SE 6000

SECURITY MANAGEMENT SYSTEM

INSTALLATION GUIDE

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an ISO 9001 certified company

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SECTION 1: OVERVIEW

BEFORE YOU START

Your SE 6000 system and its components have been set up, configured, and tested at the Westinghouse Security Electronics (WSE) factory. The UNIX operating system, application software, and database management system have been loaded and are ready to accept data. Should you require help, the remote support modem has been programmed and tested, and its configuration values have been stored in nonvolatile memory.

This guide describes connections from various access control units (ACUs) and monitor point controllers to the SE 6000. The guide *does not cover* the installation of ACUs or any other peripheral equipment that may be connected. Refer to the appropriate installation manual shipped with the device for correct installation procedures, any additional hardware requirements, and cable length limitations.

Additionally, the procedures and information contained herein are written with the assumption that the reader has attended the SE 6000 training course and is familiar with system nomenclature and the user/operator interface.

ADDITIONAL REQUIREMENTS

Since each SE 6000 system installation varies depending on facility layout, security requirements, etc., WSE does not supply cables or connectors for attaching terminals, printers, ACUs, or other monitoring equipment.

To complete your installation, you will need some or all of the following additional components in quantities suitable for your particular system configuration:

[ ] Quality 8-conductor flat Telco cable

[ ] Quality crimp-on RJ-45/8 modular Telco connectors

[ ] Suitable RJ-45/8 crimp tool (recommend Amp tool)

[ ] RJ-45/8 to female RS-232 modular adaptors (for SE 708P, SE 800-series)

[ ] RJ-45/8 to female RS-232 modular adaptors to terminals; RJ-45/8 to male RS-232 modular adaptors to printers. (Reflection 4 terminals may require 9-pin RS-232 for COM1.)

or

[ ] HP D2042G terminal / printer cables or equivalent (one shipped with system—packed in the terminal concentrator box).

NOTE

Networked options such as X-Terminal, ID3000, etc., will require additional components and network wiring. Ethernet distance standards for all media types must be observed.

SECTION 2: INSTALLATION PROCEDURES

1. Unbox all components and inspect for shipping damage.

2. Keep all SE 6000 hardware manuals together for future reference.

3. Locate the connection diagram (*Section 10) that* applies to your system.

4. With the computer POWERED OFF (power switch in *Out* position):

   [ ] A. Connect the power cord to the AC input receptacle.

   [ ] B. Plug the Activator M key into the parallel port.

   [ ] C. Connect the remote support modem with supplied cable to COM1.

   [ ] D. Connect the terminal concentrator(s) to the appropriate corollary board connector (the one closest to the green activity light is ***a***).

   NOTE

   The terminal concentrator can be located up to 1000 feet from the host adaptor, if necessary. Refer to the HP manual shipped with the unit for remote power and cabling requirements.

   [ ] E. Connect the keyboard and mouse to the appropriate ports.

   [ ] F. Connect the color graphics monitor to the monitor port.

   [ ] G. Connect the printer(s) to the appropriate terminal concentrator ports (see configuration sheet shipped with the system).

   [ ] H. Connect any additional PC color terminals or monochrome monitors to the appropriate terminal concentrator ports (see configuration sheet shipped with the system).

   [ ] I. Verify that all connections are snug, and that retaining screws are tightened securely.

   [ ] J. Connect the power cable(s) to an appropriate power source and turn on the computer, terminal(s), printer(s), and remote support modem. (Make sure the printers have paper loaded and are ready to go.)

[ ] K. Press ***Enter*** at the *boot* prompt. Press **Ctrl**/**D** to bring up the system in the multi-user mode. When the system date and time display, reset if not correct. Enter the correct date and time in the format

yymmddhhmm

yy	=	Year (94, 95, ...)
mm	=	Month (01—12)
dd	=	Day (01—31)
hh	=	Hour (01—23)
mm	=	Minute (01—59)

with no intervening spaces. For example, September 23, 1994 at 10:06 a.m. would be entered as:

9409231006

If the date is correct but the time wrong, simply enter the correct time (1006 in the foregoing example).

[ ] L. If the time zone is correct, skip the remainder of this step. Otherwise, proceed as follows:

A. Shut the system down. Then, bring it up again in the maintenance mode by entering the root password ***new123*** at the maintenance mode prompt and pressing ***Enter***.

B. When the ***#*** prompt displays enter ***tz*** and press ***Enter***.

C. Respond to the questions as prompted, entering the information for your time zone.

D. Shutdown the system by entering ***haltsys*** and pressing ***Enter***. At the ***Safe to Power Off*** message, press the spacebar to restart the system.

[ ] M. Bring the system up in the multi-user mode by holding down the ***Ctrl*** key and pressing ***d***.

[ ] N. Log into the application as ***addusers*** (the factory set password is ***new123***). Select ***Monitor Security Activity*** and press ***F2*** (or ***Enter*** twice).

[ ] O. Select ***F2—Control Functions***, ***F2—Pollers***. The pollers defined for your configuration should all indicate ***Online***.

[ ] P. If the access control and input/output controllers are already installed, connect the device loops <u>*one at a time*</u> to the appropriate poller port on the terminal concentrator box (see *Section 9: Connection Diagrams*). Test each device for normal communication.

