SIEMENS

User's Manual
DEVICE PROGRAMMING UNIT (DPU)

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1

Introduction

The Model DPU Device Programming Unit is used to program and test detectors and devices for MXL, FireFinder-XLS, FS-100, FS-250, FC20 (FC2025, FC2050, FC2005, FC922, FC924 and FC901) systems. In FireFinder-XLS, FS-250 or FC20 installations, the DPU may be used to check wiring loops for ground faults and short circuits as well as to check communication of the installed devices by displaying the device types and addresses of all devices on the loop.

A DB-11 base is integrated into the body of the DPU for programming intelligent detectors. An external adaptor must be used for programming detectors that require a DB-3S base. The DPU operates from either rechargeable or off-the-shelf non-rechargeable batteries that are located in an easily accessible battery compartment. The DPU is supplied with a carrying strap, six nickel metal hydride (NiMH) batteries, cables, banana plug to alligator clip adaptors, an external power supply, and a DB-3S base adaptor. Optional accessories are a small case, a label printer, and a large case which holds the DPU and the label printer.

A 4-line by 20-character Liquid Crystal Display (LCD) with adjustable backlighting is incorporated in the DPU. In addition to the numerical keypad, the DPU has four function buttons, two on each side of the display, which make operation simple and straightforward.

DB-11
DETECTOR
BASE

4 X 20
DISPLAY

SIEMENS

KEYPAD

POWER SWITCH

EXTERNAL POWER/
BATTERY CHARGING
CONNECTOR

TOP OF DPU

CABLE
COMPARTMENT

RED AND BLACK
BANANA JACKS
FOR DEVICES
(TRIs, MSIs)

GREEN
BANANA JACK
FOR GROUND
FAULT CABLE

USE CABLE
P/N 555-133891

USE CABLE
P/N 555-133920

RED
BANANA
JACK

BLACK
BANANA
JACK

GREEN
BANANA
JACK

SLIDING
COVER

BATTERY
COMPARTMENT

RJ11
PRINTER/
UPDATE
PORT

ALKALINE ▮▮▮ NiMH

BATTERY SELECTION SWITCH
(SHOWN IN NiMH POSITION)

BOTTOM OF DPU

Figure 1
The Device Programming Unit

2 **INTRODUCTION**
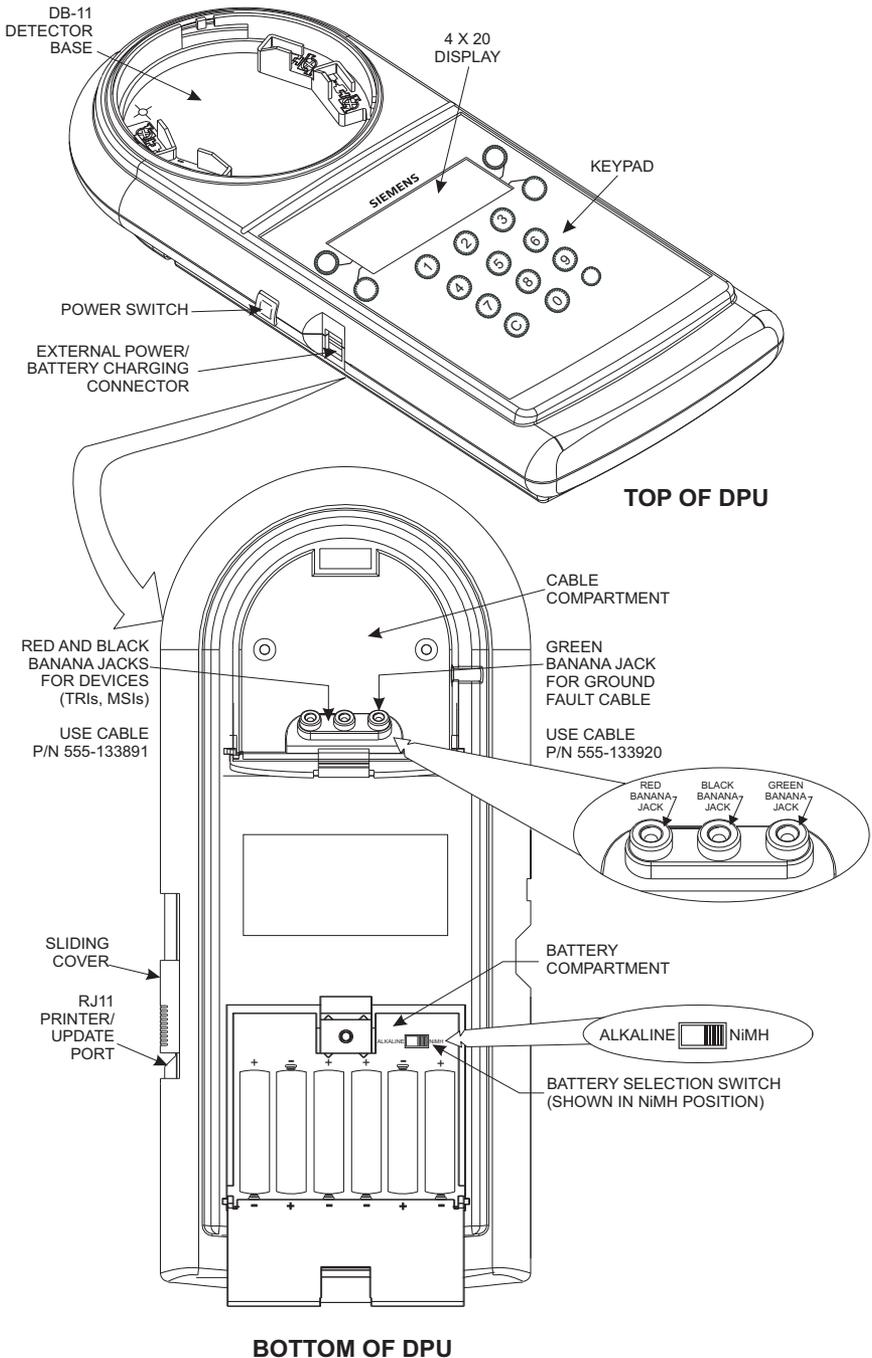
When the optional label printer is used, the DPU may be configured to print multiple labels for each address. This can be done as each of the devices is programmed or in a batch printing mode.

General Description and Features

Controls and Indicators

The DPU Controls and Indicators consists of the Display, Keypad, Power Switch, External Power/Battery Charging Connector, and Batteries and Battery Selection Switch.

Display

The display is a four line by 20 character Liquid Crystal Display (LCD). The display characters are variable in intensity. Variable backlighting is provided to enable viewing in darkened conditions. Two push button switches are located on either side of the display. These switches are used to select menu items on the display.

Keypad

The keypad is a 12-button alphanumeric keypad with digits 0 through 9, the letter C and a blank key. The "C" key adjusts the LCD and Backlighting display from the Main Menu. The blank key is nonfunctional at this time.

Power Switch

The push button power switch is located on the left side of the DPU. Pressing the Power Switch once turns the DPU ON; pressing the Power Switch a second time turns the DPU OFF.

NOTE

If the DPU is operating from batteries and no input is made for two minutes, it will go into a Power Conservation or Sleep Mode. When in the Sleep Mode any keypad entry will Wake or return the DPU to full operational status without loss of any data previously entered. If an entry is not made within five minutes of the DPU going into the Sleep Mode, it will power off. Once powered off, any data previously entered in the DPU will be lost.

External Power

WARNING

Prior to applying external power, verify that the Battery Selection Switch is in the correct position for the type of battery that is installed in the DPU. The Battery Selection Switch is located in the battery compartment in the bottom rear of the DPU.

The External Power/Battery Charging connector is located on the left-hand side of the DPU. The external power cable is attached to an AC Power Adaptor that plugs into any 115 VAC power outlet.

Batteries and Battery Selection Switch

The DPU battery compartment is located on the bottom rear of the DPU. It will accept either six Alkaline AA or six Nickel Metal Hydride (NiMH) AA batteries.

WARNING

Charging Alkaline batteries may damage the DPU and could cause personal injury.

