Film-Tech

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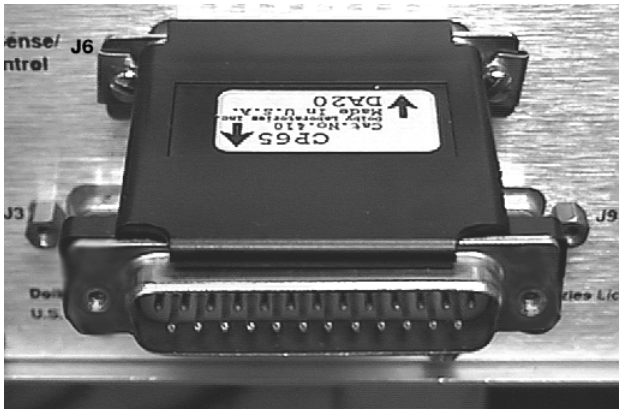
Cat. No. 410
Reversion Accelerator
For DA20 / CP65 / CP55

Installation Instructions



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Issue 1
Dolby Part No. 91562
S98/12065

Introduction

The Cat. No. 410 eliminates a sound dropout that occurs when the CP65 or CP55 Cinema Processor switches from digital to analog playback if digital film data is not available (termed a "reversion").

Switching to analog playback normally occurs 70 ms after the command is received, resulting in a period of silence. The Cat. No. 410 accelerator reduces the length of this silent period to about 5 ms (inaudible).

The unit is built into a connector housing of the type usually used for PC null modems or connector gender changers. A small printed circuit board inside the housing contains the necessary circuitry.

Installation - CP65

Installation consists of two parts:

- Modifying the Cat. No. 443 card located in the CP65 if necessary.

  NOTE: CP65 serial numbers higher than 506824 (US production) and 7082 (UK production) have been modified at the factory.

- Inserting the Cat. No. 410 into the logic cable path from the DA10/20 to the CP65

Examine your Cat. No. 443 before beginning these modifications. Units with "**REV 3A"** stamped on the solder side of the Cat. No. 443 circuit board have been factory modified. Also, if your board has the additional resistor shown in Figure 1 below, then modification to your board is unnecessary.

Cat. No. 443 Modification - See Figure 1

1. Remove the Cat. No. 443 card and hold it with the edge connector facing to the left.
2. Remove diode DZ24 shown at the upper left of figure 1.
3. Prepare a 10kΩ ¼ watt 5% resistor by soldering an extension wire on one of its leads as shown in Figure 1.
4. Solder the short 10k resistor lead to the left-hand lead of resistor R60.
5. Solder the extension wire to the square copper pad of DZ24 as shown.

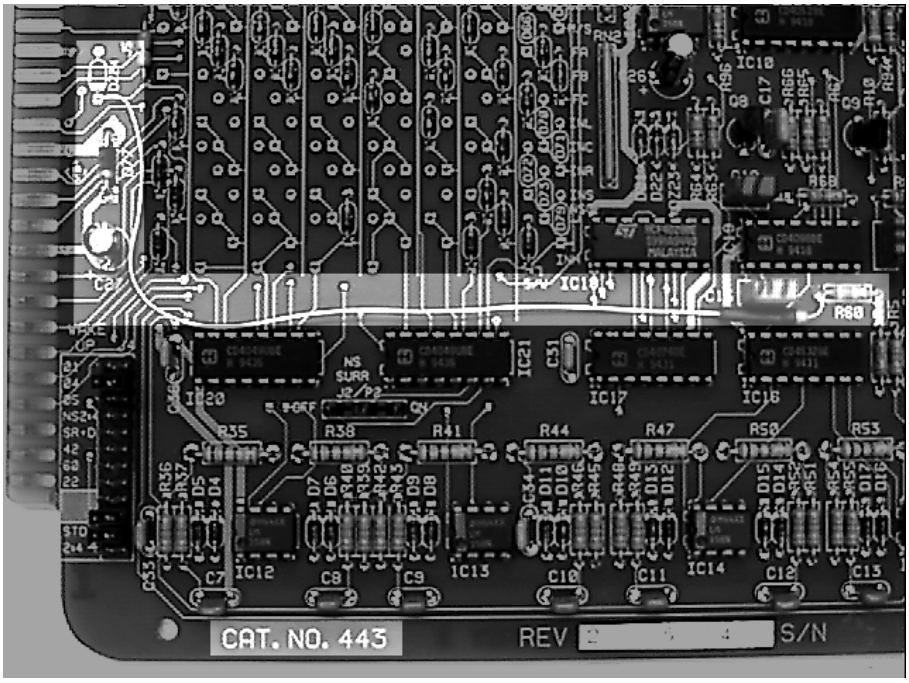

Figure 1 - Cat. No. 443 Modification

Cat. No. 410 Installation

The Cat. No. 410 housing is marked for proper orientation. Plug the DA20 logic cable into the end marked "DA20", then plug the combination into CP65 connector J18 as shown. Tighten the screws to secure it in place.

