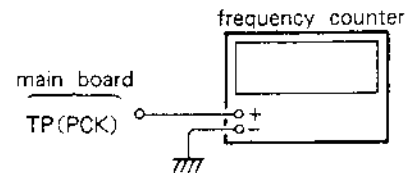


## SECTION 1 ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.

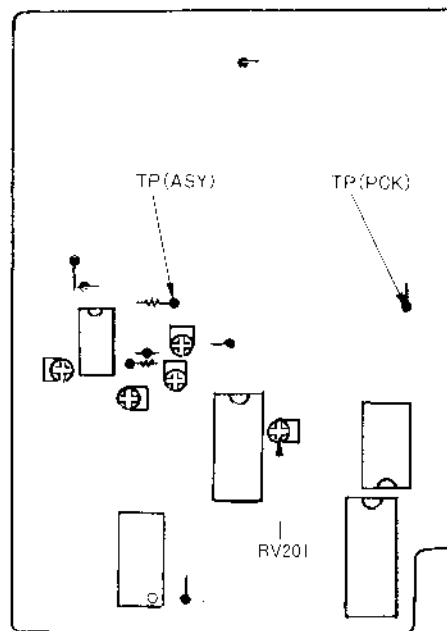
### RF PLL Frequency Adjustment

#### Procedure :



1. Connect test point TP (ASY) to ground with jumper wire.
2. Turn POWER switch on.
3. Connect the frequency counter to test point TP(PCK).
4. Adjust RV201 so that the reading on frequency counter is  $4.3218\text{MHz} \pm 30\text{kHz}$ .
5. Remove lead wire connecting TP(ASY) and ground.
6. Put disc (YEDS-18) in and press > button.
7. Confirm that the reading on frequency counter is  $4.3218\text{MHz}$ .

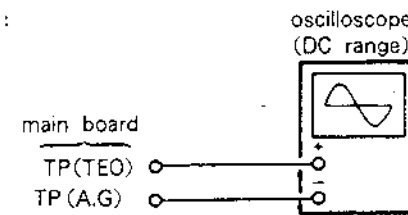
Adjustment Location : main board



### E-F Balance Adjustment

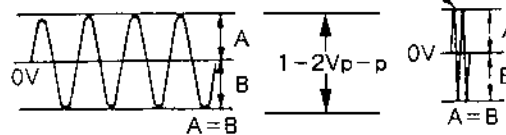
This adjustment should be made when replacing Optical Pick-up Block.

#### Procedure :

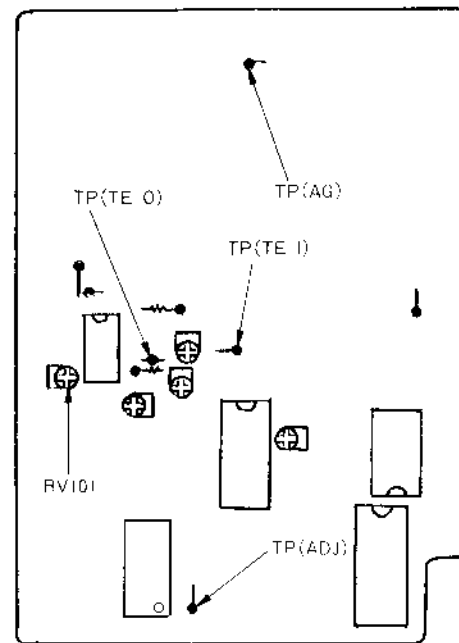


1. Connect test points TP (ADJ) and TP (TE i) to ground with jumper wires.
2. Connect oscilloscope to test points TP(TEO) and TP (A. G).
3. Turn POWER switch on.
4. Put disc (YEDS-18) in and playback the 6th selection.
5. Adjust RV101 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V.

Note: Take sweep time as long as possible to obtain best waveform.



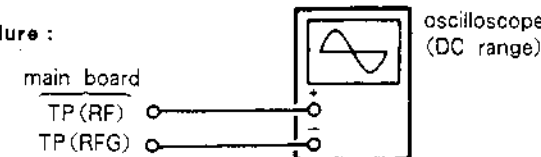
Adjustment Location : main board



### Focus Bias Adjustment

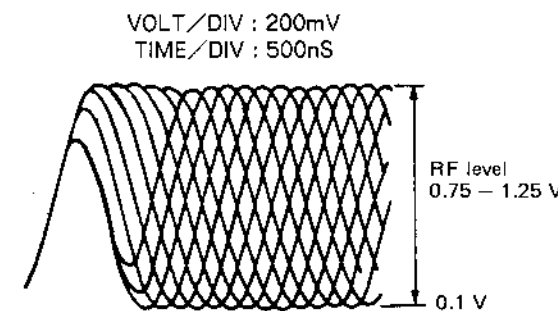
This adjustment should be made when replacing Optical Pick-up Block.

#### Procedure :



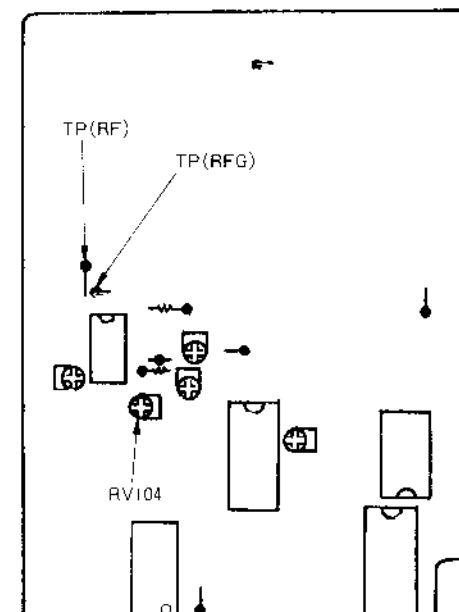
1. Connect oscilloscope to test points TP(RF) and TP (RF G).
2. Turn POWER switch on.
3. Put disc (YEDS-18) in and playback the 6th selection.
4. Adjust RV104 for an optimum waveform eye pattern or so that the peak is maximum. Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.

#### ● RF Signal Reference Waveform (eye pattern)



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

Adjustment Location : main board



## REFERENCE

### Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

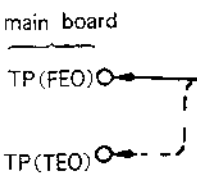
Symptoms	Gain	Focus	Tracking
● The time until music starts becomes longer for STOP → >PLAY or automatic selection (⏮ ⏭ buttons pressed). (Normally takes about 2 seconds.)		low	low or high
● Music does not start and disc continues to rotate for STOP → >PLAY or auto-matic selection (⏮ ⏭ buttons pressed.)			low
● Disc table opens shortly after STOP → >PLAY.		low or high	
● Sound is interrupted during PLAY. Or time counter display stops progressing.			low
● More noise during 2-axis device operation.	high	high	high

The following is a

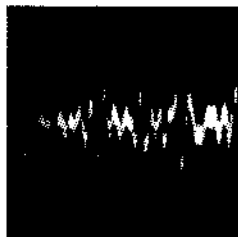
-Simple Adjustment-

Note : Since exact remember the performing the simple adjustment the controls to

#### Procedure :

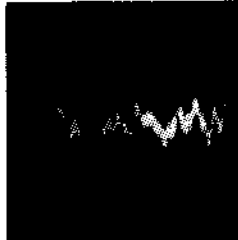


1. Keep the set horizontal. If the set is not performed due to
2. Insert disc (YEDS-18)
3. Connect oscilloscope
4. Adjust RV103 so the figure below.

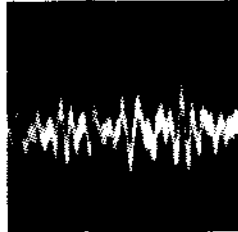


● Incorrect Example of adjusted waveform

low focus



high focus



## REFERENCE

## Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

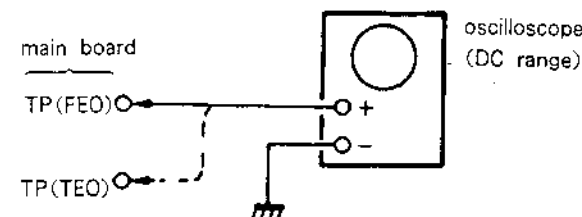
Symptoms	Gain	Focus	Tracking
● The time until music starts becomes longer for STOP →▶PLAY or automatic selection (M M buttons pressed. (Normally takes about 2 seconds.)		low	low or high
● Music does not start and disc continues to rotate for STOP →▶PLAY or automatic selection (M M buttons pressed.)			low
● Disc table opens shortly after STOP →▶PLAY.		low or high	—
● Sound is interrupted during PLAY. Or time counter display stops progressing.			low
● More noise during 2-axis device operation.		high	high

The following is a simple adjustment method.

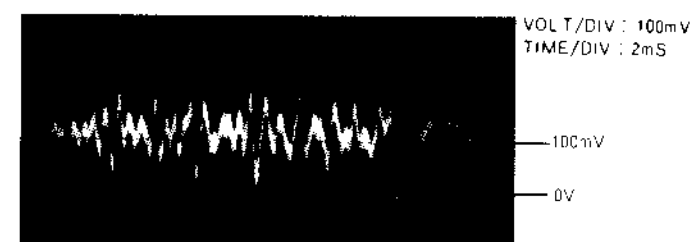
—Simple Adjustment—

**Note:** Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

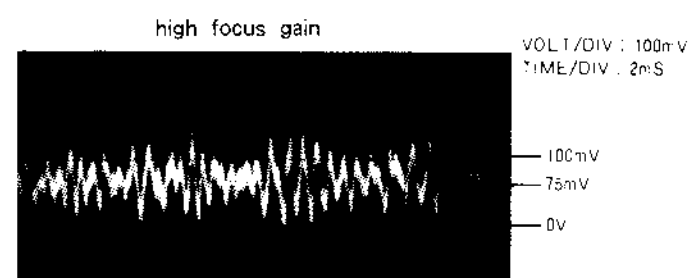
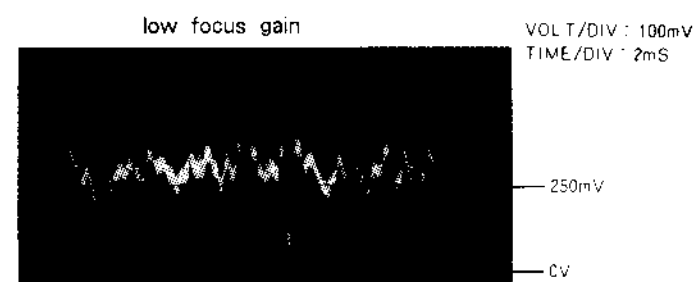
**Procedure:**



- Keep the set horizontal.  
(If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
- Insert disc (YEDS-18) playback the 6th selection.
- Connect oscilloscope to main board TP(FEO).
- Adjust RV103 so that the waveform is as shown in the figure below. (focus gain adjustment)



