▶ Link Check

▶ Version 5.1 - August 1996

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# Contents for Link Check Help

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 **What's New**

**Major changes from Version 5.00 to Version 5.10**

- Hassle-free registration via an electronic key
- All Help files are now included with this release
- Improved Help
- Added sizing of the Version details listbox and the main listbox
- Support added for executables from 12 different National Languages
- Added more version information
- Fixed minor bugs

This is basically a maintenance release but also introduces the possibility of getting the retail version within minutes of registering thanks to the electronic key.

Due to this form of registration, the 32-bit versions of **Link Check** are now available as separate products and registration for them is handled exactly in the same way as for this 16-bit version.

See Also Available for more information.

# ▶ Introduction

Link Check is a suite of three (3) diagnostic programs which allows the user to examine different areas of the system. These are useful not only on solving system problems but also for learning about the system.

All three programs show version and file information on any of the modules (files) for identification purposes as well as interacting with each other.

Armed with these three, you should be able to solve most of your software tantrums:

## Link Check (WLCHECK.EXE)

Link Check enables the user to view the links between an executable file and the modules it requires to run on the system. This tool is useful for analyzing those "Cannot find (filename) or one of its components" system error messages.

You may also use Link Check to view which versions of modules (DLLs, VBXs) the program will actually use in the system as there are duplicate DLLs frequently lying about the network or the machine.

Link Check mimics the system when a program is finally executed by the operating system (Windows). This will help in determining beforehand whether a program will run or not, or which particular copy of a .DLL it is going to use if there are multiple copies lying around the system.

Any file(s) required by the program that are missing from the system will be highlighted with a red cross. It could be that the file(s) are actually present on the system but will not get picked up by the system during run time. This could be because the system environment variable PATH has been changed.

Link Check is also useful for analyzing software installation problems as well as indicating which support modules should be backed-up with a particular program.

## Memory Check (WMCHECK.EXE)

Memory Check allows the user to view, load and unload modules currently in memory. You may also view the current status of memory, including the amount of free memory left.

Important version information about each module can be displayed and you may create and print a summary report of the state of the system.

Memory Check really comes into play when some program has ended abnormally and has left modules lying around in memory. The system might behave irratically or more to the point, those modules take up valuable memory. In these situations you can use Memory Check to unload those modules and save yourself a reboot of Windows.

**Warning:** Sometimes a clean unload is not possible and you may find yourself unceremoniously dumped back on to the C: prompt, so please do use care when unloading.

You may also verify exactly which version of a module is currently loaded in memory. Sometimes some programs will not run because a wrong version of a particular module (.DLL) has already been loaded into memory by some other application. Windows does not load a new copy of a file with the same file name but will simply increase the "usage count"

of the module already in memory. These "usage counts" are displayed by Memory Check as a number in parenthesis () next to the file name.

 WINSOCK.DLL is a very good example of a module which shares very many different versions. Most communications programs require their own particular version of WINSOCK.DLL to be loaded, but if another application has put their version in first, it is highly likely that the second one will fail or behave in manner not designed by the programmers. Use Memory Check to solve these type of problems.

## Function Check (WFCHECK.EXE)

 Function Check allows the user to view actual function calls inside modules. This program is useful for analyzing those "Call to Undefined Dynalink" system error messages.

 When a program calls a module (.DLL) to execute a function (piece of code) inside the .DLL and that particular function does not exist in the .DLL, a "Call to Undefined Dynalink" error is raised by the system. These can occur when a newer version of a .DLL is accidentally replaced by an older version of the same .DLL. A program is compiled to use the new functionality of the .DLL but can come unstuck when that .DLL is replaced by an older version which does not contain the new functionality.

 Some installation programs are prone to do this "accidental" replacement.

 Function Check cross-checks all function calls in an executable with the ones in all of the .DLLs (modules) that it uses, to verify that all of the functions all present.

 Should your program throw up one of those "Call to Undefined Dynalink" messages, Function Check will show you which module is at fault.

