

# Installation Instructions for the X7410 X10 Interface Module

## 1.0 General Information

### 1.1 Introduction:

The X7410 is an interface module that transmits information from a control/communicator to compatible X-10 products over 110V electrical wiring. The X7410 can be installed in either a Radionics panel (ZONEX Bus only) that supports the D8129 OctoRelay module **or** a Detection Systems panel (Option Bus) that supports the DS7488 Octal Relay module. Only one X7410 per panel may be used. X10 outputs will do whatever the panels' relays are programmed to do.

**Note:** The X7410 is an "transmitter only" interface. It is not capable of receiving X10 signals.

### 1.2 Specifications

- Current Draw: 10 mA
- Operating Voltage: 10.2 - 14 VDC
- Storage & Operating Temp: -20° to + 120°F (-29° to +49° C).

### 1.3 Compatibility

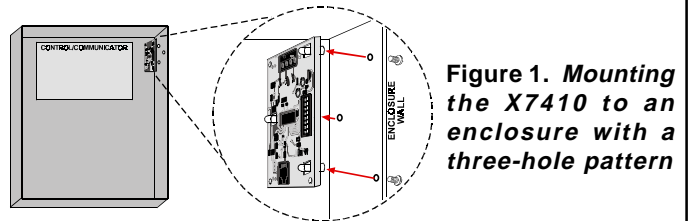
The X7410 is compatible with Detection Systems **DS7400(X)**, **DS7400Xi**, or **DS7080i V2+** control/communicators (Options Bus) and with Radionics **D7212**, **D7412**, **D9112**, and **D9412** control communicators (Zonex Bus). The X7410 connects directly to a

**PL513 or TW523** Power Line Interface Module. Only one Power Line Interface Module is required per X7410. Any X10 receiver that can receive On and Off commands are compatible.

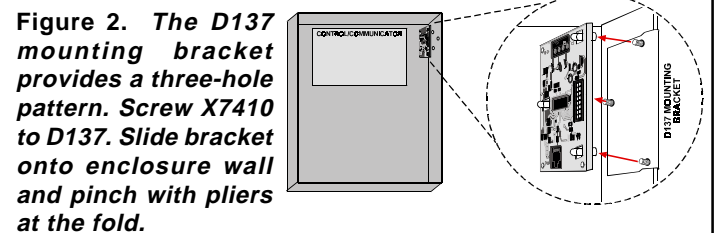
**Note:** Due to limitations of the X10 protocol, certain functions are not supported at this time. For example, if you program a relay to pulse (turn on and off repeatedly) on a ZONEX Bus panel, the result will be unknown on an X10 output. Option Bus X10 outputs will not pulse but remain on steady.

## 2.0 Mounting

The X7410 is equipped with a three-hole mounting system. If your enclosure has the three hole pattern available, you may mount the device inside the enclosure (see Figure 1). If your enclosure does not have a three-hole pattern, you can use a D137 mounting bracket (see Figure 2) or you can use a E3503 three-hole enclosure to mount the X7410 up to 500 feet from the control.

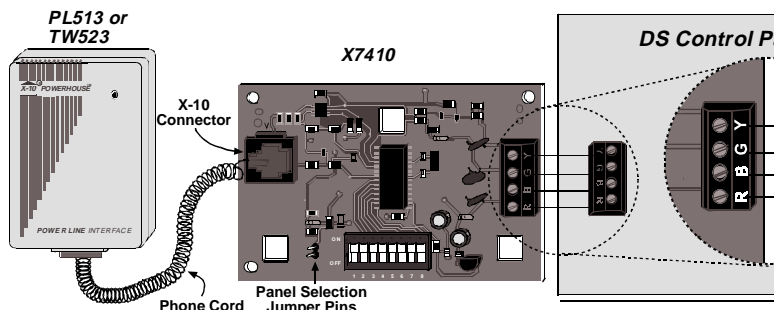


**Figure 1. Mounting the X7410 to an enclosure with a three-hole pattern**



**Figure 2. The D137 mounting bracket provides a three-hole pattern. Screw X7410 to D137. Slide bracket onto enclosure wall and pinch with pliers at the fold.**

## 3.0 Wiring

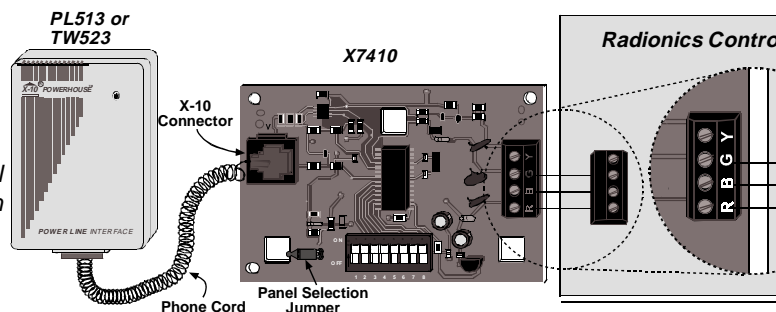


**Figure 3. Wiring X7410 to a DS Panel (Option Bus)**

**Note:** To use the X7410 with DS control panels, the Panel Selection Jumper must be removed!

**Figure 4. Wiring X7410 to a Radionics Panel (Zonex Bus)**

**Note:** To use the X7410 with Radionics control panels, the Panel Selection Jumper must be in place!



**Standard phone cord must be used with this product and should be kept as short as possible (25 feet maximum).**

## 4.0 Programming

### 4.1 DS Panel

The DS7400 Control/Communicator can be programmed to support one or two DS7488 Octal Relay Modules\*. One X7410 can emulate (take the place of) one or both of the DS7488 modules. One of three possible situations can exist:

- If the control panel is programmed to support **one** DS7488, then the X7410 outputs correspond to outputs 1-8 (Dipswitch #1 is set to 'Emulate 1' position.)
- If the control panel is programmed to support **two** DS7488 modules, then the X7410 can be configured to emulate both. The first DS7488 module that the X7410 emulates is mapped to X10 Unit Codes 1-8, while the second DS7488 module that the X7410 emulates is mapped to X10 unit Codes 9-16. (Dipswitch #1 is set to 'Emulate 2' position.)
- If the control panel is programmed for two DS7488 modules (**one** X7410 and **one** DS7488), Dipswitch #1 must be set to 'Emulate 1' and the lower addressed device (either the X7410 or the DS7488) will be assigned outputs 1-8 while the higher addressed device will be assigned outputs 9-16.