Inside the battery compartment is a Battery Selection Switch. (Refer to Figure 1 for the location of the switch.) This switch must be set to the type of battery being used. Setting the switch in the NiMH position enables the batteries to be charged when external power is applied. Setting the switch in the Alkaline position disables the batteries from being charged when external power is applied. Attempting to charge Alkaline batteries may damage the batteries or DPU.

The DPU is designed to last for a full day or 4 continuous hours on a single charge.

When the batteries are at 20%, the user will be prompted with the display "BATTERIES ARE AT 20% RECHARGE OR REPLACE." When the batteries are low,

the user will be presented with the display "BATTERY POWER LOW PLUG IN CHARGER." This display will be presented to the user until the charger is plugged in or the batteries are replaced.

WARNING

Do not apply physical shock to batteries.

Do not use old and new, chargeable and unchargeable, charged and uncharged batteries or batteries of different capacities/kinds/brands mixed together.

When charging NiMH batteries, charge all six batteries at the same time.

Charge NiMH batteries before using them for the first time or after not using them for a long time.

Do not load the batteries in the opposite direction to that shown in these instructions.

Getting Started

There are just a few steps that are necessary before you are ready to start programming devices and detectors using the DPU.

- Remove the battery separator strip before using the DPU by pulling the strip down and out of the battery compartment.
- If the DPU is to be operated from batteries, make certain that six charged AA batteries are inserted correctly in the battery compartment.
- If the DPU is to be operated from AC, connect the external power supply to the connector provided on the DPU and then connect it to the wall outlet.

WARNING

Make certain the switch inside the battery compart-ment is set for the correct type of batteries. Setting this switch for the wrong battery type and then connecting to power may cause personal injury or damage to the unit. Refer to the inside of the Battery Compartment door on the bottom of the DPU for a description on how to set the correct battery type.

- Turn on the unit by pressing the power switch on the left side of the DPU. The DPU will initially display a power up screen for about five seconds and then will display the Main Menu as shown below.

```
MAIN MENU:XLS
SELECT THE OPERATION
<LOOP TEST      TEST>
<SETUP      PROGRAM>
```

The top line indicates that this is the Main Menu and also gives the system setting.

- If the system setting needs to be changed, press SETUP then SYSTEM at the Main Menu. The display will show:

```
SELECT SYSTEM
SYSTEM=XLS
              CHANGE>
<EXIT      DOWNLOAD>
```

Then press the CHANGE button to set the system to be configured. Press EXIT twice to return to the Main Menu.

NOTE

Use the FC20 system for FC2025, FC2050, FC2005, FC922, FC924 and FC901 panels.

Printer Setup

If the optional label printer is to be used to print labels, it must first be set up in the DPU. To do this, press SETUP then PRINTER from the Main Menu. This will bring up the PRINTER SETUP screen.

```
┌─────────────────────────────┐
│ PRINTER SETUP               │
│                             │
│ <SETTINGS        BULK>      │
│ <EXIT          COPIES>      │
└─────────────────────────────┘
```

- Press SETTINGS to select the printer. Two printer choices are available: PT-9200DX and PT-9500PC. (The model number is located on either the bottom or back of the printer.) To toggle the selection between the two choices, press CHANGE.

```
┌─────────────────────────────┐
│ SELECT PRINTER              │
│ PT-9200DX                   │
│                             │
│ <EXIT         CHANGE>       │
└─────────────────────────────┘
```

- If the PT-9500PC is selected, the MORE key will appear on the SELECT PRINTER screen.

```
┌─────────────────────────────┐
│ SELECT PRINTER              │
│ PT-9500PC                   │
│                  MORE>      │
│ <EXIT         CHANGE>       │
└─────────────────────────────┘
```

- Press MORE to select text size for the PT-9500PC.
- Press CHANGE on the select text size screen to toggle the text size between small (font size 9 pts.), medium (font size 12 pts.) and large (font size 18 pts.).
- To set the number of labels to be printed when a device is programmed, press SETUP from the Main Menu, then PRINTER, then COPIES. The display will show:

```
┌─────────────────────────────┐
│ # OF COPIES=2               │
│                             │
│                 INC #>      │
│ <EXIT           DEC #>      │
└─────────────────────────────┘
```

Use the INC # (increase number) or DEC # (de-crease number) buttons to set the number of copies between 0 and 9, then press EXIT three times to return to the Main Menu.

NOTE ☞ When the number of copies is set to "0," the label printer is disabled.

Adjusting the LCD and Backlighting

The LCD contrast and the display backlighting may be adjusted through the front panel.

• While the Main Menu is displayed on the DPU press the "C" button on the keypad. The display will show numbers that represent the settings for both the LCD and backlight. LCD numbers run from 1 to 10 with the higher numbers corresponding to higher contrast. Backlight numbers run from 1 to 10 with the higher numbers corresponding to brighter backlighting. Pressing BLT DOWN beyond 1 will turn off the backlighting.

```
LCD = #
BACKLIGHT = #
<LCD UP       BLT UP>
<LCD DOWN  BLT DOWN>
```

To adjust the LCD contrast, use LCD UP and LCD DOWN. To adjust the backlight level, use BLT UP and BLT DOWN.

• When the settings are satisfactory, press the "C" key on the keypad and the DPU display will return to the Main Menu.

The DPU is now set up and ready for use. For instructions on specific operations, refer to the pertinent section of the manual.

2

Programming

The DPU will operate differently when programming detectors and devices depending on which system is selected.

NOTE ☞ **When programming devices for FC2025, FC2050, FC2005, FC922, FC924 or FC901 panels, select the FC20 mode.**

FireFinder-XLS, FS-250 and FC20 (FC2025, FC2050, FC2005, FC922, FC924 and FC901) Detectors and Devices

In FireFinder-XLS, FS-250 and FC20 (FC2025, FC2050, FC2005, FC922, FC924 and FC901) systems, the DPU is used only to set the address of detectors or devices. The other configuration data such as ASD settings, usage, and the type of the inputs on HTRIs, are sent from the applicable panel's programming tool.

- Refer to Figure 2 on pages 10-11 to connect the device to be programmed.

- At the Main Menu press PROGRAM. The display will be a screen similar to the following:

```
PROGRAM P2 DEVICE
LOOP=012 ADDRESS=111
<LOOP        ADDRESS>
<EXIT        PROGRAM>
```

- Press LOOP. The cursor will appear under the loop number allowing the user the option to change the loop setting by using the numerical keypad.

