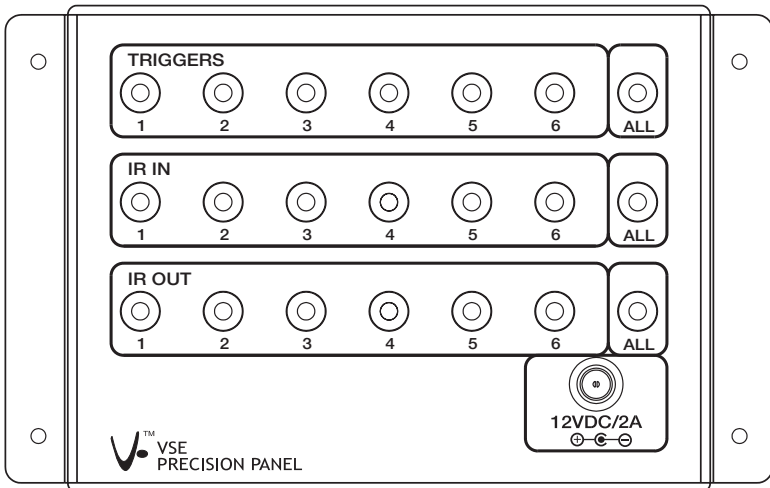


PVSE

ELECTRONIC VOLUME CONTROL
PRECISION PANEL



INSTALLATION MANUAL

ELAN

H O M E S Y S T E M S TM



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Introduction

The PVSE Precision Panel makes it easy to connect up to six ELAN Electronic Volume Controls (VSE, VSE100, and VEHP) to ELAN S Series and Z•Series equipment, and is also the perfect trim-out solution for Electronic Volume Controls in any stand-alone system.

The PVSE is one of ELAN's 1/2 frame Precision Panels and is designed to be mounted in a PF2 Precision Panel Frame (see page 4). Two 1/2 frame Precision Panels can be mounted in one standard-size Precision Panel Frame, giving the flexibility to mix and match the Precision Panels needed to complete a neat, problem-free trim-out.

The back of the PVSE features six clearly labeled 110 punchdown blocks that provide independent connections for Override, IR, and Sense; plus two additional connectors for easy routing of Electronic Volume Control IR signals to the System12 Precision Panel (PS12). Two RJ-45 jacks on the rear of the panel make it easy to route Override signals from the PZ600 Communications Controller Precision Panel and link multiple PVSE panels together. There is also a bank of six dipswitches that allow you to turn the front panel volume control-specific IR Out ports into 'ALL' ports. In stand-alone applications, this allows all six Electronic Volume Controls to control any or all sources.

The PVSE's front panel was designed with stand-alone applications in mind. Six Trigger Inputs, plus a Trigger 'ALL' port, allow you to mute any or all Electronic Volume Controls whenever voltage is not present. Six IR Inputs, plus an 'ALL' port, allow a VIA![®]SR1 or VIA![®]2-SS1 to independently control Electronic Volume Controls connected to the panel. Six IR Out ports, plus an 'ALL' IR Out port, allow each or all VSEs to control source components in a stand-alone system.

Electronic Volume Controls that are connected to the PVSE are powered by the included PWR12 +12VDC/2A power supply.



H O M E S Y S T E M S [™]

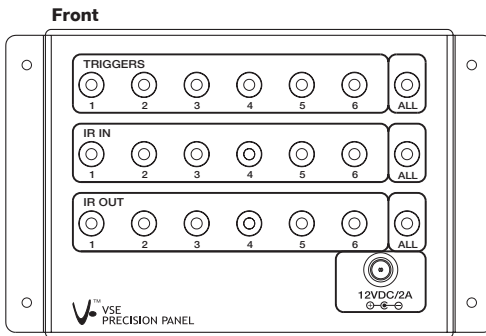
2428 Palumbo Dr.
Lexington, KY USA 40509
Voice 859.269.7760
Tech Support 800-622-3526

Introduction (continued)

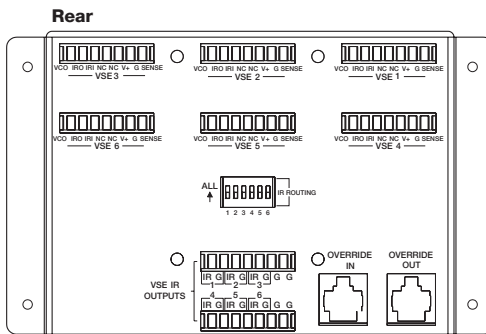
Features

- 1/2 Frame Precision Panel for Six ELAN Electronic Volume Controls (VSE, VSE100, and VEHP)
- 110 Punchdown Connectors w/ Clearly Labeled Silkscreen for Error-Free Terminations
- Easy to Interface with PS12 and PZ600 Precision Panels
- Multiple PVSEs Can Be Linked Together
- Front Panel Trigger and IR In/Out Jacks for Stand-Alone Applications
- 12VDC, 2A Power Supply Included
- Fits in PF2 Precision Panel Frame (required for installation)
- Punchdown Tool & Caps Included

PVSE Front/Rear Panels



- TRIGGERS (Inputs)
Connects to Triggering Device
- IR IN
Connects to IR Source
- IR OUT
Connects to Source to be Controlled
- 12VDC/2A
Connects to PWR12 Power Supply



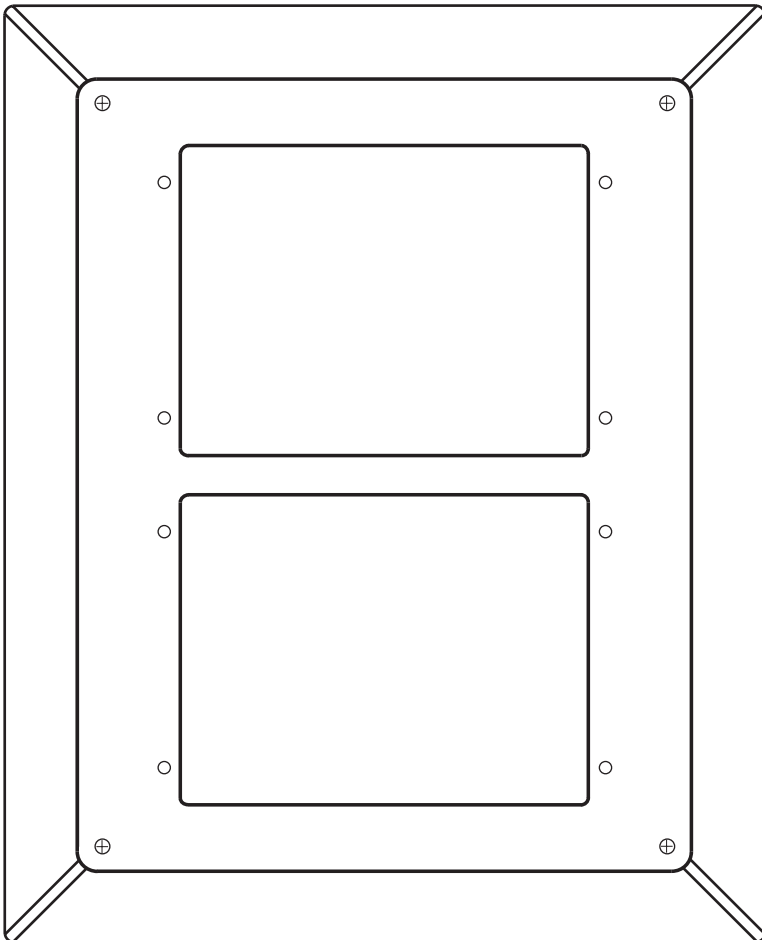
- VSE 1-6
Connects to ELAN Electronic Volume Controls (VSE, VSE100, VEHP)
- IR ROUTING Dipswitches
Controls IR OUT IR Routing
- VSE IR OUTPUTS
Connects to ELAN Multi-Zone Controllers
- OVERRIDE IN
Connects from a PZ600, Z+600, or additional PVSE
- OVERRIDE OUT
Connects to additional PVSE

Installation

PF2 Precision Panel Frame

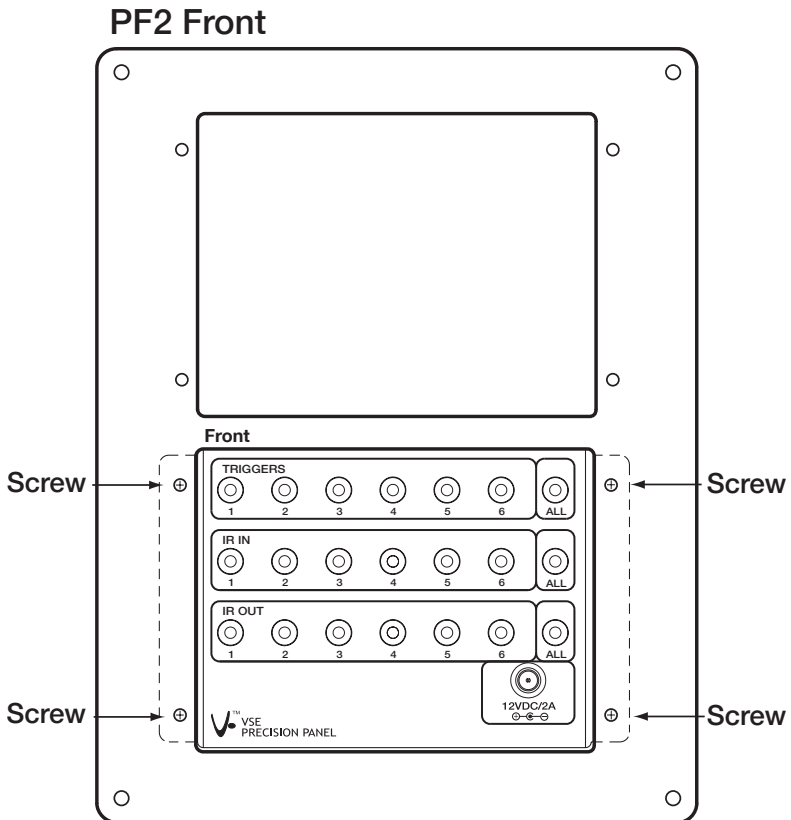
The PF2 accommodates any two 1/2 frame Precision Panels. The kit includes a full-size Precision Panel frame, an insert with pre-drilled holes for the mounting of two 1/2 frame Precision Panels, mounting screws, and a blank 1/2 frame plate to cover an unused half of the frame. PBKT6P new-construction brackets are available, or the PF2 can easily be retro-fitted using the four clamping legs attached to the frame, which clamp the panel securely to drywall.

Note: The PF2 is required for the installation of all 1/2 frame Precision Panels.



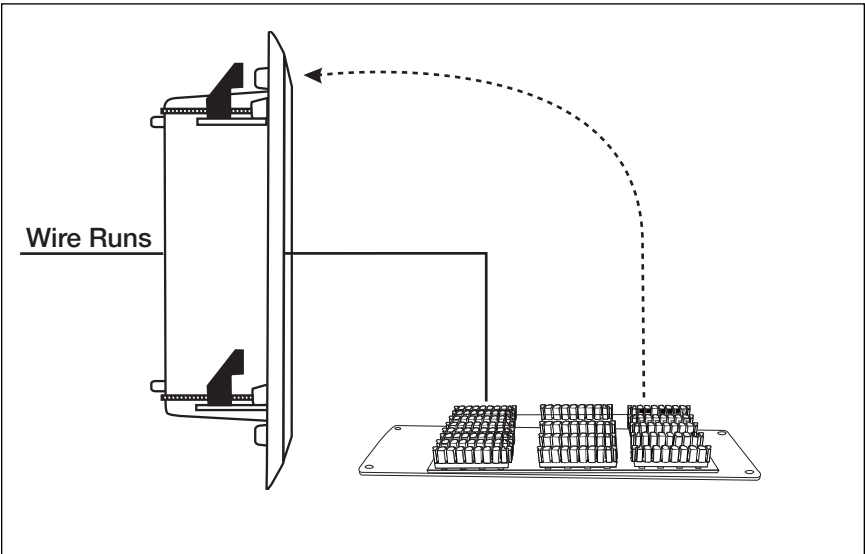
Installation (continued)**Mounting the PVSE to the PF2**

Each 1/2 frame Precision Panel mounts from the back of the PF2. Use four included screws inserted from the front of the PF2 as shown below.



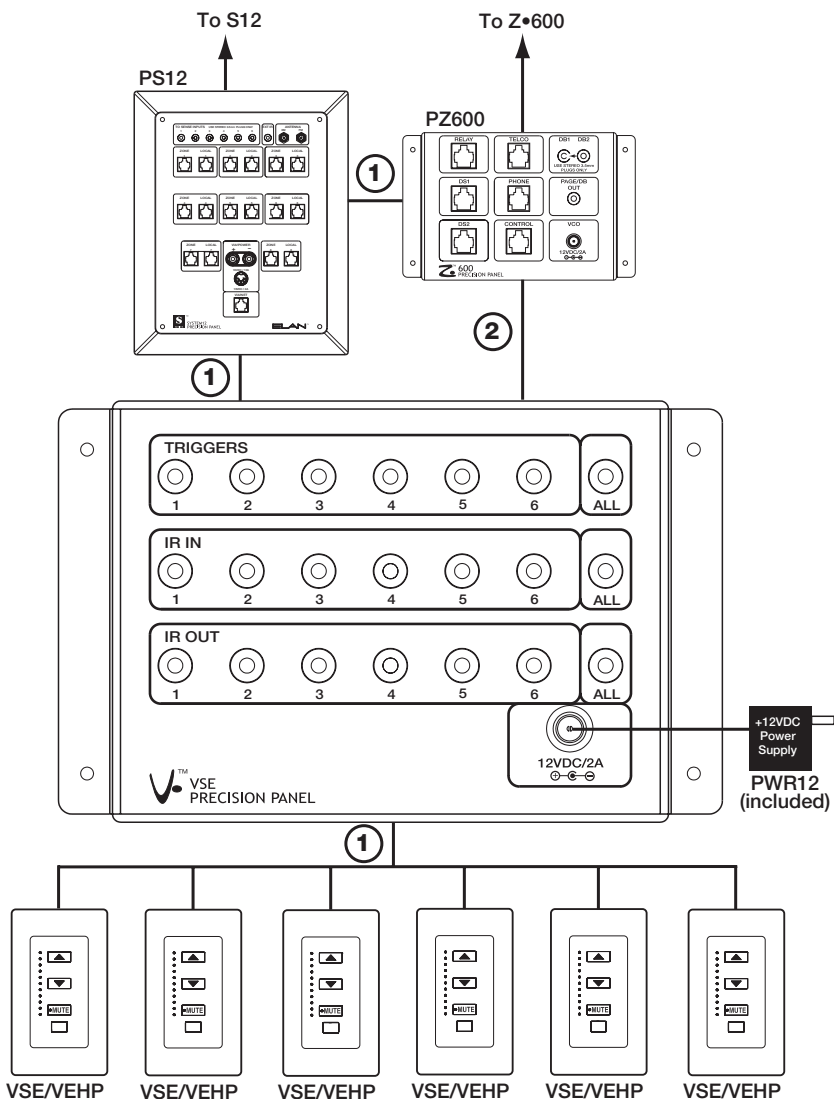
Installation (continued)**Trim-Out**

All system wire runs are pulled through the PF2 frame. Lay the PVSE front panel (attached to the PF2) on the floor in front of the frame and make all connections. Dress the wires in neat bundles, being careful not to pull off any punchdown connections, and then carefully place the PVSE/PF2 back into the frame and secure using the four screws.



Connections-ELAN System

PVSE ELAN System Overview and Wire Runs



① Cat-5

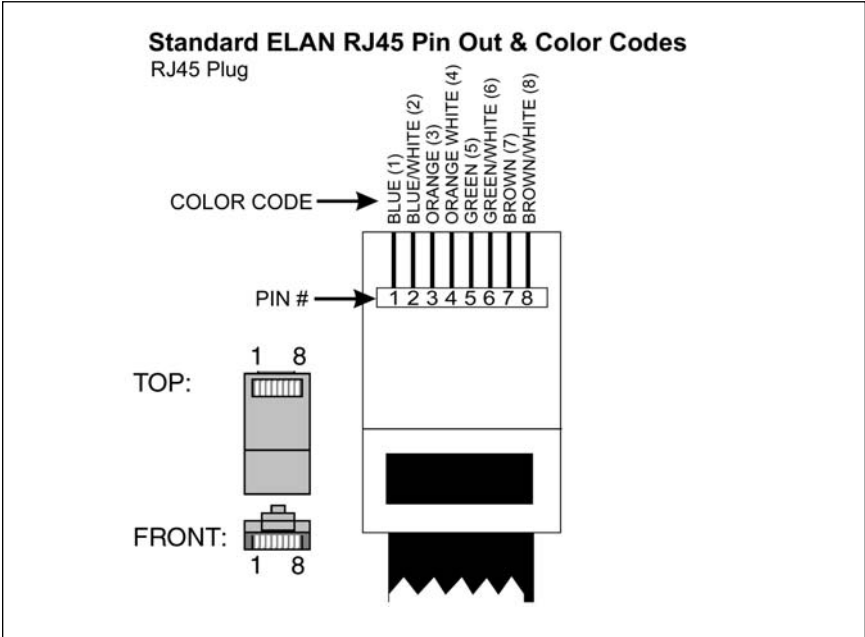
② ELAN C4545 RJ-45 Interconnect Cable

ELAN System Connections (continued)

Rear Panel Connections

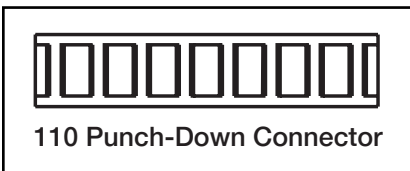
RJ-45 Pin Out

ELAN recommends using ELAN C4545 and/or C45P RJ-45 interconnect cables for all Cat-5 connections to the PVSE. Should you prefer to terminate your own RJ45 cables, refer to the diagram below for the correct pin-out.



