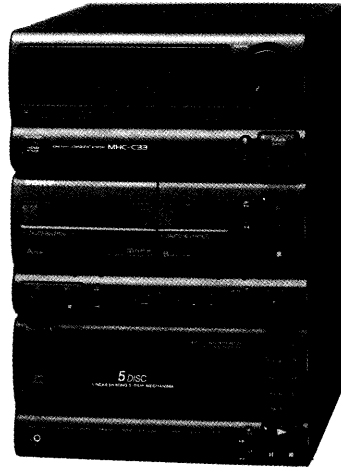


# HCD-C33

## SERVICE MANUAL



US Model  
Canadian Model  
AEP Model  
UK Model  
E Model  
Australian Model  
PX Model

• HCD-C33 is the tuner, CD, deck and amplifier in MHC-C33

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  $\square\square$  are trademarks of Dolby Laboratories Licensing Corporation.

### SPECIFICATIONS

#### AUDIO POWER SPECIFICATIONS

#### POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6 ohm loads both channels driven, from 80 – 20,000 Hz; rated 30 watts per channel minimum RMS power, with no more than 0.9% total harmonic distortion from 250 milliwatts to rated output.

#### CD player section

System	Compact disc digital audio system
Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequency response	2 Hz – 20 kHz
Signal-to-noise ratio	More than 95 dB
Dynamic range	More than 90 dB

#### Tuner section

FM stereo, FM/AM superheterodyne tuner

#### FM tuner section

Tuning range	For East European, CIS model 65 – 74 MHz 87.5 – 108.0 MHz For other countries model 87.5 – 108.0 MHz
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM33-5BD3B
	Base Unit Name	BU-5BD3B
Tape deck Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	TCM-202WR2

#### AM tuner section

Tuning range	For US, Canadian, Mexican model
AM:	530 – 1,710 kHz (with the AM tuning interval set at 10 kHz) 531 – 1,710 kHz (with the AM tuning interval set at 9 kHz) For Italian model 522 – 1,611 kHz For German model 531 – 1,602 kHz For AEP, UK model MW: 531 – 1,602 kHz LW: 153 – 279 kHz For E, Saudi Arabia, Malaysia, Singapore, Australian, Tourist, PX model
MW:	531 – 1,602 kHz (with the MW tuning interval set at 10 kHz)
SW:	5.95 – 17.90 MHz For EE, CIS model MW: 531 – 1,602 kHz LW: 153 – 279 kHz
Antenna	AM loop antenna External antenna terminals
Intermediate frequency	450 kHz

#### Amplifier section

For US, Canadian, Mexican model	Continuous RMS power output: 30 + 30 watts (6 ohms, at 80 – 20,000 Hz, 0.9% THD) 35 + 35 watts (6 ohms, at 1 kHz, 5% THD)
For AEP, German, Italian, East European, CIS model	Continuous RMS power output 35 + 35 watts (6 ohms at 1 kHz, DIN) 38 + 38 watts (6 ohms at 1 kHz, 5% THD)
Music power output	40 + 40 watts (6 ohms at 1 kHz, 10% THD)
For E, Saudi Arabia, Malaysia, Singapore, Australian, PX, Tourist model	Peak music power output 350 watts
Continuous RMS power output	35 + 35 watts (6 ohms at 1 kHz, DIN) 38 + 38 watts (6 ohms at 1 kHz, 5% THD)

—Continued on next page—

MINI HiFi COMPONENT SYSTEM  
**SONY**®

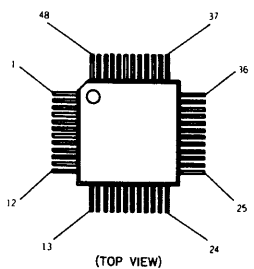




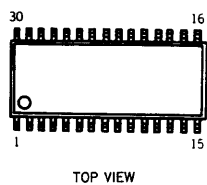
# HCD-C33

## 4-4. SEMICONDUCTOR LEAD LAYOUTS

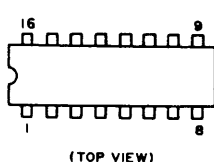
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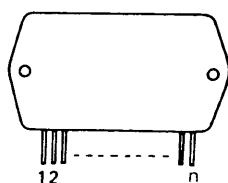
LA1851NM  
LA6532