# ▶ System Requirements and Uninstall

**Link Check** requires Windows 3.1* or later or Windows for Workgroups 3.11*.* <u>See Trademarks</u>

This package consists of the following files:

```
 1) WLCHECK.EXE    Link Check itself
 2) WLCHECK.HLP    Link Check Help file
 3) WMCHECK.EXE    Memory Check component of Link Check
 4) WMCHECK.HLP    Memory Check Help file
 5) WFCHECK.EXE    Function Check component of Link Check
 6) WFCHECK.HLP    Function Check Help file
 7) WLCCOMM.DLL    Common Routines for all of the Link Check components
 8) KSLHOOKS.DLL   More Common Routines for the Link Check components
 9) FILE_ID.DIZ              File for Bulletin Board operators
10)   README.TXT   Read Me file
```

To **uninstall Link Check** delete the above files and the following:

```
 1) WLCHECK.INI    Created by Link Check in the Windows directory
 2) WMCHECK.INI    Created by Memory Check in the Windows directory
 3) WFCHECK.INI    Created by Function Check in the Windows directory
```

# ▶ Command Line Interface and Drag & Drop

**Link Check** accepts a file name as a command line parameter.

**Syntax**: **WLCHECK Filename**

**Link Check** also supports **Drag and Drop**. You may drag a file to Link Check and drop it in.

## ▶ Keyboard Support

The main window supports the keyboard as well as the mouse.

Key actions in the main window are as follows:

| | |
|---|---|
| Tab | Switch between the main window and the Version/Key windows. |
| Enter | Expand/Collapse currently selected module. |
| Spacebar | Select a module. |
| Arrow keys | Navigate up/down the list of modules or Version/Key windows. |
| Control+O | Open executable for examination. |
| Control+V | Display Version Information window. |
| Control+K | Display Key window. |
| Control+C | Create Version report. |
| Control+P | Print Version report. |
| Control+R | Run executable. |
| Control+X | Expand all levels. |
| Control+L | Expand one more level. |
| F1 | View Help. |
| F2 | Check function calls in the selected module. |
| F3 | Check currently loaded modules in RAM (memory). |
| F5 | Collapse all open links. |
| Alt+F4 | Quit Link Check. |

# ▶ **Menu Options**

Please select one of the following:

**File:**
Open Executable
Create Version Report
Print Version Report
Run Executable
Run Executable with Parameters
Exit

**Options:**
Display Version Information
Display Key to Symbols
Check Function Calls
Check All Modules in Memory
Expand All Levels
Expand One More Level
Collapse All

**Preferences:**
Show Modules Currently in Memory
Show Optional Modules
Draw Thick Lines
Draw Lowercase File Names
Show Toolbar Tips
Show Toolbar
Show Status Bar
Show Settings Now
Save Settings on Exit

**Help:**
Contents
Search for Help on
How to Use Help
About Link Check

## ▶ Dialog Boxes

Please select one of the following:

Run Executable with Parameters dialog

## ▶ Run Executable with Parameters Dialog

This dialog box is invoked from the **Run Executable with Parameters** menu option under the **File** menu.

In this dialog, enter any extra parameters that you would like to pass on to the program about to be executed and click on **OK**.

Do not include the program name in the field, only the parameters.

**Link Check** will precede the parameters with the program name before attempting to execute it.

Click on **Cancel** to return to the main window without any further action.

# ▶ Guide to the Main Window

Use the **Open Executable** menu option under **File** to open up a module for examination.

The main window shows the links between the opened executable and the modules that it requires to be present on the system.

If you select any one of the shown modules and **double-click** it with the mouse, **Link Check** reveals further links for the selected module.

To identify any particular module, select it with the mouse and choose the **Display Version Information** menu option under **Options**. A version information window will appear at the bottom of the main window.

Each module is prefixed with a symbol identifying the module type. To find out what these symbols mean, please select the **Display Key to Symbols** menu option under **Options**. The key window will appear at the bottom of the main window.

To hide the version or the key windows, please re-select the same menu items as for invoking them. Alternatively, **right-click** with the mouse on top of these windows and select the **Hide** menu option from the popup menu that follows.

As a short cut, you may also **right-click** on the main window to access the options in the **Options** menu.

If you prefer to use the keyboard, please see Keyboard Support for the key assignments.

# ⊞ File: Open Executable

Click on this menu option or on the short cut on the Toolbar to open an executable file for examination.

## ▶ File: Open Previous Module

Click on this menu option to re-open a recently used module.

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## 🗔 File: Create Version Report

Click on this menu option or click on the short cut on the Toolbar to create a report listing all of the modules currently shown in the main window with dates, times, sizes and version numbers.

Select Sample Version Report to view a sample report.

# File: Print Version Report

Click on this menu option or click on the short cut on the Toolbar to print a report listing all of the modules currently shown in the main window with dates, times, sizes and version numbers.

Select Sample Version Report to view a sample report.

