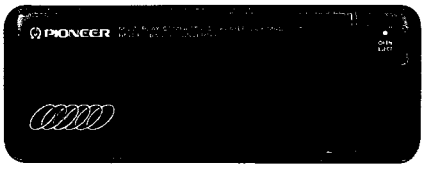
PIONEER
The Art of Entertainment

Service Manual

● CDX-M40



ORDER NO.
CRT1347

MULTI-PLAY COMPACT DISC PLAYER

CDX-M40
CDX-M60 US

UC, EW, ES

COMPACT disc DIGITAL AUDIO

- **This additional service manual is designed to be used together with Model CDX-M50/UC Service Manual (CRT1289). Refer to it for disassembly, etc. which are not shown in this manual.**

CONTENTS

1. TRANS PORTATION SCREWS

Removal of Screws

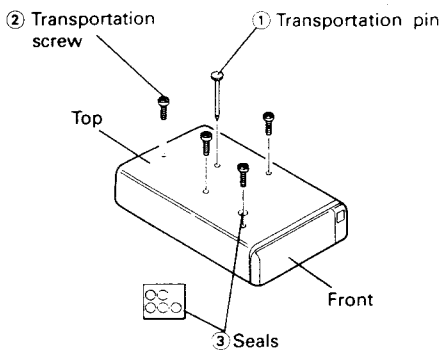
Be sure to remove transportation screws (red) ① and ② in this order and cover the screw holes with seals ③ before mounting the set. Peel off adhesive tape to remove the transporation pin ①. **Keep the screws in a safe place; they may be needed for retransporation of the set.**

Reinstallation of Screws

Be sure to reinstall the transporation screws (red) in the procedure described below before re-transporting the set. Incorrect order of reinstallation or use of different screws may cause the set to fail.

1. Let the set operate the beginning of a disc and stop operation within 10 seconds thereafter before removing the set.
2. Remove the magazine and then the set.
3. Reinstall the transportation screws in the reverse order (② and ③) of removal. Fasten the transportation pin ① with adhesive tape.

- Make sure the player is mounted using transportation screws correctly—either for horizontal mounting or vertical mounting.



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FS JAN. 1991 Printed in Japan

1. SAFETY INFORMATION (CDX-M40/EW)

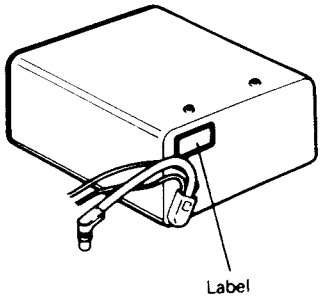
1. Safety Precautions for those who Service this Unit.

- Follow the adjustment steps (see pages 5 through 27) in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.

2. A "CLASS 1 LASER PRODUCT" label is affixed to the rear of the player.



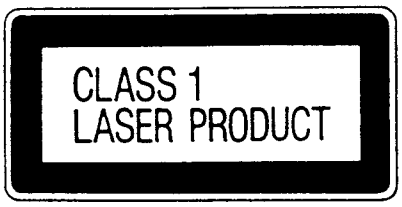


Fig. 1

3. The triangular label is attached to the mechanism unit frame.

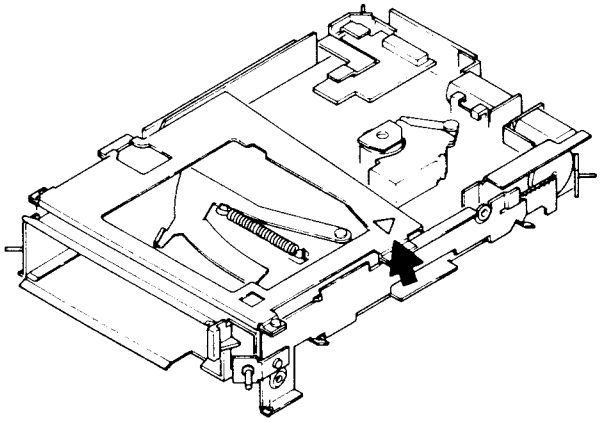


Fig. 2

4. Specifications of Laser Diode

Specifications of laser radiation fields to which human access is possible during service.

Wavelength = 780 nanometers
Radiant power = 69.7 microwatts (Through a circular aperture stop having a diameter of 80 millimeters)
0.55 microwatts (Through a circular aperture stop having a diameter of 7 millimeters)

SAFETY INFORMATION (CDX-M40/UC, CDX-M60/US)

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

4. ADJUSTMENT

1) Precautions

- The CDX-M40 uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to pin no. 21 (approx. 2.5V) of IC351 (CXA1081Q) instead of GND. (VC or VREF at test point)

If VC and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.

Do not connect the negative probe of the measuring equipment to VC and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to VC with the channel 2 negative probe connected to GND.

And since the frame of the measuring instrument is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.

If by accident VC comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.
- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.

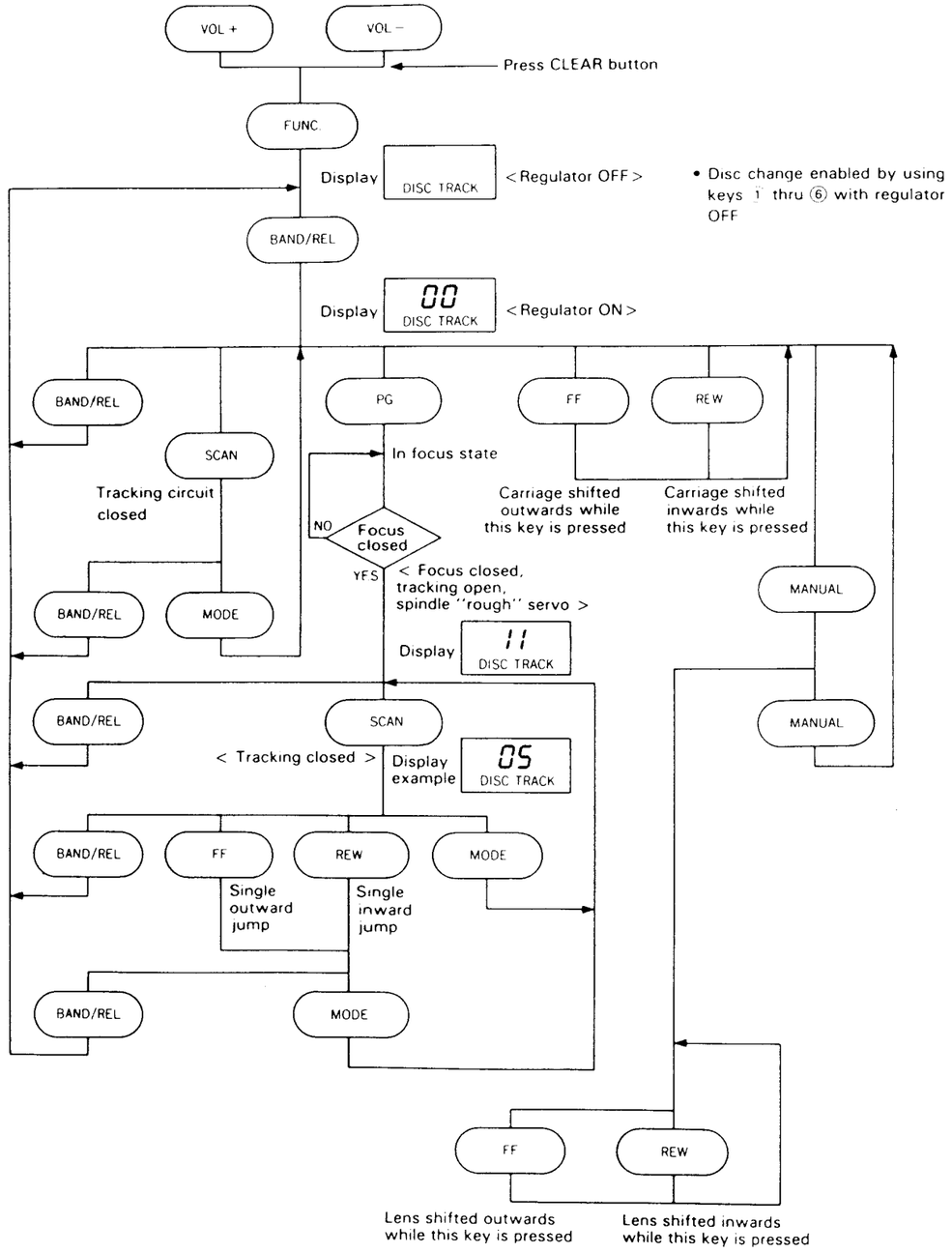
Key	Function
BAND/REL	Regulator ON/OFF
FF	FWD kick
REW	REV kick
SCAN	Tracking close
MODE	Tracking open
PG	Focus close

- When loading and unloading discs during adjustment procedures, always wait for the disc to be properly clamped or ejected before pressing the another key. Otherwise, there is risk of the actuator being destroyed. (For example, do not press the [P.G] key while a disc is being moved from magazine to clamp after regulator is switched ON in steps 3 thru 5 of Tracking Balance Adjustment I. Nor should the [EJECT] key (in M40) be pressed during focus closed status.)

2) Since CDX-M40 is used in combination with a multi-CD control section such as KEX-M700, all adjustment key operations are executed at that control section.
The KEX-M700 test mode starting procedure and key operations are included for reference purposes. All keys mentioned in the main text are KEX-M700 keys.

- Test mode starting procedure
Switch back-up ON or press the CLEAR button while pressing the [VOL +] and [VOL −] keys together.
- Test mode cancellation
Press the KEX-M700 CLEAR button, followed by the CDX-M40 CLEAR button. (Or switch the KEX-M700 and CDX-M40 back-up OFF.)

● Flow Chart



3. BLOCK DIAGRAM

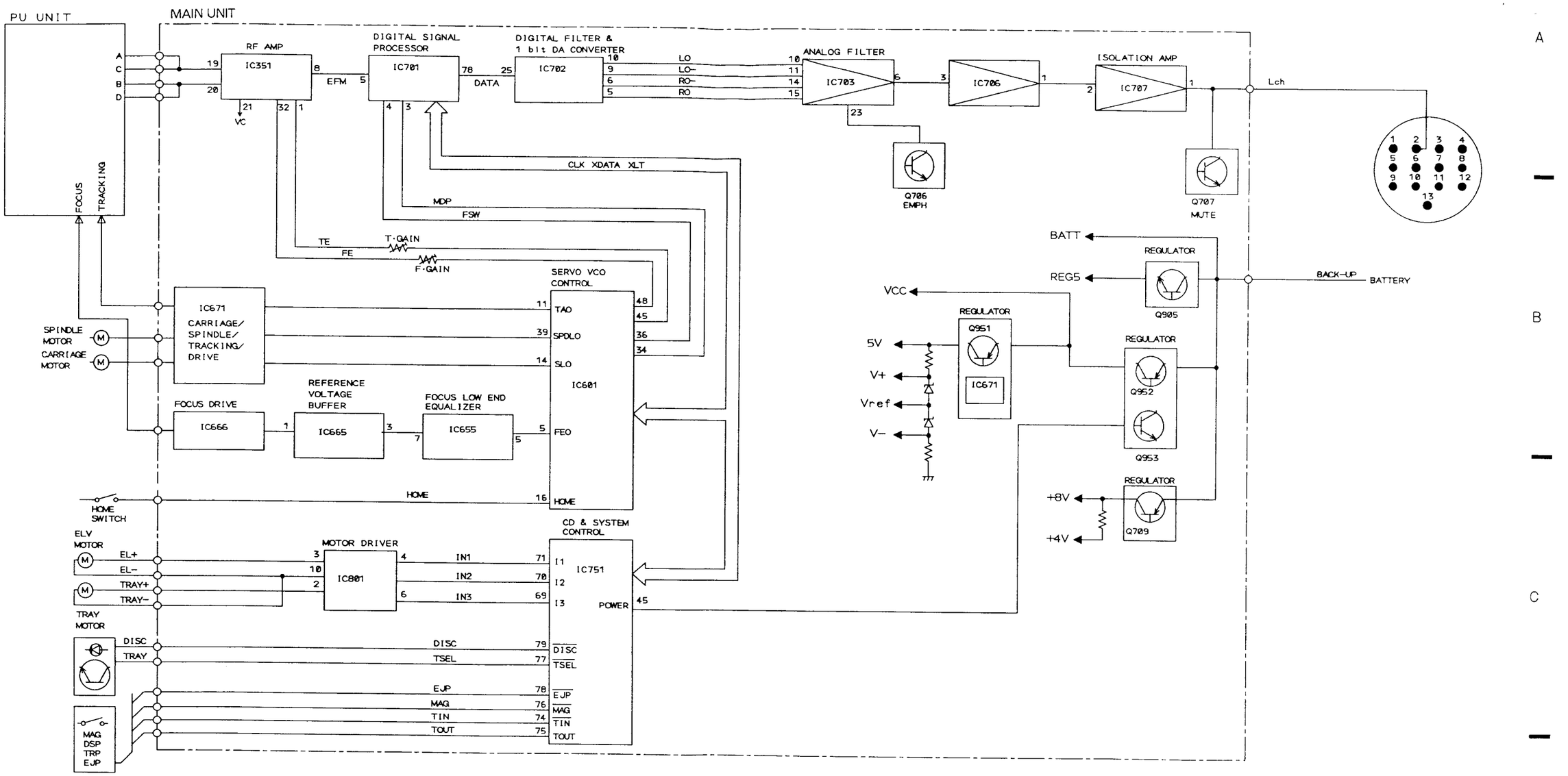


Fig. 3

● Adjustment Points

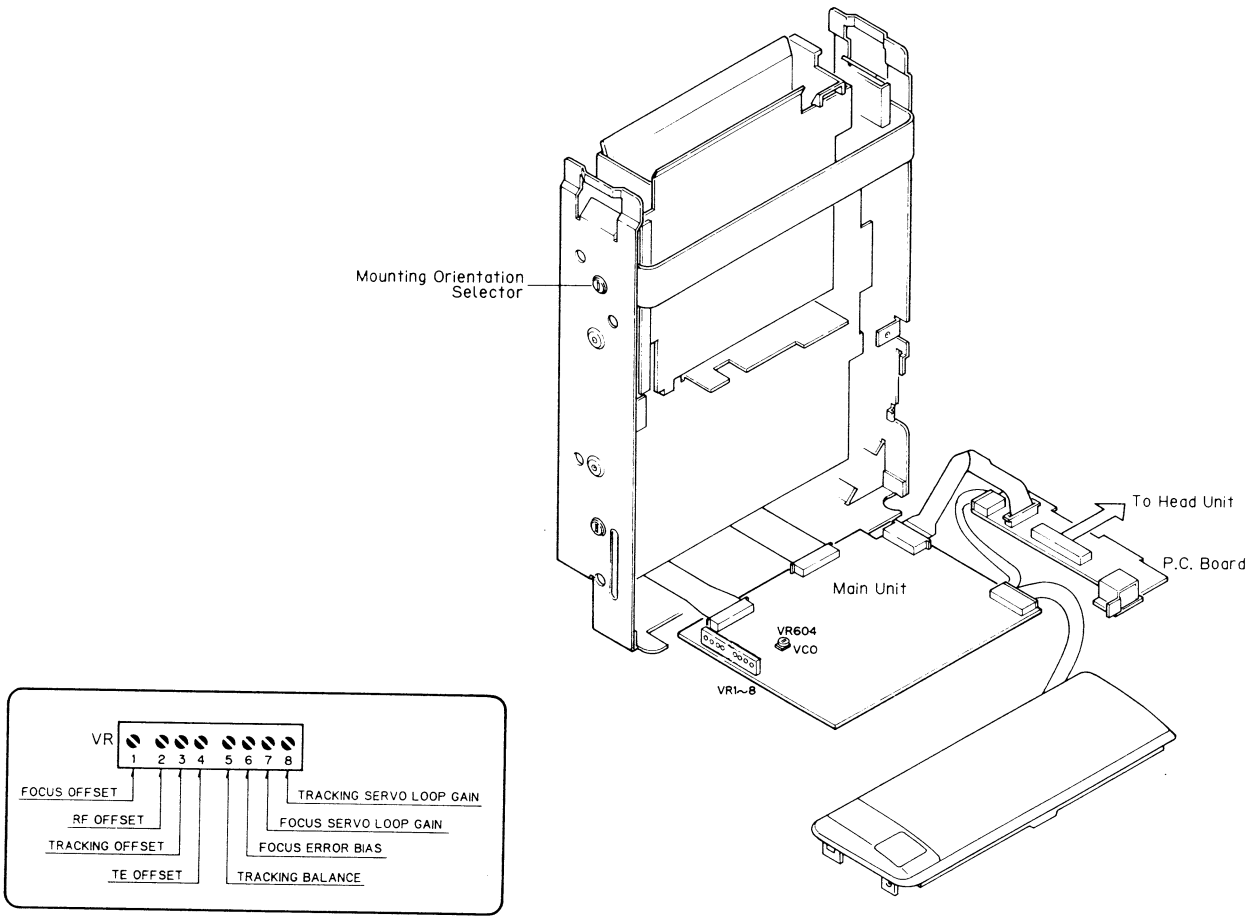


Fig. 4

● Test Points

Main Unit (Foil side)

