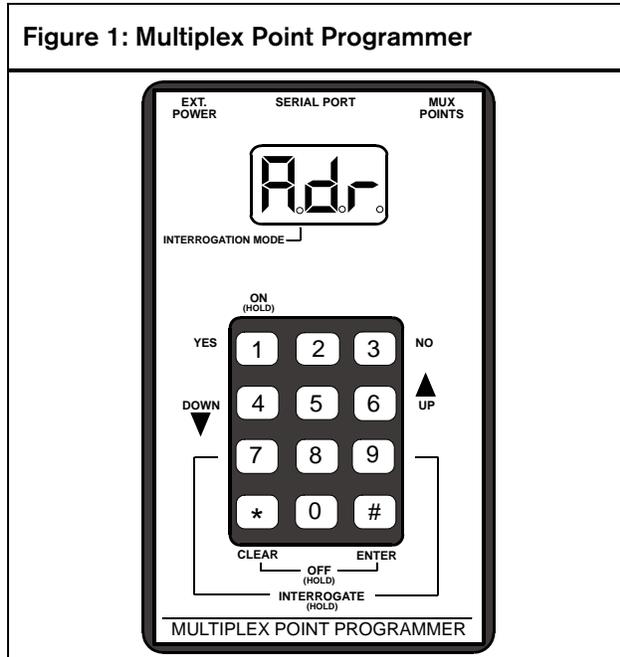## 1.0   Introduction

Use the multiplex point programmer (*Figure 1* and *Table 1*) to program multiplex bus points for the Bosch Security Systems D9412G, D9412, D9112, D7412G, D7412, D7212G, and D7212 Control Panels. In addition to programming points, the D5060 can also be used to program and read information from a D8125MUX.

Figure 1: Multiplex Point Programmer

Table 1: D5060 LED Display Definitions

Display	Definition
Adr	Enter address
A.dr	Enter address for Interrogation Mode
bAd	Battery voltage is below 15 V
Err	Point was not programmed correctly
Lob	Battery voltage is below 16 V
noP	No response from point
PnL	Communications with the D8125 failed
rSP	Point responds to address
tYP	Enter point type
t.YP	Enter point type for Interrogation Mode

2.0   Installation

1. If using external power, attach the flying leads of the included power cable to the output terminals of a 16.5 VAC transformer. Insert the plug end into the jack labeled EXT. POWER on the programmer. Refer to *Figure 2*, *Figure 3*, and *Figure 4*.

2. For control panels, use the serial cable provided to connect the D8125MUX to the D9412G, D9412, D9112, D7412G, D7412, D7212G, or D7212 Control Panel to the jack labeled SERIAL PORT on the programmer.

3. For MUX devices without DIP switches, use the multiplex programmer cable provided to connect the point to be programmed to the port labeled MUX POINTS as shown in *Figure 2*. Use the appropriate connector, either the alligator clips or the probes, to connect the programmer to a point.

   For MUX devices with DIP switches, program the point using the DIP switches. Connect the programmer to the D8125 MUX as shown in *Figure 3*, using the C318 serial cable (*Figure 4*) to program the point number and point type into the D8125MUX.

Figure 2: Wiring Diagram When Installing MUX Points Without DIP Switches
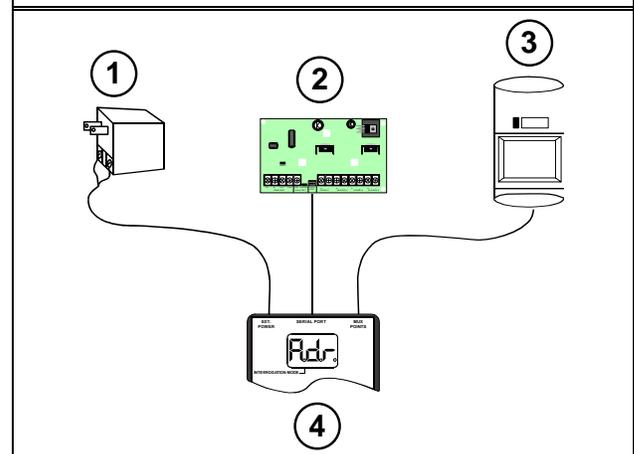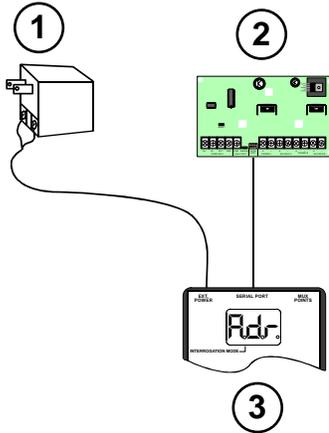
1 - External power
2 - D8125 MUX
3 - MUX point without DIP switches (non-i models)
4 - D5060 Multiplex Point Programmer
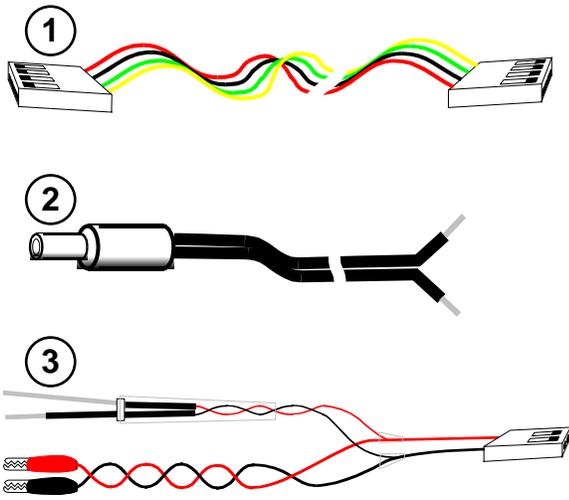
Security Systems

BOSCH

D5060

It is not necessary to connect a MUX module to the D5060 to program MUX points with programming DIP switches.

