

"Tip of the Day" Digest





"Tip of the Day" Digest

by R:BASE Technologies, Inc.

Welcome to the "Tip of the Day" Digest

The "Tip of the Day" Digest is a collection of the "Tip of the Day" threads posted on R:BASE List Servers from Razzak Memon, an R:BASE developer himself, the President & CEO of R:BASE Technologies, Inc.

These tips include many hundreds of features and innovations that have been added to R:BASE over the years.

"Tip of the Day" Digest

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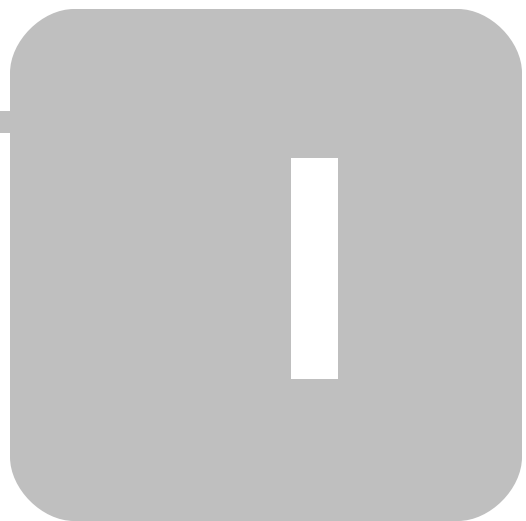
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Part



1 General

1.1 Copying Forms, Labels, and Reports

Did you know that you can copy any number of selected Forms, Labels, and Reports from one R:BASE database to another R:BASE database by simply copying [Ctrl+C] from the source database and pasting [Ctrl+V] to the destination database while both databases are connected as two separate sessions of R:BASE?

You can use the same techniques of copying and pasting between R:BASE eXtreme (64) and R:BASE eXtreme (32) sessions as well!

In addition, you may copy (unload) any number of selected Tables, Views, Stored Procedures, Forms, Labels, Report, External Forms, and Command Files from R:BASE Database Explorer to any folder or even your desktop, by simply dragging and dropping the selected item(s).

Hint:

While copying and pasting, make sure that both sessions of R:BASE are using the similar modules in Database Explorer. For example, copying Forms from one Database Explorer to another Database Explorer you will have to make sure that the Forms section of the destination database is opened before pasting the forms. Thus, Forms to Forms, Labels to Labels, and Reports to Reports, and so on.

Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build: 9.0.1.10701 and higher)

1.2 Data Dictionary and Selecting Color Value

Data Dictionary [F3] Key in R:BASE eXtreme 9.1/9.5 (32/64) provides the following valuable information at your fingertips:

- Databases
- Tables *
- Columns *
- Key/Indexes *
- Variables
- Views *
- Forms *
- Reports *
- Labels *
- Functions
- Stored Procedures *
- System Tables *
- System Columns *
- Form Component IDs **
- Form Actions **
- Report Component IDs ***
- Label Component IDs ****
- Themes
- Printers
- External Forms
- Applications
- Colors
- Control Types
- Database Settings
- Files

* = Connected Database

** = While in Form Designer

*** = While in Report Designer

**** = While in Label Designer

These are very slick and handy options that allow users to capture information about the R:BASE environment and/or connected database.

These options can be accessed from anywhere in R:BASE by pressing the [F3] key or selecting "Data Dictionary" option from the Menu Bar under "Tools".

While programming and customizing applications, if you wish to use custom font color, background color, for CHOOSE, DIALOG, or PAUSE commands you can press the [F3] key, select the color you like and then either double-click for single item or [OK] button for multi-select items. Using this approach, you can capture the name of the color listed in the first column.

The Data Dictionary | Color tab includes a list of 190 colors.

Did you know that now you can choose which option you want as the return value?

Here's how:

Press [F3] Data Dictionary Key and notice the additional option for [Return Value].

You now have four (4) options to pick from.

[] Color [] Name [] Integer Value [] RGB Value

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.4.11012 or higher)

1.3 Defining a Default Path for "Open Image" Dialogs

Did you know that you can define a folder path where all "Open Image" dialogs will initially start?

A new RBTI System Variable, RBTI_IMG_FOLDER, is now supported to define the valid folder path where all "Open Image" dialogs will launch.

```
SET VAR RBTI_IMG_FOLDER TEXT = 'C:\TEMP\IMAGES\'
```

Notes:

- The RBTI_IMG_FOLDER System Variable must be redefined for a new session of R:BASE, so define the variable in your development startup file.
- If the RBTI_IMG_FOLDER variable does not exist or contains a non-valid folder path, all image dialogs will open in the current folder.

Supported Versions:

- R:BASE eXtreme 9.5 (32/64), Build: 9.5.1.10614 or higher
- R:BASE eXtreme 9.1 (32/64), Build: 9.1.5.20619 or higher

1.4 Deploying an R:BASE eXtreme 9.x (64) Database

When you are ready to deploy your first R:BASE eXtreme 9.x (64) database and application, you may want to reset the version and time stamp of all your forms, labels, reports, and stored procedures to clean start the first deployed version of your application.

Use the following code:

```
-- TimeStamp_Forms_Labels_Reports_StoredProcedures.RMD  
-- A. Razzak Memon  
-- May 14, 2010
```

```
UPDATE SYS_FORMS3 SET SYS_FORM_VERSION = 1, SYS_FORM_MOD_TS = .#NOW  
UPDATE SYS_LABELS3 SET SYS_LABEL_VERSION = 1, SYS_LABEL_MOD_TS = .#NOW  
UPDATE SYS_REPORTS3 SET SYS_REPORT_VERSION = 1, SYS_REPORT_MOD_TS = .#NOW
```

```
UPDATE SYS_PROCEDURES SET SYS_PROC_VERSION = 1, SYS_PROC_MOD_TS = .#NOW
RETURN
```

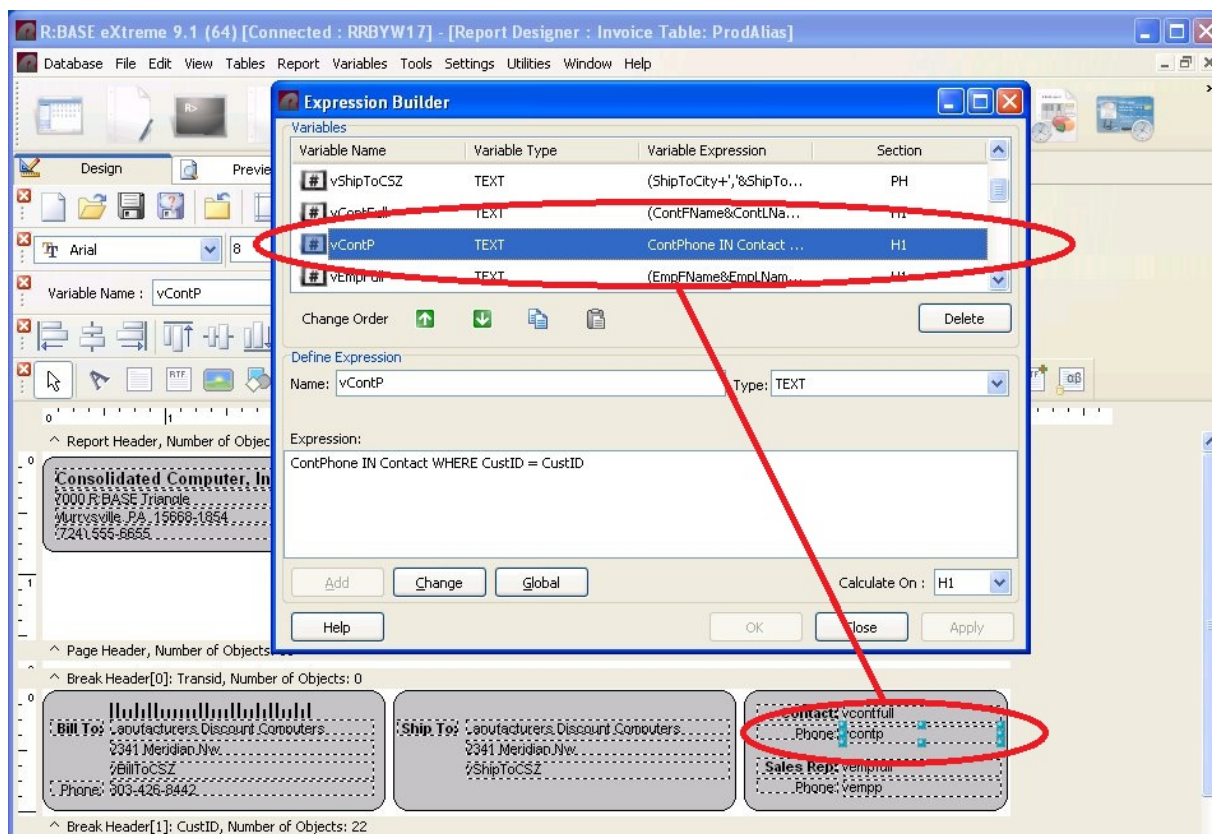
Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10511 or higher)

1.5 Display the Selected Expression Builder Variable

Did you know that you can now see the highlighted variable object within the Form/Report/Label Designer canvas background, when editing variables within the Expression Builder?

This feature allows for easier recognition of a variable's location while reviewing the expression definition. Switching to different variables in the Expression Builder list will move the blue handlebars to that variable object.



Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.20214 or higher)

1.6 Displaying R:BASE Keys/Indexes

Using R:BASE eXtreme 9.5 (32/64), while in Data Designer (RBDefine), the [Key/Indexes] option allows users to create table constraints; such as Primary Keys, Foreign Keys and Unique Keys. Users can also create Indexes, which provide faster data retrieval for the database.

Did you know that you can retrieve and display a complete list of Keys and Indexes, if defined, using the Data Dictionary (F3) key?

Among many other database and non-database information, the enhanced Data Dictionary (F3) key in R:BASE eXtreme 9.5 (32/64), also includes a tab for [Keys/Indexes]. Selecting [Keys/Indexes] tab will list all database Keys and Indexes, if defined.

By default, all Keys and Indexes are displayed including details such as, ID, Type, Table Name, and References. Clicking on the appropriate column header will sort the column in ascending and descending order accordingly.

However, if you wish to only display Primary Keys, Unique Keys, Indexes, or Foreign Keys, you may use the Type: Drop-Down Filter option located above the columns to specifically display your selected option of Primary Keys, Unique Keys, Indexes, or Foreign Keys, if you wish.

R:BASE eXtreme 9.5 (32/64) Data Dictionary [F3] key includes the following options:

- Databases
- Tables
- Columns
- Keys/Indexes
- Variables
- Views
- Forms
- Reports
- Labels
- Functions
- Stored Procedures
- System Tables
- System Columns
- Themes
- Printers
- External Forms.
- Applications
- Colors
- Control Types
- Database Settings
- Files

While in Form Designer, the Data Dictionary includes the following additional tabs:

- Form Component IDs
- Form Actions

While in Report Designer, the Data Dictionary includes the following additional tab:

- Report Component IDs

While in Label Designer, the Data Dictionary includes the following additional tab:

- Label Component IDs

While in External Form Designer, the Data Dictionary includes the following additional tabs:

- External Form Component IDs
- External Form Actions

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20611 or higher)

1.7 Documenting Component IDs in Forms/Labels/Reports

Did you know that you can document all embedded Custom EEPs in Forms, Labels and Reports using the "Document Custom EEPs" option while in Form, Label or Report Designer?

Form Designer > main Menu Bar > Form > Document Custom EEPs
Label Designer > main Menu Bar > Label > Document Custom EEPs
Report Designer > main Menu Bar > Report > Document Custom EEPs

Notice the following output options:

- Printer
- Text File
- PDF File
- Clipboard

The complete documentation of embedded Custom EEPs will also include the Component IDs, if defined.

1.8 Dynamically Changing Themes in R:BASE Application (.RBA)

Current versions of R:BASE for Windows allow you to design and distribute the stand alone R:BASE Application (.RBA) files using the "Applications" module of R:BASE Database Explorer.

While in the Application designer, you may elect to use an Application Theme by checking the [] Use Theme option and then selecting your favorite theme from among the list of supported themes. Did you know that now you can dynamically change the R:BASE Application (.RBA) theme using the following PROPERTY command?

Example 01:

```
-- Start
-- Application: On After Start Action
CLEAR VARIABLE vThemeName
SET VAR vThemeName TEXT = NULL
IF (CVAL('NetUser')) <> 'Razzak' THEN
PROPERTY RBA_FORM THEMENAME 'Sports Blue'
PROPERTY RBA_FORM CAPTION 'Using Sports Blue'
ELSE
PROPERTY RBA_FORM THEMENAME 'R:BASE Rocks!'
PROPERTY RBA_FORM CAPTION 'Using R:BASE Rocks!'
ENDIF
RETURN
-- End
```

Example 02:

```
-- Start
-- Application: On After Start Action
IF (CVAL('DATABASE')) <> 'RRBYW18' OR (CVAL('DATABASE')) IS NULL THEN
CONNECT RRBYW18 IDENTIFIED BY NONE
ENDIF
CLEAR VARIABLE vUserThemeName, vThemeCaption, vDefaultTheme
SET VAR vUserThemeName TEXT = NULL
SET VAR vThemeCaption TEXT = NULL
SET VAR vDefaultTheme TEXT = 'Convergence'
SELECT UserThemeName, ThemeCaption INTO +
vUserThemeName INDIC ivUserThemeName, +
vThemeCaption INDIC ivThemeCaption +
FROM UserThemes WHERE UserName = (CVAL('NetUser'))
IF vUserThemeName IS NULL THEN
SET VAR vUserThemeName = .vDefaultTheme
SET VAR vThemeCaption = .vDefaultTheme
ENDIF
PROPERTY RBA_FORM THEMENAME .vUserThemeName
```

```
PROPERTY RBA_FORM CAPTION .vUserThemeName
RETURN
-- End
```

Supported Versions:

- R:BASE eXtreme for Windows (Build: 9.0.1.11229 or higher)

1.9 Dynamically Defining Unique File Names

Here are two examples to create a unique file name in a multi-user and multi-session environments using R:BASE eXtreme 9.1 (32/64) and R:BASE eXtreme 9.5 (64).

```
-- Example 01
-- Using R:BASE eXtreme 9.1 (32/64)
IF (CVAL('DATABASE')) <> 'RRBYW17' OR (CVAL('DATABASE')) IS NULL THEN
CONNECT RRBYW17 IDENTIFIED BY NONE
ENDIF
-- Verify the existence of PDF Sub-Directory
SET VAR vChkFile INTEGER = NULL
SET VAR vChkFile = (CHKFILE('PDF'))
IF vChkFile <> 1 THEN
MD PDF
ENDIF
CLS
-- Get Globally Unique ID
SET VAR vGUID TEXT = NULL
PLUGIN RGUID vGUID|SYMBOLS OFF
-- Create Unique PDF File Name
SET VAR vPDFFileName TEXT = NULL
SET VAR vPDFFileName = +
('PDF\'+(CVAL('NetUser'))+'_'+vGUID+'_CustomerList_'+ +
(FORMAT(.#DATE, 'MMDDYYYY'))+'.pdf')
PRINT CustomerList +
OPTION PDF +
|FILENAME .vPDFFileName +
|SHOW_CANCEL_DIALOG ON +
|TITLE Customer List +
|SUBJECT Customer List +
|AUTHOR R:BASE eXtreme 9.1 (64) +
|KEYWORDS Customer List +
|OPEN ON
CLEAR VARIABLES vChkFile, vGUID, vPDFFileName, RBTI_%
RETURN

-- Example 02
-- Using R:BASE eXtreme 9.5 (64)
IF (CVAL('DATABASE')) <> 'RRBYW18' OR (CVAL('DATABASE')) IS NULL THEN
CONNECT RRBYW18 IDENTIFIED BY NONE
ENDIF
-- Verify the existence of PDF Sub-Directory
SET VAR vChkFile INTEGER = NULL
SET VAR vChkFile = (CHKFILE('PDF'))
IF vChkFile <> 1 THEN
```

```

MD PDF
ENDIF
CLS
-- Create Unique PDF File Name
SET VAR vPDFFileName TEXT = NULL
SET VAR vPDFFileName = +
('PDF\'+(CVAL('NetUser')))+'_'+(CVAL('GUID'))+'_CustomerList_'+ +
(FORMAT(.#DATE, 'MMDDYYYY'))+'.pdf')
PRINT CustomerList +
OPTION PDF +
|FILENAME .vPDFFileName +
|SHOW_CANCEL_DIALOG ON +
|TITLE Customer List +
|SUBJECT Customer List +
|AUTHOR R:BASE eXtreme 9.1 (64) +
|KEYWORDS Customer List +
|OPEN ON
CLEAR VARIABLES vChkFile,vPDFFileName,RBTI_%
RETURN

```

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.4.11012 or higher)

1.10 Enabling Object Inspector in R:BASE eXtreme

Did you know that R:BASE eXtreme includes the built-in Object Inspector for Form, Label and Report Designers?

While in Form, Label or Report Designer, you can enable the Object Inspector to explore in-depth properties of Form, Label, Report, and any selected object.

Here's how to enable the Object Inspectors in R:BASE eXtreme:

Form Designer > Menu Bar > View > Toolbars > Object Inspector

Report Designer > Menu Bar > View > Toolbars > Object Inspector

Label Designer > Menu Bar > View > Toolbars > Object Inspector

Once enabled, you may dock the Object Inspector on the left, or float anywhere you find more convenient!

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10701 and higher)

1.11 Enhanced [F3] Function Key in R:BASE eXtreme

When using R:BASE eXtreme 9.1, you may use [F3] Function Key to explore the following options:

01. Databases (List of Databases including Name, Date/Time, Size)
02. Tables (Name, Comment)
03. Columns (Name, Comment)
04. Key/Indexes (ID, Type, Table Name, References)
05. Variables (Name Data Type, Value)
06. Views (Name, Comment)
07. Forms (Name, Table Name, Comment)

08. Reports (Name, Table Name, Comment)
09. Labels (Name, Table Name, Comment)
10. Functions (Name, Category, Syntax)
11. Stored Procedures (Name, Comment)
12. System Tables (Name)
13. System Columns (Name, Comment)
14. Themes (Name)
15. Printers (Name)
16. External Forms (Name, Date/Time, Size)
17. Applications (Name, Date/Time, Size)
18. Colors (Color, Name, Integer Value, RGB Value)
19. Control Types (Name, Comment)
20. Database Settings (Parameter, Value, Description)
21. Files (File Name, Extension, Date/Time, Size), with File Mask

Additionally, while in Form Designer, notice the following additional tabs:

22. Form Component IDs
23. Form Actions

While in Report Designer, notice the following additional tabs:

24. Report Component IDs

While in Label Designer, notice the following additional tabs:

25. Label Component IDs

While in External Form Designer, notice the following additional tabs:

26. External Form Component IDs
27. External Form Actions

After selecting the appropriate tab, you may use double-click to copy and paste the selected item while in R:BASE/EEP Editor, or [Ctrl+A] to select all items and then click on [OK] button to copy and paste all items in R:BASE/EEP Editor.

To jump from one tab to another, click on appropriate tab, or use the new Drop-Down [List] button (far right) and select appropriate tab.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.4.10602 or higher)

1.12 Finding the Exact Name of a Form Control Type

When creating the Dynamic Objects for Forms, using the new CREATEOBJECT command, you have to know the exact name for the Control Type to be created dynamically at runtime.

Syntax:

```
CREATEOBJECT +  
<ObjectType> <ComponentID> <ParentControl> <Left Top Width Height>
```

While in the Form Designer, *every* property of the selected object including the "Name" and "Object Type" is listed under the Object Inspector. However, the required Object Type name could be hard to find without using the Enterprise Edition.

Did you know that you can use the new [Control Types] tab of the Data Dictionary [F3] to highlight and

paste the exact name for the desired Object Type?

In addition to specific tabs that become visible within which module the [F3] key was pressed, you will always find the [Control Types] tab from any module of R:BASE.

Data Dictionary [F3] General Tabs:

- System Tables
- System Columns
- Themes
- Control Types
- Tables
- Columns
- Variables
- Views
- Forms
- Reports
- Labels
- Functions
- Stored Procedures

Data Dictionary [F3] Form Designer Specific Tabs:

- All General tabs listed above, plus ...
- Form Component IDs
- Form Actions

Data Dictionary [F3] Label Designer Specific Tabs:

- All General tabs listed above, plus ...
- Label Component IDs

Data Dictionary [F3] Report Designer Specific Tabs:

- All General tabs listed above, plus ...
- Report Component IDs

1.13 Handling Milliseconds in Parameterized Update Statements

When converting MS SQL or Oracle databases to R:BASE eXtreme 9.x (64), or using parametrized update statements, it takes the hours, minutes, and seconds, but drops off the milliseconds.

By default, the milliseconds are not set in the configuration file of R:BASE and Oterro. However, if you wish to deal with milliseconds, you will need to add that option in R:BASE and Oterro configuration files accordingly.

Here's how:

In Oterro configuration file, change the TIME FORMAT (line 48) to HH:MM:SS.SSS and TIME SEQUENCE (line 49) to HHMMSSSSS. Additional ".SSS" are used to handle milliseconds.

Example:

```
TIME FORMAT HH:MM:SS.SSS
TIME SEQUENCE HHMMSSSSS
```

Based on the R:BASE version, follow the same routine for appropriate R:BASE configuration file(s).

In addition, make sure that the connected R:BASE database settings are also configured accordingly.

1.14 How Healthy is your Database?

Have you ever wondered how healthy your database really is?

Are all defined indexes properly indexed? Are there any duplicate indexes? Are all Primary/Foreign/Referenced keys valid? Are all defined default column values still valid? Are all defined views still functional? Is there any inconsistency in performance?

These issues become important concerns when upgrading/migrating from an old (LEGACY) DOS or Windows version of R:BASE. Technically, there is very little to worry about when your database is designed and managed using the latest Data Designers (RBDefine), Enhanced CREATE and LOAD commands of R:BASE that fully enforce all rules and validate everything before the table is created/saved or the data is loaded. Granted, all things must be considered.

However, if you have upgraded your legacy database and everything seems to be working fine, do yourself and your lovely clients a big favor! Perform one additional task to validate the integrity of your database.

Follow the steps below and see if everything is "peachy".

1. Make a backup copy of the database.
2. Copy the entire database (.RB1-.RB4/.RX1-.RX4 files) on your local drive in a separate folder with at least twice as much available free disk space.
3. Start R:BASE using the latest version/update and switch the current folder to the appropriate database folder on your local drive.
4. At the R> prompt:

```
DISCONNECT
SET MESSAGES ON
SET ERROR MESSAGES ON
SET MULTI OFF
-- CONNECT the database with OWNER password, if any
CONNECT dbname IDENTIFIED BY owner password
-- CONNECT the database with no passwords
CONNECT dbname
```

5. Check the connected database CHARacter settings, especially the IDQUOTES. At the R> prompt:

```
CLS
SHOW CHAR
```

Notice the setting for IDQUOTES (the last item on list). If this setting is blank/null, make sure to set the IDQUOTES settings to ` (that is a single reversed quote, on the same key as the ~ tilde).

```
SET IDQUOTES= `
```

6. Now create the unload file with NULL set to -0-. At the R> prompt:

```
CLS
SET NULL -0-
OUTPUT newdb.ALL
UNLOAD ALL
OUTPUT SCREEN
```

This step will create two files (newdb.ALL and newdb.LOB)

7. DISCONNECT, and then rename this database to some other name. At the R> prompt:

```
DISCONNECT
RENAME dbname.RB? dbnameBK.RB?
```

8. Now, let's rebuild the fresh database and see if it passes the integrity check. At the R> prompt:

```
CLS
RUN newdb.ALL
```

Watch the activity and all messages on the screen. Don't fall asleep! You might miss an important warning. Completion time may vary based on size of the database (number of tables/records/indexes).

If there were no warnings or error messages, you've got a fresh/healthy database. Give yourself a pat on the back.

If there are any warning or -ERROR- message(s), take them seriously. In this case, DISCONNECT the bad database (built using RUN newdb.ALL). At the R> prompt:

```
DISCONNECT
```

Delete the bad database. At the R> prompt:

```
DELETE dbname.rb?
DELETE newdb.ALL
DELETE newdb.LOB
-- Rename the previously saved database (Step 07.)
RENAME dbnameBK.RB? dbname.RB?
-- CONNECT to the database
CONNECT dbname
```

9. CORRECT all -ERROR-s accordingly and then repeat Step 06.
10. Do not quit or give up until you see a completely fresh database without any warnings or errors.

Believe me, the time spent on this exercise will save you a lot of hassle and embarrassment, instead of chasing something obvious that should have been taken care of a long time ago. Hope that helps!

Additional housekeeping and database maintenance tips are also available on From The Edge:
<http://www.razzak.com/fte/>

1.15 Is the Application Compiled or Not?

When designing and distributing R:Compiler applications, your main menu options may include a line item to access Database Explorer or the R> Prompt.

Accessing that particular option would be fine if the end user is using the full version of R:BASE. However, that option would go nowhere if the end user is using the compiled version of the custom application.

Did you know that you can assign a unique Component ID to a particular item or button on your application main menu and then use the following GETPROPERTY and PROPERTY command to manage access to that option?

```
-- Start
-- On After Start EEP
-- Know if the running application is compiled or not?
CLEAR VARIABLE vCompiled
SET VAR vCompiled TEXT = NULL
GETPROPERTY APPLICATION ISCOMPILED vCompiled
IF vCompiled = 'YES' THEN
PROPERTY AccessDatabaseExplorer VISIBLE 'FALSE'
```

```
ENDIF
CLEAR VARIABLE vCompiled
RETURN
-- End
```

Supported Versions:

- R:BASE eXtreme (v9) for Windows (Build: 9.0.1.11229 or higher)

1.16 Is the Application Runtime or Not?

When designing and distributing Runtime applications, your main menu options may include a line item to access Database Explorer or the R> Prompt.

Accessing that particular option would be fine if the end user is using the full version of R:BASE. However, that option would go nowhere if the end user is using the Runtime version of the application.

Did you know that you can assign a unique Component ID to a particular item or button on your application main menu and then use the following GETPROPERTY and PROPERTY command to manage access to that option?

```
-- Start
-- On After Start EEP
-- Know if the running application is runtime or not?
CLEAR VARIABLE vRuntime
SET VAR vRuntime TEXT = NULL
GETPROPERTY APPLICATION ISRUNTIME vRuntime
IF vRuntime = 'YES' THEN
PROPERTY AccessDatabaseExplorer VISIBLE 'FALSE'
ENDIF
CLEAR VARIABLE vRuntime
RETURN
-- End
```

Supported Versions:

- R:BASE eXtreme (v9) for Windows (Build: 9.0.1.11229 or higher)

1.17 Managing Custom Colors

While in Form, Label or Report Designer, defining a background color, when the ordinary color palate does not give the color you need, you always have the choice to opt for "Custom ..." colors. Selecting this option provides you with a selection of 48 Basic Colors as well as the option to define or select from 16 "Custom Colors". Once custom colors are defined and added to the list, only the logged in user on that workstation can access those Custom Colors while in Form, Label or Report Designer.

In an environment of R:BASE Developers and/or Team of R:BASE Contractors and Sub-Contractors, each developer must define those custom colors manually for R:BASE for Windows, in order to follow the application standards. In addition, if you define all those custom colors and for some reason you need to replace a hard drive or re-install R:BASE, you also have to re-define those custom colors when designing Forms, Labels or Reports.

Did you know that you can export your custom defined colors to a text file and then import them back into R:BASE when you need them again, or distribute to your own developers or contractors for consistency purposes?

Here's how:

1. Start R:BASE for Windows
2. Open any Form, Label or Report in designer
3. Select any control and use the Object Property to change background color
4. Select the "Custom ..." from the bottom of the list

5. Define your custom color or Add to existing Custom Colors
6. Click on [OK] button to save Custom Colors
7. Now if you wish to export all defined Custom Colors:

Database Explorer | Settings | Custom Colors

Notice the following options:

Save to file ...

Load from File ...

8. You may also import from a file that was created in Step 7

You can also import your 16 custom colors defined in previous R:BASE for Windows versions into R:BASE eXtreme without re-defining them again.

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10701 and higher)

1.18 Managing External Themes - R:BASE Themes Unleashed!

Did you know that you can use your own custom-designed or ".msstyles" compatible themes with R:BASE eXtreme?

R:BASE eXtreme (32/64) now includes support for external themes. External theme files must have the ".msstyles" file extension. These themes can be acquired from any online resource or from a custom theme you created yourself. After a theme is loaded into the R:BASE session, the theme name will be listed in every available location where themes are specified and will also appear in the Data Dictionary list.

When using external themes, the theme file must be loaded into R:BASE each time the session is launched. So, it can be loaded within the environment set up in a startup file.

In order to load a theme into R:BASE, the PROPERTY command must be used. The following PROPERTY command parameters are to manage external themes in R:BASE eXtreme:

--Load Theme Example:

```
PROPERTY LOAD_THEME 'NewLuna' LunaBlue.msstyles
```

After this command is issued, the theme "NewLuna" will be available in all locations where a theme can be specified.

--Release Theme Example:

```
PROPERTY RELEASE_THEME NewLuna TRUE
```

After this command is issued, the theme "NewLuna" will be released.

--Change Theme Example:

```
PROPERTY CHANGE_THEME NewLuna LunaXP.msstyles
```

After this command is issued, the theme NewLuna will use the styles defined in the LunaXP.msstyles file. This command parameter is provided to alter the theme file, and to avoid changing the specified "theme name" in every location within the code.

Have fun integrating your own themes in R:BASE eXtreme!

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.11126 or higher)

1.19 Managing Multipage Images

Did you know that you can use the built-in Note/BLOB Field Viewer/Editor to manage multipage VARBIT images, such as DCX, TIFF and GIF files?

The enhanced Note/BLOB Field Viewer/Editor now includes an additional option to manage Multipage Images. When Editing or Browsing the data using Data Browser/Editor, or a DB Grid in forms, the

dynamic Note/BLOB Field Viewer/Editor is used if you double click on the NOTE, VARCHAR or VARBIT columns.

When using the form as BROWSE USING formname, EDIT USING formname, or ENTER USING formname, the Note/BLOB Field Viewer/Editor is used when double clicking on DB Memo controls for NOTE data types, the DB Rich Edit controls for VARCHAR data types (RTF data), or DB Image controls for VARBIT data types (images).

Depending on the form control used, tab appropriate window tab of the Note/BLOB Field Viewer/Editor is opened to manage the data accordingly. If you wish to manage Multipage images, such as DCX, TIFF or GIFs, you may select the "Multipage Images" tab of the Note/BLOB Field Viewer/Editor.

You may also use the enhanced RBBEDIT (RBBE) command to manage external files.

-- Example 01 (To Manage External Plain Text Data)

RBBE filename.txt

-- Example 02 (To Manage External RTF Data)

RBBE filename.rtf

-- Example 03 (To Manage Bitmap Files)

RBBE filename.bmp

-- Example 04 (To Manage Multipage TIFFs)

RBBE filename.TIF

-- Example 05 (To Manage Multipage DCX Files)

RBBE filename.cdx

-- Example 06 (To Manage Multipage GIFs)

RBBE filename.gif

1.20 Optimizing the R:BASE Multi-User Environment

The ability to fine tune R:BASE itself is one of the many enhancements added over the years. Most often, R:BASE is able to make the right decisions about the best way to process commands.

Generally, you know your database and application code better than anyone else. However, you should always take advantage of the latest enhancements and syntax, and would pick a more efficient method if given the opportunity.

Did you know that there are three settings that can improve performance in a multi-user environment?

- STATICDB
- FASTLOCK
- QUALCOLS

STATICDB limits structural changes to the database, and activates a read-only schema mode. When STATICDB is set to ON, permanent changes cannot be made to the database structure (table and column names, for example). New tables can be created, but they are temporary and visible only to the user who created them. By restricting changes to the database structure, R:BASE does not continually re-read the structure to check for changes. Hence, multi-user applications run faster. All users connected to a multi-user database must have the same setting for STATICDB. The default is OFF.

In a multi-user environment, a user who first connects to a database with STATICDB set to ON engages that database to operate in a read-only schema mode, whereby any user must have their STATICDB setting ON in order to connect to that database.

SET FASTLOCK ON for faster multi-user performance while modifying data. With FASTLOCK ON, R:BASE

does not place a table lock on the table, allowing for greater throughput. A table lock is only needed to prevent structure changes. FASTLOCK can only be set to ON when STATICDB is set to ON, and both FASTLOCK and STATICDB must be set ON before the database is connected.

QUALCOLS setting is used to turn page locking OFF and use row locking instead and the ROWLOCKS setting is no longer used to turn row locking ON or OFF. If you know that your application mainly updates or deletes data a row at a time, rather than many rows, SET QUALCOLS 2 for row locking.

Use 10 for page locking or row locking as appropriate. Use 2 for row locking only, not page locking. In this case, R:BASE locks a row, reads the row, makes the change, and then releases the row.

Keep in mind that the QUALCOLS setting can be changed dynamically and can be different for different users using the same database. In most cases the SET QUALCOLS 2 is a good combination. However, use SET QUALCOLS 10 for page locking when you are doing an UPDATE and/or DELETE affecting many rows in a table.

Here is a routine that you can use to automate the process of CONNECTing the database in a network environment with SET STATICDB ON, SET FASTLOCK ON, and SET QUALCOLS 2.

```
-- Example
-- Start here ..
-- MyApp.DAT Startup Application File
-- Start Fresh
CLEAR ALL VARIABLES
LABEL StartFresh
DISCONNECT
SET QUOTES=NULL
SET QUOTES='
SET DELIMIT=NULL
SET DELIMIT=', '
SET LINEEND=NULL
SET LINEEND='^'
SET SEMI=NULL
SET SEMI=';'
SET PLUS=NULL
SET PLUS='+'
SET SINGLE=NULL
SET SINGLE='_ '
SET MANY=NULL
SET MANY='%'
SET IDQUOTES=NULL
SET IDQUOTES='`'
SET CURRENCY '$' PREF 2 B
DISCONNECT
SET STATICDB OFF
SET ROWLOCKS ON
SET FASTLOCK OFF
SET TIMEOUT 120
SET FEEDBACK OFF
LABEL Start
DISCONNECT
SET STATICDB ON
SET FASTLOCK ON
SET QUALCOLS 2
SET MESSAGES OFF
SET ERROR MESSAGES OFF
```



```
SET ERROR MESSAGE 2495 OFF
CONNECT dbname IDENTIFIED BY ownername
SET ERROR MESSAGE 2495 ON
SET MESSAGES ON
SET ERROR MESSAGES ON
-- Check the availability of database
IF SQLCODE = -7 THEN
CLS
PAUSE 2 USING 'Unable to Connect the Database.' +
CAPTION ' Your Application Caption Here ...' +
ICON WARNING +
BUTTON 'Press any key to continue ...' +
OPTION MESSAGE_FONT_NAME Tahoma +
|MESSAGE_FONT_COLOR RED +
|MESSAGE_FONT_SIZE 11 +
|THEMENAME R:BASE Longhorn
CLOSEWINDOW
EXIT
ENDIF
-- Enforce Database Default Settings
SET QUOTES='
SET DELIMIT=', '
SET LINEEND='^'
SET SEMI=';'
SET PLUS='+'
SET SINGLE='_'
SET MANY='% '
SET IDQUOTES='`'
SET CURRENCY '$' PREF 2 B
SET NULL ' '
SET DATE FORMAT MM/DD/YYYY
SET DATE SEQUENCE MMDDYY
SET DATE YEAR 30
SET DATE CENTURY 19
CLS
EDIT USING ApplicationMainMenu
RETURN
-- End here ...
```

Notes:

1. Correct the appropriate lines accordingly if you wish to use STATICDB, FASTLOCK, and QUALCOLS settings.
2. Verify the CHARACTER SETtings related to your database.
3. Verify the DATE and TIME settings related to your database.
4. Re-visit the routine that closes the application to either EXIT or go back to the Database Explorer or R> prompt.
5. Create for yourself a startup file with SET STATICDB OFF prior to CONNECTing the database when you are in "development mode" and making structural changes, when no one else is connected to the same database.

```
-- Example
DISCONNECT
SET STATICDB OFF
CONNECT dbname IDENTIFIED BY ownername
```

RETURN

The options and example detailed above can help you reach maximum performance with R:BASE, but since each application and database is a unique set, only a trial and error process identifies which options help in your situation. Do not forget that different operating systems, hardware configurations, available memory, band-width, system security, and installed anti-virus settings can also affect performance. Experiment with the known options and see which ones improve performance for your application. You, the developer of your application, have the opportunity to set R:BASE internal parameters to gain optimum performance for each application.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20128 or higher)

1.21 R:BASE eXtreme 32 or 64?

Designing and deploying version specific applications that include naming conventions for short (18 character) vs. long (128 character) table, view, column, index, SP, form, label, report, and variable names can be tricky at times to differentiate the deployed versions of R:BASE eXtreme (32/64).

This is not relevant nor an issue if you are still using the 18 characters naming conventions even in R:BASE eXtreme (64). I certainly don't use 18 character naming convention in my vertical market as well as recently deployed government applications running as LAN, WAN, Terminal Server, and Web versions of R:BASE eXtreme (64).

So, if you decide to step-up your programming techniques and take advantage of 128 Characters naming convention in R:BASE eXtreme (64), while maintaining the similar code for your R:BASE eXtreme (32) applications, you may need a method to differentiate the currently running version of R:BASE so that you can use the appropriate form names, etc.

Here is a dynamic CVAL function trick that you can use to find the currently running or compiled version of your R:BASE eXtreme (32/64).

```
-- Example 01:
IF (SGET(CVAL('VERSION'),2,21)) = '64' THEN
SET NAMEWIDTH 40
-- additional R:BASE eXtreme (64) specific code here ...
EDIT USING MyNewMainMenuForPublicUsers
ELSE
-- additional R:BASE eXtreme (32) specific code here ...
EDIT USING MainMenuPublicUsrs
ENDIF
-- Example 02:
IF (SGET(CVAL('VERSION'),2,21)) = '32' THEN
-- additional R:BASE eXtreme (32) specific code here ...
EDIT USING MainMenuPublicUsrs
ELSE
SET NAMEWIDTH 40
-- additional R:BASE eXtreme (64) specific code here ...
EDIT USING MyNewMainMenuForPublicUsers
ENDIF
```

This should give you an idea of how to implement such techniques in your own applications.

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10511 or higher)

1.22 The Complete R:BASE System Variable List

R:BASE supports the use of system variables that provide information, and enhance the environment, for that R:BASE instance.

Some system variables are preset and constant, some are updated after actions are taken, some are created after actions are taken, while others can be defined to adjust areas of R:BASE.

The existence of following system variables are constant. The values can be verified by typing SHOW VARIABLES at the R> Prompt.

R>SHOW VARIABLES Variable	= Value	Type
#DATE	= 12/21/2012	DATE
#TIME	= 10:00 AM	TIME
#PI	= 3.14159265358979	DOUBLE
SQLCODE	= 0	INTEGER
SQLSTATE	= 00000	TEXT
#NOW	= 12/21/2012 10:00 AM	DATETIME

- #DATE - Stores the current system date
- #TIME - Stores the current system time
- #PI - Stores the value of as a DOUBLE data type (3.14159265358979)
- SQLCODE - Holds the result of the previous SQL command
- SQLSTATE - Stores a 5-character long return code string that indicates the status of the previous SQL statement
- #NOW - Stores the current system date and time

The system variables can be used in variable expressions to capture system information.

Examples:

```
SET VAR vToday DATE = .#DATE
SET VAR vTimer TIME = (.#TIME + 10)
SET VAR vNum DOUBLE = (.#PI * 56 ** 2)
SET VAR vRightNow = .#NOW
```

R>SHOW VARIABLES Variable	= Value	Type
#DATE	= 12/21/2012	DATE
#TIME	= 10:20 AM	TIME
#PI	= 3.14159265358979	DOUBLE
SQLCODE	= 0	INTEGER
SQLSTATE	= 00000	TEXT
#NOW	= 12/21/2012 10:20 AM	DATETIME
vNum	= 9852.03456165758	DOUBLE
vToday	= 12/21/2012	DATE
vTimer	= 10:20 AM	TIME
vRightNow	= 12/21/2012 10:19 AM	DATETIME

With the following example;

```
SELECT netamount FROM transmaster +
WHERE netamount IS NULL
IF SQLCODE <> 100 THEN
  --Perform Task here
ENDIF
```

The IF...ENDIF condition checks if any rows exist. If valid rows are found, SQLCODE is set to 0, and the

control passes to the command after ENDIF. If no data is found, SQLCODE is set to 100. A negative number for SQLCODE indicates failure. Based on the value of SQLCODE, the WHENEVER command can be used to call an error handling routine.

SQLSTATE was added for Oterro compatibility. Values may be set by attached server tables commands or Stored Procedures.

The following variables can be defined to enhance R:BASE use:

- RBTI_CEM_FONTSIZE - Alters the font size for constraint error messages
- RBTI_CEM_FONTCOLOR - Alters the font color for constraint error messages
- RBTI_ERR_FONTSIZE - Alters the font size for general error messages
- RBTI_ERR_FONTCOLOR - Alters the font color for general error messages
- RBTI_IMG_FOLDER - Defines a valid folder path where all "Open Image" dialogs will initially start

Examples:

```
SET VAR RBTI_CEM_FONTSIZE INTEGER = 14
SET VAR RBTI_CEM_FONTCOLOR TEXT = BLUE
SET VAR RBTI_ERR_FONTSIZE INTEGER = 12
SET VAR RBTI_ERR_FONTCOLOR TEXT = RED
SET VAR RBTI_IMG_FOLDER TEXT = 'C:\TEMP\IMAGES\'
```

With the FEEDBACK operating condition set ON to display processing results, system variables will be created containing values. The FEEDBACK system variables will be generated and hold the values for the record changes and the elapsed time for the command.

- RBTI_RowsInserted - Holds the value for the number of rows inserted
- RBTI_RowsDeleted - Holds the value for the number of rows deleted
- RBTI_RowsUpdated - Holds the value for the number of rows updated
- RBTI_ElapsedTime - Holds the value for the elapsed processing time

The RBTI_PRNSETUP system variable stores the button selection (OK/CANCEL) after using the PRNSETUP dialog. After launching PRNSETUP window, and pressing "OK", the RBTI_PRNSETUP variable will exist.

```
R>SHOW VARIABLES
Variable                                = Value                                Type
-----                                -
#DATE                                  = 12/21/2012                           DATE
#TIME                                  = 10:43 AM                             TIME
#PI                                    = 3.14159265358979                     DOUBLE
SQLCODE                                = 0                                     INTEGER
SQLSTATE                              = 00000                                TEXT
#NOW                                   = 12/21/2012 10:43 AM                  DATETIME
RBTI_PRNSETUP                          = OK                                    TEXT
```

The following system variables are specific to R:BASE Forms:

- RBTI_DBGRID_COLUMN - Stores the name of focused Column on a DB Grid
- RBTI_DIRTY_FLAG - Returns 1 if any database control value(s) in the form was changed, or 0 if nothing was changed
- RBTI_FORM_ALIAS - Stores the name of a focused form, if AS alias is used
- RBTI_FORM_COLNAME - Stores the name of focused column of a database control on a form
- RBTI_FORM_COLVALUE - Stores the value of focused column database control on a form
- RBTI_FORM_COMPID - Stores the value of focused DB/Variable Edit control's Component ID
- RBTI_FORM_DATATYPE - Stores the data type of focused column database control on form
- RBTI_FORM_DIRTYVAR - Returns 1 if any Variable Control value(s) in form were changed, or 0 if nothing was changed
- RBTI_FORM_FORMNAME - Stores the name of the current form (useful when using multiple forms simultaneously)
- RBTI_FORM_MODE - Stores the value of current mode of the form; ENTER, EDIT, or BROWSE
- RBTI_FORM_TBLNAME - Stores the name of the current table in a form (useful with multi-table)

forms)

- RBTI_FORM_VARNAME - Stores the name of focused Variable Control on a form
- RBTI_FORM_VARVALUE - Stores the value of focused Variable Control on a form

The following system variable is specific to R:BASE Reports:

- RBTI_REPORT_NAME - Stores the name of the current report

The following system variable is specific to R:BASE Labels:

- RBTI_LABEL_NAME - Stores the name of the current label

When using the Form Designer, the "System Variable" control is an object that can be placed on the form to display system information. The following values are available:

- Date
- Date and Time
- Time
- R:BASE Name
- R:BASE User
- Windows User
- Computer Name
- Database Name
- Default Printer
- Current Printer
- R:BASE Version
- R:BASE Build
- R:BASE Version and Build
- Current Directory
- Record Count
- Record Number and Count
- Record Number and Count with Description
- Record Number
- Record Number with Description

When using the Report/Label Designer, the "System Variable" control is an object that can be placed on the report/label to display system information. The following values are available:

- Date
- Date and Time
- Document Name
- Print Date/Time
- Page Count
- Page Set
- Page Set with Description
- Page Number
- Page Number with Description
- Time
- R:BASE Name
- R:BASE User
- Windows User
- Computer Name
- Database Name
- Default Printer
- Current Printer
- Version
- Build
- Version/Build
- Current Folder

1.23 The R:BASE On-Screen Keyboard (ROSK)

Did you know that you can display an on-screen keyboard within R:BASE to allow users to type and enter data, without relying on a physical keyboard?

Imagine your mobile R:BASE eXtreme 9.5 application running on Tablet PCs in a industrial, manufacturing, or austere environments.

The R:BASE On-Screen Keyboard is a visual keyboard displayed on the screen that provides all standard keys, where users can select keys using the mouse or another pointing device.



The R:BASE On-Screen Keyboard is the ideal complement to any Handheld, Kiosk, Mobile, Pen, Rugged, Tablet or Touchscreen based R:BASE eXtreme applications.

The R:BASE On-Screen Keyboard (ROSK) is accessible using the following methods:

- Selecting "Utilities" > "On Screen Keyboard" from the main Menu Bar
- Pressing the [Ctrl]+[Alt]+K key combination
- Using the PROPERTY command

Important Note: The R:BASE On-Screen Keyboard is only supported on Windows 7, Windows 2008 Server R2, and higher operating systems.

Supported PROPERTY Commands:

--To show/hide the keyboard

```
PROPERTY ROSK SHOW TRUE/FALSE
```

--To alter the color of the button outer edge:

```
PROPERTY ROSK OUTER_EDGE_COLOR_NORMAL Value
PROPERTY ROSK OUTER_EDGE_COLOR_PRESSED Value
PROPERTY ROSK OUTER_EDGE_COLOR_DISABLED Value
```

--To alter the color of the button inner edge:

```
PROPERTY ROSK INNER_EDGE_COLOR_NORMAL Value
PROPERTY ROSK INNER_EDGE_COLOR_PRESSED Value
PROPERTY ROSK INNER_EDGE_COLOR_DISABLED Value
```

--To alter the starting gradient color of the button background:

```
PROPERTY ROSK BK_START_COLOR_NORMAL Value
PROPERTY ROSK BK_START_COLOR_PRESSED Value
PROPERTY ROSK BK_START_COLOR_DISABLED Value
```

--To alter the ending gradient color of the button background:

```
PROPERTY ROSK BK_END_COLOR_NORMAL Value
PROPERTY ROSK BK_END_COLOR_PRESSED Value
PROPERTY ROSK BK_END_COLOR_DISABLED Value
```

--To alter the font colors of the buttons:

```
PROPERTY ROSK TEXT_COLOR_NORMAL Value
PROPERTY ROSK TEXT_COLOR_PRESSED Value
PROPERTY ROSK TEXT_COLOR_DISABLED Value
```

--To alter the style of the buttons:

```
PROPERTY ROSK DRAWING_STYLE NORMAL / GRADIENT
PROPERTY ROSK GRADIENT_START_COLOR Value
PROPERTY ROSK GRADIENT_END_COLOR Value
```

Example:

```
PROPERTY ROSK SHOW TRUE
PROPERTY ROSK BK_START_COLOR_NORMAL WHITE
PROPERTY ROSK BK_END_COLOR_NORMAL RED
PROPERTY ROSK BK_START_COLOR_PRESSED white
PROPERTY ROSK BK_END_COLOR_PRESSED GRAY
PROPERTY ROSK OUTER_EDGE_COLOR_NORMAL BLACK
PROPERTY ROSK OUTER_EDGE_COLOR_PRESSED RED
PROPERTY ROSK INNER_EDGE_COLOR_NORMAL WHITE
PROPERTY ROSK INNER_EDGE_COLOR_PRESSED RED
PROPERTY ROSK TEXT_COLOR_NORMAL BLACK
PROPERTY ROSK TEXT_COLOR_PRESSED BLACK
PROPERTY ROSK DRAWING_STYLE GRADIENT
PROPERTY ROSK GRADIENT_START_COLOR BLUE
PROPERTY ROSK GRADIENT_END_COLOR WHITE
```



Have fun adding the R:BASE On-Screen Keyboard to your custom applications!

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10317 or higher)

1.24 Tracking Date/Time and Version Information

Did you know that you can track the Date/Time and Version information of Stored Procedures, Forms, Reports, and Labels in R:BASE eXtreme (64) using the Database Explorer?

In addition to SYS_PROC_VERSION (INTEGER) & SYS_PROC_MOD_TS (DATETIME) for SYS_PROCEDURES, R:BASE eXtreme (64) now includes the following additional columns for SYS_FORMS3, SYS_LABELS3, and SYS_REPORTS3 to keep track of date/time as well as the revision number of modified Forms, Labels, and Reports.

Additional SYS_ Columns:

- SYS_FORMS3 (SYS_FORM_MOD_TS, SYS_FORM_VERSION)
- SYS_LABELS3 (SYS_LABEL_MOD_TS, SYS_LABEL_VERSION)
- SYS_REPORTS3 (SYS_REPORT_MOD_TS, SYS_REPORT_VERSION)

These columns are updated when saving the form, label or report while in form, label or report designers accordingly, which are displayed at the Database Explorer.

Form Name	Main Table	Comment	Size (byt...	Date/Time	Version
ActiveX	FormTable	To Demonstrate the use of ActiveX	1,177	03/14/2010 16:20:40.000	1
AdhocReports		Ad hoc Reports	14,982	03/14/2010 16:20:40.000	1
AnimatedGIFs	FormTable	To Demonstrate the use of Animated GIFs	73,394	03/14/2010 16:20:40.000	1
AskScreenPrinter	FormTable	Options to Print Report on Screen or Printer	4,414	03/14/2010 16:20:40.000	1
CallNotesEdit	ContactCallNotes	Review/Update Call Notes	7,135	03/14/2010 16:20:40.000	1
CallNotesEnter	ContactCallNotes	Enter Call Notes	4,658	03/14/2010 16:20:40.000	1
ContactPhoto	Contact	Show Customer Contact Photo	2,332	03/14/2010 16:20:40.000	1
Contacts	Contact	Enter/Update Contact(s)	7,111	03/14/2010 16:20:40.000	1
CustContAndSales	Customer	Master Form to Display Customer, Contacts...	10,449	03/14/2010 16:20:40.000	1
CustForm_StatusBar	Customer	Enter/Update Customer(s) - With Status Bar	8,010	03/14/2010 16:20:40.000	1
CustomerContacts	Customer	Customer and Contacts	9,312	03/14/2010 16:20:40.000	1
CustomerManagement	FormTable	Customer Management	6,637	03/14/2010 16:20:40.000	1
Customers	Customer	Enter/Update Customer(s)	7,717	03/14/2010 16:20:40.000	1

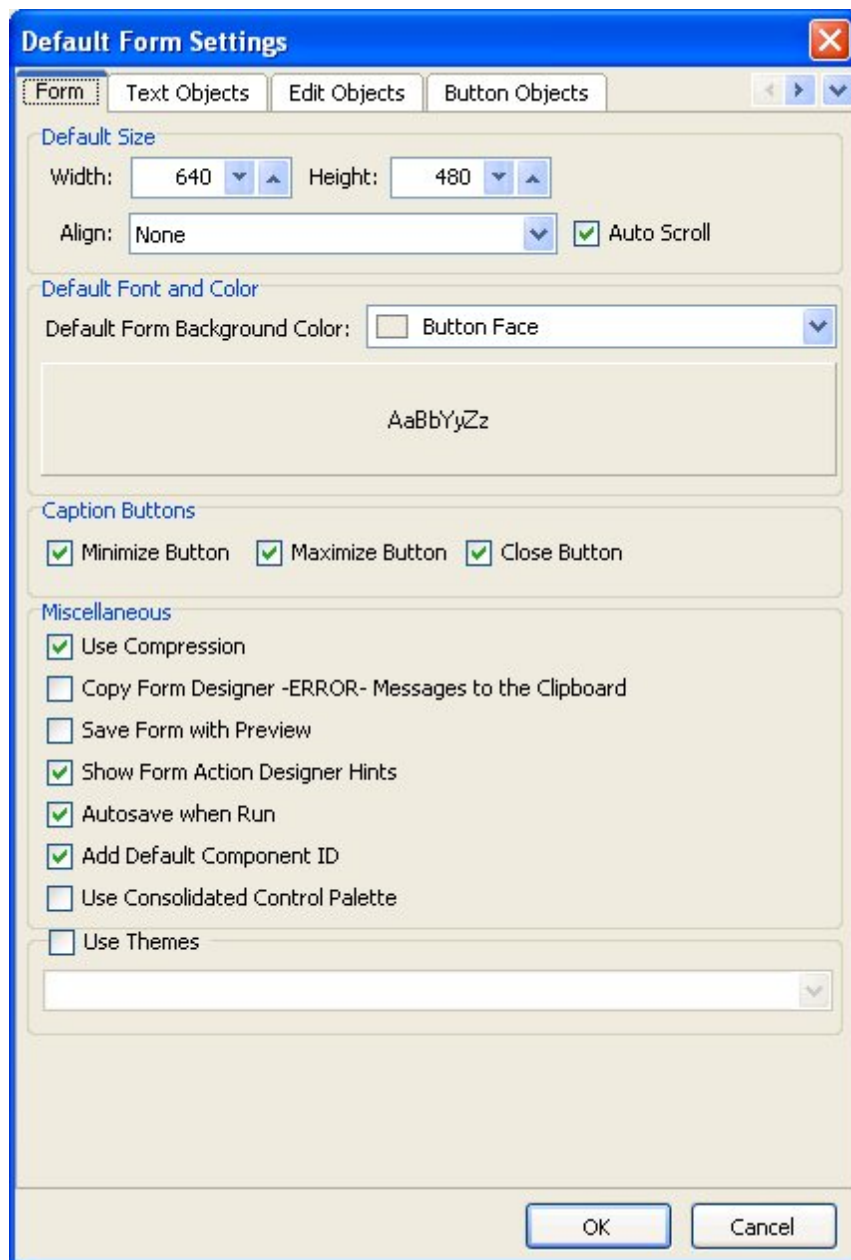
Report Name	Main Table	Comment	Size (bytes)	Date/Time	Version
ColumnarReport	Customer	To Demonstrate Columnar Report	3,923	03/14/2010 16:20:4...	1
ConditionalChkBox	YTDInvoiceTotal	To Demonstrate the use of Conditional Check...	10,385	03/14/2010 16:20:4...	1
Contacts	Contact	Customer Contact List	6,144	03/14/2010 16:20:4...	1
ContactsByCustomer	Contact	Contact List by Customer	7,223	03/14/2010 16:20:4...	1
CoverPageAndDetail	Customer	Customer List by State (Summary Page with ...	8,501	03/14/2010 16:20:4...	1
CrossTabReport	TCrossTabView	CrossTab Report (Standard)	6,277	03/14/2010 16:20:4...	1
CrossTabReportCust	TCrossTabView	CrossTab Report (Custom)	6,291	03/14/2010 16:20:4...	1
CustContInvoices	NewCustomer	Sub-Reports (4 Tables): NewCustomer, New...	19,906	03/14/2010 16:20:4...	1
CustDirWithURL_DB	Customer	Customer Phone Directory with Hyperlinks (U...	5,584	03/14/2010 16:20:4...	1
CustDirWithURL_VAR	Customer	Customer Phone Directory with Hyperlinks (U...	5,532	03/14/2010 16:20:4...	1
CustomerContacts	Customer	Sub-Reports (2 Tables): Customer and Conta...	8,935	03/14/2010 16:20:4...	1
CustomerDirectory	Customer	Customer Phone Directory	5,366	03/14/2010 16:20:4...	1

Label Name ▲	Main Table	Comment	Size (bytes)	Date/Time	Version
 ContactLabel	Contact	Contact Address Label	2,602	03/14/2010 16:20:40.000	1
 CustomerLabels	Customer	Customer Labels	2,349	03/14/2010 16:20:40.000	1
 CustShippingLabel	Customer	Customer Shipping Label	3,926	03/14/2010 16:20:40.000	1
 EmployeeLabel	Employee	Employee Labels	2,878	03/14/2010 16:20:40.000	1
 EmployeeLabel_01	Employee	Employee Labels	2,800	03/14/2010 16:20:40.000	1
 EmployeeNameTags	Employee	Employee Name Tags	2,231	03/14/2010 16:20:40.000	1
 LabelExpressions	Customer	Customer Labels	1,945	03/14/2010 16:20:40.000	1
 ProductLabels	Product	Product Labels with Bar Code	3,159	03/14/2010 16:20:40.000	1
 RBG90_CustShpLabl	Customer	RBG90 - 2DBarcode Shipping Label	3,945	03/14/2010 16:20:40.000	1
 RBG90_SecureNmTag	Employee	RBG90 - 2DBarcode Security Tag	2,166	03/14/2010 16:20:40.000	1
 SecurityNameTags	Employee	Employee Name Tags	2,231	03/14/2010 16:20:40.000	1

Hint:

While in Form Designer, when running or previewing the form, the form is automatically saved, thus stamps the date/time as well as increases the version count. If you wish to change this behavior and only stamp the date/time and increase the version count when you click on the [Save] button in Form Designer, you may change the Form Designer settings as follows:

Database Explorer | Main Menu | Settings | Form Designer ...



Supported Versions:

- R:BASE eXtreme 9.0 **(64)** for Windows (Build: 9.0.1.10701 and higher)

1.25 Update Command History

Did you know that you can update the R> Prompt Command History tool bar when running a form, printing a report, browsing a table, or when building a clause within the WHERE Builder?

Within any of the above areas, the syntax is executed through a GUI, when using the full version of R:BASE eXtreme (32/64). An added option is now available to update the R> Prompt Command History, allowing end-users or developers to easily reference the command syntax.

A "Update Command History" check box is visible within the following:

Run Form ContactsEdit

Form Table: Contact

Form Comment

Edit Existing Contact(s)

WHERE Clause

WHERE CustID > 150 ORDER BY ContLName ASC

Run Mode

☐ Enter ☒ Edit ☐ Browse

WHERE Builder ☐ MDI

OK Cancel

Print Report Contacts

Report Table : Contact

Report Comment

Customer Contact List

WHERE Clause

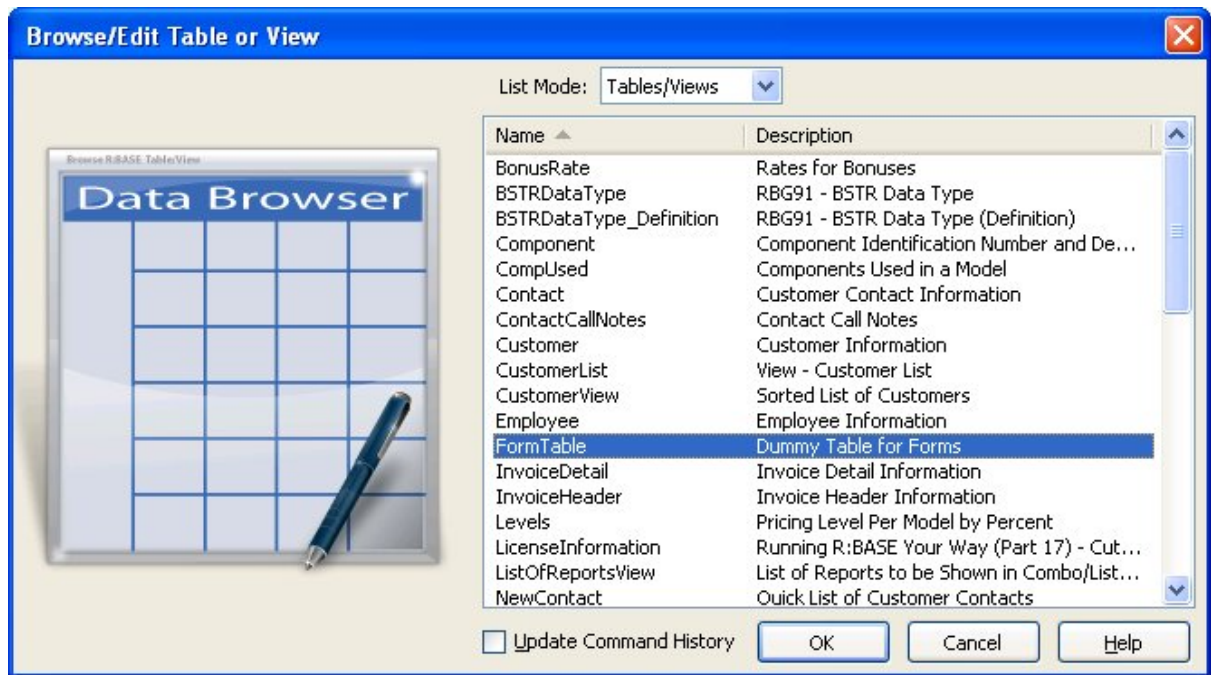
|

Print Target

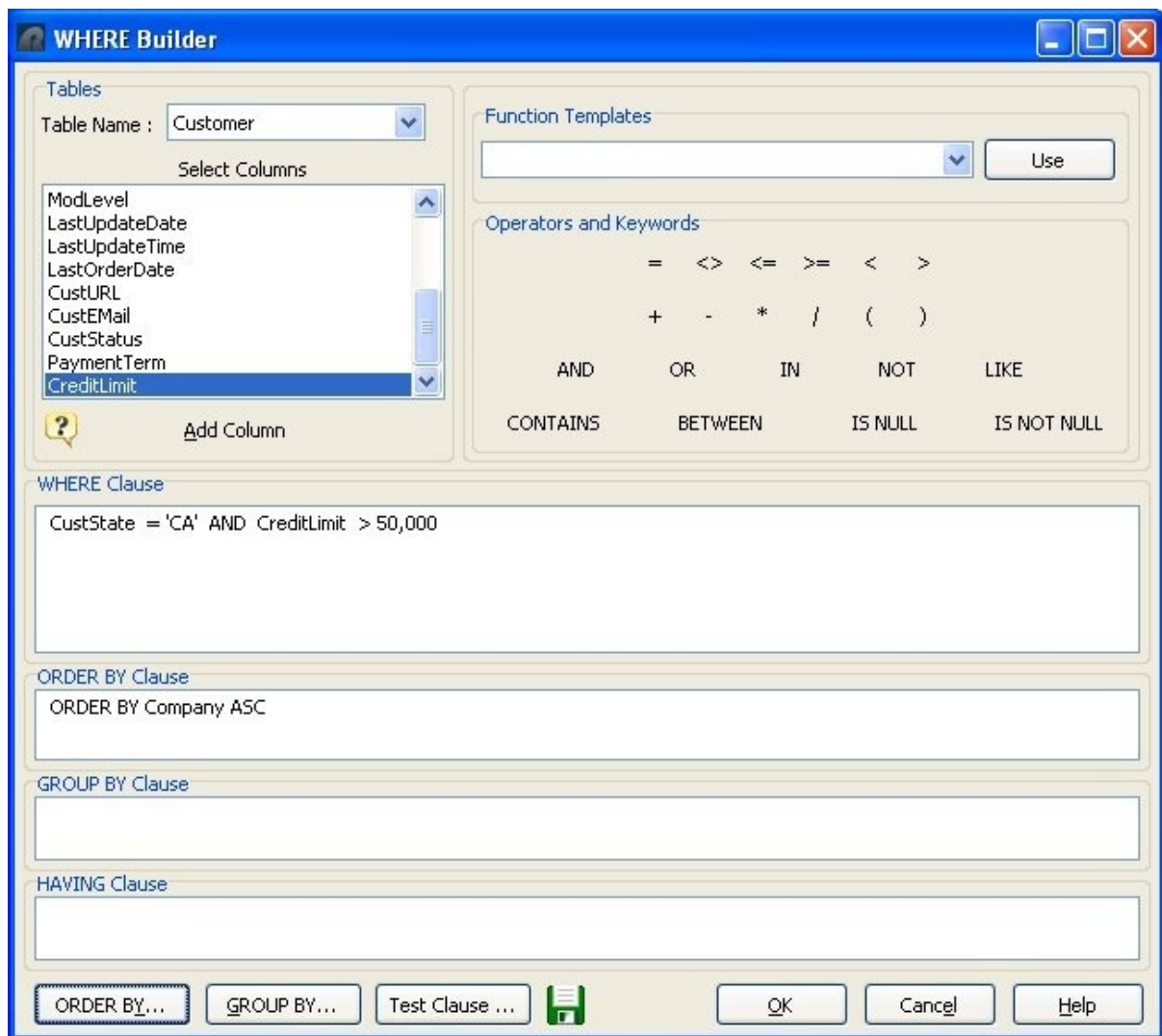
☒ Screen ☐ Printer ☐ File

WHERE Builder ☐ MDI ☐ Maximize

OK Cancel



A green diskette button is visible within the Where Builder:



Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11212 or higher)

1.26 Upgrading from R:BASE 7.6/Turbo V-8 for Windows to R:BASE eXtreme 9.x (64)

If you wish to upgrade from R:BASE 7.6/Turbo V-8 for Windows to R:BASE eXtreme (64), use the following simple steps:

01. Start R:BASE 7.6/Turbo V-8 for Windows
02. At the R> Prompt:

```
DISCONNECT
CONNECT dbname
SET NULL -0-
OUTPUT dbname.all
UNLOAD ALL
OUTPUT SCREEN
EXIT
```

03. Start R:BASE eXtreme (64) and switch to the folder with previous database and dbname.all and dbname.lob files.

04. At the R> Prompt:

```
SET FEEDBACK ON  
RUN dbname.all
```

Watch your database being built in R:BASE eXtreme (64).

05. Your new RBASE eXtreme (64) database will include the following four files.

- dbname.RX1
- dbname.RX2
- dbname.RX3
- dbname.RX4

All your working R:BASE 7.6/Turbo V-8 for Windows applications, command files, and routines should work accordingly.

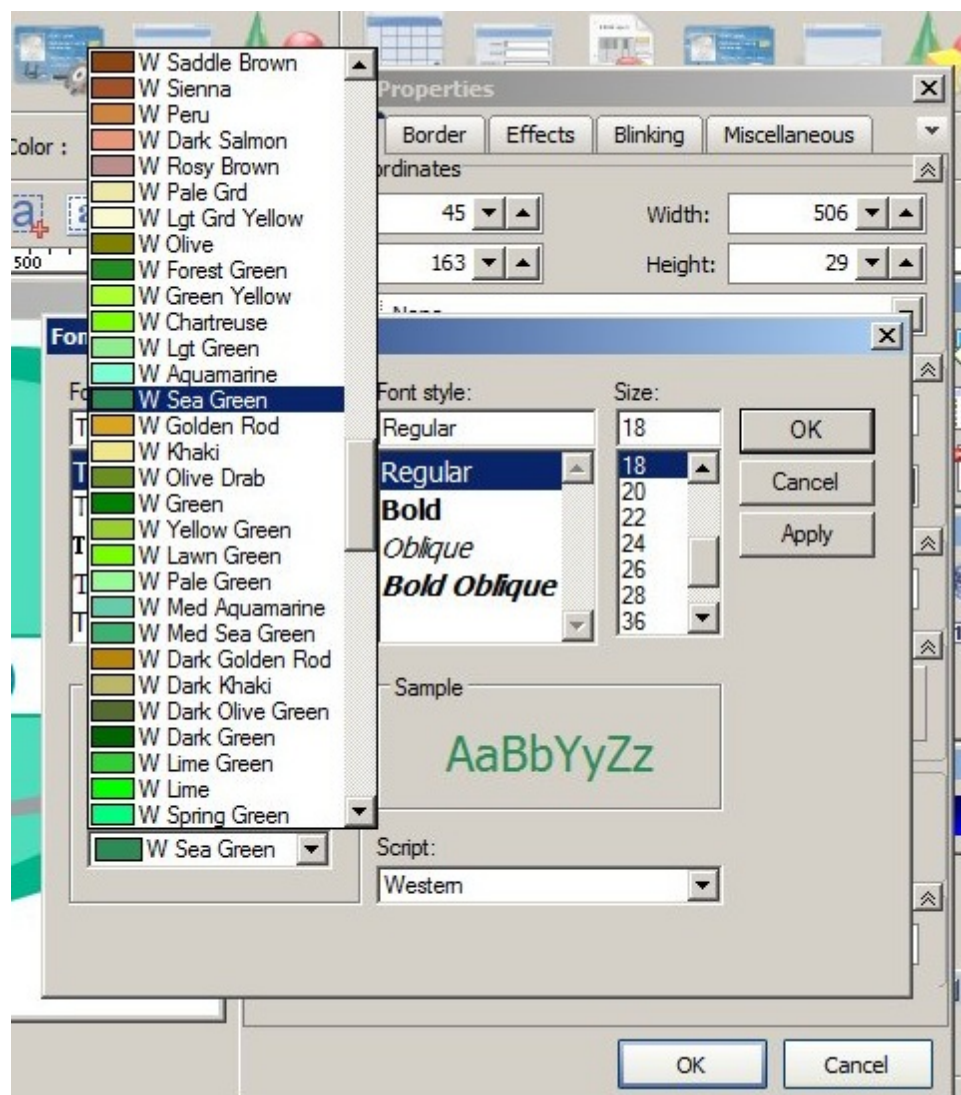
After upgrading to R:BASE eXtreme (64), you can take advantage of all bug fixes, enhancements, and most importantly the built-in tools and features, not to mention the completely re-designed interface, development environment and the enhanced R:BASE Engine!

1.27 Using Expanded Color Palette

The Data Dictionary [F3] Key in R:BASE eXtreme (32/64) provides the option to choose a color from the list of expanded colors.

While programming and customizing applications, if you wish to use custom font color, background color, for CHOOSE, DIALOG, or PAUSE commands you can press the [F3] key to open the Data Dictionary, select the color and then either double-click for single item or [OK] button for multi-select items.

Did you know that now you can select all 188 colors from the "Font" Control Panel while in Form, Label, or Report Designer?



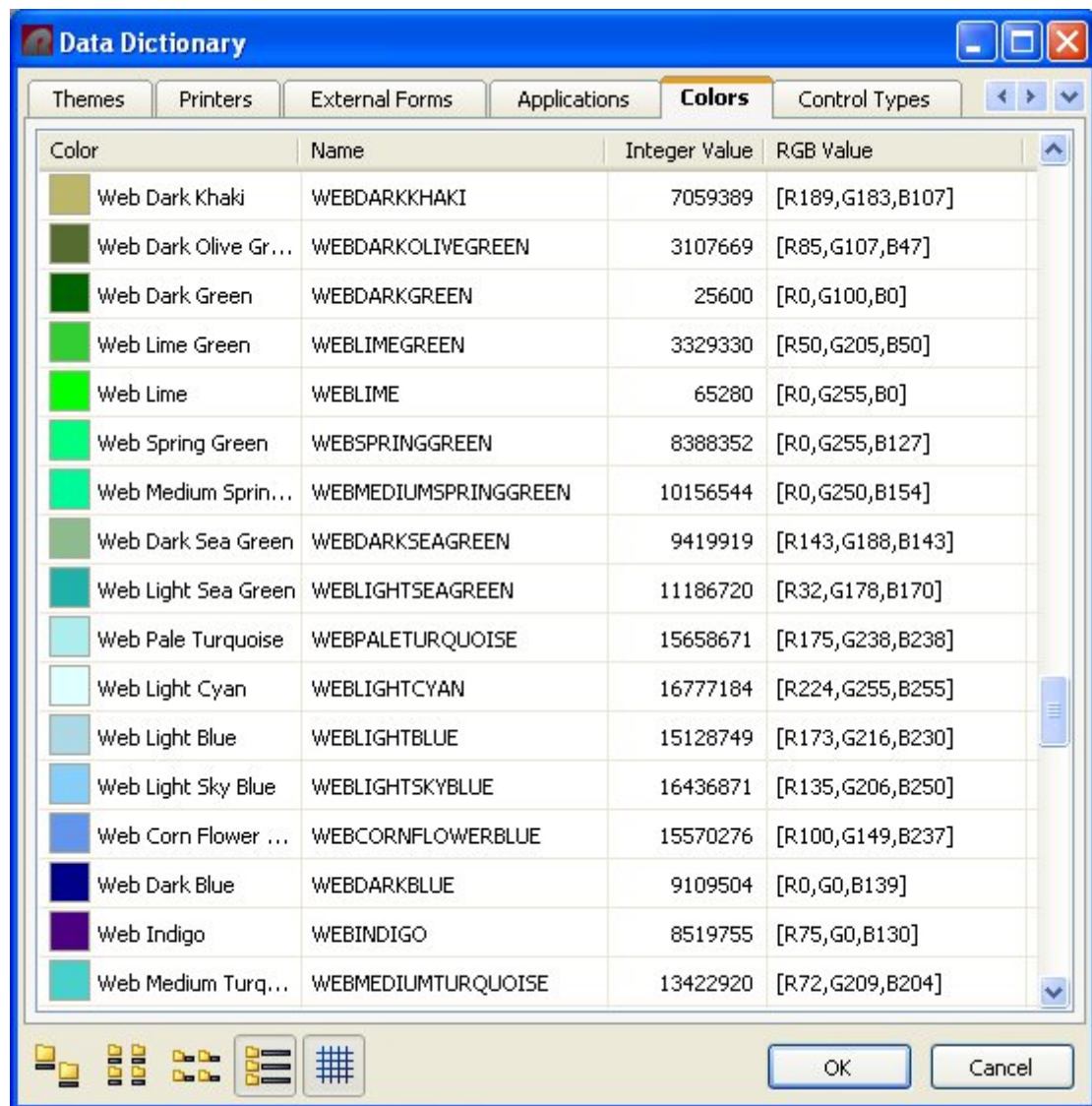
Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11111 or higher)

1.28 Using Extended Colors

Did you know that you can use the extended colors defined in R:BASE eXtreme that can be accessed while in Form, Label or Report Designers?

You can also use enhanced Data Dictionary [F3] key to access the complete list of colors along with Displayed Color, Name, Integer and RGB value.



Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build: 9.0.1.10701 and higher)

1.29 Using Custom Themes in R:BASE eXtreme

Did you know that you can integrate your own custom theme in R:BASE eXtreme?

There are **86** (35 old + 51 new) pre-defined themes available in R:BASE eXtreme. These themes can be applied to Internal Forms, External Forms (.rff), Applications (.rba), the Print Preview window, CHOOSE, DIALOG, PAUSE, PLUGIN (RCalculator), and PRNSETUP dialog windows.

Here is a list of documented themes in R:BASE eXtreme:

01. Aqua
02. BeOS
03. Blade
04. Blue Monkey
05. Bugatti
06. Catalyst

07. Celestial
08. Chrome
09. Clear Orange
10. Convergence
11. Crystal Blue
12. Dazzle
13. Elegance
14. Eternal
15. Forest Green
16. Destiny
17. Gallardo
18. Homestead
19. iTunes
20. KDE
21. Legends
22. Luna
23. Luxor
24. Metallic
25. Mind Wood
26. Mint
27. Navy
28. Office 2007
29. Panther
30. Plex
31. Prof Skin
32. QNX
33. Radiance
34. Royale
35. Sentinel Blue
36. Sentinel Green
37. Sentinel Red
38. Sentinel Purple
39. Sentinel Silver
40. Seven
41. Sniper
42. Soft Blue
43. Swing
44. Venom
45. Vienna
46. Vista CG
47. Vista New
48. Water Color
49. Windows Media Player 11
50. Wood
51. Yrgen Style

If that is not enough, now you can integrate your own custom theme in R:BASE eXtreme!

Here's how:

01. Create a separate folder, such as "Styles" under the same folder with your database and application (s).
02. Copy your own custom designed theme (themename.msstyles) file in "Styles" folder.
03. Use the following PROPERTY command to load your custom designed theme in your application startup or RBASE.DAT file.

```
-- Load Theme
PROPERTY LOAD_THEME 'themename' 'Styles\themename.msstyles'
-- your additional code here
RETURN
```

04. Use the following PROPERTY command to release your custom designed theme from memory, such as application EXIT routine.

```
-- Release Theme
```

```
PROPERTY RELEASE_THEME 'themename' 'TRUE'
RETURN
```

05. Use the following PROPERTY command to change custom theme.

```
-- Change Theme
PROPERTY CHANGE_THEME 'themename' 'filepathandname'
RETURN
```

Example:

```
PROPERTY CHANGE_THEME NewLuna 'Styles\LunaXP.msstyles'
RETURN
```

After this command is issued, the theme NewLuna will use the styles defined in the LunaXP.msstyles file. This command parameter is provided to alter the theme file, and to avoid changing the specified "theme name" is every location within the code.