  The loop number on the XLS is limited to 251; the loop number on the FC2025, FC2050, FC922, FC924 is limited to 64; the FS-250, FC2005 and FC901 loop number is fixed at 1. Device addresses for
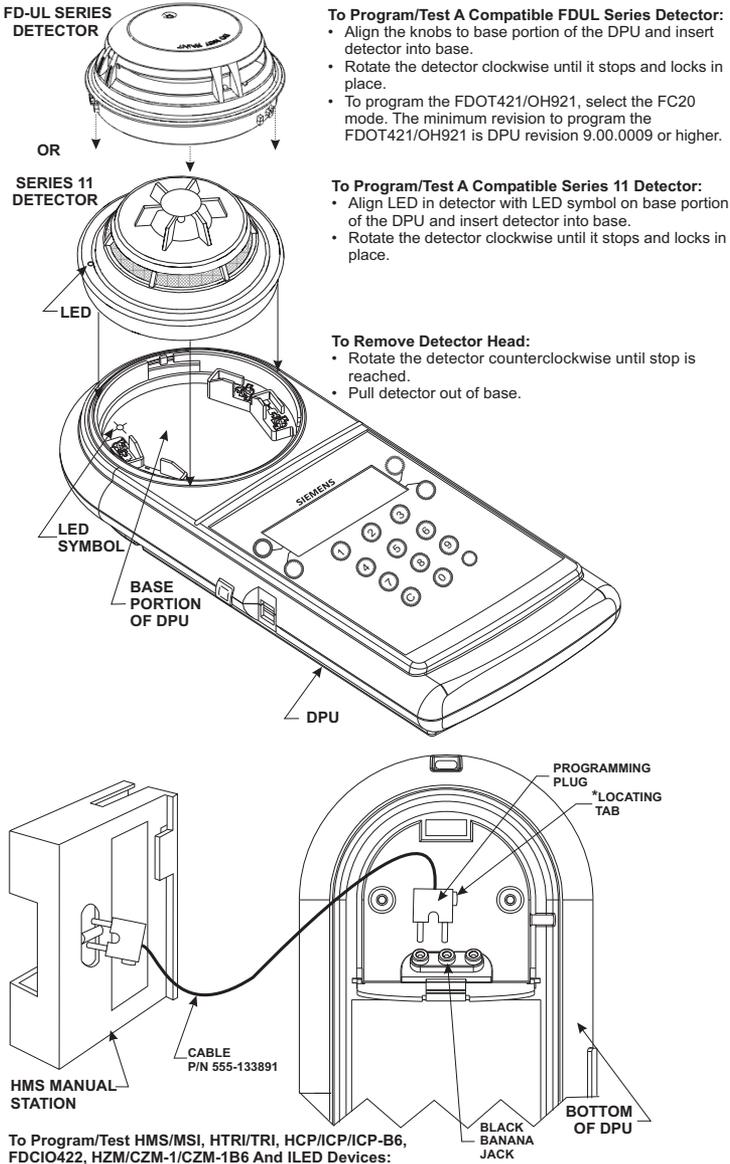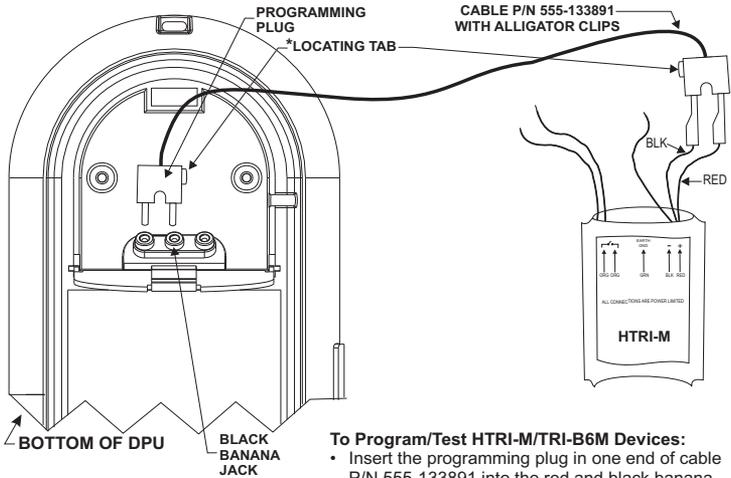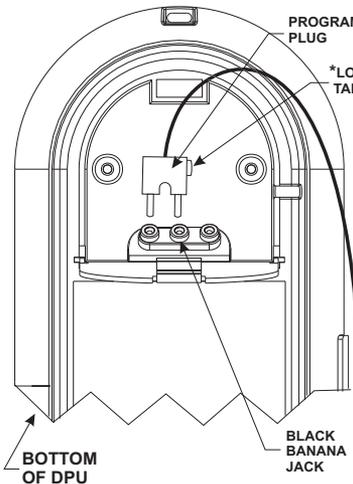
FD-UL SERIES DETECTOR

OR

SERIES 11 DETECTOR

LED

LED SYMBOL

BASE PORTION OF DPU

DPU

To Program/Test A Compatible FDUL Series Detector:
• Align the knobs to base portion of the DPU and insert detector into base.
• Rotate the detector clockwise until it stops and locks in place.
• To program the FDOT421/OH921, select the FC20 mode. The minimum revision to program the FDOT421/OH921 is DPU revision 9.00.0009 or higher.

To Program/Test A Compatible Series 11 Detector:
• Align LED in detector with LED symbol on base portion of the DPU and insert detector into base.
• Rotate the detector clockwise until it stops and locks in place.

To Remove Detector Head:
• Rotate the detector counterclockwise until stop is reached.
• Pull detector out of base.

PROGRAMMING PLUG

*LOCATING TAB

CABLE P/N 555-133891

HMS MANUAL STATION

BLACK BANANA JACK

BOTTOM OF DPU

To Program/Test HMS/MSI, HTRI/TRI, HCP/ICP/ICP-B6, FDCIO422, HZM/CZM-1/CZM-1B6 And ILED Devices:
• Insert the programming plug in one end of cable P/N 555-133891 into the red and black banana jacks in the cable compartment in the bottom of the DPU.
• Insert the programming plug in the other end of cable P/N 555-133891 into the programming points of the device to be programmed.

*NOTE:
When programming or testing MXL and FS-100 devices, the prong on the same side of the programming plug as the locating tab goes into the black banana jack.

Figure 2
Connecting The Device Programming Unit To Detectors And Devices

PROGRAMMING
PLUG

*LOCATING TAB

CABLE P/N 555-133891
WITH ALLIGATOR CLIPS

BLK

RED

ORG ORG   GRN   BLK RED
EARTH
GRND

ALL CONNECTIONS ARE POWER LIMITED

HTRI-M

BOTTOM OF DPU

BLACK
BANANA
JACK

*NOTE:
When programming or testing MXL and FS-100 devices, the prong on the same side of the programming plug as the locating tab goes into the black banana jack.

To Program/Test HTRI-M/TRI-B6M Devices:
• Insert the programming plug in one end of cable P/N 555-133891 into the red and black banana jacks in the cable compartment in the bottom of the DPU.
• Using the two alligator clip adaptors provided on the programming plug, connect the other end of cable P/N 555-133891 to the red and black wires of the HTRI/TRI device.
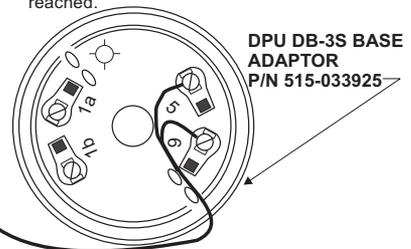
PROGRAMMING
PLUG

*LOCATING
TAB

To Program/Test A Compatible Series ILI/ILP Detector, connect the DPU to the DB-3S Base Adaptor:
• Insert programming plug of P/N 515-033925 into the red and black banana jacks in the cable compartment in the bottom of the DPU.
• Align notch in detector cover to raised surface on outer ring of base.
• Push detector head into base and rotate clockwise to make electrical connections. The detector automatically stops and locks into place.

To Remove Detector Head:
• Push detector head into the base while rotating the detector head counterclockwise. Continue to rotate counterclockwise until stop is reached.

BOTTOM
OF DPU

BLACK
BANANA
JACK

1a

1b

5

6

DPU DB-3S BASE ADAPTOR P/N 515-033925

*NOTE:
The prong on the same side of the programming plug as the locating tab goes into the black banana jack.

FireFinder-XLS, FS-250, FC2025, FC2050, FC922 and FC924 are limited to 252; for FC2005 and FC901 they are limited to 50.

NOTE ☞ **The loop number will only appear if the DPU has been configured for label printing.**

- Press ADDRESS. The cursor will appear under the address number, allowing the user the option to change the address setting by using the numerical keypad.

- Press PROGRAM. The DPU will prompt the user to insert or connect a device. Once the device is connected, the DPU will program the address. If the detector or device is programmed successfully, the label printer will print the number of labels selected at setup and and the DPU will display the message PROGRAMMED OK.

```
HFPT-11
LOOP=012 ADDRESS=111
PROGRAMMED OK
<EXIT         CHANGE>
```

- Press EXIT to return to the Main Menu. To change the current setting of the detector or device, press CHANGE to return to the loop and address setting screen. Removing or disconnecting the device will automatically increment the address and return to the programming display.

  If the data is entered out of range, the following screen will flash for 3 seconds:

  ```
  INCORRECT ENTRY!!!
  ```

  If the unit could not be programmed correctly, the display will show the message PROGRAMMING FAILED and display a screen similar to the following:

  ```
  Loop=1   ADDRESS=111
  PROGRAMMING FAILED
  <EXIT         RE-DO>
  ```

• Press RE-DO to return to the top level of the programming display. Press EXIT to escape from programming and return to the Main Menu. When the device is removed, the DPU will return to the first programming screen.

