

PETERSON

SOLID STATE CHIME RELAY, A.C.

INSTALLATION INSTRUCTIONS

DESCRIPTION

The Peterson Solid State Chime Relay is designed to be used with tubular chimes that have A.C. operated solenoids. A positive D.C. input voltage in the range of 10 to 20 Volts will cause the output triac in the Solid State Chime Relay to switch the A.C. onto the particular chime solenoid desired. Any input voltage within the above range will work equally well and the chime volume will not be affected by the level of this voltage. The output load can be up to 6 Amperes.

Since the Solid State Chime Relay requires an input current of only approximately .01 Ampere, it is possible to use regular organ key contacts. It is not necessary to use a gang switch since stop switching is accomplished in the Solid State Chime Relay.

CAUTION

Solid state equipment will provide years of trouble free operation if a few words of caution are heeded. *Wherever specific polarities are indicated, it is important that they be observed. Do not troubleshoot with "hot" wires unless you know what you are doing!*

INSTALLATION

The Solid State Chime Relay can be mounted on the chime rail under the dust canopy, or, if desired, it can be mounted remotely. The advantage of mounting it on the chime rail is that the wires to the solenoids can be 20 AWG and be kept short. The input wires from the keyswitch can be quite small, such as 28 AWG, regardless of length. If the unit is mounted remotely, it will be necessary to increase the size of the wire to the solenoids in order to reduce voltage drops caused by wire resistance.

If the Solid State Chime Relay is to be mounted on the chime rail, use four of the plastic spacers provided and locate it according to the example in Figure 1. If the assembly is to be mounted remotely, you may use the same method as above or it may be mounted on a flat surface using the eight holes in the circuit board.

To mount to a flat surface, use eight of the plastic spacers provided and assemble them to the circuit board as shown in Figure 2. You may then use wood screws, sheet metal screws, etc. to mount it to a panel.

STOP CONTROL

Stop control is accomplished by means of a Stop Switch plug-in module located on the main circuit board assembly (See Figure 3). Two Stop Switch modules are available, Positive and Negative. We supply whichever Stop Switch is requested at the time the Solid State Chime Relay is ordered. The Positive Stop Switch can be identified by the red dot on the foil side of the circuit board. The Positive Stop Switch also has two transistors whereas the Negative Stop Switch has one. If you find that you need a Stop Switch of the opposite polarity, they are available from the factory upon request.

WIRING

This type of chime is usually supplied with a tapped secondary transformer and strike selector switch which adjusts the voltage level applied to the solenoids and thus how hard the chime is struck. The common wire from the secondary (low voltage side) of the transformer is connected to Terminal 1 of the four lug barrier strip, (see Figure 3), and the variable A.C. from the common of the strike selector switch is connected to the solenoid common.

These wires should be heavy enough to supply several coils simultaneously. Use the following chart as a guide to wire size and length:

Up to 20 Feet	16 AWG
Up to 50 Feet	14 AWG
Up to 100 Feet	12 AWG

The Positive (+) Terminal of the organ rectifier should be connected to Terminal 2 of the barrier strip. The Negative (-) Terminal of the organ rectifier should be connected to Terminal 3 of the barrier strip. The Stop Control wire should be connected to Terminal 4. These wires can be small, such as 24 AWG.

The wires from the solenoids must be connected to the Solid State Chime Relay output connectors A,B and C as shown in Figure 3 and the Guide to Wiring Length and Size. The wires from the key contacts should be connected to input connectors D, E, and F. The input terminal is directly in line with the output terminal it controls, ie., input D-1 controls output A-1.

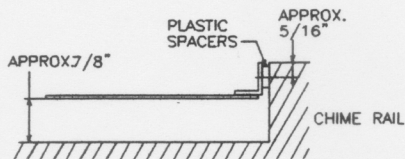
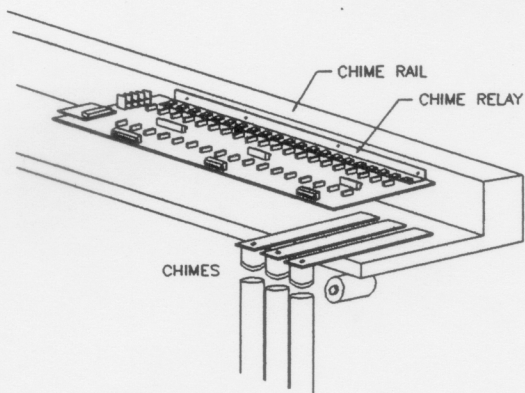
TESTING

Check to be certain that the A.C. and organ supply voltages (Positive, Negative, and Stop Control) are present at the Solid State Chime Relay and *properly connected*. Once this is confirmed, test each note from the console with the stop on and off.