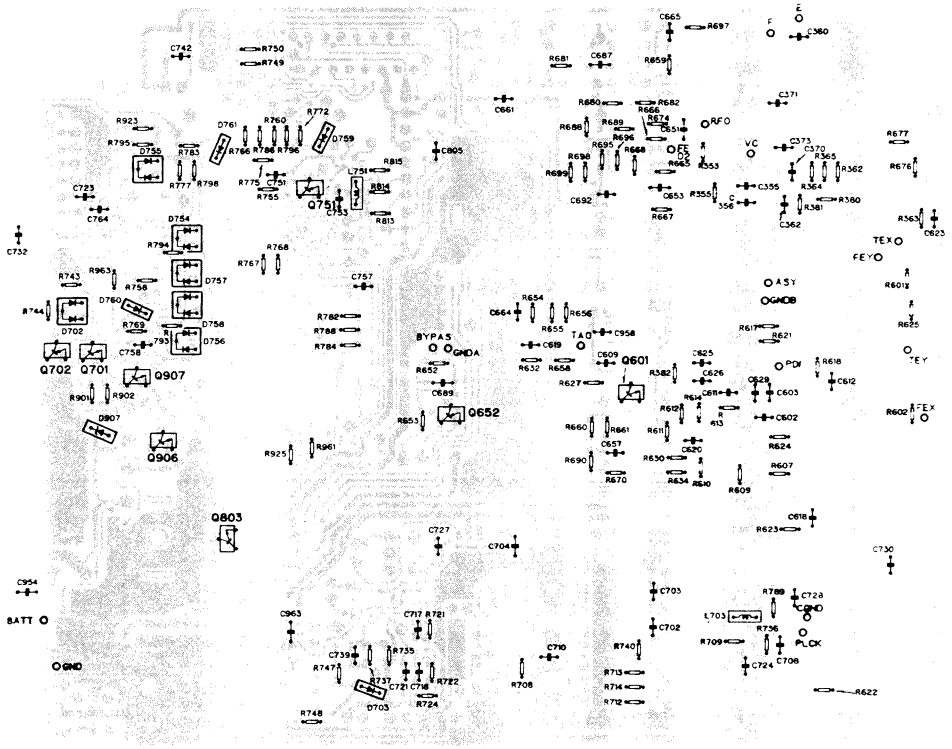


Fig. 5

Main Unit (Parts mounted side)

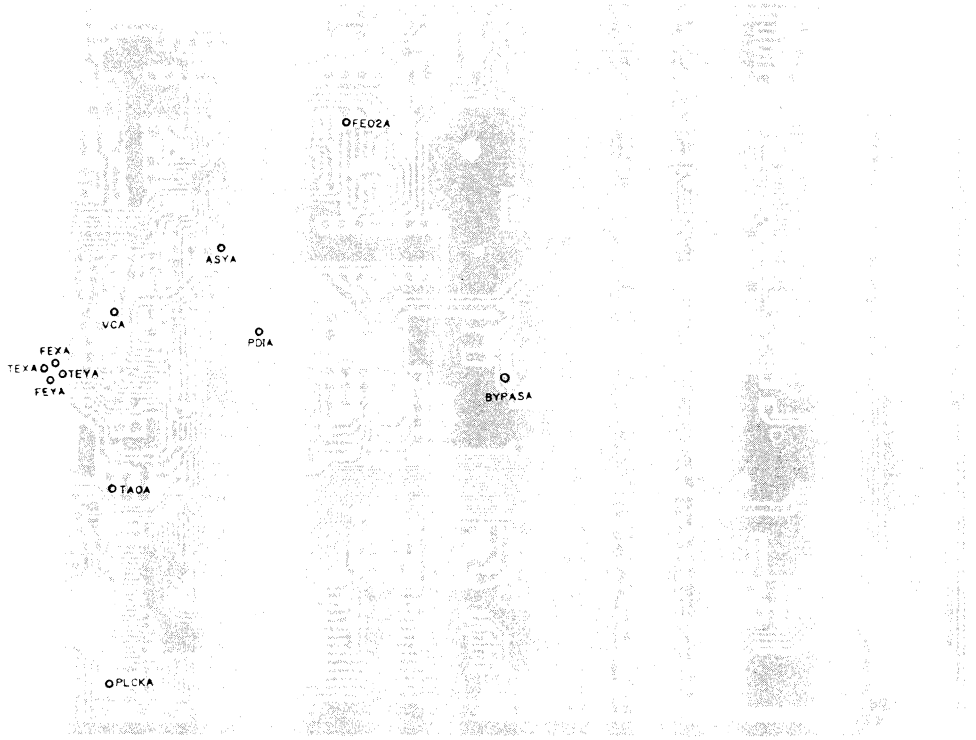


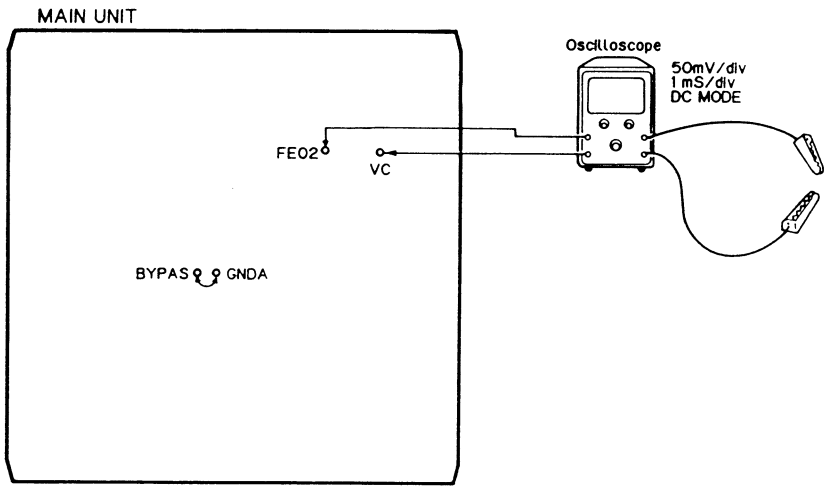
Fig. 6

4.1 Focus Offset Adjustment

● Purpose: To adjust the electrical offset of the focus amplifier to zero.

● Maladjustment symptoms: No focus closing

● Measuring equipment/ jigs	• Multi-meter or oscilloscope
● Measuring point	• FEO2
● Test disc and setting	• Empty magazine, test mode
● Adjustment position	• VR1 (FO)



(This p.c. board connection diagram is viewed from the foil side.)

Fig. 7

Adjustment Procedure

1. Connect BYPAS to GNDA.
2. Switch regulator ON.
3. Using VR651, adjust the FEO2 DC voltage in reference to VC to a value of 0 ± 25mV.

4.2 VCO Free Run Frequency Adjustment

● Purpose: To adjust the EFM decoder reference clock free- run frequency to a suitable value

● Maladjustment symptoms: Spindle lock not possible, distorted sound or no sound at all

● Measuring equipment/ jigs	• Frequency counter
● Measuring point	• Pin No. 70 (PLCK) of IC701 (CXD1167Q)
● Test disc and setting	• Empty magazine • Test mode
● Adjustment position	• VR604

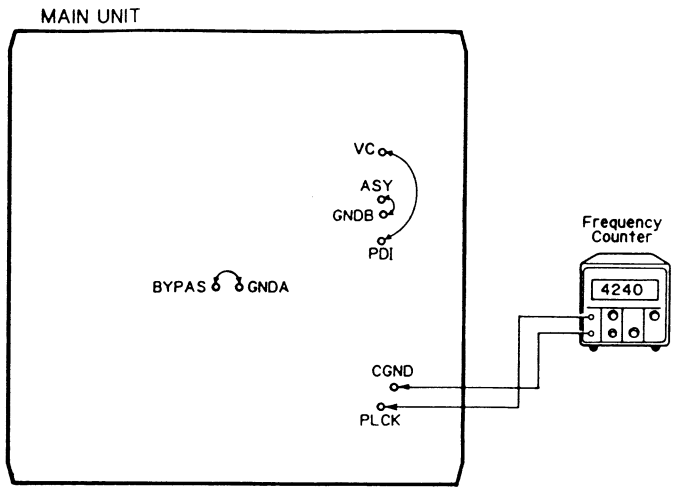


Fig. 8

Adjustment Procedure

1. Connect pin No. 7 (TP ASY) of IC351 to GNDB. Connect BYPAS to GND.
2. Connect pin no. 1 (TP VC) of IC601 to pin no. 28 (TP PDI).
3. Switch regulator ON while in test mode.
4. Connect the frequency counter to pin No. 70 (TP PLCK) of IC701 (CXD1167Q).
5. Adjust VR604 to obtain a frequency of 4.24 ±0.005MHz.
6. Switch regulator OFF.
7. Disconnect the leads connecting TP VC to TP PDI, and TP ASY to GNDB.

Note: Connect TP VC and TP PDI with leads kept as short as possible.

Note: Connect the frequency counter ground to TP CGND as shown in the figure.

4.3 RF Offset Adjustment

● Purpose: To adjust the RF amplifier offset to a suitable value

● Maladjustment symptoms: Focus closure fails readily

● Measuring equipment/ jigs	• Oscilloscope
● Measuring point	• RFO
● Test disc and setting	• Empty magazine • Test mode
● Adjustment position	• VR2 (RFO)

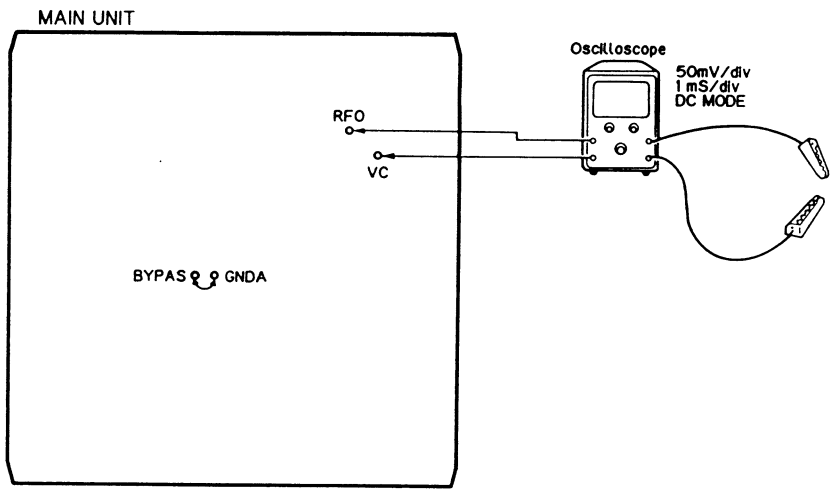


Fig. 9

Adjustment Procedure

1. Connect BYPAS to GNDA.
2. Switch regulator ON.
3. Using the oscilloscope, measure the RFO DC voltage in reference to VC, and adjust VR2 (RFO) to obtain a reading of +40 ± 10mV.

4.4 Tracking Offset Adjustment

● Purpose: To adjust the electrical offset of the tracking amplifier to zero

● Maladjustment symptoms: Search times too long, carriage run-away

● Measuring equipment/ jigs	• Oscilloscope
● Measuring point	• TAO low-pass filter output
● Test disc and setting	• Empty magazine • Test mode
● Adjustment position	• VR3 (TO)

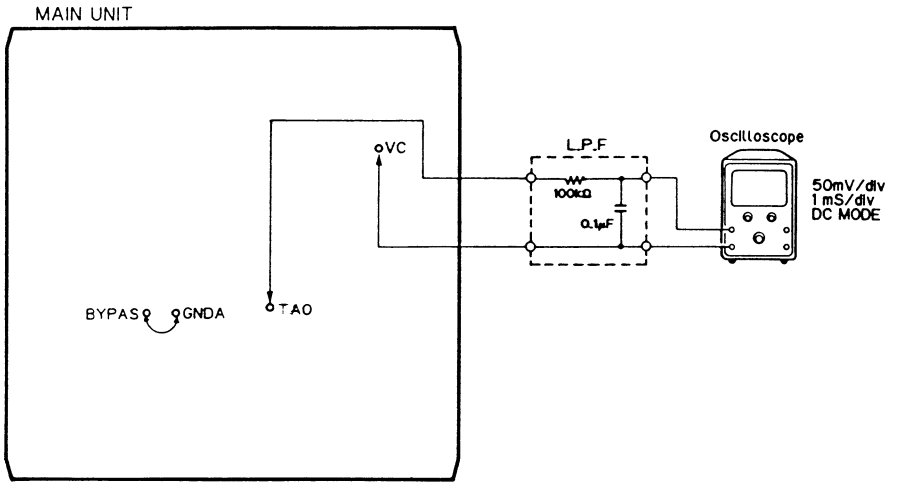


Fig. 10

Adjustment Procedure

1. Insert a low-pass filter between TAO and VC.
2. Check that BYPAS is connected to GNDA.
3. Switch regulator ON.
4. Using the oscilloscope, measure the TAO LPF output DC voltage in reference to VC, and adjust VR3 (TO) to obtain a reading of 0 ± 25mV.
   The low-pass filter may be left in place for later adjustments.

4.5 TE Offset Adjustment - I

● Purpose: To adjust the electrical offset of the tracking servo to zero.

● Maladjustment symptoms: Search times too long, carriage run-away

● Measuring equipment/ jigs	• DC voltmeter
● Measuring point	• TAO low-pass filter output
● Test disc and setting	• Empty magazine • Test mode
● Adjustment position	• VR4 (TEO)

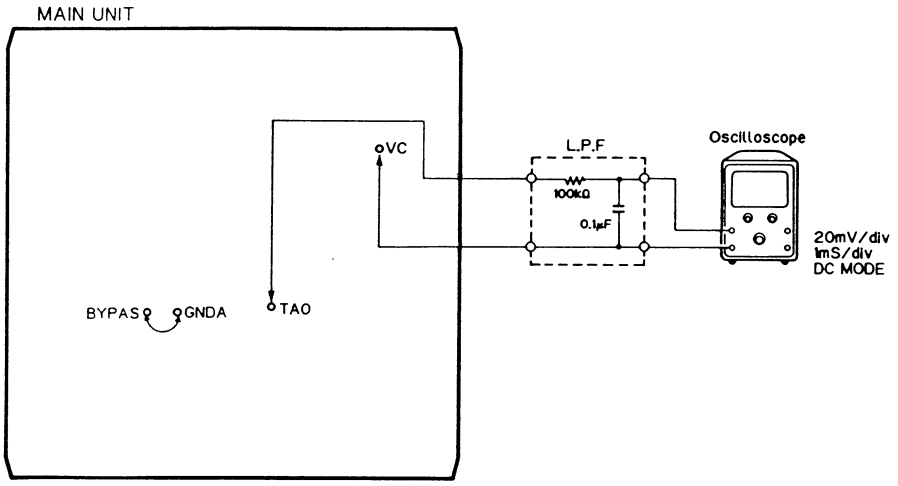


Fig. 11

Adjustment Procedure

1. Check that BYPAS is connected to GNDA.
2. Switch regulator ON while in test mode.
3. Press the [SCAN] key to close tracking.
4. Using VR4 (TEO), adjust the TAO LPF output DC voltage in reference to VC to a value of 0 ± 10mV.
5. Switch regulator OFF.

4.6 Tracking Balance Adjustment - I

● Purpose: To adjust the tracking servo offset to zero.

● Maladjustment symptoms: Search times too long, poor playability, carriage run-away

● Measuring equipment/ jigs	• Oscilloscope
● Measuring point	• TEY (Tracking error signal), low-pass filter output
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Test mode
● Adjustment position	• VR5 (T.BAL)

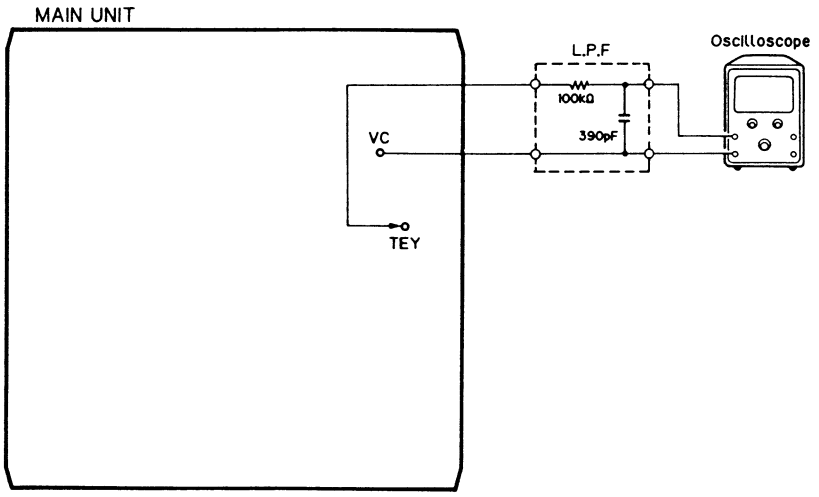
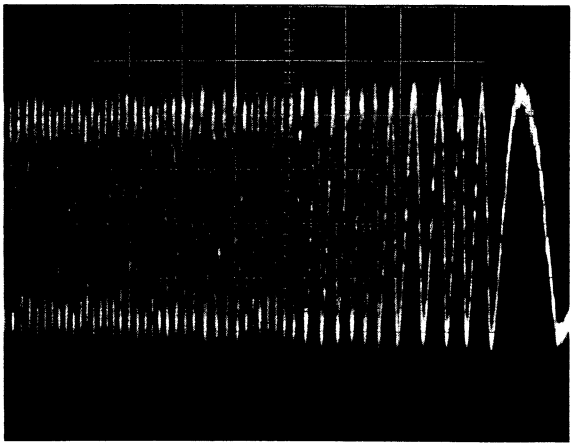


Fig. 12

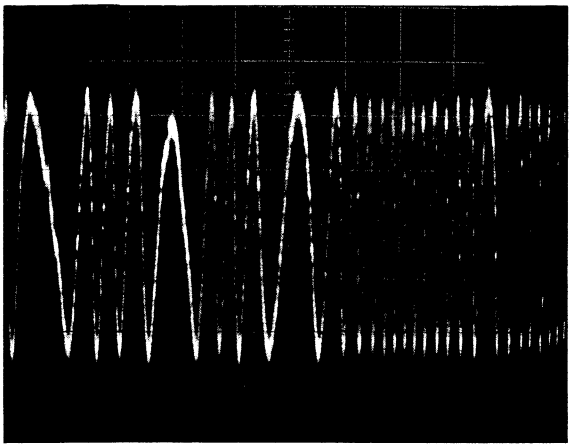
Adjustment Procedure

1. After checking that regulator is OFF, connect the lowpas filter as shown in the diagram.
2. Disconnect BYPAS from ground.
3. Set the test disc (SONY TAPE 4) in magazine tray 6 and load the magazine. Switch regulator ON.
4. Using the [FF] or [REW] key, move the pick-up to about the center of the signal surface.
5. Press the [PG] key to close focus.
6. Using an oscilloscope, observe the TEY signal in respect to VC. Then adjust VR5 (T.BAL) to set the positive and negative amplitudes to the same levels. (See Fig. 13-15)
7. Switch the power OFF.
   The low-pass filter may be left in place for later adjustments.