06. In a compiled application, you may embed your custom themes as built-in resource without including external files.

From the R:Compiler interface, choose the "Additional Resources" option, select the "Themes" tab, and select the "Add Themes ..." or "Load Theme(s) from Library..." buttons.

Notes:

- All previously defined Forms which are redefined to use Themes should be thoroughly checked prior to putting into production, as objects and text may look substantially different.
- To review all Themes in a live form, run the "Dynamic R:BASE eXtreme Theme Selector" form, RBG9_ThemeSelctr, within the RRBYW18 sample database (bundled with full installation) of R:BASE eXtreme (32) and (64).

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10511 or higher)

1.30 Using R:BASE eXtreme 9.5 Executable Startup Options

R:BASE eXtreme for Windows supports several startup parameters that users can embed in the desktop shortcut properties, to launch a custom R:BASE application, or to launch R:BASE in a different folder. When multiple parameters are specified, each must be separated with a space.

Target

-A

This option tells R:BASE to look in the specified "Target" folder first for the R:BASE engine and configuration files. This option is beneficial if you are making only one installation of R:BASE on a network server and want local workstations to be able to launch the R:BASE eXtreme program without the need to install it on the local workstation. Add the "-A" parameter after the executable at the end of the "Target:" field value. The executable and "-A" parameter should be separated with a space.

"-BLOB <filename>"

This option opens the specified file (rich text, image, etc.) in the R:BASE BLOB Editor as the initial screen, when the program is launched. Note that there is a single space between the BLOB and the file name parameter, and that the BLOB <filename> must be enveloped in double-quotes.

Example: C:\RBTI\RBG95_64\RBG95_64.EXE "-BLOB C:\RBTI\RBG95_64\License.rtf"

-C

This option opens the R> Prompt window when the program is launched.

-E

This option opens the R:BASE Editor when the program is launched.

"-E <filename>"

This option opens the specified file in the R:BASE Editor when the program is launched. Note that there is a single space between the E and the file name parameter, and that the E <filename> must be enveloped in double-quotes.

Example: C:\RBTI\RBG95_64\RBG95_64.EXE "-E C:\RBTI\RBG95_64\ReadMe.txt"

-L

This option opens the Database Explorer when the program is launched.

"-O filespec"

Specifies an alternate R:BASE configuration file to use for startup information.

filespec

This option specifies a startup file opens your custom application directly. It can be a command file (.DAT, .RMD, .CMD) or an R:BASE application file (.RBA).

Start in

By editing the "Start in:" field, you can alter what folder location R:BASE will launch in. You can specify a local folder, a mapped network drive, or a UNC path.

Launching Applications

To launch a custom application on a network folder, edit the "Start in:" field to the database and custom application folder. Then, specify your R:BASE application file or startup file in the "Target:" after the R:BASE executable. Separate the executable and startup file with a space.

Notes

- The order in which the parameters are listed in the Target field is the order in which the modules will open and appear in the R:BASE program, with the last parameter displayed.

For example, using the following Target: C:\RBTI\RBG95_64\RBG95_64.EXE -E -L -C

R:BASE will open with the modules in the order of R:BASE Editor, Database Explorer, and R> Prompt, with the R> Prompt window displayed.

- When multiple parameters are specified, each must be separated with a space.

Examples

-- Example 01:

Launches R:BASE eXtreme 9.5 (64) in the RRBYW18 sample database folder, opening the R:BASE Editor, R> Prompt, and Database Explorer modules while displaying the Database Explorer.

Target: C:\RBTI\RBG95_64\RBG95_64.exe -E -C -L

Start in: C:\RBTI\RBG95_64\Samples\RRBYW18

-- Example 02:

Launches R:BASE eXtreme 9.5 (32) in the program folder, opening the Database Explorer and R:BASE Editor modules, while displaying R:BASE ReadMe.txt text file.

Target: C:\RBTI\RBG95_32\RBG95_32.exe -L "-E C:\RBTI\RBG95_32\ReadMe.txt"

Start in: C:\RBTI\RBG95_32

-- Example 03:

Launches R:BASE eXtreme 9.5 (64) in the program folder, opening the Database Explorer and R> Prompt modules, while initially displaying R:BASE License.rtf in the BLOB Editor.

Target: C:\RBTI\RBG95_64\RBG95_64.exe -L -C "-BLOB C:\RBTI\RBG95_64\License.rtf"

Start in: C:\RBTI\RBG95_64

-- Example 04:

Launches locally installed R:BASE eXtreme 9.5 (32) in a shared network folder, and launches the CRM.DAT startup file.

Target: C:\RBTI\RBG95_32\RBG95_32.exe CRM.DAT

Start in: R:\RBFILES\CRM

-- Example 05:

Launches a network installation of R:BASE eXtreme 9.5 (64) in a shared network folder with the -A parameter, and launches the SPECS.DAT startup file.

Target: R:\RBTI\RBG95_64\RBG95_64.exe -A SPECS.DAT

Start in: R:\RBFILERS\PECS

-- Example 06:

Launches a network installation of R:BASE eXtreme 9.5 (32) in a shared network folder with the -A parameter, uses a custom configuration file for the user, and launches the EST.DAT startup file.

Target: R:\RBG95_32\RBG95_32.exe -A "-O R:\RBG95_32\CFG\JOE\RBENGINE95_32.CFG" EST.DAT

Start in: R:\RBFILERS\EST

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20430 or higher)

1.31 Using the #NOW System Variable

Did you know that in addition to #DATE, #TIME, #PI, SQLCODE, and SQLSTATE, now you also have an additional #NOW system variable?

Example 01:

```
SHOW VARIABLES
```

Among other system variables, such as #DATE, #TIME, #PI, SQLCODE, and SQLSTATE, #NOW will also be included when using the SHOW VARIABLES command at the R> prompt.

Example 02:

```
SET VAR vCurrentDateTime = .#NOW
```

The resulting variable vCurrentDateTime will return current date time with DATETIME data type.

Example 03:

```
UPDATE tablename SET datetimecolname = .#NOW WHERE ...
```

Will update the datetimecolname with DATETIME data type with current date and time value.

Example 04:

```
INSERT INTO tablename (Colname1, Colname2, Colname3) +  
VALUES .vColumnValue1, .vColumnValue2, .#NOW
```

1.32 Using the Enhanced Find in Files Utility

Did you know that you can open the Find in Files utility and it will now load with its previously used options, along with a combo box with the last 10 searched items?

Using the built-in Editor in R:BASE eXtreme 9.5 (32/64) or stand-alone R:BASE Editor 9.5, the "Find in Files" option will now remember its previously used options, along with a combo box with the last 10 searched items.

In addition, the "Skip Files" field has been added to the Find in Files search utility to exclude files from the text search.

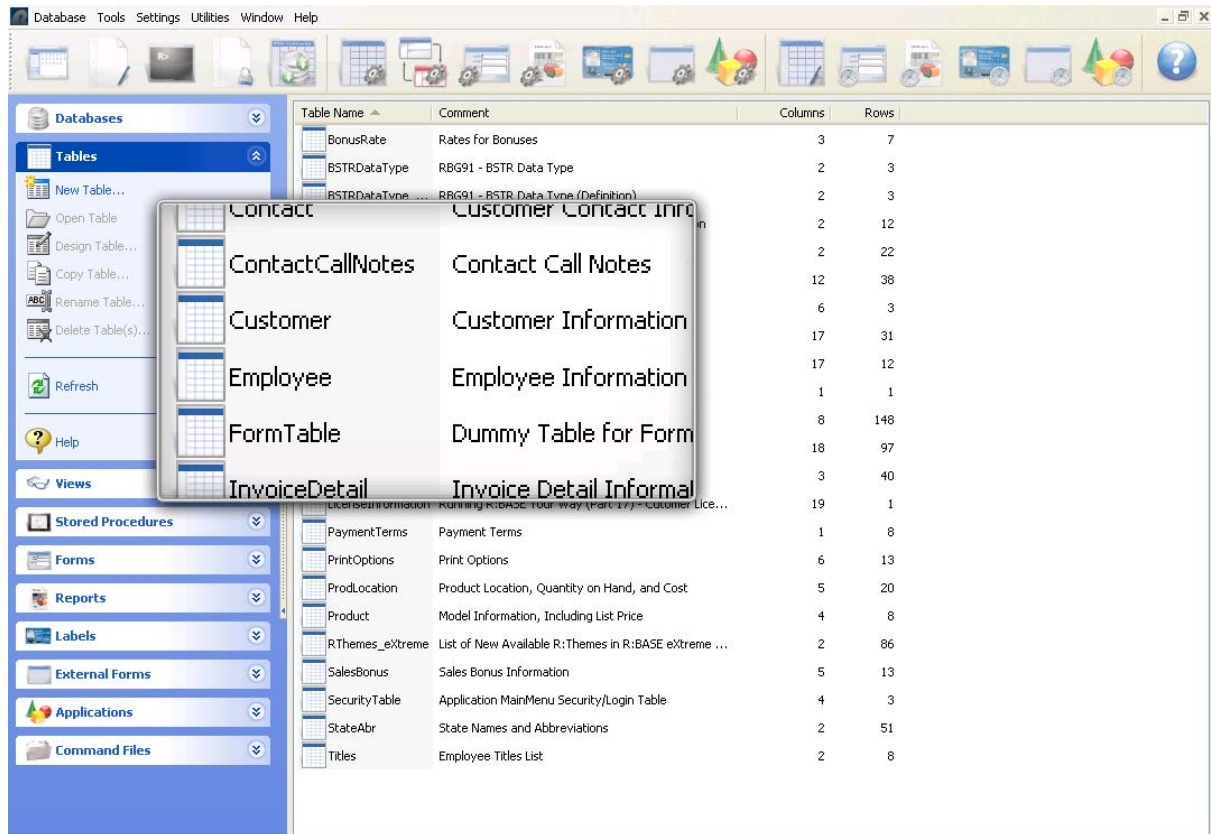
Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

1.33 Using the Magnifying Glass

Did you know that you can use the Magnifying Glass to zoom any object, text, or even Expression Window when defining a complex expression while in Form, Label, or Report Designer? R:BASE eXtreme (32/64) includes an option to use a cool Magnifying Glass on demand.

To display the Magnifying Glass in R:BASE eXtreme, select "Utilities" > "Magnifying Glass" from the Menu Bar.



Did you know that you can expand the horizontal and vertical size of the Magnifying Glass by grabbing the corner or edge of the transparent glass displayed at the center of the screen?

Tips:

- [Ctrl]+[Alt]+M will launch the built-in Magnifying Glass (anywhere)
- [Esc] or "Right-Click | Close" will close the Magnifying Glass
- Right-Click will provide the option to zoom (2x, 4x, 8x, 16x)

Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build: 9.0.1.131028 and higher)

1.34 What Version of Engine DLL, and Files In Use?

Did you know that you can determine the exact version of the R:BASE eXtreme Engine DLL, and all related Windows DLLs that are being used with your currently installed R:BASE eXtreme?

Here's how to determine the specific version of Engine DLLs are being used with your R:BASE eXtreme:

1. Start R:BASE eXtreme (32 or 64)
2. From the main window, select "Help" > "File Versions..." from the main Menu Bar.

Notice a list of all DLLs, and Plugins if loaded, along with details including Name, Version, Size, Company, and Path.

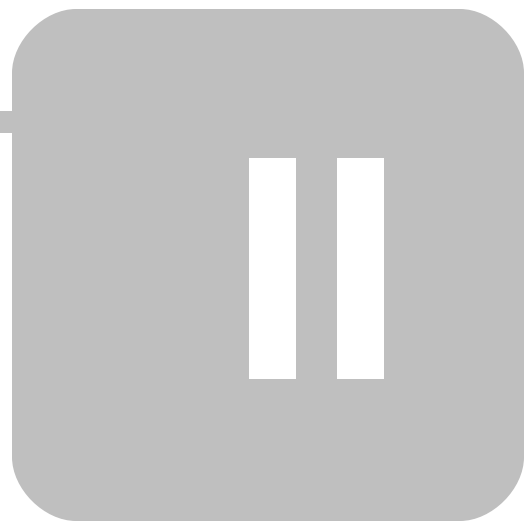
You may select to Print the list to the following:

- Printer
- Text File
- PDF File
- Clipboard

Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build: 9.0.1.10701 and higher)

Part



2 Settings

2.1 Assigning Default Component IDs for Form, Label, and Report Controls

Did you know that while in the Form, Label or Report Designer, placing a new control can also assign a default Component ID to that particular control?

Of course, you can always overwrite the default name assigned, if you wish.

This enhancement is implemented to ameliorate the use of the PROPERTY and GETPROPERTY commands.

To incorporate this cool feature, you must first enable the check box for "Add Default Component ID" within your Form, Label, and Report Default Settings.

For the Form Designer, select "Settings" > "Form Designer" from the main Menu Bar. Within the "Form" tab, notice the "Add Default Component ID" option.

For the Report/Label Designers, select "Settings" > "Report/Label Designer" > "Default Settings" from the main Menu Bar. Within the "General" tab, notice the "Add Default Component ID" option.

2.2 AUTOMUMbering in a Multi-User Environment

In a typical multi-user, multi-session environment, you may notice the resource conflict or I/O -ERROR- when resources are not available, mainly from trying to get a lock on the SYS_DEFAULTS table to update the AUTONUM values.

Did you know that by increasing the setting for WAIT and INTERVAL in a multi-user, multi-session environment can reduce the instances of resource conflicts?

You can still get a resource not available message, but the chances of getting it can be reduced by increasing the value for WAIT from 4 (default) to something larger.

SET WAIT sets the minimum number of seconds to retry the last requested resource (a table or database) before halting execution. Rather than aborting execution, SET WAIT allows you to set a length of time for R:BASE to keep trying to access a resource. A message is displayed showing the approximate percentage of wait time remaining.

If you do not run a SET WAIT command, R:BASE automatically retries the locked resource for approximately four seconds before issuing a retry message.

You can also adjust the INTERVAL in which R:BASE tries the command during the SET WAIT period. The SET INTERVAL command specifies the time to elapse before R:BASE retries the command that caused a conflict within the waiting period.

Recent update of R:BASE include enhancements related to the resource not available and I/O -ERROR- in a multi-user, multi-session environment that loops adding rows with Autonumbered columns.

Alternatively, in a multi-user, multi-session, and/or on-line R:BASE applications using a common database, you may also take advantage of (NEXT(tblname, autonumcol)) function.

A sample application is available to demonstrate the use of such feature in R:BASE eXtreme 9.5.

Sample Applications: <http://www.razzak.com/sampleapplications/>

Application Title: Understanding R:BASE (NEXT(tblname, autonumcol)) Function

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

2.3 Automating the Directory for SCRATCH Files

Did you know that you can automate the default directory for the R:BASE/OTERRO Scratch files without knowing the user's rights to their temporary directory?

SET SCRATCH sets the drive and directory location for temporary files created when sorting data.

SET SCRATCH ON - stores temporary sort files on the database drive and directory.

SET SCRATCH OFF - stores files on the current drive and directory.

SET SCRATCH <path> - provides the path to the location where temporary files are stored.

The latest builds of R:BASE and Oterro include the enhancement to simply type "TMP" for SCRATCH option in your configuration file.

SET SCRATCH TMP

Updating the SCRATCH setting to TMP in the appropriate configuration files, R:BASE/OTERRO will use the user's TMP environment settings for SCRATCH files on startup.

Using the latest builds of R:BASE/OTERRO, you need to either update the line for "SCRATCH TMP" to automatically define the windows temporary environment or use "SCRATCH C:\TEMP", for example, in R:BASE/OTERRO configuration files. If you define the "SCRATCH C:\TEMP", make sure that you actually have the C:\TEMP directory. We suggest that you keep all configuration (*.CFG) file in Windows or WinNT directory.

This option is also helpful when you establish a universal naming convention (UNC) network connection for R:BASE database as a System DSN defined with UNC, such as "\\FileServerName\SharedDirectoryName\dbname.rb1". This type of environment requires you to sure that you have also set the path for R:BASE and OTERRO temporary SCRATCH files.

Use any text editor or R:BASE Editor to edit the configuration file to read SCRATCH settings as follows:

SCRATCH TMP

This will help eliminate all issues related to the access rights, disk space and so on, when running R:BASE/OTERRO on enterprise servers and when accessing R:BASE database defined as a System DSN using the UNC option.

2.4 Cleaning Scratch (.\$\$\$) Files on Exit

Did you know that you can have R:BASE clean any remnants of temporary (.\$\$\$) scratch files, on exit? Here's how:

From the R:BASE main Menu Bar, select "Settings" > "Clean Scratch Files on Exit".

Checking this option will clean any remnants of temporary (.\$\$\$) scratch files, on exit.

Supported Versions:

- R:BASE eXtreme for Windows (Build: 9.0.1.30808 or higher)

2.5 Customizing Default Printer Settings

Did you know that among many default settings, now you can also set the default settings for your Report Printer, Paper Size and Paper Source?

Here's how:

1. Database Explorer > Settings > Report/Label Designer > Default Settings
2. Click on [Printer] tab and select the default Printer for report
3. Click on [Paper Size] tab to select the default Paper Size

4. Click on [Paper Source] tab to select the default Paper Source

These default settings are for your local workstation and will be effective for designing new reports only.

2.6 Customizing Hints

Displaying hints on your cool custom-designed forms, external forms, or even from the R:BASE Database Explorer can be very helpful for the end user.

Until now, you had the option to set background color, font, font style, font size, font effects, font color, and the time (in milliseconds) to display and hide the hint. The entire hint displays in a balloon.

What if your end-users don't like the hint embedded in the balloon? What about adding a balloon hint with an appropriate icon to display the nature of the hint?

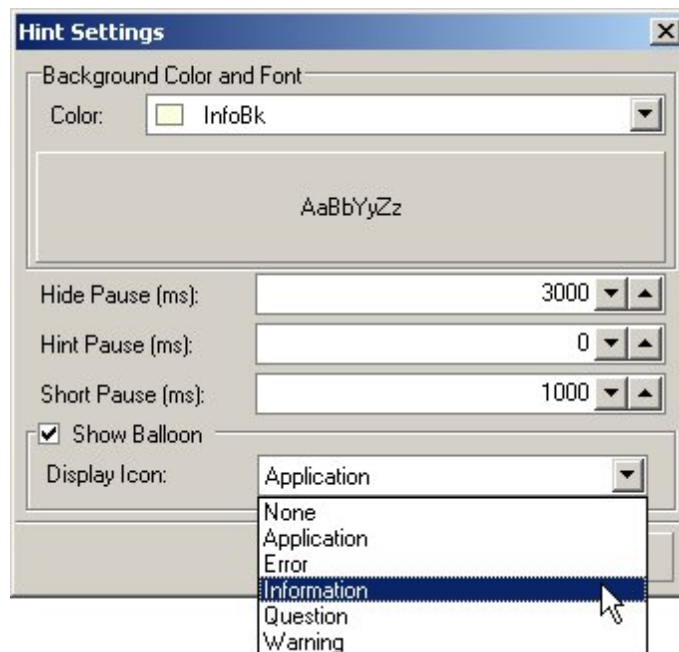
Did you know that you can now customize the hint settings to display hints with or without a balloon along with the option to use the appropriate icon when used with balloon?

Here's how:

1. Start R:BASE for Windows
2. Customize Hint Settings

Select "Settings" > "Hint Settings..." from the Menu Bar.

Notice the following options for Hint Settings:



- **Background Color and Font** - specifies the background color and text font, color and style
- **Hide Pause (ms)** - specifies the time interval for the hint to be displayed on the screen
- **Hint Pause (ms)** - specifies the time interval for the hint to appear after the cursor first moves over the control (default 5000)
- **Short Pause (ms)** - specifies the time interval for the hint to appear after the cursor leaves and immediately returns to the same control (default 0)
- **Show Balloon** - specifies whether the hint is encompassed within a balloon (default 500)
- **Display Icon** - specifies what, if any, icon is included in the hint balloon

3. If you wish to remove the balloon for hints, simply un-check the option for Show Balloon.
4. If you wish to display the balloon hint with no icon, check the option for "Show Balloon" and select "None" from the list of available Display Icons
5. If you wish to display the balloon hint with an icon, check the option for "Show Balloon" and select one of the following icons from the list of available Display Icons.
6. Click the "OK" button to save the Hint Settings.

These hint settings will be saved for this workstation.

2.7 Customizing WALKMENU Time Interval Settings

Did you know that you can customize the WALKMENU Time Interval Settings to match your typing speed?

R:BASE now includes a Walkmenu Time Interval Setting to control the WALKMENU speed for CHOOSE, ListBox, ComboBox and Pop-up Menus.

1. Start R:BASE
2. Database Explorer > Main Menu > Settings ...
3. Select Walkmenu Time Interval ... and enter the value (default value is set to 1500 ms.)

The time interval value must be specified in milliseconds.

For example:

1000 for 1 second
1500 for 1.5 seconds

Using the command file or in an EEP, you may also control the WALKMENU time interval setting by using the PROPERTY command.

Example:

```
SET WALKMENU ON
PROPERTY APPLICATION WALKMENUTIMEINTERVAL nnnn
```

About WALKMENU:

SET WALKMENU ON allows the user to access list item selections by typing the beginning characters (up to when a match is made) of their names.

2.8 Database Stored Settings

Did you know that there are several R:BASE settings that are stored within the database files, which are automatically applied to any other R:BASE instance when it connects to that same database?

These are called Database Stored Settings. The following is a list of R:BASE Database Stored Settings:

CHARacter Settings:

BLANK
DELIMIT
LINEEND
SEMI
QUOTES
PLUS
SINGLE
MANY
IDQUOTES

NULL

DATE Settings:

DATE FORMAT
DATE SEQUENCE
CENTURY Threshold
Default CENTURY

TIME Settings:

TIME FORMAT
TIME SEQUENCE

CURRENCY Settings:

CURRENCY SYMBOL
CURRENCY LOCATION
CURRENCY DIGITS
CURRENCY CONVENTION

Operating Conditions:

AUTOSKIP
BELL
CASE
REVERSE
TOLERANCE
ZERO

Database Events:

ON ERROR
BEFORE PACK
AFTER PACK
BEFORE CONNECT
AFTER CONNECT
FIRST CONNECT

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20128 or higher)

2.9 Disabling TRACE in Forms, Labels and Reports

When you are close to distributing your developed R:BASE applications and are reviewing your work from a standpoint of securing your code, you may notice that the "SET TRACE ON" setting allows for the viewing of your command syntax within Form/External Form "On Before Start" EEPs and within Label/Report "Before Generate..." custom actions.

Even if the first command in that EEP is "SET TRACE OFF", the form, label or report won't trace after that command; however, all of the code can be seen by scrolling down before the F10 key is pressed.

Sure, you can password protect your form, but you don't want your users to have to enter a password every time they use the form just to keep the code safe from an unscrupulous person who happens to have R:BASE (even the trial version will trace!).

Did you know that you can disable the TRACE or ECHO by using the newly implemented option of "Disable Trace" while in Form, Label or Report Designers?

Now you can secure your code using the "Disable Trace" option. Here's how:

Forms/External Form File:

1. In Form or External Form Designer, select "Form Properties", and choose the "Miscellaneous" tab.
2. Notice the "Disable Trace" checkbox option.

Labels:

1. In the Label Designer, select "Label" from the main Menu Bar.
2. Notice the "Disable Trace" option.

Reports:

1. In the Report Designer, select "Report" from the main Menu Bar.
2. Notice the "Disable Trace" option.

2.10 Display Extended Characters

You can force R:BASE to display extended characters correctly by editing your R:BASE configuration file (.CFG). Look within the file for the Case and Collating tables. In the CFG file look for CASEP and COLLATE.

1. Based on the character that is not displayed correctly, like the Õ, capture its ASCII value, 213, from the Windows Character Map utility.
2. Within the CFG file, under CASEP and COLLATE, you may see:

```
CASEP 213 79
```

```
COLLATE 213 79
```

3. Change the 79, which is the ASCII value for the capital letter O, to 213. Then, adjust any other characters to their correct counterpart for your extended text.
4. Now, you have to PACK the Case and Collating tables at the R> Prompt with the PACK command as follows:

```
DISCONNECT
SET MULTI OFF
CONN dbname
PACK ALL WITH USER CASE
DISCONNECT
SET MULTI ON
CONN dbname
```

The correct values should now display correctly in the tables, forms, and reports.

You may also need to change your R> Prompt "Console Font" setting in order to use your extended characters in R> Prompt window queries.

1. From the Main Menu Bar, choose "Settings" > "R> Prompt..."
2. Select the "ASCII" radio button and select the "OK" button

2.11 Duplicating Your Personalized R:BASE Settings

When installing R:BASE eXtreme (32/64) on your computer, the default settings are automatically installed and initiated when you first start R:BASE eXtreme. Then, you may further customize R:BASE Settings on your working desktop, including the look and feel, as well as all default settings when designing a new database, tables, forms, labels, reports, external form files, and applications as follows:

- Startup Options

- Database Explorer
- R:BASE Editor
- R> Prompt
- Data Browser
- Data Designer
- Form Designer
- Report/Label Designer
- Application Designer
- BLOB Editor
- Hint Settings
- Walkmenu Time Interval
- Default Printer Font
- Custom Colors
- Registry Settings
- Show Main Toolbar
- Warn When Closing R:BASE Session
- Show Check Box to Suppress Error Messages
- Clean Scratch Files on Exit
- Configuration Settings

These custom settings are saved and are effective when you are the same logged in user on that particular workstation. Any change in the layout afterward is also updated immediately, including Favorite Folders.

If you are in a situation with many workstations, such as office, home, two notebooks for the road, remote client(s) workstations, etc., you will have to either customize each individual workstation to match your favorite settings, custom colors, layouts, etc., one at a time, or live with what you have and customize as you go. This is not a productive R:BASE development environment, wouldn't you agree?

Did you know that you can export your favorite R:BASE eXtreme (32/64) settings (not including the license, of course) from one workstation to another by simply using the new "Registry Settings | Save to File" option?

Here's how:

01. Database Explorer | Main Menu | Settings ...
02. Select Registry Settings ...
03. Click on Save to File ...
04. Assign the file name and click on the [Save] button to save. The binary file will be saved as filename.bin

Keep this binary file handy when re-setting R:BASE eXtreme settings on the same computer or duplicating your personalized settings on other computer(s). Use "Load From File ..." option to load settings.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.4.11012 or higher)

2.12 Finding Default vs. Active SCRATCH Settings

The (CVAL('SCRATCH')) function returns the value of the currently active SCRATCH setting.

SET SCRATCH sets the drive and directory location for temporary (.\$\$\$) files created when managing TEMPORARY Table, TEMPORARY Views, TEMPORARY SATTACHed Tables, and Sorting data.

When using the SET SCRATCH ON, the temporary (.\$\$\$) files are stored in the database drive and directory.

When using the SET SCRATCH OFF, the temporary (.\$\$\$) files are stored in the current (startup) drive and directory.

When using the SET SCRATCH TMP, (default configuration), the temporary (.\$\$\$) files are stored in the Windows User Environment Variables folder set for TMP folder.

When using the manual SET SCRATCH <path>, the temporary (.\$\$\$) files are stored in the defined path folder location. When doing so, make sure that the folder does exist, and the user has Full Control and permission to such folder.

By default, R:BASE configuration files include the TMP for SCRATCH setting. This default will allow R:BASE or Oterro sessions to use the user's TMP environment settings for SCRATCH files on startup and eliminate all issues related to setting the SCRATCH directory and related files.

To take advantage of this setting, use the option "SCRATCH TMP" in the appropriate R:BASE and OTERRO configuration files. You may also use the "SET SCRATCH TMP" command in your application startup files.

Using the SET SCRATCH <ValidPathAndFolder> command at the R> prompt, in a command file or in application startup file, will overwrite the default SCRATCH setting defined in the R:BASE eXtreme 9.5 Configuration file.

Using the SET SCRATCH <path> command, and providing the invalid path and folder will result in an -ERROR- as follows:

-ERROR- Cannot create temporary file. (2964)

In that case, make sure that you provide the correct path and folder with full control and permissions.

In a scenario where you have overwritten the default SCRATCH setting, did you know that the R:BASE Settings will show you the "Default" and "Active" SCRATCH settings?

Here's how:

From the R:BASE eXtreme 9.5 (32/64) main menu bar, select Settings > Configuration Settings

Within the Configuration Settings dialog, select the Scratch tab

Notice the illustration, including:

[x] TMP (to store temporary files in user environment TMP directory)

Default SCRATCH Location:

Active SCRATCH Location:

Supported Versions:

- R:BASE eXtreme 9.5 (Build..: 9.5.2.20718 or higher)

2.13 Handling Form/Report/Label Designer -ERROR-Messages

Did you know that you can pre-define all required global variables for Forms, Reports and Labels within the Form, Report or Label Designer?

To avoid any inconvenience the next time you open the form, report or label with -ERROR- messages related to missing global variable(s) in expression, a new "On Before Design Action..." has been implemented for Form, Report and Label Designers to pre-define all required variables with appropriate data types before opening the form, report or label in designer.

Here's how:

Form Designer | Layout | On Before Design Action...

Report Designer | Report | Actions | On Before Design...

Label Designer | Label | Actions | On Before Design...

2.14 Turning Off User Interface Updates to Increase Performance

Did you know that you can now turn off Database Explorer update notifications in order to increase application performance?

A new operating condition setting, UINOTIF, is available to display or suppress table, view, stored procedure, form, report, and label user interface updates at the Database Explorer.

Syntax:

```
SET UINOTIF OFF - suppresses Database Explorer update notifications
SET UINOTIF ON (default) - displays Database Explorer update notifications
```

With UINOTIF set to ON, new objects (tables, views, reports, etc.) will be automatically refreshed and displayed within the user interface.

Setting UINOTIF to OFF will not automatically refresh and display new objects within the user interface. Any new objects still exist, they are simply not automatically displayed. Pressing [F5] will refresh the display and any new objects will appear.

The UINOTIF setting is located within the R:BASE configuration file, and is listed in the Configuration Settings dialog, within the "Display" tab.

The SHOW command can be used to display the current UINOTIF value:

```
SHOW UINOTIF
(UINOTIF ) ON Front-End User Interface Notifications
```

As the Database Explorer is not used in most instances of custom application use, this option offers a fast and easy boost for performance!

Supported Versions:

- R:BASE eXtreme 9.5 (Build..: 9.5.3.20829 or higher)

2.15 Using Conditional TRACE in a Command File

Did you know that you can use the conditional TRACE in a command file or EEP to just debug a block of code?

A new conditional SET TRACE ON/OFF option has been implemented to execute TRACE (Interactive Command File Debugger) inside a command file or EEP to trace a block of code as defined.

Syntax:

```
SET TRACE ON/OFF (Default is ON)
```

Example 01: (typical command line option)

```
TRACE filename.ext
```

Example 02: (in a command file)

```
-- start
Your code here ....
```

```
SET TRACE ON {this will start the trace within a command file}
```

```
Your code here ...
```



```
SET TRACE OFF {this will stop the trace within a command file}
```

```
Your remaining code here ...  
-- end
```

Notes:

- Once you turn OFF the TRACE in an R:BASE session, you will need to turn it back ON.
- (CVAL('TRACE')) will return the current status of TRACE (Values: ON or OFF)
- SHOW TRACE will display the current status of TRACE (Values: ON or OFF)
- Newly created R:BASE configuration files (.CFG) will include the option for TRACE ON
- If you want no one to TRACE your code, setting the TRACE option to OFF at the beginning

2.16 Using Double-Click to Bring Up the Designers

Did you know that you can double-click on any Table, View, Stored Procedure, Report, Label, Form, External Form File, Application, or Command File to bring up the appropriate item in the corresponding designer?

After connecting to a the database and using the Database Explorer, traditionally, you would first highlight the appropriate Table/View/Stored Procedure/Report/Label/Form/External Form File/Application/Command File and then right click to access the speed menu or click on the "Design" option to open the selected item in its designer.

By default, double-click is used to "Open" or "Run" selected item. However, if you wish to simply double-click on the item to open it within its designer, all you need to do is customize the Database Explorer settings.

Here's how:

Database Explorer > Main Menu > Settings > Database Explorer ...
Click on "Double Click Open Designer" option to Select

These custom settings are specific to the logged in user only. Using these custom settings, you can run R:BASE Your Way!

2.17 Warning When Changing Table Structure

Previous updates of R:BASE eXtreme (32/64) for Windows included an enhancement request to warn the user when accessing and managing the table structure (RBDEFINE), in a multi-user connected database environment, using the Database Explorer.

Did you know that now you can turn off that -Warning- message, if you are a veteran and know what you are doing, taking full responsibility for accessing or managing table structure in a multi-user environment?

Here's how:

01. Start R:BASE eXtreme

02. Database Explorer | Main Menu | Settings | Data Designer ...

Notice the option for "Warn When in Multi-User Environment"

03. Un-Check this option to turn off the warning message.

The default installation is always set to checked.

Now you can have your cake and eat it too.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.4.11012 or higher)

2.18 Warning When Closing an R:BASE Session

Have you ever been in a situation with many opened R:BASE sessions on your normal or extended desktop (because you can), and then mistakenly clicked on the close [x] icon of the R:BASE Database Explorer, closing the session (as it should), and you wished it would have warned you if you really wanted to close that session of R:BASE?

Now R:BASE includes a "Setting..." to prompt you if you really want to close an R:BASE session when clicking on the [x] close window icon of the Main Database Explorer.

Here's how:

1. Start R:BASE
2. Database Explorer|Main Menu|Settings

Check the Setting for:

[x] Warn When Closing R:BASE Session (the default is set to Off - unchecked)

3. Now close the R:BASE session by clicking on the [x] and close window icon on the Main Database Explorer window.

Notice the confirmation dialog box?

"Do you really want to close this R:BASE session? [Yes] [No]"

Part



3 R> Prompt

3.1 Copying/Pasting Multiple Line Code

When copying your complete code with multiple lines and continuation symbols such as "+" at the R> prompt, it can be tedious to take out all the plus characters and turn the entire code as one line for the R> prompt to execute properly.

For example, a command looks like the following when typed in REdit or the R:BASE Editor.

```
CHOOSE vwhereCluase FROM #WHERE IN Customer +  
OPTION THEMENAME R:BASE Rocks! +  
|WHERE_CLAUSE WHERE CustState IS NOT NULL +  
GROUP BY CustState HAVING COUNT(CustState) > 1
```

If you copy and past the above command, with multiple lines and continuation characters at the R> prompt, it will be copied exactly as is. Then, you would have to eliminate the "+" characters before pressing the [Enter] key to execute the command.

Did you know that you use the [Shift]+[Ctrl]+[Alt]+[C] keys to copy the entire block, then paste it at the R> prompt as one single line without the continuation "+" characters?

Using the [Shift]+[Ctrl]+[Alt]+[C] keys eliminates the continuation "+" characters at the end of each line when pasted.

3.2 Documenting and Recycling the Command History

The enhanced Command History panel is a new addition within the R> Prompt window. If it is not displayed, you can access the Command History panel, using the [Ctrl]+[H] keys, or from within the R> Prompt Settings.

To execute any command displayed within the Command History panel, you can either double click on a command, or select the command from the list, which will display the command at the R> Prompt Input console, and then press the [Enter] key.

Did you know that you can [Save] the entire command history to a file or copy to the clipboard for documenting or recycling purposes? You can also [Load] the command history from file.

Notice the following options when you right-click on "Command History" panel.

- Run Selected Command
- Clear Command History
- Close Command History Panel
- Load Command History from File...
- Save Command History to File...
- Copy Command History to Clipboard

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10511 or higher)

3.3 Hot Keys

Usually, when you type a command at the "Input Console" of the R> prompt and press the [Enter] key, the "Output Console" displays the output results. The typed command at the input console is then cleared.

If you wish to retype the same command again, you either have to use the [PageUp], [PageDn] or [Ctrl

+H] keys to view the history of all commands typed at the R> prompt. The history is retained for the current session of R:BASE. Clicking the mouse on the Output Console and then pressing the [PageUp] key reveals the entire history of output results. Using the CLS command clears the buffer of all stored results in Output Console.

Did you know that you can type the command at the input console of the R> prompt and still retain the typed command by simply holding the [Shift] key and then pressing the [Return] Key?

Holding the [Shift] key and then pressing the [Return] key will retain the typed command in the input console of the R> prompt.

Part

IV

4 Database Explorer

4.1 Default File Names for Unloading Forms/Labels/Reports

Did you know that when you unload a form, label or report using the Database Explorer, the default file name includes a suffix "_Form", "_Label", or "_Report" for the form, label, or report?

Using this method, you will never have the problem of forms, labels, or reports with same names wiping out each other's LOB files.

For example:

When unloading a form named "Customers", the following two files will be created:

- Customers_Form.frm
- Customers_Form.lob

When unloading a label named "Customers", the following two files will be created:

- Customers_Label.lbl
- Customers_Label.lob

When unloading a report named "Customers", the following two files will be created:

- Customers_Report.rpt
- Customers_Report.lob

4.2 Exploring the Database Explorer

Here are a few search tips related to the Enhanced Database Explorer:

01. Renaming List Items

- Databases
- Tables
- Views
- Stored Procedures
- Forms
- Reports
- Labels
- External Forms
- Applications
- Command Files

Highlight the item, right-click and select "Rename ...".

You may also use [F2] key to rename selected item, or use click-pause-click to rename the selected item as well.

02. Stored Procedures - Find in Stored Procedures

From the Database Explorer, select Stored Procedures from the Group Bar menu on the left.

- I. Use [Ctrl+F] to launch "Find in Stored Procedures" Window to Find Text.
- II. Double-clicking on the selected item in Search Results will launch R:BASE Editor with highlighted found text. Use [F8] key to search next match while in the same block of code.

03. Forms - Find in Custom EEPs

From the Database Explorer, select Forms from the Group Bar menu on the left.

- I. Select a single, multiple, or [Ctrl+A] for all forms.

- II. Use [Ctrl+F] to launch "Find in Custom EEPs" dialog box to enter text to find.
- III. Selecting the form in [Form List] will expand Search Results with itemized list of controls and embedded Custom EEP.
- IV. Double-clicking on the link will launch R:BASE Editor with highlighted found text. Use [F8] key to search next match while in the same block of code.

Note:

While editing the Custom EEP, notice the Editor Caption with all details related to the Form Name, Control Name, Caption, Coordinates, and option that is used for Custom EEP, such as On Click EEP, etc.

04. Reports - Find in Custom EEPs

From the Database Explorer, select Reports from the Group Bar menu on the left.

- I. Select a single, multiple, or [Ctrl+A] for all reports.
- II. Use [Ctrl+F] to launch "Find in Custom EEPs" dialog box to enter text to find.
- III. Selecting the report in [Report List] will expand Search Results with itemized list of sections/bands and embedded Custom EEP.
- IV. Double-clicking on the link will launch R:BASE Editor with highlighted found text. Use [F8] key to search next match while in the same block of code.

Note:

While editing the Custom EEP, notice the Editor Caption with all details related to Report Name, Action, Band, and option that is used for Custom EEP, such as On Before Generate EEP.

05. Labels - Find in Custom EEPs

From the Database Explorer, select Labels from the Group Bar menu on the left.

- I. Select a single, multiple, or [Ctrl+A] for all labels.
- II. Use [Ctrl+F] to launch "Find in Custom EEPs" dialog box to enter text to find.
- III. Selecting the label in [Label List] will expand Search Results with itemized list of sections/bands and embedded Custom EEP.
- IV. Double-clicking on the link will launch R:BASE Editor with highlighted found text. Use [F8] key to search next match while in the same block of code.

Note:

While editing the Custom EEP, notice the Editor Caption with all details related to Report Name, Action, Band, and option that is used for Custom EEP, such as On Before Generate EEP.

06. External Forms - Find in Custom EEPs

From the Database Explorer, select External Forms from the Group Bar menu on the left.

- I. Select a single, multiple, or [Ctrl+A] for all external forms.
- II. Use [Ctrl+F] to launch "Find in Custom EEPs" dialog box to enter text to find.
- III. Selecting the form in [Form List] will expand Search Results with itemized list of controls and embedded Custom EEP.
- IV. Double-clicking on the link will launch R:BASE Editor with highlighted found text. Use [F8] key to search next match while in the same block of code.

Note:

While editing the Custom EEP, notice the Editor Caption with all details related to Form Name, Control Name, Caption, Coordinates, and option that is used for Custom EEP, such as On Click EEP, etc.

07. Applications - Find in Custom EEPs

From the Database Explorer, select Applications from the Group Bar menu on the left.

- I. Select a single, multiple, or [Ctrl+A] for all applications.
- II. Use [Ctrl+F] to launch "Find in Custom EEPs" dialog box to enter text to find.
- III. Selecting the application in [Application List] will expand Search Results with itemized list of controls and embedded Custom EEP.

IV. Double-clicking on the link will launch R:BASE Editor with highlighted found text. Use [F8] key to search next match while in the same block of code.

Note:

While editing the Custom EEP, notice the Editor Caption with all details related to Application Name, Control Name, Caption, Coordinates, and option that is used for Custom EEP, such as On Click EEP, etc.

08. Command Files - Find in Files

From the Database Explorer, select Command Files from the Group Bar menu on the left.

- I. Select a single, multiple, or [Ctrl+A] for all command files.
- II. Use [Ctrl+F] to launch "Find in Files" dialog box to enter text to find.
- III. You may also customize the search using Search Options and File Attributes. Click on [Start] button to search.
- IV. Highlight one, multiple, or [Ctrl+A] for all command files that match the criteria. Click on [Open File(s)] button to open all command files in R:BASE Editor.

09. Command Files - Editing Multiple Files at Once

From the Database Explorer, select Command Files from the Group Bar menu on the left.

Select a single, multiple, or [Ctrl+A] for all command files and then right-click to select Edit File(s) to edit all files at once.

Make sure to customize R:BASE Editor Settings to take advantage of new and enhanced options, such as:

General (Background, Selected Block, Text Match)

- o String
- o Display
- o Line Highlight
- o Background
- o Printer Font
- o Compare by Content
- o Structure Toolbar
- o Syntax Schema

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10414 or higher)

4.3 Form Preview From the Database Explorer

Did you know that you can preview any Form from the Database Explorer?

Here's how:

A new setting has been introduced to preview your form canvas from the Database Explorer, when you are not even using the form designer.

Steps to activate this "Preview" option:

1. From the Database Explorer, select "Settings" > "Form Designer..." from the Menu Bar.

The "Default Form Settings" dialog window will appear.

2. Check the option for [] Save Form with Preview
3. Click on [OK] button to save the user settings.

Now open any form in form designer, make any changes, save the form and then close the Form Designer. From now on, creating a new form or updating an existing form will be saved with the preview capabilities.

When using the [Forms] section of the Database Explorer, select that form you have just saved and then right-click on it for all speed menu options. Notice the additional item [Form Preview]. Selecting this option will display the Form Preview.

4.4 Key Word Search Options

Did you know that there are four (4) options to search for a key word?

1. [Ctrl] + F
 - Find in Custom EEPs
 - Stored Procedures, Forms, Reports, Labels, External Forms, Applications, Command Files
2. [Ctrl] + L
 - Find in Control Properties - Captions
 - Forms, Reports, Labels, External Forms
3. [Ctrl] + [Shift] + F
 - Find in Expressions
 - Forms, Reports, Labels
4. [Ctrl] + N (Search key words in Name or Comments)
 - Tables
 - Views
 - Stored Procedures
 - Forms
 - Reports
 - Labels
 - External Forms
 - Applications
 - Command Files

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21008 or higher)

4.5 One Click UNLOAD for Data and Structure

Did you know that you can UNLOAD the STRUCTURE as well as the DATA (ALL), using the one-click option of the R:BASE Database Explorer?

Here's how:

```
CONNECT RRBYW18
```

Database Explorer | Tables

Right-click on the desired table and click on "Unload" > "Structure and Data..." option of the speed menu.

This will UNLOAD the data as well as the structure of selected table to an external file, using the default file name as tablename.all, which you can change, if you wish.

The other options for "Unload" include strictly structure output:

- Structure...
- Definition...

- Definition with Constraints, Indexes, Comments...

4.6 Open Table/View Options Using the Data Browser/Editor

Traditionally, when using the Database Explorer, double-clicking on a table/view will bring up the Data Browser in a Browse mode and then you can sort the data by clicking on a column header or using the Sort options from the main menu. You can also to press [F4] key or click on the toolbar icon to toggle Edit or Browse mode. There is no option to limit the number of rows with a WHERE clause after you have double clicked on the table/view.

Did you know that you can use the new Setting for the DB Explorer to display a "Open Table" dialog with the following options:

- WHERE Clause
- Open As: [] Browse [] Edit
- WHERE Builder
- Open As MDI Window

This setting will provide you with options to customize the data and Data Browser/Editor Window itself.

RBG9 Main Window | Main Menu | Settings | Database Explorer ...

Supported Versions:

R:BASE eXtreme 9.0 (Build: 9.0.1.11111 and higher)

4.7 Renaming Database Explorer Objects

Using the new Main Window and Database Explorer, while seeing the list of Tables, Views, Stored Procedures, Forms, Reports, Labels, External Form Files, Applications, and Command Files, now you can simply left click twice (not double-click) or use the [F2] key to rename the displayed name accordingly.

Be careful using this shortcut!

Supported Versions:

R:BASE eXtreme 9.0 (Build: 9.0.1.131028 or higher)

4.8 Resetting Version Number of External Form Files

Similar to internal database forms, the External Form Files also include the "Version" control option to keep track of external form file revisions.

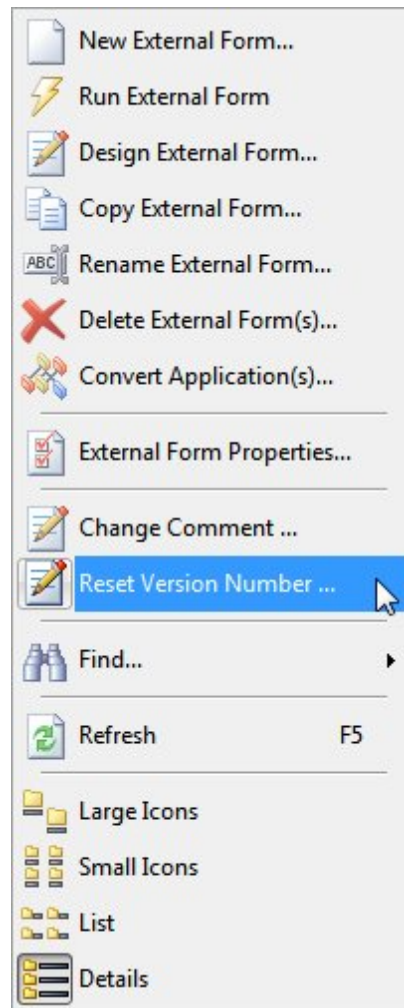
Did you know that you can reset the version number of External Form Files?

The latest version and build of R:BASE eXtreme 9.5 (32/64) include the option to reset the version number of External Form Files.

Here's how:

Within the Database Explorer, select External Forms ...

Highlight the External Form, Right-Click, and select Reset Version Number ...



In addition to resetting the version number, you may also change the comment for external form file, if you wish.

Database Explorer | External Forms ...

Highlight the External Form, Right-Click, and select Change Comment ...

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20430 or higher)

4.9 Searching for Text in Control Properties

Did you know that you can search for specific text that may be defined in Form, Report, Label, and External Form control properties?

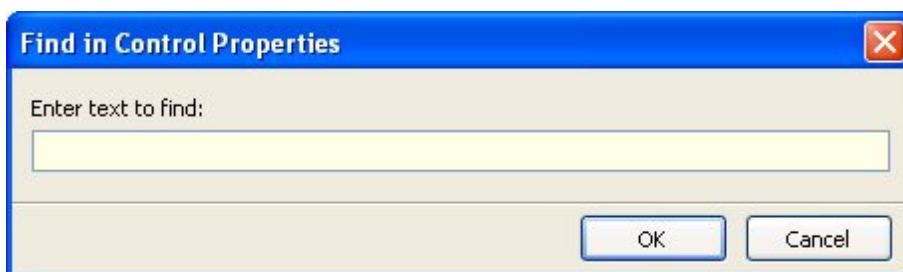
The new "Find in Control Properties" feature opens a search utility to locate specific text defined within the properties of any object for the connected database. The functionality to search for text within Control Properties allows users to locate Component IDs, hints, text captions, columns listed in WHERE Clauses for Lookup controls, and also pop-up menus. Any text defined within a form, report, or label control will be used in the search!

When searching for text within Control Properties, text strings can be located within the following modules:

- Forms
- Reports
- Labels
- External Forms

Here's how:

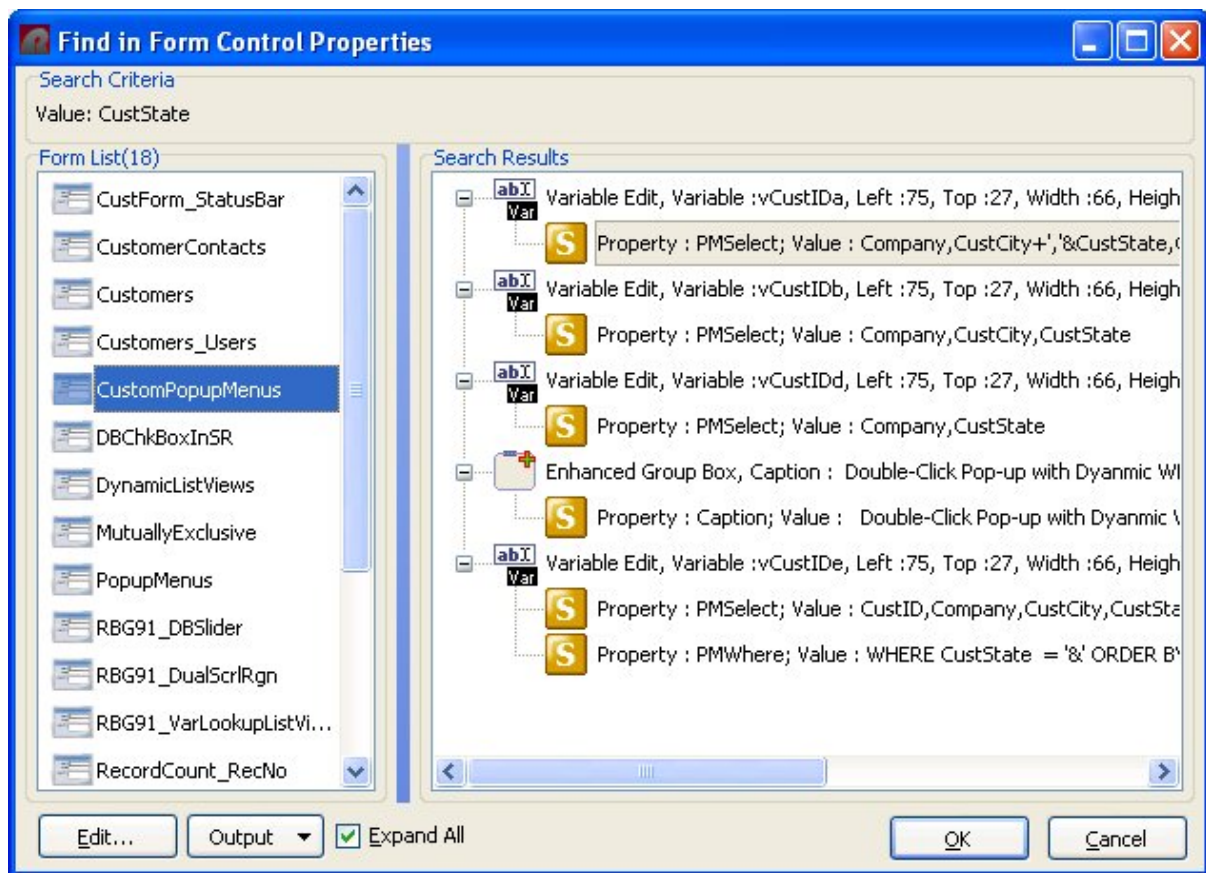
To begin searching, press the [Ctrl]+[L] key combination to display the "Find in Control Properties" dialog.



Searching for text can include all listed items displayed at the Database Explorer, or just a selected few. For example, selecting ten out of fifty forms, and then pressing [Ctrl]+[L] will search for the text for all controls within the ten selected forms.

Note: The "Find in Control Properties" dialog can only be launched from the Database Explorer.

After the search is complete, a list of forms and form objects that match the search will be displayed. The search results will contain form object(s) whose property and value match the search criteria.



The property value can be launched within a dialog window for editing by double clicking on it, or by selecting the "Edit..." button. The search results can be saved to several output formats.

The "Expand All" check box allows the list of EEPs in the search results to expand for full viewing.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11111 or higher)

4.10 Searching for Text in Expressions

Did you know that you can search for specific text that may be defined in Form, Report, and Label expressions?

The "Find in Expressions" feature opens a search utility to locate specific text defined within the form, report, and label expressions for the connected database. The functionality to search for text within expressions allows users to locate specific columns, tables, functions, variables, and any part of a WHERE Clause.

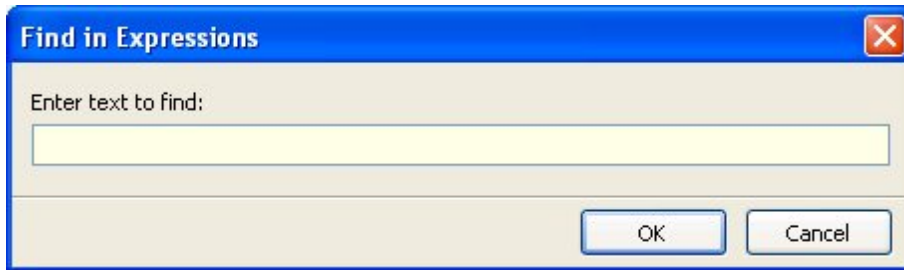
Any text defined within an expression will be used in the search!

Here's how:

When searching for text within expressions, text strings can be located within the following modules:

- Forms
- Reports
- Labels

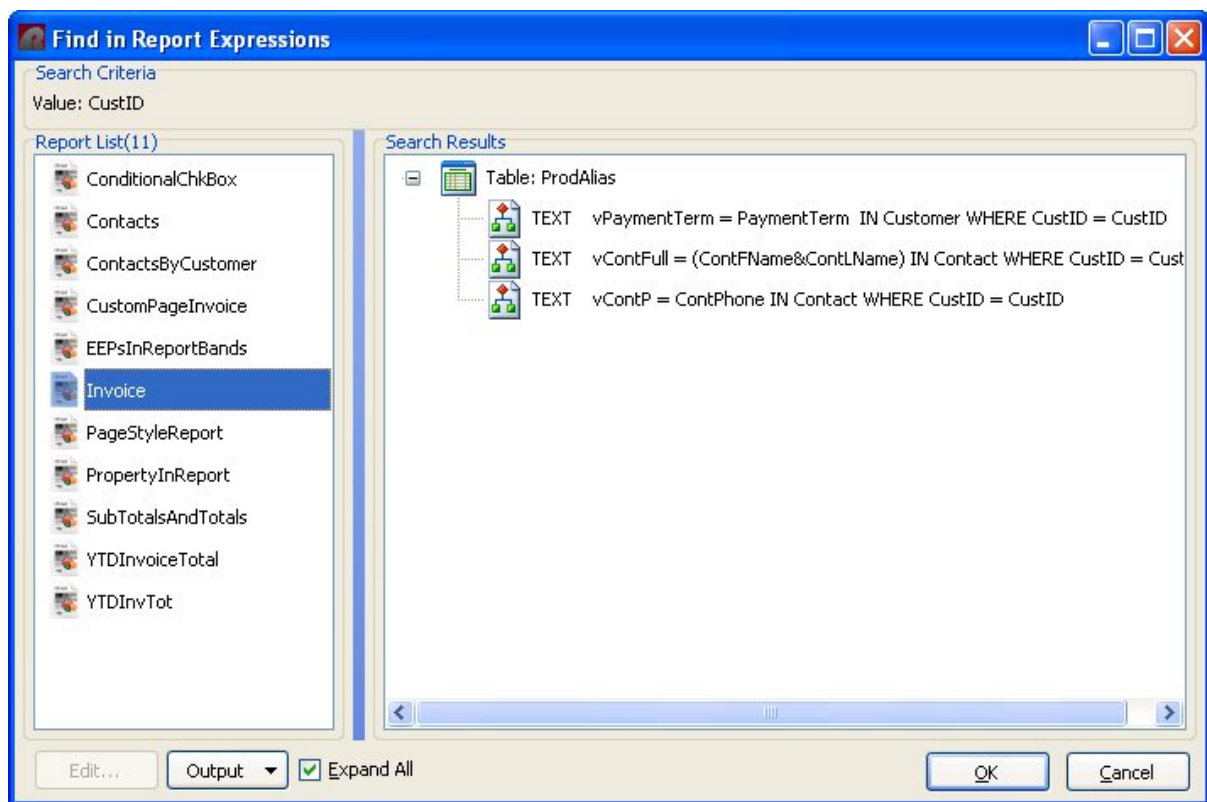
To begin searching, press the [Ctrl]+[Shift]+[F] key combination to display the "Find in Expressions" dialog.



Searching for text can include all listed items displayed at the Database Explorer, or just a selected few. For example, selecting fifteen out of fifty reports, and then pressing [Ctrl]+[Shift]+[F] will search for the text for all expressions within the fifteen selected reports.

Note: The "Find in Expressions" dialog can only be launched from the Database Explorer.

After the search is complete, a list of reports and defined variable expressions that match the search will be displayed.



The search results will contain the table(s) and expressions that match the search criteria. The variable expression can be launched within a dialog window for editing by double clicking on it, or by selecting the "Edit..." button. The search results can be saved to several output formats. The "Expand All" check box allows the list of expressions in the search results to expand for full viewing.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11111 or higher)

4.11 Searching in Database Explorer

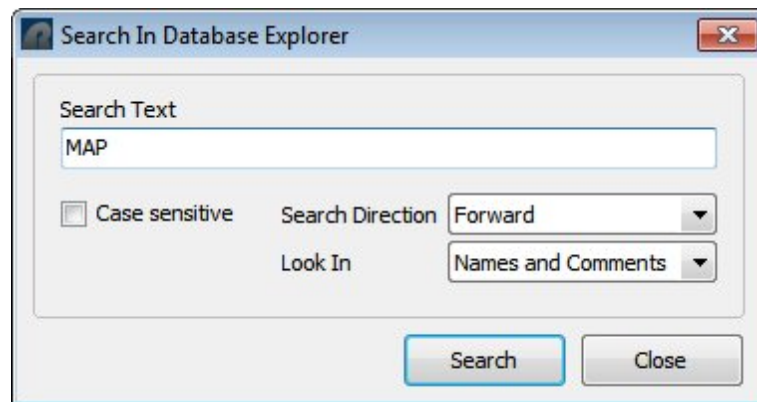
After CONNECTing the database, the Database Explorer includes the following sections and appropriate columns when configured as "View as Details":

- Tables (Name, Comment, Columns, Rows)
- Views (Name, Comment, Columns)
- Stored Procedures (Name, Comment, Size, Date/Time, Version)
- Forms (Name, Main Table, Comment, Size, Date/Time*, Version*)
- Reports (Name, Main Table, Comment, Size, Date/Time*, Version*)
- Labels (Name, Main Table, Comment, Size, Date/Time*, Version*)
- External Forms (Name, Comment, Size, Date/Time, Version)
- Applications (Name, Date/Time, Version)
- Command Files (Name, Extension, Date/Time, Size)

* = R:BASE eXtreme 9.5 (64) only.

Did you know that you can use the "Ctrl + N" hot key to search for any key word in appropriate column while selecting the appropriate section of Database Explorer?

In a typical development environment, for example -- one remembers the form has to be something ".... MAP ...". Using the [Ctrl] + [N] hot key to search text, all forms containing map in the name and comment will be highlighted, one at a time, for easy selection.



This feature is extremely helpful for those that have databases with significant number of tables, views, stored procedures, forms, reports, labels, external forms, applications, and command files.

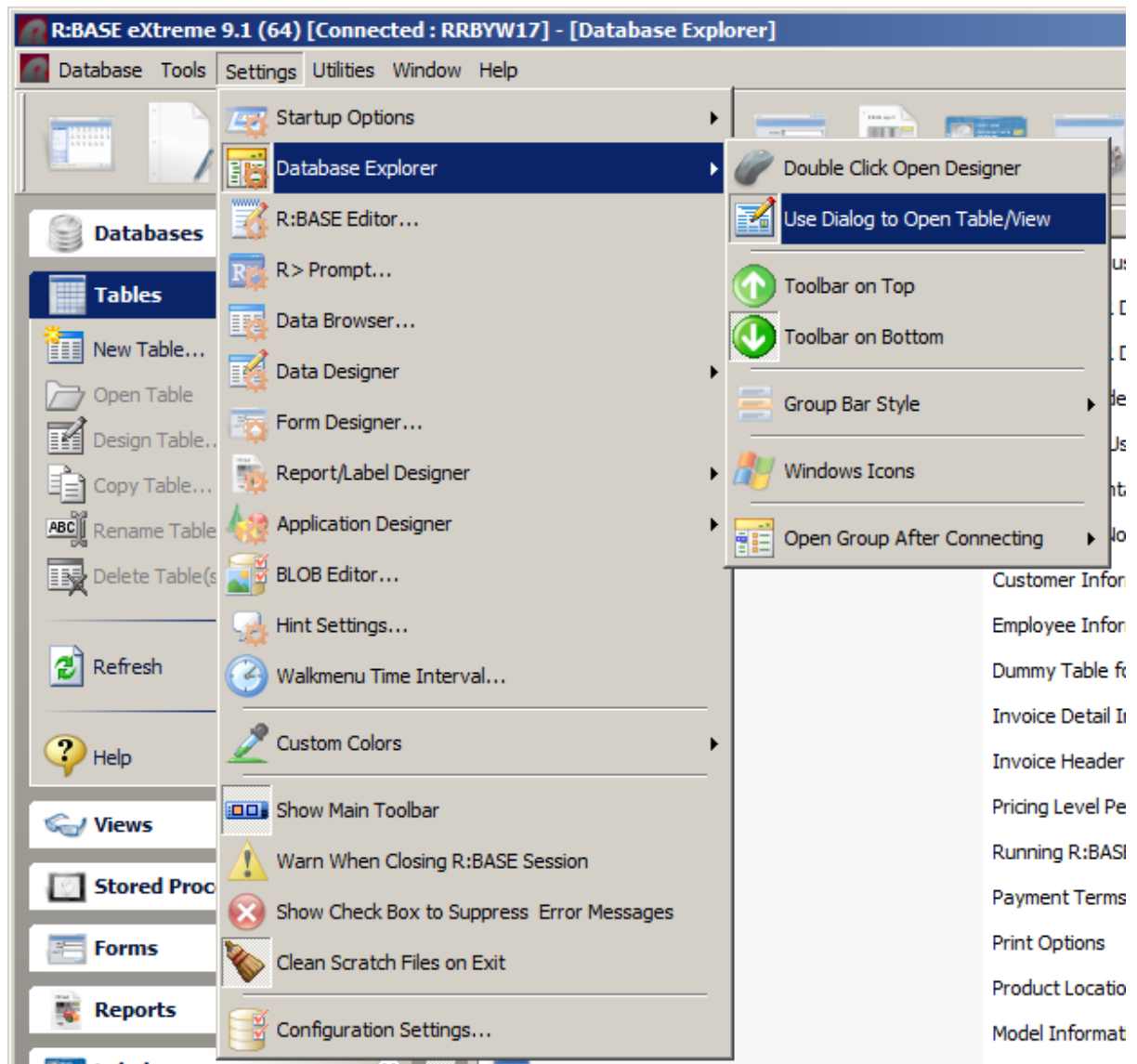
Note: The [Ctrl] + [N] will not do a search in the active or selected row.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.20829 or higher)

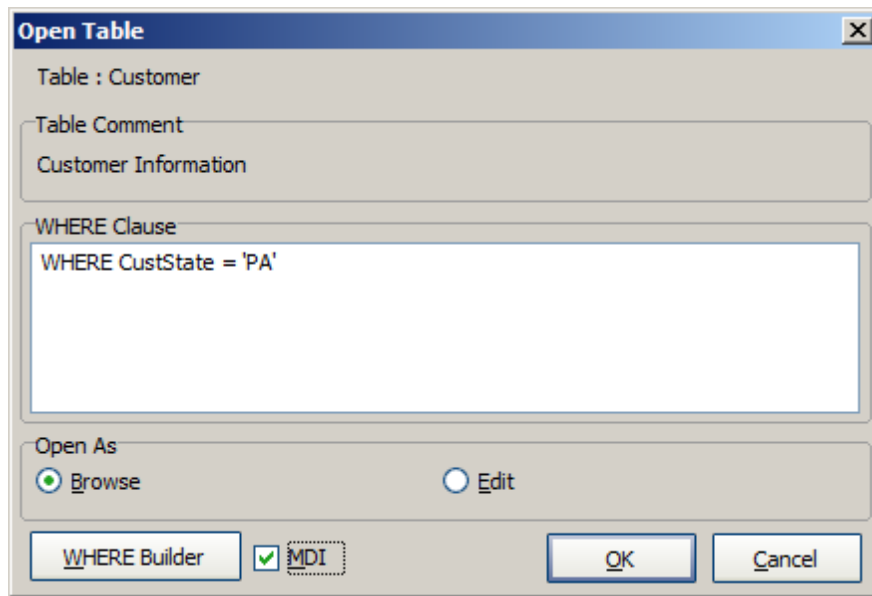
4.12 Using MDI Option for Database Explorer Modules

When customizing the settings for Database Explorer, in addition to change the appearance of the Database Explorer window, you may also select the option to "Use Dialog to Open Table/View".



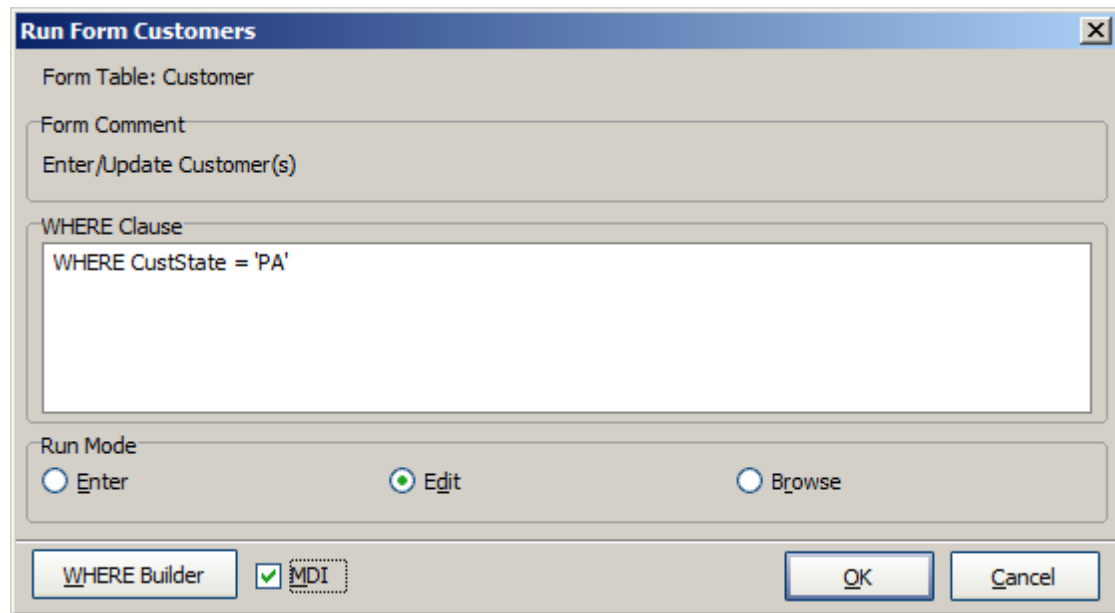
Selecting this option toggles the ability to launch a dialog to add a WHERE Clause, change the browse mode, and use an MDI window when opening a table or view.

When you double click on a table or view, "Open Table" or "Open View" dialog box is launched and next to the WHERE Builder button an "MDI" check box is available. When MDI option is checked, the Data Browser will be displayed as an MDI windows. You may open as many tables or views at the same time using the MDI option.



The "Open Table" dialog box is shown. It has a title bar with a close button. The "Table" field is set to "Customer". The "Table Comment" field contains "Customer Information". The "WHERE Clause" text area contains "WHERE CustState = 'PA'". The "Open As" section has two radio buttons: "Browse" (selected) and "Edit". At the bottom, there is a "WHERE Builder" button, a checked checkbox next to an "MDI" button, and "OK" and "Cancel" buttons.

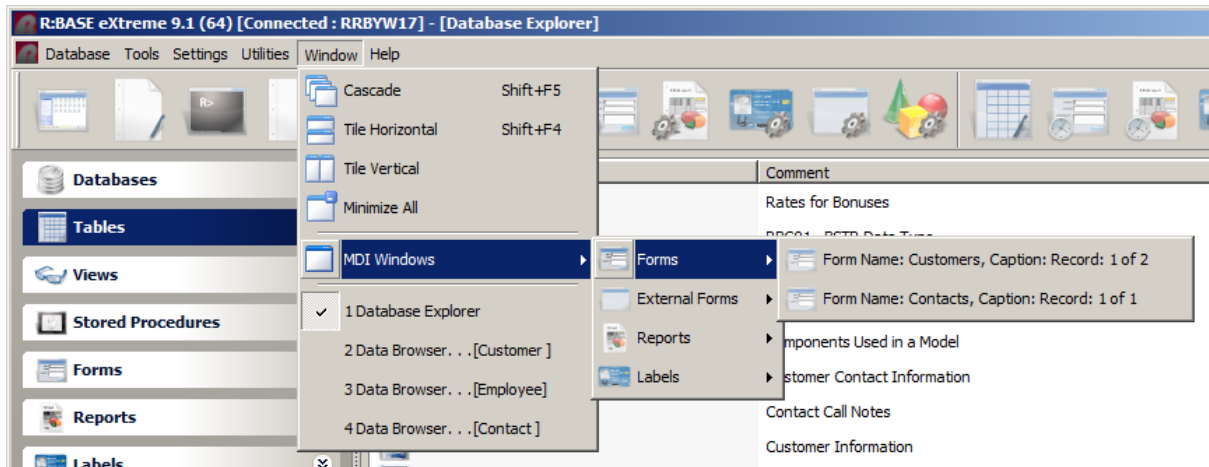
Did you know that you can use the MDI option when double-clicking on Forms, Reports, Labels, or External Forms to run? Notice the [] MDI option next to the [WHERE Builder] button.



The "Run Form Customers" dialog box is shown. It has a title bar with a close button. The "Form Table" field is set to "Customer". The "Form Comment" field contains "Enter/Update Customer(s)". The "WHERE Clause" text area contains "WHERE CustState = 'PA'". The "Run Mode" section has three radio buttons: "Enter", "Edit" (selected), and "Browse". At the bottom, there is a "WHERE Builder" button, a checked checkbox next to an "MDI" button, and "OK" and "Cancel" buttons.

You may also use the same option for Reports, Labels, and External Forms. There is no limit.

If you wish to retrieve, switch back to previously opened MDI Browser, Form, Report, Label, External Form, or would like to see a list of all opened MDI windows, you may use the Window option of the Database Explorer by selecting Window > MDI Windows.



Supported Versions:

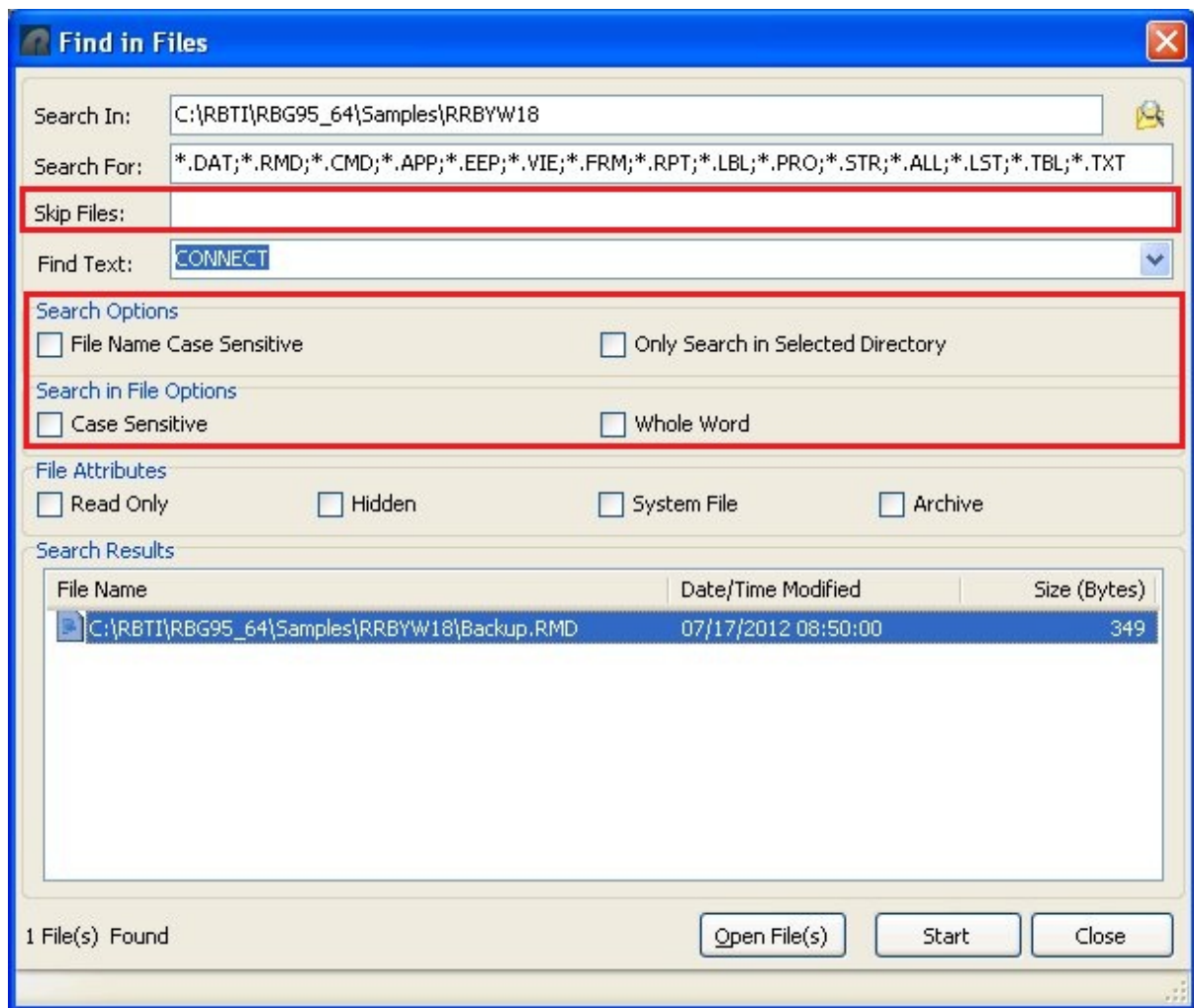
- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10414 or higher)

4.13 Using the Find in Files Settings

The "Find in Files" utility allows users to locate command files based upon specific text within the files.

Two new "Search" options allow the search for text to be more precise. For example, with "Case Sensitive" and "Whole Word" enabled, a search for the command "CONNECT" will no longer return the unwanted results for DISCONNECT or SCONNECT, or any locations where the word "Connect" with lower case letters is used in a DIALOG or PAUSE as the message or caption.

From the Database Explorer, select "Command Files" > "Find in Files"



Search criteria can be modified based on file extensions, case sensitivity, sub-directory searches, and file attributes. After the search is complete, the selected files can be opened in the R:BASE Editor.

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10317 or higher)

Part



5 Data Designer (RBDefine)

5.1 Computed Columns and Default Values

While upgrading and migrating legacy R:BASE databases to R:BASE eXtreme 9.5 (32/64), a warning message will be displayed if the legacy table column contains a default value for a computed column.

If the command syntax to CREATE a table defines a default value on a computed column, the table will be created, however, a warning message will be displayed, but the default value on the computed column will not be added.

IMPORTANT NOTE:

This may alert some users if they inadvertently added a default value to a column definition, and then decided to change that column to a computed value, but did not remove the default value.

R:BASE eXtreme 9.5 (32/64) Data Designer (RBDef) and the CREATE TABLE command has been enhanced to display warning message and ignore default value, if defined, for a computed column.