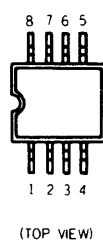
M50253P  
MC14052BCP  
μPD4053BC



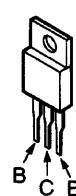
STK4152II



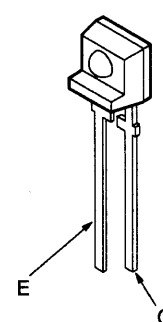
X24C01S-TP



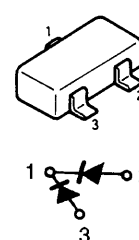
2SB1094-LK  
2SD2012



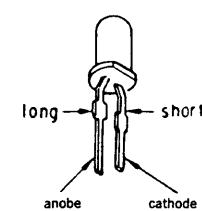
TPS626-B



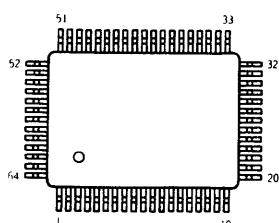
DCB010



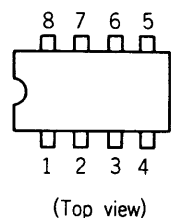
SEL2410E-C-TP6  
SEL2910A-TP6  
SEL3210S-CD



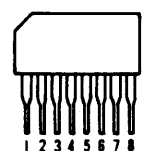
CXD2507Q  
TC74HC04AP  
VXD2507Q



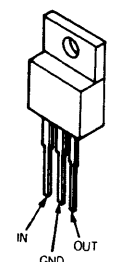
LB1639  
M5218AP  
UPC4570C-1



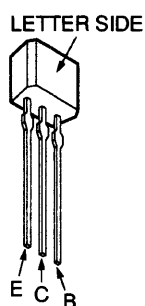
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M5230L-A  
UPC1237HA



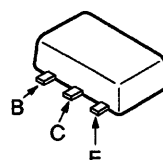
TA7805L  
TA7805S



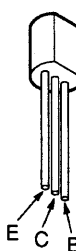
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2SC3623A-LK



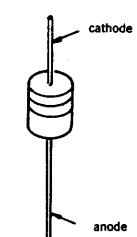
2SB798-DLDK



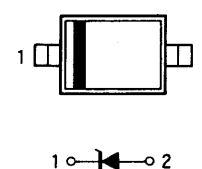
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2SD1387-3  
2SD1387-3



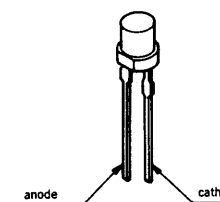
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HZS30-2L  
RD5.6ESB  
RD6.8ESB3  
UZ-4.7BSA  
UZL-11H1  
UZL-12M1  
UZL-24L  
UZL-6M2



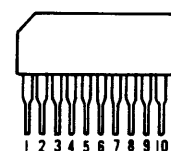
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MA8056



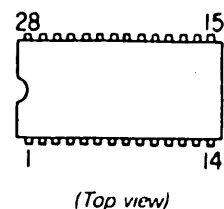
SEL3213C-D



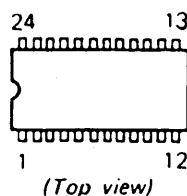
LB1641



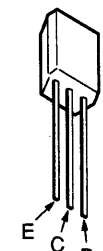
NJU7305L



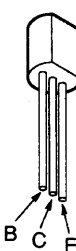
TC9293N



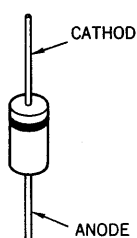
2SA1344  
2SC2603-EF  
2SC3622A-LK  
DTA114ES  
DTA114YS  
DTA124ES  
DTC114ES  
DTC124ES  
DTC144ES



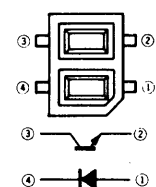
2SC2001-LK



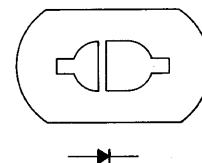
1N4148M  
UZ-4.3BSC  
UZ5.6BSA  
UZP-5.6B



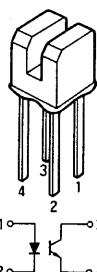
NJL5165K-A



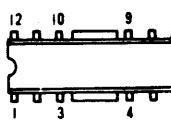
SEL5220E  
SEL5220S-TP15  
SEL5420E-TP15  
SEL5920A-TP15