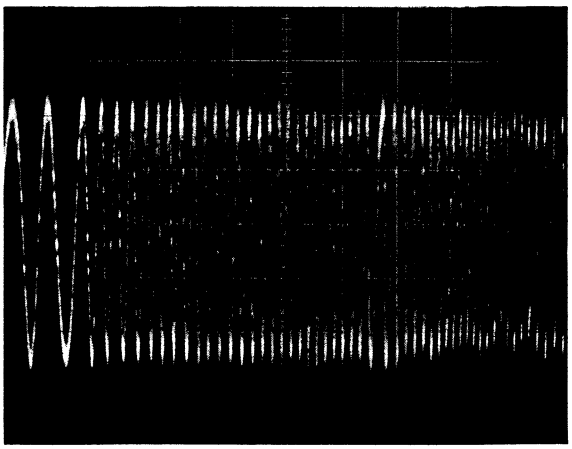
+5% NG

Fig. 13



±0% OK

Fig. 14



−5% NG

10ms/div.
0.2V/div.
DC Mode

Fig. 15

4.7 Tangential Skew Check

● Purpose: To check whether tangential skew has been misaligned or not when replacing the pick-ip unit.

● Maladjustment symptoms: No disc playback; track jumping

● Measuring equipment/ jigs	• Oscilloscope, screwdriver
● Measuring point	• RFO
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Normal mode
● Adjustment position	• Pick-up tangential adjustment screw

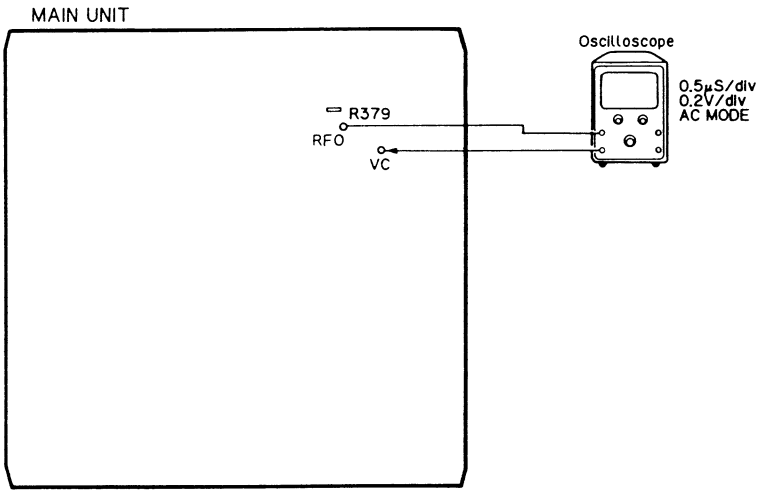
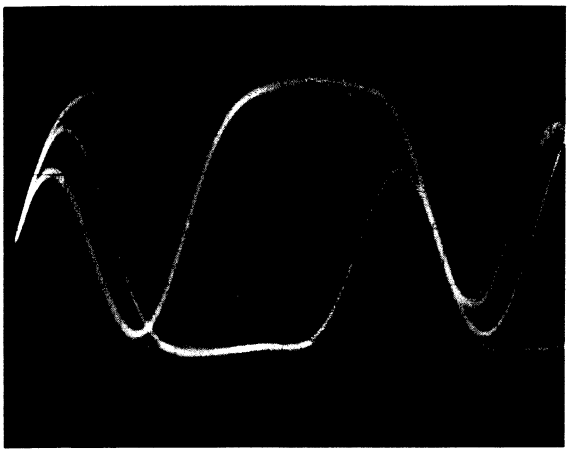


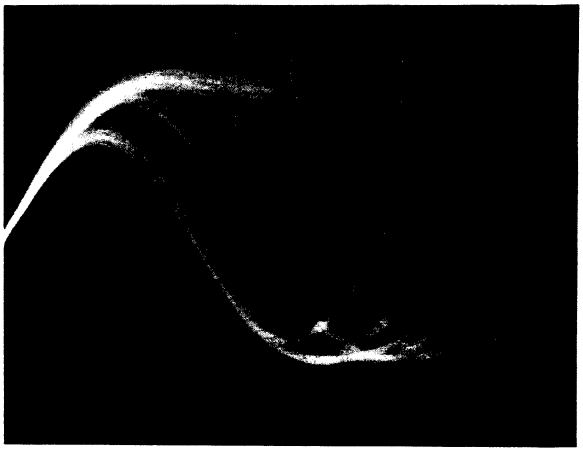
Fig. 16

Adjustment Procedure (with R379 removed)

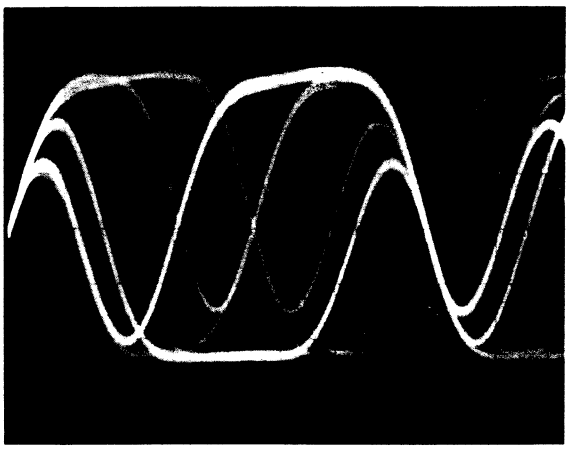
1. Remove R379 (but reconnect after completing adjustment).
2. Play tune TNO 7 in normal mode. (TYPE 3: TNO 23)
3. Check that the valley at the 11T section of the RF waveform is flat.
4. If out of adjustment, readjust to obtain a flat RF waveform. (See Fig. 17-22) Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.)
5. Switch the power OFF and reconnect R379.
6. Apply "screw-lock" to the tangential adjustment screw.
7. After adjusting tangential skew, also adjust the grating.
8. If tangential skew is seriously out of adjustment, carriage stopping and run-away tend to occur in normal mode. In this case,
   a) Switch to test mode,
   b) Shift the pick-up to signal surface center using [FF] or [REW] key,
   c) Press the [PG] key to close focus.
   d) Press the [SCAN] key to close tracking.
   e) Observe RFO in respect to VC, and turn the tangential adjustment screw to obtain a flat waveform at the 11T section.
   f) Repeat the adjustment resuming from step 2.



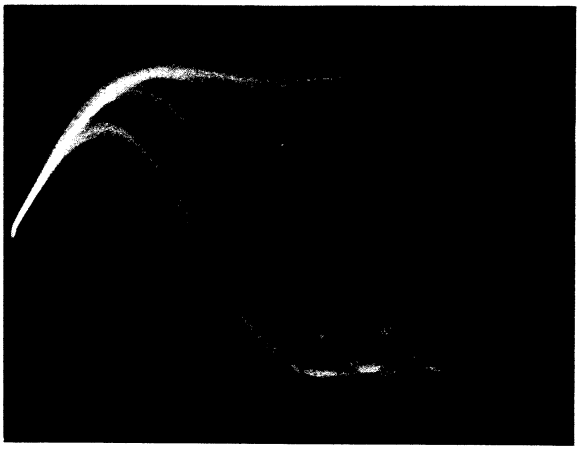
NG Fig. 17



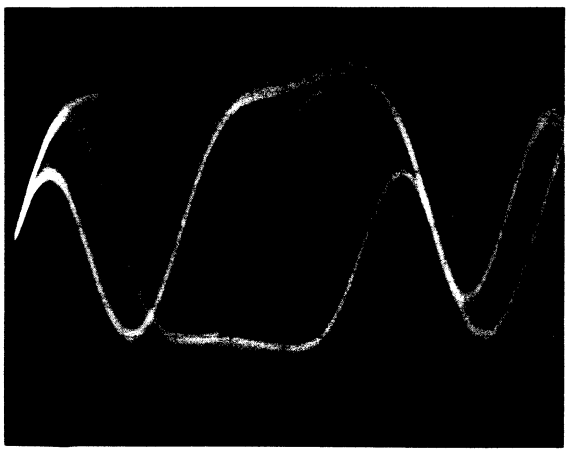
NG Fig. 18



OK Fig. 19

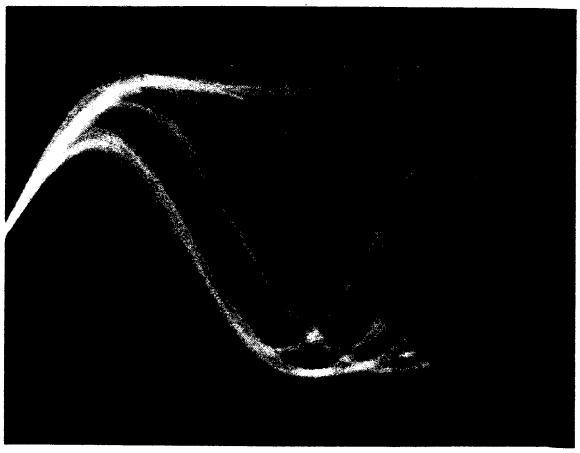


OK Fig. 20



NG Fig. 21

Play tune TN0 7 (TYPE4)

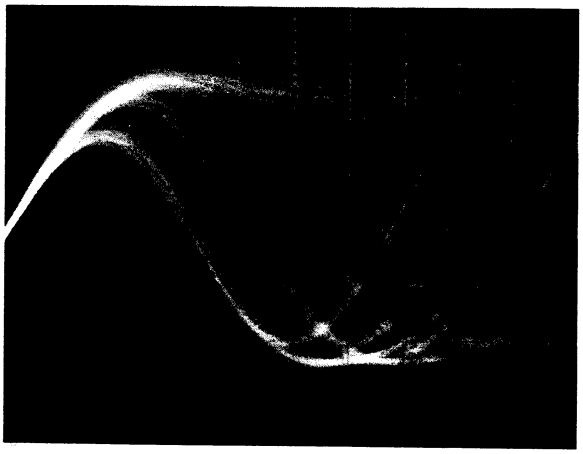


NG Fig. 22

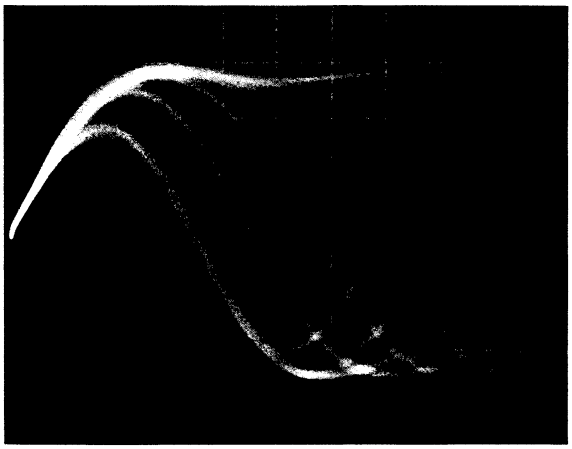
Play tune TN0 12 (TYPE4)

Adjustment Procedure (without R379 removed)

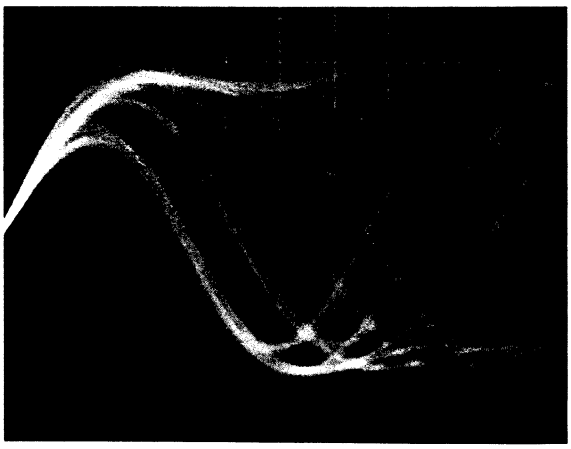
1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
2. Turn the tangential adjustment screw to obtain a good RF waveform eye pattern. Turn the adjustment screw both clockwise and counterclockwise to points where the eye pattern deteriorates, and take the midway point as the adjustment point. As a general guide, look for an overall clear waveform, and one of the diamond shapes in the eye pattern. The diamond shapes should appear in fine lines at the point of optimum adjustment. Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.) (See Fig. 23-25)
3. Apply "screw-lock" to the tangential adjustment screw.
4. After adjusting tangential skew, also adjust the grating.



NG Fig. 23



OK Fig. 24



NG Fig. 25

4.8 Grating Adjustment

● Purpose: The grating may need adjustment in a replaced pick-up assembly.

● Maladjustment symptoms: No disc playback; track jumping

● Measuring equipment/ jigs ● Measuring point ● Test disc and setting ● Adjustment position	• Oscilloscope, clock driver, grating adjustment filter (bandpass filter) (GGF-133) AC millivoltmeter, two low-pass filters • TEY, E LPF output, F LPF output • SONY TYPE 4 (or TYPE 3) • Test mode • Pick-up grating adjustment hole

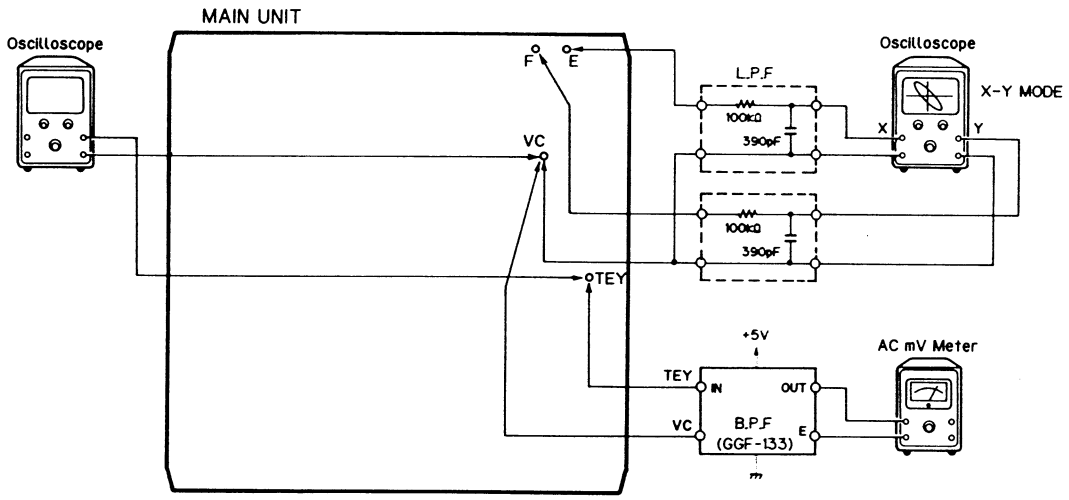


Fig. 26

Adjustment Procedure

1. Connect a low-pass filter (100k, 390p) to test points E, F, and VC as shown in the above diagram.
2. Switch regulator ON in test mode, and load a disc.
3. Press the [PG] key to close focus.
4. Press the [SCAN] key to close tracking.
5. Using the [FF] or [REW] key, move the pick-up to about the center of the signal surface (tune TNO 6). (TYPE 3: TNO 7)
6. Press the [MODE] key to open tracking.
7. While monitoring the TEY filter output by AC milli- voltmeter, turn the grating adjustment hole slowly. The AC voltage increases and decreases while turning the screw. Search for the minimum voltage level. (This corresponds to the position where the grating is on a track, and is referred to as the null point.)
8. Then while monitoring TEY by oscilloscope, turn the driver slowly clockwise from the null point (as seen from under the pick-up) until the first waveform peak amplitude is reached. (See Fig. 28-33)

9. With the E low-pass filter output connected to the X axis of the oscilloscope, and the F low-pass filter output connected to the Y axis, apply an input in AC mode and observe the Lissajous figure.
10. Using the driver, adjust the Lissajous figure to a single line (or as close as possible).
11. Switch regulator OFF and remove the filters.