# ▶ Sample Version Report

Sample output:

```
==========================================================================
                      Link Check Version Report
==========================================================================

 For: C:\MYPROGS\MYPROG.EXE

      Filename     Date     Time      Size     File Ver     Prod Ver  Path
--------------------------------------------------------------------------
   MYPROG.EXE   03/12/95   03:10    123456     1.23.456        1.23   C:\
MYPROGS
      GDI.EXE   01/11/93   03:11    220800        3.11         3.11   C:\
WINDOWS\SYSTEM
     USER.EXE   21/07/95   03:02    264096        3.11         3.11   C:\
WINDOWS\SYSTEM
 KEYBOARD.DRV   01/11/93   03:11      7568        3.10         3.10   C:\
WINDOWS\SYSTEM
  COMMDLG.DLL   01/11/93   03:11     97936        3.11         3.11   C:\
WINDOWS\SYSTEM
    SHELL.DLL   01/11/93   03:11     40944        3.11         3.11   C:\
WINDOWS\SYSTEM
      VER.DLL   01/11/93   03:11      9696        3.11         3.11   C:\
WINDOWS\SYSTEM
  CTL3DV2.DLL   15/06/95   00:00     21648        2.04      2,0,4,0   C:\
WINDOWS\SYSTEM
--------------------------------------------------------------------------

 8 files listed.
```

## ▶ File: Run Executable

Click on this menu option to run the currently loaded executable file.

# ▶ File: Run Executable with Parameters

Click on this menu option to run the currently loaded executable file with parameters.

The Run Executable with Parameters dialog will pop up for you to enter the parameters.

#  File: Exit

Click on this menu option or click on the short cut on the Toolbar to exit **Link Check**.

## ▶ Options: Display Version Information

Click on this menu option to show the **Version window** at the bottom of the main window.

This window will show version and file details of the selected module and can also be invoked from the popup menu by **right-clicking** with the mouse anywhere over the main window.

You may hide this window either by **right-clicking** on the mouse whilst over this window or by re-selecting the same menu option.

# ▶ Options: Display Key to Symbols

Click on this menu option to show the **Key window** at the bottom of the main window.

This window will show an explanation to the symbols used in the main window and can also be invoked from the popup menu by **right-clicking** with the mouse anywhere over the main window.

You may hide this window either by **right-clicking** on the mouse whilst over this window or by re-selecting the same menu option.

## ▣ Options: Check Function Calls

Click on this menu option or on the short cut on the Toolbar to launch **Function Check (WFCHECK.EXE)** component of **Link Check**.

You can examine all of the function calls in the module as well as the ones that it requires to be present in the system to run properly.

This menu option can also be invoked by **right-clicking** with the mouse anywhere in the main window or by pressing **F2**.

## ▣ Options: Check All Modules in Memory

Click on this menu option or on the short cut on the Toolbar to launch **Memory Check (WMCHECK.EXE)** component of **Link Check**.

You can examine all of the modules currently loaded in memory.

This menu option can also be invoked by **right-clicking** with the mouse anywhere in the main window or by pressing **F3**.

## ▶ Options: Expand All Levels

Click on this menu option to show every single module required by the executable.

## ▶ Options: Expand One More Level

Click on this menu option to expand the current level throughout the Main Window.

When a module is first opened, the first level of linked modules are shown. A second level of modules can be seen if any one of the first level modules are expanded by **double-clicking** on the module, and so on for up to 256 levels.

Rather than having to select each first level module for expansion, you can select just one and use this menu option to expand all of the modules on the same level as the selected one. The same holds true for any level.

Note that only the modules on the same level and underneath get expanded, so select the topmost module if you want to see the whole level expanded.

## ▶ Options: Collapse All

Click on this menu option to collapse all open links of the loaded module.

This menu option is equivalent to re-opening the executable file.

# ▶ __Preferences: Show Lowercase File Names__

Click on this menu option to draw the file names in the main window in lowercase or as is.

If this menu option is checked, then the file names will be in lowercase, otherwise as is.

## ▶ <u>Preferences: Draw Thick Lines</u>

Click on this menu option to draw the connecting modules with either thick or thin lines.

If this menu option is checked, then the lines will be thick, otherwise thin.

## ▶ Preferences: Show Modules Currently in Memory

Click on this menu option to show the status of each module whether loaded in memory or not.

If a ▪ symbol appears next to the module name then the module is loaded in memory.

If a ▪ symbol appears next to the module name then the module is **not** loaded in memory.

## ▶ **Preferences: Show Optional Modules**

Click on this menu option to make **Link Check** scan the currently open executable for the string **.DLL** to find out if there are any references to some external .DLLs embedded in the code.

Any entries found are shown in Red and these modules are **not** necessarily required by the system for the executable to work properly.

## ▶ <u>**Preferences: Show Toolbar Tips**</u>

Use this menu option to turn the Toolbar button explanations/hints on and off.

## ▶ Preferences: Show Toolbar

Use this menu option to show or hide the Toolbar.

## ▶ Preferences: Show Status Bar

Use this menu option to show or hide the Status Bar.

