INSTALLATION GUIDE

SCS-1R SECURITY CONTROL RECEIVER

DIGITAL MONITORING PRODUCTS, INC.

© 2021

Information furnished by DMP is believed to be accurate and reliable.
This information is subject to change without notice.

TABLE OF CONTENTS

Operator's Quick Reference 1

Acknowledge an Alarm Signal 1
LED Indicators 1

System Overview 2

Description 2
Function 2
32-Character LCD Membrane Keypad 2
Printer 2
Additional Messages 2
24-Hour Recall Tests 2
Line Capacity 2
Number of Standard or Encrypted Line Security Network Accounts 2
Opening and Closing Signals 2
Compliance Instructions 2

Installation Checklist 4

SCS-1R Faceplate 4
Earth Ground 4
Location of Circuit Boards 4
SCS-208 Power Cord 4
Phone Lines 4
Network Connection 4
AC Power 4
Optional Printer 4
Start Up 4
Configuration 4

Model SCS-1R Security Control Receiver 5

Description 5
SCS-1R Components Included 5

Model SCS-RACK System Enclosure 5

Description 5
Modem Rack 5
Multibus Rack 5
32-Character LCD Membrane Keypad 5
Install the SCS-RACK 5
Rack Mounting 5

Model SCS-150 Receiver Processor Board 6
Description 6
Compatibility 6
Features 6
Line Card Slots 6
Communication Output Ports 6
SCS-150 LEDs 7
Reset Button 7
Install the SCS-150 7
Dip Switch Settings (S2) 8
Reset Programming To Factory Defaults 8
Clear Receiver Events 8
Update Software Using the SD Card 8

Model SCS-104 Line Card 9
Description 9
Install the SCS-104 9
Connect the Phone Lines 9
Connect the Network 9
Phone Line Monitor 9
Power Monitor LED 9
SCS-104 LED Indicators 9

Model SCS-110 Modem Power Supply Card 10
Description 10
Install the SCS-110 10
Power Monitor LEDs 10
LCD Membrane Keypad Trouble LED 10
UPS Trouble LED 10
AC Trouble LED 10

Model SCS-120 Multibus Power Supply Card 11
Description 11
Install the SCS-120 11
Processor Monitor 11
Power Monitor LEDs 11

Model SCS-130 Transformer Card 12
Description 12
Installation 12
AC Power Connection 12
Three Amp Fuse 12

Model SCS-208 Power Cable 13
Description 13
Installation 13

Model SCS-203 Convenience Panel 13
Description 13
Installation 13

Model SCS-204 Host Cable 13
Description 13
Installation 13
Host Cable 13

SCS-1R Printer Cable 14
Serial Printer Cable Pinout 14

Use the LCD Membrane Keypad 15
Special Keys 15
CMD Key 15
Back Arrow Key 15
Select Keys 15
Keypad Prompts Display Current Programming 15
Enter Alpha Characters 15

LCD Membrane Keypad Configuration 16
User Options 16
Keypad Options and Diagnostics 16
Keypad Options 17
Access Keypad Diagnostics 17
Exit the Installer Options 17

Status Displays 18
Receiver Startup Display 18
Time Display 18
Off-Normal Status 18
System Status 19

SCS-150 Programming 19

SCS-150 Membrane Keypad Programming 20
Programming Menu 20
Service Code (XR500 Series and XR550 Series panels) 20
Receiver Options 20
Line Cards 22
Dialer Lines Setup 23
Network Line Setup 24
Exit Network Line Setup 25
Host Automation 26
Serial Ports 27
Set System Time/Date 27
Exit Programming Menu 27

Browser Programming 28
Receiver Options 28
Company Name 29
Receiver Number 29
Receiver Key 29
Service Code (XR500 Series and XR550 Series panels) 29
Hours From GMT 29
Event Display Priority 30
Dialer Line Monitor 30
Local IP Address 30
Local Port 30
Gateway Address 30
Subnet Mask 30
Web User Name 30
Web Password 30
Print Operation 31
Print Operation 31
Activity Log Baud Rate 31
Receiver Line Cards 32
Line Card Number 32
Line Card Model 32
Send Time to Panels 32
SCS-104 Dialer Settings 32
Dialer Line 1 Enable 32
Dialer Line 2 Enable 32
Dialer Line 3 Enable 32
Dialer Line 4 Enable 32
First Communication Type 32
Second Communication Type 32
Send ANI/DNIS Information 33
Send Caller ID Information 33
Echo Cancel Disable 33
SCS-104 Network Settings 33
Net Line Enable 33
S16 and S17 Always 33
Acknowledge Panel Substitution Message 33
Local IP Address 33
Local Port 33
Gateway Address 33
Subnet Mask 33
Passphrase 33

SCS-104 Check-in Table Settings 34
Check-in Table IP Address 34
Check-in Table Port 34
Check-in Table ID 34
Host Automation 34
Host Name 34
Host Port Type 34
Host IP Address 34
Host Port 34
Protocol 34
Host Output Baud Rate 35
Start Character 35
Use CRC 35
Use Sequence Number 35
Test Interval (Minutes) 35
Acknowledge Timeout 35
Line Number Length 35
Retries to Failure 35
Receiver Diagnostics 35
SCS-150 Line Level Diagnostics 35

Printout Explanations 36
General Description 36
System Messages 36
Panel Messages 36
Alarm, Trouble, and Restore 36
Ambush 36
Opening and Closing 36

Remote Link Programming 36
Program the SCS-150 36
Bypass and Reset 37
Schedule Changes 37
Door Access 37
Acknowledgment of Fire Alarms and Troubles 37
Message Destinations 37

Printer Troubleshooting for SCS-186T 38
Activity Log ERROR 38
Power Light Not Lit 38
SEL Light Not Lit 38
PAPER Light Lit 38
Bad Printer Cable 38

Compliance Listing Specifications 38
UL Commercial Fire 38

Important Information **39**

Glossary **40**

Security Control Terms 40

Notes: **41**

FCC Information **44**

OPERATOR'S QUICK REFERENCE

This section explains basic operation for the operator.

Acknowledge an Alarm Signal

Press the key labeled **ACK**, or any top row Select key, to acknowledge an alarm.

When the SCS-1R is in normal mode, the alarm message displays in the LCD display.

If you are in programming when an alarm is received and requires acknowledgment, the **ACK LED** lights and the keypad begins to beep. If more than one message is received, the Message LED also lights.

You must exit programming before you can acknowledge any alarm signals. All alarms must be acknowledged before you can enter or return to programming mode.

LED Indicators

The SCS-1R features three LED indicators:

- The Green Power LED lights when power is applied to the SCS-1R.
- The Red ACK LED lights when an alarm signal is received that must be acknowledged.
- The Red Message LED lights when more than one signal has been received that must be acknowledged.

SYSTEM OVERVIEW

Description

The SCS-1R Security Control Receiver system from DMP is a full featured digital dialer and data network capable alarm receiver. The receiver provides a 32-character LCD display for viewing incoming messages and a built-in membrane keypad for acknowledging messages and configuring the SCS-1R system.

Function

The SCS-1R Receiver system provides central stations with computerized monitoring of DMP panels. Features of the SCS-1R include automatic alarm, trouble, and supervisory account message logging on a local printer including the date and time of their occurrence. The SCS-1R also provides an output to most security automation software packages.

32-Character LCD Membrane Keypad

The built-in LCD display and Membrane Keypad add flexibility to the SCS-1R system by allowing the operator to view alarm messages before acknowledging them from the built-in Membrane Keypad. A typical alarm message includes the account number, zone name, and alarm type with the time and date of the occurrence. Alarm messages display on the LCD and print to the local printer.

Printer

Routine messages print without the need of operator response while non-routine messages print and display on the LCD for operator acknowledgment.

Note: UL central station applications must use a serial printer that is listed for Fire Protective Signaling Systems.

Additional Messages

Other messages transmitted to the SCS-1R by DMP panels include:

- Zone bypasses and resets by name and number including the name of the person making the change
- Schedule changes including the name of the person making the change
- Trouble and Restoral message by zone name and number
- Door access reports including the user name and the number of the door being accessed

The Printout Explanation section of this guide provides a description of the SCS-1R alarm and activity messages that print and display.

24-Hour Recall Tests

The automatic recall test from a digital dialer account must be tracked manually or with a listed automation system. The SCS-1R Receiver does not automatically indicate a delinquent recall test. Failure to receive a signal from a Digital Alarm Communicator Panel (DACT) over a 24-hour period is handled by the automation system.

Line Capacity

The SCS-1R Receiver accommodates up to eight line cards. The account range for Digital Dialer panels is 1 to 65,535.

To select the communication type used on each incoming line, refer to Line Card Programming section of this guide.

Number of Standard or Encrypted Line Security Network Accounts

The maximum number of accounts with standard or encrypted line security and substitution using 6 minute checkin that can be received by a single SCS-104 Line Card is 3200.

Opening and Closing Signals

The total capacity of opening or closing signals per SCS-1R Receiver, limited by automation system using 19200 baud and acknowledgment speed of 100 milliseconds, is 300 per minute.

Compliance Instructions

For applications that must conform to a local authorities installation standard or a National Recognized Testing Laboratory certificated system, please see the Listed Compliance Specifications section near the end of this guide for additional instructions.

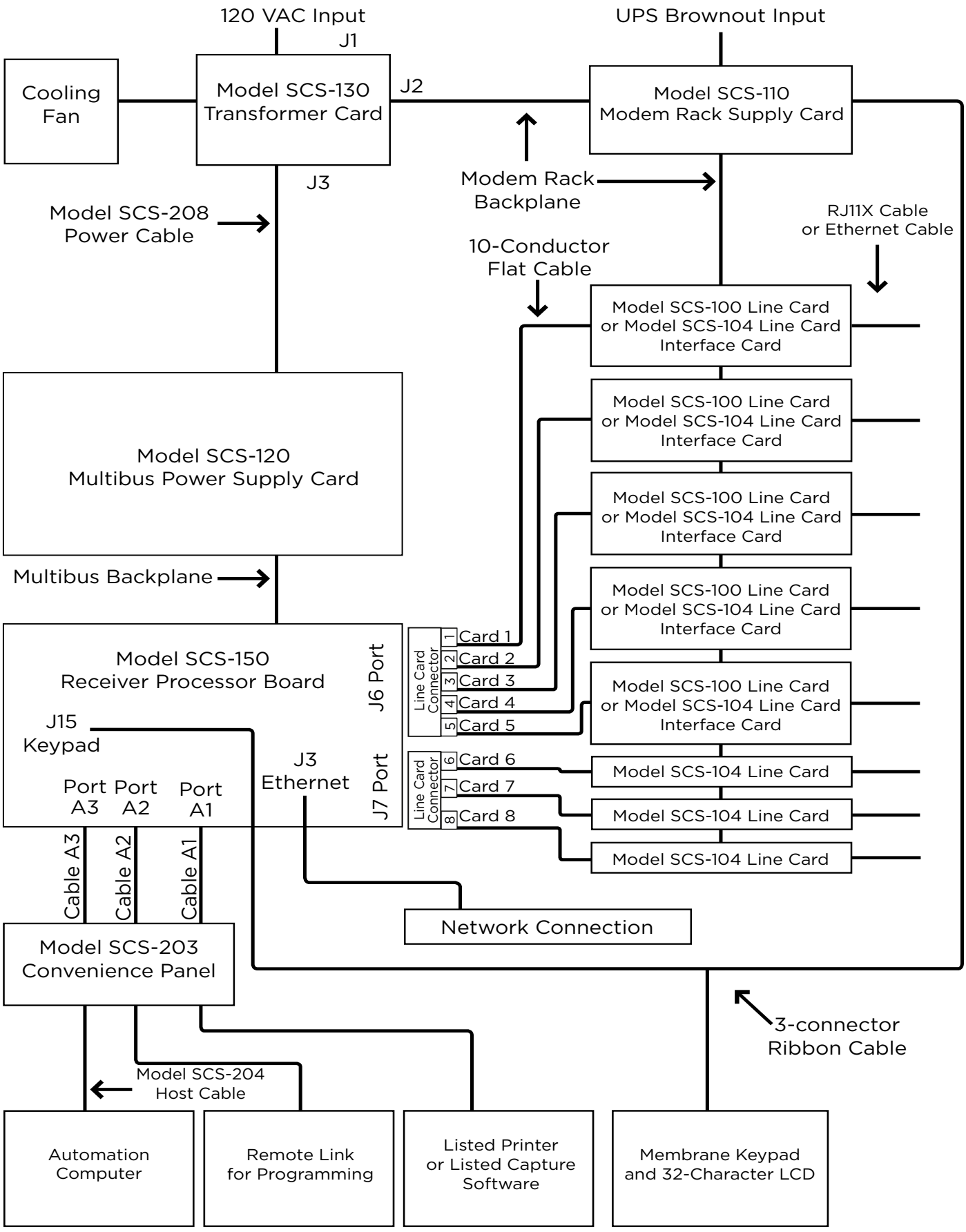


Figure 1: System Block Diagram

INSTALLATION CHECKLIST

Refer to the Hardware Description section of this guide for installation, setup, and operating information.

SCS-1R Faceplate

To lower the SCS-1R faceplate, turn the two screws located in the top corners of the SCS-1R. The front of the SCS-1R opens on a hinge to allow access to the inside of the SCS-1R. Close the SCS-1R system by raising the front of the SCS-1R and securing the two screws in the top corners.

Earth Ground

Connect the ground lug on the modem rack rear side to earth ground. Using a minimum of 14-gauge wire, ground to a cold water pipe or a ground rod. Do not ground to building ground, electrical conduit, or telephone company ground.

Location of Circuit Boards

Confirm the circuit boards in the modem rack and in the multibus rack are installed properly and are in their proper locations. The circuit boards are properly installed when completely seated into the connector on the rack backplane.

SCS-208 Power Cord

Connect the SCS-208 Power Cord from the SCS-120 Multibus Power Supply card to the SCS-130 Transformer Card.

Phone Lines

Connect the RJ11X cables provided with each line card to the phone lines used for receiving alarms.

Network Connection

When using a network connection, connect the SCS-104 network cable to the data network. Refer to the Hardware Description and Appendix for network installation instructions.

AC Power

AC power input of the receiver is 120 VAC, 60 Hz and at least 3.5 Amps outlet not controlled by a switch. Do not apply AC power yet. For listed operation, use a listed uninterrupted power supply (UPS). The UPS system must have a secondary power source (batteries) and provide alarm contacts to indicate when the UPS switches from primary power to secondary power. The SCS-1R Receiver requires a UPS that delivers at least 400 VA power operating at 60 Hz.

Optional Printer

Connect the RS-232 printer cable. Install paper, connect the printer to AC power, and turn on the printer power switch.

Note: UL central station applications must use a serial printer that is listed for Fire Protective Signaling Systems.

Start Up

Apply 120 VAC to the AC power cord. The 120 volts supplied to the SCS-1R Receiver and the printer must be from the same UPS circuit.

Configuration

After powering up the system, set the correct time, configure the phone lines and network communications.

