Adjustment Manual

1. ADJUSTMENT PROCEDURE

Refer to the service manual for the disassembling methods of each parts.

(Note) Avoid the direct entrance of laser rays into the eyes and exposure of the body to laser rays which are dangerous. Especially be carefull in the electric and optical pick-up adjustments because a laser beam is radiated from the lens of the optical pick-up when the power supply of unit is turned on. Also follow the adjusting procedures given in the manual.

1-1. Preparation for Electric Adjustments

① Remove the cabinet, and front panel.

② Remove the power switch rod.

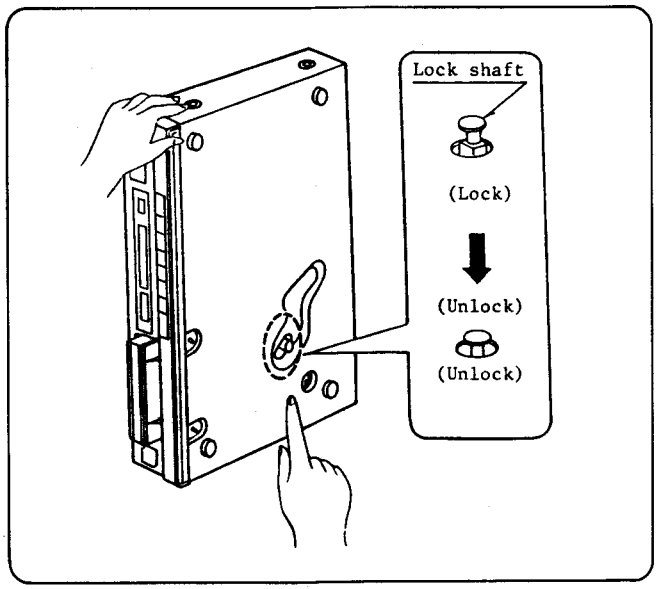
③ Release the optical pick-up lock by pressing in the lock shaft located on the bottom side of unit (■ (Lock) → ▬ (Free)).

(Note 1)

The pick-up detects signals recorded on the disc with a laser beam. The pick-up moves as the programs are played back but the movement is not visible from outside.

Caution:

- Must remove a disc from the player and lock the pick-up by pressing in the lock shaft when the player is transported as in moving. Otherwise, the disc loading mechanism is moved and damaged.
- Also lock the pick-up by pressing in the lock shaft in (▬→■) prior to disassembling the player.

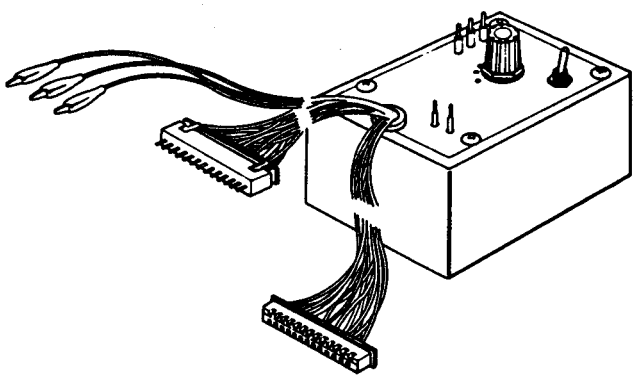


Lock Shaft

1-2. Measuring Instruments and Special Tools

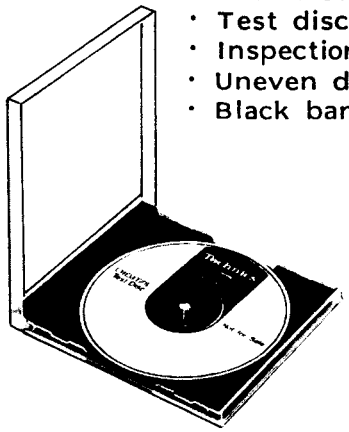
Must provide special tools prior to starting electric adjustment and optical pick-up adjustment. The special tools are available through the ordinary part supply route. Specify the part numbers (SZZP ----) when placing your order.

1. Servo gain adjuster (SZZP1017F)



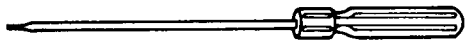
2. Test disc

- Test disc (SZZP1014F) old type
- Test disc (SZZP1014F) new type
- Inspection test disc (SZZ1054C)
- Uneven disc (SZZP1056C)
- Black band disc (SZZP1057C)

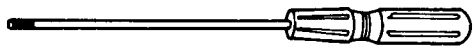


3. Ordinary disc
4. 2-channel oscilloscope (with external trigger more than 30MHz)
5. Low frequency oscillator
6. Adjusting screwdriver ----- SZZP1043C
7. Allen wrench ---------- SZZP1044C
9. General servicing tools

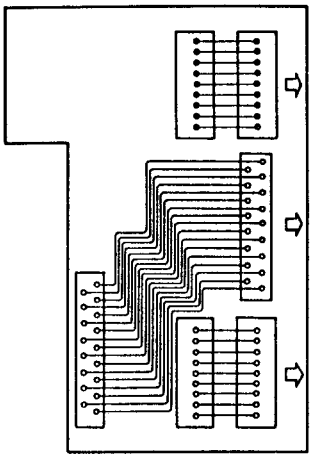
6. Adjusting screwdirver (SZZP1043C)



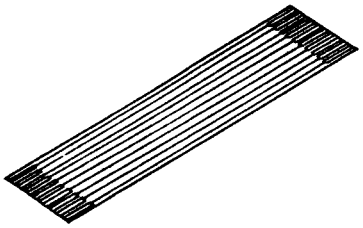
7. Allen wrench (1.5 mm) (SZZP1044C)



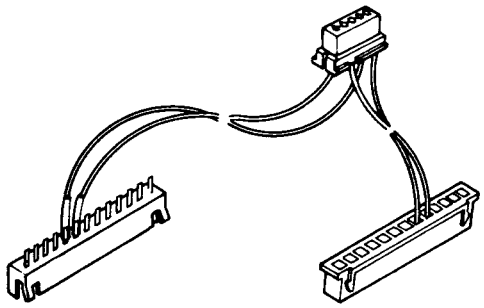
10. Junction PCB (SZZP1070C)



11. Junction FPC cord (SZZP1071C)



8. Conversion connector (SZZP1032F)



• TEST DISC (SZZP1014F) old type

Contents

TON	PURPOSE	SIGNAL	Time
		(TOC)	
1	Servo adjustment	Wowble Tone -10dB L+R	2'00"
2	Pickup assenmetry adjustment	Wowble Tone -10dB L+R	5'00"
3	Reference	1 kHz 0 dB L+R	1'00"
4	Freq. Response	20kHz 0 dB L+R	0'30"
5	Emphasis	16 kHz -0.96 L+R	0'30"
6	Channel Separation	L 1kHz 0 dB R-∞	0'30"
7	Channel Separation	R 1kHz 0 dB L-∞	0'30"
8	Dynamic range	1 kHz -60 dB L+R	1'00"
9	Linearity	1 kHz -80 dB L+R	1'00"
10	S/N	- ∞	2'00"
11	THD	1 kHz 0 dB L+R	1'00"
12	Black Spot	Wowble Tone -10 dBL+R	5'00"
13	Black Spot	Wowble Tone -10 dBL+R	5'00"
14	Finger Print	Wowble Tone -10 dBL+R	5'00"
15	Finger Print	Wowble Tone -10 dBL+R	9'00"
16	Wedge	Wowble Tone -10 dBL+R	4'00"
17	Wedge	Wowble Tone -10 dBL+R	4'00"
18	Reference	1 kHz 0 dB L+R	0'30"
19	Freq. Response	15 Hz	0'30"
20	Freq. Response	20	0'30"
21	Freq. Response	50	0'30"
22	Freq. Response	100	0'30"
23	Freq. Response	200	0'30"
24	Freq. Response	500	0'30"
25	Freq. Response	2K	0'30"
26	Freq. Response	5K	0'30"
27	Freq. Response	10K	0'30"
28	Freq. Response	12K	0'30"
29	Freq. Response	15K	0'30"
30	Freq. Response	18K	0'30"
31	Freq. Response	20K	0'30"
32	Channel Separation	L 100Hz 0 dB R - ∞	0'30"
33	Channel Separation	R 100Hz 0 dB L - ∞	0'30"
34	Channel Separation	L 10kHz 0 dB R - ∞	0'30"
35	Channel Separation	R 10kHz 0 dB L - ∞	0'30"
36	Channel Separation	L 20kHz 0 dB L - ∞	0'30"
37	Channel Separation	R 20kHz 0 dB L - ∞	

* This old type test disc has been changed to new type (CDT-002)
* This old type test disc has 37 tracks and display shown 37 tracks when this disc is played
* Characteristics of old type and new type (CDT-002) are completely same. And both disc can use for same purpose

• TEST DISC (SZZP1014F) new type

Contents

TON	PURPOSE	SIGNAL	Time
1	Reference	1 kHz L+R 0dB	1'40"
2	S/N	1 kHz L+R -	1'40"
3	Separation	1 kHz L 0dB	1'40"
4	Separation	1 kHz R 0dB	1'40"
5	Dynamic Range	1 kHz L+R -20dB	1'40"
6	Emphsis	16kHz L+R 0dB	1'40"
7	Black Band 0.4 mm	400Hz L+R -10dB	3'00"
8	Black Band 0.5 mm	400Hz L R -10dB	2'30"
9	Wedge 0.7 mm	400Hz L+R -10dB	5'00"
10	Fingerprint No.3	400Hz L+R -10dB	2'00"
11	Index	1.440Hz L+R -10dB 2.880Hz L+R -10dB 3.1760Hz L+R -10dB	8'00" 8'00" 1'00"
12	Repeat check	1 kHz L+R 0dB	0'05"

• INSPECTION TEST DISC (SZZP1054C) CDT-016

Contents

TON	PURPOSE	SIGNAL	Time
1	Reference	1 kHz L+R 0dB	1'00"
2	Reference	400Hz L+R 0dB	1'40"
3	Wedge 0.4 mm	400Hz L+R -10dB	2'10"
4	Wedge 0.5 mm	400Hz L+R -10dB	2'20"
5	Wedge 0.6 mm	400Hz L+R -10dB	2'20"
6	Wedge 0.7 mm	400Hz L+R -10dB	2'40"
7	Wedge 0.8 mm	400Hz L+R -10dB	2'40"
8	Wedge 0.9 mm	400Hz L+R -10dB	3'10"
9	Black dot 0.3 mm	400Hz L+R -10dB	3'55"
10	Black dot 0.4 mm	400Hz L+R -10dB	4'10"
11	Black dot 0.5 mm	400Hz L+R -10dB	4'20"
12	Black dot 0.6 mm	400Hz L+R -10dB	5'05"
13	Black dot 0.7 mm	400Hz L+R -10dB	5'10"
14	Black dot 0.8 mm	400Hz L+R -10dB	6'05"
15	Black dot 0.9 mm	400Hz L+R -10dB	9'45"

• UNEVEN DISC (SZZP1056C)