B.P.F. (GGF-133)

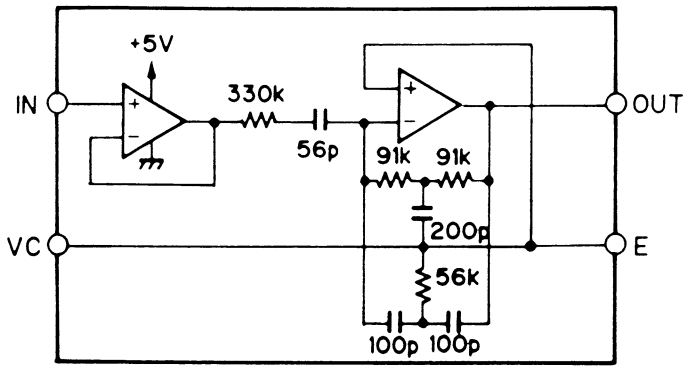


Fig. 27

TEY waveform 10ms/div, 500mV/div

Null Point

Lissajous figure (AC input)
Horizontal axis E 20mV/div
Vertical axis F 20mV/div

Fig. 28

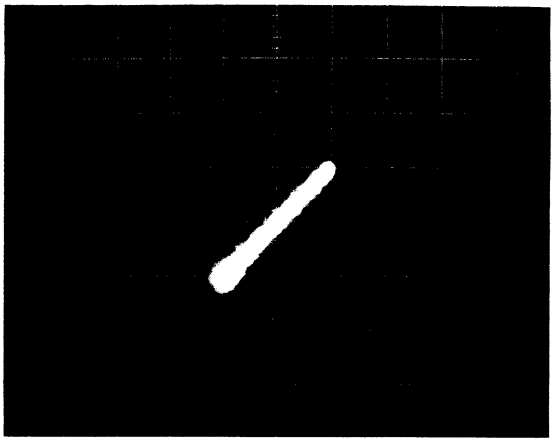


Fig. 29

"Rough" adjustment

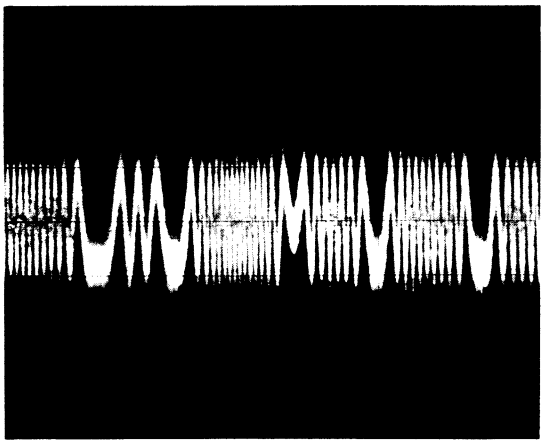


Fig. 30

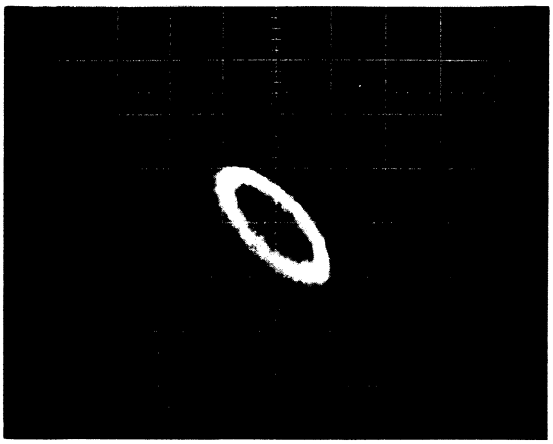


Fig. 31

Final adjustment

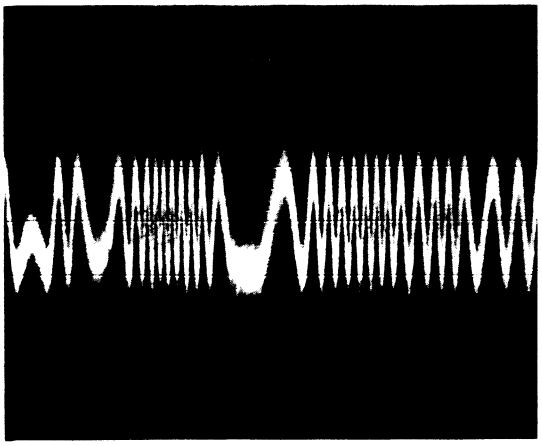


Fig. 32

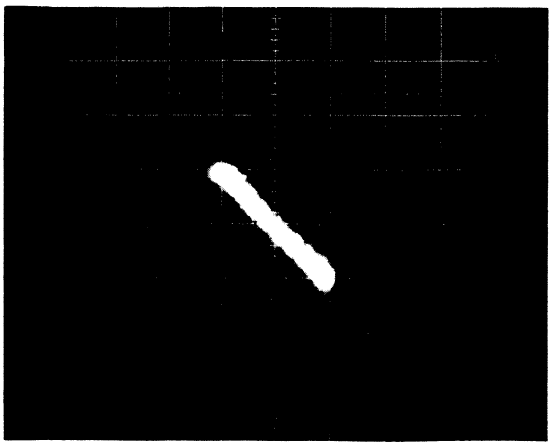


Fig. 33

4.9 Focus Bias Adjustment

● Purpose: To adjust the focus servo bias to an optimum value

● Maladjustment symptoms: Focus closing difficulty, poor playability

● Measuring equipment/ jigs	• Oscilloscope
● Measuring point	• RFO
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Normal mode
● Adjustment position	• VR6 (FEB)

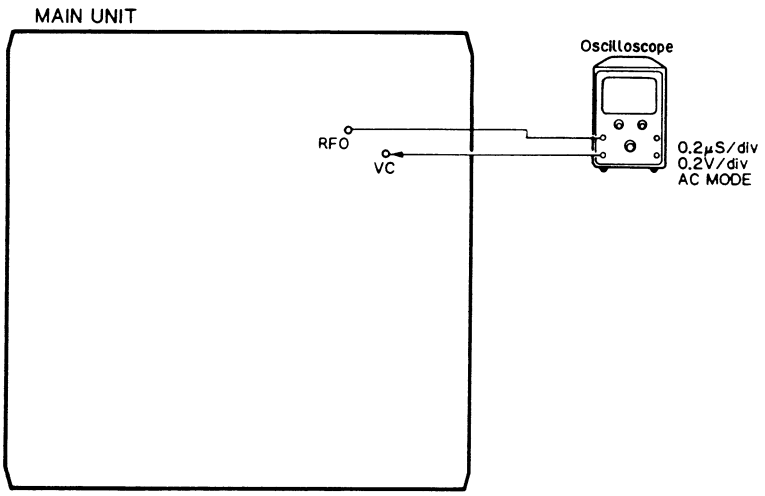
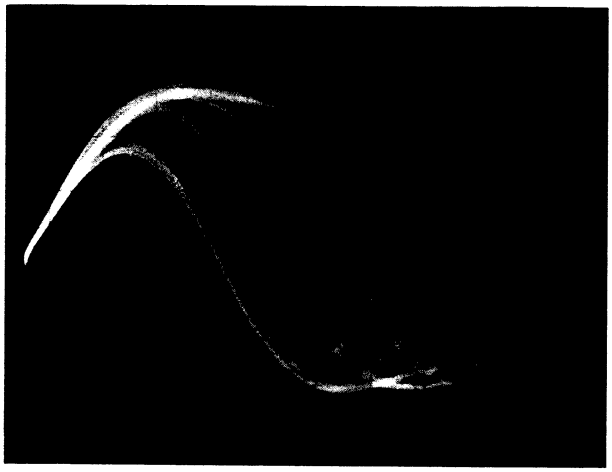


Fig. 34

Adjustment Procedure

1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
2. Observe RFO in respect to VC in the oscilloscope, and adjust VR6 (FEB) to obtain maximum RF and optimumeye pattern. (See Fig. 35 and 36)



OK Fig. 35

0.2μs/div.
0.2V/div.
AC Mode

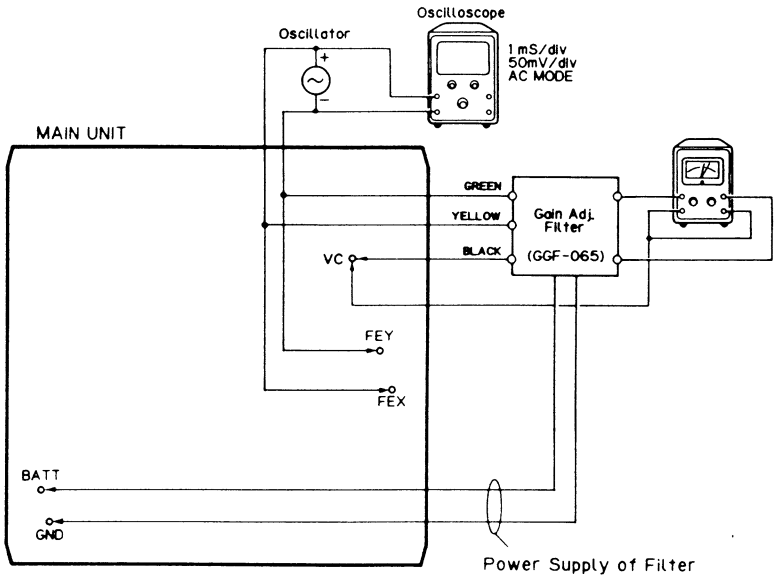
Before adjustment Fig. 36

4.10 Focus Servo Loop Gain Adjustment

● Purpose: To adjust the focus servo loop gain to an optimum value

● Maladjustment symptoms: Poor playability, reduced resistance to vibration, focus closure fails readily

● Measuring equipment/ jigs	• Oscillator, gain adjustment filter (GGF-065), dual meter milli-voltmeter
● Measuring point	• FEX, FEY
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Normal mode
● Adjustment position	• VR7 (FG)



Note: Leave the negative side of the other oscilloscope channel open.

Connect the negative milli-voltmeter lead to VC, and do not connect VC to the power supply ground.

Fig. 37

Adjustment Procedure

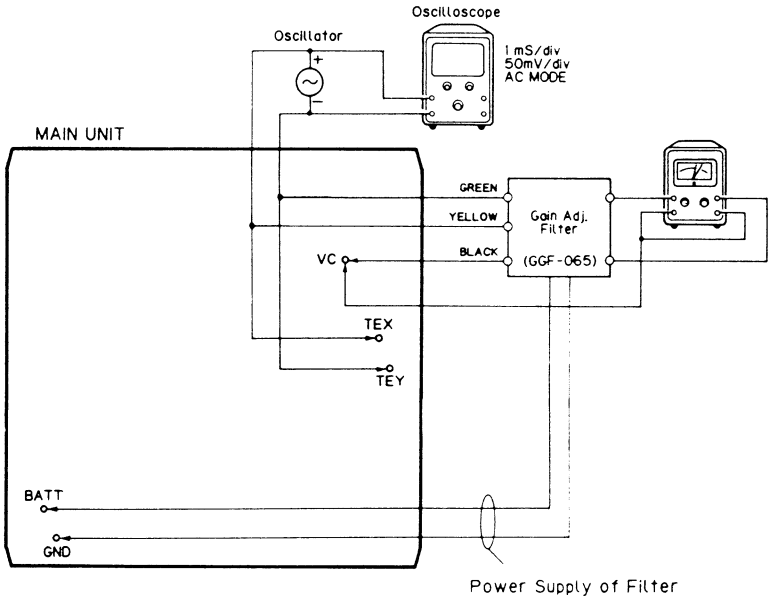
1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
3. Set the oscillator to 1kHz, and observe the FEX/FEY output in the oscilloscope. Adjust the oscillator output to obtain a FEX/FEY output of 100mVp-p.
4. Adjust VR7 (FG) to obtain a milli-voltmeter difference of 0 ± 0.5dB.

4.11 Tracking Servo Loop Gain Adjustment

● Purpose: To adjust the tracking servo loop gain to an optimum value

● Maladjustment symptoms: Poor playability, reduced resistance to vibration

● Measuring equipment/ jigs	• Oscillator, gain adjustment filter (GGF-065), dual meter milli-voltmeter
● Measuring point	• TEX, TEY
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Normal mode
● Adjustment position	• VR8 (TG)



Note: Leave the negative side of the other oscilloscope channel open.

Connect the negative milli-voltmeter lead to VC, and do not connect VC to the power supply ground.

Fig. 38

Adjustment Procedure

1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
3. Set the oscillator to 1.4kHz, and observe the TEX/TEY output in the oscilloscope. Adjust the oscillator output to obtain a TEX/TEY output of 100mVp-p.
4. Adjust VR8 (TG) to obtain a milli-voltmeter difference of 0 ± 0.5dB.

4.12 TE Offset Adjustment - II

● Purpose: To adjust the electrical offset of the tracking servo to zero.

● Maladjustment symptoms: Search times too long, carriage run-away

● Measuring equipment/ jigs	• DC voltmeter
● Measuring point	• TAO low-pass filter output
● Test disc and setting	• Empty magazine • Test mode
● Adjustment position	• VR4

Adjustment Procedure

Same as for TE offset adjustment - I, but with the DC voltage of the TAO LPF output adjusted to 0 ± 50mV.
The purpose of this additional adjustment is to correct any deviations generated when carrying out the tracking balance and tracking servo loop gain adjustments after completing TE offset adjustment - I.

4.13 Tracking Balance Adjustment - II

● Purpose: To adjust the tracking servo offset to zero.

● Maladjustment symptoms: Search times too long, poor playability, carriage run-away

● Measuring equipment/ jigs	• Oscilloscope
● Measuring point	• TEY low-pass filter output
● Test disc and setting	• SONY TYPE 4 (or TYPE 3) • Test mode
● Adjustment position	• VR5

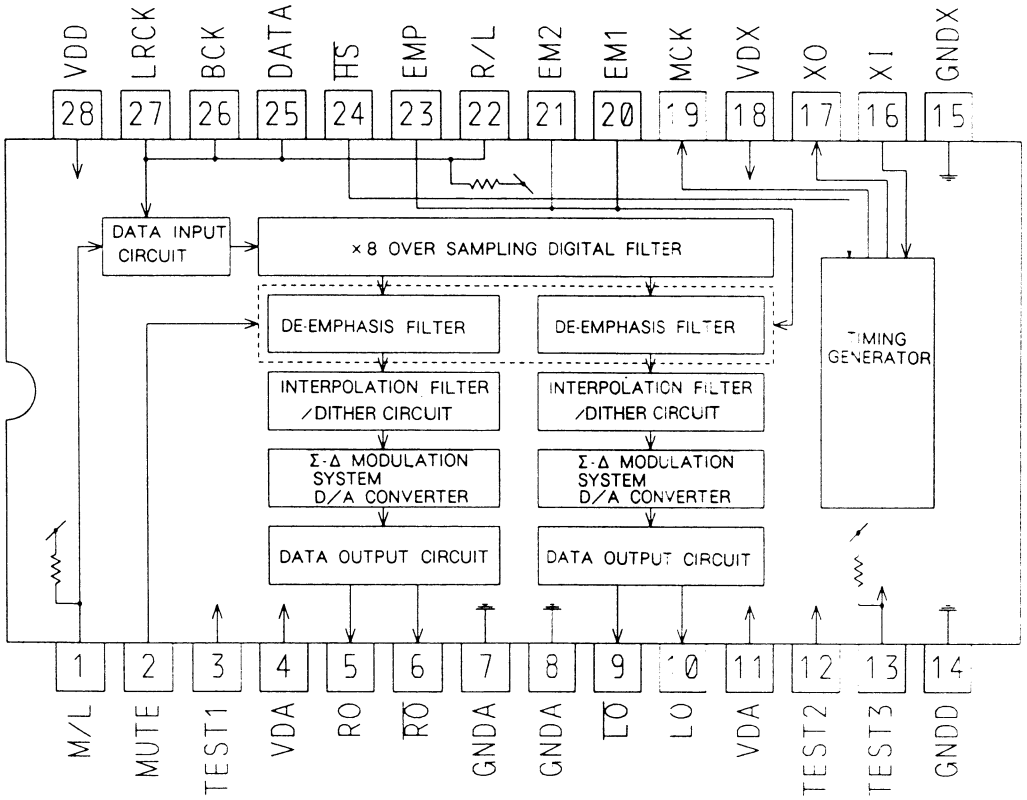
Adjustment Procedure

Steps 1 thru 5 same as tracking balance adjustment-I.

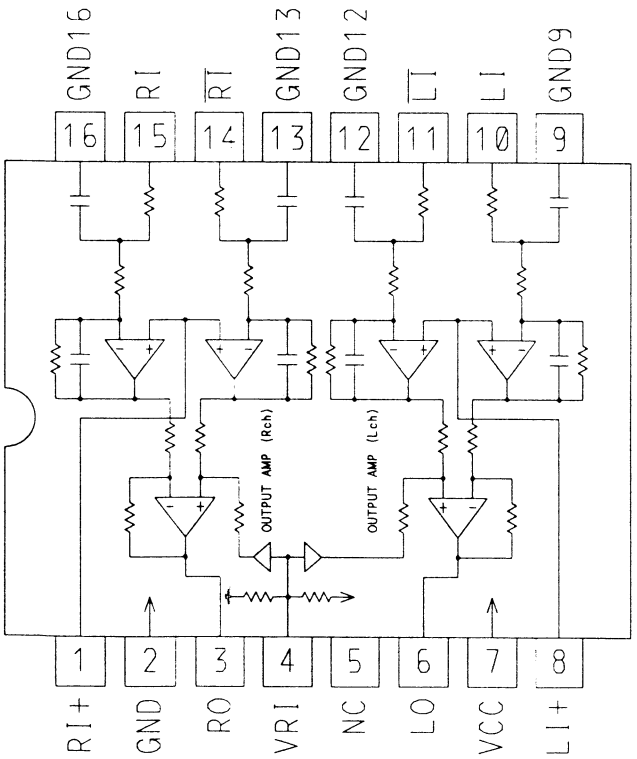
6. Check that the level difference between the positive and negative amplitudes of the TEY signal is within 5% (See Fig. 13-15). If greater than 5%, adjust with VR5.
7. If further adjustment was necessary in step 6, repeat TE offset adjustment -II.

