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Main Help

Welcome to *Clarion for Windows 1.5*

You now have in your hands the *fastest* Rapid Application Development (RAD) environment ever! In addition to building both 16-bit and 32-bit applications for Microsoft Windows 3.1x, Windows 95, and Windows NT from the same application and project files, Clarion for Windows also features the **world's first Application *WIZARD*** which generates *reuseable* Template-based procedures to produce *multi-threaded, full-featured applications at the press of a single button*. **TopSpeed's Application Wizard technology is the most *revolutionary* productivity advancement in the history of application development!!!**

Clarion for Windows 1.5 is the **Next Level in RAD products.**

The new 32-bit optimizing compiler makes Clarion, which was also the first 16-bit RAD with a compiler, the *first RAD tool to compile applications in the new Win 32 Portable Executable format*. **Clarion for Windows 1.5 is an evolutionary tool for programmers to support both 16-bit and 32-bit Windows. Clarion for Windows 1.5 clones features across the 16-bit / 32-bit Windows boundary.** Windows 3.1x end users can get a Windows 95 look and feel in their applications, while Windows 95 and Windows NT applications can incorporate 16-bit .VBX controls.

Welcome to the Clarion Community!

New Users | Upgrade Users | Technical Support | License Information | New in 1501

If you have the CD version of Clarion for Windows, additional information about the contents of the CD can be found in README.WRI in the root directory of the CD.

If You're New to Clarion for Windows...

Welcome! You are about to enter the world of Clarion programming. Depending upon your previous programming experience, this may be a little or a *lot* different than what you're used to.
Here's how you can master Clarion for Windows "one step at a time."
For the most effective introduction to the Development Environment, we *strongly* suggest that you **work through the tutorials** in the *Getting Started* manual--both the Quick Start Tutorial and the "hands-on" tutorial. These tutorials have been specifically designed to "show off" the productivity features of the Development Environment, some of which may not be immediately obvious until they are pointed out to you. The time you spend doing this will pay off in increased productivity later.
After the tutorials, **take a look at the example programs**. These demonstrate the range of Clarion programming--from standard business applications to utility programs, and even games. These examples also demonstrate how to accomplish some of the more commonly requested techniques--both in the Application Generator and in completely hand-coded applications. By examining the hand-coded examples, the embedded source code in the Application Generator examples, or the generated source code modules, you'll begin to learn the Clarion language--the foundation of Clarion for Windows. It's a powerful, yet easy to understand, business-oriented fourth-generation programming language. As you examine the code in Clarion's Text Editor, place the cursor on any Clarion language statement (the Blue statements) and press F1--the context sensitive help will locate the pertinent Language Reference topic.
Next, **explore the Development Environment**. Once you've created the tutorial applications and looked at the examples, you'll probably feel confident enough to strike out on your own. We suggest creating your own data dictionary. The data dictionary is the starting point for practically every new application; by planning well, and "pre-defining" controls, your applications will practically write themselves--especially if you make use of the Wizards! Chapter 4 of the User's Guide tells you all about the Dictionary Editor.
Another great source of information is the **Common Questions** section in on-line help. These "how to's" cover many techniques not necessarily demonstrated in the example programs or the tutorials. You get to Common Questions by choosing **Help ▸ Contents** from anywhere in the Clarion environment. While you're there, take some time to explore the on-line help--there's a wealth of information that's always available to you.
These four steps introduce you to the Development Environment, the templates, planning a Clarion for Windows application, and the Clarion language. From here you can begin creating your own applications. You'll be surprised at how much you can accomplish in a short period of time!

Known Limitations

The 16-bit debugger doesn't work under Windows NT. This appears to be caused by a problem in NT that has no workaround. You can compile in 32-bit mode to debug and then switch back to 16-bit mode to deploy a 16-bit application.

There is currently no 32-bit Btrieve driver. Call TopSpeed Sales for availability.

You may experience problems with the PALLETTE attribute in 16-bit mode under Windows 95. Removing the attribute or changing to 32-bit mode will resolve the problem.