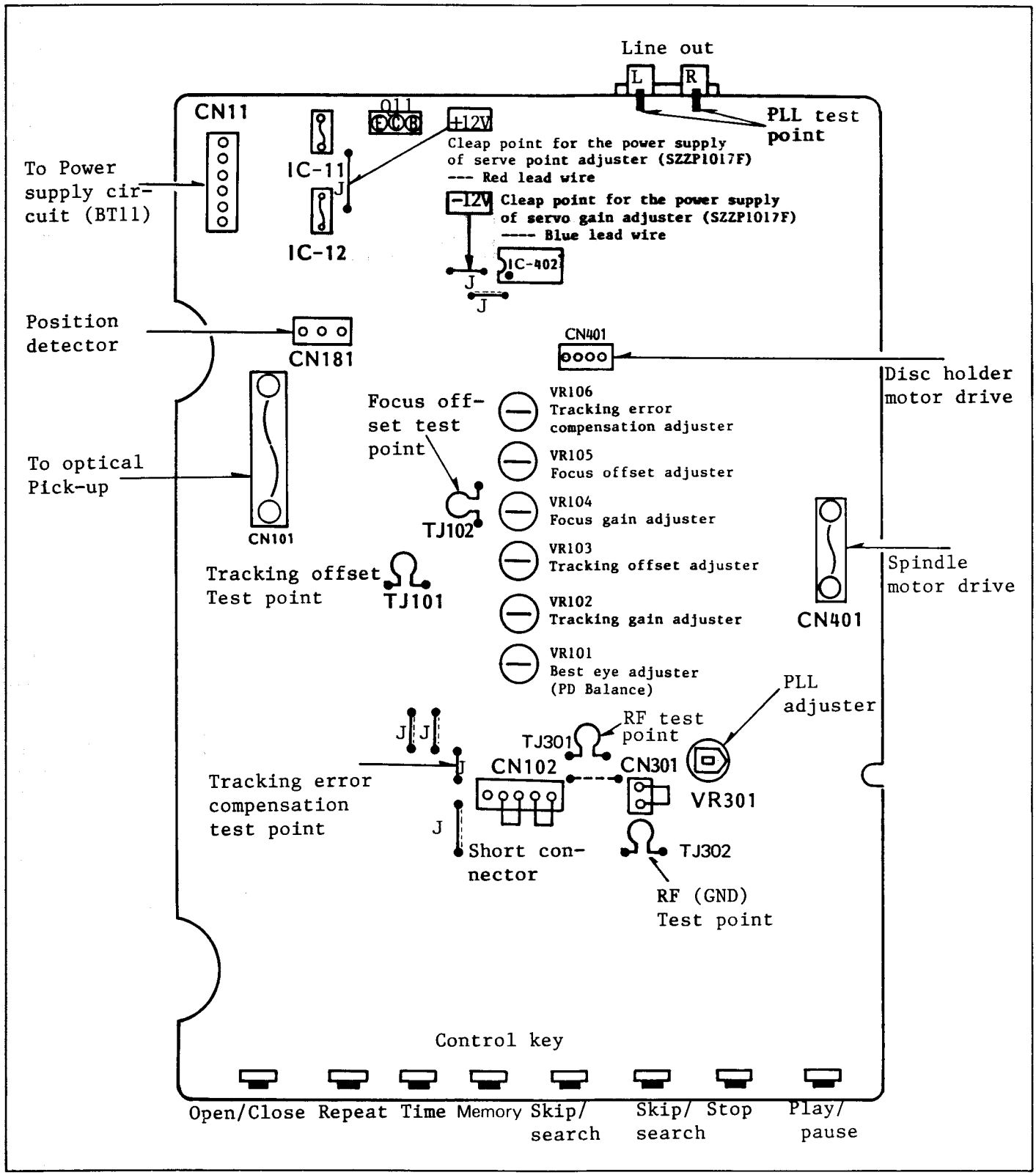
Structure : Ordinary disc with small piece for uneveness
Usage : Optical pick up mechanical adjustment

• BLACK BAND DISC (SZZP1057C)

Structure : Ordinary disc with 0.5 mm width tape at both side
Usage : Adjustment for regular size FF1 CD player

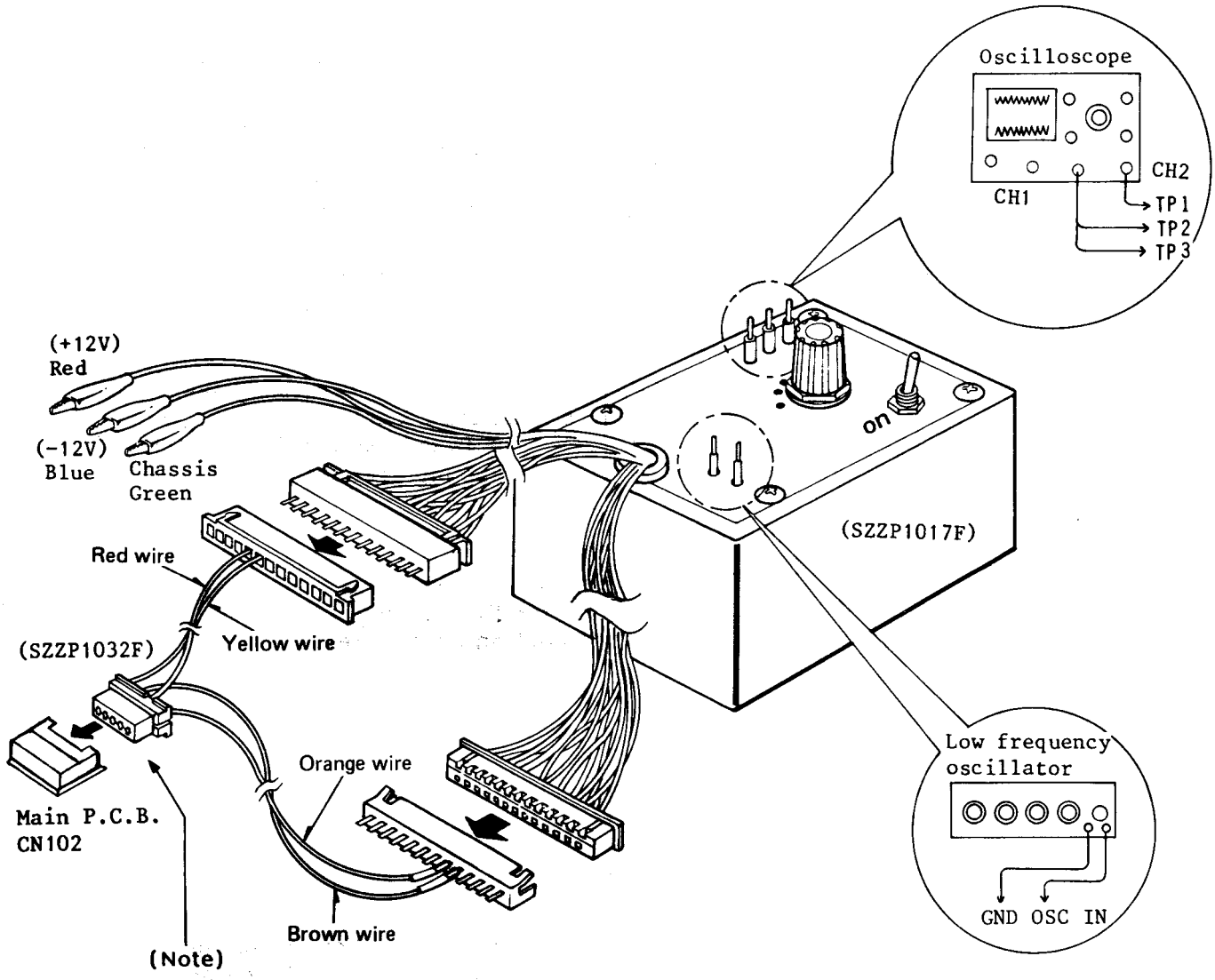
(1) Tracking offset adjustment
(2) Focus offset adjustment

2. ADJUSTING POINT AND TEST POINT ILLUSTRATION



Main circuit

2-1. Servo gain adjuster and its connection



(Note)

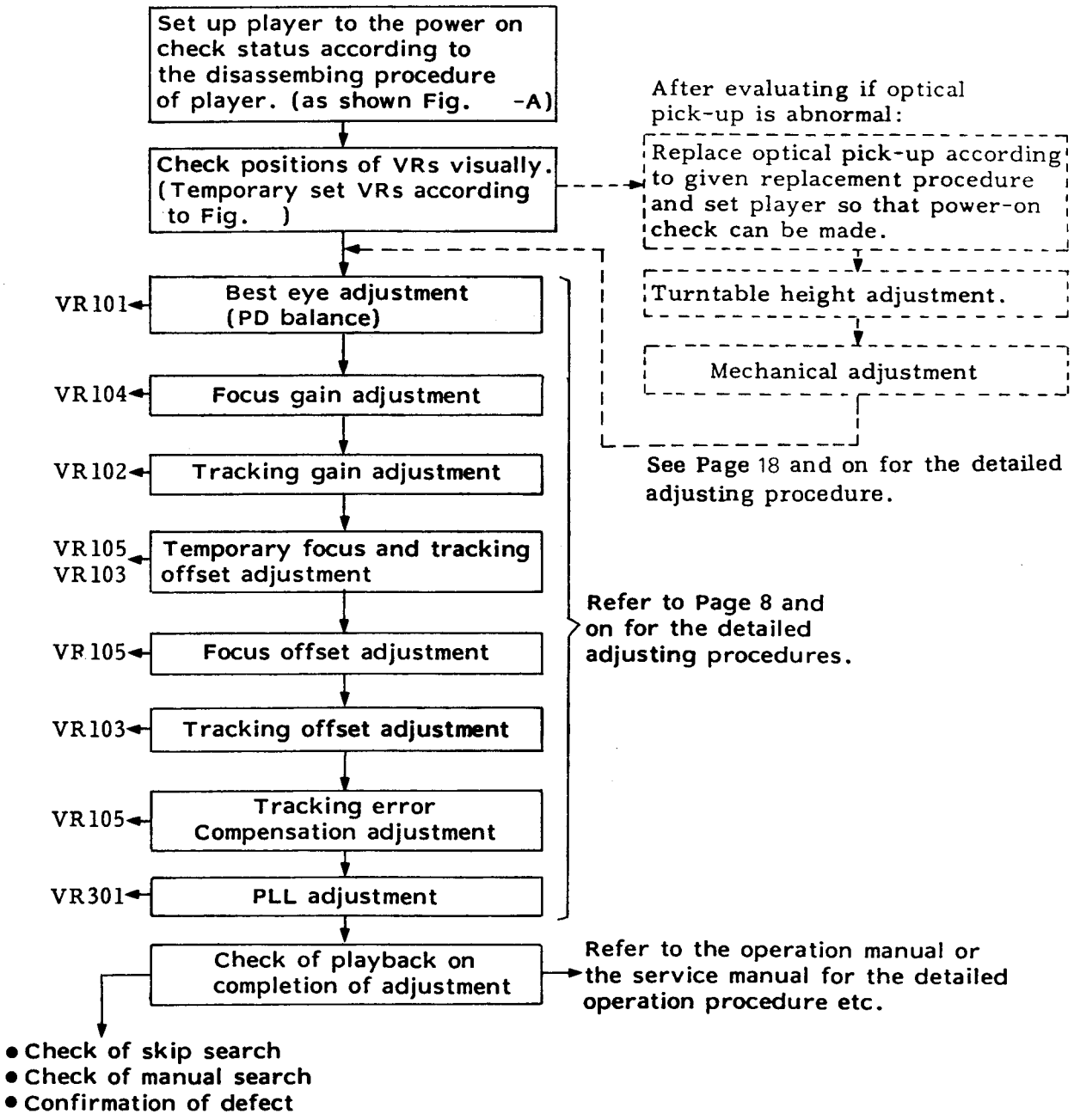
CN102 of the main PCB is provided with a short circuiting connector.
Remove the CN102 connector and install the conversion connector (SZZP1032F) for adjustment.
On completion of adjustment, must return the short-circuiting connector to its place.

Servo Gain Adjuster

Caution:

(1) Do not look into the lens when power is applied to the unit, since there is laser radiation (H.H.S./D.H.W./etc., regulation).
(2) These steps must be followed in order.