NOTE 👉 When programming or testing HTRI-S/-D/-R/-M, HMS-S/-D/-M/-2S/-SA or FDCIO422 devices, the polarity of the programming cable (position of locating tab) is not important because the devices are not sensitive to polarity.

MXL Detectors and Devices

Since some MXL detectors use the older DB-3S base, it is necessary to connect the base adaptor, P/N 515-033925, supplied with the DPU in order to program these devices. Refer to Figure 2 on pages 10-11 to connect the device to be programmed.

In addition to programming the address, the DPU allows usage information to be programmed into MXL devices and detectors; therefore, the screens presented to the user will vary depending on the device being programmed.

Smoke Detectors

• To program an MXL smoke detector, the system must be set to MXL (refer to page 6.) Begin with the DPU displaying the Main Menu and then press the PROGRAM button. The DPU will prompt the user to insert or connect a device or detector. When the DPU finds the detector, it will display the detector type on the first line of the display. The following screen is an example of an FP-11 detector:

```
FP-11
LOOP=012   ADDRESS=41
<ID        SETTINGS>
<EXIT       PROGRAM>
```

- To adjust the LOOP and ADDRESS settings, press SETTINGS. The DPU will display a screen similar to the following:

```
FP-11
LOOP=012   ADDRESS=41
<LOOP        ADDRESS>
<EXIT        PROGRAM>
```

Press the LOOP or ADDRESS button to move the cursor over the loop or address number, and then use the keypad to set the appropriate number.

NOTE 👉 **The loop number is limited to 246 and will only appear if the DPU has been configured for label printing.**

- If the loop and address information is correct, press PROGRAM. The DPU will indicate that it is program-ming the unit and when programming is complete, will display a screen similar to the following:

```
FP-11
LOOP=012   ADDRESS=41
PROGRAMMED OK
<EXIT        CHANGE>
```

Press EXIT to return to the Main Menu. Press CHANGE to return to the beginning and change the settings.

The MXL device address range is 01 to 60. If the data entered is out of range, the following screen will flash for 3 seconds:

```
INCORRECT ENTRY!!!
```

If the smoke detector was not programmed correctly, the display will show a screen similar to the following:

```
FP-11
LOOP=012   ADDRESS=41
PROGRAMMING FAILED
<EXIT        RE-DO>
```

Press EXIT to return to the Main Menu. Press RE-DO to reprogram the detector.

When the detector is removed from the socket, the DPU will return to the top programming screen and will increment the address.

TRI-S, TRI-R, TRI-M

TRI interface modules must be programmed using cable P/N 555-133891 that is stored in the cable compartment in the bottom of the DPU. Before starting to program TRIs, open the cable compartment and insert the programming plug in one end of the cable into the red and black banana jacks in the cable compartment of the unit. (Refer to Figure 2, pages 10-11.) Then follow the procedure below:

• With the DPU displaying the Main Menu, press the PROGRAM button. The DPU will prompt the user to insert or connect a device or detector.

NOTE **The DPU is not equipped with polarity reversal for TRI devices, and MS manual stations. If the display searches for a device for longer than two seconds, reverse the polarity of the programming cable.**

• Connect the programming cable to the device to be programmed. (Refer to Figure 2, pages 10-11.) When the DPU has detected the device, the display will appear similar to the following:

```
TRI  AL  NO
LOOP=012  ADDRESS=41
            SETTINGS>
<EXIT       PROGRAM>
```

The top line of the display indicates the device type, the device usage and the contact state of the input.

The next line shows the loop number and the address to which the device will be set.

• To change the contact state of the input, the device usage, the loop number, or the address to which the device will be set, press the SETTINGS button. The DPU will show a display similar to the following:

```
TRI  AL  NO
LOOP=012  ADDRESS=41
<LOOP       ADDRESS>
<EXIT         NEXT>
```

Press the LOOP or ADDRESS button to move the cursor over the loop or address number, then use the keypad to set the number.

NOTE 👉 **The loop number will appear only if the DPU has been configured for label printing.**

Press EXIT to return to the previous Menu.

• To continue changing other settings of the same device, press NEXT. The DPU will show a display similar to the following:

```
TRI  AL  NO
LOOP=012  ADDRESS=41
<TROUBLE       N/C>
<EXIT      PROGRAM>
```

This screen allows the usage and the contact state of the input to be changed. Press the TROUBLE button to change the usage setting. As the button is pressed, the usage in the top line changes and the label on the button sequences between ALARM, TROUBLE, and STATUS.

Press the N/C button to change the contact state of the input to N/C (Normally Closed). As the contact state changes to N/C, the button toggles to N/O (Normally Open).

- If the settings are correct, press PROGRAM to program the TRI. If label printing is selected, up to nine labels will be printed. If the TRI is programmed correctly, the display will appear similar to the following:

```
TRI  AL  NO
LOOP=012  ADDRESS=41
PROGRAMMED OK
<EXIT        CHANGE>
```

    Press EXIT to return to the Main Menu. Use the CHANGE button to go back and change a setting.

- If the TRI was not programmed correctly, the display will appear similar to the following:

```
TRI  AL  NO
LOOP=012  ADDRESS=41
PROGRAMMING FAILED
<EXIT        RE-DO>
```

    Press EXIT to return to the Main Menu. Press RE-DO to reprogram the detector.

- If the TRI was programmed correctly and the device is removed, the "searching" screen will display.

TRI-DUAL (TRI-D)

TRIs must be programmed using cable P/N 555-133891 that is stored in the cable compartment in the bottom of the DPU. Before starting to program TRIs, open the cable compartment and insert the programming plug in one end of the cable into the red and black banana jacks in the cable compartment of the unit. (Refer to Figure 2, pages 10-11.) Then follow the procedure below:

- With the DPU displaying the Main Menu, press the PROGRAM button. The DPU will prompt the user to insert or connect a device or detector.

- Connect the device programming cable to the device to be programmed. (Refer to Figure 2, pages 10-11.) When the DPU has detected the device, the display will appear similar to the following:

```
DUAL TRI AL/AL NO/NO
LOOP=012  ADDRESS=41
           SETTINGS>
<EXIT      PROGRAM>
```

The top line indicates the device type, the device usages and the contact state of the inputs. The next line shows the loop number and the address that the device will be set to. The TRI-D requires two consecutive addresses. The lower address will appear on the screen first; scroll to the higher address using the NEXT button.

- To change the contact state of the input, the device usage, the loop number, or the address to which the device will be set, press the SETTINGS button. The DPU will show a display similar to the following:

```
DUAL TRI AL/AL NO/NO
LOOP=012  ADDRESS=41
<LOOP      ADDRESS>
<EXIT        NEXT>
```

Press the LOOP or ADDRESS button to move the cursor over the loop or address number, then use the keypad to set the number.

NOTE ☞ **The loop number will appear only if the DPU has been configured for label printing.**

Press EXIT to return to the previous Menu.

- To continue changing other settings press NEXT. The DPU display will appear similar to the following:

```
TRI-D #1 N/O ALARM
LOOP=012  ADDRESS=41
<TROUBLE        N/C>
<EXIT         NEXT>
```

This screen allows the usage and the contact state of the first input (#1) to be changed. Press the TROUBLE button to change the usage setting. As the button is pressed, the usage in the top line changes and the label on the button sequences between ALARM, TROUBLE, and STATUS.

Press the N/C button to change the contact state of the input to N/C (Normally Closed). As the contact state changes to N/C, the button toggles to N/O (Normally Open).

- To change the settings for input 2 (#2), press NEXT. The display will appear similar to the following:

```
TRI-D #2 N/O ALARM
LOOP=012  ADDRESS=41
<TROUBLE        N/C>
<EXIT       PROGRAM>
```

- Use the TROUBLE and N/C buttons to change the settings as explained above.

- If the settings are correct, press PROGRAM to program the TRI. If label printing is selected, up to nine labels will be printed. If the TRI is programmed correctly, the display will appear similar to the following:

```
DUAL TRI TR/TR NC/NC
LOOP=012  ADDRESS=41
PROGRAMMED OK
<EXIT        CHANGE>
```

Press EXIT to return to the Main Menu. Use the CHANGE button to go back and change a setting.