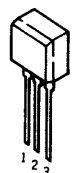
GP1S24



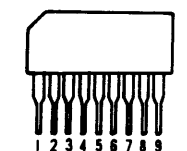
LB1648



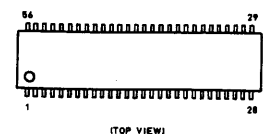
PST572E



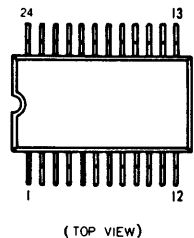
UPC1330HA



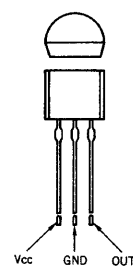
HA12172NT



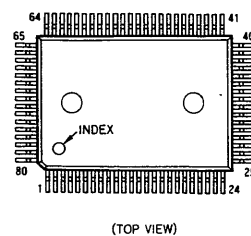
LC7218M



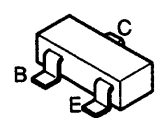
PST600D-T



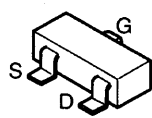
UPD78042GF-075-3B9



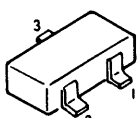
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2SC2814-F4  
2SC3398  
2SC4154F  
2SC4666BB-TP1  
DTC144EK



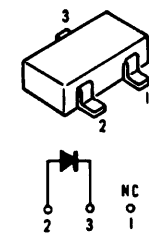
2SK208-GRT5LSONY-1



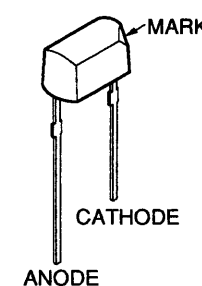
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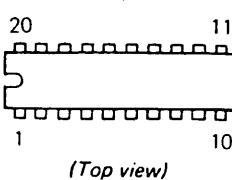
RD6.2M-B2



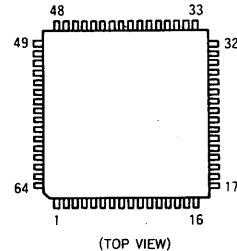
SEL5220S-TH8C



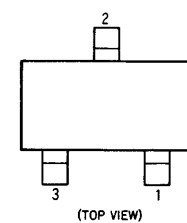
IR3R42  
M5289P



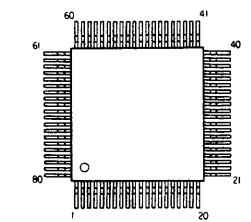
M38122M2-067FP



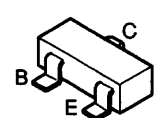
PST-600EMT-T1



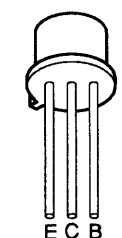
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UPD78055GC-021-3B9



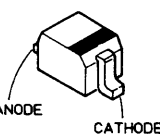
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2SC4398