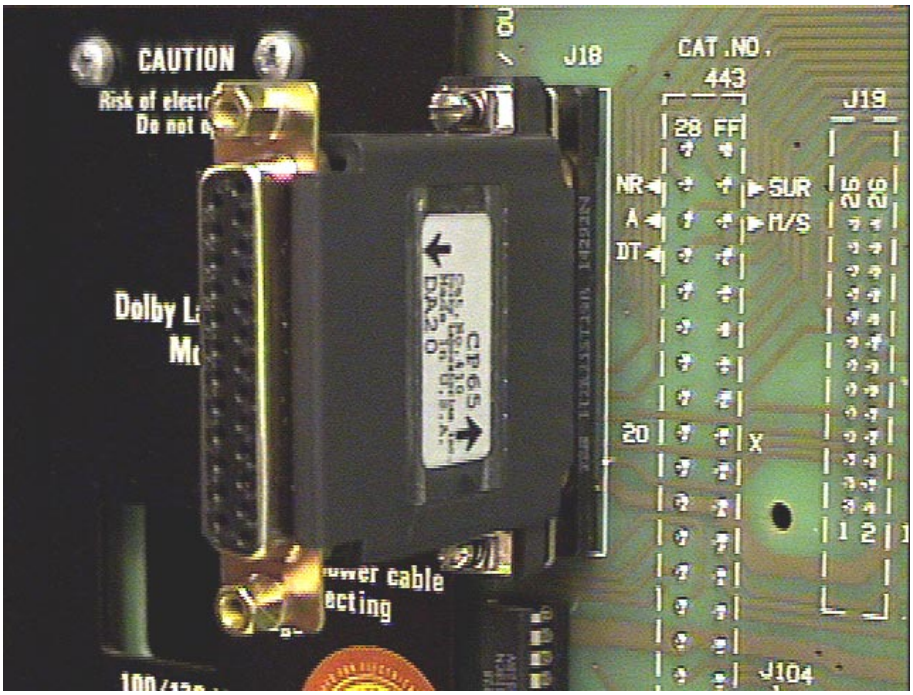

Figure 2 - Cat. No. 410 mounted to CP65

Testing

Play a film containing Dolby Digital sound. Interrupt the light path in the digital film reader. This will force a reversion to the analog sound track. Verify that the analog sound is automatically selected without audible dropout. You can compare the new reversion performance with the old by removing the Cat. No. 410 from the control path and re-testing using the same material.

Installation - CP55

NOTE: A 25 pin female D-connector with solder terminals is required for this installation.

Installation consists of four parts:

- Adding a jumper wire to the Cat. No. 243
- Modifying the logic cable
- Modifying the Cat. No. 410
- Inserting the Cat. No. 410 into the logic cable path from the DA10/20 to CP55

Cat. No. 243 Modification

1. Remove the Cat. No. 243 card and hold it with the edge connector facing to the left.
2. Add a jumper wire from the left side of resistor R60 to contact B of the edge connector as shown.

NOTE: Avoid using excessive solder which can flow too far onto the gold contact B.

