

## Technical Bulletin

### No: 134 – Modifying the Output Board for Headphone/Cue Split

Problem: Customer wants cue or external audio to mix with the left headphone feed.

Resolution: Follow instructions below.

*Refer to the Output board schematic for reference designators*

Choice 1: Mixing External Audio into front headphone jack AND external headphone out, with level control

Take a capacitor and resistor (22UF non polar and 4.00K), put them in series, and connect the free resistor end to the U17-2. Any signal injected into the free end of the capacitor will be summed with the signal selected by the headphone analog switch. The signal will appear at the left headphone jack, it will be controlled by the headphone level control, and it will also appear at the headphone out pre-fader connector (J11, J13). The resistor and capacitor must be physically close to U17.

Choice 2: Mixing External Audio into front headphone jack only, with level control

Take a capacitor and resistor (10UF non polar and a 20.0K), put them in series, and connect the free resistor end to U5-1. Any signal injected into the free end of the capacitor will be summed with the signal selected by the headphone analog switch. The signal will appear at the left headphone jack and it will be controlled by the headphone level control. The resistor and capacitor must be physically close to U5.

Choice 3: Mixing External Audio into front headphone jack only, without level control

Take a capacitor and resistor (10UF non polar and 20.0K), put them in series, and connect the free resistor end to U3-7. Any signal injected into the free end of the capacitor will be summed with the signal selected by the headphone analog switch. The signal will appear at the left headphone jack. The resistor and capacitor must be physically close to U3.

It is strongly suggested that a differential input stage be added to bring the external signal into the console. This could be accomplished by modifying a console DA card. Good wiring practices must be used, including shielded cable between the free end of the capacitor and the differential input stage.



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