Clarion for Windows 1.5 and the Evaluation Edition were not designed to coexist on the same machine. They both have files with the same name and therefore, at runtime will find the first one in your path.

Corrections to the Printed Documentation

In the User's Guide (0895 printing, look at the bottom of the copyright page for the print date), Appendix F--Multi-Programmer Development
In step 3 (p 645) and step 6 (p 647) you should select the External DLL module template. This template adds the DLL() attribute needed for a 32-bit compile. In 16-bit mode, the steps are correct.

If You're Upgrading from Clarion for Windows 1.0

Welcome to the **Next Level!** You already know how productive you have been with Clarion for Windows 1.0, and now you're about to become even more so!

For the most effective introduction to the new features of the Development Environment, we *strongly* suggest that you work through the tutorials in the *Getting Started* manual--both the Quick Start Tutorial and the "hands-on" tutorial. These tutorials have been specifically designed to "show off" the new productivity features of the Development Environment, some of which may not be immediately obvious until they are pointed out to you. The time you spend doing this will pay off in increased productivity later.

After the tutorials, look closely at the example programs provided. These demonstrate how to accomplish some of the more commonly requested techniques--both in the Application Generator and in hand-code.

The next great source of information is the **Common Questions** section in on-line help. These "how to's" cover many techniques not necessarily demonstrated in the example programs. You get to Common Questions by choosing **Help** ▸ **Contents** from anywhere in the Clarion environment.

Before you get started....

There are some issues you should understand before you begin.

Porting Existing programs

- A .TXD or .TXA file created in CW 1.00x will import into CW 1.5. However, a .TXD or .TXA file created in CW 1.5 has additional information that CW 1.00x will not understand if you attempt to import it. If this additional information is deleted, the .TXD or .TXA will import into CW 1.00x.
- The templates utilize VIEWs for all browses and reports. This requires you to BIND any variables used in a Filter expression.

  To BIND a variable: In the Actions for the Browse Box Control template or the Report Properties on the Report Prodedure, press the "Hot" Fields button, insert the field and check the **BIND field** box.
- **If you do anything with an application or dictionary in CW 1.5, you cannot open it again in CW 1.00x. This means opening and saving, or even just importing a procedure.** You should back up your .APPs and .DCTs before using them in CW 1.5.
- You should install CW 1.5 to a different directory than CW 1.00x and make sure the new directory is in your PATH. You *can* run both CW 1.00x and CW 1.5 on the same machine without conflict.
- You need Windows 95 or Windows NT to utilize any of the 32-bit features of CW 1.5.
- If you encounter syntax errors when attempting to compile an .APP created with CW 1.00x, choose **Project** ▸ **Generate All**, and recompile.
- You may need to increase the Stack size on some procedures in existing applications when running on Windows 95.
- If you experience a GPF when importing a Clarion for DOS dictionary, check your PATH for an older version of WBTRCALL.DLL. Removing this .DLL will resolve the problem.
- If you have GROUP or QUEUE structures that do not have a PREFIX. You must add a PRE() attribute (it may be empty if desired) or you will receive compiler errors. See Field Qualification in the Language Reference.
- A hand-coded program which uses external .DLLs must have the DLL() attribute everywhere you used the EXTERNAL() attribute if porting to 32-bit.
- To migrate an application from any of our DOS products, import the file definitions into a Data Dictionary and use the Application Wizard. From Clarion for DOS 3.x, merely open the .DCT file in Clarion for Windows. From a Clarion Professional Developer application, import each data file definition into a CW dictionary, create the releationships, then let the Wizard do the rest.

Known Limitations

The 16-bit debugger doesn't work under Windows NT. This appears to be caused by a problem in NT that has no workaround. You can compile in 32-bit mode to debug and then switch back to 16-bit mode to deploy a 16-bit application.

There is currently no 32-bit Btrieve driver. Call TopSpeed Sales for availability.

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Quick Index to New Features in the Clarion Language

This portion provides an easy method to jump into the Language Reference to see the syntax changes for CW 1.5. These include new Controls, new attributes, and other changes to the Clarion Language.