Figure 3: Wiring Diagram When Installing MUX Points With DIP Switches

1 - *External power*
2 - *D8125 MUX*
3 - *D5060 Multiplex Point Programmer*

Figure 4: Cables Included with the Programmer

1 - *C318 Serial Cable*
2 - *C319 External Power Supply Cable*
3 - *C320 Multiplex Programmer Cable*

3.0   Programming Procedure

3.1   Powering the D5060

To turn the D5060 on, press and hold the [1] key until the unit beeps. To turn the unit off, press and hold the [#] and [*] keys simultaneously until the unit beeps.

After 5 min of inactivity, the programmer powers down automatically to conserve power.

3.2   Programming the Points

1. The D5060 displays the prompt **Adr** after it is powered on. This indicates that it is ready to begin programming.

2. If the MUX device has no DIP switches, connect the D5060 to the point to be programmed (*Figure 2*). If the MUX device has DIP switches, program the device using its DIP switches.

    The point must be connected only to the programmer and not to the D8125MUX or the MUX bus.

    If programming points for a Bosch Security Systems control panel, and if the MUX device has no DIP switches, connect the D8125MUX and the MUX device to be programmed to the D5060 for simultaneous programming (*Figure 2*). If the MUX device has DIP switches, program the device using its DIP switches.

3. Enter the point's three-digit address. The address must be between 1 and 255. Press [#].

4. The programmer displays **tyP**. Enter the number corresponding to the point type you are programming (*Table 2*), then press [#]. The programmer alternately displays the address and the point type.

    When programming a Mux Smoke point (decimal value 4 or 5, as shown in *Table 2*), an 18-second timer starts counting. Do not disconnect the Mux Smoke point until after the timer counts down to zero.

Table 2: Point Type Entry Code	
Decimal Value	**Point Type**
0	Remove point from D8125MUX
1	Contact
2	Sensor (or Single Point Module)
3	I/O Module
4	Mux smoke without low temperature
5	Mux smoke with low temperature
6	Dual point

5. Press [#] to program a point connected to the D5060 and the D8125MUX (if connected), or press [1] to program the D8125MUX only. If the MUX device has DIP switches, program the device using its DIP switches.

> Press [*] at any time to back up through the sequence.

6. If the point is programmed correctly, the unit beeps once and displays **Adr** indicating that it is ready to program the next point. If the point was not programmed correctly, the unit sounds a three-beep error tone and one of the following messages displays:

   Err: The point was not programmed correctly.

   PnL: Communications with the D8125MUX failed.

7. Press [*] to clear the entry, or press [#] to reprogram.

3.3 Removing a Point from the D8125MUX

1. Apply power to the D5060 and connect the programmer to the D8125MUX only.

2. Enter the address of the point you wish to remove.

3. When prompted for a point type, press [0]. Refer to *Table 2*.

4.0 Interrogation Mode

You can also use the programmer to read information from a D8125MUX and from MUX points. Refer to *Section 2.0 Installation* for D5060 installation information.

4.1 Reading Information from the D8125MUX

1. To put the unit into Interrogation Mode, press and hold [7] and [9] simultaneously until the unit beeps. The LED marked INTERROGATION MODE lights.

2. The display shows **A.dr** and the left-most decimal point lights, prompting the user to enter a starting address. Enter an address followed by [#].

3. The Interrogation LED flashes. Press [#] to read point information from the D8125MUX at that address.

4. Press [4] to read the previous address information from the D8125MUX.

5. Press [6] to read the next address information from the D8125MUX.

> If communication between the unit and the D8125MUX fails, the unit sounds a three-beep error tone and displays **PnL**.

6. To exit Interrogation Mode, press and hold [*] until the unit beeps.

4.2 Reading Information from MUX Points

> Disconnect all multiplex points from the D8125MUX and the multiplex bus before reading multiplex point information.

1. To put the unit into Interrogation Mode, press and hold [7] and [9] simultaneously until the unit beeps. The LED marked INTERROGATION MODE lights.

2. The display reads **A.dr** and the left-most decimal point lights, prompting you to enter a starting address. Enter an address and press [#].

3. Press [1].

4. When **t.YP** displays at the keypad, enter the point type of the Mux point (*Table 2*) and press [#].

5. If a point responds to the address, the programmer beeps once and displays **rSP**. If the point does not respond, the unit beeps three times and the display reads **noP**.

6. To exit Interrogation Mode, press and hold [*] until the unit beeps.

5.0   Batteries

This device is intended for use with AC power. Extended use of batteries is not recommended due to the power requirements of the unit.

This unit includes a feature that monitors the charge of the batteries. If the battery voltage falls below 16 V, the unit displays **Lob**. If the battery voltage falls below 15 V, the unit displays **bAd**. The display of **Lob** or **bAd** indicates insufficient power for programming. D8125MUX communications might still function properly even if these conditions exist.

To preserve the life of the batteries, remove them from the multiplex point programmer whenever you will not use the unit for any length of time.

6.0   Specifications

Table 3: Specifications

Description	Value
Display	Three-digit, seven-segment LED
Power	16.5 VAC (20 VA to 50 VA) external power source (recommended), or two 9 VDC batteries (optional)

This product is intended for use with AC power. Extended use of batteries is not recommended due to the power requirements of the unit.

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User's Guide

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