

R:BASE X

Database Conversion Guide





R:BASE X

Database Conversion Guide

by R:BASE Technologies, Inc.

Welcome to R:BASE X!

R:BASE X is the sleek new relational database environment intended to offer next-generation development and connectivity to database administrators. Many added R:BASE X features bring forth powerful means to further streamline data management. R:BASE X also takes a big and very fundamental step of extended character support, geared towards even more versatile world-wide use.

The clean and sophisticated styling of R:BASE X, paired with the built-in database engine that has paved the foundation of stability and reliable convenience, provides a brand-new value on R:BASE's database and application adaptive content development.

R:BASE X for Windows Database Conversion Guide

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First Edition

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Part



1 Preparation

When preparing to convert a legacy database and use those files in R:BASE X, it is important that you follow the proper steps to convert that database. Please review the following steps and recommendations to ensure you convert your legacy database(s) successfully.

1.1 Make a Database Backup

Before you begin, make a backup copy of your database. You should place the database on a storage medium that is different than the one which your original files are already stored upon. For example, if you are using a hard disk to store the data, you can back up your database to an external hard drive, a flash drive, a tape drive, or a CD-ROM. With these storage options, you can also copy the backup files back to your hard drive.

If users are still entering data into the live database, while the conversion is taking place, use a different database copy than the one in use. When the conversion is complete, the live data being added to can always be loaded into the converted database at a later time. Make sure no users are connected to the database when the copy is made.

During the conversion process, it is also recommended to make periodic backups. This will prevent you from starting from the beginning in case any problems occur.

1.2 Review Table and Column Names

You must review all table and column names to be sure that no invalid names are defined and no reserved words are used.

In the current version, a 1-18 character alpha-numeric name must be specified for a column. Spaces are NOT permitted. Valid names must start with an alpha character and can include the following symbols:

- Letters (A-Z)
- Numbers (0-9)
- _ (underscore)
- # (pound sign) *
- \$ (dollar sign) *
- % (percent sign) *

***Note:** For ODBC compliance, it is NOT recommended to use the #, \$, or % even though R:BASE permits it.

Review your table and column names that may begin with a number. Check for any characters that are not supported like a question mark "?" or a greater than character ">".

Also review your table and column names to verify that no reserved words are used. These words, commands, keywords, and other names are to be used exclusively by the R:BASE database. Names used by System Tables, System Views and System Columns are also reserved words. As a rule, all words beginning with "**SYS**" are reserved.

Do not use reserved words or any shorter forms of them as names for columns, tables, or views. As a rule, if the word is a reserved word, R:BASE will flag it. R:BASE will not allow you to use a reserved word as a column or table name, but this MAY NOT always be the case. For example in the table designer, R:BASE may not warn you about **REF**, short for **REFERENCES**, but **REF** will not be allowed in a command file. If a particular column or table is giving you problems, please check out the list below and consider all shortened versions of the words listed here.

The following is a list of all known reserved words, commands, keywords, and other names that are in effect when ANSI is set on, which is the default setting.

100_PERCENT 128BIT	ATTA ATTACH
-----------------------	----------------

40BIT	ATTACHMENTS
ABO	AUTH
ABORT	AUTHOR
ABS	AUTHORIZATION
ABSO	AUTHORIZE
ABSOLUTE	AUTO_MAXIMIZE_WINDOW
ACC	AUTOC
ACCESS	AUTOCHK
ACOS	AUTOCOM
ACTION	AUTOCOMMIT
ACTIVE	AUTOCON
ACTIVECOLOR	AUTOCONVERT
ACTIVEOUTLINECOLOR	AUTODROP
ACTIVEPAGEINDEX	AUTODROPDOWN
ADA	AUTOEXPAND
ADD	AUTOF
ADD19	AUTOFIX
ADDDAY	AUTON
ADDFRC	AUTONUM
ADDHR	AUTONUMBER
ADMIN	AUTORECOVER
ADDMON	AUTOROWVER
ADDSEC	AUTOSCROLL
ADDYR	AUTOSELECT
AINT	AUTOSIZE
ALIAS	AUTOSK
ALIGN	AUTOSKIP
ALIGNMENT	AUTOSNAP
ALIGNTABS	AUTOSY
ALL	AUTOSYNC
ALLOWGRAYED	AUTOUPGRADE
ALLOWKEYEDIT	AVE
ALLOWOPEN	AVERAGE
ALPHABLEND	AVG
ALPHABLENDVALUE	BAC
ALT	BACK_COLOR
ALTER	BACKCOLOR
anchors	BACKGRND
AND	BACKGROUND_COLOR
ANGLE	BACKGROUND_FILE
ANIMATE	BACKGROUND_TYPE
ANINT	BACKGROUND_COLOR
ANS	BackgroundColorField
ANSI	BACKUP
ANY	BARCOLOR
ANY_COLOR	BCC_LIST
APP	BEE
APPEND	BEEP
APPEND_DUPLICATE	BEF
APPLICATION	BEFORE
APPLYSETTINGS	BEGIN
ARR	BEGINS
ARRANGE	BEL
AS	BELL
ASC	BET
ASCII	BETWEEN
ASIN	BEVELED
ASS	BEVELHIGHLIGHTCOLOR
ASSIGN	BEVELSHADOWCOLOR
AT	BEVELWIDTH
ATAN	BIN
ATAN2	BINARY
ATT	BIT
BITN	BUTTONS_SHOW_GLYPH
BITNOTE	BUTTONWIDTH

BLA	BY
BLACK	C
BLANK	CALL
BLANKVALUE	CANCEL
BLI	CANCELHINT
BLINDS_HOR	CANCLOSE
BLINDS_VERT	CAP
BLINK	CAPTION
BLINKCOLOR	CAPTIONCOLOR
BLINKING	CAPTIONCOLORDEFAULT
BLINKINTERVALOFF	CAPTIONHEIGHT
BLINKINTERVALON	CAPTIONHOTCOLOR
BLU	CAPTIONX
BLUE	CAPTIONY
BODY	CAS
BORDERCOLOR	CASC
BORDERHIGHLIGHT	CASCADE
BORDERSHADOW	CASE
BORDERWIDTH	CASEP
BOT	CC_LIST
BOTH	CD
BOX_INWARD	CDECL
BOX_OUTWARD	CELL_ATTR
BRE	CENT
BREAK	CENTER
BRN	CENTER_WINDOW
BRND	CENTU
BRO	CENTURY
BROWN	CGA
BROWS	CHA
BROWSE	CHANGE
BRUSH_COLOR	CHANGEDELAY
BTN100PERCENT_VISIBLE	CHAR
BTNCANCEL_VISIBLE	CHARA
BTNFIRST_VISIBLE	CHARACTER
BTNLAST_VISIBLE	CHARACTERS
BTNNEXT_VISIBLE	CHARCASE
BTNPAGEWIDTH_VISIBLE	CHART_TITLE
BTNPRINT_VISIBLE	CHDI
BTNPRIOR_VISIBLE	CHDIR
BTNWHOLEPAGE_VISIBLE	CHDR
BTNZOOMPERCENTAGE_VISIBLE	CHDRV
BUI	CHE
BUILD	CHECK
BUTTON	CHECKED
BUTTON_CANCEL_CAPTION	checkindex
BUTTON_CANCEL_WIDTH	CHECKRANGE
BUTTON_COLOR	CHK
BUTTON_FONT_COLOR	CHKB
BUTTON_NO_CAPTION	CHKBOX
BUTTON_NO_COLOR	CHKCOMPID
BUTTON_NO_FONT_COLOR	CHKCUR
BUTTON_NO_FONT_SIZE	CHKDSK
BUTTON_OK_CAPTION	CHKF
BUTTON_OK_WIDTH	CHKFILE
BUTTON_YES_CAPTION	CHKK
BUTTON_YES_COLOR	CHKKEY
BUTTON_YES_FONT_COLOR	CHKS
BUTTON_YES_FONT_SIZE	CHKSORT
ButtonEnter	CHKVAR
BUTTONS_BACK_COLOR	CHO
BUTTONS_FONT_COLOR	CHOOSE
BUTTONS_FONT_SIZE	CLE
CLEAR	CREATEOBJECT
CLEARFILTER	CREATOR

CLEARIMAGE	CRO
ClickableTitle	CROSSTAB
CLIENTHEIGHT	CSSFILE
CLIENTWIDTH	CSV
CLIPBOARD	CTR
CLKARROWCOLOR	CTXT
CLKFACECOLOR	CURR
CLOSE	CURRENCY
CLOSEW	CURRENT
CLOSEWINDOW	CurrentColumnName
CLS	CURRNUMALLOC
COBOL	CURS
COD	CURSOR
CODELOCK	CURSORCOL
COL	CURSORROW
COLCOUNT	CURSORS
COLL	CUTCORNERSIZE
COLLATE	CUTTOCLIPBOARD
COLLATEC	CVAL
COLLATION	CYA
COLOR	CYAN
COLORADJUSTMENT	DAT
COLORDEFAULT	DATA
COLU	DATAB
COLUMN	DATABASES
COLUMNS	DATE
COMMAND	DATET
COMME	DATETIME
COMMENT	DBSIZE
COMMI	DEB
COMMIT	DEBUG
COMP	DEC
COMPATIB	DECIMAL
COMPATIBILITY	DECIMALS
COMPID	DECL
COMPRESSION	DECLA
COMPRESSION_LEVEL	DECLAR
COMPRESSION_METHOD	DECLARE
COMPRESSION_TYPE	DEFA
COMPUTE	DEFAULT
COMPUTED	DEFAULT_COLOR
CONFIRMDELETE	DEFAULT_FONT_BOLD
CONFIRMTEXT	DEFAULT_FONT_COLOR
CONN	DEFAULT_FONT_ITALIC
CONNECT	DEFAULT_FONT_NAME
CONS	DEFAULT_FONT_SIZE
CONSTRAINT	DEFAULT_FONT_STRIKEOUT
CONSTRAINTS	DEFAULT_FONT_UNDERLINE
CONT	DEFAULTDIRECTORY
CONTAINS	DEFAULTVALUE
CONTI	DEFF
CONTINUE	DEFI
CONV	DEFINE
CONVERT	DEL
COP	DELETE
COPIES	DELETEHINT
COPY	DELETEOBJECT
COPYTOCLIPBOARD	DELIMIT
COS	DELIMITER
COSH	DELR
COUNT	DELROW
CRE	DES
CREATE	DESC
DET	EENUM
DETA	ELS

DETACH	ELSE
DEXTRACT	EMAIL
DIA	EMAIL_ATTACHMENTS
DIAL	EMAIL_AUTHENTICATION
DIALOG	EMAIL_BCC_LIST
DIALOG_EDIT_HINT	EMAIL_BODY
DIFHOUR	EMAIL_CC_LIST
DIFMINUTE	EMAIL_DATE
DIM	EMAIL_DELETE_AFTER_SEND
DIR	EMAIL_FROM_ADDRESS
DIS	EMAIL_FROM_NAME
DISABLE_ADD_NEW_ROWS	EMAIL_HOST
DISABLE_COPYING	EMAIL_PASSWORD
DISABLE_DELETE_ROWS	EMAIL_PORT
DISABLE_RIGHT_CLICK	EMAIL_REPLY
DISABLECLOSEACTION	EMAIL_SHOW_DIALOG
DisableDoubleClick	EMAIL_SUBJECT
DISC	EMAIL_TO_LIST
DISCONNECT	EMAIL_USERID
DISKSPACE	EMBED_USED_FONTS
DISP	ENABLE_ADD_NEW_ROWS
DISPLAY	ENABLE_COPYING
DISPLAY_DOC_TITLE	ENABLE_DELETE_ROWS
DISSOLVE	ENABLE_MODIFYING
DISTINCT	ENABLE_PRINTING
DIVIDERCOLOR	ENABLED
DIVIDERVERSIBLE	ENCRYPT
DLCALL	ENCRYPT_FILE
DLFREE	ENCRYPTION_ALLOW_ACCESSIBILITY
DLLOAD	ENCRYPTION_ALLOW_ANNOTATION
DNW	ENCRYPTION_ALLOW_ASSEMBLY
DOC_LIST_FILE	ENCRYPTION_ALLOW_COPY
DOCUMENT_NAME	ENCRYPTION_ALLOW_FORM_FILL
DontShowDeleteDialog	ENCRYPTION_ALLOW_MODIFY
DONTSHOWSAVEDIALOG	ENCRYPTION_ALLOW_PRINT
DOU	ENCRYPTION_ENABLE
DOUBLE	ENCRYPTION_HIRES_PRINT
DOWN	ENCRYPTION_LEVEL
DRA	ENCRYPTION_OWNER_PASSWORD
DRAGDROPEENABLED	ENCRYPTION_USER_PASSWORD
DRAW	END
DRAWGRADIENT	ENDC
DRO	ENDI
DROP	ENDIF
DROPDOWNCOUNT	ENDSW
DROPDOWNWIDTH	ENDW
DroppedItemIndex	ENDWHILE
DUP	ENT
DUPLEX	ENTER
DUPLICATE	ENVVAL
DUPLICATES	EOF
DUPROW	EOFCHAR
DURATION	EQN
DWE	EQNULL
DWR	ERA
DWRD	ERASE
ECH	ERR
ECHO	ERROR
EDI	ESC
EDIT	ESCAPE
EDITHINT	EvenColor
EDITOR	EVERYTHING
EEP	EXC
EXCEPT	FOLD
EXCLUSIVEMODE	FONT

EXE	FONT_BOLD
EXECUTE	FONT_COLOR
EXI	FONT_ENCODING
EXISTS	FONT_HEIGHT
EXIT	FONT_ITALIC
EXITF	FONT_NAME
EXITFORM	FONT_SIZE
EXP	FONT_STRIKEOUT
EXPA	FONT_UNDERLINE
EXPAND	FOO
EXPL	FOOTING
EXPLODE	FOR
EXPO	FOREG
EXPORT	FOREGRND
EXPRESS	ForegroundColorField
EXTENDED	FOREI
EXTRACT	FOREIGN
FAI	FORM
FAILS	FORM_CONTROL_TYPE
FALSE	FORM_DIRTY_FLAG
FASTEST	FORMAT
FASTF	FORMATT
FASTFK	FORMATTED
FASTL	FORMI
FASTLOCK	FORMING
FEE	FORMS
FEEDBACK	FORTRAN
FET	FOU
FETCH	FOUND
FIL	FRAMECOLOR
FILE	FRAMEFLAT
FILENAME	FRAMEVISIBLE
FILES	FRO
FILL	FROM
FILLI	FROM_ADDRESS
FILLIN	FROM_NAME
FILLLASTCOLUMN	FUL
FIN	FULL
FINDFILE	FULL_OPEN
FINT_UNDERLINE	FULL_SCREEN
FIR	FUNCTION
FIRST	FV
FIRSTCHAR	GAT
FIRSTHINT	GATEWAY
FIT_WINDOW	GAUGE_COLOR
FIXED	GAUGE_INTERVAL
FIXEDCOLOR	GAUGE_VISIBLE
FIXEDCOLS	GENERATE_TOC
FKE	GET
FKEYS	GETDATE
FLAT	GETK
FLATBUTTONS	GETKEY
FLATCOLOR	GETPROP
FLATCOLORADJUSTMENT	GETPROPERTY
FLATE	GETVAL
FLATSCROLLBARS	GLITTER_LEFT_TO_RIGHT
FLDNAME	GLITTER_TOP_LEFT_TO_BOTTOM_RIGHT
FLO	GLITTER_TOP_TO_BOTTOM
FLOAT	GOT
FLU	GOTO
FLUSH	GOURL
FLYBYCOLOR	GRA
FLYBYENABLED	GRADIENTCOLORSTART
GRADIENTCOLORSTOP	IFGT
GRADIENTENDCOLOR	IFLT

GRADIENTSTARTCOLOR	IFNU
GRANT	IFNULL
GRAPHIC_DATA_IN_BINARY	IFRC
GRAY	IFWINDOW
GRAYSCALE	IHA
GRE	IHASH
GREEN	IHR
GRIDLINES	IIN
GRO	IINFO
GROUP	ILY
GROUPBORDERSIZE	IMAGE_DPI
GROUPED	IMAGE_FOLDER
GROUPINDEX	IMAGE_FORMAT
GUID	IMAGE_HEIGHT
HAV	IMAGE_WIDTH
HAVING	IMAGEMARGIN
HEA	IMAGESTYLE
HEADING	IMIN
HEADINGS	IMON
HEIGHT	IMPO
HEL	IMPORT
HELP	IN
HIDE_MENUBAR	INACTIVECOLOR
HIDE_TOOLBAR	INCLUDE_HYPERLINKS
HIDE_WINDOW_UI	INCLUDE_IMAGES
HIDE_WINDOWUI	INCLUDE_LINES
HIDESCROLLBARS	INCLUDE_RICH_TEXT
HIDeseLECTION	INCLUDE_RICHTEXT
HIGHLIGHTCOLOR	INCLUDE_SHAPES
HIGHLIGHTFOCUS	INCREMENT
HIGHLIGHTFOCUSCOLOR	INCREMENTALDISPLAY
HINT	INDE
HINT_BACK_COLOR	INDENT
HINT_FONT_BOLD	INDEX
HINT_FONT_COLOR	INDEXES
HINT_FONT_ITALIC	INDI
HINT_FONT_NAME	INDIC
HINT_FONT_SIZE	INDICATOR
HINT_FONT_STRIKEOUT	INIT
HINT_FONT_UNDERLINE	INITPOS
HORZEXTENT	INP
HORZSCROLLBAR	INPUT
HOST	INPUT_FILE
HOTTRACK	INS
HOTTRACKCOLOR	INSERT
HOVERTIME	INSERTHINT
HTML	INT
ICAP	INTE
ICHAR	INTEGER
ICON	INTEGERONLY
ICON_FILE	INTENSITY
IDAY	INTERSECT
IDE	INTERVAL
IDENTIFIED	INTO
IDIM	IS
IDOY	ISA
IDQ	ISALPHA
IDQUOTES	ISCOMPILED
IDWK	ISD
IF	ISDIGIT
IFEQ	ISEC
IFEX	ISL
IFEXISTS	ISLOWER
ISRUNTIME	LINK_FONT_ITALIC
ISS	LINK_FONT_NAME

ISSPACE	LINK_FONT_SIZE
IST	LINK_FONT_STRIKEOUT
ISTAT	LINK_FONT_UNDERLINE
ISU	LINK_H_BACK_COLOR
ISUPPER	LINK_H_FORE_COLOR
ITEMCNT	LINK_IMG_FILE_FIRST
ITEMCOUNT	LINK_IMG_FILE_LAST
ITEMHEIGHT	LINK_IMG_FILE_NEXT
ITEMINDEX	LINK_IMG_FILE_PREV
IWOY	LINK_TEXT_FIRST
IYR	LINK_TEXT_LAST
IYR4	LINK_TEXT_NEXT
JAVA_SCRIPT_FILE_NAME	LINK_TEXT_PREV
JDA	LINKTARGET
JDATE	LIS
JOI	LIST
JOIN	LIST_BACK_COLOR
JPEG_QUALITY	LIST_BOLD
JUMP	LIST_FONT_COLOR
JUMPTO	LIST_FONT_NAME
KEY	LIST_FONT_SIZE
KEYB	LIST_ITALIC
KEYBOARD	LIST_STRIKEOUT
KEYMAP	LIST_UNDERLINE
KEYS	LISTA
KEYVALUES	LISTATT
KEYWORDS	LISTCOUNT
LAB	LISTITEMS
LABEL	LISTITEMSADD
LABELS	LISTITEMSADDDELIMITEDTEXT
LANGUAGE	LISTITEMSCLEAR
LAS	LISTITEMSDELETE
LAST	LISTITEMSREFRESH
LASTCHAR	LISTOPEN
LASTHINT	LISTREL
LASTK	LJS
LASTKEY	LMAX
LAUNCH	LMIN
LAVG	LOA
LAY	LOAD
LAYOUT	LOAD_FROM_FILE
LBL	LOAD_GLYPH_FROM_FILE
LBLPRINT	LOADIMAGEFROMFILE
LCFOLD	LOADWINDOW
LEF	LOB
LEFT	LOC
LEGEND_VISIBLE	LOCK
LIG	LOG
LIGHT	LONG
LIGHTTEXTSTYLE	LOO
LIK	LOOKUP
LIKE	LOOKUPS
LIM	LOWER
LIMIT	LTRIM
LIMITNUMALLOC	LUC
LINE_SPACE	MAG
LINEE	MAGENTA
LINEEND	MAILADDRESS
LINES	MAKECLICK
LINESPERROW	MANO
LINK_BACK_COLOR	MANOPT
LINK_FONT_BOLD	MANY
LINK_FONT_COLOR	MARGIN
MARGIN_BOTTOM	MOVEUP
MARGIN_LEFT	MPW

MARGIN_RIGHT	MUL
MARGIN_TOP	MULTI
MASK	MULTILINE
MAX	MULTILINEROWS
MAXFREE	MULTILINETITLES
MAXI	MULTIPAGE
MAXIMIZE	MULTISELECT
MAXIMIZED	NAM
MAXIMUM	NAME
MAXLENGTH	NAMEWIDTH
MAXNUMALLOC	NAV_ORIENT
MAXTRANS	NAV_POS
MD	NAV_SHOW
MDI	NAV_TYPE
MEMORY	NAVY
MEN	NEW
MENU	NEWP
MERGE	NEWPAGE
MES	NEWR
MESSAGE	NEWROW
MESSAGE_BACK_COLOR	NEXT
MESSAGE_BOLD	NEXTHINT
MESSAGE_COLOR	NEXTR
MESSAGE_FONT_BOLD	NEXTROW
MESSAGE_FONT_COLOR	NEXTT
MESSAGE_FONT_ITALIC	NEXTTAB
MESSAGE_FONT_NAME	NINT
MESSAGE_FONT_SIZE	NOC
MESSAGE_FONT_STRIKEOUT	NOCHE
MESSAGE_FONT_UNDERLINE	NOCHECK
MESSAGE_ITALIC	NOCHG
MESSAGE_STRIKEOUT	NOE
MESSAGE_UNDERLINE	NOECHO
MESSAGES	NOF
METER_COLOR_OFF	NOFILL
METER_COLOR1	NOHEAD
METER_COLOR2	NOHEADER
METER_COLOR3	NON
METER_MAX_VALUE	NON_FULL_SCREEN_PAGE_MODE
METER_TYPE	NONE
METER_VALUE	NONUM
METER_VISIBLE	NOQ
MICRORIM_RETURN	NOQBE
MICRORIM_WALLPAPER	NOR
MIN	NORMAL
MINI	NORMALIZE
MINIMIZE	NOS
MINIMIZED	NOScroll
MINIMUM	NOT
MINSIZE	NOTE
MIR	NOTE_PAD
MIRROR	NUL
MKDIR	NULL
MOD	NULLASUNCHECKED
MODAL	NUM
MODULE	NUME
MONOCHROME	NUMERIC
MOU	OddColor
MOUSE	OF
MOUSECOL	OFF
MOUSEROW	OLDLINE
MOVE	OLDMENUS
MOVEDOWN	ON
ONE_COLUMN	PERCENTAGE
ONELINE	PIXELFORMAT

