

Cinema~~A~~*coustics* ENGINEERING NOTES

Note 002, 16 Apr 98

DTS-6D DIGITAL OUTPUT MODIFICATION AND CABLE REPLACEMENT

Many users have experienced problems operating the CA-CP600 Digital Cinema Processor with the DTS-6D and DTS-6DSV direct digital output. Peavey engineers have spent considerable time evaluating this problem. Extensive testing has shown that the DTS-supplied line driver ICs and DTS-supplied direct digital cable are inadequate for robust field operation. Fortunately, the line driver ICs are socketed and field-replaceable with robust pin-compatible devices. By following the DTS modification and cable replacement described in this Engineering Note, robust and reliable direct digital audio from DTS will be obtained.

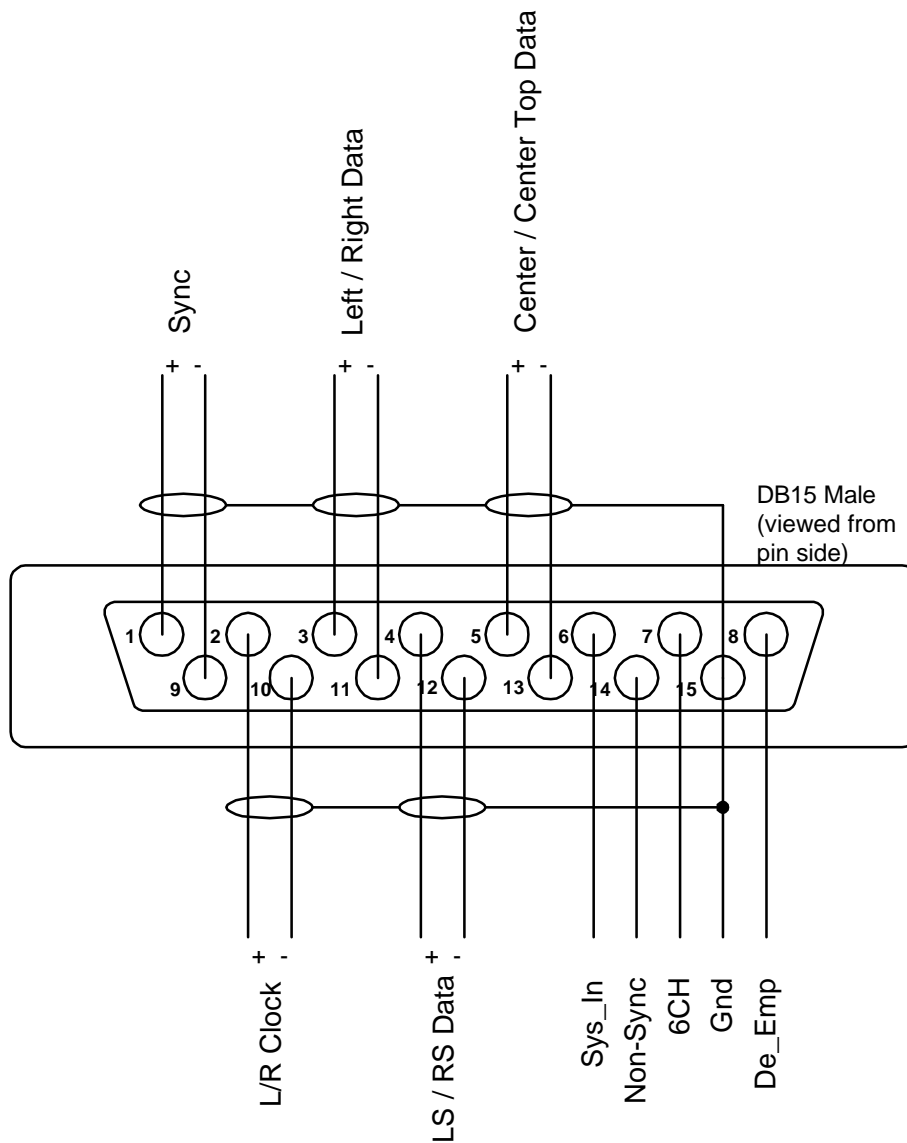
To upgrade the DTS-6D or DTS-6DSV, replace line driver ICs U40 and U41, originally MC3487, with the higher speed version MC34C87 (Motorola) or DS34C87 (National). While not electrically identical, the SN75ALS192 line driver (Texas Instruments) will also correct the problem. The DS34C87 can be purchased from Digikey as part number DS34C87TN-ND.

To replace U40 and U41, remove the top of the DTS unit and the rear panel to which the output board is attached. Next remove the DTS output board. ICs U40 and U41 are located at the top of the board next to the DB15 output connector. Take caution to work on the unit in a static-free environment and use a ground strap on your wrist.

The direct digital cable supplied with the DTS-6D is also found to be inadequate. Shielded twisted pair data cable should be used for the digital data pairs, wired as shown in the diagram on the following page. Low capacitance data cable such as Belden 9808 (7 pair) or multiple lengths of Carol C6040 (3 pair) should be used. Carol C6040 can be obtained from Digikey as part number C6040-X-ND.

For those who may find it useful, we have assembled a complete Digikey parts list, given below. (In the US, call 1-800-344-4539 for Digikey sales.)

| <i>Description</i> | <i>Digikey Part No.</i> |
|---------------------------------------|-------------------------|
| DS34C87 line driver (2 required) | DS34C87TN-ND |
| 3-pair data cable | C6040-X-ND |
| Male D-Sub 15 solder-type connector | A2044-ND |
| Female D-Sub 15 solder-type connector | A2048-ND |
| D-Sub 15 Shells (2 required) | A2062-ND |



DTS DIRECT DIGITAL INTERFACE WIRING

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