While converting legacy database(s), you will also notice the warning message when building a fresh database using R:BASE eXtreme 9.5 from an output file that was created using the UNLOAD command based on a legacy database, only if the build process finds a default value for computed column.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

5.2 Computed Columns At A Glance

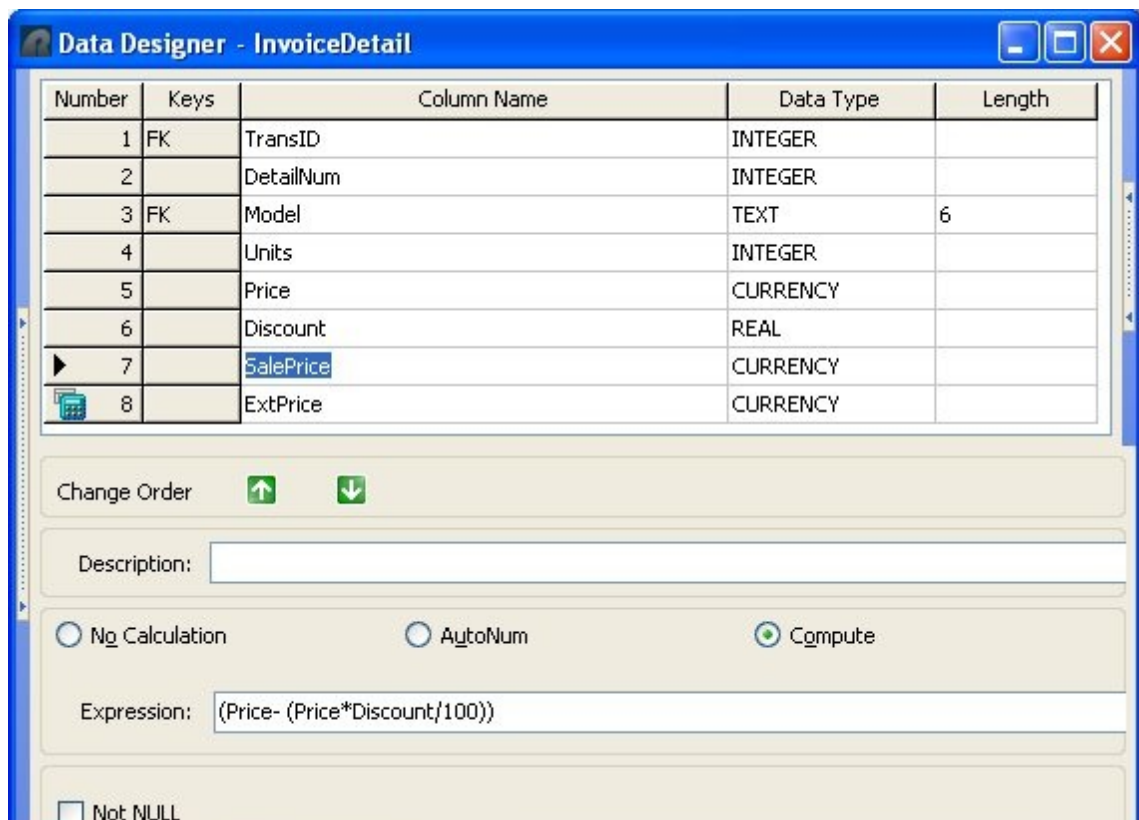
Within the R:BASE eXtreme 9.5 Data Designer, also called RBDefine, users can create and modify table definitions for a table. Table definitions can include Table, Columns, Keys/Indexes, Rules, and Triggers.

Within the "Columns" section, computed columns can be created by defining a custom expression, whose end result will populate the field.

Did you know that enhanced R:BASE eXtreme 9.5 Data Designer will now display a calculator image within the Columns Number list, indicating a computed column?

Just looking at the list of columns, you can glance all computed columns in that table.

In the image below, it is easily recognizable that the SalePrice and ExtPrice columns are computed.



Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20521 or higher)

5.3 Reorganizing Columns in Data Designer

Did you know that you can reorganize/re-sequence table columns in the Data Designer using the Change Order [Move Up] and [Move Down] speed buttons?

Here's how:

1. Start R:BASE.
2. Connect to a database.
3. From the Database Explorer, select the "Tables" option.
4. Select the appropriate table and choose the "Design Table" option.
5. Within the "Data Designer", select the "Columns" tab.

Notice the green arrow [Move Up] and [Move Down] speed buttons!

6. Highlight the exact column that you wish to move up/down.
7. Click on the [Move Up] or [Move Down] button accordingly.

Notice the new position of selected column

8. Click on the "Save" button to save the current structure or "Save and Close" to save the current structure and close the data designer.

5.4 Validate the syntax for an email address

Here is a tip from the Father of R:BASE, Wayne Erickson (Head of the R:BASE Development Team), that validates the syntax for an email address in R:BASE.

Wayne's Corner: Validating syntax for an email address in R:BASE ...

For an example, assume you have a table called "person" and it has a column called "email" for storing email addresses. You want to check some things to make sure the values in this column meets some basic things an email address should have. Here is the rule definition code:

```
RULES 'Improper Email Address' FOR Person SUCCEED +
WHERE +
(SLOC(SMOVE(`Email`, (SLOC(`Email`, '@')+1), SLEN(`Email`)-(SLOC
(`Email`, '@')), ' ', 1), '.')) > 1 +
AND +
((SLEN(SMOVE(`Email`, (SLOC(`Email`, '@')+1), (SLEN(`Email`)-SLOC
(`Email`, '@')), ' ', 1))) - +
(SLOC(SMOVE(`Email`, (SLOC(`Email`, '@')+1), (SLEN(`Email`)-SLOC
(`Email`, '@')), ' ', 1), '.'))) >= 2 +
AND +
(SLOC(STRIM(LJS(`Email`, 40)), '@')) > 2
```

This particular rule checks three things:

1. Are there at least 2 characters before an "@" character? This is done with the

```
(SLOC(STRIM(LJS(`Email`, 40)), '@')) > 2
```

part of the rule.

2. Is there a "." after the "@", and is there at least one character between the "@" and the "."? This is done with the

```
(SLOC(SMOVE(`Email`, (SLOC(`Email`, '@')+1), SLEN(`Email`)-(SLOC
(`Email`, '@')), ' ', 1), '.')) > 1
```

part of the rule.

3. Are there at least 2 characters after the "." which follows the "@" character? This would allow something like x@x.ca but not x@x.c. This is done with the

```
((SLEN(SMOVE(`Email`, (SLOC(`Email`, '@')+1), (SLEN(`Email`)-SLOC
(`Email`, '@')), ' ', 1))) - +
(SLOC(SMOVE(`Email`, (SLOC(`Email`, '@')+1), (SLEN(`Email`)-SLOC
(`Email`, '@')), ' ', 1), '.'))) >= 2
```

part of the rule.

Have fun implementing this cool code in your R:BASE applications!

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10701 and higher)

Part

A gray rounded square with the letters "VI" in white, bold, sans-serif font. The square is positioned to the right of the word "Part" and a horizontal line.

VI

6 Data Browser

6.1 Adding a Duplicate Row in the Data Browser/Editor

Did you know that you can add a duplicate row within the Data Browser/Data Editor?

Here's how:

While in the Data Browser/Editor, and while in "Edit Mode" [F4], an additional "Duplicate Row" option has been added to the Menu Bar.

Select "Edit" > "Duplicate Row" from the main Menu Bar to add a duplicate row.

In addition to the Menu Bar option, a "Duplicate Row" button has been added to the Toolbar and the key combination [Ctrl+F2] is also supported.

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10515 or higher)

6.2 Conditionally Managing Data Browser/Editor Options

Traditionally, among many options, the Data Browser/Editor "Edit" list includes:

- Edit Mode [F4] (Switch Between Browse/Edit Mode)
- Print Data
- Export Results to
- Save Result As (Table, Temporary Table, View, Temporary View)

However, there may be circumstances when you may not want to provide these options to any or all users.

Did you know that you can conditionally manage these options which may include enabling/disabling these choices based upon the logged in user?

Here's how:

```
IF (CVAL('DATABASE')) <> 'RRBYW17' OR (CVAL('DATABASE')) IS NULL THEN
    CONNECT RRBYW17 IDENTIFIED BY NONE
ENDIF
```

```
-- Example 01 (Typical Options)
CLS
BROWSE Company,CustAddress,CustCity,CustState,CustZip,CustPhone +
FROM Customer ORDER BY Company +
OPTION CAPTION Customer Data|WINDOW_STATE NORMAL
RETURN
```

```
-- Example 02 (NOCHG)
-- Disable [F4] key to switch between Browse/Edit Mode
CLS
BROWSE Company,CustAddress,CustCity,CustState,CustZip,CustPhone +
FROM Customer ORDER BY Company NOCHG +
OPTION CAPTION Customer Data|WINDOW_STATE NORMAL
```

RETURN

Customer Data

EditSortCalculateLayout

Cut

Copy

Paste

Insert Row

Edit Mode

Delete Row

Delete Value

Replace All Column Values ...

Delete All Rows

Print Data

Export Results to

Save Result As

Search ...

Search Again

Ctrl+X

Ctrl+C

Ctrl+V

F2

F4

F9

Shift+Ctrl+F7

Ctrl+F7



	CustAddress	CustCity	CustState	CustZip	CustPhone	
	1403 Queen Anne Ave N	Stony Brook	NY	11794	516-563-4438	
	123 Main Street	Asheville	NC	28801	828-987-6543	
	205 Whitman N	Ogden	UT	84403	801-248-4798	
	1208 Occidental Rd	Miami	FL	33128	305-767-4309	
	11033 Webster Blvd	Concord	CA	94521	613-226-7171	
	4311 Beach Dr	Ft Lauderdale	FL	33309	305-365-7803	
	14792 15th Ave. E.	Denver	CO	80214	303-271-1500	
	14600 Eastgate Way	Bloomington	IN	47401	812-701-1002	
	123 My Way, Suite 100	Boston	CA	02178	617-341-2181	
	3923 Pleasant Hill Dr	Olympia	WA	98504	206-321-5606	
	62 Main St	Lynnwood	WA	98037	206-323-4365	
	5200 Empire Way	Denver	CO	80214	303-239-7823	
	5602 Silverdale Way	Livermore	CA	94550	415-878-5600	
	30021 Grant Blvd	Sunnyvale	CA	94089	408-234-8654	
	2341 Meridian NW	Englewood	CO	80112	303-426-8442	
	12287 112th S	Plantation	FL	33317	305-746-2302	
	24700 Industrial Parkway	Boston	MA	02162	617-423-8921	
	5672 SW Graham	Appleton	WI	54911	414-245-9867	
	2800 N.E. 47th	Chicago	IL	60637	312-277-5000	
	2315 Woodlawn	Snoqualmie	WA	99026	509-382-8706	
	3682 11th Ave S	Las Vegas	NV	89104	702-649-9551	
	Murrysville Technology Center	3930 Old William Penn Highway	Murrysville	PA	15668-1854	
	Blue Ridge Technologies, Inc.	123 Main Street	Asheville	NC	28801	828-987-6543

Record : 1

☐View as Grid

☐View as Row

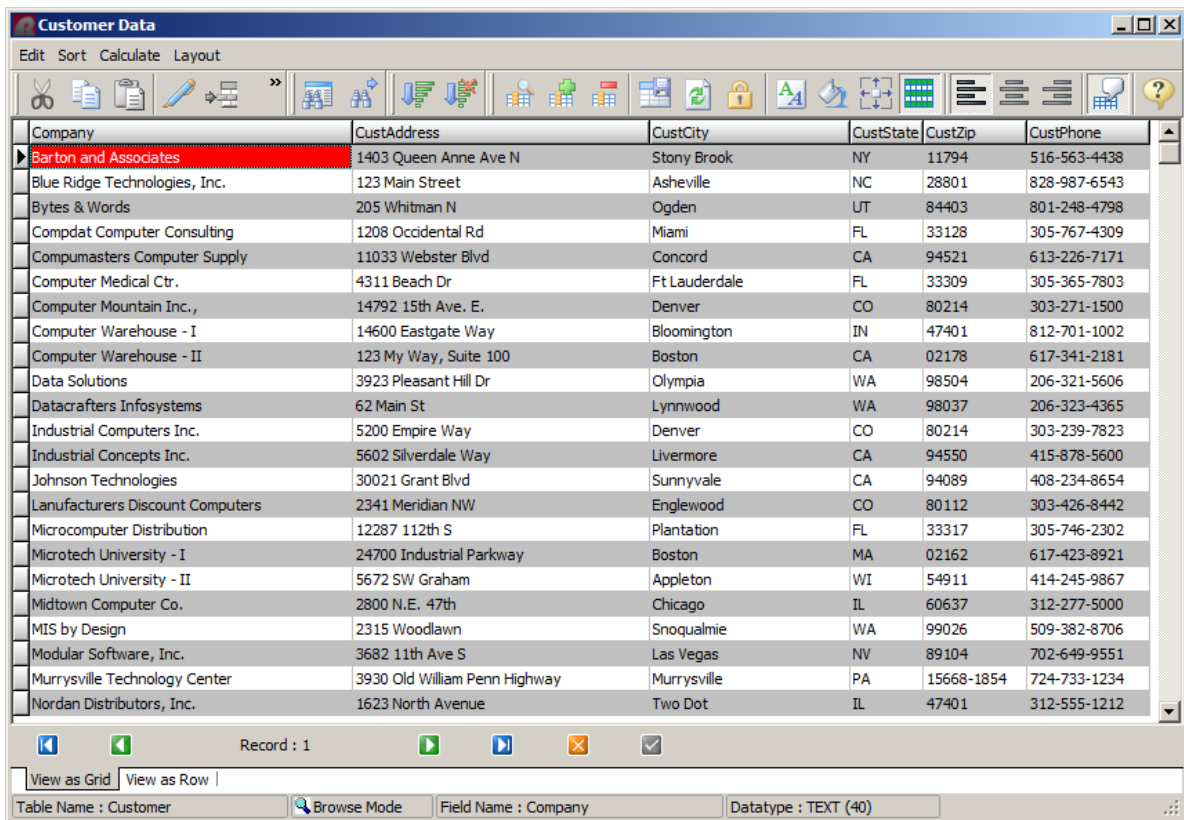
Table Name : Customer

Browse Mode

Field Name : Company

Datatype : TEXT (40)

```
-- Example 03 (READONLY ON)
-- Makes the entire data set READONLY.
CLS
BROWSE Company,CustAddress,CustCity,CustState,CustZip,CustPhone +
FROM Customer ORDER BY Company +
OPTION CAPTION Customer Data|WINDOW_STATE NORMAL|READONLY ON
RETURN
```



Company	CustAddress	CustCity	CustState	CustZip	CustPhone
Barton and Associates	1403 Queen Anne Ave N	Stony Brook	NY	11794	516-563-4438
Blue Ridge Technologies, Inc.	123 Main Street	Asheville	NC	28801	828-987-6543
Bytes & Words	205 Whitman N	Ogden	UT	84403	801-248-4798
Compdat Computer Consulting	1208 Occidental Rd	Miami	FL	33128	305-767-4309
Compumasters Computer Supply	11033 Webster Blvd	Concord	CA	94521	613-226-7171
Computer Medical Ctr.	4311 Beach Dr	Ft Lauderdale	FL	33309	305-365-7803
Computer Mountain Inc.,	14792 15th Ave. E.	Denver	CO	80214	303-271-1500
Computer Warehouse - I	14600 Eastgate Way	Bloomington	IN	47401	812-701-1002
Computer Warehouse - II	123 My Way, Suite 100	Boston	CA	02178	617-341-2181
Data Solutions	3923 Pleasant Hill Dr	Olympia	WA	98504	206-321-5606
Datacrafters Infosystems	62 Main St	Lynnwood	WA	98037	206-323-4365
Industrial Computers Inc.	5200 Empire Way	Denver	CO	80214	303-239-7823
Industrial Concepts Inc.	5602 Silverdale Way	Livermore	CA	94550	415-878-5600
Johnson Technologies	30021 Grant Blvd	Sunnyvale	CA	94089	408-234-8654
Lanufacturers Discount Computers	2341 Meridian NW	Englewood	CO	80112	303-426-8442
Microcomputer Distribution	12287 112th S	Plantation	FL	33317	305-746-2302
Microtech University - I	24700 Industrial Parkway	Boston	MA	02162	617-423-8921
Microtech University - II	5672 SW Graham	Appleton	WI	54911	414-245-9867
Midtown Computer Co.	2800 N.E. 47th	Chicago	IL	60637	312-277-5000
MIS by Design	2315 Woodlawn	Snoqualmie	WA	99026	509-382-8706
Modular Software, Inc.	3682 11th Ave S	Las Vegas	NV	89104	702-649-9551
Murrysville Technology Center	3930 Old William Penn Highway	Murrysville	PA	15668-1854	724-733-1234
Nordan Distributors, Inc.	1623 North Avenue	Two Dot	IL	47401	312-555-1212

Record : 1

View as Grid View as Row

Table Name : Customer Browse Mode Field Name : Company Datatype : TEXT (40)

-- Example 04 (PRINTDATA OFF)

-- Disable Print Data Option

CLS

BROWSE Company,CustAddress,CustCity,CustState,CustZip,CustPhone +

FROM Customer ORDER BY Company +

OPTION CAPTION Customer Data|WINDOW_STATE NORMAL|PRINTDATA OFF

RETURN

CustAddress	CustCity	CustState	CustZip	CustPhone
1403 Queen Anne Ave N	Stony Brook	NY	11794	516-563-4438
123 Main Street	Asheville	NC	28801	828-987-6543
205 Whitman N	Ogden	UT	84403	801-248-4798
1208 Occidental Rd	Miami	FL	33128	305-767-4309
11033 Webster Blvd	Concord	CA	94521	613-226-7171
4311 Beach Dr	Ft Lauderdale	FL	33309	305-365-7803
14792 15th Ave. E.	Denver	CO	80214	303-271-1500
14600 Eastgate Way	Bloomington	IN	47401	812-701-1002
123 My Way, Suite 100	Boston	CA	02178	617-341-2181
3923 Pleasant Hill Dr	Olympia	WA	98504	206-321-5606
62 Main St	Lynnwood	WA	98037	206-323-4365
5200 Empire Way	Denver	CO	80214	303-239-7823
5602 Silverdale Way	Livermore	CA	94550	415-878-5600
30021 Grant Blvd	Sunnyvale	CA	94089	408-234-8654
2341 Meridian NW	Englewood	CO	80112	303-426-8442
12287 112th S	Plantation	FL	33317	305-746-2302
24700 Industrial Parkway	Boston	MA	02162	617-423-8921
5672 SW Graham	Appleton	WI	54911	414-245-9867
2800 N.E. 47th	Chicago	IL	60637	312-277-5000
2315 Woodlawn	Snoqualmie	WA	99026	509-382-8706
3682 11th Ave S	Las Vegas	NV	89104	702-649-9551
Murrysville Technology Center	3930 Old William Penn Highway	Murrysville	PA	15668-1854
Blue Ridge Technologies, Inc.	123 Main Street	Asheville	NC	28801

```
-- Example 05 (EXPORTRESULT OFF)
-- Disable Export Result To Option
CLS
BROWSE Company,CustAddress,CustCity,CustState,CustZip,CustPhone +
FROM Customer ORDER BY Company +
OPTION CAPTION Customer Data|WINDOW_STATE NORMAL|EXPORTRESULT OFF
RETURN
```

Customer Data

Edit Sort Calculate Layout

 Cut

 Copy

 Paste

 Insert Row

 Edit Mode

 Delete Row

 Delete Value

 Replace All Column Values ...

 Delete All Rows

 Print Data

 Export Results to

 Save Result As

 Search ...

 Search Again

Ctrl+X

Ctrl+C

Ctrl+V

F2

F4

F9

Shift+Ctrl+F7

Ctrl+F7



	CustAddress	CustCity	CustState	CustZip	CustPhone	
	1403 Queen Anne Ave N	Stony Brook	NY	11794	516-563-4438	
	123 Main Street	Asheville	NC	28801	828-987-6543	
	205 Whitman N	Ogden	UT	84403	801-248-4798	
	1208 Occidental Rd	Miami	FL	33128	305-767-4309	
	11033 Webster Blvd	Concord	CA	94521	613-226-7171	
	4311 Beach Dr	Ft Lauderdale	FL	33309	305-365-7803	
	14792 15th Ave. E.	Denver	CO	80214	303-271-1500	
	14600 Eastgate Way	Bloomington	IN	47401	812-701-1002	
	123 My Way, Suite 100	Boston	CA	02178	617-341-2181	
	3923 Pleasant Hill Dr	Olympia	WA	98504	206-321-5606	
	62 Main St	Lynnwood	WA	98037	206-323-4365	
	5200 Empire Way	Denver	CO	80214	303-239-7823	
	5602 Silverdale Way	Livermore	CA	94550	415-878-5600	
	30021 Grant Blvd	Sunnyvale	CA	94089	408-234-8654	
	2341 Meridian NW	Englewood	CO	80112	303-426-8442	
	12287 112th S	Plantation	FL	33317	305-746-2302	
	24700 Industrial Parkway	Boston	MA	02162	617-423-8921	
	5672 SW Graham	Appleton	WI	54911	414-245-9867	
	2800 N.E. 47th	Chicago	IL	60637	312-277-5000	
	2315 Woodlawn	Snoqualmie	WA	99026	509-382-8706	
	3682 11th Ave S	Las Vegas	NV	89104	702-649-9551	
	Murrysville Technology Center	3930 Old William Penn Highway	Murrysville	PA	15668-1854	
	Blue Ridge Technologies, Inc.	123 Main Street	Asheville	NC	28801	828-987-6543

 Record : 1



☐ View as Grid

☐ View as Row

Table Name : Customer

 Browse Mode

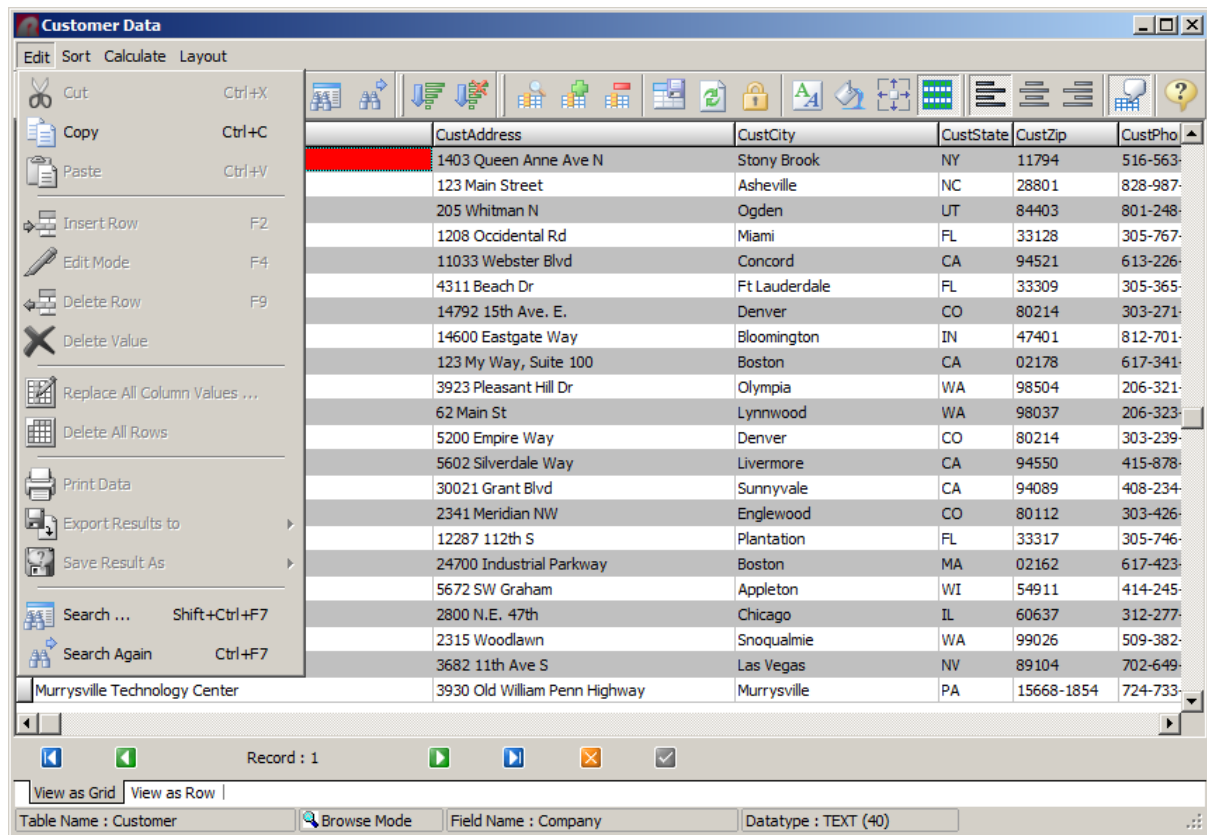
Field Name : Company

Datatype : TEXT (40)

- Example 06 (SAVERESULT OFF)
 - Disable Save Result As Option
- ```
CLS
BROWSE Company,CustAddress,CustCity,CustState,CustZip,CustPhone +
FROM Customer ORDER BY Company +
OPTION CAPTION Customer Data|WINDOW_STATE NORMAL|SAVERESULT OFF
RETURN
```

| CustAddress                   | CustCity                      | CustState   | CustZip | CustPhone    |
|-------------------------------|-------------------------------|-------------|---------|--------------|
| 1403 Queen Anne Ave N         | Stony Brook                   | NY          | 11794   | 516-563-4438 |
| 123 Main Street               | Asheville                     | NC          | 28801   | 828-987-6543 |
| 205 Whitman N                 | Ogden                         | UT          | 84403   | 801-248-4798 |
| 1208 Occidental Rd            | Miami                         | FL          | 33128   | 305-767-4309 |
| 11033 Webster Blvd            | Concord                       | CA          | 94521   | 613-226-7171 |
| 4311 Beach Dr                 | Ft Lauderdale                 | FL          | 33309   | 305-365-7803 |
| 14792 15th Ave. E.            | Denver                        | CO          | 80214   | 303-271-1500 |
| 14600 Eastgate Way            | Bloomington                   | IN          | 47401   | 812-701-1002 |
| 123 My Way, Suite 100         | Boston                        | CA          | 02178   | 617-341-2181 |
| 3923 Pleasant Hill Dr         | Olympia                       | WA          | 98504   | 206-321-5606 |
| 62 Main St                    | Lynnwood                      | WA          | 98037   | 206-323-4365 |
| 5200 Empire Way               | Denver                        | CO          | 80214   | 303-239-7823 |
| 5602 Silverdale Way           | Livermore                     | CA          | 94550   | 415-878-5600 |
| 30021 Grant Blvd              | Sunnyvale                     | CA          | 94089   | 408-234-8654 |
| 2341 Meridian NW              | Englewood                     | CO          | 80112   | 303-426-8442 |
| 12287 112th S                 | Plantation                    | FL          | 33317   | 305-746-2302 |
| 24700 Industrial Parkway      | Boston                        | MA          | 02162   | 617-423-8921 |
| 5672 SW Graham                | Appleton                      | WI          | 54911   | 414-245-9867 |
| 2800 N.E. 47th                | Chicago                       | IL          | 60637   | 312-277-5000 |
| 2315 Woodlawn                 | Snoqualmie                    | WA          | 99026   | 509-382-8706 |
| 3682 11th Ave S               | Las Vegas                     | NV          | 89104   | 702-649-9551 |
| Murrysville Technology Center | 3930 Old William Penn Highway | Murrysville | PA      | 15668-1854   |
| Blue Ridge Technologies, Inc. | 123 Main Street               | Asheville   | NC      | 28801        |

```
-- Example 07 (Conditionally Disable Options)
-- (NOCHG, READONLY ON, PRINTDATA OFF, EXPORTRESULT OFF, SAVERESULT OFF)
CLS
SET VAR vOptions TEXT = NULL
IF (CVAL('NetUser')) IN (JohnDoe, JaneDoe, MikeSmith, LLooser) THEN
 SET VAR vOptions = +
 ('CAPTION Customer Data|WINDOW_STATE NORMAL|READONLY ON' + +
 '|PRINTDATA OFF|EXPORTRESULT OFF|SAVERESULT OFF')
ELSE
 SET VAR vOptions = ('CAPTION Customer Data|WINDOW_STATE NORMAL')
ENDIF
BROWSE Company, CustAddress, CustCity, CustState, CustZip, CustPhone +
FROM Customer ORDER BY Company NOCHG +
OPTION &vOptions
CLEAR VARIABLES vOptions
RETURN
```



Have fun implementing these options in your R:BASE applications!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10414 or higher)

## 6.3 Right-Click Calculate (Compute, Tally, Duplicates)

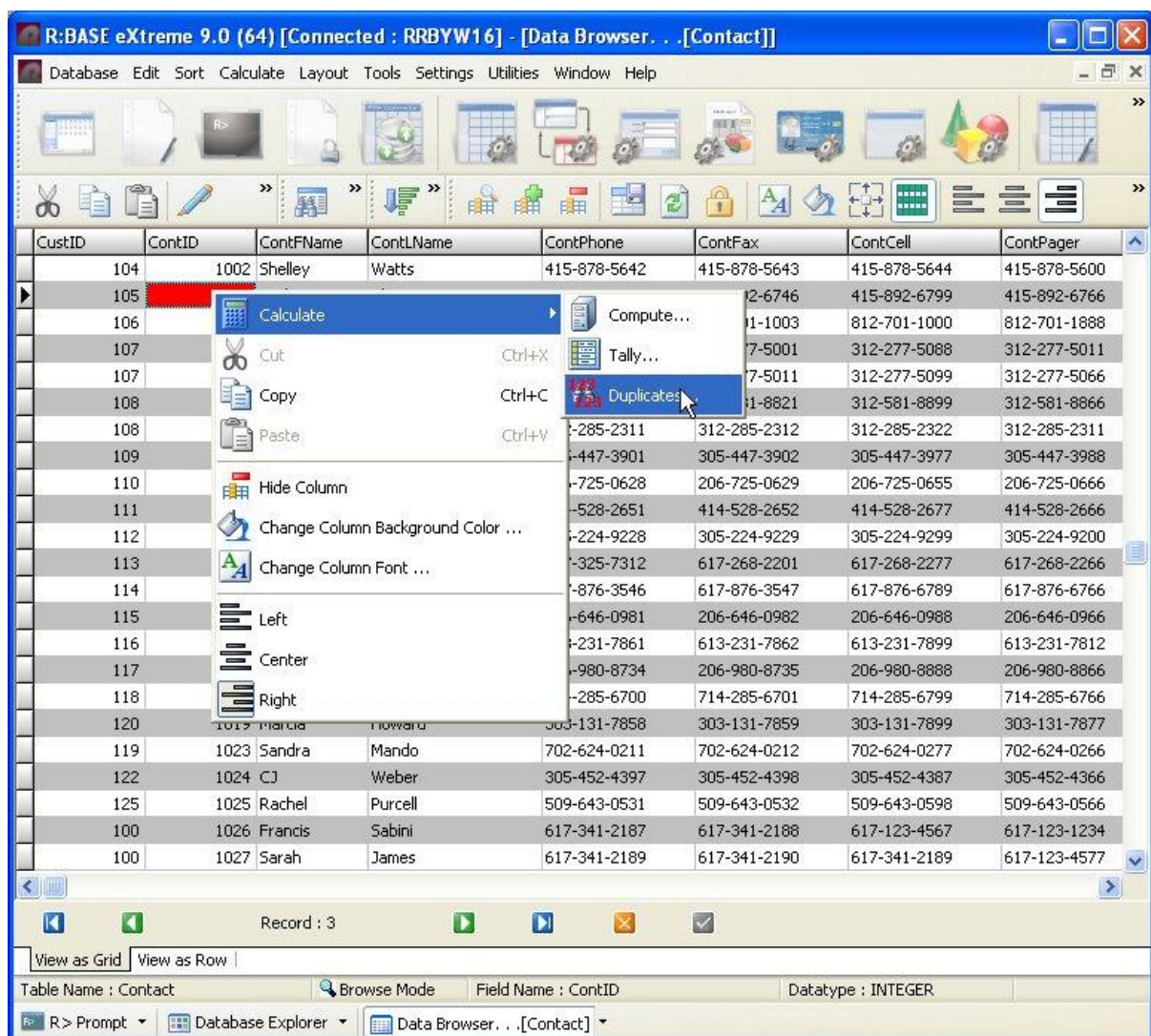
Did you know that while in the Data Browser/Editor, using the right-click on selected column will bring up a new speed menu option to calculate the following three options?

Calculate >

- Compute...
- Tally...
- Duplicates..

Using the right-click on selected column, and selecting the Calculate option, now you can instantly Compute (Count, Rows, Minimum, Maximum, Sum, Average, Standard Deviation, Variance), Tally, and most importantly can find the Duplicates without knowing the correct syntax.





## Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build: 9.0.1.10420 or higher)

**Part**

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**VII**

## 7 Stored Procedures

### 7.1 Order of Processing for Stored Procedures and Triggers

A trigger automatically runs a stored procedure when an UPDATE, DELETE, or INSERT command is run with a table.

The following describes the sequence in which data integrity is maintained when using Stored Procedures and Triggers:

#### DELETE

- Rules
- Cascades
- Triggers
- Keys
- Row itself

#### UPDATE

- Rules
- Cascades
- Triggers
- Keys
- Row itself

#### INSERT

- Rules
- Triggers
- Keys
- Row itself

Triggers automatically run a stored procedure when an UPDATE, DELETE, or INSERT command is run with a table. The trigger is run before the row that triggered it is updated, inserted, or deleted.

Since the trigger runs first, it gives you a chance to abort the procedure.

When indexes are updated it is the last step before completing the update.

The row has valid values, the rules are met, and the triggers did not abort.

The only error out at this point is if the key update fails, such as a PKFK violation. When the key processing code is done it is a real attempt to update the key, not just a "will it be ok" process. If you do not want your triggers to run you could modify the trigger to check for PK-FK violations before doing the rest of the trigger.

**Part**

---



## 8 Forms

### 8.1 Action Sequence (Form EEP Execution)

Action Sequence (the order in which the form EEPs are executed)

A typical control's property options within the "EEPs" tab include the following options:

- Predefined Actions
  - Add Row
  - Add Row and Exit
  - Delete Row
  - Discard Row
  - Discard Row and Exit
  - Duplicate Row
  - Exit
  - Next Row
  - Next Table
  - Previous Row
  - Previous Table
  - Save Row
  - Last Row
  - First Row
  - Save Row and Exit
  - Refresh Current Table
- Stored Procedure
- Custom Form Action
- Custom

This is the actual order in which the form EEPs are executed:

1. Custom Embedded EEP (if defined)
2. Custom EEP (External File)
3. Stored Procedure
4. Custom Form Action
5. Predefined Actions

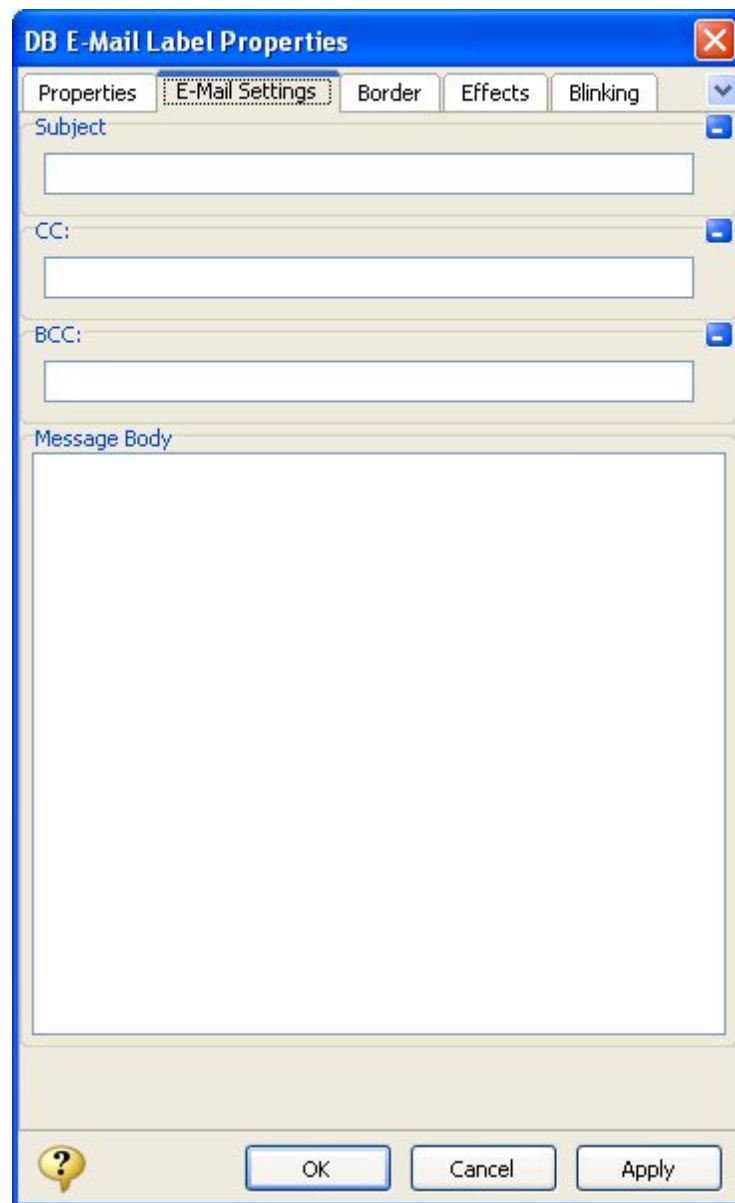
### 8.2 Additional Fields for DB/Variable Email Label Controls

Did you know that you can now use additional fields to specify the CC, BCC, and Message Body fields for the DB Email Label and Variable Email Label controls?

The Email Label Controls send a message to the user's MAPI mail client. The CC, BCC, and Message Body fields can be specified within the control properties, or altered on the fly using the PROPERTY command.

Example:

```
PROPERTY Comp_ID_CC CC 'joe@newco.com'
PROPERTY Comp_ID_BCC BCC 'wade@newco.com'
PROPERTY Comp_ID_MsgBody BODYTEXT 'Thank you for your order!'
```



The CC, BCC, and Message Body fields for the DB and Variable Email Label controls can now be specified using the PROPERTY command, and within the control properties!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11212 or higher)

## 8.3 Aligning Radio Groups Buttons

Typically, while in Form Designer, when you place a DB Radio Group or a Variable Radio Group control, by default the "Radio Buttons" are always aligned to the left side of the caption (Item Text).

Did you know that now you can change the Radio Button Alignment in conjunction with the associated Radio Button Caption (Item Text)?

A new "Button Alignment" property for DB and Variable Radio Group controls has been implemented to move the Radio Button on either side of the item text to provide you with a customized look & feel.

Form Designer > DB Radio Group > Object Property > Radio Buttons > Button Alignment ...

- ☐ Left Justify
- ☐ Right Justify

Form Designer > Var Radio Group > Object Property > Radio Buttons > Button Alignment ...

- ☐ Left Justify
- ☐ Right Justify

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

## 8.4 Capturing the Value of Form Component IDs

Did you know that you can capture the value of any DB or Variable Edit Control's Component ID, if defined, while using the form in Enter, Edit or Browse mode?

In addition to all Form System Variables, a new `RBTI_FORM_COMPID` variable has been added to capture the value of DB or Variable Edit Component ID, if defined.

Here's a comprehensive list of System Variables used in Forms:

- `RBTI_DBGRID_COLUMN`
- `RBTI_DIRTY_FLAG`
- `RBTI_FORM_ALIAS`
- `RBTI_FORM_COLNAME`
- `RBTI_FORM_COLVALUE`
- `RBTI_FORM_COMPID`
- `RBTI_FORM_DATATYPE`
- `RBTI_FORM_DIRTYVAR`
- `RBTI_FORM_FORMNAME`
- `RBTI_FORM_MODE`
- `RBTI_FORM_TBLNAME`
- `RBTI_FORM_VARNAME`
- `RBTI_FORM_VARVALUE`

### **`RBTI_DBGRID_COLUMN`**

This variable holds the name of focused Column on DB Grid.

### **`RBTI_DIRTY_FLAG`**

Returns 1 if any DB Control value(s) in form were changed or 0 if nothing was changed.

### **`RBTI_FORM_ALIAS`**

This variable holds the name of focused form, if used AS alias.

### **`RBTI_FORM_COLNAME`**

This variable holds the name of focused column DB Control on form.

### **`RBTI_FORM_COLVALUE`**

This variable holds the value of focused column DB Control on form.

### **`RBTI_FORM_COMPID`**

This variable holds the value of focused DB/Variable Edit control's Component ID, if defined.

### **`RBTI_FORM_DATATYPE`**

This variable holds the data type of focused column DB Control on form.

### **`RBTI_FORM_DIRTYVAR`**

Returns 1 if any Variable Control value(s) in form were changed or 0 if nothing was changed.

**RBTI\_FORM\_FORMNAME**

This variable holds the name of the current form. Particularly useful when using the form-in-a-form technique and multiple forms are running at the same time.

**RBTI\_FORM\_MODE**

This variable holds the value of current mode of the form, such as ENTER, EDIT or BROWSE.

When the form is brought-up as ENTER USING formname ... the value for RBTI\_FORM\_MODE will be returned as 'ENTER'.

When the form is brought-up as EDIT USING formname ... the value for RBTI\_FORM\_MODE will be returned as 'EDIT'.

When the form is brought-up as BROWSE USING formname ... the value for RBTI\_FORM\_MODE will be returned as 'BROWSE'.

**RBTI\_FORM\_TBLNAME**

This variable holds the name of the current table in a form. This is especially useful when used within a multi-table form.

**RBTI\_FORM\_VARNAME**

This variable holds the name of focused Variable Control on form.

**RBTI\_FORM\_VARVALUE**

This variable holds the value of focused Variable Control on form.

## 8.5 Controlling Date/Time Picker Drop-Down

Did you know that you can control the drop-down option of the DB Date/Time Picker or Variable Date/Time Picker control by simply using the following PROPERTY command?

```
PROPERTY <DateTimePickerCompID> OPEN 'TRUE'
RETURN
```

That will open the DB/Variable Date/Time Picker drop-down calendar, on demand.

## 8.6 Controlling TABLE Add/Delete Row Properties

Did you know that you can control the "Add" or "Delete" Rows options for the table settings within a Form using the following PROPERTY command parameters?

- ENABLE\_ADD\_NEW\_ROWS
- DISABLE\_ADD\_NEW\_ROWS
- ENABLE\_DELETE\_ROWS
- DISABLE\_DELETE\_ROWS

Examples:

```
-- To enable the option for "Add New Rows to the Table":
PROPERTY TABLE tablename ENABLE_ADD_NEW_ROWS
RETURN
```

```
-- To disable the option for "Add New Rows to the Table":
PROPERTY TABLE tablename DISABLE_ADD_NEW_ROWS
RETURN
```

```
-- To enable the option for "Delete Rows":
PROPERTY TABLE tablename ENABLE_DELETE_ROWS
RETURN
```



```
-- To disable the option for "Delete Rows":
PROPERTY TABLE tablename DISABLE_DELETE_ROWS
RETURN
```

## 8.7 Converting DB Grid Control to Enhanced DB Grid Control

Did you know that you can convert an existing DB Grid Control to Enhanced DB Grid Control by click of a mouse button?

Here's how:

While in Form Designer, right-click on an existing DB Grid Control and then select "Convert to Enhanced DB Grid" from the list of speed menu options.

The following single-click conversions to "enhanced" form controls are also available in R:BASE eXtreme (32/64):

- Panel -> Convert to Enhanced Panel
- Group Box -> Convert to Enhanced Group Box
- Speed Button -> Convert to Enhanced Speed Button
- Tab Control -> Convert to Enhanced Tab Control
- Calendar -> Convert to Enhanced Calendar
- Variable Calendar -> Convert to Enhanced Variable Calendar
- DB Calendar -> Convert to Enhanced DB Calendar
- DB Grid -> Convert to Enhanced DB Grid
- DB Navigator > Convert to Enhanced DB Navigator
- DB Rich Edit -> Convert to Advanced DB Rich Edit
- Speed Button -> Convert to Enhanced Speed Button

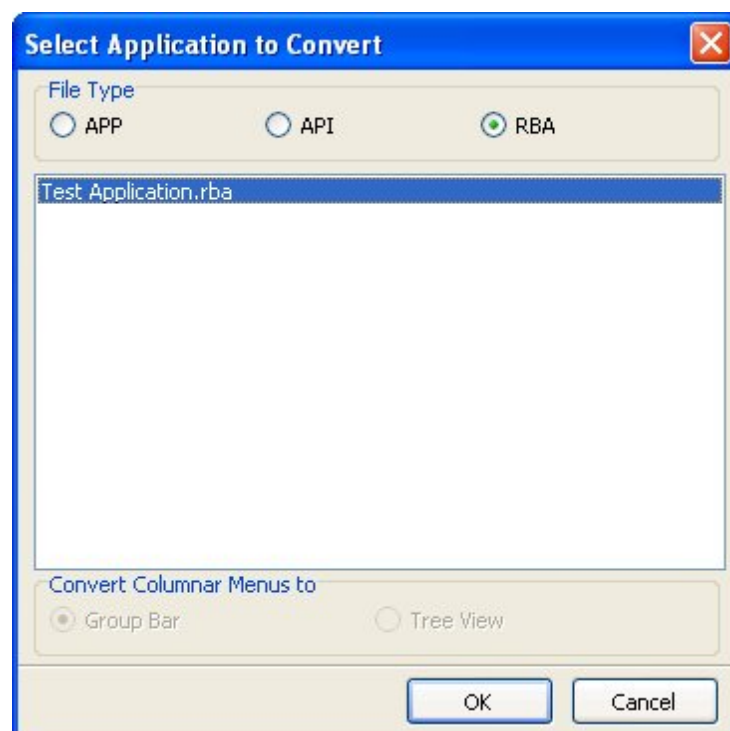
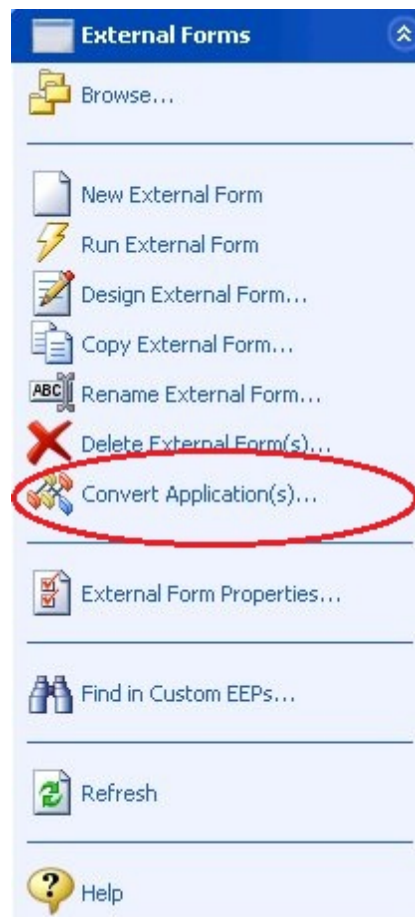
Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10515 or higher)

## 8.8 Converting R:BASE Application Files to External Form Files

Did you know that you can convert an R:BASE Application Files (.RBA) to an External Form Files (.RFF)?

Within the External Form File portion of the Database Explorer, the new "Convert Application(s)..." option is available to convert R:BASE Application Files to an External Form File.



Selecting this option will create an external form that matches the same properties used within the RBA application file.

When the external form file is created, the "Main Menu" section is converted to a form "Menu Bar", the "Actions" are converted to "Custom Form Actions", and the "Toolbar" is converted to a Toolbar in the new "Toolbar Designer".

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10510 or higher)

## 8.9 Converting Variable Form to External Form File

Did you know that you can convert a Variable Form to External Form File?

A new feature in the R:BASE eXtreme Database Explorer within the "Forms" options allows for a Variable Form to be saved as an External Form File.

This option is only enabled when a Variable Form is selected.

Once the Variable form is highlighted, using the right-click speed menu, or clicking on the "Save as External Form File" option. A dialog box will prompt for the External Form File name with the .rff file extension.

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10317 or higher)

## 8.10 Copy and Paste Custom Form Actions

Did you know that you can copy a Custom Form Action from a form, and paste it into another form?

Buttons for "Copy" and "Paste" have been added to the Action Designer for the Forms and External Form File modules, to allow users to copy and paste selected, or all, Custom Form Actions.

Please note the "Copy" and "Paste" buttons are located next to the "Up" and "Down" arrow buttons, which reorder the location of a Custom Form Action.

In addition, you may also use [Ctrl+C] to copy selected action(s) and [Ctrl+V] to paste.

Custom Form Action can now be easily moved from one form to another!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11212 or higher)

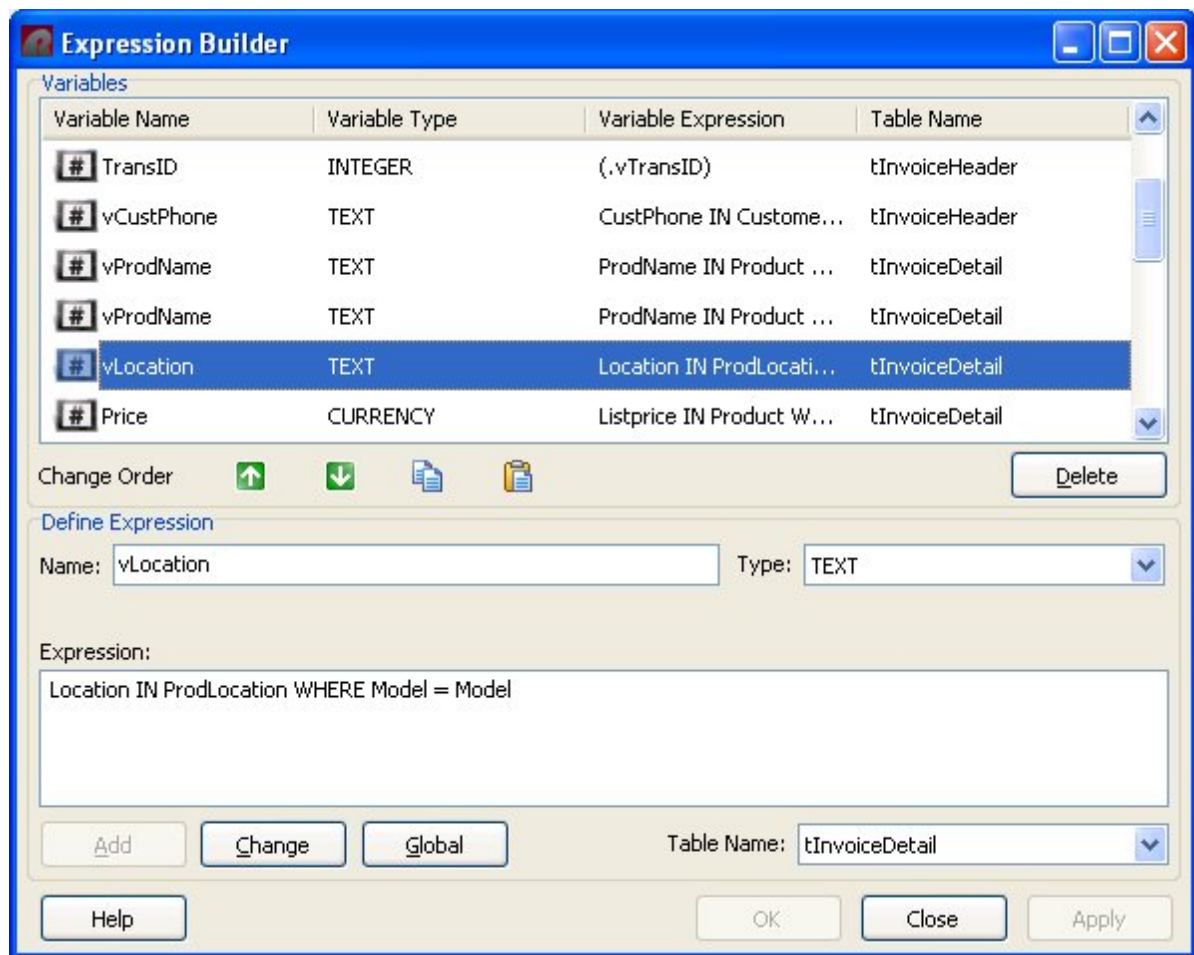
## 8.11 Copy and Paste Expression Builder Variables

Did you know that you can copy a form variable from the Expression Builder, and paste it into another form?

Buttons for "Copy" and "Paste" have been added to the Expression Builders for the Form, Report, and Label modules, to allow users to copy and paste selected, or all, variables.

Please note the "Copy" and "Paste" buttons are located next to the "Up" and "Down" arrow buttons, which reorder the location of a variable in the Expression Builder.

In addition, you may also use [Ctrl+C] to copy selected expression(s) and [Ctrl+V] to paste expression(s) while placing the cursor over the expression builder window.



Variables and Expressions can now be easily moved from form to form, label to label, and report to report!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11111 or higher)

## 8.12 Copy and Paste Menu Bar Items

Did you know that you can copy a Menu Bar Item from a form, and paste it into another form?

Buttons for "Copy" and "Paste" have been added to the Menu Bar Designer for the Forms and External Form File modules, to allow users to copy and paste selected, or all, items.

In addition, you may also use [Ctrl+C] to copy selected item(s) and [Ctrl+V] to paste.

Menu Bar Items can now be easily moved from one form to another!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11111 or higher)

## 8.13 Copy and Paste Tree View Nodes

Did you know that you can copy and paste nodes within the Tree View control?

Buttons for "Copy" and "Paste" have been added to the Tree View control to allow users to copy and paste nodes.

When a node is copied, all sub-items are copied with the main node.

Nodes can also be copied from one form to another.

In addition, you may also use [Ctrl+C] to copy the selected node and [Ctrl+V] to paste.

Tree View Nodes can now be easily moved into the same Tree View, or into another form!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11111 or higher)

## 8.14 Copying and Pasting Windows Clipboard Data in Forms

Did you know that you can copy and paste any image or text to and from the Windows Clipboard to any designated control on a form using the PROPERTY command?

The following PROPERTY command parameters are now supported:

- CopyToClipboard
- CutToClipboard
- PasteFromClipboard

Here's how:

- To copy images or text data TO Windows Clipboard

```
PROPERTY <ComponentID> CopyToClipboard 'TRUE'
RETURN
```

Supported Form Controls:

- DB Edit
- DB Memo
- DB Image
- Variable Edit
- Variable Memo
- Variable Image

2. To cut images or text data TO Windows Clipboard

```
PROPERTY <ComponentID> CutToClipboard 'TRUE'
RETURN
```

Supported Form Controls:

- DB Edit
- DB Memo
- DB Image
- Variable Edit
- Variable Memo
- Variable Image

3. To paste images or text data FROM Windows Clipboard

-- Example 01

```

-- To paste Windows Clipboard BLOB Data into DB/VAR Image Field
PROPERTY <BLOBControlComponentID> PasteFromClipboard 'TRUE'
RETURN

-- Example 02
-- To paste Windows Clipboard Text Data into DB/VAR Edit/Memo Field
PROPERTY <EditMemoControlComponentID> PasteFromClipboard 'TRUE'
RETURN

-- Example 03
-- To paste Windows Clipboard BLOB Data into focused DB/VAR Image Field
PROPERTY RBASE_FORM PasteFromClipboard 'TRUE'
RETURN

-- Example 04
-- To paste Windows Clipboard Text Data into focused DB/VAR Edit/Memo
Field
PROPERTY RBASE_FORM PasteFromClipboard 'TRUE'
RETURN

```

## 8.15 Creating a Dynamic Tree View Object

Did you know that you can create a dynamic Tree View object in forms using the CREATEOBJECT command?

### Syntax:

```
CREATEOBJECT <FormObjectName> 'ComponentID' 'Parent' T L W H
```

Here's an example to create a dynamic Tree View object with Node Items and Sub-Items.

```

-- Start here
-- Create TreeView Object
CREATEOBJECT TreeView 'TreeView' 'RBASE_FORM' 5 10 186 441
PROPERTY TreeView INIT 'TRUE'

-- Add Nodes (Items and Sub-Items)
-- Create First Item
CREATEOBJECT TREENODE Node1 TreeView 0 0 0 0
PROPERTY Node1 TEXT 'Node 1'
PROPERTY Node1 INIT 'TRUE'

-- Add Sub-Item to First Item
CREATEOBJECT TREENODE Node11 TreeView|Node1 0 0 0 0
PROPERTY Node11 TEXT 'Node 1 - 1'
PROPERTY Node11 INIT 'TRUE'

-- Create Second Item
CREATEOBJECT TREENODE Node2 TreeView 0 0 0 0
PROPERTY Node2 TEXT 'Node 2'
PROPERTY Node2 INIT 'TRUE'

-- Add Sub-Item to Second Item
CREATEOBJECT TREENODE Node21 TreeView|Node2 0 0 0 0
PROPERTY Node21 TEXT 'Node 2 - 1'
PROPERTY Node21 INIT 'TRUE'

```

```
RETURN
-- End here

--To delete the dynamically created Tree View object
DELETEOBJECT TreeView
RETURN
```

## 8.16 Customizing Character Case for Data Input

The R:BASE eXtreme 9.5 (32/64) Form and External Form Designers include an option to customize the Character Case for DB and Variable Edit Controls.

Form Designer > DB Edit Control > Properties > Effects > Character Case

Form Designer > Variable Edit Control > Properties > Effects > Character Case

Did you know that you can customize the Character Case for DB and Variable Edit Controls using the following options?

- Normal (the default)
- Upper Case
- Lower Case
- Title Case
- Sentence Case

Character Case specifies a case of the entered characters, which are converted as the user types. Changing the Character Case property changes the actual contents of the text, not just the appearance.

Use "Upper Case" option to capitalize every character.

Use "Lower Case" option to not capitalize any character.

Use "Title Case" option to capitalize the first letter of every word.

Use "Sentence Case" option to capitalize the first letter of the sentence.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20611 or higher)

## 8.17 Customizing DB Grid Column Properties

By default, placing the DB Grid control on the form and assigning the appropriate table will use each column to be included in the DB Grid when displayed. However, if you wish to include only a selected column, you'll have to use the [Columns] option of the DB Grid Properties.

Once you select specific columns for DB Grid in selected columns panel, you can individually customize each column property by highlighting the column and then clicking on the "gear" icon. Using this option, you may customize the following Column Properties:

- General (Column/Title Properties)
- Pre-Defined Values
- Expression

You'll have to go through each column, one at a time, to customize individual column properties.

However, did you know that you can select more than one column (using Shift+Click, Click+Ctrl+Click, or Ctrl+Click), and then use the Right-Click to change the following column properties all at once?

Using that approach, you can customize the following column properties:

- Title Properties (Alignment, Color, Font)
- Column Properties (Alignment, Color, Font)
- Set Read Only ON
- Set Read Only OFF

For samples of customized DB Grid Columns, take a look at the following forms included with RRBYW18.

- DBGridListBox
- DBGridLookupList
- DBGridProperties
- DBGridWithPickList
- SalesTransactions

**Summary:**

Highlighting all columns and then clicking on the "gear" icon will only modify the properties of "Last" column. However, if you wish to modify the properties of all selected columns, you'll need to use the right-click and then select the appropriate property from the speed menu.

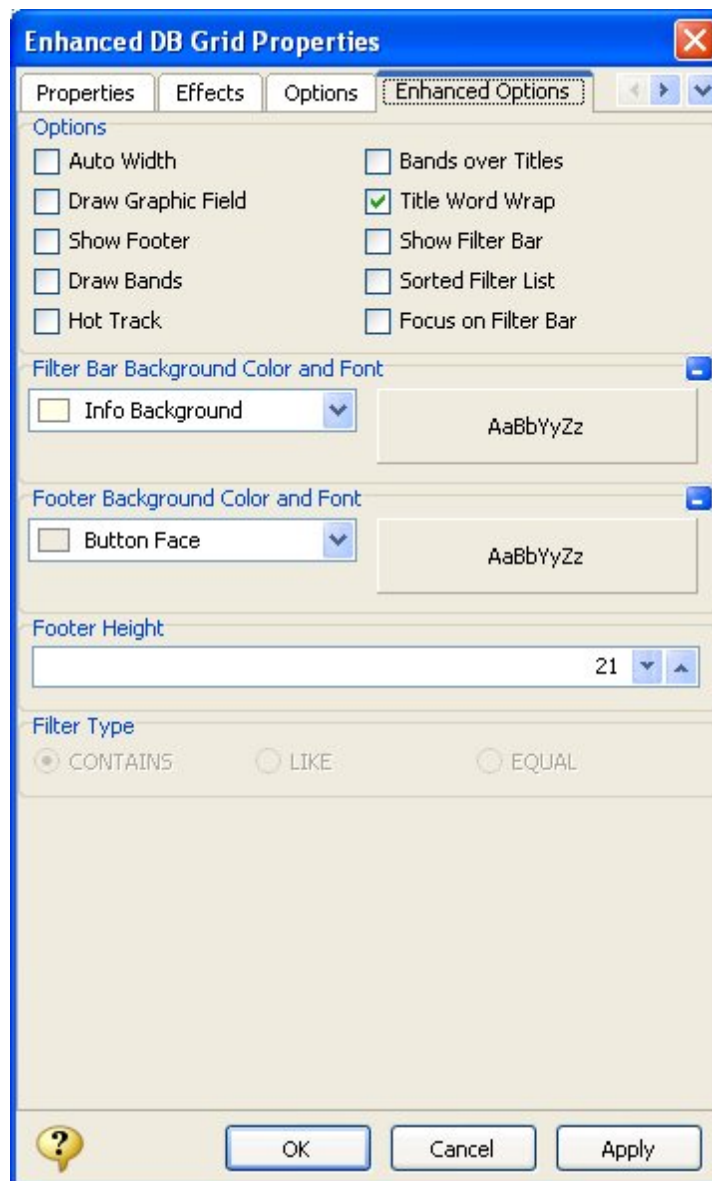
## **8.18 Customizing Filter Options for the Enhanced DB Grid Control**

When using the Enhanced DB Grid Control and selecting the option to "Show Filter Bar", the filter type default is always set to "CONTAINS".

Did you know that you can customize the filter option to use additional conditions such as "LIKE" or "EQUAL"? Here's how:

Form Designer > Enhanced DB Grid Control > Properties > Enhanced Options ...





Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.131028 or higher)

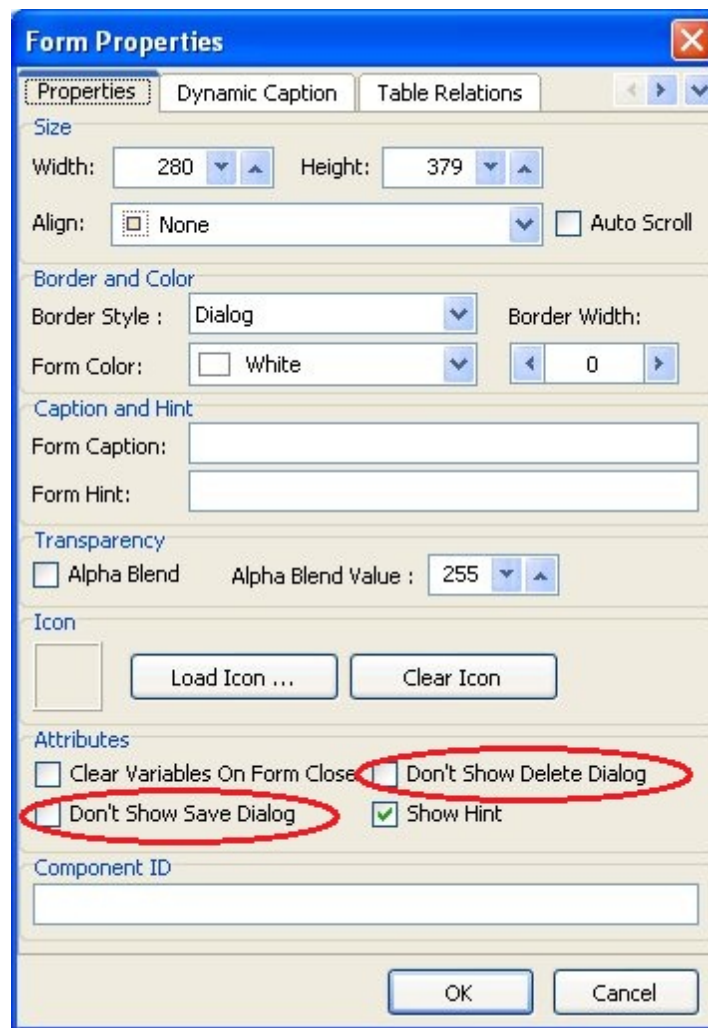
## 8.19 Customizing Form Closing Behavior

When closing table driven forms where data has been changed or deleted, a dialog will appear prompting "Save Changes?" or "Confirm Deletion?"

Did you know that now, in addition to the "DONTSHOWSAVEDIALOG" and "DONTSHOWDELETEDIALOG" PROPERTY command parameters, you can use the "Don't Show Save Dialog" and "Don't Show Delete Dialog" attributes listed within the Form Settings?

**Don't Show Save Dialog** - disables the display of the "Save Changes?" dialog box upon closing the form

**Don't Show Delete Dialog** - disables the display of the "Confirm Deletion?" dialog box upon closing the form



Using these settings, you can customize how table driven forms close.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.20214 or higher)

## 8.20 Customizing Selected Row Highlight Color in List Views

Did you know that you can customize the Background and Font Color for selected rows in DB and Variable Lookup List Views?

A new "Selected Row Background and Font Color" option for DB Lookup List View and Variable Lookup List View controls are now implemented in the latest version and update of R:BASE eXtreme 9.5 (32/64).

This enhancement will certainly provide a cool visual effect when looking at a custom form with multiple List View controls associated as one-to-many relationship.

Form Designer > DB Lookup List View Control > Object Property > Colors

Selected Row Background and Font Color ...  
Background Color:  
Font Color:

Form Designer > Variable Lookup List View Control > Object Property > Colors

Selected Row Background and Font Color ...  
Background Color:  
Font Color:

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

## 8.21 Defining Custom EEPs for "On Roll Up" and "On Roll Down"

R:BASE eXtreme includes a cool option of collapsible roll-up forms, a form that will reduce its height to nothing but the title bar when clicked.

To enable the roll up option from within the Form Designer:

1. Open a form's "Form Properties"
2. Select the "Dynamic Caption" tab
3. Enable the "Roll Up Button" check box

By checking this option, you may create a roll-down and roll-up effect for a form when a user right-clicks its title bar button.

In addition, now you can define a Form Custom EEP "On Roll Up" and "On Roll Down" to control anything you can imagine.

Form Designer | Form Properties | EEPs ...

Notice the two additional EEP options for:

- On Roll Up
- On Roll Down

Supported Versions:

- R:BASE eXtreme 9.0 (Builds: 9.0.1.131028 or higher)

## 8.22 Defining TEMPORARY TABLES/VIEWS with Actions

Did you know that now you can define all Form, Label or Report related TEMPORARY TABLES/VIEWS in "On Before Design Action..."?

The latest R:BASE supports the option to define Form, Label or Report Master and Slave tables or views based on TEMPORARY tables or view before the form, label or report is brought up in the designer.

This enhancement will eliminate the most common mistake when opening the form, label or report based on temporary table/view, if not pre-defined at the R> prompt or in a startup command file.

For example, if you open the "SalesOrder" form in RRBW18 with pre-defining the required temporary tables (tInvoiceHeader and tInvoiceDetail), you'll notice the "-ERROR- Table tInvoiceHeader Does Not Exist!" and you are not able to open the form until you RUN TempTables.RMD to define all temporary tables/views required for forms/labels/reports.

Well, now all you have to do is include the following block of code in SalesOrder form as "On Before Design Action...".

Here's how:

Form Designer | Layout | On Before Design Action...

```
SET ERROR MESSAGE 2038 OFF
DROP TABLE tInvoiceHeader
```

```

CREATE TEMPORARY TABLE `tInvoiceHeader` +
(`TransID` INTEGER, +
`CustID` INTEGER, +
`EmpID` INTEGER, +
`TransDate` DATE, +
`BillToCompany` TEXT (40), +
`BillToAddress` TEXT (30), +
`BillToCity` TEXT (20), +
`BillToState` TEXT (2), +
`BillToZip` TEXT (10), +
`ShipToCompany` TEXT (40), +
`ShipToAddress` TEXT (30), +
`ShipToCity` TEXT (20), +
`ShipToState` TEXT (2), +
`ShipToZip` TEXT (10), +
`NetAmount` CURRENCY, +
`Freight`= (netamount* .01) CURRENCY, +
`Tax`= (netamount* .081) CURRENCY, +
`InvoiceTotal`= (NetAmount+Freight+Tax) CURRENCY)
COMMENT ON TABLE tInvoiceHeader IS 'Invoice Header Information'
DROP TABLE tInvoiceDetail
CREATE TEMPORARY TABLE `tInvoiceDetail` +
(`TransID` INTEGER, +
`DetailNum` INTEGER, +
`Model` TEXT (6), +
`Units` INTEGER, +
`Price` CURRENCY, +
`Discount` REAL, +
`SalePrice`= (Price-(Price*Discount/100)) CURRENCY, +
`ExtPrice`= (Units* SalePrice) CURRENCY)
COMMENT ON TABLE tInvoiceDetail IS 'Invoice Detail Information'
SET ERROR MESSAGE 2038 ON
RETURN

```

Save the form and close the form designer.

If you disconnect the database (when all temporary tables/view are automatically dropped), you'll never have to worry about opening that form in the form designer next time. The required TEMPORARY tables will automatically be defined before opening the form in form designer.

These features also allow your forms, labels and reports to be totally portable modules for your ever-changing applications.

## 8.23 Defining the Number of Items in Pop-up Menus

Did you know that you can define more than 18 items/lines to be displayed for Pop-up Menu used in DB Edit or Variable Edit Controls?

Using the latest versions/updates, you are no longer limited to 18 items/lines. You may even pick your own number, if you wish.

Previous versions are restricted to 18 items/lines for Pop-up Menu.

Form Designer > DB Edit Control > Object Property > Pop-up Menu  
 Form Designer > Variable Edit Control > Object Property > Po-up Menu

## 8.24 Designing Custom Pop-up Menus

Did you know that now you can customize all Pop-up Menus for DB Edit and Variable Edit Controls to look like the ListBox with Show Lines, Title Background Color, Title Font/Color, List Background Color, and List Font/Color?

To customize the DB Edit and Variable Edit Pop-up Menus:

Form Designer > DB Edit > DB Edit Properties > Pop-up Menus

or

Form Designer > DB Edit > Variable Edit Properties > Pop-up Menus

Notice the following additional options:

- Show Lines (to separate multiple columns for a better look)
- Title Font and Color
- List Font and Color
- Title Background Color
- List Background Color

## 8.25 Disabling the Sort Feature for DB Grid Columns

Did you know that you can disable the column sort option used in DB Grid?

When a DB Grid control is placed on a form, by default, every column includes the ability to sort (Asc/Des) when clicking on the column title; displaying the current sort state. However, there may be application instances, where you may not want your users to change the default sort state.

A new option [ ] Title Clickable has been added for customizing the individual column properties for DB Grids. The default is set to checked, i.e, Title Clickable.

A new PROPERTY command is also introduced to manage the column title properties:

Syntax:

```
PROPERTY <DBGRIDComponentID> Columns[n]-> ClickableTitle 'value'
```

Example:

```
PROPERTY DBGRID Columns[0]-> ClickableTitle 'FALSE'
```

This property command will disable the sort feature for the first DB Grid column.

## 8.26 Displaying a Balloon Tip in DB/Variable Edit Fields

Did you know that you can display a balloon tip in DB Edit and Variable Edit Fields?

The balloon tip displays a hint message that can be used in response to an end user action on the form, or even to a specific form object. The balloon tip will appear when the SHOWBALLOONTIP parameter is set to TRUE for the field's Component ID. A title, message, and icon image can be displayed in the balloon tip. The balloon tip is only available to DB Edit and Variable Edit fields.

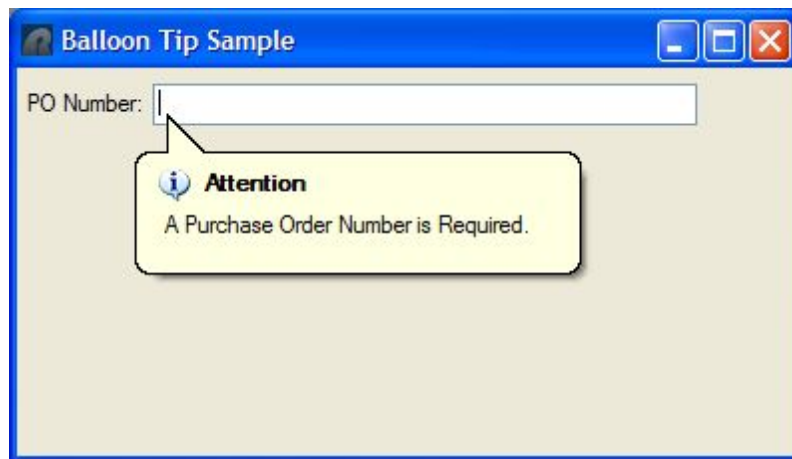
Icon options available include:

- NONE
- INFO
- WARNING
- ERROR
- INFO\_LARGE (Windows Vista, 7, and higher only)

- WARNING\_LARGE (Windows Vista, 7, and higher only)
- ERROR\_LARGE (Windows Vista, 7, and higher only)

Example: (Variable Edit On Exit EEP)

```
IF vPONumber IS NULL THEN
 PROPERTY PEdit_PO ShowBalloonTip TRUE
 PROPERTY PEdit_PO BalloonTipTitle 'Attention'
 PROPERTY PEdit_PO BalloonTipText 'A Purchase Order Number is Required.'
 PROPERTY PEdit_PO BalloonTipIcon INFO
 PROPERTY PEdit_PO SET_FOCUS 'TRUE'
ENDIF
RETURN
```



Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10317 or higher)

## 8.27 Displaying a Cue Banner in DB/Variable Edit Fields

Did you know that you can display cue banner in DB Edit and Variable Edit Fields?

Cue banners (aka watermarks) are text hints that can be displayed as a prompt to the user inside an DB Edit or Variable Edit control. This is a line of "grayed out" text which can be used to prompt the user for the information s/he is expected to enter in that box. For example if the edit control receives a search string, the cue banner may read "Enter search text here". When the user clicks in the box, the text goes away and s/he can type entry as usual.

Once the focus lands on the field, or when keystrokes are entered, the cue banner disappears. An optional setting can be used so the hint remains until keystrokes are pressed (Windows Vista, 7, and higher only).

The PROPERTY command can also be used to specify the cue banner for the DB/Variable Edit fields.

Example:

```
-- Form On After Start Custom EEP
PROPERTY DB_UserName CUEBANNER 'User Name'
PROPERTY DB_Password CUEBANNER 'Password'
RETURN
```

The image displays two sequential screenshots of a 'Login' dialog box. The dialog has a light blue title bar and a light gray background. It contains two input fields: 'User Name' and 'Password'. The 'User Name' field is highlighted with a yellow border in the bottom screenshot. The 'Password' field has a placeholder text 'Enter Password'. At the bottom, there are three buttons: a help button (question mark icon), a 'Login' button (key icon), and a 'Cancel' button (folder icon).

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10317 or higher)

## 8.28 Displaying the Current Table/Field on the Status Bar

Did you know that you can display the Current Table and Current Field on the form Status Bar?

After placing the Status Bar control, you may add one of the following Status Bar Panes, including "Current Table" and "Current Field":

- Clock Status
- Key Status
- Simple Status

- Glyph Status
- Marquee Status
- Table State Status
- DB Field Status
- Current Table
- Current Field

**Record: 28 of 31**

Existing Customers

|                          |                               |            |
|--------------------------|-------------------------------|------------|
| <b>Company:</b>          | RAM Data Systems, Inc.        |            |
| <b>Address:</b>          | 3935 Old William Penn Highway |            |
| <b>City:</b>             | Murrysville                   |            |
| <b>State/Zip Code:</b>   | PA                            | 15668-1854 |
| <b>Phone:</b>            | 724-733-0053                  |            |
| <b>Fax:</b>              | 724-733-0198                  |            |
| <b>Mod level:</b>        | 1                             |            |
| <b>Last Update Date:</b> | 03/27/2008                    |            |
| <b>Last Update Time:</b> | 10:30 AM                      |            |
| <b>Last Order Date:</b>  | 03/27/2008                    |            |
| <b>Customer URL:</b>     | http://www.ramdatasystems.com |            |
| <b>Customer E-Mail:</b>  | info@ramdatasystems.com       |            |
| <b>Current Status:</b>   | A                             |            |
| <b>Payment Terms:</b>    | Net 30 Days                   | +          |
| <b>Credit Limit:</b>     | \$100,000.00                  |            |

Table: Customer      Field : Company      NUM      CAPS

Navigation buttons: First, Prev, Next, Last, Add, Del, Save, Cancel, Close

## 8.29 Displaying the Record Number in a DB Grid

Did you know that you can display the record number in DB Grid?