OPE OPEN OPEN_AFTER_SAVE OPENCURRENTDIR OPENED OPENEDHEIGHT OPT OPTIMIZATION OPTIMIZE_FOR_IE OPTION OPTIONS OR ORD ORDER ORIENTATION OUT OUTER OUTP OUTPUT OUTPUT_FILE OUTPUT_FORMAT OUTPUT_SCRIPTS_TO_JAVA_SCRIPT_FILE OUTPUT_STYLES_TO_CSS_FILE OWN OWNER OWNER_PASSWORD PAC PACK PAG PAGE PAGE_COUNT PAGE_END_LINES PAGE_LAYOUT PAGE_LAYOUT_SINGLE_PAGE PAGE_MODE PAGE_RANGE PAGE_TRANSITION_EFFECT page_width PAGECOL PAGECOUNT PAGEMODE PAGENO_VISIBLE PAGEROW PAGESIZE PANELBORDER PAPER_HEIGHT PAPER_NAME PAPER_WIDTH PAS PASCAL PASSIVECOLOR PASSTAB PASSTHROUGH PASSWORD PASSWORDCHAR PASSWORDS PasteFromClipboard PAU PAUSE PDF PEN_COLOR PENWIDTH	PKE PKEYS PLA PLAINTEXT PLAYBACK PLI PLU PLUGIN PLUGINS PLUS PMT POI POINTER POPUP_CALENDAR_BACK_COLOR POPUP_CALENDAR_DATE_BUTTONS_COLOR POPUP_CALENDAR_DATE_BUTTONS_FONT_COLOR POPUP_CALENDAR_DAYS_COLOR POPUP_CALENDAR_DAYSOFWEEK_COLOR POPUP_CALENDAR_FILLDAYS_COLOR POPUP_CALENDAR_LINES_COLOR POPUP_CALENDAR_MONTH_AREA_COLOR POPUP_CALENDAR_MONTH_AREA_FONT_COLOR POPUP_CALENDAR_SELBACK_COLOR POPUP_CALENDAR_SELFORCE_COLOR POPUP_CALENDAR_TODAYFRAME_COLOR POPUP_CAPTION POPUP_CLOCK_BACK_COLOR POPUP_CLOCK_FACE_COLOR POPUP_CLOCK_HANDS_COLOR POPUP_CLOCK_HOURTICKS_COLOR POPUP_CLOCK_MINUTETICKS_COLOR POPUP_CLOCK_NUMBERS_COLOR POPUP_DIALOG_TYPE POPUP_DISTINCT POPUP_ENABLED POPUP_LINES POPUP_LIST_BACK_COLOR POPUP_LIST_FONT_BOLD POPUP_LIST_FONT_COLOR POPUP_LIST_FONT_ITALIC POPUP_LIST_FONT_NAME POPUP_LIST_FONT_SIZE POPUP_LIST_FONT_STRIKEOUT POPUP_LIST_FONT_UNDERLINE POPUP_LIST_MULTISELECT POPUP_RETURN_COLUMN POPUP_RETURN_TYPE POPUP_SELECT POPUP_SHOW_LINES POPUP_TABLE POPUP_TITLE_BACK_COLOR POPUP_TITLE_FONT_BOLD POPUP_TITLE_FONT_COLOR POPUP_TITLE_FONT_ITALIC POPUP_TITLE_FONT_NAME POPUP_TITLE_FONT_SIZE POPUP_TITLE_FONT_STRIKEOUT POPUP_TITLE_FONT_UNDERLINE POPUP_TITLE_TEXT POPUP_WHERE POPUP_WINDOW_BACK_COLOR POSFIXED
POSITION POST	RBBE RBBEDIT

POSTHINT	RBD
PRE	RBDEFINE
PRECISION	RBE
PREF	RBEDIT
PREFIX	RBGS
PRESENTATION_MODE	RBGSIZE
PREVENT_FULL_OPEN	RBL
PREVIEW_BACKGROUND_COLOR	RBLABELS
PREVIEW_CAPTION	RBS
PREVR	RBSIZE
PREVROW	RBSYNC
PREVT	RBSYSTEM
PREVTAB	RBTI_NOSTATUS
PRI	RBTI_PRNSETUP
PRIM	RD
PRIMARY	RDATE
PRINT	REA
PRINTER	READ
PRINTER_NAME	READONLY
PRIO	REAL
PRIOR	RECA
PRIORHINT	RECALC
PRIV	RECOR
PRIVILEGES	RECORD
PRN	RECOV
PRNSETUP	RECOVER
PRO	RECYCLE
PROC	RED
PROCEDURE	REDE
PROCESSMESSAGE	REDEFINE
PROGRESS	REF
PROGRESSIVE_ENCODING	REFERENCES
PROJECT	REFF
PROM	REFRESH
PROMPT	REFRESHFILES
PROMPTS	REFRESHHINT
PROP	REFRESHLIST
PROPERTY	REL
PROPORTIONAL	RELA
PTR	RELATIVE
PUB	RELOAD
PUBLIC	REM
PUT	REMOVE
PV	REN
QBE	RENAME
QUA	REP
QUALCOLS	REPAINTGRID
QUALITY	REPETITIONS
QUE	REPL
QUERY	REPLACE
QUI	REPLY_TO
QUIT	REPO
QUO	REPORT
QUOTES	REPORTS
RAGGEDRIGHT	RES
RAN	RESE
RANDOM	RESET
RATE	RESETROW
RBA_FORM	REST
RBADMIN	RESTORE
RBAPP	RESTOREDIRECTORY
RBASE_FORM	RestoreOrderBy
RBASE_FORM_ACTION	RET
RETURN	SDIS
REV	SDISCONNECT

REVERSE	SECARROW
REVOKE	SECTION
RHIDE	SEG1COLOR
RICHTEXT_ENCODING_TYPE	SEG1COUNT
RIG	SEG2COLOR
RIGHT	SEG2COUNT
RJS	SEG3COLOR
RMD	SEG3COUNT
RMDIR	SEGOFFCOLOR
ROL	SEGONCOLOR
ROLLBACK	SEGSPACING
ROLLOUT	SEL
ROUND	SELECT
ROW	SELECT_ALL
ROWCOUNT	selectall
ROWINDENT	SELECTEDCOLOR
ROWLOCKS	selectedstate
ROWOVERLAP	SELECTION
ROWS	SELM
ROWSELECT	SELMARGIN
ROWSHEIGHT	SEM
RPHONE	SEMI
RPW	SEP_FILE_PER_PAGE
RSHOW	SEQ
RTIME	SEQUENCE
RTRIM	SER
RUL	SERIES_TABLE
RULE	SERVER
RULES	SET
RUN	SET_FOCUS
SAT	SET_FOCUS_ASYNC
SATT	SETF
SATTACH	SETFOCUS
SAV	SFIL
SAVE_TO_BMP	SGET
SAVE_TO_FILE	SHADOWCOLOR
SAVE_TO_JPG	SHADOWDEPTH
SAVE_TO_PDF	SHEET_INDEX
SAVE_TO_PNG	SHEET_NAME
SAVE_TO_VML	SHO
SAVEROW	SHORTNAME
SCALEBY	SHOW
SCALEX	SHOW_CANCEL_DIALOG
SCALEY	SHOW_CLOSE_BUTTON
SCH	show_editor
SCHEMA	SHOW_HELP
SCO	SHOW_MAXIMIZE_BUTTON
SCON	SHOW_MINIMIZE_BUTTON
SCONNECT	SHOW_SETUP_DIALOG
SCR	SHOWACCELCHAR
SCRATCH	SHOWARROW
SCREEN	SHOWBLINKING
SCRO	SHOWBUTTONS
SCROLL	SHOWCOLUMNHEADERS
SCROLLDELAY	SHOWDOWNPATTERN
SCROLLHINTS	SHOWFOCUS
SCROLLING	SHOWFOCUSRECT
SCROLLOPPPOSITE	SHOWGLYPH
SCROLLWIDTH	SHOWGLYPHS
SDE	SHOWGRADIENT
SDET	SHOWHIDDENIRS
SDETACH	SHOWHINT
SDI	ShowHorizontalLines
SHOWIMAGE	STDCALL
SHOWLINES	STDEV

SHOWLONGNAMES	STOPFRAME
SHOWPERCENT	STORE
SHOWRECORDNUMBER	STR
SHOWROOT	STRETCH
ShowSeconds	STRIM
SHOWSHADOW	STRUCTURE
SHOWTEXTELLIPSIS	SUB
SHOWTEXTURE	SUBJECT
SHOWTITLEELLIPSIS	SUBTRACT
SHOWTODAY	SUC
SHOWTODAYCIRCLE	SUCCEEDS
SHOWWEEKNUMBERS	SUF
SHOWWORKAREAS	SUFF
SIGN	SUFFIX
SIN	SUM
SINGLE	SUPPRESSSCRIPTERRORS
SINGLE_PAGE	SWI
SINH	SWITCH
SIZ	SYS
SIZE	SYS_NEW
SKI	SYS_OLD
SKIP	SYSTEM
SLEN	TAB
SLOC	TABENABLED
SLOCP	TABHEIGHT
SMA	TABHINTS
SMALLINT	TABINDEX
SMOVE	TABLE
SNA	TABLES
SNAP	TABORDER
SOLID_COLOR	TABSIZE
SOM	TABSTOP
SOME	TABVISIBLE
SOR	TABWIDTH
SORT	TAL
SORTED	TALLY
SORTM	TAN
SORTMENU	TANH
SOUNDEX	TASKBARBUTTON
SOUNDS	TBLNAME
SOUNDS_L	TDWK
SOUNDS_LIKE	TEAL
SPACEEVENLY	TEMP
SPACING	TEMPORARY
SPECIAL	TERM
SPECIFICATION_FILE_NAME	TERMI
SPLIT_HOR_INWARD	TERMINAL
SPLIT_HOR_OUTWARD	TEX
SPLIT_VERT_INWARD	TEXT
SPLIT_VERT_OUTWARD	TEXTRACT
SPUT	TEXTVALUE
SQLCODE	THE
SQLERROR	THEMENAME
SQRT	THEN
SRPL	TILE
SSQL	TIM
SSUB	TIME
STARTFRAME	TIMEO
STARTUP	TIMEOUT
STAT	TIMERENABLED
STATICDB	TIMERINTERVAL
STAY_ON_TOP	TIT
STD	TITLE
TITLE_BACK_COLOR	USE_COMPRESSION
TITLE_BOLD	USE_OUTLINES

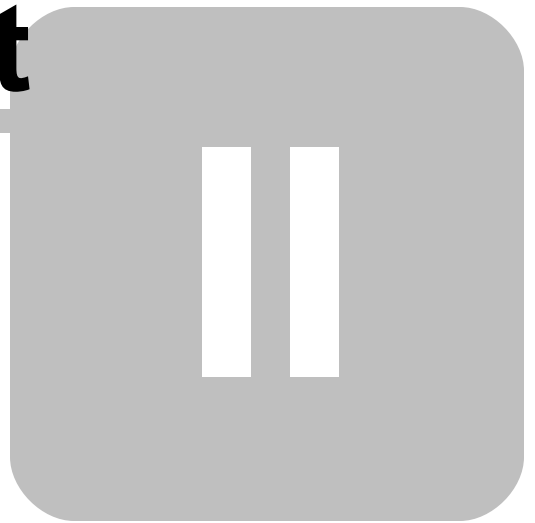
TITLE_FONT_COLOR	USE_TEXT_LINKS
TITLE_FONT_NAME	USE_THUMBS
TITLE_FONT_SIZE	USECOLOREDTABS
TITLE_ITALIC	USEGRADIENTS
TITLE_STRIKEOUT	USER
TITLE_UNDERLINE	USER_PASSWORD
TITLES	USERA
TMON	USERAPP
TO	USERID
TO_LIST	USI
TOC_FILE_NAME	USING
TOL	V
TOLERANCE	VAL
TOOLBAR_VISIBLE	VALUE
TOOLTIPS	VALUES
TOP	VAR
TOPITEM	VARBIN
TOTALALLOC	VARBINARY
TOTALFREE	VARBIT
TOTALLOCKS	VARC
TOTALREADS	VARCHAR
TOTALWRITES	VARI
TRA	VARIAB
TRACE	VARIABLE
TRANSACT	VARIABLES
TRANSITION_DURATION	VARIAN
TRANSITION_PAGE_RANGE	VARIANCE
TRANSPARENCY	VARY
TRANSPARENT	VARYING
TRANSPARENTCOLOR	VER
TRANSPARENTCOLORVALUE	VERIFY
TRAPEZOIDMIN	VERS
TRAY	VERSION
TRIG	VERTICALSPACING
TRIGGER	VIE
TRIM	VIEW
TRUE	VIEWS
TURBO	VISIBLE
TwelveHourClock	VOID
TWO_COLUMN_LEFT	WAI
TWO_COLUMN_RIGHT	WAIT
TYP	WAL
TYPE	WALKMENU
UDF	WANTRETURNS
UKE	WANTTABS
UKEYS	WEEKNUMBERS
ULC	WHE
UNI	WHEN
UNIO	WHENEVER
UNION	WHERE
UNIQ	WHI
UNIQUE	WHILE
UNL	WHILEOPT
UNLOAD	WHITE
UNNAMED	whole_page
unselect	WID
UPD	WIDTH
UPDATE	WINAUTH
UPG	WINBEEP
UPGRADE	WINDOW_BACK_COLOR
UPPER	WINDOW_CAPTION
URL	WINDOW_STATE
USE	WIPE_BOTTOM_TO_TOP
WIPE_LEFT_TO_RIGHT	
WIPE_RIGHT_TO_LEFT	

WIPE_TOP_TO_BOTTOM WIT WITH WOR WORDWRAP WORK WRA WRAP WRI WRITE WRITECHK XHTML YEA YEAR YEL YELLOW ZebraStripe ZER ZERO ZIP ZOO zoom_type ZOOMEDIT ZOOMPERCENT ZOOMPERCENT_VISIBLE	
---	--

If you are still using a legacy version of R:BASE, it is recommended that you perform these table and column name changes in that version. After making the table and column names changes, R:BASE will update the form, report, and label column objects with the appropriate new name. However, if any of the columns and tables are listed in the form, report, and label variable expressions, you must manually edit these expressions.

On paper, record any table and column name changes. Later in the conversion process when you're updating your command files, you will need to make these necessary name changes for the command files as well.

Part



2 Converting the Database Files

2.1 Recognizing the Database Files

When locating and using the database name in the conversion instructions, be sure to remember that the "actual" database name for .RBS and .RBF files does not include the "1", "2", or "3", which is located before the file extension. For example, a R:BASE 3.1 database with the name SALES will have the database files SALES1.RBF, SALES2.RBF, and SALES3.RBF, but the database name is still just "SALES". In the steps below where the "dbname" is required in the command syntax, use only the "actual" database name.

To use this document you will need to know which version of R:BASE you are upgrading from. To assist you in getting a rough idea of which version you are starting at, we have included the table below which lists the various R:BASE file formats. Once you find your R:BASE database version from the table below, follow the necessary conversion steps in the next section.

R:BASE Database File Formats

Version	File Format
R:BASE 4000 and R:BASE 5000	DBNAME1.RBS DBNAME2.RBS DBNAME3.RBS
R:BASE System V to R:BASE 4.0	DBNAME1.RBF DBNAME2.RBF DBNAME3.RBF
R:BASE 4.5 to R:BASE 5.0	DBNAME.RB1 DBNAME.RB2 DBNAME.RB3
R:BASE 5.1 to R:BASE X	DBNAME.RB1 DBNAME.RB2 DBNAME.RB3 DBNAME.RB4
R:BASE Turbo V-8, R:BASE eXtreme 9.5 (64), and R:BASE X Enterprise	DBNAME.RX1 DBNAME.RX2 DBNAME.RX3 DBNAME.RX4

2.2 Conversion Steps

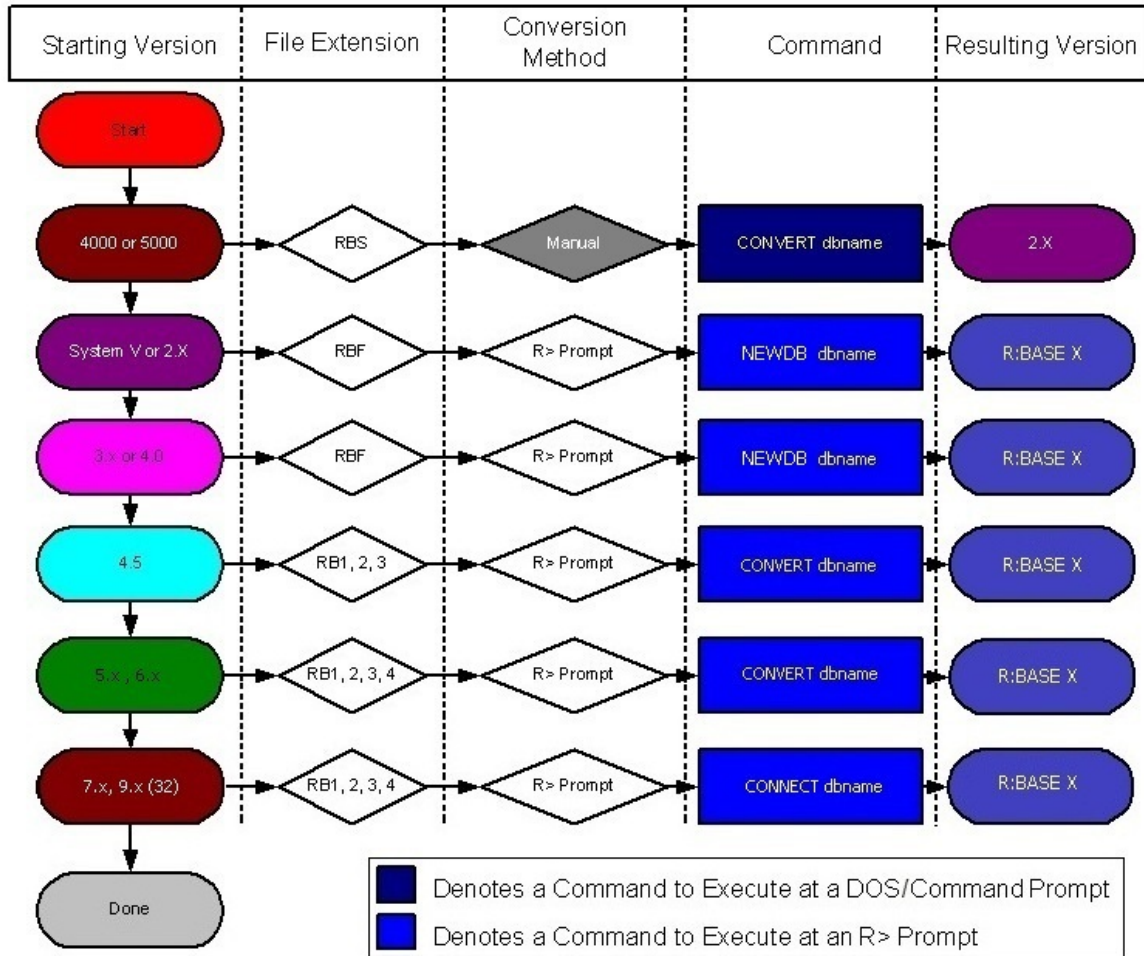
PLEASE REMEMBER TO BACK UP YOUR DATABASE!

The steps required to convert databases to work with R:BASE X for Windows are described in the following flow chart. Locate your current R:BASE database file "Starting Version" in the left column and complete the steps until you reach the bottom. If you are not sure of your database file version, refer to the [Recognizing the Database Files](#) chart.

In the sections that follow, proceed to the chapter that lists the version you are upgrading from. Your options include:

- [Converting from R:BASE 4000/5000](#)
- [Converting from R:BASE System V to R:BASE 4.0](#)
- [Converting from R:BASE 4.5 through 6.5++](#)
- [Converting from R:BASE 7.x](#)

- [Converting from R:BASE eXtreme 9.x \(32\)](#)



2.2.1 Converting from R:BASE 4000/5000

If you have not done so already, please contact R:BASE Technologies to receive the legacy conversion utility for migrating R:BASE 4000/5000 databases. The legacy conversion utility is a 16-bit application file that will not open on 64-bit operating systems.

IMPORTANT: The instructions below require the steps be executed on a 32-bit operating system.

1. Create a new directory; perhaps something near your root directory on the local drive (example: "C:\DBTEMP").
2. Copy the contents of the "CONVERT" directory, from the installation CD, to your new directory. If the conversion tools were provided by download, place those files in the new directory.
3. Copy your .RBS [database files](#) to the new directory.
4. Continue with your version as listed below.
5. Open a Command Prompt or DOS Prompt window and navigate to the new directory created above in Step 1
6. At the Prompt, type: CONVERT dbname
7. Repeat for all databases. In addition to the original .RBS database files, three new files will be created for each data that have the .RBF file extensions.
8. Exit the Command Prompt or DOS Prompt window. Use the EXIT command to exit.
9. Continue with the steps listed at [Converting from R:BASE System V to R:BASE 4.0](#)

2.2.2 Converting from R:BASE System V to R:BASE 4.0

At this point, you must have R:BASE X installed on your computer. Be sure to review the R:BASE X Getting Started Guide regarding the installation and set up for your R:BASE software. The Getting Started Guide is located in the R:BASE program directory.

If there is no OWNER or Password

1. Install and launch R:BASE X
2. Navigate to your database directory using the "Change Current Folder" button (bottom left corner, folder icon with a green arrow, at the database Explorer)
3. Go to the R> Prompt window (third button from the left on the Tool Bar, or press [Ctrl]+[R])
4. At the R> Prompt, type: `SET MULTI OFF` , then press [Enter]
5. At the R> Prompt, type: `SET STATICDB OFF` , then press [Enter]
6. At the R> Prompt type: `NEWDB DBNAME` , then press [Enter]
7. At the R> Prompt, type: `CONNECT DBNAME` , then press [Enter]
8. At the R> Prompt, type: `SET IDQUOTES=`` , then press [Enter] (the ` quote character is the reverse single quote, which is next to the "1" and under the tilde "~", on American keyboards)
9. At the R> Prompt, type: `DISCONNECT` , then press [Enter]
10. Perform the "Complete Database Rebuild" instructions below
11. Repeat "Steps 6-10" for all databases

If there is a Username and Password

1. Install and launch R:BASE X
2. Navigate to your database directory using the "Change Current Folder" button (bottom left corner, folder icon with a green arrow, at the database Explorer)
3. Go to the R> Prompt window (third button from the left on the Tool Bar, or press [Ctrl]+[R])
4. At the R> Prompt, type: `SET MULTI OFF` , then press [Enter]
5. At the R> Prompt, type: `SET STATICDB OFF` , then press [Enter]
6. At the R> Prompt, type: `SET USER UserName Password` , then press [Enter]
7. At the R> Prompt type: `NEWDB DBNAME` , then press [Enter]
8. At the R> Prompt, type: `CONNECT DBNAME` , then press [Enter]
9. At the R> Prompt, type: `SET IDQUOTES=`` , then press [Enter] (the ` quote character is the reverse single quote, which is next to the "1" and under the tilde "~", on American keyboards)
10. At the R> Prompt, type: `DISCONNECT` , then press [Enter]
11. Perform the "Complete Database Rebuild" instructions below
12. Repeat "Steps 6-11" for all databases

If there is a database OWNER

1. Install and launch R:BASE X
2. Navigate to your database directory using the "Change Current Folder" button (bottom left corner, folder icon with a green arrow, at the database Explorer)
3. Go to the R> Prompt window (third button from the left on the Tool Bar, or press [Ctrl]+[R])
4. At the R> Prompt, type: `SET MULTI OFF` , then press [Enter]
5. At the R> Prompt, type: `SET STATICDB OFF` , then press [Enter]
6. At the R> Prompt, type: `SET USER OwnerName` , then press [Enter]
7. At the R> Prompt type: `NEWDB DBNAME` , then press [Enter]
8. At the R> Prompt, type: `CONNECT DBNAME` , then press [Enter]
9. At the R> Prompt, type: `SET IDQUOTES=`` , then press [Enter] (the ` quote character is the reverse single quote, which is next to the "1" and under the tilde "~", on American keyboards)
10. At the R> Prompt, type: `DISCONNECT` , then press [Enter]
11. Perform the "Complete Database Rebuild" instructions below
12. Repeat "Steps 6-11" for all databases

Database Rebuild

In addition to the above conversion steps, the following steps are required to completely rebuild the

database. These steps will be performed in R:BASE X.

1. Connect to the database and open the R> Prompt.
2. Check the IDQUOTE settings of connected database.

At the R> Prompt, type:

```
SHOW CHARACTERS
```

Notice the last parameter, **IDQUOTES**

If IDQUOTES is set to NULL, you'll need to change NULL to the appropriate character, such as ` (reversed quote) as following:

```
SET IDQUOTES= `
```

3. Unload the entire database. Use the SET USER command below if an OWNER name exists.

At the R> Prompt, type:

```
SET NULL -0-  
SET USER ownersname  
OUTPUT filename.ALL  
UNLOAD ALL  
OUTPUT SCREEN
```

This process will create two files for Windows databases (filename.ALL and filename.LOB), and a single file for DOS databases.

4. Disconnect the database.

At the R> Prompt, type:

```
DISCONNECT
```

5. Now rename the database that was just unloaded in Steps 1-3.

Review the list of Databases in the R:BASE Database Explorer, and select the "Rename" option. Enter a new name for the database.

