



Dolby Laboratories Inc

Field Bulletin 223

Models CP500 and DA20

Slow switching to Dolby Digital sound

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|---|
| <input type="checkbox"/> Modification Urgent |
| <input type="checkbox"/> Modification Recommended |
| <input checked="" type="checkbox"/> Modification Required if Problem is Present |
| <input type="checkbox"/> Modification Required on Early Units |
| <input type="checkbox"/> Information Bulletin |

Symptom

The cinema processor sometimes takes up to 10 seconds to switch to the Dolby Digital format when Format 10 is selected and valid Dolby Digital data first appears on film.

Background

When this problem occurs, the Cat. No. 671 boards usually indicate all corners found but the error rate indication on the Cat. No. 673 or Cat. No. 673A shows "F" and the block error light is illuminated until about 10 seconds into the film. If the *DRAS10* program is running, it can be seen that the focus histogram does not form immediately and the processor will not switch to Dolby Digital audio until the histogram has taken shape.

Potentially Affected Units

This slow response has been seen in some DA20 and CP500 units shipped between June 1996 and May 1998. This corresponds approximately to DA20 serial numbers 1450 to 2665 and CP500 serial numbers up to 3500.

Change Required

The decoding of the video signal which is read from film is carried out on the Cat. No.671 cards, controlled by software that is loaded from the Cat. No. 673(A) card on power up. One of the software modules in the Cat. No. 673(A) must be changed to overcome the occasional long delay in being able to fully process the digital data from film.

Recent Dolby Cinema Processors have left the factory with the new software module already installed. To check whether the processor needs upgrading, turn on the processor as normal and turn the rotary switch at the top of the Cat. No. 673(A) to position **1**. If the processor has already been upgraded, then the seven-segment red LED display will show the letter "A". If the LED display shows the number 9 or below then you will need to follow the instructions in this bulletin.

This field bulletin describes two methods that may be used to upgrade the software:

- Load the new software using a computer running the program supplied. Or
- Replace IC15 located on the Cat. No. 673(A) card.



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Upgrade Procedure - Follow either of the two methods shown below:

1. Load the software from a laptop computer using the upgrade disk

The upgrade disk (Part Number 82040) is obtainable from Dolby Laboratories. A computer and a pin-to-pin serial data cable as used to run *DRAS10* or *Load500* software is required to upgrade the Cat. No. 673(A) card in either a DA20 or CP500. See the Readme document on the upgrade disk for the minimum computer requirements.

In addition to the new software file itself the floppy disk supplied contains a number of files to automate the upgrade procedure. The disk may be used in one of two ways. It is configured as a boot disk and the upgrade program will automatically run if the computer is powered up with the floppy disk in drive A. Alternatively, the files can be copied to a new directory on the computer hard disk and the program run from DOS in the same way as the *DRAS10* and *Load500* programs.

To continue the upgrade process connect the computer to the serial port on the DA20 or CP500 using a pin-to-pin serial data cable.

1. Rotate the switch on the Cat. No.673(A) to position **8** and press the reset button at the bottom of the card. After a few seconds, the letter "A" should appear on the seven segment red LED display.
2. Start the upgrade program either by powering up the computer with the floppy disk in place or by running the program from DOS by typing **upgrade** at the DOS prompt.
3. After the program has opened, press function key **F8** on the computer to load the new file. As the new software module is loaded, the display on the Cat. No. 673(A) will change from **A** to **C** and then back to **A**.
4. After the file has been loaded press function key **F4** to exit the program.
5. Return the rotary switch on the Cat. No. 673(A) to position **0** and press the reset button at the bottom of the card.

To check that the module has been upgraded successfully, turn the rotary switch at the top of the Cat. No. 673(A) card to position **1**. The LED display should now show the letter "A".

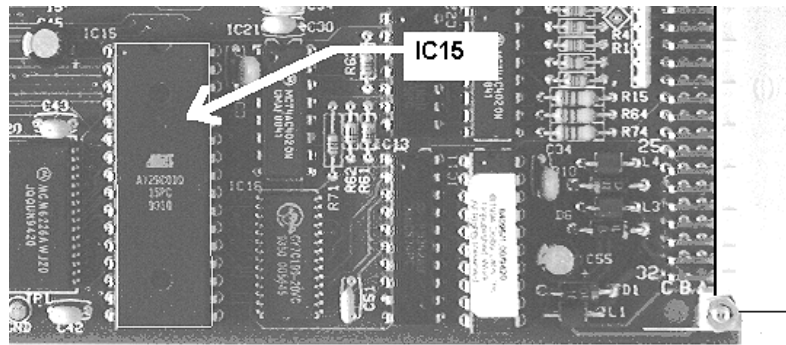
2. Replace IC15 on the Cat. No. 673(A)

Install a new IC15 ROM which is obtainable from Dolby Laboratories:

Part Number 84092 for Cat. No. 673, or
Part Number 84147 for Cat. No. 673A.

Note: It is essential to remove power from the unit before removing boards and ICs. Take care to avoid electrostatic damage by wearing an earthing strap.

1. Switch off the cinema processor and remove the Cat. 673(A) card.
2. Locate IC15. Note the orientation of the IC.



3. Be sure that your wrist strap is adequately grounded and gently remove IC15 from its socket using an IC extractor tool.
4. Install the new IC15 in the socket. Be sure that no pins are bent and that all pins fit into the socket holes.
5. Reinstall the card in the processor.

3. Dynamic Upload

The software contained in this upgrade will be included in a future dynamic upload from film but no schedule has yet been set for its release.