Note: Be sure that the Membrane Keypad is set to Address **01** (one). Refer to LCD Membrane Keypad Configuration for complete information.

MODEL SCS-1R SECURITY CONTROL RECEIVER

Description

The DMP SCS-1R Receiver ships from the factory with all of the necessary system components to provide four Digital Dialer lines and one line of Data Network receiving capability. This package can be expanded to include a maximum of 32 digital dialer communication lines.

SCS-1R Components Included

The SCS-1R includes the following:

- SCS-RACK with Modem and Multibus Racks, fan, and 32-Character LCD with Membrane Keypad
- SCS-150 Receiver Processor Board
- SCS-104 Line Card
- SCS-110 Modem Supply Card
- SCS-120 Multibus Power Supply Card
- SCS-130 Transformer Card
- SCS-203 Convenience Panel
- SCS-208 Power Cord

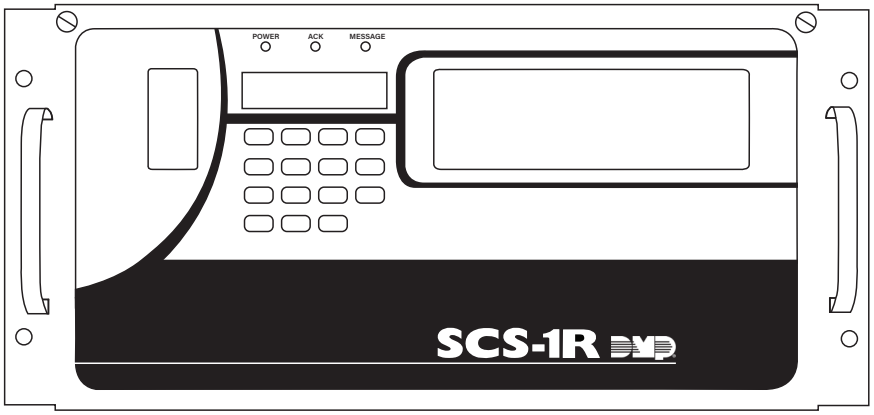


Figure 2: SCS-1R

MODEL SCS-RACK SYSTEM ENCLOSURE

Description

The SCS-RACK houses the receiver processor, power supply, line cards, and associated cables. The enclosure measures 8.75" high, 19" wide, and 12" deep.

Modem Rack

The SCS-RACK top portion holds the modem rack, which connects the SCS-110 Modem Power Supply Card and up to eight line cards. The SCS-130 Transformer Card for connecting the 120 VAC mounts on the rear of the modem rack.

Multibus Rack

The bottom portion of the SCS-RACK holds the Multibus Rack, which holds the SCS-150 Receiver Processor Board and the SCS-120 Multibus Power Supply Card.

32-Character LCD Membrane Keypad

Mounted on the front faceplate of the SCS-RACK is a 32-character LCD Membrane Keypad. The LCD and keypad come pre-mounted and pre-wired with the power cable and ribbon cable.

Install the SCS-RACK

Connect the SCS-RACK to earth ground before making any module connections. Use a minimum 14 gauge wire for grounding. A crimp type spade connector is provided for connecting the ground wire to the ground lug on the modem rack.

Rack Mounting

The SCS-1R must be mounted in a standard 19" rack for listed Fire Signaling applications. Simply slide the entire unit into the 19" rack and secure with screws. Refer to the drawing below for rack-mounting hole locations.

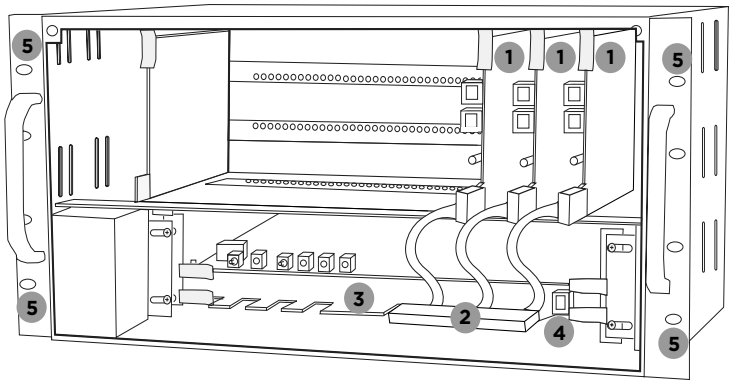


Figure 3: SCS-1R Rack Mounting

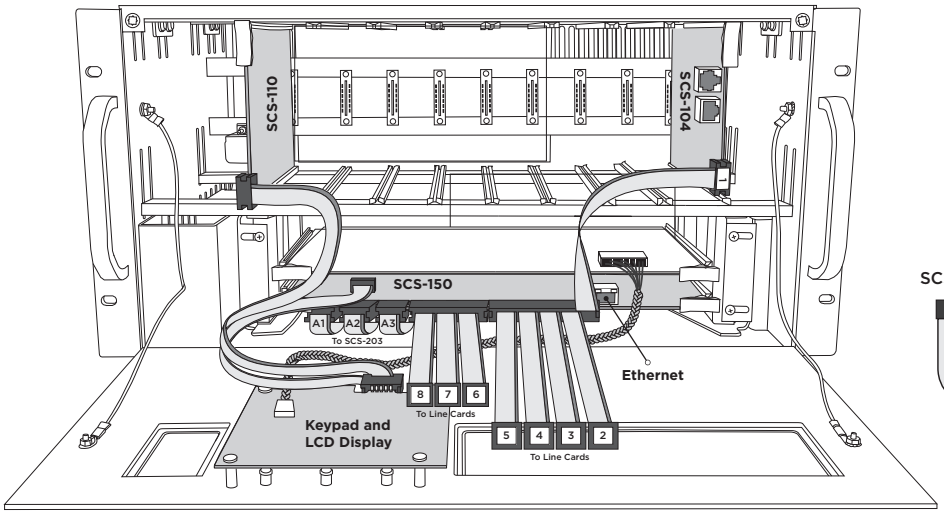


Figure 4: SCS-150 Full Wiring Detail

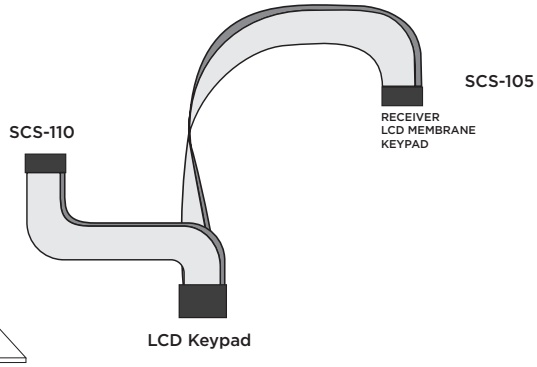


Figure 5: LCD Cable Detail

MODEL SCS-150 RECEIVER PROCESSOR BOARD

Description

The SCS-150 is the main system processor for the SCS-1R Security Control Receiver and controls the line cards, LCD display, data output to a host automation system, and printers. It also contains the receiver's software.
The SCS-150 can be programmed from the front panel, with Remote Link, or with a browser if compatible.

Compatibility

- Remote Link programming: SCS-150 Version 101 and higher with Remote Link 1.45 or higher
- Browser programming: SCS-150 Version 101 and higher
- SCS-100 or SCS-104 Line Cards: Level E hardware, Version 200 and higher
- DMP's full line of SCS Line Cards and accessories

Features

Line Card Slots

The SCS-150 Receiver Processor Board has two Line Card harness connectors. Port J6 has five cables to support SCS-100 and SCS-104 cards. Port J7 has three cables to support SCS-104 cards.

Note: Lines 6-8 can only be used with SCS-104 Line Cards using SCS-150 Version 101 or higher and updated SCS-RACK hardware. Slide the Line Card Cable Connector onto the J6 or J7 port on the SCS-150.

Communication Output Ports

The SCS-150 receiver has three ports to use for peripheral communication. The A1 port is used for printing to the Activity Log, the A2 port is for programming using Remote Link, and the A3 port is used as a host automation output port.

SCS-150 LEDs

- 1 (Far Left): Flashes constantly. This is the heartbeat LED
- 2 (Center Left): On when saving data like programming
- 3 (Center Right): Not used
- 4 (Far Right): On if memory resources are too low, like if there are thousands of messages pending at the dispay or a printer

Reset Button

The reset button resets the SCS-150 receiver but does not clear the stored events.

Install the SCS-150

Caution: Always remove power to the SCS-1R Receiver when installing or removing any components.

When connecting cables, follow these guidelines:

- If the card is horizontal, connect with pin 1 right
- If the card is vertical, connect with pin 1 up

1. Ensure the DIP switches on the SCS-150 are set to the off position for normal operation.
2. Connect the LCD cable to the LCD keypad board.
3. Connect the bottom cable from the LCD keypad connector to the SCS-150 RECEIVER LCD MEMBRANE KEYPAD header, then connect the top cable to the SCS-110 Modem Power Supply card.
4. Connect the cables labeled A1, A2, and A3 to the matching edge contacts on the SCS-150.
5. Slide the SCS-150, component side up, into the lowest position in the receiver rack. Ensure the edge contacts seat properly in the main board sockets, then press the board into place.
6. Connect the line card connector with ribbons 1 - 5 to the right line card edge contact with ribbon 1 on the right.
7. Connect the line card connector with ribbons 6 - 8 to the left line card edge contact with ribbon 6 to the right.
8. Install line cards, then connect additional wires or cables as needed, like Ethernet or line card cables.
   Note: Network Connection must be terminated to a network switch within the same room.
9. Power up the SCS-1R.

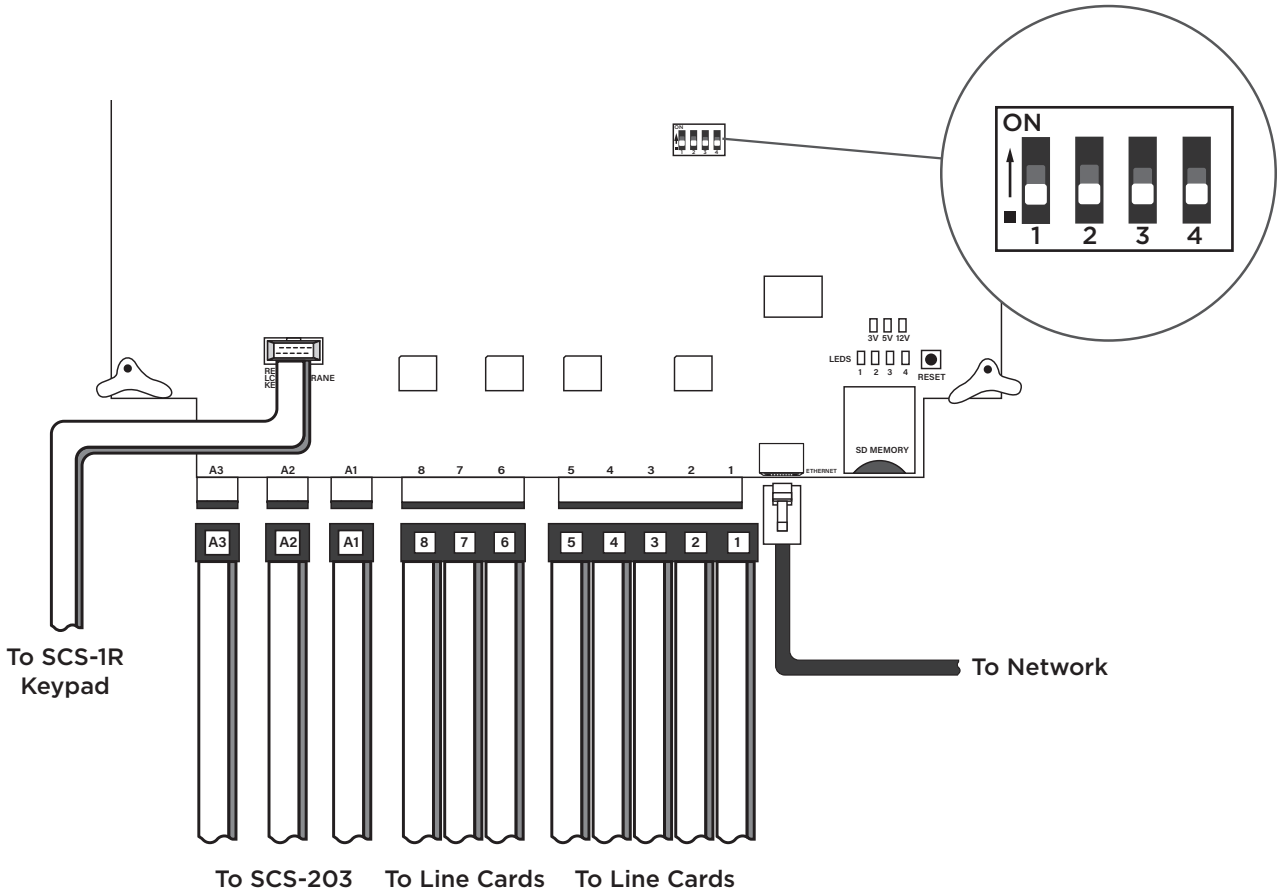


Figure 6: SCS-150

Dip Switch Settings (S2)

Dip switches 1-4, designated as S2 on the SCS-150 board, have the following settings and usage:

Settings: 0 is OFF, 1 is ON

Reset Programming To Factory Defaults

Return the receiver programming in EEPROM to factory defaults using the procedure below.

1. Power down the SCS-1R and remove the SCS-150 board.
2. Set the dip switches to 1010.
3. Replace the SCS-150 board and power up.
4. Wait until after the VERSION/DATE/CODE screen is displayed.
5. Reset the dip switches to 0000 and replace the SCS-150 board.

Clear Receiver Events

The SCS-150 stores up to 5000 events in battery-backed RAM. Clear the receiver events stored in RAM using the procedure below.

1. Set the dip switches to 1111.
2. Replace the SCS-150 board and power up.
3. Wait until after the VERSION/DATE/CODE screen is displayed.
4. Reset the dip switches to 0000 and replace the SCS-150 board.

Normal Operation (0 0 0 0)
Use during normal receiver operation.

Reset to Defaults (1 0 1 0)
Reset all receiver programming to factory defaults.

Update Software Locally (1 1 0 1)
Use when updating receiver software locally with an SD card.

Clear Events (1 1 1 1)
Clear all pending LCD display, printer, and host output events

Figure 7: DIP Switch Settings

Update Software Using the SD Card

The SCS-150/UPDATE comes preformatted and loaded with the current software update for use with the SD (Secure Digital) card slot. Refer to the Update the SCS-150 section below. If using an SD Card other than the SCS-150/UPDATE, follow the instructions as listed.

Before updating, make sure the SD Card is formatted for FAT32.

1. Insert the SD Card into the card reader attached to the computer.
2. Go to **My Computer** and right-click on the drive that has the card reader attached.
3. Select **Properties** to display the **Removable Disk Properties**.
4. If the **File System** displays **FAT32**, then you are ready to load the software onto the SD Card.
5. If the **File System** does not show **FAT32** as the File System, the SD Card needs to be formatted.

