

File Menu

The following items are included in this menu:

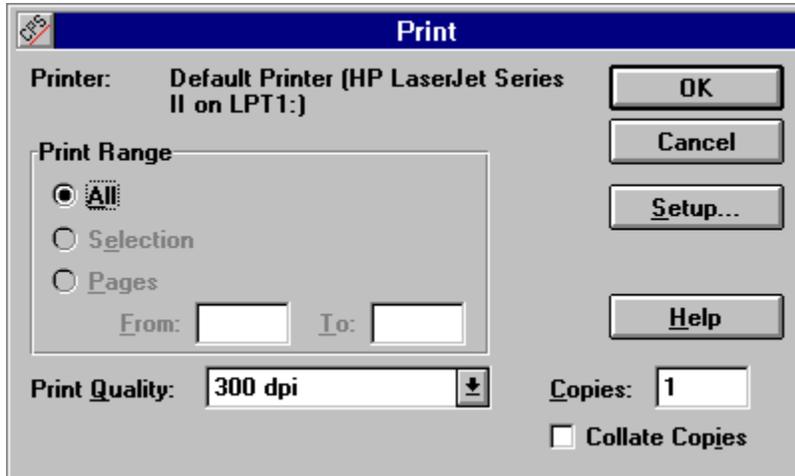
Print...

Printer Setup

Exit

Print... (File Menu)

Select this command, or press **Ctrl + P**, or to print the contents of the screen.



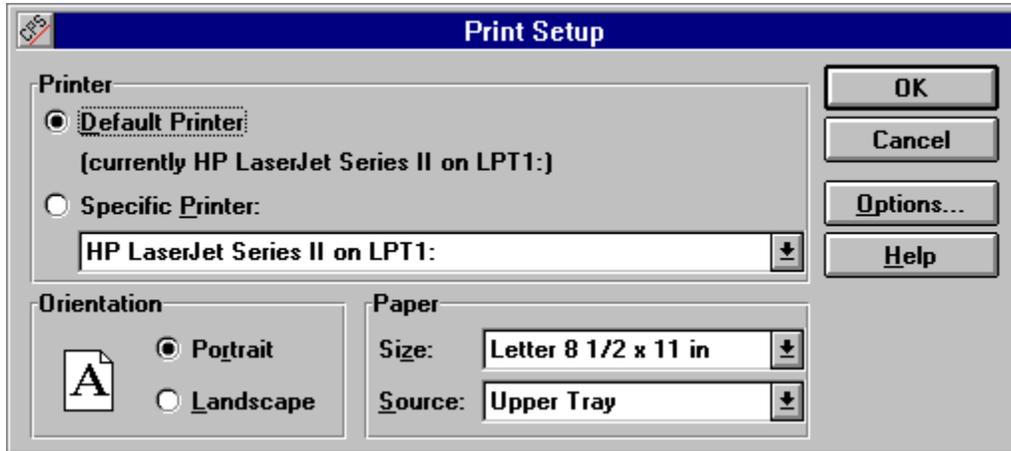
The default print range is all. You cannot choose the Selection or Pages options. You can select the print quality, the number of copies you want to print, and if you want the copies collated.

Select the Setup... button, to access the available printer options available to you by the printer manufacturer.

SHORTCUT: Select the Print icon 

Printer Setup (File Menu)

Select this command to access the Print Setup dialog box and set up your printer.



Select the Options... button in the dialog box to access the available printer options available to you by the printer manufacturer.

Exit (File Menu)

Select this command or press **Alt + F4** to exit X-Ray/WinSock.

Configure Menu

The following menu items are included in this menu:

Status Bar

Save Configuration

Toolbar (Configure Menu)

The following command icons are available on the tool bar:



saves the window position, tool bar and status bar display, Option dialog box settings, and the Filters dialog box settings (except for tasks, or applications).



prints the contents of the screen.



displays the details of a specified event.



opens the Trace Options dialog box, so that you can set trace preferences.



opens the Filters dialog box, so that you can select the functions and tasks (applications) you want to trace.



clears the trace log and buffer.



starts trace, and clears the current trace.



stops tracing events.



continue tracing events. It saves the current trace.



display the WinSock API Help file.



display help for a specific WinSock function.

Status Bar (Configure Menu)

Select this command to display the status bar.



The status bar displays the status on the current trace activity, and provides information on menu items and command icons.

Save Configuration (Configure Menu)

Select this command to save the window position, tool bar and status bar display, Option dialog box settings, and the Filters dialog box settings (except for tasks, or applications).

SHORTCUT: Select the Save icon .