[ ] Q. Select in order ***Master File Maintenance***, ***System Configuration***, then ***Device Entry*** and add the appropriate device record for each ACU. As these are added,

the devices should begin to communicate with the SE 6000. To verify this, use the ***Monitor Security Activity***, ***Control Functions***, ***Pollers*** screen. Use the down arrow key to highlight the poller you are working with, then press ***F4*** for device communication.

If the device is responding correctly, you should see 'raw' data flashing under the ***Response*** heading. If the unit is not communicating, check or perform the following:

[ ] Concentrator is communicating with the host—green host light on the right front of the concentrator is on solid.

[ ] Cable and adapter terminated correctly.

[ ] Cable is plugged into correct concentrator port.

[ ] Device communication baud rate is 9600 bps.

[ ] The device record has the correct computer ID: 0 for host connection; 1 to ***x*** for LC/RLC connection.

[ ] Device is powered up.

[ ] Device address set correctly.

[ ] Cycle power on the device.

[ ] Reboot the system following the procedures given in *Section 3: Starting / Stopping the SE 6000 System*.

If you are still unable to communicate with the device, contact your dealer or WSE customer service for assistance. See *Section 7: Product Support* for hours of operation and phone numbers.

SECTION 3: STARTING / STOPPING THE SE 6000 SYSTEM

The SE 6000 is a sophisticated blend of state-of-the-art hardware, comprehensive multi-user, multi-tasking operating system, and advanced access control software. During the course of normal day-to-day activity, the system is performing several tasks concurrently and keeps track of all the files associated with each task.

Unlike MS-DOS, UNIX requires an orderly shutdown procedure to maintain system and data integrity. Although it is robust enough to handle power failures and 'unscheduled' interruptions, these are considered abnormal shutdowns that leave the database and temporary files open. The operating system and application software will close the files and fix the database when the system is restarted.

NOTE

This occurs automatically within 30 seconds if:

- The system is unattended (no keyboard or mouse activity),

or

- The operator fails to respond to the boot prompt following power restoration.

If you are required to shut down the system for any reason, you should make every effort to follow the standard shutdown procedures. This will ensure your data integrity and will make the subsequent system start-up as expeditious as possible.

STANDARD SYSTEM SHUTDOWN PROCEDURES

1. Log off the system by pressing ***F1*** until the ***Exit SE/SMS System*** prompt appears. Then respond ***yes*** and press ***Enter***.

2. Log back in as ***Shutdown***. Enter the appropriate password—(***new123***-default) and press ***Enter***. This generates a broadcast message to other terminals that may be still active, warning the operators to log off immediately.

   If any operators remain logged in, the shutdown is interrupted. When certain that*all* operators are logged off, enter **Y** to continue.

   This action will then suspend poller operation, halt the miscellaneous tasks that control the

database, log, and print functions, close all open files, and will shut down the database in an orderly fashion.

3. Finally, the ***Safe to Power Off*** message appears. You can then safely remove power from the SE 6000 and its various components.

NOTE

These procedures take approximately one minute.

RESTARTING THE SYSTEM

To restart the system:

- Power it on and allow it to 'autoboot',

or

- Follow the procedures given in *Section 2: Installation Procedures*, beginning with Step K.

SECTION 4: GETTING STARTED WITH THE DATABASE BUILD

The *SE 6000 User's Manual* (packaged with your software distribution) explains in detail the various files and entry screens that are used to build and maintain the database. While the software is powerful and flexible enough to allow you to 'build on the fly', it is by no means the most efficient way to tackle the job.

The SE 6000 database is organized logically and has some internal dependencies called 'linkages'. For example, you must define an ACU to the system before you can define readers or monitor points for that device.

To enable you to get started quickly, the setup sequence logic for the system hardware is included. (Refer to the *SE 6000 User's Manual* for the complete list of data that needs to be entered to configure a fully-functional access control system.)

The screens necessary to define the following are located on the ***Master File Entry*** and ***Device Configuration*** menus. Proceed as follows:

1. Enter your time codes.

2. For installation purposes, use Tenant 0 for your physical devices unless you have already designed the tenant structure. If Tenant 0 is used, this can be changed later if required.

3. Define and enter zones, if applicable. This allows you to view and control devices, readers and points in user-selected groups (zones). The zones can be changed/reorganized at any time without deleting records. (See the *SE 6000 User's Manual* and the *SE 6000 Database Setup* manual for zone and anti-passback details.)

4. Define and enter pollers.

   NOTE

   The system pollers are set at the WSE factory during the test phase. If you wish to use a different numbering scheme, delete the factory-set numbers and re-add at this time.

5. Define and enter your devices.

6. Define and enter your monitor points, including door switches and REX points.

7. Define and enter your readers. To test the readers, you also have to add the following:

   [ ] An access code that includes all readers defined previously.

NOTE

You can use time code 1 (24 hours access on all days) supplied with the system.

[ ] A test keyholder that is assigned the access code defined previously with a key.

SECTION 5: BACKING UP THE SYSTEM

The SE 6000 is equipped with a large-capacity hard disk drive, and even entry-level systems would require a large number of floppy diskettes for backup. For this reason, a 150MB tape drive is standard on all SE 6000 systems.

Packaged with your system, WSE has provided two emergency floppy diskettes (usually referred to as the build diskettes), and a backup tape of your entire system which we created in our factory after configuring, loading, and testing your system. Except for the test records, the database is empty. If necessary, this tape could be used, with WSE customer support help, to restore any or all files to their original condition. Make sure these are put in a safe place, along with the SCO/UNIX and SCO/CGI 'pink' activation cards.

