

MD-1 to Pedal Keyboard Cable

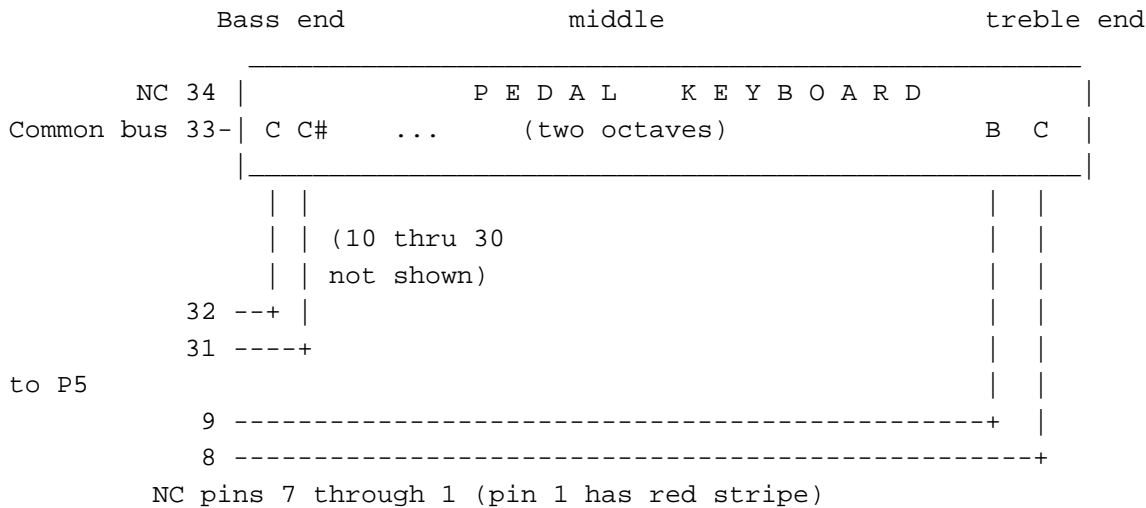
This page describes the cable which connects the pedal keyboard to MD-1 card D; it is labelled C3 in the block diagram.

In the original Schober Theatre organ circuit, each pedal operated a SPDT leaf contact. The contacts were daisy chained so that only the one lowest key pressed would play, because the circuitry was designed so that only one pedal note could be processed at one time. (This was not the case in the Recital organ.)

In the MIDI organ, multiple pedal notes can sound at one time, so the leaf contacts are wired slightly differently. Instead of being daisy chained, each set of leaf contacts provides one SPST contact which grounds the appropriate MD-1 card note input. On the MD-1 card, a pullup resistor keeps each input high. Grounding the input via the pedal's SPST switch then plays the note.

The Theatre organ uses 25 pedals, while a Recital organ would have only 32 pedals, so only half of the MD-1 card's 64 inputs are needed. One 34-conductor ribbon cable connects the pedals to the MD-1 card's P5 connector. Wires 1 through 32 are keying signals (wire 32 is the lowest note), wire 33 is the ground wire, and wire 34 is +5 volts (present at the card, but not used). There is a total of 64 keying inputs, but only 25 are used on the Theatre organ, so wires 1 through 7 of the cable are not connected at the keyboard. At the MD-1 end, the cable connects with a 34-pin IDC (insulation displacement) connector.

The 25 pedals connect to the MD-1 pc board through one 34-conductor ribbon cable, as shown below, which connects to P5 on the board. The wires are numbered 1 through 34. Wire 1 has a red stripe on it. NC means No Connection -- there are several wires that are not connected. The text below shows the actual wiring.



Here is another view of the 34 wires:

NOTE	Wire no.
	1-7 no connection
C	8 Top C on keyboard (treble end)
B	9
:	: and so on...
C#	31
C	32 Bottom C (bass end)

33 Ground wire to common bus

34 not connected

CAUTION: Pin 34 of both cables is connected to +5 volts. DO NOT accidentally short it to ground or any other lead. It is there strictly as a convenience for those users who implement positive keying instead of ground keying.