PVSE Punch-Down Connectors

The back of the PVSE uses standard 110 punchdown connectors for all wire runs. Wires do not need to be stripped prior to punchdown as the insulation will automatically be displaced. Each punchdown row will accept two 24 or 22 AWG solid conductor wires. Use the included 110 punchdown tool to properly make connections and avoid damaging the PVSE.



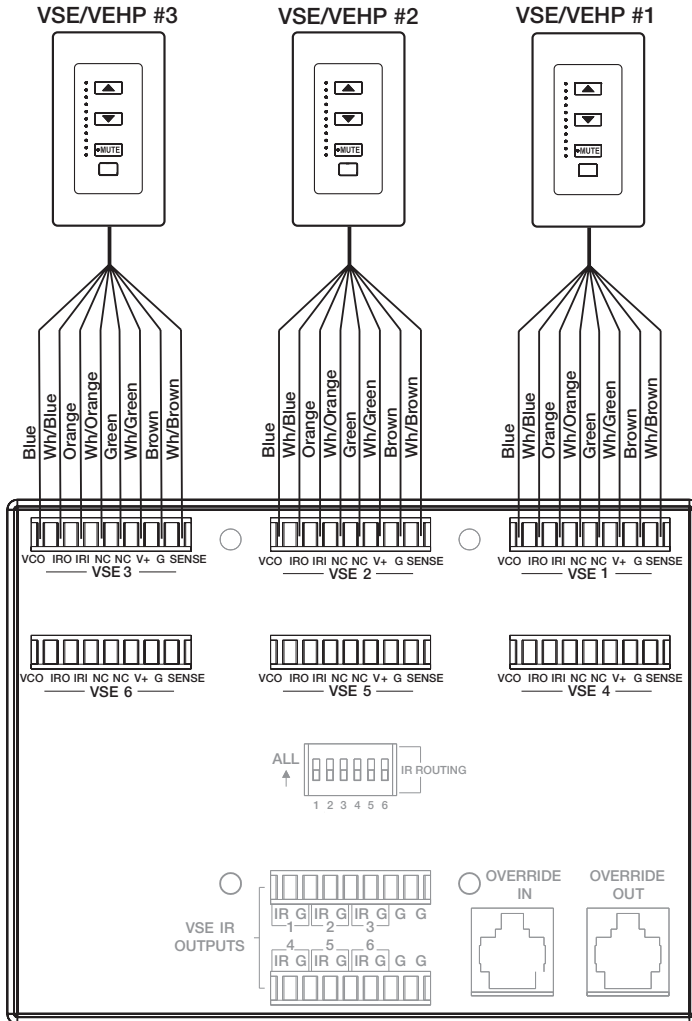
NOTE:

The PVSE comes with punch-down caps to ensure that connections won't come loose.

ELAN System Connections-Rear (continued)

VSE 1-6 Connections

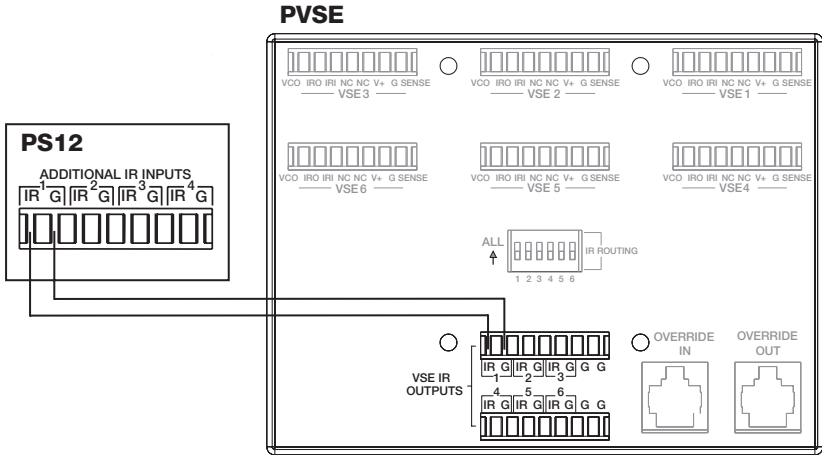
Punch-down each wire according to ELAN standard pin-out (previous page). Be sure to note which Electronic Volume Control is punched-down to each connector. The diagram below shows VSE's #1 through #3 properly connected.



ELAN System Connections-Rear (continued)

VSE IR OUTPUTS Connections to PS12

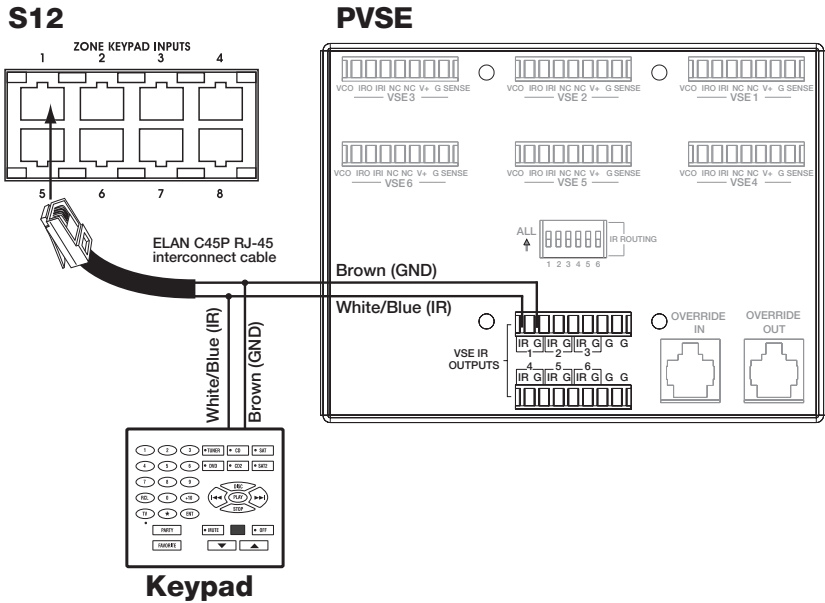
The **VSE IR OUTPUTS** are designed to route IR from a specific Electronic Volume Control to a specific zone of an S6, S12, or Z•system. When installing an S12 system, ELAN strongly recommends the use of the PS12 Precision Panel! To route IR to a specific S12 zone, use a run of Cat-5 to connect IR and Ground from **VSE IR OUTPUTS** on the PVSE to **ADDITIONAL IR INPUTS** on the PS12. Make sure to connect the correct **VSE IR OUTPUT** on the PVSE to the correct **ADDITIONAL IR INPUT** on the PS12. The diagram below shows VSE #1 connected to S12 Zone 1.



ELAN System Connections-Rear (continued)

VSE IR OUTPUTS Connections to S12 (no PS12)

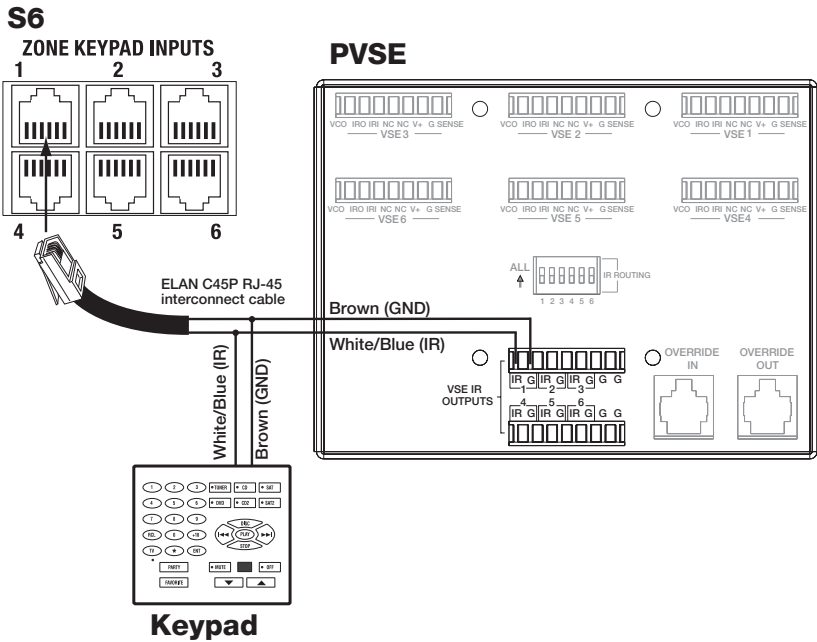
If not using a PS12 to install an S12 system, it is necessary to connect two conductors of a Cat-5 wire from the PVSE's **VSE IR OUTPUTS** to the **ZONE KEYPAD INPUTS** of the S12. Connect **IR** from the PVSE to the Wh/Blue IR Input wire (PIN 2) of the S12. Connect **G** from the PVSE to Brown (Pin 7) of the S12. Make these connections in parallel with any keypads or touch panels that are in the same zone as the Electronic Volume Control. Make sure to connect the correct **VSE IR OUTPUT** of the PVSE to the correct **ZONE KEYPAD INPUT** of the S12. The diagram below shows **VSE #1** to **S12 Zone 1** connections. Only the keypad's **IR** and **Ground** are shown for clarity.



