

CDP-400/501/501ES /610ES

SERVICE MANUAL

CDP-400/-610ES:
US Model
CDP-610ES:
Canadian Model
CDP-501/-501ES:
AEP Model
UK Model
E Model

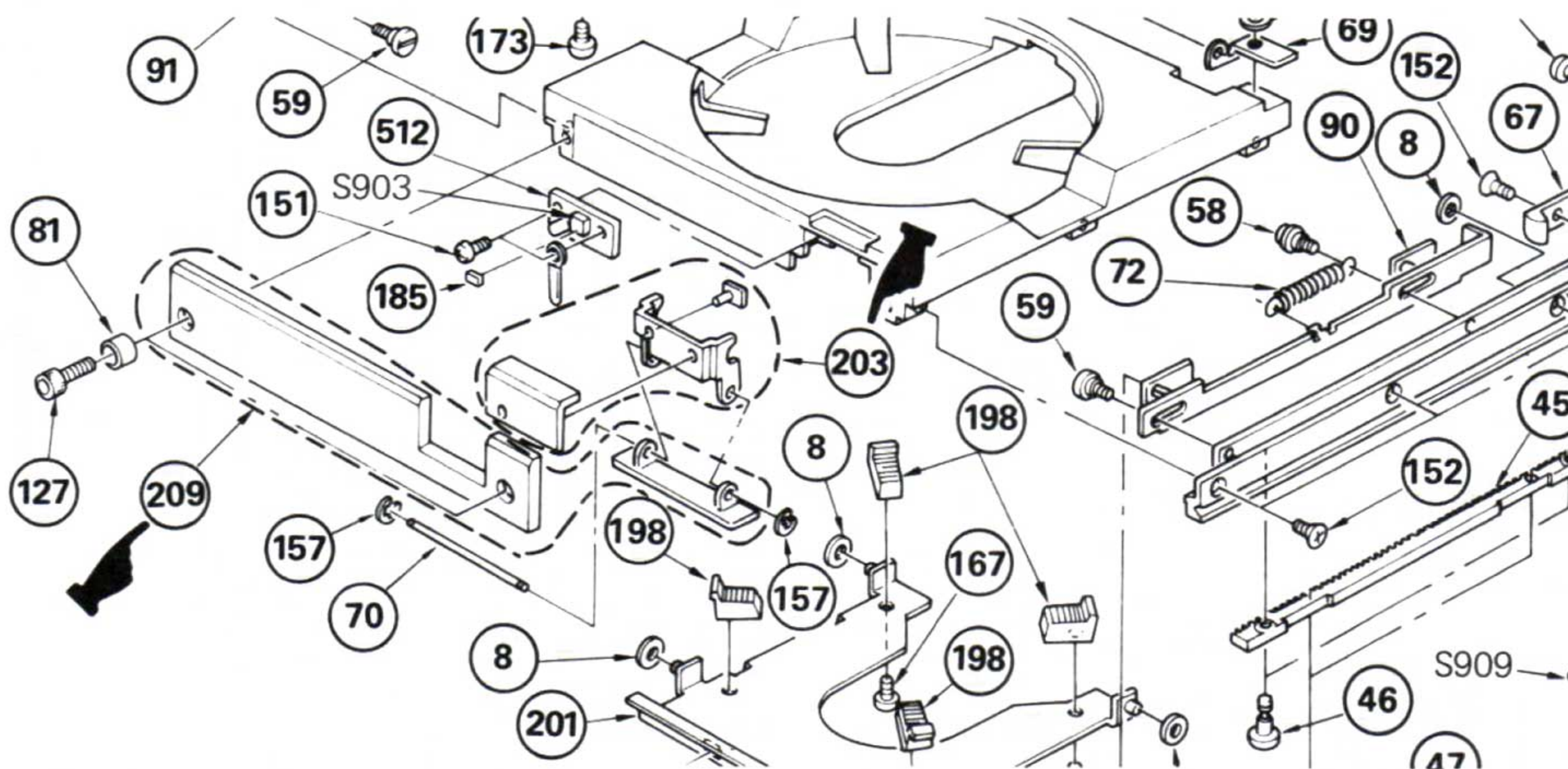
CORRECTION

SUBJECT: Exploded View and Parts List

File this correction with the service manual.