- If the TRI was not programmed correctly, the display will show;

```
DUAL TRI AL/AL
LOOP=012  ADDRESS=41
PROGRAMMING FAILED
<EXIT         RE-DO>
```

Press EXIT to return to the Main Menu. Press RE-DO to reprogram the device.

• If the TRI was programmed correctly and the device is removed, the "searching" screen will display.

Changing a Device ID

The ID of certain MXL detectors may be changed for backward compatibility. The DPU Programming mode provides the capability to accomplish this.

With the DPU displaying the Main Menu, press the PROGRAM button. The DPU will prompt the user to insert or connect a device or detector. When the DPU finds the detector, it will display the detector type. Following is an example screen:

```
FP-11
LOOP=012   ADDRESS=41
<ID        SETTINGS>
<EXIT       PROGRAM>
```

Press the ID button. The display will be similar to the following:

```
FP-11, 012-41
SELECT THE NEW ID
           ID-60P/PT>
<EXIT           OK?>
```

Press the ID-60P/PT button to cycle through the possible IDs that may be set. The DPU will only present IDs that the device will accept. When the ID is set correctly, press OK to return to the programming mode to finish programming the device or press EXIT to return to the programming mode without changing the ID.

Table 1 lists all backward compatible devices and the devices the DPU will allow them to emulate.

TABLE 1 BACKWARD COMPATIBLE DEVICES			
Actual Device	**Backward Compatible Devices Which Actual Device Can Emulate**		
FP-11	ID-60P/ID-60PT	ILP-1/ILPT-1	ILP-2
ILP-2	ID-60P/ID-60PT	ILP-1/ILPT-1	
FPT-11	ILT-1/ID60T		
ILP-1/ILPT-1	ID-60P/ID-60PT		
ILI-1/ILI-1H	ID-60I/ID-60H		
ILI-1A/ILI-1AH	ID-60IA/ID-60IAH		
ILI-1B/ILI-1BH	ID-60IB/ID-60IBH		

FS-100 Detectors and Devices

Usage and configuration information for FS-100 devices and detectors may only be programmed by the panel or configuration tool. The DPU is only capable of setting the address of these devices.

Smoke Detectors

- To program an FS-100 smoke detector, the system must be set to FS-100 (refer to page 6.) Begin with the DPU displaying the Main Menu and then press the PROGRAM button. The DPU will prompt the user to insert or connect a device or detector. When the DPU finds the detector, it will display the detector type on the first line of the display. The following screen is an example of an FS-DPT detector:

```
FS-DPT
           ADDRESS=41
              ADDRESS>
<EXIT      PROGRAM>
```

NOTE ☞ **The loop number will only appear if the DPU has been configured for label printing.**

- If the loop and address information is correct, press PROGRAM. The DPU will indicate that it is programming the unit and when programming is complete, will display a screen similar to the following:

```
FS-DPT
          ADDRESS=41
PROGRAMMED OK
<EXIT        CHANGE>
```

Press EXIT to return to the Main Menu. Press CHANGE to return to the beginning and change the settings.

The FS-100 device address range is 01 to 60. If the data entered is out of range, the following screen will flash for 3 seconds:

```
INCORRECT ENTRY!!!
```

If the smoke detector was not programmed correctly, the display will show a screen similar to the following:

```
FS-DPT
LOOP=1    ADDRESS=41
PROGRAMMING FAILED
<EXIT        RE-DO>
```

Press EXIT to return to the Main Menu. Press RE-DO to reprogram the detector.

When the detector is removed from the socket, the DPU will return to the top programming screen and will increment the address.

FS-TRI-S, FS-TRI-R, FS-TRI-M, FS-MS and FS-CZM

These devices must be programmed using cable
P/N 555-133891 that is stored in the cable compartment
in the bottom of the DPU. Before starting to program
FS-TRIs, FS-MSs or FS-CZMs, open the cable compart-
ment and insert the programming plug in one end of the
cable into the red and black banana jacks in the cable
compartment of the unit. (Refer to Figure 2, pages 10-11.)
Then follow the procedure below:

• With the DPU displaying the Main Menu, press the
PROGRAM button. The DPU will prompt the user to
insert or connect a device or detector.

NOTE ☞ **The DPU is not equipped with polarity reversal for FS-TRI
devices, FS-MS manual stations and FS-CZM modules. If the
display searches for a device for longer than two seconds,
reverse the polarity of the programming cable.**

• Connect the programming cable to the device to be
programmed. (Refer to Figure 2, pages 10-11.)
When the DPU has detected the device, the display
will appear similar to the following:

```
FS-TRI    AL   NO
             ADDRESS=41
              ADDRESS>
<EXIT       PROGRAM>
```

The top line of the display indicates the device type,
the contact state of the input and the device usage.
The next line shows the address to which the
device will be set.

- If the settings are correct, press PROGRAM to program the device. If label printing is selected, up to nine labels will be printed. If the device is programmed correctly, the display will appear similar to the following:

```
FS-TRI    AL    NO
            ADDRESS=41
PROGRAMMED OK
<EXIT        CHANGE>
```

Press EXIT to return to the Main Menu. Use the CHANGE button to go back and change a setting.

- If the device was not programmed correctly, the display will appear similar to the following:

```
FS-TRI    AL    NO
LOOP=1     ADDRESS=41
PROGRAMMING FAILED
<EXIT        RE-DO>
```

Press EXIT to return to the Main Menu. Press RE-DO to reprogram the detector.

- If the device was programmed correctly and the device is removed, the "searching" screen will display.

FS-TRI-D

FS-TRIs must be programmed using cable P/N 555-133891 that is stored in the cable compartment in the bottom of the DPU. Before starting to program FS-TRIs, open the cable compartment and insert the programming plug in one end of the cable into the red and black banana jacks in the cable compartment of the unit. (Refer to Figure 2, pages 10-11.) Then follow the procedure below:

- With the DPU displaying the Main Menu, press the PROGRAM button. The DPU will prompt the user to insert or connect a device or detector.

- Connect the device programming cable to the device to be programmed. (Refer to Figure 2, pages 10-11.) When the DPU has detected the device, the display will appear similar to the following:

```
FS-TRI-D AL/AL NO/NO
           ADDRESS=41
             ADDRESS>
<EXIT       PROGRAM>
```

  The top line indicates the device type, the contact state of the inputs and the device usages. The next line shows the address that the device will be set to. The FS-TRI-D requires two consecutive addresses.

- If the settings are correct, press PROGRAM to program the FS-TRI. If label printing is selected, up to nine labels will be printed. If the TRI is programmed correctly, the display will appear similar to the following:

```
FS-TRI-D AL/AL NO/NO
           ADDRESS=41
PROGRAMMED OK
<EXIT        CHANGE>
```

  Press EXIT to return to the Main Menu. Use the CHANGE button to go back and change a setting.

- If the FS-TRI was not programmed correctly, the display will show;

```
FS-TRI-D AL/AL NO/NO
LOOP=1    ADDRESS=41
PROGRAMMING FAILED
<EXIT        RE-DO>
```

  Press EXIT to return to the Main Menu. Press RE-DO to reprogram the device.

- If the FS-TRI was programmed correctly and the device is removed, the "searching" screen will display.