ELAN System Connections-Rear (continued)

VSE IR OUTPUTS Connections to S6

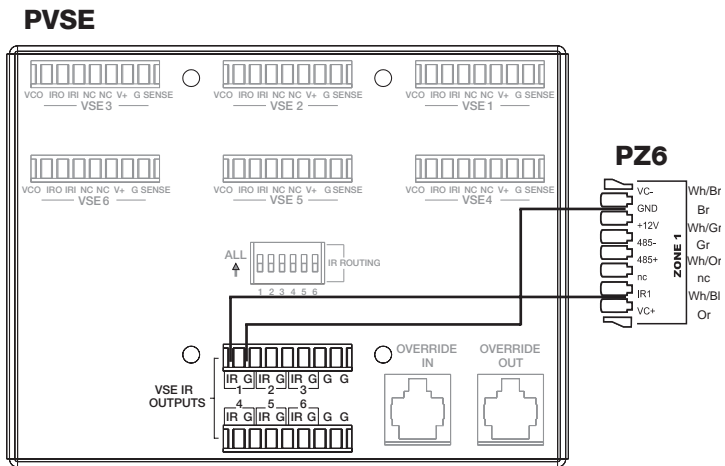
When installing a PVSE into an ELAN S6 system, connect two conductors of a Cat-5 wire from the **VSE IR OUTPUTS** to the **ZONE KEYPAD INPUTS** of the S6. Connect **IR** from the PVSE to the Wh/Blue IR Input wire (PIN 2) of the S6. Connect **G** from the PVSE to Brown (Pin 7) of the S6. Make these connections in parallel with any keypads or touch panels that are in the same zone as the Electronic Volume Control. Make sure to connect the correct **VSE IR OUTPUT** of the PVSE to the correct **ZONE KEYPAD INPUT** of the S6. The diagram below shows **VSE #1** to S6 **Zone 1** connections. Only the keypad's **IR** and **Ground** are shown for clarity.



ELAN System Connections-Rear (continued)

VSE IR OUTPUTS Connections to PZ6

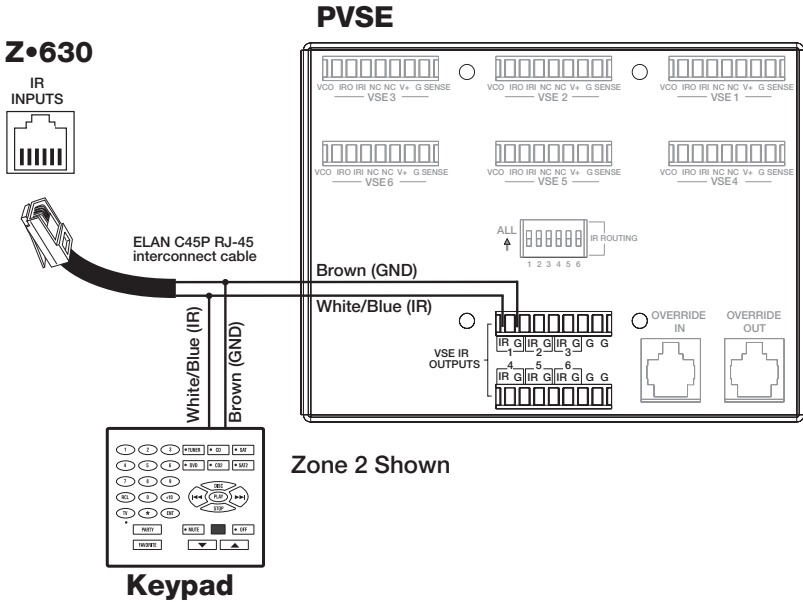
When installing an ELAN Z system, the PVSE will route IR from a specific Electronic Volume Control to a specific Z•system zone. Panel! To route IR to a specific Z•630 zone, use a run of Cat-5 to connect IR and Ground from VSE IR OUTPUTS on the PVSE to ZONE punch-down locations on a PZ6 Precision Panel. Make sure to connect the correct VSE IR OUTPUT on the PVSE to the correct ZONE punchdown location on the PZ6. The diagram below shows VSE #1 to ZONE 1 connections.



ELAN System Connections-Rear (continued)

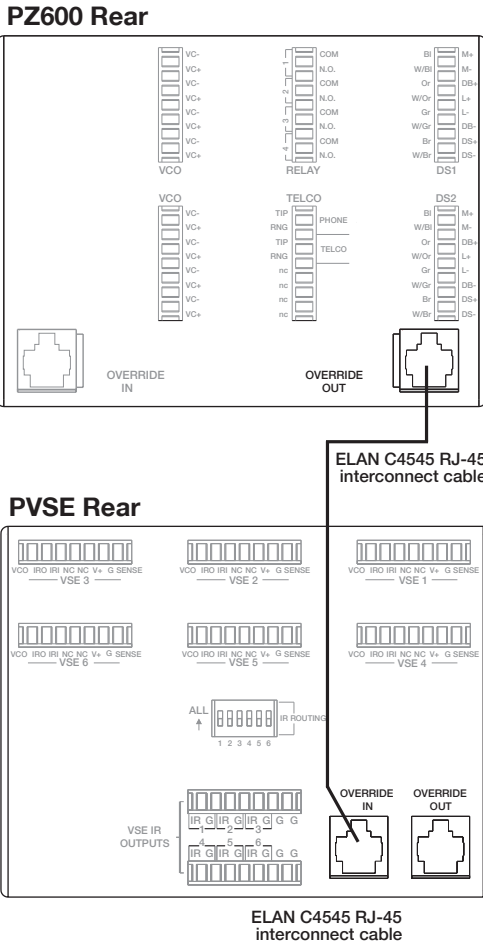
VSE IR OUTPUTS Connections to Z•630 (no PZ6)

If not using a PZ6 to install a Z• system, it is necessary to connect two conductors of a Cat-5 wire from the PVSE's **VSE IR OUTPUTS** to the **IR INPUTS** of the Z•630. Connect **IR** from the PVSE to the **IR INPUTS** wire of the specific zone of the Z•630 that the Electronic Volume Control will be assigned to. Connect **G** from the PVSE to Brown (Pin 7) of the Z•630. Make these connections in parallel with any keypads or touch panels that are in the same zone as the Electronic Volume Control. The diagram below shows **VSE #1** connected to **Zone #2** of a Z•630. Only the keypad's **IR** and **Ground** connections are shown for clarity. See the **Z•630 Installation Manual** for complete details about **IR INPUT** wiring of a Z• system.



ELAN System Connections-Rear (continued) **VERRIDE IN Connections w/ PZ600**

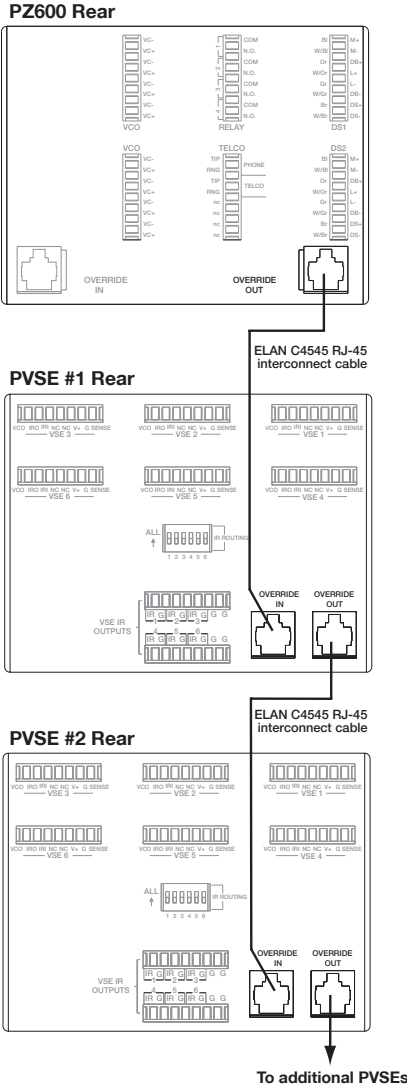
The **VERRIDE IN** RJ-45 jack is designed to take the Volume Control Override signal from a Z•600 Communications Controller and automatically route it to the **VC+** and **VC-** connections on Electronic Volume Controls connected to the PVSE. Use of a PZ600 Precision Panel is highly recommended when installing a PVSE in an ELAN S6 or S12 system that includes a Z•600. Connect an ELAN C4545 RJ-45 patch cable from the Z•600's **CONTROL OUTPUTS** jack to the **VERRIDE IN** RJ-45 jack on the PZ600, then connect an additional C4545 from the PZ600's **VERRIDE OUT** jack to **VERRIDE IN** of the PVSE as shown below.



