Film-Tech

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Dolby Laboratories Inc

Field Bulletin 227

CP500 Loss of Sound During Power-Up

Cat. No. 675A or Cat. No. 662A

- ☐ Modification Urgent
- ☐ Modification Required
- ☐ Modification Recommended
- ☒ Modification if Problem is Present
- ☐ Information Bulletin

Symptom

When the CP500 is first turned on, there is no sound on some or all channels in the cinema. The front panel display shows audio signals present, but some or all of the corresponding output signal present LEDs on the Cat. No. 682 and Cat. No. 683 are not illuminated. Turning the CP500 power off and on again clears the fault and sound is heard on all channels.

The loss of sound generally occurs in pairs of channels: left and right, left surround and right surround or centre and subwoofer. A single pair of missing channels is the most common problem but in some circumstances all three pairs (all six channels) may be lost.

The loss of all channels on power-up is more likely if Version 1.61EX software is in use.

Cause

One or more of the Digital-to-Analogue Converter ICs on the Cat. No. 662A are not initialising correctly and are therefore unable to decode the digital audio signal being sent to them. There are two possible reasons for this same fault occuring in the CP500. The first is due to noise on two clock lines on the Cat. No. 675A during the power-up cycle. The second is due to internal changes within the Digital to Analogue converter IC on the Cat. No. 662A.

Solution

Because it is difficult to determine which of the two problems is causing the loss of sound in any particular unit we suggest that the following sequence of modifications is tried:

Dolby

Signal Processing and Noise Reduction Systems

100 Potrero Avenue
San Francisco, California 94103-4813
Telephone 415-558-0200
Facsimile 415-863-1373
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Wiltshire SN4 8QJ
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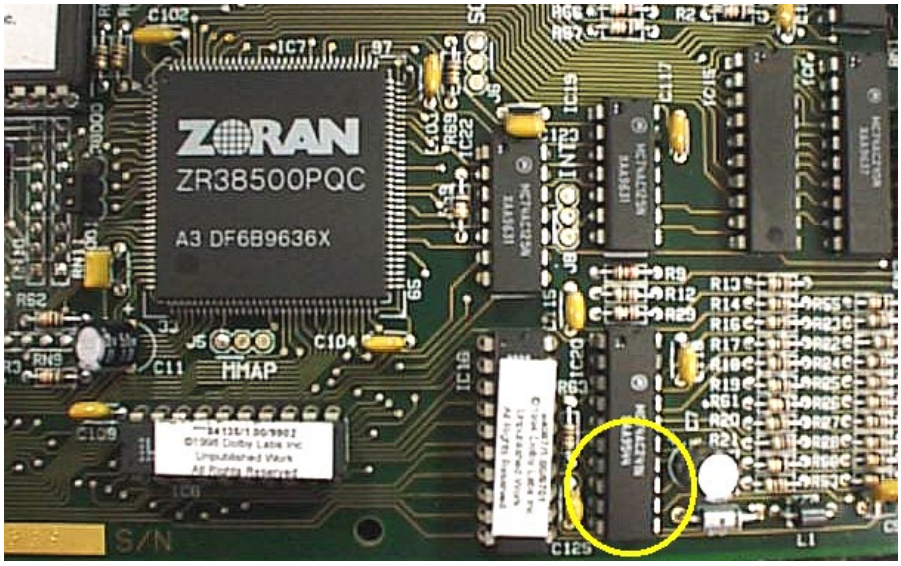
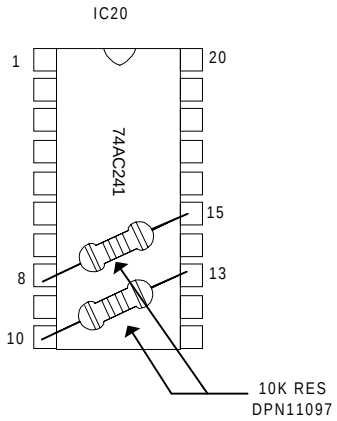
1. Remove the Cat. No. 675A board in slot J14 and add a resistor to ground on each of the two noisy clock lines.

   Using the photograph below as a reference locate IC20 on the Cat. No. 675A board.