6. Finally, use R:BASE to rebuild the database by running the .ALL file.

At the R> Prompt type:

```
RUN filename.ALL
```

These steps will build a clean database!

If there is a considerable amount of errors with both rebuilding the structure and/or data, please refer to the "Database Repair Routine" within the Database Maintenance PDF document in the R:BASE program directory.

With the database file conversion complete, proceed to the chapter for [Converting Forms, Reports, & Labels](#).

2.2.3 Converting from R:BASE 4.5 through 6.5++

At this point, you must have R:BASE X installed on your computer. Be sure to review the R:BASE X Getting Started Guide regarding the installation and set up for your R:BASE software. The Getting Started Guide is located in the R:BASE program directory.

If there is no OWNER or Password

1. Install and launch R:BASE X
2. Navigate to your database directory using the "Change Current Folder" button (bottom left corner, folder icon with a green arrow, at the database Explorer)
3. Go to the R> Prompt window (third button from the left on the Tool Bar, or press [Ctrl]+[R])
4. At the R> Prompt, type: `SET MULTI OFF` , then press [Enter]
5. At the R> Prompt, type: `SET STATICDB OFF` , then press [Enter]
6. At the R> Prompt type: `CONVERT DBNAME` , then press [Enter]
7. At the R> Prompt, type: `CONNECT DBNAME` , then press [Enter]
8. At the R> Prompt, type: `SET IDQUOTES=`` , then press [Enter] (the ` quote character is the reverse single quote, which is next to the "1" and under the tilde "~", on American keyboards)
9. At the R> Prompt, type: `DISCONNECT` , then press [Enter]
10. Perform the "Complete Database Rebuild" instructions below
11. Repeat "Steps 6-10" for all databases

If there is a Username and Password

1. Install and launch R:BASE X
2. Navigate to your database directory using the "Change Current Folder" button (bottom left corner, folder icon with a green arrow, at the database Explorer)
3. Go to the R> Prompt window (third button from the left on the Tool Bar, or press [Ctrl]+[R])
4. At the R> Prompt, type: `SET MULTI OFF` , then press [Enter]
5. At the R> Prompt, type: `SET STATICDB OFF` , then press [Enter]
6. At the R> Prompt, type: `SET USER UserName Password` , then press [Enter]
7. At the R> Prompt type: `CONVERT DBNAME` , then press [Enter]
8. At the R> Prompt, type: `CONNECT DBNAME` , then press [Enter]
9. At the R> Prompt, type: `SET IDQUOTES=`` , then press [Enter] (the ` quote character is the reverse single quote, which is next to the "1" and under the tilde "~", on American keyboards)
10. At the R> Prompt, type: `DISCONNECT` , then press [Enter]
11. Perform the "Complete Database Rebuild" instructions below
12. Repeat "Steps 6-11" for all databases

If there is a database OWNER

1. Install and launch R:BASE X
2. Navigate to your database directory using the "Change Current Folder" button (bottom left corner, folder icon with a green arrow, at the database Explorer)
3. Go to the R> Prompt window (third button from the left on the Tool Bar, or press [Ctrl]+[R])
4. At the R> Prompt, type: `SET MULTI OFF` , then press [Enter]
5. At the R> Prompt, type: `SET STATICDB OFF` , then press [Enter]
6. At the R> Prompt, type: `SET USER OwnerName` , then press [Enter]
7. At the R> Prompt type: `CONVERT DBNAME` , then press [Enter]
8. At the R> Prompt, type: `CONNECT DBNAME` , then press [Enter]
9. At the R> Prompt, type: `SET IDQUOTES=`` , then press [Enter] (the ` quote character is the reverse single quote, which is next to the "1" and under the tilde "~", on American keyboards)
10. At the R> Prompt, type: `DISCONNECT` , then press [Enter]
11. Perform the "Complete Database Rebuild" instructions below
12. Repeat "Steps 6-11" for all databases

Database Rebuild

In addition to the above conversion steps, the following steps are required to completely rebuild the database. These steps will be performed in R:BASE X.

1. Connect to the database and open the R> Prompt.
2. Check the IDQUOTE settings of connected database.

At the R> Prompt, type:

```
SHOW CHARACTERS
```

Notice the last parameter, **IDQUOTES**

If IDQUOTES is set to NULL, you'll need to change NULL to the appropriate character, such as ` (reversed quote) as following:

```
SET IDQUOTES= `
```

3. Unload the entire database. Use the SET USER command below if an OWNER name exists.

At the R> Prompt, type:

```
SET NULL -0-  
SET USER ownersname  
OUTPUT filename.ALL  
UNLOAD ALL  
OUTPUT SCREEN
```

This process will create two files for Windows databases (filename.ALL and filename.LOB), and a single file for DOS databases.

4. Disconnect the database.

At the R> Prompt, type:

```
DISCONNECT
```

5. Now rename the database that was just unloaded in Steps 1-3.

Review the list of Databases in the R:BASE Database Explorer, and select the "Rename" option. Enter a new name for the database.

6. Finally, use R:BASE to rebuild the database by running the .ALL file.

At the R> Prompt type:

```
RUN filename.ALL
```

These steps will build a clean database!

If there is a considerable amount of errors with both rebuilding the structure and/or data, please refer to the "Database Repair Routine" within the Database Maintenance PDF document in the R:BASE program directory.

With the database file conversion complete, proceed to the chapter for [Converting Forms, Reports, & Labels](#).

2.2.4 Converting from R:BASE 7.x

At this point, you must have R:BASE X installed on your computer. Be sure to review the R:BASE X Getting Started Guide regarding the installation and set up for your R:BASE software. The Getting Started Guide is located in the R:BASE program directory.

Complete Database Rebuild

The following steps are required to ensure a clean rebuild of the database. These steps will be performed in R:BASE X.

1. Connect to the database and open the R> Prompt.
2. Check the IDQUOTE settings of connected database.

At the R> Prompt, type:

```
SHOW CHARACTERS
```

Notice the last parameter, **IDQUOTES**

If IDQUOTES is set to NULL, you'll need to change NULL to the appropriate character, such as ` (reversed quote) as following:

```
SET IDQUOTES= `
```

3. Unload the entire database. Use the SET USER command below if an OWNER name exists.

At the R> Prompt, type:

```
SET NULL -0-  
SET USER ownersname  
OUTPUT filename.ALL  
UNLOAD ALL  
OUTPUT SCREEN
```

This process will create two files for Windows databases (filename.ALL and filename.LOB), and a single file for DOS databases

4. Disconnect the database.

At the R> Prompt, type:

```
DISCONNECT
```

5. Now rename the database that was just unloaded in Steps 1-3.

Review the list of Databases in the R:BASE Database Explorer, and select the "Rename" option. Enter a new name for the database.

6. Finally, use R:BASE to rebuild the database by running the .ALL file.

At the R> Prompt type:

```
RUN filename.ALL
```

These steps will build a clean database!

With the database file conversion complete, proceed to the chapter for [R:BASE 7.x Forms, Reports, &](#)

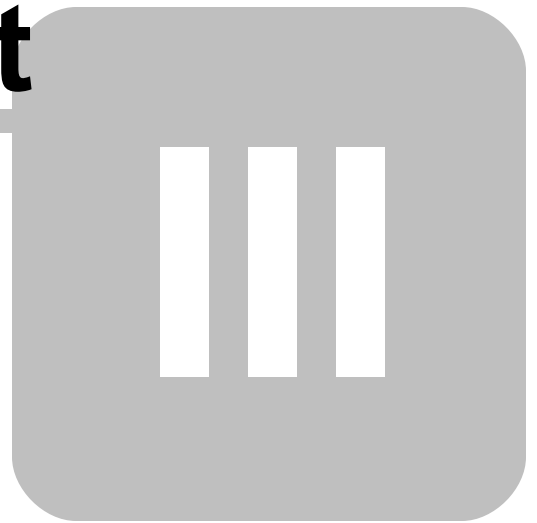
[Labels](#).

2.2.5 Converting from R:BASE eXtreme 9.x (32)

If you are upgrading to R:BASE X from R:BASE eXtreme 9.x (32), you are only required to connect to the database in order to complete the conversion.

Of course, there will be several new features to take advantage of. Please review the "What's New in R:BASE X for Windows" PDF document for additional details.

Part



3 Converting Forms, Reports, & Labels

At this point in the conversion process, four database files should exist. When connected to a database, tables will be listed in the R:BASE X Database Explorer window. You should also be able to browse the table data with no problems.

Now, steps can be taken to convert the existing forms, reports, and labels to R:BASE X for Windows. Whether the database originates from DOS or Windows all forms, reports, and labels can easily be converted to R:BASE X.

Proceed to the next chapter for converting [6.5++ and Lower Version Forms, Reports, & Labels](#).

3.1 R:BASE 6.5++ and Lower Forms, Reports, & Labels

At this point in the database conversion process, R:BASE X for Windows must be installed on the computer to complete the instructions below.

1. Launch R:BASE X for Windows
2. Connect to the database by selecting "Database" > "Connect to Database..." from the main Menu Bar.

You will be prompted to locate your database files where they are stored on your computer. Once connected to your database, you will see the database name listed across the top of the R:BASE X program caption, in brackets.

Throughout the following instructions, there will be areas of the R:BASE interface that will require you to know what is being referred to (e.g. Database Explorer, Navigator, Tool Bar, Menu Bar, etc.). For a quick description as to what these objects are, please read the "Introduction" page of the R:BASE X Tutorial before continuing. To open the **Introduction** page, select "Help" > "R:BASE Tutorial" from the R:BASE main Menu Bar.

Once you have completed reading the Introduction page, close the window and go to the next section, **Converting Forms**.

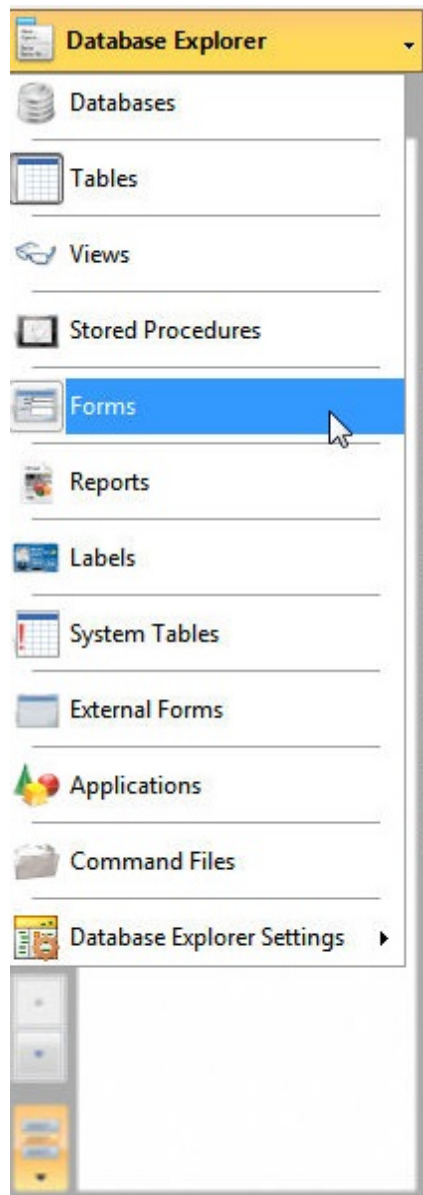
3.1.1 Converting Forms

You should now be looking at the R:BASE window with the Database Explorer displayed. To confirm, you will see the main R:BASE caption read the "R:BASE X", then your database name listed in square brackets, then "R:BASE Database Explorer" listed in square brackets.

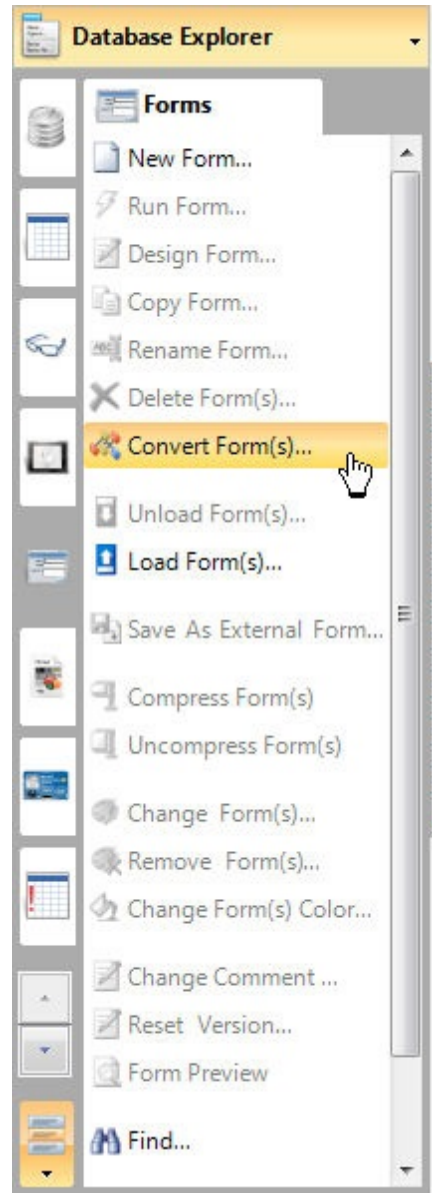
- If you do not see your database listed in brackets, then connect to it now by selecting "Database" > "Connect to Database..." from the main Menu Bar. You will be prompted to locate your database files where they are stored on your computer. Once connected to your database, you will see the database name listed in the R:BASE X program caption, in brackets.
- If you do not see "R:BASE Database Explorer" listed in square brackets, then select the "Database Explorer" button on the main Tool Bar. It is the first button on the left and the hint displayed will read "Database Explorer".

At the Database Explorer window, you will see the "Navigator" listed on the left side of the window containing various menu options of R:BASE database modules (e.g. Tables, Views, Forms, etc.)

1. Click on the Database Explorer button and choose "Forms" from the drop down menu (figure 1), then select the "Convert Form(s)..." menu option (figure 2).

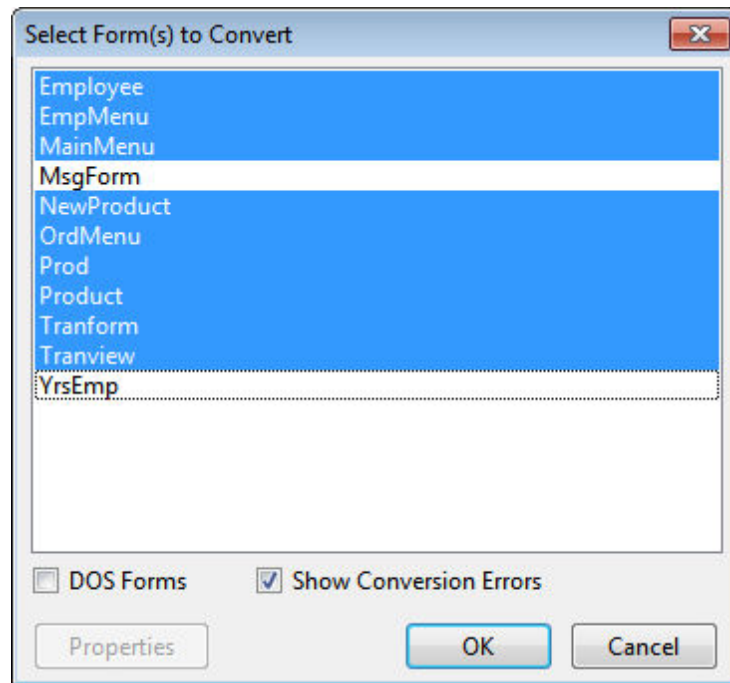


(figure 1)



(figure 2)

Upon selecting this option, a dialog will appear that may contain a list of the available forms to convert (figure 3). The forms listed are Windows-based forms that were created in a previous Windows version of R:BASE.

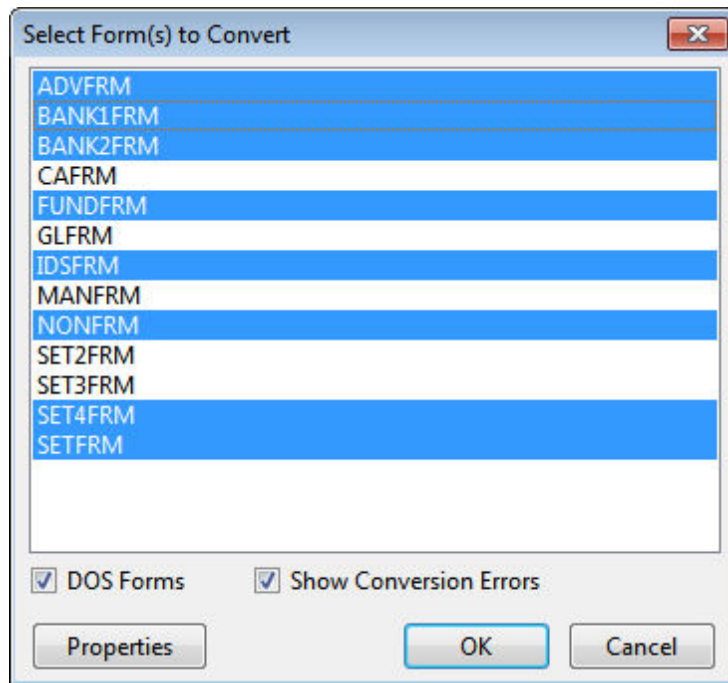


(figure 3)

- Individual forms can be selected and converted. Multiple forms can be converted by holding the [Ctrl] key and selecting individual form names. Or pressing the [Ctrl]+[A] keys will select all listed forms. Press the "OK" button to convert the selected forms.

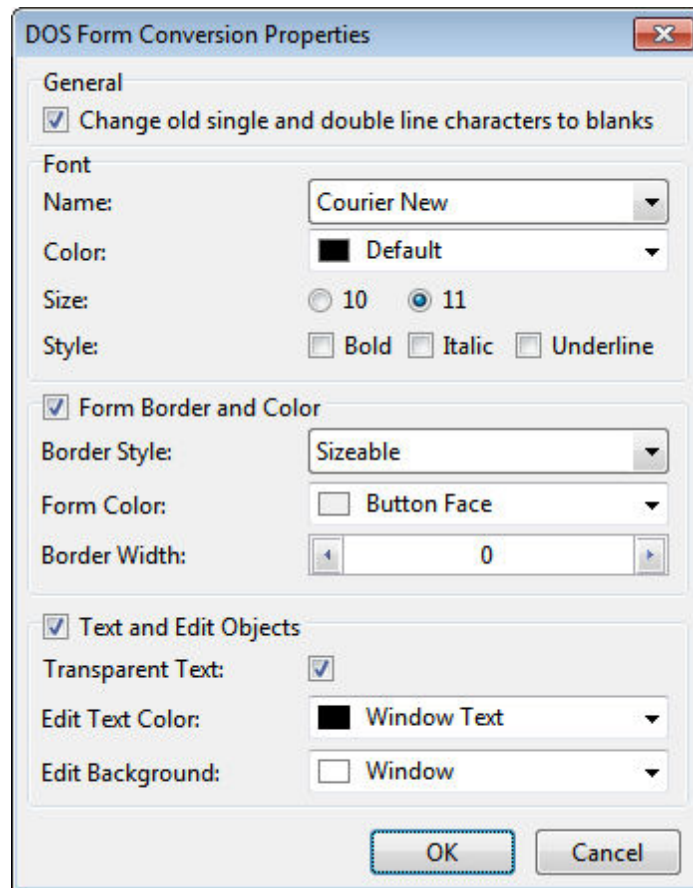
The form(s) will convert and will be displayed in the Database Explorer.

- The database may contain DOS forms. Select the "DOS Forms" check box. The dialog may now contain a list of the available DOS forms to convert (figure 4). Any forms listed are DOS-based forms that were created in a DOS version of R:BASE.



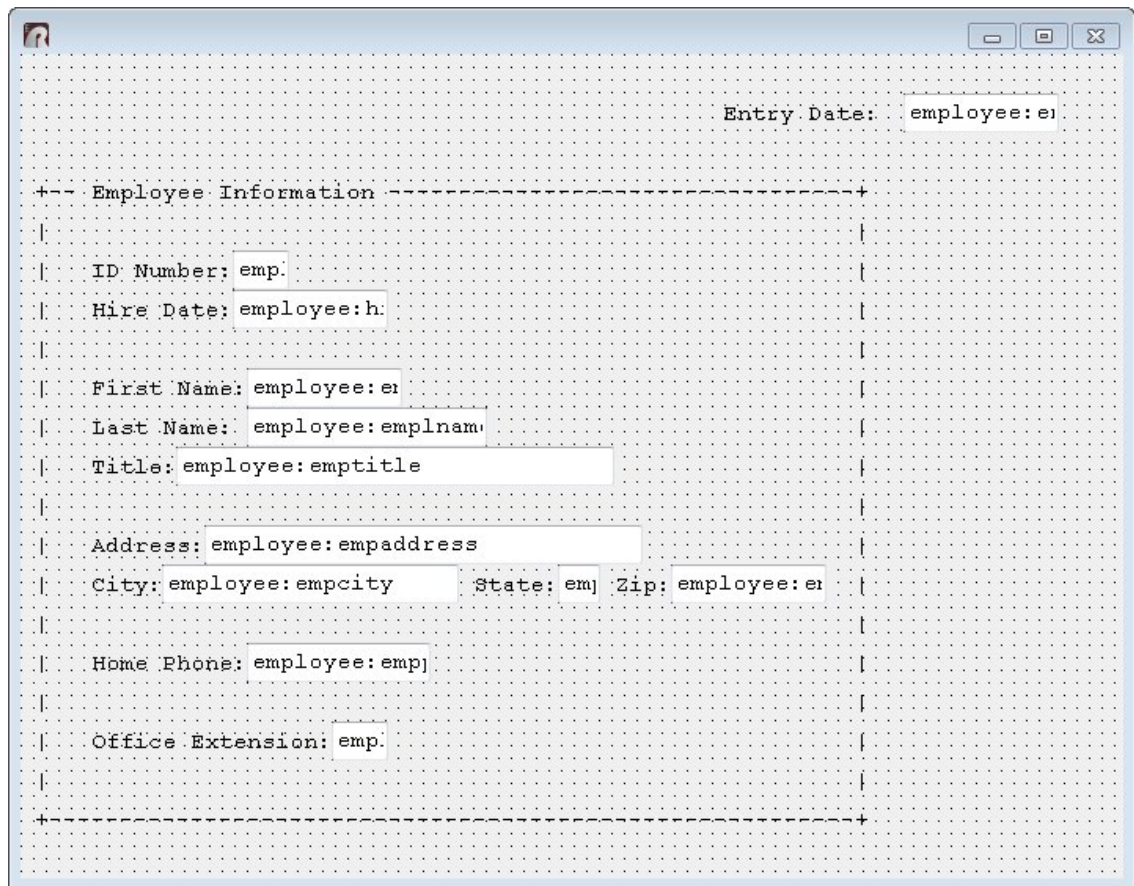
(figure 4)

4. The "Properties" button provides a form conversion option to change single and double line characters to blank spaces, alter the Font (name, color, size, and style), Form Border (style and width), Form Background Color, Text (transparent), and Edit Objects (text color and background) (figure 5).



(figure 5)

The following is an example of a form that was converted with the single and double line characters setting unchecked. This display may be beneficial in the conversion process to see how a form may have been divided into sections.



5. Like with the Windows-based forms, the DOS forms can be individually selected and converted. Multiple forms can be converted by holding the [Ctrl] key and selecting individual form names. Or pressing the [Ctrl]+[A] keys will select all listed forms. Press the "OK" button to convert the selected forms.

At this point, you can now enter the Form Designer to view and make changes to the forms. There are [Issues and Suggestions](#) to review for the converted forms. However, since many of the instructions below refer to specific control/object names and require a basic understanding of the Form Designer, it is recommended that you perform the conversions of the remaining modules (e.g. reports, labels), and then complete the R:BASE Tutorial before continuing.

From the Main Menu, choose "Help" > "R:BASE Tutorial". This tutorial covers step-by-step instructions on building a complete database and application from scratch providing the R:BASE relational logic as it adhere's to Dr. Codd's relational model. This is where one would learn how to quickly adapt to the R:BASE interface!

3.1.1.1 Issues and Suggestions

NOTE: From inside the Form Designer, you can launch the Form Designer help file by pressing the [Shift] +[F1] hot keys.