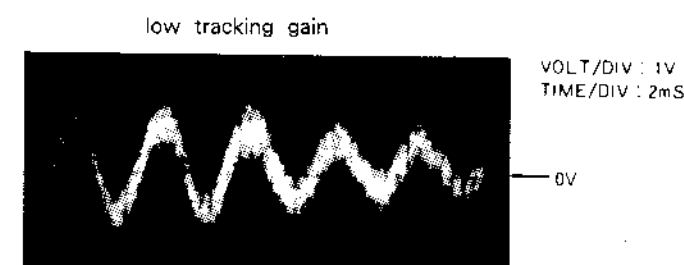
- Incorrect Examples (DC level changes more than on adjusted waveform)



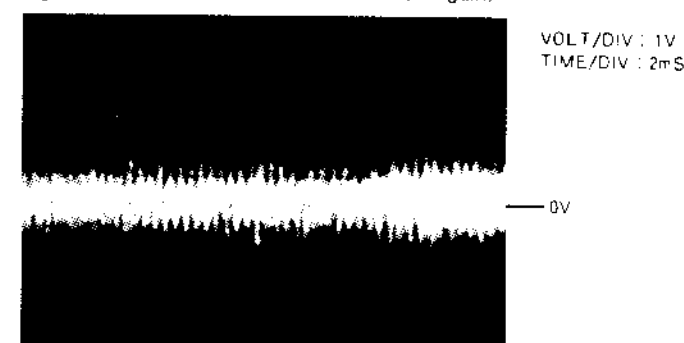
- Connect oscilloscope to main board TP(TEO).
- Adjust RV102 so that the waveform is as shown in the figure below. (tracking gain adjustment)



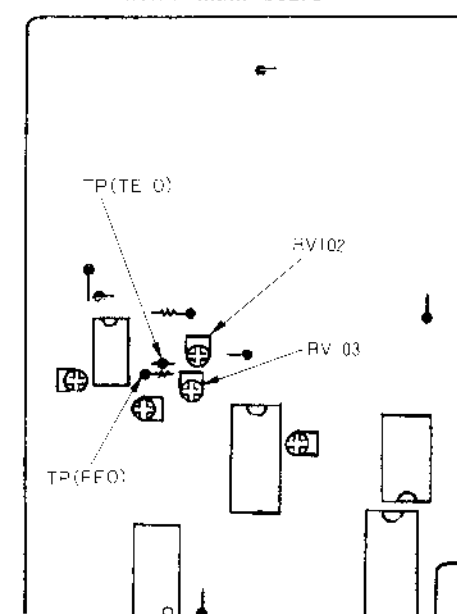
- Incorrect Examples (fundamental wave appears)



- high tracking gain  
(higher fundamental wave than for low gain)