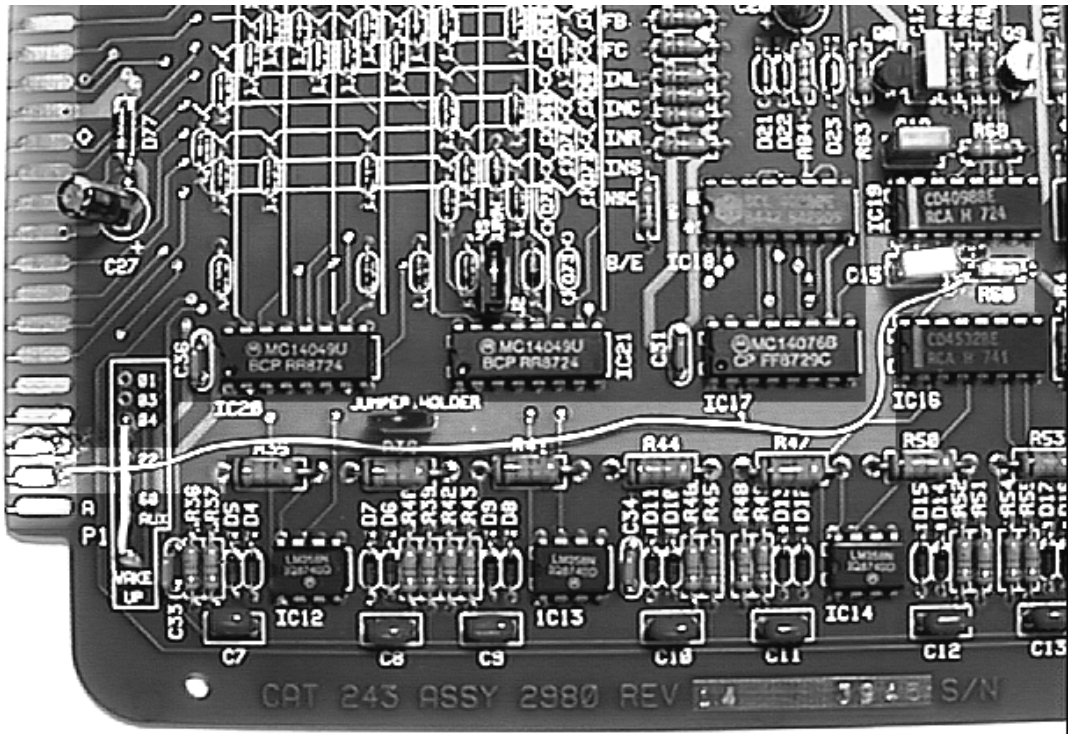

Figure 3 - Cat. No. 243

Logic Cable Modification

1. On the Cat. No. 321 automation interface card, remove the fanning strip(s) from terminal TB2.
2. Remove the Cat. No. 321 automation interface card from the CP55 backplane.
3. Unplug the logic cable from the DA10/20.
4. Cut the **white** wire originally soldered to the fanning strip on TB2.
5. Strip, and solder this wire to the copper feed through hole as shown.

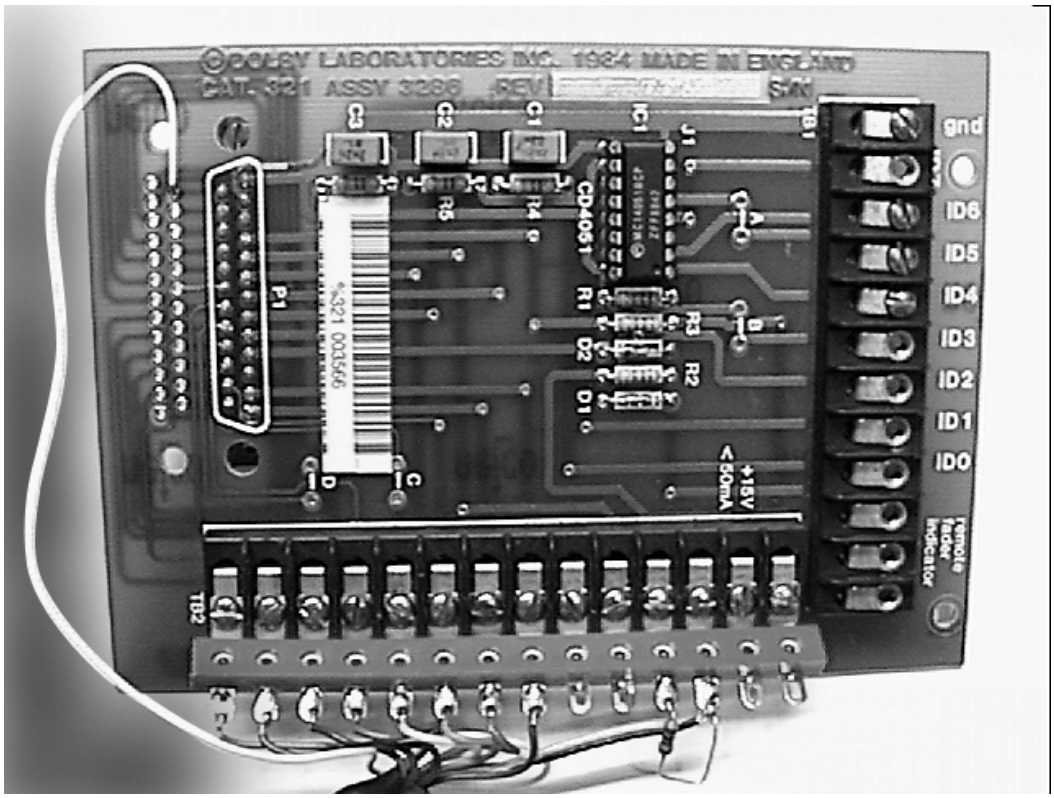

Figure 4 - Logic Cable Modification

6. On the other end of the logic cable, cut the wires from the existing 25 pin female D-connector.
7. Solder the wires to a new 25 pin female D-connector (solder cup style) using the table below. Wire colors are shown for the TB2 fanning strip end of the cable for reference.

New D-Connector Pin No.	Wire Color
1	Brown
2	Orange
3	Red
4	Yellow
5	Gray
6	Blue
7	Purple
8	Green
12	Black
25	White

Signal Designation at TB2	Wire Color
S0 (01-mono optical)	Brown
S1 (05-Dolby SR)	Red
S2 (04-Dolby Stereo)	Orange
S3	Yellow
S4 (22-mag)	Green
S5	Blue
S6 (60-non sync)	Purple
S7 (10-Dolby SR D)	Gray
Ground	Black
Feed through hole (see Figure 4)	White

Table 1 - CP55 to DA20 Sense/Control Rewiring

8. Remount the Cat. No. 321 to the CP55 and reattach the fanning strip(s).

Cat. No. 410 Modification

Disassemble and reverse the housing end for end. This allows you to reverse the two screws as shown. Do not re-use the hex threaded spacers.

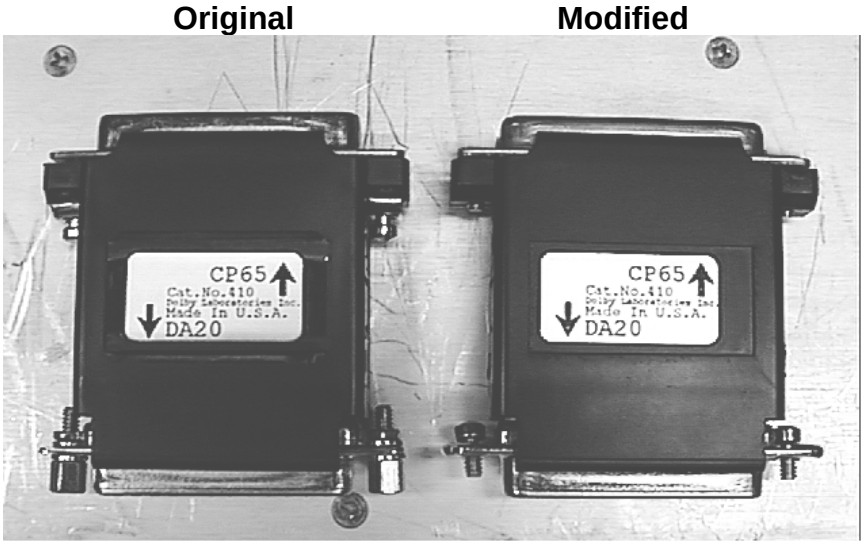

Figure 5 - Housing and Screw Modification

Cat. No. 410 Installation

1. Plug the Cat. No. 410 into DA20 rear panel connector J6 and tighten the screws to secure it in place as shown.
2. Plug the modified logic cable into the Cat. No. 410.

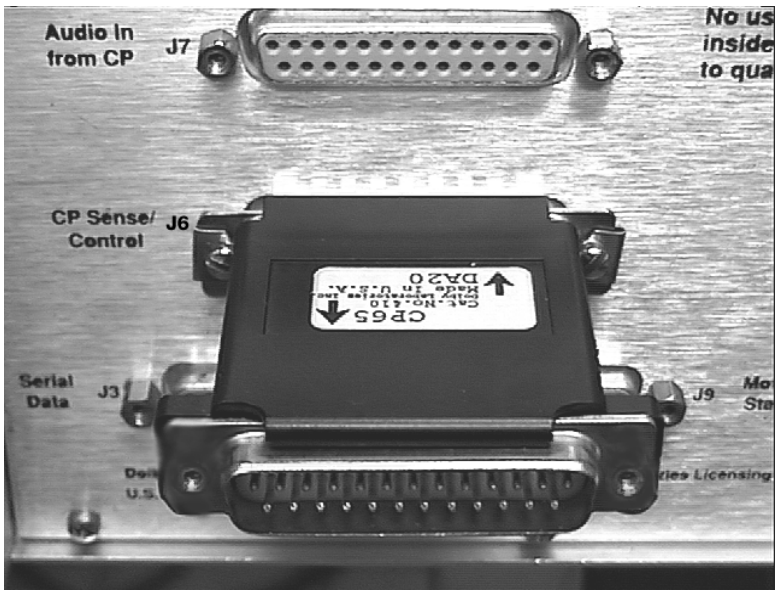

Figure 6 - Cat. No. 410 mounted to DA20

Testing

Play a film containing Dolby Digital sound. Interrupt the light path in the digital film reader. This will force a reversion to the analog sound track. Verify that the analog sound is automatically selected without audible dropout. You can compare the new reversion performance with the old by removing the Cat. No. 410 from the control path and re-testing using the same material.