Trace Menu

The following items are included in this menu.

Event Details...

Options...

Filters...

Start

Pause

Continue

Reset Events

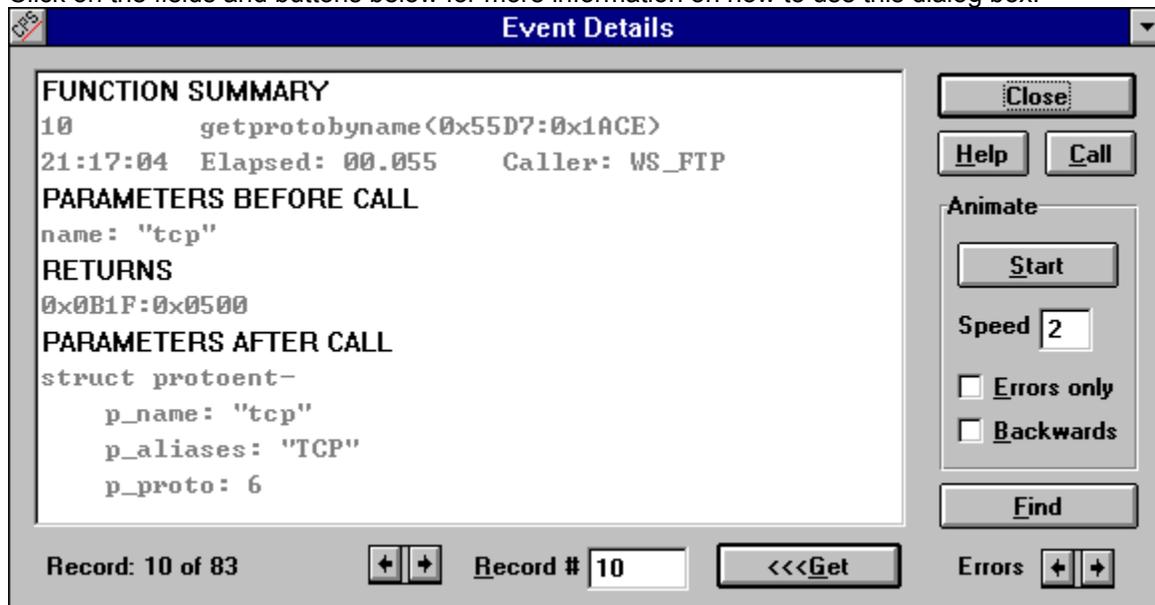
Event Details... (Trace Menu)

Select this command to access the Event Details dialog box and view details of trace events.

Alternatively, double click on a trace record in the X-Ray/WinSock window, or press **Ctrl + E**.

SHORTCUT: Select the Details icon .

Click on the fields and buttons below for more information on how to use this dialog box.



The Event Details dialog box can remain on the screen as long as the trace buffer is not cleared (by selecting the Clear icon  or selecting the Reset Events item in the Trace menu).

Detail List Box

This window displays detail of a specified trace. You can specify the trace for which you want more detail by double clicking on a trace record in the X-Ray window, or by entering a number in the Record text box and pressing the Get button. Alternatively, you can scroll through the list box, or select the Animate button to view other records, or select the Find button to find a record alphanumerically.

The following information is displayed for every trace detail:

FUNCTION SUMMARY: A summary of the function, including record number, function, and the time it was called.

PARAMETERS BEFORE CALL: Parameters in the code before the function is executed.

RETURNS: Error codes or values that are returned by Winsock.

PARAMETERS AFTER CALL: Values that may have been changed by Winsock.

Close Button

Select this button to close the dialog box.

Find Button

Select this button to find a record. The Find dialog box is displayed.

You can search by any numeric or alphabetic characters. If you search alphabetically, you can do a case-sensitive search (if the word for which you are searching contains capital letters) by selecting the Match Case option. You can also search up or down through records.

Speed

Enter the number from 1 to 15. The higher the number, the slower the animation (that is, automated scrolling through the detail list box). The range of values equates to .2 through 3 seconds. You can initiate animation by selecting the Start key.

Errors Only

Select this option if you want to view error messages while animation is enabled.

Backwards

Select this option if you want to see the log in reverse order while animation is enabled.

Browse Records

Select the Browse scroll buttons to view records ahead or behind the current record.

Errors

Select the Errors scroll buttons to scroll through errors.

Start Button

Select the Start button if you want to automate scrolling through the detail list box. To set the animation delay, enter the number of seconds delay in the seconds text box.