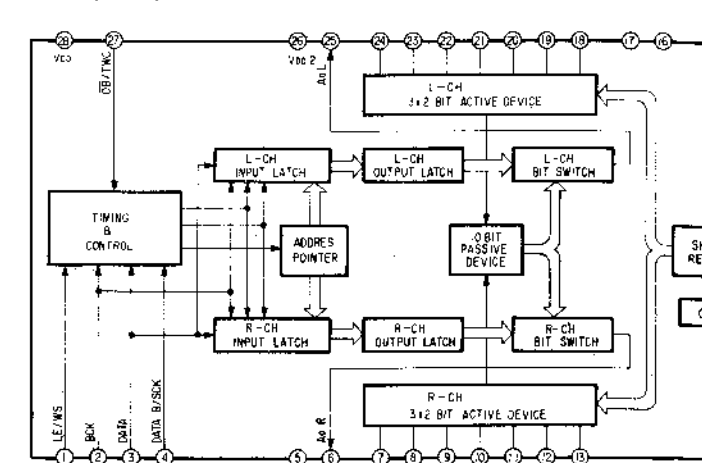


Adjustment Location: main board

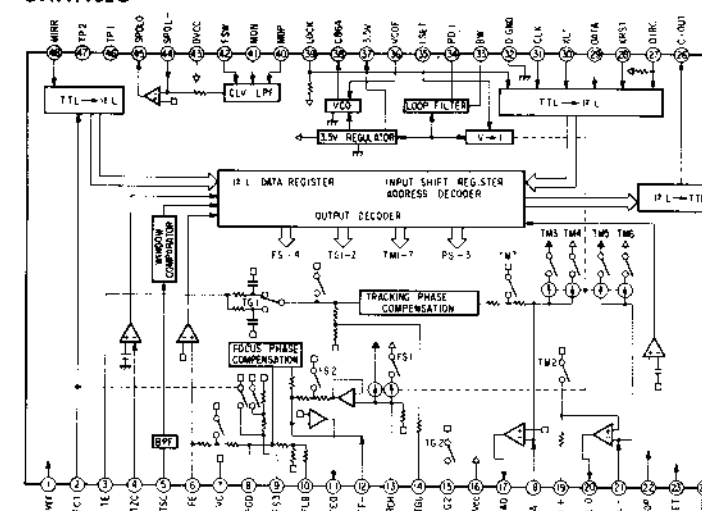


## 2-1. IC BLOCK DIAGRAMS

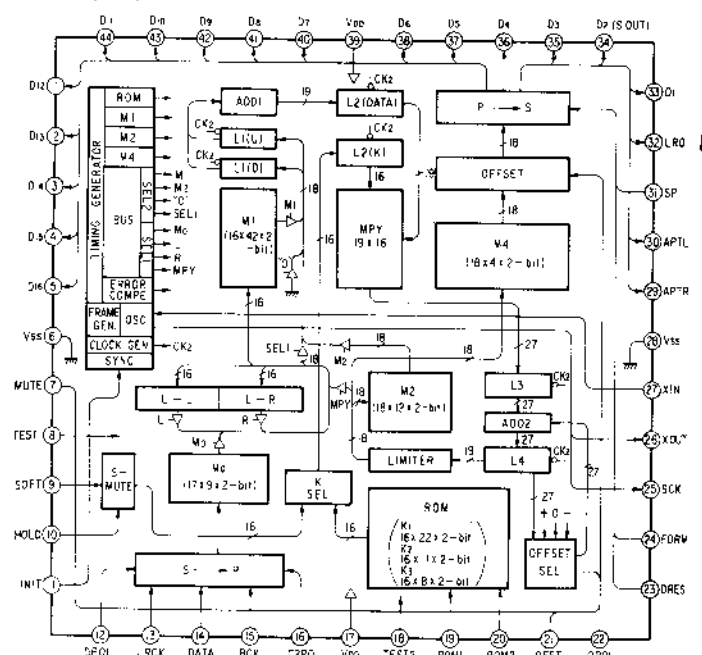
## TDA1541-N5



## CXA1182S



## CXD1088Q

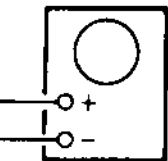


## SECTION 2

### DIAGRAMS

ple adjustment method.

ment cannot be performed.  
tions of the controls before  
tment. If the positions after the  
re only a little different, return  
original position.



oscilloscope  
(DC range)

nal, this adjustment cannot be  
gravity against the 2 axis device,  
playback the 6th selection.  
main board TP(FEO).  
the waveform is as shown in  
us gain adjustment)

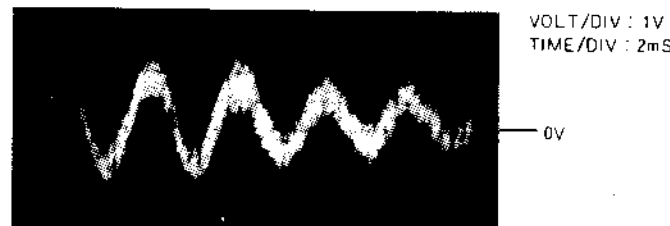
C level changes more than on

5. Connect oscilloscope to main board TP(TEO).
6. Adjust RV102 so that the waveform is as shown in the figure below. (tracking gain adjustment)



● Incorrect Examples (fundamental wave appears)

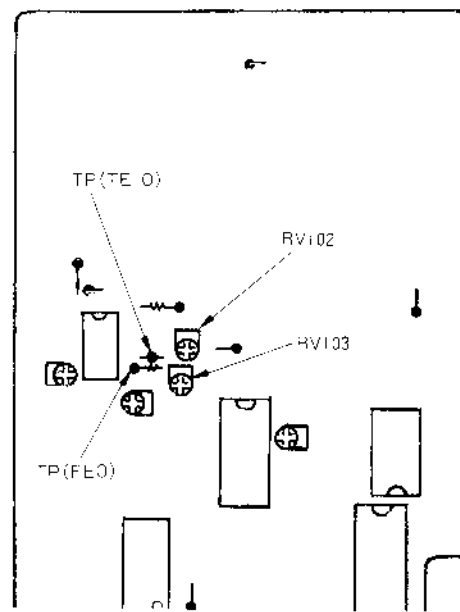
low tracking gain



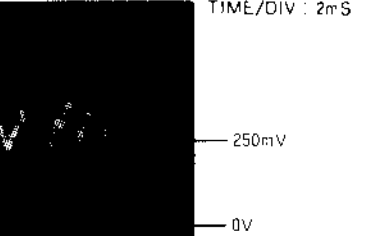
high tracking gain  
(higher fundamental wave than for low gain)