No. 1
March, 1984

1. EXPLODED VIEW: Page 75



2. PARTS LIST: Page 80

No.	Part No.	Description
203	X-4884-524-1	(CDP-501ES, -610ES) ... BUTTON ASSY, EJECT (BLACK)
203	X-4884-524-2	(CDP-400, -501) ... BUTTON ASSY, EJECT (SILVER)
209	X-4901-709-1	(CDP-501ES, -610ES) ... PLATE ASSY, ORNAMENTAL BASE (BLACK)
209	X-4901-709-2	(CDP-400, -501) ... PLATE ASSY, ORNAMENTAL BASE (SILVER)

COMPACT DISC PLAYER
SONY®

Sony Corporation

CDP-400/501/501ES /610ES

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CORRECTION

No. 2

June, 1984

SUBJECT: Part No.

File this correction with the service manual.

No. 208 on page 80 should be read as follows.

<u>No.</u>	<u>Part No.</u>	<u>Description</u>
208	X-4901-708-1	(CDP-400, -501) ... HOLDER ASSY, FUNCTION BUTTON
208	X-4901-708-2	(CDP-501ES, -610ES) ... HOLDER ASSY, FUNCTION BUTTON

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CORRECTION

File this Correction with the Service Manual.

**Subject: DISC EJECT AND RF PLL ADJUSTMENT AND
PART No. OF IC**

No. 3
August, 1984

Sometimes when a compact disc is loaded, the disc table is automatically ejected in about 10 seconds. This can sometimes be corrected by adjusting the RF PLL and making some other alignments mentioned on pages 41 through 49 of the service manual. Since the description of the RF PLL adjustment is not correct, please refer to the procedures described below.

1. RF PLL Adjustment

This is done to adjust the free-run frequency of the VCO to the optimum point. It is also done to set (at the time when the disc spin servo is not engaged) the disc revolution to the right speed which will be obtained when the servo is engaged. If this is not adjusted properly, the servo loop will not close at the disc spin start and the unit will fail to read the data from the disc. Then the disc table will be ejected.

In this adjustment, three variables are involved. Two of them are for VCO adjustment and the other one is to determine the disc speed in case the servo loop is open.