Here's how:

1. Form Designer > DB Grid Control > Properties > Option
2. [x] Check the option for "Show Record Number" and select the "OK" button
3. Save and close the Form Designer
4. Database Explorer > Select Form > Run Form

The left column will display the actual record number for the table/view.

Here's a visual presentation of such feature in R:BASE:



Record 11 of 31

|    | Customer ID | Company Name                     | City          | State | Zip Code | Phone Number |
|----|-------------|----------------------------------|---------------|-------|----------|--------------|
| 1  | 100         | Computer Warehouse - II          | Boston        | CA    | 02178    | 617-341-2189 |
| 2  | 101         | Microtech University - I         | Boston        | MA    | 02162    | 617-423-8921 |
| 3  | 102         | Industrial Computers Inc.        | Denver        | CO    | 80214    | 303-239-7823 |
| 4  | 103         | Computer Mountain Inc.,          | Denver        | CO    | 80214    | 303-271-1500 |
| 5  | 104         | Industrial Concepts Inc.         | Livermore     | CA    | 94550    | 415-878-5600 |
| 6  | 105         | PC Consultation And Design       | Palo Alto     | CA    | 94321    | 415-892-6745 |
| 7  | 106         | Computer Warehouse - I           | Bloomington   | IN    | 47401    | 812-701-1002 |
| 8  | 107         | Midtown Computer Co.             | Chicago       | IL    | 60637    | 312-277-5000 |
| 9  | 108         | Nordan Distributors, Inc.        | Two Dot       | IL    | 47401    | 312-555-1212 |
| 10 | 109         | Compdat Computer Consulting      | Miami         | FL    | 33128    | 305-767-4309 |
| 11 | 110         | Soltech Database Design          | Mercer Island | WA    | 98040    | 206-827-3309 |
| 12 | 111         | Microtech University - II        | Appleton      | WI    | 54911    | 414-245-9867 |
| 13 | 112         | Computer Medical Ctr.            | Ft Lauderdale | FL    | 33309    | 305-365-7803 |
| 14 | 113         | State University                 | Bedford       | MA    | 01730    | 617-268-2200 |
| 15 | 114         | Olympic Sales                    | Newton        | MA    | 02160    | 617-885-3320 |
| 16 | 115         | Datacrafters Infosystems         | Lynnwood      | WA    | 98037    | 206-323-4365 |
| 17 | 116         | Compumasters Computer Supply     | Concord       | CA    | 94521    | 613-226-7171 |
| 18 | 117         | Data Solutions                   | Olympia       | WA    | 98504    | 206-321-5606 |
| 19 | 118         | Open Systems I/O                 | Laguna Beach  | CA    | 92652    | 714-763-9923 |
| 20 | 119         | Modular Software, Inc.           | Las Vegas     | NV    | 89104    | 702-649-9551 |
| 21 | 120         | Lanufacturers Discount Computers | Englewood     | CO    | 80112    | 303-426-8442 |
| 22 | 121         | Bytes & Words                    | Ogden         | UT    | 84403    | 801-248-4798 |
| 23 | 122         | Microcomputer Distribution       | Plantation    | FL    | 33317    | 305-746-2302 |
| 24 | 123         | The Data Shop                    | Austin        | TX    | 78701    | 512-328-1776 |
| 25 | 124         | Barton and Associates            | Stony Brook   | NY    | 11794    | 516-563-4438 |
| 26 | 125         | MIS by Design                    | Snoqualmie    | WA    | 99026    | 509-382-8706 |

## 8.30 Documenting Form EEPs

Did you know that while in Form Designer, you can document all Embedded Custom EEPs (if defined), as well as External EEPs (if referenced)?

In addition to documenting Custom EEPs (if defined), now you may also document all External EEPs (if referenced). This will help documenting all references related to Form External EEPs when converting legacy databases and applications.

Here's how:

While in Form Designer, select "Form" > "Document EEPs" from the main Menu Bar.

Four output options are available:

- Printer
- Text File ...
- PDF File ...
- Clipboard

## 8.31 Dynamically Changing Band List Properties

Did you know that you can dynamically change the properties of Enhanced DB Grid Band List(s), including the CAPTION and FONT.

Now you may use the following GETPROPERTY/PROPERTY commands:

```
-- To Obtain Band Count in Enhanced DB Grid
GETPROPERTY ComponentID BANDS->COUNT vValue

-- To obtain Current Caption for a Given Band in Enhanced DB Grid
GETPROPERTY ComponentID BANDS[n]->CAPTION vValue

-- To Dynamically Change Caption for a Given Band in Enhanced DB Grid
PROPERTY ComponentID BANDS[n]->CAPTION value

-- To Dynamically Change Font Name for Band(s) in Enhanced DB Grid
PROPERTY ComponentID BANDS->FONT_NAME value

-- To Change Font Color for Band(s) in Enhanced DB Grid
PROPERTY ComponentID BANDS->FONT_COLOR Value

-- To Dynamically Change Font Size for Band(s) in Enhanced DB Grid
PROPERTY ComponentID BANDS->FONT_SIZE value

-- To Dynamically Change Font Height for Band(s) in Enhanced DB Grid
PROPERTY ComponentID BANDS->FONT_HEIGHT value

-- To Dynamically Change Font Bold Style for Band(s) in Enhanced DB Grid
PROPERTY ComponentID BANDS->FONT_BOLD value
Values TRUE/FALSE

-- To Dynamically Change Font Italic Style for Band(s) in Enhanced DB Grid
PROPERTY ComponentID BANDS->FONT_ITALIC value
Values TRUE/FALSE

-- To Dynamically Change Font Strikeout Style for Band(s) in Enhanced DB Grid
PROPERTY ComponentID BANDS->FONT_STRIKEOUT value
Values TRUE/FALSE

-- To Dynamically Change Font Underline Style for Band(s) in Enhanced DB Grid
PROPERTY ComponentID BANDS->FONT_UNDERLINE value
Values TRUE/FALSE

-- Example 01
-- Database: RRBYW17
-- Form Name: RBG91_EnhancDBGrd_BandList_Properties
-- Control: Enhanced DB Grid
-- Related Tables: Customers, InvoiceHeader
-- Component ID: DBGrid_Customers, DBGrid_Invoices
-- Band List Count: 1
-- Bit Button: [Change Band Properties]
-- Custom EEP:
PROPERTY DBGrid_Invoices BANDS[0]->CAPTION 'Selected Customer Invoice
Details'
PROPERTY DBGrid_Invoices BANDS->FONT_NAME Tahoma
PROPERTY DBGrid_Invoices BANDS->FONT_COLOR GREEN
PROPERTY DBGrid_Invoices BANDS->FONT_SIZE 8
PROPERTY DBGrid_Invoices BANDS->FONT_BOLD TRUE
RETURN
```

Enhanced DB Grid Band List Before:

Customers

| Company                       | City          | State | Zip Code   | Status                              | Web Site                                                        |
|-------------------------------|---------------|-------|------------|-------------------------------------|-----------------------------------------------------------------|
| Modular Software, Inc.        | Las Vegas     | NV    | 89104      | <input checked="" type="checkbox"/> | <a href="http://www.msinc.com">http://www.msinc.com</a>         |
| Murrysville Technology Center | Murrysville   | PA    | 15668-1854 | <input checked="" type="checkbox"/> | <a href="http://www.mtc.com">http://www.mtc.com</a>             |
| Nordan Distributors, Inc.     | Two Dot       | IL    | 47401      | <input checked="" type="checkbox"/> | <a href="http://www.mdi.com">http://www.mdi.com</a>             |
| Olympic Sales                 | Newton        | MA    | 02160      | <input checked="" type="checkbox"/> | <a href="http://www.osales.com">http://www.osales.com</a>       |
| Open Systems I/O              | Laguna Beach  | CA    | 92652      | <input checked="" type="checkbox"/> | <a href="http://www.osio.com">http://www.osio.com</a>           |
| PC Consultation And Design    | Palo Alto     | CA    | 94321      | <input checked="" type="checkbox"/> | <a href="http://www.pccad.com">http://www.pccad.com</a>         |
| RAM Data Systems, Inc.        | Murrysville   | PA    | 15668-1854 | <input checked="" type="checkbox"/> | <a href="http://www.ramonline.com">http://www.ramonline.com</a> |
| Renaissance Computer Company  | Asheville     | NC    | 28801      | <input checked="" type="checkbox"/> | <a href="http://www.rccompany.com">http://www.rccompany.com</a> |
| Softech Database Design       | Mercer Island | WA    | 98040      | <input checked="" type="checkbox"/> | <a href="http://www.sdd.com">http://www.sdd.com</a>             |
| State University              | Bedford       | MA    | 01730      | <input checked="" type="checkbox"/> | <a href="http://www.stateu.com">http://www.stateu.com</a>       |
| The Data Shop                 | Austin        | TX    | 78701      | <input checked="" type="checkbox"/> | <a href="http://www.tds.com">http://www.tds.com</a>             |

First  
Prev  
Next  
Last  
Close

Invoices

| Invoice No. | Date       | Invoice Details     |                   |                    |                     |
|-------------|------------|---------------------|-------------------|--------------------|---------------------|
|             |            | Net Amount          | Freight           | Tax                | InvoiceTotal        |
| 1002        | 01/05/2011 | \$13,941.00         | \$139.41          | \$1,129.22         | \$15,209.63         |
| 1031        | 01/06/2011 | \$10,755.00         | \$107.55          | \$871.16           | \$11,733.71         |
| 1039        | 01/07/2011 | \$1,701.00          | \$17.01           | \$137.78           | \$1,855.79          |
| 1042        | 01/08/2011 | \$9,868.50          | \$98.69           | \$799.35           | \$10,766.54         |
| 1044        | 01/09/2011 | \$5,944.00          | \$59.44           | \$481.46           | \$6,484.90          |
| 1053        | 01/10/2011 | \$7,312.50          | \$73.13           | \$592.31           | \$7,977.94          |
| 1055        | 01/11/2011 | \$15,551.00         | \$155.51          | \$1,259.63         | \$16,966.14         |
| 1057        | 01/12/2011 | \$1,975.50          | \$19.76           | \$160.02           | \$2,155.28          |
| 1058        | 01/13/2011 | \$8,616.00          | \$86.16           | \$697.90           | \$9,400.06          |
|             |            | <b>\$325,475.25</b> | <b>\$3,254.80</b> | <b>\$26,363.54</b> | <b>\$355,093.59</b> |

Selected Invoice  
1055

Print Invoice

Invoice Summary

Change Band Properties

Enhanced DB Grid Band List **After**:

**Customers**

| Company                       | City          | State | Zip Code   | Status | Web Site                                                        |
|-------------------------------|---------------|-------|------------|--------|-----------------------------------------------------------------|
| Modular Software, Inc.        | Las Vegas     | NV    | 89104      | ✓      | <a href="http://www.msinc.com">http://www.msinc.com</a>         |
| Murrysville Technology Center | Murrysville   | PA    | 15668-1854 | ✓      | <a href="http://www.mtc.com">http://www.mtc.com</a>             |
| Nordan Distributors, Inc.     | Two Dot       | IL    | 47401      | ✓      | <a href="http://www.mdi.com">http://www.mdi.com</a>             |
| Olympic Sales                 | Newton        | MA    | 02160      | ✓      | <a href="http://www.osales.com">http://www.osales.com</a>       |
| Open Systems I/O              | Laguna Beach  | CA    | 92652      | ✓      | <a href="http://www.osio.com">http://www.osio.com</a>           |
| PC Consultation And Design    | Palo Alto     | CA    | 94321      | ✓      | <a href="http://www.pccad.com">http://www.pccad.com</a>         |
| RAM Data Systems, Inc.        | Murrysville   | PA    | 15668-1854 | ✓      | <a href="http://www.ramonline.com">http://www.ramonline.com</a> |
| Renaissance Computer Company  | Asheville     | NC    | 28801      | ✓      | <a href="http://www.rccompany.com">http://www.rccompany.com</a> |
| Softech Database Design       | Mercer Island | WA    | 98040      | ✓      | <a href="http://www.sdd.com">http://www.sdd.com</a>             |
| State University              | Bedford       | MA    | 01730      | ✓      | <a href="http://www.stateu.com">http://www.stateu.com</a>       |
| The Data Shop                 | Austin        | TX    | 78701      | ✓      | <a href="http://www.tds.com">http://www.tds.com</a>             |

**Invoices**

| Invoice No. | Date       | Net Amount          | Freight           | Tax                | InvoiceTotal        |
|-------------|------------|---------------------|-------------------|--------------------|---------------------|
| 1002        | 01/05/2011 | \$13,941.00         | \$139.41          | \$1,129.22         | \$15,209.63         |
| 1031        | 01/06/2011 | \$10,755.00         | \$107.55          | \$871.16           | \$11,733.71         |
| 1039        | 01/07/2011 | \$1,701.00          | \$17.01           | \$137.78           | \$1,855.79          |
| 1042        | 01/08/2011 | \$9,868.50          | \$98.69           | \$799.35           | \$10,766.54         |
| 1044        | 01/09/2011 | \$5,944.00          | \$59.44           | \$481.46           | \$6,484.90          |
| 1053        | 01/10/2011 | \$7,312.50          | \$73.13           | \$592.31           | \$7,977.94          |
| 1055        | 01/11/2011 | \$15,551.00         | \$155.51          | \$1,259.63         | \$16,966.14         |
| 1057        | 01/12/2011 | \$1,975.50          | \$19.76           | \$160.02           | \$2,155.28          |
| 1058        | 01/13/2011 | \$8,616.00          | \$86.16           | \$697.90           | \$9,400.06          |
|             |            | <b>\$325,475.25</b> | <b>\$3,254.80</b> | <b>\$26,363.54</b> | <b>\$355,093.59</b> |

**Selected Customer Invoice Details**

Selected Invoice: 1055

Print Invoice

Invoice Summary

Change Band Properties

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10417 or higher)

## 8.32 Dynamically Passing DB Grid Filter Parameters

In addition to many New and Enhanced Controls and Properties in R:BASE eXtreme, Enhanced DB Grid in Form Designer includes the option to "Show Filter Bar".

Enabling this option will display a filter bar directly under the titles which allows end-user to enter value to limit the displayed grid records based on matching criteria. You may also pre-define the Filter Pick List by selecting "Column Values", if you wish.

Did you know that you can dynamically pass filter parameters as "On After Start Custom EEP" or "On Demand", using the expanded Enhanced DB Grid Filter PROPERTY commands?

Here is a comprehensive list of supported PROPERTY/GETPROPERTY commands that are specific to Enhanced DB Grid Filter Bar.

```
-- Passing Filter Value for a Given Column Number
-- Syntax
PROPERTY CompID FILTERS[NNN]->VALUE filter_value
-- Example
PROPERTY EDBGridCust FILTERS[2]->VALUE 'CA'

-- Passing Filter Value for Given Column Name
-- Syntax
```

```
PROPERTY CompID FILTERS->COLUMN_NAME->ColName filter_value
-- Example
PROPERTY EDBGridCust FILTERS->COLUMN_NAME->CustState 'CA'

-- Capturing Filter Value for Given Column Number
-- Syntax
GETPROPERTY CompID FILTERS[NNN]->VALUE VarName
-- Example:
GETPROPERTY EDBGridCust FILTERS[2]->VALUE vStateFilter

-- Capturing Filter Value for Given Column Name
-- Syntax
GETPROPERTY CompID FILTERS->COLUMN_NAME->ColName VarName
-- Example
GETPROPERTY EDBGridCust FILTERS->COLUMN_NAME->CustState vValue

-- Clearing Filter Value for Given Column Number
-- Syntax
PROPERTY CompID FILTERS[NNN]->CLEAR_ITEMS TRUE
-- Example
PROPERTY EDBGridCust FILTERS[2]->CLEAR_ITEMS TRUE

-- Clearing Filter Value for Given Column Name
-- Syntax
PROPERTY CompID FILTERS->COLUMN_NAME->ColName->CLEAR_ITEMS TRUE
-- Example
PROPERTY EDBGridCust FILTERS->COLUMN_NAME->CustState->CLEAR_ITEMS TRUE

-- Dynamically Defining Single Filter Item for a Given Column Number
-- Syntax
PROPERTY ComponentID FILTERS[NNN]->ADD_ITEMS Value
-- Example
PROPERTY EnhDBGridCust FILTERS[2]->ADD_ITEMS 'MO'

-- Dynamically Defining Single Filter Item for a Given Column Name
-- Syntax
PROPERTY CompID FILTERS->COLUMN_NAME->ColName->ADD_ITEM ItemValue
-- Example
PROPERTY EDBGridCust FILTERS->COLUMN_NAME->CustState->ADD_ITEMS 'MO'

-- Dynamically Defining Multiple Filter Items for a Given Column Number
-- Syntax
PROPERTY CompID FILTERS[NNN]->ADD_ITEMS Value
-- Example:
PROPERTY EDBGridCust FILTERS[2]->ADD_ITEMS 'MO|HN|NY|CT'

-- Dynamically Defining Multiple Filter Items for a Given Column Name
-- Syntax
PROPERTY CompID FILTERS->COLUMN_NAME->ColName->ADD_ITEMS Value
-- Example
PROPERTY EDBGridCust FILTERS->COLUMN_NAME->CustState->ADD_ITEMS 'MO|HN|NY|CT'

-- To repopulate the filter from column values for a given column number
-- Syntax
PROPERTY CompID FILTERS[NNN]->ADD_COLUMN_VALUES TRUE
-- Example
PROPERTY EDBGridCust FILTERS[2]->ADD_COLUMN_VALUES TRUE

-- To repopulate the filter from column values for a given column name
```

```
-- Syntax
PROPERTY CompID FILTERS->COLUMN_NAME->ColName->ADD_COLUMN_VALUES TRUE
-- Example
PROPERTY EDBGridCust FILTERS->COLUMN_NAME->CustState->ADD_COLUMN_VALUES TRUE

-- To clear all filter values at once
-- Syntax
PROPERTY CompID CLEARFILTER TRUE
-- Example
PROPERTY EDBGridCust CLEARFILTER TRUE
```

Have fun implementing these properties in your R:BASE eXtreme applications!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10428 or higher)

## 8.33 Enabling/Disabling the "Drag and Drop" Feature

Did you know that you can enable or disable the "drag & drop" feature of any form control using the PROPERTY command?

A new DRAGDROPENABLED parameter has been added to the PROPERTY command to enable or disable the "drag & drop" feature of any form control, on demand.

### Syntax:

```
PROPERTY <FormControlCompID> DRAGDROPENABLED 'value'
Values: (TRUE/FALSE)
```

-- Example 01 (To enable Drag and Drop feature):

```
PROPERTY <FormControlCompID> DRAGDROPENABLED 'TRUE'
RETURN
```

-- Example 02 (To disable Drag and Drop feature):

```
PROPERTY <FormControlCompID> DRAGDROPENABLED 'FALSE'
RETURN
```

## 8.34 Enhanced DB Grid Control - Hot Keys

In addition to all enhanced features of Enhanced DB Grid Control in Forms, you may also use the following hot keys to extend the use of Enhanced DB Grid Control.

01. Enhanced DB Grid: Use [Ctrl + F3] to Search Records

**Customers**

| Company                       | City        | State | Zip Code | Status                              | Web Site                                                  |
|-------------------------------|-------------|-------|----------|-------------------------------------|-----------------------------------------------------------|
| Barton and Associates         | Stony Brook | NY    | 11794    | <input checked="" type="checkbox"/> | <a href="http://www.ba.com">http://www.ba.com</a>         |
| Blue Ridge Technologies, Inc. | Asheville   | NC    | 28801    | <input checked="" type="checkbox"/> | <a href="http://www.brtinc.com">http://www.brtinc.com</a> |
| Bytes & Words                 | Ogden       | UT    | 84403    | <input checked="" type="checkbox"/> | <a href="http://www.bw.com">http://www.bw.com</a>         |
| Compdat Computer Consulting   | Miami       | FL    | 33128    | <input checked="" type="checkbox"/> | <a href="http://www.ccc.com">http://www.ccc.com</a>       |
| Compumasters Computer Supply  | Concord     | CA    | 94521    | <input checked="" type="checkbox"/> | <a href="http://www.ccs.com">http://www.ccs.com</a>       |
| Computer Medical Ctr.         |             |       |          |                                     |                                                           |
| Computer Mountain Inc.,       |             |       |          |                                     |                                                           |
| Computer Warehouse - I        |             |       |          |                                     |                                                           |
| Computer Warehouse - II       |             |       |          |                                     |                                                           |
| Data Solutions                |             |       |          |                                     |                                                           |
| Datacrafters Infosystems      |             |       |          |                                     |                                                           |

**Record Search**

Value:

☒ in all fields  
☐ in field Company

Options: ☒ case sensitive

At a beginning of string

Origin: ☒ from first record  
☐ from current record

OK Cancel

| Invoice No. | Date       |                    |                 |                   |  | InvoiceTotal       |
|-------------|------------|--------------------|-----------------|-------------------|--|--------------------|
| 1003        | 01/06/2009 |                    |                 |                   |  | \$977.00           |
| 1054        | 01/14/2009 | \$13,572.00        | \$135.72        | \$1,099.33        |  | \$14,807.05        |
| 1059        | 01/23/2009 | \$4,972.50         | \$49.73         | \$402.77          |  | \$5,425.00         |
| 1069        | 05/19/2009 | \$1,386.00         | \$13.86         | \$112.27          |  | \$1,512.13         |
| 1037        | 09/27/2009 | \$940.50           | \$9.41          | \$76.18           |  | \$1,026.09         |
| 1093        | 10/03/2009 | \$3,186.00         | \$31.86         | \$258.07          |  | \$3,475.93         |
| 1092        | 11/25/2009 | \$4,302.00         | \$43.02         | \$348.46          |  | \$4,693.48         |
|             |            | <b>\$29,254.50</b> | <b>\$292.56</b> | <b>\$2,369.62</b> |  | <b>\$31,916.68</b> |

Clear Filters

First

Prev

Next

Last

Close

**Selected Invoice**

**1092**

Print Invoice

Invoice Summary

02. Enhanced DB Grid: Use [Ctrl + L] to Customize Filters

**Customers**

| Company                       | City        | State | Zip Code | Status                              | Web Site                                                  |
|-------------------------------|-------------|-------|----------|-------------------------------------|-----------------------------------------------------------|
| Barton and Associates         | Stony Brook | NY    | 11794    | <input checked="" type="checkbox"/> | <a href="http://www.ba.com">http://www.ba.com</a>         |
| Blue Ridge Technologies, Inc. | Asheville   | NC    | 28801    | <input checked="" type="checkbox"/> | <a href="http://www.brtinc.com">http://www.brtinc.com</a> |
| Bytes & Words                 | Ogden       | UT    | 84403    | <input checked="" type="checkbox"/> | <a href="http://www.bw.com">http://www.bw.com</a>         |
| Compdat Con                   |             |       |          |                                     |                                                           |
| Compumaster                   |             |       |          |                                     |                                                           |
| Computer Me                   |             |       |          |                                     |                                                           |
| Computer Mo                   |             |       |          |                                     |                                                           |
| Computer Wa                   |             |       |          |                                     |                                                           |
| Computer We                   |             |       |          |                                     |                                                           |
| Data Solution                 |             |       |          |                                     |                                                           |
| Datacrafters                  |             |       |          |                                     |                                                           |

**Filter Setup**

Select the records by the next conditions:

| Field | Condition | Value |
|-------|-----------|-------|
|       |           |       |

Define the additional condition:

Field:

Condition:

Value:

☐ AND
 ☒ OR

| Invoice # | Invoice Date | Invoice Total      |
|-----------|--------------|--------------------|
| 1003      |              | \$977.00           |
| 1054      |              | \$4,807.05         |
| 1059      |              | \$5,425.00         |
| 1069      |              | \$1,512.13         |
| 1037      |              | \$1,026.09         |
| 1093      |              | \$3,475.93         |
| 1092      | 11/25/2009   | \$4,693.48         |
|           |              | <b>\$29,254.50</b> |
|           |              | <b>\$292.56</b>    |
|           |              | <b>\$2,369.62</b>  |
|           |              | <b>\$31,916.68</b> |

**Selected Invoice**  
**1054**

03. Enhanced DB Grid: Use [Ctrl + S] to Show/Hide Grid Columns



| Company                       | City        | State | Zip Code | Status                              | Web Site                                                  |
|-------------------------------|-------------|-------|----------|-------------------------------------|-----------------------------------------------------------|
| Barton and Associates         | Stony Brook | NY    | 11794    | <input checked="" type="checkbox"/> | <a href="http://www.ba.com">http://www.ba.com</a>         |
| Blue Ridge Technologies, Inc. | Asheville   | NC    | 28801    | <input checked="" type="checkbox"/> | <a href="http://www.brtinc.com">http://www.brtinc.com</a> |
| Bytes & Words                 | Ogden       | UT    | 84403    | <input checked="" type="checkbox"/> | <a href="http://www.bw.com">http://www.bw.com</a>         |
| Compdat Computer              |             |       |          |                                     |                                                           |
| Compumasters Co               |             |       |          |                                     |                                                           |
| Computer Medical              |             |       |          |                                     |                                                           |
| Computer Mountai              |             |       |          |                                     |                                                           |
| Computer Wareho               |             |       |          |                                     |                                                           |
| Computer Wareho               |             |       |          |                                     |                                                           |
| Data Solutions                |             |       |          |                                     |                                                           |
| Datacrafters Infos            |             |       |          |                                     |                                                           |

| Invoice No.  | Invoice Total      |
|--------------|--------------------|
| 1003         | \$977.00           |
| 1054         | \$4,807.05         |
| 1059         | \$5,425.00         |
| 1069         | \$1,512.13         |
| 1037         | \$1,026.09         |
| 1093         | \$3,475.93         |
| 1092         | \$4,693.48         |
| <b>Total</b> | <b>\$31,916.68</b> |

You may also use the same hot keys to re-arrange columns.

Supported Versions:

- R:BASE eXtreme 9.0 (Builds: 9.0.1.131028 or higher)

## 8.35 Enhanced Tab Control EEPs

Did you know that now you can use "On Enter EEP" and "On Exit EEP" for the Enhanced Tab Control itself?

Now, you may customize the Enhanced Tab Control to execute your custom code when the focus is switched in or out of the Enhanced Tab Control itself. This is in addition to the "On Tab Change EEP" for individual Tab Pages.

Form Designer > Enhanced Tab Control > Object Property > EEPs:

Enhanced Tab Control Properties:

- On Enter EEP
- On Exit EEP

## 8.36 Focusing on the Enhanced DB Grid Filter Bar

When deploying Enhanced DB Grids on Forms, you might wish to place the cursor directly onto the "Filter" as soon as the form opens.

Did you know that now you can use a new "FocusOnFilterBar" PROPERTY command parameter to set the focus/cursor directly in a filter field for an Enhanced DB Grid?

Here's how:

```
PROPERTY EBDGrid_ComponentID FocusOnFilterBar 'TRUE'
```

Using this approach, you can have more control over your Enhanced DB Grid driven forms.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.20214 or higher)

## 8.37 Getting the Radio Button Count

Did you know that you can get the count of total number of radio buttons in a RadioGroup using the GETPROPERTY command?

Here's how:

```
GETPROPERTY <RadioGroupCompID> 'BUTTONCOUNT' varname
SET VAR vButtonCount = (INT(.varname))
RETURN
```

Variable varname will return the text value of a total number of Radio Buttons in DB/Variable RadioGroup control.

Variable vButtonCount will return the integer value of button count (varname).

## 8.38 GROUPINDEX property for Speed Buttons

Did you know that you can group all Speed Buttons to determine how the buttons behave when clicked?

You can use the new PROPERTY command GROUPINDEX parameter for Speed Buttons to allow all speed buttons to work together as a group.

### Syntax:

```
PROPERTY <SpeedButtonComponentID> GROUPINDEX nnnn
```

You will need to set GROUPINDEX to determine how the button behaves when clicked.

-- Example:

```
PROPERTY <SpeedButtonOFF> GROUPINDEX 1000
PROPERTY <SpeedButtonON> GROUPINDEX 1000
PROPERTY <SpeedButtonOFF> DOWN 'TRUE'
PROPERTY <SpeedButtonON> DOWN 'FALSE'
```

When GROUPINDEX is 0, the button behaves independently of all other buttons on the form. When the user clicks such a speed button, the button appears pressed (in its clicked state) and then returns to its normal up state when the user releases the mouse button.

When GROUPINDEX is greater than 0, the button remains selected (in its down state) when clicked by the user. When the user clicks a selected button, it returns to the up state, unless Caption is False. Setting the GROUPINDEX property of a single speed button to a value greater than 0 causes the button to behave as a two-state button when Caption is True.

Speed buttons with the same GROUPINDEX property value (other than 0), work together as a group. When the user clicks one of these buttons, it remains selected until the user clicks another speed button belonging to the same group. Speed buttons used in this way can present mutually exclusive choices to the user.

The option DOWN specifies whether the button is selected (down) or unselected (up). Set DOWN to determine whether a speed button is selected. The DOWN property only applies if the GROUPINDEX property of the button is nonzero.

When GROUPINDEX is greater than 0, set DOWN to TRUE to select a button. When the user clicks on a button in the unselected (up) state, the button is selected and DOWN is set to TRUE. When the user clicks on a button in the selected (down) state, if Caption is True, the button becomes unselected and DOWN is set to FALSE.

At design time, specify which button in a group is the initially selected button by setting the Down property of the selected button to TRUE.

**Note:** When GROUPINDEX is 0, buttons do not remain in the selected state when clicked.

## 8.39 Listing All Controls with Component IDs

Did you know that you can list all controls with Component IDs, while in a form designer? Here's how:

While in Form Designer, press the [F3] key to launch the Data Dictionary.

Notice the additional tabs...

Now click on the [Form Component IDs] tab

The list will display all Component ID-associated form controls and the control caption (if exists).

While in Form Designer, you may also list "Form Actions", if defined, by clicking on the [Form Actions] tab of data dictionary.

## 8.40 Loading Images in Drop-Down and Bit Buttons

Did you know that you can load images in Drop-Down and Bit Buttons from an executable (.EXE), Dynamic Link Library (.DLL), OCX file, or icon (.ICO) file?

Using R:BASE eXtreme (32/64), the Drop Down Menu Button and Bit Button permit the ability to load a glyph from an executable (.exe), dynamic link library (.dll), OCX file, or icon (.ico) file. A 32x32 or 16x16 pixel glyph can be displayed.

In addition, the Drop Down Menu Button and Bit Button now provide alpha channel support to display a greater level of transparency for glyphs used on the buttons. A new attribute "Blend Image" allows this capability. The highest benefit of using alpha channel is visual appeal. Without alpha channel support, images would have a blocky jagged edge to them, like displayed below for the button on the left. This allows for the buttons to support PNG images in addition to BMP.

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10317 or higher)

## 8.41 Making an Enhanced Group Box Transparent

When using "Enhanced GroupBox" Control on the form, if you would like the Enhanced GroupBox to acquire the background color and/or application theme of your form wallpaper, etc., try the following:

1. Start R:BASE
2. CONNECT dbname
3. Database Explorer > Forms

- Highlight the form with Enhanced GroupBox
  - Right-Click > choose "Design Form"
4. While in Form Designer:
- Right-Click on Enhanced GroupBox Object placed on the form
  - Select Object Property
  - [x] Transparent (set to True)
  - Click on "Effects" Tab
  - Select Border: "Group Style" as "Custom"
  - Click on [OK] button to save property.
5. Click on "Run Form" button or use [Ctrl+F9] to Preview
- Close the form

## 8.42 Managing Digital Clock Properties

Did you know that you can change the default 24-hour Digital Clock control in forms to display a 12-hour (AM/PM) clock by using the TWELVEHOURCLOCK parameter in the PROPERTY command?

### Syntax:

```
PROPERTY <DigitalClockCompID> TWELVEHOURCLOCK 'value'
```

The default is set to 'FALSE'.

-- Example 01: To Display 12 Hour (AM/PM) Clock

```
PROPERTY DigitalClockCompID TWELVEHOURCLOCK 'TRUE'
```

-- Example 02: To Display 24 Hour Clock

```
PROPERTY DigitalClockCompID TWELVEHOURCLOCK 'FALSE'
```

In addition, you may also use the following PROPERTY command enable/disable the display of "Seconds" in Digital Clock.

### Syntax:

```
PROPERTY <DigitalClockCompID> SHOWSECONDS 'value'
```

The default is set to 'TRUE'

-- Example 03: To Disable/Hide the Seconds in Digital Clock

```
PROPERTY <DigitalClockCompID> SHOWSECONDS 'FALSE'
```

-- Example 04: To Enable/Show the Seconds in Digital Clock

```
PROPERTY <DigitalClockCompID> SHOWSECONDS 'TRUE'
```

## 8.43 Managing RBTI Form Variables

When working on a single form at a time, it is very easy to manage the following RBTI Form Variables:

- RBTI\_FORM\_FORMNAME (TEXT)
- RBTI\_DIRTY\_FLAG (INTEGER)
- RBTI\_FORM\_ALIAS (TEXT)
- RBTI\_FORM\_MODE (TEXT)
- RBTI\_FORM\_DIRTYVAR (INTEGER)
- RBTI\_FORM\_TBLNAME (TEXT)
- RBTI\_FORM\_COLNAME (TEXT)
- RBTI\_FORM\_COLVALUE (TEXT)
- RBTI\_FORM\_DATATYPE (TEXT)
- RBTI\_FORM\_COMPID (TEXT)

However, if you have a situation where a form is called from within another form, you may have a stack of forms being displayed on top of each other. RBTI Form Variables defined by the last form will of course overwrite the results of the previous form.

So, how do you keep track and manage all resulting variables for each form separately?

To manage this particular situation, all you need to do is define form variables with specific form-related expressions with a unique naming convention.

Here's how:

Assuming you have two forms (FormA and FormB).

1. Define the following expressions for FormA

```
vFormA_FormName TEXT = (.RBTI_FORM_FORMNAME)
vFormA_DirtyFlag INTEGER = (.RBTI_DIRTY_FLAG)
vFormA_Alias TEXT = (.RBTI_FORM_ALIAS)
vFormA_Mode TEXT = (.RBTI_FORM_MODE)
vFormA_DirtyVar INTEGER = (.RBTI_FORM_DIRTYVAR)
vFormA_TblName TEXT = (.RBTI_FORM_TBLNAME)
vFormA_ColName TEXT = (.RBTI_FORM_COLNAME)
vFormA_ColValue TEXT = (.RBTI_FORM_COLVALUE)
vFormA_DataType TEXT = (.RBTI_FORM_DATATYPE)
vFormA_CompID TEXT = (.RBTI_FORM_COMPID)
```

2. Define the following expressions for FormB

```
vFormB_FormName TEXT = (.RBTI_FORM_FORMNAME)
vFormB_DirtyFlag INTEGER = (.RBTI_DIRTY_FLAG)
vFormB_Alias TEXT = (.RBTI_FORM_ALIAS)
vFormB_Mode TEXT = (.RBTI_FORM_MODE)
vFormB_DirtyVar INTEGER = (.RBTI_FORM_DIRTYVAR)
vFormB_TblName TEXT = (.RBTI_FORM_TBLNAME)
vFormB_ColName TEXT = (.RBTI_FORM_COLNAME)
vFormB_ColValue TEXT = (.RBTI_FORM_COLVALUE)
vFormB_DataType TEXT = (.RBTI_FORM_DATATYPE)
vFormB_CompID TEXT = (.RBTI_FORM_COMPID)
```

Using this technique, all variables will be unique to each individual form, and you can easily track the status of each variable when working in a multi-form application.

## 8.44 Managing Table Properties on Demand

Did you know that you can manage table properties on demand while using the form in ENTER, EDIT or BROWSE mode?

Imagine a situation where you have one multi-table form, and you wish to manage all related controls for a specific table, based on certain conditions, such as network user.

Conditionally, depending on the logged in user, you may enable or disable all controls related to any table without knowing the individual Component IDs.

Using the "PROPERTY TABLE tablename DISABLECONTROLS" or "PROPERTY TABLE tablename ENABLECONTROLS" commands, you may manage the status of any table as deemed necessary.

Use the following PROPERTY commands as "On After Start EEP":

```
-- To disable all controls related to given table
PROPERTY TABLE tablename DISABLECONTROLS
RETURN
```

```
-- To enable all controls related to given table
PROPERTY TABLE tablename ENABLECONTROLS
RETURN
```

Here's a comprehensive list of all supported table properties:

- ENABLE\_DELETE\_ROWS
- ENABLE\_ADD\_NEW\_ROWS
- DISABLE\_DELETE\_ROWS
- DISABLE\_ADD\_NEW\_ROWS
- UPDATE
- CLOSE
- DISABLECONTROLS
- ENABLECONTROLS
- OPEN
- EDIT
- NEXT
- PRIOR
- LAST
- FIRST
- INSERT
- APPEND
- DELETE
- POST
- CANCEL
- REFRESH
- JUMPTO
- JUMP
- SEARCH

## 8.45 Managing Windows Media Player Properties

Did you know that now you can manage every property of the Windows Media Player ActiveX control when implemented in R:BASE forms?

Here is a list of new supported PROPERTY command parameters to manage the Windows Media Player ActiveX control:

Syntax:

```
PROPERTY <WMPActiveXComponentID> 'WMPProperty' 'value'
```

Example 01 (Load File):

```
PROPERTY MediaPlayer 'URL' 'D:\Videos\Stockholm Syndrome.avi'
```

Example 02 (Play):

```
PROPERTY MediaPlayer 'CALL_PROCEDURE Controls.Play' ''
```

Example 03 (Pause):

```
PROPERTY MediaPlayer 'CALL_PROCEDURE Controls.Pause' ''
```

Example 04 (Next):

```
PROPERTY MediaPlayer 'CALL_PROCEDURE Controls.Next' ''
```

Example 05 (Fast Forward):

```
PROPERTY MediaPlayer 'CALL_PROCEDURE Controls.FastForward' ''
```

Example 06 (Fast Previous):

```
PROPERTY MediaPlayer 'CALL_PROCEDURE Controls.Previous' ''
```

Example 07 (Fast Reverse):

```
PROPERTY MediaPlayer 'CALL_PROCEDURE Controls.Reverse' ''
```

Example 08 (Stop):

```
PROPERTY MediaPlayer 'CALL_PROCEDURE Controls.Stop' ''
```

Example 09 (User Interface):

```
PROPERTY MediaPlayer uiMode 'NONE'
PROPERTY MediaPlayer uiMode 'MINI'
PROPERTY MediaPlayer uiMode 'FULL'
```

Example 10 (Stretch to Fit TRUE/FALSE):

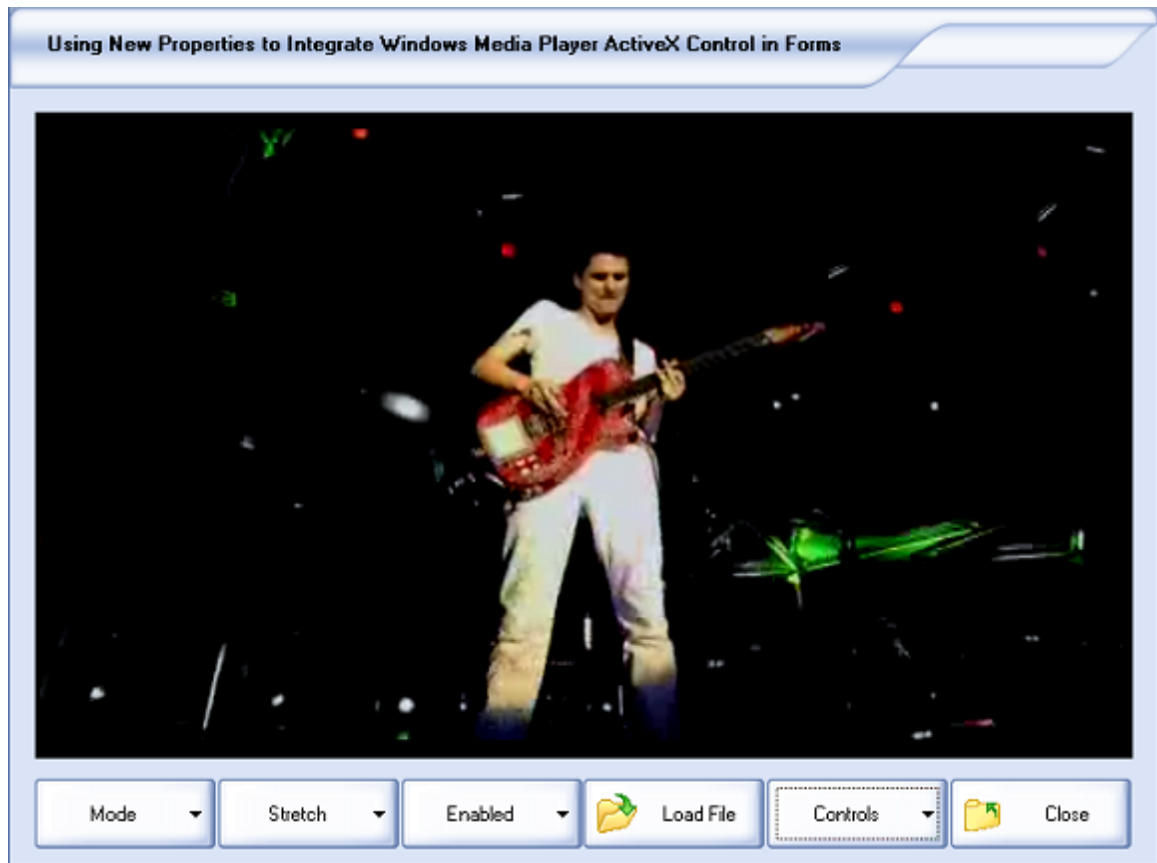
```
PROPERTY MediaPlayer STRETCHTOFIT 'TRUE'
PROPERTY MediaPlayer STRETCHTOFIT 'FALSE'
```

Example 11 (Enabled TRUE/FALSE):

```
PROPERTY MediaPlayer ENABLED 'TRUE'
PROPERTY MediaPlayer ENABLED 'FALSE'
```

Example 12 (Currently Playing File Name)

```
GETPROPERTY MediaPlayer URL vURLName
```



Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build:9.0.1.31125 or higher)

## 8.46 Moving Form Lookup Variables into Custom EEPs

When upgrading databases from older versions, it is important to take into account if and how R:BASE may work differently. Applications created with legacy logic can perhaps be improved upon in new releases.

For instance, in legacy versions of R:BASE, form variables were not calculated automatically. A RECALC VARIABLES command was needed in an EEP to refresh the variables and generate different results. In newer releases of R:BASE (7.0 and higher), form variables are recalculated automatically when the cursor moves from field to field.

Because of this logic change in R:BASE, the response time may be longer in forms with many lookup variables which are based upon large tables.

To retain that same performance when using the form, the lookup variables can be populated within an EEP.

In the following variables list, there are 11 lookups performed for the "Client" table based upon a provided client identification number. The variables were meant to display a range read-only information about the client.

Form : OrderEntry

Main Table : Orders

```
1 : TEXT vClientFirstName = CFirstName IN Client WHERE ClientID = ClientID
2 : TEXT vClientLastName = CLastName IN Client WHERE ClientID = ClientID
```



```

3 : TEXT vClientCompany = CCompany IN Client WHERE ClientID = ClientID
4 : TEXT vClientAddress1 = CAddress1 IN Client WHERE ClientID = ClientID
5 : TEXT vClientAddress2 = CAddress2 IN Client WHERE ClientID = ClientID
6 : TEXT vClientCity = CCity IN Client WHERE ClientID = ClientID
7 : TEXT vClientState = CState IN Client WHERE ClientID = ClientID
8 : TEXT vClientZipCode = CZipCode IN Client WHERE ClientID = ClientID
9 : TEXT vClientPhone = CPhone IN Client WHERE ClientID = ClientID
10 : TEXT vClientFax = CFax IN Client WHERE ClientID = ClientID
11 : TEXT vClientEmail = CEmail IN Client WHERE ClientID = ClientID

```

Instead, the variable values can be populated using a SELECT command placed within an "On Exit" Custom EEP, within the control where the client ID was entered.

```

-- On Exit EEP
SET VAR vClientFirstName = NULL
SET VAR vClientLastName = NULL
SET VAR vClientCompany = NULL
SET VAR vClientAddress1 = NULL
SET VAR vClientAddress2 = NULL
SET VAR vClientCity = NULL
SET VAR vClientState = NULL
SET VAR vClientZipCode = NULL
SET VAR vClientPhone = NULL
SET VAR vClientFax = NULL
SET VAR vClientEmail = NULL
SELECT +
 CFirstName, +
 CLastName, +
 CCompany, +
 CAddress1, +
 CAddress2, +
 CCity, +
 CState, +
 CZipCode, +
 CPhone, +
 CFax, + +
 CEmail +
INTO +
 vClientFirstName INDIC iv1, +
 vClientLastName INDIC iv1, +
 vClientCompany INDIC iv1, +
 vClientAddress1 INDIC iv1, +
 vClientAddress2 INDIC iv1, +
 vClientCity INDIC iv1, +
 vClientState INDIC iv1, +
 vClientZipCode INDIC iv1, +
 vClientPhone INDIC iv1, +
 vClientFax INDIC iv1, +
 vClientEmail INDIC iv1 +
FROM Client WHERE ClientID = .vClientID
RECALC VARIABLES
RETURN

```

In the following set of variables lookup data within a "ThirdParty" table based upon a third party payer ID, the variables were also meant to display a range read-only information.

```

12 : TEXT vTPPContactName = TPPContactName IN ThirdParty WHERE TPP_ID = TPP_ID
13 : TEXT vTPPCompany = TPPCompany IN ThirdParty WHERE TPP_ID = TPP_ID

```

```

14 : TEXT vTPPContract = TPPContract IN ThirdParty WHERE TPP_ID = TPP_ID
15 : TEXT vTPPCertificate = TPPCertificate IN ThirdParty WHERE TPP_ID = TPP_ID
16 : TEXT vTPPNotes = TPPNotes IN ThirdParty WHERE TPP_ID = TPP_ID

```

These variable values can be populated using a similar SELECT command placed within an "On Exit" Custom EEP, within the control where the third party payer ID was entered.

```

SET VAR vTPPContactName = NULL
SET VAR vTPPCompany = NULL
SET VAR vTPPContract = NULL
SET VAR vTPPCertificate = NULL
SET VAR vTPPNotes = NULL
SELECT +
 TPPContactName, +
 TPPCompany, +
 TPPContract, +
 TPPCertificate, +
 TPPNotes ,+
INTO +
 vTPPContactName INDIC iv1, +
 vTPPCompany INDIC iv1, +
 vTPPContract INDIC iv1, +
 vTPPCertificate INDIC iv1, +
 vTPPNotes INDIC iv1 +
FROM ThirdParty WHERE TPP_ID = .vTPP_ID
RECALC VARIABLES
RETURN

```

Other variables which perform calculations must remain in the Form Variables. The variables will continue to be updated if any changes are made to the variables contained within the expressions.

```

17 : TEXT vDayOfWeek = (SGET((TDWK(DateContarct)),3,1))
18 : CURRENCY vSubTotal = (SUM(ExtPrice))
19 : CURRENCY vFreight = (.vSubTotal * .01)
20 : CURRENCY vSalesTax = (.vSubTotal * .07)
21 : CURRENCY vInvoiceTotal = (.vSubTotal + .vFreight + .vSalesTax)

```

**Note:**

Using such technique, make sure to predefine all variables with appropriate data type as On Before Start EEP, and clear all necessary variables as On Close EEP.

```

-- Example
-- On Before Start EEP
SET VAR vClientFirstName TEXT = NULL
SET VAR vClientLastName TEXT = NULL
SET VAR vClientCompany TEXT = NULL
SET VAR vClientAddress1 TEXT = NULL
SET VAR vClientAddress2 TEXT = NULL
SET VAR vClientCity TEXT = NULL
SET VAR vClientState TEXT = NULL
SET VAR vClientZipCode TEXT = NULL
SET VAR vClientPhone TEXT = NULL
SET VAR vClientFax TEXT = NULL
SET VAR vClientEmail TEXT = NULL
SET VAR vTPPContactName TEXT = NULL
SET VAR vTPPCompany TEXT = NULL
SET VAR vTPPContract TEXT = NULL

```

```
SET VAR vTPPCertificate TEXT = NULL
SET VAR vTPPNotes TEXT = NULL
RETURN
```

```
-- On Close EEP
CLEAR VARIABLES iv%,vClient%,vTPP%
RETURN
```

You will also need to create two variables as Form Expression to capture the values for entered ClientID and TPP\_ID columns.

```
-- Example
nn : INTEGER vClientID = (ClientID)
nn : INTEGER vTPP_ID = (TPP_ID)
```

Supported Versions:

- R:BASE eXtreme 9.5 (32/64), Build: 9.5.2.11212 or higher
- R:BASE eXtreme 9.1 (32/64), Build: 9.1.6.21212 or higher

## 8.47 Searching in the DB Tree View Control

Did you know that you can search for any text in nodes that is dynamically generated by DB Tree View control?

PROPERTY command example:

```
PROPERTY TreeViewConrol FINDNODE 'Daily'
```

The DB Tree View control also supports the ability to search the nodes for text, using [Ctrl] + [F] to display a search dialog.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

## 8.48 Selecting All Items in List Box/List View Controls

Did you know that you can use the [Ctrl+A] or [Shift+F6] keys to toggle between selecting all items and unselecting all items in Variable Lookup ListBox or Variable Lookup ListView controls?

Here's how to "Select All Items" in Variable Lookup ListBox and Variable Lookup ListView controls.

1. Start R:BASE.
2. Connect to your database.
3. Open a form with a Variable Lookup ListBox or Variable Lookup ListView Control, in the Form Designer.
4. Make sure that associated variable data type is capable of accepting multi-select List Source Key Field items.
5. Make sure to enable the "MultiSelect" option for the Variable Lookup ListBox or ListView Control.
6. Save the form.
7. Run the form.
8. Use [Ctrl+A] or [Shift+F6] to toggle between Select and Un-Select All items.
9. Use [Ctrl+Click] to select multiple items.
10. Use [Shift+Click] to select an highlighted group of items.

You may also use the following PROPERTY commands to dynamically select all items, if you wish:

```
-- For Variable Lookup ListBox Control
PROPERTY <VarLookupListBoxCompID> MULTISELECT 'TRUE'
PROPERTY <VarLookupListBoxCompID> SELECT_ALL 'TRUE'
```

```
RETURN
```

```
-- For Variable Lookup ListView Control
PROPERTY <VarLookupListViewCompID> MULTISELECT 'TRUE'
PROPERTY <VarLookupListViewCompID> SELECT_ALL 'TRUE'
RETURN
```

## 8.49 Setting the Background Color for Focused Controls

When you design a cool form with so many DB/Variable Edit controls, sometimes the end user simply cannot figure out where the tiny mouse cursor is located. In the past we have found a workaround to change the background color properties for the "On Enter EEP" for each control.

Did you know that you can use the default "Form Settings" for "Edit Objects" to achieve your goal without customizing each and every edit control on the form?

Here's how:

1. Start R:BASE for Windows
2. From the Database Explorer > Main Menu > Settings > Form Designer
3. Within the Default Form Settings > Edit Objects ...

[ ] Background Color When Focused

This is where you'll have to define the color, including the option to define your own custom color, if you wish.

Using this custom setting will provide the option for any individual to use their favorite color.

You may also customize this setting for individual DB/Variable Edit/Memo controls as follows:

Form Designer > Object Properties > Effects > [ ] Background Color When Focused

You may use the PROPERTY command as "On After Start EEP" to dynamically enforce/change the background color for any DB/Variable Edit/Memo Controls.

Example:

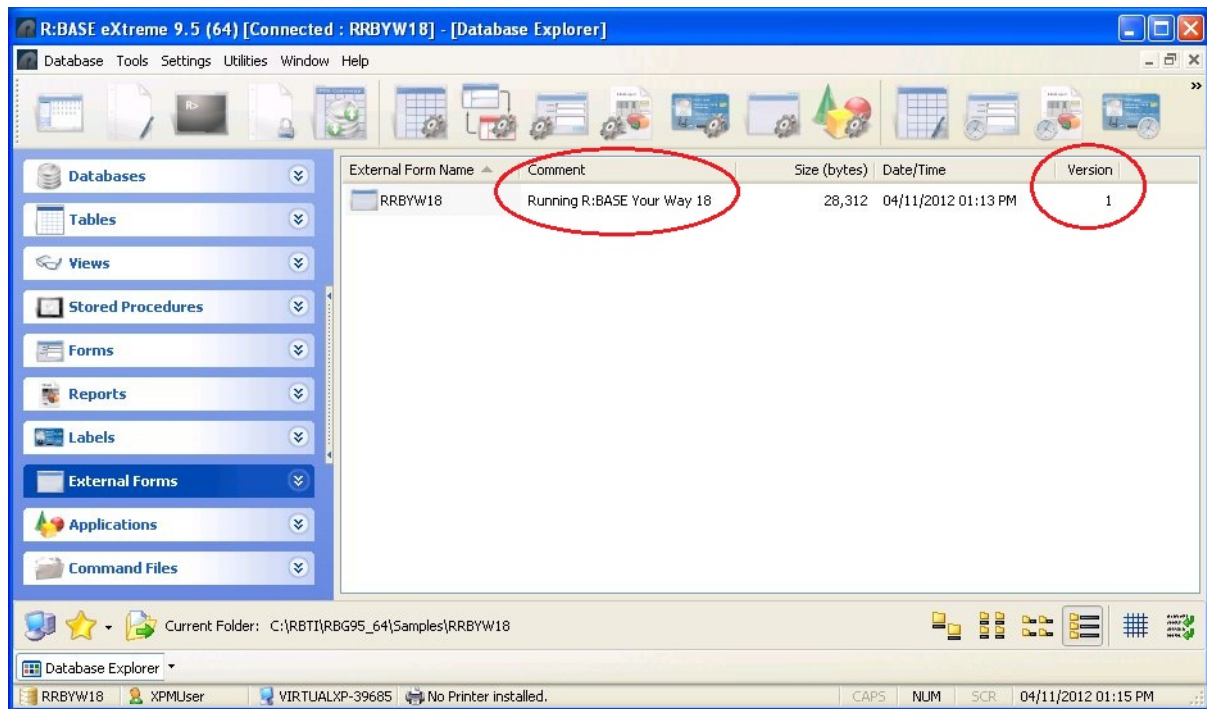
```
PROPERTY <ComponentID> HighlightFocus 'TRUE'
PROPERTY <ComponentID> HighlightFocusColor 'YELLOW'
RETURN
```

## 8.50 Storing Comment and Version Information for External Form Files

Did you know that you can store comment and version information for External R:BASE Form Files (.RFF)?

After creating/saving a new external form file, the name, latest revision date, size, and version number will be displayed in the Database Explorer.

A comment can be added and/or updated by right clicking on the external form file and choosing "Change Comment...".



Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10410 or higher)

## 8.51 Suppressing Script Errors in WEB Browser Controls

When implementing Web Browser, DB Web Browser, or Variable Web Browser controls in forms, depending on the server URLs, users may encounter script errors or warning messages which force them to click on an "OK" button to continue and so on. This may create an inconvenience for your R:BASE custom applications.

Now, you can suppress those warning or script error messages by either checking the additional property option to "Suppress Script Errors" for Web Browser, DB Web Browser or Variable Web Browser controls or use the following PROPERTY command:

```
PROPERTY WebBrowserComponentID SuppressScriptErrors 'TRUE'
RETURN
```

## 8.52 Understanding Tab Order

Tab Order Priority:

01. Form itself
02. Panel(s) and Controls within that panel
03. Individual Controls

When you place any control(s) in a form designer which posses the property of being "Containers" itself, such as Enhanced Panel, Enhanced Group Box, Scrolling Region and Tab Control, then the tab order of any placed controls within is related to that container itself.

It is also important to know the order in which the Panel(s) were defined.

So, if you would like to re-order the tab within each container (Enhanced Group Box in your case), first you need to select that container and then:

Layout > Change Tab Order will display the objects placed on that container, such as Enhanced Group Box.

Also, the form designer remembers the order in which you placed the container and the contents within that container.

BUT ... using the PROPERTY command, you CAN change the tab order as well as the focus.

Typical Scenario:

Let's say you have three "Enhanced Group Box" controls on the form and when the form starts, you would like the focus to be on the third (3rd) control (DB Edit) on the Middle (2nd) Enhanced GroupBox, irregardless of the sequence they were placed on the form, etc.

In that case:

1. Assign the Component ID as "Panel2" for the middle Enhanced Group Box.
2. Assign the Component ID as "Field3" on the third control (DB Edit) placed on the middle (2nd) Enhanced Group Box.
3. Create an EEP, for example, TabOrder.EEP with the following commands:

```
PROPERTY Panel2 TABORDER 0
PROPERTY Field3 SET_FOCUS 0
RETURN
```

4. Use TabOrder.EEP as "On After Start EEP"

Form Properties > Miscellaneous > "On After Start EEP"

5. Save the form.

Now when you run that form, the focus will be on the third control (DB Edit) placed on the middle (2nd) Enhanced Group Box.

## 8.53 Understanding the "Space Evenly" Option for Radio Group Controls

Within the Form Designer, choose either the DB RadioGroup or the Variable RadioGroup. View the Properties for the control and select the "Effects" tab.

When "Space Evenly" option is set to True (checked), the columns are positioned so that each "column" of controls takes up the same amount of space. This specific option is very useful when "Columns" are set to more than 1.

### Example:

Properties > Columns: 2

To specify the number of pixels used between "rows" (when Columns: is set to 1), use the PROPERTY command to specify the number of pixels used between rows of Radio Buttons in a Radio Group Control.

### Example:

```
PROPERTY <Component ID> VERTICALSPACING xxx
```

Where xxx is the number of pixels used between rows of Radio Buttons in a Radio Group Control.

## 8.54 Using a Date Picker (Calendar) in a DB Grid

Did you know that you can use a Date Picker (Calendar) in a DB Grid?

If you have a DB Grid Column associated with DATE, now you can use the Calendar to Enter or Update

the field in DB Grid.

Here's how:

1. Form Designer > DB Grid Control > Properties > Effects
2. [x] Check the option for "Show Picker for DATE Fields" and select the "OK" button
3. Save and close the Form Designer
4. Database Explorer > Select Form > Run Form

Notice the drop-down arrow on DATE field when the date column is focused.

Clicking on the drop-down arrow will bring up a calendar.

## 8.55 Using a Default State for DB/Variable Check Boxes

Did you know that you can set the "Default State" for DB and Variable Check Boxes?

- Form Designer > DB Check Box > Properties ...

Default State: ☐ Unchecked ☐ Checked

- Form Designer > Variable Check Box > Properties ...

Default State: ☐ Unchecked ☐ Checked

## 8.56 Using Bidirectional Mode Properties in R:BASE

Did you know that you can enable the control to adjust its appearance and behavior automatically when the application runs in a locale that reads from right to left instead of left to right?

A new BiDiMode (Bidirectional Mode) properties have been implemented for the following controls in the latest version and update of R:BASE eXtreme 9.5 (32/64):

- DB Check Box
- DB Radio Button
- DB Radio Group
- Variable Check Box
- Variable Radio Button
- Variable Radio Group

Form Designer | Object Properties | Effects | Bidirectional Mode

☐ Left to Right ☐ Right to Left, No Align  
☐ Right to Left ☐ Right to Left, Reading Only

The bidirectional mode controls the reading order for the text, the placement of the vertical scroll bar, and whether the alignment is changed.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

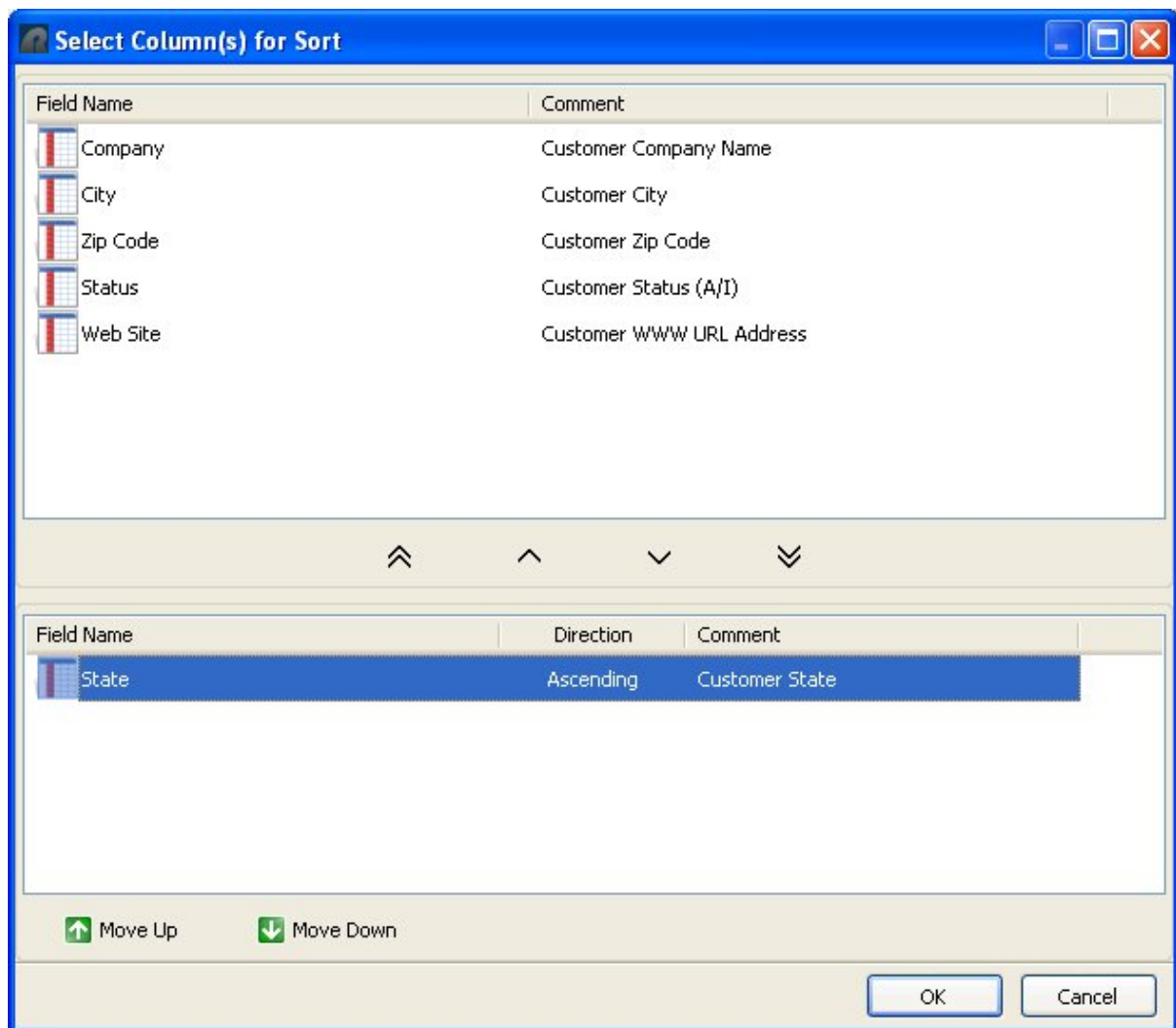
## 8.57 Using Multi-Column Sort in Enhanced DB Grid Control

Did you know that the current version and update of R:BASE eXtreme 9.5 include the option to use Multi-Column Sort in the Enhanced DB Grid Control?

Here's how:

1. Start R:BASE eXtreme 9.5 (32/64)
2. Connect the RRBYW18 database and run the form with Enhanced DB Grid control

3. Use [Ctrl + D] to bring up the screen to select column(s) for sort.



4. Select the column name and then click on [Add Column] button to add to the list.

Repeat the same to add column(s) for additional sort

Tips:

- You may also double-click on the column name to "select and add" to the list of columns to sort.
  - Use [Remove Column] button to remove selected column from the list
  - Use [Move Up] or [Move Down] button to re-arrange the list of columns
  - You may also double-click on the column name to "un-select" the column from the list of columns to sort.
5. Once done selecting all columns to sort, click on [OK] button to close the screen.  
 6. Notice the Enhanced DB Grid with Sorted Columns  
 7. Use [Shift + Ctrl + D] to clear the sort, if you wish.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20430 or higher)



## 8.58 Using the Enhanced DB Grid Sort Column Properties

Did you know that you can sort the Enhanced DB Grid Columns without clicking on the actual column header, using the PROPERTY commands?

New PROPERTY commands have been implemented in the latest updates and builds of R:BASE eXtreme 9.5 (32/64).

Here's how:

```
PROPERTY <EnhancedDBGridComponentID> SortAsc '0'
PROPERTY <EnhancedDBGridComponentID> SortDesc '0'
```

-- Examples (Based on RBG9\_EnhancDBGrd form included with RRBYW18)

-- To Dynamically Sort (ASC) the first column (Company)  
PROPERTY DBGrid\_Customers SortAsc '0'

-- To Dynamically Sort (DESC) the first column (Company)  
PROPERTY DBGrid\_Customers SortDesc '0'

-- To Dynamically Sort (ASC) the second column (City)  
PROPERTY DBGrid\_Customers SortAsc '1'

-- To Dynamically Sort (DESC) the second column (City)  
PROPERTY DBGrid\_Customers SortDesc '1'

Alternative, you could also use the following PROPERTY syntax as well.

```
PROPERTY <EnhancedDBGridComponentID> SortAsc 'columnname'
PROPERTY <EnhancedDBGridComponentID> SortDesc 'columnname'
```

-- To Dynamically Sort (ASC) the first column (Company)  
PROPERTY DBGrid\_Customers SortAsc 'Company'

-- To Dynamically Sort (DESC) the first column (Company)  
PROPERTY DBGrid\_Customers SortDesc 'Company'

-- To Dynamically Sort (ASC) the second column (City)  
PROPERTY DBGrid\_Customers SortAsc 'City'

-- To Dynamically Sort (DESC) the second column (City)  
PROPERTY DBGrid\_Customers SortDesc 'City'

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

## 8.59 Using the Mouse Over Property for Images

Did you know that in addition to "On Click" and "Right Click" EEPs, now you also have the following additional properties for Image, DB Image and Variables Image Controls?

- On Mouse Enter
- On Mouse Over
- On Mouse Leave

On Mouse Enter:

Use this option to run EEP automatically when the mouse cursor moves into the control's area.

**On Mouse Over:**

Use this option to run EEP when the mouse moves across the control. Please keep in mind that as the mouse cursor moves across a control, the EEP is called repeatedly. Each time it is called, it is with the new coordinates that reflect the continuous path of the mouse cursor across the screen real estate covered by the control's visual representation.

**On Mouse Leave:**

Use this option to run EEP automatically when the mouse cursor moves out of the control's area.

## 8.60 Using the New Display Format in Forms

Generally, all DB and Variable controls in Form Designer include a "Format Mask" property option to customize the format for data entry and data update purposes. This Format Mask property cannot be used for customizing the "display format" of database or variable edit controls.

Did you know that you can use the newly implemented enhancement to customize the "Display Format" for DB and Variable controls in form designer?

Here's how:

1. Open any form in the Form Designer
  2. From the Menu Bar, choose "Tables" > "Display Format ..."
- Notice the dynamic Tables/Columns Tree View with all associated table(s) and the list of customizable column(s).
3. Click on the desired column that needs the custom display format.
  4. Depending on the data type of the selected column, a list of appropriate display formats is generated.
  5. Select the most suitable format from the list. You may further customize (overwrite) the selected format is necessary.
  6. Click on [OK] button to save the Display Format.

Using this enhanced feature, now you can have your cake and eat it too!

## 8.61 Using the On Increment/On Decrement EEPs for Spinner Controls

Did you know that you fire an Entry/Exit Procedure (EEP) for a DB Spinner and Variable Spinner control each time the value is increased or decreased?

The Spinner controls now include the "On Increment" and "On Decrement" EEP options that will run the specified EEP once the action is taken.

The available EEPs now include:

**On Double Click EEP**

Double clicking on the control will run the specified EEP

**On Increment EEP**

Increasing the value for the control will run the specified EEP

**On Decrement EEP**

Decreasing the value for the control will run the specified EEP

**Supported Versions:**

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20128 or higher)

## 8.62 Using the "On Right-Click" EEP on List Box/List View Controls

Did you know that you can use the "Right-Click" mouse button on Variable Lookup List Box or Variable Lookup List View controls to execute any code, defined within a "On Right-Click" EEP?

Here's how:

For the Variable Lookup List Box:

1. Within the Form Designer, select an existing or add a new Variable Lookup List Box
2. Within the Object Properties, select the "EEPs" tab.
3. Notice the additional option for "On Right Click"
4. You may also access your Custom EEP by simply right-clicking on the object and selecting the "Custom EEP" > "On Right Click" menu option.

For the Variable Lookup List View:

1. Within the Form Designer, select an existing or add a new Variable Lookup List View
2. Within the Object Properties, select the "EEPs" tab.
3. Notice the additional option for "On Right Click"
4. You may also access your Custom EEP by simply right-clicking on the object and selecting the "Custom EEP" > "On Right Click" menu option.

## 8.63 Using the SCALEBY Property

Did you know that you can scale the form and all placed control dynamically to fit the screens with higher resolution?

You may use the `PROPERTY RBASE_FORM SCALEBY 'nnnn'` command to automatically scale form and all related controls to specified screen pixel width.

SCALEBY property modifies the Height and Width properties of the form and all controls placed on it, but it does not change the Top and Left properties; therefore, the size of the controls changes, but not the coordinates of the top-left corners of the controls. Thus, it preserves the position of all controls on the form.

If you have developed a form that is 800x600 for the majority of users having a monitor with 800x600 screen resolution to fit the form on the entire available screen, but a few users of your application have a higher resolution (1024x768) and if you wish your 800x600 form to fill the entire screen of a monitor with a resolution of 1024x768, you'll need to use the `RBASE_FORM SCALEBY` property as follows:

```
PROPERTY RBASE_FORM SCALEBY '800'
RETURN
```

This will scale the original form designed as 800x600 to fill the entire screen even if the screen resolution is higher than 800x600, such as, 1400x1050, 1280x800 or 1024x768.

### Notes:

- Use the SCALEBY property as embedded custom EEP in "On After Start EEP" in form
- To take advantage of this feature, make sure that you use the scaled true type fonts for all controls on that form

A sample form to demonstrate the use of SCALEBY property in forms is also available at:

<http://www.razzak.com/sampleapplications>

## 8.64 Using the File List Box Control

Did you know that now you can use "On Click EEP" for the File List Box Control?

Form Designer > File System Controls > File List Box > Properties

Using this feature, you can capture the entire file name as a "Long File Name" or "Short File Name" into variable(s) by simply clicking on any file name listed in the File List Box.

Example:

1. Place a File List Box Control on a form.
2. Assign a Component ID for File List Box Control, for example, "cFileListBoxControl".
3. Place two Variable Edit or Variable Label Controls associated with "vLongFileName" and "vShortFileName" to monitor the captured results.
4. Use the following code as File List Box Control "On Click EEP":

```
-- Begin
-- File List Box Control (On Click Custom EEP)
CLEAR VAR vLongFileName, vShortFileName
SET VAR vLongFileName TEXT = NULL
SET VAR vShortFileName TEXT = NULL
GETPROPERTY cFileListBoxControl LONGFILENAME vLongFileName
GETPROPERTY cFileListBoxControl SHORTFILENAME vShortFileName
RECALC VARIABLES
RETURN
-- End
```

5. Save and close the form.
6. At the R> Prompt or using the Database Explorer:

```
EDIT USING formname
```

Click on any file listed in the list box and notice the resulting captured values as Long/Short file names.

## 8.65 Using the Directory Tree Control

Did you know that now you can use an "On Click EEP" for the Directory Tree Control?

Form Designer > File System Controls > Directory Tree > Properties

Using this feature, now you can capture the value into a variable by simply clicking on any node of the tree.

Example:

1. Place a Directory Tree Control on a form.
2. Assign a Component ID for Directory Tree Control, for example, "cDirTreeControl".
3. Place a Variable Edit or Variable Label Control on the form to monitor the captured results.
4. Use the following code within the Directory Tree Control "On Click EEP":

```
-- Begin
-- Directory Tree Control (On Click Custom EEP)
CLEAR VAR vValue
SET VAR vValue TEXT = NULL
GETPROPERTY cDirTreeControl DIRECTORY vValue
RECALC VARIABLES
RETURN
-- End
```

5. Save and close the form.
6. At the R> Prompt or using the Database Explorer:

EDIT USING formname

Click on any level of the Directory Tree Control and notice the resulting captured value.

## 8.66 Using the Multi-Select Option for the List View Control

Did you know that you can use a multi-select option for the Variable Lookup List View control in forms?

Here's how:

Form Designer > Variable Controls > Variable Look-up List View > Object Property > Effects > MultiSelect

Notes:

1. To use the multi-select option, make sure that the variable data type is pre-defined as TEXT, NOTE or VARCHAR. Choosing which of these to use depends on the anticipated cumulative value for the variable. You must choose the data type wisely as the TEXT variable length is limited to 1500 characters, the NOTE variable length is limited to 4092 characters, and the VARCHAR variable length is limited to 256MB.
2. Use single-click to select one item.
  - Use [Ctrl + Click] to add item(s) to the list
  - Use [Ctrl + Click] to un-select the already selected item
  - Use [Ctrl + A] to select ALL items
  - Use [Ctrl + A] to un-select ALL items
  - Use [Shift + F6] key to select ALL items
  - Use [Shift + F6] key to un-select ALL items
3. All key values will be separated by a comma.

## 8.67 Using the Object List Toolbar

While in Form Designer, the Object List is very useful to displays the list of \*all\* object(s) placed on the form. You may view all objects by selecting [All Controls] from the Object List, or view all objects by selecting individual category, such as:

- Standard Controls
- Database Controls
- Variable Controls
- Additional Controls
- Internet Controls
- File System Controls
- Legacy Controls
- ActiveX Controls

By selecting the object and clicking on [Object Property] button, you may customize the property of selected object.

Did you know that you can also dock or float the Object List? Here's how:

Form Designer > Layout > Toolbars > Object List

Notice the floating Object List.

You may resize the height and width of this control and then dock it or float it, as you wish!

This is similar to other Toolbars.

## 8.68 Using the "On Key Press" EEP for Instant Results

Did you know that you can use the new "On Key Press" EEP to execute code while you start typing a character in a DB Edit or Variable Edit control?

Use "On Key Press" EEP, an event handler to make something happen as a result of a single character key press on the keyboard.

The key parameter in the "On Key Press" event handler is of type TEXT; therefore, the "On Key Press" event registers the ASCII character of the key pressed. Keys that don't correspond to an ASCII character value (i.e. [Shift] or [F1]) will not execute an "On Key Press" EEP. Key combinations of non-ASCII and ASCII characters (i.e. [Shift]+[A]), execute an "On Key Press" EEP only once. For this example, [Shift]+[A] results in a key value of "A", if [Caps Lock] is off.

**Designing Search Screens (Using On Key Press Option)**

Enter Keyword or % for All Customers

c

**Customers**

| Company                          | City          | State |
|----------------------------------|---------------|-------|
| Compdat Computer Consulting      | Miami         | FL    |
| Compumasters Computer Supply     | Concord       | CA    |
| Computer Medical Ctr.            | Ft Lauderdale | FL    |
| Computer Mountain Inc.           | Denver        | CO    |
| Computer Warehouse - I           | Bloomington   | IN    |
| Computer Warehouse - II          | Boston        | CA    |
| Industrial Computers Inc.        | Denver        | CO    |
| Industrial Concepts Inc.         | Livermore     | CA    |
| Johnson Technologies             | Sunnyvale     | CA    |
| Manufacturers Discount Computers | Englewood     | CO    |
| Midtown Computer Co.             | Chicago       | IL    |
| Open Systems I/O                 | Laguna Beach  | CA    |
| PC Consultation And Design       | Palo Alto     | CA    |

 Close

Powered by R:BASE!

## 8.69 Using the Show Accelerator Character Setting

Did you know that you can use the ampersand character "&" for captions to be used as the ampersand itself character, and not as the "\_" accelerator character?

Technically, the ampersand in captions is used for the accelerator character when using the [Alt]+Letter as a hot key (accelerator).

A new "Show Accelerator Character" setting has been added to show "&" as accelerator character "\_" or "&" as is, if you wish.

