BSCLIB for Windows

SmartSync/DCP Version Installation Guide

Table of Contents

Technical Support	2
Hardware Installation Installation of ISA-Bus SmartSync/DCP Adapter Hardware Port Addresses Memory Mapped Addresses	3 3 4 4
Software Installation	5
Software Removal	6
AMXBSC.EXE – SmartSync/DCP Download File	6
DCPLOAD - SmartSync/DCP Download Utility	7
If You Are Not a Software Developer	7
BSCLIB Software Development Kit	
BSCLIB Run-Time	9
DCPPEEK – SmartSync/DCP BSC Process Status Utility	10
DCPDUMP – SmartSync/DCP Dump Utility	11
DCPDEBUG – SmartSync/DCP Debug Utility	11
DCPTRACE – SmartSync/DCP Trace Dump Utility	13
KILLBSC – Kill BSC Protocol Task Program	14
RMLIB.DLL – Record Manager Dynamic Link Library	15
XDCPDRVR.DLL – SmartSync Device Driver Interface	15
XDCP_VXD.VXD - SmartSync Device Driver (Win 95/98)	15
XDCPDRVR.SYS – SmartSync Device Driver (Win NT)	15
Registry Entries Registry Example	15 17
WINTEST – Example Point-to-Point BSCLIB Application	
MTEST – Example Multi-Point BSCLIB Application	

Technical Support

Serengeti Systems provides technical support for as long as you use BSCLIB at no additional cost to you. Support is available via the Internet from our web site or via e-mail, or by telephone.

- Visit the Serengeti Web Page (<u>http://www.serengeti.com</u>) and click on Technical Support to access our online technical database. You'll find answers to many of the most commonly asked questions at your fingertips.
- For fast response to your technical support issue, sum up your question or problem in writing and submit this via e-mail to <u>Support@Serengeti.com</u>. We'll respond to you by e-mail or a telephone call (if appropriate) as quickly as we can.
- If you cannot find the answers you're searching for online or you do not have e-mail access, you may call us at (512) 345-2211 and ask for technical support during our normal business hours of 9AM to 5PM Central Time Monday through Friday.

BSCLIB for Windows

BSCLIB operates under Microsoft Windows 95, Windows 98, or Windows NT Workstation or Server.

This installation guide applies only to the multi-port version of BSCLIB that uses the SmartSync/DCP series of synchronous adapters. This guide is designed to step you through the installation process and to describe the key components of BSCLIB. You may also wish to refer to the "readme.1st" file for more information.

BSCLIB is supplied in two forms. If you are a software developer you initially receive the BSCLIB Software Developers Kit (SDK) to create an application program that utilizes BSCLIB to connect with a BSC communications network. Please refer to the <u>BSCLIB Programmer's Guide</u> for information on how to write programs for the BSCLIB API. If you are an end-user or distributor of such an application, you receive the BSCLIB Run-Time package that permits the application to be used on another PC.

Hardware Installation

This section applies only to the ISA-bus SmartSync/DCP adapter. The PCI-bus SmartSync/DCP adapter is Plug-n-Play (PnP), so if you are installing a PCI-bus adapter for use with BSCLIB then simply insert it into any available PCI slot and skip ahead to the **Software Installation** section.

Installation of ISA-Bus SmartSync/DCP Adapter

Refer to the **DCP-286i INSTALLATION AND DIAGNOSTIC MANUAL**, or the **DCP-386i/e INSTALLATION GUIDE** for

hardware configuration and installation instructions. It is a good idea to verify that all jumpers and switches on the board are set to the factory defaults prior to installation. When used with BSCLIB, the SmartSync/DCP does not require the use of an interrupt (IRQ) in your computer. Before installing the SmartSync/DCP board, be sure that the board is configured to NO INTERRUPT mode. Note: The diagnostic program provided with the DCP-286i and DCP-386i hardware requires that the IRQ jumper be set. If you wish to run this diagnostic program, you will have to set the IRQ jumper to a valid IRQ.

Hardware Port Addresses

When installing a SmartSync/DCP board, choose an address that does not conflict with other hardware installed on your system. Windows NT is able to detect a hardware port address conflict, and will not allow the device driver to start if a conflict exists.