- **Add an Enhanced DB Navigator Control**

The Enhanced DB Navigator is a form object that allows moving between, saving, and deleting rows in a table. To add the control, locate the button within the Database Controls (boxed in red below).



Mouse click on the button, then mouse click on the form where the object is to be placed. The properties dialog will appear to alter the settings for the control. Click OK to use the default settings.

- **Form Lookup Variables**

The "Lookup Variable" is now truly a "Lookup" variable, and is not to be changed. All expressions, if based on lookup variables, will be evaluated and refreshed INSTANTLY. Prior to version 7.x, this was not the case. Previously, the form variables must be refreshed with the RECALC VARIABLES command each time variables were to be refreshed. To achieve the same results in R:BASE X, then do NOT use form defined variables, but rather EEPs to declare variables with the SET VARIABLE command, which can execute when needed and with the flexibility to change the variables accordingly.

- **Form Variables**

Form variables that perform calculations or combine a number of values should be enclosed in parenthesis. If error messages are displayed for variables performing calculations, like the one below,

```
2 : CURRENCY      vTotal = price * quantity
```

add parenthesis as follows:

```
2 : CURRENCY      vTotal = (price * quantity)
```

- **Multi-Page Form with Push Buttons**

When converting a multiple page form, the different "pages" will be placed on a Tab Control, with each page placed upon a separate "tab". Any Push Buttons on the form that use a predefined "Next Page" or "Previous Page" EEP will appear on the new form, however will have no action assigned to them. This is because there is technically no longer a "page" to move to with regards to the behavior of a Tab Control.

- **Lookup Variable Tip**

Within the R:BASE X Form Designer there is an option to run a series of commands (or Action) for a form before the Form Designer is launched. In the Form Designer, choose "Layout" from the Menu bar, then select "On Before Design Action...".

This will run a series of commands, which can include the creation of variables that Lookup Variables are based upon, to avoid annoying error messages when the form is opened in the designer. An example of a lookup variable based upon another variable would be...

```
1 : TEXT          vCompany = Company IN Customer WHERE CustID =
.vCustID
```

The error message appears because the variable vCustID is not defined. Adding the following SET VAR command to the "On Before Design Action..." will alleviate this error message:

```
SET VAR vCustID INTEGER
```

The "On Before Design Action..." is listed under "Layout" on the main Menu Bar.

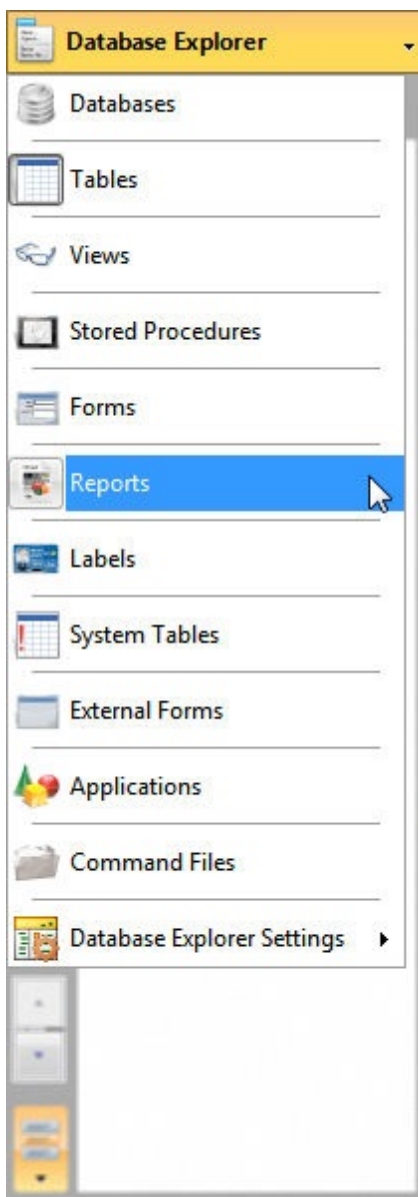
3.1.2 Converting Reports

You should now be looking at the R:BASE window with the Database Explorer displayed. To confirm, you will see the main R:BASE caption read the "R:BASE X", then your database name listed in square brackets, then "R:BASE Database Explorer" listed in square brackets.

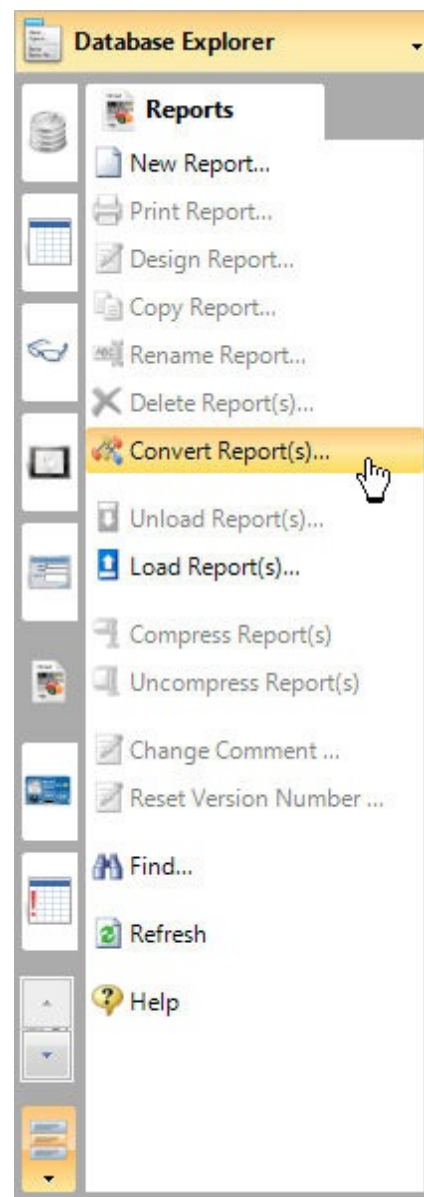
- If you do not see your database listed in brackets, then connect to it now by selecting "Database" > "Connect to Database..." from the main Menu Bar. You will be prompted to locate your database files where they are stored on your computer. Once connected to your database, you will see the database name listed in the R:BASE X program caption, in brackets.
- If you do not see "R:BASE Database Explorer" listed in square brackets, then select the "Database Explorer" button on the main Tool Bar. It is the first button on the left and the hint displayed will read "Database Explorer".

At the Database Explorer window, you will see the "Navigator" listed on the left side of the window containing various menu options of R:BASE database modules (e.g. Tables, Views, Forms, etc.)

1. Click on the Database Explorer button and choose "Reports" from the drop down menu (figure 1), then select the "Convert Report(s)..." menu option (figure 2).

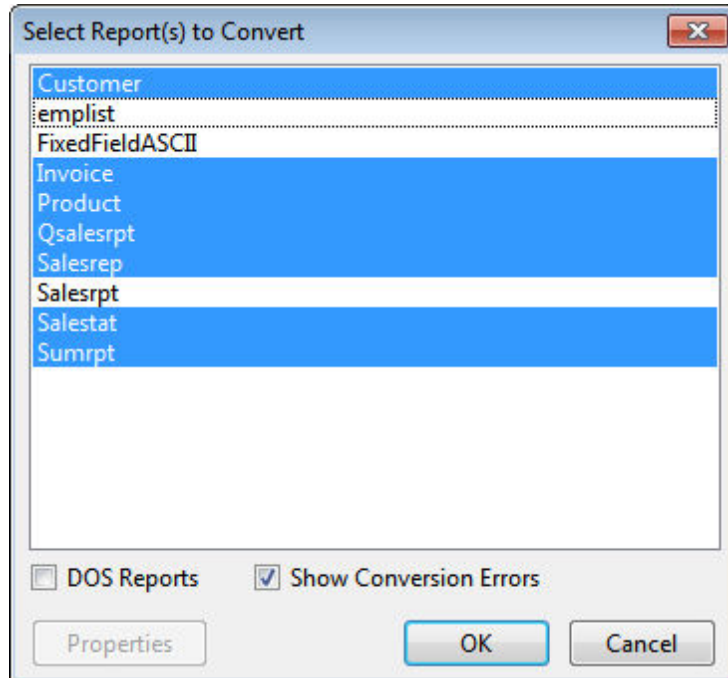


(figure 1)



(figure 2)

Upon selecting this option, a dialog will appear that may contain a list of the available reports to convert (figure 3). The reports listed are Windows-based reports that were created in a previous Windows version of R:BASE.

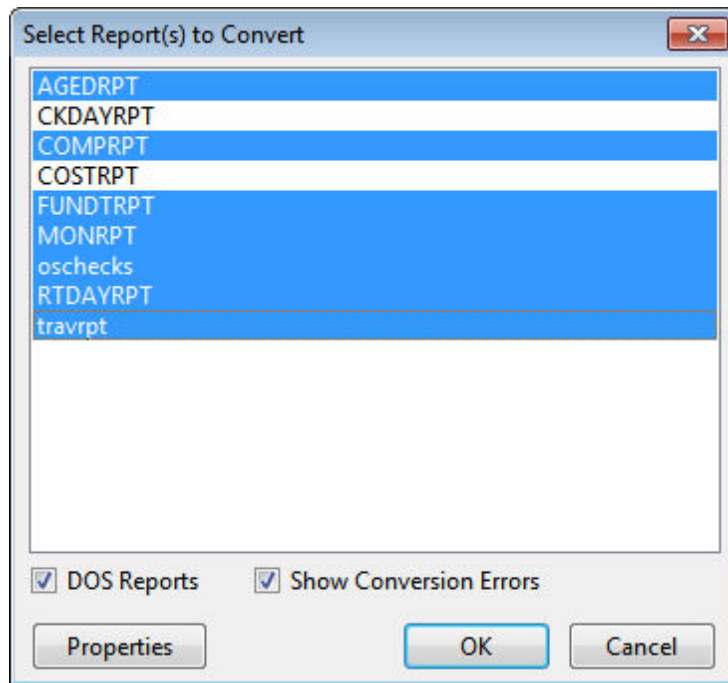


(figure 3)

2. Individual reports can be selected and converted. Multiple reports can be converted by holding the [Ctrl] key and selecting individual report names. Or pressing the [Ctrl]+[A] keys will select all listed reports. Press the "OK" button to convert the selected reports.

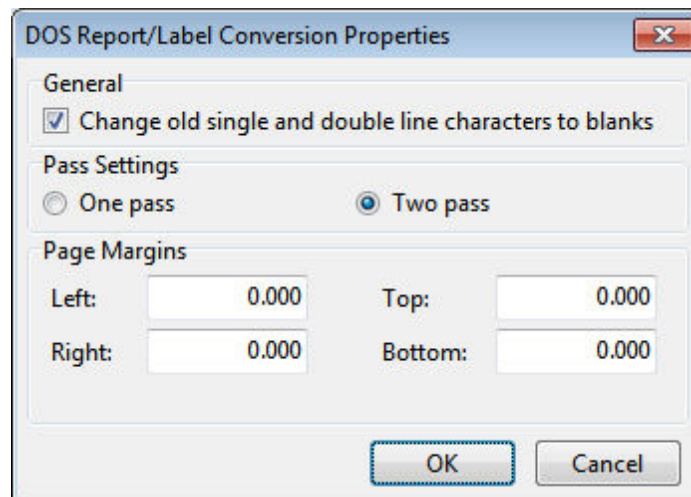
The report(s) will convert and will be displayed in the Database Explorer.

3. The database may contain DOS reports. Select the "DOS Reports" check box. The dialog may now contain a list of the available DOS reports to convert (figure 4). Any reports listed are DOS-based reports that were created in a DOS version of R:BASE.



(figure 4)

4. The "Properties" button provides report conversion options to change single and double line characters to blanks, a pass setting, and margins (figure 5).



(figure 5)

Maintaining single and double lines in the conversion process may help see how a report was divided into sections. The pass setting processes system variables once or twice are the report is generated. For DOS reports, the default is one pass. For Windows reports, the default pass setting is two. Margins in DOS reports begin at zero. The margin can be changed for any custom reports.

5. Like with the Windows-based reports, the DOS reports can be individually selected and converted. Multiple reports can be converted by holding the [Ctrl] key and selecting individual report names. Or pressing the [Ctrl]+[A] keys will select all listed reports. Press the "OK" button to convert the selected reports.

The report(s) will convert and will be displayed within the Database Explorer.

At this point, you can now enter the Report Designer to view and make changes to the reports. There are [Issues and Suggestions](#) to review for the converted reports. However, since many of the instructions below refer to specific control/object names and require a basic understanding of the Report Designer, it is recommended that you perform the conversions of the remaining modules (e.g. forms, labels), and then complete the R:BASE Tutorial before continuing.

From the Main Menu, choose "Help" > "R:BASE Tutorial". This tutorial covers step-by-step instructions on building a complete database and application from scratch providing the R:BASE relational logic as it adheres to Dr. Codd's relational model. This is where one would learn how to quickly adapt to the R:BASE interface!

3.1.2.1 Issues and Suggestions

NOTE: From inside the Report Designer, you can launch the Report Designer help file by pressing the [Shift]+[F1] hot keys.

- **Sub-Totals and Totals**

To calculate sub-totals and totals of table columns, Aggregate Variables have always been used to perform this job. Now, the R:BASE X for Windows Report Designer has a built-in object called DB Calc, which performs these same functions on table columns without creating the extra overhead of variables. You can replace your Variable Label objects with DB Calc objects in instances where the Variables Object results will not be used further down in the report.

- **#DATE, #TIME, #PAGE, Document, and Page Information**

The R:BASE X for Windows Report Designer now has a System Variable control, which allows an object to be placed for the current DATE, TIME, Document Name, Print DATE and TIME, or one of many Page Numbering options. All Variable Label objects whose expression value consists of a system variable (#DATE, #TIME) should be deleted and replaced with a System Variable control. Any Variable Label objects whose expression value consists of the #PAGE system variable, you must delete the variable object and replace that object with a System Variable control.

- **Report Variables**

Report variables that perform calculations or combine a number of values should be enclosed in parenthesis. If error messages are displayed for variables performing calculations, like the one below,

```
2 : CURRENCY      vTotal = price * quantity
```

add parenthesis as follows:

```
2 : CURRENCY      vTotal = (price * quantity)
```

- **Report Totals**

To be sure report totals are calculating correctly on all NULL and not NULL records, make sure the **ZERO** setting is ON. Check the setting under "Settings" > "Configuration Settings".

- **Printer Control Codes**

If DOS or machine printer control codes are used in R:BASE Report variables, they can no longer be stored in the Report Variables. A control code would appear in the variable list with an expression as follows: <27 40 115 49 83>

If the control code were used to alter the text on the report (e.g. bold, underline, etc.), the control code must be deleted. There are many new features in the Windows interface that replace control codes for altering report text objects. The R:BASE X for Windows version allows you to perform these font changes must easier.

If control codes listed in the report control hardware for paper feeds or to open a cash drawer, then

document down the exact code and review the "PCC Label" Control in the Report Designer. This control will support the same functionality used previously.

- **Picture Format**

For a report object, [] may be displayed in the report preview. In R:BASE for DOS and R:BASE for Windows versions prior to 7.x, a "Picture Format" option was available. The option allowed the justification of the value and several formatting options based upon the data type of the object. For example, to add the justification a [>], or [<] was used to right/left justify.

In R:BASE X, this feature is called "Display Format", which still offers several formatting options for report objects based upon the data type of the object. While the formatting option is still supported, the justification option is no longer supported in the previous context, within the "Display Format" settings. To right/left/center justify text of an object, use the "Format" tool bar which supports many text formatting options.

If you see [] listed in your report preview for a report object, you must right click on the object, select "Display Format", and remove the [] characters.

- **Page Setup**

For DOS to Windows conversions, the default page size setting is set to it's largest values in order to make sure no objects are lost in the conversion process. You must make sure you alter your page settings back to your desired values in order for your reports to print correctly.

To alter the page size settings, follow the below instructions:

1. Select "File" > "Page Setup..." from the main Menu Bar.
2. Select the "Paper Size" tab
3. For Portrait orientation reports, the Width should be set to "8.5".
4. For Landscape orientation reports, the Height should be set to "8.5".

From this dialog, you can also adjust your report margins from the "Margins" tab.

After making any changes, make sure that all of your report objects are located within the defined page size settings and margins. Otherwise, R:BASE will display a warning that "Controls beyond the new page width will be deleted." In this case, select "Cancel" to avoid losing any controls. Then move your controls within your desired page settings and then make your page size setting changes again.

- **Report Preview Tip**

The "Report Preview" tab will display a preview of your report as it may appear when you send the report to the printer or screen. Before selecting the tab, you must make sure that there are no errors listed in your Report variables, otherwise, you will receive an error message for every error listed multiplied by the number of records displayed in the Report Preview window.

What you can do to limit the number of rows displayed in the Report Preview window, thus limiting the number error messages. To do so, alter the Report Default settings for how many rows are displayed when previewing a report.

1. Select "Settings" > "Report/Label Designer" > "Default Settings..." from the main Menu Bar.
2. Alter the value for "Row Count for Preview:" to a smaller value other than 100; perhaps to 10.

- **Lookup Variable Tip**

Within the R:BASE X Report Designer there is an option to run a series of commands (or Action) for a report before the Report Designer is launched. In the Report Designer, choose "Report" from the Menu bar, the select "Actions" > "On Before Design..."

This will run a series of commands, which can include the creation of variables that Lookup Variables are based upon, to avoid annoying error messages when the form is opened in the designer. An example of a lookup variable based upon another variable would be...

```
1 : TEXT      vCompany = Company IN Customer WHERE CustID =  
.vCustID
```

The error message appears because the variable vCustID is not defined. Adding the following SET VAR command to the "On Before Design Action..." will alleviate this error message:

```
SET VAR vCustID INTEGER
```

The "On Before Design..." action is located under "Report" > "Actions" on the main Menu Bar.

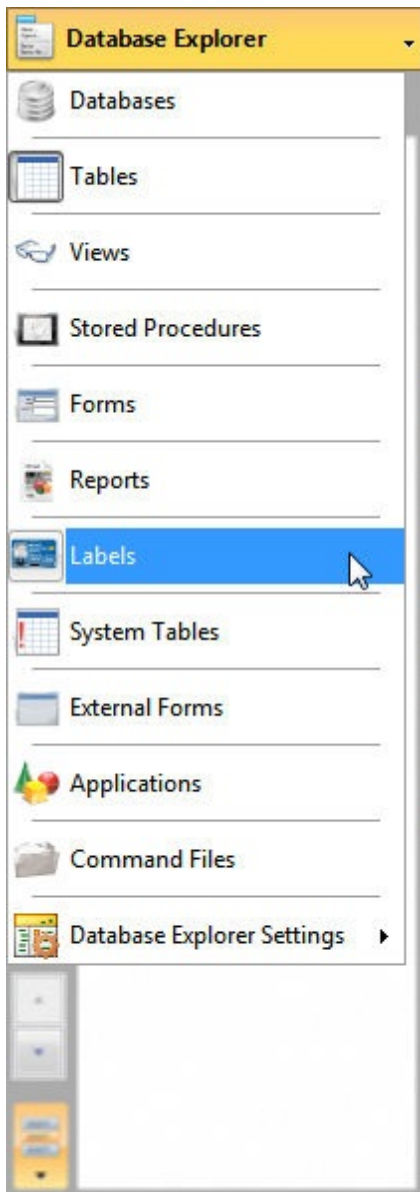
3.1.3 Converting Labels

You should now be looking at the R:BASE window with the Database Explorer displayed. To confirm, you will see the main R:BASE caption read the "R:BASE X", then your database name listed in square brackets, then "R:BASE Database Explorer" listed in square brackets.

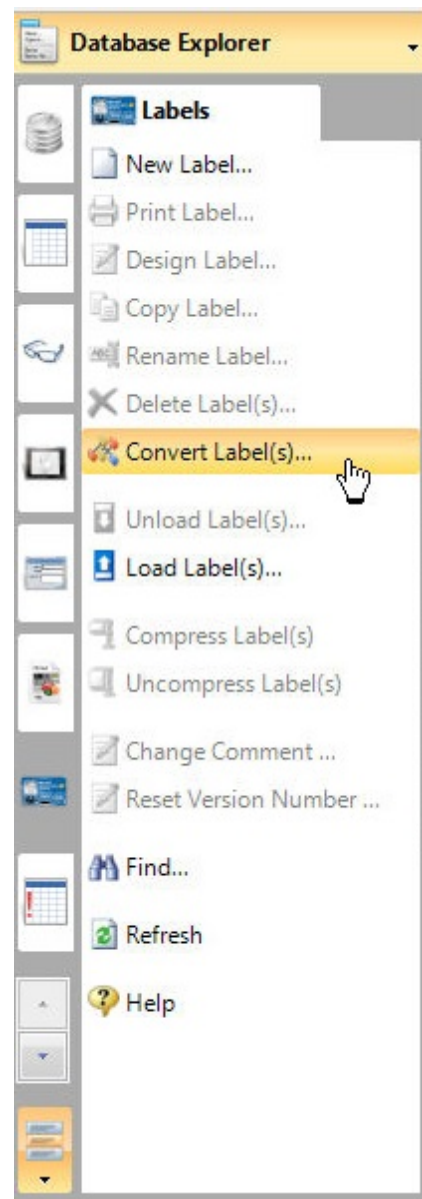
- If you do not see your database listed in brackets, then connect to it now by selecting "Database" > "Connect to Database..." from the main Menu Bar. You will be prompted to locate your database files where they are stored on your computer. Once connected to your database, you will see the database name listed in the R:BASE X program caption, in brackets.
- If you do not see "R:BASE Database Explorer" listed in square brackets, then select the "Database Explorer" button on the main Tool Bar. It is the first button on the left and the hint displayed will read "Database Explorer".

At the Database Explorer window, you will see the "Navigator" listed on the left side of the window containing various menu options of R:BASE database modules (e.g. Tables, Views, Forms, etc.)

1. Click on the Database Explorer button and choose "Labels" (figure 1), then select the "Convert Label(s)..." sub menu option (figure 2).

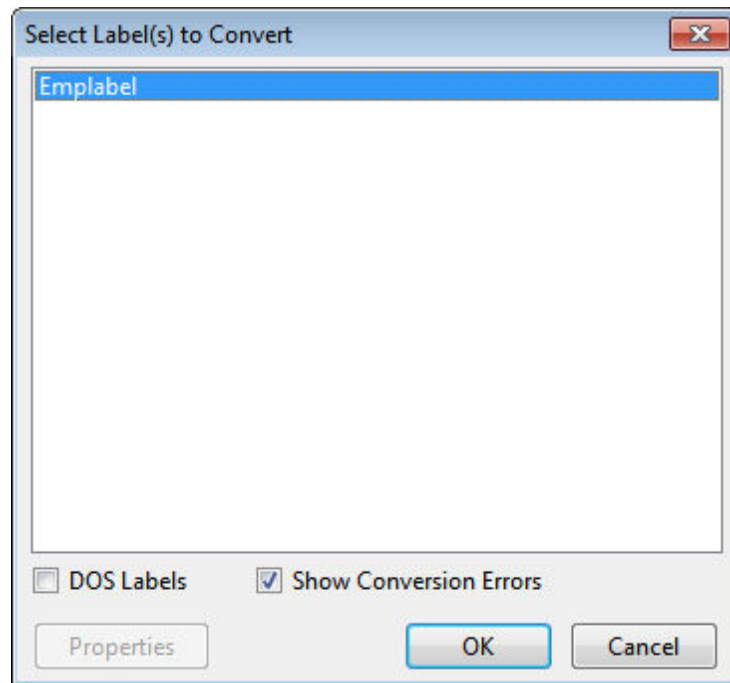


(figure 1)



(figure 2)

Upon selecting this option, a dialog will appear that may contain a list of the available labels to convert (figure 3). The labels listed are Windows-based labels that were created in a previous Windows version of R:BASE.



(figure 3)

- Individual labels can be selected and converted. Multiple labels can be converted by holding the [Ctrl] key and selecting individual label names. Or pressing the [Ctrl]+[A] keys will select all listed labels. Press the "OK" button to convert the selected labels.

The label(s) will convert and will be displayed in the Database Explorer.

- The database may contain DOS labels. Select the "DOS Labels" check box. The dialog may now contain a list of the available DOS labels to convert. Any labels listed are DOS-based labels that were created in a DOS version of R:BASE. The "Properties" button provides label conversion options to change single and double line characters to blanks, a pass setting, and margins (figure 5).