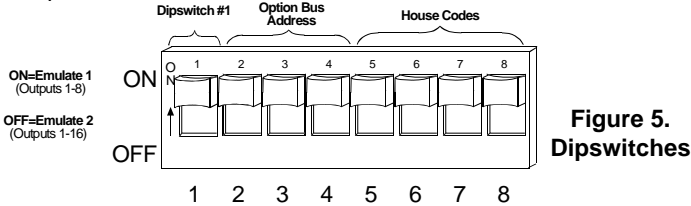


Figure 5. Dipswitches

X7410 option bus address(es) must be unique. The X7410 address should NOT be set the same as other option bus devices, such as a keypad. Control Trouble indications may, or may not, be generated when an X7410 address conflict is present.

**Note:** Option Bus addresses are sequential if using this module in "Emulate 2" mode. For example. If you select "Emulate 2" and you select the first Option Bus address to be five, the control panel will "see" a DS7488 at address five and address six.

**Note:** X10 modules will not pulse. They will always be steady regardless of panel programming. DS7488 relays will pulse if programmed to do so.

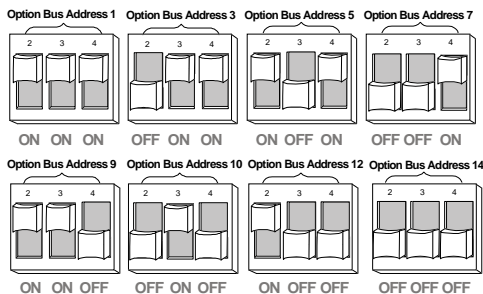


Figure 6. Option Bus Addresses

Each X10 module can be set for one of 16 House Codes and one of 16 Unit Codes. Since all X10 output modules used with the X7410 must be programmed for the same house code, once the house code is selected, there are only 16 addresses (16 Unit Codes).

\* The DS7080i V2+ Control/Communicator can support one DS7488 Octal Relay Module. One X7410 can emulate (take the place of) the DS7488 module. This relay module (or X7410 module) must be addressed as number nine (9). The output module's output functions are fixed and are not programmable. The panel may be used with one DS7488, with one X7410, or without an additional output module.

**Note:** X7410 Dip Switches are read only at Power Up! A ten-second power interruption is required for the X7410 to re-read its dip switch settings.

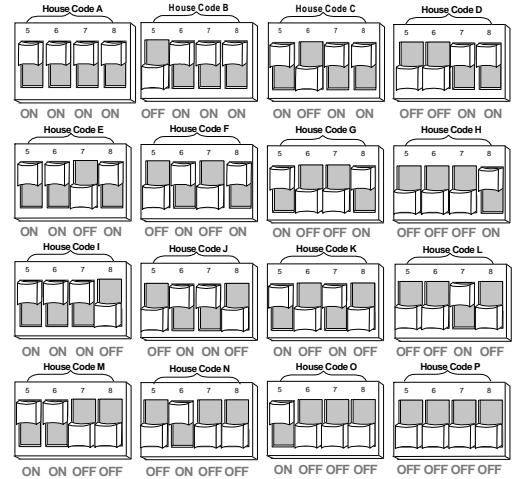


Figure 7. House Codes

### 4.2 Radionics Panel

The Zonex X-10 interface module is programmed for a starting house address and the number of groups (each group has a size of 16). The interface module then maps the panel's output relays to the X-10 devices starting with relay 1 being the same as the first house code unit address one. X7410 and D8129 can be used together (even to duplicate outputs.)

The number of X10 output modules can be limited by three factors:

- The number of relays supported by the Radionics panel
- The number of groups programmed into the X7410
- The number of groups to the end of the group map in the X7410 (example: if you set the first house code to 'O' and the number of groups to four, you would only have two groups available as the groups do not wrap.)

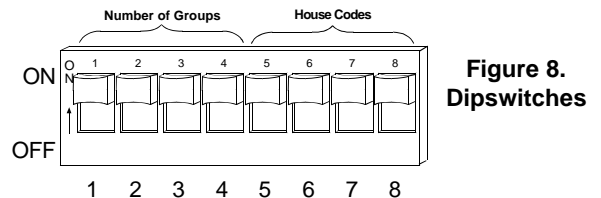


Figure 8. Dipswitches

Each X-10 module can have one of 16 house codes and one of 16 Unit addresses. The Zonex X-10 interface module can support up to 16 house codes and 16 unit addresses, therefore the theoretical limit is 256 devices. However, due to Zonex limitations, the practical number of devices is limited to 64 per bus (1-64 on Zonex 1 or 65-128 on Zonex 2).

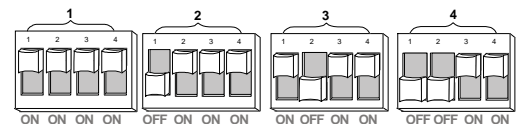


Figure 9. Number of Groups

**Note:** For House Codes, see Figure 7.