The following form controls properties are enhanced with such setting:

- Push Button
- Bit Button
- Speed Button
- Office Button
- Drop-Down Menu Button
- Enhanced Speed Button
- Enhanced Tab Control

However, if you wish to display the "&" character as is, you will have to un-check the default (checked) "Show Accelerator Character" setting.

Form Designer > Push Button > Object Properties > Attributes ... [ ] Show Accelerator Character

Form Designer > Bit Button > Object Properties > Attributes ... [ ] Show Accelerator Character

Form Designer > Speed Button > Object Properties > Attributes ... [ ] Show Accelerator Character

Form Designer > Office Button > Object Properties > Attributes ... [ ] Show Accelerator Character

Form Designer > Drop-Down Menu Button > Object Properties > Attributes ... [ ] Show Accelerator Character

Form Designer > Enhanced Speed Button > Object Properties > Attributes ... [ ] Show Accelerator Character

Form Designer > Enhanced Tab Control > Object Properties > Attributes ... [ ] Show Accelerator Character

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

## 8.70 Using Wallpapers

The Next Generation of R:BASE for Windows allows R:BASE Developers/Users to develop and deploy cool applications with a great look and feel using either standard wallpaper or custom wallpaper option of Standard Controls in Form Designer.

While this is a cool feature, as a developer/user, you'll need to assess the working environment, hardware and operating system of end-user using your wonderfully designed application(s).

Wallpaper adds additional overhead to the available memory resources on end-users' workstation.

Also, while in a form designer, if you're planning to use the custom wallpaper, use that as the last control after adding all other controls.

When using Wallpaper as the last control on the top of all other controls, make sure to Right Click and then select "Send To Back" in order for other controls to be visible.

## 8.71 Using Zebra Stripes in List View Controls

Did you know that now you can totally customize the Variable Lookup List View control in a form to display Zebra Stripes and custom column titles?

R:BASE includes properties to support "Zebra Stripes" as well as the options to select Background Color and Font Color for Column Titles.

For Zebra Stripes in List View:

1. Open the R:BASE Form Designer
2. Select the List View Control

3. Right click and select Object Property
4. Select the "Effects" tab
5. Check the option for Zebra Stripe and then select the Odd and Even colors.

For Custom Column Headers in List View:

1. Open the R:BASE Form Designer
2. Select the List View Control
3. Right click and select Object Property
4. Select the "Columns" tab
5. Select the column and then define the Background Color and Font Color.

Using these added properties and options, you can customize the List View controls to match your application theme.



# Part

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IX

## 9 Reports and Labels

### 9.1 Altering the CrossTab Grid Color

Did you know that you can customize the grid color of CrossTab control in Reports?

In addition to customizing the CrossTab column and row titles, now you may also customize the CrossTab grid color.

Here's how:

1. Start R:BASE
2. CONNECT to RRBYW18
3. From the Database Explorer > Reports > CrossTabReport > Design
4. From the Report Designer, right click on the CrossTab control and select "Grid Color..."
5. Select your favorite color and click on "OK" button
6. Click on the "Report Preview" tab to preview the report while in the Report Designer
7. Save the report and close Report Designer

You may also use the PROPERTY command to dynamically change the CrossTab grid color on demand.

Syntax:

```
PROPERTY CrossTabCompID GRIDCOLOR ColorName
```

-- Example 01:

```
PROPERTY CrossTab GRIDCOLOR 'MAROON'
RETURN
```

-- Example 02:

```
PROPERTY CrossTab GRIDCOLOR 'GREEN'
RETURN
```

Make sure to use above PROPERTY command as a "Before Generate..." action in reports.

### 9.2 Capturing Report System Variables

The following System Variables are supported in Reports:

- Date (Current Date)
- Date Time (Current Date and Time)
- Document Name (Report Name)
- Print Data Time (Print Date and Time)
- Page Count (Total page count such as 9)
- Page Set (such as 1 of 9, 2 of 9)
- Page Set with Description (such as Page 1 of 9, Page 2 of 9)
- Page Number (such as 1, 2, 3, 4, 5, 6, 7, 8, 9)
- Page Number with Description (such as Page 1, Page 2, Page 3)
- Time (Current Time)

Did you know that you can capture the value any of these System Variables using the GETPROPERTY command?

**Syntax:**

```
GETPROPERTY <ReportSystemVariableComponentID> TEXTVALUE varName
```

All you need to do is assign a unique Component ID to a System Variable object placed on a report band and then use GETPROPERTY command to capture the value. In addition, you may also use the following GETPROPERTY commands to retrieve REPORT specific values.

```
-- To Retrieve Report Name
GETPROPERTY REPORT REPORT_NAME vReportName
Report name may also be captured using the RBTI_REPORT_NAME variable.

-- To Retrieve Total Number of Tables Associated with Report
GETPROPERTY REPORT REPORT_TABLE_COUNT vReportTblCount

-- To Retrieve the Name of Master Table
GETPROPERTY REPORT 'REPORT_TABLE_NAME[0]' vReportMasterTbl
```

## 9.3 Capturing the Report Page Number

Did you know that you can capture the current Report Page Number of the report regardless of any objects on the report Detail Band?

Using R:BASE eXtreme, you can use the following GETPROPERTY command to achieve such goal.

Here's how:

```
GETPROPERTY REPORT PAGENO vPageNo
RETURN
```

New GETPROPERTY REPORT PAGENO vPageNo will return the current page number into a variable (vPageNo) which you can use to accomplish your objective of capturing the report page number.

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10717 or higher)

## 9.4 Changing the Report Section for All Expressions At Once

Traditionally, while in Report Designer Expression Builder, if you need to change the [Section] of all defined variables, or a group variables, you will have to first highlight the variables, one at a time, and then select the appropriate section from the drop-down list of sections of [Calculate On], and click on [Apply] to change the section.

Did you know that you can select/highlight multiple variables, and then select the appropriate section from the drop-down list of sections of [Calculate On], and click on [Apply] to change section for all expressions at once?

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10414 or higher)

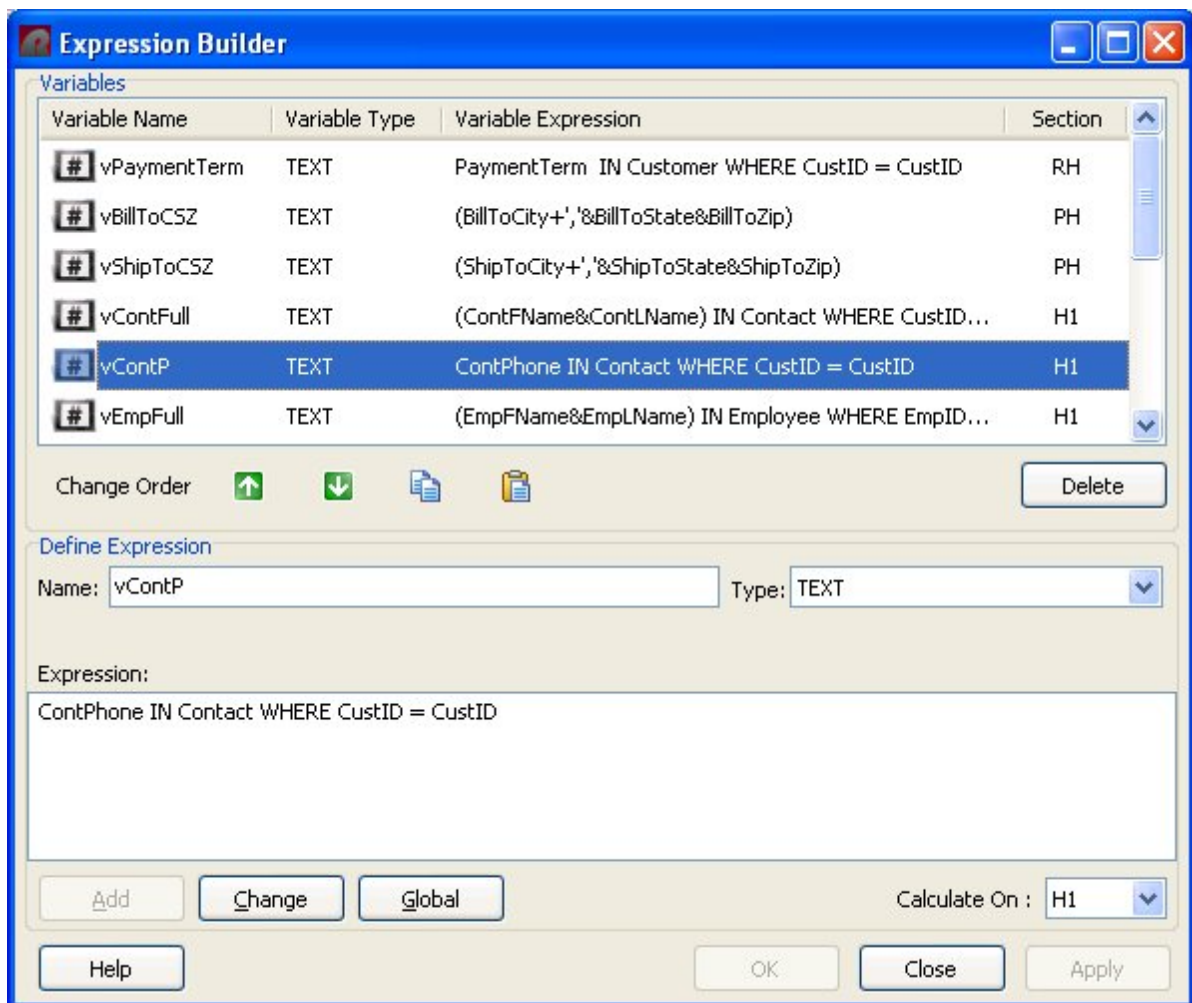
## 9.5 Copy and Paste Expression Builder Variables

Did you know that you can copy a report/label variable from the Expression Builder, and paste it into another report/label?

Buttons for "Copy" and "Paste" have been added to the Expression Builders for the Form, Report, and Label modules, to allow users to copy and paste selected, or all, variables.

Please note the "Copy" and "Paste" buttons are located next to the "Up" and "Down" arrow buttons, which reorder the location of a variable in the Expression Builder.

In addition, you may also use [Ctrl+C] to copy selected expression(s) and [Ctrl+V] to paste expression(s) while placing the cursor over the expression builder window.



Variables and Expressions can now be easily moved from form to form, label to label, and report to report!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11111 or higher)

## 9.6 Customizing Column and Row Titles for CrossTab Reports

Did you know that you can customize the "Titles" for Rows and Columns used in Cross Tab Reports?

Here's how:

1. Report Designer > Cross Tab Control > Configure ...
2. Cross Tab Configuration Layout Panel
3. Right-click on the default column heading and select "Title..." from the list of speed menu options
4. Enter the text for title and click on the [OK] button
5. Right-click on the default row heading and select "Title..." from the list of speed menu options
6. Enter the text for title and click on the [OK] button
7. Use the Steps 3-6 to also customize the following:
  - Font...
  - Color...
  - Display Format...

- Skip NULLs
- Gridlines

## 9.7 Customizing Print Preview Screens with Themes

Did you know that you can customize the Print Preview Screen to match your application/form theme?

Try the following examples and see what you find.

Example 01:

```
CONNECT RRBYW18
CLS
PRINT Invoice WHERE TransID = 1002 +
 OPTION SCREEN +
 |WINDOW_STATE MAXIMIZED +
 |ZOOM_TYPE PERCENTAGE +
 |ZOOMPERCENT 90 +
 |THEMENAME Razzmatazz +
 |PREVIEW_BACKGROUND_COLOR 16180442 +
 |PREVIEW_CAPTION Running R:BASE Your Way!
RETURN
```

Example 02:

```
CONNECT RRBYW18
CLS
PRINT Invoice WHERE TransID = 1002 +
 OPTION SCREEN +
 |WINDOW_STATE MAXIMIZED +
 |ZOOM_TYPE PERCENTAGE +
 |ZOOMPERCENT 90 +
 |THEMENAME Razzmatazz +
 |PREVIEW_BACKGROUND_COLOR [R234,G234,B234] +
 |PREVIEW_CAPTION Running R:BASE Your Way!
RETURN
```

## 9.8 Customizing Report/Label Designer Toolbars

By default, a new R:BASE installation setup installs the following options for Report Designer Toolbar:

1. Standard Controls
  - Label
  - Memo
  - Rich Text
  - Image
  - Shape
  - Line
  - Diagonal Line
  - Barcode
  - CheckBox
  - Rotated Label
2. Variable Controls
  - System Variables
  - Variable Label

- Variable Memo
  - Variable Rich Text
  - Variable Image
  - Variable Barcode
  - Variable CheckBox
3. Database Controls
    - DB Label
    - DB Memo
    - DB Rich Text
    - DB Calc
    - DB Image
    - DB Barcode
    - DB CheckBox
  4. Advanced Controls
    - Region
    - Cross Tab
  5. Format
    - Font
    - Font Size
    - Bold
    - Italic
    - Underline
    - Left Justify
    - Center
    - Right Justify
    - Justify
    - Font Color
    - Highlight Color
    - Bring to Front
    - Send to Back
  6. Edit
    - displays dynamic "Edit" options when using Standard, DB and Variable Controls
- BUT ... if you would also like to see the following additional options on your Report Designer Tool Bar, all you have to do is to check remaining options as following:
- Report Designer > Main Menu > View > Toolbars and then check the options accordingly:
7. Standard
    - New
    - Open
    - Save
    - Close
    - Page Setup
    - Print
    - Print Preview
    - Cut
    - Copy
    - Paste
    - Delete
    - Select All
  8. Draw
    - Fill Color
    - Line Color
    - Line Thickness
    - Line Style
  9. Align or Space
    - Align Left
    - Align Middle

- Align Right
  - Align Top
  - Align Center
  - Align Bottom
  - Space Horizontally
  - Space Vertically
  - Center Horizontally in Band
  - Center Vertically in Band
10. Size
- Shrink Width to Smallest
  - Grow Width to Largest
  - Shrink Height to Smallest
  - Grow Height to Largest
11. Nudge
- Nudge Up
  - Nudge Down
  - Nudge Left
  - Nudge Right

Now you have every usable options visible in Report Designer Tool Bar!

You may re-arrange the sequence of Tool Bar options by simply drag-and-drop accordingly.

The last re-arranged setup will be saved under user registry.

## 9.9 Defining Built-in PAUSE Messages in Reports

There are situations where a report with hundreds of thousands of records may take a while to print to a file or the screen, and you may want your end-users to stay tuned while the report is being prepared.

The traditional approach of utilizing the PAUSE 3 command in an application before Printing the report is good. However, as soon as the report starts printing, the report takes over control of the window, and your good old PAUSE command is no longer staying on top. So, how do we print a huge report and display the PAUSE message until the entire report is actually generated?

Did you know that you can use a cool PAUSE 3 message within a Report Action, such as the "Before Generate..." action and then issue the "CLS" command to clear the PAUSE 3 message when the report is actually finished in an "After Generate..." action?

Here's how:

1. Start R:BASE for Windows and open your favorite report in the Report Designer
2. Choose "Report" > "Actions" > "Before Generate..." from the main Menu Bar
3. Use the following code in your "Before Generate..." action:

```
-- Before Generate Action in Report
CLS
GETPROPERTY REPORT REPORT_NAME vReportName
PAUSE 3 USING +
'Preparing Report ... Please Stand By ...' +
CAPTION .vReportName +
ICON APP +
OPTION GAUGE_VISIBLE ON +
| GAUGE_COLOR 2708091 +
| GAUGE_INTERVAL 10 +
| MESSAGE_FONT_NAME VERDANA +
| MESSAGE_FONT_SIZE 10 +
| MESSAGE_FONT_COLOR RED +
```

```
|THEMENAME Vista CG
RETURN
```

4. Choose "Report" > "Actions" > "After Generate..." from the main Menu Bar
5. Use the following code in the "After Generate..." action

```
-- After Generate Action in Report
CLS
CLEAR VARIABLE vReportName
RETURN
```

6. Save the report

You may "Preview" the report while in the Report Designer, PRINT the report from within the Database Explorer or use the PRINT command to see the results.

Notice the real-time PAUSE 3 message with the report name as the caption and the moving gauge, all while the message stays on screen until the entire report is completely generated.

## 9.10 Defining TEMPORARY Table(s) within a Before Generate Action

Did you know that you can design a report and then use TEMPORARY tables to populate the data dynamically using the "Before Generate" action in Reports?

Similarly, once the report is designed and finalized, you can use the "On Before Design" action to create the required table(s) before bringing up the same report in report designer.

Here's a sample report to demonstrate the use of "Before Design" and "On Before Generate" actions in Reports.

Sample Applications: <http://www.razzak.com/sampleapplications/>

Name: Defining TEMPORARY Table(s) as On Before Generate Action in Reports

Steps:

1. Unzip the file in your sample RRBYW18 folder, such as:

```
...\Samples\RRBYW18
```

The zip file include two files: tCustomerList.RPT and tCustomerList.LOB

2. Start R:BASE CONNECT to RRBYW18
3. At the R> Prompt:

```
RUN tCustomerList.RPT
```

4. At the R> prompt:

```
LIST REPORTS
```

Notice that tCustomerList report is based on tCustomerList table. However, there is no such table defined.

5. If you open the tCustomerList report in Report Designer, notice that the required table is dynamically created.
6. If you run the tCustomerList report, notice that the required table with populated data is dynamically created.



To understand the entire logic, open the report in Report Designer and review the "Before Generate..." and "On Before Design..." actions.

- Report Designer > Main Menu > Report > Actions > Before Generate ...
- Report Designer > Main Menu > Report > Actions > On Before Design ...

## 9.11 Documenting Report/Label EEPs

Did you know that while in Report/Label Designer, you can document all Embedded Custom EPPs (if defined), as well as External EEPs (if referenced)?

In addition to documenting Custom EEPs (if defined), now you may also document all External EEPs (if referenced). This will help documenting all references related to Form External EEPs when converting legacy databases and applications.

Here's how:

With the Report Designer, select "Report" > "Document Custom EEPs" from the main Menu Bar, and the available output options include:

- Printer
- Text file
- PDF file
- Clipboard

With the Label Designer, select "Label" > "Document Custom EEPs" from the main Menu Bar, and the available output options include:

- Printer
- Text file
- PDF file
- Clipboard

## 9.12 Enabling Consolidated Control Palette in Report/Label Designer

Did you know that you can consolidate all individual Report/Label Designer Controls, namely Standard Controls, Database Controls, Advanced Controls, Variable Controls, and PDF Form Controls as one consolidated "Control Palette"?

The recently released update of R:BASE eXtreme 9.5 (32/64) now includes an optional setting to use Consolidated Control Palette for Report/Label Designer. While in Report/Label designer, if you wish to use consolidated Control Palette, follow the steps below:

1. Start R:BASE eXtreme 9.5 (32/64) and CONNect to database, such as RRBYW18
2. Database Explorer | Main Menu | Settings ...
3. Select Report/Label Designer and click on Default Settings ...

Under [General Tab] notice the new option:

[ ] Use Consolidated Control Palette

4. Check the option for [x] Use Consolidated Control Palette
5. Click on [OK] button to save Default Report/Label Settings
6. Now open any report in Report Designer and notice the newly appeared consolidated Control Palette

You may grab and dock newly appeared consolidated Control Palette anywhere you wish.

Supported Versions:

- R:BASE eXtreme 9.5 (Build..: 9.5.2.20430 or higher)

## 9.13 Getting the Total Number of Pages in a Report

Did you know that using the GETPROPERTY command, now you can get the total number of pages in a report?

Here's how:

Use the following custom EEP as an "After Generate EEP..." for the Report Footer:

```
SET VAR vTotPageCount TEXT = NULL
GETPROPERTY REPORT TotalPageCount 'vTotPageCount'
SET VAR vPauseMessage = ('Total Number of Pages:&.vTotPageCount)
PAUSE 2 USING .vPauseMessage +
 CAPTION 'GETPROPERTY in Reports' +
 ICON INFO +
 BUTTON 'Press any key to continue ...' +
 OPTION BACK_COLOR WHITE +
 |MESSAGE_COLOR WHITE +
 |MESSAGE_FONT_COLOR GREEN
CLS
RETURN
```

## 9.14 Managing the Memo Control

While in Report Designer, after placing a Memo Object on appropriate band, now you can use the double-click to open Memo Editor. You may use the [Load] option to load an external file, if you wish. Clicking on the [OK] button will save the contents. Then, you will be able to preview Memo contents without using the Memo Editor.

You may still use the right-click speed menu for more options related to Memo Control in Report Designer.

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10624 or higher)

## 9.15 Printing a Portion of a Report to a Different Printer

Did you know that the Sub-Reports have the capability to change the printer settings for the portion of the report in which they generate?

Here's how:

Use the Sub-Report's Printer Setup property to specify the different settings, including a different printer or paper tray, etc., just as you would a normal report.

If you specify a different printer in Printer Setup than that of the main (parent) report, then a New Print Job will be started on that printer when the report generates. This means that different sections of a report can not only use different printer settings, but that they can also be sent to different printers.

To do this, click on the appropriate Sub-Report tab in report designer and then simply customize the page setup as you would do for the normal report.

Report Designer > Select Sub-Report > Main Menu ...

Main Menu > File > Page Setup ... > Printer ...

When the Page Setup property is set for the Sub-Report, then this property determines whether a new print job is started when the Sub-Report is sent to the printer. This property can be used when a portion of a report needs to be printed to a separate printer. If you need to change printer settings for a certain section, you can do so without starting a new print job. Simply set the Page Setup properties (Printer, Paper Size, Orientation, Paper Tray, etc.) and these settings will be applied as the report prints.

Think about printing a Summary Page with R:Charts Analysis on a color printer and then printing all details with hundreds of pages on a separate black and white printer.

## 9.16 Printing Watermark Images in RTF Reports

When printing an rich text report with transparent images as watermark, everything looks good on the SCREEN. However, if you print that exact report directly to PRINTER, you will notice that the transparency is lost. This is how the rich text reports are printed when sent directly to the printer. This is a limitation of the rich text file format when using transparent images and overlapping text.

In order to print an rich text report with transparent images as watermark, first you need to print that report as PDF and then print that PDF report to printer to achieve your goal. Here's how:

```
PRINT reportname OPTION PDF +
|FILENAME filename.PDF +
|RICHTEXT_ENCODING_TYPE PLAINTEXT +
|OPEN ON
```

## 9.17 Retrieving Report Properties

Using the GETPROPERTY command you can retrieve the following properties of a report.

- Report Name
- Associated Number of Tables
- Associated Names of Tables (Master/Slave)

(For Sub-Reports)

Example 01: (To Retrieve Report Name)

```
GETPROPERTY REPORT 'REPORT_NAME' vReportName
RETURN
```

Variable vReportName will return the name of the report.

Example 02: (To Retrieve the Number of Associated Tables in Report)

```
GETPROPERTY REPORT 'REPORT_TABLE_COUNT' vReportTableCount
RETURN
```

Variable vReportTableCount will return the total number of associated tables in report.

Example 03: (To Retrieve the Name of Master Table Name for the Report)

```
GETPROPERTY REPORT 'REPORT_TABLE_NAME[0]' vReportMasterTable
RETURN
```

Variable vReportMasterTable will return the name of master table name for the report.

Example 04: (To Retrieve the Name of First Slave Table Name for the Report)

```
GETPROPERTY REPORT 'REPORT_TABLE_NAME[1]' vReportSlaveTable1
```

RETURN

Variable vReportSlaveTable1 will return the name of first slave table associated with a report in a Sub-Report environment.

Example 05: (To Retrieve the Name of Second Slave Table Name for the Report)

```
GETPROPERTY REPORT 'REPORT_TABLE_NAME[2]' vReportSlaveTable2
RETURN
```

Variable vReportSlaveTable2 will return the name of second slave table associated with a report in a Sub-Report environment.

## 9.18 Sorting Slave Tables with Forms/Sub-Reports

If you have a form with slave tables and a report with sub-reports, and if you wish to sort the matching rows related to slave table(s)/sub-report(s), you'll need to use the ARRANGE BY clause to achieve your goal.

ARRANGE tablename BY columnlist sorts the rows displayed by a form's or report's lower-level tables. Each lower-level table in the form or report that you want to sort requires its own ARRANGE clause. You can specify up to twenty-five tables to ARRANGE and up to five columns in each table on which R:BASE will sort.

Example 01:

```
Database: RRBYW18
Sample Form: SalesTransactions
Associated Tables (5):
 • Customer (Master)
 • InvoiceHeader (Slave 1)
 • InvoiceDetail (Slave 2)
 • Employee (Slave 3)
 • Contact (Slave 4)

Command:
EDIT USING SalesTransactions +
 ARRANGE InvoiceHeader BY TransID, +
 ARRANGE InvoiceDetail BY ItemNum, +
 ARRANGE Employee BY EmplName,EmpFName +
 ARRANGE Contact BY ContLName,ContFName +
 ORDER BY Company WHERE CustState = 'CA'
RETURN
```

Example 02:

```
Database: RRBYW18
Sample Report with Sub-Report: CustomerContacts
Associated Tables (2):
 • Customer (Master)
 • Contact (Slave 1)

Command:
PRINT CustomerContacts +
 ARRANGE Contact BY ContLName,ContFName +
 ORDER BY Company WHERE CustState = 'CA' +
 OPTION SCREEN|WINDOW_STATE MAXIMIZED +
 |ZOOM_TYPE PERCENTAGE|ZOOMPERCENT 90
```

RETURN

## 9.19 Using BRUSH\_STYLE and PEN\_STYLE Properties in Reports

While in Report Designer, when placing a Shape Object, you may also customize the Shape Type, Fill Color, Line Color, Line Thickness, and Line Style.

Did you know that using the new PROPERTY commands you may dynamically change the Shape Style and Pen Style as well?

### Syntax:

```
PROPERTY <ShapeObjectCompID> BRUSH_STYLE 'value'
```

Supported Values:

- SOLID
- CLEAR
- HORIZONTAL
- VERTICAL
- F\_DIAGONAL
- B\_DIAGONAL
- CROSS
- DIAG\_CROSS

```
PROPERTY <ShapeObjectCompID> PEN_STYLE 'value'
```

Supported Values:

- SOLID
- DASH
- DASH\_DOT
- DASH\_DOT\_DOT
- CLEAR
- INSIDE\_FRAME
- USER\_STYLE
- ALTERNATE

You may dynamically change BRUSH\_STYLE and PEN\_STYLE Properties as On Before Generate Report Action or conditionally as On Before Generate Action on any Report Band, as you wish.

```
-- Example 01
-- Database: RRBYW18
-- Report: InvoiceSummary_Brush_Style_Pen_Style
-- Using New BRUSH_STYLE and PEN_STYLE Properties for Shape Control
-- Action: Report Header [Before Generate]
-- Cover Page Shapes
PROPERTY CoverPage_Shape_01 BRUSH_STYLE 'HORIZONTAL'
PROPERTY CoverPage_Shape_01 PEN_STYLE 'SOLID'
PROPERTY CoverPage_Shape_02 BRUSH_STYLE 'VERTICAL'
PROPERTY CoverPage_Shape_02 PEN_STYLE 'DASH'
PROPERTY CoverPage_Shape_03 BRUSH_STYLE 'F_DIAGONAL'
PROPERTY CoverPage_Shape_03 PEN_STYLE 'DASH_DOT'
PROPERTY CoverPage_Shape_04 BRUSH_STYLE 'B_DIAGONAL'
PROPERTY CoverPage_Shape_04 PEN_STYLE 'DASH_DOT_DOT'
RETURN
-- Action: Page Header [Before Generate]
```

```
-- Page Header Shapes
PROPERTY PageHeader_Shape_01 BRUSH_STYLE 'CROSS'
PROPERTY PageHeader_Shape_01 PEN_STYLE 'INSIDE_FRAME'
PROPERTY PageHeader_Shape_01 BRUSH_STYLE 'DIAG_CROSS'
PROPERTY PageHeader_Shape_01 PEN_STYLE 'ALTERNATE'
RETURN
-- Action: Break Footer 0 [Before Generate]
-- Break Footer Shape
PROPERTY BreakFooter_Shape_01 BRUSH_STYLE 'B_DIAGONAL'
PROPERTY BreakFooter_Shape_01 PEN_STYLE 'DASH_DOT_DOT'
RETURN
-- Action: Report Footer [Before Generate]
-- Report Footer Shape
PROPERTY ReportFooter_Shape_01 BRUSH_STYLE 'SOLID'
PROPERTY ReportFooter_Shape_01 PEN_STYLE 'DASH_DOT'
RETURN
```

For your viewing pleasure, here is a report that illustrates the use of new BRUSH\_STYLE and PEN\_STYLE properties of Shape control.

[http://www.razzak.com/tips/InvoiceSummary\\_Brush\\_Style\\_Pen\\_Style.pdf](http://www.razzak.com/tips/InvoiceSummary_Brush_Style_Pen_Style.pdf)

In addition, notice the feature of designing a custom "Cover Page" and Page Header and Page Footer options, not to mention the compact size of PDF document using R:BASE eXtreme.

Have fun implementing BRUSH\_STYLE/PEN\_STYLE properties in Reports!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10414 or higher)

## 9.20 Using the Persistent Space Property

Did you know that you can use the new Persistent Space Property to determine whether the space reserved for header and footer band is kept, even if the contents are not printed?

The latest version and update of R:BASE eXtreme 9.5 (32/64), includes two new properties for Page Header and Page Footer bands.

### **Persistent Space On First Page**

Determines whether the space reserved for header or footer band is kept, even if the contents are not printed

### **Persistent Space On Last Page**

Determines whether the space reserved for header or footer band is kept, even if the contents are not printed

Report Designer | Page Header Band | Right-Click | Options ...

- ☐ Persistent Space of First Page
- ☐ Persistent Space of Last Page

Report Designer | Page Footer Band | Right-Click | Options ...

- ☐ Persistent Space of First Page
- ☐ Persistent Space of Last Page

Label Designer | Page Header Band | Right-Click | Options ...

- ☐ Persistent Space of First Page
- ☐ Persistent Space of Last Page

Label Designer | Page Footer Band | Right-Click | Options ...

- ☐ Persistent Space of First Page
- ☐ Persistent Space of Last Page

By default, these settings are enabled to maintain the current properties and format of all your existing reports and labels

Supported Versions:

- R:BASE eXtreme 9.5 (Build..: 9.5.3.21205 or higher)

## 9.21 Using Printer Control Codes

Did you know that you can use Printer Control Codes (PCC) in R:BASE for Windows? Using the new PCC (Printer Control Codes) Label control in either the Label or Report Designers, you can now send any Printer or POS Cash Drawer code to control the features of your printer or any other device that accepts application codes. Here's how:

1. Start R:BASE and open the Database Explorer
2. Select Reports from the Group Bar and select an existing report
3. Right click on it and select "Design Report"
4. In the Designer, notice the new "PCC Label" control under Advanced Controls
5. While in Report Designer, select the new PCC Label control and place it on the appropriate band of the report and then enter the correct code in the "Set Value" box.

Let's assume that the control code you must send to your printer to have it open your cash drawer is 27, 112, 0, 50, 250. In that particular case, you'll need to enter the following code in Set Value box to open the cash drawer before printing the receipt in R:BASE POS system.

Enter "27 112 0 50 250" into the "Set Value" box.

Another good scenario would be where the original tractor feed forms frequently require filling in data at the top of the form, which is above the area where the print head sits at rest. In order to avoid wasting the first form, the user would need back up the form to line up the top of the form with the top of the print head which would be pretty inconvenient. The other choice would be to roll up the forms on the printer and waste the first form by leaving it blank (wastes paper and is not good for the environment or trees!).

So, to achieve that goal, now all you need to do is to place the PCC label on appropriate band of the report, enter the printer specific codes, and you are done. All hardware specific codes, when placed while in the Label or Report Designer, are only enforced when printing the label or report to a printer using the **OPTION PRINTER** command.

## 9.22 When to Use Report Actions vs. Report Band EEPs

Do you know when it is appropriate to use Report Actions versus using Report Band EEPs?

In the R:BASE Report/Label Designer there are now several different options now available for developers and users to run custom code within reports and labels. There are "Report Actions" and "Report Band EEPs".

With Actions, there are several levels that your custom code can be executed during a report's stages of use. The levels include:

- Before Preview - executes code before a report is previewed
- After Preview - executes code after a report is previewed
- Before Generate - executes code before a report is generated
- After Generate - executes code after a report is generated
- On Before Design - executes code before the designer is launched

- On After Design - executes code after the designer is closed

A Report Action is geared to be used for initializing variables and creating temporary or permanent tables and views. The reason for this is because Report Actions are only intended to be executed once when the report is generated in the R:BASE Report Generator.

When using Report Band EEPs, you can run custom code before or after a report band, i.e. Page Header (PH), Report Footer (RF), etc., is generated. As R:BASE reports are generated from top to bottom, the Report Band EEPs will execute in this same fashion. If you right click on any report band, you will see the following options for EEPs:

- Before Generate Custom EEP
- After Generate Custom EEP

If you intend to alter the characteristic of any report field, i.e. color, visibility, size, etc., then you must issue the appropriate PROPERTY and GETPROPERTY commands within your Report Band EEPs.



# Part

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A large white 'X' is centered within a gray rounded square. The square has rounded corners and a solid gray fill. The 'X' is composed of two thick, white diagonal strokes that intersect in the center.

## 10 File Gateway

### 10.1 Defining Column Count When Importing Data

Did you know that while automating the entire File Gateway Import routines to import MS Spreadsheet (.xls) or .CSV file into R:BASE, now you can specify the exact number of columns to import?

An additional "OPTION COLUMN\_COUNT nnn" has been implemented to simplify your entire load process.

-- Example:

```
GATEWAY IMPORT filename.csv CREATE newtable OPTION COLUMN_COUNT 5
```

This command will import only first 5 columns from the CSV file.

### 10.2 Defining Header/Footer when Using GATEWAY EXPORT XLSW

When automating GATEWAY EXPORT XLSW options, did you know that you can also include Header and Footer text?

Two additional OPTIONS are implemented when exporting data as XLSW.

```
HEADER_TEXT value
FOOTER_TEXT value
```

-- Example 01:

```
-- Start here
CONNECT RRBYW17
SET ERROR MESSAGE 2077 OFF
DELETE InvoiceHeader.xls
SET ERROR MESSAGE 2077 ON
GATEWAY EXPORT XLSW InvoiceHeader.xls +
SELECT TransID AS `Invoice No`, +
TransDate AS `Invoice Date`, +
NetAmount AS `Sub Total`, +
Freight, Tax, +
InvoiceTotal AS `Invoice Total` +
FROM InvoiceHeader ORDER BY TransID +
OPTION COL_NAMES ON +
|HEADER_TEXT Customer Invoices +
|FOOTER_TEXT Quarterly Report +
|SHEET_NAME Invoices +
|ACTION OPENVIEW
RETURN
-- End here
```

#### Notes:

- You can customize the column names with spaces by surrounding the names with IDQUOTE character.
- Once the worksheet is opened, notice the header information in Row 1, Cell 1 (A1), and the footer information in the last row, Cell 1.
- You may also notice the "Number Format" for Invoice No, Invoice Date, Net Amount, Freight, Tax, and Invoice Total. All data types, such as INTEGER (Number), DATE, and CURRENCY are now reflected accordingly and not formatted as custom.

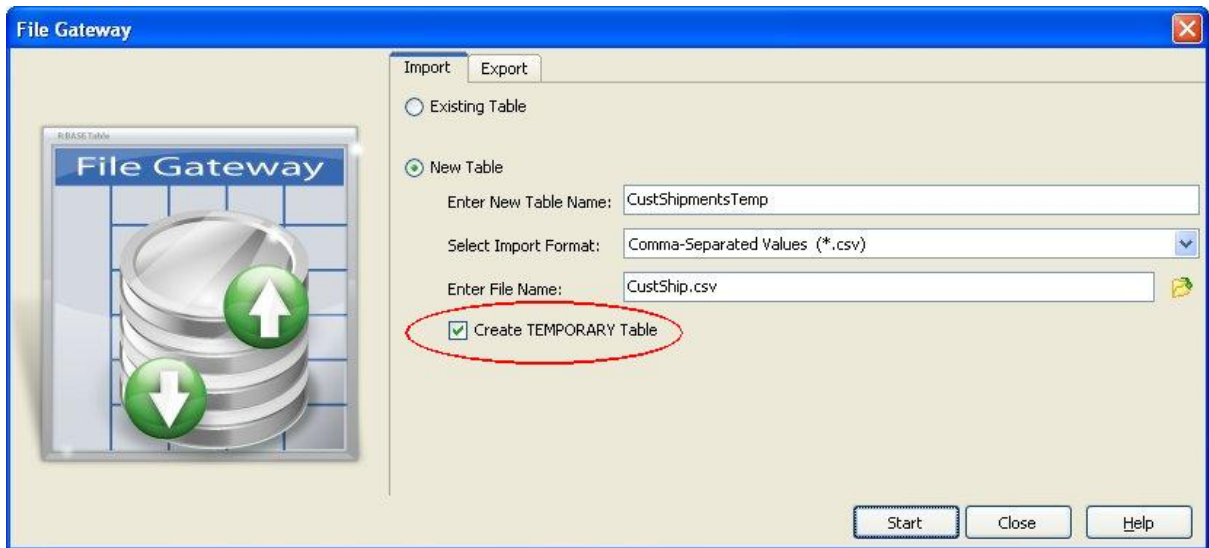
- You may also customize and automate the file extension (.xls or .xlsx) by using the PLUGIN RRegistry Command.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.2.10214 or higher)

## 10.3 Importing New Table as Temporary

Did you know that using the File Gateway Import option, now you can create a new table as TEMPORARY?



Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build: 9.0.1.10420 or higher)

## 10.4 Import XLS/XLSX Spreadsheet Column Mapping

Did you know that you can map R:BASE columns to XLS/XLSX spreadsheet columns in order to control the data import into specific locations?

Using R:BASE eXtreme, you can include the ADD\_MAPPING parameter in the GATEWAY command syntax to map an R:BASE column to the spreadsheet column.

Here's how:

-- This command will only append Cell B, Cell C and Cell D data into the Company, CustAddress and CustState columns of the Customer table from the Customer.xls file.

```
GATEWAY IMPORT XLS Customer.XLS APPEND Customer +
OPTION ADD_MAPPING Company=B|ADD_MAPPING CustAddress=C|ADD_MAPPING
CustState=D
```

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10717 or higher)
- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.20717 or higher)

## 10.5 Multi-Tab Excel Workbook with Headers Using GATEWAY EXPORT XLSW

Here's an example to create multi-tab Excel Workbook with Headers using GATEWAY EXPORT XLSW options,

```
-- GATEWAY_Multi_Tab_EXPORT_XLS_XLSW.RMD
-- Author: A. Razzak Memon
-- Date Created: March 31, 2011
-- Last Updated:
 IF (CVAL('DATABASE')) <> 'RRBYW17' OR (CVAL('DATABASE')) IS NULL THEN
 CONNECT RRBYW17 IDENTIFIED BY NONE
 ENDIF
 CLEAR VARIABLES vCaption,vPause3Message,vPause4Message,vCheckExtension
 SET VAR vCaption TEXT = 'Multi-Tab XLS/XLSX Workbook'
 SET VARIABLE vPause3Message TEXT = NULL
 SET VARIABLE vPause4Message TEXT = NULL
 SET VARIABLE vCheckExtension TEXT = NULL
 SET VARIABLE vFileName TEXT = NULL
 SET VAR vPause3Message = +
 ((CHAR(013))+ ' Now Preparing Multi-Tab XLS/XLSX Workbook')
 CLS
 PAUSE 3 USING .vPause3Message +
 CAPTION .vCaption +
 ICON INFO +
 OPTION MESSAGE_FONT_NAME Tahoma +
 |MESSAGE_FONT_COLOR GREEN +
 |MESSAGE_FONT_SIZE 11 +
 |THEMENAME Vista CG
 -- Delete previously created RRBYW17_Multi_Tab_WorkBook.xls??, if any
 SET ERROR MESSAGE 2077 OFF
 DELETE RRBYW17_Multi_Tab_WorkBook.xls??
 SET ERROR MESSAGE 2077 ON
 -- Define file name with appropriate file extension (.xls or .xlsx)
 -- .xlsx for MS Office Excel 2007 or higher
 PLUGIN RRegistry 'vCheckExtension|CHECK_KEY|HKCR|.xlsx|'
 IF vCheckExtension = 'TRUE' THEN
 SET VARIABLE vFileName = 'RRBYW17_Multi_Tab_WorkBook.xlsx'
 ELSE
 SET VARIABLE vFileName = 'RRBYW17_Multi_Tab_WorkBook.xls'
 ENDIF
 -- Create Tab 1 (Customers)
 SET VAR vPause4Message = +
 ((CHAR(013))+ ' Now Adding Tab 1 - Customers')
 PAUSE 4 USING .vPause4Message +
 CAPTION .vCaption +
 ICON INFO +
 OPTION MESSAGE_FONT_NAME Tahoma +
 |MESSAGE_FONT_COLOR GREEN +
 |MESSAGE_FONT_SIZE 11 +
 |THEMENAME Vista CG
 GATEWAY EXPORT XLSW .vFileName +
 SELECT CustID AS `Cust ID`, +
```

```

 Company AS `Company Name`, +
 CustAddress AS `Address`, +
 (CustCity+', '&CustState&CustZip) AS `City, State and Zip Code`, +
 CustPhone AS `Phone Number` +
 FROM Customer ORDER BY Company +
 OPTION COL_NAMES ON +
 |HEADER_TEXT Customers +
 |SHEET_NAME Customers|SHEET_INDEX 1
-- Create Tab 2 (Invoice Headers)
SET VAR vPause4Message = +
 ((CHAR(013))+ ' Now Adding Tab 2 - Invoice Headers')
PAUSE 4 USING .vPause4Message +
 CAPTION .vCaption +
 ICON INFO +
 OPTION MESSAGE_FONT_NAME Tahoma +
 |MESSAGE_FONT_COLOR GREEN +
 |MESSAGE_FONT_SIZE 11 +
 |THEMENAME Vista CG
GATEWAY EXPORT XLSW .vFileName +
 SELECT TransID AS `Invoice No`, +
 CustID AS `Cust ID`, +
 TransDate AS `Invoice Date`, +
 NetAmount AS `Sub Total`, +
 Freight, Tax, +
 InvoiceTotal AS `Invoice Total` +
 FROM InvoiceHeader ORDER BY TransID +
 OPTION COL_NAMES ON +
 |HEADER_TEXT Invoices +
 |SHEET_NAME Invoices|SHEET_INDEX 2 +
 |ACTION OPENVIEW
CLEAR VARIABLES vCaption, vPause%, vCheckExtension, vFileName
CLS
RETURN

```

**Notes:**

- Notice the use of PLUGIN RRegistry Command to customize and automate the file name extension (.xls or .xlsx).
- You can customize the column names with spaces by surrounding the names with IDQUOTE character.
- Once the worksheet is opened, notice the header information in Row 1, Cell 1 (A1), and the footer information in the last row, Cell 1.
- You may also notice the "Number Format" for Invoice No, Invoice Date, Net Amount, Freight, Tax, and Invoice Total. All data types, such as INTEGER (Number), DATE, and CURRENCY are now reflected accordingly and not formatted as custom.

**Supported Versions:**

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.2.10214 or higher)

## 10.6 Suppressing GATEWAY IMPORT Messages

R:BASE File Gateway utility contains many powerful features to allow the importing and exporting of data.

You may use the GUI interface to import data by clicking on the File Gateway icon on the main R:BASE toolbar. Once the File Gateway module initializes, select the Import tab. On the Import tab choose to either add the data to an "Existing Table", Create a "New Table" or TEMPORARY table.

Using the GATEWAY IMPORT command in a command file, you can automate the entire task of importing desired data formats from your end-users and/or clients. There are NO limits on importing numerous records into R:BASE databases with the GATEWAY command.

While automating the import process, be aware of both your source file structure and table structure for the command to function properly. The table and file structure MUST coincide with each other.

While importing the data, GATEWAY Import utility provides an animated status progress windows as well as -ERROR- message(s), if any.

Did you know that you can suppress both PROGRESS and MESSAGES while importing the data into an R:BASE table?

Using the latest R:BASE eXtreme 9.5 (32/64), you have two additional OPTIONs for GATEWAY IMPORT syntax as follows:

### SHOW\_PROGRESS

Indicates whether to display status dialog during the import process. Set SHOW\_PROGRESS to OFF if you wish to hide the animated status box during the import process. The default is set to ON.

### MESSAGES

If ON, during import process some messages will be displayed such as -ERROR- messages, if any. If OFF, the entire import process will be in "silent" mode. The default is set to ON.

For complete details and examples, refer to `HELP GATEWAY | IMPORT ...`

Supported Versions:

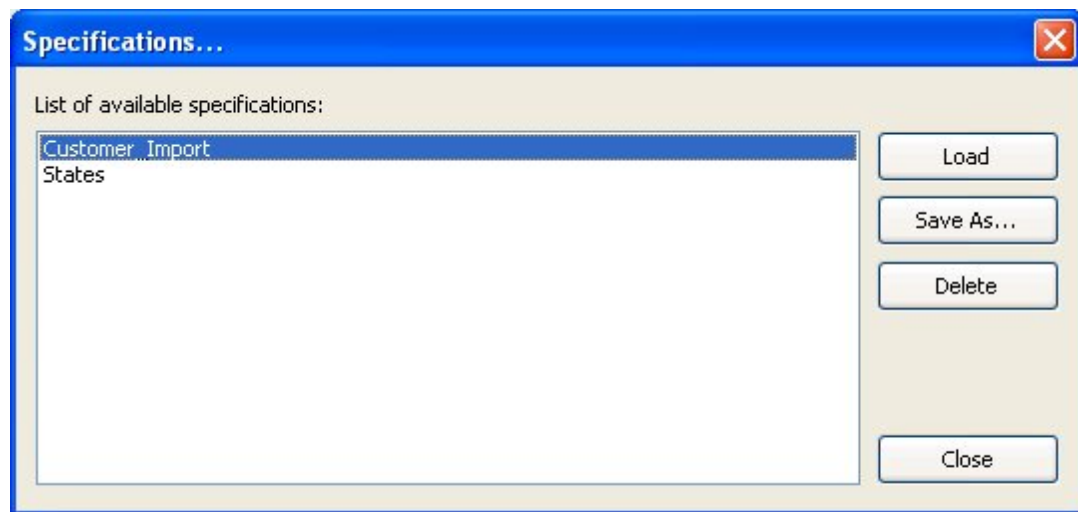
- R:BASE eXtreme 9.5 (Build..: 9.5.2.20611 or higher)

## 10.7 Using File Gateway Specification Files

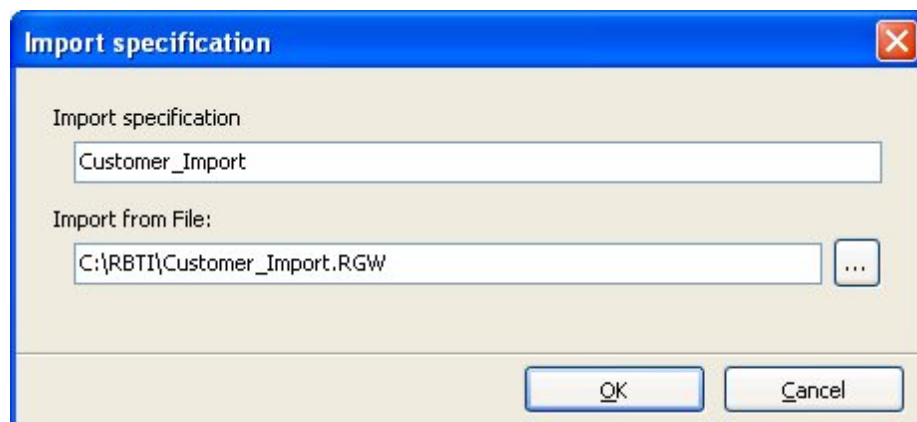
When using the File Gateway utility to import data into an existing table or when using the Export Wizard, specification files (.rgw) can be used to save your import/export options and settings to load from a previous data transfer.

As part of the latest update, it is now easier to manage multiple specification files in the same working folder with an enhanced "Save As" button.

During the import/export process, the "Specifications..." button is available. The specification file will store your import options for type, source file, fields, settings and mode.



The specification files can be loaded for the current data transfer and saved for future transfers. The specification files are stored in the current folder with the .RGW file extension.



Specification files can be utilized using both the File Gateway user interface and the GATEWAY.

GATEWAY Import Example:

```
GATEWAY IMPORT XLS Customer_New.xls APPEND Customer +
OPTION SHEET_INDEX 1 +
|SPECIFICATION_FILE_NAME Customer_Import.rgw +
|FIRST_ROW 2 +
|SHOW_PROGRESS ON +
|MESSAGES OFF
```

GATEWAY Export Example:

```
GATEWAY EXPORT CSV Customer_Release.csv +
SELECT Company,CustAddress,CustCity,CustState,CustZip FROM Customer +
OPTION COL_NAMES OFF +
|SHOW_PROGRESS ON +
|MESSAGES OFF +
|SPECIFICATION_FILE_NAME Customer_Release.rgw
```

Supported Versions:

- R:BASE eXtreme 9.5 (Build..: 9.5.3.20829 or higher)



# Part

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## 11 R:BASE Editor

### 11.1 Commenting and Uncommenting Commands

There are several different methods you can use in order to comment and uncomment lines or blocks of code in your command files.

To comment an individual line, add two hyphen characters "--" to the beginning of the line. In R:BASE Editor, the syntax highlighting will alter the display and change the font color to pink and the style to italicized. In the following example;

```
CLEAR VAR vResult
```

the command will become:

```
--CLEAR VAR vResult
```

Another use of characters that will comment your code is the asterick character preceding a set of parentheses "\*()", with the desired commented text or commands enclosed within the parentheses. In the following example;

```
PLUGIN RPDFMerge.RBL 'vResult +
|ACTION MERGE +
|DOC_LIST_FILE PDFFilesToMerge.LST +
|SHOW_SETUP_DIALOG ON +
|OUTPUT_FILE OneBigMergedFile.PDF '
```

the commands will become:

```
*(
PLUGIN RPDFMerge.RBL 'vResult +
|ACTION MERGE +
|DOC_LIST_FILE PDFFilesToMerge.LST +
|SHOW_SETUP_DIALOG ON +
|OUTPUT_FILE OneBigMergedFile.PDF '
)
```

Although this option is still supported in R:BASE, it is now recommended that you use an alternative method to avoid confusing parentheses with your R:BASE expressions. The suggested alternative is the use of a set of squiggly brackets "{}", with the desired commented text or commands enclosed within the squiggly brackets. In the following example;

```
PLUGIN RPDFMerge.RBL 'vResult +
|ACTION MERGE +
|DOC_LIST_FILE PDFFilesToMerge.LST +
|SHOW_SETUP_DIALOG ON +
|OUTPUT_FILE OneBigMergedFile.PDF '
```

the commands will become:

```
{
PLUGIN RPDFMerge.RBL 'vResult +
|ACTION MERGE +
|DOC_LIST_FILE PDFFilesToMerge.LST +
|SHOW_SETUP_DIALOG ON +
}
```

```
|OUTPUT_FILE OneBigMergedFile.PDF '
}
```

Other methods to comment an entire block of text or code include the options in the R:BASE Editor:

Highlight the entire block of text

Right Click > Block > Comment

You can uncomment the entire block of your code in RBG7 REdit by:

Highlight the entire block of text

Right Click > Block > Uncomment

You may also want to explore other options in completely re-designed R:BASE Editor!

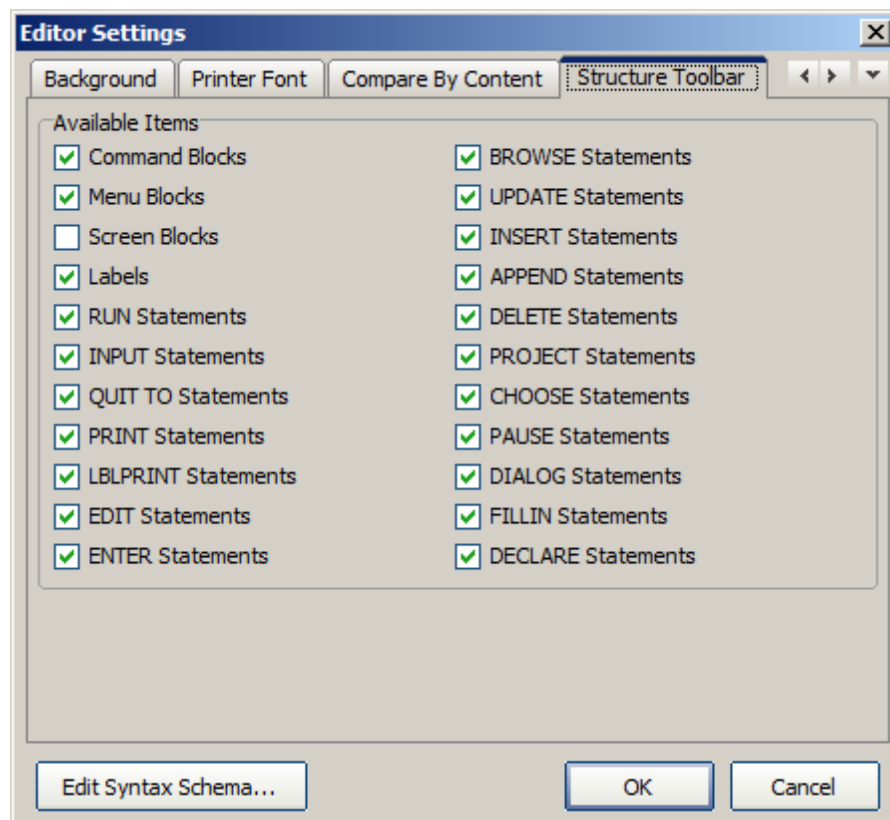
## 11.2 Customizing REdit Structure Toolbar Options

Did you know that you can customize the R:BASE Editor (REdit) Structure Toolbar settings to include custom structure options when editing or analyzing your application or command file?

Here's how:

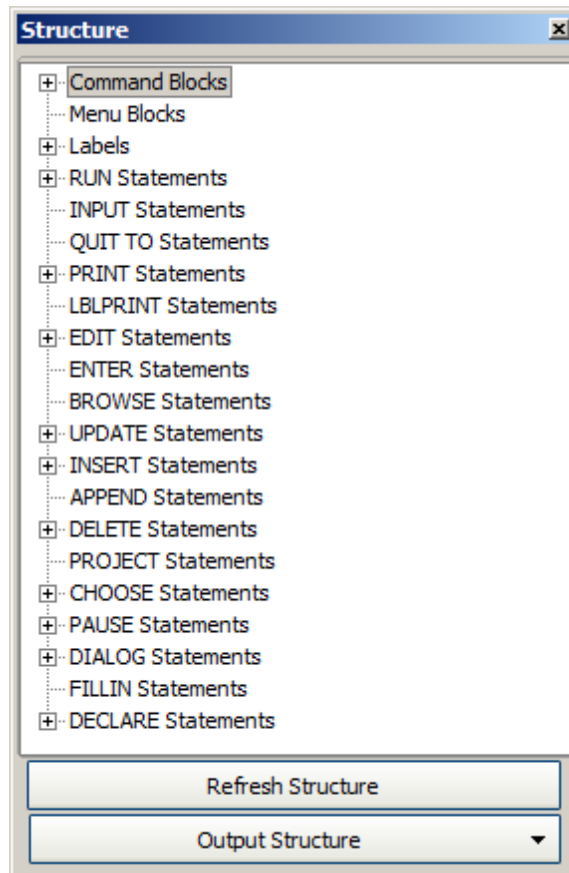
From the main Menu Bar, select > Settings > R:BASE Editor. Then, select the "Structure Toolbar" tab.

Once you check all appropriate options accordingly, click on OK button to save your custom settings.



Now when editing your application or command file, clicking on the [Refresh Structure] with document all

selected options.



Clicking on [Output Structure] button will let you save the entire structure with all details as follows:

- Printer
- Text File
- PDF File
- Copy to Clipboard

Have fun taking advantage of Expanded Structure as well as Output options in R:BASE eXtreme.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10414 or higher)

## 11.3 Integrating the External R:BASE Editor

With the added power and features of R:BASE Editor, <http://www.rbedit.com/>, if you wish to integrate the external editor into R:BASE, all you have to do is to simply use the following command at the R> prompt:

```
SET EDITOR 'C:\RBTI\RBEdit\RBEdit.exe'
```

This will set the default editor to your choice of R:BASE Editor.

The following will reveal the setting for your default editor.

```
SHOW EDITOR
```

The default editor setting can also be captured in a variable using the following Function:

```
(CVAL('EDITOR'))
```

You may also use the following option in your R:BASE configuration file (line #86):

```
EDITOR C:\RBTI\RBEEdit\RBEEdit.exe
```

## 11.4 Running Your Code Within RBEEdit

Did you know that now you can RUN your code while creating new code or updating existing code while in RBEEdit?

Here's how:

1. Start R:BASE
2. Open your existing command file or simply create a new one and use the following code:

```
CLS
SET VAR vTest TEXT = 'R:BASE Rocks!'
DIALOG 'Enter Text Messge' vTest=26 vEndKey 1 +
CAPTION 'Using AUTOSELECT' ICON APP +
OPTION AUTOSELECT TRUE +
|THEMENAME R:BASE Rocks!
RETURN
```

3. While still in RBEEdit, either click on the new Run [>] button on the tool bar or use [Ctrl + F9] keys to RUN your code.

If you need to make any changes, do it while in RBEEdit and test your code again without closing RBEEdit.

## 11.5 Wrapping Commands Using the Right Margin

Did you know that you can customize the location of the right margin in R:BASE Editor, in order expand the display of command files and EEPs?

The Right Margin is helpful in automatically displaying and wrapping long commands within the defined screen, when "Word Wrap" and "Break Word at Right Margin" are both enabled.

Here's how:

01. Within the R:BASE Editor, select "Editor Settings" > "General" tab, and locate the "Break Word at Right Margin" and "Word Wrap" check boxes in the right column.
02. Make sure both settings are enabled by clicking on the check box if it is empty.
03. While the "Editor Settings" is still displayed, select the "Display" tab and locate the "Right Margin" field (default 80 characters).
04. Using the available arrow buttons or by typing the new value, increase the value anywhere from 100 to 125, based upon your available screen space on the right.
05. Click the "OK" button.

Where long R:BASE commands are listed, you will see the extra space become populated, allowing for more of the command files to be displayed on the screen.

Have fun customizing the many options available within the R:BASE Editor!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10428 or higher)

**Part**

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**XII**

## 12 Trace Debugger

### 12.1 Accessing Database Settings While in TRACE Mode

Did you know that you can access current database settings while in TRACE mode?

In the latest update of R:BASE eXtreme 9.0 (32/64), the Data Dictionary, [F3] key, now includes an additional tab to display the current Database Settings, which is very useful when TRACing code.

Here's a comprehensive list of items/features when pressing the [F3] key:

- Databases (Name, Date/Time, Size)
- Tables (Name, Comment) \*
- Columns (Table/View Name, Name, Comment) \*
- Key/Indexes (ID, Type, Table Name, Reference) \*
- Variables (Name, Data Type, Value)
- Views (Name, Comment) \*
- Forms (Name, Table, Comment) \*
- Reports (Name, Table, Comment) \*
- Labels (Name, Table, Comment) \*
- Functions (Name, Category, Syntax)
- Stored Procedures (Name, Comment) \*
- System Tables (Name) \*
- System Columns (Table/View Name, Name, Comment) \*
- Themes (Name)
- Printers (Name)
- External Forms (External Form Name, Date/Time, Size)
- Applications (Application Name, Date/Time, Size)
- Colors (Color, Name, Integer Value, RGB Value)
- Control Types (Name, Comment)
- Database Settings (Parameter, Value, Description) \*\*

\* Only visible when connected to database

\*\* If not connected to database, default R:BASE settings are shown.

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10707 or higher)

### 12.2 Clearing Error List

In the Trace Debugger, an Error List Toolbar is available to display programming errors that occur during code debugging. If the Error List becomes too populated, there was no method to clear the list without restarting R:BASE.

Now, a new menu option is available to clear the error list.

From the Menu Bar, choose "Errors" > "Clear Error List"

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10410 or higher)

### 12.3 Managing Watch Variables in TRACE Mode

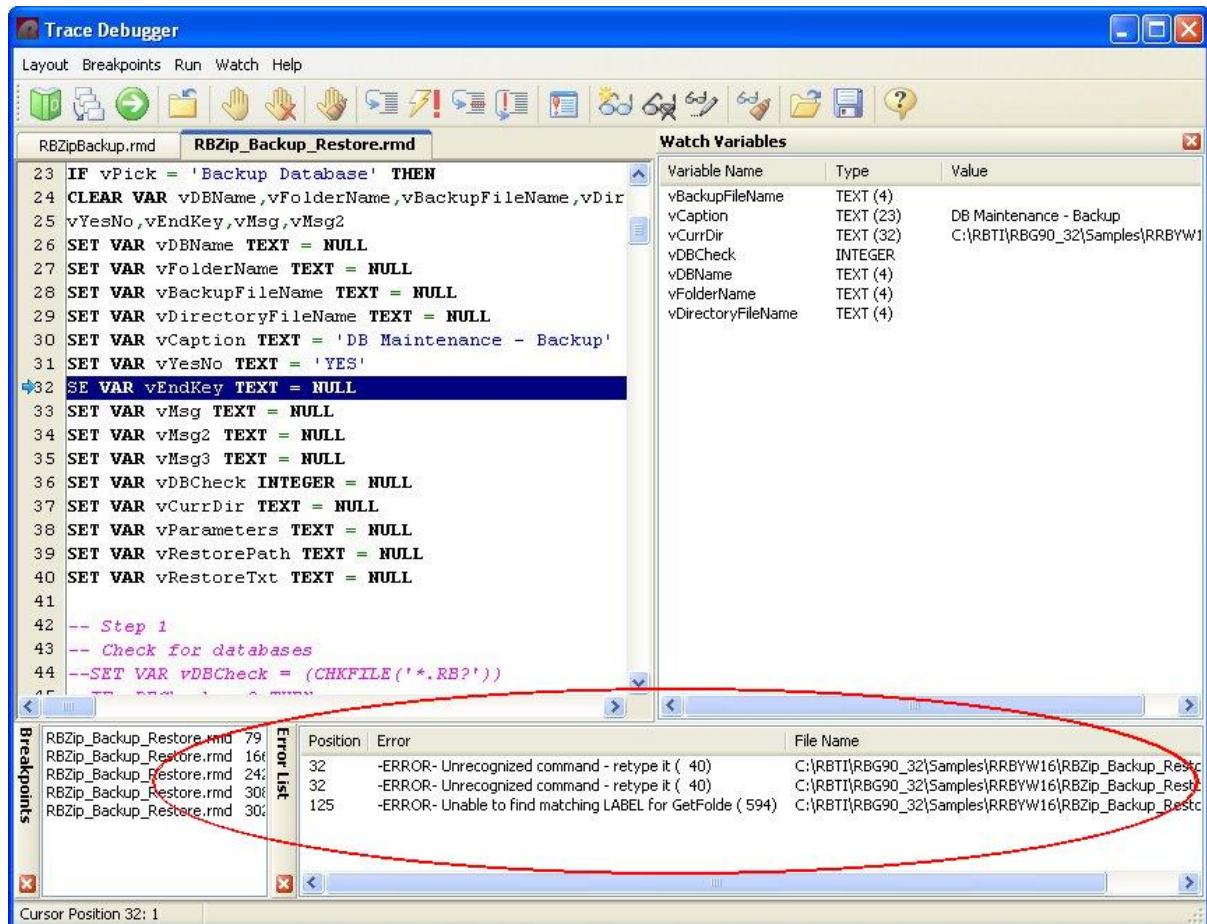
While tracing R:BASE code, using the TRACE command, you may press the [F6] key to Add/Remove Watch Variable(s) or simply right-click on the watch variables window to bring up the speed menu option, and then select click on the Add/Remove Watch Variable(s).

Using the Add/Remove Variable(s) console window, typically, you would select/highlight the variable from the list of Available Variables and then click on the right arrow [>] button to add.

Did you know that now you can Add/Remove variable(s) by using the double-click?

## 12.4 Tracking Errors in the Trace Debugger

Did you know that the new Trace Debugger window now include a separate option to list all errors, including the Error Number, File Name and Position?



Supported Versions:

- R:BASE eXtreme (9.0) for Windows (Build: 9.0.1.10420 or higher)



**Part**

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**XIII**

## 13 BLOB Editor

### 13.1 About the R:BASE eXtreme BLOB Editor

The R:BASE BLOB Editor is an integrated data utility to manage Large Objects (LOBs) and Binary Large Objects (BLOBs) within R:BASE.

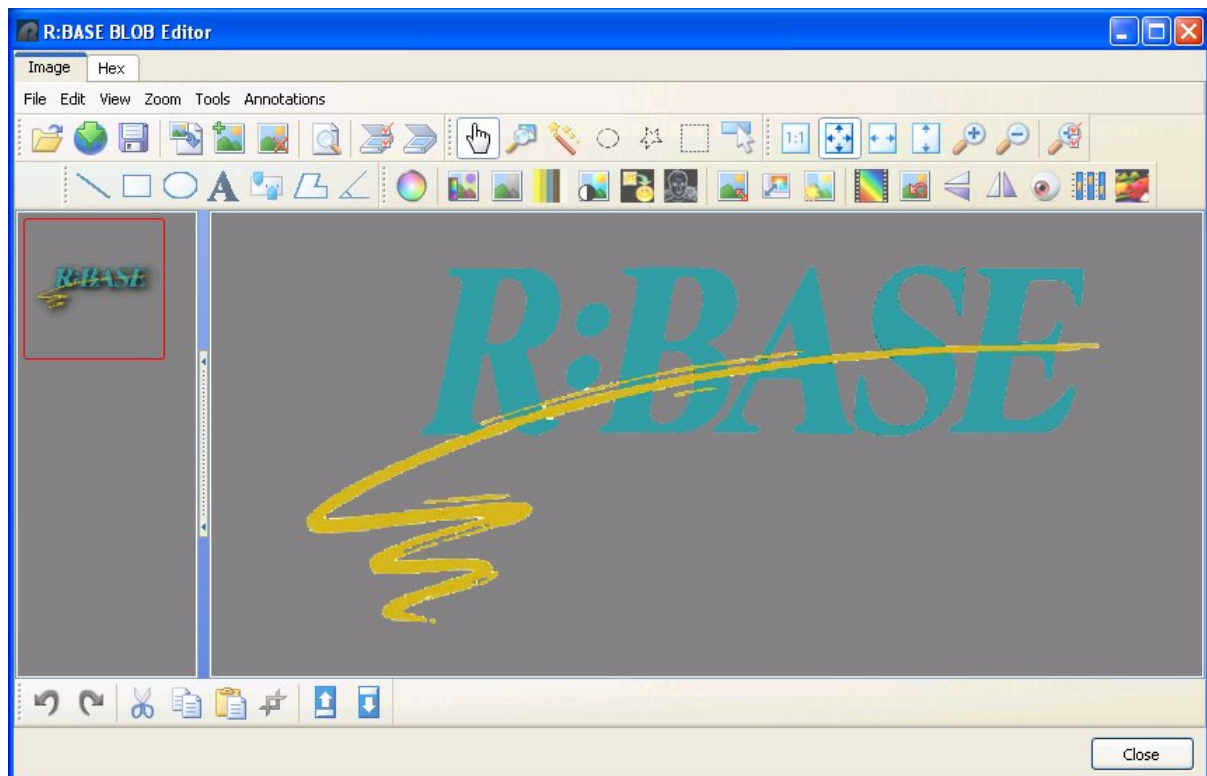
LOBs are basically large ASCII data files. These objects refer to text files that can be in any ASCII format, including RTF. The recommended data type for large text files is VARCHAR. Within the R:BASE BLOB Editor, the LOB data is manipulated from the "RTF" and "Note/VarChar" tabs. A Hex Editor is also available to manipulate binary data.

You can add, edit, or delete Binary Large Objects (BLOBs) within your database files. R:BASE recognizes the following file formats for images: BMP, JPG, GIF, WMF, PCX, EPS, SVG, TIF, PNG, ICO, EMF, WMF, and more. The R:BASE BLOB Editor has also been enhanced to manage multipage images. This enhancement will allow users to manage multipage images, such as .DCX, .GIF, or .TIFF files, when saved as BLOB data in R:BASE. The recommended data type for images is VARBIT.

The data for VARBIT and VARCHAR data types is stored in the fourth R:BASE database file.

#### 13.1.1 Image

You can add, edit, or delete images (BLOBs) within your database files. The R:BASE BLOB Editor has also been enhanced to manage multipage images. Drawing objects, like lines, boxes, text, etc., can also be added to images.



R:BASE eXtreme 9.5 recognizes the following file formats for images:

| File Format       | File Extension                |
|-------------------|-------------------------------|
| TIFF Bitmap       | tif, tiff, fax, q3n, q3f, xif |
| CompuServe Bitmap | qif                           |

|                                 |                                                                 |
|---------------------------------|-----------------------------------------------------------------|
| JPEG Bitmap                     | jpg, jpeg, jpe, jif                                             |
| PaintBrush                      | pcx                                                             |
| Windows Bitmap                  | bmp, dib, rle                                                   |
| Windows Icon                    | ico                                                             |
| Windows Cursor                  | cur                                                             |
| Portable Network Graphic        | png                                                             |
| Windows Metafile                | wmf                                                             |
| Enhanced Windows Metafile       | emf                                                             |
| Targa Bitmap                    | tga, targa, vda, icb, vst, pix                                  |
| Potable Pixmap, GrayMap, BitMap | pxm, ppm, pgm, pbm                                              |
| Wireless Bitmap                 | wbmp                                                            |
| JPEG2000                        | jp2                                                             |
| JPEG2000 Code Stream            | i2k, ipc, i2c                                                   |
| Multipage PCX                   | dcx                                                             |
| Camera RAW                      | crw, cr2, nef, raw, pef, raf, x3f, bay, orf, srf, mrw, dcr, sr2 |
| Photoshop PSD                   | psd                                                             |
| Video for Windows               | avi                                                             |
| Mpeg                            | mpeq, mpg                                                       |
| Windows Media Video             | wmv                                                             |

### 13.1.1.1 Menu Bar

The Menu Bar within the "Images" tab provides many other advanced features to manage and manipulate images.

#### File

- [Open...](#) - opens a dialog window to browse and select an image file
- [Load from URL...](#) - loads an image from a URL
- [File Save](#) - saves the current image as an external file
- Insert Image from File - inserts an image. For multiple images, the file is inserted to the selected position within the list.
- Add Image from File - adds an image. For multiple images, the file is added to the end of the list.
- Delete Selected Images - deletes the selected image(s)
- [Print Preview...](#) - opens the Print Preview dialog for changing print-specific settings
- [Select Source...](#) - opens a window to select or change TWAIN sources
- [Acquire Pages...](#) - starts the scan process of the current document

#### Edit

- [Undo](#) - undoes the last change made
- Redo - redoes the last "undo" operation
- [Cut](#) - cuts the current selection
- [Copy](#) - copies the current selection
- Paste - pastes the current clipboard selection
- [Paste to Rectangle](#) - inserts or pastes the currently cut or copied selection
- Move Selected Image Up - moves the selected image up within the list
- Move Selected Image Down - moves the selected image down within the list

#### View

- Histogram - displays a graphical representation of the tonal distribution
- [Calculate Image Colors](#) - provides the total number of colors in the active image
- [Background Style](#) - displays a style for the image background
- [Background Color](#) - specifies the background color
- [Gradient End Color](#) - specifies the background gradient end color, when gradient is selected
- [Mouse Mode](#) - changes the mouse mode for image editing

#### Zoom

- Actual Size - zooms the image to the actual size
- Fit Image - fits the image to the current BLOB Editor window

- Fit to Width - fits the image to the current BLOB Editor window width
- Fit to Height - fits the image to the current BLOB Editor window height
- Zoom In - zooms in
- Zoom Out - zooms out
- [Zoom Properties](#) - applies a zoom filter

### Tools

- [Color Adjust...](#) - displays a dialog to [adjust the color of the image](#)
- [Negative](#) - replaces each pixel color with its opposite on the color wheel
- [Grey Scale](#) - converts the image to gray colors
- [Reduce Colors...](#) - reduces the number of images used. A prompt for the new image number will appear.
- [Convert to BW...](#) - converts the image to black and white colors
- [Convert to True Color](#) - converts the image to a 24-bit color image
- [Edge Detection](#) - marks the points at which the intensity changes sharply
- [Resize...](#) - changes the size of the image
- Resample... - change the resolution of an image up or down
- [Effects...](#) - displays a dialog to [add effects to the image](#)
- [White Balance](#) - removes unrealistic color casts, so that objects in the image are rendered white just as in person
- [Rotate...](#) - rotates an image around its center point
- [Vertical Flip](#) - flips an image vertically
- [Horizontal Flip](#) - flips an image horizontally
- [Remove Red Eyes](#) - removes "red eye" from photos
- [Equalize](#) - builds a histogram of colors used in all pixels in the image, from the brightest to the darkest, and then alters colors of pixels in between so there is the same number of pixels at all brightness levels
- [Blur](#) - reduces areas of high contrast and softens the appearance of an image

### Annotations

- Draw Line - places a line drawing object
- Draw Box - places a box drawing object
- Draw Ellipse - places a ellipse drawing object
- Draw Text - places a text drawing object
- Draw Ruler - places a ruler drawing object
- Draw Polyline - places a polyline drawing object
- Draw Angle - places a angle drawing object

## 13.1.1.2 Toolbars

### 13.1.1.2.1 Image File

| Button                                                                              | Description                   |
|-------------------------------------------------------------------------------------|-------------------------------|
|  | Open...                       |
|  | Load From URL...              |
|  | File Save...                  |
|  | Insert Image from File...     |
|  | Add Image from File...        |
|  | Delete Selected Images        |
|  | <a href="#">Print Preview</a> |
|  | Select Source...              |

|                                                                                   |               |
|-----------------------------------------------------------------------------------|---------------|
|  | Acquire Pages |
|-----------------------------------------------------------------------------------|---------------|

#### 13.1.1.2.2 Image Mouse Mode

| Button                                                                            | Description           |
|-----------------------------------------------------------------------------------|-----------------------|
|  | Scroll                |
|  | Zoom                  |
|  | Magic Wand            |
|  | Ellipse Selection     |
|  | Polygon Selection     |
|  | Rectangular Selection |
|  | Select Object         |

#### 13.1.1.2.3 Image Zoom

| Button                                                                              | Description                        |
|-------------------------------------------------------------------------------------|------------------------------------|
|    | Actual Size                        |
|    | Fit Image                          |
|   | Fit to Width                       |
|  | Fit to Height                      |
|  | Zoom In                            |
|  | Zoom Out                           |
|  | <a href="#">Zoom Properties...</a> |

#### 13.1.1.2.4 Image Annotations

| Button                                                                              | Description   |
|-------------------------------------------------------------------------------------|---------------|
|  | Draw Line     |
|  | Draw Box      |
|  | Draw Ellipse  |
|  | Draw Text     |
|  | Draw Ruler    |
|  | Draw Polyline |
|  | Draw Angle    |

#### 13.1.1.2.5 Image Tools

| Button                                                                              | Description                     |
|-------------------------------------------------------------------------------------|---------------------------------|
|  | <a href="#">Color Adjust...</a> |

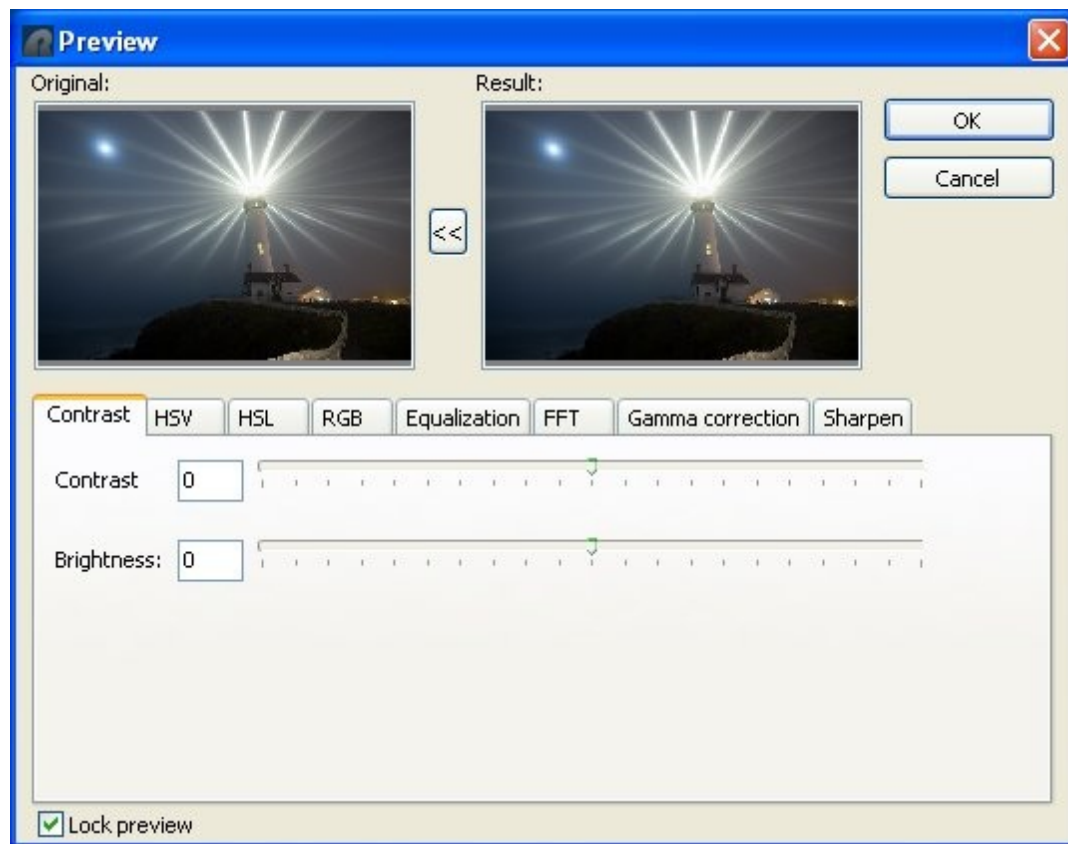
|                                                                                    |                               |
|------------------------------------------------------------------------------------|-------------------------------|
|   | Negative                      |
|   | Grey Scale                    |
|   | Reduce Colors...              |
|   | Covert to BW... (black/white) |
|   | Covert to True Color          |
|   | Edge Detection                |
|   | Resize...                     |
|   | Resample...                   |
|   | <a href="#">Effects...</a>    |
|   | White Balance                 |
|   | <a href="#">Rotate...</a>     |
|   | Vertical Flip                 |
|   | Horizontal Flip               |
|   | Remove Red Eyes               |
|   | Equalize                      |
|  | Blur                          |

## 13.1.1.2.6 Image Edit

| Button                                                                              | Description        |
|-------------------------------------------------------------------------------------|--------------------|
|  | Undo               |
|  | Redo               |
|  | Cut                |
|  | Copy               |
|  | Paste              |
|  | Paste to Rectangle |

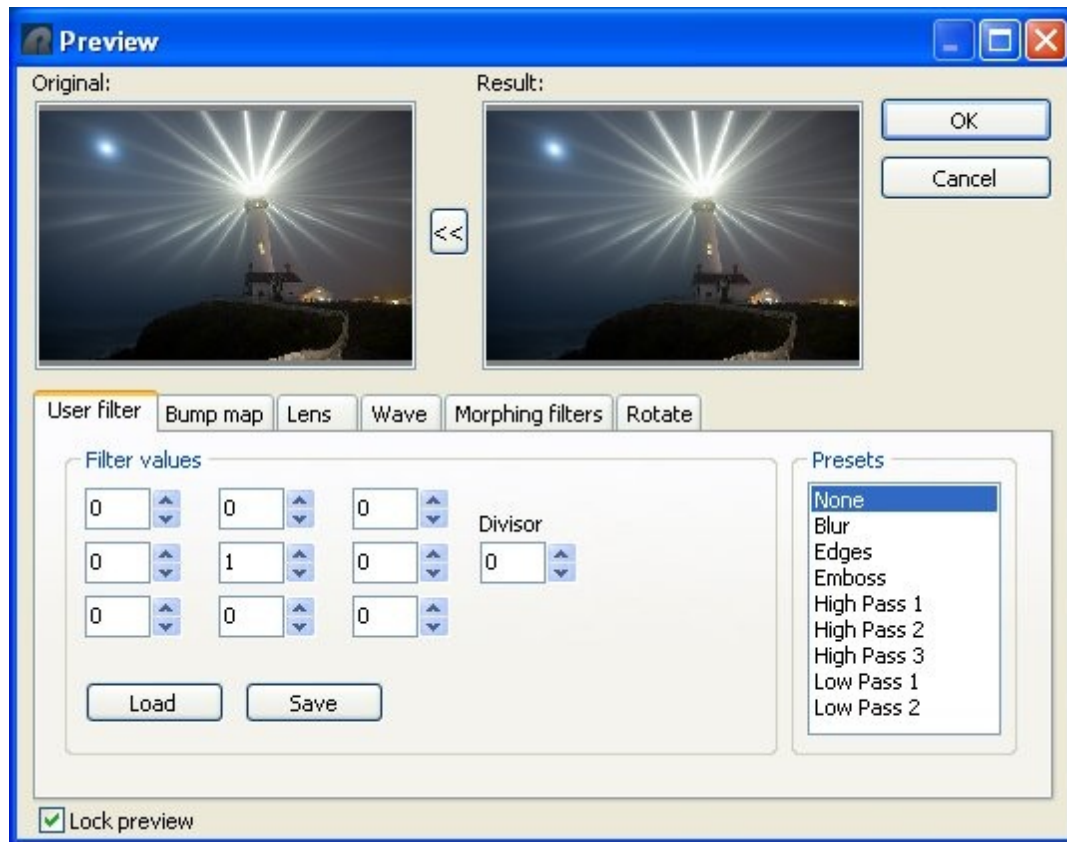
## 13.1.1.3 Color Adjust

When adjusting the color for an image, an original and resulting image is displayed to preview any changes before they are saved. To remove the automatic preview, unselect the "Lock preview" check box across the bottom of the window.