The I/O address is set with the I/O Address Switch block on your SmartSync/DCP (see Figure 2-1 in either the <u>DCP-286i INSTALLATION</u> <u>AND DIAGNOSTIC MANUAL</u> or the <u>DCP-386i/e INSTALLATION</u> <u>GUIDE</u>. The following hardware port addresses may be configured:

> 0x03c, 0x07c, 0x0bc, 0x0fc, 0x13c, 0x17c, 0x1bc, 0x1fc 0x23c, 0x27c, 0x2bc, 0x2fc, 0x33c^{*}, 0x37c, 0x3bc, 0x3fc *Factory setting

IMPORTANT: Make note of the I/O port you configure on your board since this information is required when installing BSCLIB software.

Memory Mapped Addresses

Each SmartSync/DCP contains memory that is shared with your Windows system. This shared memory is located between 640KB and 1MB in 16KB segments. You choose the memory segment during the BSCLIB installation – there is <u>not</u> a hardware switch or jumper associated with this memory location. Since VGA display adapters usually use selected memory between 0xA0000 and 0xCFFFF, most Windows systems will have only the memory between 0xD0000 and 0xEFFFF available.

It is possible that another adapter in your system may also require all or part of one of these segments – you must resolve this conflict so each adapter has its own segment.

Software Installation

Follow the steps below to install BSCLIB for Windows.

- When installing to a Windows NT system, you must have Administrator privileges to install BSCLIB.
- Insert the first BSCLIB diskette into a diskette drive.
- Click Add/Remove Programs from the Control Panel and follow the instructions on the screen.
- Setup displays a welcome dialog and then displays the License Agreement. Read this agreement carefully before continuing.
- Setup asks you for your Name, Company Name, and Serial Number. Enter this information and click Next.
- Setup allows you to change the default installation directory and Program Folder for BSCLIB. Typically, the default directories are acceptable.
- The following dialog allows you to select the number of DCP boards, the total number of ports and whether the boards are PCI or ISA bus adapters:

Hardware Configuration				×
	The hardware in work property w SmartSync/DCI BSC ports in you hardware adapt DCP Boards - © 1 © 2 © 3 © 4 © 5 © 6	n your system must th BSCLIB for Wind S Select the numb ur system, and the tr erfs]. BSC Ports 2	e configured in order to fows with rol DCP boards and ype of bus used by the Bus Type C ISA C ECI	
		< <u>B</u> ack <u>N</u>	lext > Cancel	

If the DCP adapter(s) in your machine use the ISA bus, the following dialog will allow you to set the I/O port address and the dual-ported memory address for each adapter installed.



- If you are installing under Windows 95/98, you must reboot the machine before running BSCLIB for the first time.
- You must run **Dcpload** to initialize the DCP hardware before running your BSCLIB application. See the following descriptions of the 'amxbsc.exe' file and the **Dcpload** utility program.

Software Removal

To remove the BSCLIB software, click on the **Uninstall BSCLIB** icon in the BSCLIB program folder or click on **Add/Remove Programs** in the Control Panel and follow the instructions on the screen. All programs and files that were originally installed on your machine are removed. Any files residing in the installation directory created after installation are not removed.

AMXBSC.EXE - SmartSync/DCP Download File

The "amxbsc.exe" file is downloaded to each SmartSync/DCP prior to loading a BSCLIB application by running the **Dcpload** program that is

described below. A download need only be performed once before the first use of a BSCLIB application.

IMPORTANT

This file is NOT an executable Windows program.

DCPLOAD - SmartSync/DCP Download Utility

This program is used to initialize each SmartSync/DCP co-processor and download the "amxbsc.exe" file. The "amxbsc.exe" file is expected to be found in the current working directory. Optional command line switches are:

-b board Specific board number to load [1-6]

The **-b** switch specifies which SmartSync/DCP **Dcpload** is to load. Specify board number, 1 through 6, as appropriate which corresponds to the order in which the boards were configured. If omitted, **Dcpload** loads all boards.

-f name Path/File to download

The **-f** switch specifies the full path name of "amxbsc.exe" if it is not in the currently logged subdirectory. For example:

dcpload -f \other_dir\amxbsc.exe

If You Are Not a Software Developer

If you are an end-user, not the developer, of a BSCLIB application, you need not read further from this point. The following technical information is intended primarily for programmers charged with developing BSCLIB application programs.

BSCLIB Software Development Kit

The BSCLIB Software Development Kit (SDK) is shipped to software developers only. The SDK includes a single Run-Time license for use on your development system.

AS STATED IN THE BSCLIB LICENSE AGREEMENT, A UNIQUELY SERIALIZED COPY OF BSCLIB, LICENSED TO YOU BY SERENGETI SYSTEMS, MUST ACCOMPANY EACH COPY OF YOUR BSCLIB APPLICATION THAT IS DISTRIBUTED.