To format the SD Card:

1. Go to **My Computer** and right-click on the drive that has the card reader attached.
2. Select **Format** to open up the **Format Removable Disk** window.
3. Select **FAT32** in the File system drop-down menu and select **Start**.
4. To format the disk, click **OK** on the pop-up Warning box.

To load the software onto the SD Card:

1. Go to DMP.com/Software_Downloads and select the SCS-150 firmware version that you want.
2. Select **Save** in the popup window. Save the zip file to your computer.
3. Extract the zip file onto the SD Card. There should be two files extracted on the SD card: **SCS150a.bin** and **SCS150b.bin**.

Note: These two files need to be placed on the root directory of the SD card, not in a older.

To update the SCS-150:

Note: A standard SD card must be used for updates. SDHC cards are incompatible with the SCS-150. If you do not have a standard SD card you can order part number SCS150/UPDATE.

1. Power down the receiver. Disconnect any cables preventing the SCS-150 board from being able to slide.
2. Slide the board until the S2 dip switches can be reached.
3. Set the S2 dip switches on the SCS-150 to **1101** (ON ON OFF ON).
4. Insert a FAT32 formatted SD card with the new software into the SD card slot on the SCS-150 processor board.
5. Reconnect any cables you disconnected in Step 2 to the SCS-150 board.
6. Insert the SCS-150 processor board into the SCS-1R.
7. Power up the receiver. Observe the display for programming status. When finished with the update the SCS-1R display instructs you to remove the SD Card.
8. Power down the receiver. Remove the SCS-150 board, and remove the SD card from the SCS-150 board.
9. Reset the dip switches to **0000** (OFF OFF OFF OFF) and reconnect the SCS-150 board and cables. Power up the receiver.

MODEL SCS-104 LINE CARD

Description

The SCS-104 provides four digital dialer (DD) lines and a network connection for communication to DMP panels. Each card includes one shielded eight-pin modular connector (J1) for the digital data network connection. This allows the SCS-1R Receiver to accept alarm and system messages over a network from DMP panels. Each card also includes a non-shielded eight-pin modular connector (J3) that supports up to four digital dialer lines, when connected to a standard RJ61 jack.

An optional PC software application, SCS-CTM Check-in Table Manager, is available to backup the SCS-104 records of all supervised network accounts for up to 32 different SCS-104 line cards. The SCS-CTM program is compatible with SCS-104 Version 100 or higher. For complete operation information, refer to the SCS-CTM User's Guide (LT-0940). Contact DMP Customer Service to purchase a copy of the SCS-CTM Check-in Table Manager software.

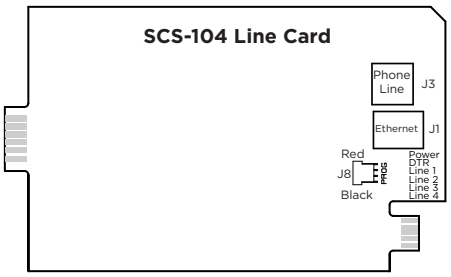


Figure 8: SCS-104 PCB

Install the SCS-104

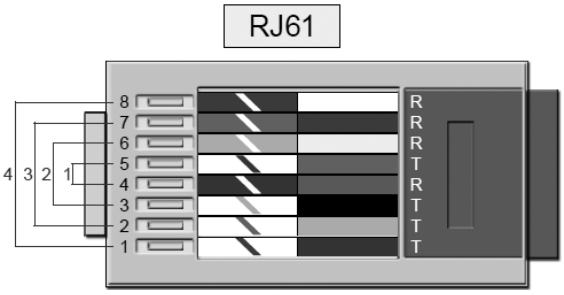
Install the SCS-104 in any one of the SCS-RACK positions with the card puller in the up position. Connect the 10-position flat cable from the SCS-150 processor card. The line card number is determined by the processor card cable it is connected to.

Pin 1 of the ribbon cable connector must face up on the line card.

Connect the Phone Lines

Install the phone line cable between the connector on the line card front to the customer supplied RJ61 jacks. Use a standard 103J voice grade (analog) line. A slot is provided in the receiver back plate for the cables to pass through. Maximum line impedance is 100 Ohms.

The SCS-104 is registered with the FCC, registration number CCKCN03BSCS-104; Ringer Equivalence 0.3B.



Pin	Pair	Wire	Color
1	4	tip	White/Brown
2	3	tip	White/Green
3	2	tip	White/Orange
4	1	ring	Blue/White
5	1	tip	White/Blue
6	2	ring	Orange/White
7	3	ring	Green/White
8	4	ring	Brown/White

Figure 9: Phone Line (RJ61) Pinout

Connect the Network

Connect an IP network cable between the J1 Ethernet connector on the front of the line card and the network LAN/WAN connection. Maximum line impedance is 100 Ohms. The SCS-104 automatically communicates UDP or TCP with DMP panels.

Note: All outbound UDP ports on the Central Station network must be open for communication from cellular communicators.

Phone Line Monitor

The SCS-104 monitors incoming phone line voltage. During a loss of phone line voltage, the SCS-104 sends a **Warning: Phone Line Trouble** message to the host automation or LCD display.

Power Monitor LED

The green LED labeled PWR lights when the power supply on the line card is working properly.

SCS-104 LED Indicators

The SCS-104 provides eight LEDs on the card. The table below describes the LED operation.

LED	Solid	Flashing	Off
POWER	Power On	N/A	Power Off
DTR	Data Terminal Ready	N/A	Processor is nearly full
LINE 1	Connected	Ringing	Idle
LINE 2	Connected	Ringing	Idle
LINE 3	Connected	Ringing	Idle
LINE 4	Connected	Ringing	Idle
LINK	Indicates a valid Network connection	Indicates a valid Network connection	No Connection
LINK SPEED	Connected at 100BASE-T	N/A	Connected at 10BASE-T

MODEL SCS-110 MODEM POWER SUPPLY CARD

Description

The SCS-110 provides power to a maximum of eight line cards. Power is supplied through the modem rack backplane connectors without additional cabling. The SCS-110 also provides LCD and keypad connection, UPS system status, and the 120 VAC input monitoring information to the SCS-1R Receiver.

Install the SCS-110

Caution: Always remove power to the SCS-1R Receiver when installing or removing the SCS-110.

Slide the SCS-110 into the modem rack far left hand position, with the card puller up as shown below. Plug the flat cable from the membrane keypad PCB onto the card edge connector at the bottom of the SCS-110. Pin 1 of the ribbon cable connector must face up on the power supply card.

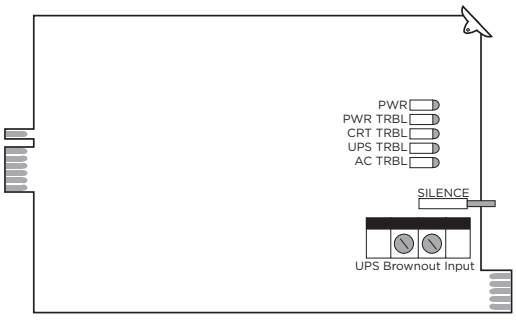


Figure 10: SCS-110 PCB

Power Monitor LEDs

The green LED labeled PWR lights when the power supply to the SCS-110 is working properly. The red LED labeled PWR TRBL is controlled by the SCS-120 Multibus Power Supply Card and lights when there is a power problem on the SCS-110. The red LED remains lit until the power problem is corrected. The alert tone on the SCS-110 Modem Power Supply Card sounds during a power problem and is silenced by pressing the silence switch on the SCS-110.

LCD Membrane Keypad Trouble LED

The LCD Membrane Keypad trouble LED lights and the alert tone sounds when the LCD Membrane Keypad fails to operate or the cable is unplugged. The alert tone is silenced by pressing the silence button on the SCS-110.

UPS Trouble LED

The UPS (Uninterrupted Power Supply) trouble LED lights and the alert tone sounds when the UPS Brownout Input is opened. Connect this circuit to the brownout contacts on your UPS system (Refer to SCS-130 information). No End-of-Line resistor is needed. Silence the alert tone by pressing the silence button on the SCS-110.

AC Trouble LED

The AC trouble LED lights and the alert tone sounds when AC power to the SCS-130 Transformer Card fails. Silence the alert tone by pressing the silence button on the SCS-110.

MODEL SCS-120 MULTIBUS POWER SUPPLY CARD

Description

The SCS-120 provides power to the SCS-150 through the multibus backplane. The SCS-120 also monitors the SCS-150 condition, the SCS-110 Modem Power Supply Card voltage output, and its own internal voltages.

Install the SCS-120

Caution: Always disconnect power to the SCS-1R Receiver when installing or removing the SCS-120. Slide the SCS-120 Multibus Power Supply Card, the component side up, into the multibus rack upper position, which is the lower rack in the SCS-RACK.

Connect the SCS-208 Power Cable to J3 on the card front right side. Connect the other end of the power cable to the SCS-130 Transformer Card on the back of the modem rack. The power cable can be used in either direction.

Processor Monitor

The SCS-120 monitors the Model SCS-150 processor through the multibus backplane. The green OK LED lights when the processor operates. If the processor stops operating, the red FAIL LED lights and the SCS-120 failure buzzer sounds.

Press the processor restart button to restart the system, silence the buzzer, and turn off the red LED. The restart button restarts the system.

Power Monitor LEDs

The SCS-120 monitors three different system voltages, +5, +12, -12 and the modem power supply. Four LEDs located to the right of the power alert silence switch display any voltage failures. A green OK LED lights when the voltages are working properly. The green PWR LED for the modem power supply is located on the SCS-110 Modem Power Supply Card. The red TRBL LED lights and the trouble alert tone on the SCS-120 sounds when there is a problem with a voltage level.

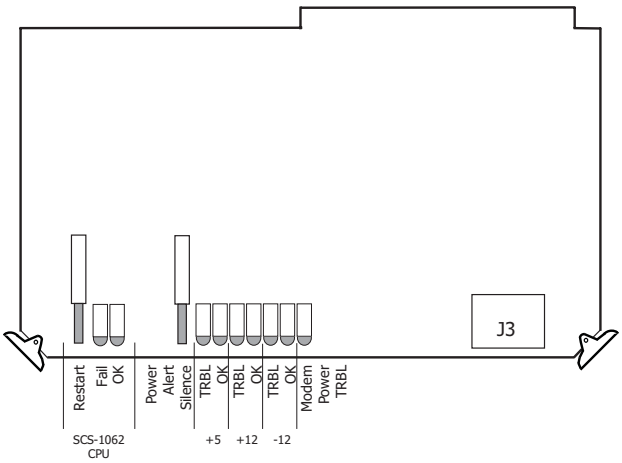


Figure 11: SCS -120 PCB

Press the SCS-120 power alert silence switch to silence the alert tone. The red TRBL LED remains lit until the power problem is corrected. The modem power LED, the SCS-120 trouble alert tone, and the SCS-110 Modem Power Supply Card power alert LED all operate together.

MODEL SCS-130 TRANSFORMER CARD

Description

The SCS-130 provides power to the SCS-110 Modem Power Supply Card and the SCS-120 Multibus Power Supply Card. Two terminals are provided for connecting 120 VAC to the system. A power cord is provided for connecting the multibus rack cooling fan.

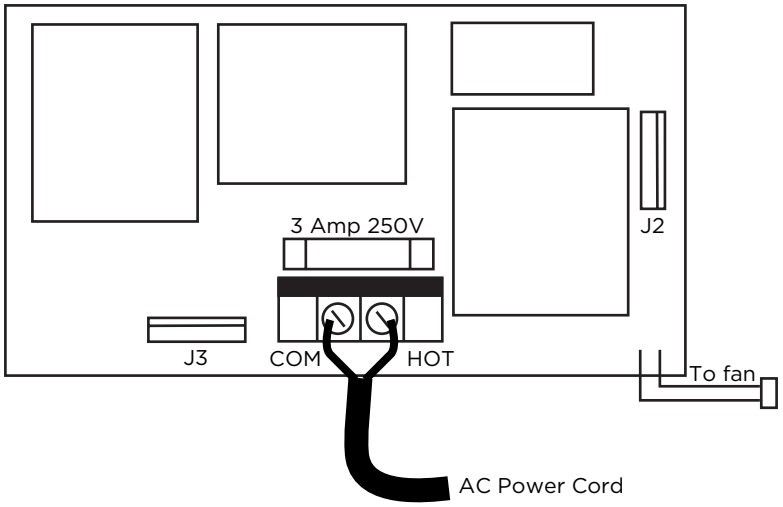


Figure 12: SCS-130 Transformer Card

Installation

Caution: Always remove power to the SCS-1R Receiver when installing or removing the SCS-130.

1. Install the SCS-130 with J2 on the right side on the rear of the modem rack and J3 on the bottom as shown above. Four 6-32 screws with lock washers are provided.
2. Connect the SCS-208 Power Cable to J3 on the bottom left of the SCS-130 Transformer Card. Connect the other end of the power cable to the SCS-120 Multibus Power Supply. The power cable can be used in either direction.
3. Connect the cable from the right end of the modem rack labeled J2 to J2 on the right side of the SCS-130 Transformer Card.
4. Connect the 2-conductor cables labeled TO FAN to the multibus cooling fan on the lower right side of multibus rack.

AC Power Connection

Connect 120 VAC to the SCS-1R Receiver through the SCS-130 Transformer Card. The SCS-1R Receiver backplate provides a 7/8" conduit knockout.

1. Install the supplied strain relief onto the AC power cord approximately 12 inches from the AC wires.
2. Feed the end of the AC power cord through the backplate knockout until the strain relief snaps into place.
3. Connect the White AC power cord wire to the COM terminal on the bottom of the SCS-130.
4. Connect the Black AC power cord wire to the HOT terminal on the bottom of the SCS-130.
5. Connect the Green AC power cord ground wire to the grounding lug located on the right side of the enclosure.

The AC power must be provided by a listed UPS. A signal shall be provided at the operators console when the UPS power source switches from primary power to secondary power.

Caution: Do not apply power to the receiver until the reader cover is replaced on the receiver cabinet.

Three Amp Fuse

The 120 VAC connection to the SCS-1R Receiver is current limited with a DMP Model 319, 3 Amp 250 volt fuse. The 3 Amp fuse is a Type AGC 1/4" x 1 1/4" fast blow.

MODEL SCS-208 POWER CABLE

Description

The SCS-208 is a 2-foot cable that connects the different system voltages between the SCS-130 Transformer Card J3 and SCS-120 Multibus Power Supply Card J3.

Installation

The SCS-208 cable can be used in either direction, but is polarized on each end for proper installation to the J3 connectors.

MODEL SCS-203 CONVENIENCE PANEL

Description

The SCS-203 provides cabling for three RS-232 ports for the host output, auxiliary port (used for Remote Link programming), and an activity log printer.