- Contrast - adjusts the Contrast and Brightness controls to lighten or darken the underlying layers and change the amount of shading, or contrast, between areas.
- HSV - adjusts the Hue, Saturation, and Value as related representations of points in an RGB color space
- HSL - adjusts the Hue, Saturation, and Luminosity as related representations of points in an RGB color space
- RGB - adjusts the Red, Green, Blue based upon the RGB color model
- Equalization - distributes the lightness values of the pixels more evenly across the light spectrum from black to white
- FFT - (Fast Fourier Transform) converts the image from the image (spatial) domain to the frequency domain
- Gamma correction - adjusts the the contrast and brightness in unison by using the red, green, and blue check boxes adjust the image color balance
- Sharpen - increases the contrast between adjacent pixels where there are significant color contrasts, usually at the edges of objects

#### 13.1.1.4 Effects



- User filter - provides filter presets, with the ability to load and save custom filters
- Bump map - creates a 3D effect by embossing an image and then mapping it to another image
- Lens - adds a lens filter to enhance depth
- Wave - distorts the image as if it had been disturbed by a number of waves
- Morphing filters - warps the image
- Rotate - rotates the image to an exact degree

#### 13.1.1.5 Image Annotations

When adding or displaying images in the R:BASE BLOB Editor, annotations can be made using several type of drawing tools. Objects include:

- Line
- Box
- Ellipse
- Text
- Ruler
- Polyline
- Angle

##### Image Annotation Notes:

- After an object is added to the image, the properties will automatically display. Double clicking on the object will redisplay the Properties dialog.
- When a field object is selected, small tan circles appear on the corners and sides or line ends,



based upon the drawing object added. These circles are called handlebars which are used to manipulate the size and location.

- Objects can be stretched, resized and/or manipulated by hovering the mouse cursor over and dragging any of the available handlebars that are displayed upon the object's edges or end points. The cursor will change to a double pointed arrow.
- Objects can be moved by hovering the mouse cursor along any line portion of the object between the handlebars and dragging the mouse cursor. The cursor will change to a black four-pointed cross.
- After placing an object, any objects added after will use the same pen and brush properties, if the setting applies.
- When placing a text object, "Draw Text" option, on an image and then clicking the "OK" button to save the object properties, start typing your text. You will notice the text being displayed against a grey background.
- In order to save an image annotation, double click on the thumbnail (left side of the separator). The change will then be visible in the thumbnail image.
- Selecting the "OK" or "Cancel" buttons (lower right corner) of the R:BASE BLOB Editor will save or cancel your changes accordingly.

#### 13.1.1.5.1 Line

##### Pen Settings

*Color* - specifies the line color

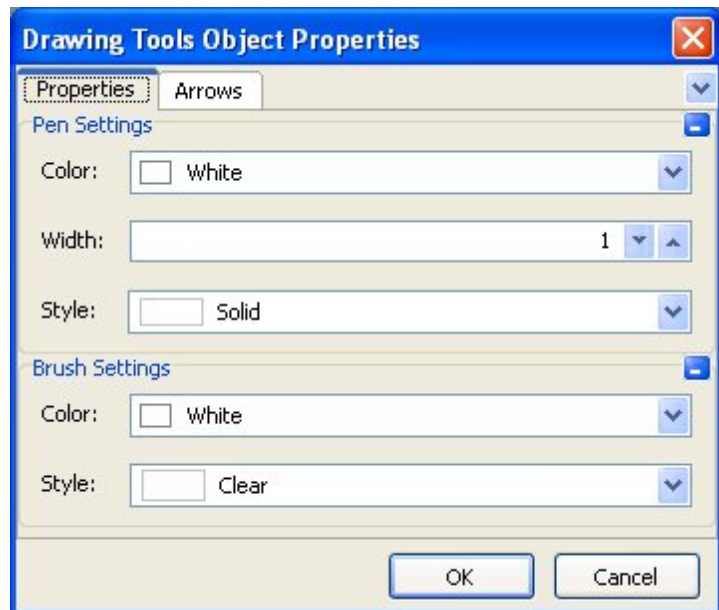
*Width* - Specifies the line width

*Style* - specifies the line style

##### Brush Settings

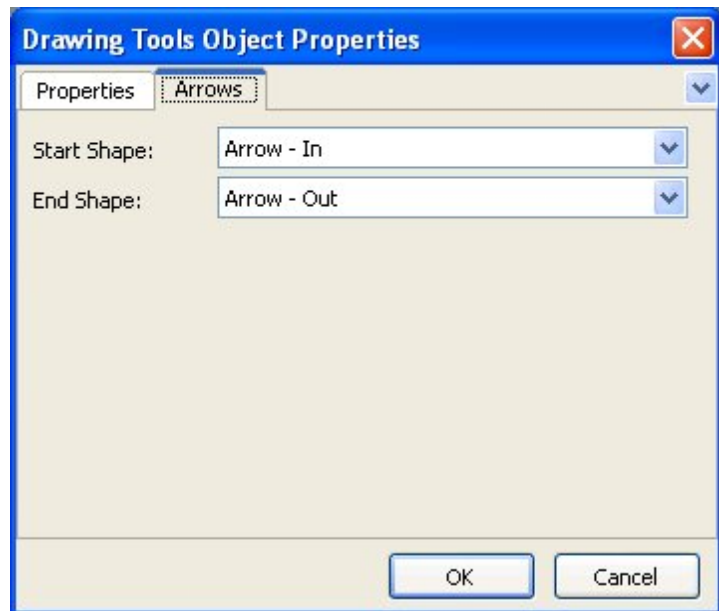
*Color* - specifies the fill color for the arrow start and end shapes, if defined

*Style* - specifies the fill style for the arrow start and end shapes, if defined

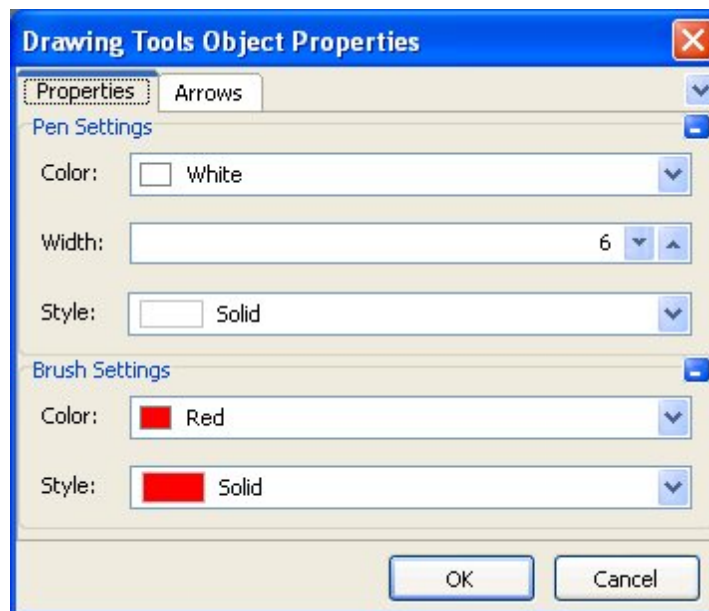


*Start Shape* - specifies the arrow start shape for the line

*End Shape* - specifies the arrow end shape for the line



The following object properties for a line were used to add the line object in the screen shot below.



Notice the handlebars on each end of the line that can be used to stretch or move the starting/ending points for the arrow.



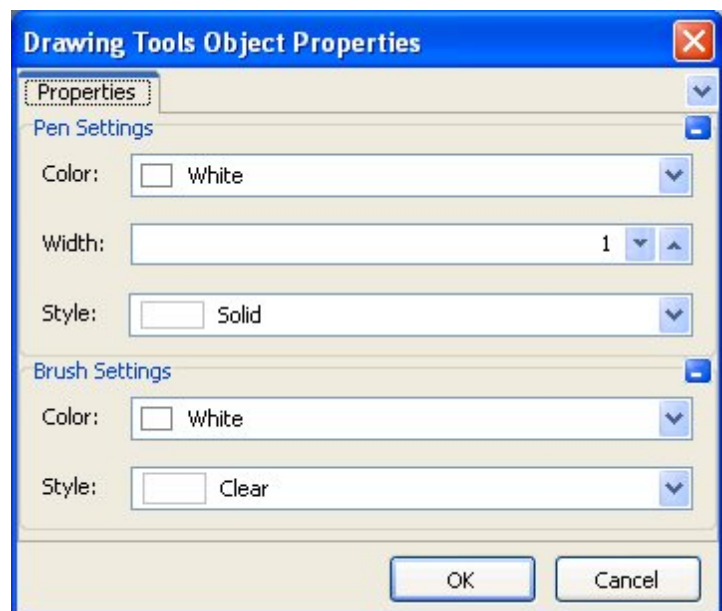
## 13.1.1.5.2 Box

**Pen Settings**

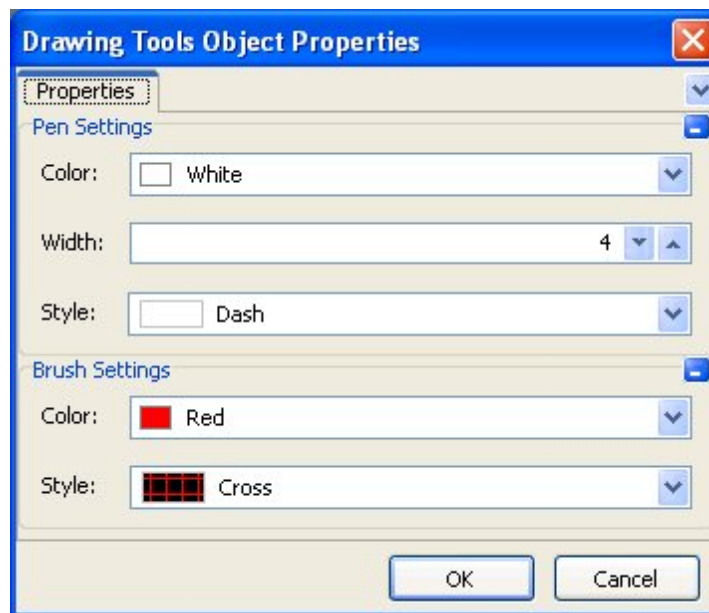
*Color* - specifies the box border color  
*Width* - Specifies the box border width  
*Style* - specifies the box border style

**Brush Settings**

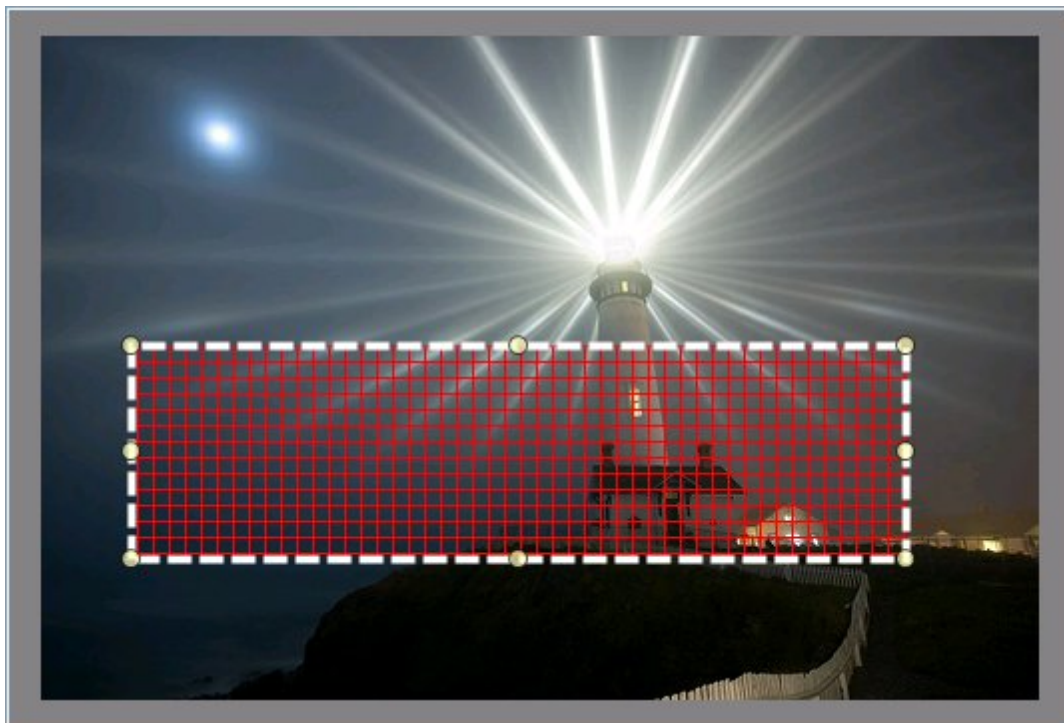
*Color* - specifies the box fill color  
*Style* - specifies the box fill style



The following object properties for a box were used to add the object in the screen shot below.



Notice the handlebars on each corner, and between each corner, that can be used to stretch or move the box.



## 13.1.1.5.3 Ellipse

**Pen Settings**

*Color* - specifies the ellipse color

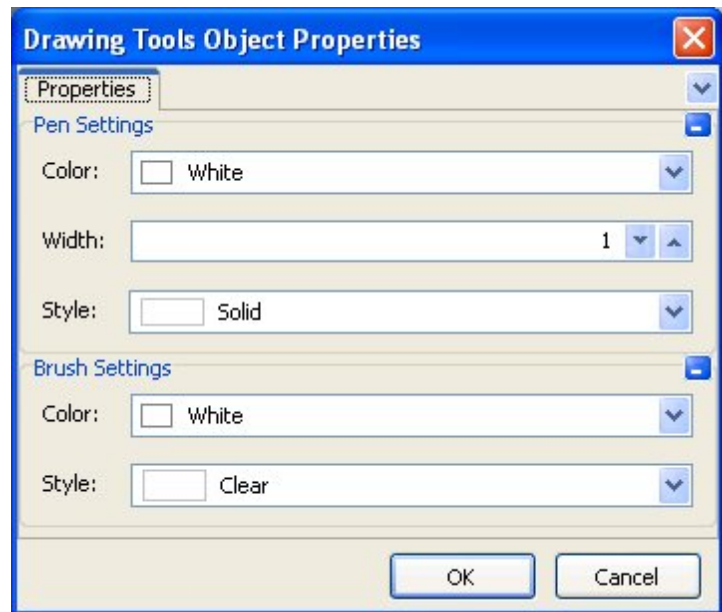
*Width* - Specifies the ellipse width

*Style* - specifies the ellipse style

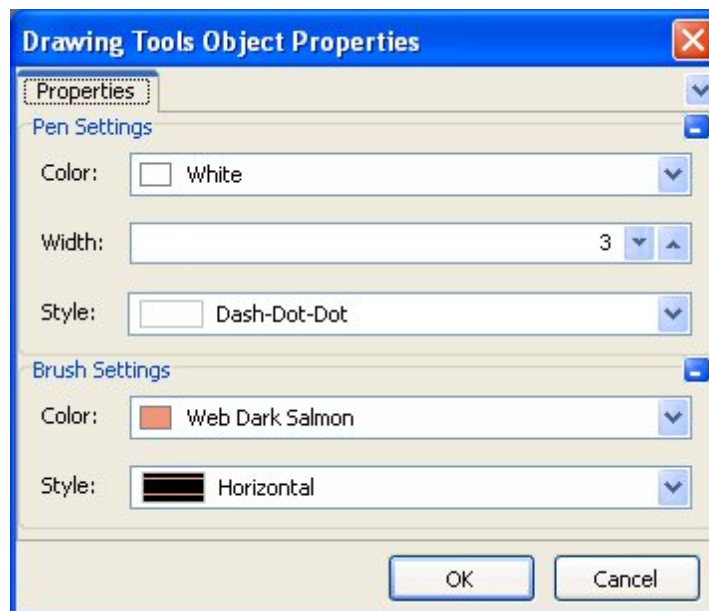
**Brush Settings**

*Color* - specifies the ellipse fill color

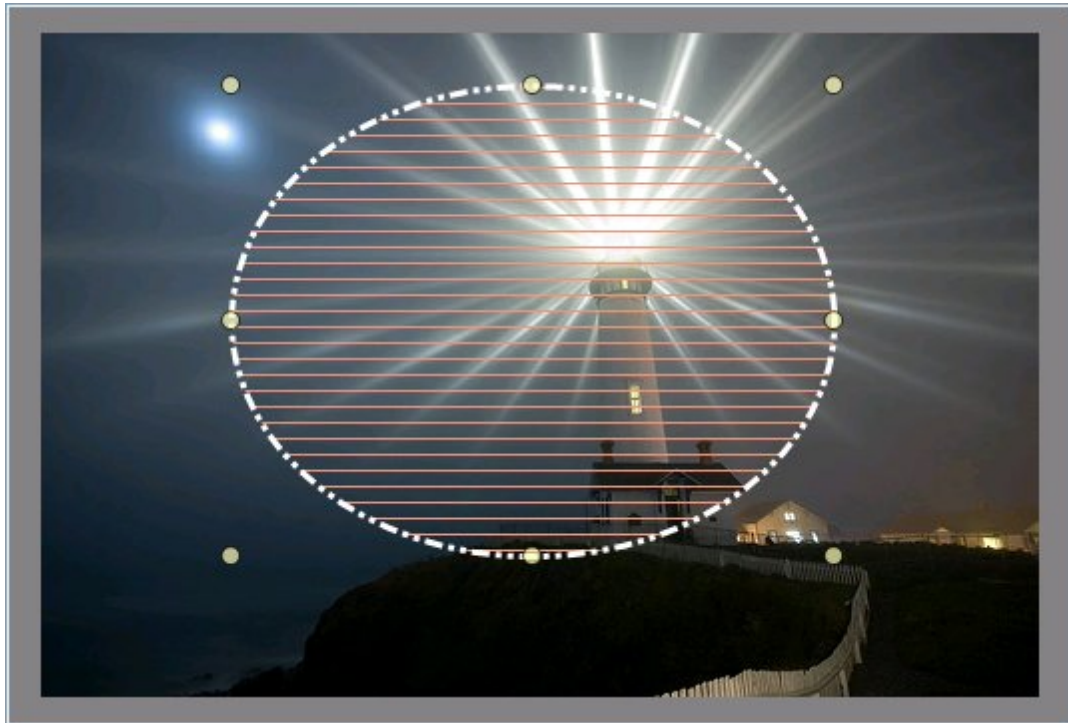
*Style* - specifies the ellipse fill style



The following object properties for an ellipse were used to add the object in the screen shot below.



Notice the handlebars at the corners and sides that can be used to stretch or move the ellipse.



## 13.1.1.5.4 Text

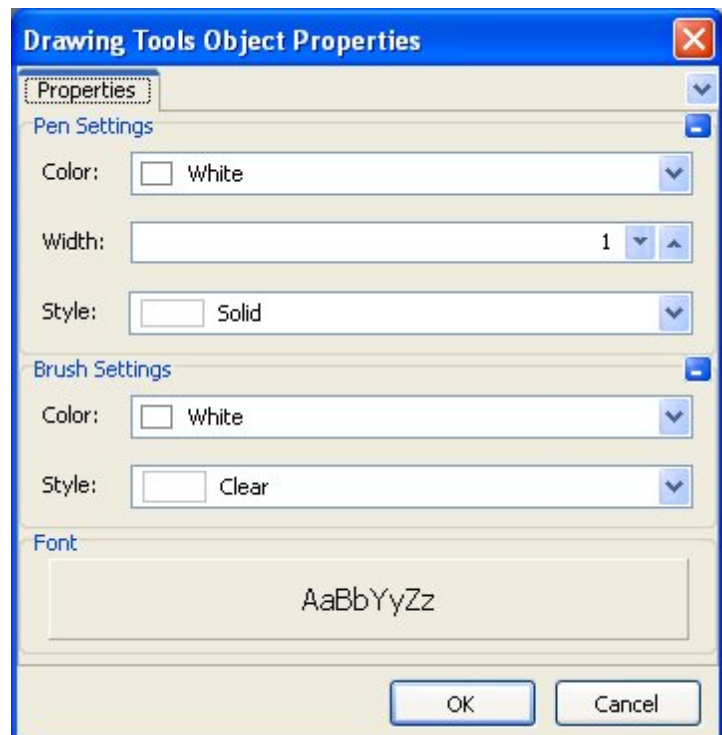
**Pen Settings**

**Color** - specifies the text and border color  
**Width** - Specifies the text border width  
**Style** - specifies the text border style

**Brush Settings**

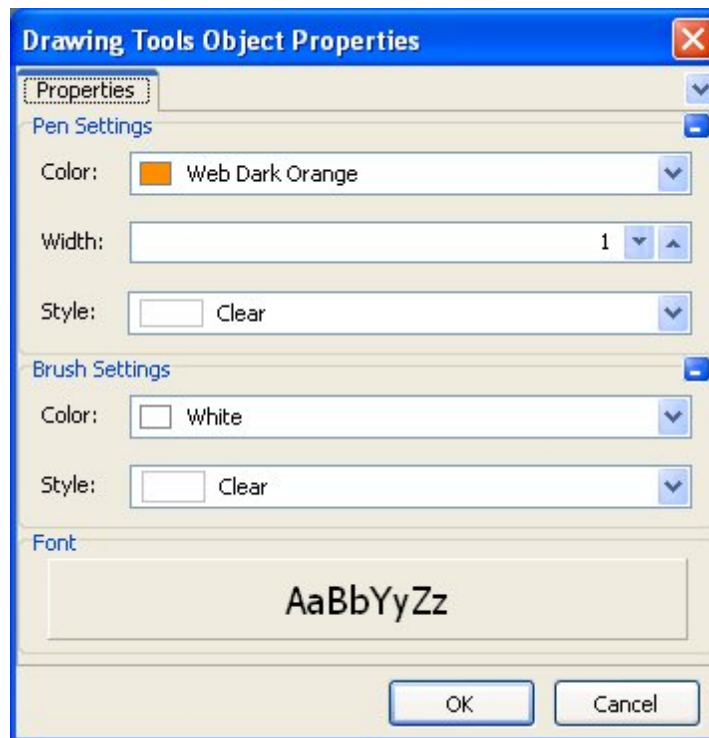
**Color** - specifies the text background color  
**Style** - specifies the text background style

**Font** - specifies the text font type, size, and style

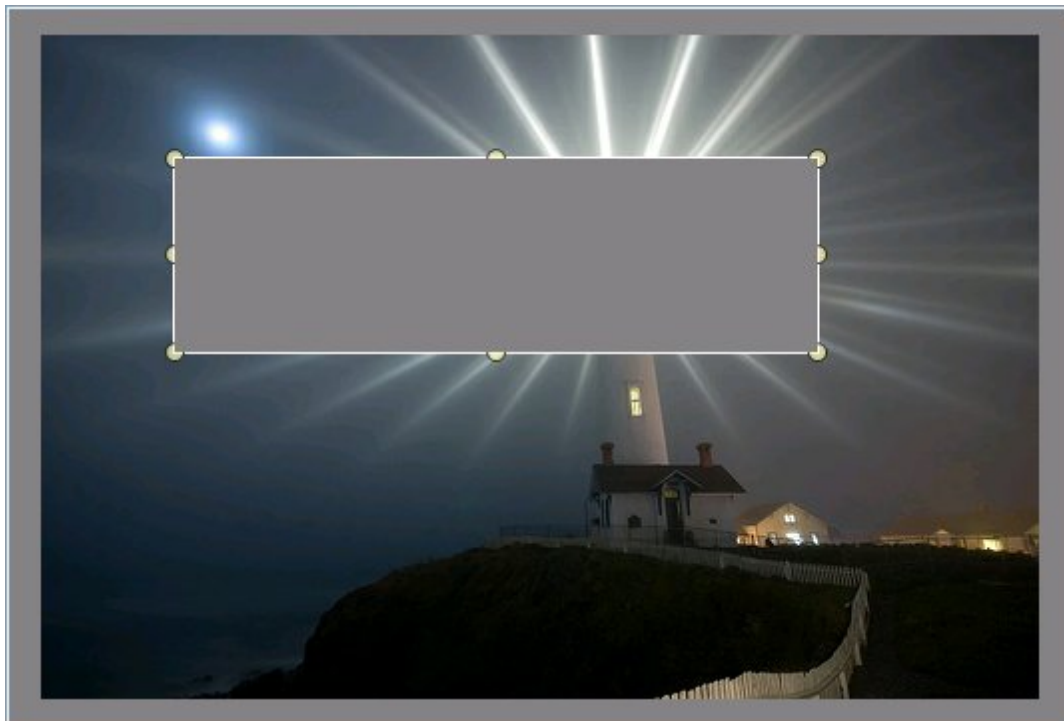


After adding the Text object, the following object properties were used.





The gray box is the input mode waiting for your text key entry.



With the above settings, the text is displayed in the screen shot below. Notice the handlebars at the

corners and sides that can be used to stretch or move the text object.



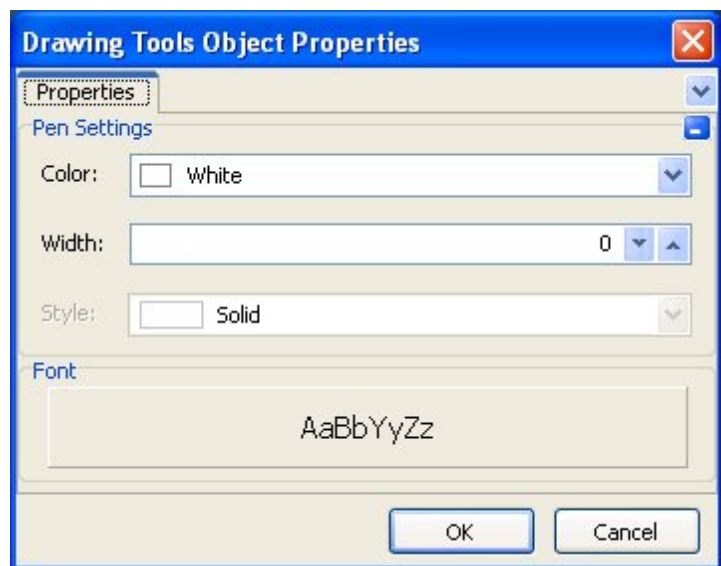
#### 13.1.1.5.5 Ruler

##### Pen Settings

*Color* - specifies the ruler line color

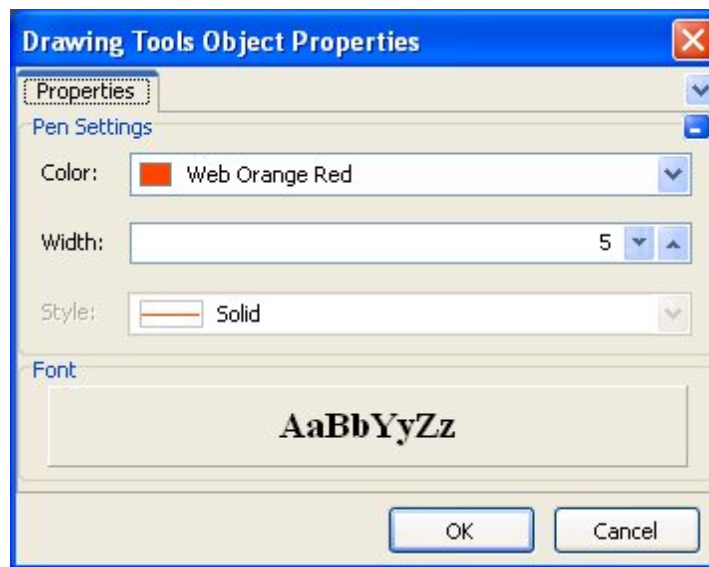
*Width* - Specifies the ruler line width

**Font** - specifies the text font type, size, and style



After adding the Ruler object, the following object properties were used.





With the above settings, the ruler is displayed in the screen shot below.



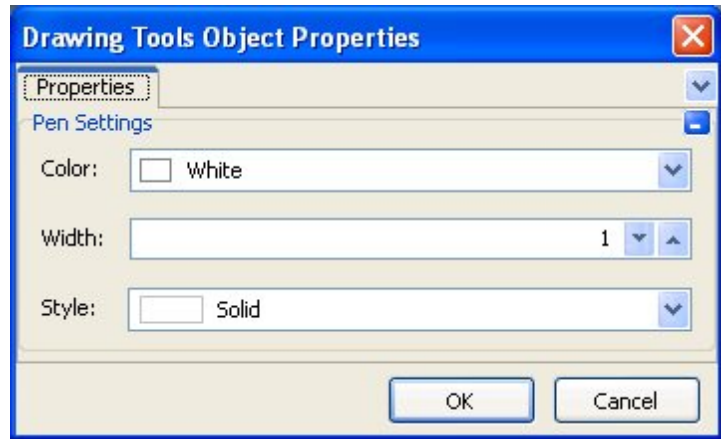
## 13.1.1.5.6 Polyline

**Pen Settings**

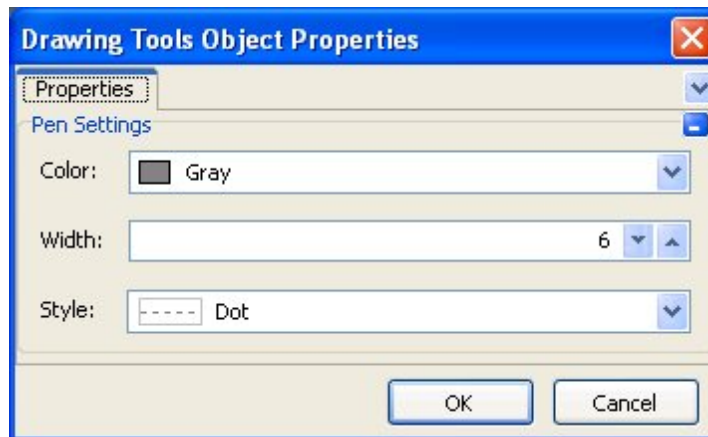
*Color* - specifies the polyline border color

*Width* - Specifies the polyline border width

*Style* - specifies the polyline border style



The following object properties for a polyline were used to add the object in the screen shot below.



Notice the handlebars at the corners and sides that can be used to stretch or move the polyline.

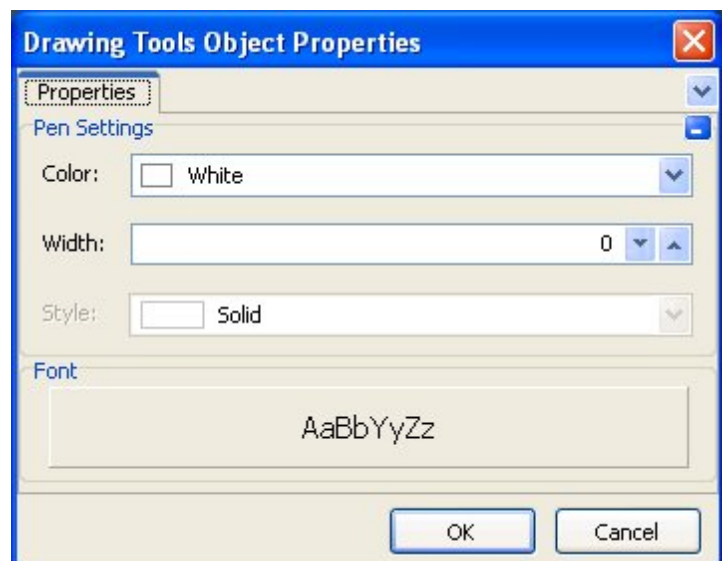


## 13.1.1.5.7 Angle

**Pen Settings**

**Color** - specifies the angle line color  
**Width** - Specifies the angle line width

**Font** - specifies the text font type, size, and style



After adding the Angle object, the following object properties were used.

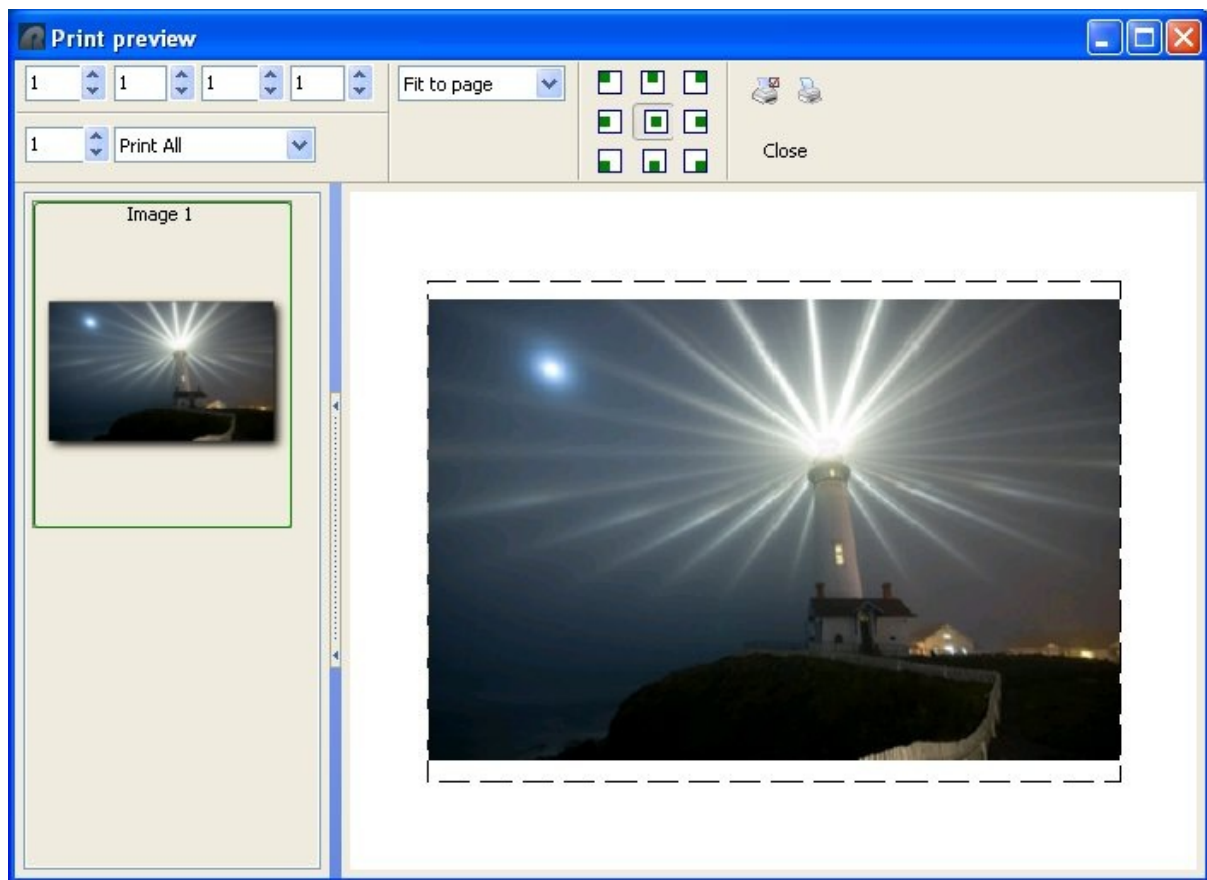


Notice the handlebars at the end and corner that can be used to stretch or move the angle object.



#### 13.1.1.6 Print Preview

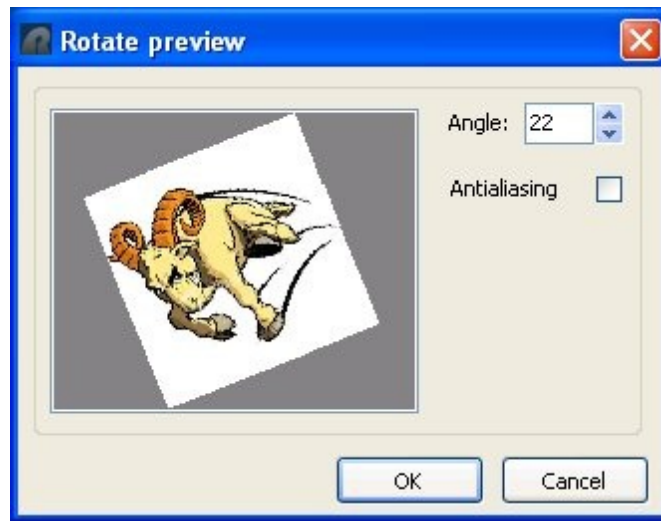
The Print Preview screen allows the image print to be customized with the margins, size, location, gamma correction, and the ability to print a selected image.



#### 13.1.1.7 Rotate

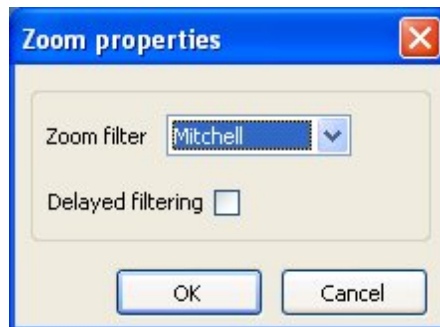
An image can be rotated within the R:BASE BLOB Editor. By selecting up/down arrows for the "Angle" field, the image will rotate based upon the angle value.





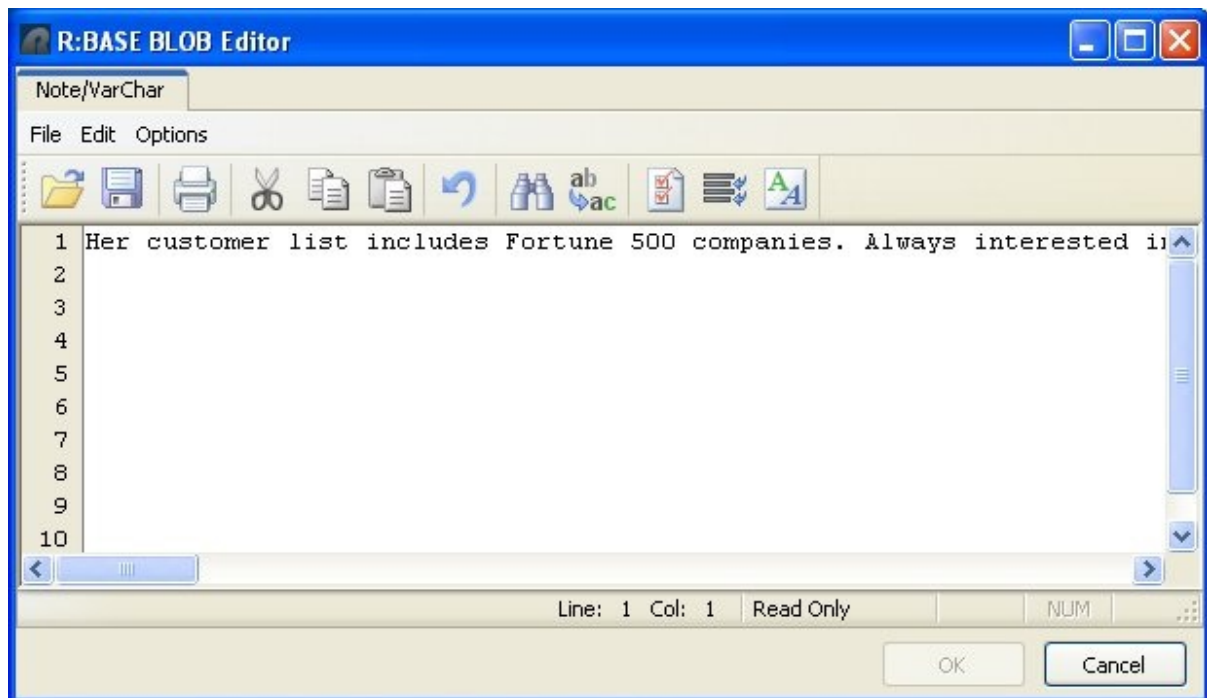
#### 13.1.1.8 Zoom Properties

The Zoom properties allow for various filter methods for zooming in and out of large images.



### 13.1.2 Note/VarChar

You can load, edit, and save Note/VarChar data within R:BASE.



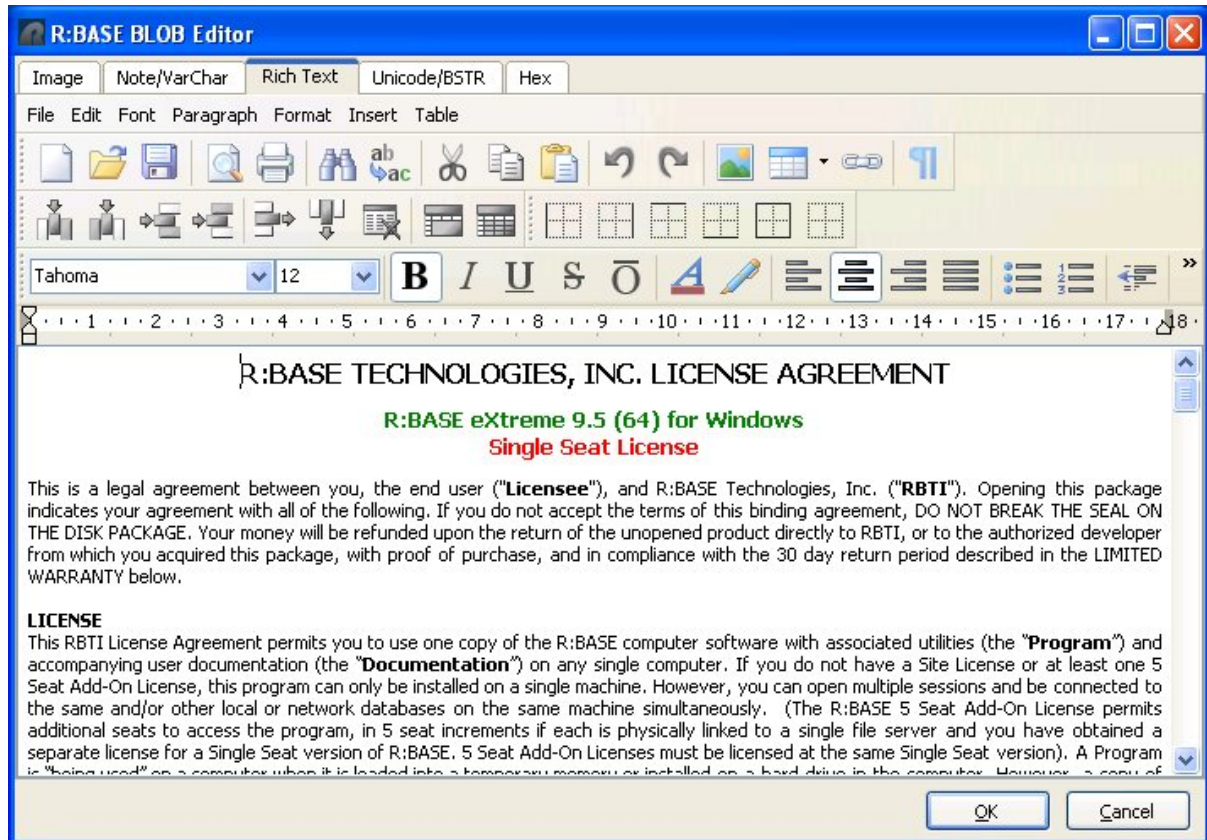
#### Toolbar

| Button | Description             |
|--------|-------------------------|
|        | Load From External File |
|        | Save To External File   |
|        | Print                   |
|        | Cut selected item       |
|        | Copy selected item      |
|        | Paste contents          |
|        | Undo the last action    |
|        | Search                  |
|        | Search and Replace      |
|        | Show/Hide Right Margin  |
|        | Word Wrap               |
|        | Font...                 |



### 13.1.3 Rich Text

You can load, edit, and save RTF data within R:BASE. The "RTF" tab of the R:BASE BLOB Editor allows many word processing capabilities for your RTF data.



#### Toolbars

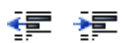
| Button | Description   |
|--------|---------------|
|        | New           |
|        | Open          |
|        | Save          |
|        | Print Preview |
|        | Print         |
|        | Find          |
|        | Replace       |
|        | Cut           |
|        | Copy          |
|        | Paste         |
|        | Undo          |

| Button | Description         |
|--------|---------------------|
|        | Insert Column Left  |
|        | Insert Column Right |
|        | Insert Row Above    |
|        | Insert Row Below    |
|        | Delete Column       |
|        | Delete Table        |
|        | Left Border         |
|        | Right Border        |
|        | Top Border          |
|        | Bottom Border       |
|        | All Borders         |



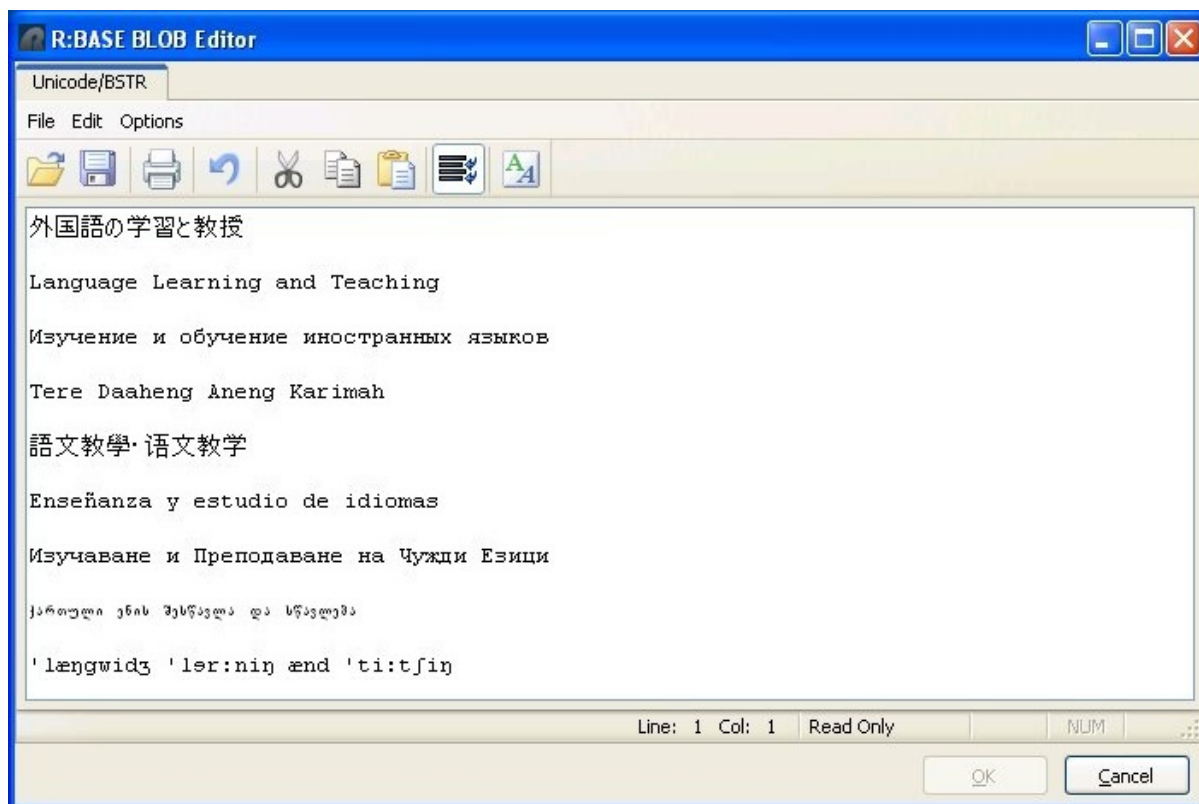
|                                                                                   |                        |
|-----------------------------------------------------------------------------------|------------------------|
|  | Redo                   |
|  | Picture                |
|  | Insert Table           |
|  | Hypertext Link         |
|  | Nonprinting Characters |

|                                                                                   |            |
|-----------------------------------------------------------------------------------|------------|
|  | No Borders |
|-----------------------------------------------------------------------------------|------------|

| Button                                                                             | Description                                                                              |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|   | Font Style                                                                               |
|   | Font Size                                                                                |
|   | <b>Bold</b> , <i>Italic</i> , <u>Underline</u> , <del>Strikethrough</del> , and Overline |
|   | Left, Center, Right, and Full Justify                                                    |
|   | Bullets                                                                                  |
|   | Numbering                                                                                |
|   | Decrease Indent , Increase Indent                                                        |
|  | Paragraph Background Color                                                               |

### 13.1.4 Unicode/BSTR

The "Unicode/BSTR" tab allows the ability to see or edit binary string data.

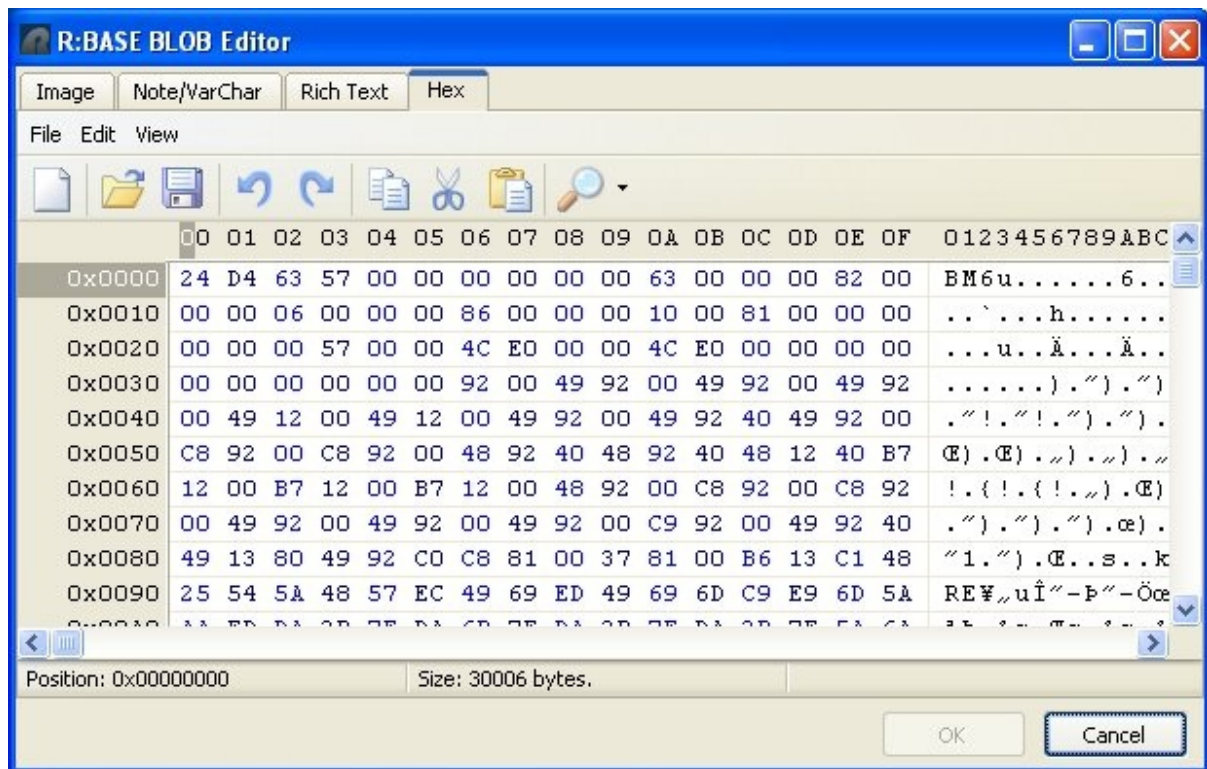


#### Toolbar

| Button                                                                              | Description |
|-------------------------------------------------------------------------------------|-------------|
|  | Open        |
|  | Save        |
|  | Print       |
|  | Undo        |
|  | Cut         |
|  | Copy        |
|  | Paste       |
|  | Word Wrap   |
|  | Font...     |

### 13.1.5 Hex

The "Hex" tab allows the ability to see or edit the raw binary data.



#### Toolbar

| Button | Description |
|--------|-------------|
|        | New         |
|        | Open        |
|        | Save        |
|        | Undo        |
|        | Redo        |
|        | Copy        |
|        | Cut         |
|        | Paste       |
|        | View        |

## 13.2 Customizing the BLOB Editor

Did you know that now you can customize the caption and icon of R:BASE BLOB Editor?

One of the more exciting features in R:BASE for Windows is the ability to add, edit, delete, and display binary files-Binary Large Objects, or BLOBs. This term refers to binary data as opposed to ASCII data. The data types VARBIT and BITNOTE were added for storing binary files within an R:BASE database. In

addition, the VARCHAR data type lets you store large ASCII data files (Large OBjects, or LOBs). The data for VARBIT and VARCHAR data types is stored in the fourth R:BASE data file, DBName.RB4 or DBName.RX4.

In addition, you may also use R:BASE BLOB Editor to create a new or update an existing files, such as RTF, BMP, TXT, JPG, GIF, PNG, and more...

While deploying R:BASE applications with integrated features of R:BASE BLOB Editor, now you can customize the caption and icon. Here's how:

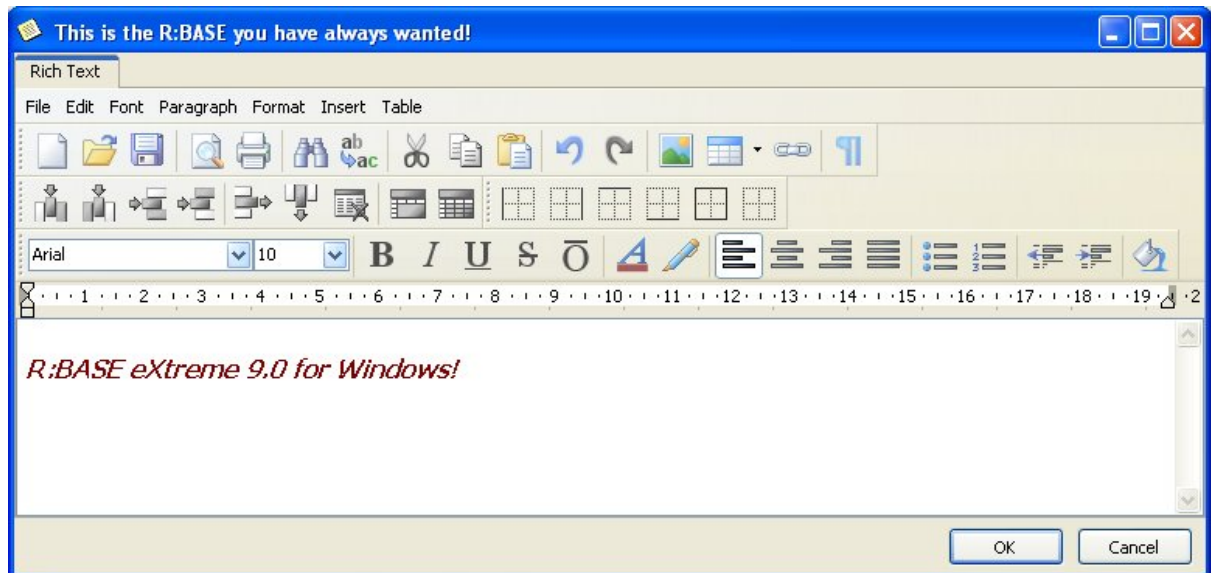
First, use the following PROPERTY commands to customize R:BASE BLOB Editor.

```
PROPERTY BLOB_EDITOR CAPTION ' This is the R:BASE you have always wanted!'
PROPERTY BLOB_EDITOR ICON 'IntoTheFuture.ico'
```

Then, use the following command to create a new Rich Text File with your favorite logo into a single table column.

```
RBBE NewRTFFile.RTF
```

Notice the customized caption and icon for R:BASE BLOB Editor.



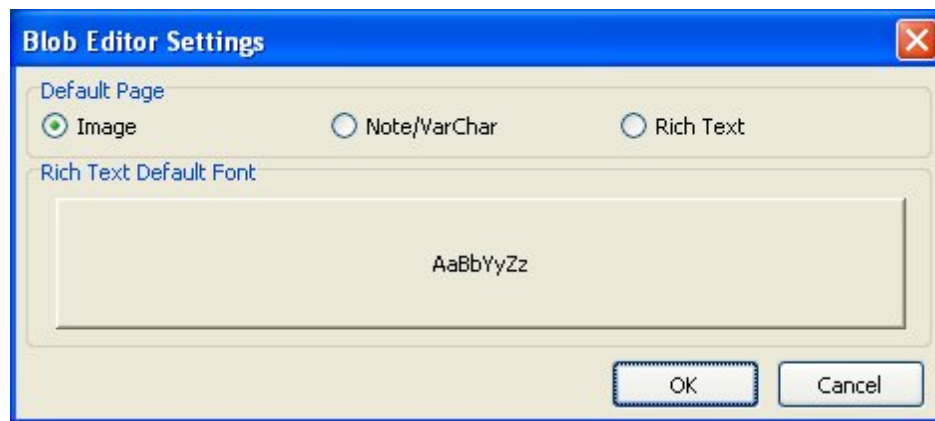
Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build: 9.0.1.10420 or higher)

### 13.3 Setting Rich Text Default Font for Blob Editor

Did you know that you can set the default font for Rich Text option of the R:BASE Blob Editor? Here's how:

01. Start R:BASE eXtreme
02. Select "Settings" > "Blob Editor Settings ..." from the main Menu Bar.



This is where you will define the default Font, Font Style, Size, Effects and Color for Rich Text.

Supported Versions:

- R:BASE eXtreme 9.0 (Build: 9.0.1.10624 or higher)

**Part**

---

**XIV**

## 14 Commands

### 14.1 Assigning Line Numbers using the SELECT Command

Did you know that you can assign the line numbers for the SELECT command?

Use the (CVAL('ROWCOUNT')) function to achieve that goal.

Here's how:

1. Start R:BASE
2. CONNECT ConComp
3. At the R> Prompt:

```
SELECT (INT(CVAL('ROWCOUNT'))) AS LineNo, Company=35, +
(CustCity+', '&CustState&CustZip)=35 AS CityStateZip FROM Customer
```

Notice the line counter!

4. If you would like to print that select statement output as PDF, use the following example:

```
SET VAR vLines = (INT(CVAL('LINES')))
SET LINES 0
OUTPUT CustomerList.PDF PDF
SELECT (INT(CVAL('ROWCOUNT'))) AS LineNo, Company=35, +
(CustCity+', '&CustState&CustZip)=35 AS CityStateZip FROM Customer
OUTPUT SCREEN
SET LINES .vLines
```

That will send the output as CustomerList.PDF using the "built-in" PDF capabilities of R:BASE OUTPUT command.

Use the LAUNCH CustomerList.PDF command to view the results.

### 14.2 Attaching Server Tables as TEMPORARY Tables

Did you know that now you can attach server tables as TEMPORARY tables?

Among so many enhancements and features in R:BASE, the traditional SATTACH command has been enhanced to include the option for attaching server tables as TEMPORARY.

Syntax:

```
SATTACH TEMPORARY tablename AS tablealias USING ...
```

The optional TEMPORARY parameter allows you to create a Temporary Table with the SATTACH command and all supported parameters. The temporary tables will disappear when the database is DISConnected.

Use this option to take the exact snapshot of the sever table to manage and analyze the data as you wish.

Note:

Any changes made to the temporary table will not be reflected upon the original SQL data source. The sole purpose of this enhancement is to let R:BASE attach server tables as TEMPORARY tables specific to that User/R:BASE session even when the database is connected with STATICDB ON.

## 14.3 Capturing Screenshots to the Windows Clipboard

Did you know that you can capture a screen shot of a running form, copy it to the Windows Clipboard, and then paste the image for your internal documentation, support e-mail (with built-in tools), or even save as a snapshot of given date and time?

As the current PROPERTY command supports capturing an image of the current window or screen and places the content in a file, the command can now also place the image content in the clipboard.

```
-- To capture the window to the clipboard
PROPERTY RBASE_FORM CAPTURE_FROM_WINDOW 'CLIPBOARD'
RETURN

-- to capture part of the screen to the clipboard
PROPERTY RBASE_FORM 'CAPTURE_FROM_SCREEN|23, 24, 934, 800' 'CLIPBOARD'
RETURN
```

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

## 14.4 Changing CASCADE Options

With prior versions/builds of R:BASE, if you have already added the CASCADE option to a table with a Primary Key (PK) that automatically executes the UPDATE and DELETE options, and if you wish to change the default option to UPDATE only, use the following command at the R> prompt:

```
ALTER TABLE <PKtablename> ADD CASCADE UPDATE
```

This will change the CASCADE option to UPDATE only.

If you wish to change the default option to DELETE only, use the following command at the R> prompt:

```
ALTER TABLE <PKtablename> ADD CASCADE DELETE
```

If you wish to change the default option to both, use the following command at the R> prompt:

```
ALTER TABLE <PKtablename> ADD CASCADE
```

And finally, if you wish to cancel the CASCADE option altogether, use the following command at the R> prompt:

```
ALTER TABLE <PKtablename> DROP CASCADE
```

You may also implement these options using the enhanced R:BASE Data Designer (RBDEFine).

## 14.5 Changing Report Margins Using the PRINT Command

Did you know that you can change the report margins dynamically using the enhanced PRINT command with the "margin" parameters?

Here's how:

Four additional PRINT OPTION parameters are now supported to change Left, Top, Right and Bottom margins of report.

### Syntax:

```
PRINT reportname OPTION outputvalue|MARGIN_xxxx nnn
```



**Where:**

*outputvalue* is the parameter such as SCREEN, PRINTER, BMP, EMF, ETXT, GIF, HTML, JPG, PDF, RTF, TIFF, TXT, WMF, XHTML, or XLS.

*MARGIN\_xxxx* are the parameters for:

- MARGIN\_LEFT
- MARGIN\_TOP
- MARGIN\_RIGHT
- MARGIN\_BOTTOM

*nnn* is the REAL data type value; such as 0.5, 1.0, or 0.75

**MARGIN\_LEFT** - specifies the horizontal position on the page where printing should begin. All report component positions are relative to the margin. In other words, if the MARGIN\_LEFT parameter is set to 0.25 inches and you place a report component in a band and set the component's "left" parameter to 0, then that component will print 0.25 inches from the edge of page (or at the left margin).

**MARGIN\_TOP** - specifies the vertical position on the page where printing should begin. All report component positions are relative to the margin. In other words, if the MARGIN\_TOP parameter is set to 0.25 inches and you place a report component in a band and set the component's "top" parameter to 0, then that component will print 0.25 inches from the edge of page (or at the top margin).

**MARGIN\_RIGHT** - specifies the horizontal position on the page where printing should stop. All report component positions are relative to the margin.

**MARGIN\_BOTTOM** - specifies the vertical position on the page where printing should stop. All report component positions are relative to the margin.

-- Example 01:

```
PRINT CustomerList OPTION PRINTER|MARGIN_LEFT 1.25
```

-- Example 02:

```
PRINT CustomerList OPTION PRINTER|MARGIN_TOP 0.50
```

-- Example 03:

```
PRINT CustomerList OPTION PRINTER|MARGIN_RIGHT 0.75
```

-- Example 04:

```
PRINT CustomerList OPTION PRINTER|MARGIN_BOTTOM 0.50
```

-- Example 05:

```
PRINT CustomerList OPTION PRINTER +
|MARGIN_LEFT 1.25 +
|MARGIN_TOP 0.50 +
|MARGIN_RIGHT 0.75 +
|MARGIN_BOTTOM 0.50
```

## 14.6 Clearing Stubborn Table Locks

In a multi-user environment, have you ever been in a situation where a table is left locked and you have no way to clear the lock(s), even knowing that there is no one out there using the same database?

Well, now you have the option to clear those stubborn table locks by simply using the *\*new\** CLEAR TABLE LOCKS command.

Here's how:

```
DISCONNECT
```

```
SET MULTI OFF
CONNECT dbname
CLEAR TABLE LOCKS
```

This will CLEAR all table locks.

## 14.7 Creating/Editing RTF Files Outside the Database

Did you know that you can create and/or edit rich text file(s) outside the R:BASE database?

Use the new RBBEDIT command at the R> Prompt, in a Command File or in an EEP.

Example:

```
RBBEDIT ThePowerOfRBASE.RTF
```

or

```
RBBE ThePowerOfRB.RTF
```

## 14.8 Customizing DIALOG POPUP Colors

Did you know that you can customize the DIALOG POPUP colors to match your custom application theme?

Here's how:

Example 01:

```
-- Start
-- DIALOG_POPUP_CustomColors_Razzmatazz.RMD
-- Theme: Razzmatazz
IF (CVAL('DATABASE')) <> 'RRBYW18' OR (CVAL('DATABASE')) IS NULL THEN
 CONNECT RRBYW18 IDENTIFIED BY NONE
ENDIF
CLEAR VARIABLES vCustIDTxt,vCustID,vEndKey
SET VAR vCustIDTxt TEXT = NULL
SET VAR vCustID INTEGER = NULL
SET VAR vEndKey TEXT = NULL
CLS
DIALOG 'Enter a Customer ID' vCustIDTxt=8 vEndkey 1 +
 CAPTION 'DIALOG Custom Colors' +
 OPTION THEMENAME Razzmatazz +
 |POPUP_ENABLED TRUE +
 |POPUP_DIALOG_TYPE LOOKUP +
 |DIALOG_EDIT_HINT Double-click for a List +
 |POPUP_CAPTION CustID Selection +
 |POPUP_TITLE_TEXT Select a Customer +
 |POPUP_TABLE Customer +
 |POPUP_SELECT Company +
 |POPUP_WHERE ORDER BY Company +
 |POPUP_RETURN_COLUMN CustID +
 |POPUP_WINDOW_BACK_COLOR [R218,G228,B246] +
 |POPUP_LIST_BACK_COLOR [R218,G228,B246] +
 |POPUP_LIST_FONT_COLOR NAVY +
```

```
|POPUP_LIST_FONT_NAME ARIAL +
|POPUP_LIST_FONT_SIZE 10 +
|POPUP_LIST_FONT_BOLD ON +
|POPUP_TITLE_BACK_COLOR [R218,G228,B246] +
|POPUP_TITLE_FONT_COLOR NAVY +
|POPUP_TITLE_FONT_NAME ARIAL +
|POPUP_TITLE_FONT_SIZE 10 +
|POPUP_TITLE_FONT_BOLD ON +
|POPUP_LINES 16
-- Do what you have to do here ...
RETURN
-- End
```

Example 02:

```
-- Start
-- DIALOG_POPUP_CustomColors_RBASERocks.RMD
-- Theme: R:BASE Rocks!
IF (CVAL('DATABASE')) <> 'RRBYW18' OR (CVAL('DATABASE')) IS NULL THEN
 CONNECT RRBYW18 IDENTIFIED BY NONE
ENDIF
CLEAR VARIABLES vCustIDTxt,vCustID,vEndKey
SET VAR vCustIDTxt TEXT = NULL
SET VAR vCustID INTEGER = NULL
SET VAR vEndKey TEXT = NULL
CLS
DIALOG 'Enter a Customer ID' vCustIDTxt=8 vEndkey 1 +
 CAPTION 'DIALOG Custom Colors' +
 OPTION THEMENAME R:BASE Rocks! +
 |POPUP_ENABLED TRUE +
 |POPUP_DIALOG_TYPE LOOKUP +
 |DIALOG_EDIT_HINT Double-click for a List +
 |POPUP_CAPTION CustID Selection +
 |POPUP_TITLE_TEXT Select a Customer +
 |POPUP_TABLE Customer +
 |POPUP_SELECT Company +
 |POPUP_WHERE ORDER BY Company +
 |POPUP_RETURN_COLUMN CustID +
 |POPUP_WINDOW_BACK_COLOR 2708091 +
 |POPUP_LIST_BACK_COLOR 2708091 +
 |POPUP_LIST_FONT_COLOR WHITE +
 |POPUP_LIST_FONT_NAME ARIAL +
 |POPUP_LIST_FONT_SIZE 10 +
 |POPUP_LIST_FONT_BOLD ON +
 |POPUP_TITLE_BACK_COLOR 2708091 +
 |POPUP_TITLE_FONT_COLOR WHITE +
 |POPUP_TITLE_FONT_NAME ARIAL +
 |POPUP_TITLE_FONT_SIZE 10 +
 |POPUP_TITLE_FONT_BOLD ON +
 |POPUP_LINES 16
-- Do what you have to do here ...
RETURN
-- End
```

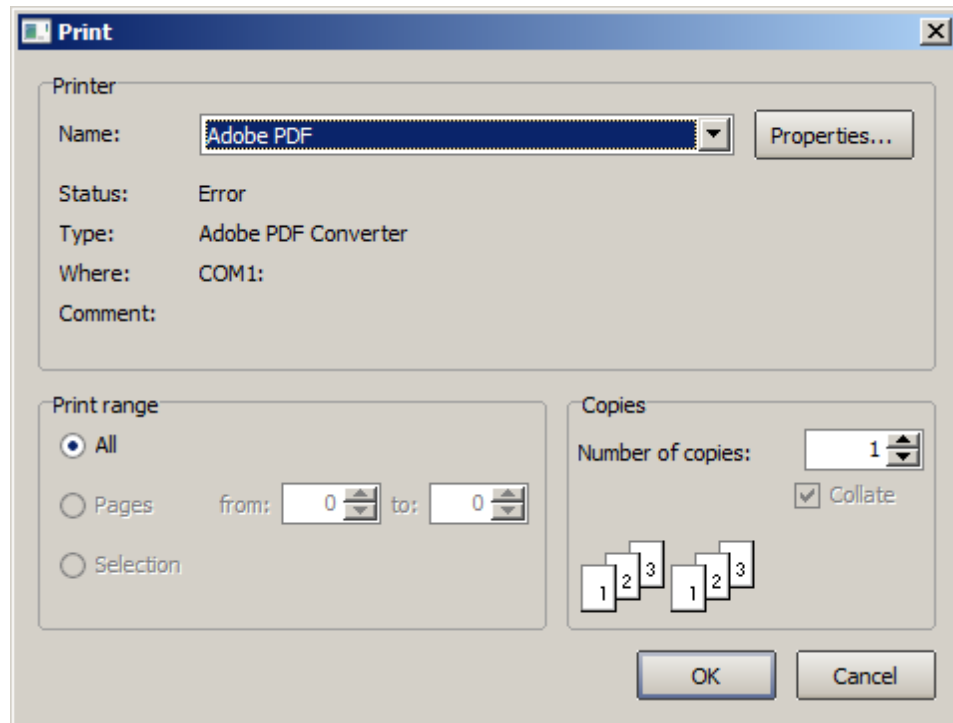
## 14.9 Customizing the PRNSETUP Dialog

Did you know that you can customize the PRNSETUP box, and use themes to match your Form, Application, #WHERE, CHOOSE, DIALOG and PAUSE windows?

Try the following examples which demonstrate the use of PRNSETUP command to match your Form, Application, #WHERE, CHOOSE, DIALOG and PAUSE themes.