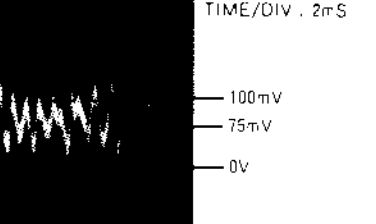
Adjustment Location : main board



VOLT/DIV : 100mV  
TIME/DIV : 2mS

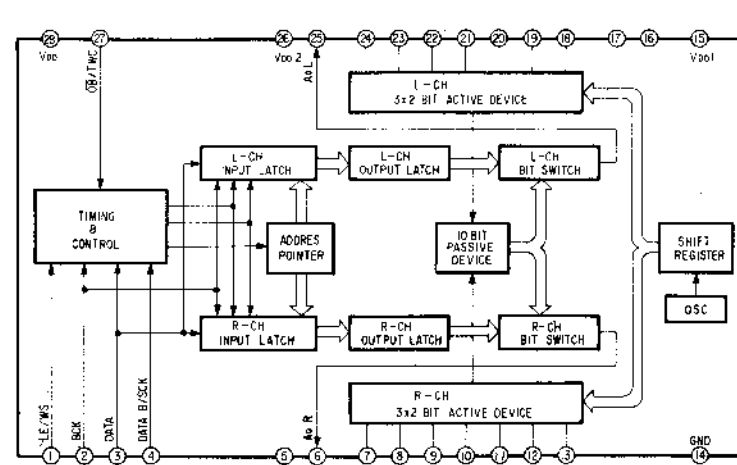


VOLT/DIV : 100mV  
TIME/DIV : 2ms

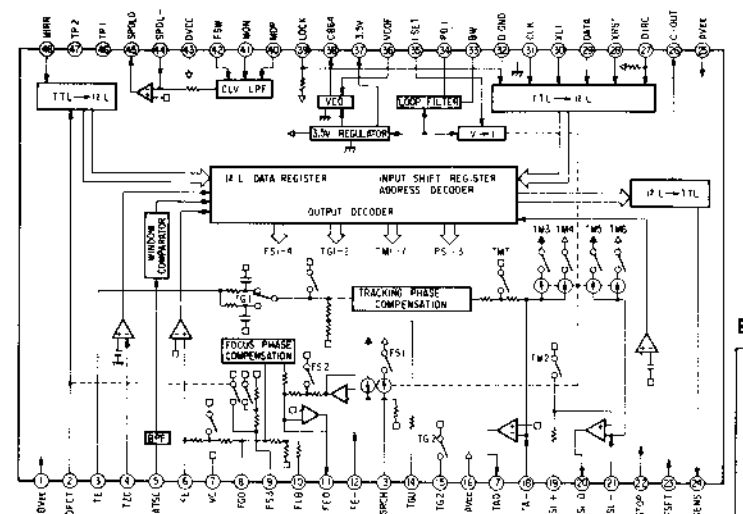


## 2-1. IC BLOCK DIAGRAMS

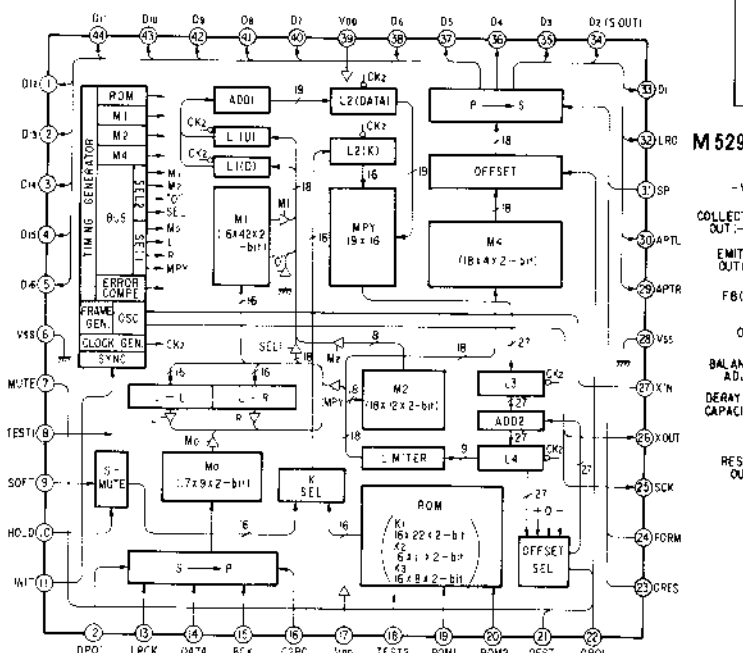