Installation

1. Install the metal plate with the three 25-pin RS-232 connectors on the SCS-1R Receiver backplate using the two 6-32 x 1/4" screws provided.
2. Install the three 10-pin flat cable connectors to the SCS-150 Receiver ports A1, A2, and A3.
    a. Connect the ribbon cable marked A1 (Activity Log) to port A1.
    b. Connect the ribbon cable marked A2 (Aux) to port A2.
    c. Connect the ribbon cable marked A3 (Host Output) to port A3.
3. Connect the printer using a DMP Model 389 Printer Cable and host computer using a DMP model SCS-204 Host Cable (see below) to the appropriate RS-232 connectors.

MODEL SCS-204 HOST CABLE

Description

The SCS-204 is a 10-foot RS-232 cable that connects a host computer to the SCS-1R Receiver.

Installation

Connect the SCS-204 cable from a host computer to the SCS-203 Convenience Panel center connector marked "HOST OUTPUT".

Caution: The end of the cable marked "HOST" must be installed onto the host computer.

Host Cable

If you are using a cable different from the SCS-204, be sure the cable pin out matches the drawing below.

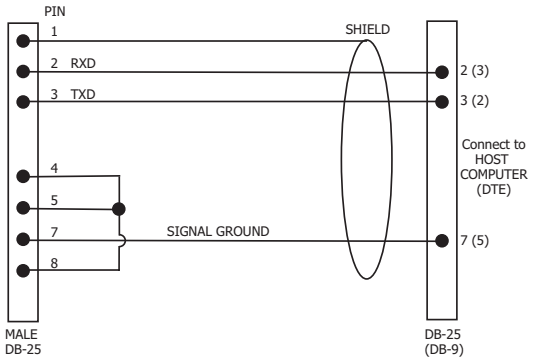


Figure 13: SCS-204 Cable

SCS-1R PRINTER CABLE

Serial Printer Cable Pinout

UL central station applications must use a serial printer that is listed for Fire Protective Signaling Systems.

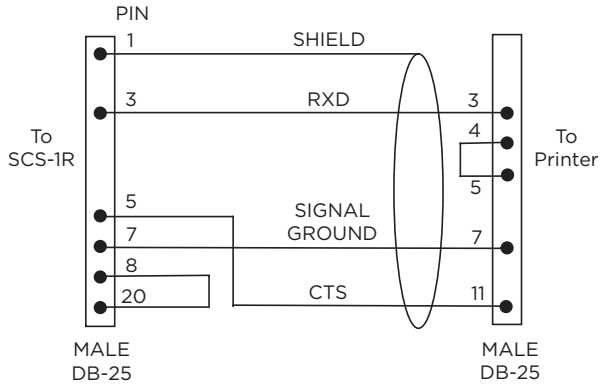


Figure 14: SCS-1R Printer Cable

USE THE LCD MEMBRANE KEYPAD

Special Keys

CMD Key

The **CMD** key allows you to go forward through the configuration menu and each configuration step (or prompt). As you go through programming, the keypad display shows any current programming already stored in the panel memory. If the information does not need to be changed, press **CMD** to advance to the next step. After changing programming, press **CMD** to advance to the next option.

Back Arrow Key

Use the Back Arrow key to back up one step during programming. The Back Arrow key is also used when an error is made while entering information. Press the Back Arrow key once to erase the last character entered.

Select Keys

The top row of keys are called the Select keys. Each time a top row Select key is to be used, the keypad displays the function or options above the key. Displaying choices above the individual top row Select keys allows them to be used for many different applications. For example, you can enter **AM** or **PM** when programming time or answer **YES** or **NO** for a **NET** Option.

During programming, the top row Select keys also allow you to change information currently in the panel memory. Press the appropriate Select key under the display then enter the new information through the keypad.

The Select keys are also used for choosing a programming menu. Press any one of the top row Select keys when the name of the programming section you want displays.

When the SCS-1R system is in normal mode, the Select keys are used to acknowledge alarm messages. Press the Select key labeled **ACK**, or any top row Select key, to acknowledge the alarm message.

Keypad Prompts Display Current Programming

Each prompt displayed at the keypad shows the currently selected option in the panel memory. These options are either shown as a number, a blank, or **NO** or **YES**. To change a number or blank to a new number, press any top row Select key. An underscore replaces the current option. Press the number(s) on the keypad you want to enter as the new number for that prompt.

It is not necessary to enter numbers with leading zeros. The SCS-1R automatically right justifies the number when you press the **CMD** key.

To change a programming prompt that requires a **NO** or **YES** response, press the top row Select key under the response not selected.

For example, if the current prompt is selected as **YES** and you want to change it to **NO**, press the third top row Select key. The display changes to **NO**. Press the **CMD** key display the next prompt.

Enter Alpha Characters

You can use the keypad to enter alpha characters. To enter an alpha character, press the key that has the desired letter written below it. The keypad display shows the number on that key. To change the number to a letter, press the top row Select key that corresponds to the location of the letter under the key. For example, if you press key number 1, the letters for that key are A, B, and C. Press the first top row Select key for A, the second for B, and the third for C. See the figure below.

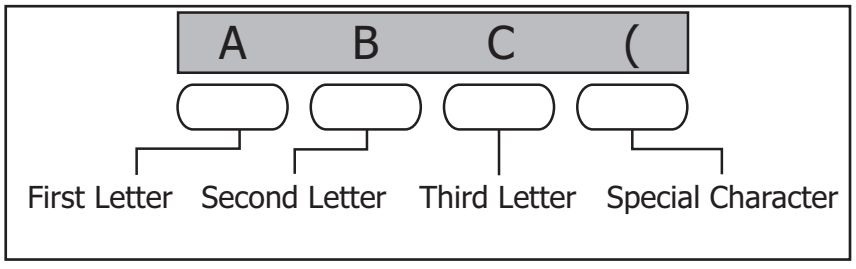


Figure 15: Entering Alphanumeric Characters

LCD MEMBRANE KEYPAD CONFIGURATION

User Options

The keypad provides three adjustments to suit the environment.

To access, press and hold the Back Arrow and **CMD** keys for two seconds. The keypad display changes to **SET BRIGHTNESS**. Use the **CMD** key to display the next Option or press the Back Arrow key to exit the User **Options** function.

Brightness

Set the keypad LCD brightness level and the AC Power LED. Use the left Select key to lower the keypad brightness and the right Select key to raise the brightness. The LCD backlighting turns on every time a key is pressed or the speaker sounds. The backlighting dims to medium brightness whenever the speaker is on.

Note: If the brightness level is lowered, it reverts to maximum intensity whenever a key is pressed. If no keys are pressed, and the speaker has not sounded for 30 seconds, the user-selected brightness level restores.

Speaker Tone

The keypad speaker emits standard tones for key presses and alerts. At the **SET TONE** display, use the left Select key to lower the tone and the right Select key to raise the tone.

Volume Level

Set the keypad internal speaker volume level for key presses and entry delay tone conditions. During alarm and trouble conditions, the volume is always at maximum level. Use the left Select key to decrease the keypad volume and the right Select key to increase the volume. Press **CMD** to display the Model Number.

Model Number

The LCD displays the keypad firmware version and date. The user cannot change this information in User Options.

Keypad Address

The LCD displays the keypad address. While in User Options, the user cannot change the keypad address. Press the Back Arrow key to exit the User Options function.

Keypad Options and Diagnostics

The keypad also contains **Options** and **Diagnostic** options that allow you to configure and test keypad operation.

You can only access **Keypad Options** and **Diagnostics** through the User Options. After holding down the Back Arrow and **CMD** keys for two seconds to display **SET BRIGHTNESS**, enter the code **3577** (INST) and press **CMD**. The display changes to **KPD OPT** (keypad options) **KPD DIAG** (keypad diagnostics) and **STOP**.

Keypad Options

Keypad Options (KPD OPT)
To program keypad options, press the left Select key under **KPD OPT**. The display changes to **CURRENT KEYPAD ADDRESS: # #**.

Current Keypad Address
The keypad must be set to keypad address **01**. This is the default setting and should not be changed.

Keypad Mode
The keypad can be set for either Supervised or Unsupervised operation. It is recommended the setting be left at the default Supervised setting.

Default Keypad Message
Press **CMD** to scroll past this option. The keypad does not provide a programmable Keypad Message.

Arm Panic Keys
The Panic Keys should be disabled. They cannot be used on the membrane keypad. If an asterisk appears next to one of the options, for example ***PN**, press the Select key under the option with the asterisk to remove the asterisk and disable the panic key.

Zone 2 Shunt
Leave this option set to **NO**.

Zone 3 Exit
Leave this option set to **NO**.

Entry Cards
Leave this option set to **NO**.

All?
Leave this option set to **NO**.

Access Keypad Diagnostics

Keypad Diagnostics (KPD DIAG)
The Keypad Diagnostic option allows you to check the display segments and test individual keys.

Press the Select key under **KPD DIAG**. The keypad lights all display segments and turns off LEDs (Power, ACK, Message). A few seconds later the keypad turns the display off and turns LEDs on. The keypad then alternates between these two states for approximately two minutes. Press **CMD** at any time to continue.

Test Individual Keys
The display changes to **PRESS KEY TO TEST**. This option allows you to test each membrane key to ensure it is operating properly. Press and hold each key for about two seconds. The key number being held appears in the display. Verify the correct number displays before testing the next key.

Exit the Installer Options
When done, press **CMD** until the display returns to the Keypad Options and Diagnostics screen. Press the Select key under **STOP** to exit the Keypad Options and Diagnostics function.

STATUS DISPLAYS

Receiver Startup Display

When the SCS-1R powers up, the software version and date of version release is displayed.

Time Display

During normal operation the display shows the current time. Press Command button to enter the **OFF-NORMAL** menu.

Off-Normal Status

Displays previous Fire, Fire Verify, Burglary, and Supervisory zones that have not restored. In addition, supervised network (**NET** or **CELL**) accounts that are not communicating properly display here.

```
OFF-NORMAL?
```

Off-Normal
Press any top row Select key to view Off-Normal conditions. Press **CMD** to advance to the System Status menu.

```
   OFF-NORMAL
ACCTS          ZONES
```

Off-Normal Accounts and Zones
Press the far left Select key to view supervised accounts. Press the far right Select key to view non-restored zones.

```
1245678   ZN 123
FIRE ALARM
```

Off-Normal Zone Display Example
After pressing the top row Select key under **ZONES**, all non-restored zone messages display similar to the one shown on the left. The card number is listed first: Card 1 in the example. The line number is listed second: Line 2 in the example. The account number follows the line number: 45678. The zone number then displays: ZN 123. The second line displays the zone type, Fire, Burglary, or Supervisory, followed by the event type, Alarm or Trouble: FIRE ALARM is the message in the example.

```
1245678   ZN 123
DELETE?     NO  YES
```

Delete Off-Normal Zone Instance
When an off-normal zone displays, pressing any top row Select key can delete the zone off normal status from the SCS-1R. Press the top row Select key under **YES** to delete, or **NO** to save the message and return to the previous display. Default is **NO**.

```
1245678 NET ACCT
NOT RESPONDING
```

Off-Normal Account Display Example
After pressing the Select key under ACCTS, all off normal supervised accounts display a message similar to the one shown on the left. The card number is listed first: Card 1 in the example. The line number is listed second: Line 2 in the example. The account number follows the line number: 45678. The example message then displays: Network Account not Responding.

```
1245678 NET ACCT
DELETE?     NO  YES
```

Delete Off-Normal Account Instance
When an off-normal account message displays, pressing any top row Select key can delete this display from the SCS-1R. Press the top row Select key under **YES** to delete, or **NO** to save the message and return to the last display. Default is **NO**.

```
   OFF-NORMAL
 END OF LIST
```

End of List
This displays when the end of the Off-Normal list has been reached.

System Status

The System Status section displays the number of calls since 12:00 AM for each line card programmed for Digital Dialer (DD) communication.

```
SYSTEM STATUS?
```

System Status
Press any top row Select key to view System Status.

```
LINE 12
NO OF CALLS: XXXX
```

Number of Calls
This displays the number of calls the line on a particular card has received since midnight. The card number is listed first: Card 1 in the example. Range is 1-8. The line number is listed second: Line 2 in the example. Range is 1-4 for all enabled DD lines. XXXX in the second line of the display represents the number of calls. Press **CMD** to advance to the next DD line card. If no more DD line cards display, the display advances to the programming menu.

```
LINE 12  -19.5DBM
4175551234
```

Line Level
This displays the signal strength and caller ID information for each line. The card number is listed first: Card 1 in the example. Range is 1-8. The line number is listed second: Line 2 in the example. Range is 1-4 for all enabled DD lines. The number in the top line of the display represents the signal strength of the last call in -dBm. The second line displays caller ID information of the last call. If caller ID information is unavailable, then the ANI/DNIS information is displayed. If ANI/DNIS information is unavailable, then NO DATA will display. Press **CMD** to advance to the next DD line card. If no more DD line cards display, the display advances to the programming menu.

```
NO  DD  LINES
```

No DD Lines
Displays for four seconds if no DD lines are programmed.

SCS-150 PROGRAMMING

Programming of the SCS-150 can be performed using the following methods:

Programming Method	Requirements
SCS-1R Membrane Keypad	SCS-1R membrane keypad
Browser	SCS-150 Version 103 or higher have the ability to be programmed using a standard browser. **Note:** IP and Gateway addresses must be programmed at the SCS-1R membrane keypad to allow access.
Remote Link	Remote Link version 1.47 or higher when using an SCS-150 Version 100 or 101 only.

SCS-150 MEMBRANE KEYPAD PROGRAMMING

Programming Menu

Allows entry to the programming menu for the SCS-1R using the keypad display.

MENU? NO YES

Menu?
Select **YES** to enter the programming code. Select **NO** to return to the Time Display.

ENTER CODE: 6653

Programming Code
Enter **PROG** (6653) to enter the Programming Menu.

Service Code (XR500 Series and XR550 Series panels)

This option allows the entry of a 5-digit service authorization code used to authenticate service personnel before allowing access to panel programming or performing any user operations.

SCS-1R MENU SERVICE CODE

Service Code (XR500 Series and XR550 Series panels)
Press any top row Select key to enter the Service Code. Press **CMD** to advance to the next section of programming.

Range for the 5-digit code is 00000-65535. When this feature is enabled on an XR500 Series or XR550 Series panel a service person is required to enter a valid service user code for system programming access. Once the code is authenticated with the receiver, access to panel programming is granted. If the code is not authenticated, access is denied.

SERVICE CODE 00000

The receiver cannot authenticate service personnel until a number is entered at this option. Entering **00000** at the receiver disables this operation and panel access is always granted.

Note: This panel operation is available to purchase for XR500 Series panels with version 108 or higher software and all XR550 Series panels. Refer to the Feature Upgrade section in the XR500 Series Programming Guide (LT-0679) or XR550 Series Programming Guide (LT-1232) for additional information.

Receiver Options

This section assigns the company name and system number as well as the communication type for each SCS-1R Receiver incoming line.