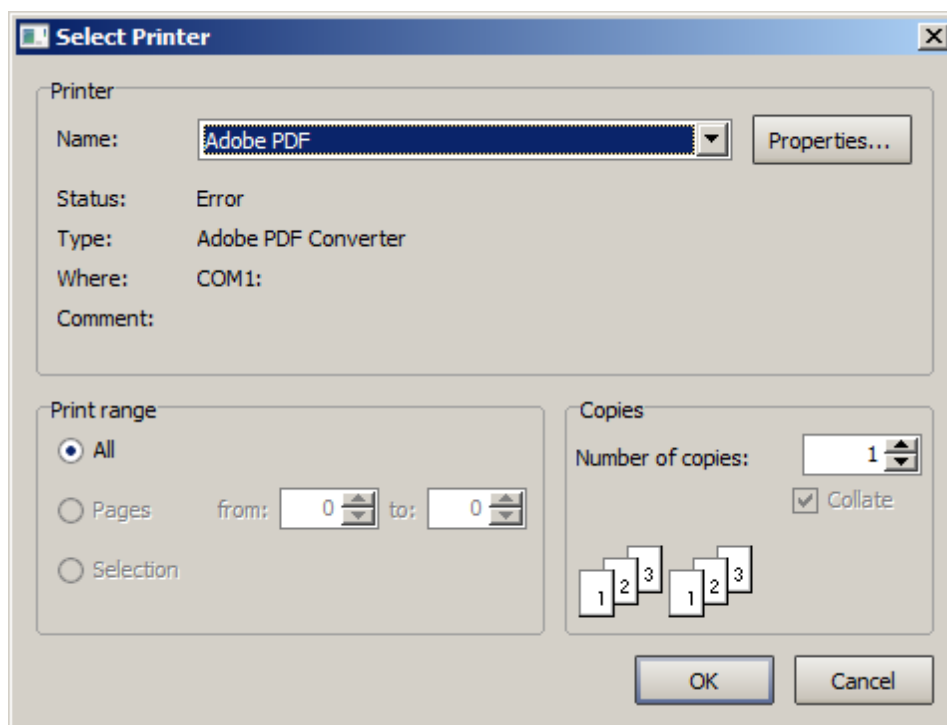
Example 01:

```
--(Changing Printer and then showing the window)
PRNSETUP 'Adobe PDF'
PRNSETUP
```



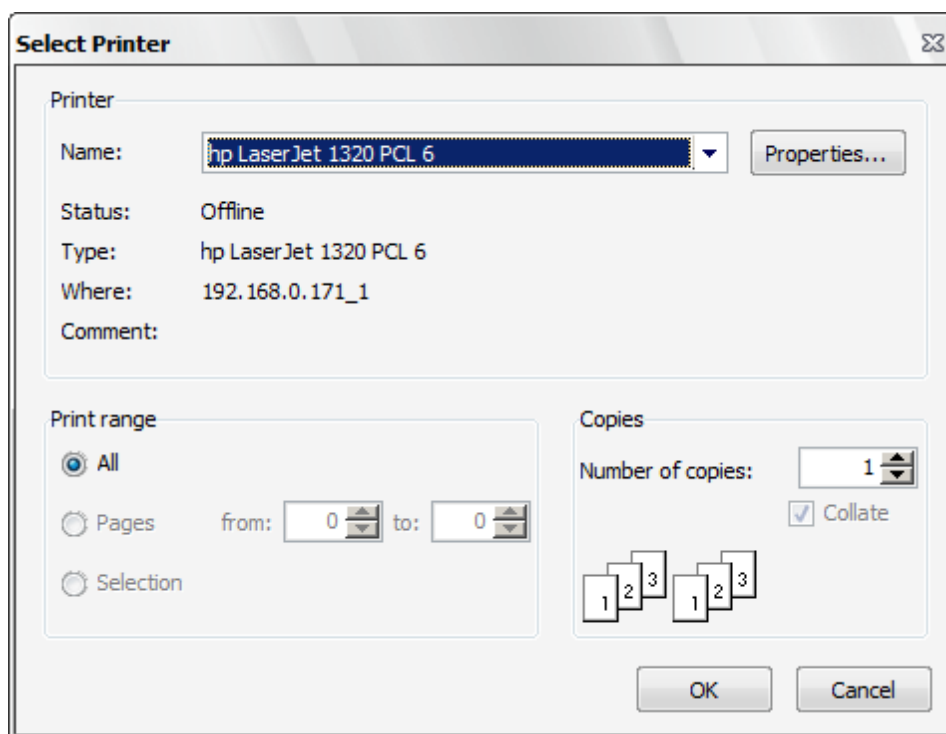
Example 02:

```
-- (Customizing Caption)
PRNSETUP OPTION CAPTION Select Printer
```



Example 03:

```
-- (Customizing Caption with R:BASE eXtreme 9.1 Theme)
PRNSETUP OPTION CAPTION Select Printer|THEMENAME Vista CG
```

**Notes:**

01. If you use a printer name that does not exist there will be no error and the current printer will not be changed.
02. Use RBTI\_PRNSETUP variable to capture user action. When using the PRNSETUP window, clicking on [OK] button will return the value of RBTI\_PRNSETUP as "OK". When using the PRNSETUP window, clicking on [Cancel] button will return the value of RBTI\_PRNSETUP as "CANCEL".
03. Use PRNSETUP INFO command at the R> prompt for detailed info on your currently selected printer.
04. For complete details, PRNSETUP parameters and OPTIONS: **HELP PRNSETUP**

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10428 or higher)

## 14.10 Defining Font Name/Size with OUTPUT PRINTER

Did you know that you can define the font name and size when using the OUTPUT PRINTER command?

R:BASE allows you to define font name and font size when using the OUTPUT PRINTER command at the R> prompt, in a command file or in an EEP used in Forms, Reports and Labels.

Example 01

```
CONNECT RRBYW18
SET LINES 0
SET WIDTH 120
SET NULL ' '
OUTPUT PRINTER FONTNAME COURIER FontSize 9
SELECT +
Company=38 AS `Company Name`, +
CustAddress=32 AS `Address`, +
(CustCity+', '&CustState&CustZip)=30 AS `City, State and Zip` +
FROM Customer ORDER BY Company
OUTPUT SCREEN
SET LINES 20
SET WIDTH 79
```

Example 02

```
CONNECT RRBYW18
SET LINES 0
SET WIDTH 120
SET NULL ' '
OUTPUT PRINTER FONTNAME COURIER FontSize 8
SELECT +
Company=38 AS `Company Name`, +
CustAddress=32 AS `Address`, +
(CustCity+', '&CustState&CustZip)=30 AS `City, State and Zip`, +
CustPhone=14 AS `Phone Number` +
FROM Customer ORDER BY Company
OUTPUT SCREEN
SET LINES 20
SET WIDTH 70
```

Supported Versions:

- R:BASE eXtreme for Windows (Build:9.0.1.31125 or higher)

## 14.11 Differentiating Between Regular and Temporary Tables/Views

R:BASE includes the new feature of differentiating between Regular and Temporary Tables/Views when using the LIST or LIST TABLES command at the R> prompt.

To safely indicate which tables are temporary tables in the LIST or LIST TABLES command, you will now see a "(T)" in front of the table name.

Example:

1. Launch R:BASE
2. CONNECT Concomp
3. Switch to R> Prompt and create a TEMPorary table as following:

```
PROJECT TEMP tCustomer FROM Customer USING ALL
LIST TABLES
```

You will notice the **(T)** in front of the tCustomer table.

4. Now create a TEMPorary VIEW as following:

```
CREATE TEMP VIEW `tYTDInvoiceTotal` +
 (CustID, YTDInvoiceTotal) AS +
 SELECT CustID,(SUM(InvoiceTotal)) FROM TransMaster +
 GROUP BY CustID
COMMENT ON VIEW `tYTDInvoiceTotal` IS +
 'Year-To-Date Invoice Total by Customer'
LIST
```

You will notice **(T)** in front of the tYTDInvoiceTotal view.

Note: All TEMPorary Tables/View created during individual R:BASE session disappear when the database is DISConnected.

## 14.12 Displaying Longer Table/Column Names

Using R:BASE eXtreme 9.x (64) for Windows, if you have a table or column name that is more than the traditional 18 characters wide, and if you wish to display a list of TABLES or COLUMNS, use the NAMEWIDTH setting.

The default setting for this exclusive NAMEWIDTH option is set to 18. However, you can change the name width to display table or columns names that are more than 18 characters to list them accordingly.

Syntax:

```
SET NAMEWIDTH nnn
```

Example:

```
SET WIDTH 120
SET NAMEWIDTH 40
SET LINES 0
LIST COLUMNS
```

## 14.13 Dropping Multiple Views

Did you know that you can drop multiple views with a single DROP command?

Here's how:

The DROP command has been enhanced to drop multiple views with the same DROP command by supporting the delimiter character between view names in the syntax. The R:BASE default delimiter is a comma (,).

```
DROP VIEW ViewName1, ViewName2, ViewName3
```

The NOCHECK parameter can also be added to eliminate the confirmation message.

```
DROP VIEW ViewName4, ViewName5, ViewName6 NOCHECK
```

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10717 or higher)
- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.20717 or higher)

## 14.14 Encrypting an UNLOADED DATA File

Traditionally, the UNLOAD command is used to unload the structure, data, structure with data, forms, labels or reports to a specified OUTPUT file. Depending on the option used, the UNLOAD command also creates a LOB file with matching output file name.

Typically, you can view the entire ASCII unloaded data using text editor. However, it becomes critical when the unloaded file contains sensitive data, including owner and user passwords, etc.

Did you know that you can encrypt the entire file using the new built-in 512-bit ENCRYPT option?

### Example 01:

```
CONNECT RRBYW18
OUTPUT rrbyw18.str ENCRYPT mypassword
UNLOAD STRUCTURE
OUTPUT SCREEN
```

This will create an encrypted password-protected structure file (rrbyw18.str).

### Example 02:

```
CONNECT RRBYW18
OUTPUT rrbyw18.all ENCRYPT mypassword
UNLOAD ALL
OUTPUT SCREEN
```

This will create an encrypted password-protected data rrbyw18.all and rrbyw18.lob file.

### Example 03:

```
CONNECT RRBYW18
OUTPUT employee.asc ENCRYPT mypassword
UNLOAD DATA FOR Employee USING +
EmpID, EmpFName, EmpLName, EmpAddress, EmpAddress2, EmpCity, EmpState, +
EmpZip, EmpPhone, HireDate, EntryDate, EMailAddress AS ASCII
OUTPUT SCREEN
```



This will create an encrypted password-protected ascii employee.asc file.

While using the built-in REdit or external R:BASE Editor, you may also create/edit any external command file/EEP and add the encryption by using the "Add Encryption" when saving or using the "Save As" option.

An output file created with "ENCRYPT yourpassword" option can only be opened using any version of R:BASE 7.x and higher for Windows.

Attempting to edit or run the encrypted file will prompt you to enter the appropriate password.

## 14.15 Enhanced DIALOG Command

Did you know that you can include end-user "hints", apply a "theme", and use "lookup" options for pop-up menus when using the DIALOG command? These are just a few new enhancements in the DIALOG command.

When you double-click on the DIALOG edit box, not only can you bring up the customized lookup pop-up menus, but when you hover your mouse cursor over the dialog edit box, the hint can be displayed.

Here's how:

1. DIALOG\_EDIT\_HINT value, specifies the hint.
2. POPUP\_ENABLED (ON/OFF), enables the option of bringing up a custom pop-up menu when using the double-click.
3. POPUP\_DIALOG\_TYPE value, specifies the Pop-up type when double-clicking on the DIALOG edit box.

Example: (Dialog with Hint and Pop-ups as Lookup)

```
-- Dialog_With_Hint_And_Popups_As_Lookup.RMD
-- Popup Dialog Type: LOOKUP
-- Along with DIALOG_EDIT_HINT value ...
CONNECT RRBYW18
CLEAR VAR vCaption,vResponse,vEndKey,vCustID,vRows, +
ivRows,vPauseMessage
SET VAR vCaption TEXT = 'DIALOG with Hint and Pop-up Menus'
SET VAR vResponse TEXT = NULL
SET VAR vEndkey TEXT = NULL
SET VAR vCustID INTEGER = NULL
SET VAR vRows INTEGER = NULL
SET VAR vPauseMessage TEXT = NULL
LABEL GetCustID
CLS
DIALOG 'Enter Customer ID' vResponse=33 vEndKey 1 +
CAPTION .vCaption +
ICON APP +
OPTION DIALOG_EDIT_HINT Double-Click for List of Customers +
|POPUP_ENABLED TRUE +
|POPUP_DIALOG_TYPE LOOKUP +
|POPUP_TITLE_FONT_NAME VERDANA +
|POPUP_TITLE_FONT_SIZE 9 +
|POPUP_TITLE_FONT_BOLD TRUE +
|POPUP_TITLE_FONT_COLOR WHITE +
|POPUP_TITLE_BACK_COLOR 5142690 +
```

```

|POPUP_TITLE_TEXT Select Customer +
|POPUP_LIST_FONT_COLOR WHITE +
|POPUP_LIST_BACK_COLOR 5142690 +
|POPUP_CAPTION List of Customers +
|POPUP_TABLE Customer +
|POPUP_SELECT Company,CustCity+', '&CustState&CustZip +
|POPUP_RETURN_COLUMN CustID +
|POPUP_WHERE ORDER BY Company +
|POPUP_SHOW_LINES TRUE +
|POPUP_RETURN_TYPE COLUMN +
|POPUP_LINES 20 +
|POPUP_DISTINCT TRUE +
|THEMENAME R:BASE Rocks!
IF vEndKey = '[Esc]' THEN
 GOTO Done
ENDIF
IF vResponse IS NULL THEN
 PAUSE 2 USING 'Missing Customer ID!' +
 CAPTION .vCaption ICON STOP +
 BUTTON 'Click here to enter Customer ID again ...' +
 OPTION BACK_COLOR WHITE +
 |MESSAGE_COLOR WHITE +
 |MESSAGE_FONT_NAME Verdana +
 |MESSAGE_FONT_COLOR RED +
 |MESSAGE_FONT_SIZE 9 +
 |MESSAGE_FONT_BOLD ON +
 |MESSAGE_FONT_ITALIC OFF +
 |MESSAGE_FONT_STRIKEOUT OFF +
 |BUTTON_COLOR WHITE +
 |BUTTON_FONT_COLOR GREEN
 GOTO GetCustID
ENDIF
SET VAR vCustID = (INT(.vResponse))
CLS
SELECT COUNT(*) INTO vRows INDIC ivRows FROM +
 Customer WHERE CustID = .vCustID
IF vRows > 0 THEN
 SET VAR vFormMode = 'EDIT'
 EDIT USING Customers WHERE CustID = .vCustID
ENDIF
SET VAR vResponse = NULL
SET VAR vCustID = NULL
GOTO GetCustID
LABEL Done
CLEAR VAR vCaption,vResponse,vEndKey,vCustID,vRows, +
 ivRows,vPauseMessage
RETURN

```

Customize or modify above code to meet your needs.

For more details, options and examples, please refer to:

From The Edge: <http://www.razzak.com/fte>  
 Topic: All About DIALOG Command

## 14.16 Enhanced LIST Command Parameters

Did you know that now you can selectively LIST only LOCKed, dBASE, SERVER, and TEMP tables?

R:BASE eXtreme 9.5 includes some cool engine-level enhancements, including enhanced LIST command parameters as follows:

- Example 01 (to list only locked tables)  
LIST TABLE LOCK
- Example 02 (to list only dBASE tables)  
LIST TABLE dBASE
- Example 03 (to list only ODBC SATTACHed Server tables)  
LIST TABLE SERVER
- Example 04 (to list only temporary tables)  
LIST TABLE TEMP

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20611 or higher)

## 14.17 Enhanced LIST FORMS, REPORTS and LABELS Command

When a Form, Label, Report, or External Form is modified using the appropriate designer, having the ability to track and visually display the Date/Time Stamp and Version Number is among the many eXclusive features of R:BASE eXtreme 9.5 (64) Database Explorer.

Did you know that using the LIST FORMS, LABELS, or REPORTS command at the R> prompt now includes "Modified" and "Version" columns in addition to Name, Table/View, and Description?

- Example 01 (To list all forms)  
LIST FORMS
- Example 02 (To list all forms for a given table)  
LIST FORMS FOR tablename
- Example 03 (To list all labels)  
LIST LABELS
- Example 04 (To list all labels for a given table)  
LIST LABELS FOR tablename
- Example 05 (To list all reports)  
LIST REPORTS
- Example 06 (To list all reports for a given table)  
LIST REPORTS FOR tablename

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20611 or higher)

## 14.18 LAUNCHing Operations with Show Modes

Did you know that you can open and utilize primary operations of the Windows operating system with the LAUNCH command, and control the "show mode" for everything being launched?

The LAUNCH command supports several new parameters for operating system operations and show modes for the launched program. New operation parameters allow for parts of the operating system to be utilized within R:BASE.

- CMD\_EXPLORE - displays the Windows Explorer from the specified folder
- CMD\_FIND - initiates a search from the specified folder
- CMD\_PRINT - prints a file to the default printer, or displays a print dialog, based upon file type

Examples:

```
LAUNCH CMD_EXPLORE|C:\RBTI
```

```
LAUNCH CMD_FIND|F:\DATA
```

```
LAUNCH CMD_PRINT|C:\ReadMe.txt
```

Several show modes are available for the launched program or operation.

- NORMAL - launches the program in a normal window
- MINIMIZED - launches the program in a minimized window
- MAXIMIZED - launches the program in a maximized window
- HIDE - launches the program, but it is hidden from display

Examples:

```
LAUNCH C:\MyDocs\ReadMe.txt NORMAL
```

```
LAUNCH 'winword|"C:\My Documents\AllFiles.docx" "/mMacroName"|W' MAXIMIZED
```

```
LAUNCH D:\Customers\Listing.doc MINIMIZED
```

```
LAUNCH CMD_PRINT|N:\Sales\OrderForm.pdf HIDE
```

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10317 or higher)

## 14.19 Listing Database Keys

Did you know that you can use the new LIST command to list PRIMARY, FOREIGN and UNIQUE Keys?

Here's how:

### 1. LIST PKEYS

Using LIST PKEYS will return a list of all PRIMARY KEYS and PRIMARY KEYS REFERENCED.

### 2. LIST PKEYS FOR tablename

Using LIST PKEYS FOR tablename will return the name of a PRIMARY KEY column for a given table name and associated REFERENCED keys

### 3. LIST FKEYS

Using LIST FKEYS will return a list of all FOREIGN KEYS in the connected database.

### 4. LIST FKEYS FOR tablename

Using LIST FKEYS FOR tablename will return a list of all FOREIGN KEY columns for a given table.

## 5. LIST UKEYS

Using LIST UKEYS will return a list of all UNIQUE KEYs in the connected database.

## 6. LIST UKEYS FOR tablename

Using LIST UKEYS FOR tablename will return a list of all UNIQUE KEY columns for a given table.

# 14.20 Listing Tables with Cascade and Cascade Type

Did you know that you can list all tables with Cascade and Cascade Types, if defined, using the LIST command?

```
LIST CASCADE
```

LIST CASCADE will display a list of all tables with a CASCADE and type of cascade (UPDATE, DELETE or BOTH).

# 14.21 Printing a Report/Label as Maximized

Did you know that when you use the PRINT command to print a report, or LBLPRINT command to print a label, at the R> prompt, or in a command file, without the OPTION parameters, the report or label will always be printed as MAXIMIZED?

The latest update of R:BASE eXtreme 9.5 (32/64) includes the requested enhancement to display the report or label as maximized when no OPTION parameters are defined.

```
PRINT reportname
LBLPRINT lablename
```

Supported Versions:

- R:BASE eXtreme 9.5 (Build..: 9.5.2.20128 or higher)

# 14.22 Programmatically Clean Scratch Files on Exit

R:BASE allows you to "Clean Scratch Files on Exit" by using an option within the R:BASE Settings; select "Settings" > "Clean Scratch Files on Exit" from the main Menu Bar.

However, when using R:Compiler compiled executables or Runtime applications, this option is not available, obviously for restricted access to all settings, designers, and the R> Prompt.

Did you know that through your code you can clean the scratch files on exit, using the following PROPERTY command in the application startup file, as an "On Before Start" Custom EEP in the main application form, External Form File, or R:BASE Application (.RBA) file?

```
PROPERTY APPLICATION CLEANSCRATCHFILESONEXIT 'TRUE'
RETURN
```

Using this option will automatically clean all scratch files upon exiting of your compiled or runtime application.

Supported Versions:

- R:BASE eXtreme (9.0) for Windows (Build: 9.0.1.11229 or higher)

## 14.23 RUN filespec vs. QUIT TO filespec

Creating complex applications with many command files and monitoring nesting levels has always been an art with designing trouble-free applications. It is the programmer's responsibility to monitor the nesting level, when using RUN filespec command from within a command or procedure file.

When you use the RUN filespec command from within a command or procedure file, R:BASE adds one to the nesting level for each nested command file. The RETURN command is the only way to exit and to return control to the next line in the calling command file and to decrease the nesting counter by one.

You can nest command files, such as RUN filespec, IF structures, WHILE loops, and SWITCH structures. The number of control structures that you can nest depends on the amount of memory available when the command or procedure file executes.

You can have up to five levels of RUN execution, unless you use the SET FILES command to change the number of command files that can be open simultaneously. In other words, command file 1 can execute command file 2, command file 2 can execute command file 3, command file 3 can execute command file 4, and command file 4 can execute command file 5. Successive RETURN commands pass execution control back up through the command files.

It all comes down to defining nesting levels and ... making sure to return control back to the originating command file.

Using the QUIT TO filespec command, there is no overhead, no nesting level, nor does R:BASE have to keep track of nesting levels.

Using the QUIT TO filespec command, you can QUIT TO any command file at any level you wish and never have to worry about returning to the last command to return control to the one command before and so on ...

QUIT TO filespec command clears all nesting levels and resets the nesting level to 0. Thus, no overhead.

You can use QUIT TO in individual binary codelocked command file(s), however, QUIT TO filespec cannot be used to execute a command block in a procedure file.

## 14.24 Selecting the Appropriate Tray Using PRNSETUP

Did you know that you can select the printer specific paper tray using the PRNSETUP command?

Syntax:

```
PRNSETUP TRAY_NAME <Printer Specific Tray name>
```

```
-- Example 01: (to select printer specific Tray1)
```

```
PRNSETUP TRAY_NAME Tray1
RETURN
```

```
-- Example 02: (to select printer specific Tray2)
```

```
PRNSETUP TRAY_NAME Tray2
RETURN
```

```
-- Example 03: (to select printer specific MP Tray)
```

```
PRNSETUP TRAY_NAME MP Tray
RETURN
```

## 14.25 Turning the Data Browser into a Quick Form

Did you know that you can turn the Data Browser into a quick form?

You can achieve that by using the "ROWVIEW" option of the BROWSE command.

Here's how:

1. Start R:BASE
2. CONNECT ConComp
3. Create a command file with the following syntax:

```
-- DataBrowserAsForm.RMD
CLS
BROWSE * FROM Customer +
 ORDER BY Company +
 NOCHG +
 OPTION WINDOW_STATE MAXIMIZED +
 |CAPTION ConComp Customers +
 |ROWVIEW ON
RETURN
```

4. RUN DataBrowserAsForm.RMD

For enhanced database security from users with the same command, you can use disable any output options.

3. Create a command file with the following syntax:

```
-- DataBrowsSecure.RMD
CLS
BROWSE * FROM Customer +
 ORDER BY Company +
 NOCHG +
 OPTION WINDOW_STATE MAXIMIZED +
 |CAPTION ConComp Customers +
 |ROWVIEW ON +
 |EXPORTRESULT OFF +
 |SAVERESULT OFF +
 |PRINTDATA OFF
RETURN
```

4. RUN DataBrowsSecure.RMD

## 14.26 Understanding Dotted vs. Ampersand Variables

### **Dotted Variables**

1. Variables used to hold values.
2. When you want R:BASE to use the "value" contained in the variable.
3. When you use a variable in a calculation or as a comparison value, you use "dot" variable.
4. A rule of thumb for when to "dot" a variable is to always "dot" the variable when it is on the right side of the operator.
5. Dotted a variable basically turns it into a constant value. R:BASE looks only at the value of the variable when it is dotted. R:BASE doesn't look at the datatype, just at the value the variable contains. That's why you can have a TEXT datatype variable (result of a CHOOSE or DIALOG

- command, for example) containing a value that looks like a DATE and use that variable to compare to a DATE datatype column or variable.
6. In expressions, R:BASE checks the datatype of a dotted variable. An expression is anything enclosed in parentheses. R:BASE verifies the datatype in expressions to make sure the expression is valid. You can't add an INTEGER to a TEXT for example.
  7. Dotted variables are used in Form and Report expressions as they are in the SET VAR command. On the right side of the operator, dot the variable.
  8. Dotted variables are commonly used in WHERE clauses and in calculations with other variables.

Example 01:

```
SET VAR vDate DATE = 11/19/2001
SELECT * FROM TransMaster WHERE TransDate <= .vDate
```

The SELECT queries all of the records from the TransMaster table where the value in the TransDate column is less than or equal to the value contained in the variable vdate.

Example 02:

```
SET VAR vOrder INTEGER = 20001
SET VAR vAmount CURRENCY = NULL
SET VAR vShip TEXT = NULL
SET VAR vFreight CURRENCY = NULL
SET VAR vTax CURRENCY = NULL
SET VAR vState TEXT = NULL
SELECT NetAmount, ShipMethod, StateAbr INTO +
 vAmount INDIC IvAmount, +
 vShip INDIC IvShip, +
 vState INDIC IvState +
 FROM Orders WHERE OrderNum = .vOrder
IF vShip = 'AIR' THEN
 SET VAR vFreight = $11.00
ELSE
 SET VAR vFreight = $5.00
ENDIF
SET VAR vAmount = (.vAmount + .vFreight)
SELECT TaxRate INTO vTax INDIC IvTax +
 FROM States WHERE StateAbr = .vState
SET VAR vAmount = (.vAmount+ (.vAmount*.vTax))
```

On the right side of the equals sign (the operator), the variable is dotted. On the left side of the operator, in the IF and the SET VAR commands, the variable is referenced by its name only, it is not dotted.

### **Ampersand Variables**

1. You can't dot a variable when it contains part of a command - a table or column name, or an ORDER BY or WHERE clause.
2. When a variable contains part of a command, its name is prefaced with an ampersand, "&", and it is called an ampersand variable. The "&" in front of the variable name tells R:BASE that the variable contains part of the command, not a value, and the contents of the variable are used when parsing the command.
3. Don't confuse the ampersand that prefaced a variable name with the ampersand that is used to concatenate TEXT values.
4. Because an ampersand variable is part of a command, it can't be used inside parentheses. Parentheses indicate expressions, expressions are parsed separately from the rest of the command. You need to include the parentheses as part of the variable value. Sub-selects and IN lists are enclosed in parentheses and you can't use an ampersand variable inside them, you need to include the entire sub-select or IN list, including parentheses, as the variable value.
5. Ampersand variables are most often used to hold table and column names and WHERE and ORDER



BY clauses. By using ampersand variables to hold column and table names, you can use the same command to select data from different tables. The CHOOSE command displays menus of available tables and columns.

Example 01:

```
SET VAR vTable TEXT = NULL
SET VAR vColList TEXT = NULL
CLS
CHOOSE vTable FROM #TABLES AT CENTER,CENTER TITLE 'Choose Table' +
 CAPTION 'List of Tables' LINES 18 FORMATTED
CLS
CHOOSE vColList FROM #COLUMNS IN &vTable AT CENTER,CENTER +
 CHKBOX TITLE 'Choose Column(s)' CAPTION 'List of Columns' +
 LINES 18 FORMATTED
```

The values selected from the menus are placed into variables.

The variables might look like this:

```
vTable = Employee TEXT
vColList = Empid,EmpLname,EmpPhone,EmpExt TEXT
```

The variables are then used in any command that uses a table name or column list. Where you see Column names or Table/View name you can substitute an ampersand variable that contains the Column, Table or View name. The variables must be used as ampersand variables to tell R:BASE they contain part of the command.

Example 02:

```
BROWSE &vColList FROM &vTable
```

To prompt for an ORDER BY clause, use the CHKSORT option instead of CHKBOX on the CHOOSE...FROM #COLUMNS.

Example 03:

```
SET VAR vOrderBy TEXT = NULL
CHOOSE vOrderBy FROM #COLUMNS IN &vTable AT CENTER,CENTER +
 CHKSORT TITLE 'Choose Column(s)' CAPTION 'Order By' +
 LINES 18 FORMATTED
```

The CHKSORT option prompts for Ascending or Descending just like the R:BASE sort menus. The variable contains ASC or DESC as well as the column names. It might look like this:

```
vOrderBy = EmpLname ASC,EmpFname ASC TEXT
```

In the command, follow the keywords ORDER BY with the ampersand variable containing the columns to order by.

Example 04:

```
BROWSE &vColList FROM &vTable ORDER BY &vOrderBy
```

## 14.27 Understanding WHILE Loop Optimization

Have you ever run into a situation where your command file/application is not working correctly by variables not being calculated accurately or by experiencing unexpected closes within a WHILE..ENDWHILE loop; and when you TRACE or RUN that routine with WHILEOPT set to off, R:BASE returns no errors and everything works fine?

Well, those are the typical symptoms of WHILE loop optimization. There is likely a problem with an optimized command and the problem is most likely with a variable that you may be clearing, redefining, or not data typing.

WHILE loops have always been considered one of the faster ways to process code as R:BASE places the WHILE loop code into memory and then parses it before beginning execution. R:BASE does not need to perform line-by-line reading and parsing of the code for each iteration of the WHILE loop. As the code is read into memory, the WHILE loop code was parsed into tokens (4-byte segments). But, R:BASE still needed to figure out what was what -- parse the expressions, find variable names and values, etc. It was faster than reading and parsing line-by-line, but not as fast as it could be.

If you determine that the problem is with an optimized command, review the rules below:

1. Pre-define all variable(s) with NULL values at the beginning of a command file or before the WHILE loop is executed.
2. Always use DROP CURSOR cursor before DECLARE CURSOR.
3. When using FETCH cursor INTO varname, always use INDICATOR variables for each defined variable(s).
4. Use WHILE SQLCODE <> 100 THEN
5. Never CLEAR any variable(s) within the WHILE loop. The value can be reset to NULL, but not cleared.
6. Never change variable data types within the WHILE loop.
7. Make sure to DROP CURSOR cursor after the WHILE loop.
8. Make sure to CLEAR unwanted and INDICATOR variables after the WHILE loop.

Keep in mind that TRACE does not use the WHILE loop optimization.

Example:

```
SET VAR vVarName ColType = NULL
DROP CURSOR C#1
DECLARE C#1 CURSOR FOR SELECT ColName FROM TableName +
 ORDER BY ColName
OPEN C#1
FETCH C#1 INTO vVarName INDIC IvVarName
WHILE SQLCODE <> 100 THEN
 -- Do what you have to do here with that sorted record
 FETCH C#1 INTO vVarName INDIC IvVarName
ENDWHILE
DROP CURSOR C#1
CLEAR VAR vVarName, IvVarName
```

## 14.28 Using Additional Data Browser/Editor Options

When using the BROWSE/EDIT commands, the following OPTION parameters provide the ability to customize the Data Browser/Editor Window:

- WINDOW\_STATE value (MAXIMIZED, NORMAL, MINIMIZED)
- CAPTION value
- LOCK nnn
- ROWVIEW
- READONLY value (ON, OFF)
- MODAL value (ON, OFF)

- EXPORTRESULT value (ON, OFF)
- SAVERESULT value (ON, OFF)
- PRINTDATA value (ON, OFF)

When "BROWSE/EDIT columnlist FROM tableviewname" command includes BLOB (VARCHAR, BITNOTE, VARBIT) data, typically you will notice a white square box (indication of NOT NULL field) or white square box with red "X" (indication of NULL or empty field). With the full development version of R:BASE eXtreme 9.1 installed, you may change the "Layout" settings for Data Browser/Editor to "Show NOTE Hints" and "Show Image Hints" when mousing over the column cells with BLOB data.

What if you are using a compiled/runtime version of your R:BASE eXtreme 9.1 (32/64) application and would like to provide these additional options?

Did you know that you can dynamically enable or disable these additional options using the following parameters in your R:BASE eXtreme 9.1 (32/64) applications?

- ZEBRA\_STRIPE value (ON, OFF) - specifies if zebra stripes are displayed
- CELL\_HINTS value (ON, OFF) - specifies if NOTE column cell hints are displayed
- IMAGE\_HINT value (ON, OFF) - specifies if image hints are displayed

-- Example 01 (Display Zebra Stripes)

```
CONNECT RRBYW17
```

```
BROWSE * FROM Contact OPTION ZEBRA_STRIPE ON
```

-- Example 02 (Display Cell Hints)

```
CONNECT RRBYW17
```

```
BROWSE * FROM Contact OPTION CELL_HINTS ON
```

-- Example 03 (Display Image Hints)

```
CONNECT RRBYW17
```

```
BROWSE * FROM Contact OPTION IMAGE_HINT ON
```

-- Example 04 (Display Zebra Stripes, Cell Hints, Image Hints)

```
CONNECT RRBYW17
```

```
BROWSE * FROM Contact +
```

```
OPTION ZEBRA_STRIPE ON|CELL_HINTS ON|IMAGE_HINT ON
```

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10428 or higher)

## 14.29 Using an Enhanced Calculator in a Dialog Box

Did you know that you can bring up the enhanced R:BASE Calculator by simply double-clicking in a DIALOG box?

This newly introduced enhancement also adapts the R:BASE Themes, if used as an option for the DIALOG command.

-- Example 01:

```
-- Dialog_With_Popup_As_Calculator_01.RMD
```

```
CLS
```

```
CLEAR VAR vValueTxt,vValue,vEndKey
```

```
SET VAR vValueTxt TEXT = NULL
```

```
SET VAR vValue DOUBLE = NULL
```

```
DIALOG 'Enter Value or Double-Click for Calculator' +
```

```

vValueTxt=26 vEndKey 1 +
CAPTION 'DIALOG with Calculator Pop-up' ICON APP OPTION +
POPUP_ENABLED TRUE +
|POPUP_DIALOG_TYPE CALCULATOR
SET VAR vValue = .vValueTxt
CLEAR VARIABLE vValueTxt,vEndKey
RETURN

```

```

-- Example 02:
-- Dialog_With_Popup_As_Calculator_02.rmd
-- Using THEMENAME as Razzmatazz
-- Notice the dialog box and the matching calculator
CLS
CLEAR VAR vValueTxt,vValue,vEndKey
SET VAR vValueTxt TEXT = NULL
SET VAR vValue DOUBLE = NULL
DIALOG 'Enter Value or Double-Click for Calculator' +
vValueTxt=36 vEndKey 1 +
CAPTION 'DIALOG with Calculator Pop-up' ICON APP OPTION +
POPUP_ENABLED TRUE +
|POPUP_DIALOG_TYPE CALCULATOR +
|THEMENAME Razzmatazz
SET VAR vValue = .vValueTxt
CLEAR VARIABLE vValueTxt,vEndKey
RETURN

```

```

-- Example 03:
-- Dialog_With_Popup_As_Calculator_02.rmd
-- Using THEMENAME as R:BASE Rocks!
-- Notice the dialog box and the matching calculator
CLS
CLEAR VAR vValueTxt,vValue,vEndKey
SET VAR vValueTxt TEXT = NULL
SET VAR vValue DOUBLE = NULL
DIALOG 'Enter Value or Double-Click for Calculator' +
vValueTxt=30 vEndKey 1 +
CAPTION 'DIALOG with Calculator Pop-up' ICON APP OPTION +
POPUP_ENABLED TRUE +
|POPUP_DIALOG_TYPE CALCULATOR +
|THEMENAME R:BASE Rocks!
SET VAR vValue = .vValueTxt
CLEAR VARIABLE vValueTxt,vEndKey
RETURN

```

## 14.30 Using AS ALIAS and CAPTION With External Forms

Did you know that you can now specify an alias name when running an external form file as a modeless form, and include a dynamic caption as well?

The REFF command, to run an external form file, has been enhanced to support the AS ALIAS and CAPTION parameters.

Syntax:

```
REFF ExternalForm.rff MDI AS ExtForm_AliasName CAPTION 'Form Caption'
```

**MDI**

Specifies a modeless form, allowing users to access other windows without closing the form first.

**AS alias**

Allows the user to specify a name for this instance of the form. This option is used in conjunction with the MDI option so that the user can programmatically specify the form with the SETFOCUS command.

**CAPTION 'windowcaption'**

Specifies a caption for the window title bar.

Here's how:

```
REFF RRBYW18.RFF CAPTION 'Running R:BASE Your Way!'
```

```
REFF AdhocReports.RFF MDI AS Adhoc CAPTION 'Adhoc Custom Reports'
```

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.20829 or higher)

## 14.31 Using DROP ALL

Typically, the DROP ALL TABLES command can be used to DROP all tables with a warning dialog prompt (Yes/No) to verify each table and DROP ALL VIEWS command can be used to DROP all views with a warning dialog prompt (Yes/No) to verify each view.

However, if you wish to DROP ALL tables except a few, you may use the DROP ALL TABLES EXCEPT tablename1, tablename2 command.

You may also use the \*enhanced\* DROP ALL VIEWS EXCEPT viewname1, viewname2 command using the latest versions/updates of R:BASE.

Summary:

- Use DROP ALL or DROP ALL TABLES command to drop all TABLES
- Use DROP ALL VIEWS command to drop all VIEWS
- Use DROP ALL TABLES EXCEPT listoftables command to drop all tables except the ones listed, separated by commas

Example:

```
DROP ALL TABLES EXCEPT tablename1, tablename2
```

- Use DROP ALL VIEWS EXCEPT listofviews command to drop all views except the ones listed, separated by commas

Example:

```
DROP ALL VIEWS EXCEPT viewname1, viewname2
```

## 14.32 Using INPUT Color for the DIALOG Command

Did you know that you can use "INPUT\_BACKGROUND\_COLOR value" to customize the input box background color in DIALOG command?



Here's how:

```
-- Using_Input_Color_For_Dialog.RMD
-- Author: A. Razzak Memon
-- October 1, 2012
SET VAR vInput TEXT = NULL
SET VAR vEndKey TEXT = NULL
SET VAR vCaption TEXT = 'Using Input Color for DIALOG Box'
LABEL GetInput
CLS
SET VAR vInput = NULL
DIALOG 'Enter Message Text' vInput=30 vEndKey 1 +
CAPTION .vCaption ICON INFO +
OPTION MESSAGE_FONT_NAME Tahoma +
|MESSAGE_FONT_COLOR NAVY +
|MESSAGE_FONT_SIZE 11 +
|INPUT_BACKGROUND_COLOR YELLOW +
|THEMENAME Longhorn
IF vEndKey = '[Esc]' THEN
GOTO Done
ENDIF
IF vInput IS NULL THEN
PAUSE 2 USING 'Missing Message Text' +
CAPTION .vCaption ICON WARNING +
BUTTON 'Press any key to enter message text' +
OPTION MESSAGE_FONT_NAME Tahoma +
|MESSAGE_FONT_COLOR RED +
|MESSAGE_FONT_SIZE 11 +
|INPUT_BACKGROUND_COLOR YELLOW +
|THEMENAME Longhorn
GOTO GetInput
ENDIF
-- Do what you have to do here ...
LABEL Done
CLEAR VARIABLES vInput,vEndKey,vCaption
RETURN
```

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.2.10920 or higher)

## 14.33 Using ON CONNECT

Did you know that you can use the ON CONNECT command to save and reset your ON CONNECT parameters in R:BASE?

Syntax Sample 01:

```
ON CONNECT RUN commadfile SAVE
```

Where:

- CONNECT indicates the command file should be run when connecting a database.
- RUN specifies the name of the command file to run.
- commandfile specifies the name of the command file to run.
- SAVE indicates the defined ON CONNECT parameters be saved.
- Any options without the SAVE parameters will only be active for a session.

Example 01:

```
CONNECT RRBYW18 IDENTIFIED BY NONE
ON CONNECT RUN RRBYW18.DAT SAVE
```

To RESET the ON CONNECT parameters:

Syntax Sample 02.:

```
ON CONNECT RESET SAVE
```

Where:

- RESET turns the ON CONNECT procedure off.
- SAVE indicates the defined ON CONNECT parameters be saved.

Example 02:

```
CONNECT RRBYW18 IDENTIFIED BY NONE
ON CONNECT RESET SAVE
```

## 14.34 Using PRNSETUP Help Options

Did you know that you can use the PRNSETUP HELP options to find available Fonts, Printers, Formats, Sources and other details about your printer?

Here's how:

1. Start R:BASE
2. At the R> prompt, type:

```
PRNSETUP HELP
```

This will list all available options, such as:

```
FONTS - Available Fonts
PRINTERS - Available Printers
PAPER NAMES - Available Formats
TRAYS - Available Sources
INFO - Current Printer Information
```

**PRNSETUP FONTS**

This will list all available fonts.

**PRNSETUP PRINTERS**

This will list all available printers. Printer name preceded by "\*" denotes the default printer.

**PRNSETUP PAPER NAMES**

This will list all available paper formats.

**PRNSETUP TRAYS**

This will list all available paper sources.

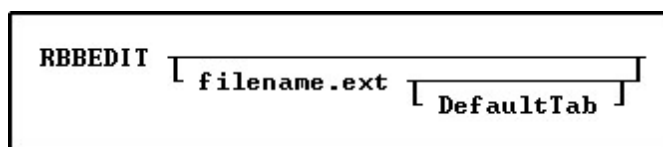
**PRNSETUP INFO**

This will list all details about the default printer, including:

- Current Printer
- Status
- Paper Orientation
- Paper Size
- Paper Source
- Print Quality (DPI)
- Copies
- Color Mode
- Duplex Mode
- Collation

## 14.35 Using the Default Tab for the R:BASE BLOB Editor

Did you know that R:BASE BLOB Editor RBBEDIT (RBBE) command has been enhanced to specify the default tab for the R:BASE BLOB Editor, if desired?

**filename.ext**

Specifies an external ASCII text, RTF, or image file. The R:BASE BLOB Editor recognizes the following image formats:

|     |      |
|-----|------|
| GIF | BMP  |
| DCX | PCC  |
| PCX | AFI  |
| VST | TGA  |
| PNG | JPEG |
| JPG | TIFF |
| TIF | ICO  |
| EMF | WMF  |

**DefaultTab**

Specifies the default tab for the R:BASE BLOB Editor.

| Default Tab | Parameter |
|-------------|-----------|
|-------------|-----------|



|              |                                  |
|--------------|----------------------------------|
| Image        | NOTE, VARCHAR, TEXT, NOTEVARCHAR |
| Note/Varchar | IMAGE                            |
| Rich Text    | RICHTEXT, RTF                    |
| Unicode/BSTR | UNICODEBSTR, UNICODE, BSTR       |
| Hex          | HEX                              |

Examples:

```
RBBEDIT test.txt TEXT
```

```
RBBEDIT image.bmp IMAGE
```

```
RBBEDIT filename HEX
```

```
RBBEDIT mydoc.rtf RICHTEXT
```

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

## 14.36 Using the Enhanced ATTACH Command

With the inception of R:BASE eXtreme 9.5 (32/64), and the opportunities to convert and upgrade legacy databases and old routines, including the conversion of all dBASE databases, many features and enhancements have been implemented in the latest update of R:BASE.

R:BASE's ATTACH command allows users to attach an external dBASE file to a connected R:BASE database.

Did you know that now you can totally automate the attachment of all your dBASE files using the enhanced ATTACH command?

In addition to using the traditional ATTACH command, and then manually answering all questions and ALIASing conflicting reserved column names, now you can enhance your routines by defining selective columns as well as ALIAS column names with all supported parameters just like SATTACH command, including the option to ATTACH dBASE file as TEMPORARY table.

```
ATTACH [TEMPORARY] filespec [AS tablealias] [USING ndxlist] [ALIAS aliaslist]
```

### Options

#### ALIAS AliasList

To specify alias names for columns.

#### AS tablealias

Specifies an alias, or temporary name, for the dBASE table. A table alias is sometimes required when attaching files that do not follow the same table name restrictions as R:BASE.

#### filespec

A dBASE database name with a drive and path specification in the form D:\PATHNAME\FILENAME.

#### ndxlist

Specifies a list of index files to associate with the specified dBASE file. You do not have to include the extension for each index file. Separate index file names with a comma (or the current delimiter). Index files must be located with the specified dBASE file.

#### TEMPORARY

Allows you to create a temporary table with the ATTACH command. The temporary tables will disappear when the database is disconnected.

#### **USING**

Removes dBASE index files that were previously associated with the attached dBASE file when this option is used without a list of index files.

-- Example 01:

```
ATTACH TEMPORARY filename.dbf +
AS TableAlias +
ALIAS Column1, Column2, Column3, Column4, Column5
```

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21008 or higher)

## 14.37 Using the Enhanced DIR Command in R:BASE

Did you know that the traditional DIR command has been enhanced to display new Windows output format? DIR command displays a list of a directory's files and sub-directories. Used without parameters, DIR displays the disk's volume label and serial number, followed by a list of directories and files on the disk, including their names and the date and time each was last modified.

For files, DIR displays the long name, extension and the size in bytes. DIR also displays the total number of files and directories listed, their cumulative size, and the free space (in bytes) remaining on the disk.

If you wish to display the traditional output format, you can use the following new SET SHORTNAME ON command. The default is set to OFF.

In addition, new SHOW SHORTNAME command will display the current setting and new (CVAL ('SHORTNAME')) function will retrieve the current setting when used in a command file.

The default R:BASE configuration files, when created from scratch, will also include the new default setting as SHORTNAM OFF.

Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build:9.0.1.31125 or higher)

## 14.38 Using the GAUGE Options with PAUSE

If you are running a routine and don't know exactly how long it is going to take, now you may use the new GAUGE options to display a cool gauge with custom theme and colors.

Here's how:

Example 01:

```
CLS
PAUSE 3 USING 'Calculating ... Please Stand By ...' +
CAPTION ' Pause 3 with Gauge ' ICON APP +
OPTION GAUGE_VISIBLE ON +
| GAUGE_COLOR [R218,G228,B246] +
| GAUGE_INTERVAL 10 +
| MESSAGE_FONT_NAME VERDANA +
| MESSAGE_FONT_SIZE 10 +
| MESSAGE_FONT_COLOR BLUE +
| THEMENAME Razzmatazz
-- Put your code, that takes a lot of time, here ...
```

```
-- Use CLS command to clear the PAUSE 3 with gauge
RETURN
```

Example 02:

```
CLS
PAUSE 3 USING 'Calculating ... Please Stand By ...' +
CAPTION ' Pause 3 with Gauge ' ICON APP +
OPTION GAUGE_VISIBLE ON +
|GAUGE_COLOR 2708091 +
|GAUGE_INTERVAL 10 +
|MESSAGE_FONT_NAME VERDANA +
|MESSAGE_FONT_SIZE 10 +
|MESSAGE_FONT_COLOR RED +
|THEMENAME R:BASE Rocks!
-- Put your code, that takes a lot of time, here ...
-- Use CLS command to clear the PAUSE 3 with gauge
RETURN
```

Example 03:

```
CLS
PAUSE 3 USING 'Calculating ... Please Stand By ...' +
CAPTION ' Pause 3 with Gauge ' +
ICON WINDOWS +
OPTION GAUGE_VISIBLE ON +
|GAUGE_COLOR RED +
|GAUGE_INTERVAL 10 +
|MESSAGE_FONT_NAME VERDANA +
|MESSAGE_FONT_SIZE 10 +
|MESSAGE_FONT_COLOR WHITE +
|THEMENAME Steel Blue
-- Put your code, that takes a lot of time, here ...
-- Use CLS command to clear the PAUSE 3 with gauge
RETURN
```

## 14.39 Using the LAUNCH Command

Using R:BASE, the LAUNCH command is used to execute (or LAUNCH) another application or process, from within R:BASE eXtreme for Windows and higher. It designates which file to execute. This means that the FileName can be set to any file that has a corresponding association registered with Windows. For example, setting FileName to 'README.TXT' will invoke the Windows NotePad when launched. If a full path is not specified, the current search path is used.

The LAUNCH command can be used to launch programs, as well as files associated with programs.

If you are running R:BASE eXtreme on MS Windows 7, and if you have a file, such as Word document with built-in macros, you may use the following syntax to LAUNCH:

```
-- Example 01
LAUNCH 'winword|f:\temp\test.doc /mTestMacro|W'
```

If a folder path, file name, or parameter contains spaces, double quotes (") must be added.

```
-- Example 02
LAUNCH 'winword|"f:\temp word files\test.doc" "/mTestMacro"|W'
```

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.20214 or higher)

## 14.40 Using the New RUNRBA Command

Did you know that you can use the new RUNRBA command to Run R:BASE Application (.RBA) file in a command file or in an EEP?

A new RUNRBA command is now supported to specifically run an R:BASE Application (.RBA) file that is created specifically using the R:BASE Application Designer.

R:BASE will run an Application (.RBA) file like it is run within the Database Explorer, only from a command file or a Custom EEP.

-- Example  
RUNRBA TestApp.rba

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

## 14.41 Using the PRNSETUP OPTION STANDARD Parameter

A custom PRNSETUP window was designed and introduced in R:BASE eXtreme 9.1 (32/64) and R:BASE eXtreme 9.5 (32/64) that allows developers to customize the Print Setup window with added support of R:BASE Themes, Caption, etc. In addition to OPTION parameters, this window allows the selection of Printer Name from the list of available Printers, Printer Properties, Print Range, and Copies.

However, if you wish your users to view and select extended printer options such as Paper Size, Paper Source (Tray), and Orientation (Portrait/Landscape), now you may use the new PRNSETUP OPTION STANDARD to provide such features.

-- Example 01 (To Display Custom R:BASE Print Window)  
PRNSETUP

-- Example 02 (To Display Standard MS Print Window)  
PRNSETUP OPTION STANDARD

Supported Versions:

- R:BASE eXtreme 9.5 (32/64), Build: 9.5.2.11212 or higher
- R:BASE eXtreme 9.1 (32/64), Build: 9.1.6.21212 or higher

## 14.42 Using the SCALEBY Property in R:BASE Application (.RBA)

Did you know that now you can use the SCALEBY property to dynamically adjust your application's main window or form based on a given screen resolution?

Syntax:

```
PROPERTY RBA_FORM SCALEBY 'nnnn'
```

Use this property to automatically scale an R:BASE Application (.RBA) form and all related controls to a specified screen pixel width. SCALEBY property modifies the Height and Width properties of the form and all controls placed on it, but it does not change the Top and Left properties; therefore, the size of the controls changes, but not the coordinates of the top-left corners of the controls. Thus, it preserves the position of all controls on the form.

If you have developed an R:BASE Application (.RBA) form that is 800x600 for the majority of users having a monitor with 800x600 screen resolution to fit the form on the entire available screen, but a few

users of your application have a higher resolution (1024x768) and if you wish your 800x600 form to fill the entire screen of a monitor with a resolution of 1024x768, you'll need to use the RBA\_FORM SCALEBY property as follows:

Example:

```
-- Application: On After Start Action
PROPERTY RBA_FORM SCALEBY '800'
RETURN
```

This will scale the original form designed as 800x600 to fill the entire screen even if the screen resolution is higher than 800x600, such as 1400x1050, 1280x800 or 1024x768.

**Notes:**

- The 'nnnn' value should exactly be the same as the original "form width" in order to scale proportionally on the monitors with higher resolution.
- Use the SCALEBY property as embedded custom EEP in "On After Start" Action for R:BASE Application (.RBA) file.
- To take advantage of this feature, make sure that you use the scaled true type fonts for all controls on that form.

Supported Versions:

- R:BASE eXtreme 9.0 for Windows (Build: 9.0.1.11229 or higher)

## 14.43 Using the TOP and LEFT coordinates for PRNSETUP

There are times when you wish you could display the PRNSETUP window at a particular position on the desktop, instead of in the center of your screen.

Using the latest updates, now you can use the TOP and LEFT coordinates to achieve this goal.

Here's how:

```
PRNSETUP +
 OPTION CAPTION Select Printer +
 | TOP 10 +
 | LEFT 10 +
 | THEMENAME R:BASE Rocks!
RETURN
```

The PRNSETUP windows will be displayed at your desktop's top 10 and left 10 screen pixels, with a caption "Select Printer" and the theme of R:BASE Rocks!

You may change the TOP and LEFT coordinates, as well as choose from over 30 supported Themes, to suit your R:BASE application.

In addition to PRNSETUP, the OPTION for TOP and LEFT coordinates are also supported in the #WHERE, CHOOSE, DIALOG and PAUSE commands.

## 14.44 Using the Zoom Level Percent for PRINT

If you need to PRINT any report/label on SCREEN with a pre-defined Zoom Level, such as ZOOMPERCENT 55, you will need to precede the option with ZOOM\_TYPE PERCENTAGE.

Example:

```
PRINT reportname WHERE whereclause ORDER BY orderbyclause +
OPTION SCREEN +
```

```
|WINDOW_STATE MAXIMIZED +
|ZOOM_TYPE PERCENTAGE +
|ZOOMPERCENT 55
```

## 14.45 Using Themes for the #WHERE Builder

Did you know that in addition to applying Themes to Forms, Pop-up Menus, CHOOSE, DIALOG and PAUSE commands, now you can also apply R:Themes for #WHERE Builder window also?

When using #WHERE IN tableview option of CHOOSE command, it opens the WHERE builder for you to enter conditions for the columns in the specified table or view; stores the entire WHERE clause in the variable varname.

-- Example 01: (Traditional Command)

```
CONNECT RRBYW18
CHOOSE vWhereClause FROM #WHERE IN Customer
RETURN
```

-- Example 02: (Using Razzmatazz theme for #WHERE)

```
CONNECT RRBYW18
CHOOSE vWhereClause FROM #WHERE IN Customer +
OPTION THEMENAME Razzmatazz
RETURN
```

-- Example 03: (Using R:BASE Rocks! theme for #WHERE)

```
CONNECT RRBYW18
CHOOSE vWhereClause FROM #WHERE IN Customer +
OPTION THEMENAME R:BASE Rocks!
RETURN
```

## 14.46 Using SET FEEDBACK

With SET FEEDBACK set to ON, R:BASE displays the number of rows processed and the elapsed time to completion in the new pause look-alike form at the center of the screen.

Syntax: SET FEEDBACK ON/OFF

Default: OFF

This setting displays processing results when either calculating, sorting, inserting or editing more than 100 rows.

Supported commands:

- ALTER TABLE
- COMPUTE
- CREATE INDEX
- CROSSTAB
- DELETE
- INSERT
- The data transfer for the JOIN of two tables
- LOAD
- The data transfer for a PROJECT command
- SELECT
- SORTing a huge record set
- the data transfer for a SUBTRACT of two tables

- TALLY
- The R:BASE UNION command

## 14.47 Using SET PROGRESS

With SET PROGRESS set to ON, did you know that you can display a cool progress bar display window to show the process progression when building indexes, packing or reloading a database?

Syntax: SET PROGRESS ON/OFF

Default: OFF

Example 01:

```
CONNECT RRBYW18
PACK INDEX
```

Example 02:

```
CONNECT RRBYW18
PACK TABLE Customer
PACK TABLE InvoiceHeader
PACK TABLE InvoiceDetail
```

Example 03:

```
CONNECT RRBYW18
RELOAD RRBYWNEW
```

Example 04:

```
DISCONNECT
SET MULTI OFF
PACK RRBYW18
SET MULTI ON
```

Example 05:

```
DISCONNECT
SET MULTI OFF
CONNECT RRBYW18
PACK
SET MULTI ON
```

## 14.48 Using Wild Cards with PROPERTY

Did you know that you can use the connected database wild card symbols (also known as MANY) to change the PROPERTY of all controls with matching Component IDs at once?

-- Example 01:

```
PROPERTY FontControl% VISIBLE 'FALSE'
RETURN
```

-- Example 02:

```
PROPERTY %ontControl VISIBLE 'FALSE'
RETURN
```

-- Example 03:

```
PROPERTY %ontCon% VISIBLE 'FALSE'
RETURN
```

Imagine the possibilities!

## 14.49 Validating An Internet Connection

When designing and deploying R:BASE eXtreme applications, you might have a cool R:BASE routine or Plugin to submit and/or retrieve data that requires an Internet connection.

When your R:BASE eXtreme applications include tools to extract, transform and load data, they are mainly responsible for data transfer from your R:BASE application and the Internet to data warehouses.

However, not being connected to the Internet, or not having Internet access may result into -ERROR- message(s) and so forth. It would be nice to confirm a valid Internet connection before submitting or retrieving data or LAUNCHing a Web browser.

Did you know that now you can use a new GETPROPERTY command parameter to check whether or not the computer is connected to the Internet?

Here's how:

```
SET VAR vResult TEXT = NULL
GETPROPERTY APPLICATION IsInternetConnected vResult
```

Resulting "vResult" variable will return the value of YES or NO.

Using this approach, you can now build higher intelligence into your R:BASE eXtreme applications.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.5.11111 or higher)



# Part

---



## 15 Functions

### 15.1 Capturing PRNSETUP INFO Results

PRNSETUP INFO retrieves a list of current printer settings like:

- Current Printer
- Paper Orientation
- Paper Size
- Paper Source
- Print Quality (DPI)
- Copies
- Color Mode
- Duplex Mode
- Collation

You may capture PRNSETUP INFO results using the "PRN" specific CVAL functions as follows:

- PRN\_STATUS
- PRN\_ORIENTATION
- PRN\_SIZE
- PRN\_SOURCE
- PRN\_QUALITY
- PRN\_COPIES
- PRN\_COLORMODE
- PRN\_DUPLEXMODE
- PRN\_COLLATION

(CVAL('CURRENTPRINTER')) returns the current printer for the R:BASE session.  
(CVAL('PRN\_STATUS')) captures the printer status.  
(CVAL('PRN\_ORIENTATION')) captures the printer orientation.  
(CVAL('PRN\_SIZE')) captures the printer paper size.  
(CVAL('PRN\_SOURCE')) captures the printer paper source.  
(CVAL('PRN\_QUALITY')) captures the printer print quality (DPI).  
(CVAL('PRN\_COPIES')) captures the printer copy count.  
(CVAL('PRN\_COLORMODE')) captures the printer color mode.  
(CVAL('PRN\_DUPLEXMODE')) captures the printer duplex mode.  
(CVAL('PRN\_COLLATION')) captures the printer collation.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20128 or higher)

### 15.2 Defining First and Last Date of the Current Month

There are times when you may need to provide your users with a pre-defined first and last date of the month for query and/or reporting purposes.

Did you know that you can dynamically define the first and last date of the current month by using the following two lines of code:

```
SET VAR vStartDate DATE = (RDATE((IMON(.#DATE)),1,(IYR4(.#DATE))))
SET VAR vEndDate DATE = ((ADDMON(.vStartDate,1))-1)
```

The two lines of code above will always calculate the first and last date of the current month regardless of the current date.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20521 or higher)

## 15.3 Finding PORTS on Your Workstation

Did you know that you can find the available ports on your computer?

You can find all available ports using the *\*new\** (CVAL('PORTS')) function.

Here's how:

1. Start R:BASE
2. At the R> prompt, type:  

```
SET VAR vAvailablePorts TEXT = NULL
SET VAR vAvailablePorts = (CVAL('PORTS'))
SHOW VAR vAvailablePorts
```

The variable *vAvailablePorts* will return a text string with a list of all ports that are available on that workstation. Each item in the list will be separated by a comma (or the database character settings for comma).

## 15.4 Finding Table/View Locks Programmatically

Did you know that you can find the table or view locks using the new (GETVAL('GetLock','tableviewname')) function in R:BASE?

Here's how:

```
SET VARIABLE vCheckLock TEXT = NULL
SET VARIABLE vCheckLock = (GETVAL('GetLock','tableviewname'))
```

Where:

GetLock is the first required parameter and the tableviewname is the name of table or view.

The variable *vCheckLock* will return the text value of ON or OFF.

## 15.5 Finding the Data Type for a given Column or Variable

Did you know that you can find the data type for a given column name or variable by using the undocumented CVTYPE function?

Here's how:

**Syntax:**

**(CVTYPE('colvarname',flag))**

Returns the data type for a given column or variable name. To return the data type for a given column, a zero "0" flag must be used. To return the data type for a given variable, the one "1" flag must be used.

1. Start R:BASE for DOS or Windows
2. After CONNecting to ConComp or RRBYW18, try the following two examples at the R> prompt:

Example 01.

```
SET VAR vCustIDType TEXT = (CVTYPE('CustID',0))
SET VAR vEmpCity TEXT = (CVTYPE('EmpCity',0))
```

```
SHOW VARIABLES
```

```
vCustIDType = INTEGER TEXT
vEmpCity = TEXT,16 TEXT
```

Example 02.

```
SET VAR vCustIDType TEXT = (CVTYPE('CustID',0))
SET VAR vVarInquiry TEXT = (CVTYPE('vCustIDType',1))
```

```
SHOW VARIABLES
```

```
vCustIDType = INTEGER TEXT
vVarInquiry = TEXT,7 TEXT
```

**Notes:**

- When using the zero flag to return column data types, you must be **CON**NECTed to a database.
- When returning a **TEXT** data type, the length is included and is separated with a comma. When returning a **NUMERIC** data type, the precision and scale are separated with commas.

## 15.6 Finding the **INTEGER** value for a given **TEXT** String

Did you know that you can find the **INTEGER** value for a given **TEXT** string by using the **ISTR** function of **R:BASE**?

Here's how:

Syntax:

**(ISTR('textstring',position))**

Returns the corresponding integer value.

This function converts a single character, which you specify within a string by position, returning its corresponding ASCII Character Chart Decimal value.

In the following example, the **INTEGER** value of *vDecimalValue* is 65 for the capital letter A.

Example 01:

Start **R:BASE** for DOS or **R:BASE** for Windows at the **R>** Prompt:

```
SET VARIABLE vDecimalValue = (ISTR('R:BASE Rocks!',4))
```

```
SHOW VARIABLE
```

```
vDecimalValue = 65 INTEGER
```

## 15.7 Managing Application Security Using New CVAL Functions

Traditionally, when managing database/application security and access level, you may validate and provide database and application access by implementing various R:BASE (CVAL('keyword')) functions as follows:

- (CVAL('COMPUTER')) Returns the name of your computer
- (CVAL('NETUSER')) Returns the currently logged-in network user name
- (CVAL('USERDOMAIN')) Returns the Name of Logged-In Network Domain
- (CVAL('USERID')) Returns the Windows User ID
- (CVAL('WINAUTH')) Returns the value of the WINAUTH operating condition. This function is specific to R:BASE eXtreme 9.5 (64)

Did you know that now you may provide added database/application security and access to windows logged-in user based upon MS Windows "Global Groups" and "Local Groups"?

- (CVAL('NETGROUP')) Returns a list of global groups to which the current logged-in user belongs
- (CVAL('NETLOCALGROUP')) Returns a list of local groups to which the current logged-in user belongs

Using these CVAL functions, now you may provide access based on your network global or local groups as compared to providing application access based on individual (CVAL('NetUser')).

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20718 or higher)

## 15.8 Managing DLCALL Functions

Did you know that you can:

1. Declare up to 200 functions using the DLCALL function
2. Use CHKFUNC function to check DLL function that exists or not

Example:

```
SET VAR v1 = (CHKFUNC('function_name'))
```

Returns 1 if function exists or 0 if not.

3. Use DELFUNC function to delete DLL function declaration

Example:

```
SET VAR v1 = (DELFUNC('function_name'))
```

Returns 1 if function was deleted or 0 if not.

4. Use new LIST FUNCTIONS command to list declared functions

LIST FUNCTIONS command will list all declared DLL functions

## 15.9 Rounding Down with RNDDOWN Function

Did you know that you can use R:BASE to round down numbers to a specific decimal place?

The RNDDOWN function returns a number rounded down to a specified number of digits.

Syntax:

`(RNDDOWN(number,digits))`

Where:

*number* is the number to round down

*digits* is the number of digits to round the number down to

Remarks:

- RNDDOWN behaves like ROUND, except that it always rounds a number down.
- If digits is greater than 0 (zero), then number is rounded down to the specified number of decimal places.
- If digits is 0, then number is rounded down to the nearest integer.
- If digits is less than 0, then number is rounded down to the left of the decimal point.

Examples:

--Example 01:

```
SET VAR v1 DOUBLE = (RNDDOWN(662.79,0))
SHOW VAR v1
662
```

--Example 02:

```
SET VAR v3 DOUBLE = (RNDDOWN(54.1, -1))
SHOW VAR v3
50
```

--Example 03:

```
SET VAR v5 DOUBLE = (RNDDOWN(-23.67, 1))
SHOW VAR v5
-23.6
```

Supported Versions:

- R:BASE eXtreme 9.5 (32/64) (Build: 9.5.1.10317 or higher)

## 15.10 Understanding the New IFF Logical Function

Did you know that a new "IFF" logical function has been added to handle working with conditions to return a value.

Syntax: `(IFF((condition), arg1, arg2))`

If the condition is met, then the value of arg1 is returned. If condition is not met, then the value of arg2 is returned.

The condition must follow the syntax specifications as set with IF...ENDIF command structure.

The condition must list a set of conditions that combine to form a statement that is either true or false.

Conditions can be combined with the connecting operators AND, OR, AND NOT, and OR NOT.

Conditions using CURRENCY, the value MUST match database CURRENCY SYMBOL settings.

It is important to note that the condition needs to be a single item, which is why quotes are used in the examples below.

The data types of arg1 and arg2 must match.

```
-- Example 01: (Comparison of Variables)
SET VAR v1 INTEGER = 1
SET VAR v2 INTEGER = 2
SET VAR v3 TEXT = NULL
SET VAR v3 = (IFF('.v1<.v2','First','Second'))
SHOW VAR v3
First

-- Example 02: (Comparing Logic)
SET VAR v1 TEXT = NULL
SET VAR v1 = (IFF('1 < 2','Yes','No'))
SHOW VAR v1
Yes

-- Example 03: (Using IF Command)
SET VAR v1 INTEGER = 1
SET VAR v2 INTEGER = 2
IF v1 < .v2 THEN
PAUSE 2 USING 'Smaller' +
CAPTION 'New IFF Function' ICON INFO +
BUTTON 'Press any key to continue ..' +
OPTION MESSAGE_FONT_NAME Tahoma +
|MESSAGE_FONT_COLOR GREEN +
|MESSAGE_FONT_SIZE 11 +
|THEMENAME Longhorn
ELSE
PAUSE 2 USING 'Bigger' +
CAPTION 'New IFF Function' ICON INFO +
BUTTON 'Press any key to continue ..' +
OPTION MESSAGE_FONT_NAME Tahoma +
|MESSAGE_FONT_COLOR GREEN +
|MESSAGE_FONT_SIZE 11 +
|THEMENAME Longhorn
ENDIF
CLEAR VARIABLES v1,v2
RETURN

-- Example 04: (Using WHILE Command)
SET VAR v1 INTEGER = 1
SET VAR v2 INTEGER = 2
SET VAR vPause2Message TEXT = NULL
WHILE v1 < v2 THEN
SET VAR v1 = (.v1 + 1)
SET VAR vPause2Message = (CTXT(.v1))
PAUSE 2 USING .vPause2Message +
CAPTION 'New IFF Function' ICON INFO +
BUTTON 'Press any key to continue ..' +
OPTION MESSAGE_FONT_NAME Tahoma +
|MESSAGE_FONT_COLOR GREEN +
|MESSAGE_FONT_SIZE 11 +
|THEMENAME Longhorn
ENDWHILE
CLEAR VARIABLES v1,v2,vPause2Message
RETURN
```

```
-- Example 05: (SELECT and Display Feedback on Data)
CONNECT RRBYW18
SELECT NetAmount, (IFF('NetAmount>$100000', 'Good', 'Needs Improvement'))=30
+
AS Status FROM SalesBonus
```

```
NetAmount Status

```

```
$176,000.00 Good
$87,500.00 Needs Improvement
$22,500.00 Needs Improvement
$40,500.00 Needs Improvement
$76,800.00 Needs Improvement
$36,625.00 Needs Improvement
$56,250.00 Needs Improvement
$152,250.00 Good
$108,750.00 Good
$78,750.00 Needs Improvement
$27,000.00 Needs Improvement
$9,500.00 Needs Improvement
$210,625.00 Good
```

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

## 15.11 Using Additional Logical Functions

R:BASE's Logical Functions can be used to introduce decision making into your application. Traditional Logical Functions include:

- IFEQ
- IFEXISTS
- IFGT
- IFLT
- IFNULL

(IFEQ(arg1,arg2,arg3,arg4))

If arg1 and arg2 are equal, IFEQ returns the value of arg3. If arg1 and arg2 are not equal, IFEQ returns the value of arg4.

(IFEXISTS(arg1,arg2,arg3))

If arg1 contains a value, IFEXISTS returns the value of arg2. If arg1 is null, then the value of arg3 is returned.

(IFGT(arg1,arg2,arg3,arg4))

If arg1 is greater than arg2, IFGT returns the value of arg3. If arg1 is less than arg2, IFGT returns the value of arg4

(IFLT(arg1,arg2,arg3,arg4))

If arg1 is less than arg2, IFLT returns the value of arg3. If arg1 is greater than arg2, IFLT returns the value of arg4.

(IFNULL(arg1,arg2,arg3))

If arg1 is null, then the value of arg2 is returned. If arg1 is not null, then the value of arg3 is returned.

Did you know that the latest version and update of R:BASE eXtreme 9.5 include the following additional Logical Functions?



- IFGE
- IFLE
- IFNE

(IFGE(arg1,arg2,arg3,arg4))

If arg1 is greater than or equal to arg2, IFGE returns the value of arg3. If arg1 is less than arg2, IFGE returns the value of arg4.

(IFLE(arg1,arg2,arg3,arg4))

If arg1 is less than or equal to arg2, IFLE returns the value of arg3. If arg1 is greater than arg2, IFLE returns the value of arg4.

(IFNE(arg1,arg2,arg3,arg4))

If arg1 and arg2 are not equal, IFNE returns the value of arg3. If arg1 and arg2 are equal, IFNE returns the value of arg4.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21008 or higher)

## 15.12 Using Enhanced ICAP2 Function

The ICAP2 Function in R:BASE converts the text string with an initial capital letter on each word. This is also known as Word Case.

In the following example, the value of vICAP2 is John Smith.

```
SET VAR vICAP2 TEXT = (ICAP2('john smith'))
```

In the following example, the value of vHyfnTxt2 is Daniel Day-Lewis.

```
SET VAR vHyfnTxt2 TEXT = (ICAP2('daniel day-lewis'))
```

Did you know that the R:BASE now includes the support for apostrophe as well?

In the following example, the value of vName2 is Brian O'Rielly.

```
SET VAR vName1 TEXT = ('BRIAN O' 'RIELLY')
SET VAR vName2 TEXT = (ICAP2(.vName1))
```

This new enhancement will help those who wish to see consistent results when using the ICAP2 function to display Word Case in so many cases, such as List Views, Mail Merge Letters, Mailing/Name Labels, Inscription applications, and more ...

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21008 or higher)

## 15.13 Using IFWINDOW

Did you know that you can use the IFWINDOW function to see if the form is open or not, WITHOUT specifying the AS alias option of ENTER or EDIT USING formname?

```
(IFWINDOW(FormComponentID))
```

will return 1 when a form with the Component ID is open, 0 if not.

All you need to do is assign a Component ID to the form.

## 15.14 Using CHKCUR

If you need to know whether a CURSOR is already DECLARED or DROPPed, now you may use the CHKCUR function to find the current status of a given cursor name.

Here's how:

```
SET VARIABLE vCheckCuror = (CHKCUR('cursorname'))
```

The CHKCUR Function checks to see if a cursor is declared and is not dropped. The function returns an integer value of 1 if the cursor exists and is not dropped, and 0 if it is not declared or dropped.

The variable vCheckCursor will return a value of 1 or 0.

## 15.15 Using CHKVAR

Have you ever had the need to find whether a required VARIABLE is declared before you use that variable in an expression or routine to avoid code breaks or a sequence of -ERROR- messages?

Now you can avoid those moments by simply verifying the existence of a variable using the CHKVAR function, which checks to see if a variable name exists.

Here's how:

```
SET VARIABLE vCheckVar = (CHKVAR('varname'))
```

The function returns an integer value of 1 if the variable name exists or is declared, and 0 if it is not defined.

The variable vCheckVar will return a value of 1 or 0.

No more workarounds, suppressing error messages or even lengthy code to evaluate the existence of a variable!

## 15.16 Using SLOCP

The SLOCP Function is used to locate the exact position of a given string and occurrence in a TEXT, NOTE or VARCHAR value, returning the position if the string is found or 0 if it is not found. Using -1 as the third parameter will return the LAST occurrence.

Syntax:

```
(SLOCP(TextNoteVarcharValue, string, occurrence))
```

Example 01:

```
SET VARIABLE v1 VARCHAR = 'ABCDEABC_AB'
SET VARIABLE vSLoc1 = (SLOCP(.v1, 'AB', 1))
```

The resulting variable vSloc1 will return the integer value of 1.

Example 02:

```
SET VARIABLE v1 VARCHAR = 'ABCDEABC_AB'
SET VARIABLE vSLoc2 = (SLOCP(.v1, 'AB', 2))
```

Resulting variable vSloc2 will return the integer value of 6.

The above two examples will locate the exact position of a given string and occurrence. However, if you wish to find the LAST occurrence in the value of your string, use the "-1" parameter. Here's how:

Example 03:

```
SET VARIABLE v1 VARCHAR = 'ABCDEABC_AB'
SET VARIABLE vSLocLast = (SLOCP(.v1, 'AB', -1))
```

Resulting variable *vSLocLast* will return the integer value of 10.

## 15.17 Using SLOCI Function to Locate the Number of String Instances

Did you know that you can locate the number of instances a string appears in a TEXT, NOTE, or VARCHAR value using the new SLOCI Function?

### Syntax:

```
(SLOCI(TextNoteVarcharValue, string, arg))
```

New SLOCI function will return the INTEGER value for the number of instances a string appears in a TEXT, NOTE, or VARCHAR value.

The argument parameter determines whether the search on the string is case sensitive, where "0" is not case sensitive while "1" is case sensitive.

Example 01:

```
SET VAR vProduct1 TEXT = (SLOCI('R:BASE Single Seat: Upgrade', ':', 0))
SHOW VAR
vProduct1 2 INTEGER
```

Example 02:

```
SET VAR vProduct2 TEXT = (SLOCI('Single Seat License', 'S', 1))
SHOW VAR
vProduct2 2 INTEGER
```

Example 03:

```
SET VAR vProduct3 TEXT = (SLOCI('Single Seat License', 'S', 0))
SHOW VAR
vProduct3 3 INTEGER
```

Have fun implementing this new Function in your R:BASE eXtreme applications!

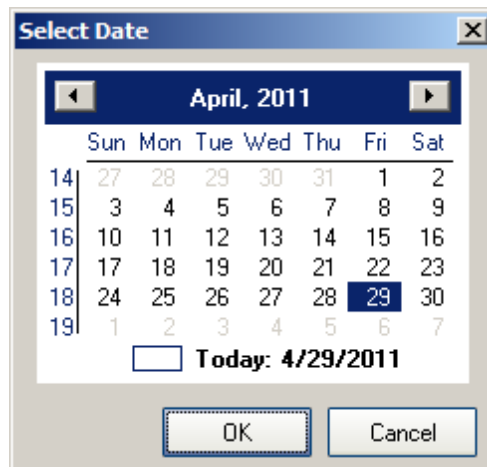
Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10414 or higher)

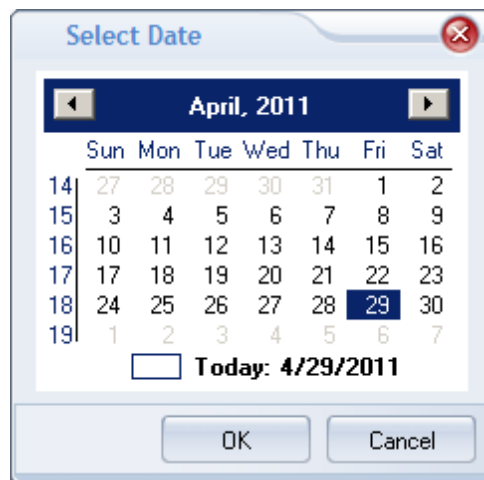
## 15.18 Using the Enhanced (GETDATE(' ')) Options

Traditionally, (GETDATE(' ')) will bring up the Windows GUI Calendar with today's date circled in red. Either you can click on [OK] to accept the circled date or click on any other date on the calendar using the current month or scrolling months.

```
-- Example 01 (Traditional Calendar):
SET VAR vDate DATE = NULL
SET VAR vDate = (GETDATE('Select Date'))
RETURN
```

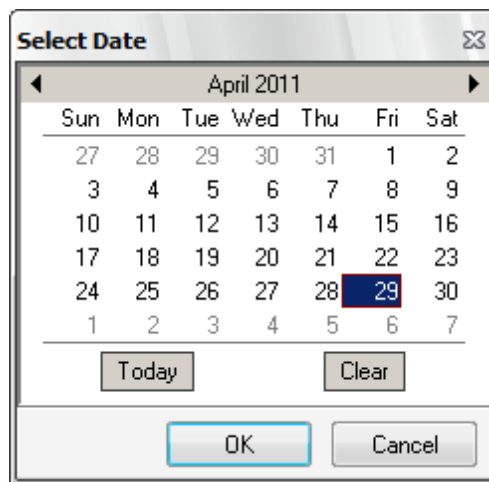


```
-- Example 02 (Traditional Calendar with R:BASE Themes):
SET VAR vDate DATE = NULL
SET VAR vDate = (GETDATE('Select Date|THEMENAME Soft Blue'))
RETURN
```



Did you know that now you can use the new "CALENDAR\_TYPE ENHANCED" option to display an enhanced calendar?