ELAN System Connections-Rear (continued)

VERRIDE OUT Connections w/ PZ600

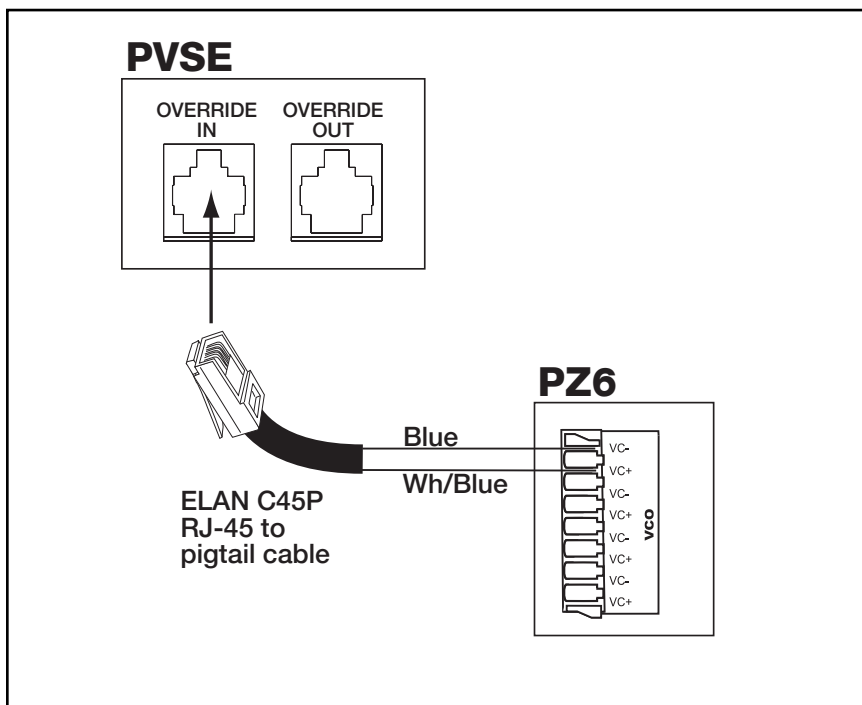
The OVERRIDE OUT RJ-45 jack is designed for system expansion. When connecting multiple PVSE's, connect the **VERRIDE OUT** RJ-45 jack from PVSE #1 to the **VERRIDE IN** RJ-45 jack on PVSE #2. Continue the process for all PVSEs in the system. The diagram below shows a Z•600 connected to a PZ600, then to two PVSEs.



ELAN System Connections-Rear (continued)

VERRIDE IN Connections w/ PZ6

If using the PVSE with PZ6 Precision Panel for Z• Systems, it is necessary to use an ELAN C45P RJ-45 to pigtail cable to connect **VC+** and **VC-** from the back of the PZ6 to the **VERRIDE IN** RJ-45 jack on the back of the PVSE as shown below. Pin 1 (Blue) of the RJ-45 cable is **VC+**, Pin 2 (Wh/Blue) is **VC-**.



VERRIDE OUT Connections w/ PZ6

VERRIDE OUT connections will go to additional PVSEs exactly as shown on p. 16.

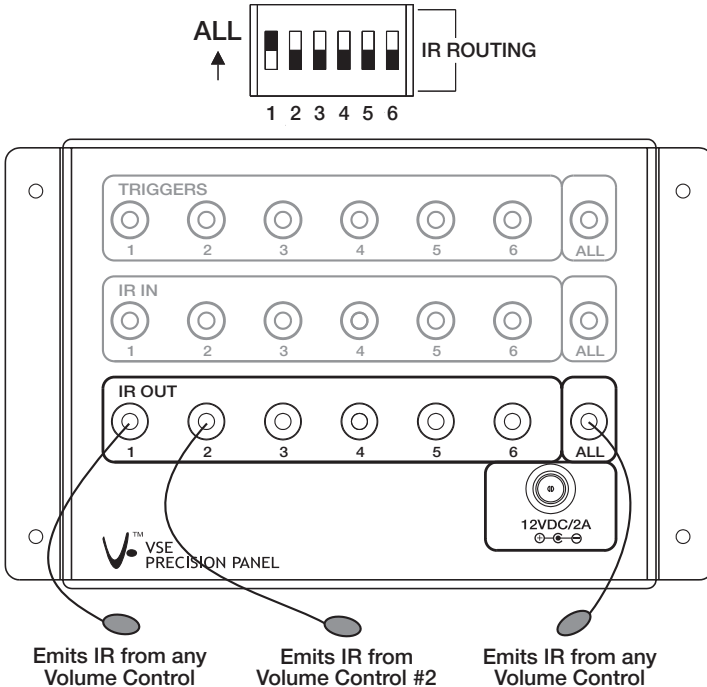
ELAN System Connections-Rear (continued)

IR ROUTING Dipswitch Settings

IR from Electronic Volume Controls connected to the PVSE can be routed to the front IR Output jacks in two different ways. By default, the dipswitches are all down, meaning that each Electronic Volume Control sends IR to its' specific IR port on the front of the panel, and the **ALL** port. For example, the Electronic Volume Control connected to the **VSE 1** location will only send IR out of **IR OUT 1** and **ALL**.

By moving a dipswitch to the upper **ALL** position, the corresponding **IR OUT** port becomes an **ALL** port; passing IR signals from every Electronic Volume Control that is connected to the PVSE. The original **ALL** port remains active and functions identically regardless of dipswitch settings.

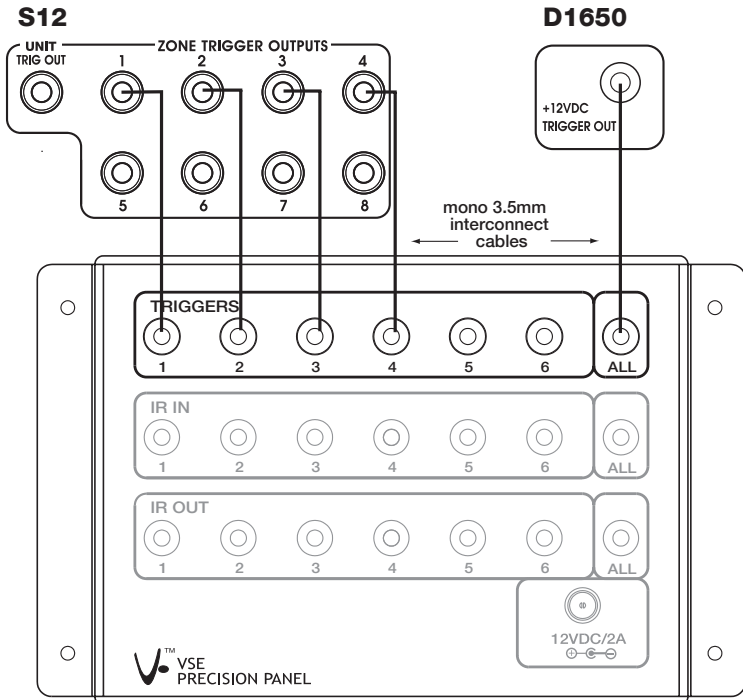
In the example below, **Dipswitch #1** is in the Up position. **IR OUT #1** will pass IR sent from any Electronic Volume Control that is connected to the PVSE. **Dipswitch #2** is in the Down position. **IR OUT #2** will only pass IR from the Electronic Volume Control connected to the **VSE 2** location. The **ALL** port will pass IR from both volume controls.



ELAN System Connections (continued) Front Panel Connections

TRIGGERS

ELAN Electronic Volume Controls have a feature called “Sense” which corresponds to the TRIGGERS ports on the PVSE and provides the ability to Mute when voltage is absent. Connect a mono 3.5mm interconnect cable from a specific **TRIGGERS** port on the PVSE to a **ZONE TRIGGER OUTPUT** or **UNIT TRIG OUT** of a System12, a **ZONE TRIGGER OUTPUT** or **SYSTEM TRIG OUT** of an S6, the **REMOTE OUT** of a Z•POWER, Z•630 or Z•660 amplifier, or the **+12VDC TRIGGER OUT** of a D1200 or D1650 amplifier, in order to Mute the Electronic Volume Controls when a specific zone is turned Off. Connect the Trigger output to the **ALL TRIGGERS** port to Mute all volume controls simultaneously. The Electronic Volume Controls will not automatically Un-Mute when the zone or system is turned back On. See the **VSE Electronic Volume Control Installation Manual** for valuable information about how Electronic Volume Controls’ Sense features react to Triggers.