Chapter 2--Program Source Code Format
Field Qualification
FUNCTION and PROCEDURE Prototypes
DLL (set procedure defined externally in .DLL)
PROC (set function called as procedure without warnings)
PRIVATE (set procedure private to a single module)
Passing GROUPs and QUEUEs as Parameters

Chapter 3--Declaring Variables
STRING (fixed-length string)
CSTRING (fixed-length null terminated string)
GROUP (compound data structure)
DIM (set array dimensions)
DLL (set variable defined externally in .DLL)

Chapter 4--Expressions and Assignments
PUSHBIND
POPBIND

Chapter 6--Window Structures
Controls
PROGRESS (declare a progress control)
SHEET (declare a group of TAB controls)
TAB (declare a page of a SHEET control)

Attributes
SPREAD (set evenly spaced TAB controls)
TIP (set 'balloon help' text)
VALUE (set RADIO control OPTION USE variable assignment)
WIZARD (set "tabless" SHEET control)

Chapter 7--Window Commands
Window Functions
POPUP (return popup menu selection)

Chapter 9--Reports
REPORT (declare a report structure)
Attributes
PAPER (set report paper size)

Chapter 10--Data Files

BLOB (declare a variable-length memo field)
DLL (set file defined externally in .DLL)

Chapter 12--Memory Queues
QUEUE (declare a memory QUEUE structure)
EXTERNAL (set queue defined externally)
DLL (set queue defined externally in .DLL)

Chapter 13--Miscellaneous Procedures and Functions
DIRECTORY (get file directory)
REJECTCODE (return reject code number)

Appendix C--Properties
Property Assignments

Appendix D-- Error Codes
Error Codes

Appendix E--Events
Event Equates

What's New in this release (1501)

Release 1501 of Clarion for Windows fixed a number of bugs that were discovered in 1500. You may download the PROBLEMS.TPS file from our CompuServe forum (GO TOPSPEED) to see exactly what has been corrected. Use the SUPPORT program to view the file.In addition to the bug fixes, there are several new features in Clarion for Windows that were not in release 1500:

FIRSTFIELD and LASTFIELD now return values for the current TARGET window (as specified by SETTARGET) rather than top window.
The CREATE statement can now be used to create report bands and menu bars, in addition to controls.
The FORM band in a REPORT is now built at the first PRINT statement, not when the report is opened. This allows you to use property syntax to change it before the first PRINT.
You can now set PROP:Drop to zero to suppress the dropdown part of a LIST or COMBO control.
You can now set PROP:Icon for a LIST with the DROP attribute or COMBO control to allow the drop button's image to be changed. This is a runtime-only property -- that is, the ICON attribute is not valid on LIST or COMBO.
The extension for Project file backups has been renamed to .BKP.
A STRING control with a picture and no USE variable now displays the <<,<<< type info for the picture.
Repaints of the screen no longer repaint graphics objects that lie outside the paint rectangle. This provides faster screen response.
CUSTOM controls now support .VBX OnError handling--a mechanism analogous to the Visual Basic ON ERROR statement.
Whenever a VBX generates an internal error, the Clarion program will receive a EVENT:VBXevent where the PROP:VBXEvent is set to '&OnError' and the PROP:VBXEventArg contains the error number as the first argument, and the error text as the second. For Example:

```
WindowWINDOW(`Test'),AT(0,0,320,200),MAX
CUSTOM,AT(0,0,120,320),USE(C1),CLASS('graph.vbx','graph')
END

MsgNumLONG
MsgTxtSTRING(255)

CODE
OPEN( Window )
ACCEPT
CASE EVENT()
OF ?EVENT:VBXevent
IF ?C1{PROP:VBXEvent} = '&OnError' THEN
MsgNum = ?C1{PROP:VBXArg,1}
MsgTxt = ?C1{PROP:VBXArg,2}END
END
END
```

This feature is supported in both 16 bit and 32 bit models.
Date formatting in 1500 assumed U.S. order for dates in xx/yy/zz format if the picture was a string-type date -- 1501 now assumes the Windows short date format order.
Dates which are beyond the range of a Clarion standard date now map to the maximum Clarion date (12/31/2099). This solves looping problems when files (usually Btrieve) contain dates that Clarion can't handle.