Installing, implementing, and managing a large access control/alarm monitoring system requires the joint effort of many personnel. During the initial phases of system implementation, the database processes many changes, mostly in the form of new data items. Besides the device and point records, large companies often have hundreds or thousands of keyholder records and a wide variety of access code definitions. Because of the update volume, it is good practice during system implementation to back up the database frequently, even daily when the database is first being created.

To perform the backup, first obtain a supply of 150MB formatted tapes (10 to begin with).

NOTE

WSE uses and recommends the Sony 6150 tape or equivalent.

Label the tapes A1 through A5, and B1 through B5, and be sure to include the appropriate date. This will enable you to rotate your backups, keep them together by week if required, and to identify how old they are later. During the build phase of every installation, back up the database from the System Administration menu each evening, and enter the date, tape number and your initials in the backlog. This procedure enables you to reuse the tapes many times during the installation without having to peel labels.

SECTION 6: SYSTEM RECOVERY—POWER FAILURE

Local power failures, inadvertently disconnecting the CPU from its power source, and system crashes are unavoidable, and these happen to **ALL** computer systems from time to time. Both the UNIX operating system and the SE 6000 database management system will inform you of any data discrepancies following an 'unscheduled' interruption, and together they will automatically correct these before resuming operations.

When power returns, either allow the system to recover automatically by waiting at least 30 seconds after the boot prompt appears, or proceed as follows:

1. Cycle power on the system; press ***Enter*** at the boot prompt.

2. When UNIX is loaded, it will inform you that the root file system needs to checked with the message ***OK to proceed Y/N?***. Enter ***Y***.

3. A UNIX utility, file system check—***fsck***, will locate all the file system discrepancies and will ask if it is OK to fix them. ***Always answer* Y *to these system prompts***.

4. After fixing the problems, the file system check utility responds with ***Set file system state to OK?***. Enter ***Y***.

5. The system will then load the application software which automatically goes into the recovery mode. When this completes, the software starts the pollers, rebuilds memory maps as required, tells you that the system has been restarted successfully, then displays the log-in prompt. Depending on the size of your installation and database, the recovery procedures take from 5 to 15 minutes.

IMPORTANT

If the system does not restart after you complete these procedures, try them a second time. If still not successful, contact WSE customer support for assistance (See *Section 7: Product Support*).

SECTION 7: PRODUCT SUPPORT

Product support may be obtained from your authorized dealer, either directly or via modem. Every SE 6000 system is supplied with a remote support modem (Telebit T1000 or Trailblazer) that communicates over standard voice grade lines at 9600 bps.

IMPORTANT

Modems are supplied with U.S. domestic shipments only. Because of differing foreign regulations concerning modems, SE 6000 systems shipped internationally are not supplied with these units.

If dealer support is unavailable, contact the WSE customer support department, either directly or via modem. The department is open Monday through Friday, 0600 to 1800 PST, public holidays excepted. The phone numbers are:

(800) 227-1667
(408) 727-5170 (ask for technical support)
(408) 727-6521 ext 1-5400

For areas served by WSE Europe, customer service representatives can be reached Monday through Friday, from 0800 to 1700 local time (Netherlands), public holidays excepted. The phone number is:

(31) 71417197

In all cases, please have the following information available:

A. SE 600 system type (6050, 6100, etc.)

B. Device types attached to the system (SE 708P, SE 800-Series, Opto's, etc.)

C. Dial-in phone number for the remote support modem

D. Phone number and end-user contact name

E. Software revision level

F. Detailed problem description

OTHER MODEM CAPABILITIES

With a terminal and compatible modem, your dealer or system administrator can also access the SE 6000 remotely should you choose to provide this capability. Once logged in, remote users may access all the system functions their individual security levels permit.

SECTION 8: CABLE CONFIGURATIONS

INTRODUCTION

The SE 6000 systems communicate with and support a variety of devices. This section provides details on cable termination for the currently supported ACUs, input / output controllers, broadcast boxes, modems, and HP terminals / printers. The various cable configurations, in the order given in this section, are listed below.

CABLE CONFIGURATION LIST

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EXCEPTIONS

If the wiring information in this section does not cover devices in your configuration that have been approved by WSE for connection to the SE 6000, please contact WSE customer support for assistance (see *Section 7: Product Support*).

HP 8-Port Mux to an HP 700-Series Terminal

This cable is used to connect an HP 8-port mux to an HP 700-series terminal. An 8-pin RJ-45/8 (male) connector is at each end of the cable. One end of the cable plugs into the HP 8-port mux; the other into an RJ-45/8 (female) to DB25 (male) that plugs into the terminal.

Cable Pinouts

RJ-45/8 Pin #	Signal	RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	4
5	Receive data	5
6	Data carrier detect	6
7	Clear to send	7
8	Data set ready	8

RJ-45/8 Pin to DB25 Headshell Pinouts (Terminal)

RJ-45/8 Pin #	Signal	DB25 Pin #
1	Ground 0 volts	7
2	Request to send	8
3	Data terminal ready	5, 6
4	Transmit data	3
5	Receive data	2
6	Data carrier detect	4
7	Clear to send	20
8	Data set ready	20

HP 8-Port Mux to SHMs, to SE 708P or SE 800-Series

This configuration is used to connect an HP 8-port mux, two short-haul modem (SHMs), and an SE 708P or SE 800-Series. Three cable configurations are required.