   Carefully solder one 10k ohm 5% 0.25W resistor between pins 13 and 10 of IC20 and another 10k ohm 5% 0.25W resistor between pins 15 and 8 as shown on the drawing and photograph below.

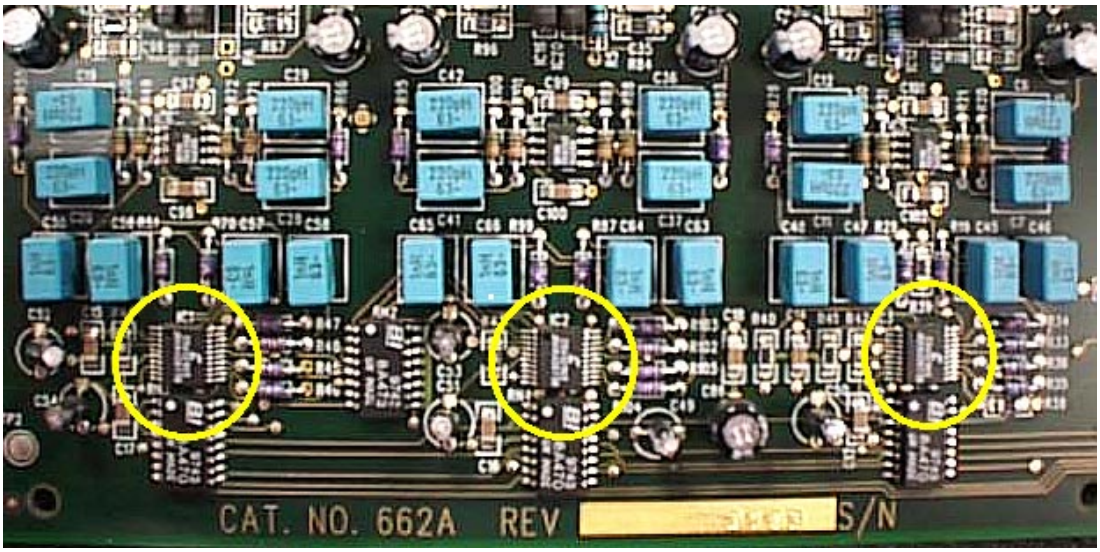
   Note: R63 and C125 to the left of IC20 may or may not be installed depending upon the age of the board.



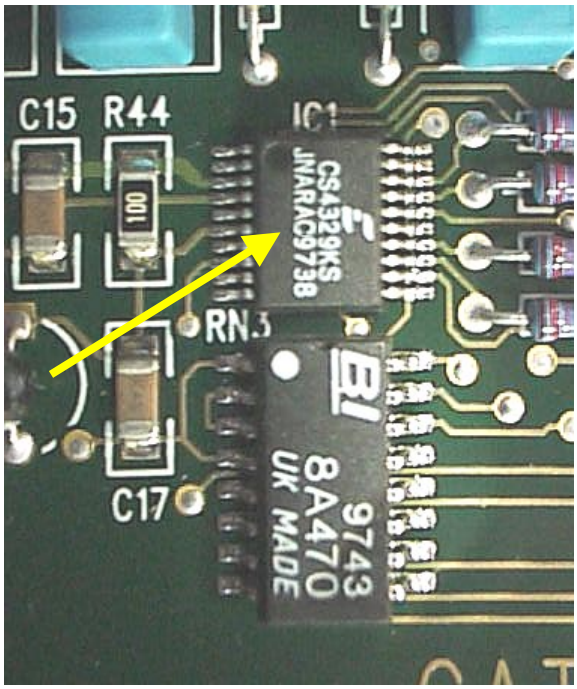
   Replace the Cat. No. 675A in slot J14.

   If after adding the two resistors to the Cat. No. 675A the problem of loss of channels on power-up still exists, check the revision of the D-to-A converters on the Cat. No. 662A as described in section 2 below.

2. Remove the Cat. No. 662A board from slot J11. Using the photograph below as a reference locate the D-to-A converters IC1, IC2 and IC3.



Check the marking on each of the three ICs to determine the manufacturer's revision code.



The revision code is included on the second line of text on the body of the IC and is the last letter in the sequence before the numbered date code. The example above shows revision code "C" in the line JNARA**C**9738.

If any of the ICs show revision code C, contact Dolby Laboratories for a replacement Cat. No. 662A card.