## TDA1541-N5



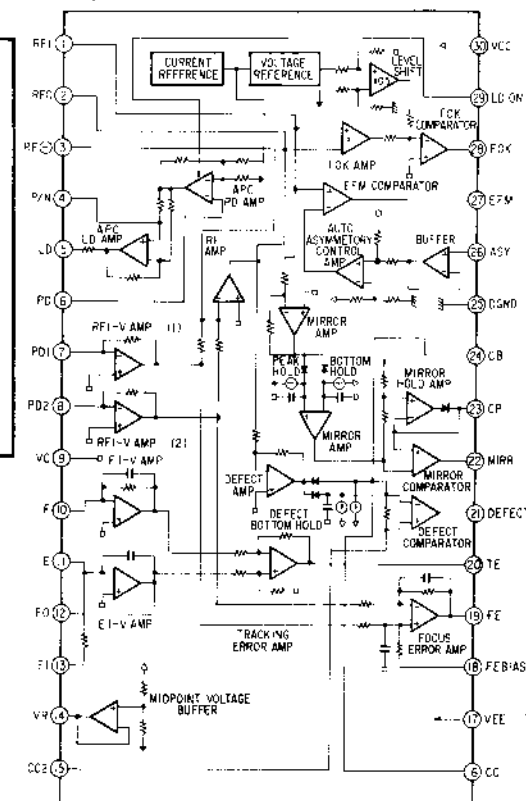
## CXA1182S



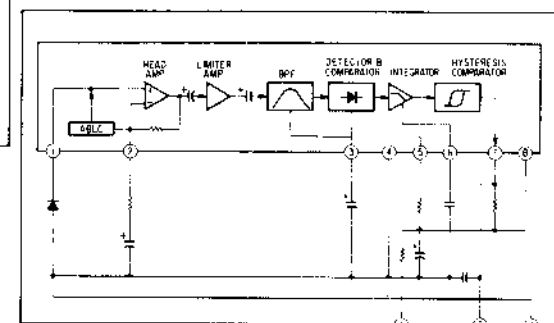
CXD1088Q



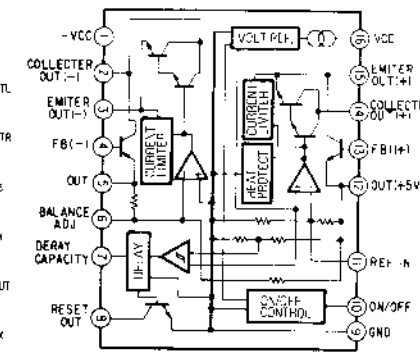
## CXA1081S



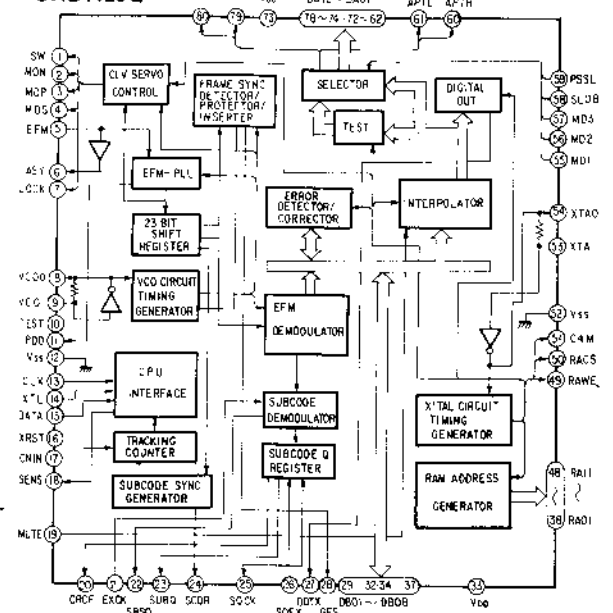
## BX-1387



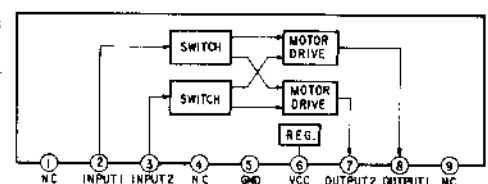
OC M 5290-16



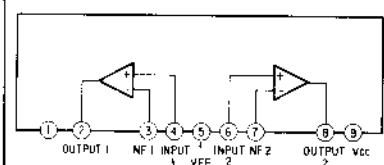