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3

Testing

Testing a FireFinder-XLS / FS-250 / FC20 (FC2025, FC2050, FC2005, FC922, FC924 or FC901) Loop

The DPU may be used to test FireFinder-XLS / FS-250 / FC20 (FC2025, FC2050, FC2005, FC922, FC924, FC901) loops before the system is connected. The DPU checks that all of the devices are communicating and also checks for ground faults and short circuits. By using the loop test feature, all troubles can be cleared from the device loop before it is connected to the panel.
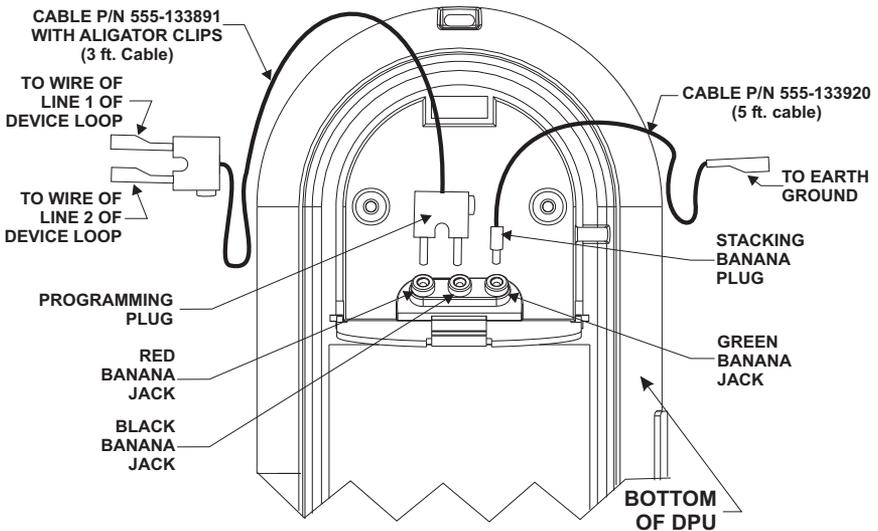
NOTE ☞ **The loop test menu is available only when the system is set for FireFinder-XLS / FS-250 / FC20 (FC2025, FC2050, FC2005, FC922, FC924, FC901) and it operates only when the DPU is powered from AC.**

⚠ CAUTION **Be sure to disconnect the wire between the device and/or detector loop and the system before performing the loop test.**

Follow the procedure below to test a loop of FireFinder-XLS / FS-250 / FC20 (FC2025, FC2050, FC2005, FC922, FC924, FC901) detectors and devices.

- Connect the DPU to an AC wall outlet using the external power supply provided. (See Figure 1, page 2, for location of External Power Connector.)
- Connect the loop drive cable P/N 555-133891 to the loop to be tested and connect the ground connection cable P/N 555-133920 to a valid ground, as shown in Figure 3, page 28. (The ground connection is needed only to test for ground faults.)

CABLE P/N 555-133891
WITH ALIGATOR CLIPS
(3 ft. Cable)

TO WIRE OF
LINE 1 OF
DEVICE LOOP

TO WIRE OF
LINE 2 OF
DEVICE LOOP

PROGRAMMING
PLUG

RED
BANANA
JACK

BLACK
BANANA
JACK

CABLE P/N 555-133920
(5 ft. cable)

TO EARTH
GROUND

STACKING
BANANA
PLUG

GREEN
BANANA
JACK

BOTTOM
OF DPU

To Connect the DPU to Test for Device Communication:
• Insert the programming plug in one end of Cable P/N 555-133891 into the red and black jacks in the cable compartment in the bottom of the DPU.
• Attach the two alligator clip adaptors provided to the programming plug on the other end of cable P/N 555-133891. Connect one clip to the wire of Line 1 from the device loop to be tested. Connect the other clip to the wire of Line 2 from the device loop to be tested.

To Connect the DPU to Test for Ground Faults:
• Make the connections described above to test for device communication.
• Insert the stacking banana plug of Cable P/N 555-133920 into the green jack in the cable compartment in the bottom of the DPU.
• Connect the alligator clip on the other end of Cable P/N 555-133920 to Earth Ground.

Figure 3
Connecting The DPU To Test For Communication And Ground Faults

• With the DPU displaying the Main Menu, press the LOOP TEST button. Note that this is visible only if the DPU is set to the FireFinder-XLS / FS-250 / FC20 (FC2025, FC2050, FC2005, FC922, FC924 or FC901) system. The DPU will show a display similar to the following:

```
GROUND FAULT = NO
INTEL. DEVICES = 121
<SUMMARY
<EXIT         DETAIL>
```

The top line indicates if there are any ground faults on the loop. The second line indicates how many devices the DPU has detected on the loop. It may take more than a minute to detect all of the devices on the loop. The count will continue to increment as each additional device or detector is recognized.

- Press SUMMARY to get a summary count of all of the different devices on the loop. A letter indicates the type of device (see Table 2 on page 30 for a list of all available device types). The number to the right of the letter indicates the quantity of those devices found on the loop. (For example, P=001 indicates one HFP photo/thermal detector.) Examples of H-Series (Screen A) and FD-UL Series (Screen B) displays are shown below:

```
P=001   T=023   I=020          Q=002   E=022   W=021
D=000   R=000   M=000          G=000   V=000   N=011
C=000   Z=010   *=002
<EXIT           NEXT>          <EXIT           NEXT>
```

Screen A   *Screen B*

- Pressing NEXT shows further summary screens. Pressing EXIT returns the DPU one screen up to the top of the loop test display.

- Press the DETAIL button to display the type of device responding at each address. Different letters represent the device types. (See Table 2 on page 30.) Following is an example of a detail screen where the numbers indicate the address and the letters indicate the device types.

```
000    PP*T D--DD
010    IIIMM MMMMM
                NEXT>
<EXIT           PREV>
```

This screen shows the addresses on the loop and the devices that are responding at each address. The devices are shown ten to a line, as two groups of five. The starting address appears on the left-hand

TABLE 2		
LOOP TEST FOR XLS / FS-250 / FC20 (FC2025, FC2050, FC2005, FC922, FC924 OR FC901) USING H-SERIES DEVICES		
DPU LOOP TEST LETTER	**MODEL**	**DESCRIPTION**
—		No response
P	HFP-11	P2 Photo / Thermal Smoke Detector
T	HFPT-11	P2 Thermal Detector
I	HTRI-S	P2 Switch Monitor Module
D	HTRI-D	P2 Switch Monitor Module - Dual input
R	HTRI-R	P2 Switch Monitor Module - Single input - Single relay output
I	HTRI-M	P2 Switch Monitor Module - Small profile - Mini
M	HMS-S,-D,-M	P2 Manual Pull Station / - Dual action / - Metal
2	HMS-2S,-SA	P2 Manual Pull Station - 2 Stage (Canadian)
C	HCP	P2 Control Point
Z	HZM	P2 Conventional Zone Module
O	HFPO-11	P2 Photo Only (FS-250 Only)
L	ILED-HC, -HW	Intelligent Remote Lamps
U		Unidentified response
*		Multiple response
Flashing		Alarm or trouble

The letters listed in the first column will appear on the screen during a FireFinder-XLS / FS-250 / FC20 (FC2025, FC2050, FC2005, FC922, FC924, FC901) loop test. When the letter is flashing, it indicates that the device is in alarm or trouble.

LOOP TEST FOR XLS / FC20 (FC2025, FC2050, FC2005, FC922, FC924 OR FC901) USING FD-UL SERIES DEVICES		
—		No response
Q	FDCIO422	P2/FD Quad Contact Input / Relay Output
E	FDO421 / OP921	P2/FD Smoke Detector
W	FDOOT441 / OOH941	P2/FD Multi-criteria Fire Detector
G	FDOOTC441 / OOHC941	P2/FD Multi-criteria Fire and CO Detector
V	FDOT421 / OH921	P2/FD Combined Optical Thermal Detector
N	FDT421 / HI921	P2/FD Thermal Detector
X	Exchange	Exchange recommendation (Device needs to be changed.)
*		Multiple response
Flashing		Alarm or trouble

The letters listed in the first column will appear on the screen during a FireFinder-XLS / FC20 (FC2025, FC2050, FC2005, FC922, FC924, FC901) loop test. When the letter is flashing, it indicates that the device is in alarm or trouble

side of the screen. Note that there should never be any device responding at address zero. Pressing NEXT and PREV on the Detail screen will cycle through the addresses 20 at a time. Pressing EXIT on the loop test screen will return you to the Main Menu.

Testing a Device or Detector

The DPU allows automatic and manual testing of detectors and devices.

Automatic Test

The automatic test is the same for all systems. Follow the procedure below to test a device or detector.