SCS-1R MENU RECEIVER OPTIONS

Receiver Options
Press any top row Select key to display the company name and configure the system. Press **CMD** to advance to the next section of programming.

COMPANY NAME -

Company Name
Enter your company name using two lines, each line can have up to 16 characters.
Enter the first 16 characters and press **CMD** to accept.

COMPANY NAME 2 -

Enter the second 16 characters and press **CMD** to accept.

RECEIVER SYSTEM NUMBER: **1**

Receiver System Number
The LCD displays the current receiver system number. Press any top row Select key, then enter the system number, 0 through 9. The default System Number is 1. Press **CMD** when finished.

Note: This identifier is used by the automation computer to distinguish between multiple SCS-1R systems.

RECEIVER KEY KEY:********

Receiver Key
The current Receiver Key displays. Press **CMD** to leave the Receiver key the same and move to the next programming option. Press any top row Select key to change the Receiver Key.

Note: This is an eight-character alphanumeric entry. This key is requested by panels in the field when using remote programming from this receiver. Once entered this key does not display and should never be changed. Record this number in the Important information Sheet at the end of this document and store in a secure place.

Enter the new Receiver Key up to eight characters long. Press **CMD** to display the next prompt.

CHANGE REC KEY
SURE? YES NO

Change Receiver Key

After entering the desired Receiver Key and pressing **CMD**, the **SURE? YES NO** prompt displays. Press the Select key under **YES** to keep the new key, or under **NO** to use the previously stored key.

RECEIVER KEY
CHANGED

Receiver Key Changed

After pressing the Select key under **YES**, the display indicates that the receiver key has been successfully changed.

RECEIVER HOURS
FROM GMT: **6**

Receiver Hours From GMT

Number of hours (0 to 23), from the Greenwich Time zone (GMT), where the receiver is located. Refer to the table below for various cities and GMT settings. Default is **6**.

GMT	City/Time Zone
0	London, Monrovia, Lisbon, Dublin, Casablanca, Edinburgh
1	Cape Verde Island, Azores
2	Mid-Atlantic, Fernando de Noronha
3	Buenos Aires, Georgetown, Brasilia, Rio de Janeiro
4	Atlantic Time (Canada), Caracas, La Paz, Santiago
5	Eastern Time (US, Canada) Bogota, Lima, Arequipa
6	Central Time (US, Canada), Mexico City, Saskatchewan
7	Mountain Time (US, Canada), Edmonton
8	Pacific Time (US, Canada), Tijuana
9	Alaska
10	Hawaii
11	Midway Island, Samoa
12	Fiji, Marshall Island, Wellington, Auckland, Kwajalein, Kamchatka
13	New Cadelonia
14	Guam, Sydney
15	Tokyo, Seoul
16	Hong Kong, Singapore
17	Bangkok, Hanoi
18	Dhaka, Almaty
19	Islamabad, Karachi
20	Abu Dhabi, Kazan
21	Moscow, Bagdad
22	Eastern Europe
23	Rome, Paris, Berlin

DIALER LINE
MONITOR? **NO** YES

Dialer Line Monitor

Press the far right Select key for **YES** to enable monitoring of digital dialer lines for any failed communication attempts. A failed communication attempt occurs when the line card goes off hook but does not successfully communicate with a panel. Press the middle right Select key for **NO**, to disable the line monitoring operation. Default is **NO**.

When enabled, and a line communication fails, an S153 Communication Trouble message, along with the card and line number, is sent to the host automation computer, SCS-1R printer and LCD display. Manual acknowledgment is required when the SCS-1R is not successfully communicating with the host automation computer.

EVENT DISPLAY
PRIORITY **STD**

STD ULC

Event Display Priority
For Canadian Central Stations that receive signals from a ULC-599-04 fire communicator installation, set the Event Display priority to ULC. Otherwise, set to **STD**. This option defines the priority of messages waiting for manual acknowledgment in event memory when the receiver is unable to communicate with the host automation computer.

To change the setting, press a top row key. Select **STD** to have the display follow the standard priority as shown below. Select **ULC** to have the display follow the ULC priority shown below for Canadian fire communicator installations. Default is **STD**.

Priority Number	STD	ULC
1	Fire Alarms	Fire Alarms
2	Burglary Alarms	Fire Supervisory
3	Trouble, Fire Supervisory, & Fire Trouble	Fire Trouble
4	Other Messages	Burglary Alarms & Trouble
5	N/A	Other Messages

LOCAL IP ADDRESS
192.168.000.250

Local IP Address
Enter the Local IP Address of the SCS-150 processor. The Local IP Address must be unique and cannot be duplicated and needs to be a privately accessible network connection. The default value is **192.168.000.250**.

LOCAL PORT
2001

Local Port
The Local Port identifies the SCS-150 IP port used when the host automation computer communicates with the receiver over network. If a setting change is required, enter the new number. Valid range is 1 to 65,535. The default value is **2001**.

GATEWAY ADDRESS
000.000.000.000

Gateway Address
Enter the local SCS-150 Gateway Address. You need the SCS-150 Gateway Address if subnets are divided in your network. The default value is **000.000.000.000**.

SUBNET MASK:
255.255.255.000

Subnet Mask
Enter the Subnet Mask assigned to the SCS-150. The default value is **255.255.255.000**.

WEB USER NAME:
NEW

Web User Name
Enter a User Name for web programming access. This is the User Name entered to gain access to the programming and can be up to 10 characters long. Default is **NEW**.

WEB PASSWORD:
NEW

Web Password
Enter the password to use for web programming access. This is the password used to gain access to the programming and can be up to 10 characters long. Default is **NEW**.

Line Cards

This section assigns the line number and line type for all line cards connected to the SCS-150.

SCS-1R MENU
LINE CARDS

Line Cards
Press any top row Select key to assign the line number and line type for each line card connected to the SCS-150.

CARD NUMBER:1

CARD NUMBER: 1
NONE 104 101 100

Card Number
Press **CMD** to select the displayed Card Number to program. Press any top row Select key to clear the display and enter a new card number. Enter the card number, 1 through 8, for which the communication method is to be specified.

Note: Lines 6-8 can only be used with SCS-104 Line Cards using SCS-150 Version 101 and updated SCS-RACK hardware.

CARD NUMBER: 1
CARD MODEL: 104

Card Model
The display shows the current card model setting. Press any top row Select key to change the Card Model. Press the Select key under the model for this card. Options include **NONE**, **104**, **101**, and **100**. Card number 1 defaults to Model 104. Card numbers 2-8 default to **NONE**.

SEND TIME CHANGE
TO PNLS? NO **YES**

Send Time Change
Press the top row Select key under **YES** to allow the SCS-1R to send time changes to panels that communicate to the receiver on this line card. Select **NO** to prevent the SCS-1R Receiver from sending time changes.

The following options display if 104 is selected as the Card Model.

Dialer Lines Setup

DIALER LINE 21
ENABLE? NO **YES**

DIALER LINE 22
ENABLE? NO **YES**

DIALER LINE 23
ENABLE? NO **YES**

DIALER LINE 24
ENABLE? NO **YES**

Enable Dialer Lines

The card number is displayed first (Card 2 in the examples) followed by the line number (Line 1 in the first example). Line numbers 1-4 represent dialer line cards for each card. Press the far right Select key for **YES**, which enables dialer for the selected card and line. After selecting, Line 2, 3 and 4 are displayed. Default is **YES** for all lines. If **NO** is selected for all four lines, the dialer line setup prompts are skipped and the network line setup prompts are displayed.

FIRST COMM
TYPE: **DD**

FIRST COMM TYPE
DD CID

First Communication Type

Select DD to enable all dialer lines on the line card to communicate with panels using digital dialer communication format. Select CID to enable all dialer lines on the line card to communicate with panels using contact ID format. To change the communication type, press any select key to display the options. Default is **DD**. If the receiver cannot communicate with the panel using the first communication type, the receiver attempts communication using the secondary communication type.

SECOND COMM
TYPE: **DD**

SECOND COMM TYPE
DD CID NONE

Second Communication Type

Select **DD** to enable all dialer lines on the line card to communicate with panels using digital dialer communication format. Select **CID** to enable all dialer lines on the line card to communicate with panels using contact ID format. Select **NONE** to have no second communication type. To change the communication type, press any select key to display the options. Default is **DD**.

SEND ANI/DNIS
INFO? **NO** YES

Send ANI/DNIS Information

Press the far right Select key for **YES**, which enables the Automatic Number Identification (ANI) and Dialed Number Identification Service (DNIS) information to be sent. ANI sends the phone number that the panel is using to call. DNIS sends the DNIS identifier of the phone number that the panel dialed. Default is **NO**.

SEND CALLER ID
INFO? **NO** YES

Send Caller ID Information

Press the far right Select key for **YES**, which enables the Caller ID information to be sent. Caller ID sends the phone number that the panel is using to call. Default is **NO**.

ECHO CANCEL
DISABLE? **NO** YES

Echo Cancel Disable

Echo Cancellation is technology used by telephone companies to eliminate echo from voice telephone transmissions. In some cases this technology can interfere with alarm signals. If you have problems with Echo Cancellation interfering with your signals, press the far right Select key for **YES** to turn off the echo cancelers. If you are not having problems with the telephone company echo cancellation, select **NO** to leave the echo cancelers on. Default is **NO**.

Network Line Setup

NET LINE 20
ENABLE? NO **YES**

Enable Network Line

The card number is displayed first (Card 2 in the example) followed by the line number (Line displays as 0 (zero) for the network line of each card). Press the far right Select key for **YES**, which enables the network for the selected card. Default is **YES**. If **NO** is selected, the display returns to the Card Number prompt.

LOCAL IP ADDRESS
192.168.000.250

Local IP Address

Enter the Local IP Address. This is the SCS-104 IP address. The Local IP Address must be unique and cannot be duplicated. The default value is **192.168.000.250**.

LOCAL PORT
2001

Local Port

The Local Port identifies the port used to communicate messages to and from the panel. If a setting change is required, enter the new number. Valid range is 1 to 65,535. The default value is **2001**.

GATEWAY ADDRESS
000.000.000.000

Gateway Address

Enter the local Gateway Address. You need the Gateway Address to exit your local network. The default value is **000.000.000.000**.

SUBNET MASK:
255.255.255.000

Subnet Mask

Enter the local Subnet Mask assigned to the SCS-104. The default value is **255.255.255.000**.

PASSPHRASE:

Passphrase

In order to communicate using encryption, XR500E and XR550E panels reporting to the SCS-104 at the receiver must have a Passphrase. This Passphrase must be programmed into every panel reporting to the SCS-104 at the receiver. The SCS-104 installed in the receiver must also be programmed with the same Passphrase. To clear the passphrase press any Select Key and then press **CMD**.

Note: 256-bit encrypted messages to the SCS-1R receiver only communicate when using SCS-104 Receiver Line Cards with Version 102 or higher software.

To enable encryption enter an 8- to 16-character Passphrase using alphanumeric characters. If you leave the Passphrase blank, the SCS-104 communicates with XR500E and XR550E panels, but the data is not encrypted. The Passphrase is blank by default.

Caution: Do not lose the passphrase. A lost or forgotten Passphrase requires that every XR500E or XR550E panel reporting to the SCS-104 at the receiver be individually reprogrammed with a new passphrase.

S16 AND S17
ALWAYS? **NO** YES

S16 and S17 Always

When **NO** is selected, the S16 Panel Not Responding message is sent to the automation computer for each supervised account that has stopped sending check-in messages unless 50 S16 messages have been generated for different accounts within one minute. This could occur because the network has failed. Once this occurs, S72 Network Trouble is sent and the receiver stops sending S16 messages to the automation computer. The receiver sends S73 Network Restored and will begin sending S16 messages after the receiver starts receiving check-in messages again.

When **YES** is selected, the S16 Panel Not Responding message is always sent to the automation computer for each supervised account that has stopped sending check-in messages without regard to the number of accounts generating S16 messages.

When **YES** is selected, the S17 Panel Response Restored message is sent to the automation computer each time a supervised account checks in for the first time after installation. This also occurs at an account's first check-in after the receiver or SCS-104 is powered-up. Default is **NO**.

ACK SUBSTITUTED MESSAGE? NO **YES**

Acknowledge Panel Substitution Message

When YES is selected, the SCS-104 replies with an acknowledgment to messages sent by substituted panels. See the Substitution Code section of the panel programming guide for the definition of a substituted panel. The SCS-104 generates only one S58 Alarm: Panel Substitution message to the host automation computer and receiver printer for each substituted panel. Subsequent messages from substituted panels do not generate additional S58 messages. Default is **YES**.

When **NO** is selected, substituted panels are not sent acknowledgments for their messages. For each message received from a substituted panel, an S58 Alarm: Panel Substitution message is sent to the host automation computer and receiver printer.

Note: Set this option to **YES** for all receiver installations except for Canadian receiver installations where the security requirement is ULC Active Level 3.

CHECKIN TABLE IP **000.000.000.000**

Check-in Table IP Address

The optional SCS-CTM Check-in Table Manager software is used to backup the records of supervised network accounts on up to 32 different SCS-104 line cards. Use SCS-CTM to repopulate the list of supervised network accounts when one SCS-104 line card is replaced by another SCS-104. Additionally, the list of supervised network accounts used by an SCS-104 on a primary receiver can be mirrored by the SCS-CTM for use by an SCS-104 card on a second receiver. Refer to the SCS-CTM User's Guide (LT-0940).

Note: The list of supervised network accounts on an SCS-104 line card is automatically populated as each panel sends its supervisory check-in message to the SCS-104 line card.

Enter the IP address for the computer where the SCS-CTM Check-in Table Manager software is installed. When no SCS-CTM software is installed, leave the IP address set to **000.000.000.000**.

CHECKIN TABLE PORT: **2005**

Check-in Table Port

Enter the IP port used to communicate Check-In Table messages to the SCS-CTM Check-in Table Manager program. Valid range is 1 to 65,535. Default is **2005**.

CHECKIN TABLE ID: **1**

Check-in Table ID

Enter the table ID number to be used by the SCS-CTM Check-in Table Manager to identify the check-in table. Valid range is 1 to 255. Default is **1**.

Exit Network Line Setup

When done, press **CMD** once to return to the Card Number prompt. The next Card Number in sequence will be displayed.

Host Automation

The SCS-1R Host Automation programming section allows adjustments to optimize the SCS-1R performance with the host automation computer. The display shows the current setting for each prompt. Press any top row Select key to clear the display and enter the new information.

SCS-1R MENU
HOST AUTOMATION

Host Automation

Press any top row Select key to program Host Automation settings. Press **CMD** to advance to the next programming section. Press the Back Arrow key to return to the previous section.

HOST NAME
HOST 1 NAME

Host Name

Enter a Host Name up to 16 characters. When done, press Command to accept name and continue to HOST PORT TYPE. Default is **HOST 1 NAME**.

HOST PORT TYPE:
SERIAL

HOST PORT TYPE:
SERIAL NETWORK

Host Port Type

Select **SERIAL** to send messages to the host automation computer through the Host Output serial port on the SCS-203 Convenience panel located on the back of the receiver. Select **NETWORK** to send messages through the network connection on the SCS-150 to the host automation computer. Default is **SERIAL**.