**CXD1125Q**



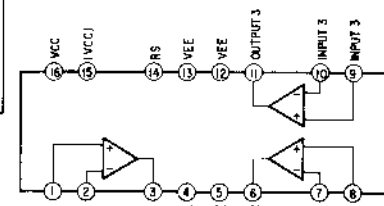
## BA6208



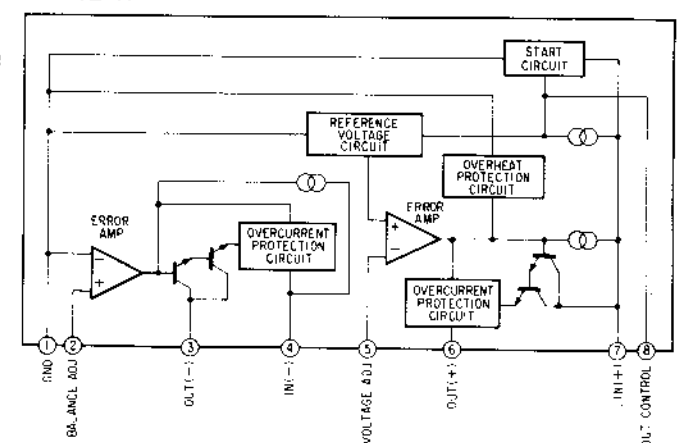
## TA7256P



LA6520



**M5230L-A**

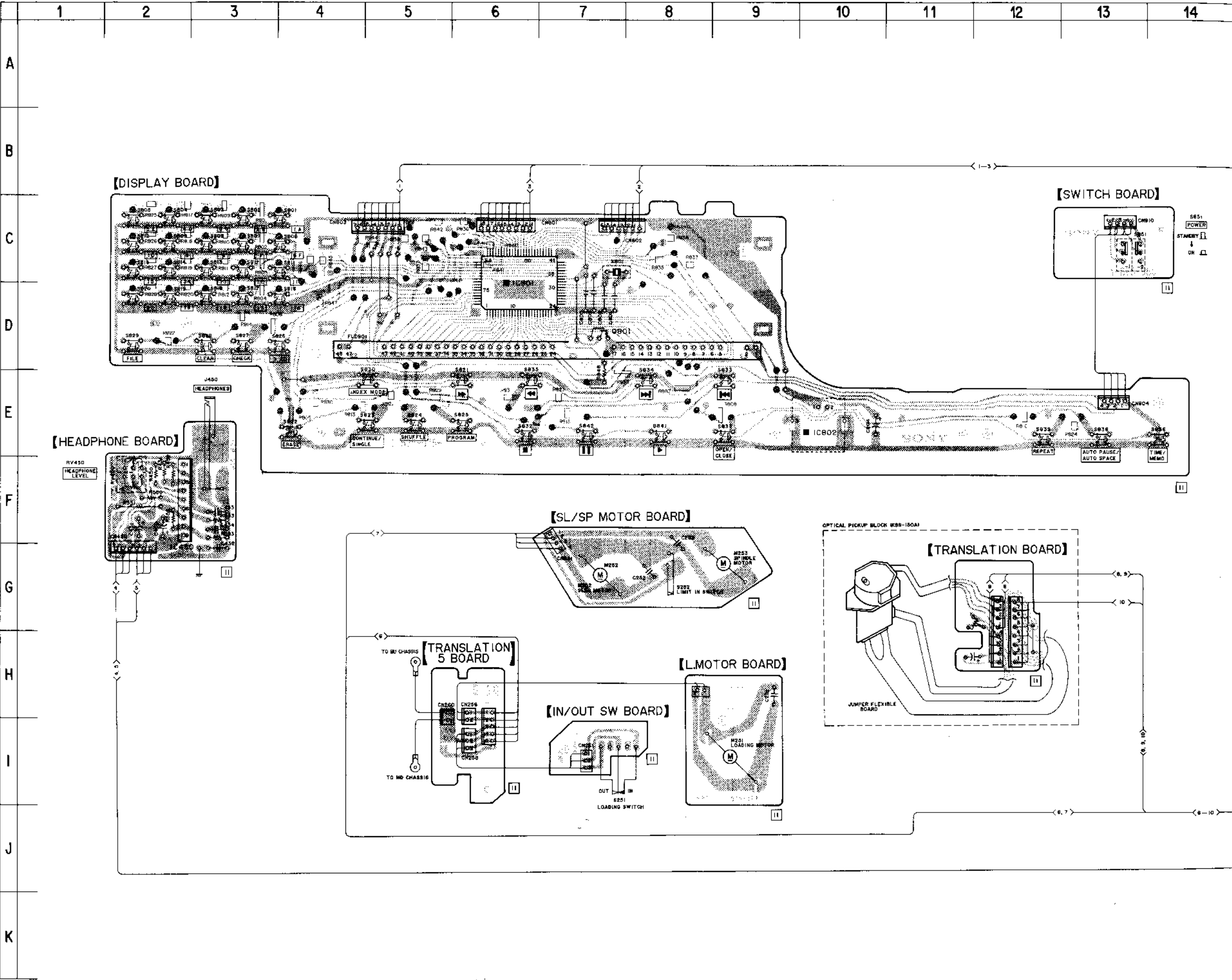


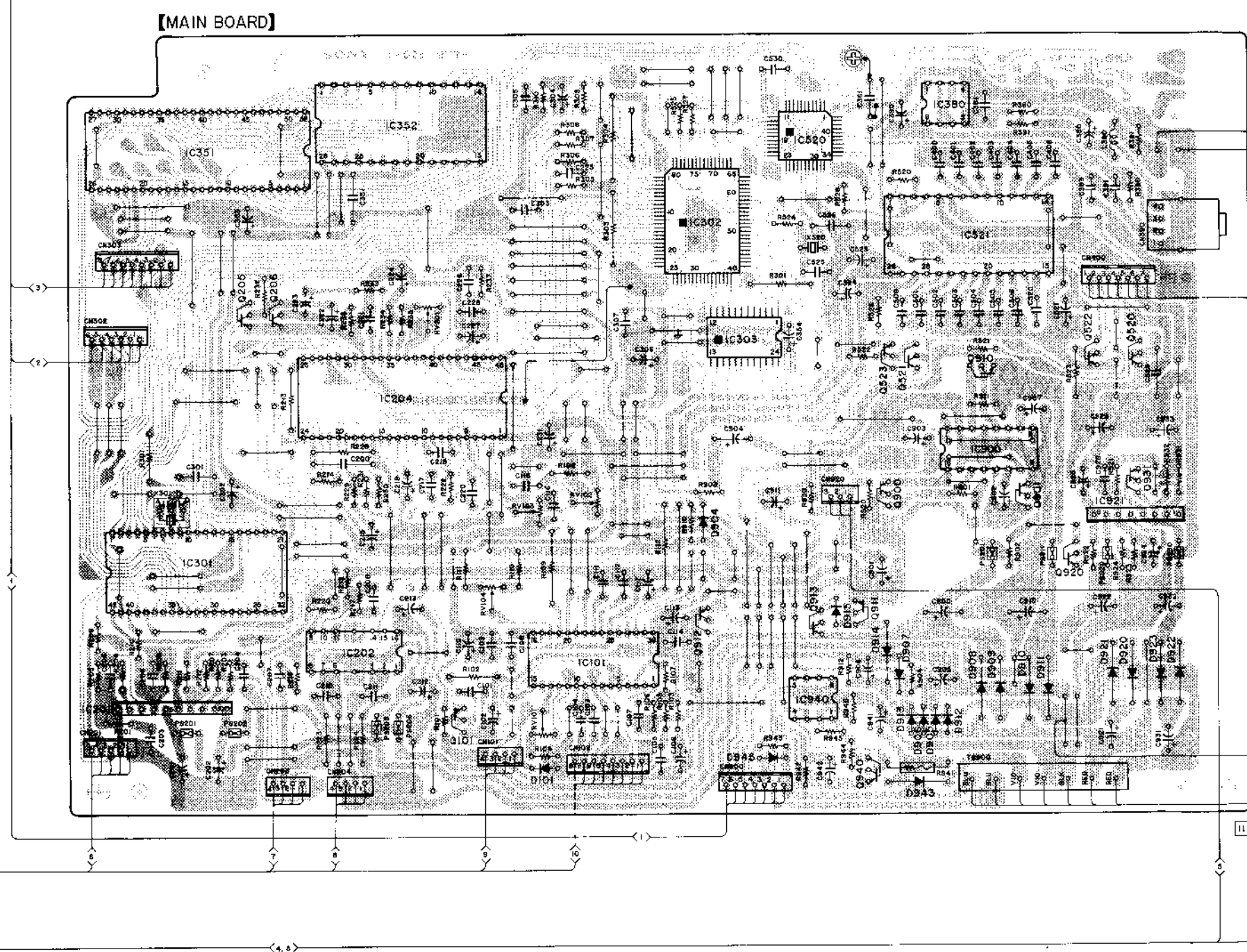
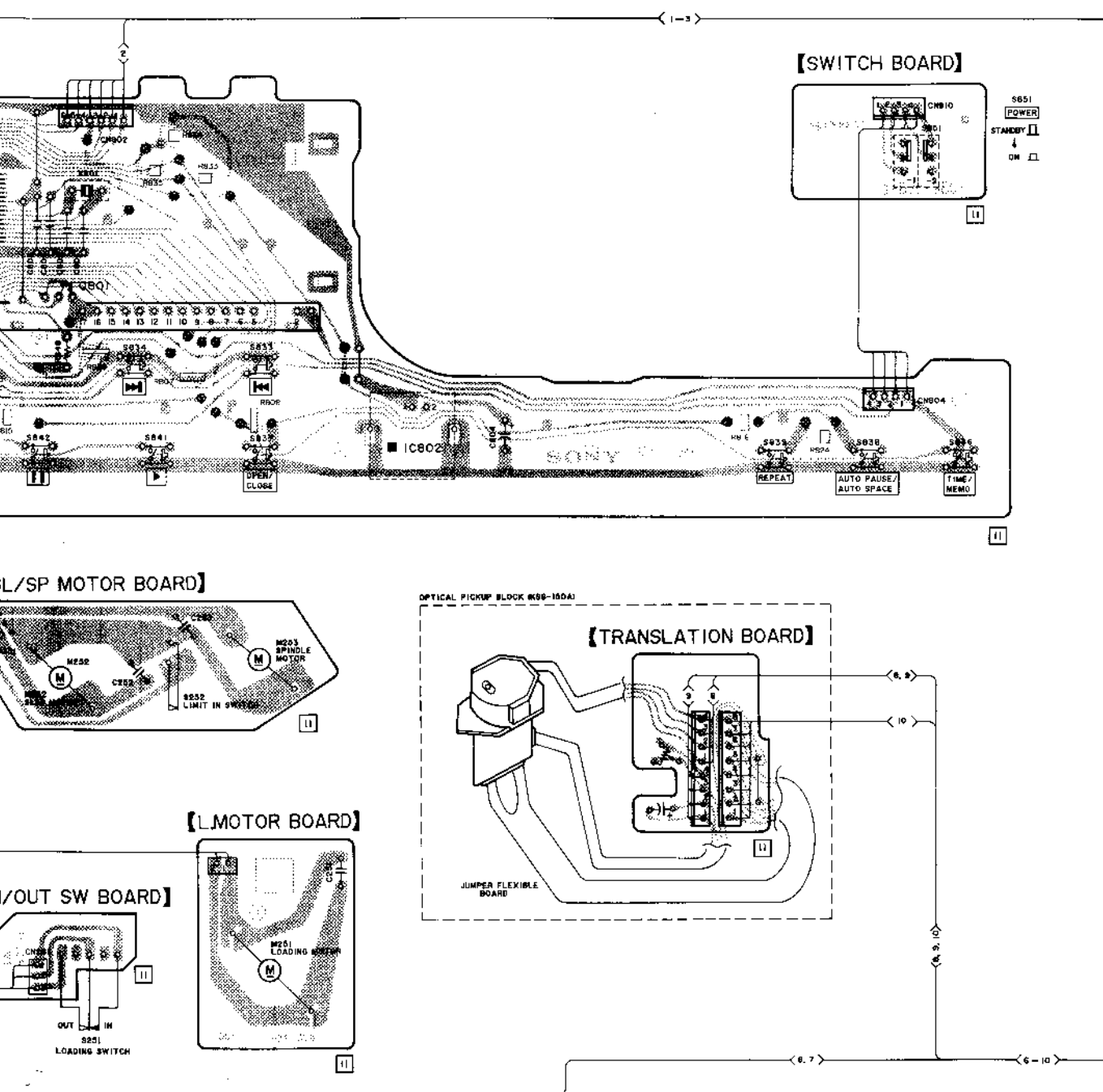
2-2. MOUNTING DIAGRAM