The BSCLIB SDK files are installed into "\Program Files\Bsclib" directory and the "BSCLIB SDK" Program Group by default. After installation is complete, the following files will reside on your machine:

README.1ST	Updated information on BSCLIB
AMXBSC.EXE	Executable downloaded to SmartSync/DCP
DCPLOAD.EXE	Program to download AMXBSC.EXE
DCPPEEK.EXE	Program to check if BSC processes are running
DCPDUMP.EXE	Program to dump SmartSync/DCP memory
DCPTRACE.EXE	Program to dump trace buffers
DCPDEBUG.EXE	Program to print BSC process debug log
LOAD_RES.DAT	Resource file for DCPLOAD.EXE
PEEK_RES.DAT	Resource file for DCPPEEK.EXE
DUMP_RES.DAT	Resource file for DCPDUMP.EXE
TRAC_RES.DAT	Resource file for DCPTRACE.EXE
DBUG_RES.DAT	Resource file for DCPDEBUG.EXE
WINTEST.EXE	Sample BSCLIB application
WINTEST.INI	Initialization file for WINTEST.EXE
ERRDEFS.TXT	Error description file for WINTEST.EXE
KILLBSC.EXE	Program to terminate BSC processes
RMLIB.LIB	Record manager export library
RMLIB.DLL	Record manager dynamic link library
XDCPDRVR.DLL	XDCPDRVR dynamic link library
XDCP_VXD.VXD	XDCPDRVR device driver (Win 95/98)
XDCPDRVR.SYS	XDCPDRVR device driver (Win NT)
WINTEST	Directory for WINTEST project files:
CONFIG.C	Source module for WINTEST.EXE
DIALOGS.H	Source module for WINTEST.EXE

EXTDEFS.H	Source module for WINTEST.EXE
INITFUNC.C	Source module for WINTEST.EXE
LOOKERR.C	Source module for WINTEST.EXE
MENUCTRL.C	Source module for WINTEST.EXE
MTEST.C	Source for multi-point example program
MTEST.MDP	Project file for multi-point program
RCVFILE.C	Source module for WINTEST.EXE
RESOURCE.H	Source module for WINTEST.EXE
SDEFS.H	Source module for WINTEST.EXE
SNDFILE.C	Source module for WINTEST.EXE
TRACESUB.C	Source module for WINTEST.EXE
WINDEFS.H	Source module for WINTEST.EXE
WINTEST.C	Source module for WINTEST.EXE
WINTEST.DEF	Definition file for WINTEST.EXE
WINTEST.H	Source module for WINTEST.EXE
WINTEST.ICO	Icon definition file for WINTEST.EXE
WINTEST.INI	Configuration file for WINTEST.EXE
WINTEST.MDP	Project make file for WINTEST.EXE
WINTEST.RC	Resource file for WINTEST.EXE

BSCLIB Run-Time

The BSCLIB Run-Time is shipped to end-users or distributors of BSCLIB application programs. A separate and unique BSCLIB Run-Time license is required for each instance of an application that uses any part of BSCLIB. The Run-Time files are installed into the "\Program Files\Bsclib" directory and the "BSCLIB RT" Program Group by default. After installation is complete, the following files will reside on your machine:

README.1ST AMXBSC.EXE DCPLOAD.EXE DCPPEEK.EXE DCPDUMP.EXE DCPTRACE.EXE DCPDEBUG.EXE LOAD_RES.DAT PEEK_RES.DAT

Updated information on BSCLIB Executable downloaded to SmartSync/DCP Program to download AMXBSC.EXE Program to check if BSC processes are running Program to dump SmartSync/DCP memory Program to dump trace buffers Program to print BSC process debug log Resource file for DCPLOAD.EXE Resource file for DCPPEEK.EXE

DUMP_RES.DAT	Resource file for DCPDUMP.EXE
TRAC_RES.DAT	Resource file for DCPTRACE.EXE
DBUG_RES.DAT	Resource file for DCPDEBUG.EXE
KILLBSC.EXE	Program to terminate BSC processes
RMLIB.DLL	Record manager dynamic link library
XDCPDRVR.DLL	XDCPDRVR dynamic link library
XDCP_VXD.VXD	XDCPDRVR device driver (Win 95/98)
XDCPDRVR.SYS	XDCPDRVR device driver (Win NT)

DCPPEEK - SmartSync/DCP BSC Process Status Utility

This program is used to "peek" at each SmartSync/DCP and verify that the various processes running in the co-processor are active. This utility is intended primarily for trouble-shooting purposes, but can be run at any time to check the status of BSC processes.