●ICs

TC9237F



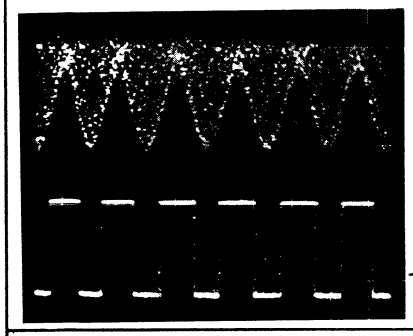
TA2009F



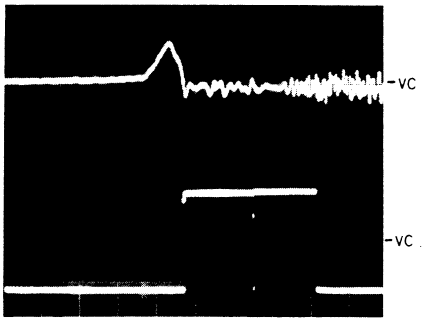
Note: 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage
G: GND VC: Pin 21 of CXA1081Q (2.5V)

● Wave Forms

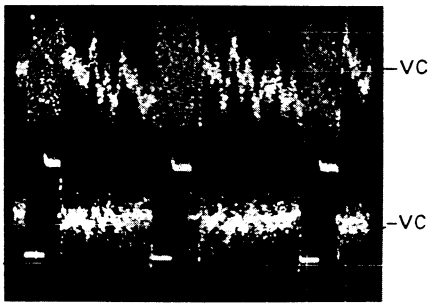
① CH1: RFO 0.4V/div.
0.4ms/div.
② CH2: MIRR 2V/div.
Test mode: Tracking open



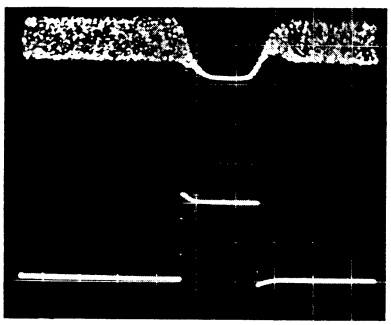
⑦ CH1: FEY 1V/div.
4ms/div.
⑧ CH2: SENS 2V/div.
Normal mode: Focus close (The lens moves DOWN → UP)



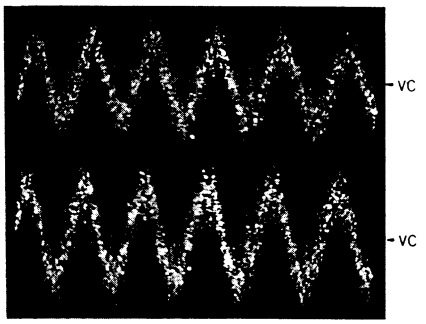
⑨ CH1: TEY 0.4V/div.
4ms/div.
⑪ CH2: TAO 0.4V/div.
Normal mode: Track search (80 track jump)



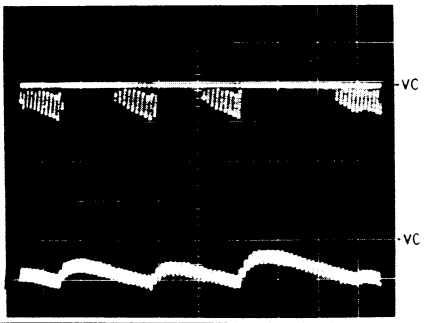
① CH1: RFO 1V/div.
0.4ms/div.
③ CH2: DFCT 2V/div.
Normal mode: The defect part passes 800μm.



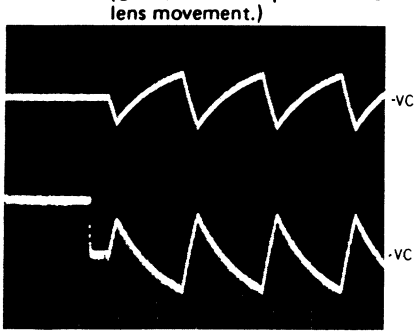
⑨ CH1: TEY 0.4V/div.
0.4ms/div.
⑩ CH2: TZC 0.4V/div.
Test mode: Tracking open



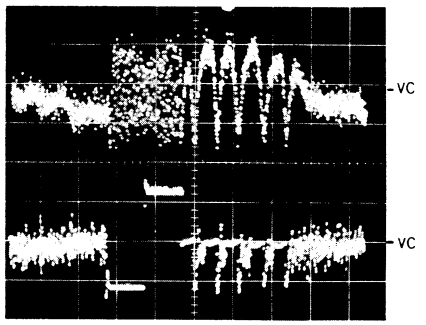
⑫ CH1: SLO 0.4V/div.
2S/div
⑬ CH2: ATSC 0.02V/div.
Normal mode: PLAY



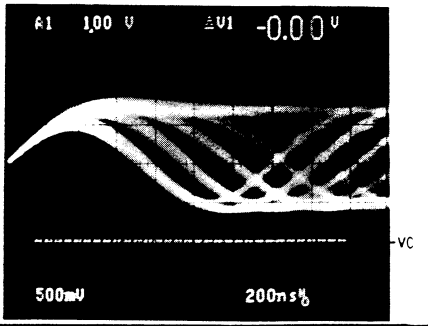
④ CH1: FEO 0.2V/div. 0.4S/div.
⑤ CH2: SRCH 0.1V/div.
Test mode: Connect the FOK2 to GND.
Focus search is performed.
(CH1 is the same phase as the lens movement.)



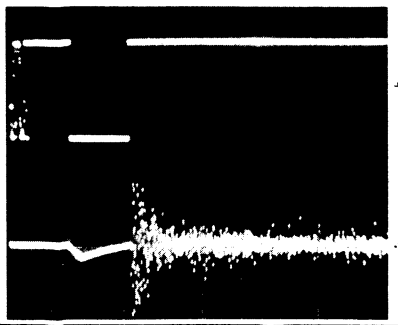
⑨ CH1: TEY 0.4V/div.
2ms/div.
⑪ CH2: TAO 0.4V/div.
Normal mode: Brake wave form when track search is performed.



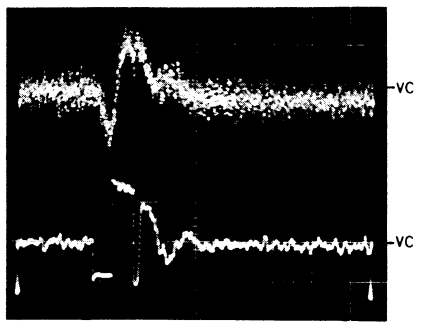
① RFO 0.5V/div.
200ns/div.
Normal mode: PLAY



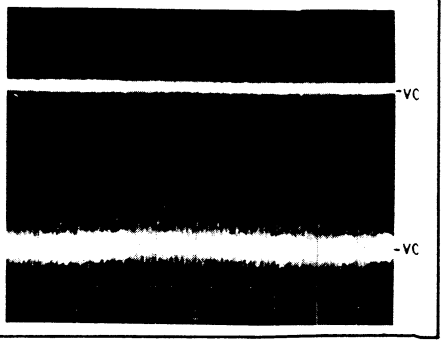
⑥ CH1: FOK2 2V/div.
0.2S/div.
④ CH2: FEO 0.4V/div.
Normal mode: Focus close



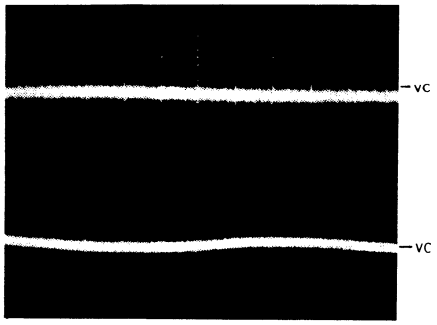
⑨ CH1: TEY 0.4V/div.
0.4ms/div.
⑪ CH2: TAO 0.4V/div.
Test mode: Single jump



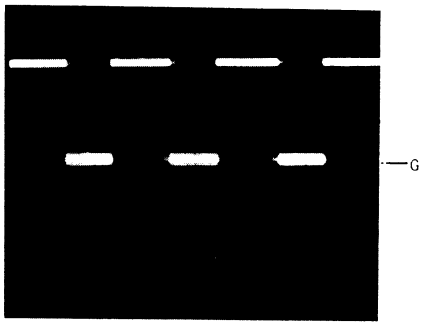
⑦ CH1: FEY 0.5V/div.
20ms/div.
⑭ CH2: FEO2 0.5V/div.
Normal mode: PLAY



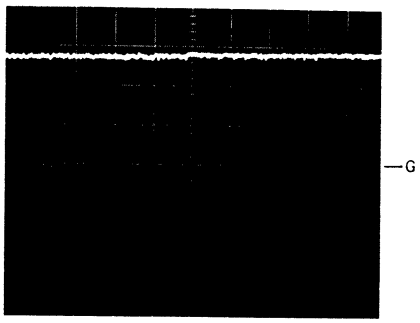
⑨ CH1: TEY 0.5V/div.
⑪ CH2: TAO 0.5V/div.
20ms/div.
Normal mode: PLAY



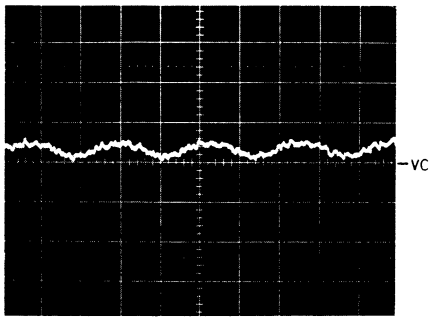
⑰ MDS 2V/div.
50μs/div.
PLAY



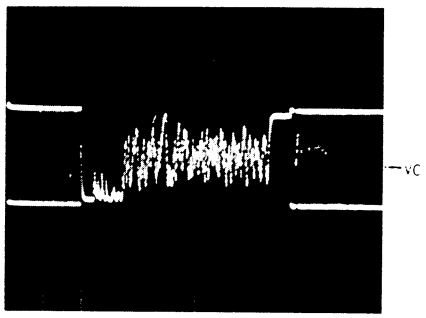
⑲ GFS 2V/div.
200μs/div.
PLAY



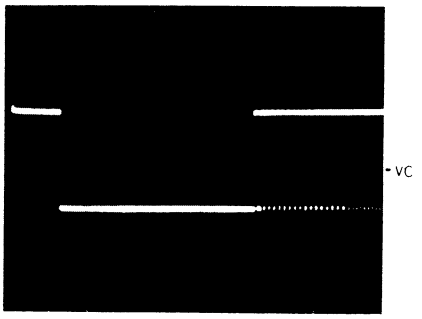
⑮ SPDLO 2V/div.
50ms/div.
PLAY



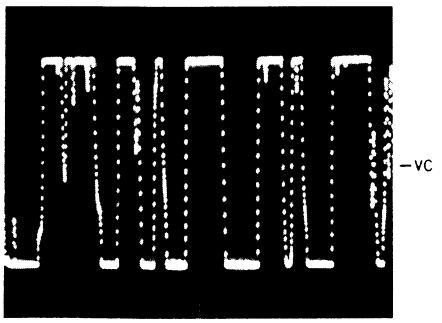
⑰ MDS 2V/div.
0.4S/div.
TRACK COUNT SEARCH



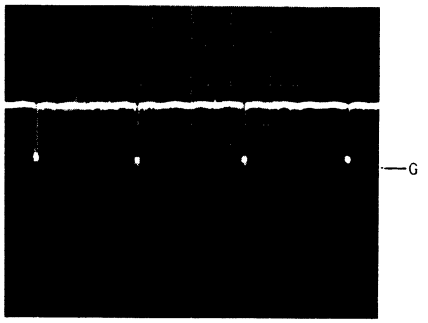
⑲ GFS 2V/div.
0.4S/div.
TRACK COUNT SEARCH



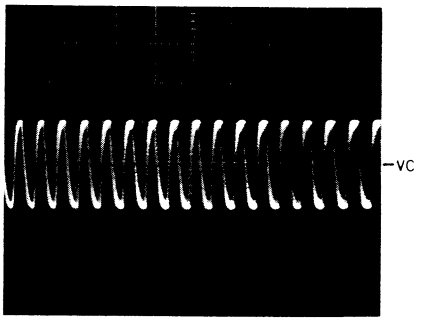
⑮ SPDLO 2V/div.
40ms/div.
12cm DISC TRACK COUNT SEARCH



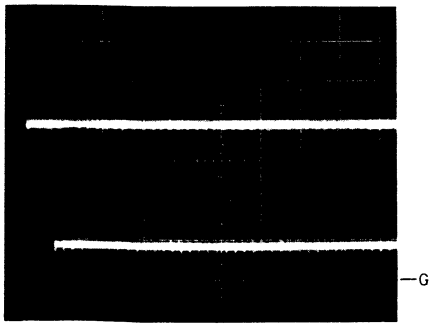
⑱ MDP 2V/div.
200μs/div.
PLAY



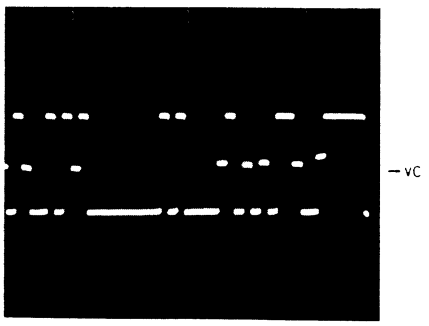
⑳ VCOO 2V/div.
0.2μs/div.
PLAY



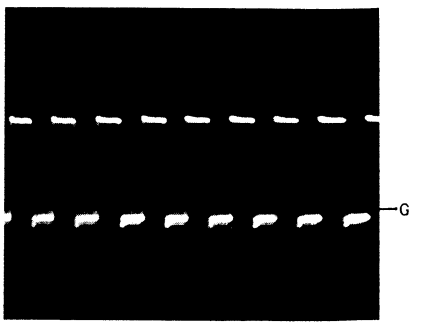
⑯ EFM 1V/div.
1 μ s/div.
PLAY



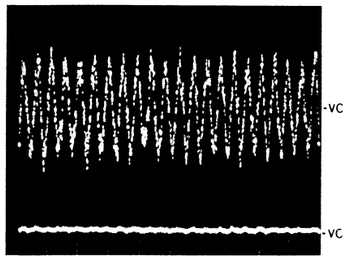
⑱ MDP 2V/div.
10ms/div.
TRACK COUNT SEARCH



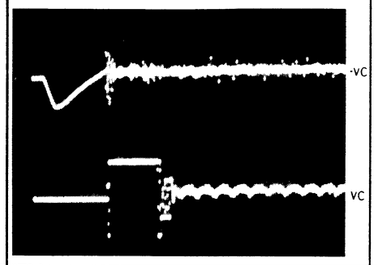
㉑ $\overline{\text{PLCK}}$ 2V/div.
0.2μs/div.
PLAY



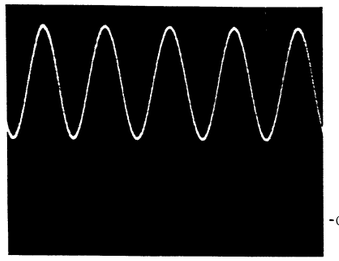
⑨CH1 : TEY 0.4V/div. 0.2ms/div.
⑪CH2 : TAO 0.4V/div.
TRACK COUNT SEARCH



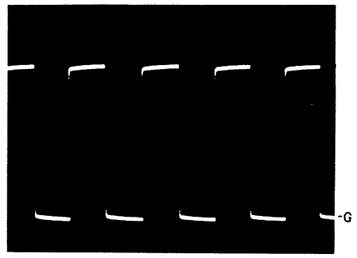
⑭CH1 : FEO2 1V/div. 0.2S/div.
⑮CH2 : SPDLO 1V/div.
After 8cm disc loaded



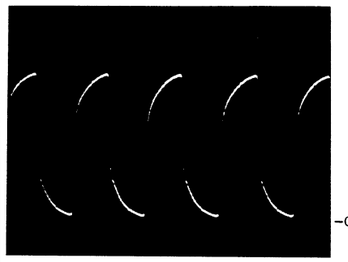
㉗ IR, IL 1V/div. 0.5ms/div.
PLAY (When 1kHz FS)



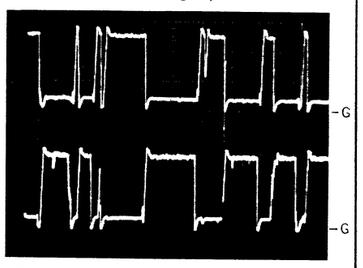
㉙LRCK
1V/div. 10μs/div.



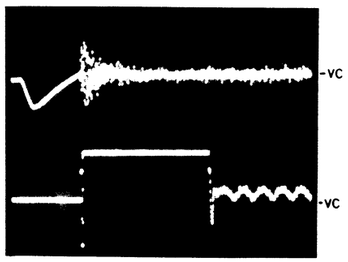
㉓BCLK
1V/div. 0.2μs/div.



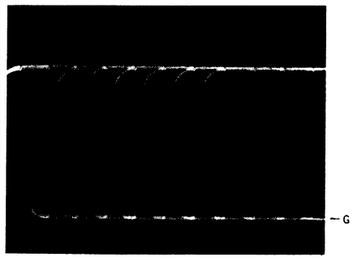
㉚ CH1: S+
㉛ CH2: S− 2V/div. 20ms/div.
Test mode: Focus close
tracking Open



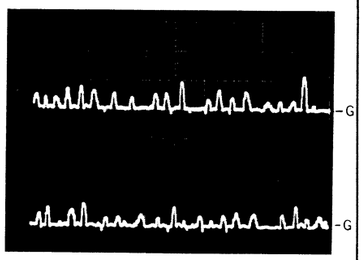
⑭CH1 : FEO2 1V/div. 0.2S/div.
⑬CH2 : SPDLO 1V/div.
After 12cm disc loaded



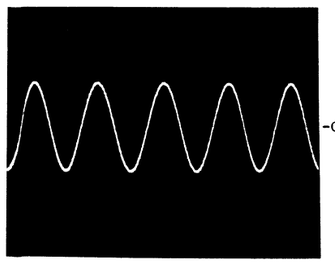
㉕DATA
1V/div. 0.5μs/div.