• See page 22 for Semiconductor Lead Layouts.

Ref. No.	Location	Ref. No.	Location
D101	I-19	Q101	H-18
D904	G-20	Q205	D-16
D905	H-22	Q206	E-17
D906	H-22	Q400	H-27
D907	H-22	Q401	H-27
D908	H-23	Q402	G-27
D909	H-23	Q500	I-28
D910	H-23	Q501	G-28
D911	H-23	Q502	G-28
D912	H-22	Q520	E-24
D913	H-22	Q521	E-22
D914	H-22	Q522	E-23
D915	G-21	Q523	E-22
D920	H-24	Q801	D-7
D921	H-24	Q900	F-22
D922	H-24	Q901	F-23
D923	H-24	Q910	E-23
D943	I-22	Q911	G-22
D945	H-21	Q912	G-20
		Q913	G-21
IC101	H-19	Q920	G-23
IC201	H-16	Q931	F-24
IC202	H-17	Q940	I-22
IC204	E-18		
IC301	G-16		
IC302	D-20		
IC303	E-21		
IC351	C-16		
IC352	C-18		
IC380	C-22		
IC400	H-27		
IC450	F-2		
IC500	H-28		
IC520	C-21		
IC521	D-22		
IC801	C-6		
IC802	E-9		
IC900	F-23		
IC921	F-24		
IC940	H-21		

- Note:
- Color code or sleeving over the end of the jacket.
  - —○— : parts extracted from the component side.
  - —●— : parts extracted from the conductor side.
  - ■ : parts mounted on the conductor side.
  - —○— : Jumper wire connected to the ground pattern on the component side.
  - ▨ : Pattern on the side which is seen.
  - ▩ : Pattern of the rear side.
  - □ : Printed resistors extracted from the rear side.



[illegible]



15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
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