• At the Main Menu press TEST then press AUTO. The DPU prompts the user to insert or connect a device. (Refer to Figure 2, pages 10-11, to install devices for testing.) When the device is detected, the test is run. The DPU will display the type of device tested and the address, as shown below:

```
TESTING SUCCESSFUL
device type here
device address
<EXIT
```

• If the device is removed, the DPU will enter "search mode." Press EXIT to return to the Main Menu.

Manual Test

Manual testing allows the operator to read back information about the settings of the detector or device under test. The information displayed will vary depending on the type of the system and the devices being tested.

FIREFINDER-XLS / FS-250 / FC20 (FC2025, FC2050, FC2005, FC922, FC924, FC901)

At the Main Menu press TEST then press MANUAL. The DPU will prompt for a device to be connected or a detector to be inserted. (Refer to Figure 2, pages 10-11, to install devices for testing.) When the device or detector is found, the display will show the type of device that has been found, the device address and the current status of the device as shown in the screen below. The manual test screen is updated once per second.

```
HFP-11
ADDRESS=002
NORMAL
<EXIT          NEXT>
```

HFP-11 Example

Pressing EXIT will return the DPU to the device test screen. Pressing NEXT will display further screens of information that will vary depending on the type of device being tested. Some example screens are shown below:

```
S/N=94D1F724
USAGE=ALARM
ASD=OFFICE
<EXIT          NEXT>
```

HFP-11 Example

```
IEC=CLEAN
TEMP=23C/74F
SENS=3.14%/FT
<EXIT          NEXT>
```

HFP-11 Example

```
S/N=04080036
USAGE1=TROUBLE, N/C
USAGE2=ALARM, N/O
<EXIT          NEXT>
```

HTRI-D Example

Table 3 describes the diagnostic data displayed in the preceding screens. This data is applicable to all H-Series devices and to all FD-UL Series devices except FDOOTC441/OOHC941 and FDCIO422. The diagnostic data for the FDOOTC441/OOHC941 is described in Table 4 and the diagnostic data for the FDCIO422 is described in Table 5.

TABLE 3 FIREFINDER-XLS / FS-250 / FC20 (FC2025, FC2050, FC2005,FC922, FC924, FC901) SYSTEM DIAGNOSTIC DATA	
Label	**Description**
Device	The model number of the device.
Address	The address setting of the device.
Usage	The use that the device has been set to by the system, i.e. Alarm, Status, Supervisory. Note that this setting is downloaded from the system and is set to default until the detector or device is connected to a system that is powered up.
ASD	The ASD setting of the detector. This will also display settings of devices related to the manner in which they process alarms (for example, Rate of Rise or Fixed Temperature for HFPT-11). NOTE: FD-UL detectors do not support ASD.
S/N	The serial number of the detector or device.
IEC	The Intelligent Environmental Compensation setting for a detector. Possible settings are CLEAN, DIRTY or REPLACE.
TEMP	This is the temperature reading from thermal detectors.
SENS	This is the real time sensitivity reading of a detector (in % per foot).

FC20 (FC2025, FC2050, FC2005, FC922, FC924, FC901) MANUAL TEST FOR FDOOTC441/OOHC941

Manual testing of the FDOOTC441/OOHC941 will retrieve and display diagnostic information in a series of four screens instead of the three-screen display for all of the other devices. The fourth screen provides the CO status of the detector. An example of a manual test for the FDOOTC441/OOHC941 follows with a description of the diagnostic information given in Table 4. The NEXT button may be used to page to the next screen of information.

```
FDOOTC441/OOHC941
ADDRESS=022
NORMAL
<EXIT           NEXT>
```

FDOOTC441/OOHC941 or FDOOT441 Example Screen 1

```
S/N=0494AB4
USAGE1=MULTI    2
USAGE2=THERMAL  5
<EXIT           NEXT>
```

FDOOTC441/OOHC941 or FDOOT441 Example Screen 2

```
IEC=CLEAN
TEMP=23C74F
SENS=3.14%/FT
<EXIT           NEXT>
```

FDOOTC441/OOHC941 or FDOOT441 Example Screen 3

```
CO=NORMAL   EXPIRING
COC=50PPM
LIMIT=CO LEVEL
<EXIT           NEXT>
```

FDOOTC441/OOHC941 Example Screen 4

TABLE 4 FC20 (FC2025, FC2050, FC2005,FC922, FC924 AND FC901) SYSTEM DIAGNOSTIC DATA FOR FDOOTC441/OOHC941	
Label	**Description**
Device	The model number of the device.
Address	The address setting of the device.
S/N	The serial number of the detector or device.
IEC	The Intelligent Environmental Compensation setting for a detector. Possible settings are CLEAN, DIRTY or REPLACE.
TEMP	This is the temperature reading from thermal detectors.
SENS	This is the real time sensitivity reading of a detector (in % per foot).
USAGE1	Input component 1. The operation mode is defined as either Multi-criteria, Smoke, Undefined or OFF.
USAGE2	Input component 2. The operation mode is defined as either Thermal, Undefined or OFF.
USAGEx value	Parameter set ID value (00 to 15) for the input component. This will also represent settings of devices related to the manner in which they process alarms.
CO	Life safety channel danger level status is either Normal, Warning, Prealarm or Alarm.
CO STATUS	CO channel status is either OK, EXPIRING or CHANGE.
COC	CO concentration measured in parts per million (ppm).
LIMIT	Configuration to determine which input channel is configured as supervisory causing. Options are OFF, High Temperature, Low Temperature or CO Level.

FC20 (FC2025, FC2050, FC2005, FC922, FC924, FC901) MANUAL TEST
FOR FDCIO422

Manual testing of the FDCIO422 will retrieve and display diagnostic information in a series of three screens. The FDCIO422 three-screen display differs from the displays of the other devices because the FDCIO422 can have four usage settings. The input channel status is displayed as "NORMAL" for Usage1 and Usage2 in Example Screen 2. Screen 3 shows the input channel status as "NORMAL" for Usage3 and Usage4.

An example of a manual test for the FDCIO422 follows with a description of the diagnostic information given in Table 5.

```
FDCIO422        NORMAL
ADDRESS=036
S/N=2F0494AB6
<EXIT           NEXT>
```

FDCIO422 Example Screen 1

```
NORMAL          NORMAL
USAGE1=ALARM        NC
USAGE2=SUPV         NO
<EXIT           NEXT>
```

FDCIO422 Example Screen 2

```
NORMAL          NORMAL
USAGE3=CL_A EOL     NC
USAGE4=CL_A EOL     NO
<EXIT           NEXT>
```

FDCIO422 Example Screen 3

	TABLE 5 FC20 (FC2025, FC2050, FC2005, FC922, FC924 AND FC901) SYSTEM DIAGNOSTIC DATA FOR FDCIO422
Label	**Description**
Device	The model number of the device.
Address	The address setting of the device.
S/N	The serial number of the detector or device.
USAGE1	(Input switch 1) Operation mode is defined as SUPV (Supervisory) ALARM, UNDEFINED or OFF. The input channel status (normal, active, alarm or undefined) is displayed in the upper left-hand corner of manual test screen 2 for Usage1.
USAGE2	(Input switch 2) Operation mode is defined as SUPV (Supervisory), ALARM, UNDEFINED or OFF. The input channel status (normal, active, alarm or undefined) is displayed in the upper right-hand corner of manual test screen 2 for Usage2.
USAGE3	(Input switch 3) Operation mode is defined as SUPV (Supervisory) ALARM, CL_A EOL or OFF. If CL_A-EOL is selected, then the FDCIO422 is configured to have two Class A inputs (instead of four Class B). If only one of the inputs 3 and 4 is set to CL_A_EOL, then this is a non-valid configuration. The input channel status (normal, active, alarm or undefined) is displayed in the upper left-hand corner of manual test screen 3 for Usage 3.
USAGE4	(Input switch 4) Operation mode is defined as SUPV (Supervisory) ALARM, CL_A EOL or OFF. If CL_A-EOL is selected, then the FDCIO422 is configured to have two Class A inputs (instead of four Class B). If only one of the inputs 3 and 4 is set to CL_A_EOL, then this is a non-valid configuration. The input channel status (normal, active, alarm or undefined) is displayed in the upper right-hand corner of manual test screen 3 for Usage4.