The first cable has an 8-pin RJ-45/8 (male) connector at each end. One end plugs into the HP 8-port mux; the other into an RJ-45/8 (female) to DB25 (male) that plugs into an SHM.

The second cable connects the two SHMs. The cable can be up to two miles, and it must be dedicated (not run through a phone switch) and directly connected. Minimum wire gauge should be #20 AWG.

The third cable connects the second SHM to the SE 708P or 800-Series. Set both SHMs to DCE.

8-Port Mux to SHM — Cable Pinouts

RJ-45/8 Pin #	Signal	RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	4
5	Receive data	5
6	Data carrier detect	6
7	Clear to send	7
8	Data set ready	8

RJ-45/8 Pin to DB25 Headshell Pinouts (SHM)

RJ-45/8 Pin #	Signal	DB25 Pin #
1	Ground 0 volts	7
2	Request to send	4
3	Data terminal ready	20
4	Transmit data	2
5	Receive data	3
6	Data carrier detect	8
7	Clear to send	5
8	Data set ready	6

SHM TO SHM

RX+	Receive data +	TX+
RX-	Receive data -	TX-
TX+	Transmit data +	RX+
TX-	Transmit data -	RX-

DB25 TO DB25 (SHM TO SE 708P OR SE 800-SERIES)

SHM DB25 Pin #	Signal	SE 708P or SE-800 Series DB25 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	5
6	Receive data	6
7	Data carrier detect	7
8	Clear to send	8
20	Data set ready	20

HP 8-Port Mux to SHMs (Black Box), to HP 700-Series Terminal

This configuration is used to connect an HP 8-port mux, two Black Box SHM-B short-haul modem (SHMs), and an HP 700-Series terminal. Three cable configurations are required.

The first cable has an 8-pin RJ-45/8 (male) connector at each end. One end plugs into the HP 8-port mux; the other into an RJ-45/8 (female) to DB25 (male) connector that plugs into an SHM.

The second cable connects the two SHMs. The cable can be up to two miles, and it must be dedicated (not run through a phone switch) and directly connected. Minimum wire gauge should be #20 AWG.

The third cable connects the second SHM to the HP 700-Series terminal. Set both SHMs to DCE.

8-Port Mux to SHM — Cable Pinouts

RJ-45/8 Pin #	Signal	RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	4
5	Receive data	5
6	Data carrier detect	6
7	Clear to send	7
8	Data set ready	8

RJ-45/8 Pin to DB25 Headshell Pinouts (SHM)

RJ-45/8 Pin #	Signal	DB25 Pin #
1	Ground 0 volts	7
2	Request to send	4
3	Data terminal ready	20
4	Transmit data	2
5	Receive data	3
6	Data carrier detect	8
7	Clear to send	5
8	Data set ready	6

SHM TO SHM

RX+	Receive data +	TX+
RX-	Receive data -	TX-
TX+	Transmit data +	RX+
TX-	Transmit data -	RX-

DB25 TO DB25 (SHM TO TERMINAL)

SHM DB25 Pin #	Signal	Terminal DB25 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	5
6	Receive data	6
7	Data carrier detect	7
8	Clear to send	8
20	Data set ready	20

HP 8-Port Mux to DBB (Black Box), to SHMs (Black Box), to SE 708P or SE 800-Series

This configuration is used to connect an HP 8-port mux, a Black Box TL-158 Data Broadcasting Box (DBB), two Black Box SHM-B short haul modems (SHMs), and an SE 708P or SE 800-Series. Four cable configurations are required.

The first cable has an 8-pin RJ-45/8 (male) connector at each end. One end plugs into the HP 8-port mux; the other into an RJ-45/8 (female) to DB25 (male) connector that plugs into the DBB COMM port.

The second cable is an RS-232 cable that connects the DBB to the first SHM.

The third cable connects the two SHMs. The cable can be up to two miles, and it must be dedicated (not run through a phone switch) and directly connected. Minimum wire gauge should be #20 AWG.

The fourth cable connects the second SHM to the SE 708P or SE 800-Series. Set all DBB ports to DCE.

8-Port Mux to DBB — Cable Pinouts

RJ-45/8 Pin #	Signal	RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	4
5	Receive data	5
6	Data carrier detect	6
7	Clear to send	7
8	Data set ready	8

RJ-45/8 Pin to DB25 Headshell Pinouts (DBB COMM Port)

RJ-45/8 Pin #	Signal	DB25 Pin #
1	Ground 0 volts	7
2	Request to send	4
3	Data terminal ready	20
4	Transmit data	2
5	Receive data	3
6	Data carrier detect	8
7	Clear to send	5
8	Data set ready	6

DBB DB25 Pin #	Signal	SHM DB25 Pin #
1	Protective ground	1
2	Transmit data	2
3	Receive data	3
4	Request to send	5
6	Data set ready	6
7	Signal ground	7
8	Receive signal detect	8
20	Data terminal ready	20

SHM TO SHM

RX+	Receive data +	TX+
RX-	Receive data -	TX-
TX+	Transmit data +	RX+
TX-	Transmit data -	RX-

DB25 TO DB25 (SHM TO SE 708P OR SE 800-SERIES)

SHM DB25 Pin #	Signal	Terminal DB25 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	5
6	Receive data	6
7	Data carrier detect	7
8	Clear to send	8
20	Data set ready	20

HP 8-Port Mux to DBB (Black Box)

This configuration is used to connect an HP 8-port mux to a Black Box TL-158 Data Broadcasting Box (DBB).

