

AS RECEIVED REPORT

Beginning immediately, all equipment shipping from MCI will include an "As Received Report" attached to the front cover of the service manual. We require that these reports be completed and returned to MCI, to allow us to evaluate our production and shipping procedures and to better serve you, the dealer. A copy of the "As Received Report" is attached to this newsletter.

JH-400 OP-AMP CONVERSION

All MCI JH-400 Series consoles were designed using the MCI 2001 op-amp. As these op-amps are getting harder to find, and new technology has provided better amplifiers, some users have requested changing their JH-400 consoles over to use MCI 2003M op-amps.

If the change is to be made, it must include all op-amps in the console, as the voltage rails must be lowered from $\pm 24V$ to $\pm 18V$. This can be accomplished by changing CR2 and CR8 on the regulator PC board to 18V zener diodes (1N5248).

The following modifications need to be made to the circuit board at each stage.

- Remove capacitor between either pin 7 and 8, or pin 8 and ground.
- Remove ground to pin 1. This can most easily be accomplished by cutting pin 1 on the IC socket.
- Cut land applying + voltage to pin 5 (Pin 5 was unused on the 2001. In the PC layout + voltage was often run through pin 5 to get to pin 7. As pin 5 is used on the 2003, this must be altered) but assure that + voltage is applied to pin 7.
- Add 22pf capacitor between pins 5 and 8 (2003's may oscillate in some applications. If the circuit gain is greater than 3, the capacitor value listed may need to be reduced).
- Some early JH-400 Series I/O modules included a Headroom Kit sub-board. This can be removed when using 2003's.

Advantages of making the change to MCI 2003M op-amps include improved noise, slew rate (frequency response) and reliability. MCI 2003M are available from MCI Field Service at \$8.00 list each.

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