— As to the adjustment procedure, refer to the next page. —

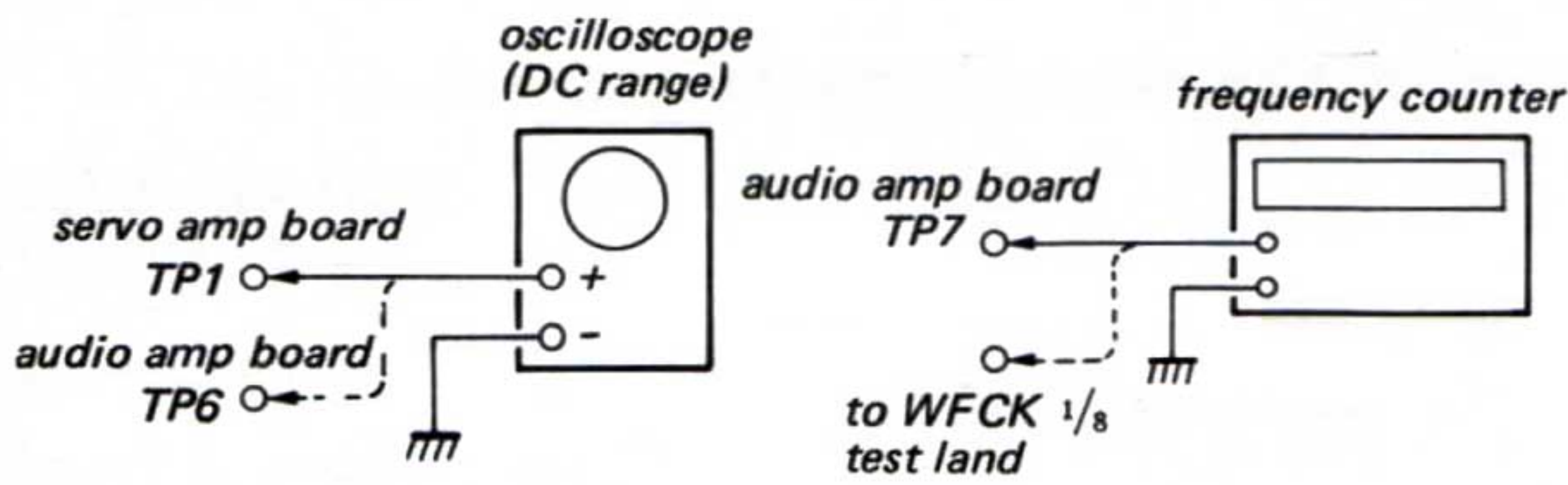
2. PART No. OF IC

	INCORRECT	CORRECT
	Part No. Description	Part No. Description
IC204	8-749-969-21 STK-6922S	8-749-969-22 STK-6922

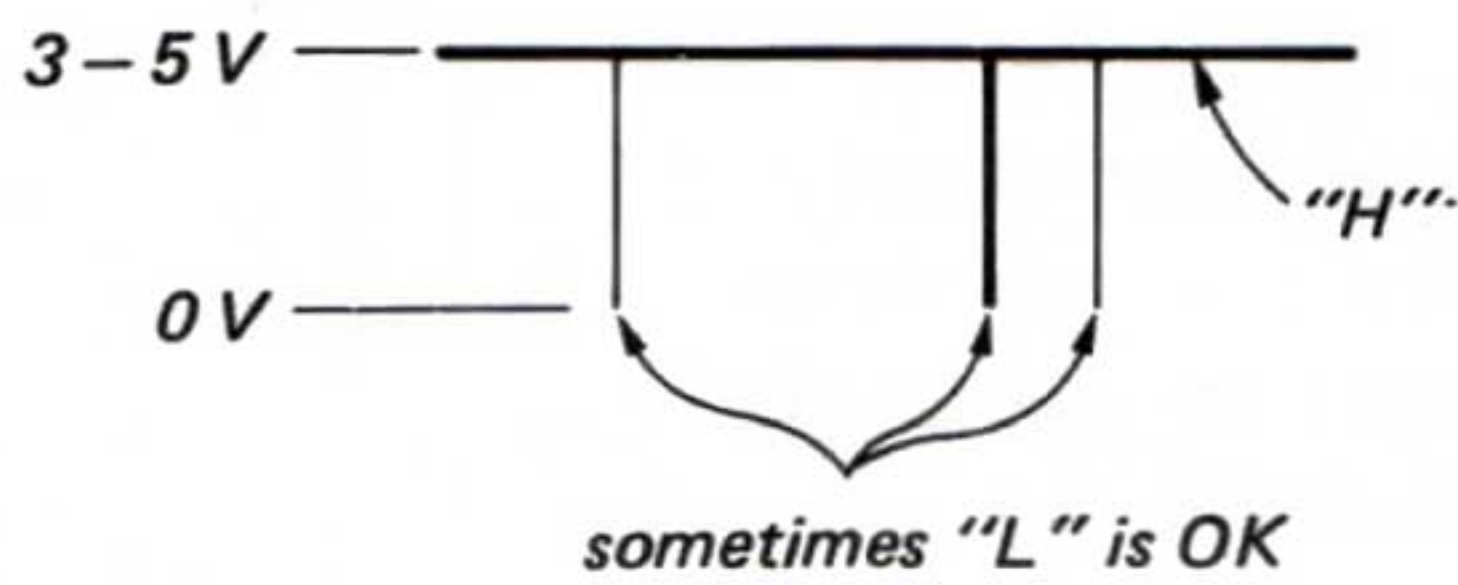
COMPACT DISC PLAYER
SONY[®]

RF PLL Adjustment

Procedure:



1. Put set into adjustment mode. (See page 41)
2. Memorize the slot position of RV101 (GFS) and fully turn RV101 (GFS) in the direction of the arrow. (Refer to adjustment location.)
3. Put disc (YEDS-1) in and press ►PLAY button.
4. Connect oscilloscope to servo amp board test point TP1 (GFS).
5. Confirm that the oscilloscope waveform is "H" as shown in the figure below.