The cable has an 8-pin RJ-45/8 (male) connector at each end. One end plugs into the HP 8-port mux; the other into an RJ-45/8 (female) to DB25 (male) connector that plugs into the DBB COMM port.

Set all DBB ports to DCE.

8-Port Mux to DBB — Cable Pinouts

RJ-45/8 Pin #	Signal	RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	4
5	Receive data	5
6	Data carrier detect	6
7	Clear to send	7
8	Data set ready	8

RJ-45/8 Pin to DB25 Headshell Pinouts (DBB COMM Port)

RJ-45/8 Pin #	Signal	DB25 Pin #
1	Ground 0 volts	7
2	Request to send	4
3	Data terminal ready	20
4	Transmit data	2
5	Receive data	3
6	Data carrier detect	8
7	Clear to send	5
8	Data set ready	6

HP 8-Port Mux to HP 8-Port Mux

This configuration is used to connect two HP 8-port muxes (used to connect a host computer to an LC, for example). There is an 8-pin RJ-45/8 (male) connector at each end.

8-Port Mux to 8-Port Mux — Cable Pinouts

Host RJ-45/8 Pin #	Signal	LC RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	6
3	Data terminal ready	7,8
4	Transmit data	5
5	Receive data	4
6	Data carrier detect	2
7	Clear to send	3
8	Data set ready	3

HP 8-Port Mux to SE CI-8

This configuration is used to connect an HP 8-port mux to an SE CI-8.

The cable has an 8-pin RJ-45/8 (male) connector at each end. One end plugs into the HP 8-port mux; the other into an RJ-45/8 (female) to DB25 (male) connector that plugs into the DBB COMM port.

8-Port Mux to SE CI-8 — Cable Pinouts

RJ-45/8 Pin #	Signal	RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	4
5	Receive data	5
6	Data carrier detect	6
7	Clear to send	7
8	Data set ready	8

RJ-45/8 Pin to DB25 Headshell Pinouts (CI-8)

RJ-45/8 Pin #	Signal	DB25 Pin #
1	Ground 0 volts	7
2	Request to send	8
3	Data terminal ready	5,6
4	Transmit data	3
5	Receive data	2
6	Data carrier detect	4
7	Clear to send	8
8	Data set ready	8

HP 8-Port Mux to SE 708P or SE 800-Series

This configuration is used to connect an HP 8-port mux to an SE 708P or SE 800-series.

The cable has an 8-pin RJ-45/8 (male) connector at each end. One end plugs into the HP 8-port mux; the other into an RJ-45/8 (female) to DB25 (male) connector that plugs into the SE 708P or SE 800-series.

8-Port Mux to SE 708P or SE 800-Series — Cable Pinouts

Host RJ-45/8 Pin #	Signal	SE 708P or SE 800-Series RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	4
5	Receive data	5
6	Data carrier detect	6
7	Clear to send	7
8	Data set ready	8

RJ-45/8 Pin to DB25 Headshell Pinouts (SE 708P or SE 800-Series)

RJ-45/8 Pin #	Signal	DB25 Pin #
1	Ground 0 volts	7
2	Request to send	8
3	Data terminal ready	5,6
4	Transmit data	3
5	Receive data	2
6	Data carrier detect	4
7	Clear to send	20
8	Data set ready	20

HP 8-Port Mux to SE 422

This configuration is used to connect an HP 8-port mux to an SE 422.

The cable has an 8-pin RJ-45/8 (male) connector at each end. One end plugs into the HP 8-port mux; the other into an RJ-45/8 (female) to DB9 (male) connector that plugs into the SE 422.

8-Port Mux to SE 422 — Cable Pinouts

Host RJ-45/8 Pin #	Signal	SE 422 RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	4
5	Receive data	5
6	Data carrier detect	6
7	Clear to send	7
8	Data set ready	8

RJ-45/8 Pin to DB9 Headshell Pinouts (SE 422)

RJ-45/8 Pin #	Signal	DB9 Pin #
1	Ground 0 volts	5
2	Request to send	8
3	Data terminal ready	1
4	Transmit data	2
5	Receive data	3
6	Data carrier detect	4
7	Clear to send	8
8	Data set ready	4

Note

Jumper 1 and 6 together at SE 422.

HP 8-Port Mux to Burle Camera Unit

This configuration is used to connect an HP 8-port mux to a Burle camera unit.

The cable has an 8-pin RJ-45/8 (male) connector at each end. One end plugs into the HP 8-port mux; the other into an RJ-45/8 (female) to DB9 (male) connector that plugs into the Burle console port.