3. ELECTRIC ADJUSTMENT STEPS AND POINTS

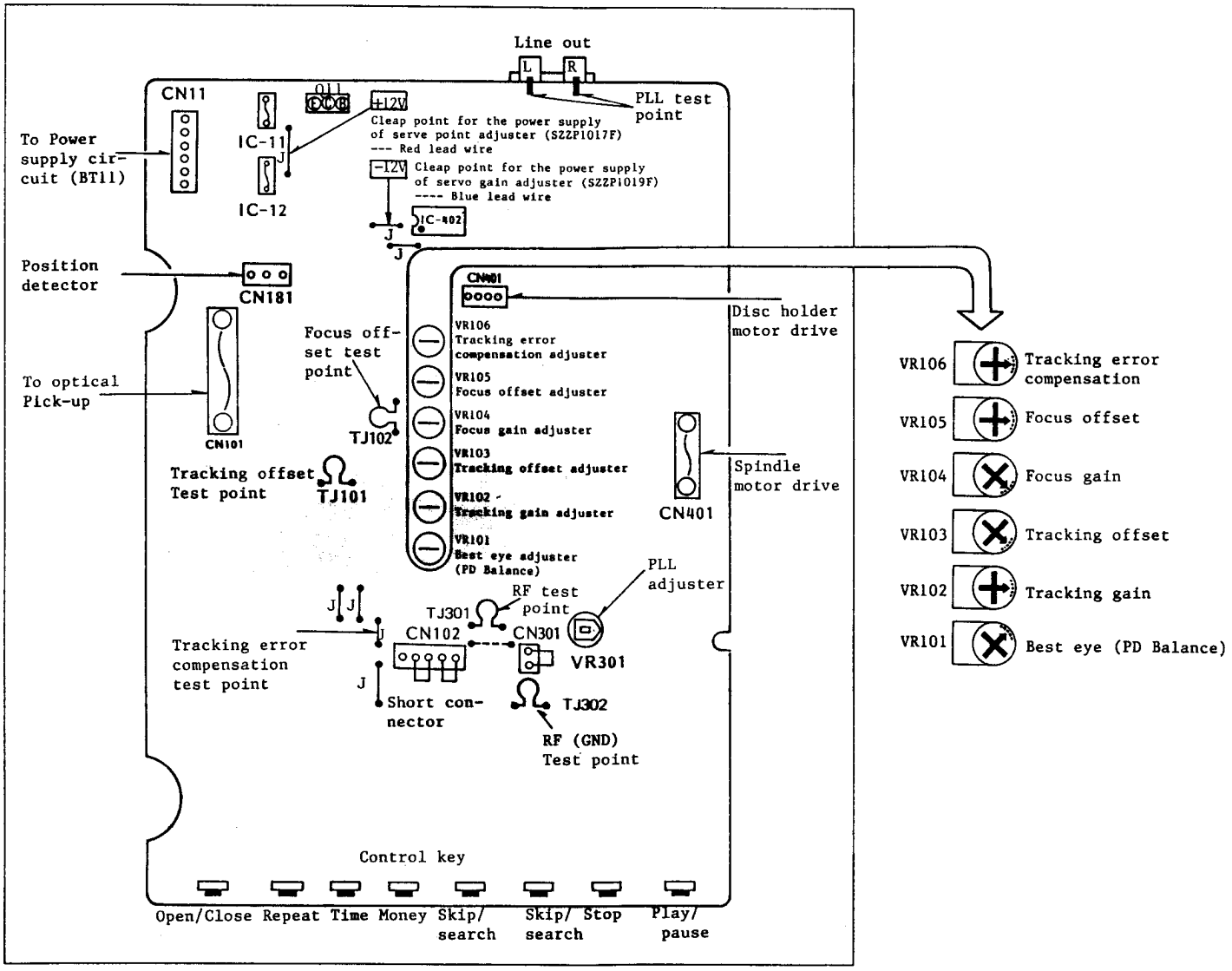


By setting the VRs temporarily as shown in Fig. the player run somehow that the optical pick-up is satisfactory but VRs must be adjusted optimumly finally.

4. INITIAL SETTING POINTS OF ADJUSTING VARIABLE RESISTORS (VR)

• Adjusting Variable Resistors and Test Points

The player operates but not optimum at the above settings of the adjusting variable resistors. Adjust them according to the adjusting procedure.



Main circuit

Most conduct the electric adjustment when any electric part is replaced. Perform ① optical pick-up adjustment and ② electric adjustment in the stated order when the optical pick-up (SOAD30A) is replaced.

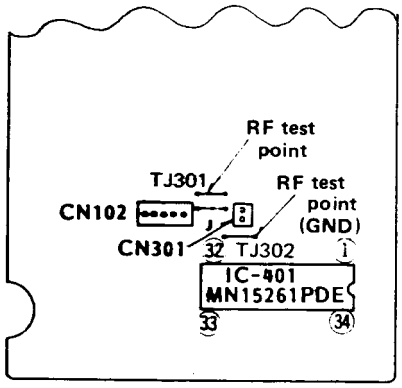
Arrangement of the adjusting variable resistors viewing the side face. All the electric adjustments are possible by setting as shown in Fig. .
(Removed the power supply switch rod for the convenience of adjustment.)

5. ELECTRICAL ADJUSTMENT PROCEDURE

A. Best Eye (PD Balance) Adjustment

(1) Connect CH-1 of the oscilloscope to the **RF test point** (TJ301) and the grounding test Point (TJ302) on the main PCB as shown in illustration.

Oscilloscope setting ---
- Volt : 500 mV
- Sweep : 0.5 μsec
- Input : AC



Main PCB

(2) Turn on the power supply switch of the player.
(3) Place the test disc **(SZZP1014F)** or **(SZZP1054C)** in to the disc holder by open/close key.
(4) The player to the play mode.
(5) Play of the test disc. **(BS 0.5mm)**
SZZP1014F (Old) ----- Track 13
(New) ----- Track 8
SZZP1054C ---------- Track 11
(6) Adjust **VR101** so that the eye pattern of RF signal is stretched most as shown in illustration.

NG OK

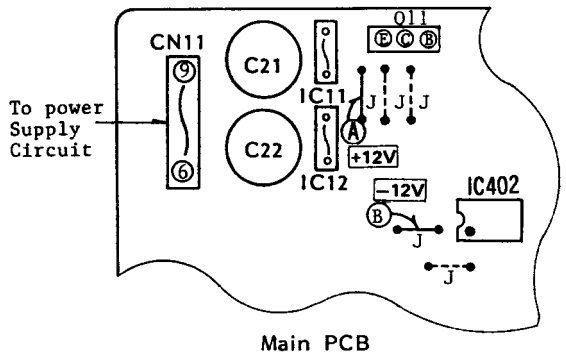
Best eye

(7) Turn off the power supply switch of the player.

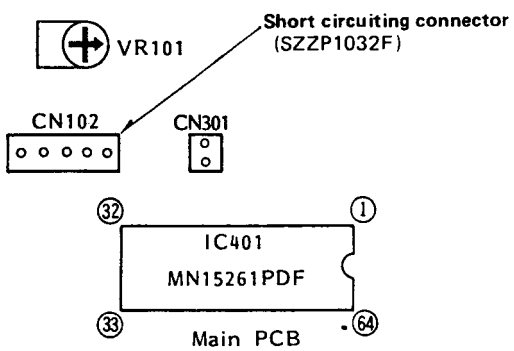
B. Focus Gain Adjustment

(1) Connect the servo gain adjuster **(SZZP1017F)** with conversion connector **(SZZP1032F)** to the player as shown in illustration.

Connecting points
- **Red lead wire** -----Ⓐ Jumper **+12V** beside the Q11 terminals on the main PCB.
- **Blue lead wire** -----Ⓑ Jumper **-12V** beside the IC402 terminal on the main PCB.
- **Green read wire** --- Chasis
- **Connector** -------- **Remove the short-circuiting pin of CN102** on the Main PCB and connect the conversion connector **(SZZP1032F)**. Connect the conversion connector side (5 pins) to CN102.

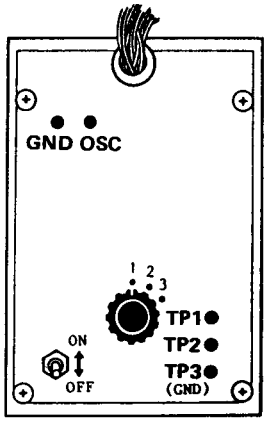


Main PCB



Main PCB

Initial setting mode of servo gain adjuster



Servo Gain Adjuster (SZZP1017F)

(1) mode select switch to **"2"** position.

(2) ON/OFF switch to "ON" position.

(2) Set the low frequency oscillator to a frequency **750 Hz** and an output voltage of **150m Vp-p** then connect the oscillator to the terminals OSC IN and GND of the servo gain adjuster **(SZZP1017F).**

(3) Connect CH-1 and CH-2 of the oscilloscope to **TP1** and **TP2** of the Servo gain adjuster **(SZZP1017F).** (TP3 is the grounding terminal.)

Oscilloscope setting --
- Volt ..... 100 mV
- Sweep ..... 1 ms
- Input selector..... DC

(4) Turn on the power supply switch of the player.

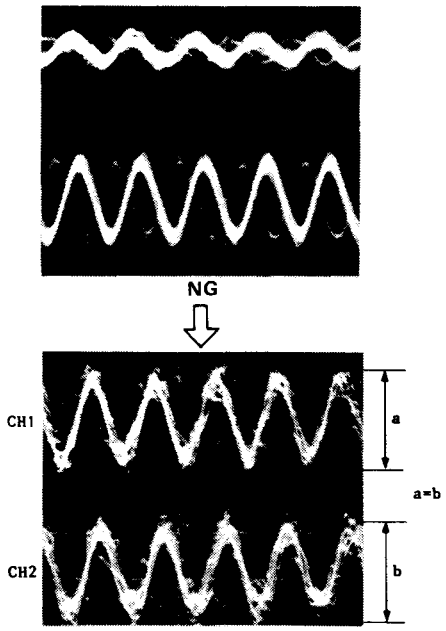
(5) Place the test disc **(SZZP1014F)** or **(SZZP1054C)** in to the disc holder by open/close key and in the Playback mode.

(6) Set the rotary switch of the servo gain adjuster **(SZZP1017F)** to **"2" → "1".**

(7) The player to the Play mode and the 750 Hz signal will be displayed on the oscilloscope, then adjust **VR104** so that the waveforms and amplitudes of the **both channels shall be equal** as shown in illustration.

(8) Turn off the power supply switch of the player.

(Note) Please do not remove the servo gain adjuster also shorting connector.



Focus gain

C. Tracking Gain Adjustment

(1) Set the low frequency oscillator to a frequency of **1.0 kHz** and an output of **150 mVp–p,** and connect the oscillator to the OSC IN and GND of the gain adjuster **(SZZP1017F).**

(2) Connect the CH-1 and CH-2 of the oscilloscope to the **TP1** and **TP2** of the gain adjuster **(SZZP1017F).** (TP3 is a grounding terminal.)

Oscilloscope setting ---
- Volt : 100mV
- Sweep : 1.0ms
- Input selector : DC

(3) Turn on the power supply switch of the Player.

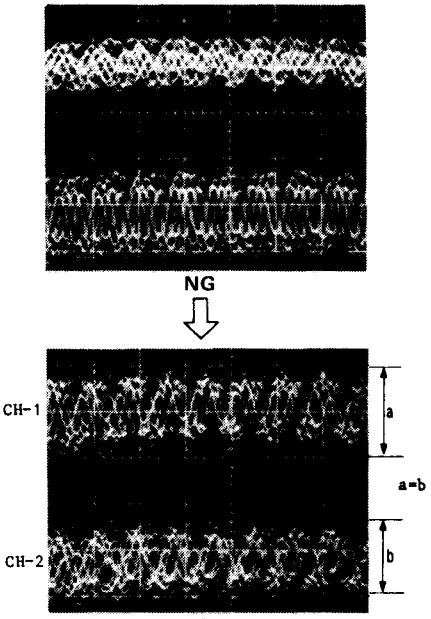
(4) Place the test disc **(SZZP1014F)** or **(SZZP1054C)** in the disc holder by open/close key and in the Playback mode.

(5) Set the rotary switch of the servo gain adjuster (SZZP1017F) to **"2" → "3".**

(6) The player to the play mode and the 1.0 kHz signal will be displayed on the oscilloscope, then adjust **VR102** so that the waveforms and amplitudes of the **both channels shall be equal** as shown in illustration.

(7) Turn off the power supply switch of the player.

(8) After completing the above mentioned adjustment, **remove the servo gain adjuster and insert the shorting connector into CN102 as it was.**



Tracking gain

D. Temporary focus and tracking offset adjustment

(Focus offset)

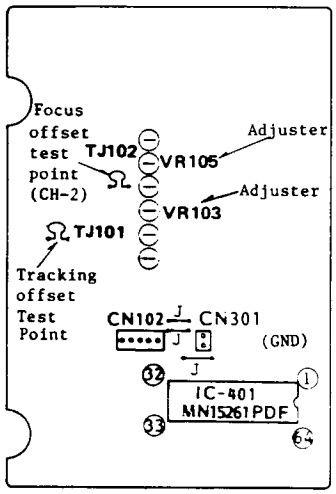
(1) Connect CH-1 of the oscilloscope of the **TJ102** (Focus offset test point) and GND to the chassis.