Get Button

Select this button to retrieve details for a trace you specify in the Record text box. The record is the first field that is displayed in the X-Ray/WinSock window. You can also use the scroll buttons to scroll backwards and forwards through record numbers.

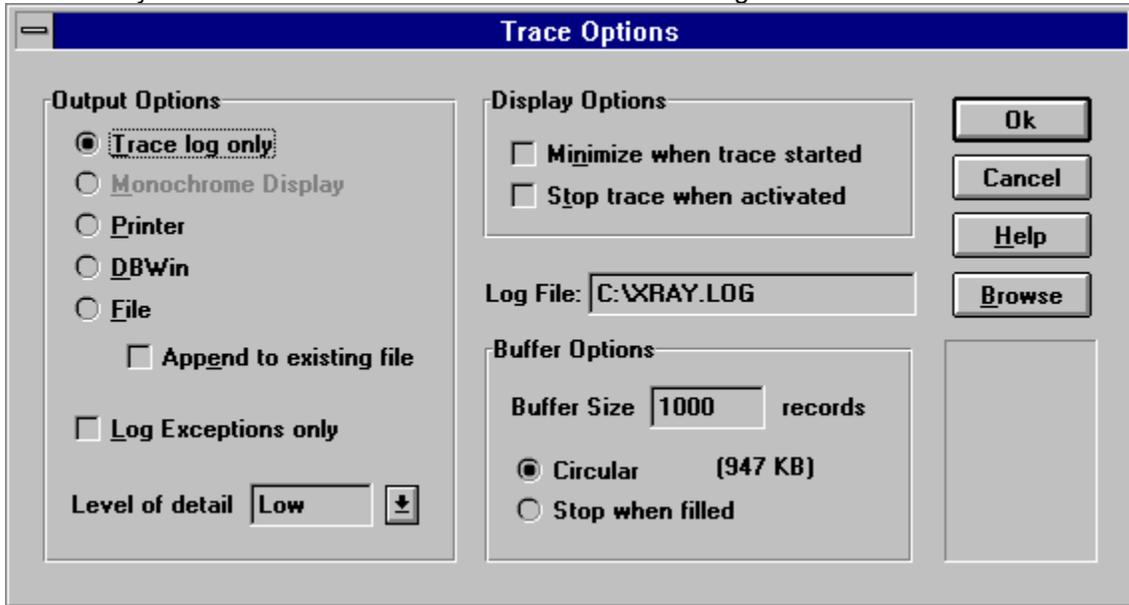
Options.... (Trace Menu)

Select this command to access the Trace Options dialog box and set your trace preferences.

Alternatively, press **Ctrl + O**.

SHORTCUT: select the Trace icon .

Click on any field for more information on how to use this dialog box.



The image shows a Windows-style dialog box titled "Trace Options". It is divided into several sections:

- Output Options:** Contains radio buttons for "Trace log only" (selected), "Monochrome Display", "Printer", "DBWin", and "File". Below these are checkboxes for "Append to existing file" and "Log Exceptions only". At the bottom, there is a "Level of detail" dropdown menu set to "Low" and a small icon button.
- Display Options:** Contains checkboxes for "Minimize when trace started" and "Stop trace when activated".
- Log File:** A text field containing "C:\XRAY.LOG" with a "Browse" button to its right.
- Buffer Options:** Contains a "Buffer Size" text field with "1000" and "records" next to it. Below are radio buttons for "Circular (947 KB)" (selected) and "Stop when filled".

On the right side of the dialog, there are four buttons: "Ok", "Cancel", "Help", and "Browse".

Select the Ok button, or press **Enter** to set your preferences and exit the dialog box.

Trace log only

Displays trace information to a window.

Monochrome Display

For a monochrome monitor. This option is grayed if you do not have a monochrome video card installed in your computer.

Printer

Outputs trace information to your printer.

DBWin

Outputs trace information to DBWin (a sample debugger available with Microsoft Windows SDK and Microsoft C/C++ (Visual C++™)). This option also supports output to WinScope™ by Periscope. X-Ray is compatible with any program capable of displaying messages sent by the function `OutputDebugString()`.

Be aware that this option can slow your system down if many trace events are being logged.

File

Outputs trace information to a log file. The default log file is C:\XRAY.LOG. However, you can enter another file in the Log File text box, or choose another log file by selecting the Browse button.

The default is **Append to existing file**, which appends new trace information to the log file you specify. If you deselect the default, the log file is deleted and a new file is created when you run a trace on another function.

Log Exceptions only

Select this option if you want to log Win Sock functions that return errors only.