8-Port Mux to Burle Camera Unit — Cable Pinouts

Host RJ-45/8 Pin #	Signal	Burle Camera Unit RJ-45/8 Pin #
1	Ground 0 volts	1
2	Request to send	2
3	Data terminal ready	3
4	Transmit data	4
5	Receive data	5
6	Data carrier detect	6
7	Clear to send	7
8	Data set ready	8

RJ-45/8 Pin to DB9 Headshell Pinouts (Burle Camera Unit)

RJ-45/8 Pin #	Signal	DB9 Pin #
1	Ground 0 volts	7
2	Request to send	No connection
3	Data terminal ready	4
4	Transmit data	2
5	Receive data	3
6	Data carrier detect	5
7	Clear to send	5
8	Data set ready	5

HP 8-Port Mux to Opto AC7 RS-232, to RS-422/485 Adapter Card

This configuration is used to connect an HP 8-port mux, an Opto AC7 RS-232, and an RS-422/485 adapter card.

Cable Pinouts

RJ-45/8 Pin #	Signal	DB-25 Pin #
1	Ground 0 volts	7
2	Request to send	8
3	Data terminal ready	5,6
4	Transmit data	3
5	Receive data	2
6	Data carrier detect	4
7	Clear to send	20
8	Data set ready	20

Note

If you have a cable where pins 2 and 3 are reversed, the AC7 provides jumpers that will reverse the pins on the AC7 end. Refer to the AC7 adapter card manual for the correct jumper settings.

MODEM TO RDI UNIT

The Modem to RDI connection is a straight-through cable, 25-pin to 25-pin.

RDI TO SE 800-SERIES OR CI-1 (SERIAL PORT J8 ON RDI)

NOTE

The red wire is pin 1. To connect up to three SE 800-series, use a CI-1 and connect the ACUs via the 20 mA loop.

RDI / DB-25 Connector	Signal	DB-25 Pin #
3	Receive data	3
2	Transmit data	2
7	Ground 0 volts	7

NOTE

A standard modem cable connection for pins 1 through 8 and pins 20 between the RDI DB-25 and the 808 or CI-1 will work properly.

HP D2042G Terminal / Printer Cable (One Shipped With System)

Cable Pinouts

RJ-45/8 Pin #	Signal	DB-25 Pin #
1	Ground 0 volts	7
2	Request to send	8
3	Data terminal ready	5, 6
4	Transmit data	3
5	Receive data	2
6	Data carrier detect	4
7 (& 8)	Clear to send	20
8 (& 7)	Data set ready	20
-	Ring indicator	-

HP 24542G and HP 24542H Serial Printer / Plotter Cable

Cable Pinouts

RJ-45/8 Pin #	Signal	DB-25 Pin #	DB-9 Pin #
1	Data carrier detect	7	5
2	Receive data	8	1
3	Transmit data	5,6	6,8
4	Data terminal ready	3	2
5	Ground 0 volts	2	3
6 (& 8)	Data set ready	4	7
8 (& 6)	Clear to send	20	4
7	Request to send	20	4
9	Ring indicator	-	-

HP 24542M US / European Modem Cable

Cable Pinouts

DB-9 Pin #	Signal	DB-25 Pin #
1	Data carrier detect	8
2	Receive data	3
3	Transmit data	2
4	Data terminal ready	20
5	Ground 0 volts	7
6	Data set ready	6
7	Request to send	4
8	Clear to send	5
9	Ring indicator	22
-	Cable shield	1

HP D2043M US / European Modem Cable

Cable Pinouts

RJ-45/8 Pin #	Signal	DB-25 Pin #
1	Ground 0 volts	7
2	Request to send	4
3	Data terminal ready	20
4	Transmit data	2
5	Receive data	3
6	Data carrier detect	8
7	Clear to send	5
8	Data set ready	6
-	Ring indicator	-
-	Cable shield	1

HP MUX TO LD485 (BLACK BOX) RS485 CONVERTER

CABLE PINOUTS

RJ-45/8 Pin #	Signal	DB-25 Pin #
1	Ground 0 volts	7
2	Request to send	4
3	Data terminal ready	20
4	Transmit data	2
5	Receive data	3
6	Data carrier detect	8
7	Clear to send	5
8	Data set ready	6

SE CI-8 TO SE 422 PINOUTS

DB25 TO DB9

CI-8	Signal	SE 422
2	Transmit data	2
3	Receive data	3
4	Request to send	1
6	DCE ready	4
7	Signal ground	5

NOTE

1. Other pins on CI-8 are not used.

2. Jumper pins 6 and 8 to pin 4 on the SE 422 side.

ME 800A SHM to SE 422 Pinouts

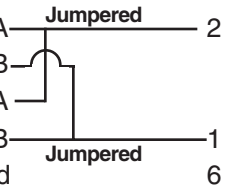
DB25 to DB9

ME 800A	Signal	SE 422
1	Ground	-
2	Transmit	3
3	Receive	2
4	Request to send	7
5	Clear to send	8
6	DCE ready	6
7	Signal ground	5
8	RSLD	1
20	DTE ready	4

HP MUX TO LD585 (BLACK BOX) CONVERTER, TO SE 422 485 PORT PINOUTS

RJ-45/8 TO DB25

HP Mux		LD485	LD485	SE 422 485 Port
1	Ground	7	RD A	2
2	RTS out	4	RD B	
3	DTE ready	20	TD A	
4	XMIT DATA	2	TD B	1
5	RECV DATA	3	Ground	6
6	RSLD	8		
7	CTS	5		
8	DCE ready	6		