Oscilloscope setting ---
- Volt : 100mV
- Sweep : 5ms
- Input selector : DC

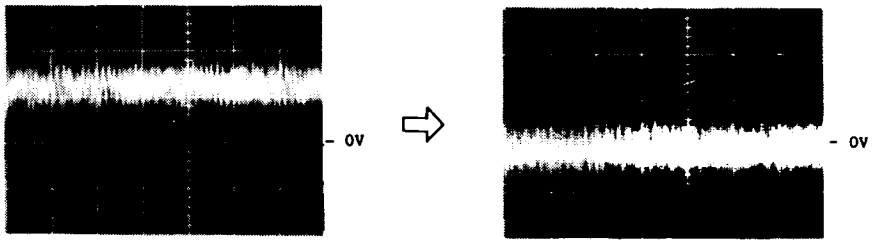
(2) Turn on the power supply switch of the player.

(3) Place the test disc **(SZZP1057C . . . Black band disc)** in to the disc holder by open/close key.

(4) After TOC reading, the set will become stop mode, then check the waveform on the oscilloscope and adjust **VR105**, so that the waveform at TJ102 shall be **Ground level** as shown in illustration.



Main PCB



NG OK

(Tracking offset)

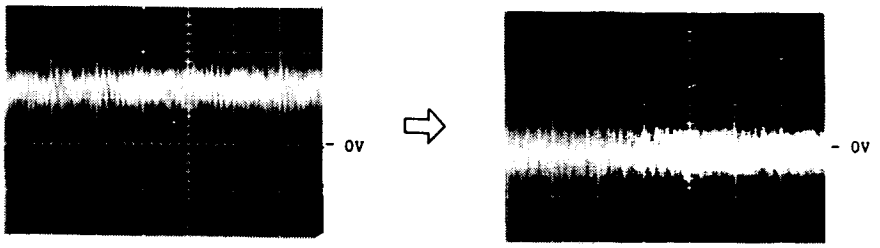
(1) Connect CH-1 of the oscilloscope to the **TJ101** (tracking offset test point) and **GND** to the chassis.

(2) Turn on the power supply switch of the Player.

(3) Place the test disc **(SZZP1057C . . . Black band disc)** in to the disc holder by open/close key.

(4) After TOC reading the set will become stop mode, then check the waveform on the oscilloscope and adjust VR103, so that the waveform at **TJ101** shall be **Ground level** as shown in illustration.

Oscilloscope setting ---
- Volt : 100mV
- Sweep : 5ms
- Input selector : DC



NG OK

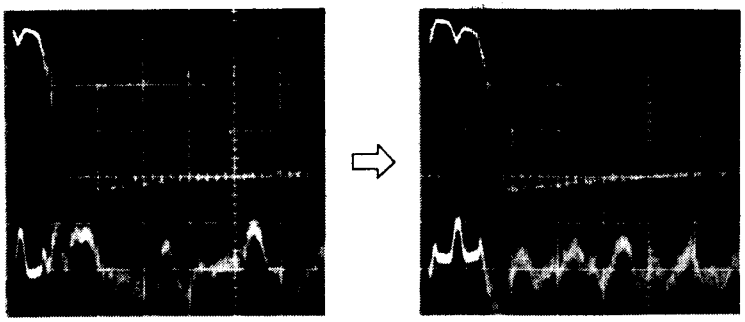
(5) Turn off the power supply switch of the Player.

E. Focus offset Adjustment

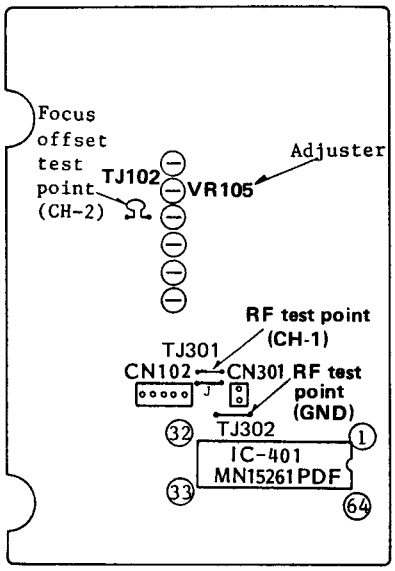
(1) Connect CH-1 of the oscilloscope to the TJ301 (RF test point) and CH-2 to the terminal TJ102. (Focus offset test point) on the main PCB. TJ302 of RF test point (GND) on the main PCB as shown in illustration.

		TJ301 (CH-1)	TJ102 (CH-2)
Oscilloscope setting	Volt	: 500mV	100mV
	Sweep	: 0.5msec	
	Input Selector	: AC	DC
	Mode	: NORM (Triggering Via CH-1).	

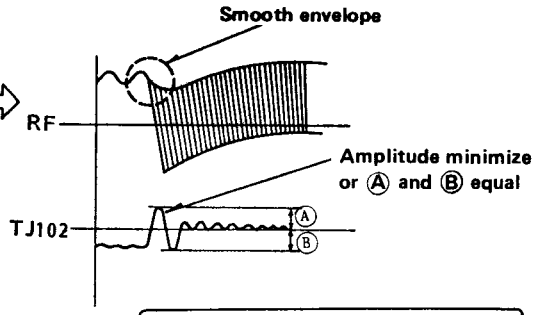
(2) Turn on the power supply switch of the player.
(3) Place the test disc (SZZP1057C . . . Black band disc) in to the disc holder by open/close key.
(4) The player to the play mode.
(5) Play TR9 of the test disc.
(6) Check the waveforms of CH-1 and CH-2 on the oscilloscope and adjust VR105 so that the waveform around the triggering point as shown in illustration.



NG Focus offset OK



Main PCB



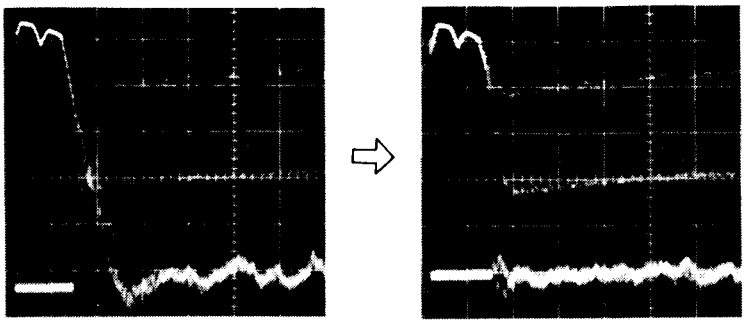
(7) Turn off the power supply switch of the player.

F. Tracking offset Adjustment

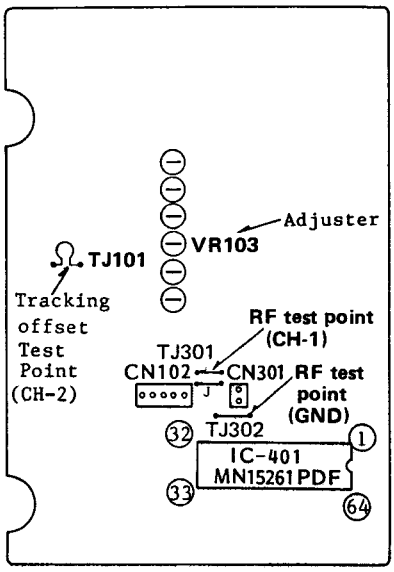
(1) Connect CH-1 of the oscilloscope to the TJ301 (RF test point) and CH-2 to the terminal TJ101. (Tracking offset test point) on the main PCB. Connect GND of the oscilloscope to the RF test point (TJ302) on the main PCB as shown in illustration.

		TJ301 (CH-1)	TJ101 (CH-2)
Oscilloscope setting	Volt	: 500mV	100mV
	Sweep	: 0.5msec	
	Input Selector	: AC	DC
	Mode	: NORM (Triggering Via CH-1).	

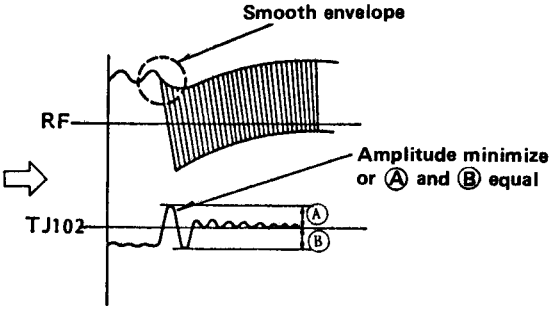
(2) Turn on the power supply switch of the player.
(3) Place the test disc (SZZP1057C . . . Black band disc)
(4) The player to the play mode.
(5) Play TR9 of the test disc.
(6) Check CH-1 and CH-2 waveforms displayed on the oscilloscope and adjust VR103 so that the waveforms as shown in illustration.



NG Tracking offset OK



Main PCB



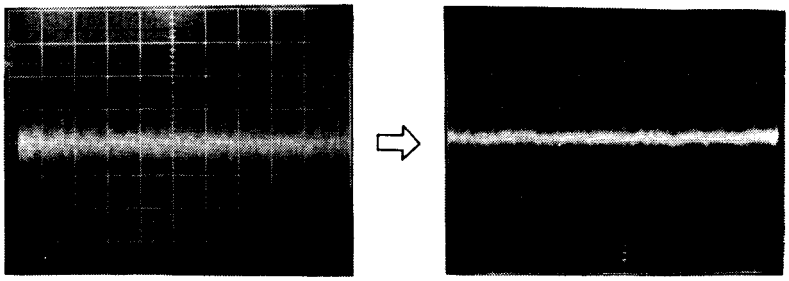
(7) Turn off the power supply switch of the player.

G. Tracking error Compensation Adjustment

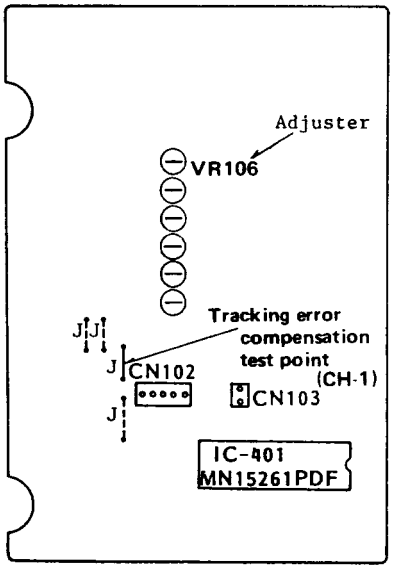
(1) Connect CH-1 of the oscilloscope to the **tracking error compensation test point** (Jumper) and GND to chassis as shown in illustration.

Oscilloscope setting
- Volt : 50mv
- Sweep : 1ms
- Input selector : DC

(2) Turn on the power supply switch of the player.
(3) Place the test disc **(SZZP1014F of SZZP1054C)** in to the disc holder by open/close key.
(4) The player to the play mode.
(5) Play **TR1** of the test disc
(6) Check the waveform on the oscilloscope and adjust **VR106,** so that the waveform of DC level less than **0±5mV** as shown in illustration.



NG OK



Main PCB

(7) Turn off the power supply switch of the player.

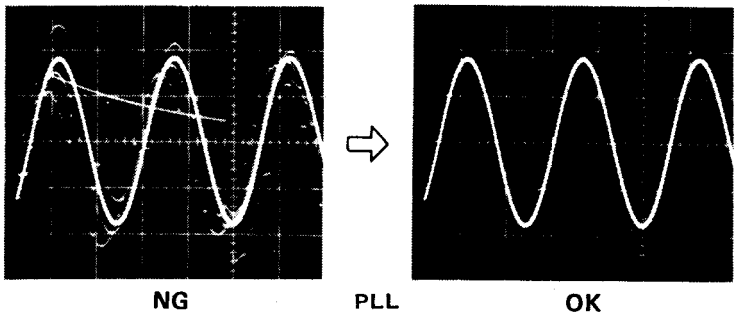
H. PLL Adjustment

(1) Connect CH-1 of the oscilloscope to the **line out terminal** (either of L-CH or R-CH) of the main PCB and the terminal GND of the chassis.