Maintaining single and double lines in the conversion process may help see how a label was divided into sections. The pass setting processes system variables once or twice are the label is generated. For DOS labels, the default is one pass. For Windows labels, the default pass setting is two. Margins in DOS labels begin at zero. The margin can be changed for any custom reports.

- Like with the Windows-based labels, the DOS labels can be individually selected and converted. Multiple labels can be converted by holding the [Ctrl] key and selecting individual label names. Or pressing the [Ctrl]+[A] keys will select all listed labels. Press the "OK" button to convert the selected labels.

The label(s) will convert and will be displayed within the Database Explorer.

At this point, you can now enter the Label Designer to view and make changes to the labels. There are [Issues and Suggestions](#) to review for the converted labels. However, since many of the instructions below refer to specific control/object names and require a basic understanding of the Label Designer, it is recommended that you perform the conversions of the remaining modules (e.g. forms, reports), and then complete the R:BASE Tutorial before continuing.

From the Main Menu, choose "Help" > "R:BASE Tutorial". This tutorial covers step-by-step instructions on building a complete database and application from scratch providing the R:BASE relational logic as it adhere's to Dr. Codd's relational model. This is where one would learn how to quickly adapt to the R:BASE interface!

3.1.3.1 Issues and Suggestions

NOTE: From inside the Label Designer, you can launch the Label Designer help file by pressing the [Shift] +[F1] hot keys.

- **Sub-Totals and Totals**

To calculate sub-totals and totals of table columns, Aggregate Variables have always been used to perform this job. Now, the R:BASE X for Windows Label Designer has a built-in object called DB Calc, which performs these same functions on table columns without creating the extra overhead of variables. You can replace your Variable Label objects with DB Calc objects in instances where the Variables Object results will not be used further down in the label.

- **#DATE, #TIME, #PAGE, Document, and Page Information**

The R:BASE X for Windows Label Designer now has a System Variable control, which allows an object to be placed for the current DATE, TIME, Document Name, Print DATE and TIME, or one of many Page Numbering options. All Variable Label objects whose expression value consists of a system variable (#DATE, #TIME) should be deleted and replaced with a System Variable control. Any Variable Label objects whose expression value consists of the #PAGE system variable, you must delete the variable object and replace that object with a System Variable control.

- **Label Variables**

Label variables that perform calculations or combine a number of values should be enclosed in parenthesis. If error messages are displayed for variables performing calculations, like the one below,

```
2 : CURRENCY      vTotal = price * quantity
```

add parenthesis as follows:

```
2 : CURRENCY      vTotal = (price * quantity)
```

- **Label Totals**

To be sure label totals are calculating correctly on all NULL and not NULL records, make sure the **ZERO** setting is ON. Check the setting under "Settings" > "Configuration Settings".

- **Printer Control Codes**

If DOS or machine printer control codes are used in R:BASE Label variables, they can no longer be stored in the Label Variables. A control code would appear in the variable list with an expression as follows: <27 40 115 49 83>

If the control code were used to alter the text on the label (e.g. bold, underline, etc.), the control code must be deleted. There are many new features in the Windows interface that replace control codes for altering label text objects. The R:BASE X for Windows version allows you to perform these font changes must easier.

If control codes listed in the label control hardware for paper feeds or to open a cash drawer, then document down the exact code and review the "PCC Label" Control in the Label Designer. This control will support the same functionality used previously.

- **Picture Format**

For a label object, [] may be displayed in the label preview. In R:BASE for DOS and R:BASE for Windows versions prior to 7.x, a "Picture Format" option was available. The option allowed the justification of the value and several formatting options based upon the data type of the object. For example, to add the justification a [>], or [<] was used to right/left justify.

In R:BASE X, this feature is called "Display Format", which still offers several formatting options for report objects based upon the data type of the object. While the formatting option is still supported, the justification option is no longer supported in the previous context, within the "Display Format" settings. To right/left/center justify text of an object, use the "Format" tool bar which supports many text

formatting options.

If you see `[]` listed in your label preview for a label object, you must right click on the object, select "Display Format", and remove the `[]` characters.

- **Page Setup**

For DOS to Windows conversions, the default page size setting is set to it's largest values in order to make sure no objects are lost in the conversion process. You must make sure you alter your page settings back to your desired values in order for your labels to print correctly.

To alter the page size settings, follow the below instructions:

1. Select "File" > "Page Setup..." from the main Menu Bar.
2. Select the "Paper Size" tab
3. For Portrait orientation reports, the Width should be set to "8.5".
4. For Landscape orientation reports, the Height should be set to "8.5".

From this dialog, you can also adjust your labels margins from the "Margins" tab.

After making any changes, make sure that all of your labels objects are located within the defined page size settings and margins. Otherwise, R:BASE will display a warning that "Controls beyond the new page width will be deleted." In this case, select "Cancel" to avoid losing any controls. Then move your controls within your desired page settings and then make your page size setting changes again.

- **Label Preview Tip**

The "Label Preview" tab will display a preview of your label as it may appear when you send the label to the printer or screen. Before selecting the tab, you must make sure that there are no errors listed in your label variables, otherwise, you will receive an error message for every error listed multiplied by the number of records displayed in the Label Preview window.

What you can do to limit the number of rows displayed in the Label Preview window, thus limiting the number error messages. To do so, alter the Label Default settings for how many rows are displayed when previewing a label.

1. Select "Settings" > "Report/Label Designer" > "Default Settings..." from the main Menu Bar.
2. Alter the value for "Row Count for Preview:" to a smaller value other than 100; perhaps to 10.

- **Lookup Variable Tip**

Recently added to the R:BASE X Label Designer is the option to run a command file (or Action) for a form before the Label Designer is launched. In the Label Designer, choose "Label" from the Menu bar, the select "Actions" > "On Before Design...".

This allows you to create any variables that Lookup Variables are based upon to avoid annoying error messages when the label is opened in the designer. An example of a lookup variable based upon another variable would be...

```
1 : TEXT      vCompany = Company IN Customer WHERE CustID =
.vCustID
```

The error message appears because the variable `vCustID` is not defined. Adding the following SET VAR command to the "On Before Design..." action will alleviate this error message:

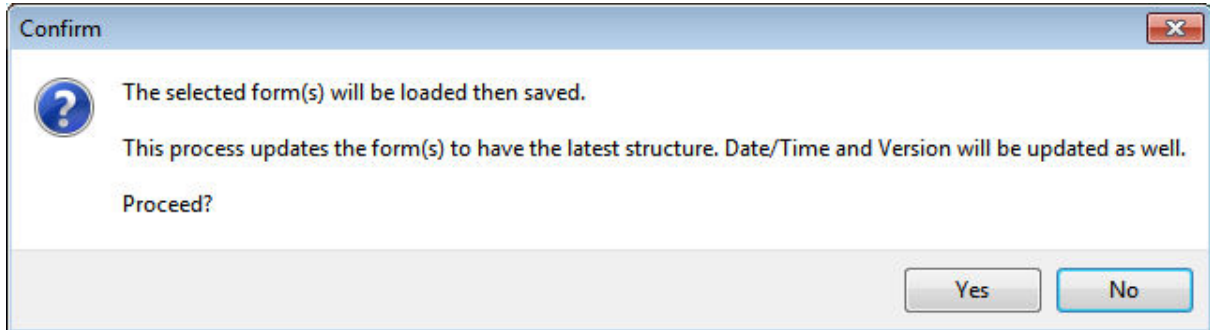
```
SET VAR vCustID INTEGER
```

The "On Before Design..." action is located under "Label" > "Actions" on the main Menu Bar.

3.2 R:BASE 7.x/Turbo V-8 Forms, Reports, & Labels

R:BASE 7.x/Turbo V-8 forms, reports, and labels will automatically populate the Forms, Reports, and Labels menus of the R:BASE X Database Explorer. The items will run in R:BASE X with little or no changes required on your behalf. However, it is recommended that you review each item to ensure the modules behave as expected.

To assist with the database migration use the "Touch" utility to quickly update and save forms, reports, and labels when migrating between current versions. The Database Explorer right click menu works like opening the selected object in the designer, making the content dirty, and saving it. The feature allows a user to save hundreds of forms, reports, and labels when migrating between R:BASE versions.



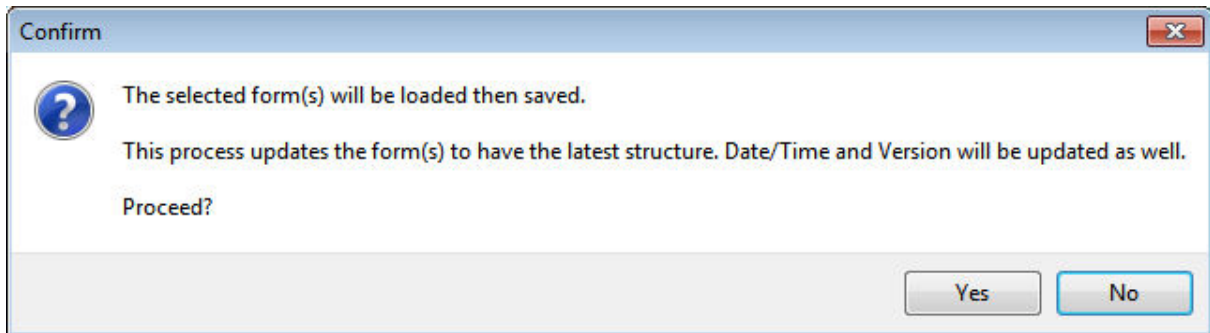
To assist in the migration to R:BASE X, [new conversion features](#) have been built in for your convenience.

Of course, there are many other new features to take advantage of. Please review the "What's New in R:BASE X for Windows" PDF document for additional details.

3.3 R:BASE eXtreme 9.x (32/64) Forms, Reports, & Labels

R:BASE eXtreme 9.x forms, reports, and labels will automatically populate the Forms, Reports, and Labels menus of the R:BASE X Database Explorer. The items will run in R:BASE X with no changes required on your behalf. It is recommended that you review each item to ensure the ensure the modules behave as expected.

To assist with the database migration use the "Touch" utility to quickly update and save forms, reports, and labels when migrating between current versions. The Database Explorer right click menu works like opening the selected object in the designer, making the content dirty, and saving it. The feature allows a user to save hundreds of forms, reports, and labels when migrating between R:BASE versions.



To assist in the migration to R:BASE X Enterprise, [new conversion features](#) have been built in for your convenience.

Of course, there will be several new features to take advantage of. Please review the "What's New in R:BASE X for Windows" PDF document for additional details.

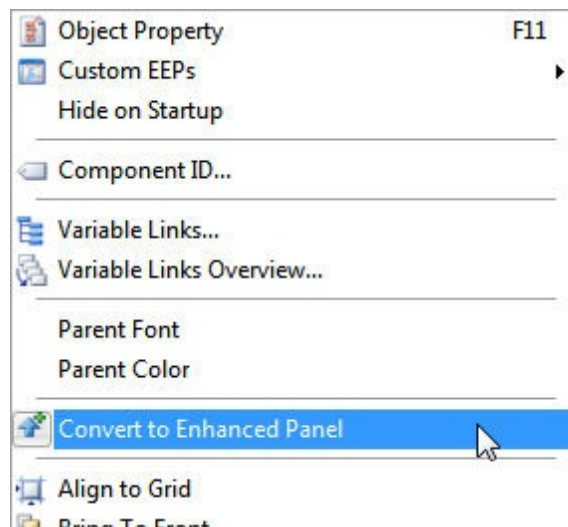
3.4 New Conversion Enhancements

To assist in the migration to R:BASE X, new conversion features have been built in for your convenience.

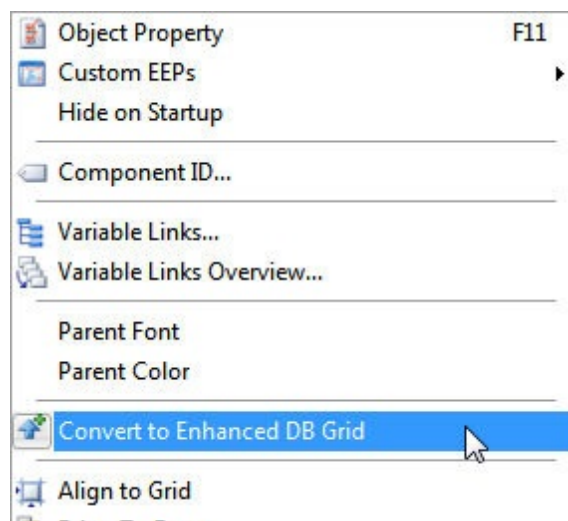
"Single Click" Conversion to Enhanced Form Controls

In the earlier versions of R:BASE, there are several introductory controls that have been enhanced considerably in later R:BASE releases. For example, the Tab Control was provided in R:BASE 7.0 for Windows. Later, in R:BASE 7.1 the Enhanced Tab Control was introduced to offer many additional features. The same comparison can be made for the popular DB Grid control whose "enhanced" counterpart was introduced in R:BASE eXtreme for Windows. Migrating from the introductory control to the enhanced counterpart meant recreating the object on the form, while referencing the properties of the original.

Now, the conversion of the introductory control can be made with a single click. For example, by right clicking on a Panel control, the option to "Convert to Enhanced Panel" is available.



By right clicking on a DB Grid control, the option to "Convert to Enhanced DB Grid" is available.

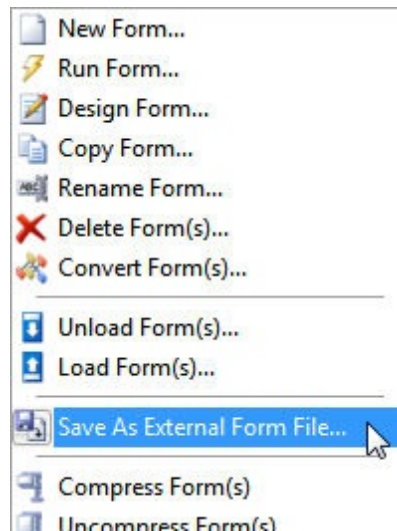


The following single-click conversions to "enhanced" form controls are available:

- 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

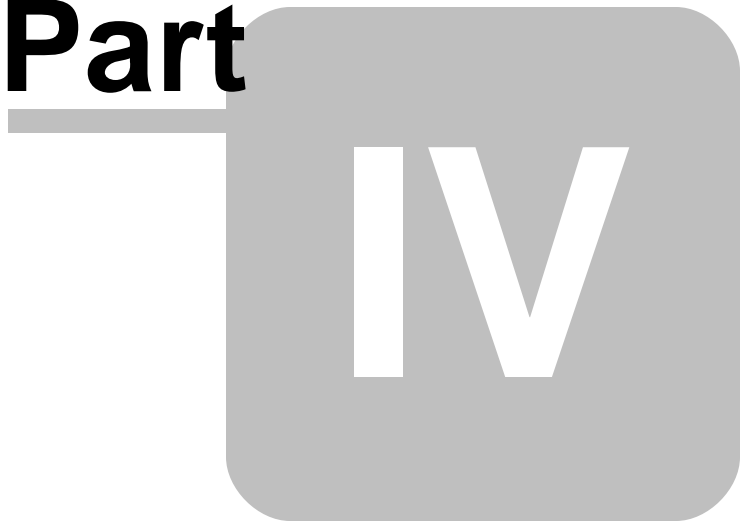
Variable Form Conversion to External Form File

Another new time-saving conversion feature is located in the Database Explorer within the "Forms" options where a new selection allows for a Variable Form to be saved as an External Form File. The option is only enabled when a Variable Form is selected.



Please review the "What's New in R:BASE X for Windows" PDF document for additional features.

Part



IV

4 Converting Applications

As R:BASE can be customized for any type of business model or company schema, there have always been several ways that developers and users could create an application. Actually, if you think of what an application consists of, you're really looking at a stored series of commands in what are called command files, which are then combined with other command files to form applications.

R:BASE provides all of the tools you need to produce command files and applications, it is just up to you to decide which method serves your needs best.

4.1 R:BASE 6.5++ and Lower Applications

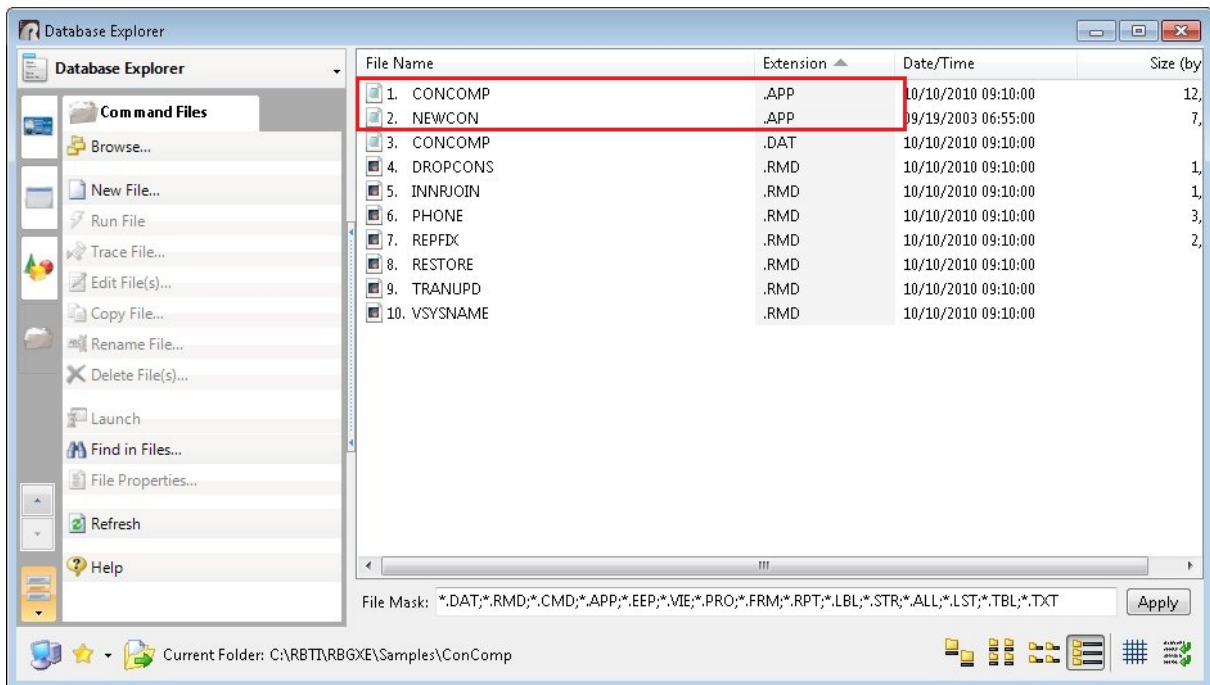
4.1.1 Application Express Users (.APP)

If you are converting an application that was designed using the Application Express module from versions prior to R:BASE 7.x, the actual application file consisting of the R:BASE command language (.APP) can be converted within R:BASE X. In addition to the .APP file, there will be an .APX and either .API or .APW files. You will only need the .APP or the .API files.

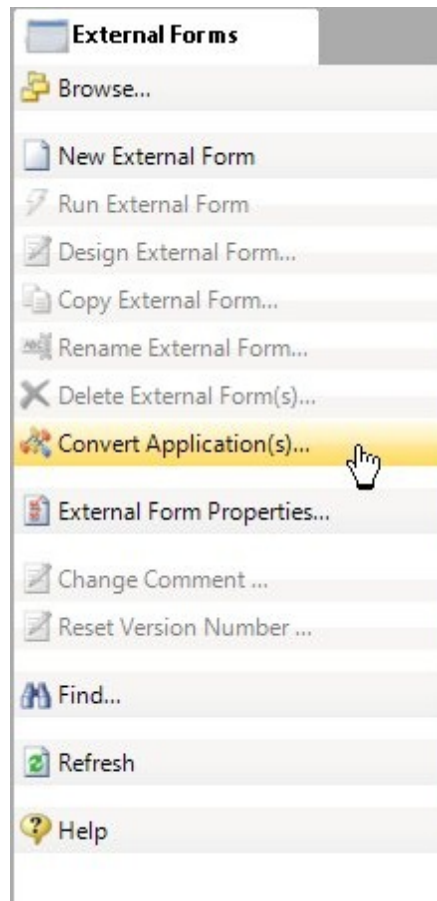
The application may be one large .APP file or several smaller command files; usually with the .CMD file extension. The standard command file extension was .CMD in early R:BASE versions. It may also be possible that no file extension is used for the command files. In this case, it is recommended that the .RMD file extension be added to the files so it may be displayed within the "Command Files" menu of the Database Explorer's Navigator.

In R:BASE for Windows, the new file extension standard is .RMD, as more file servers and mail servers flag the .CMD file extension as a possible virus. Or, if you are using a custom file extension, you can add the extension to the "File Mask:" field under the "Command Files" menu, so the files will then appear in this window.

The source code command syntax within the .APP file contains the menus and menu actions of your custom application in the form of command blocks, menu blocks, and possibly screen blocks. The .APP file is likely located with your database files. So, when you connect to your database using R:BASE X, you will see the .APP file listed under the "Command Files" menu within the Database Explorer's Navigator. The files will not be listed under the "Applications" menu as the R:BASE X Application Designer will not open legacy Application Express projects for editing.

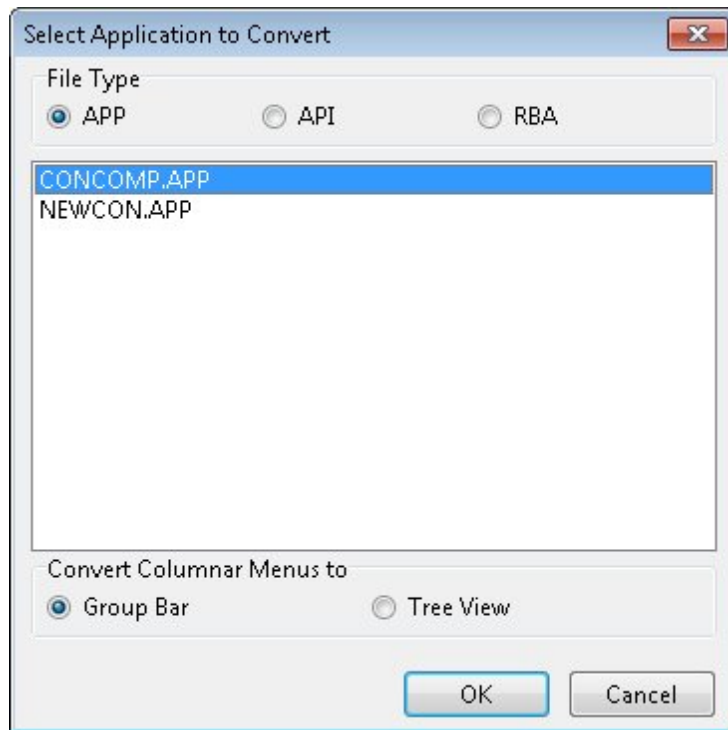


In order to use the .APP file contents in R:BASE X, a new "**Convert Application(s)...**" option has been made available within the "External Forms" portion of the Database Explorer. This feature will parse through the legacy Windows and DOS legacy application files and converts it to an External Form File. If the file does not contain \$COMMAND blocks or \$MENU Blocks, then no conversion will take place.



Selecting the "Convert Application(s)..." option will display a dialog to select an application file (.APP/.API). If no files are displayed in the dialog, press the "Cancel" button and select "Utilities" > "Set Working Directory..." to navigate to the folder where the application files reside. Then, revisit the "Convert Application(s)..." option.

Based upon the menu type of the original .APP application file, there are several methods in which R:BASE will load the menu options into an external form. If the application file used a "pull down" menu system, then the external form will contain a "Menu Bar". If the application file used a "columnar" menu system, then the external form can contain either a "Group Bar" or "Tree View". All menu types will create a collection of user interface groups that contains a list of items to select that can invoke commands.



After selecting the "OK" button, the converted external form will appear in the Database Explorer window. An external form file, with the .RFF file extension, will reside in the folder. If the database and application is moved to another directory, be sure to move the external form file as well. To design the external form and see the converted command syntax, select "Design External Form..." from Navigator options. You will then enter the External Form Designer module to alter the external form.

