

FILM-TECH

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	TITLE DTS-6AD PLL Test		NUMBER TN-E676	REV 	Page 1 of 2
	DATE PREPARED Feb. 6, 2003	CREATED BY: K. Hultgren	EFFECTIVE DATE 2/7/03	APPROVED BY: K. Hultgren	

DTS, 5171 Clareton Dr., Agoura Hills, CA 91301

Contact Document Control for the latest revision.

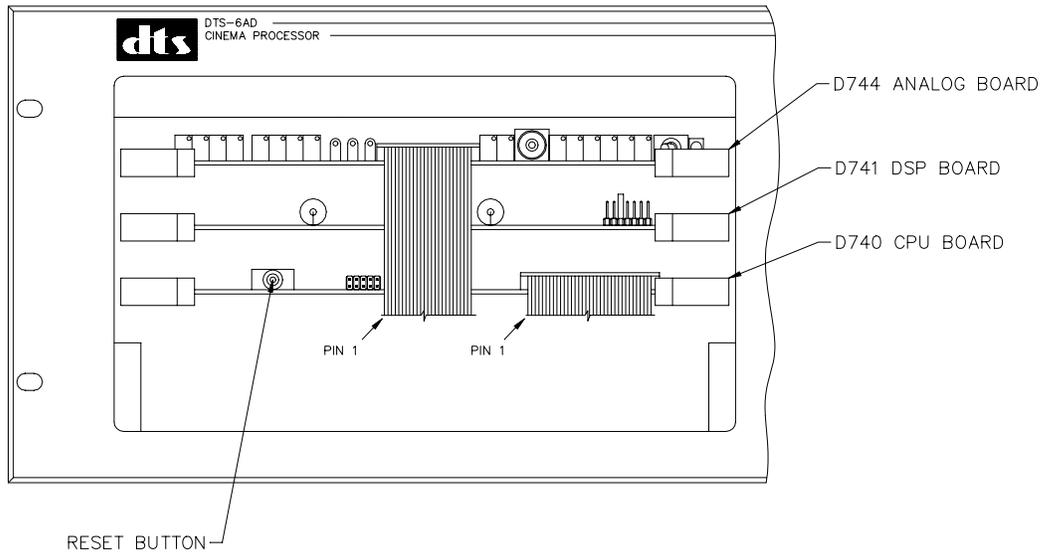
The phase lock loop, or “PLL,” circuit must be properly set for the DTS-6AD to correctly track timecode. The “PLL” circuit locks onto the projector motor speed that should be running at **24 fps +10% to -15%**. The DTS-6AD must be updated with **CPU version 2.01** (or higher). To see the version screen, shown below, press **Menu** button and then **F7 (VERSION)** button. To get a free software upgrade, contact DTS technical support at (818) 706-3525, or email cinematech@dtsonline.com

VERSION
Screen

CPU VERSION	2.01
DSP CONTROLLER	1.03
DSP FIRMWARE	2.01

How to check the PLL:

- ① **Power on** the unit and remove the front display. Find the RESET button on the CPU board.



CONTROL PANEL NOT SHOWN

- ② Now, press the RESET button and hold down the front display panel “OK” button. Watch the front display screen. First it will run a self test:

```
DTS-6AD  BOOT V1.00
(FMT) - Install Program
```

⇐ showing V1.00 as boot firmware version

- ③ Then, you should see an “OK”

```
DTS-6AD  BOOT V1.00
Self test...OK
(FMT) - Install Program
```

- ④ When you see the “OK” disappear, immediately let go of the “OK” button. You should see the display show the “key test.”:

```
KEY TEST:  press keys
(OK for next test)
```

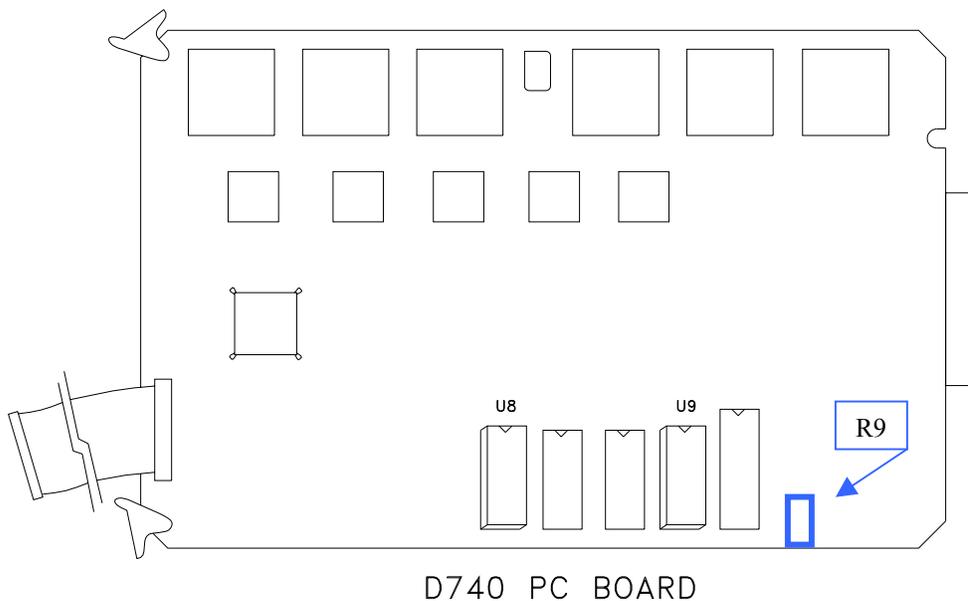
- ⑤ Press “OK” button to scroll to the PLL screen:

```
Characterizing PLL
PLL center frequency set.
Set R9 for >12.5 mhz
Press OK to continue
Center = 12.9 mhz
```

Notice the highlighted “Center = 12.9 mhz”. This indicates the PLL setting for the unit. **The PLL must be set between 12.5 and 13.5 MHz.**

- ⑥ If the unit’s PLL setting is outside the correct range, then adjust **R9** on the D740 CPU board. **Be sure to power off the DTS-6AD before removing any boards or removing cables from the front display.**

To access R9, carefully pull out the D740 (bottom) board. R9 is very sensitive so turn it very slightly and repeat the test until the correct setting is achieved (CCW to lower and CW to raise).



- ⑦ **With power off**, carefully reinsert the D740 CPU board and reconnect the display. Be sure all cables are properly reconnected. Power on unit and verify it boots correctly.