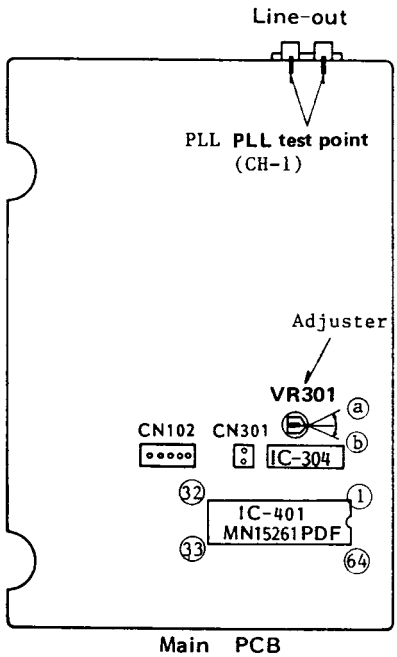
Oscilloscope setting
- Volt : 1.0V
- Sweep : 1msec.
- Input selector : DC

(2) Turn on the power supply switch of the player.
(3) Place the test disc **(SZZP1054C)** in to the disc holder by open/close key.
(4) The player to the play mode.
(5) Play of the test disc **Track 7 (WG 0.8mm).**
(6) Check the waveform displayed on the oscilloscope and adjust **VR301** in the following steps.

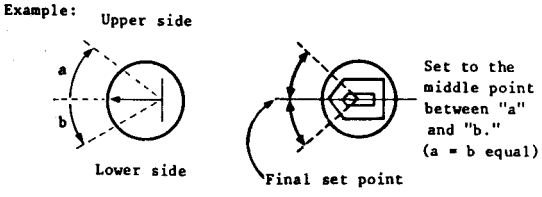
ⓐ Turn VR301 upwards slowly and learn the point at which the waveform on the oscilloscope begins to be **disturbed** as shown in **waveform** NG .
ⓑ Turn VR301 downwards slowly (opposite direction to that in the above para. "a") and learn the point at which the waveform on the oscilloscope begins to be **disturbed.**
ⓒ **Set VR301 in the middle between the points learned in the above steps "a" and "b".**



NG PLL OK



Main PCB



(7) Turn off the power switch of the player.

I. Check of Play Operation after Adjustment

(1) Check of skip search
   1) Play an ordinary disc.
   2) Press the skip button and check to see that skip search is given (Forward and reverse)

(2) Check of manual search
   1) Play an ordinary disc.
   2) Press the manual search button and check to see that smooth manual search can be done at low and high speeds (Forward and reverse)

(3) Check to make sure the best adjusted condition for defects.
   1) Play the Technics test disc "SZZP1054C".
   2) Play the track 12 (Wedge 0.6 mm), track 13 (Wedge 0.7mm), and see that there is no sound skip or noise.
   3) Play the tracks (Black spot 0.6mm), track 6 (Black spot 0.7mm) and see that there is no sound skip or noise.

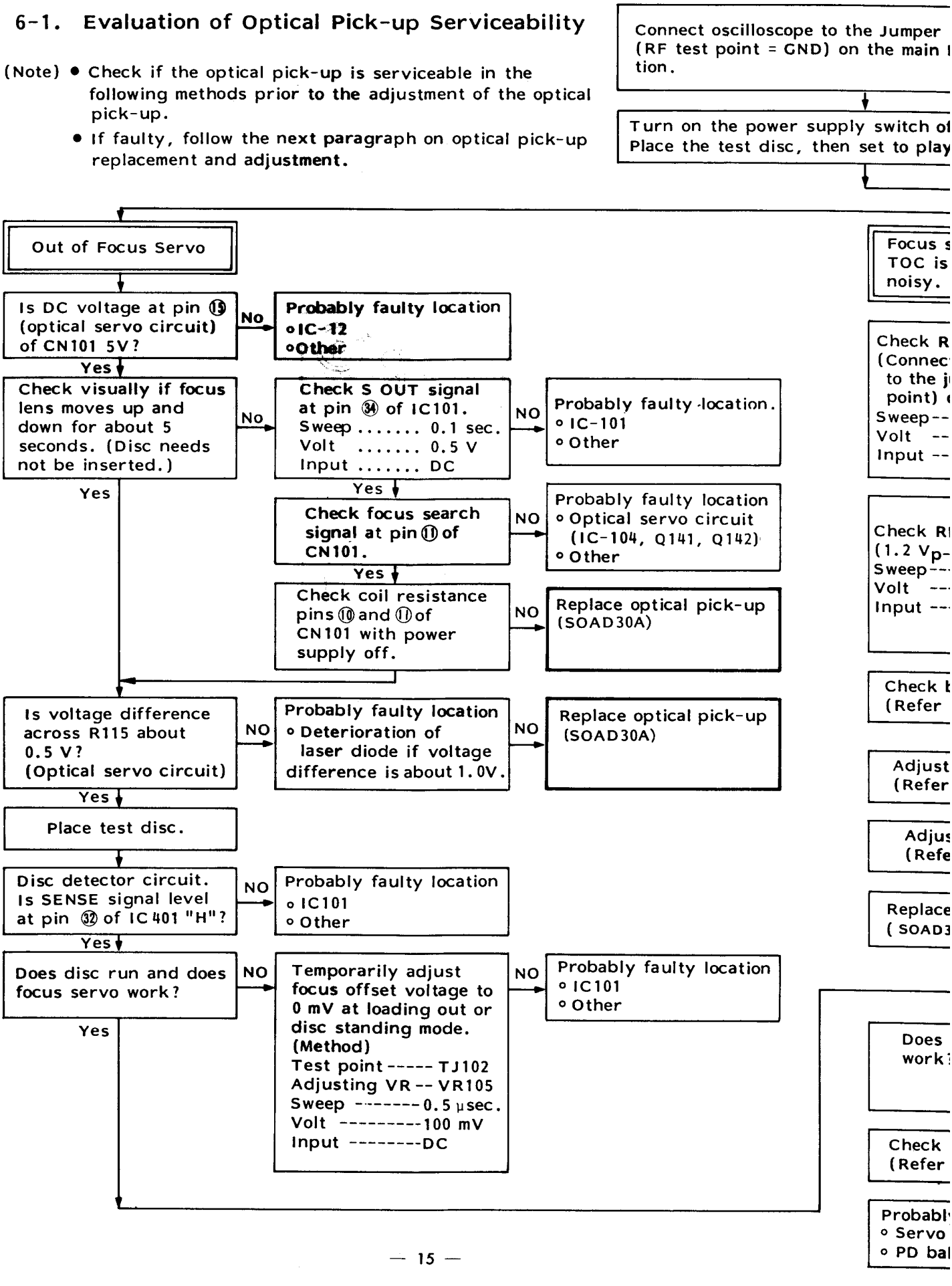
Technics Test Disc "SZZP1054C"	
Track number 12	0.6mm Wedge
Track number 13	0.7mm Wedge
Track number 5	0.6mm Black spot
Track number 6	0.7mm Black spot

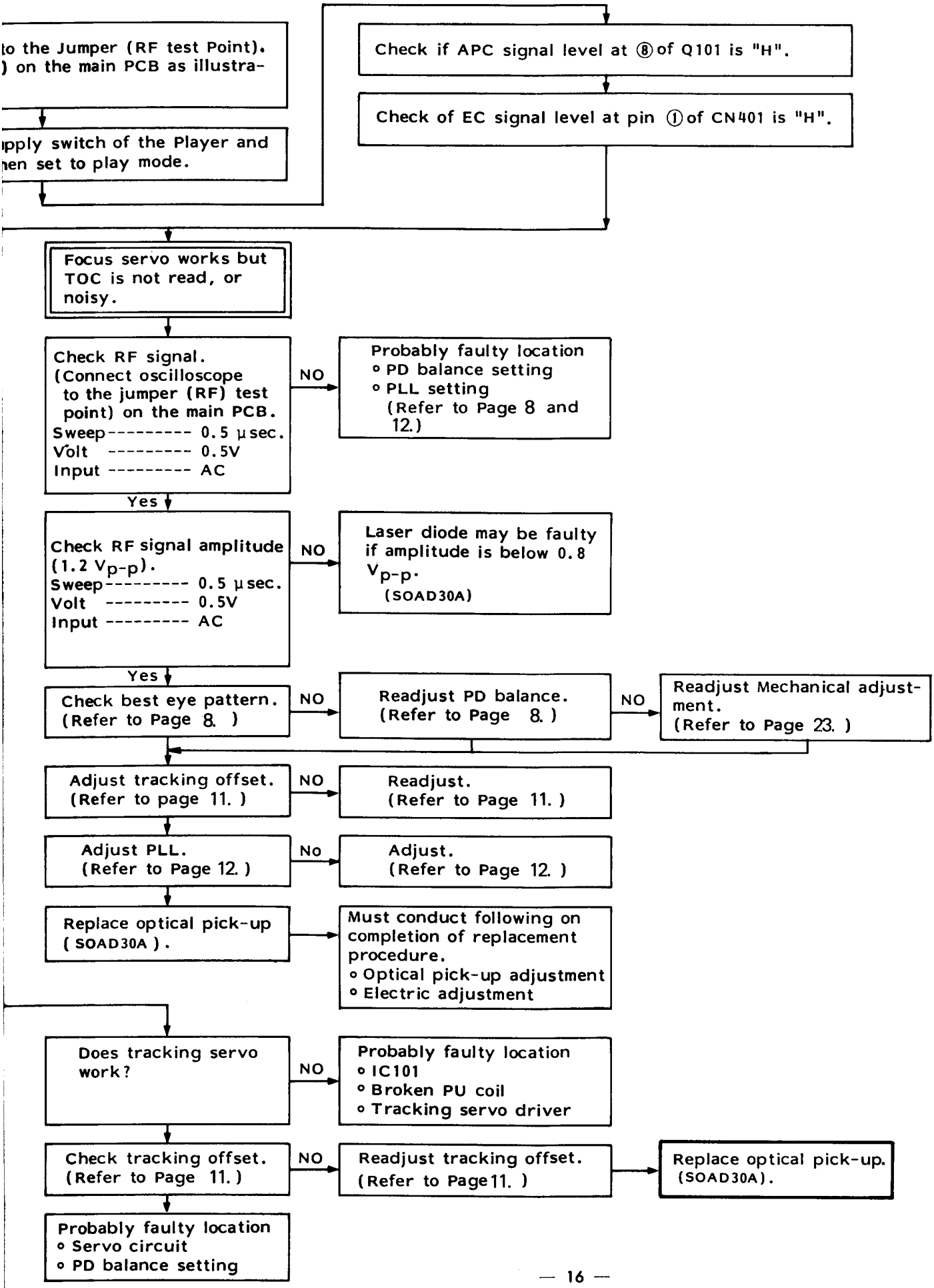
– MEMO –

6. OPTICAL PICK-UP ADJUSTMENT

6-1. Evaluation of Optical Pick-up Serviceability

(Note) • Check if the optical pick-up is serviceable in the following methods prior to the adjustment of the optical pick-up.
• If faulty, follow the next paragraph on optical pick-up replacement and adjustment.



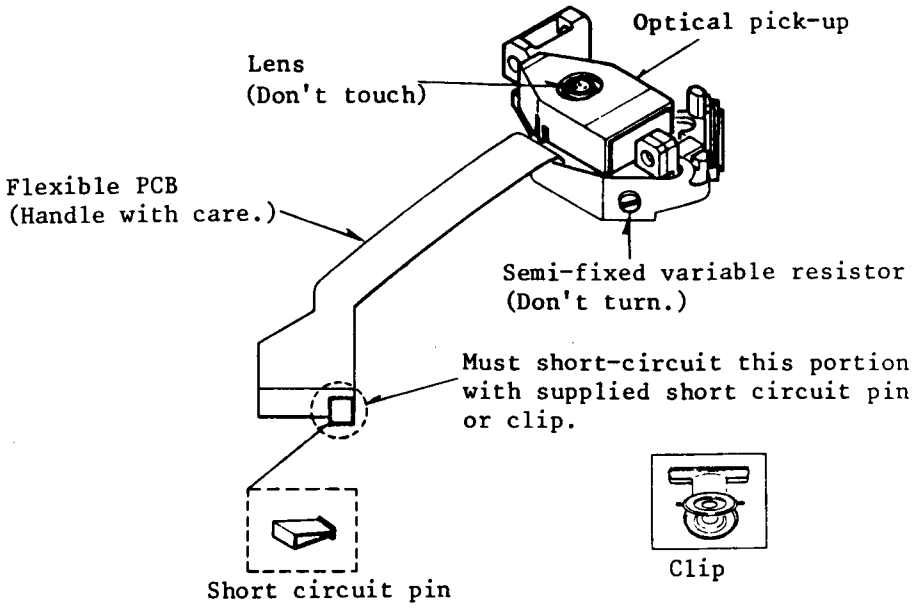

to the Jumper (RF test Point).
) on the main PCB as illustra-
ipply switch of the Player and
hen set to play mode.
Check if APC signal level at ⑧of Q101 is "H".
Check of EC signal level at pin ①of CN401 is "H".
Focus servo works but TOC is not read, or noisy.
Check RF signal. (Connect oscilloscope to the jumper (RF) test point) on the main PCB.
Sweep--------- 0.5 µsec.
Volt --------- 0.5V
Input --------- AC
NO
Probably faulty location
∘ PD balance setting
∘ PLL setting
(Refer to Page 8 and 12.)
Yes
Check RF signal amplitude (1.2 Vp-p).
Sweep--------- 0.5 µsec.
Volt --------- 0.5V
Input --------- AC
NO
Laser diode may be faulty if amplitude is below 0.8 Vp-p.
(SOAD30A)
Yes
Check best eye pattern. (Refer to Page 8.)
NO
Readjust PD balance. (Refer to Page 8.)
NO
Readjust Mechanical adjustment. (Refer to Page 23.)
Adjust tracking offset. (Refer to page 11.)
NO
Readjust. (Refer to Page 11.)
Adjust PLL. (Refer to Page 12.)
No
Adjust. (Refer to Page 12.)
Replace optical pick-up (SOAD30A).
Must conduct following on completion of replacement procedure.
∘ Optical pick-up adjustment
∘ Electric adjustment
Does tracking servo work?
NO
Probably faulty location
∘ IC101
∘ Broken PU coil
∘ Tracking servo driver
Check tracking offset. (Refer to Page 11.)
NO
Readjust tracking offset. (Refer to Page11.)
Replace optical pick-up. (SOAD30A).
Probably faulty location
∘ Servo circuit
∘ PD balance setting

