

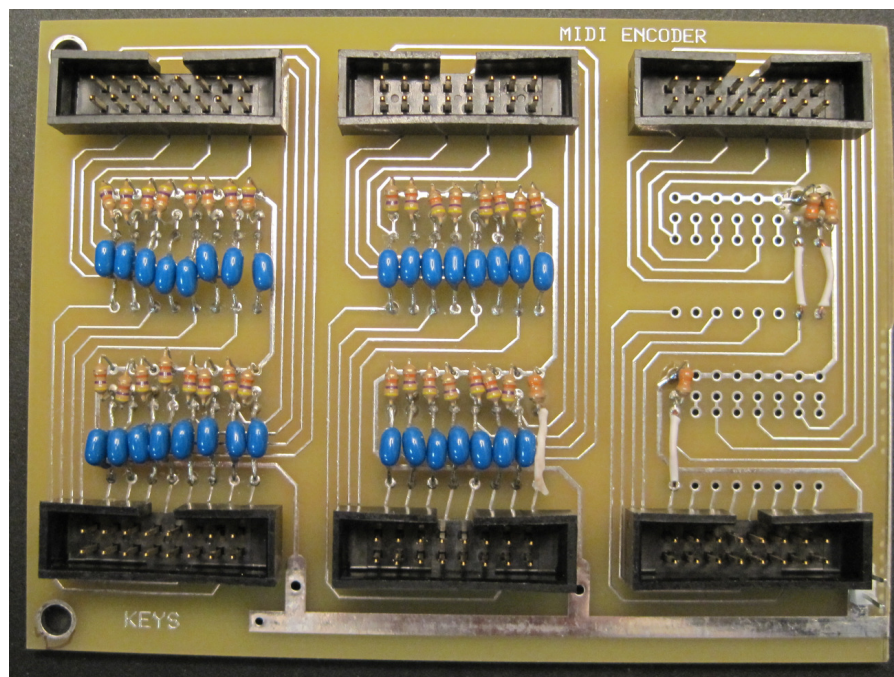
2.4 Level Shifter Assembly

The level shifter assembly converts the $-5v$ signal from the Moller combination action pistons to a signal which is compatible with the Keyboard encoder/Filter-inverter assemblies. The output of this assembly is fed to the 32 inputs which would otherwise not be used in the 64-input Pedal board encoder. This assembly is hay-wired from a printed board which was originally intended as an RC filter for suppression of keying transients. It predates the present active Filter-Inverter boards.

Ribbon Cable connectors from the Combination action pins.

Level Shifter Assembly

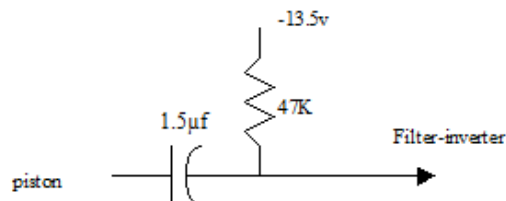
Ribbon Cable connectors to the Filter-Inverter board



The Moller (Peterson) stop drawknobs all switch between nominal 0 and $-13.6v$, as do the Cancel and sFz buttons. The other combination action pistons all switch from $-4.8v$ to 0 when pressed, as do the blank stop knobs.

The combination action pistons are AC coupled so that the signal used is momentary no matter how long the organist holds the piston. Three circuits are DC coupled since they need continuous action. They are the Setter and Cancel pistons and the drawknob which Moller had used for electronic chimes and is now used for the Great-Principal-16 stop.

The AC coupled piston circuit is:



The direct coupled circuits contain just a pullup resistor to the organ $-13.5v$. The value is especially chosen such that the combination of the Level Shifter, Filter-inverter, and pullup resistor presents $-4.8v$ to the Moller(Peterson) combination action pin and therefore does not load it:

