

# PETERSON

## MODULAR KEYSWITCH

### INSTALLATION INSTRUCTIONS

#### INTRODUCTION

The **Peterson Modular Keyswitch Assembly** was designed to be easily installed in virtually any console, either new or rebuilt. The innovative design combines traditional silver wires and phosphor bronze shorting plates into a complete 61 note assembly that includes speak point adjustment screws. There are no individual parts to mount on each key, which reduces installation time to a minimum. The prewired cable is supplied with plug-in connectors and can be easily plugged into a Peterson junction board or Peterson coupler system mounted in the console. Redundant contacts greatly improve reliability over systems with a single contact.

#### INSTALLATION OF OVER KEY CONTACTS

1. Determine if the keyboards require an "upstop" on the rear of the keys to prevent them from over-travelling or flying off the keybed. This can be done by striking the front of the key extra hard. If the back of the key flies off or binds in a position where it won't return, an "upstop" is required.

The aluminum angle to which the keyswitch circuit boards are mounted can also be used as the "upstop". Position the modular keyswitch assembly so the back of the key will strike the felt that is on the aluminum angle. See **Figure 1**. This will determine the front to back positioning of the assembly.

2. Find the approximate height of the keyswitch assembly by positioning the aluminum angle where in normal playing, the backs of the keys do not hit the felt (on the aluminum angle) but will close the contacts. A slight angle of the keyswitch assembly may be necessary to accomplish this. If this is the case, the shim plates provided can be used as shown in **Figure 2**. Tall cheek blocks may need to be notched out to accommodate the aluminum angle.

3. Once the front-to-back positioning, height, and angle (if required) have been determined, center the contacts over the keys, left to right. Next, mark the location of the aluminum angle's mounting slots on the cheek blocks.

Drill 7/64" diameter pilot holes in the cheek blocks, approximately 1/2" deep, in the center of the marked slot. Be sure the pilot holes are perpendicular to the top surface of the keycheek.

You are now ready to mount the keyswitch assembly using the #6 x 1/2" screws supplied. Before fully tightening the screws, the keyswitch assembly should be carefully positioned. If some keys are not lined up with the switches once the keyswitch assembly is mounted, the individual circuit boards can be adjusted, left to right, by loosening the 4 screws that mount them.

4. A. When the contact system is used with "conventional" Peterson switching, the only wiring required is to the key feed common. Connect the Red PVC wire in the cable supplied to any convenient organ + terminal. The rest of the cable supplied will plug on to Peterson junction boards or coupler systems to complete the wiring.

B. No special wiring is required to connect to Peterson Orga-plex Systems™. One end of the supplied cable plugs on to the keyswitch assembly. When used with an original "Orga-Plex™" system, the twelve pin connector on the other end plugs on to the Key Junction and the eight pin connector plugs on to the Division Encode printed wiring board on the Orga-Plex™ relay panel. When used with an Orga-Plex Master Coupler™ system, both the twelve and eight pin connectors plug onto the Master Coupler Mother Board.

C. When using the keyswitch assembly with other equipment you may use small gauge wire and wire to the connectors supplied. The keyswitch common should be #22 to #18 AWG wire and should be soldered to the keyswitch common terminal on the keyswitch assembly. The other end should be connected to the proper common polarity for your installation.

5. If the "speak point" of all (or most) of the keys is not correct, adjust the angle of the keyswitch assembly by sliding the shim plate in or out (See **Figure 2.**). Once most of the keys speak at the proper point, individual notes can be adjusted by turning the "speak point adjustment screw" for those notes that require further adjustment. These adjustment screws are white for natural keys and black for sharp keys.

## **INSTALLATION OF UNDER KEY CONTACTS**

1. Measure the inside dimension of the key frame where the modular keyswitch is to be mounted. Adjust the mounting brackets on the ends of the aluminum channel (see **Figure 3.**) to the measured dimension, and tighten the screws to hold them in place.

2. Hold the keyswitch assembly in its approximate position under the keys and inside the key frame. Carefully align the keyswitch assembly to a point where the contacts will close at the proper speak point. Next, mark the center of the mounting holes closest to the keys (top). Drill 7/64" pilot holes 1/2" deep in the center of the marked holes.