6-2. HOW TO HANDLING OPTICAL PICK-UP

The laser diode in the optical pick-up may be damaged by potential difference caused by static charge on clothing or body. Pay careful attention to damage by static charge when repaired.

• Handling of Optical Pick-up

1. Don't give a heavy shock to the optical pick-up which is very precisely constructed.
2. A charge prevention pin is inserted in the flexible PCB for preventing damage to the laser diode. The pin should be removed or installed in a short time.
3. Handle the flexible PCB with care because PCB may be cut if an excessive stress is applied.
4. Don't meddle with the laser power adjusting VR which is adjusted prior to shipping.



• Grounding for Preventing Static Charge Damge

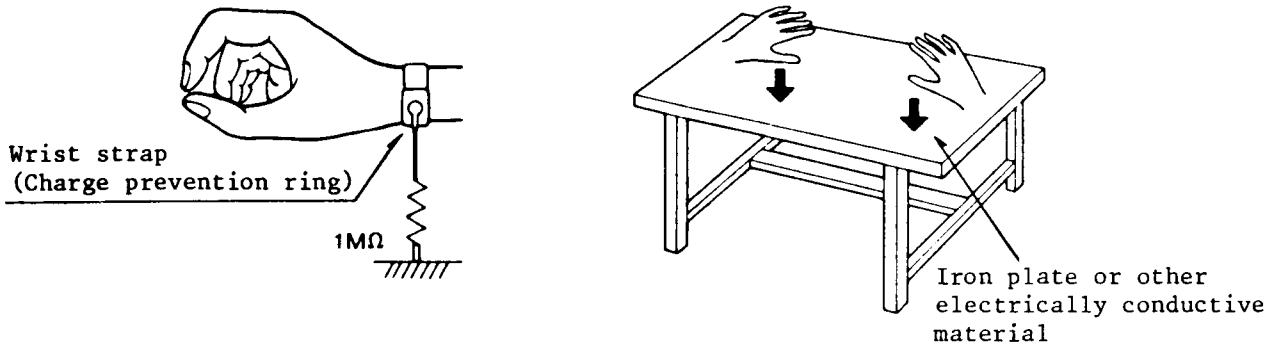
1. Body Grounding

   Put on the charge preventing wrist strap for discharging electricity from the body.

2. Working Table Grounding

   Lay electrically conductive material (conductive sheet) or an iron plate on the table where the optical pick-up is placed, and ground the material or sheet to the floor.

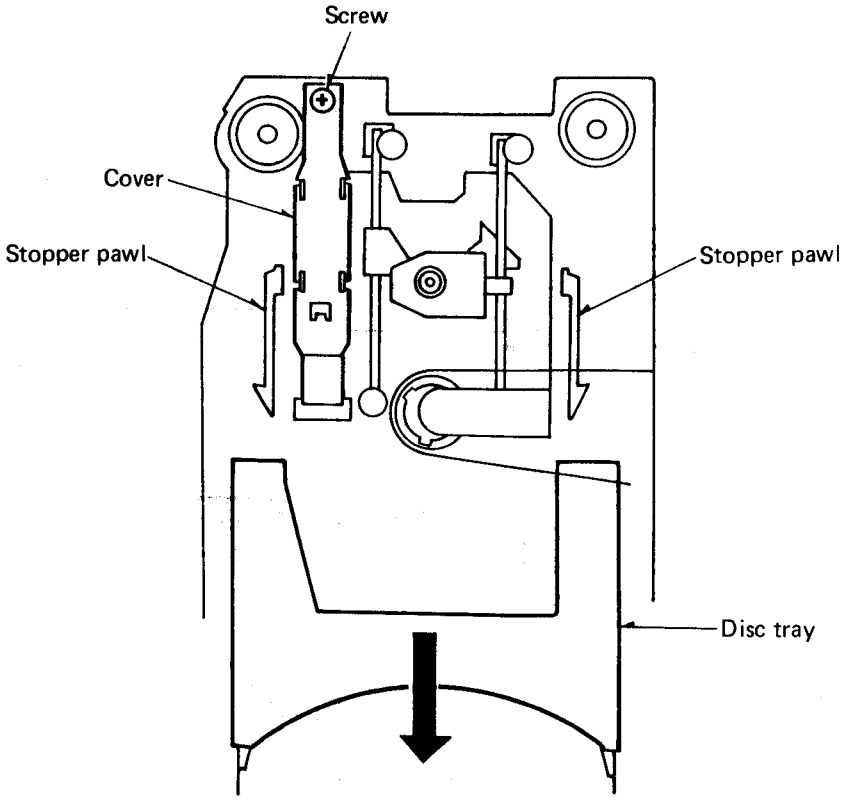
Note: Static charge of clothing is not discharged from the wrist strap. Exercise care so that clothing shall not touch the wrist strap.



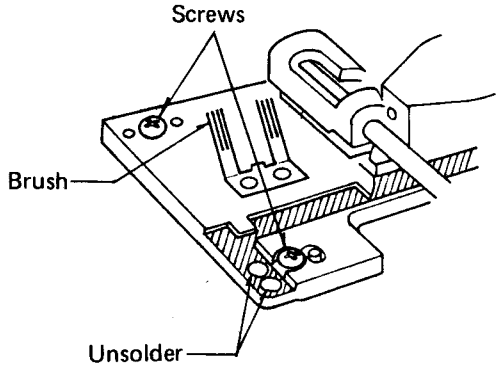
7. OPTICAL PICK-UP REPLACEMENT PROCEDURE

Note: Exercise care so that disassembled parts shall not be lost.
Set up the player so that it can be power on checked as shown in illustration according to the disassembly procedure outlined in the service manual.

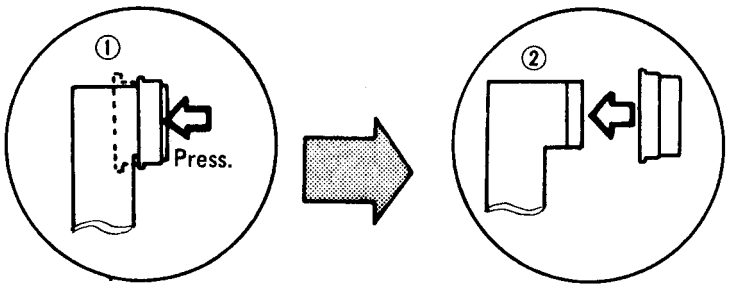
(1) Remove the front panel.
(2) Pushing the two stopper pawls of the disc holder inward simultanouely, pull the holder to remove it.
Note: The stopper pawls are nothing to reassembling.
(4) Remove the resisting plate for the position detector.



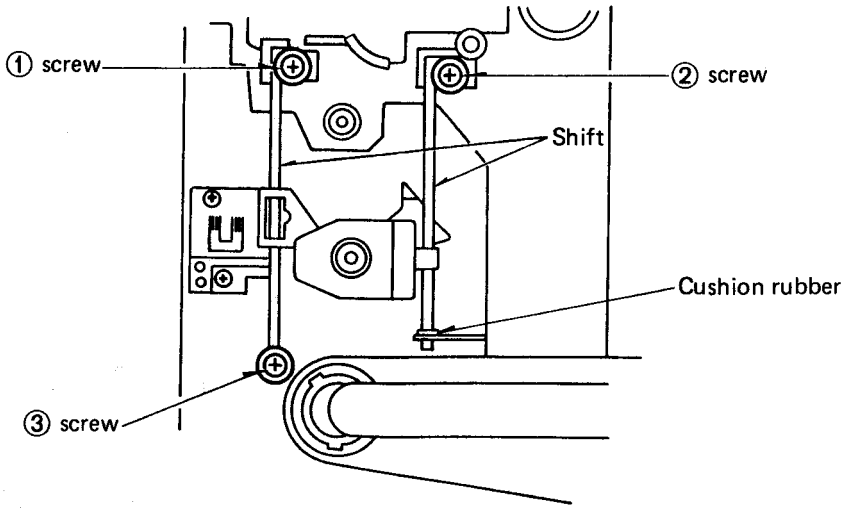
(5) Unsolder the linear motor drive coil and optical pick-up to separate them.
(6) Remove the two linear motor drive coil fastening screws.
Note: Pay due attention to the contact brush.



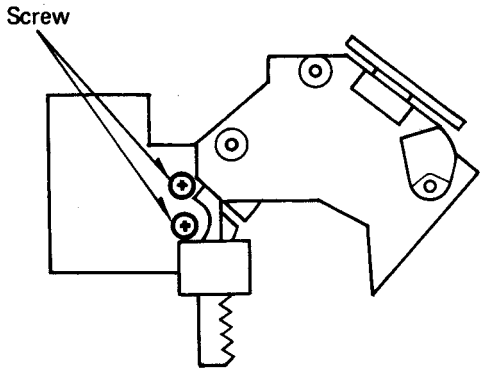
(7) Disconnect the optical pick-up 17-pin flexible cord from connector CN101 on the main PCB.
Note: 1. Pull out the connector at the point indicated by the arrow side.
2. Pull out the flexible cord.



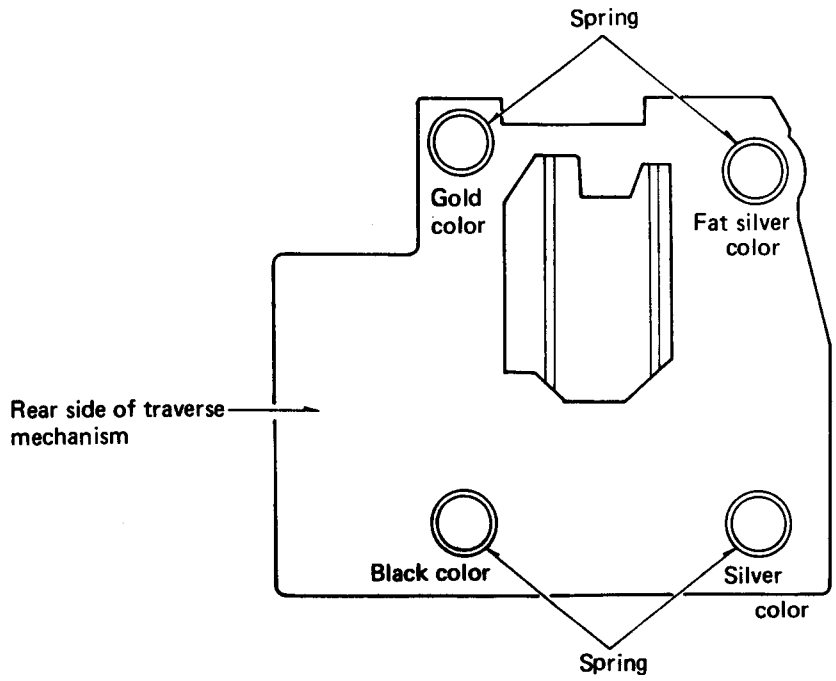
(8) Remove the three optical pick-up fastening screws.
(9) Remove the optical pick-up fastening shaft.
Note: Be careful not to lose or misplace the cushion rubber.
(10) The optical pick-up has been completely separated with this.
It is not necessary to remove the traverse unit as before. If the unit needs to be removed, pay attention to the four springs during removing.