HOST IP ADDRESS:
192.168.000.250

Host IP Address

Enter the Host IP Address. This is the IP address of the host automation computer. The default value is **192.168.000.250**.

HOST PORT:
2001

Host Port

The Host Port identifies the port on the host automation computer. Valid range is 1 to 65,535. The default value is **2001**.

PROTOCOL: **TCP**

UDP **TCP**

Protocol

Select **TCP** to communicate with the host automation computer over the network using TCP protocol. Select **UDP** to communicate using UDP protocol. Default is **TCP**.

START CHARACTER :
NONE

Start Character

Enter the character to be used at the start of a host message. Enter **NONE** or 01-12 or 14-31. Default is **NONE**.

CRC ERROR CHECK?
NO YES

CRC Error Check

Press the far right Select key for YES, which allows each message sent to the host to be prefixed with an SIA CIS CRC-16. The format is 4 hexadecimal characters. Default is **NO**.

SEQUENCE NUMBER?
NO YES

Sequence Number

Press the far right Select key for **YES**, which sends each message sent to the host with a sequence number ranging from 1 to 99. Default is **NO**.

TEST INTERVAL
MINUTES: **1**

Test Interval

Press any top row Select key to clear the display and enter the new Test Interval. Enter the number of minutes, 1 through 60, between communication test messages (S99) of the SCS-1R Receiver and host computer. Default is **1**.

ACKNOWLEDGE
TIMEOUT: **3**

Acknowledge Timeout

Press any top row Select key to clear the display and enter the new Acknowledge Timeout. This is the time in seconds, 1 through 15, the SCS-1R waits for a host acknowledgment of a message before transmitting it again. Default is **3**.

LINE NUMBER
LENGTH: **0**

Line Number Length

Press any top row Select key to clear the display and enter the new Line Number Length. Enter the number of decimal ASCII characters, 0 (zero) through 2, used to report the SCS-1R Receiver signal line number. If 0 (zero), no information is sent. If 1, display card number. If 2, display card and line number. Default is **0** (zero).

RETRIES TO
FAILURE: **3**

Retries to Failure

Press any top row Select key to clear the display. Enter the number of attempts, between 1 and 15, the SCS-1R makes to transmit a message to the host computer. When this number is reached, the SCS-1R begins manual acknowledgment operation. Default is **3**.

Serial Ports

The SCS-1R Serial Ports section allows you to make adjustments to the Host Output, Activity Log, and Print Operation Serial Port.

SCS-1R MENU
SERIAL PORTS

Serial Ports
Press any top row Select key to program the Serial Port settings. Press **CMD** to advance to the next programming section. Press the Back Arrow key to return to the previous section.

HOST OUTPUT BAUD
RATE: **9600**

Host Output Baud Rate
Press any top row Select key to change the Host Output Baud Rate. Enter **300**, **600**, **1200**, **2400**, **4800**, **9600**, **19200**, or **38400**. Press the Command button to accept. Default is **9600**.

ACTIVITY LOG BAUD
RATE: **1200**

Activity Log Baud Rate
Press any top row Select key to change the Activity Log Baud Rate. Enter **300**, **600**, **1200**, **2400**, **4800**, **9600**, **19200**, or **38400**. Press **CMD** to accept. Default is **1200**.

PRINT OPERATION:
ALWAYS

PRINT OPERATION
ALWYS NEVER FAIL

Print Operation
Press any top row Select key to change the Print Operation. Select **ALWAYS** to enable the Activity Log output for all system events. Select **NEVER** to disable the Activity Log. Select **FAIL** to enable only when Host Automation has failed and is not acknowledging messages from the receiver.

Note: If Print Operation is set to Always or Primary Fail, ensure that a printer is connected to the printer port.

Set System Time/Date

This section allows you to set the correct time and date on the SCS-1R. All changes made in this section print to the Activity Log printer. The time entered here is sent to panels if the Time Change programming option is set to **YES**.

SCS-1R MENU
TIME/DATE

Time/Date
Press any top row Select key to display the time and date. Press **CMD** to advance to the next section of programming.

TUE 12:05 PM
04/07/09

Current Time/Day/Date
Press any select key to program the time and/or date. Press the Back Arrow key to return to the previous display.

SET TIME/DATE
TIME DATE

Set Time/Date
Press the top row Select key under the item you would like to change. For example, press the far left Select key to change the SCS-1R time.

ENTER TIME:
- : AM PM

Time
Press any top row Select key to enter the new time. Using the Digit keys on the keypad, enter the current time and then press Select key under **AM** or **PM**. **TIME CHANGED** displays after the time has been changed.

ENTER DATE:
- / /

Date
Press any top row Select key to enter the date. Enter the month, date, and year in the following format: **MM/DD/YY**, with leading zeros. Press **CMD** to accept the date and display the following prompt.

TIME CHANGED

Time/Date Changed
If the Time or Date has been changed successfully, the display shows **TIME/DATE CHANGED**.

Exit Programming Menu

Exit Menu allows you to properly end programming and exit the menu.

SCS-1R MENU
STOP

Exit Menu
Press any top row Select key to exit the SCS-1R menu.

BROWSER PROGRAMMING

Programming of the SCS-150, version 103 or higher, can be performed using a browser.

Note: Obtain an IP and Gateway address from the network administrator. Enter the IP and Gateway address in Receiver Options at the SCS-1R membrane keypad to allow access to browser programming for the first time.

The IP Address must be unique and cannot be duplicated. Make sure the network connection is secure and the security on the network connection does not allow outside access to this site before accessing programming through the browser.

After programming the IP and Gateway addresses in Receiver Options at the membrane keypad, connect to the SCS-150 by entering the IP address into the address bar of any web browser. Once connected, the Authenticated Required box displays.

When accessing the programming for the first time, the default User Name and Password are both "**NEW**". Once in the programming, the User Name and Password should be changed in Receiver Options.

Each SCS-150 programming section in the browser is independent and changes should be saved after programming is completed for each section.

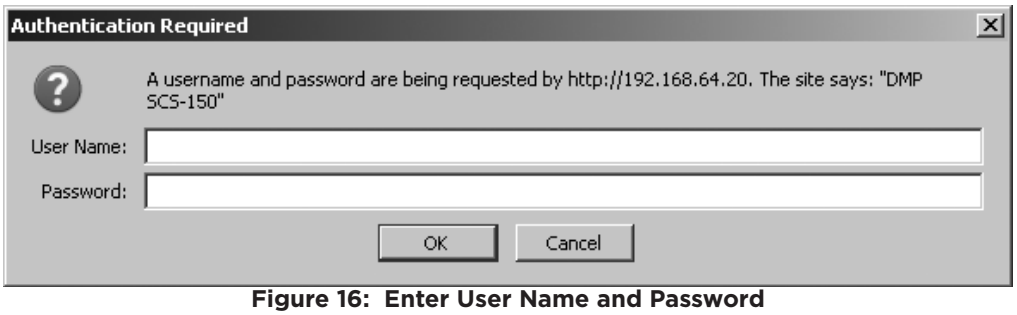


Figure 16: Enter User Name and Password

Receiver Options

This section assigns the company name and system number as well as the IP and Gateway addresses for each SCS-1R Receiver incoming line.

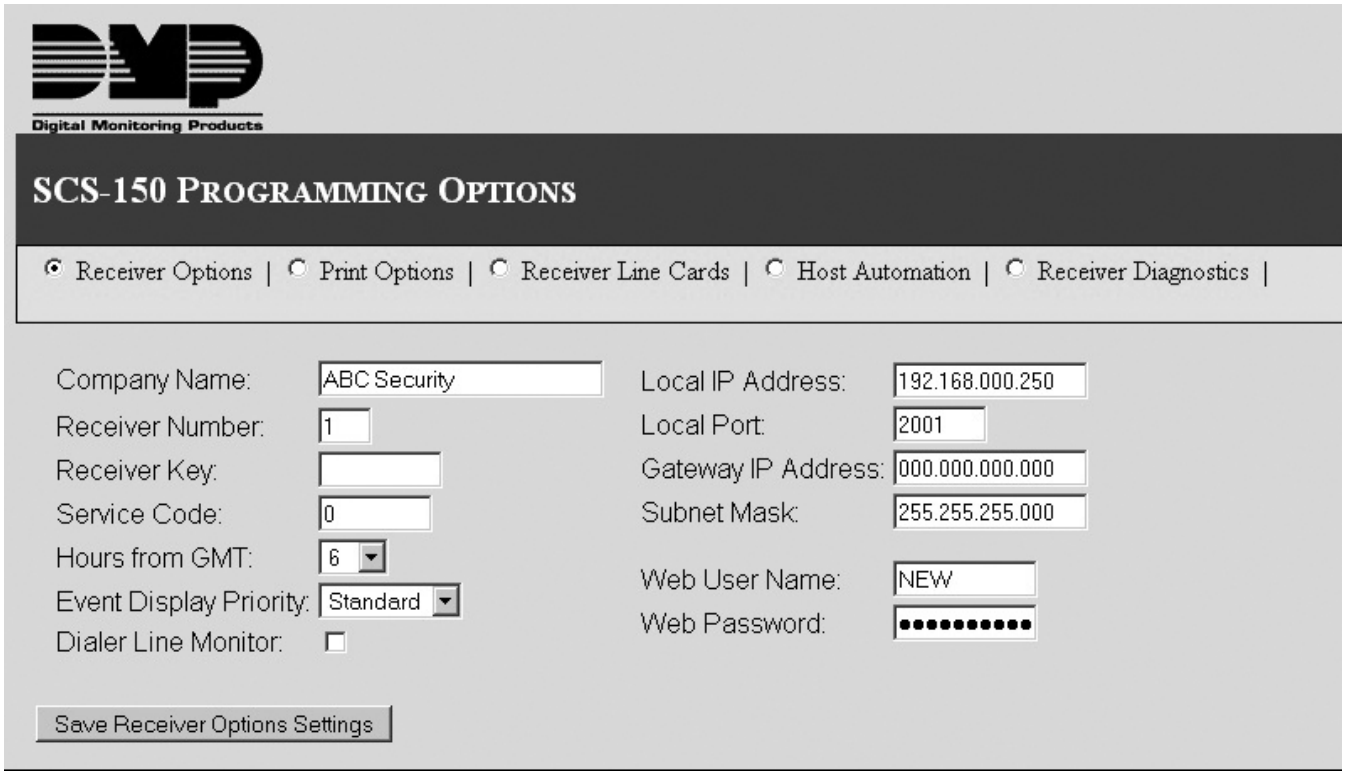


Figure 17: Programming Options

Company Name
Enter the name of the company operating the central station receiver. The company name can have up to 32 characters.

Receiver Number
If the central station has more than one SCS-1R or SCS-105 receiver, enter the number of the appropriate receiver in the Receiver Number field. The default Receiver Number is **1**.

Note: This identifier is used by the automation computer to distinguish between multiple SCS-1R systems.

Receiver Key
The Receiver Key is a number that the receiver uses as a password to confirm its identity to panels. Enter the number to use as a key to identify the receiver in the Receiver Key field.

The key numbers programmed into the panel and the receiver must match to enable the receiver and the panel communication. If the numbers do not match, the panel and the receiver cannot establish communication and an "Invalid receiver number" error message displays. Default is blank.

Once entered this key does not display and should never be changed. Record this number in the Important information Sheet at the end of this document and store in a secure place.

Service Code (XR500 Series and XR550 Series panels)
This option allows the entry of a 5-digit service authorization code used to authenticate service personnel before allowing access to panel programming or performing any user operations.

Range for the 5-digit code is 00000-65535. When this feature is enabled on an XR500 Series and XR550 Series panel a service person is required to enter a valid service user code for system programming access. Once the code is authenticated with the receiver, access to panel programming is granted. If the code is not authenticated, access is denied.

The receiver cannot authenticate service personnel until a number is entered at this option. Entering **00000** at the receiver disables this operation and panel access is always granted. Default is **00000**.

Hours From GMT
Number of hours (0 to 23), from the Greenwich Time zone (GMT), where the receiver is located. Refer to the table below for various cities and GMT settings. Default is **6**.

GMT	City/Time Zone
0	London, Monrovia, Lisbon, Dublin, Casablanca, Edinburgh
1	Cape Verde Island, Azores
2	Mid-Atlantic, Fernando de Noronha
3	Buenos Aires, Georgetown, Brasilia, Rio de Janeiro
4	Atlantic Time (Canada), Caracas, La Paz, Santiago
5	Eastern Time (US, Canada) Bogota, Lima, Arequipa
6	Central Time (US, Canada), Mexico City, Saskatchewan
7	Mountain Time (US, Canada), Edmonton
8	Pacific Time (US, Canada), Tijuana
9	Alaska
10	Hawaii
11	Midway Island, Samoa
12	Fiji, Marshall Island, Wellington, Auckland, Kwajalein, Kamchatka
13	New Cadelonia
14	Guam, Sydney
15	Tokyo, Seoul
16	Hong Kong, Singapore
17	Bangkok, Hanoi
18	Dhaka, Almaty
19	Islamabad, Karachi
20	Abu Dhabi, Kazan
21	Moscow, Bagdad
22	Eastern Europe
23	Rome, Paris, Berlin

Event Display Priority
For Canadian Central Stations that receive signals from a ULC-599-04 fire communicator installation, set the Event Display priority to “Canadian”, otherwise, set to “Standard”. This option defines the priority of messages waiting for manual acknowledgment at the membrane keypad in the event memory when the receiver is unable to communicate with the host automation computer.

Select “Standard” to have the display follow the standard priority as shown below. Select “Canadian” to have the display follow the Canadian priority shown below for Canadian fire communicator installations.

Priority Number	Standard	Canadian
1	Fire Alarms	Fire Alarms
2	Burglary Alarms	Fire Supervisory
3	Trouble, Fire Supervisory, & Fire Trouble	Fire Trouble
4	Other Messages	Burglary Alarms & Trouble
5	N/A	Other Messages

Dialer Line Monitor
Select to enable monitoring of digital dialer lines for any failed communication attempts. A failed communication attempt occurs when the line card goes off hook but does not successfully communicate with a panel. Default is unchecked (disabled).

Local IP Address
Enter the Local IP Address. This is the SCS-150 IP address used for Web Programming and Net Host Output. The Local IP Address must be unique and cannot be duplicated. The default value is **192.168.000.250**.

Local Port
The Local Port identifies the port used for the Net Host Output connections. If a setting change is required, enter the new number. Valid range is 1 to 65,535. The default value is **2001**.

Gateway Address
Enter the local Gateway Address. The Gateway Address is needed if subnets are divided in your network. The default value is **000.000.000.000**.

Subnet Mask
Enter the local Subnet Mask assigned to the SCS-150. The default value is **255.255.255.000**.

Web User Name
Enter a User Name for web programming access. This is the User Name entered to gain access to the programming and can be up to 10 characters long. Default is “**NEW**”.