In case of difficulty recheck the wiring polarities and polarity of the Stop Switch. If you still have problems or questions call the factory on our toll-free number which is 1(800)341-3311. *A simple phone call may save much time and money!*

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END VIEW

NOTE: MOUNT CHIME RELAY AS HIGH AS POSSIBLE ON CHIME RAIL, MAKING CERTAIN DAMPER SOLENOID ARMATURE DOES NOT STRIKE UNDERSIDE OF CIRCUIT BOARD.

FIGURE 1

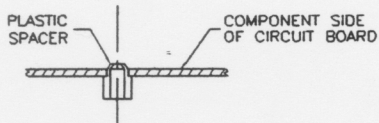
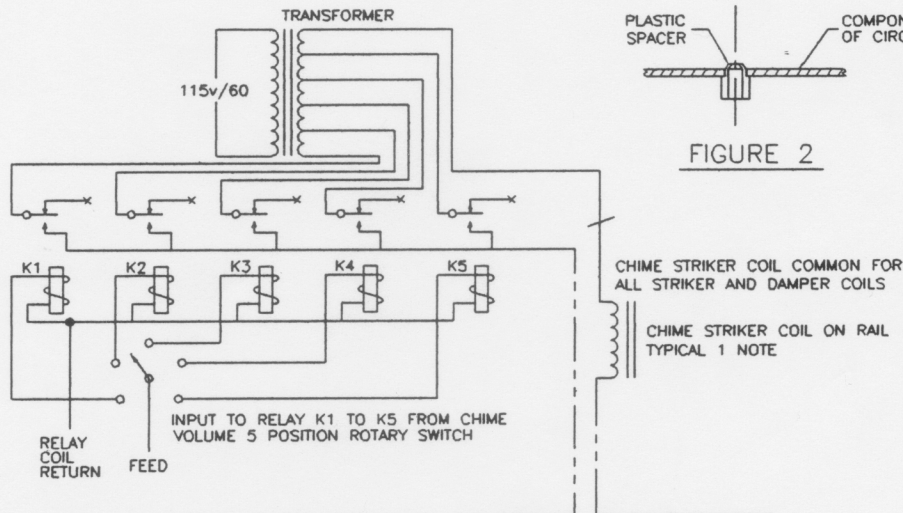
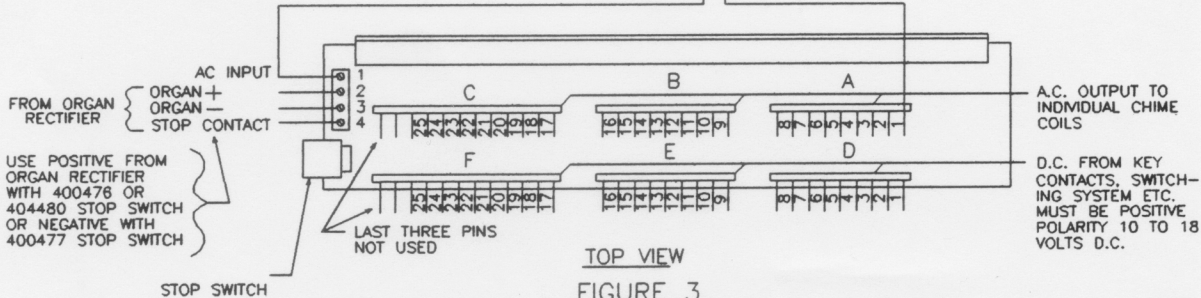


FIGURE 2



TOP VIEW

FIGURE 3

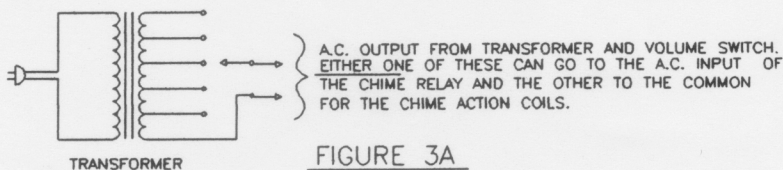


FIGURE 3A