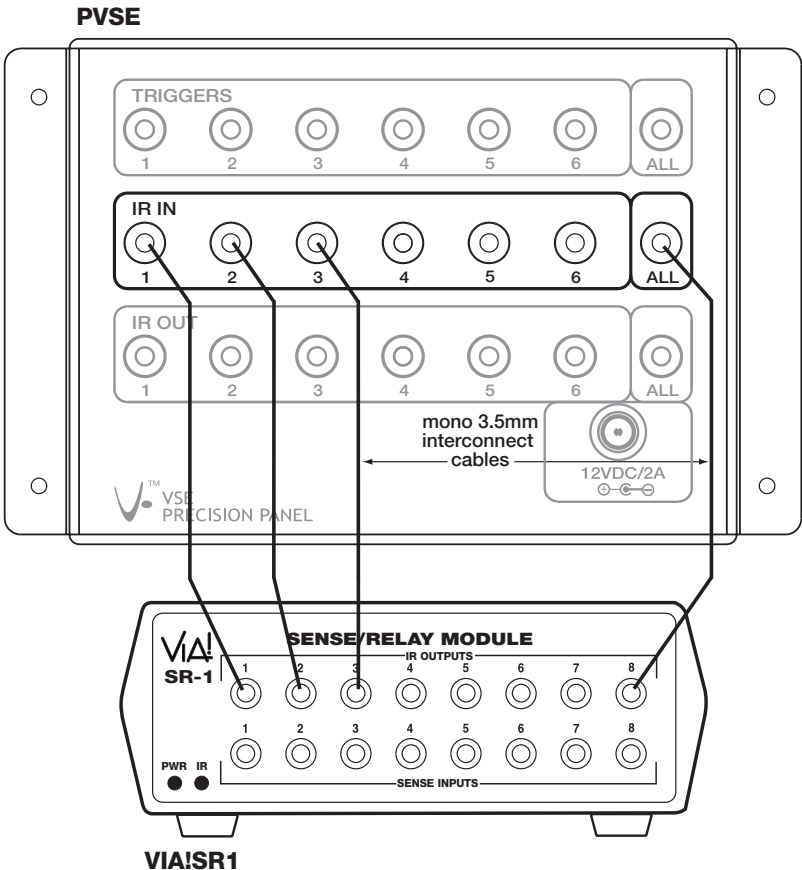


ELAN System Connections (continued)

IR IN

Use the **IR IN** ports to control specific volume controls from an ELAN IR source such as a VIA!® SR1 or VIA!®2-SS1. Connect a mono 3.5mm interconnect cable from an IR source's IR output port to the **IR IN** port of the PVSE. Make sure to connect the correct output to the correct input! Connecting an IR source to the **IR IN ALL** port will send IR to all volume controls connected to the PVSE.

The drawing below shows a VIA!SR1 connected to a PVSE Precision Panel. The SR1's **IR OUTPUT 1-3** ports are each assigned to a specific **IR IN** port on the PVSE. **SR1 IR OUTPUT #1** will send IR to the volume control connected to **VSE1** on the PVSE, **IR OUTPUT #2** sends IR to **VSE 2**, etc. **SR1 IR OUTPUT #8** sends IR to the **IR IN ALL** port and will control all volume controls connected to the PVSE.

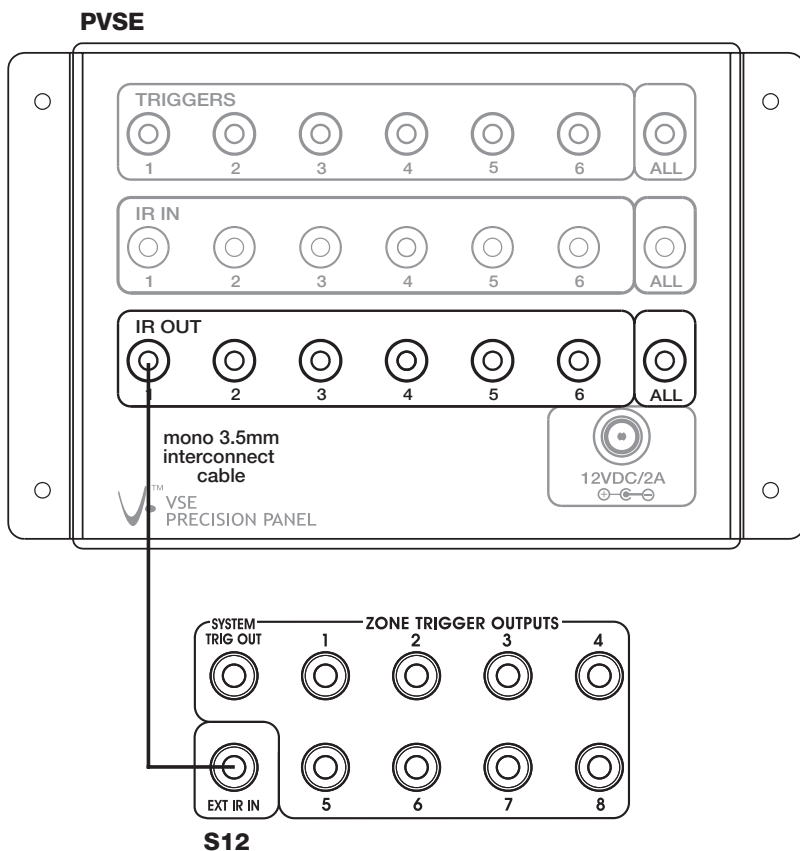


ELAN System Connections (continued)

IR OUT

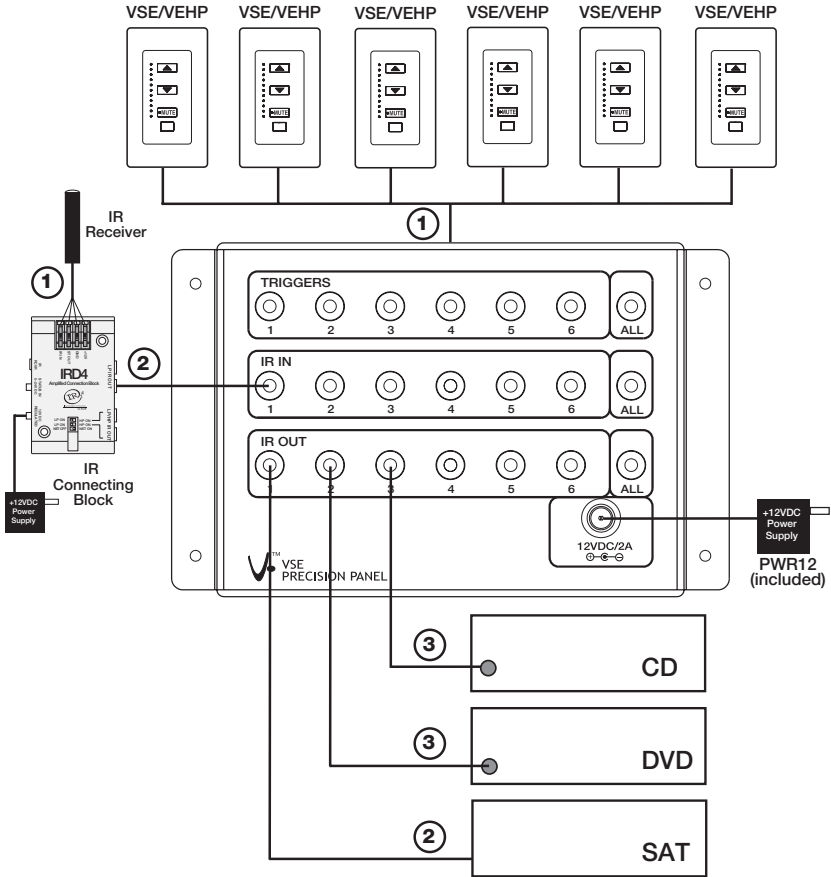
The **IR OUT** ports route IR that originates at the volume control location (typically a hand-held remote). Punch-downs are located on the rear of the PVSE that deal with IR routing for most ELAN system applications, therefore, the front panel **IR OUT** ports are seldom used in an ELAN system. One System12 application does present itself, though. Use a specific **IR OUT** port or the **ALL** port to connect to the **EXT IR IN** port of an S12. This will allow IR to pass-through Electronic Volume Controls that are not part of an S12 zone to control source equipment that is part of the S12 system.

The diagram below shows **IR OUT #1** from the PVSE connected to the **EXT IR IN** port on the System12. The volume control connected to **VSE 1** can send IR to sources connected to the S12.