3. Mount the keyswitch assembly using the #6 x 1/2" screws supplied. Before fully tightening the screws, the keyswitch assembly should be carefully positioned to get the speak point as close to the desired position as possible. Next, mark and drill the pilot holes for the other mounting screws and install the screws. With all four mounting screws in place, carefully adjust the speak point by rotating the channel. Once this adjustment is made you can fully tighten the screws. The contact assembly can now be positioned left to right if needed by loosening the other mounting screws. If some keys don't line up, the individual octave circuit boards may be adjusted by loosening the four screws that hold them.

4. Wire as described in Step 4 above.

5. Adjust the speak point of individual notes if necessary by turning the speak point adjustment screws.

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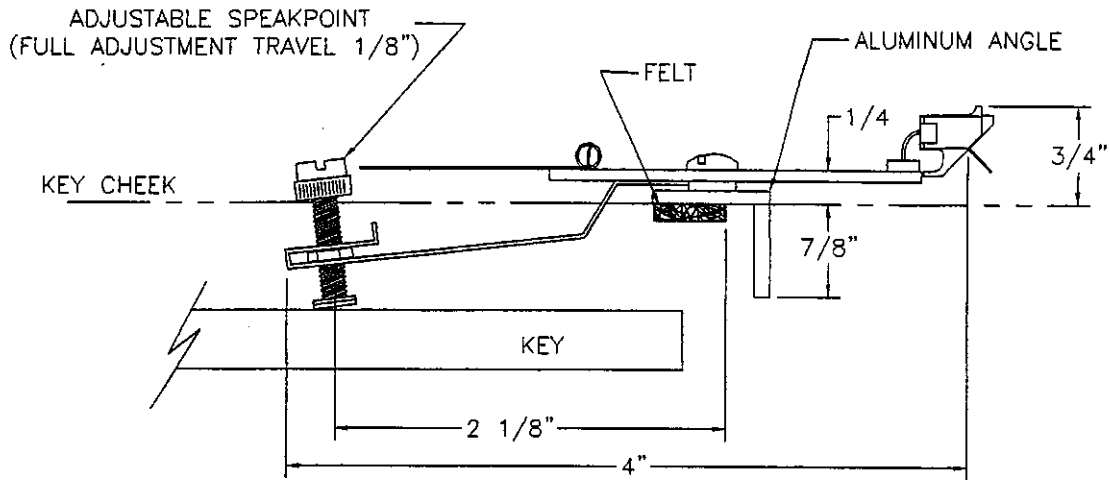
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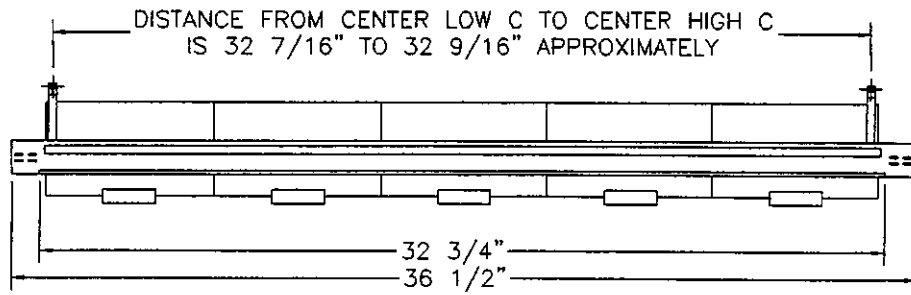
# FIGURE 1