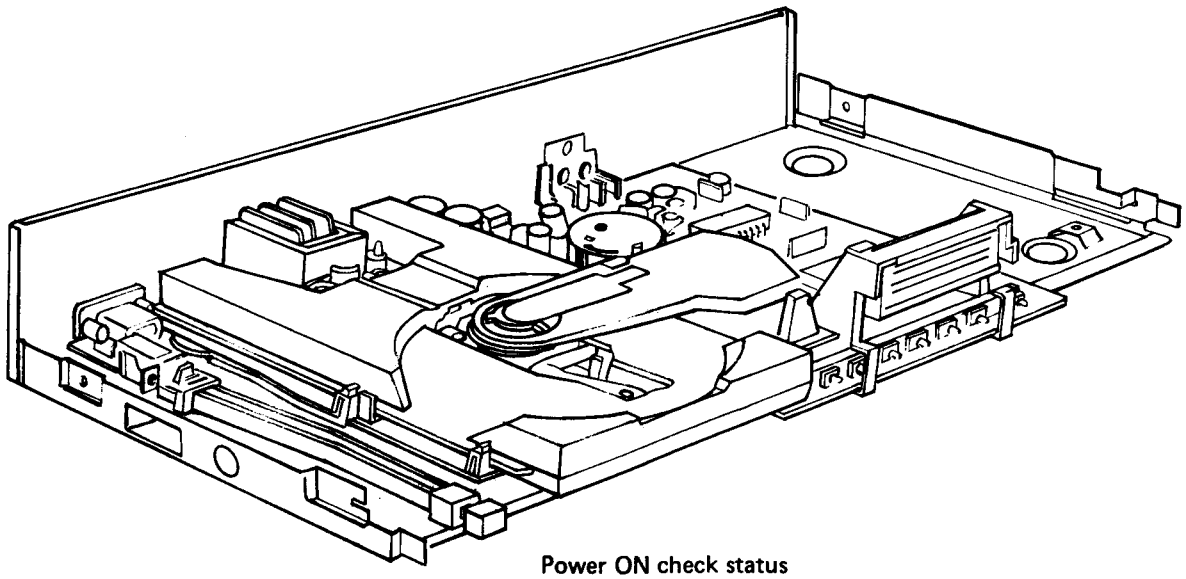


(11) Remove the linear motor coil fastening bracket.



(12) Install the optical pick-up in the reverse order of disassembling so that Power On check can be conducted as shown in illustration.





Power ON check status

8. ADJUSTING PROCEDURE OF OPTICAL PICK-UP

8-1. Adjusting steps and Points of optical pick-up

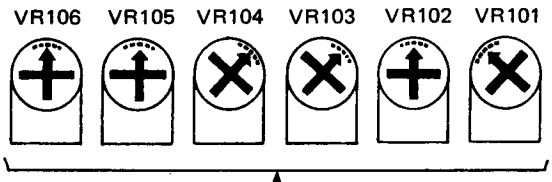
Set up player according to disassembling procedure so that power-on check can be conducted.

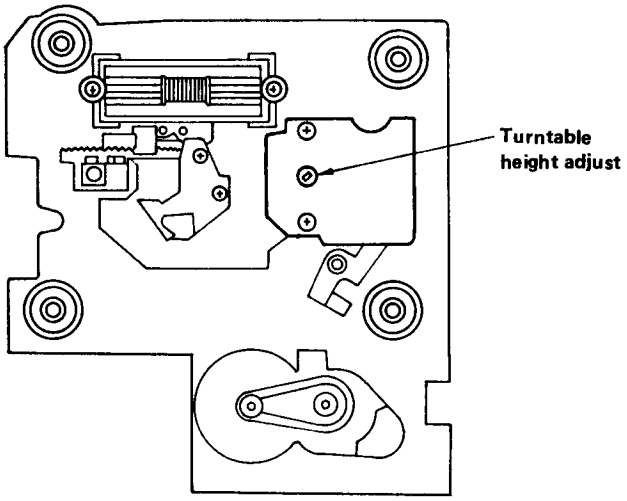
Temporarily set adjusting variable resistors on servo PCBs.

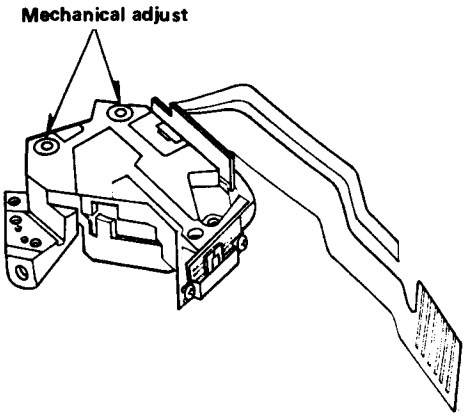
Adjust turntable height.

Mechanical adjustment

Electric adjustment







8-2. Required Measuring Instruments and Tools

1. Two-channel oscilloscope (with external trigger), over 30 MHz.
2. Test desc (SZZP1014F) or (SZZP1054C)
3. Allen wrench --------- 1.5 mm (SZZP1044C)
4. General tools

9. MECHANICAL ADJUSTMENT PROCEDURE

A. Turntable Hight Adjustment

(1) Turn on the power supply switch of the player.

(2) Place the test disc **(SZZP1014F) or (SZZP1054C)** to the disc holder

(3) Turn off the power supply switch of the player.

(4) Set the oscilloscope to **DC zero balance.**

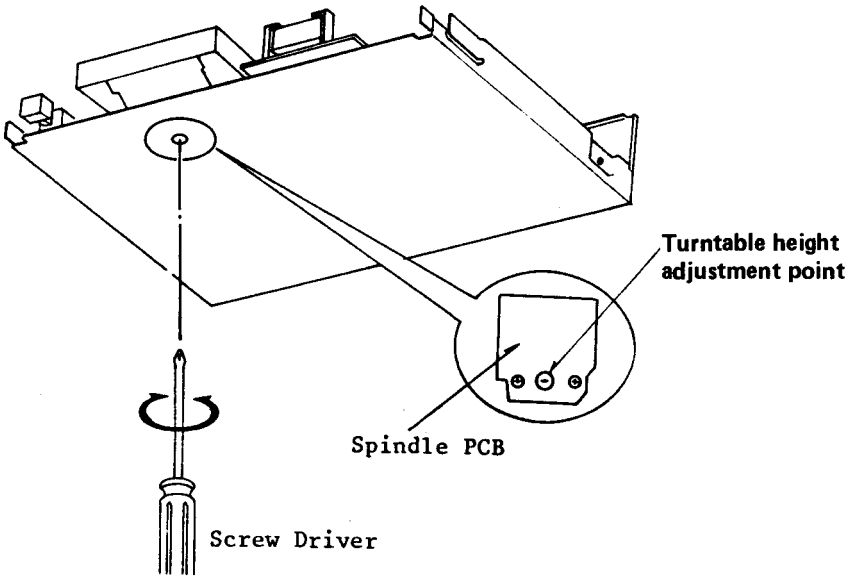
(5) Connect the CH-1 of the oscilloscope to **TJ102** of the servo circuit and GND to the chassis.

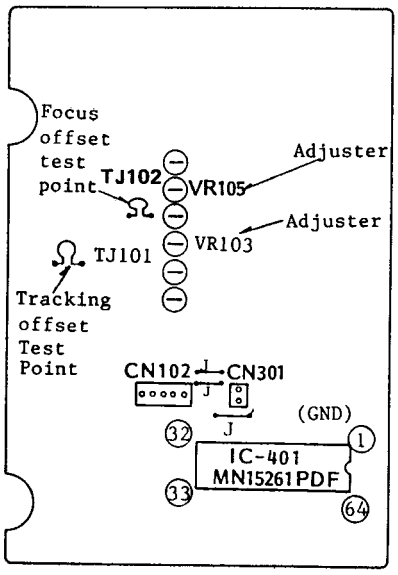
Oscilloscope settings --
- Sweep : 5m sec.
- Volt : 100mV
- Input selector : DC

(6) Turn on the power supply switch of the player.

(7) Play back a desired track.

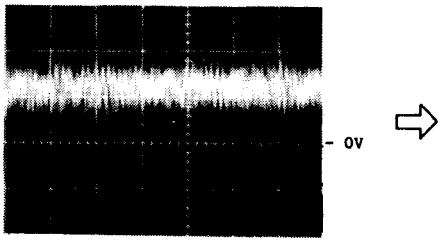
(8) Place the unit in the corner of the workbench -- in the place that allows the adjustment -- and set it as **illustrated with care not go give vibration to the unit.**



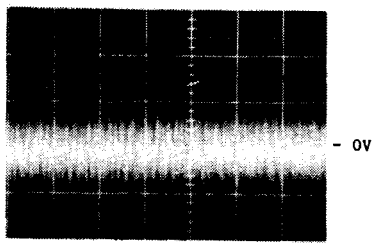


Main PCB

(9) Turn the adjusting screw on the underside of the spindle motor PCB by a flat screwdriver so that the waveform at **TJ102** shall be **0 ± 50mV** as shown in illustration.

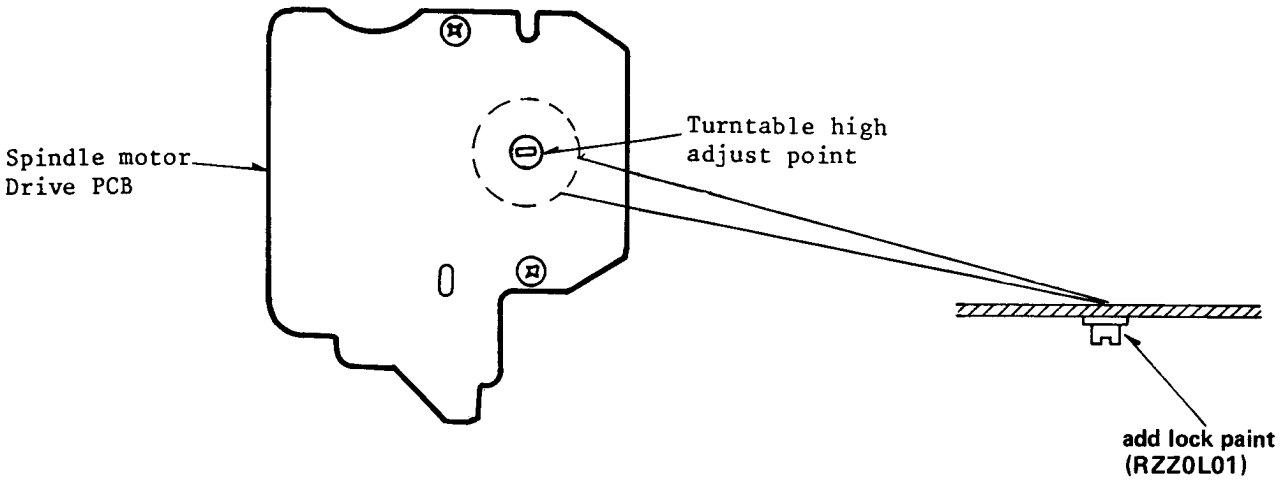


NG



OK

(10) Turn off the power supply switch of the player.
(11) Lock the adjusting screw with "Screw lock paint (RZZ0L01)" on completion of adjustment.