Web Password
Enter the password to use for web programming access. This is the password used to gain access to the programming and can be up to 10 characters long. Default is “**NEW**”. If the password is forgotten, a new password can be entered at the keypad only.

Print Operation

This section assigns the printing operation and the activity log baud rate.

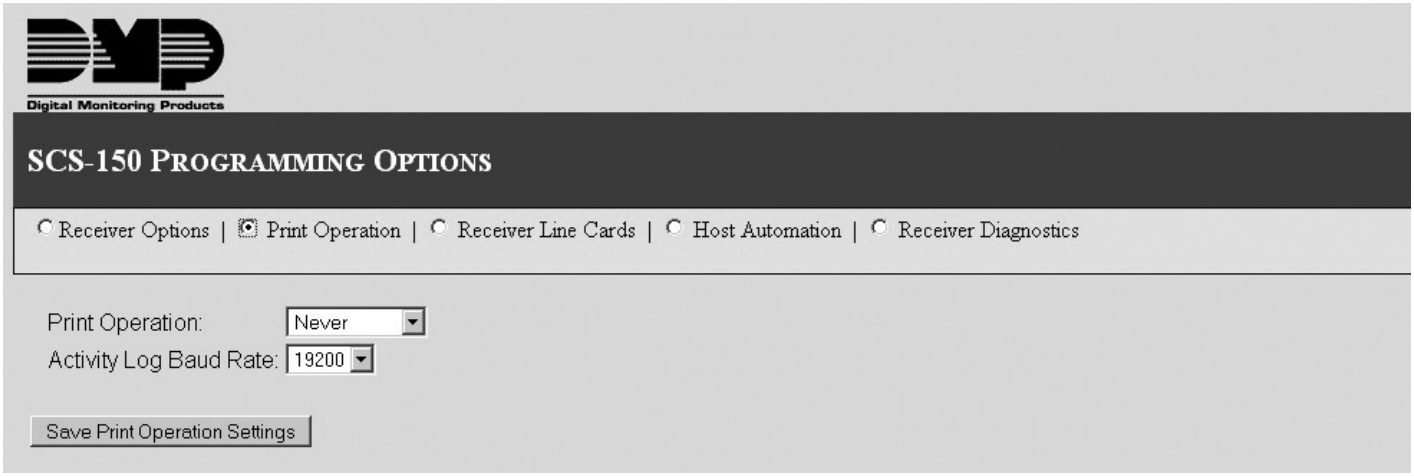


Figure 18: Programming Options

Print Operation

Select the printer operation. Default is Always.

Print Operation	Function
Never	Suppresses all printing
Always	Prints all messages from the receiver
Primary Fail (Host Output)	Prints only when the communication to the primary host fails

Note: If Print Operation is set to Always or Primary Fail, ensure that a printer is connected to the printer port.

Activity Log Baud Rate

Select the baud rate for the Serial Printer port. Default is **1200**. Select **300**, **600**, **1200**, **2400**, **4800**, **9600**, **19200**, or **38400**.

Receiver Line Cards

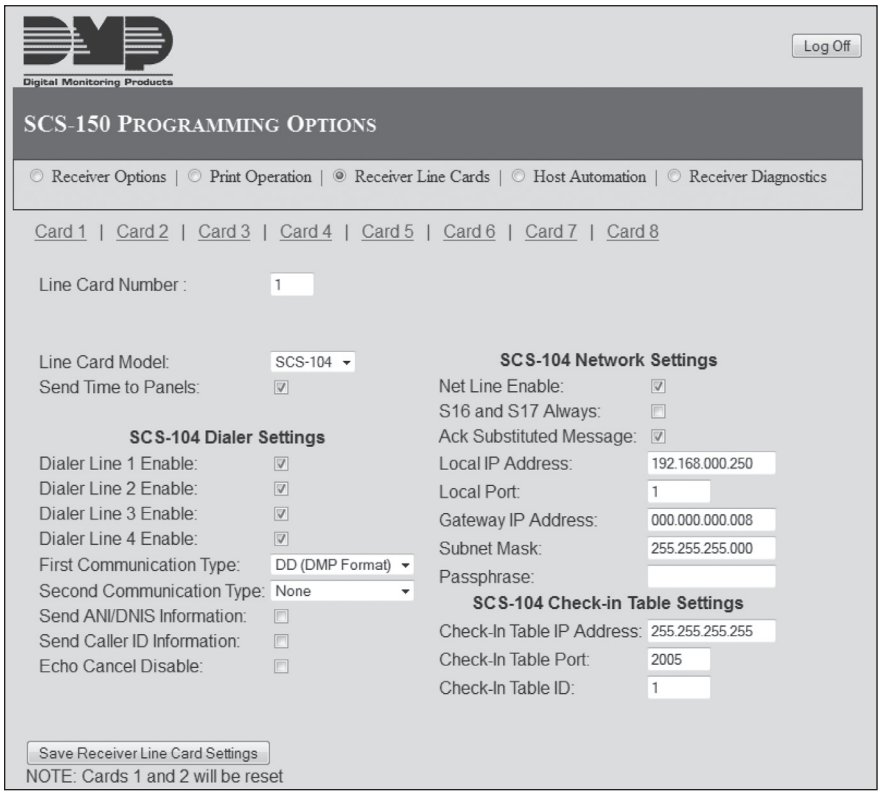


Figure 19: Receiver Line Cards

Line Card Number
Select the line card number (1-8) from the options at the top of the screen.

Note: Lines 6-8 can only be used with SCS-104 Line Cards using SCS-150 Version 101 and updated SCS-RACK hardware.

SCS-104 options are always displayed in programming, even when a line card model other than an SCS-104 is selected.

Line Card Model
Select the current model for the selected line card number above. Options include **None**, **SCS-104**, **SCS-101**, and **SCS-100**. Card number 1 defaults to **model 104**. Card numbers 2-8 default to **NONE**.

Send Time to Panels
Select this option to allow the receiver to update the panel's internal clock as the panel communicates with the SCS-150. Select **NO** to prevent the receiver from updating the communicating panel's internal clock.

SCS-104 Dialer Settings

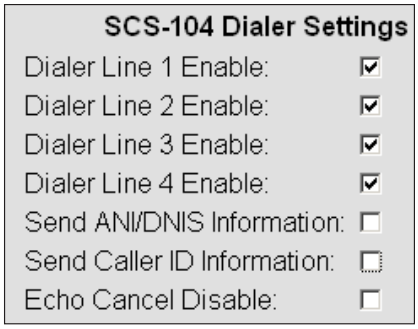


Figure 20: SCS-104 Dialer Settings

Dialer Line 1 Enable
Select to enable dialer communication for line 1 of the selected card. Default is enabled.

Dialer Line 2 Enable
Select to enable dialer communication for line 2 of the selected card. Default is enabled.

Dialer Line 3 Enable
Select to enable dialer communication for line 3 of the selected card. Default is enabled.

Dialer Line 4 Enable
Select to enable dialer communication for line 4 of the selected card. Default is enabled.

First Communication Type
Select **DD** to enable all dialer lines on the line card to communicate with panels using the DMP digital dialer communication format. Select **CID** to enable all dialer lines on the line card to communicate with panels using contact ID format. Default is **DD**. If the receiver cannot communicate with the panel using first communication type, the receiver attempts communication using the secondary communication type.

Second Communication Type
Select **DD** to enable all dialer lines on the line card to communicate with panels using the DMP digital dialer communication format. Select **CID** to enable all dialer lines on the line card to communicate with panels using contact ID format. Select **NONE** to have no second communication type. Default is **DD**.

Send ANI/DNIS Information
Select to enable the Automatic Number Identification (ANI) and Dialed Number Identification Service (DNIS) information to be sent to the host automation computer. ANI sends the phone number that the panel is using to call. DNIS sends information about the phone number the panel dialed. Default is disabled.

Send Caller ID Information
Select to enable the Caller ID information to be sent. Caller ID sends the phone number that the panel is using to call. Default is disabled.

Echo Cancel Disable
Echo Cancellation is technology used by telephone companies to eliminate echo from voice telephone transmissions. In some cases this technology can interfere with alarm signals. If you have problems with Echo Cancellation interfering with your signals, select to turn off the echo cancelers.

SCS-104 Network Settings

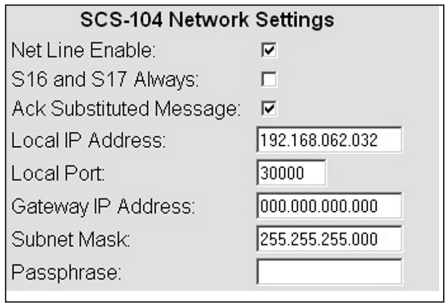


Figure 21: SCS-104 Network Settings

Net Line Enable
Select to enable the network for the selected line card. Default is selected.

S16 and S17 Always
When disabled, the S16 Panel Not Responding message is sent to the automation computer for each supervised account that has stopped sending check-in messages unless 50 S16 messages have been generated for different accounts within one minute. This could occur because the network has failed. Once this occurs, S72 Network Trouble is sent and the receiver stops sending S16 messages to the automation computer. The receiver sends S73 Network Restored and will begin sending S16 messages after the receiver starts receiving check-in messages again.

When enabled, the S16 Panel Not Responding message is always sent to the automation computer for each supervised account that has stopped sending check-in messages without regard to the number of accounts generating S16 messages.

When enabled, the S17 Panel Response Restored message is sent to the automation computer each time a supervised account checks in for the first time after installation. This also occurs at an account's first check-in after the receiver or SCS-104 is powered-up. Default is disabled.

Acknowledge Panel Substitution Message
When selected, the SCS-104 replies with an acknowledgment to messages sent by substituted panels. See the Substitution Code section of the panel programming guide for the definition of a substituted panel. The SCS-104 generates only one S58 Alarm: Panel Substitution message to the host automation computer and receiver printer for each substituted panel. Subsequent messages from substituted panels do not generate additional S58 messages.

When not selected, substituted panels are not sent acknowledgments for their messages. For each message received from a substituted panel, an S58 Alarm: Panel Substitution message is sent to the host automation computer and receiver printer.

Local IP Address
Enter the Local IP Address. This is the SCS-104 IP address. The Local IP Address must be unique and cannot be duplicated. The default value is **192.168.000.250**.

Local Port
The Local Port identifies the port used to communicate messages to and from the panel. Valid range is 1 to 65,535. The default value is **2001**.

Gateway Address
Enter the local Gateway Address to exit your local network. The default value is **000.000.000.000**.

Subnet Mask
Enter the local Subnet Mask assigned to the SCS-104. The default value is **255.255.255.000**.

Passphrase
To enable encrypted communication, enter an 8 to 16-character Passphrase using alphanumeric character. This Passphrase must be programmed into every panel reporting to the SCS-104 at the receiver. The SCS-104 installed in the receiver must also be programmed with the same Passphrase. To clear the passphrase press any Select Key and then press **CMD**.

Note: 256-bit encrypted messages to the SCS-1R receiver only communicate when using SCS-104 Receiver Line Cards with Version 102 or higher software.

The passphrase can include numbers 0-9, letters A-Z, and special characters of - (dash), . (period), * (asterisk), # (number), and a space. If you leave the Passphrase blank, the SCS-104 communicates with XR500E or XR550E panels, but the data is not encrypted. The Passphrase is blank by default.

Note: Do not lose the passphrase. A lost or forgotten Passphrase requires that every XR500E or XR550E panel reporting to the SCS-104 at the receiver be individually reprogrammed with a new passphrase.

SCS-104 Check-in Table Settings

Check-in Table IP Address

The optional SCS-CTM Check-in Table Manager software is used to backup the records of supervised network accounts on up to 32 different SCS-104 line cards. Use SCS-CTM to repopulate the list of supervised network accounts when one SCS-104 line card is replaced by another SCS-104. Additionally, the list of supervised network accounts used by an SCS-104 on a primary receiver can be mirrored by the SCS-CTM for use by an SCS-104 card on a second receiver. Refer to the SCS-CTM User's Guide (LT-0940).

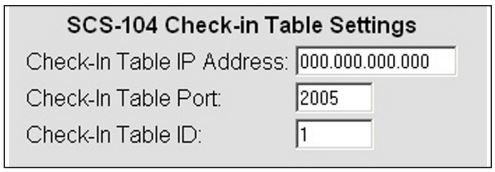


Figure 22: Check-In Table Settings

Note: The list of supervised network accounts on an SCS-104 line card is automatically populated as each panel sends its supervisory check-in message to the SCS-104 line card.

Enter the IP address for the computer where the SCS-CTM Check-in Table Manager software is installed. When no SCS-CTM software is installed, leave the IP address set to **000.000.000.000**.

Check-in Table Port

Enter the IP port used to communicate Check-In Table messages to the SCS-CTM Check-in Table Manager program. Valid range is 1 to 65,535. Default is **2005**.

Check-in Table ID

Enter the table ID number to be used by the SCS-CTM Check-in Table Manager to identify the check-in table. Valid range is 1 to 255. Default is **1**.

Host Automation

The SCS-1R Host Automation programming section allows adjustments to optimize the SCS-1R performance with the host automation computer.

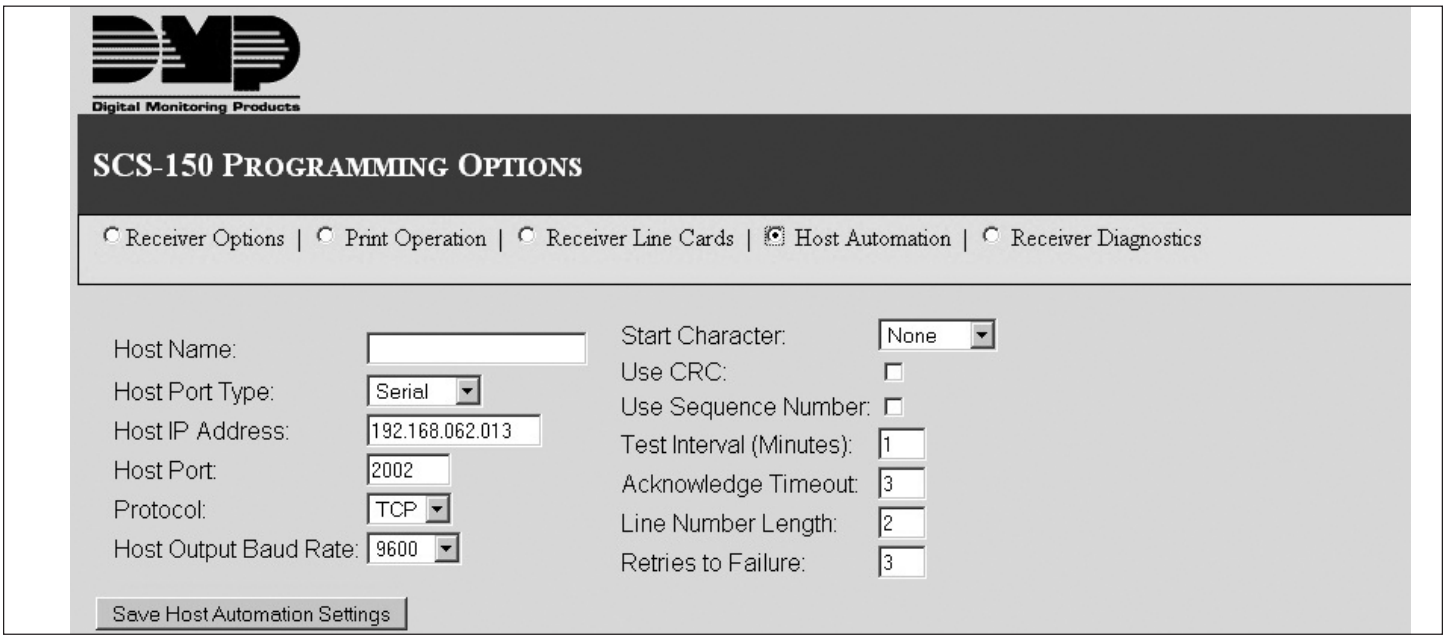


Figure 23: Host Automation

Host Name

Enter a Host Name up to 16 characters.