The following is an example of output from **Dcppeek** after running **Dcpload** with a single 4-port SmartSync/DCP:

SmartSync/DCP BSC	Process Status Utility	_ 🗆 ×
<u>File Exit!</u> <u>H</u> elp		
₩ <mark>8</mark> Board #1	_ _ X	
BSC Emulation	n Downloaded	
BSC Interrupt	Clock Running	
BSC Task Mo	nitor Running	
BSC Process #1 - I	Not Running	
BSC Process #2 - I	Not Running	
BSC Process #3 - I	Not Running	
BSC Process #4 - I	Not Running	
Ports Available:	4	
Memory Installed:	1,024K	
Board Address:	8100	
Window Address:	E0910000	
]

The BSC Task Monitor and Interrupt Clock should always be "Running" during normal operation.

The BSC Processes can have the following states: "Not Running", "Running in IDLE State", "Running in XMT State", "Running in RCV State", and "Not Running in IDLE State" (this is an error state).

If the BSC Task Monitor or Interrupt Clock is in the "Not Running" state, you must run **Dcpload** to reinitialize the SmartSync/DCP board. This is also true if one the BSC Processes is hung in one of the "Running" states (i.e., **Killbsc** is unable to return it to the "Not Running" state).

DCPDUMP – SmartSync/DCP Dump Utility

This program is used to access the onboard memory and registers of SmartSync/DCP. This utility is strictly for diagnostic purposes and should only be used under the direction of Serengeti Technical Support.

DCPDEBUG – SmartSync/DCP Debug Utility

This program is used to access debug messages generated by SmartSync/ DCP BSC processes. This utility is used strictly for diagnostic purposes and should only be used under the direction of Serengeti Technical Support.

The debug messages obtained by **Dcpdebug** are automatically written to both the screen and a file. For best results, **Dcpdebug** should be run minimized so as not to affect transmission throughput when running a BSCLIB application. If you've configured one SmartSync/DCP, the default file name is "debug. x" where x is the port number. If you've configured more than one board, the default file name is "debug.xy" where x is the port number and y is the board number. By default the output file is reset when it reaches 100,000 bytes. This enables **Dcpdebug** to run continuously without overflowing disk storage. The optional command line switches for **Dcpdebug** are described below:

-b board Board number [1-6]

The **-b** switch specifies which SmartSync/DCP associated with the BSC process is to be killed. You must indicate the board number, 1 through 6, as appropriate. The board number corresponds to the order in which they were configured. If omitted, the default is board 1.

-p port Port number [1-8]

The **-p** switch specifies the port associated with the BSC process that is to be killed. If omitted, the default is port 1.

-m size Maximum size of debug file (kilobytes)

The **-m** switch changes the default maximum output file size. By default the debug file is reset when it exceeds 100,000 bytes. To change this default, specify the maximum file size in kilobytes (1,024 bytes). For example, **-m50** establishes the maximum file size to be 50K bytes.

-s Silent mode

The **-s** switch prevents **Dcpdebug** from echoing debug messages to the screen. If the message "DEBUG TRACKING MESSAGES LOST" appears on the screen or in your debug output file when running **Dcpdebug**, use silent mode. Silent mode may also be entered by unchecking the "Echo to Screen" menu item under the "Options" menu.

-l Priority mode

The **-1** switch causes **Dcpdebug** to run at a higher priority level. If the message "DEBUG TRACKING MESSAGES LOST" appears on the screen or in your debug output file when running **Dcpdebug**, first try using silent mode. If silent mode does not prevent the messages from appearing, use priority mode. When using priority mode, be sure to run **Dcpdebug** in the background to lessen the effect on other running processes.

DCPTRACE – SmartSync/DCP Trace Dump Utility

This program is used to access the line trace buffers updated by SmartSync/DCP BSC processes. This utility is strictly for diagnostic purposes and should only be used under the direction of Serengeti Technical Support.

Your BSCLIB application is responsible for initializing the trace buffer and turning the line trace on, however the dumping of the line trace history is handled by running **Dcptrace**.