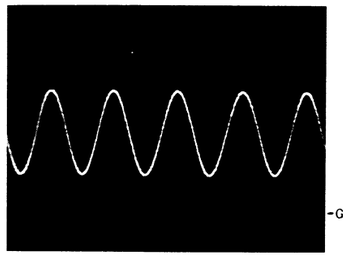
㉜ CH1: T+
㉝ CH2: T− 1V/div. 0.2ms/div.
Normal mode: PLAY



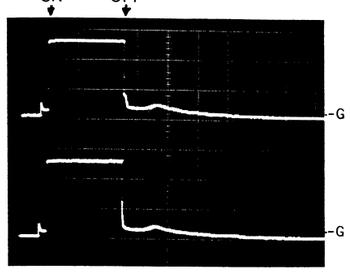
㉑L or R out 0.5V/div. 0.5ms/div.
PLAY (When 1kHz FS)



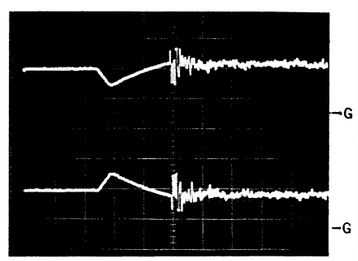
㉖ LPR, LPL 1V/div. 0.5ms/div.
PLAY (When 1kHz FS)



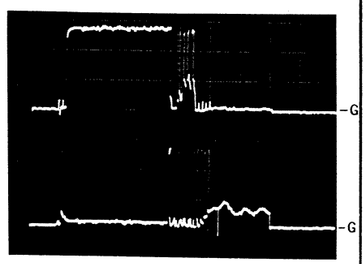
㉞ CH1: F+
㉟ CH2: F− 2V/div. 0.5S/div.
Regulator ON/OFF
ON OFF



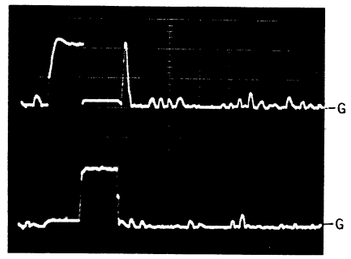
㉞ CH1: F+
㉟ CH2: F− 5V/div. 0.2S/div.
Focus close



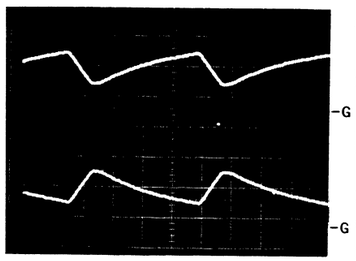
㊱ CH1: C+
㊲ CH2: C− 2V/div. 0.5S/div.
Normal mode: TNO1→TNO23 jump



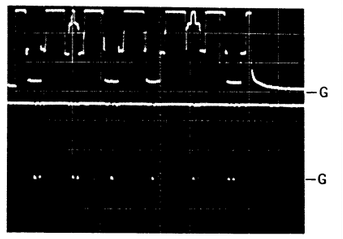
㉜ CH1: T+
㉝ CH2: T− 2V/div. 0.2ms/div.
Single jump forward



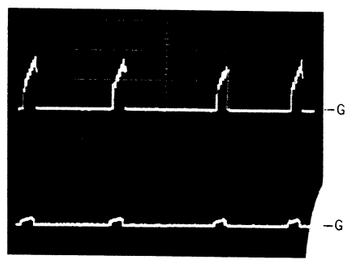
㉞ CH1: F+
㉟ CH2: F− 5V/div. 0.2S/div.
Search



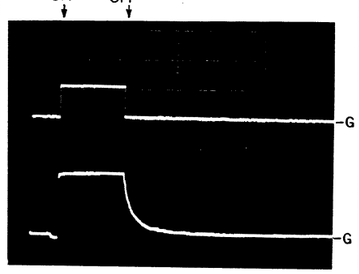
㊵ CH1: DISC
㊶ CH2: TIN 2V/div. 20ms/div.
Tray 1, 3, 4, 6: DISC (12cm DISC)
Tray 2, 5 : NO DISC



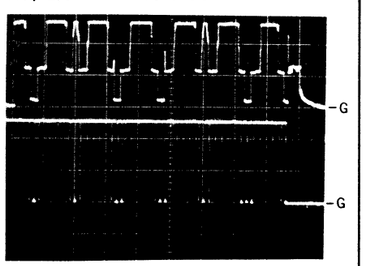
㊱ CH1: C+
㊲ CH2: C− 1V/div. 2S/div.
Normal PLAY



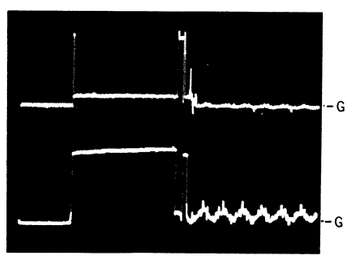
㊳ CH1: CONT
㊴ CH2: VD 5V/div. 0.5S/div.
Normal mode: Power ON/OFF
ON OFF



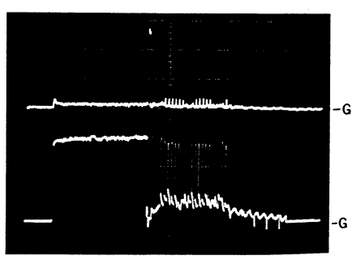
㊵ CH1: DISC
㊶ CH2: TIN 2V/div. 20ms/div.
Tray 1, 3, 4, 6: DISC (8cm DISC)
Tray 2,5 : NO DISC



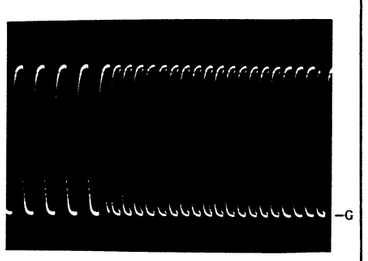
㉚ CH1: S+
㉛ CH2: S− 2V/div. 0.2S/div.
Normal mode: Power ON



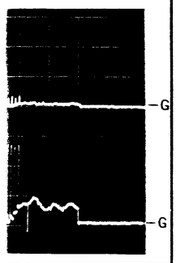
㊱ CH1: C+
㊲ CH2: C− 2V/div. 0.5S/div.
Normal mode: TNO23→TNO1 jump



㊷ DOTX 1V/div. 1μs/div.
Music PLAY

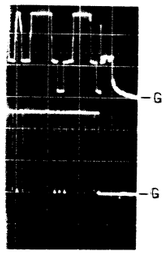


.5S/div.
→ TNO23 jump

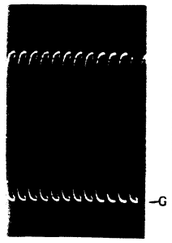


20ms/div.
12cm DISC)
C

20ms/div.
8cm DISC)
C

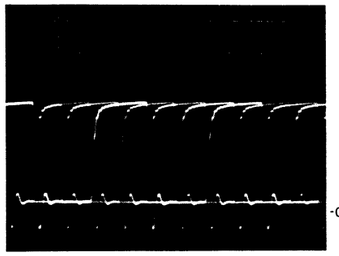


s/div.



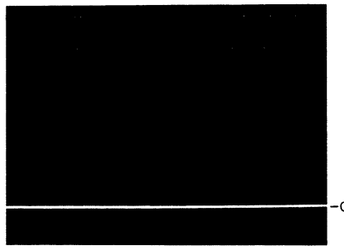
㊸ DOK 1V/div. 0.2μs/div.

When connect the optical cable.



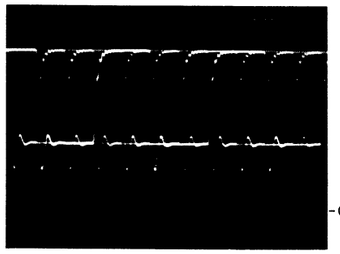
㊸ DOK 1V/div. 5ms/div.

When non-connect the optical cable.



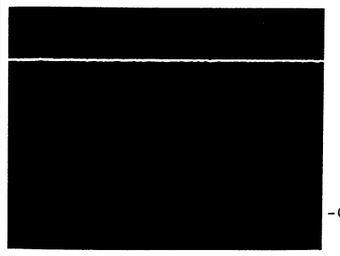
㊹ DOA 1V/div. 0.2 μs/div.

When connect the optical cable.

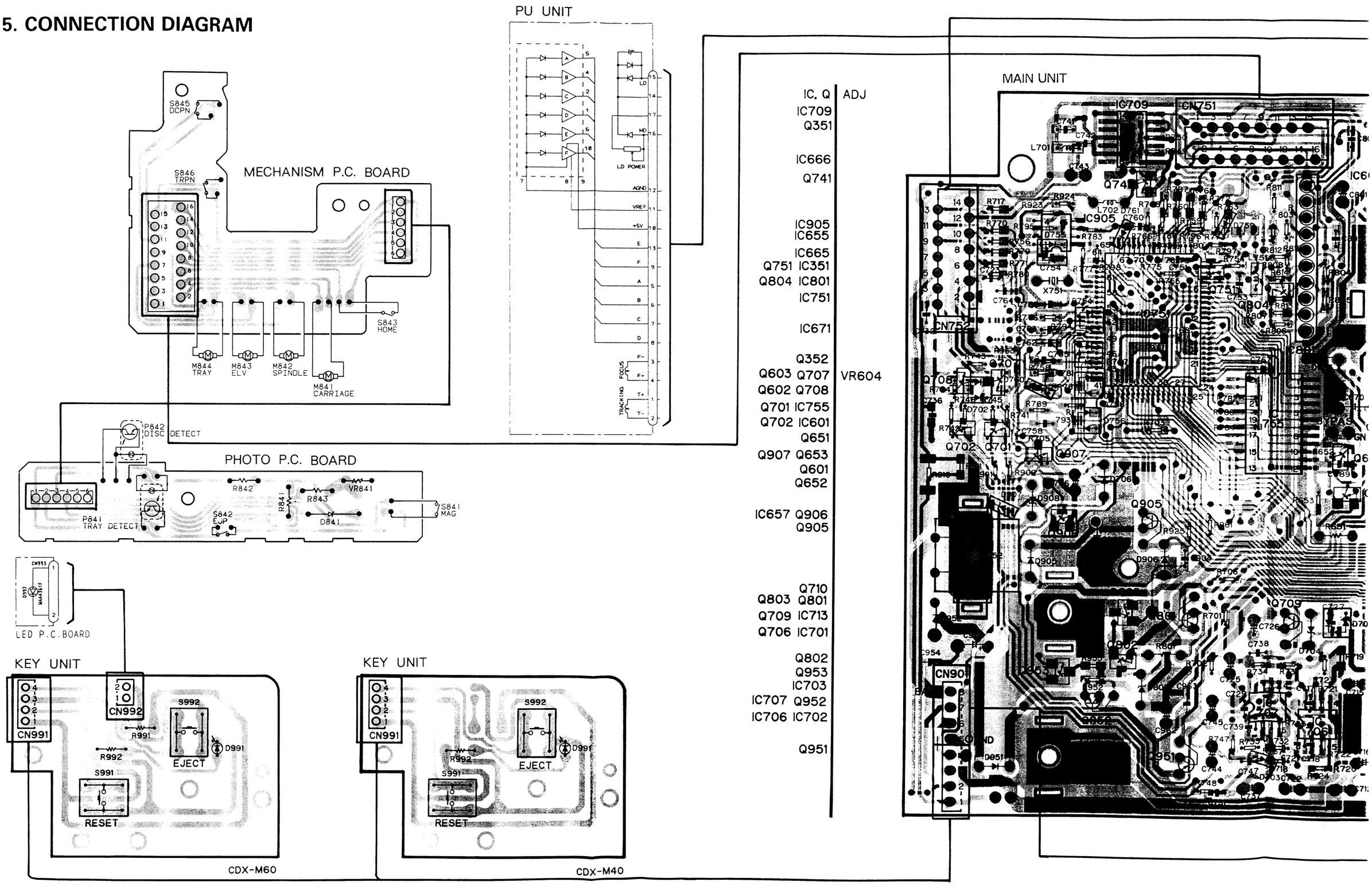


㊹ DOA 1V/div. 5ms/div.

When non-connect the optical cable.



5. CONNECTION DIAGRAM



7 8 9 10 11 12

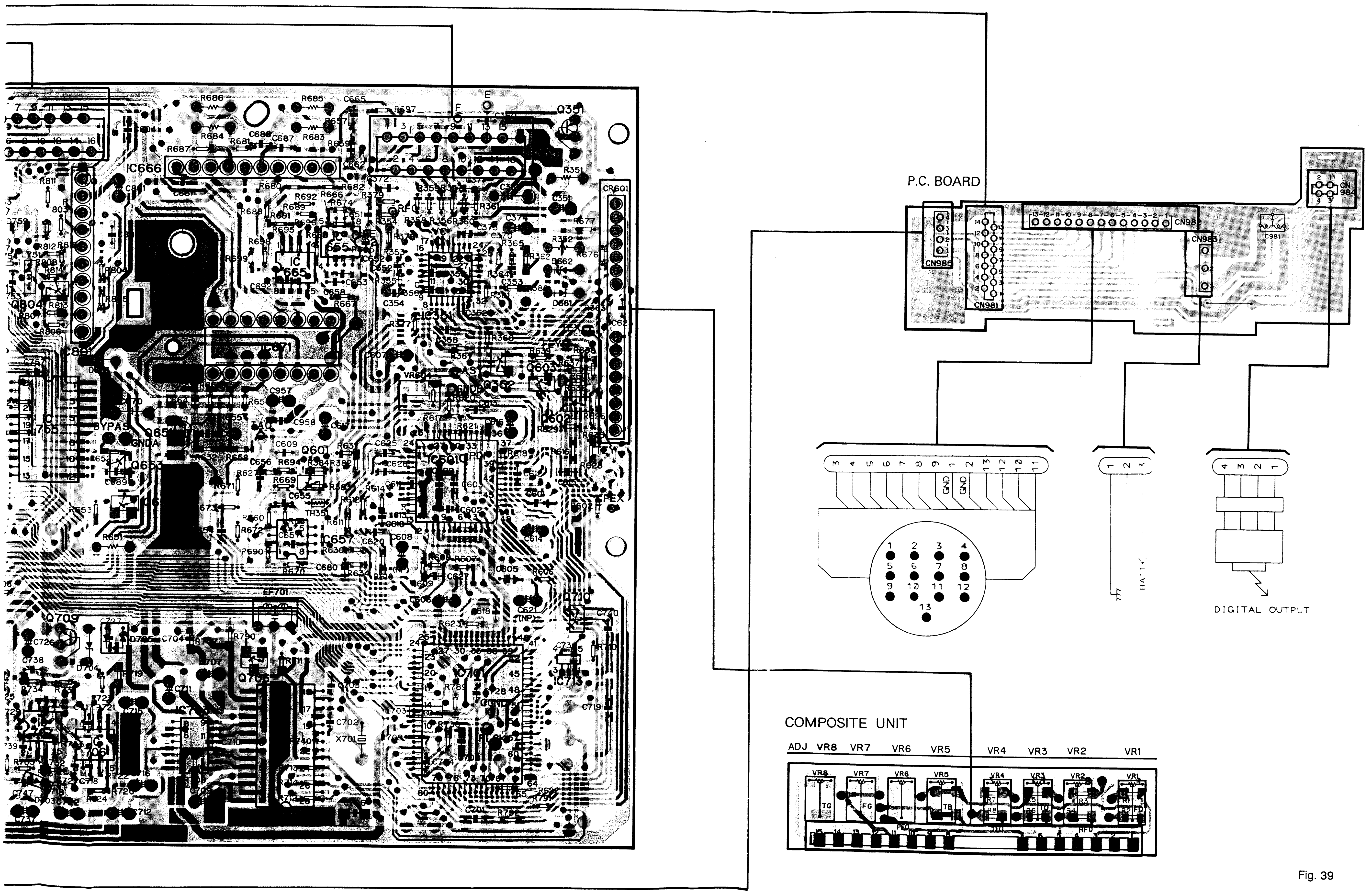
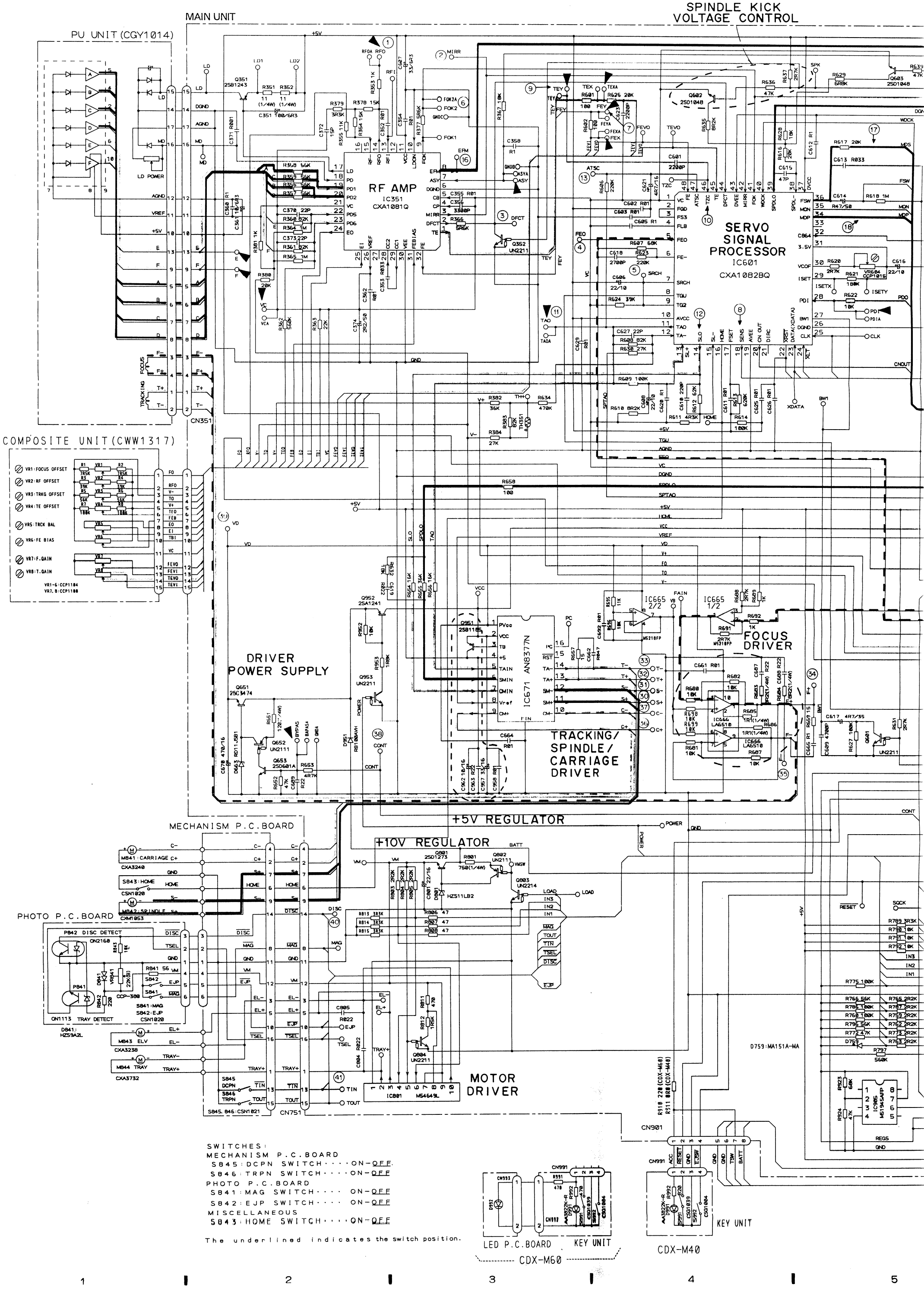