## ▶  Preferences: Save Settings Now

Select this menu option if you want **Link Check** to save the current position and size of the main window plus all other settings now to **WLCHECK.INI**.

When you restart **Link Check**, it will reposition, size and configure itself to the saved values.

# ▶ Preferences: Save Settings on Exit

Select this menu option if you want **Link Check** to save the current position and size of the main window plus all other settings when you exit the program to **WLCHECK.INI**.

When you restart **Link Check**, it will reposition, size and configure itself to the saved values.

## ▶ Toolbar

The Toolbar contains the following short cuts:

▶ Open Executable

▶ Create Version Report

▶ Print Version Report

▶ Check Function Calls

▶ Check All Modules in Memory

▶ Exit Program

Help Contents

# ![?] Help: Contents

This menu item shows the Contents page of the help file. Alternatively, click on the short cut on the Toolbar.

## ▶ Help: Search for Help on

This menu item shows the Search dialog box for the help file.

## ▶ <u>Help: How to Use Help</u>

This menu item shows how to use Help.

## ▶ Help: How to Register/Order

This menu item shows how you can order a copy of the registered version of Link Check.

## ▶ Help: About Link Check

Use this dialog box to view the copyright information for this program.

# ▶ How to Register/Order

**Link Check** now includes online registration facilities. Please click on the **Register** pushbutton in the **About dialog** and follow the dialog boxes.

Once finished, the registration process will create an order form **(WLCHECK.ORD)** for you based on the details given. This order form will be created in your Windows directory and Notepad will be launched for you to view it.

**VERY IMPORTANT:** We will create an **electronic key** from the order form so please follow the instructions on the form and send/fax/email it to us. The order form includes details of our fax number, postal address and email id.

Once we receive the order form we will send/fax/email/phone you the key along with details on how to unlock **Link Check** for the full retail version. We will get the key to you as soon as possible (usually within 24 hours).

**Payment Details:**

**Price: 29 US Dollars or 18 Pounds Sterling**

To have your registration added to your CompuServe bill, **GO SWREG** and follow the instructions.

Please use the registration ID **7160**, unless...

**IMPORTANT:** If you are a VAT registered company residing in the European Union (EU) (and not in the UK), please use the registration ID **10094**.

You will see details on all other forms of payment through the registration process/dialogs.

Please click on Registered Version Details for information on the retail version.

# ▶ Copyright and License Agreement

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**Function Check 5.1**
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OS/2 is a registered trademark of International Business Machines Corporation.

## ▶ Acknowledgements

Karri Software Ltd. would like to **THANK ALL** of the registered users of **Link Check** for supporting the **Shareware** concept. Without you **Shareware** would not exist.

Special thanks to **Bob Henderson** for his many suggestions, and for spending his own time testing **Link Check** and providing useful feedback.

## ▶ Registered Version Details

**Link Check** is shareware and not available for free. You are allowed a 21-day evaluation period free of charge for this program and then you should either register it with the author or remove it from your disk(s). Should you use it after the 21-day evaluation period, you are violating US and international copyright laws and treaties.

For details on how to register this program, please click on <u>How to Register/Order</u>.

The registered version of Link Check includes:

1. Full unrestricted version
2. All references to "Unregistered Shareware" removed
3. Your name in the "About" dialog box

The 32-bit versions of **Link Check** (WLCHK95.ZIP and WLCHKNT.ZIP) are also available.

As a registered user of **Link Check**, you will receive the following benefits:

1. Free technical support over the telephone and Email
2. Free upgrades via the electronic key

Currently (Aug 96) we have no plans to charge for upgrades. Once registered with the electronic key, any upgrades will be seamless. All you need to do is to obtain/download a new copy and install over the old version. The key will unlock the retail version automatically so you need to register **only once**.

# Other Products

### Link Check for Windows 95* (WLCHK95.ZIP):

This is the 32-bit native version of Link Check for the Windows 95 platform.

### Link Check for Windows NT 3.51* (WLCHKNT.ZIP):

This is the 32-bit native version of Link Check for the Windows NT platform.

### Software Check 3.24 (WACHECK.ZIP):

**Software Check** is a program which scans your local and network drive(s) for specified or all executable files and gathers information about them for software licensing purposes.

You may also use **Software Check** to identify any unwanted software on your disks/drives.

Information can be gathered, saved to a log and processed later. You may also export the information to another application for further processing.

You may run multiple copies of **Software Check** and scan more than one drive at the same time.

Individual directories may also be logged.

The shareware version of **Software Check** supports floppy and local hard drives only. The full retail version adds support for CD ROM and network/remote drives.

* See Trademarks