The trace data retrieved by **Dcptrace** is automatically written to both the screen and an output file. If you've configured one SmartSync/DCP, the default file name is "trace. x" where x is the port number. If you've configured more than one board, the default file name is "trace.xy" where x is the port number and y is the board number. By default the output file is reset when it reaches 100,000 bytes. This enables **Dcptrace** to run continuously without overflowing disk storage. The optional command line switches for **Dcptrace** are described below:

-b board Board number to trace [1-6]

The **-b** switch specifies which SmartSync/DCP **Dcptrace** is to access. The board number corresponds to the order in which they were configured. If omitted, **Dcptrace** defaults to board 1.

-p port Port number to trace [1-8]

The **-p** switch specifies which of the SmartSync/DCP ports to monitor for trace data. If omitted, **Dcptrace** defaults to monitor port 1.

-f name Alternative trace file name

The **-f** switch specifies a file, other than the default, to record trace data.

-m size Maximum size of trace file (kilobytes)

The **-m** switch changes the default maximum output file size. By default the trace file is reset when it exceeds 100,000 bytes. To change this default,

specify the maximum file size in kilobytes (1,024 bytes). For example, **-m50** establishes the maximum file size to be 50K bytes.

-s Silent mode

The **-s** switch prevents **Dcptrace** from echoing debug messages to the screen. To lessen the impact on other processes when running **Dcptrace**, use silent mode. Silent mode may also be entered by unchecking the "Echo to Screen" menu item under the "Options" menu.

KILLBSC – Kill BSC Protocol Task Program

This program is used to terminate BSC processes running in the SmartSync/DCP. You should not need to use **Killbsc** during normal operation. However, if your application program terminates without calling the UNINSTALL function, you will have to run **Killbsc** to set the corresponding BSC process to the "Not Running" state before running your application again. The optional command line switches for **Killbsc** are described below.

-f Forced kill

The **-f** switch may be used to force the termination of a BSC process when it is not "Running in IDLE State".

-b board Board number [1-6]

The **-b** switch specifies which SmartSync/DCP associated with the BSC process is to be killed. You must indicate the board number, 1 through 6, as appropriate. The board number corresponds to the order in which they were configured. If omitted, the default is board 1.

-p port Port number [1-8]

The **-p** switch specifies the port associated with the BSC process that is to be killed. If omitted, the default is port 1.

-s Silent mode

The **-s** switch enables the silent mode that suppresses all output to the terminal with the exception of error messages.

<u> RMLIB.DLL – Record Manager Dynamic Link Library</u>

RMLIB.LIB is your application's gateway to the functionality of BSCLIB. Any language that can link to Windows 95 dynamic library files (DLL's) can be used to develop BSCLIB applications.

XDCPDRVR.DLL – SmartSync Device Driver Interface

The XDCPDRVR.DLL is automatically loaded when your BSCLIB application begins. This DLL contains the interface to BSCLIB's device driver.

XDCP_VXD.VXD - SmartSync Device Driver (Win 95/98)

The BSCLIB installer copies the XDCP_VXD.VXD device driver file into the \WINDOWS\SYSTEM directory. Once installed, BSCLIB's XDCP_VXD.VXD device driver is automatically loaded when you start a BSCLIB application.

XDCPDRVR.SYS – SmartSync Device Driver (Win NT)

The BSCLIB installer copies the XDCPDRVR.SYS device driver file into the \WINNT\SYSTEM32\DRIVERS directory. Once installed, BSCLIB's XDCPDRVR device driver is automatically started when load a BSCLIB application.

Registry Entries

Software developers may be interested in the information that is added to the Windows Registry as a result of installing BSCLIB. Experienced users can

directly add or modify the device entry in the Registry to avoid a complete reinstallation of BSCLIB if there is a change in the BSCLIB configuration.

IMPORTANT

Using Registry Editor incorrectly can cause serious, system-wide problems that may require you to reinstall Windows to correct them. Serengeti Systems cannot guarantee that any problems resulting from the use of Registry Editor can be solved. Use this tool at your own risk.