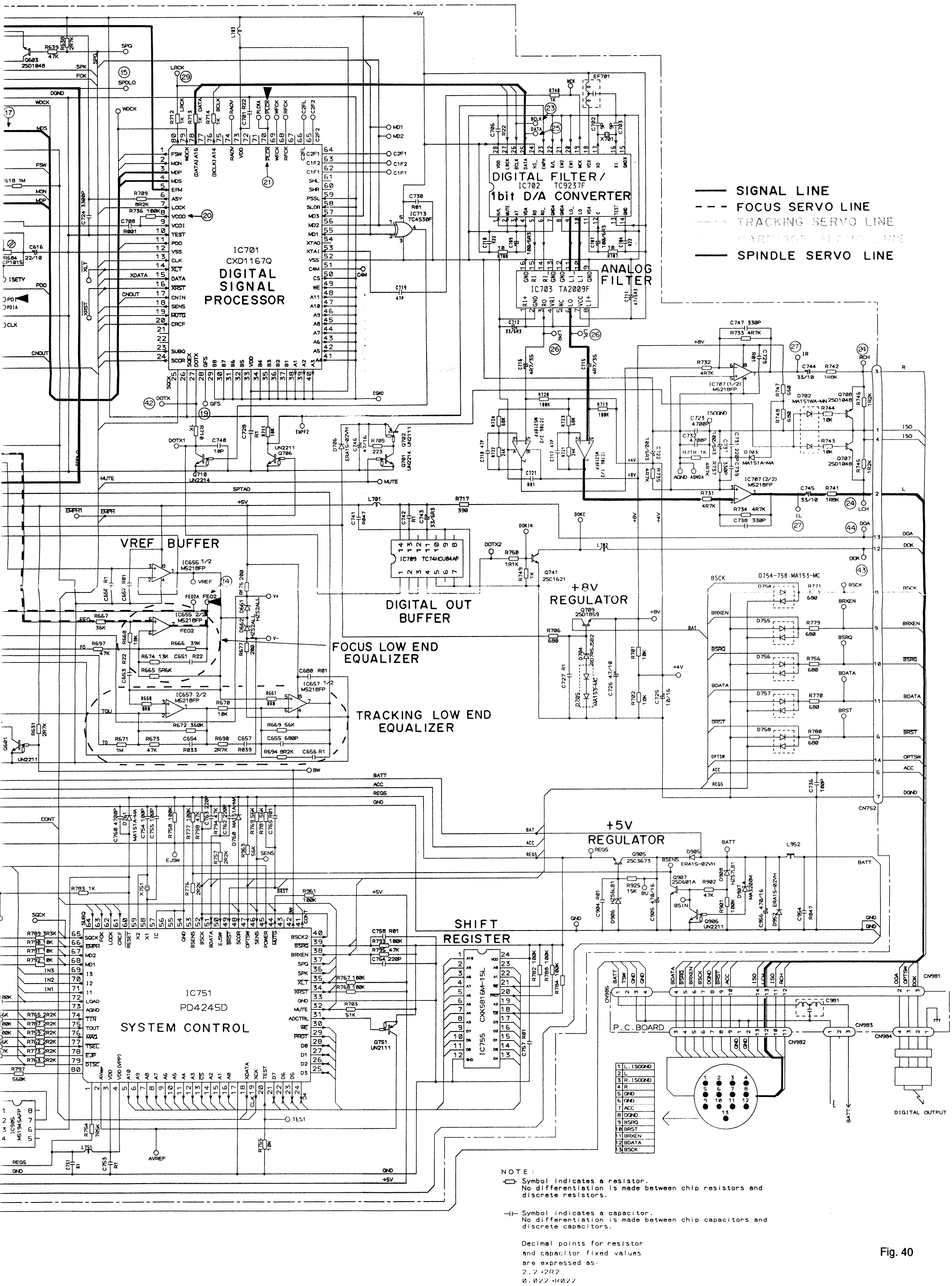
Fig. 39

A B C D

7 8 9 10 11 12

6. SCHEMATIC CIRCUIT DIAGRAM





NOTE :

Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.

Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2 → 2R2
0.022 → R022

Fig. 40

7. CD MECHANISM UNIT EXPLODED VIEW

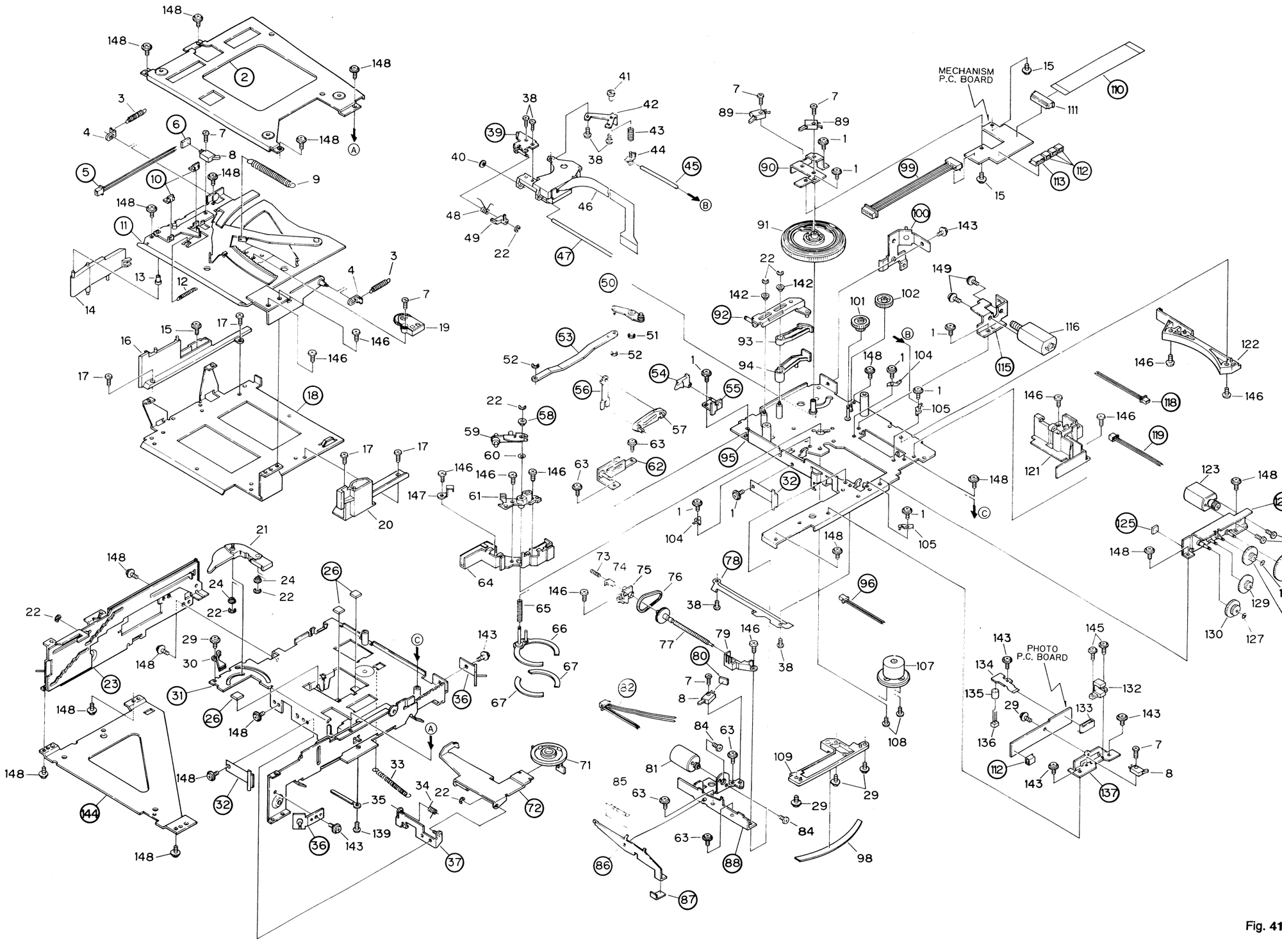


Fig. 41

● Part

NOTE:
- *Parts*
- *Parts long*

Mark

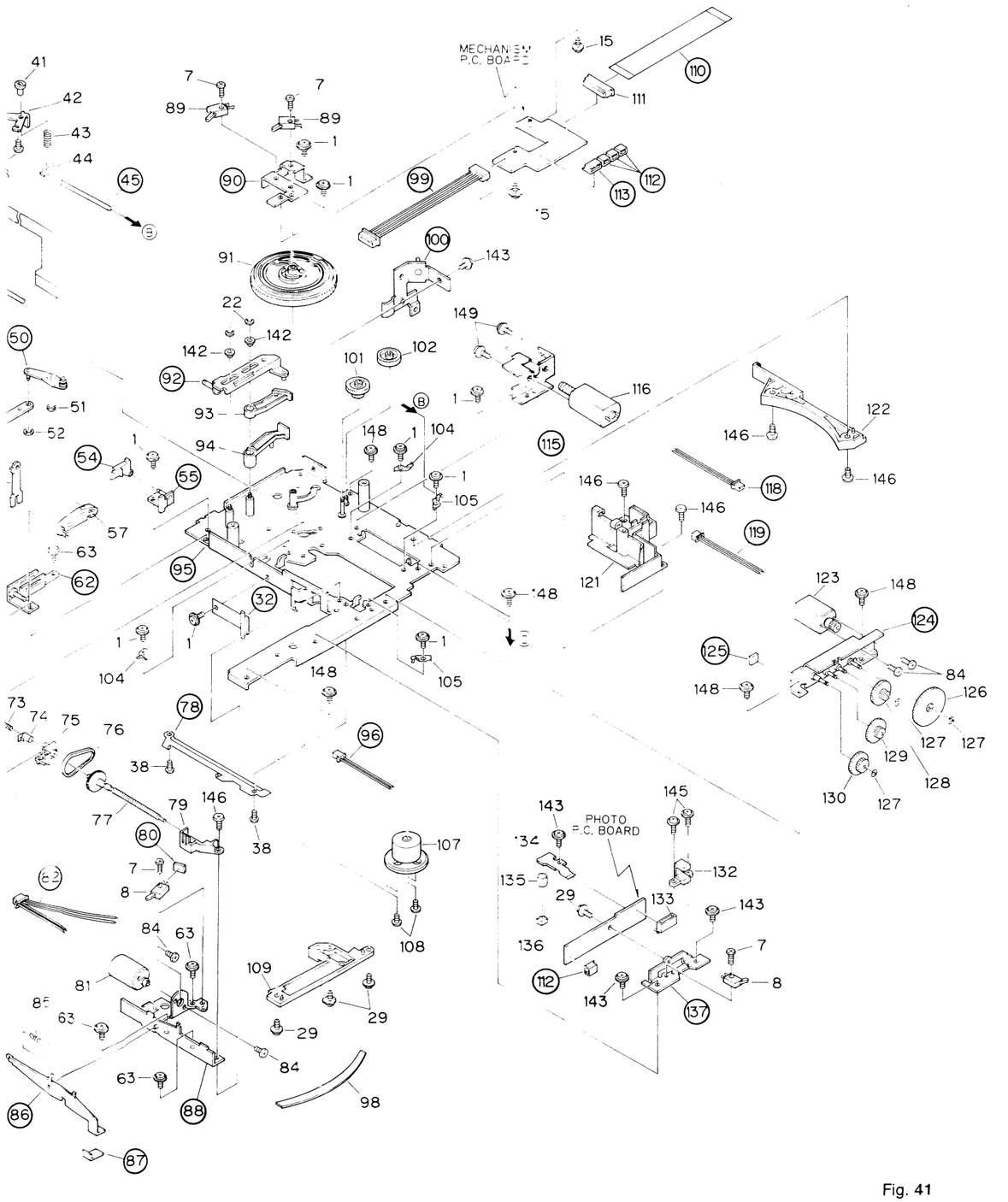


Fig. 41

● Part List

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Mark No.	Description	Part No.
1	Screw	PMS20P030FMC
2	Frame	
3	Spring	CBH1324
4	Spring Holder	CNC3054
5	Connector	
6	P.C.Board	
7	Screw	CBA1070
8	Switch	CSN1020
9	EJ Spring	CBH1319
10	Clamper	
11	Magazine Holder Unit	
12	Spring	CBH1320
13	Roller	CLA1756
14	Arm	CNV2593
15	Screw	CBA1075
16	Magazine Guide	CNV2369
17	Screw	CBA1077
18	Magazine Holder	
19	Damper Unit	CXA3242
20	Magazine Guide	CNV2368
21	Arm	CNV2352
22	Washer	YE15FUC
23	Side Frame Unit	
24	Roller	CLA1518
25	·····	
26	Cushion	
27	·····	
28	·····	
29	Screw	CBA1080
30	Arm Guide	CNV2372
31	Chassis Unit	
32	Tray Stopper Unit	
33	ELV Spring	CBH1322
34	Spring	CBH1321
35	Clamper	HEF-102
36	Bracket Unit	
37	Bracket Unit	
38	Screw	CBA1062
39	Holder Unit	
40	Cushion	CNV1863
41	Screw	CLA1319
42	Holder	CNC1736
43	Spring	CBH1105
44	Holder	CNV1512
45	Shaft	
46	PU Unit	CGY1014
47	Shaft	
48	Spring	CBH1106
49	Rack	CNV1513
50	Arm Unit	
51	Washer	YE20FUC
52	Washer	YE25FUC
53	Lever Unit	
54	Arm	
55	Bracket Unit	
56	Lever	
57	Cam Arm	CNV2354
58	Disc UP Collar	
59	Arm Unit	CXA4043
60	Washer	CBE1027
61	Guide	CNR1163
62	Bracket Unit	
63	Screw	BMZ20P025FMC
64	Holder	CNV2370
65	Disc UP Spring	CBH1323
66	Disc UP Guide Unit	CXA3236
67	Sheet	CNM2552
68	·····	
69	·····	
70	·····	
71	Bracket Assy	CXA3788
72	Arm Unit	
73	Spring	CBH1104
74	Spacer	CNV1844
75	CRG Holder	CNV2377
76	Belt	CNT1020
77	Screw Unit	CXA2375
78	Shaft Cover	
79	CRG Holder	CNV2378
80	P.C.Board	
81	Motor Unit(Carriage)	CXA3240
82	Connector	
83	·····	
84	Screw	CBA-098
85	Spring	CBH1335
86	8cm Guide Arm	
87	Sheet	
88	CRG Bracket	
89	Switch	CSN1021
90	Cam Gear Bracket	

Mark No.	Description	Part No.	Mark No.	Description	Part No.
91	Cam Gear	CNV2357	121	Guide	CNV2376
92	Cam Lever Unit		122	Disc Guide	CNV2367
93	SW Arm	CNV2374	123	Motor Unit(ELV)	CXA3238
94	SW Arm	CNV2356	124	ELV Bracket Unit	
95	Chassis Unit		125	Spacer	
96	Connector		126	Gear	CNV2362
97	·····		127	Washer	CBF1038
98	Sheet	CNM2553	128	Gear(Brack)	CNV2363
99	Connector		129	Gear(White)	CNV2371
100	Bracket Unit		130	Gear(White)	CNV2364
101	Wheel	CNV2359	131	·····	
102	Gear	CNV2360	132	Photo-Interrupter	ON1113
103	·····		133	Plug	CKS1053
104	Holder	CNC1738	134	P.C.Board	CNP2307
105	Holder	CNC1739	135	Spacer	CNV2365
106	·····		136	Photo-Interrupter	ON2160
107	Motor Unit(Spindle)	CXM1053	137	TSEL Bracket	
108	Screw	HBA-258	138	·····	
109	Disc Guide	CNV2366	139	Screw	BMZ26P030FMC
110	Connector		140	·····	
111	Connector	CKS1536	141	·····	
112	Plug		142	Roller	CLA1846
113	Plug		143	Screw	CBA1152
114	·····		144	Frame	
115	Tray Bracket		145	Screw	CBA1026
116	Tray Motor Unit	CXA3729	146	Screw	CBA1054
117	·····		147	Spring	CBL1124
118	Connector		148	Screw	BMZ20P030FMC
119	Connector		149	Screw	PMS20P025FMC
120	·····				

8. CHASSIS EXPLODED VIEW

● CDX-M40/UC

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Nut	NR60FZK	13	Grille Unit	CXA3496
2	Screw	HMF40P080FZK	14	Cushion	CNM2760
3	Angle	CNB1303	15	Spring	CBH1308
4	Screw	BMZ40P080FRD	16	Lever	CNV2310
5	Screw	PMS30P050FZK	17	Spacer	
6	·····		18	Button	CAC2484
7	Pin	CLA1822	19	Spacer	
8	Base		20	Shaft	
9	·····		21	Shaft	
10	Screw	CBA1157	22	Spring	CBH1360
11	Damper	CNV2605	23	Spring	CNC3277
12	Screw	PMS30P050FMC	24	Door	CAT1368
			25	Gear	CNV2287