Note: A = Negative Polarity; B = Positive Polarity

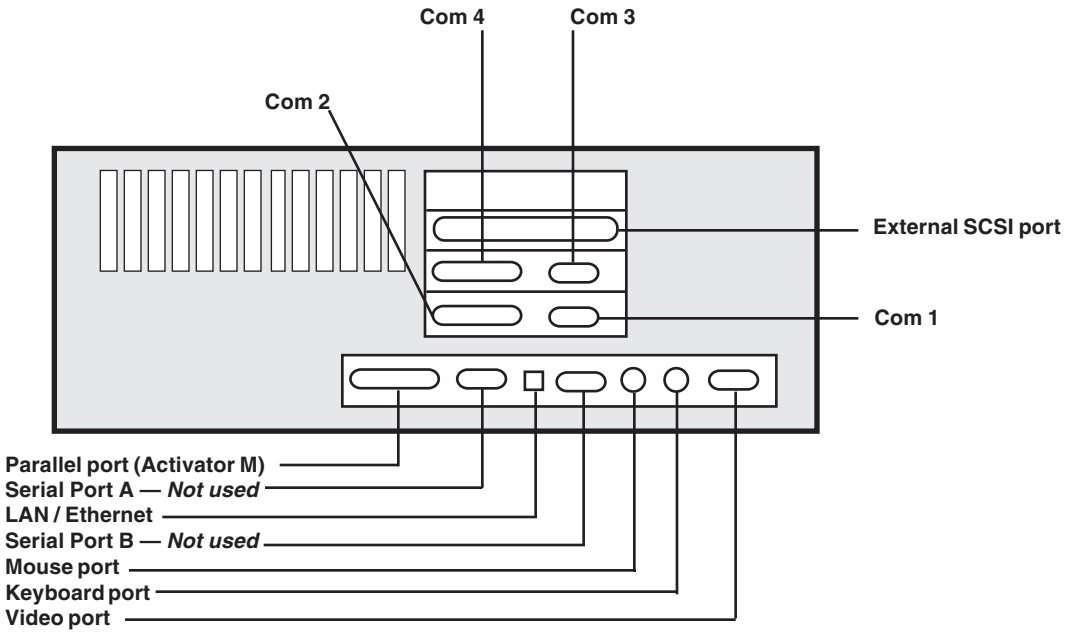
SECTION 9: CONNECTION DIAGRAMS

This section gives the wiring / port connections for the SE 6000 product series. Detailed are:

- 6018
- 60*xx* / 6100
- 6200
- 6300

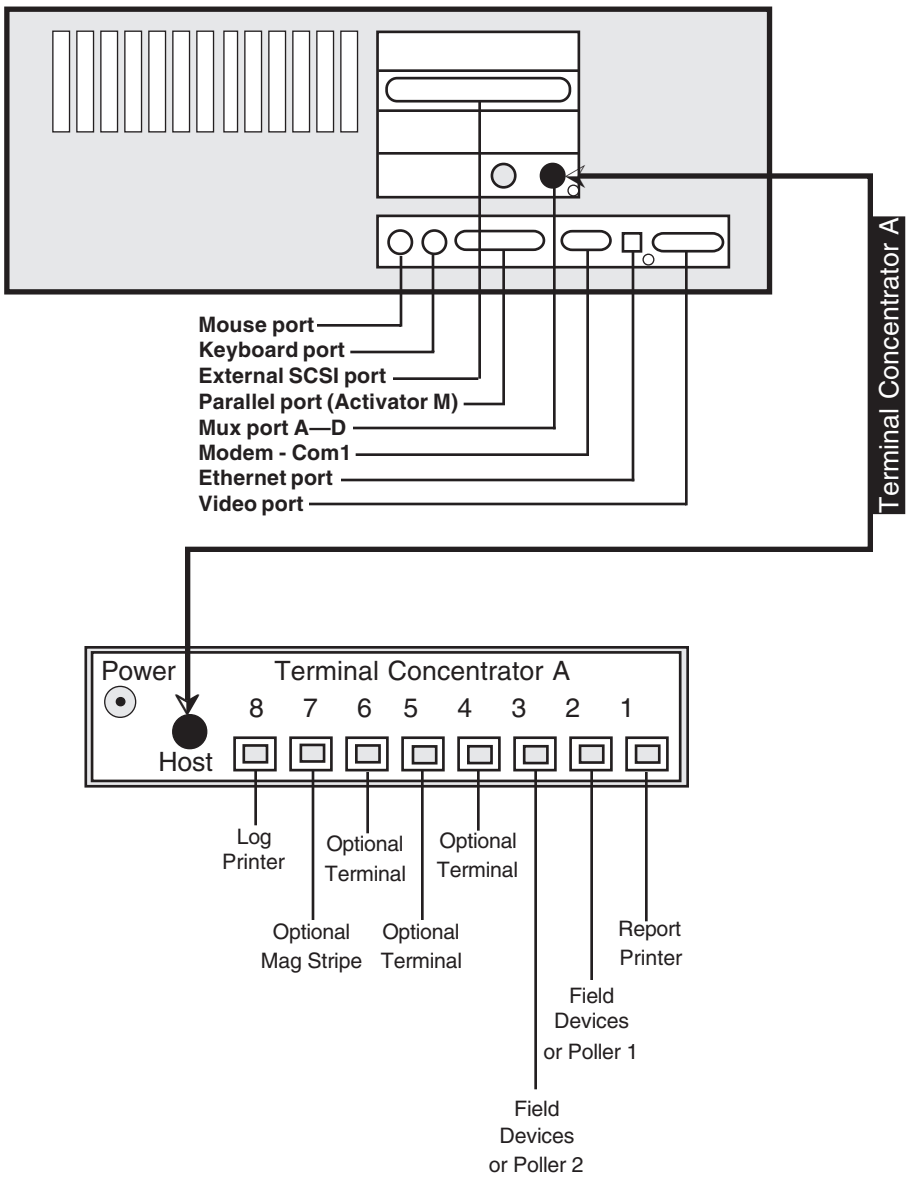
The port configurations given here should be considered as guidelines only. Although these are the standard configurations, port assignments can differ according to various circumstances. If you experience any difficulty when connecting the hardware, please contact WSE customer support for assistance (see *Section 7: Product Support*).