## THE OVER KEY CONTACT RAIL

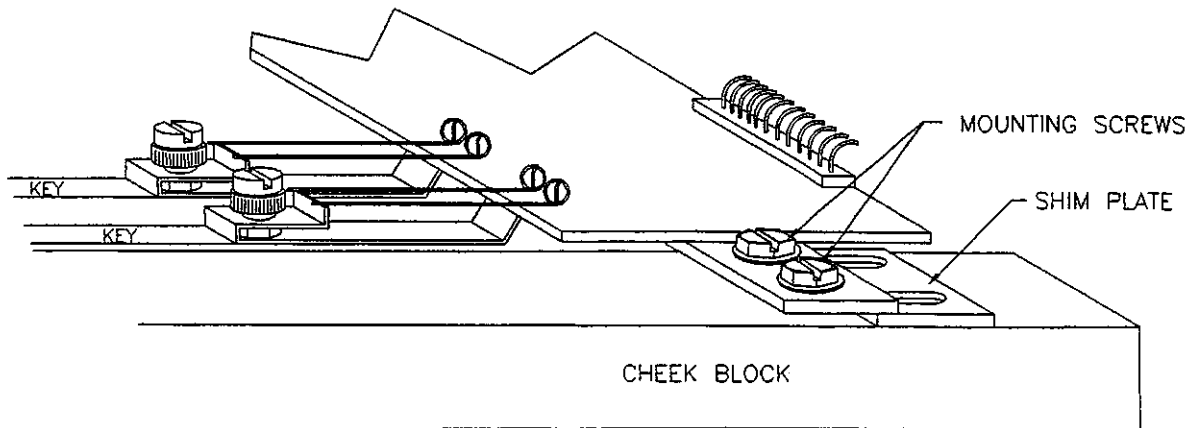


ALL DIMENSIONS ARE APPROXIMATE

## 61 NOTE KEYSWITCH ASSEMBLY

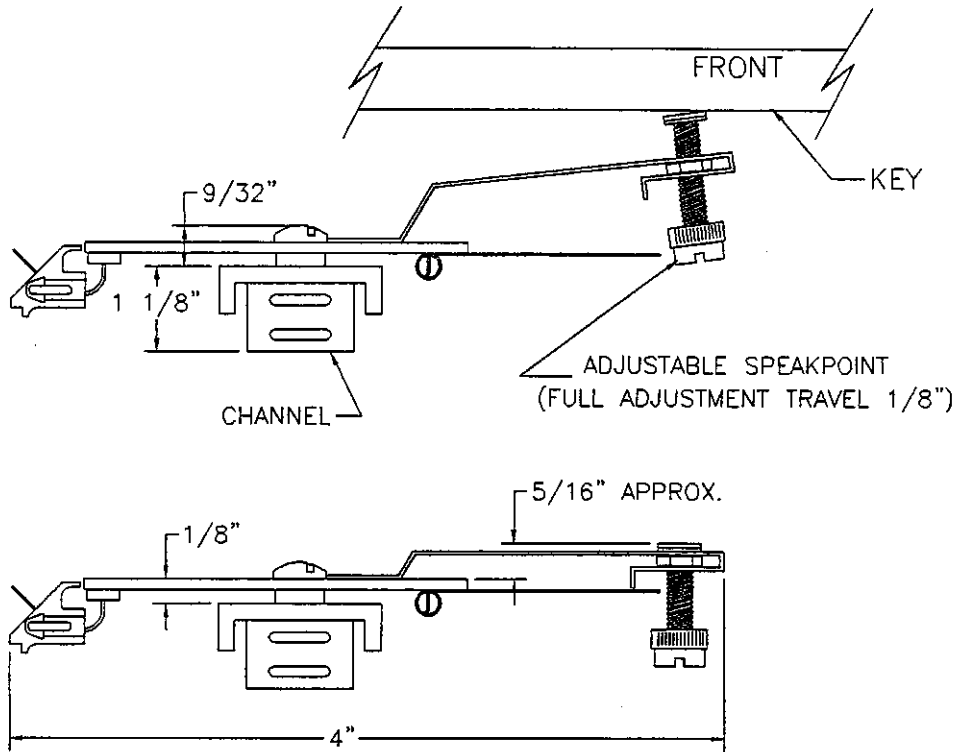


# FIGURE 2



# FIGURE 3

## THE UNDER KEY CONTACT RAIL



WITH SPEAKPOINT SCREW  
FULLY WITHDRAWN, & CONTACT  
SURFACE TOUCHING

## 61 NOTE KEYSWITCH ASSEMBLY