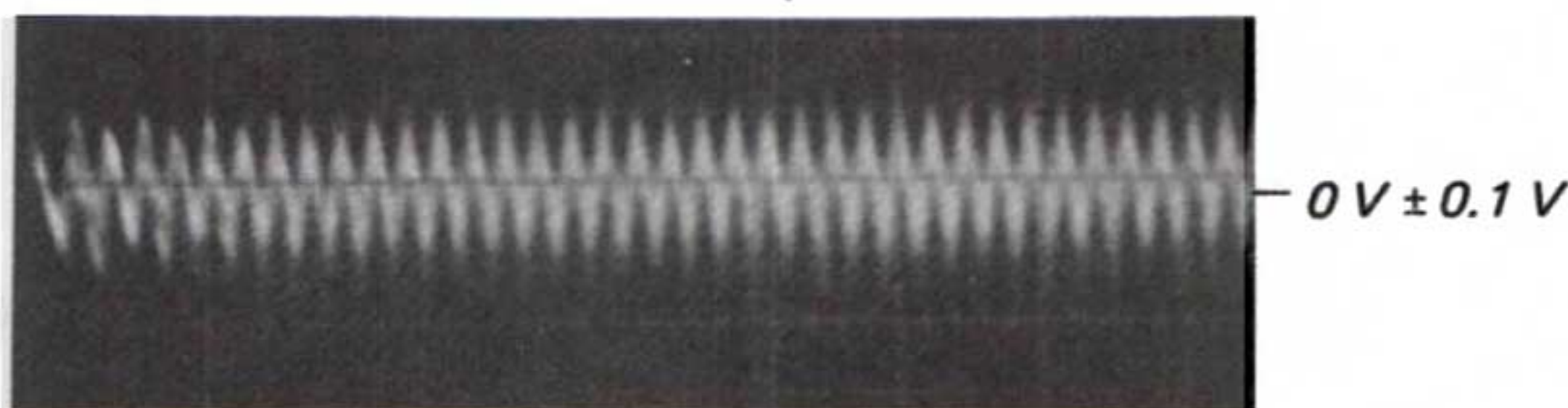


- Confirm the following items when the waveform is as shown above. If it is not, perform the adjustment in steps 6-15.

- A. Connect oscilloscope to audio amp board test point TP6 (PLL V) and read the voltage value.
Reading: DC 0 ± 0.1 V
- B. Connect frequency counter to audio amp board test point TP7 (PLCK) and read frequency.
Reading: $4.3218 \text{ MHz} \pm 10 \text{ kHz}$

6. Momentarily ground pin 15 of the mechanism controller IC101 on the servo amp board to move the optical pick up to the music area.
7. Turn RV202 (CLVS) to its full-clockwise stop. In this condition, the disc speed will slow down to disable the locking of the VCO signal to the RF signal during the adjustment.
8. Connect oscilloscope to test point TP6 (PLL V) and frequency counter to TP7 (PLCK) on the audio amp board.