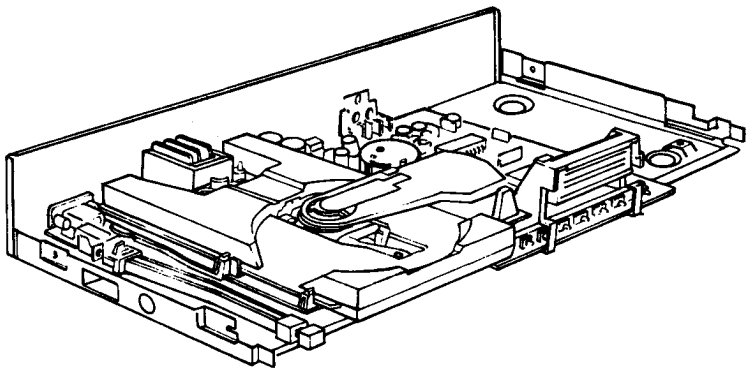
B. Mechanical Adjustment

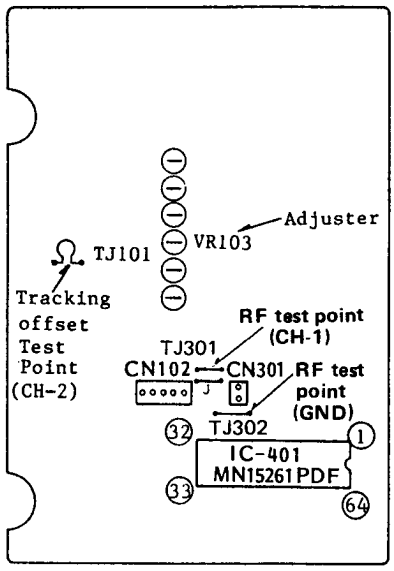
(1) Turn on the power supply switch of the player.
(2) Insert the test disc (SZZP1056C) in the disc holder.
(3) Turn off the power supply switch of the player.
(4) Set the oscilloscope as stated below.

Oscilloscope settings

Sweep	:	0.5 µsec.
Volt	:	0.5V
Input selector	:	AC

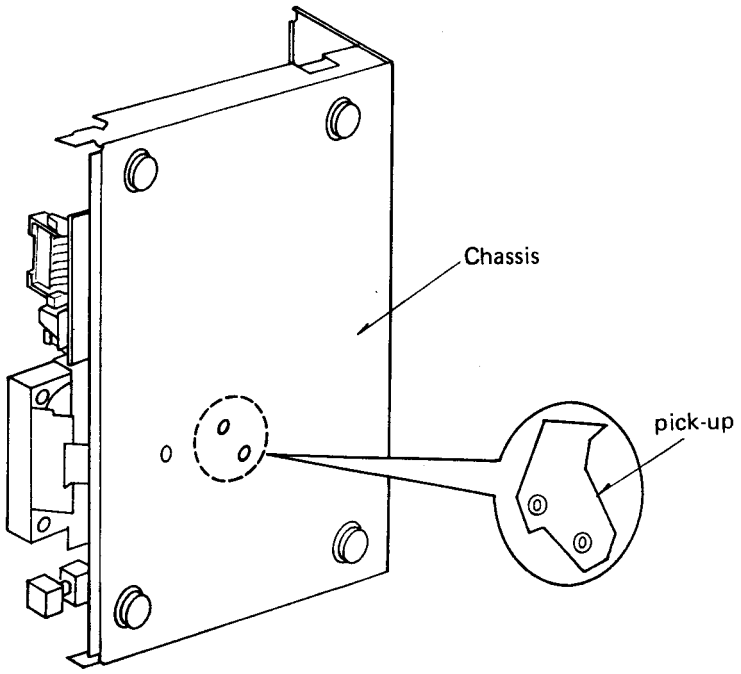
(5) Connect CH-1 of the oscilloscope to **TJ301 of RF test point** and GPD to **TJ302 of RF test point (GND).**
(6) Turn on the power supply switch of the player.
(7) **Play back TR9.**
Note: If any track other than TR9 is played back, this adjustment cannot be achieved. **If the temporary adjustment takes much time,** it is advisable to set the player in the **repeat mode.**
(8) Set the player in the playback mode as shown in illustration with care not to give vibration to the unit.





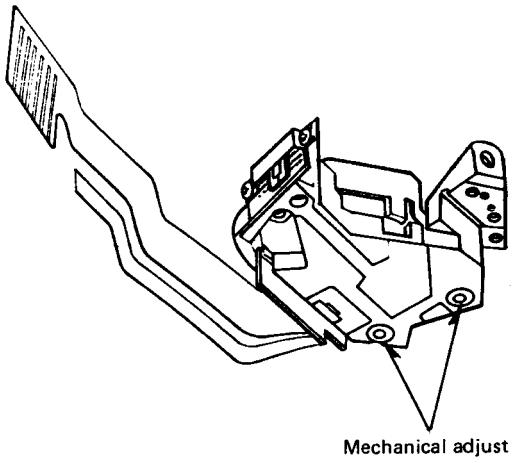
Main PCB

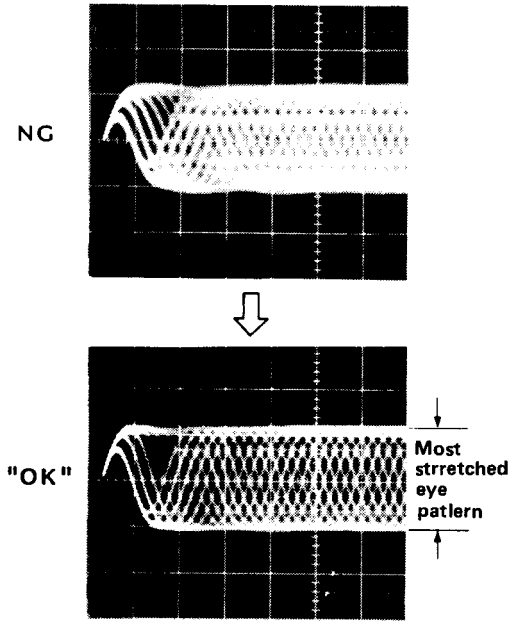
(9) Keeping the player in the playback mode, place it as illustrated **(stand it on its left side).**
Note : If the player is stood on its right side, the adjustment cannot be accomplished perfectly.



(10) Check if the RF signal waveform is as shown in illustration (NG). If the waveform can not be checked or is unlike the given waveform, proceed to the following steps.

(11) Set the allen wrench **(SZZP1044C. . .1.5mm)** into the socket in the heads of the mechanical adjusting screws shown in illustration and turn the both screws right or left to optimum positions.



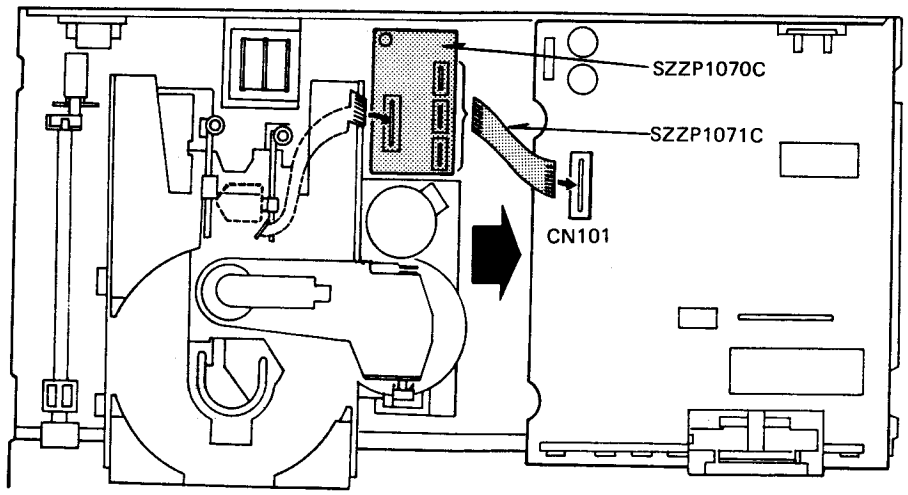


(12) Turn off the power supply switch of the player.

(13) Lock the adjusting both screw with **screw lock paint (RZZ0L01)** on completion of adjustment.

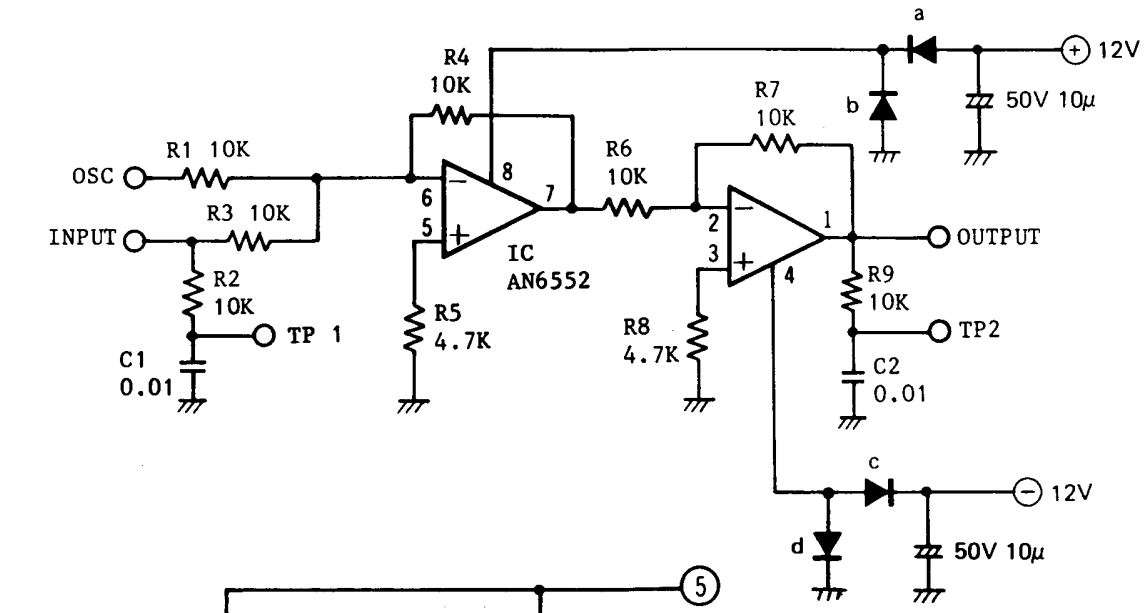
10. CHECKING PROCEDURE FOR THE WHOLE ELECTRICAL CIRCUIT (IN TROUBLESHOOTING)

The FPC cord from the optical pick-up is too short to check the back of the main PCB with case. So use the servicing fixture **(SZZP1070C) and (SZZP1071C)** and follow the procedure shown below. This fixture is not a must in the electrical and mechanical adjustments.

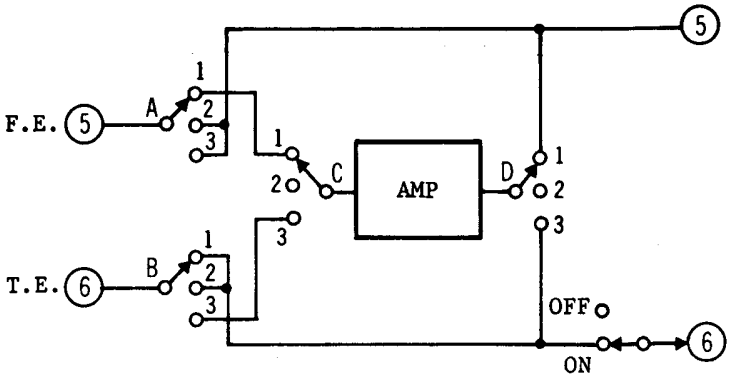


(1) Disconnect the FPC cord from **CN101.**
(2) Attach a clip to the top end of the FPC cord. (This is for protecting the optical pick-up against the breakdown due to static electricity. The clip is not a must, however, when a destaticizing mat or the like is already in use in servicing.)
(3) Remove the four main PCB fastening screws.
(4) Shift the main PCB to the right side.
(5) Attach the servicing fixture **(SZZP1070C)** as illustrated.
(6) Connect the FPC cord from the optical pick-up to the connector of the fixture. (The other connectors are for the SL-P1200. Use care not to mistake any of these for the above connector.)
(7) Connect further the junction FPC cord **(SZZP1071C)** to the output connector from the fixture, then connect the cord to CN101 on the main PCB.
Each part on the back of the main PCB can easily be checked now.

11. SCHEMATIC DIAGRAMS OF SERVO GAIN ADJUSTER (SZZP1017F)



(Circuit Protection)



Ref. No.	Part No.	Q'ty
IC	AN6552	1
R 1,2,3,4,6,7,9	ERDS2TJ103	7
R 5,8	ERDS2TJ472	2
C 1,2	ECKD1H103ZF	2
C	ECEA1HU100	2
Connector	SSDJB13BXHA	1
Lead Wire	(180,600mm)	2
3 Wire with		1
a b c d (Diode)	MA162	4

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