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	26	Damper Unit	CXA3253		51	Cord	CDE2878
	27	Screw	BPZ20P080FMC		52	·····	
	28	Screw	BMZ26P040FZK		53	Connector	CKS1537
	29	Spring	CBH1379		54	Screw	JGZ17P050FNI
	30	Spring	CBH1377		55	Heat Sink	
	31	Chassis Assy			56	Connector	CKS1536
◉	32	Eject Unit	CWM2164		57	Connector	CKS1534
	33	Screw	BPZ26P060FMC		58	Screw	CBA1159
	34	Plug			59	Plug	
	35	Connector	CKS2020		60	Heat Sink	
	36	Holder					
	37	Plug			61	·····	
	38	Connector			62	Screw	PMS26P080FMC
	39	Plug			63	Connector	
	40	Connector	CKS1566		64	Case	CNB1352
					65	Case	CNB1411
	41	Screw	BMZ26P050FZK				
	42	P.C.Board	CNP2202		66	·····	
◉	43	CD Mechanism Unit	CXK2320		67	Screw	BMZ26P050FMC
	44	Bracket			68	·····	
	45	Holder			69	Sheet	CNM2819
					70	Grille Assy	CXA3918
	46	Connector	CDE2949				
	47	Screw	BMZ26P050FMC		71	Clamper	HEF-102
	48	Screw	CBA1158		72	Composite Unit	CWW1317
◉	49	Main Unit	CWX1318				
	50	Cord	CDE3080				

NSP:Non spare part

		CDX-M40/UC	CDX-M40/EW	CDX-M40/ES	CDX-M60/US
No.	Description	Part No.	Part No.	Part No.	Part No.
	13 Grille Unit	CXA3496	CXA3496	CXA3496	CXA3916
	18 Button	CAC2484	CAC2862	CAC2484	CAC2206
	24 Door	CAT1368	CAT1372	CAT1368	CAT1369
◉	32 Eject Unit	CWM2164	CWM2164	CWM2164	CWM2528
	35 Connector	CKS2020	CKS2020	CKS2020	CKS1940
◉	49 Main Unit	CWX1318	CWX1318	CWX1318	CWX1340
	64 Case	CNB1352	CNB1352	CNB1352	CNB1376
	65 Case	CNB1411	CNB1441	CNB1411	CNB1443
	70 Grille Assy	CXA3918	CXA3996	CXA3958	CXA3919
	73 Connector	----	----	----	NSP
	74 Screw	----	----	----	BPZ26P060FMC
	75 Plug	----	----	----	CKS1049

● Chassis

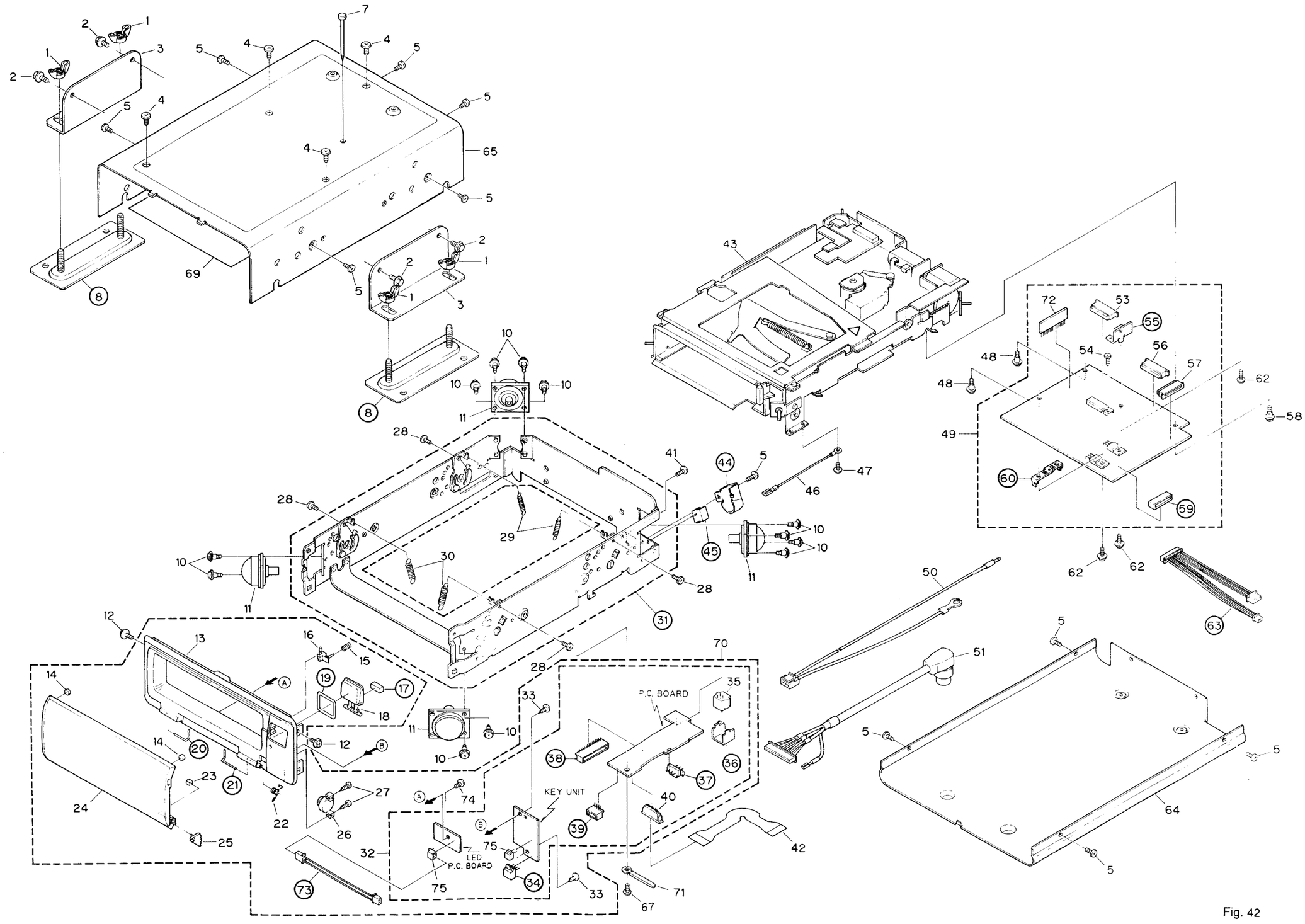


Fig. 42

9. PACKING METHOD

NSP:Non spare part

Mark No.	Description	CDX-M50/UC Part No.	CDX-M40/UC Part No.	CDX-M40/EW Part No.	CDX-M40/ES Part No.	CDX-M60/US Part No.
1	Cover	CEG1082	CEG1091	CEG1091	CEG1091	CEG1091
2	Owner's Manual	CRD1354	CRD1440	CRD1438	CRD1459	CRB1210
		----	----	CRD1439	----	----
	Card	NSP	NSP	NSP	----	NSP
5	Magazine	PXA1356	PXA1356	PXA1297	PXA1297	PXA1297
6	Accessory Assy	CEA1518	CEA1518	CEA1519	CEA1518	CEA1518
7	Carton	CHG1805	CHG1934	CHG1933	CHG1935	CHG1936
8	Contain Box	CHL1805	CHL1934	NSP	NSP	CHL1936

Owner's Manual Part No.	Language
CRB1210	English
CRD1438	English, French, German, Spanish, Portuguese
CRD1439	Swedish, Norwegian, Dutch, Italian, Finnish
CRD1440	English, French
CRD1459	English, French, Spanish, Arabic

10. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

Chip Resistor

RS1/8S □□□J, RS1/10S □□□J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

Unit Number :
Unit Name : Key Unit

Mark	Circuit Symbol & No.	Part Name	Part No.
D	991	LED	AA3822K-R
S	991	Switch(RESET)	CSG1039
S	992	Switch(EJECT)	CSG1004
R	991(CDX-M60)		RD1/4PS471JL
R	992(CDX-M40)		RD1/4PS821JL
R	992(CDX-M60)		RD1/4PS471JL

Unit Number :
Unit Name : LED P.C.Board(CDX-M60)

Mark	Circuit Symbol & No.	Part Name	Part No.
D	992	LED	MAA4565S-R

Unit Number :
Unit Name : P.C.Board

Mark	Circuit Symbol & No.	Part Name	Part No.
C	981		CCG-105

Unit Number : CWW1317
Unit Name : Composite Unit

Mark	Circuit Symbol & No.	Part Name	Part No.
VR	1 2 3 4 5 6	Semi-fixed 47kΩ(B)	CCP1104
VR	7 8	Semi-fixed 10kΩ(B)	CCP1100
R	1 2		RS1/10S752J
R	3 4		RS1/10S393J
R	5 6		RS1/10S563J
R	7 8		RS1/10S184J

Unit Number :
Unit Name : Main Unit

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
IC	351		CXA1081Q
IC	601		CXA1082BQ
IC	655 657 665 706 707		M5218FP
IC	666		LA6510
IC	671		AN8377N

Mark	Circuit Symbol & No.	Part Name	Part No.
IC	701		CXD1167Q
IC	702		TC9237F
IC	703		TA2009F
IC	709		TC74HCU04AF
IC	713		TC4S30F
IC	751		PD4245D
IC	755		CXK5816M-15L
IC	801		M54649L
IC	905		M51945AFP
Q	351		2SB1243
Q	352 804 953	Chip Transistor	UN2211
Q	601 906	Chip Transistor	UN2211
Q	602 603 707 708	Chip Transistor	2SD1048
Q	651		2SC3474
Q	652	Chip Transistor	UN2111
Q	653	Chip Transistor	2SD601A
Q	701 803	Chip Transistor	UN2214
Q	702 751	Chip Transistor	UN2111
Q	706	Chip Transistor	UN2211
Q	709		2SD1859
Q	710	Chip Transistor	UN2214
Q	741		2SC1621
Q	801		2SD1273
Q	802	Chip Transistor	UN2111
Q	905		2SC3673
Q	907	Chip Transistor	2SD601A
Q	951		2SB1185
Q	952		2SA1241
D	661 662		HZS2ALL
D	663		RD11JSB1
D	702	Chip Diode	MA151WA-MW
D	703 759 760 761	Chip Diode	MA151A-MA
D	704		RD7R5JSB2
D	705	Chip Diode	MA153-MC
D	706 905 952		ERA15-02VH
D	754 755 756 757 758	Chip Diode	MA153-MC
D	801		HZS11LB2
D	906		HZS6LB1
D	907	Chip Diode	MA3200M
D	908		HZS7LB1
D	951		RB100AVH
L	701	Inductor	CTF1006
L	702	Micro-Inductor	LAU2R7M
L	703	Inductor	CTF1082
L	751	Inductor	CTF1082
L	952	Choke Coil	CTH1074
TH	351	Thermister	CCX1006
CR	601		CWW1317
X	701	Crystal Resonator	CSS1052
X	751		CSS1038
VR	604	Semi-fixed 2.2kΩ(B)	CCP1015
EF	701		CCG1018

FESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
R	351 352		RD1/4PS110JL
R	353 381 689 749 783		RS1/10S102J
R	354 378		RS1/10S153J
R	355		RS1/10S113J
R	356 357 358 359 781		RS1/10S563J
R	360 361 608		RS1/10S823J
R	362		RS1/10S564J
R	363		RS1/10S223J
R	364 365 618		RS1/10S105J
R	366 377		RS1/10S562J
R	367 628		RS1/10S183J
R	379		RS1/10S332J
R	380 617 625		RS1/10S203J
R	382 655 667		RS1/10S363J
R	383		RS1/10S823J
R	384		RS1/10S273J
R	601 602		RS1/10S101J
R	606		RS1/10S224J
R	607 923		RS1/10S683J
R	609 614 627 758 760 767		RS1/10S104J
R	610 709		RS1/10S822J
R	611		RS1/10S432J
R	612		RS1/10S623J
R	613		RS1/10S624J
R	616		RS1/10S203J
R	620 631 637 638 691		RS1/10S272J
R	621		RS1/10S184J
R	622 670 680 681 682 755		RS1/10S103J
R	623		RS1/10S224J
R	624 666		RS1/10S393J
R	629		RS1/10S682J
R	630		RS1/10S273J
R	632 668		RS1/10S183J
R	634		RS1/10S474J
R	635 694		RS1/10S822J
R	636 639 673 924		RS1/10S473J
R	651		RD1/4PS121JL
R	652 697 772 794 795 798 [illegible]		RS1/10S473J
R	653		RS1/10S472J
R	654 656		RS1/10S163J
R	657		RS1/10S150J
R	658		RS1/10S101J
R	659		RS1/10S150J
R	660		RS1/10S0R0J
R	661		RS1/10S0R0J
R	665		RS1/10S562J
R	669		RS1/10S563J
R	671		RS1/10S105J
R	672		RS1/10S364J
R	674		RS1/10S133J
R	676		RS1/10S201J
R	677		RS1/10S201J
R	683 684		RD1/4PS8R2JL
R	685 686		RD1/4PS1R1JL
R	687 790 952		RS1/10S103J
R	688 690		RS1/10S272J
R	692 710 718		RS1/10S102J
R	695		RS1/10S113J
R	696 698 699		RS1/10S103J
R	701 702		RS1/10S103J
R	703		RS1/10S513J
R	705		RS1/10S223J
R	706 756 770 771 779 780		RS1/10S681J
R	707		RS1/10S100J
R	708		RS1/10S100J
R	711		RS1/10S103J
R	712		RS1/10S102J
R	713 714		RS1/10S102J
R	717		RS1/10S391J
R	719 720		RS1/10S104J
R	721 722		RS1/10S243J
R	723		RS1/10S683J
R	724		RS1/10S683J
R	731 732		RN1/10SE472D
R	733 734		RN1/10SE472D

Mark	Circuit Symbol & No.	Part Name	Part No.
R	735 737		RN1/10SE472D
R	736		RS1/10S104J
R	740		RS1/10S102J
R	741 742 953		RS1/10S182J
R	743 744		RS1/10S103J
R	745 746		RS1/10S122J
R	747		RS1/10S561J
R	748		RS1/10S681J
R	750		RS1/10S112J
R	754		RS1/10S752J
R	757 759 762 763 765 773 776 787 803 804		RS1/10S222J
R	766 769 796 963		RS1/10S563J
R	768 775 777 782 784 786 788 793 901 961		RS1/10S104J
R	789		RS1/10S332J
R	791		RS1/10S103J
R	792		RS1/10S103J
R	797		RS1/10S564J
R	801		RD1/4PS751JL
R	805		RS1/10S222J
R	806 807 808		RS1/10S470J
R	811		RS1/10S471J
R	812		RS1/10S152J
R	813 814 815		RS1/10S332J
R	910 (CDX-M60)		RS1/2S221J
R	911 (CDX-M40)		RS1/10S0R0J
R	925		RS1/10S153J

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
C	351 722 737		CEA101M6R3LL
C	352 354 652 680 729 765		CKSQYB103K50
C	353 613 654		CKSQYB333K25
C	355 362 602 603 611 625 626 629 661 664		CKSQYB103K50
C	356 724		CKSQYB332K50
C	358 605 656 658		CKSQYB104K25
C	360 612 620 665 742		CKSQYB104K25
C	361		CASA100M6R3
C	370 373		CCSQCH220J50
C	371 708		CKSQYB102K50
C	372		CCSQCH150J50
C	374		CEA2R2M50LL
C	601		CKSQYB222K50
C	606 616		CEA220M10LL
C	607 743		CEA330M6R3LL
C	608		CEA220M10NPLL
C	609		CKSQYB472K50
C	610 731 762 763		CCSQCH221J50
C	614		CEAR47M50LL
C	615		CCSQCH470J50
C	617		CEA4R7M35LL
C	618		CKSQYB272K50
C	619		CKSQYB223K50
C	621		CEA4R7M16NPLL
C	623		CKSQYB222K50
C	627		CCSQCH220J50
C	651 653 687 689 963		CKSYB224K25
C	655		CCSQSL681J50
C	657		CKSQYB393K25
C	662 741		CKSQYB473K25
C	670	470μF/16V	CCH1080
C	688		CKSYB224K25
C	692 730 757 758 958		CKSQYB103K50
C	701		CKSYB224K25
C	702 703		CCSQCH090D50
C	704		CKSYB224K25
C	706		CKSYB224K25
C	707		CEA101M6R3LS
C	709		CEA101M6R3LS
C	710		CKSYB224K25
C	711		CEA470M6R3LS
C	712		CEA330M6R3LL
C	715		CEA4R7M35LS
C	716		CEA4R7M35LS
C	717 718		CCSQCH470J50
C	719		CCSQCH470J50
C	721		CKSQYB103K50
C	723 732		CKSQYB472K50
C	725		CEA100M16LL
C	726		CEA470M10LS
C	727		CKSQYB104K25
C	728		CKSQYB104K25
C	736 754 755		CCSQCH101J50
C	738 747		CCSQCH331J50
C	739		CCSQCH331J50
C	740		CCSQCH100D50
C	744 745		CEA330M10LL
C	746		CEA470M16LL
C	751		CKSQYB104K25
C	753		CKSQYB104K25
C	760		CKSQYB472K50
C	764		CCSQCH221J50
C	801		CEA220M16LL
C	804		CKSQYB223K50
C	805		CKSQYB223K50
C	904		CKSQYB103K50
C	905		CEA471M16L2
C	954		CKSQYB473K25
C	956		CEA471M16L2
C	957		CEA330M16LL
C	962		CEA100M16LL

Unit Number :
Unit Name : Mechanism P.C.Board

Mark	Circuit Symbol & No.	Part Name	Part No.
M	841	Motor Unit (Carriage)	CXA3240
M	842	Motor Unit (Spindle)	CXM1053
M	843	Motor Unit (ELV)	CXA3238
M	844	Motor Unit (Tray)	CXA3732
S	843	Switch (Home)	CSN1020
S	845 846	Switch (DCPN, TRPN)	CSN1021

Unit Number :
Unit Name : Photo P.C.Board

Mark	Circuit Symbol & No.	Part Name	Part No.
D	841		HZS9A2L
P	841	Photo-Interrupter	ON1113
P	842	Photo-Interrupter	ON2160
VR	841	Semi-fixed 22kΩ (B)	CCP-380
S	841 842	Switch (MAG, EJP)	CSN1020
R	841		RD1/4PS560JL
R	842		RD1/4PS221JL
R	843		RD1/4PS103JL

Miscellaneous Parts List

Mark	Circuit Symbol & No.	Part Name	Part No.
		PU Unit	CGY1014