The structure of the Registry entries for the Windows 95/98 version of BSCLIB is shown below:

+ HKEY_LOCAL_MACHINE

- + Software
 - + Serengeti Systems
 - + xdcpdrvr
 - + Parameters
 - XDCPBoards : REG_DWORD : boards
 - XDCPPorts : REG_DWORD : ports
 - XDCPHwAddressn : REG_DWORD : address
 - XDCPMemAddressn : REG_DWORD : address
 - License : REG_SZ : *license*
 - SerialNumber : REG_SZ : serial number

The structure of the BSCLIB Registry entries for Windows NT are below:

+ HKEY_LOCAL_MACHINE

- + SYSTEM
 - + CurrentControlSet
 - + Services
 - + xdcpdrvr
 - DisplayName : REG_SZ : xdcpdrvr
 - ErrorControl : REG_DWORD : 0x1
 - Group : REG_SZ : Extended Base
 - Start : REG_DWORD : 0x3
 - Type : REG_DWORD : 0x1
 - + Parameters

- XDCPBoards : REG_DWORD : boards
- XDCPPorts : REG_DWORD : ports
- XDCPHwAddressn : REG_DWORD : address
- XDCPMemAddressn : REG_DWORD : address
- License : REG_SZ : *license*
- SerialNumber : REG_SZ : serial number
- + EventLog
 - + System
 - + xdcpdrvr
 - EventMessageFile : REG_SZ : "...xdcpdrvr.sys"
 - TypesSupported : REG_DWORD : 0x7

XDCPBoards : boards	Number of boards
----------------------------	------------------

The "Number of boards" entry specifies the total number of SmartSync/DCP boards present in your computer.

XDCPPorts : ports	Number of ports
--------------------------	-----------------

The "Number of ports" entry specifies the total number of SmartSync/DCP ports for which you are licensed.

XDCPHwAddressn : address Hardware address

The "Hardware address" entry specifies the I/O port address of the SmartSync/DCP installed in your system. See the section of this guide titled **Hardware Port Addresses** for more information.

XDCPMemAddressn : address Memory window address

The "Memory window address" entry specifies the shared memory window address of the SmartSync/DCP. See the section of this guide titled **Memory Mapped Addresses** for more information.

Registry Example

For example, the following lines might appear in the Windows NT Registry for a single SmartSync/DCP with 8 ports, an I/O address of 0x33c, and a shared memory segment of 0xd0000:

+ HKEY_LOCAL_MACHINE

+ SYSTEM

+ CurrentControlSet

- + Services
 - + xdcpdrvr
 - DisplayName : REG_SZ : xdcpdrvr
 - ErrorControl : REG_DWORD : 0x1
 - Group : REG_SZ : Extended Base
 - Start : REG_DWORD : 0x3
 - Type : REG_DWORD : 0x1
 - + Parameters
 - XDCPBoards : REG_DWORD : 0x1
 - XDCPPorts : REG_DWORD : 0x8
 - XDCPHwAddress1 : REG_DWORD : 0x33c
 - XDCPMemAddress1 : REG_DWORD : 0xd0000
 - License : REG_SZ : Acme Widgets
 - SerialNumber : REG_SZ : 828435
 - + EventLog
 - + Services
 - + xdcpdrvr
 - EventMessageFile : REG_SZ :"...xdcpdrvr.sys"
 - TypesSupported : REG_DWORD : 0x7

WINTEST - Example Point-to-Point BSCLIB Application

A fully functional example program, **Wintest**, and its complete C source code are provided with the BSCLIB Software Development Kit. This menudriven program exercises most of the features of BSCLIB.

The project file "wintest.mdp" may be used to compile and link the program using Microsoft Visual C/C++ version 4.0 or later. It demonstrates the correct compiler and linker options to use when developing a program that uses BSCLIB.

The resulting program is useful as both a demonstration and test program for BSCLIB in a point-to-point or contention mode BSC environment. You can exercise virtually all of BSCLIB's functions from menus within the program. All inputs to the BSCLIB API are displayed before each call to the library.

The BSCLIB result codes are displayed immediately after a call returns. This is a valuable learning aid for new BSCLIB programmers.

Studying the source code for this example program is the best way to learn how to write a program that uses BSCLIB. The source file includes two high level functions (SNDFILE.C and RCVFILE.C) that utilize several BSCLIB function calls to demonstrate how to send and receive files between BSCLIB and a remote BSC system. These high level functions can be copied directly into your own application to reduce your development time.

MTEST – Example Multi-Point BSCLIB Application

The C source code and project file for **Mtest**, a multi-point BSCLIB application is provided with the BSCLIB Software Development Kit. This console application exercises most of the features of BSCLIB.

The project file "mtest.mdp" may be used to create the executable program using Microsoft Visual C/C++ version 4.0 or later. It demonstrates the correct compiler and linker options to use when developing a console program that uses BSCLIB. The resulting program is useful as both a demonstration and test program for BSCLIB in a multi-point or poll/select BSC environment.

Notes