4.1.1.1 Menu System Types

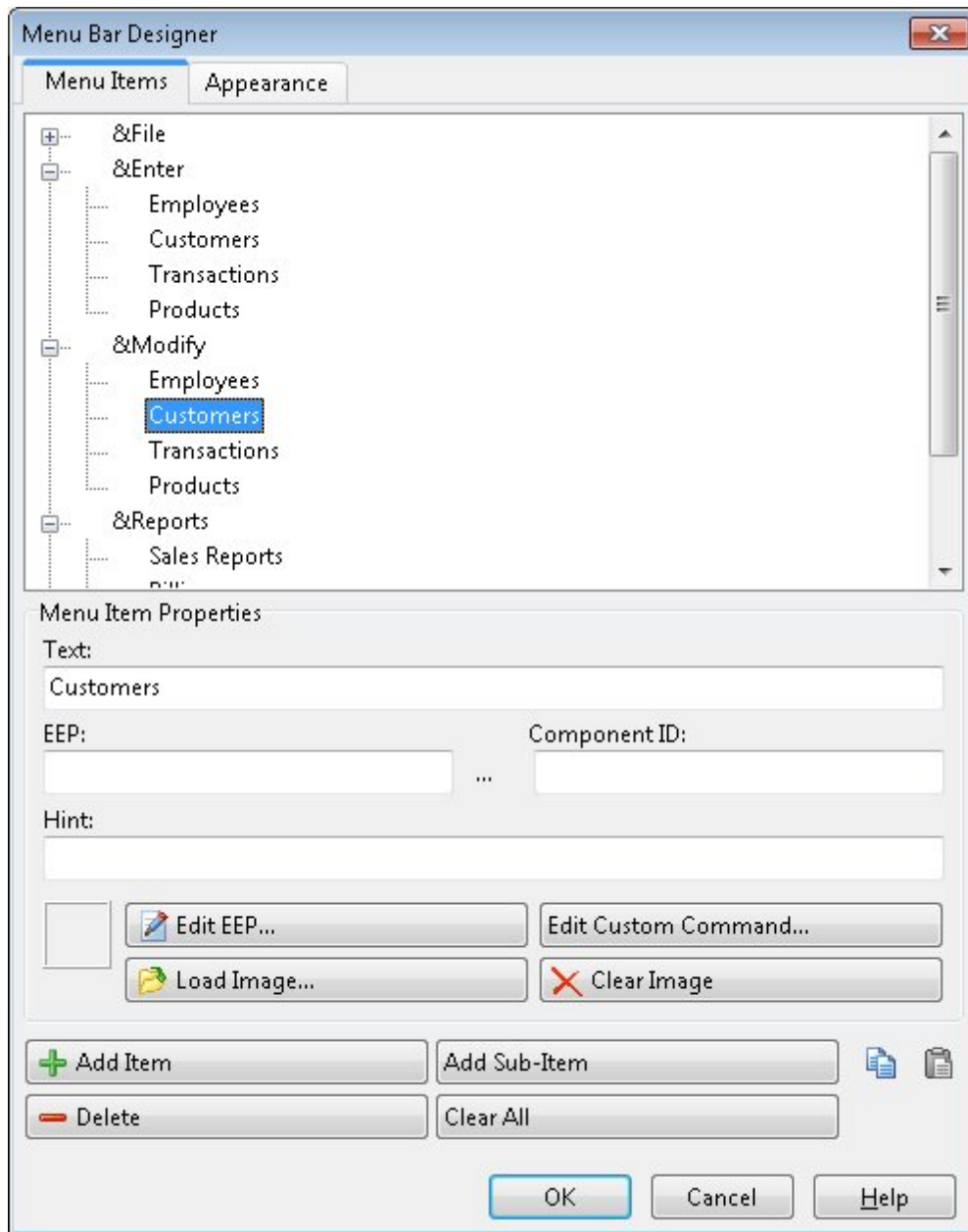
Based upon the menu system type of the original .APP application file, R:BASE will create the following menu system types into the external form:

- Menu Bar
- Group Bar
- Tree View

Menu Bar

After the conversion, a blank gray canvas will be displayed in the External Form Designer. The menu system and command syntax for each menu item from the application are stored within the external form file. From the main Menu Bar, select "Layout" > "Design Menu Bar". The Menu Bar Designer will launch with the application file menus placed accordingly. The Menu Items displayed should match the \$MENU blocks from the originating .APP application file. There may be some menu options that are no longer used. Make a note of the items as this will save time in the process of reviewing and updating the command syntax.

A Menu Bar is a horizontal strip that contains lists of available menus for a certain program. In Windows programs, the menu bar resides at the top of a window. The Menu Bar uses main "Items" which display across the top of a window, and "Sub-Items" which drop down when the main Item is selected. Items" and Sub-Items can be used to run a series of R:BASE commands or an external file. From the below example, "Modify" is the main Item, where "Employees", "Customers", "Transactions", and "Products" are the Sub-Items.



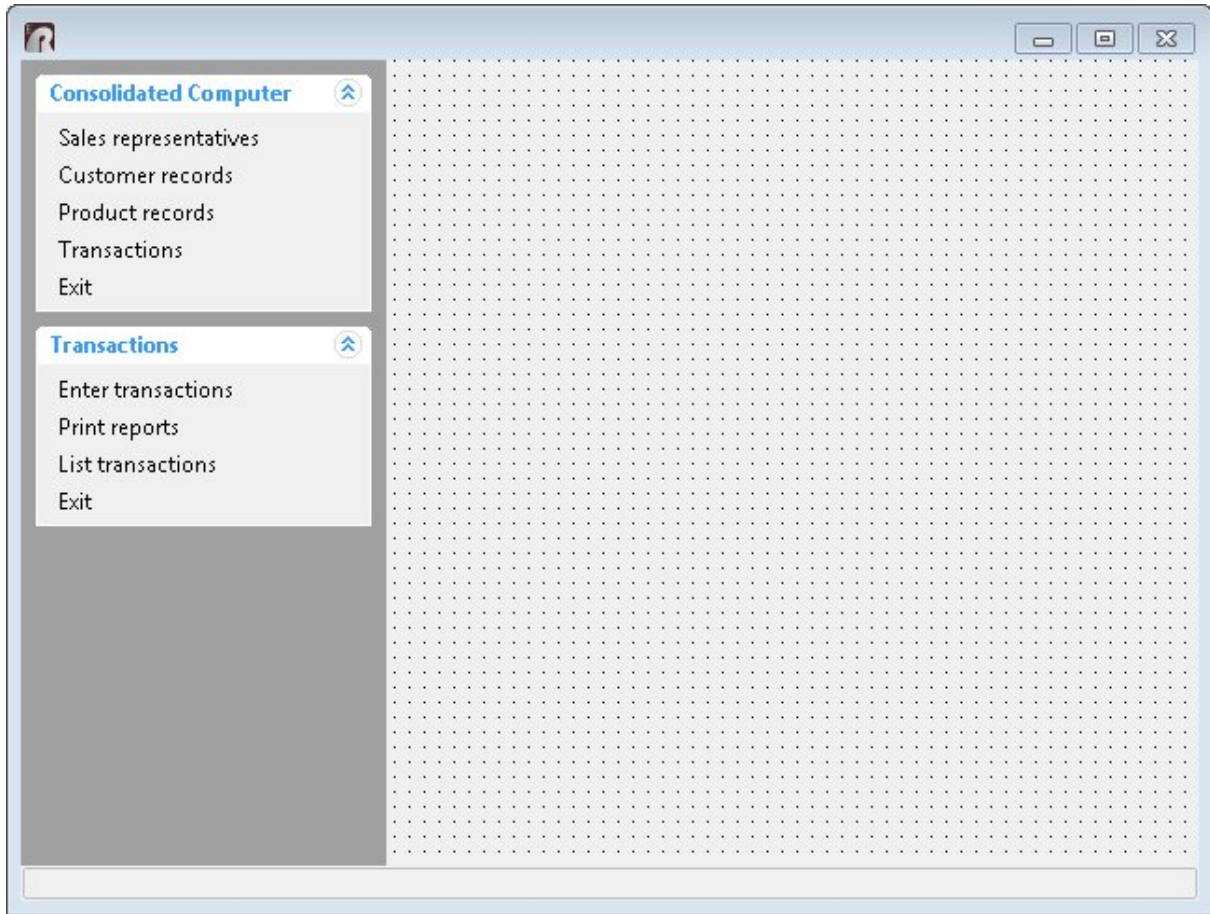
During the conversion, R:BASE loaded the command syntax portions of the .APP application file into the "Custom Command" portions of the Menu Bar. Any [command syntax](#) loaded in a Sub-Item will highlight the "Edit Custom Command..." button with a yellow background. If no syntax was loaded into the menu item or sub-item, then the button background will not be yellow. Selecting the "Edit Custom Command..." button will display the command syntax stored within the Item or Sub-Item. Before running the external form and selecting any menu options, the [command syntax must first be checked](#).

Group Bar

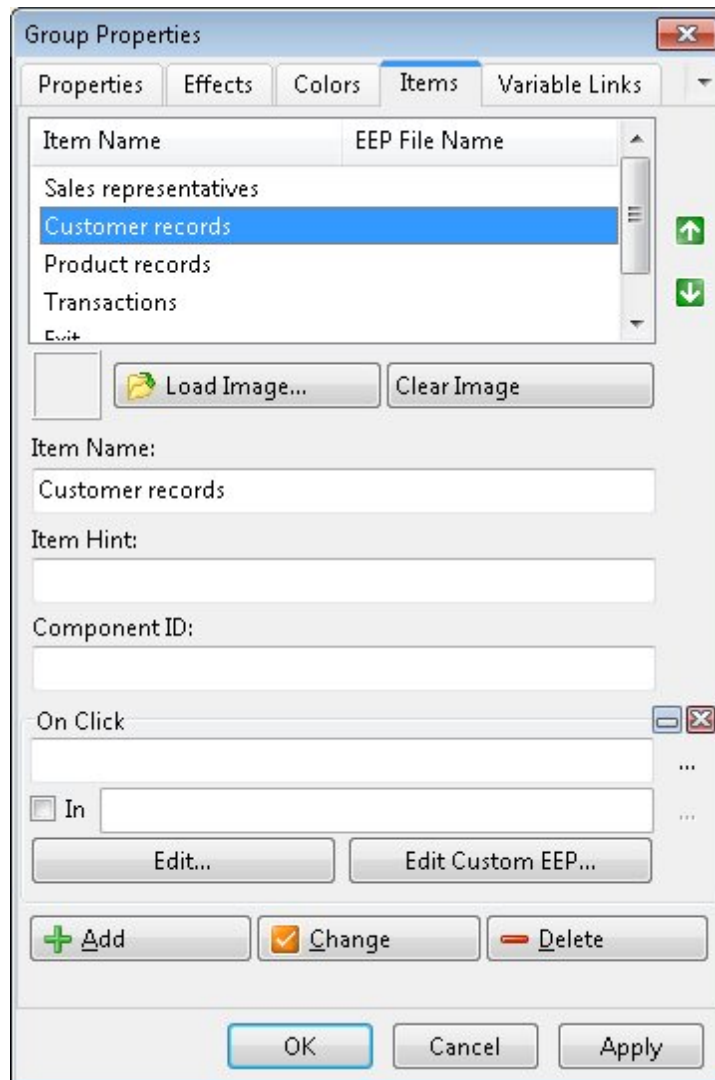
After the conversion, the Group Bar will be located on the left side of the form with menu options placed accordingly. The Group Bar items displayed should match the \$MENU blocks from the originating .APP application file. There may be some menu options that are no longer used. Make a note of the items as this will save time in the process of reviewing and updating the command syntax.

A Group Bar control is a collection of "groups", that can be opened and closed by using the arrows (looks like two carat characters ^). Each group contains a list if items that are used to run a series of R:BASE

commands or an external file. The "Groups" are displayed below with a blue font and white background. The Group Items are located under the Group with a black font. From the below example, "QUOTE FILE MAIN MENU Ver 4.5" is the first Group, where "VIEW DATA", "PRINT REPORTS", "ENTER NEW QUOTES", "EDIT QUOTE", "TRANSFER DATA", "COST INFORMATION", and "EXIT QUOTE FILES" are the Items.



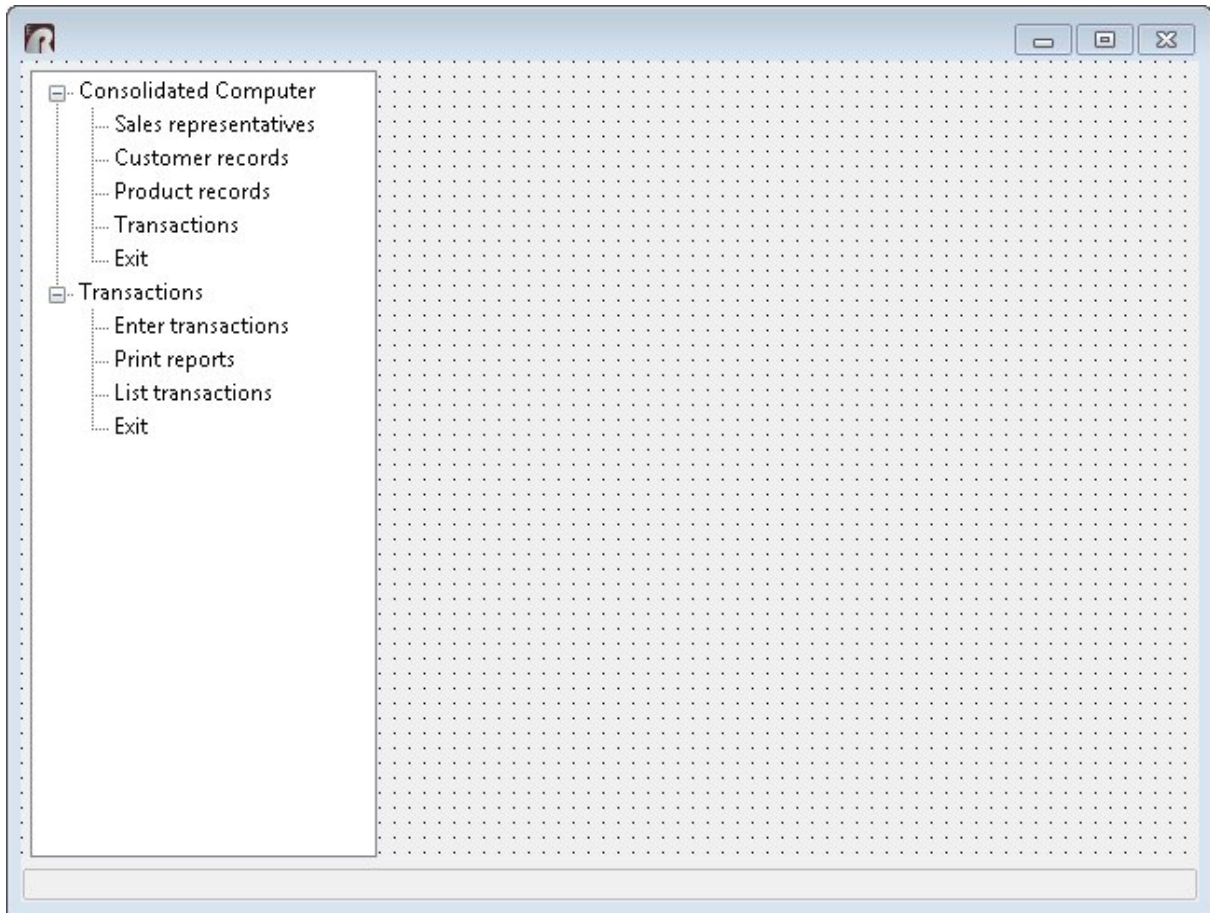
By right clicking on the Group, and selecting "Object Property [F11], the Group Properties dialog is displayed. Select the "Items" tab to review the list of item names. Any [command syntax](#) loaded in an Item will highlight the "Edit Custom EEP..." button with a yellow background. If no syntax was loaded into the Item, then the button background will not be yellow. Selecting the "Edit Custom EEP..." button will display the stored command syntax. Before running the external form and selecting any menu options, the [command syntax must first be checked](#).



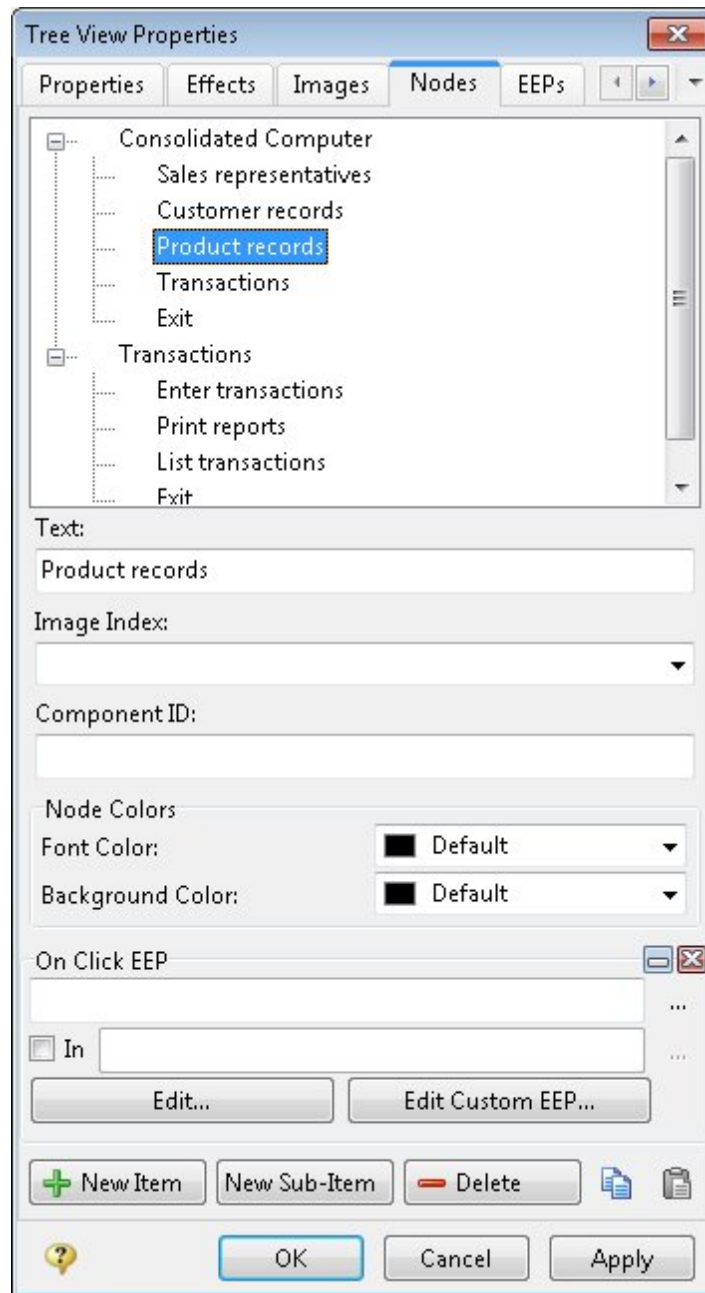
Tree View

After the conversion, the Tree View will be located on the left side of the form with menu options placed accordingly. The Tree View items displayed should match the \$MENU blocks from the originating .APP application file. There may be some menu options that are no longer used. Make a note of the items as this will save time in the process of reviewing and updating the command syntax.

A Tree View control is a expandable object with collection of Nodes and Sub-Items that can be expanded and closed by using the plus and minus characters. Each Node contains a list if items that are used to run a series of R:BASE commands or an external file. The main "Nodes" are displayed below next to the minus characters. The Sub-Items are located within the Nodes linked by the dotted lines. From the below example, "QUOTE FILE MAIN MENU Ver 4.5" is the first Node, where "VIEW DATA", "PRINT REPORTS", "ENTER NEW QUOTES", "EDIT QUOTE", "TRANSFER DATA", "COST INFORMATION", and "EXIT QUOTE FILES" are the Sub-Items.



By right clicking on the Tree View, and selecting "Object Property [F11], the Tree View Properties dialog is displayed. Select the "Nodes" tab to review the list of nodes and sub-items. Any [command syntax](#) loaded in a sub-item will highlight the "Edit Custom EEP..." button with a yellow background. If no syntax was loaded into the sub-item, then the button background will not be yellow. Selecting the "Edit Custom EEP..." button will display the stored command syntax. Before running the external form and selecting any menu options, the [command syntax must first be checked](#).



4.1.1.2 Menu Action Types

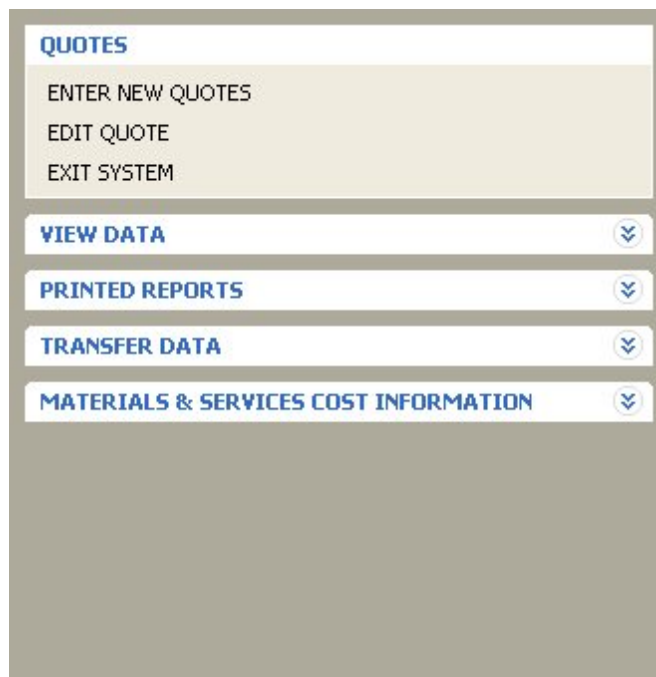
When a menu option is selected in a legacy application, R:BASE would have provided another menu (e.g. sub menu) to the user, or would have performed an action. The two type of menus that can be used include a "menu to a menu" or a "menu to an action."

Menu to a Menu

In some cases, a legacy menu selection was used to jump to another menu. This usually occurs in the first or second tier of a menu system. In the menu system below, the menu options with the red, orange, green, and blue lines were used in a DOS menu system to jump to another screen with additional options. The other three options "ENTER NEW QUOTES", "EDIT QUOTE", and "EXIT QUOTE FILES" do not.



Since the Windows menu system can display more information, these initial tier options with the red, orange, green, and blue lines can be removed, and the displayed Group Bar main group captions can be altered. The end result may look something like this.



Menu to an Action

The menu to an action will run a series of commands, a Command Block, or an external file. The action can contain as little as one or two commands, or as much as hundreds of lines of code.

