Technical Bulletin
No: 109 – Treatise on Output Connections

Model: RS-6/12/18/24 **No:** 109

Subject: Connection of Balanced Outputs to unbalanced inputs (e.g. Otari MX-5050 BII) **Date:** 9-1-95

Symptom: Failure of output op-amps U7 and U8 and resistors R67 and R73 for the Program Bus, op-amps U9 and U10 and resistors R79 and R85 for the Audition Bus, op-amp U11 and resistor R91 for the Mono Bus.

Solution: As the technical manual clearly states in several places - if a console output is to be directly connected to an unbalanced input, one side on the balanced output should be left unterminated, not shorted to ground. This is a common error because older, transformer-balanced outputs generally could have one output leg shorted to ground with no deleterious effect.

Procedure: In one case where a failure occurred, a customer was using an Otari MX-5050 BII type recorder (not the new Mark II version). Even though the tape machine's inputs are XLR, pins 1 and 2 are both ground, i.e. the input is unbalanced.

The solution is to lift pin 2 from the console audition output.

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