6018
HP XM—Series



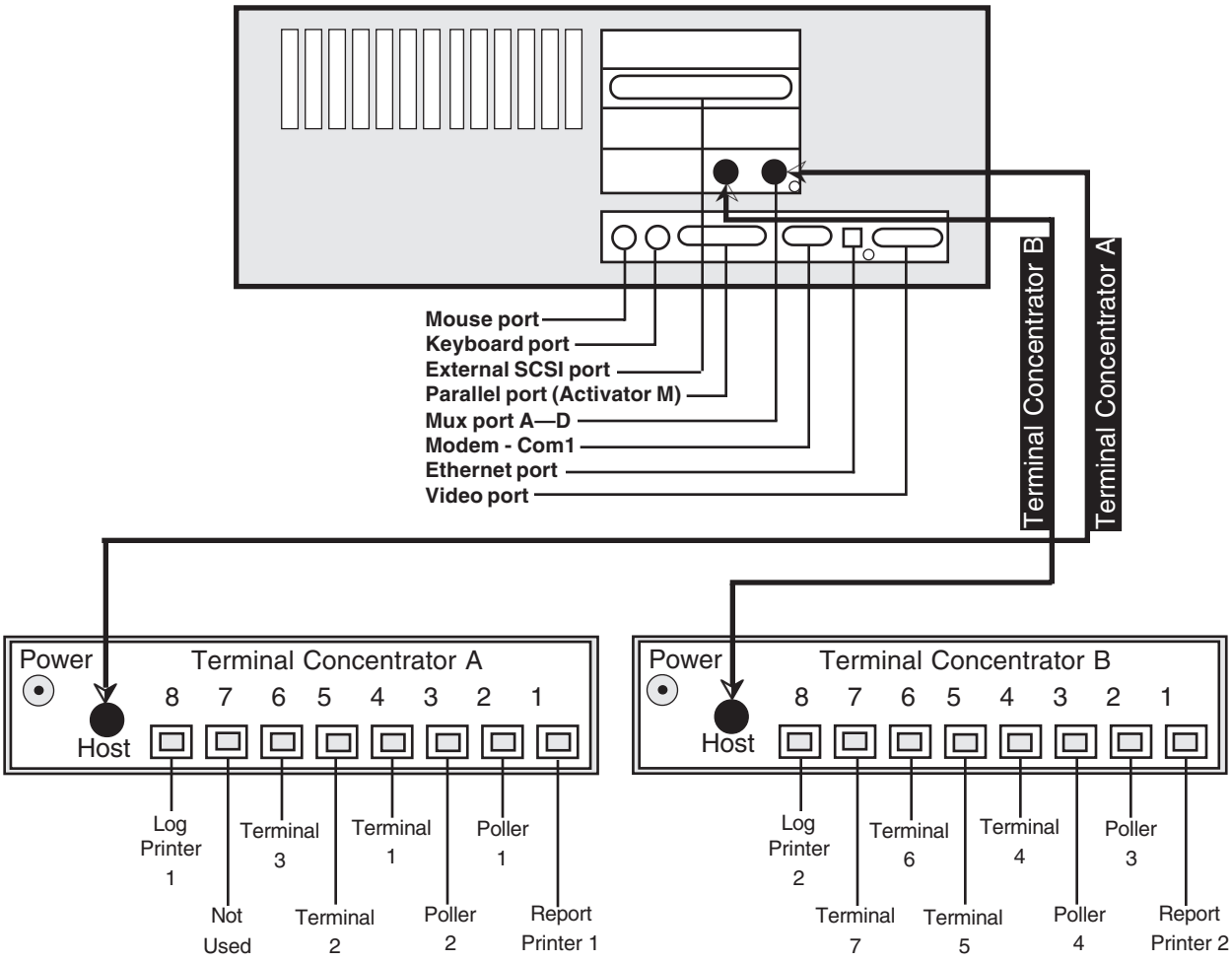
The port configurations given here should be considered as guidelines only. Although these are the standard configurations, port assignments can differ according to various circumstances. If you experience any difficulty when connecting the hardware, please contact WSE customer support for assistance (see *Section 7: Product Support*).

60*xx*/6100
HP XM—Series



The port configurations given here should be considered as guidelines only. Although these are the standard configurations, port assignments can differ according to various circumstances. If you experience any difficulty when connecting the hardware, please contact WSE customer support for assistance (see *Section 7: Product Support*).

6200
HP XM—Series



The port configurations given here should be considered as guidelines only. Although these are the standard configurations, port assignments can differ according to various circumstances. If you experience any difficulty when connecting the hardware, please contact WSE customer support for assistance (see *Section 7: Product Support*).

6300
HP XM—Series