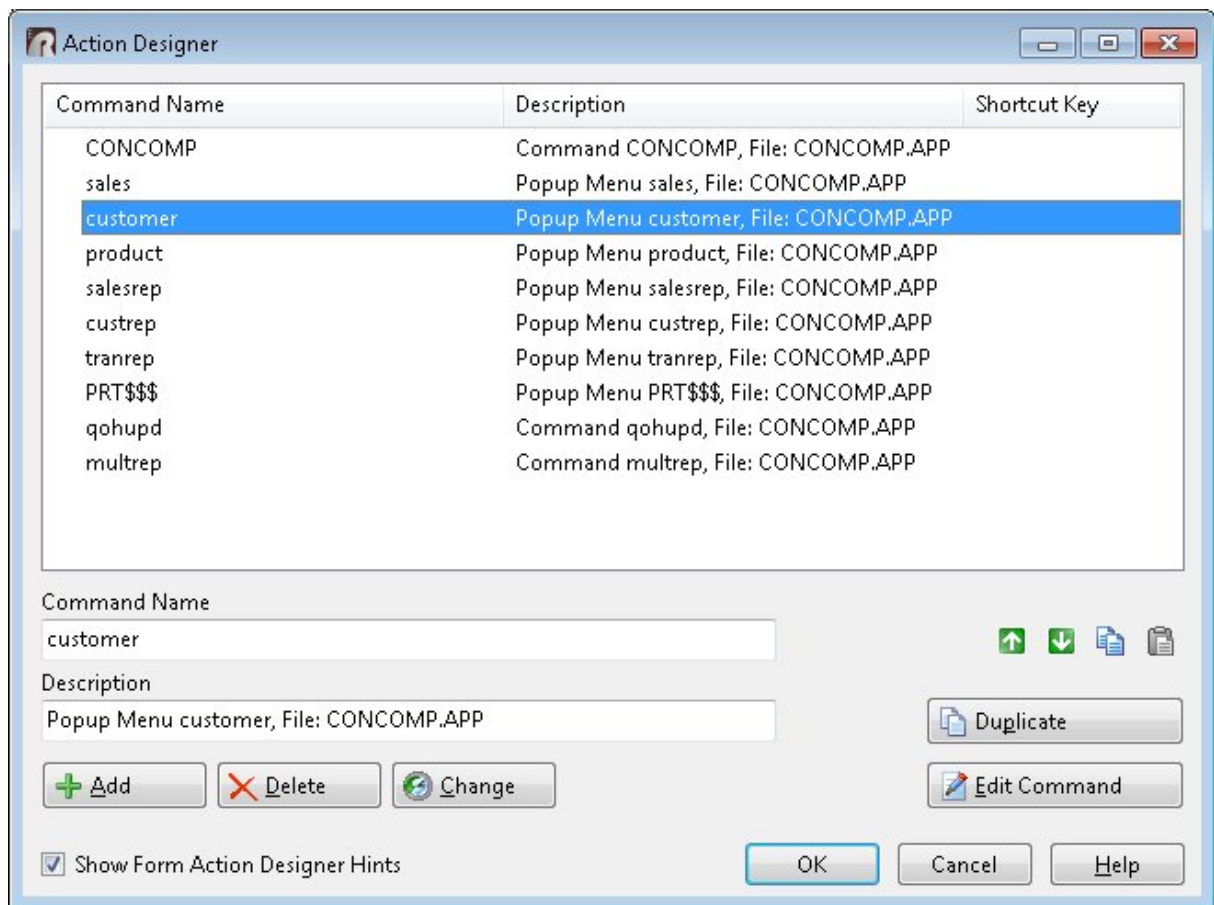
After the conversion, R:BASE loaded the command syntax portions of the .APP application file into the "Custom Command" or "Custom EEP" portions of the new menu system (e.g. Menu Bar, Group Bar, Tree View). Any [command syntax](#) loaded will highlight the "Edit Custom Command..." or "Edit Custom EEP" button with a yellow background. Selecting the button will display the stored command syntax. Before running the external form and selecting any menu options, the command syntax must first be checked.

4.1.1.3 Command Syntax Reference

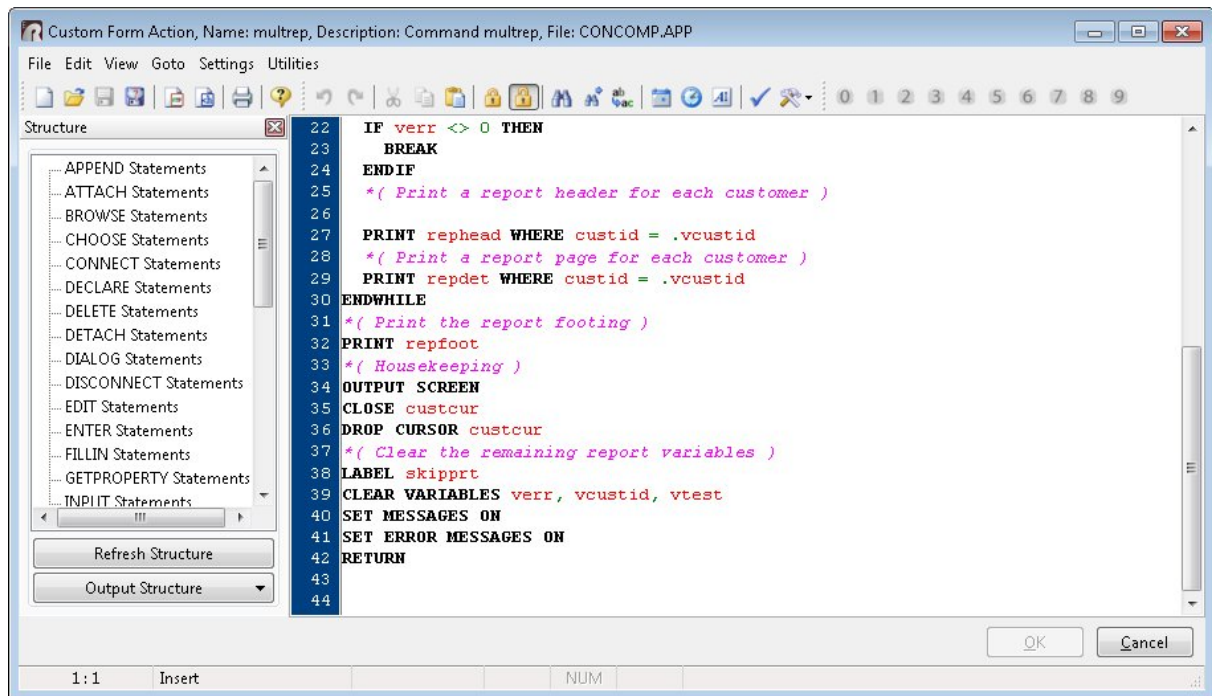
After the conversion, R:BASE will also load the command block portions of the .APP application file into the external form as separate "Custom Form Actions". From the main Menu Bar, select "Layout" > "Custom Form Actions". The placement of the command syntax within the Custom Form Actions serves as a secondary reference for the command syntax that was used in the legacy application file.

Since the individual command blocks were already loaded into the appropriate menu system (Menu Bar, Group Bar, Tree View) during the initial conversion process, the syntax here does not need to be updated in addition to to the command syntax in the menu system.

The Action Designer, which is used to build and store a library of command blocks, will launch with the application file \$COMMAND blocks loaded separately as individual "Command Name" actions. The "Description" column will list the \$COMMAND block and originating application file. Within each of the listed items is a block of code. Select or hover the mouse cursor over an item will display a hint of the stored command syntax.



Select the "Edit Command" button to review the command syntax stored within the Custom Form Action.



4.1.2 Command Files

The application may be one large .APP file or several smaller files; usually with the .CMD file extension. The standard command file extension was .CMD in early R:BASE versions. It may also be possible that no file extension is used for the command files. In this case, it is recommended that the .RMD file extension be added to the file so it may be displayed within the "Command Files" menu within the Database Explorer's Navigator. Now, in R:BASE X for Windows, the new standard is .RMD as more file servers and mail servers flag the .CMD file extension as a possible virus. If you are using a custom file extension, you can add the extension to the "File Mask:" field under the "Command Files" option and they will then appear in this window.

In order to use your command files in R:BASE X, you will need to review and [update the command syntax](#) used in the files. Based on the R:BASE version you are upgrading from, there are additional steps needed to upgrade your command syntax. The older your command files are, then the more steps will be needed. And, if you are upgrading from a DOS version, there are additional changes required as well.

With command files as the primary storage format for the code, it is recommended that you open the R:BASE Editor Help file and review the many features available to add more productivity to the conversion process.

Also, in R:BASE X, there are several different ways to run the menus contained within the files. Please review the several [Application Formats](#) available.

4.1.3 Updating the Command Syntax

At this point, it is necessary to review and update the command syntax so it can be used within R:BASE X. If the syntax is used to RUN another file, then that file must also be checked and updated, if needed. Based upon the R:BASE version you are upgrading from, there are additional steps needed to update your application code. The older the application is, then the more steps will be needed. And, if you are upgrading from a DOS version, there are additional changes required as well.

You may encounter reserved words (PROJECT, TIME), obsolete commands (SET POINTER), and/or commands whose syntax has been enhanced for your benefit (PRINT, SELECT, CHOOSE). The time invested to perform these changes depends on the size of your command files.

There are two important tools included with R:BASE X that will make your command syntax changes more pleasant than you think.

The new R:BASE Editor & R:Style!

The R:BASE Editor is an editor specifically designed for creation and editing of R:BASE program and application files, command files, recorded scripts, and text files. It offers these special R:BASE features:

- You can specify settings such as the font, tab stops, and text wrapping. You can also search and replace text, and print files.
- Any number of program files can be open simultaneously.
- Command files are shown with syntax highlighting with the option of displaying each syntax element in a different color text.
- Safe tabs -- the Tab key inserts spaces.
- Block commands include block indent, block outdent, block comment out, and block comment in.
- Seamless integration with the R:Style, R:BASE code styler and checker.
- And more...

What is R:Style?

R:Style provides structural error checking, and spelling assistance to help debug your code prior to running it. R:Style will tell you where in the file to look, and what error to look for! R:Style is not a full syntax checker, but it is an excellent structure checker, with some syntax checking thrown in as a bonus. R:Style will find:

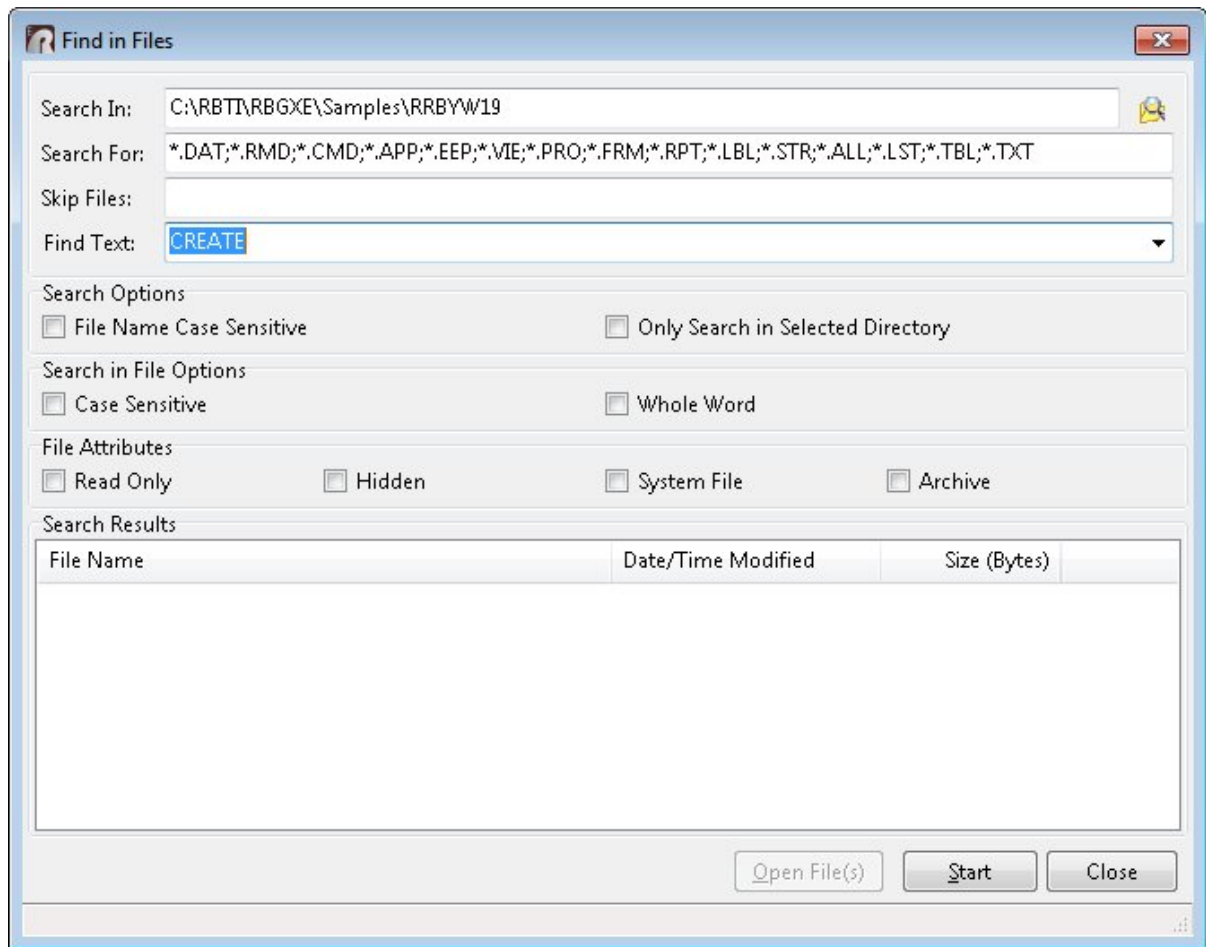
- Mis-terminated lines (= instead of +)
- Illegal or ambiguous commands
- Missing, unmatched, or incorrect quotes
- Unmatched parenthesis
- Missing RETURNS & ENDS, adds them
- Missing or out of place structures, IF, ELSE, ENDF, SWITCH, ENDSW, WHILE, ENDWHILE, BREAK
- Duplicate block names in APP files
- Illegal use of command words in code or block names
- Ill advised RETURN from within WHILE or SWITCH
- Illegal dotted variables
- Support for finding misspelled or illegal words
- And more...

4.1.3.1 Table and Column Name Changes

During the initial Preparation stages of the conversion process you were instructed to review change your table and column names which match any invalid names and [reserved words](#), and to record these changes on paper.

If you made any table and/or column name changes, the first step in your command syntax updates is to make these necessary name changes in the application/command files.

For command files, one time-saving suggestion for this task is to use the R:BASE built-in "Find Files" utility. To launch this command file utility, choose "Utilities" > "Find Files" from the main Menu bar. This interface will allow you to search your command files for obsolete commands and other words, so you are not forced to manually search the individual files.



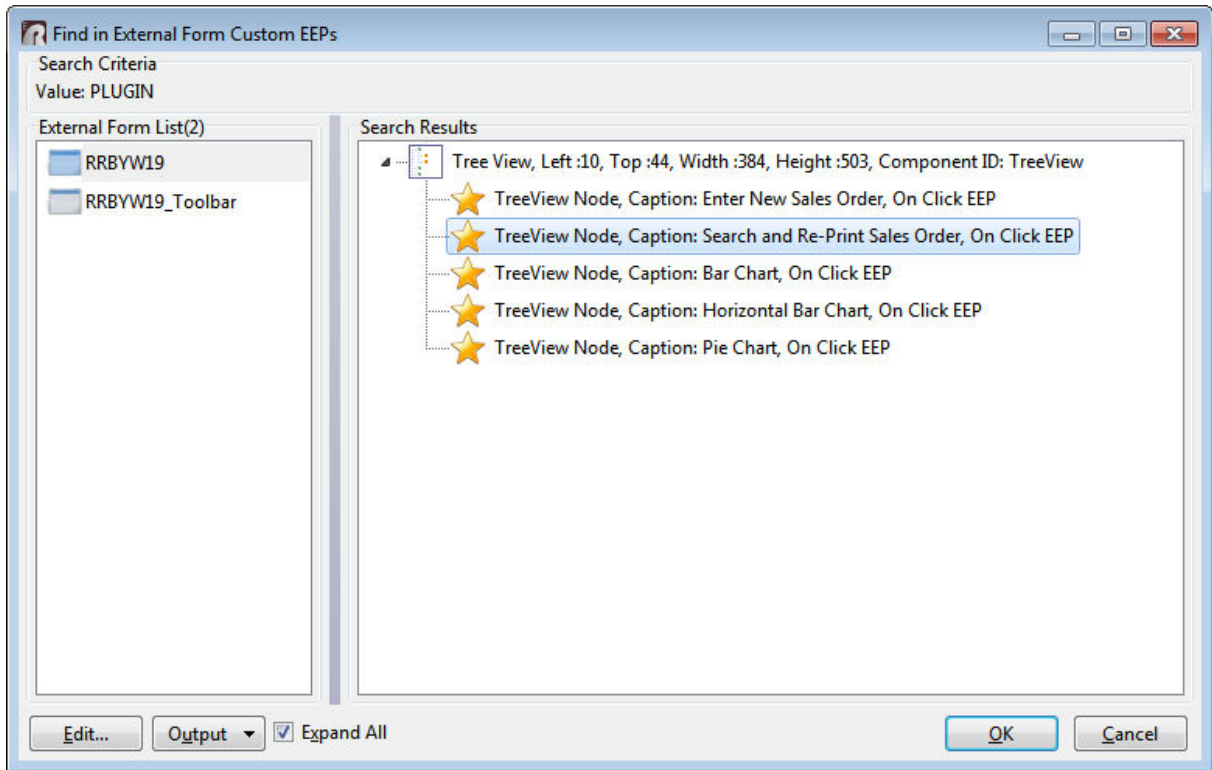
Keep in mind that whether you are using the R:BASE Editor or another text editor to make these command syntax updates, it is wise to take advantage of all of the utilities available in the text editor. In this case where you are replacing keywords, be sure to use any built-in word Search and Replace utilities to make this task easier.

For Custom Form Actions, a built-in search utility is available to search all of the code within the Actions. From within the External Form Designer, select "Edit" > "Find in Custom EEPs" from the main Menu Bar to search for text within Custom EEPs for the external form. The key combination [Ctrl]+[F] can also be used to launch the "Find in Custom EEPs" dialog.



After the search is complete, a list of external form objects and custom form actions that match the search will be displayed. The external form object(s) will contain the exact location where the Custom EEP is in use for the object. The command syntax can be launched in the R:BASE Editor 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.



4.1.3.2 Obsolete Commands

The following table contains a list of commands that are considered to be obsolete. Most of these commands have been made obsolete by their SQL Compliant equivalent, and there is no guarantee that these commands will be supported in future versions of R:BASE. Any code which relies on any of these commands should be considered dangerous as their use may have unintended and unpredictable results.

While most items have a direct replacement there are some items that are listed as having no direct replacement. However it may be possible to replace those commands with other commands that emulate that functionality. For more information on the "Replacement" commands, refer to the R:BASE Help "Command Index", or press [F1] from any location in R:BASE.

One suggestion for task this task is to use the R:BASE built-in "Find in Files" utility. To launch this command file utility, choose "Utilities" > "Find in Files" from the main Menu bar. This interface will allow you to search your command files for obsolete commands and other words, so you are not forced to manually search the individual files.

Obsolete Command	Replacement	Notes
#FORM_COLUMNNAME	RBTI_FORM_COLNAME	See also RBTI System Variables
#FORM_FORMNAME	RBTI_FORM_FORMNAME	See also RBTI System Variables
#FORM_TABLENAME	RBTI_FORM_TBLNAME	See also RBTI System Variables
AVE()	LAVG	
BUILD KEY	CREATE INDEX	
CHANGE	UPDATE	
CHANGE COLUMN	ALTER TABLE	
CLOSE	DISCONNECT	
COLUMNS	CREATE TABLE	
(CVAL('FORM_ALIAS'))	RBTI_FORM_ALIAS	See also RBTI System Variables
(CVAL('FORM_CAPTION'))	GETPROPERTY RBASE_FORM CAPTION vCaption	
(CVAL('FORM_DATA'))	RBTI_FORM_COLVALUE	See also RBTI System Variables
(CVAL('FORM_DATA_TYPE'))	RBTI_FORM_DATATYPE	See also RBTI System Variables
(CVAL('FORM_FIELD_NAME'))	RBTI_FORM_COLNAME	See also RBTI System Variables
(CVAL('FORM_NAME'))	RBTI_FORM_FORMNAME	See also RBTI System Variables
(CVAL('FORM_TABLE'))	RBTI_FORM_TABLENAME	See also RBTI System Variables
DEFINE	CREATE SCHEMA	
DELETE KEY	DROP INDEX	
DELETE FROM #n	DELETE FROM TableName WHERE CURRENT OF CURSOR	See also DECLARE CURSOR
DISPLAY	EDIT USING	Used with Variable Forms.
DRAW	NONE	Used with Variable Forms. No direct replacement.
ECHO	SET ECHO ON	
EDIT VAR ...	NONE	Used with Variable Forms. No direct replacement.
ENTER VAR ...	NONE	Used with Variable Forms. No direct replacement.
ESC	[ESC]	Used in IF and WHERE clauses to compare to the Esc key.
Value1 EQ Value2	Value1 = Value2	Value1 equals Value2
EXISTS	IS NOT NULL	
EXPAND	ALTER TABLE	
EXPRESS	RBAPP	
FAILS	IS NULL	
FILLIN	DIALOG	In windows consider using DIALOG, ENTER or EDIT.

Value1 GE Value2	Value1 >= Value2	Value1 greater than or equal to Value2.
Value1 GT Value2	Value1 > Value2	Value1 greater than Value2.
IN #n	WHERE CURRENT OF CURSOR	Used with UPDATE and SET VAR commands.
Value1 LE Value2	Value1 <= Value2	Value1 less than or equal to Value2.
Value1 LT Value2	Value1 < Value2	Value1 less than or equal to Value2.
MAX()	LMAX()	
MICRORIM_RETURN	STP_RETURN	
MICRORIM_WALLPAPER	NONE	This variable was only used with Forms and Reports created for R:WEB.
MIN()	LMIN()	
Value1 NE Value2	Value1 <> Value2	Value1 does not equal Value2.
NEXT	FETCH	See also DECLARE CURSOR
NOECHO	SET ECHO OFF	
OPEN	CONNECT	
OWNER	CREATE SCHEMA	
PASSWORDS	GRANT	
PLAYBACK	NONE	No Replacement.
POPUP/PULLDOWN Menus	NONE	Use #LIST option of CHOOSE command. Use LISTOF command option to create list of items.
PROMPTS		Now DOS Only.
RECORD	NONE	
REDEFINE	ALTER TABLE	
REMOVE	DROP	
RESET	NONE	No Replacement.
#RETURN	NONE	Used with Variable Forms. No Direct Replacement.
SCREEN RESTORE	RECALC VARIABLES	Now DOS Only.
SELECT FROM #n	SELECT FROM TableName	See also DECLARE CURSOR WHERE CURRENT OF cursor
SET CGA	NONE	No Replacement.
SET EXTENDED	NONE	R:BASE always operates in Extended Mode now.
SET INTENSITY	NONE	Use "Selected Row" color option in Scrolling Region Properties.
SET OLDLINE	NONE	Use the Page Style option in Reports.
SET POINTER	DECLARE CURSOR	
SET RBGSIIZE		No replacement necessary due to imbedded form properties. Command is ignored.
SET USERAPP	NONE	No replacement.

SNAP	NONE	No replacement.
SORTED BY	ORDER BY	
USER	CONNECT IDENTIFIED BY ...	
VIEW	CREATE VIEW	
WRITE		In Windows consider using DIALOG, PAUSE, ENTER or EDIT.
ZIP RBEDIT	RBEDIT	RBEDIT is no longer a separate executable.
ZIP RBSYNC	RBSYNC	RBSYNC is no longer a separate executable.

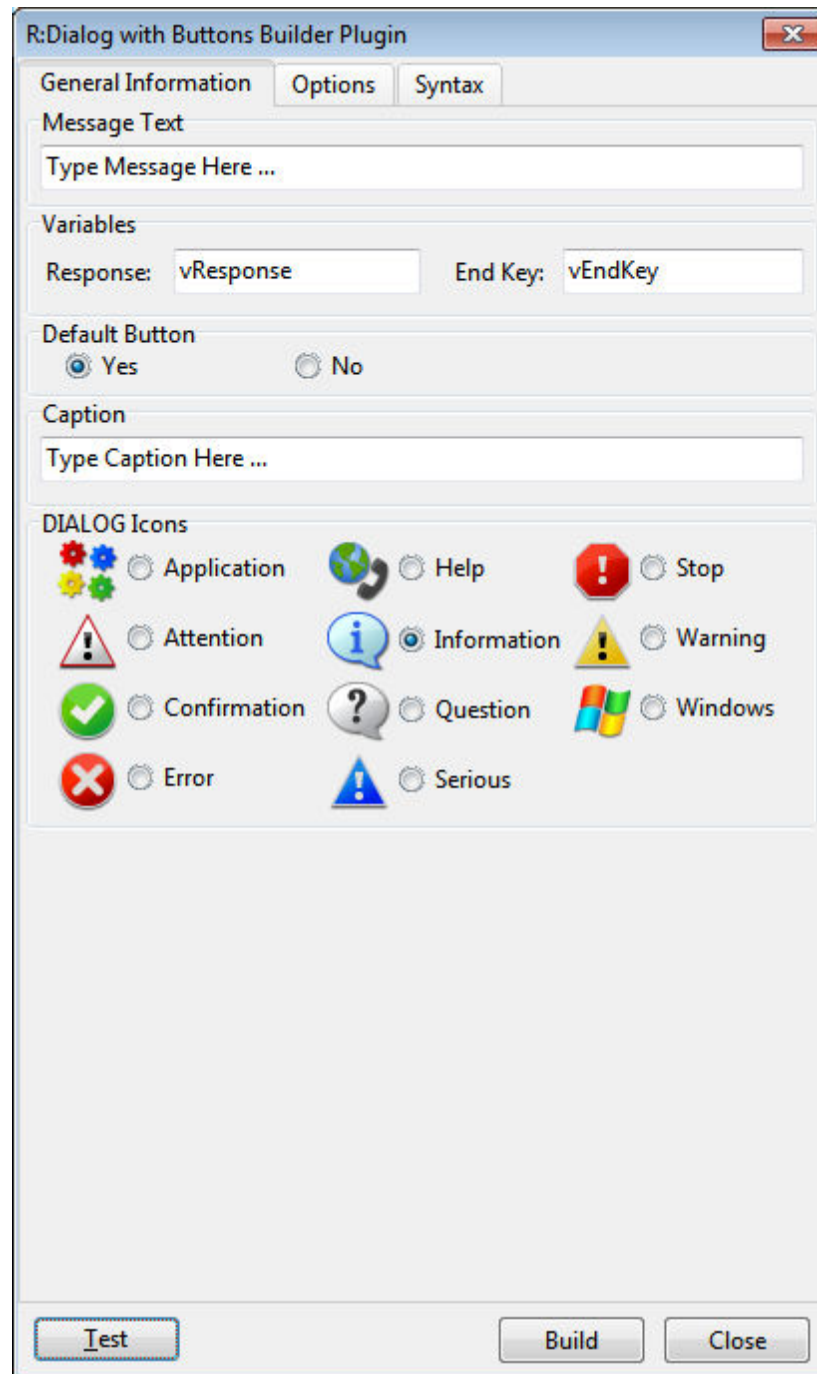
4.1.3.3 DOS to Windows Conversion

When converting from DOS to Windows, there are command syntax changes that may or may not require your attention.