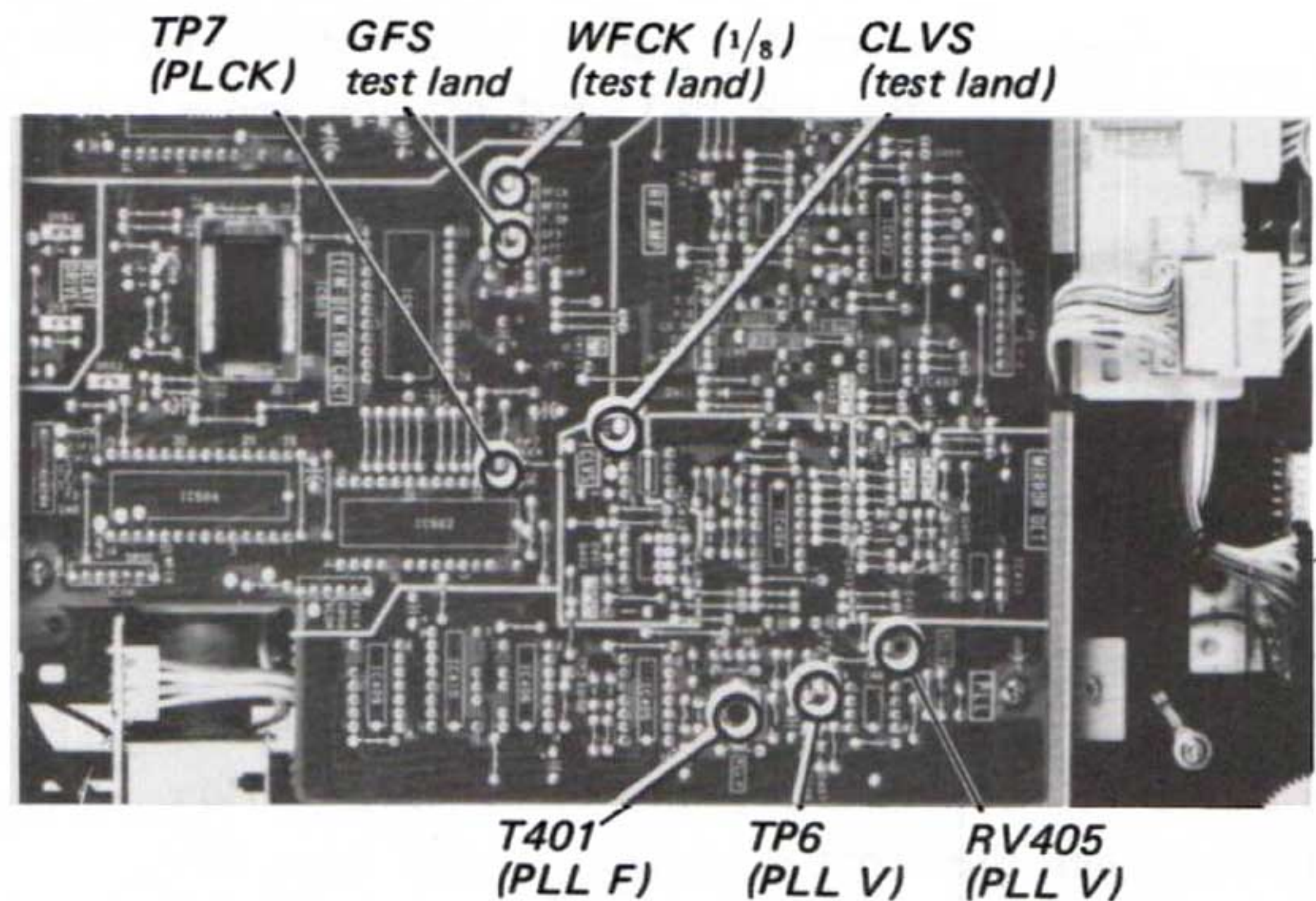
TP6 (PLL V) oscilloscope waveform



9. Connect pins 1 and 2 of the lowpass filter IC408 on the audio amp board to make the potential of pin 1 to be equal to that of pin 3, i.e., ground level, by setting up a 100% feed-back configuration.
10. Adjust T401 (PLL F) so that frequency counter reading is $4.3218 \text{ MHz} \pm 10 \text{ kHz}$.
11. Remove the test jumper installed in step 9.
12. Adjust RV405 (PLL V) so that the oscilloscope reading becomes in 0 ± 0.1 V.
13. Connect frequency counter to WFCK $1/8$ test land.
14. Connect oscilloscope to TP1 (GFS) or GFS test land.
15. Adjust RV202 (CLVS) so that the frequency counter reads $918 \text{ Hz} \pm 5 \text{ Hz}$ by making sure the waveform at TP1 (GFS) is in the "H" condition as shown in step 5. If it is not, repeat steps 6 – 15.
16. After adjustment, return RV101 (GFS) to the original setting.

Adjustment Locations:

– Audio amp board –



– Servo amp board –