Level of detail

Select High to output information details to printer, DBWin, or the file you specified in the option above.
Select Low to display only two lines of information to the Event Details dialog box.

Display Options Field

Minimize when trace started: Minimizes the X-RAY/WinSock application window to an icon.

Stop trace when activated: Stops the trace when you activate the X-RAY/WinSock window.

Log File

If you selected File in the Output Options field, and if you do not want to accept the default of C:\XRAY.LOG, enter the name of the file to which you want trace information stored, or choose another log file by selecting the Browse button.

Buffer Options Field

The number in parentheses below the Buffer Size option is the amount of memory in kilobytes.

Buffer Size: Enter the number of records, between 100-1000 inclusive, that you want to buffer.

Circular: When the number of records is one more than the number you specified in the Buffer Size option, the buffer drops the oldest record, giving the appearance of an endless buffer. The larger the buffer size, the more records it can hold before losing the oldest record.

Stop when filled: The buffer stops accepting record when the number of records you specified in the Buffer Size option is reached. The trace is automatically stopped.

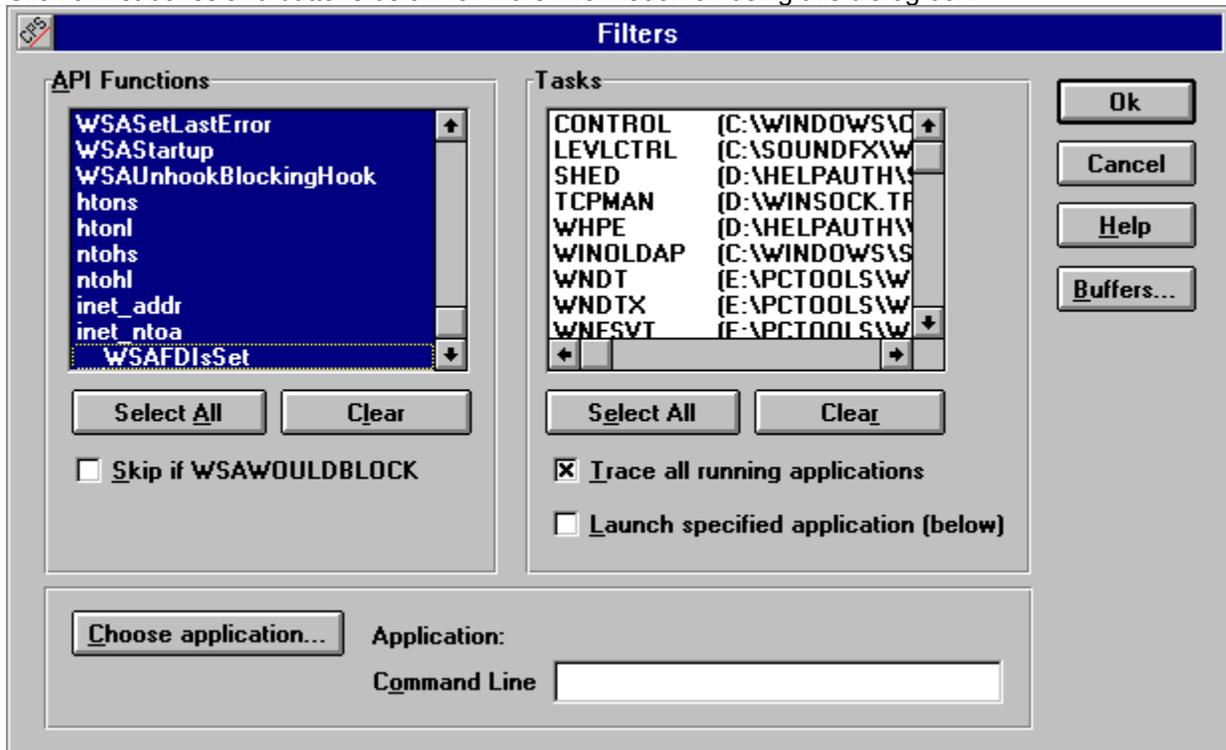
Filters... (Trace Menu)

Select this command to access the Filters dialog box and set filters.

Alternatively, press **Ctrl + F**.

SHORTCUT: Select the Filters icon .

Click on list boxes and buttons below for more information on using this dialog box.



To exit the dialog box without setting any filters, select the Cancel button.

To set your filters and exit the dialog box, select the Ok button or press **Enter**.

API Functions

Select the trace functions you want to run. For more information about these functions, refer to the documentation that accompanies the Winsock API.

X-Ray does not trace the WinSock function `WSAGetLastError()`.