The ODBC driver now supports Date, time, and decimal data types and has been optimized to minimze the number of connections used.
String constants in dBase expressions now use single quotes (') instead of double quotes ("").
The OEM attribute is now supported in all xBase drivers except FoxPro.
The IGNORECORRUPTIONS SEND string has been added to the Clarion driver for Clarion 2.1 compatibility.
The STD(STD:Windowlist) attribute has been added to the default APPLICATION in the Frame template.
The Report Wizard and Application Wizard now create columnar reports, instead of form-style.

The Templates now generate a run-time warning if a Filter expression gives an error message.
The Templates now split long Filter expressions over multiple lines, to prevent compile errors.
The Templates have a number of new embed points.
The Templates now generate code to handle EVENT:Rejected.
PUSHBIND and POPBIND have been added to all templates to solve Filter scoping problems.
The Text Editor will now Indent a Block. To indent: Highlight a block then press the Tab key. The Block indent window appears to specify the number of characters and direction. Press OK and the text moves (without removing the highlight).
The Text Editor now supports simple macros. To create a macro: press Ctrl+=, specify the key which will invoke the macro (such as Ctrl+Z) and press OK, perfrom the operation (type text, use cursor controls, etc.) then press Ctrl+= again when the macro is finished. To invoke the macro, press the key you specified. These macros are available until you close Clarion for Windows, but are not saved between sessions.
The Template Language now allows the #PROMPT FROM attribute values to come from user defined symbols.
There are two new template #PROMPT types for open and save file dialogs (OPENDIALOG and SAVEDIALOG).
The Application Generator now allows multiple Wizards for each Procedure template, selectable at procedure creation time.

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Technical Support

You can receive unlimited free technical support for Clarion for Windows on CompuServe Information Service. Once connected to CompuServe, type GO TOPSPEED. TopSpeed employees, as well as TopSpeed Certified Support Partners (known as *Team TopSpeed*), will answer your questions in a timely manner. Additionally you will get advice and answers from other Clarion for Windows users. We strongly recommend that our customers take advantage of this service.

Paid telephone technical support is also available from TopSpeed Corporation. You can access our pay-per-call support by calling (900) 884-0444. Various paid support programs are also available. Call TopSpeed Corporation customer service at (800) 354-5444 or (954) 785-4555 for more information.

Education

To put you on the fast-track to Clarion productivity, TopSpeed offers Educational Seminars at Beginner, Intermediate, and Advanced levels.

Call TopSpeed Corporation's customer service at (800) 354-5444 or (954) 785-4555 extension 130 for more information.

License Information

Btrieve Technologies, Inc. (BTI)

A registered Clarion for Windows owner cannot redistribute the following BTI files outside of his/her organization without a license from BTI.
WBTR32.EXE
WBTRLOCL.DLL
WBTRCALL.DLL
WBTRVRES.DLL
In order to obtain a license, please contact:
Btrieve Technologies, Inc.
5918 West Courtyard Drive, Suite 400
Austin, Texas 78730
Phone: (512)794-1719

Bits per Second

An example program illustrating the use of GRAPH.VBX with Clarion for Windows is provided in the example directory under the name GRAPH.PRJ. Bits per Second Limited has given you permission to distribute our example program with its crippled version of its GRAPH.VBX and the following files:
GSW.EXE
GRAPH.HLP
GRAPH.DEM
GRAPH.ICO
GSWDLL.DLL

If you wish to purchase the full-featured GRAPH.VBX, please contact:
In the United States:

Pinnacle Publishing
Phone: (800) 231-1293

In the United Kingdom:

TopSpeed Software Limited
Phone: +44 (0)1582-763200

Elsewhere

Your nearest TopSpeed Distributor