Connections-Stand-Alone

PVSE Stand-Alone Overview and Wire Runs

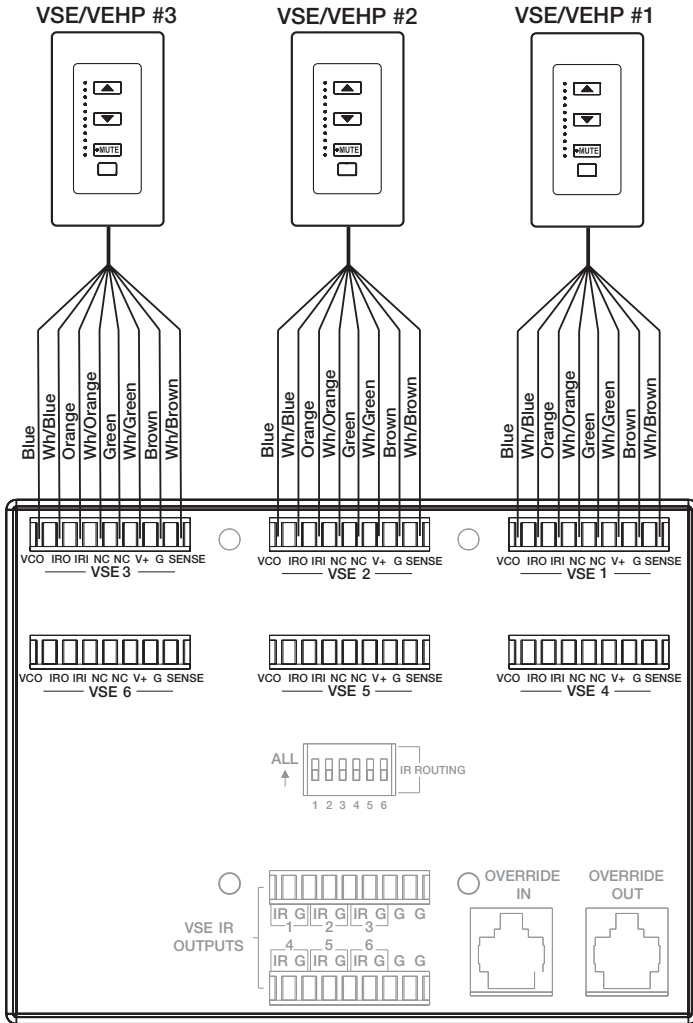


- ① Cat-5
- ② Mono 3.5mm Interconnect Cable
- ③ IR Emitter

Stand-Alone Connections-Rear

VSE 1-6 Connections

Punch-down each wire according to ELAN standard pin-out (p. 8). Be sure to note which Electronic Volume Control is punched-down to each connector. The diagram below shows VSE's #1 through #3 properly connected.



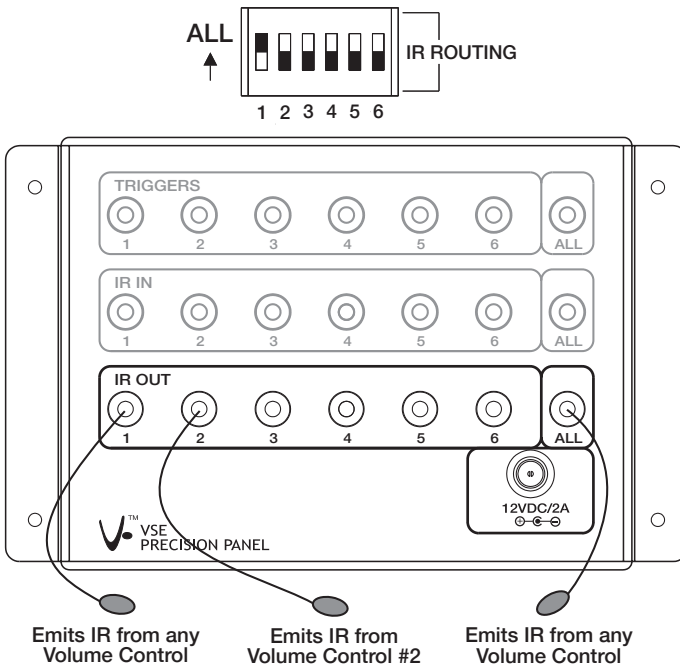
Stand-Alone Connections-Rear (continued)

IR ROUTING Dipswitch Settings

IR from Electronic Volume Controls connected to the PVSE can be routed to the front IR Output jacks in two different ways. By default, the dipswitches are all down, meaning that each Electronic Volume Control sends IR to its' specific IR port on the front of the panel and the **ALL** port. For example, the Electronic Volume Control connected to the **VSE 1** location will only send IR out of **IR OUT 1** and **ALL**.

By moving a dipswitch to the upper **ALL** position, the corresponding **IR OUT** port becomes an **ALL** port; passing IR signals from every Electronic Volume Control that is connected to the PVSE. The original **ALL** port remains active and functions identically regardless of dipswitch settings.

In the example below, **Dipswitch #1** is in the Up position. **IR OUT #1** will pass IR sent from any Electronic Volume Control that is connected to the PVSE. **Dipswitch #2** is in the Down position. **IR OUT #2** will only pass IR from the Electronic Volume Control connected to the **VSE 2** location. The **ALL** port will pass IR from both volume controls.



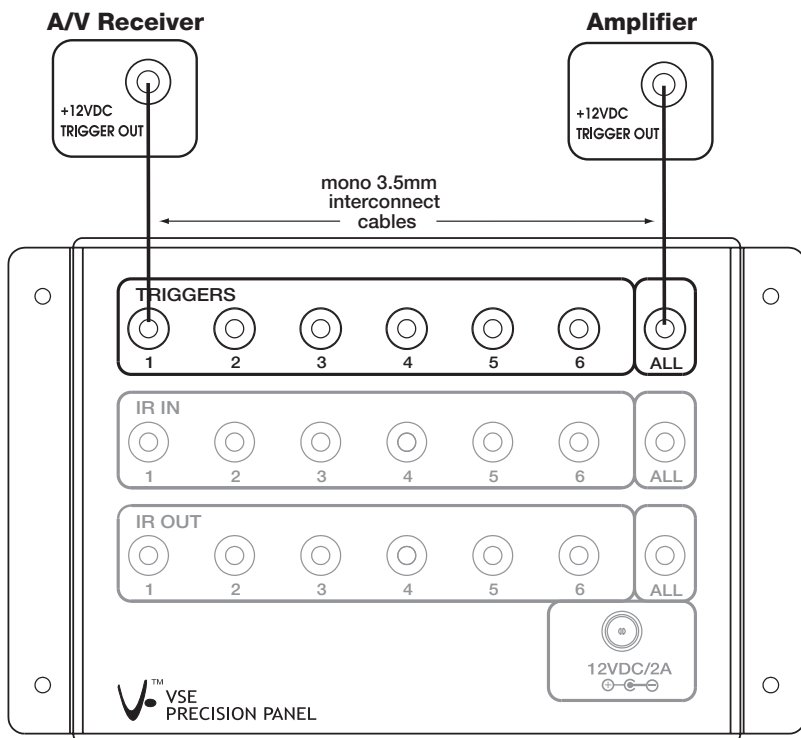
Stand-Alone Connections-Front

TRIGGERS Connections

The **TRIGGERS** ports on the PVSE act as inputs. Although normally used for ELAN system integration, the **TRIGGERS** ports on the front of the PVSE can be used to activate the “Sense” feature of Electronic Volume Controls in Stand-Alone applications.

Connect a mono 3.5mm plug into the **TRIGGERS** jack that corresponds to the Electronic Volume Control that is to be Muted. If all the volume controls are to Mute together, connect this plug into the **ALL** port. Connect the other end to a source that provides 3-24 VDC output when turned On. Certain amplifiers and A/V or Stereo Receivers have triggered outputs.

The diagram below shows an A/V Receiver muting the volume control connected to **VSE 1**, while an Amplifier Mutes all volume controls connected to the PVSE.

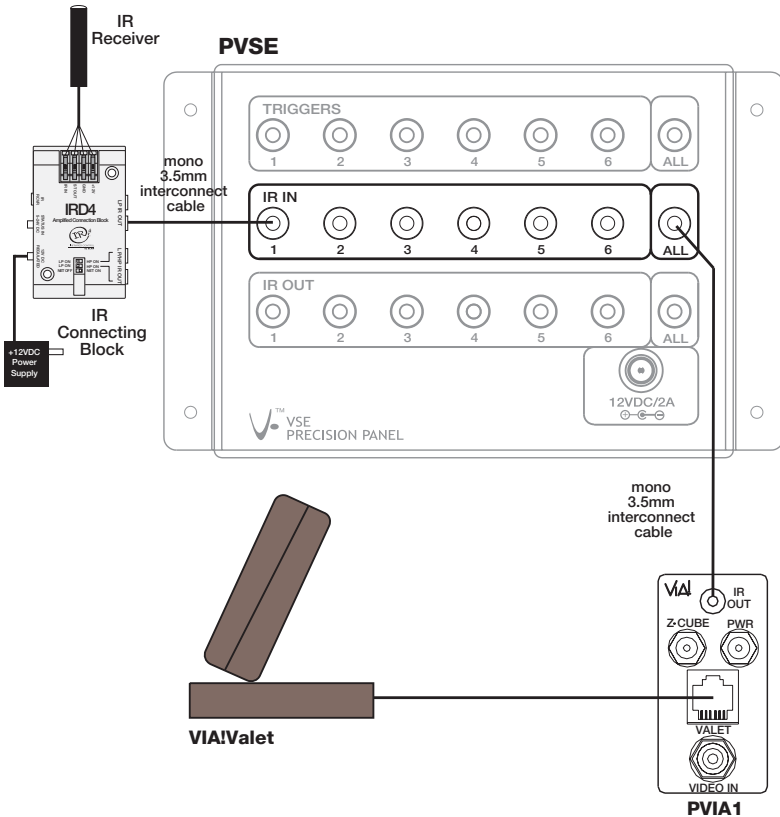


Stand-Alone Connections-Front (continued)

IR IN Connections

It is possible to send IR to ELAN Electronic Volume Controls through the **IR IN** ports on the front of the PVSE. The volume control will respond to signals it receives just like it would if a hand-held IR remote control were pointed at it. Connect an IR receiver or other IR source such as an IR connecting block to the specific **IR IN** port that corresponds with the volume control you are sending the IR to. If volume control-specific IR functionality is not required, connect the IR source to the **ALL** port.