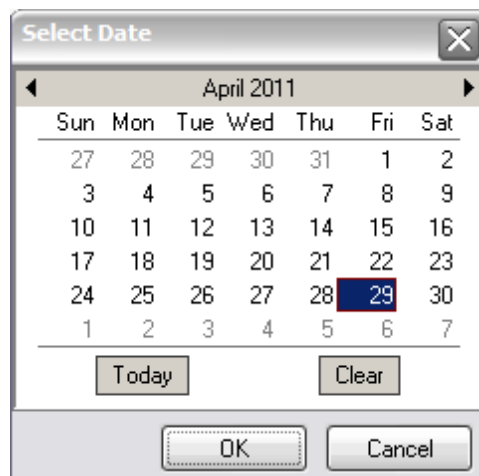
```
-- Example 03 (Enhanced Calendar with R:BASE Theme):
SET VAR vDate DATE = NULL
SET VAR vDate = +
(GETDATE('Select Date|CALENDAR_TYPE ENHANCED|THEMENAME Vista CG'))
RETURN
```



Using the enhanced calendar, additional [Clear] button will clear the selection and use today's date as default. Clicking on [OK] will populate the selected date into a variable, such as vDate.

Clicking on [Cancel] will ignore to populate any value into a variable, such as vDate. Pre-Defined value, if used, will not be overwritten.

```
-- Example 04 (Dynamic Approach using Global Variables)
SET VAR vDate DATE = NULL
SET VAR vCaption TEXT = 'Select Date'
SET VAR vCalendarType TEXT = 'ENHANCED'
SET VAR vThemeName TEXT = 'XP Grey Scale'
SET VAR vQuotes = (CVAL('QUOTES'))
SET VAR vString TEXT = +
('SET VAR vDate = (GETDATE('+.vQuotes+.vCaption+ +
'|CALENDAR_TYPE'+.vCalendarType+ +
'|THEMENAME'+.vThemeName+.vQuotes+'))')
&vString
CLEAR VARIABLE vCaption,vCalendarType,vThemeName,vQuotes,vString
RETURN
```



Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10428 or higher)

## 15.19 Using the FORMAT Function with .#NOW

Technically, you can use FORMAT anywhere that you can use a function. The result of the FORMAT function is always text. In the syntax for this function, value is the value you want to be displayed in a particular format; it can be a column, variable, or a constant value. 'Picture-format' is the picture format you establish.

In a command file, the FORMAT function can be useful in several ways; such as, aligning decimals, punctuating long numbers, formatting currency, and formatting text for CHOOSE, DIALOG, and PAUSE commands.

A beneficial example using FORMAT, for creating dynamic and unique file names based on the current date and time, would be useful to any user/developer that requires the ability to make an unattended timely backup of your live database.

The following FORMAT function examples can be used to create a dynamic file name based on .#DATE, .#TIME or .#NOW.

Let's say if you are already connected to the RRBYW18 database and would like to implement a routine to backup the entire database (even in a multi-user environment) on demand.

Here's a simple routine to create a unique file name:

```
-- Example 01: (Using .#DATE and .#TIME as two separate variables)
CLS
CLEAR VARIABLES vDateTxt,vTimeTxt,vFileName
SET VAR vDateTxt TEXT = NULL
SET VAR vTimeTxt TEXT = NULL
SET VAR vFileName TEXT = NULL
SET VAR vDateTxt = (FORMAT(.#DATE, 'MMDDYYYY'))
SET VAR vTimeTxt = (FORMAT(.#TIME, 'HHMM'))
SET VAR vFileName = +
((CVAL('DATABASE'))+'_'+vDateTxt+'_'+vTimeTxt+'.BKP')
CLEAR VARIABLES vDateTxt,vTimeTxt
RETURN
-- vFileName will return the text variable as:
-- RRBYW18_12302008_1630.BKP
-- Database Name, Date and Time will vary on your end

-- Example 02: (Using .#DATE and .#TIME as one variable in expression)
CLS
CLEAR VARIABLES vFileName
SET VAR vFileName TEXT = NULL
SET VAR vFileName = +
((CVAL('DATABASE'))+'_'+(FORMAT(.#DATE, 'MMDDYYYY'))+ +
'_'+(FORMAT(.#TIME, 'HHMM'))+'.BKP')
RETURN
-- vFileName will return the text variable as:
-- RRBYW18_12302008_1630.BKP
-- Database Name, Date and Time will vary on your end

-- Example 03: (Using .#NOW) - Short and Swift
CLS
CLEAR VARIABLES vFileName
SET VAR vFileName TEXT = NULL
SET VAR vFileName = +
```

```
((CVAL('DATABASE'))+' ' - ')+(FORMAT(.#NOW, 'MMDDYYYY_HHNN'))+' .BKP')
RETURN
-- Notice the "NN" for minutes when using .#NOW (not a typo)
-- vFileName will return the text variable as:
-- RRBYW18_12302008_1630.BKP
-- Database Name, Date and Time will vary on your end
```

Now that you have successfully created a unique file name, you may use the following routine to make a backup of your live database, on demand!

Here's how:

```
OUTPUT .vFileName
UNLOAD ALL
OUTPUT SCREEN
```

The resulting two files will be created in the same folder, unless a different folder name is specified:

1. RRBYW18\_12302008\_1630.BKP
2. RRBYW18\_12302008\_1630.LOB

Supported Versions:

- R:BASE eXtreme (9.0) for Windows (Build: 9.0.1.11229 or higher)

## 15.20 Using the LISTOF Function for Large Data

Did you know that you can use VARCHAR data type to retrieve large dataset when using the (LISTOF(colname)) function?

Syntax:

```
SELECT (LISTOF(colname)) IN TableViewName

SELECT (LISTOF(colname)) INTO varname INDIC ivarname FROM tblviewname
```

Note: Use WHERE clause to limit the resulting data, if necessary.

The (LISTOF(colname)) function creates a text string of the matched values separated by the current comma delimiter character.

The LISTOF function can be used with the "SELECT ... INTO ..." to populate a variable with a list of values which can then be used in a CHOOSE command with the #LIST option. It can also be used in Forms, Reports or Labels to look up values from multiple rows.

By default, the (LISTOF(colname)) function returns a NOTE data type and notes are limited to 4K. However, if you need to retrieve a large data set to build a dynamic CHOOSE command, Dynamic ListView, or even Dynamic ListBox, now you can use the VARCHAR data type to achieve your goal.

Example 01:

```
CONNECT RRBYW18
SET VARIABLE vResult VARCHAR = NULL
SELECT (LISTOF(CompDesc)) IN Component
```

Example 02:

```
CONNECT RRBYW18
SET VARIABLE vResult VARCHAR = NULL
SELECT (LISTOF(CompDesc)) IN Component WHERE CompDesc CONTAINS 'Box'
```

Example 03:

```
CONNECT RRBYW18
SET VARIABLE vResult VARCHAR = NULL
SELECT (LISTOF(CompDesc)) INTO vResult INDIC ivResult FROM Component
SHOW VARIABLE vResult
```

Example 04:

```
CONNECT RRBYW18
SET VARIABLE vResult VARCHAR = NULL
SELECT (LISTOF(CompDesc)) INTO vResult INDIC ivResult FROM +
 Component WHERE CompDesc CONTAINS 'Box'
SHOW VARIABLE vResult
```



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XV

## 16 R:Compiler

### 16.1 Customizing the Load Window in Compiled Applications

When compiling your application, you have the option (check box) to "Show Loading Window" which permits the ability to display a progress window while the program is loading. The available field is used to enter a custom message for the progress dialog window.

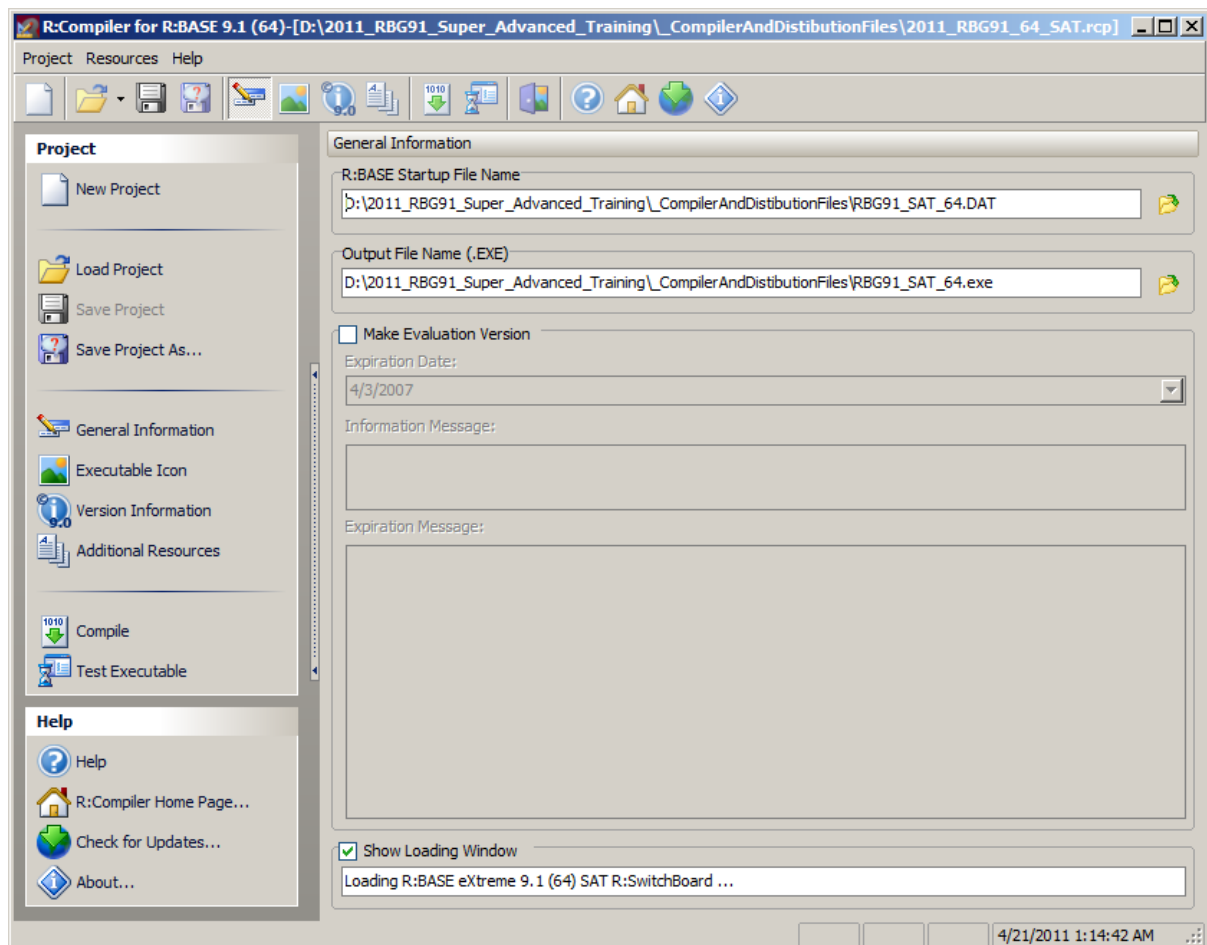
With this feature available to the compiled program, there are three additional PROPERTY command parameters which you can use to display customized load window:

```
PROPERTY LOADWINDOW TITLE 'Your Message Here'
PROPERTY LOADWINDOW PROGRESS nnn (0-100)
PROPERTY LOADWINDOW CLOSE 'TRUE'
PROPERTY LOADWINDOW CAPTION 'Your Caption'
```

Did you know that you can use the new LOADWINDOW SHOWINDICATOR parameters to display moving circle (indicator) along with your custom message?

Here's how:

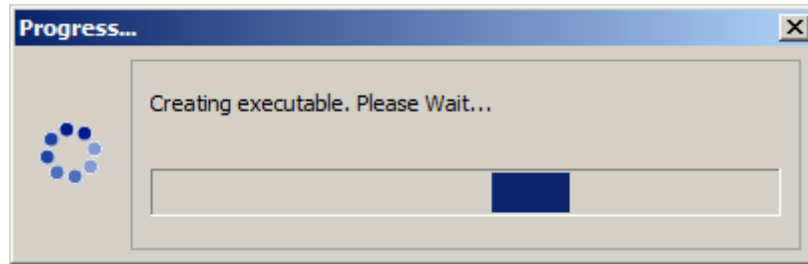
01. While customizing your project using R:Compiler 9.x (32/64), make sure to enable the option for "Show Loading Windows"



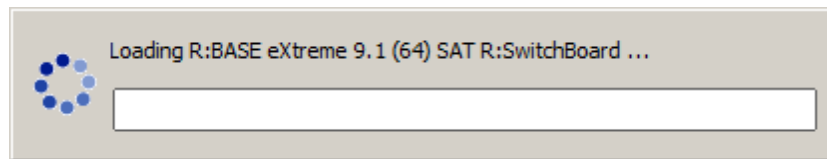
02. Customize the application DAT file to include the following PROPERTY command:

```
PROPERTY LOADWINDOW SHOWINDICATOR 'TRUE'
RETURN
```

03. Compile your application.



04. Once the application is compiled successfully, run the .exe file and notice the Load Window with moving circle (Indicator).



05. Finally, use the following PROPERTY command as "On After Start" EEP for your main application form to close the loading window.

```
-- On After Start Custom EEP
SET VARIABLE vCompiled TEXT = NULL
GETPROPERTY APPLICATION IsCompiled vCompiled
IF vCompiled = 'YES' THEN
PROPERTY LOADWINDOW CLOSE 'TRUE'
ENDIF
CLEAR VARIABLE vCompiled
RETURN
```

Have fun implementing new features & enhancements of R:Compiler!

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.3.10414 or higher)

## 16.2 Is the Running Application Compiled or Not?

When you design and then deploy totally automated R:BASE applications, there may be an option for a few users, including yourself, to return to the R:BASE Database Explorer or R> Prompt window. That's fine if your application was started using a full version of R:BASE for Windows.

What happens when you have distributed your cool application using R:Compiler?

You may wish to keep all menu options, and make the optional "Database Explorer, R> Prompt" invisible if the application is using the compiled version of R:BASE. This feature can be achieved without creating separate menus for development and distribution.

Within R:BASE, you may use the "ISCOMPILED" property parameter to capturing whether the application

"is compiled" or not. to take advantage the latest versions of R:BASE.

Here's how:

1. Assign a <ComponentID> to a button or menu item of a tree or drop-down menu, such as 'DBExplorer'.
2. Use the following code as "On After Start" Custom EEP.

```
CLEAR VARIABLE vCompiled
SET VARIABLE vCompiled TEXT = NULL
GETPROPERTY APPLICATION ISCOMPILED vCompiled
IF vCompiled = 'YES' THEN
 PROPERTY DBExplorer VISIBLE 'FALSE'
ENDIF
CLEAR VARIABLE vCompiled
RETURN
```

The variable *vCompiled* will return the value of YES or NO.

## 16.3 Managing Embedded Resources for Compiled Applications

Using the R:Compiler for R:BASE eXtreme 9.5 (32/64) Project | Additional Resources option, you may embed the following database and file resources in your compiled executable project:

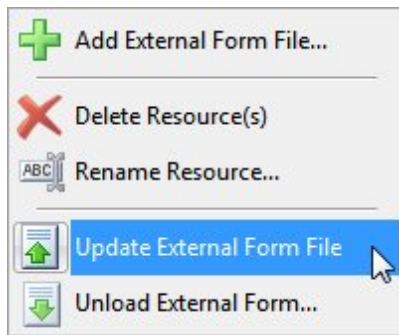
- External Form Files
- R:BASE Forms
- R:BASE Reports
- R:BASE Labels
- Themes (.msstyles, .theme, .uskn, .kskn, .xskn, .mskn)
- Runtime Licenses
- Plugins (.rbm)
- Misc. Files, including:
  - o R:BASE Command Files
    - dat
    - rmd
    - cmd
    - app
    - eep
  - o R:Charts chart files (.rbc)
  - o R:BASE Gateway Import/Export Specification files (.rgw)
  - o R:Mail Editor Template files (.rmt)

In addition, you may also embed the R:BASE Engine file (.dll) into the compiled executable, as well as define the executable to allow only one instance of the compiled application.

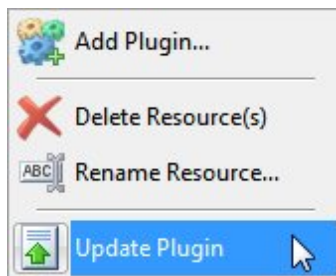
Once the project is deployed, managing embedded resources for your compiled application is as critical as keeping up with the updated versions of R:BASE. In addition to re-compiling and distributing the new compiled executables, using the current version and update of R:Compiler 9.5, you will also need to make sure that you have included the updated versions of all External Form Files, Plugins, and Misc. Files, if updated.

Did you that you can Update External Form Files, Plugins, and Misc. Files by simply using the right-click and select Update option?

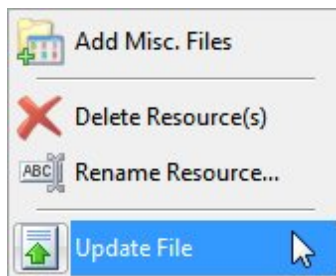
For Updating External Form Files:



For Updating Plugins:



For Updating Misc. Files:



Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20430 or higher)

## 16.4 Reloading Resource Files

File resources can be added to your R:Compiler for R:BASE compiled executable projects.

File resources can include:

- External Forms (.rff)
- R:BASE Plugins (.rbm)
- R:BASE Command Files (.dat, .rmd, .cmd, .app, .eep, .vie, .frm, .rpt, .lbl, .str, .all, .lst, .tbl)
- R:Charts chart files (.rbc)
- R:BASE Gateway Import/Export Specification files (.rgw)
- R:Mail Editor Templates (.rmt)

Did you know that you can simply reload, or update, file resources without having to delete and re-add the resource?

As file resources will change over time, an option to update the file resource is now available. Here's how

for Plugins:

01. Open R:Compiler, and select the "Additional Resources" option.
02. Choose the "Plugins" tab, select the appropriate Plugin that needs updated, and click on the "Update Plugin" button.

Here's how for Miscellaneous Files:

01. Open R:Compiler, and select the "Additional Resources" option.
02. Choose the "Misc. Files" tab, select the appropriate file that needs updated, and click on the "Update File" button.

Here's how for External Forms:

01. Open R:Compiler, and select the "Additional Resources" option.
02. Choose the "External Form Files" tab, select the appropriate external form file, and click on the "Update External Form File" button.

As the resource file is listed within R:Compiler, it will assume that the stored location for the file has not changed.

Supported Versions:

- R:BASE eXtreme 9.1 (32/64) (Build: 9.1.4.11012 or higher)

## 16.5 Saving/Recycling R:Compiler Projects

Did you know that you can now "Save" all settings of your R:Compiler projects, such as, General Properties, EXE-File Icon and Customized Version Information to a file?

R:Compiler includes the features: "Save Project", "Save Project As..." and "Open Project...".

This will help manage different versions of compiled applications and recycle custom details, etc., for your application updates.

## 16.6 Understanding R:Compiler Resources

When embedding R:BASE Forms, Reports, and Labels as "Additional Resources", the following will assist in your use of R:Compiler for R:BASE eXtreme 9.5:

1. Multiple objects can be selected in the R:BASE Database Explorer to copy into your R:Compiler project. Use the [Shift+Arrow] keys or the [Ctrl] key with the left mouse button to select more than one object.
2. Only [Ctrl+C] at the R:BASE Database Explorer can be used to send your R:BASE resources to the clipboard for R:Compiler to recognize the objects.
3. Only one "type" of object can be added at a time. One or more forms must be added separately than when adding reports or labels.
4. All listed resources can be cleared by using the "Clear Resources" button.
5. After adding Forms/Reports/Labels as resources, make a backup copy of the database, delete those added resources from the database, and reload the database to decrease the overall size and improve network speed.
6. If a resource has been removed from the database, and needs replaced for editing, the item can be copied from the R:Compiler project to the Database Explorer. Use the "Copy to Clipboard" button in R:Compiler, and then [Ctrl+V] at the R:BASE Database Explorer window.
7. When choosing to "Update" an external form file, Plugin, miscellaneous file, R:Compiler will assume that the stored location for the file has not changed.

8. In addition to the Additional Resources toolbar, a speed menu is also available with a right click.
9. When running a compiled executable where a specific resource resides in the executable AND the actual database files, the resource which resides in the executable will be recognized first.

Have fun compiling and deploying R:Compiler applications for R:BASE eXtreme 9.5.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.3.21205 or higher)

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**XVI**



## 17 Plugins

Enter topic text here.

### 17.1 Additional R:Spell Checker 9.5 Dictionaries on a Network

R:Spell Checker allows for multiple dictionaries to be stored to check spelling. In addition to the English dictionary, Medical, Legal, and Technical dictionaries can be added to verify the accuracy for a word, and to also avoid spell checking commonly terms for medical, legal, and technical business environments.

The Medical terminology dictionary (medical.adm) contains 207,963 words.  
The Legal terminology dictionary (legalwords.adm) contains 4,736 words.  
The Technical terminology dictionary (technical.adm) contains 5,667 words.

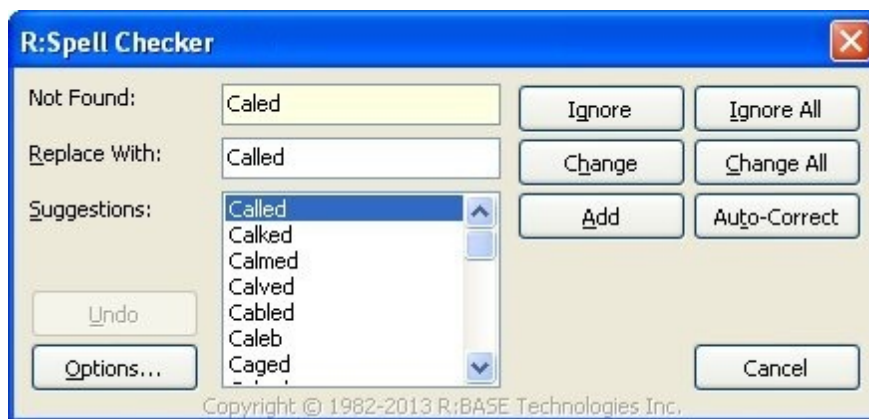
The dictionary files would reside into the same folder location as the English dictionary (American.adm).

With a multi-user network application and/or compiled application, R:Spell Checker should be configured to use the "CONFIG\_TYPE FILE" parameter to perform all spell checking using a RSpellChecker95.CFG configuration file.

The PLUGIN command syntax would be similar to the following:

```
PLUGIN RSpellChecker CallNotes +
| LANGUAGE ENGLISH +
| DICTIONARY R:\PHONE_APP\Dictionaries\ +
| CONFIG_TYPE FILE +
| CONFIG_FILE R:\PHONE_APP\RSpellChecker95.CFG
```

Using the R:BASE form, perform a spell check upon a misspelled word, to purposely display the R:Spell Checker options.



Select the "Options" button to review the Spelling Options.



In the list of dictionaries, be sure to place a check in the "Medical" or "Technical" dictionary along with "English (US)". If no dictionaries are listed, select the "Locate Dictionaries" option to navigate to the network location where the .adm files are stored. Press OK to save the options.

The new RSpellChecker95.CFG will then be created, whose contents should be something like the below:

```
[UserName]
_FirstRun=+
_Main_count=2
_Main_0=American.adm
_Custom_count=0
_MSWordCustom_count=0
_ActiveCustom=UserName.adu
_soUppcase=-
_soNumbers=-
_soHTML=-
_soInternet=+
_soQuoted=-
_soAbbreviations=+
_soPrimaryOnly=-
_soRepeated=+
_soLiveSpelling=+
_soLiveCorrect=+
_soUser1=-
_soUser2=-
_soUser3=-
_soUser4=-
_DialogX=926
_DialogY=725
_NewPaths_count=0
_UserData_count=0
_Main_1=medical.adm
```

Note the two dictionaries, Main\_0 and Main\_1, are listed.

Any spell checking there after upon medical terms will not be considered misspelled, unless of course if the term itself was entered incorrectly.

Supported Versions:

- R:BASE eXtreme 9.5 (Build...: 9.5.2.20521 or higher)

## 17.2 Capturing Common Operating System Folders

Does your application require the ability to send output to a User's directory, only the network contains several different operating systems?

Perhaps the application must add a Favorite to the Internet Explorer menu bar. Or, it is needed that a specific Font be verified?

Access to the all operating system specific common folders like the My Documents, Windows, and System folders are easily accessible using the latest GetCommonFolder Plugin that is part of the R:BASE Plugin Power Pack.

The GetCommonFolder Plugin is used to capture fifty (50) of the most common operating system folders used frequently by applications, but which may not have the same name or location on any given system.

### Syntax:

```
PLUGIN GetCommonFolder vFolder|FolderType
```

### Where:

vFolder is the variable to return the text value of a given common operating system folder.

FolderType is the name of the specific common folder type.

### Examples:

--The following return the Common Programs folder

```
PLUGIN GetCommonFolder vValue|COMMON_PROGRAMS
```

```
SET VAR vResult = 'COMMON_PROGRAMS : ' + vValue; WRITE .vResult
```

```
COMMON_PROGRAMS : C:\ProgramData\Microsoft\Windows\Start Menu\Programs
```

--The following return the Windows folder

```
PLUGIN GetCommonFolder vValue|WINDOWS
```

```
SET VAR vResult = 'WINDOWS : ' + vValue; WRITE .vResult
```

```
WINDOWS : C:\Windows
```

--The following return the System folder

```
PLUGIN GetCommonFolder vValue|SYSTEM
```

```
SET VAR vResult = 'SYSTEM : ' + vValue; WRITE .vResult
```

```
SYSTEM : C:\Windows\system32
```

--The following return the Program Files folder

```
PLUGIN GetCommonFolder vValue|PROGRAM_FILES
```

```
SET VAR vResult = 'PROGRAM_FILES : ' + vValue; WRITE .vResult

PROGRAM_FILES : C:\Program Files (x86)
```

In addition to a library of R:BASE Plugins, GetCommonFolder is included with the latest version of the R:BASE Plugin Power Pack.

R:BASE Plugin Power Pack Online Help Manual:  
<http://www.rbase.com/products/PluginPowerPack95>

## 17.3 Converting RTF to Plain TEXT, NOTE or VARCHAR

Did you know that you can convert Rich Text Format (RTF) data to a plain TEXT, NOTE or VARCHAR data using the RTFtoTEXT Plugin?

Syntax: (Four Different Scenarios)

```
-- (01.) When Input/Output Data is a VARIABLE
PLUGIN RRTFtoTXT vResult +
 | INPUT_TYPE VARIABLE +
 | INPUT_VARIABLE inputvarname +
 | OUTPUT_TYPE VARIABLE +
 | OUTPUT_VARIABLE outputvarname +
 | OUTPUT_DATA_TYPE value
```

WHERE:

- vResult is the resulting message value, such as, "OK" or the actual "-ERROR- message"
- INPUT\_VARIABLE inputvarname is the input RTF data as variable
- OUTPUT\_VARIABLE outputvalue is the resulting output variable name with converted data
- OUTPUT\_DATA\_TYPE value is the data type (TEXT, NOTE, or VARCHAR)

```
-- (02.) When Input/Output Data is an external FILE
PLUGIN RRTFtoTXT vResult +
 | INPUT_TYPE FILE +
 | INPUT_FILE inputfilename.rtf +
 | OUTPUT_TYPE FILE +
 | OUTPUT_FILE outputfile.txt +
 | OUTPUT_DATA_TYPE value
```

WHERE:

- vResult is the resulting message value, such as, "OK" or the actual "-ERROR- message"
- INPUT\_FILE inputfilename.rtf is the input RTF file name
- OUTPUT\_FILE outputfilename.txt is the resulting output file with converted data
- OUTPUT\_DATA\_TYPE value is the data type (TEXT, NOTE, or VARCHAR)

```
-- (03.) When Input is a VARIABLE and Output is an external FILE
PLUGIN RRTFtoTXT vResult +
 | INPUT_TYPE VARIABLE +
 | INPUT_VARIABLE inputvarname +
 | OUTPUT_TYPE FILE +
 | OUTPUT_FILE outputfilename.txt +
 | OUTPUT_DATA_TYPE value
```

WHERE:

- vResult is the resulting message value, such as, "OK" or the actual "-ERROR- message"

- INPUT\_VARIABLE inputvarname is the input RTF data as variable
- OUTPUT\_FILE outputfilename.txt is the resulting output file with converted data
- OUTPUT\_DATA\_TYPE value is the data type (TEXT, NOTE, or VARCHAR)

-- (04.) When Input is a an external FILE and Output is a VARIABLE

```
PLUGIN RRTFtoTXT vResult +
 |INPUT_TYPE FILE +
 |INPUT_FILE inputfilename.rtf +
 |OUTPUT_TYPE VARIABLE +
 |OUTPUT_VARIABLE outputvarname +
 |OUTPUT_DATA_TYPE value
```

WHERE:

- vResult is the resulting message value, such as, "OK" or the actual "-ERROR- message"
- INPUT\_FILE inputfilename.rtf is the input RTF file name
- OUTPUT\_VARIABLE outputvarname is the resulting output variable name with converted data
- OUTPUT\_DATA\_TYPE value is the data type (TEXT, NOTE, or VARCHAR)

Examples:

```
-- ConvertingRTF_to_TEXT.RMD
-- Author: A. Razzak Memon
-- Converting_NOTE_VARCHAR.RMD
-- To be used with R:BASE for Windows
-- Required Plugin: RRTFtoTXT
IF (CVAL('DATABASE')) <> 'RTFtoTXT' OR (CVAL('DATABASE')) IS NULL THEN
 CONNECT RTFtoTXT IDENTIFIED BY NONE
ENDIF
LABEL Start
CLS
CLEAR VARIABLES iv%,vRecordID,vRTFData,vTextData,vNoteData, +
 vVarCharData,vResult
SET VARIABLE vRecordID INTEGER = 2
SET VARIABLE vRTFData VARCHAR = NULL
SET VARIABLE vTextData TEXT = NULL
SET VARIABLE vNoteData NOTE = NULL
SET VARIABLE vVarCharData VARCHAR = NULL
SET VARIABLE vResult TEXT = NULL
SELECT RecordID,RTFData INTO +
 vRecordID INDICATOR ivRecordID, +
 vRTFData INDICATOR ivRTFData +
 FROM RTFData WHERE RecordID = .vRecordID

-- Converting RTF Data to TEXT
PLUGIN RRTFtoTXT vResult +
 |INPUT_TYPE VARIABLE +
 |INPUT_VARIABLE vRTFData +
 |OUTPUT_TYPE VARIABLE +
 |OUTPUT_VARIABLE vTextData +
 |OUTPUT_DATA_TYPE TEXT
IF vResult <> 'OK' THEN
 PAUSE 2 USING .vResult ICON ERROR
ELSE
 INSERT INTO TextData VALUES (.vRecordID,.vTextData)
ENDIF
```

```

-- Converting RTF Data to NOTE
PLUGIN RRTFtoTXT vResult +
 |INPUT_TYPE VARIABLE +
 |INPUT_VARIABLE vRTFData +
 |OUTPUT_TYPE VARIABLE +
 |OUTPUT_VARIABLE vNoteData +
 |OUTPUT_DATA_TYPE NOTE
IF vResult <> 'OK' THEN
 PAUSE 2 USING .vResult ICON ERROR
ELSE
 INSERT INTO NoteData VALUES (.vRecordID,.vNoteData)
ENDIF

-- Converting RTF Data to VARCHAR
PLUGIN RRTFtoTXT vResult +
 |INPUT_TYPE VARIABLE +
 |INPUT_VARIABLE vRTFData +
 |OUTPUT_TYPE VARIABLE +
 |OUTPUT_VARIABLE vVarCharData +
 |OUTPUT_DATA_TYPE VARCHAR
IF vResult <> 'OK' THEN
 PAUSE 2 USING .vResult ICON ERROR
ELSE
 INSERT INTO VarCharData VALUES (.vRecordID,.vVarCharData)
ENDIF
LABEL Done
CLEAR VARIABLES iv%,vRecordID,vRTFData,vTextData,vNoteData, +
 vVarCharData,vResult
RETURN

```

A sample application is also available at:  
<http://www.razzak.com/sampleapplications/>

## 17.4 Creating a Playlist for Windows Media Player

Did you know that you can create a playlist for the Windows Media Player ActiveX Control and then play several files in a continuous mode using the PROPERTY command in form?

Here's how:

1. Using RBEEdit or any text editor, create a file with ".m3u" extension, such as:

```

-- PlayList.m3u
D:\MyStuff\Dave_Brubeck_Take5.mp3
D:\MyStuff\Shine on You Crazy Diamond.mp3
D:\MyStuff\Pink_Floyd_Live_At_Pompeii.mpg
D:\MyStuff\Live 8 Performance - Pink Floyd.mpg
D:\MyStuff\R:BASE for Windows 101.avi
D:\MyStuff\R:BASE for Windows Step-by-Step.avi

```

Notice that you can mix and match all sorts of formats supported by Windows Media Player.

2. Save the file as PlayList.m3u
3. Download the sample application posted on 02/14/2006

<http://www.razzak.com/fte>

<http://www.razzak.com/sampleapplications>

"Integrating Windows Media Player ActiveX Control in Forms"

4. Use the following PROPERTY command to dynamically load the playlist.

```
PROPERTY MediaPlayer 'CALL_PROCEDURE CLOSE' ''
PROPERTY MediaPlayer 'URL' PlayList.m3u
```

5. You may also modify the "Load File" routine in sample application to manually load a playlist as follows:

```
-- Load File routine for Windows Media Player ActiveX
CLEAR VAR vFileName
SET VAR vFileName TEXT = NULL
PLUGINS LoadFileName.RBL vFileName +
|FULLPATH ON +
|TITLE Select File +
|NO_LONG_NAMES OFF +
|FILTER +
AVI Files(*.AVI)#*.AVI# +
PLAY List Files(*.M3U)#*.M3U# +
MP3 Files(*.MP3)#*.MP3# +
MPEG Files(*.MPG)#*.MPG# +
WMV Files(*.WMV)#*.WMV# +
All Files(*.*)#*.* +
|INITIAL_DIR C:\
IF (vFileName = NULL) OR (vFileName = '[Esc]') THEN
RETURN
ENDIF
PROPERTY MediaPlayer 'CALL_PROCEDURE CLOSE' ''
PROPERTY MediaPlayer 'URL' .vFileName
RETURN
```

## 17.5 Dynamically Assigning R:Charts' Tables/Views

By design, each series used in R:Charts is associated with a table or view. The designated table or view is stored with the resulting R:BASE Chart (.RBC) file.

In development, there can be instances where you would like to recycle that cool chart with the exact same column names but with a different table or view, without copying or re-designing a whole new chart. Did you know that you can dynamically change the assigned table or view name for a chart already designed in R:Charts?

Using the latest R:BASE and R:Charts, now you can use the additional parameter of "**SERIES\_TABLE[n] tableviewname**" to dynamically change the assigned table or view name for any series used in R:Charts, where [n] represents the specific table or view listed in the series.

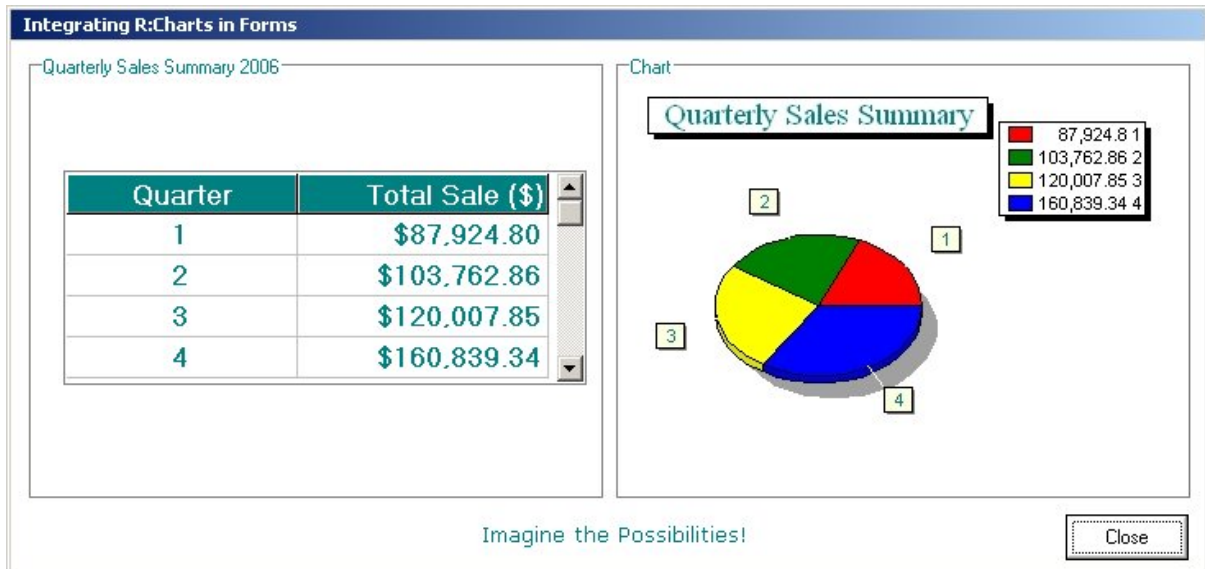
### Example 01:

The R:Chart file (Quarterly\_DonutChart.RBC) is based on a QuarterlySummary view in RRBW18. To print this chart on a form, the following command is used as a "Before Start" EEP.

```
-- On Before Start EEP in Forms
PLUGIN Rcharts +
FILENAME Quarterly_DonutChart.RBC +
```

```
|SAVE_TO_JPG Quarterly_DonutChart.jpg +
|IMAGE_WIDTH 324 +
|IMAGE_HEIGHT 244
SET VAR vImage = 'Quarterly_DonutChart.jpg'
RETURN
```

The results displayed is:



#### Example 02:

To use that exact Quarterly\_DonutChart.RBC chart with a different view QuarterlySummary07 in a different form in RRBW18, use the following command as a "On Before Start" EEP.

```
-- On Before Start EEP in Forms
PLUGIN Rcharts +
FILENAME Quarterly_DonutChart.RBC +
|SAVE_TO_JPG Quarterly_DonutChart.jpg +
|IMAGE_WIDTH 324 +
|IMAGE_HEIGHT 244 +
|SERIES_TABLE[0] QuarterlySummary07
SET VAR vImage = 'Quarterly_DonutChart.jpg'
RETURN
```

The results displayed is:





## 17.6 Finding the Row Size using the RRowSize Plugin

Here's how to find Row Size using RRowSize Plugin.

You may integrate this technique in your own database/application.

Example 01:

```
-- Start
IF (CVAL('DATABASE')) <> 'RRBYW18' OR (CVAL('DATABASE')) IS NULL THEN
 CONNECT RRBYW18 IDENTIFIED BY NONE
ENDIF
LABEL Start
CLEAR VAR
vTableName,vRowSize,vString,vPauseMessage,vYesNo,vCaption,vEndKey
SET VAR vTableName TEXT = NULL
SET VAR vRowSize INTEGER = NULL
SET VAR vString TEXT = NULL
SET VAR vPauseMessage TEXT = NULL
SET VAR vYesNo TEXT = 'No'
SET VAR vCaption TEXT = ' Finding Row Size - Select Table Name'
CLS
CHOOSE vTableName FOR #TABLES +
 CHKBOX 1 +
 TITLE 'Select a table and then click on [OK] button to continue' +
 CAPTION .vCaption LINES 19 FORMATTED +
 OPTION LIST_FONT_COLOR MAROON +
 |TITLE_FONT_COLOR MAROON +
 |TITLE_BACK_COLOR [R234,G234,B234] +
 |WINDOW_BACK_COLOR [R234,G234,B234] +
 |TITLE_FONT_SIZE 10 +
 |TITLE_FONT_NAME VERDANA +
 |LIST_BACK_COLOR [R234,G234,B234] +
 |BUTTONS_SHOW_GLYPH ON +
 |THEMENAME R:BASE Rocks!
```

```

IF vTableName = '[Esc]' THEN
 GOTO Done
ENDIF
IF vTableName IS NULL THEN
 PAUSE 2 USING 'Table NOT Selected!' +
 CAPTION .vCaption ICON STOP +
 BUTTON 'Click here to select a table ...' +
 OPTION BACK_COLOR WHITE +
 |MESSAGE_COLOR WHITE +
 |MESSAGE_FONT_NAME Verdana +
 |MESSAGE_FONT_COLOR RED +
 |MESSAGE_FONT_SIZE 10 +
 |MESSAGE_FONT_BOLD ON +
 |MESSAGE_FONT_ITALIC OFF +
 |MESSAGE_FONT_STRIKEOUT OFF +
 |BUTTON_COLOR WHITE +
 |BUTTON_FONT_COLOR GREEN +
 |THEMENAME R:BASE Rocks!
 GOTO Start
ENDIF
SET VAR vString = ('vRowSize|TABLE_NAME'&.vTableName)
PLUGIN RRowSize &vString
SET VAR vPauseMessage = +
 ((CHAR(013))+'Table Name:'+(CHAR(009))&.vTableName+(CHAR(013))+ +
 'Row Size:'+(CHAR(009))&(CTXT(.vRowSize)))
CLS
PAUSE 2 USING .vPauseMessage +
 CAPTION 'Finding Row Size' +
 ICON APP +
 BUTTON 'Press any key to continue ...' +
 OPTION MESSAGE_FONT_NAME VERDANA +
 |MESSAGE_FONT_SIZE 10 +
 |MESSAGE_FONT_COLOR MAROON +
 |MESSAGE_FONT_BOLD OFF +
 |BUTTON_COLOR WHITE +
 |BUTTON_FONT_COLOR GREEN +
 |THEMENAME R:BASE Rocks!
GOTO Start
LABEL Done
CLEAR VAR
vTableName, vRowSize, vString, vPauseMessage, vYesNo, vCaption, vEndKey
RETURN
-- End

```

## 17.7 Using the Enhanced MAPIMail Plugins with Thunderbird

There are several steps required to use the enhanced R:BASE MAPIMail Plugins with Mozilla Thunderbird:

First, you must alter your Windows operating system setting for your default email program as follows:

1. Select the "Start" button, and choose "Settings" > "Control Panel" > "Add/Remove Programs"
2. Click on "Set Program Access and Defaults" button on the left panel.
3. Select the "Custom" radio button.

4. Click on the "down arrow" characters to expand the available options.
5. Select the "Mozilla Thunderbird" radio button under "Choose a default e-mail program".
6. Click on the "OK" button to save your changes.

Next, you must update the Windows Registry in order to make sure that the MAPI protocol is installed:

1. Select the "Start" button for your Windows operating system, and choose "Run".
2. Enter "REGEDIT" into the field, and the Registry Editor will launch.
3. From the list on the left panel, select the value: HKEY\_LOCAL\_MACHINE.
4. Within the tree view, select sub categories "SOFTWARE" > "Microsoft" > "Windows Messaging SubSystem".
5. On the right panel, verify that the value for "MAPI" does exist and is equal to 1.
6. Close the Registry Editor window.

Now, we will check certain MAPI options within Mozilla Thunderbird

1. Start the Mozilla Thunderbird email client software
2. From the main Menu Bar, select "Tools" > "Options"
3. Within this dialog window, select the "Advanced" button
4. Under the "General" tab, select the "Config Editor..." button
5. Type "mapi" into the filter to see the parameters that contain the word mapi.
6. Verify that the following parameters exist:

```
mapi.blind-send.enabled = true
mapi.blind-send.warn = false
```

The first parameter, *mapi.blind-send.enabled*, will likely already exist with its value set to true. The second parameter may need to be added.

1. If either parameter needs added, right click in the white space and select "New" > "Boolean".
2. Enter the parameter, i.e. "mapi.blind-send.warn", and select the "OK" button.
3. From the true/false options, choose the appropriate value based upon what is listed above for that parameter.
4. In order to verify your new parameter, click the "Show All" button, and reenter the "mapi" filter.

Finally, you use the Enhanced MAPIMail Plugins (included with Update 1 of the R:BASE Plugin Power Pack).

1. Copy the following MAPIMail Plugins into the appropriate R:BASE program directory or compiled application directory. Here are the file names and the differences between the Plugins.
  - MAPIMail.RBL (interactive - appears under Utilities > Plugins within R:BASE)
  - MapiMail2.RBL (automated - opens the MAPIMail dialog window and displays the defined parameters)
  - MapiMail3.RBL (automated - opens the default email client and displays the defined parameters)
  - MapiMail4.RBL (automated - sends the email message automatically)
2. Using the automated Plugin parameters

#### Syntax:

```
PLUGINS MapiMail2.rbl vMail|<parameters>
PLUGINS MapiMail3.rbl vMail|<parameters>
PLUGINS MapiMail4.rbl vMail|<parameters>
```

#### Parameters:

|     |                                                 |
|-----|-------------------------------------------------|
| TO: | specifies the list of recipients of the message |
|-----|-------------------------------------------------|

|                |                                                                                                                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CC:            | specifies the list of carbon copy recipients of the message                                                                                                                                                           |
| BCC:           | specifies the list of blind carbon copy recipients of the message                                                                                                                                                     |
| SUBJECT:       | specifies the subject string for the message                                                                                                                                                                          |
| BODY:          | specifies the body content of the message                                                                                                                                                                             |
| ATTACHMENTS:   | specifies the list of files to be send along with the message                                                                                                                                                         |
| PROFILE_NAME:  | specifies a Profile to be used by the Messaging API when the Send method is called. Typically, this parameter is left blank which instructs MAPI to use the default profile.                                          |
| PASSWORD:      | specifies the password to be used during the logon process                                                                                                                                                            |
| SENDDIRECT:    | specifies the setting for the "Send Directly" check box (TRUE/FALSE)                                                                                                                                                  |
| RESOLVE_NAMES: | specifies the setting to resolve a message recipient's name (as entered by a user) to an unambiguous address list entry, optionally prompting the user to choose between possible entries, if necessary. (TRUE/FALSE) |

**Where:**

vMail is the text variable to return the status, such as 'OK' or the exact -ERROR- message

**Notes:**

Returned variable name and the exact file name with path must be separated by a "|" pipe symbol.

## 17.8 Using the R:AudioPlayer Plugin

The R:AudioPlayer Plugin is used to play audio files. The Plugin supports the following audio formats:

- AVI
- MDI
- MP3
- WAV
- WMA

Syntax:

```
PLUGIN RAudioPlayer vResult|option
```

Supported Options:

- FILENAME filespec
- PLAY
- PAUSE
- RESUME
- STOP

Where:

- vResult is the text variable to return the status, such as 'OK' or the exact -ERROR- message
- FILENAME is the name and path of the audio file
- PLAY is used to play the current file
- PAUSE is used to pause the current file
- RESUME is used to resume playing the current file
- STOP is used to stop playing the current file

Each option must be separated by a "|" pipe symbol.

```
-- Example 01: To load and play audio file
PLUGIN RAudioPlayer vResult|FILENAME DreamTheater_Octavarium.mp3
PLUGIN RAudioPlayer vResult|PLAY
RETURN
```

```
-- Example 02: To pause the already playing audio
PLUGIN RAudioPlayer vResult|PAUSE
RETURN

-- Example 03: To resume the paused audio
PLUGIN RAudioPlayer80.RBL vResult|RESUME
RETURN

-- Example 04: To stop the audio player
PLUGIN RAudioPlayer vResult|STOP
RETURN
```

In order to use R:Audio Player Plugin with R:BASE, you have to make sure that the version specific Plugin is installed in the R:BASE program folder, or in the compiled (.exe) application folder. R:AudioPlayer does not appear in the R:BASE for Windows Plugins Menu.

Some Plugins are only made available through the purchase of the R:BASE Plugin Power Pack.  
<http://www.rbase.com/products/pluginpowerpack95>

**Part**



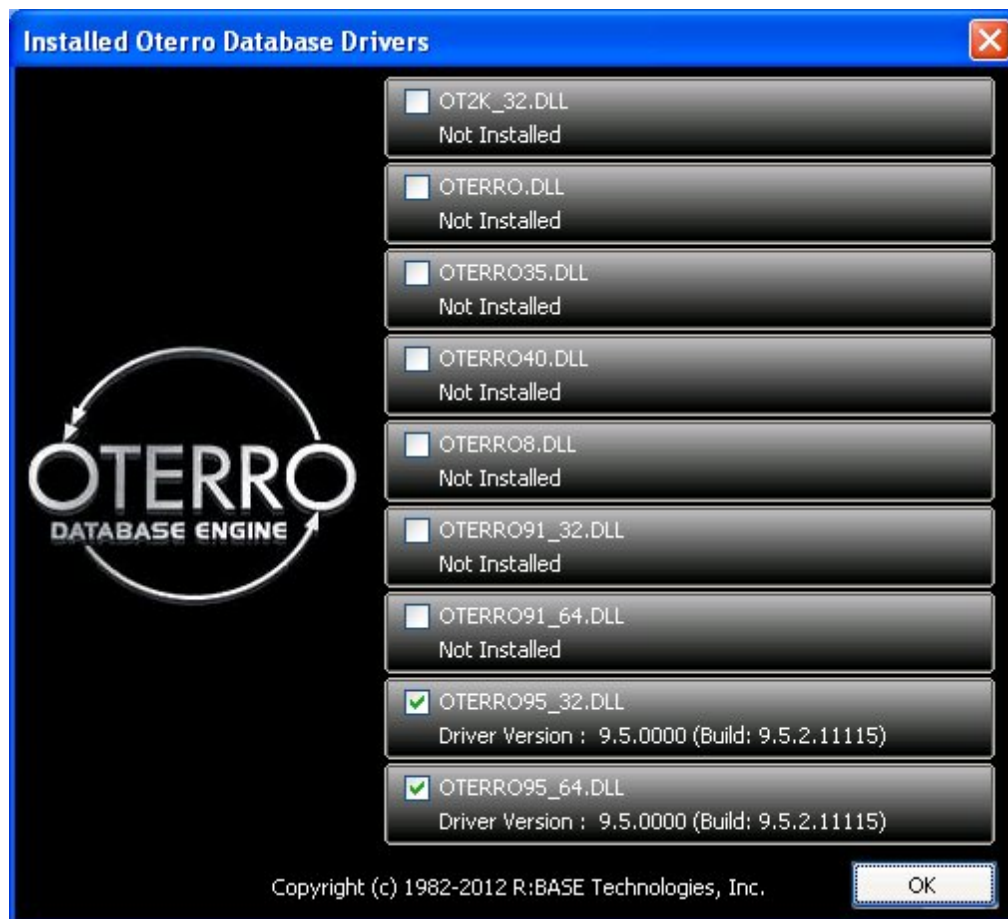
## 18 Oterro / ODBC

### 18.1 Checking Version and Build of Oterro

With various versions of Oterro installed on your Network Server, Workstation, Notebook, or Tablet PC, it may be helpful to know the exact version and build of installed version(s) of Oterro.

Did you know that you use the "CheckVer" utility installed in the default installation folder of Oterro?

After installing/updating the latest version of Oterro, you will find the enhanced "CheckVer" utility that will illustrate all installed versions of Oterro ODBC drivers, including the file name, driver version and build of Oterro.



### 18.2 Configuring Oterro and R:BASE ODBC Drivers on 64-bit OS

If you are running any of the R:BASE products above on MS XP (64), Vista (64), Win 7 Professional (64), or Windows Server 2003/2008 (64), you may need to tweak the registry settings to recognize installed R:BASE and Oterro ODBC settings and installed drivers.

Typically, using the full installer, after a successful installation of R:BASE/Oterro, you would expect the R:BASE/Oterro ODBC drives to be listed under the Drivers for ODBC Data Source Administrator panel. Well, by default, on all XP (64), Vista (64), Windows Server 2003 (64), and Windows Server 2008 R2 x 64 with Service Pack 2 machines, the installed ODBC Drivers list is empty. There are no drivers listed, even for Microsoft's own default drivers.

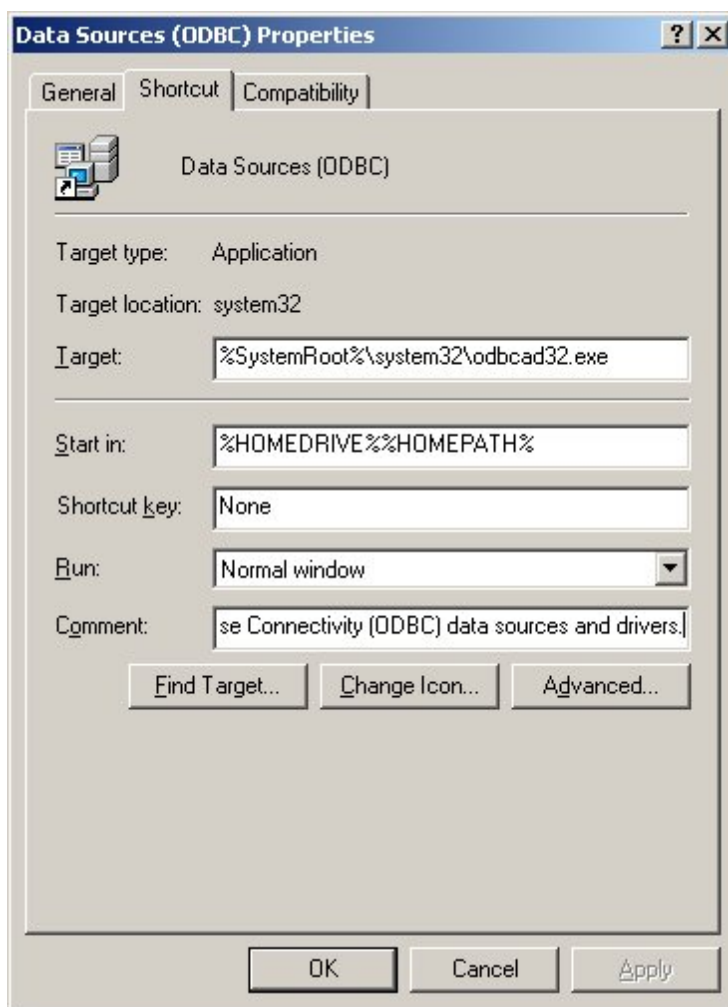
The reason the installed drivers are not listed is the way Windows x64 editions operate with the ODBC drivers. On Windows x64 editions, all ODBC drivers are installed in the "%SystemRoot%\SysWOW64" folder.

However, the default ODBC Data Source Administrator that is available through the Administrative Tools or Control Panel in Windows x64 Editions is located in the "%SystemRoot%\system32" folder, and only searches this folder for ODBC drivers.

To alter this behavior on Windows x64 editions, you should update the target information for shortcut properties of the ODBC Data Source Administrator tool to reflect "%SystemRoot%\SysWOW64\odbcad32.exe".

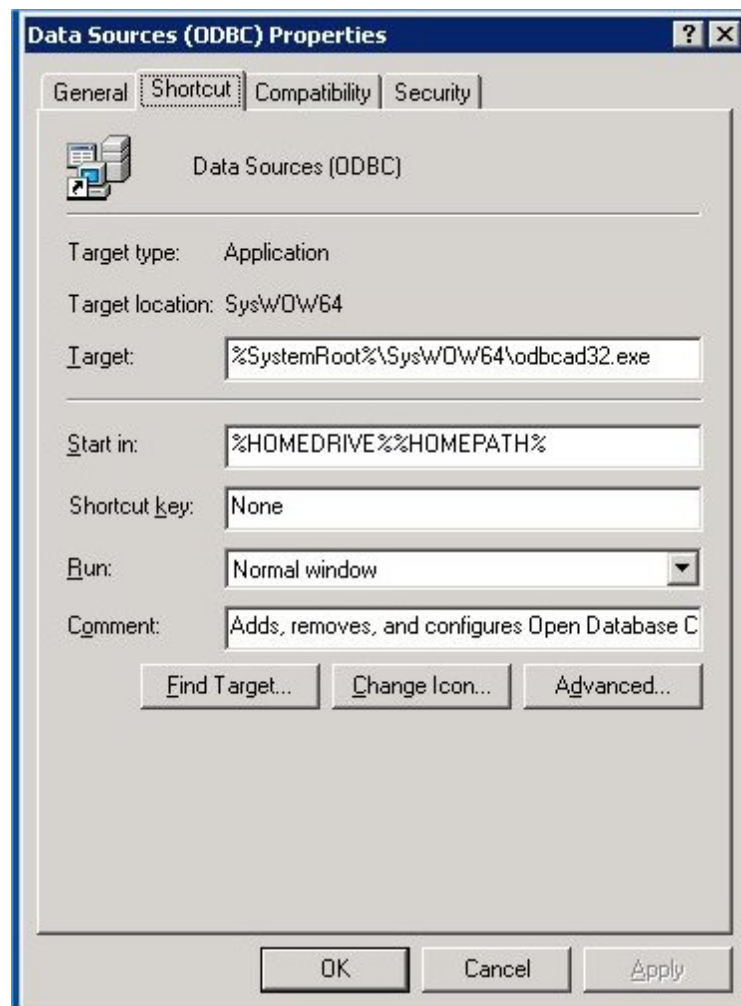
This will correctly locate and list all installed ODBC drivers as well as enable you to create a System DSN or should be recognized when using the DSN-Less connection.

Default Properties for ODBC Data Source Administrator

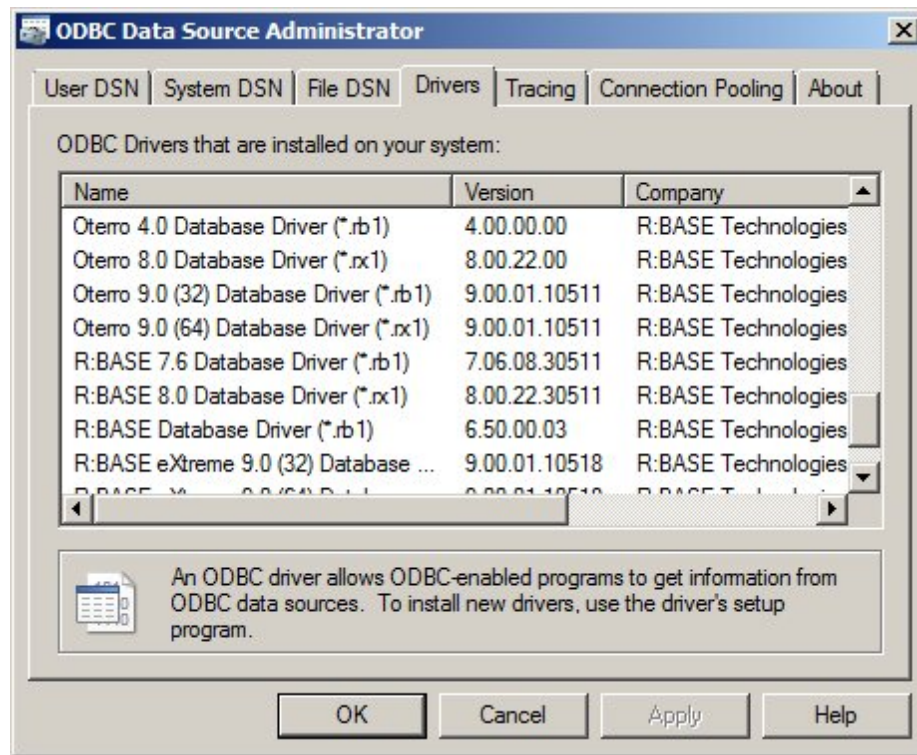


Modified Properties for ODBC Data Source Administrator





Installed ODBC Drivers on Server 2003 R2 x64 SP2 machines



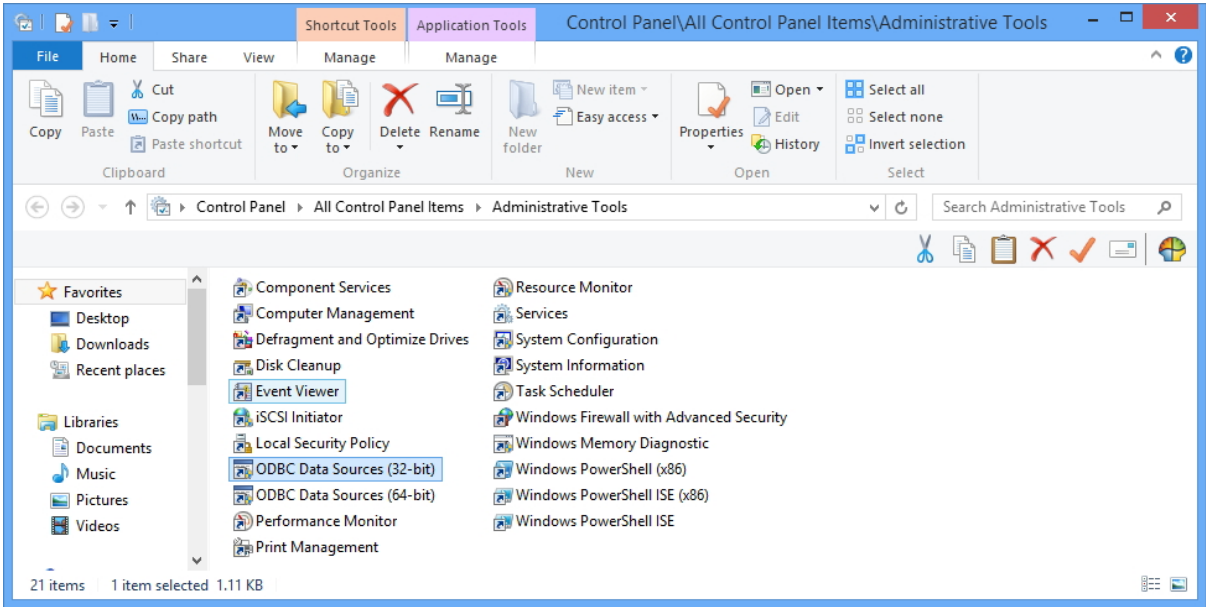
Have fun running R:BASE and Oterro on Windows XP (64), Vista (64), Win 7 Professional (64), Win Server 2003 R2 x64, and Win Server 2008 (64) operating systems!

## 18.3 Creating R:BASE/Oterro ODBC Data Sources in Windows 8 Pro

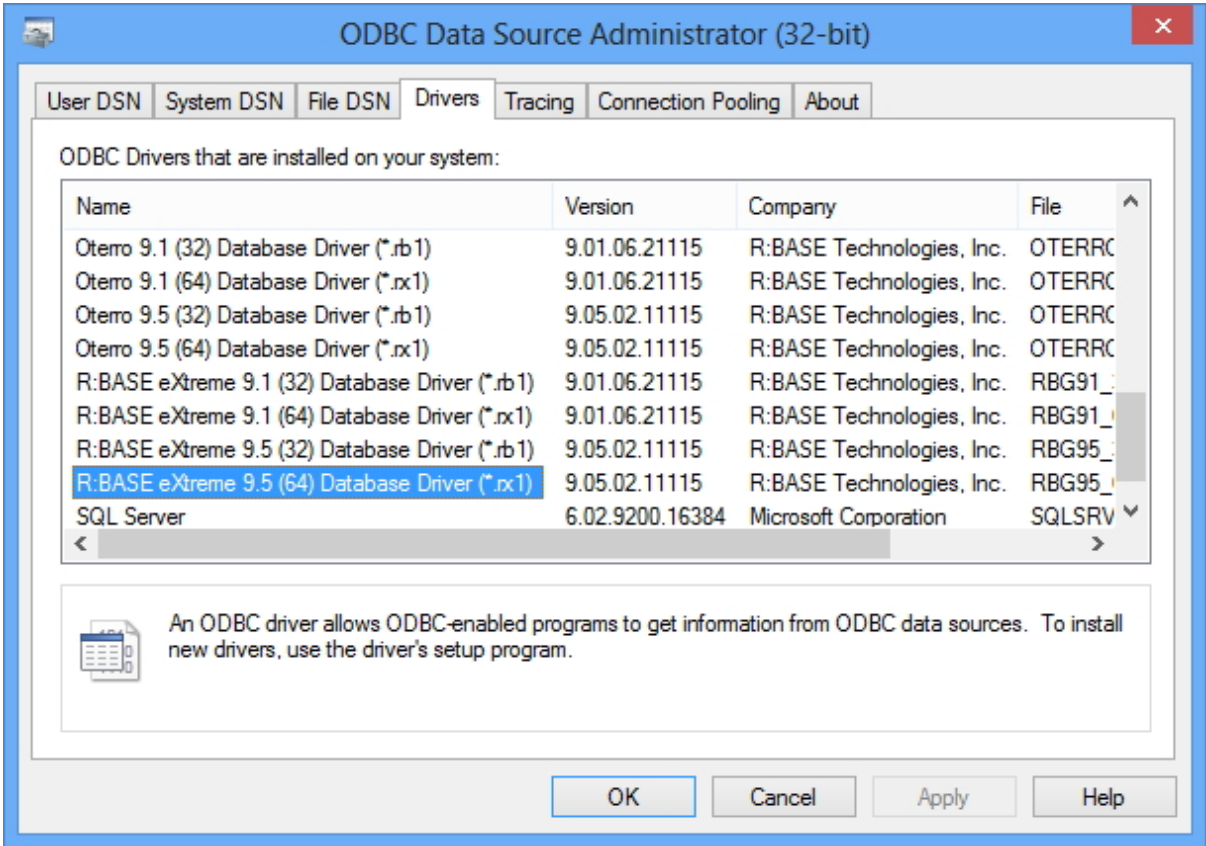
To create a data source, you must first install the corresponding ODBC driver. When you install R:BASE or Oterro, the installer loads the ODBC driver necessary for connecting to R:BASE databases.

01.

To create a data source name (DSN) in Windows 8 Pro, use the "ODBC Data Sources (32-bit)" program, located within the "Administrative Tools" section of the Windows Control Panel.



02. Within the ODBC Data Source Administrator, the list of R:BASE/Oterro ODBC drivers can be reviewed by selecting the "Drivers" tab.

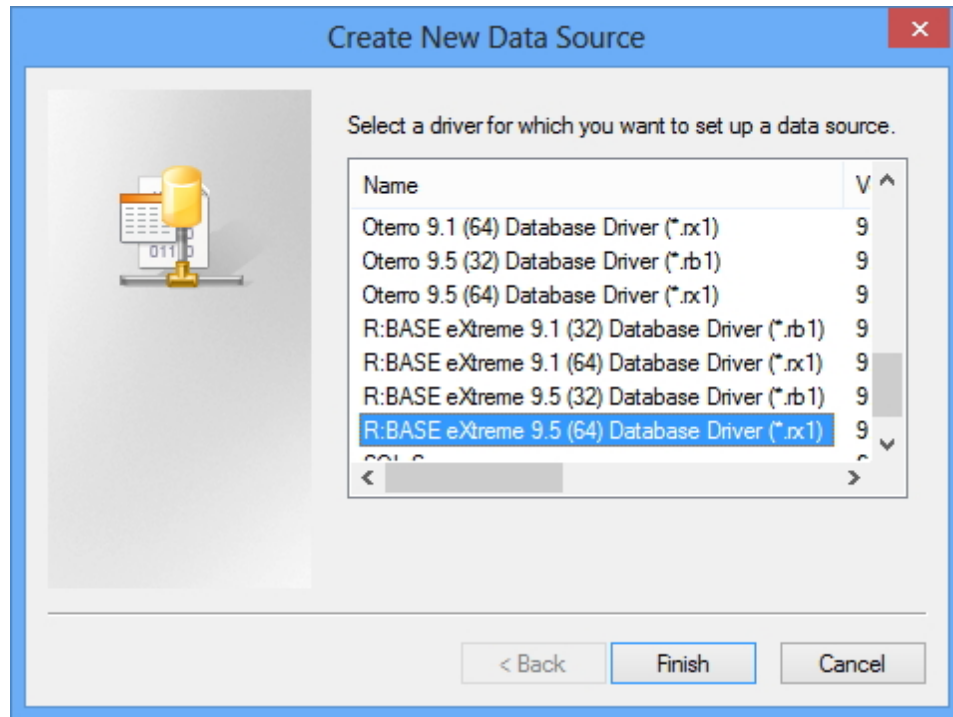


03.

Based upon the requirements for the data source, a User DSN or System DSN will be created. In these steps, a System DSN will be created. Select the "System DSN" tab, then click the "Add..." button.

04.

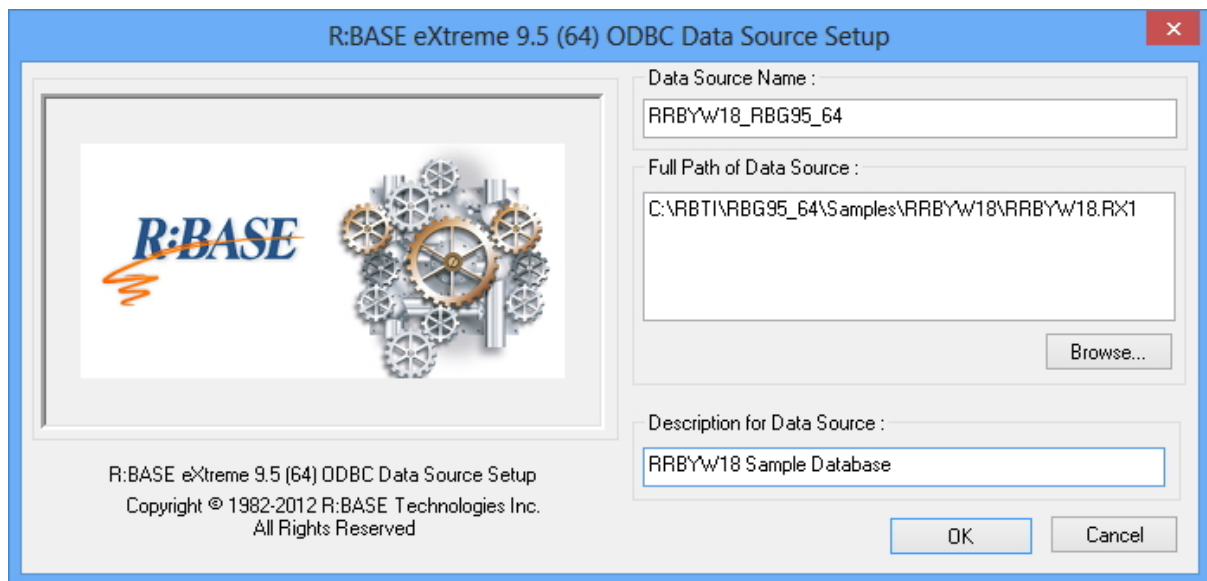
The next step is to select the database driver. In this example the R:BASE eXtreme 9.5 (64) driver is being selected. Once selected, click the "Finish" button.



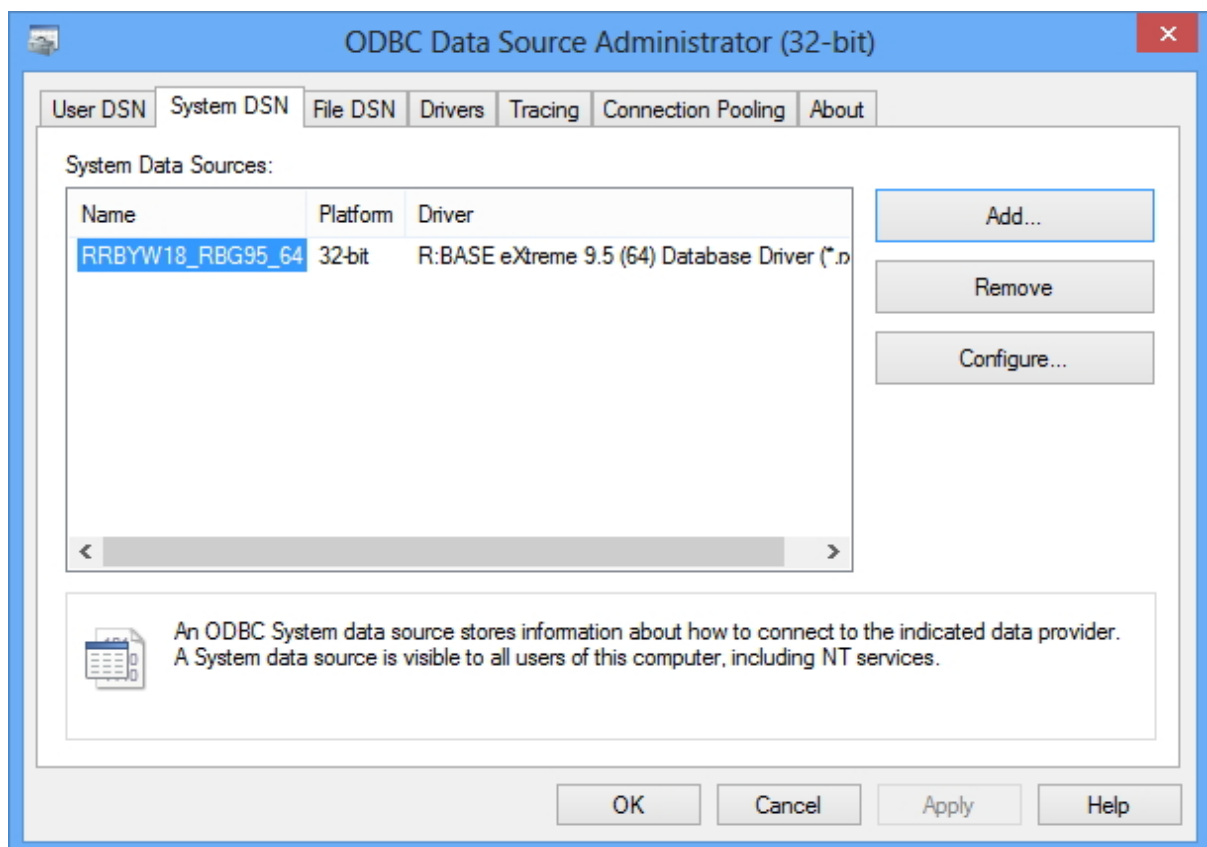
05.

The "R:BASE eXtreme 9.5 (64) ODBC Data Source Setup" screen is displayed where the name, path and description fields are available.

In some cases, you will need to restrict the name of the Data Source if your development environment does not allow certain characters. The "Full Path of Data Source" field must list the path and name of the .RX1 database file. For 9.5 (32), the name of the .RB1 database file must be defined. Press "OK" when complete.



The new System DSN will be listed within the ODBC Data Source Administrator window.



**Supported Versions:**

- R:BASE eXtreme 9.5 (32/64), Build: 9.5.2.11115 or higher
- R:BASE eXtreme 9.1 (32/64), Build: 9.1.6.21115 or higher

**Part**

---

**XIX**

## 19 Feedback

### **Suggestions and Enhancement Requests:**

From time to time, everyone comes up with an idea for something they'd like their software to do differently.

If you come across an idea that you think might make a nice enhancement, your input is always welcome.

Please submit your suggestion and/or enhancement request to the R:BASE Developers' Corner Crew (R:DCC) and describe what you think might make a nice enhancement. In R:BASE, the R:DCC Client is fully integrated to communicate with the R:BASE development team. From the main Menu Bar, choose "Help" > "RBG9 R:DCC Client". If you do not have a login profile, select "New User" to create one.

If you have a sample you wish to provide, have the files prepared within a zip archive prior to initiating the request. You will be prompted to upload any attachments during the submission process.

Unless additional information is needed, you will not receive a direct response. You can periodically check the status of your submitted enhancement request.

If you are experiencing any difficulties with the R:DCC Client, please send an e-mail to [rbg9rdcc@rbase.com](mailto:rbg9rdcc@rbase.com).

### **Reporting Bugs:**

If you experience something you think might be a bug, please report it to the R:BASE eXtreme Developers' Corner Crew. In R:BASE, the R:DCC Client is fully integrated to communicate with the R:BASE development team. From the main Menu Bar, choose "Help" > "RBG9 R:DCC Client". If you do not have a login profile, select "New User" to create one.

You will need to describe:

- What you did, what happened, and what you expected to happen
- The product version and build
- Any error messages displayed
- What computer operating system is in use
- Anything else you think might be relevant

If you have a sample you wish to provide, have the files prepared within a zip archive prior to initiating the bug report. You will be prompted to upload any attachments during the submission process.

Unless additional information is needed, you will not receive a direct response. You can periodically check the status of your submitted bug.

If you are experiencing any difficulties with the R:DCC Client, please send an e-mail to [rbg9rdcc@rbase.com](mailto:rbg9rdcc@rbase.com).

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