MDS MX2000 KVC.1 Two Channel Audio Card E&M Positive Keying Modifications

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General

This job instruction details modifications to the MDS MX2000 KVC.1 Two Channel audio card to provide positive keying of its E & M lines. The KVC.1 Two Channel Card is the 4 Wire E & M audio card for the MDS MX2000 microwave mux. By default its E & M lines use RS-464 or SSDC-5 signaling. This means that they use negative voltage pulled to ground to provide signaling. For connection to a device that requires signaling that is positive voltages pulled down to ground, a modification needs to be made. Examples of devices that use this form of signaling are the A800-SIM and the T800 RX and TX modules.

This job instruction encompasses all of the modifications detailed in the MDS application note APP 95066 and adds a few new modifications. The original MDS application note only provided part of the modifications required. For more information on the original MDS application note, refer to APP 95066.

This instruction assumes that the technician has a sound working knowledge of the MDS MX2000. For detailed information on the MDS MX2000, refer to the relevant service manual.

Parts

No special parts are required for this modification.

Procedure

All modifications are effected on the KVC.1 card. All of the components and points detailed below can be easily located on the KVC.1 card using the boards top overlay. Also refer to Figure 1. for component locations.

1. Remove the 1K1 2W resistors R14 and R15.
2. Set the switch SW1 to Type 1, 2, 3.
3. Set switches S1 and S2 to 'Others'. S1 and S2 are adjacent to J4.
4. Remove the wire links JP9 & JP10.
5. Add a wire link to JP4 from 1 to 3.
6. Ensure that the jumper link SP1 is set to OV (& not +5V). Link SP1 is the “Watch Dog Timer” link. If the timer is left enabled, a clicking noise will be heard on the channels audio lines approximately every 4 seconds. This clicking noise is the KVC.1 card resetting every time the watch dog timer expires.

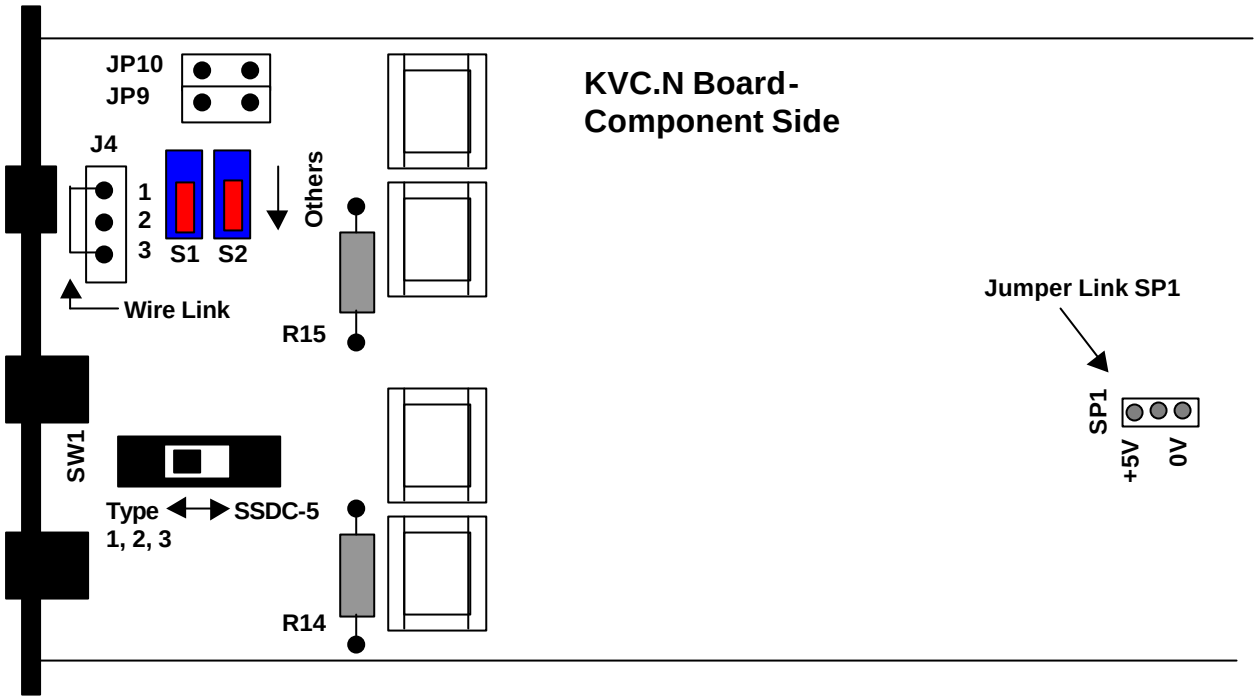

Figure 1

Installation

Connection to the MDS MX2000 KVC.1 channel port is made using an RJ45 8-way modular connector. Table 1 lists the KVC.1 cards inputs and outputs. Figure 2 shows a rear view of the KVC.1 socket.

Table 1.

KVC.1 /E&M		
Function	**Designation**	**Pin No**
+ M Lead Input (+13.8V)	SB	1
- M Lead Input	M	2
Voice Output	R1-OUT	3
Voice Input	R-IN	4
Voice Input	T-IN	5
Voice Output	T1-OUT	6
+ E Lead Output	SG	7
- E Lead Output (Ground)	E	8

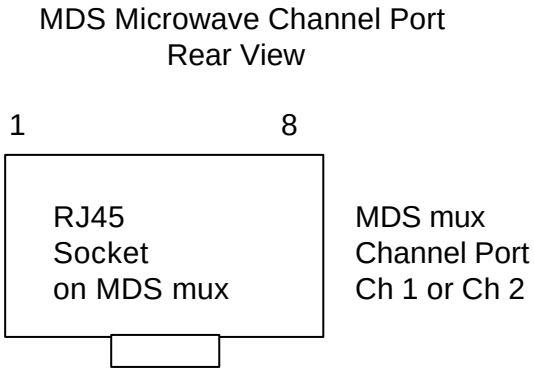

Figure 2.