MXL / FS-100

Manual testing of the MXL / FS-100 detectors and devices will retrieve and display diagnostic information in a number of screens. The NEXT button may be used to page to the next screen of information. Table 6 shows the information that is displayed.

TABLE 6 MXL / FS-100 SYSTEM DIAGNOSTIC DATA	
Label	**Description**
Supervisory	The state of the device's input
Device ID	The ID number of the connected device.
ANALOG 1	Temperature measured by FP-11/FPT-11/FS-DPT/FS-DT in degrees C.
ANALOG 2	Obscuration value of FP-11/FS-DPT/FS-DP in MXL counts.
T1	For factory use only.
T2	For factory use only.
SS	For factory use only.
ASD1	For factory use only.
STATUS	For factory use only.
SW	For factory use only.
T3	For factory use only.
ASD2	For factory use only.
TBL	For factory use only.
MISC	For factory use only.

4

Printing Labels

The DPU may be connected to the optional label printer to print labels with the loop number and detector address. The format of the label depends on the fire control system as shown in Table 7.

<table>
<tr><td colspan="2" align="center">TABLE 7
LABEL PRINTING FORMAT</td></tr>
<tr><td>System</td><td>Label Format</td></tr>
<tr><td>FireFinder-XLS</td><td>LLL-AAA</td></tr>
<tr><td>MXL</td><td>LLL-AAA</td></tr>
<tr><td>FC2025, FC2050, FC922, FC924</td><td>LLL-AAA</td></tr>
<tr><td>FC2005, FC901</td><td>LAA</td></tr>
<tr><td>FS-100</td><td>LAA</td></tr>
<tr><td>FS-250</td><td>LAAA</td></tr>
<tr><td colspan="2">L is a one-to-three-digit loop number.
A is a two-to-three-digit address.
(On MXL / FS-100 systems, the address can be up to 60. On FC2005 / FC901 systems, the address can be up to 50. On FireFinder-XLS / FS-250 / FC2025 / FC2050 / FC922 / FC924 systems, the address can be up to 252.)</td></tr>
</table>

Labels may be printed up to nine at a time as each device or detector is programmed or they can be printed in bulk for a range of addresses.

NOTE ☞ **The printer must be set up in the DPU before labels can be printed. Refer to Printer Setup on page 6.**

Automatic Printing

In order to make the DPU print labels each time a device is programmed, follow the procedure below.

1. Connect the DPU to the optional printer with programming cable P/N 555-134217. (Refer to Figure 1, page 2, for the location of the printer port.)

2. With the Main Menu appearing on the display, press SETUP, then PRINTER and then COPIES. The display will appear as below:

```
# OF COPIES=2

                INC #>
<EXIT           DEC #>
```

3. Use the INC # and DEC # buttons to set the number of copies desired. Press EXIT three times to return to the Main Menu display.

NOTE ☞ **If the printer does not work, turn off the DPU, wait a few seconds, and then turn it back on and try again.**

Bulk Printing

From one to nine copies of each label may be printed for a range of addresses by using the bulk print facility. Following is the procedure:

1. Connect the DPU to the optional printer with programming cable P/N 600-190704. (Refer to Figure 1, page 2, for the location of the printer port.)

2. With the DPU displaying the Main Menu, press SETUP, then PRINTER and then BULK. The DPU will display a screen similar to the following:

```
S'ADD=123 E'ADD=123
LOOP=111 COPIES=2
<LEFT          RIGHT>
<EXIT          PRINT>
```

NOTE 👉 **The LOOP field will display "1" for FS-100, FS-250 or FC2005 systems, since they are single loop systems. This field cannot be changed.**

3. Use the left and right buttons to move the cursor over the various numerical fields to set the starting address (S'ADD), the ending address (E'ADD), the loop number (LOOP) and the number of copies (COPIES) of the label—from 1 to 9—that you wish to print.

4. When these have been set correctly press the PRINT button. The DPU will then begin printing the labels and the display will indicate that printing is in progress.

5. An ABORT button is provided to allow the user to cancel the printing operation and return to the bulk printing display.

6. The display will indicate when the printing has been completed.

7. To return to the bulk printing screen to print another batch of labels, use the EXIT button.

NOTE 👉 **If the printer does not work, turn off the DPU, wait a few seconds, and then turn it back on and try again.**

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5

Maintenance

Updating the Firmware

The firmware in the DPU may be updated in the field without disassembly of the unit by connecting a PC to the RJ11 printer/update port and downloading the software to it.

NOTE ☞ Some settings may change during firmware update. Be sure to note these settings before performing the update and check them afterwards. The settings that might change back to the default settings are:

- System Type [MXL, XLS, FS-100, FS-250, FC20 (FC2025, FC2050, FC2005, FC922, FC924 or FC901)]

- LCD Contrast and Backlight settings

- Label printing settings
    - number of copies to print in Auto and Bulk printing
    - start and end addresses used in Bulk printing

Use the Siemens Module Firmware Upload Utility to update the firmware in your DPU as follows:

1. Connect the PC with the download software to the update port on the DPU using cable P/N 600-190704. (See Figure 1, page 2, for the update port location.)

2. Connect the external power/battery charging connector to the DPU and an AC power source.

3. Start the Siemens Module Firmware Upload Utility.

4. Select **Network Config->Type-> DPUNET** in the utility and select the Com port you will be using.

5. Select **File-> Open** and navigate to the upload file. You will need to select either the .dp0 or the .dpu file, depending on the processor type that is installed in your DPU. If you are not sure which file to use, choose the .dp0 file.

6. On the DPU from the Main Menu, press SETUP then SYSTEM then DOWNLOAD. The DPU will display the following screen:

```
CONNECT SERIAL CABLE
FROM DPU TO PC NOW

<EXIT            OK>
```

Press OK on the DPU. The DPU is now ready to accept the upload.

NOTE ☞

To ensure the DPU is communicating with the PC at this point, click the toolbar button with the binoculars. If a "Timeout Waiting for Configuration reply" message is displayed, the DPU is not communicating properly. Check the cable connection between the PC and the DPU, and the Com port selection described in Step 4.

7. In the Upload utility, select **Session -> Upload file to DPU** or select the **Upload file to DPU** button on the toolbar. If the message "Network Initialization Failure" is displayed by the utility, select **Session -> Close Session,** then go back to Step 5 and select the opposite file type. For example, if you originally chose the .dp0 file, try the .dpu file instead.

8. When the download is initiated at the PC, the DPU display will indicate that the download is in process and the PC will display a progress indication. When the download is complete, the DPU will restart automatically.

CAUTION

Do not unplug the PC or DPU during the download.

Charging the Internal Batteries

The DPU display will indicate when the internal batteries require replacement or recharging. If rechargeable batteries have been installed in the DPU, they can be recharged by using the external power supply provided.

WARNING

Attempting to recharge non-rechargeable batteries is dangerous and could result in damage to the DPU or possible explosion.

Follow these step to recharge the internal batteries:

1. Check that rechargeable (NiMH) batteries have been installed and that the selection switch inside the battery compartment is set for rechargeables (NiMH).

2. Connect the external power supply to the DPU and plug the external power supply into the wall socket. Recharging will take about two hours. The DPU may be used during this period, but the recharging time may be significantly longer.

Replacing the Batteries

The DPU will operate using either rechargeable (NiMH) or non-rechargeable (Alkaline) batteries. The battery compartment is accessible on the bottom rear of the unit (refer to Figure 1, page 2) without the use of tools. Follow the procedure below to replace the batteries:

1. Turn off the DPU using the power switch.
2. Open the battery compartment cover.
3. Remove the batteries.
4. Set the battery selection switch to the correct setting for the batteries to be installed.

WARNING

An incorrect setting could lead to damage to the unit or personal injury.

5. Install the batteries.
6. Close and lock the battery compartment cover.

Troubleshooting

- When nothing shows on the display, try the following:
  1. Press any key (the unit may be in low power mode)
  2. Check the batteries
  3. Check the power

- If the printer does not seem to work, turn off the DPU, wait a few seconds, and then turn it back on and try again.