Select All Button

Select this button to select all items in the list box.

Clear Button

Select this button to cancel your choice(s) in the list box.

Active Application(s)

Select the applications for which you want trace information.

Skip if WSAWOULDBLOCK

WSAWOULDBLOCK is returned if the recv, recvfrom, send, and/or sendto functions fail because no data could be received or sent. Select this option if you do not want WSAWOULDBLOCK logged.

Trace all applications

Select this option if you want to trace all current and new applications.

Launch specified application

Select this option if you want to run a trace on an application that is not displayed in the Active application(s) list box. To select the application, select the Choose application... button or enter the command line of the application.

Choose application...

Select this button to select an application for trace that does not appear in the Active application(s) list box.

Alternatively, you can enter the command line of the application.

Buffers

Determines the way that data buffers are displayed in the Event Details dialog box (typically buffers passed to `recv/recvfrom` or obtained from `send/sendto`). There are several options available:

Display entire buffer: Displays the entire buffer in the selected format.

Don't display buffer: Displays "N/A" instead of the contents of the buffer.

Display up to nnnn bytes: Displays the first nnnn bytes of the buffer. Buffers are limited to 4096 bytes. If a buffer is larger than 4096 bytes, it will be truncated to 4096.

Display buffers in Hex/ASCII: Display buffer information in DEBUG style format:

Display buffers in ASCII only: Display buffer in text format. Useful for debugging FTP type applications.

Start (Trace Menu)

Select this command, or press **Ctrl + S** to start the trace.

SHORTCUT: Select the Start icon .

Before you start the trace, set you trace preferences and filters.

Pause (Trace Menu)

Select this command, or press **Ctrl + A** to pause tracing.

Alternatively, If you selected the **Stop trace when activated** option in the Trace Options dialog box, tracing will stop when you activate X-Ray/WinSock.

SHORTCUT: Select the Stop icon .

Continue (Trace Menu)

Select this command after you have stopped/paused the trace to save the current trace and continue tracing events.

Reset Events (Trace Menu)

Select this command to clear all events from the trace log and buffer.

SHORTCUT: Select the Clear icon .

If you select this command or the Clear icon, and the Event Details dialog box is displayed, the dialog box will close.

Help Menu

The following menu items are included in this menu:

[Index](#)

[Keyboard](#)

[View README.WRI...Winsock API...Specific WinSock Function...About X-Ray/WinSock](#)

Index (Help Menu)

X-Ray/WinSock traces function calls of the Windows Socket (WinSock) implementation.

The first time you open X-Ray/WinSock, follow the procedures below:

1. In the Help menu, select [View README.WRI...](#).
2. Select [Options...](#) to set your trace preferences.
3. Select [Filters...](#) to set trace functions and tasks.

X-Ray/WinSock may open with the title bar and menu bar hidden. To display the title bar and menu bar, press **Alt + I**.

Once the menu bar is displayed, you can access help on any menu item by highlighting it and pressing **F1**.

For more information about menu items X-Ray/WinSock, click on any of the following:

[File menu](#)

[Configure menu](#)

[Trace menu](#)

[Help menu](#)

[Toolbar](#)

[Status Bar](#)

For information on procedures, click on any of the following:

Trace Procedures

Clearing the trace log

Continuing a trace

Setting functions and tasks

Setting trace preferences

Starting a trace

Stopping a trace

[Reset Events](#)

[Continue](#)

[Filter...](#)

[Options...](#)

[Start](#)

[Pause](#)

General Procedures

Exiting X-Ray/WinSock

Printing contents of the X-Ray/WinSock window

Saving the configuration

Setting up your printer

Using keyboard commands

[Exit](#)

[Print...](#)

[Save Configuration](#)

[Printer Setup...](#)

[Keyboard Commands](#)

Keyboard Commands (Help Menu)

Clear all events from the trace log	Ctrl + R
Continue the trace	Ctrl + C
Display event details	Ctrl + E
Exit X-Ray/WinSock	Alt + F4
Help	F1
Pause the trace	Ctrl + A
Print	Ctrl + P
Set trace functions and tasks	Ctrl + F
Set trace preferences	Ctrl + O
Start the trace	Ctrl + S
Display the Winsock API Help file	Ctrl + F1
Display help on a Winsock function	Shift + F1

WinSock API... (Help Menu)

SHORTCUT: Select the API button 

Specific WinSock Function... (Help Menu)

SHORTCUT: Select the Function button 

View README.WRI... (Help Menu)

Select this command for information that has become available since the manual was printed, and for other vital information.