Host Port Type

Select Serial to send messages to the host automation computer through the Host Output serial port. Select Network to send messages through the network connection on the SCS-150 to the host automation computer. Default is **Serial**.

Host IP Address

Enter the Host IP Address. This is the IP address of the host automation computer. The default value is **192.168.000.250**.

Host Port

The Host Port identifies the port on the host automation computer. Valid range is 1 to 65,535. The default value is **2001**.

Protocol

Select **TCP** to communicate with the host automation computer over the network using TCP protocol. Select **UDP** to communicate using UDP protocol. Default is **TCP**.

Host Output Baud Rate
Select the baud rate for the Host Output. Select **300**, **600**, **1200**, **2400**, **4800**, **9600**, **19200**, or **38400**. Default is **9600**.

Start Character
Enter the character to be used at the start of a host message. Enter None, 01-12, or 14-31. Default is **None**.

Use CRC
Select to enable CRC error checking on each message sent to the host. Default is disabled.

Use Sequence Number
Select to enable 1-99 numbering of all messages sent to the host. Default is disabled.

Test Interval (Minutes)
Enter number of minutes between message tests. The test interval can be between 1-60 minutes. Default is **1**.

Acknowledge Timeout
Enter the number of seconds (1-15) that the receiver should wait for an acknowledgment from the host before re-sending the message. Default is **3**.

Line Number Length
Enter the number of digits, 0 (zero) through 2, used to report the SCS-1R Receiver signal line number. Default is **0**.

Retries to Failure
Enter the number of retries allowed without receiving an acknowledgment from the host before entering a failed state. This retry number includes the initial message sent to host. The retry range may be from 1-15. Default is **3**.

Receiver Diagnostics

The Receiver Diagnostics tab displays the MAC Address, Serial Number, Firmware Version Number, Firmware Date, Bank Number, Key value, Write Count and DB Version.

Note: The information on this tab is for display only and changes can not be made.

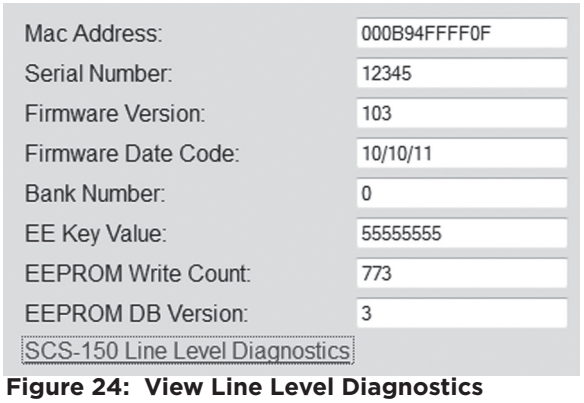


Figure 24: View Line Level Diagnostics

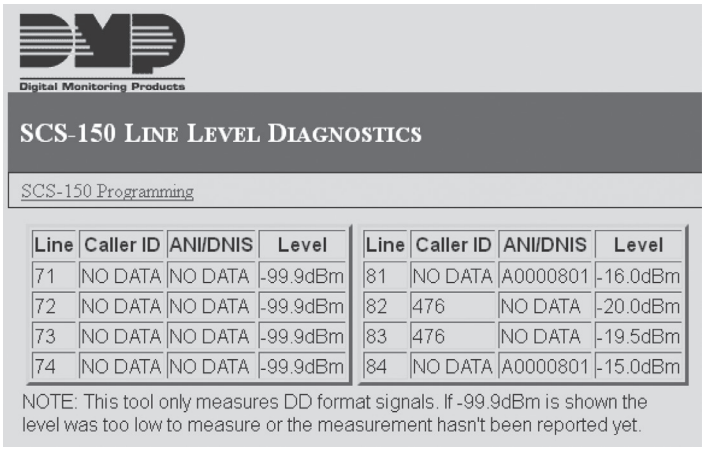


Figure 25: Line Level Diagnostics

SCS-150 Line Level Diagnostics

Select the SCS-150 Line Level Diagnostics link to display the diagnostics window. This displays the Caller ID information, ANI/DNIS information and signal Strength level for each line. The card number is listed first: Card 7 in the first example. Range is 1-8. The line number is listed second: Line 1 in the example. Range is 1-4 for all enabled DD lines.

REMOTE LINK PROGRAMMING

Program the SCS-150

Programming of the SCS-150 Version 100 or 101 can be performed using Remote Link version 1.47 or higher. SCS-150 Version 103 and higher cannot be programmed using Remote Link. Connect the computer with Remote Link installed to the 25-pin connector Auxiliary Port on the back of the SCS-1R Receiver using an SCS-204 cable. See Remote Link for more information.

Note: Each SCS-150 programming section in Remote Link is independent and changes should be sent to the receiver after programming is completed for each window.

PRINTOUT EXPLANATIONS

General Description

Note: UL central station applications must use a serial printer that is listed for Fire Protective Signaling Systems.

The SCS-1R prints out two general types of messages: changes in the system information and messages received from DMP panels. The message line for system changes is bracketed by double asterisks with the time of occurrence printed at the far right. Messages from panels always list the account number first followed by the message and the time of occurrence. The printout below is a typical page from an Activity Log.

ATLAS SECURITY SERVICE, INCORPORATED

Wednesday	5/1/03		* * ACTIVITY LOG * *		Page number:	2
* *	SECURITY CONTROL SYSTEM NUMBER CHANGED TO: 1.				* * 8:01 a.m.	
* *	LINE: 3 CONFIGURED AS: DD		PHONE NUMBER: (214) 555-1212		* * 8:02 a.m.	
* *	DIALER PANEL NUMBER: 108 ADDED TO LINE: 1				* * 8:04 a.m.	
1-	1	Zone: 8 FRONT DOOR	- BURG	ALARM	8:18 a.m.	
1-	1	Zone: 2 BACK DOOR	- BURG	TROUBLE	8:23 a.m.	
1-	1	Zone: 2 BACK DOOR	- BURG	RESTORE	8:24 a.m.	
1-	1	* * AMBUSH * *			8:27 a.m.	
1-	1	Area: 1 OFFICE 2 PLANT 3 SHIPPING	- DISARMED	Usr: 007	8:31 a.m.	
1-	1	Zone: 010 FRONT DOOR	- BYP	Usr: 015	8:33 a.m.	
1-	1	Usr: 009 added to panel		Usr: 002	8:33 a.m.	
1-	1	Permanent schedule for Tuesday Area: 1 Open: 8:00 a.m. Close: 5:30 p.m.		Usr: 005	8:35 a.m.	
1-	1	Door access	Dr: 001	Usr: 021	8:36 a.m.	
1-	1	WARNING: Low standby battery			8:38 a.m.	
1-	1	Zone: 37 SMOKE DET.	- FIRE	ALARM	8:40 a.m.	

System Messages

System messages are provided on the Activity Log printer to provide a permanent record of changes made to the system information. The operator making the change is determined by referring to the last sign on.

Panel Messages

Messages from panels are sent to the SCS-1R advising of various changes in the panel status. The messages print and/or display on the LCD.

Alarm, Trouble, and Restore

These messages are all formatted the same. Alarm and Trouble messages print to the Activity Log and display on the LCD for acknowledgment.

Fire and Supervisory restorals display on the LCD for acknowledgment and printed to the Activity Log while other restore messages print to the Activity Log only.

Ambush

The Ambush message prints and displays on the LCD for acknowledgment.

Opening and Closing

Openings and Closings reports list the areas that are armed or disarmed and the user name making the change. These messages can be from 1 to 8 consecutive lines and print to the Activity Log only.

Bypass and Reset

This message prints in a one line format listing the zone number, zone name, and user name making the change. The message prints on the Activity Log only.

Schedule Changes

This prints in a 2-line format listing the type of schedule, day of the week, opening and closing time, and the user name making the change. This message prints on the Activity Log only.

Door Access

This message lists the user name accessing the door strike relay and the door number that is being accessed. The door number matches the keypad address operated by the user. This message prints on the Activity Log only.

Acknowledgment of Fire Alarms and Troubles

This message is listed each time the operator acknowledges a fire type zone alarm or trouble message. The message includes the account number, zone number, and the acknowledged condition.

Message Destinations

Message	Activity Log	LCD
Time/Date	X	
System Number	X	
Telephone Line Configuration	X	
Zone Alarm	X	X
Zone Trouble	X	X
Zone Restore	X	*
Ambush	X	X
Opening and Closing	X	
Bypass and Reset	X	
Add and Delete Codes	X	
Schedule Changes	X	
System Messages	X	X
Door Access	X	
* Fire and supervisory type zones restorals are the only restorals that display on the LCD for acknowledgment.		

PRINTER TROUBLESHOOTING FOR SCS-186T

Activity Log ERROR

When the SCS-1R cannot complete printing a message to the Activity Log printer, this alarm message displays on the LCD for acknowledgment. Possible causes of failure are:

Power Light Not Lit

Check AC outlet. If the outlet is good, check the internal circuit breaker and fuse located on the left rear corner of the printer.

SEL Light Not Lit

Press the SEL switch to light the SEL light. If the light does not come on, turn the unit off for five seconds and try again.

PAPER Light Lit

In this case the SEL light cannot be lit and paper must be added.

Bad Printer Cable

If the printer can complete a test printing and installing a dummy plug at the rear of the SCS-1R can silence an alarm, the printer cable has been damaged.

If none of the above are the cause for the activity log error, contact DMP Technical Support at:

1-888-4DMPTEC (1-888-436-7832)

If calling internationally, dial 1-417-831-9362

Note: Installation of a dummy plug, which shorts pins 4 and 5, causes all messages waiting to be printed and all messages received while it is installed will not be printed.

COMPLIANCE LISTING SPECIFICATIONS

UL Commercial Fire

This product incorporates field-programmable software. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, certain programming features or options must be limited to specific values or not used at all as indicated below.

Feature or Option	Permitted in UL 864?	Possible Settings?	Settings Permitted in UL 864
Print Operation	Yes	Always, Never, Fail	Always, Fail

IMPORTANT INFORMATION

Use the table below to record the receiver key for your SCS-1R Receiver. Keep this sheet and the rest of the manual in a safe location for future reference.

Receiver Key __ __ __ __ __ __ __ __

Passphrase __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __

GLOSSARY

Security Control Terms

This is an alphabetical list of terms used in the SCS-1R Receiver system operating instructions. Refer to these explanations for additional information.

- **ACK** Acknowledge an alarm signal by pressing any top row Select key on the Membrane Keypad.
- **Alphanumeric** A set of characters consisting of either the letters A through Z, the digits 0 through 9, special symbols, or a combination of all of these. For example, the set of characters "AB76#2," is alphanumeric.
- **Character** One of a set of symbols that can be arranged in groups to express information. This includes the digits 0 through 9, the letters A through Z, punctuation marks, and other special symbols.
- **CMD** The key on the Membrane Keypad used to scroll through programming and enter programming information.
- **LCD Membrane Keypad** A 32-character Liquid Character Display that displays information and provides a Membrane Keypad that allows you to enter information.
- **Default Value** A value assigned to a prompt by the SCS-1R. The SCS-1R Receiver assigns the value to that prompt allowing the operator to accept its entry and respond to the next prompt.
- **Entry** Information typed into the SCS-1R through the LCD Membrane Keypad mounted in the front of the SCS-1R. This information is entered into the system when **CMD** key is pressed.
- **Prompt** A single item of information on the LCD. For example, a prompt within the System Configuration program would be the company name.
- **Menu** An LCD display that lists the program selections available to the operator.
- **Numeric** Description of numerical information. For example, the set of characters 1 2 3 4 5 is numeric.
- **User Number** The sequential number assigned to each user code number by the panel during its programming. This is the number transmitted to the SCS-1R Receiver. The actual code number is never transmitted.

NOTES:

FCC INFORMATION

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm (7.874 in.) from all persons. It must not be located or operated in conjunction with any other antenna or transmitter.

Changes or modifications made by the user and not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

SCS-1R

Specifications

Dimensions	19 W × 8.75 H × 12 D inches 48.26 W x 22.23 H x 30.48 D cm

Components

SCS-RACK	System Enclosure
SCS1R-Spares	Spare Board kit
SCS-104	Line Card
SCS-110	Modem Power Card
SCS-120	Multibus Power Card
SCS-130	Transformer Card
SCS-203	Convenience Panel
SCS-204	Host Cable
SCS-208	Power Cord
SCS-150	Receiver Processor Board

Accessory Devices

SCS-186T	Printer with Cable (Non-UL)

Certifications

FCC Part 15
FCC Part 68 Registration ID CCK8GW-16197-AL-N (SCS-100)
FCC Part 68 Registration ID CCKCN03BSCS-104 (SCS-104)
NIST AES Algorithm Certificate #1760 (SCS-104) 128-bit
NIST AES Algorithm Certificate #2599 (SCS-104) 256-bit
California State Fire Marshal (CSFM)
New York City (FDNY)
Underwriters Laboratory (UL Listed)

ANSI/UL 864	Fire Protective Signaling
ANSI/UL 1635	Digital Alarm Communicator
ANSI/UL 1610	Central-station Burglar
ANSI/UL 365	Police Station Connected Burglar
ANSI/UL 1076	Proprietary Burglar
ULC-S559-04	Equipment for Fire Signal Receiving Centers and Systems
ULC-S545	Standard for Residential Fire Warning System Control Units
ULC-S304	Standard for Central and Monitoring Station Burglar Alarm Units
ULC-C1023	Household Burglar Alarm System Units
ULC/ORD-C1076	Standard for Proprietary Burglar Alarm Units and Systems

For more information, visit DMP.com/Compliance.

Designed, engineered, and manufactured in Springfield, MO using U.S. and global components.

LT-1037 1.06 21141
© 2021

INTRUSION • FIRE • ACCESS • NETWORKS

2500 North Partnership Boulevard
Springfield, Missouri 65803-8877
800.641.4282 | DMP.com