Instances where you will positively update the command syntax are any locations where DOS message commands (WRITE) or information prompts (FILLIN) which should be replaced by their Windows counterpart (PAUSE and DIALOG).

These commands send simple messages or prompts for data entry to the end user. Your time involved in this step depends on how much user interaction is in the code.

To assist you with these replacements, R:BASE X for Windows includes several syntax builders for the DIALOG, PAUSE, and CHOOSE commands. They can be accessed from the Menu Bar under "Utilities" > "Plugins".



For **WRITE**, you may have this;

```
WRITE 'THE PROCESS IS COMPLETE!' AT 10 05
```

and will replace it with this:

```
PAUSE 2 USING 'THE PROCESS IS COMPLETE!' CAPTION ' ' ICON INFO
```

For **FILLIN**, you may have this;

```
FILLIN vdte USING 'ENTER DEADLINE DATE: ' AT 12 10
```

and will replace it with this:

```
DIALOG 'ENTER DEADLINE DATE:' vdte venke 1 CAPTION 'Question'
ICON QUESTION
```

The PAUSE and DIALOG samples provided above do not include the many options that are available for each command to professionally display a message on the screen. Please review the "All About The Dialog Command" and "All About The Pause Command" PDF documents for the complete syntax available for each command. The PDF documents are located within the default program directory of R:BASE X (C:\RBTI\RBGX).

4.1.3.4 Enhanced Commands

There will be commands whose syntax has been enhanced for your benefit. Most of these commands will not require mandatory changes other than for an enhanced display (CHOOSE, DIALOG, PAUSE), but the PRINT command is an example of a command that has been enhanced 20 times over, and will require you to alter your syntax.

You may have this:

```
OUT PRINTER
PRINT bulletin SORTED BY poscl
OUT screen
```

and will replace it with this:

```
PRINT bulletin ORDER BY poscl ASC OPTION PRINTER
```

or even this:

```
PRINT bulletin ORDER BY poscl ASC OPTION PRINTER +
|SHOW_CANCEL_DIALOG OFF |TRAY 2 |COLLATION ON +
|COPIES 2 |ORIENTATION LANDSCAPE |PRINTER_NAME HPLaser1345
```

4.1.3.5 Unsupported Command Parameters

The application file may have menu blocks where the CHOOSE command is used to run a specific selected menu, the CHOOSE command parameter "IN MENU.APX". This logic is no longer supported.

If the approach of the application file conversion is to run the .APP file as a command file, then the following method can be used to move the "menu list" into the CHOOSE command with the #LIST parameter.

Instead of the following:

```
CHOOSE PICK1 FROM MENU0000 IN Menu.APX
--
-- rest of file
--
$MENU
MENU0000
PULLDOWN | |
|Entry|
|Product Quality Plan|
```

```
|Inquiry|
|Reports|
|Maintenance|
ENDC
```

You would use:

```
CHOOSE PICK1 FROM #LIST 'Entry,Product Quality Plan,Inquiry,Reports,Maintenance' +
TITLE 'SELECT OPTION...' CAPTION 'Main Menu Options' LINES 5 +
OPTION List_Font_Color NAVY|List_Back_Color WHITE|List_Font_Size 12 +
|Title_Font_Color NAVY|Title_Back_Color LIGHT GRAY +
|Window_Back_Color LIGHT GRAY|Title_Font_Size 14
```

The above will display a choose pop-up window to select the desired option.

Although this will allow the application file to work, we recommend using one of the current [application formats](#) to display a Windows driven menu system.

4.1.4 New Application Formats

When building R:BASE databases and applications, R:BASE users have several options as to how they want to store their "application".

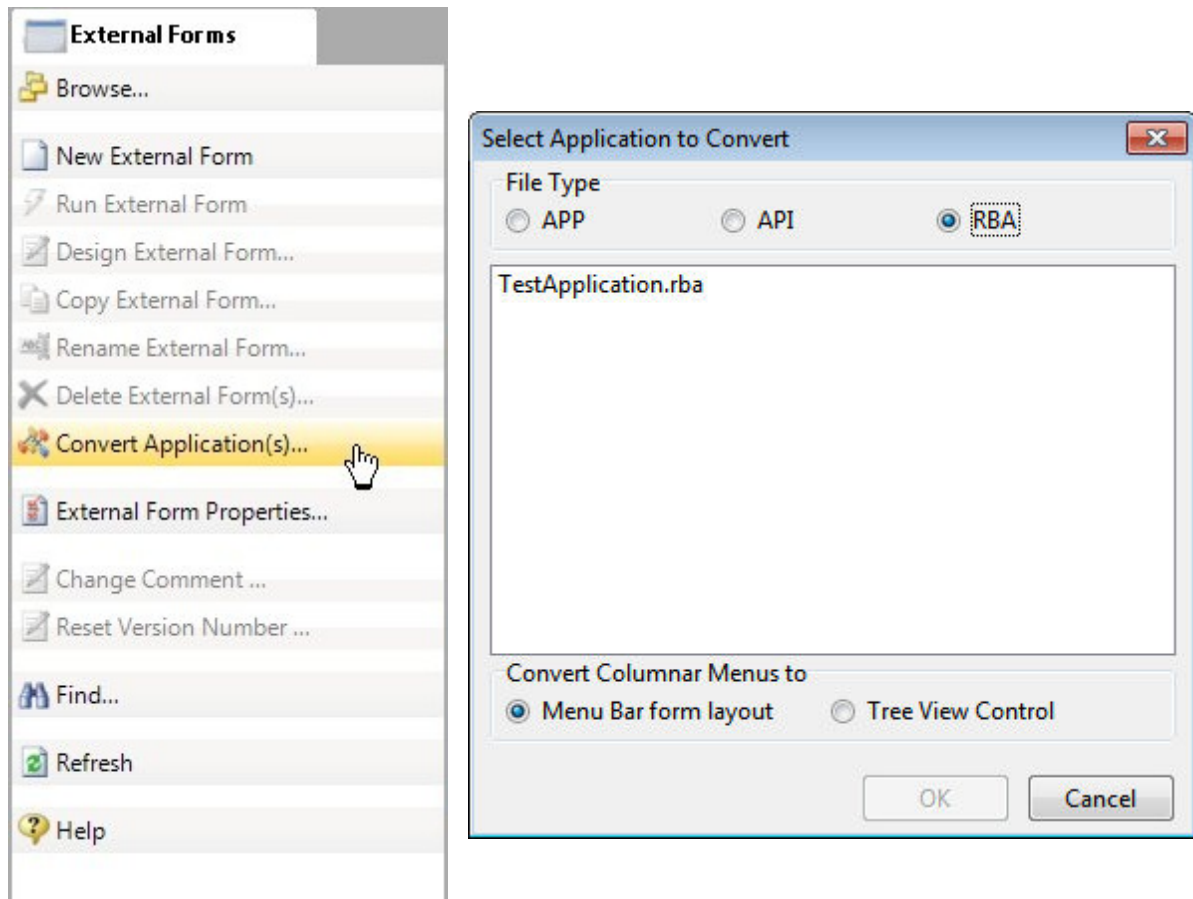
1. **Forms** - an application can be completely Form driven by storing all of the code in form EEPs.
2. **Application Builder** - using the Application Builder interface, an application can be stored in a .RBA file, separate from the database files. This offers additional security over using just command files.
3. **Command Files** - using only code (e.g. CHOOSE, DIALOG, PAUSE, etc), an application can be entirely written in one or many RMD, APP, CMD, and DAT files.
4. **External Form Files** - an application can be driven using External Forms, by storing all of the code in form EEPs. Like an R:BASE Application file (.RBA), External Form Files are stored outside of the database.
5. **All, or some, of the above** - an application can consist of all of a few of the above methods to store R:BASE menu and command files.

4.2 R:BASE 7.x/Turbo V-8 Applications (.RBA)

Any .RBA Application files, Form-Driven Applications, External Form Files, or command files running in R:BASE 7.x or Turbo V-8 will run in R:BASE X with little or no changes. The R:BASE 7.x versions include 7.0, 7.1, 7.5 and 7.6.

It is recommended that you review your application menus and actions to ensure the system is 100% operational.

Also, within the External Form File portion of the Database Explorer, the new "Convert Application(s)..." option is available to convert R:BASE application files (.RBA) to an External Form File.



Selecting this option will create an external form that matches the same properties used within the RBA application file. For the "Menu Bar" layout, 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 "Toolbar Designer" when the external form file is created. A "Tree View" control is also available as a menu display method, where menu options are loaded into a hierarchical list with "Actions" placed and referenced into Custom EEPs and Custom Form Actions.

Plugins

When upgrading from 7.6/V-8 to R:BASE X, you will also need to upgrade any Plugins, if used. The older .RBL Plugin files cannot be used in R:BASE X as a different plugin type and file extension (.RBM) is used.

The free Plugins that are shipped with R:BASE are contained within the R:BASE X executable. Initially, you will not see any Plugins in the R:BASE program folder. The Plugins contained within the R:BASE executable include:

- LoadDirectoryName
- LoadFileName
- LoadFileNamePlus
- RCalculator

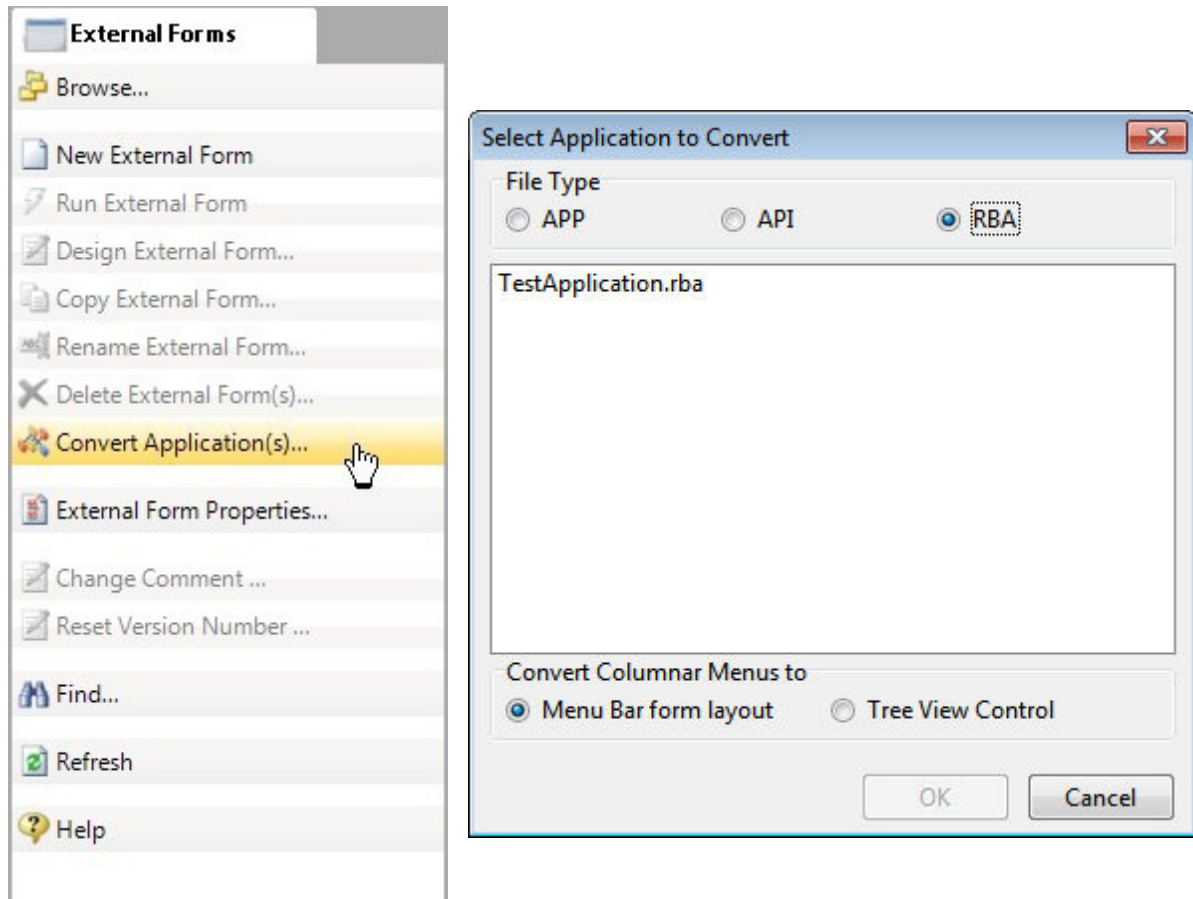
When you run the PLUGIN command with your R:BASE program, the window will display appropriately.

Please refer to the PLUGIN section within the Command Index to verify the supported syntax.

4.3 R:BASE eXtreme 9.x Applications

Any .RBA Application files, Form-Driven Applications, External Form Files, or command files running in R:BASE eXtreme will run in R:BASE X with no changes required on your behalf. It is recommended that you review your application menus and actions to ensure the system is 100% operational.

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



Selecting this option will create an external form that matches the same properties used within the RBA application file. For the "Menu Bar" layout, 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 "Toolbar Designer" when the external form file is created. A "Tree View" control is also available as a menu display method, where menu options are loaded into a hierarchical list with "Actions" placed and referenced into Custom EEPs and Custom Form Actions.

Plugins

When upgrading from R:BASE eXtreme 9.x to R:BASE X, you will also need to upgrade any Plugins, if used. The 9.x specific Plugin files cannot be used in R:BASE X.

4.4 PAGELOCK Setting

R:BASE X/X Enterprise (Version 10) includes a new (actually separate) PAGELOCK operating condition, which specifies how R:BASE locks data in a multi-user environment, based on the position of the row in the data file?

Previously the R:BASE operating condition was controlled by QUALCOLS as a dual-functioning setting,

specifying unique columns for ODBC tables and for page locking. Now page locking (PAGELOCK) is separate from ODBC unique columns (QUALCOLS).

What does this mean for R:BASE X/X Enterprise users?

The application code must be updated to add PAGELOCK and set the condition to ON/OFF appropriately where QUALCOLS was used for page locking. Examples below demonstrate the setting could also be used dynamically in case-by-case instances to increase multi-user performance.

To summarize the code changes, if you used SET QUALCOLS 10 for faster page locking, add SET PAGELOCK OFF to your code. If you used SET QUALCOLS 2 to enforce a page lock for a faster UPDATE/DELETE process, add SET PAGELOCK ON in your code.

PAGELOCK specifies how R:BASE locks data when updating and deleting rows.

The settings for PAGELOCK are:

ON - R:BASE uses page locking or row locking as appropriate. When PAGELOCK is ON and two or more users are updating rows within the same page of data, R:BASE only lets the first user update rows--the other users are locked out until the first user's update has been completed.

OFF - R:BASE uses a fast row-locking method where only row locking is applied with no page locking. When PAGELOCK is OFF, you can lock rows of data instead of locking a page of data. You increase multi-user performance when PAGELOCK is OFF. And even more so when STATICDB and FASTLOCK are on.

If you know that your application mainly updates or deletes data a row at a time, rather than many rows, set PAGELOCK to OFF for row locking. In this case, R:BASE locks a row, reads the row, makes the change, and then releases the row. Otherwise, set PAGELOCK ON for page locking when you are doing an UPDATE and/or DELETE affecting many rows in a table.

Keep in mind that the PAGELOCK setting can be changed dynamically and can be different for different users using the same database.

Technically, the most efficient and fastest method for updating data in multi-user environment is to SET STATICDB ON, SET FASTLOCK ON, and SET PAGELOCK OFF. This particular combination will result in the fewest contentions between users.

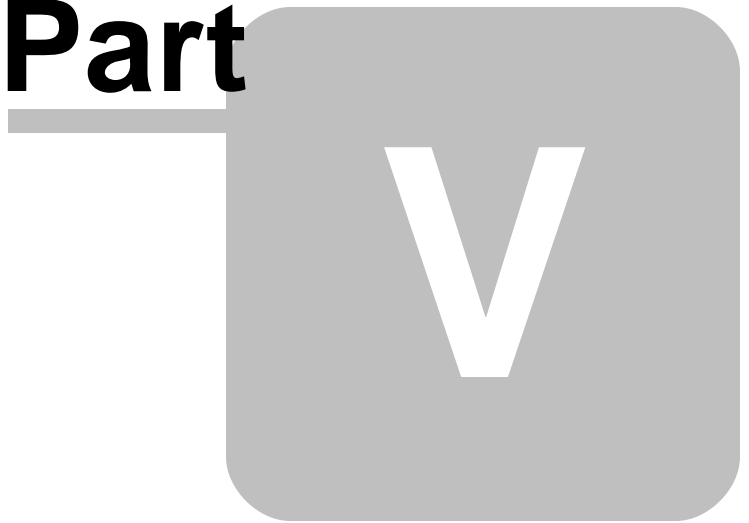
Notes:

- FASTLOCK and PAGELOCK can be set on at the same time.
- Setting STATICDB and FASTLOCK to ON (in that order), with PAGELOCK set to OFF will significantly increase multi-user performance with individual row changes.
- PAGELOCK is not the same as SET ROWLOCKS.
- Setting the value of PAGELOCK does not change the setting of ROWLOCKS.
- The PAGELOCK setting can be changed dynamically and can be different for different users using the same database.

Example:

```
-- The UPDATE must alter the values for many rows
SET FEEDBACK ON
SET PAGELOCK ON -- use page locking
UPDATE <tablename> SET <columnname> = value -- no WHERE Clause
SET PAGELOCK OFF -- use row locking
SET FEEDBACK OFF
CLS
```

Part



5 ODBC Compliance

If you are planning on using ODBC with R:BASE, you must make sure that your character settings are set correctly by performing the following:

1. Go to the R> Prompt
2. Connect to your database
3. Type: `SHOW CHAR`
4. Compare your values to the chart below

Character	Set To	Description
MANY	%	Percent Sign
SINGLE	_	Underscore
QUOTES	'	Single Quote

5. If they do not match, change them by typing `SET TYPE=CHAR`
(where TYPE is from the "Character" column and CHAR from the "Set To" column)

For example, `SET MANY=%`

Continue below to ensure your database files are [Y2K](#) compliant.

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6 Y2K Compliance

For more information on Y2K Compliance please visit our Y2K Page at <http://www.rbase.com/support/y2k/>

To check the Y2K compliance of your database do the following.

1. Go to an R> Prompt
2. Connect to your Database
3. Type SHOW DATE

Most likely the settings will be as follows... (This is the default for upgraded databases).

```
DATE FORMAT MM/DD/YY
DATE SEQUENCE MMDDYY
DATE CENTURY 19
DATE YEAR 0
```

If so, then your database is NOT Y2K compliant. To activate the Y2K compliancy features of your database we recommend the following:

Set your Format to 4 Y's

When they are set that way then 1/1/1999 will be seen as a valid year and 1/1/99 will also be a valid year. If you are set to 2 Y's then only 1/1/99 will be a valid year.

Set the Date Year to a Convenient Year

The Date Century and Date Year determine how 2 digit years such as 1/1/99 are handled. To determine your settings mentally combine the century and the year (in this case 19 and 0 make 1900) and then add 99 (in this case 1999) all two digit years will be interpreted as being between these dates. Setting Date Year to 80 will result in 19 + 80 giving 1980 and then adding 99 making 2079. Thus all two digit dates will be between 1980 and 2079. For example a date entered as 1/1/60 would be seen as 2060.

Older versions set to four Y's would see 2 digit dates as being complete four digit years. For example, 1/1/99 would be January First in the year 99. This is known as First Century data. For this reason if your database is already set to four Y's on the format we recommend using the following command to check for invalid dates:

```
TALLY datecol FROM tablename WHERE datecol < 1/1/1950
```

This should build a list of all dates (and how often they occur) that are possibly incorrectly entered and that you can then deal with. Be careful not to go overboard. For example: if you have your family tree stored in an R:BASE Database then be careful that you leave Great Grandmother's birthday in the 1800's where it is supposed to be even though the Tally command above would flag that as an "invalid" date.

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7 Database Integrity Routine

Follow the steps below and to validate the integrity of your database.

1. Make a backup copy of the database.
2. Copy the entire database to 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>, connect to the database:

```
DISCONNECT
SET MESSAGES ON
SET ERROR MESSAGES ON
SET MULTI OFF

CONNECT dbname
or connect to the database with OWNER password, if any
CONNECT dbname IDENTIFIED BY owner password
```

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). At the R>, type:

```
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.RX? dbnameBK.RX?
or for RB1 through RB4 files, use:
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.

Errors?

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

```
DISCONNECT
```

```
DELETE dbname.RX?
```

or for RB1 through RB4 files, use:

```
DELETE dbname.RB?
```

```
DELETE newdb.ALL
```

```
DELETE newdb.LOB
```

2. Rename and connect to the previously saved database (Step 7).

```
RENAME dbnameBK.RX? dbname.RX?
```

or for RB1 through RB4 files, use:

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

```
CONNECT dbname
```

3. CORRECT all -ERROR-s accordingly and then repeat Step 6.
4. Do not quit or give up until you see a completely fresh database without any warnings or errors.

If there is a considerable amount of errors with both rebuilding the structure and/or data, please refer to the "Database Repair Routine" within the Database Maintenance PDF document in the R:BASE program directory.

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VIII

8 Useful Resources

- . R:BASE Home Page: <http://www.rbase.com>
- . Up-to-Date R:BASE Updates: <https://www.rbaseupdates.com/>
- . Current Product Details and Documentation: <http://www.rbase.com/rbgx/>
- . Support Home Page: <http://www.rbase.com/support/>
- . Product Registration: <http://www.rbase.com/register/>
- . Official R:BASE Facebook Page: <http://www.facebook.com/rbase/>
- . Sample Applications: <http://www.razzak.com/sampleapplications>
- . Technical Documents (From the Edge): <http://www.razzak.com/fte>
- . Education and Training: <http://www.rbase.com/training>
- . Product News: <http://www.rbase.com/news>
- . Upcoming Events: <http://www.rbase.com/events>
- . R:BASE Online Help Manual: <http://www.rbase.com/support/rsyntax>
- . Form Properties Documentation: <http://www.rbase.com/support/FormProperties.pdf>
- . R:BASE Beginners Tutorial: <http://www.rbase.com/support/tutorial>
- . R:BASE Solutions (Vertical Market Applications): <http://www.rbase.com/products/rbasesolutions/>

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IX

9 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" > "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 rdcc@rbase.com.

Reporting Bugs:

If you experience something you think might be a bug, please report it to the R:BASE 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" > "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 rdcc@rbase.com.

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