The example below shows an IR Receiver/IR Connecting Block connected to **IR IN #1**. IR sent to this IR Receiver will be routed to the volume control that is connected to the **VSE 1** punchdown location. Also shown is a **VIA®** Touch Panel that is connected to the **ALL** port, which will route IR to all volume controls connected to the PVSE.

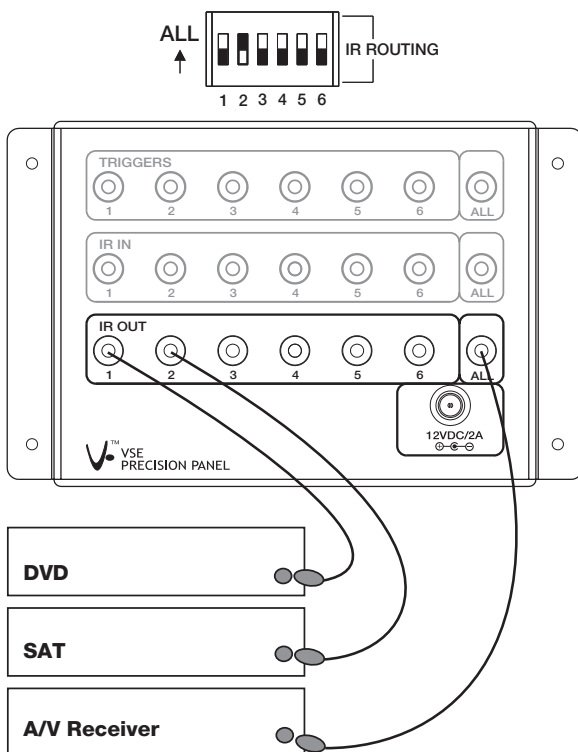


Stand-Alone Connections-Front (continued)

IR OUT Connections

See **IR ROUTING Dipswitch Settings** (p. 24) before making **IR OUT** connections. Once the configuration is decided upon and the **IR ROUTING** dipswitches are correctly set, plug IR mini-emitters or mono 3.5mm interconnect cables into the appropriate **IR OUT** ports.

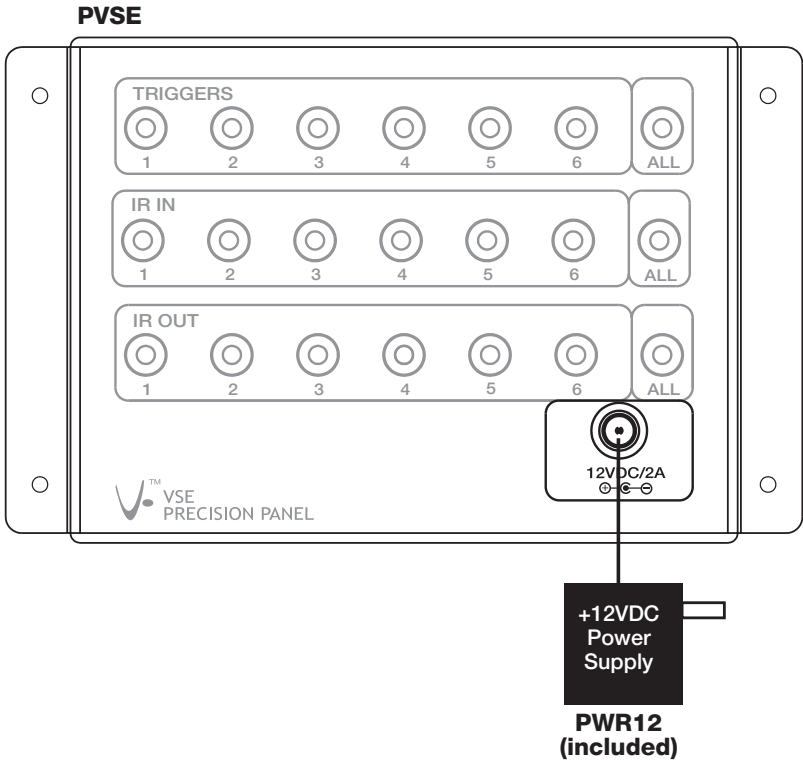
The diagram below shows **IR OUT #1** connected to a DVD player. **IR ROUTING Dipswitch #1** is in the Down position so that the DVD player can only be controlled from the volume control that is punched down to the **VSE 1** location on the back of the PVSE. An A/V Receiver is connected to the **ALL** port and can be controlled by any volume control connected to the PVSE. **IR ROUTING Dipswitch #2** is in the Up position. **IR OUT #2** sends IR from any volume control connected to the PVSE to the Satellite Receiver connected to **IR OUT #2**.



Power Supply Connections

12VDC/1.5A

The PWR3 power supply that is included with the PVSE is designed to power up to six ELAN Electronic Volume Controls. Connect the power supply to the front of the PVSE as shown below.

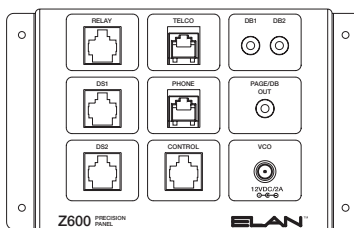


ELAN 1/2 Frame Precision Panels

ELAN's new 1/2 frame Precision Panels save time and make sense out of complex wiring tasks. Add reliability and simplicity to your installs by using them in every job!

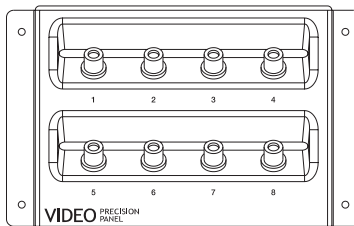
PZ600

The PZ600 Precision Panel allows the connection of phone service, page, Doorbell and Override signals, relays and door stations to the Z•600 Communications Controller and ELAN S Series controllers.



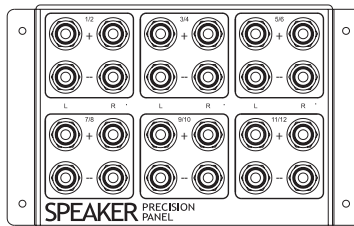
PV8

The PV8 Video Precision Panel provides a clean and easy way to connect up to 8 runs of coaxial cable to the System12 A/V Controller or Z•880 Video Controller.



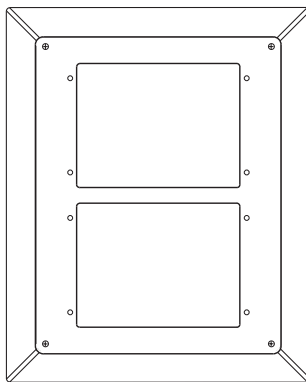
PSP6

The PSP6 Speaker Precision Panel is a neat and easy way to connect in-wall wire runs from up to six pairs of speakers (twelve speakers total) to a system's amplifier.



PF2

The PF2 Precision Panel Frame accommodates any two 1/2 frame Precision panels (PZ600, PVSE, PV8, & PSP6). This kit includes a full-sized Precision panel frame, a blank 1/2 frame plate to cover any unused half of the frame, and all mounting hardware. Required for use with all 1/2 frame Precision Panels.



Limited Warranty

ELAN HOME SYSTEMS L.L.C. ("ELAN") warrants the PVSE Precision Panel to be free from defects in materials and workmanship for the period of two years (2 years) from date of purchase. If within the applicable warranty period above purchaser discovers that such item was not as warranted above and promptly notifies ELAN in writing, ELAN shall repair or replace the item at the company's option. This warranty shall not apply (a) to equipment not manufactured by ELAN, (b) to equipment which shall have been installed by other than an ELAN authorized installer, (c) to installed equipment which is not installed to ELAN's specifications, (d) to equipment which shall have been repaired or altered by others than ELAN, (e) to equipment which shall have been subjected to negligence, accident, or damage by circumstances beyond ELAN's control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or other catastrophic events beyond ELAN's control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by ELAN, the warranty obligations of ELAN shall in all respects conform to the warranty actually extended to ELAN by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation or other expenses which may be incurred in connection with repair or replacement.

Except as may be expressly provided and authorized in writing by ELAN, ELAN shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by ELAN or services rendered by ELAN.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES EXCEPT WARRANTIES OF TITLE, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ATTENTION: TO OUR VALUED CONSUMERS

To ensure that consumers obtain quality pre-sale and after-sale support and service, ELAN Home Systems products are sold exclusively through authorized dealers. *ELAN products are not sold online.* The warranties on ELAN products are NOT VALID if the products have been purchased from an unauthorized dealer or an online E-tailer. To determine if your ELAN reseller is authorized, please call ELAN Home Systems at (859) 269-7760.

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