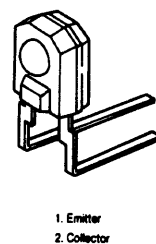
2SK246-Y



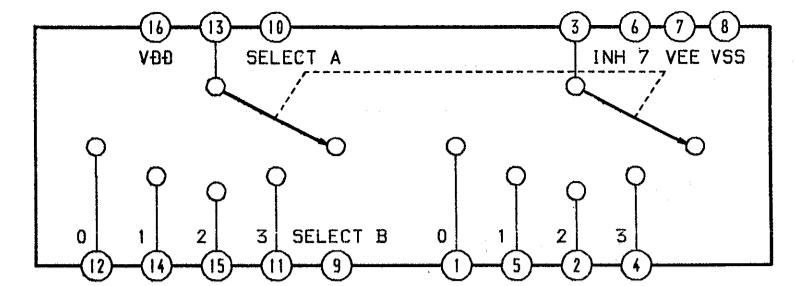
1SS352



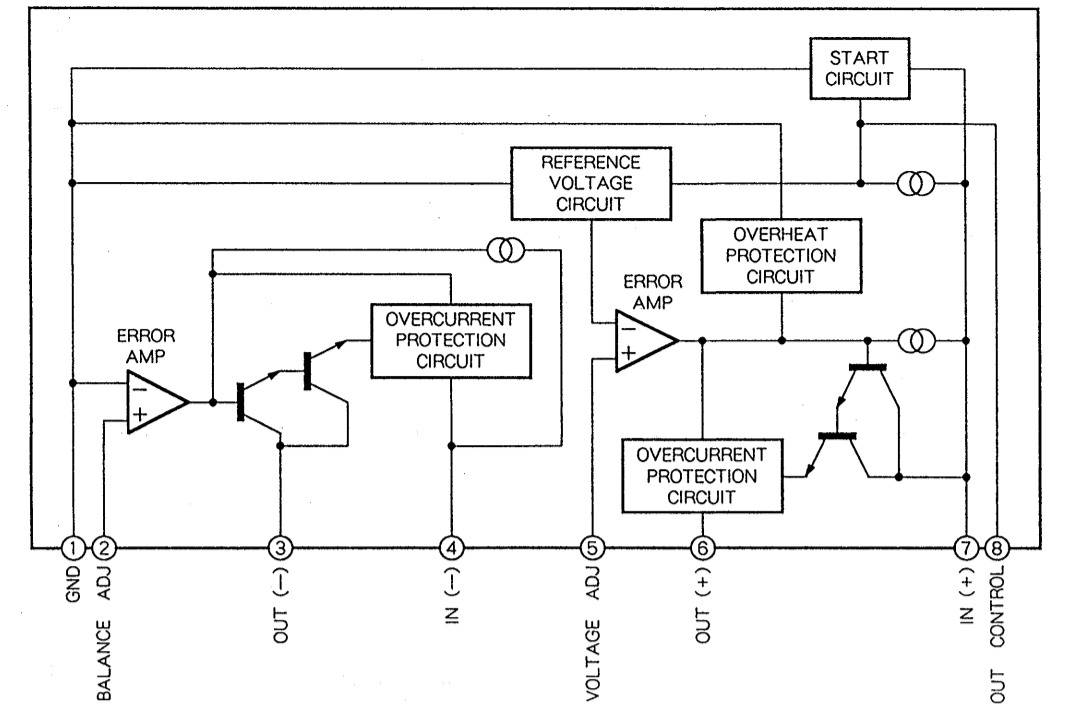
TLN117-B



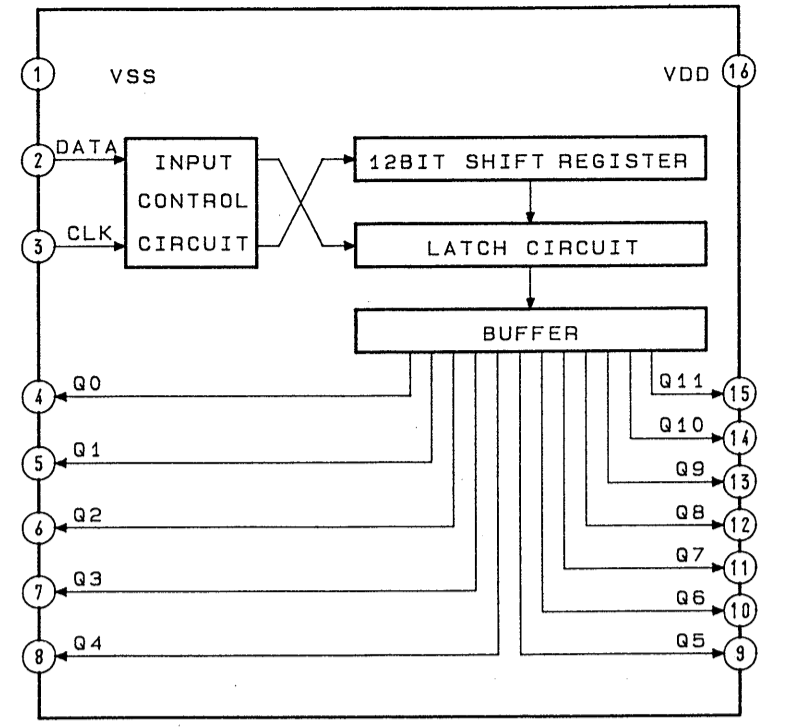
IC Block Diagrams  
IC102, 103 MC14052BCP



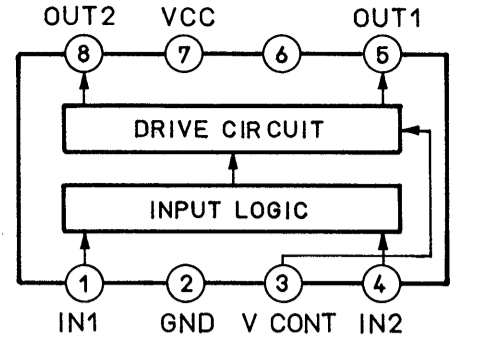
IC701 M5230L-A



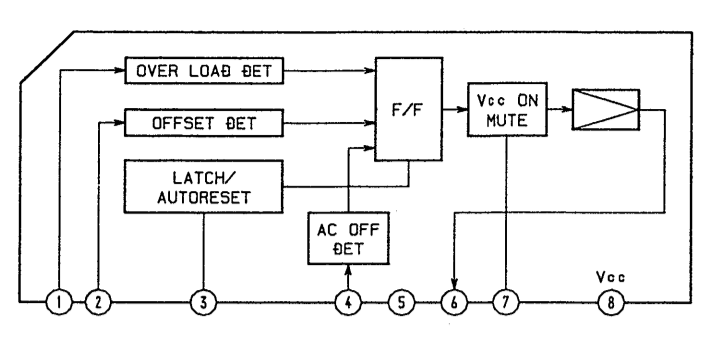
IC106 M50253P



IC301 LB1639



IC902 μPC1237HA



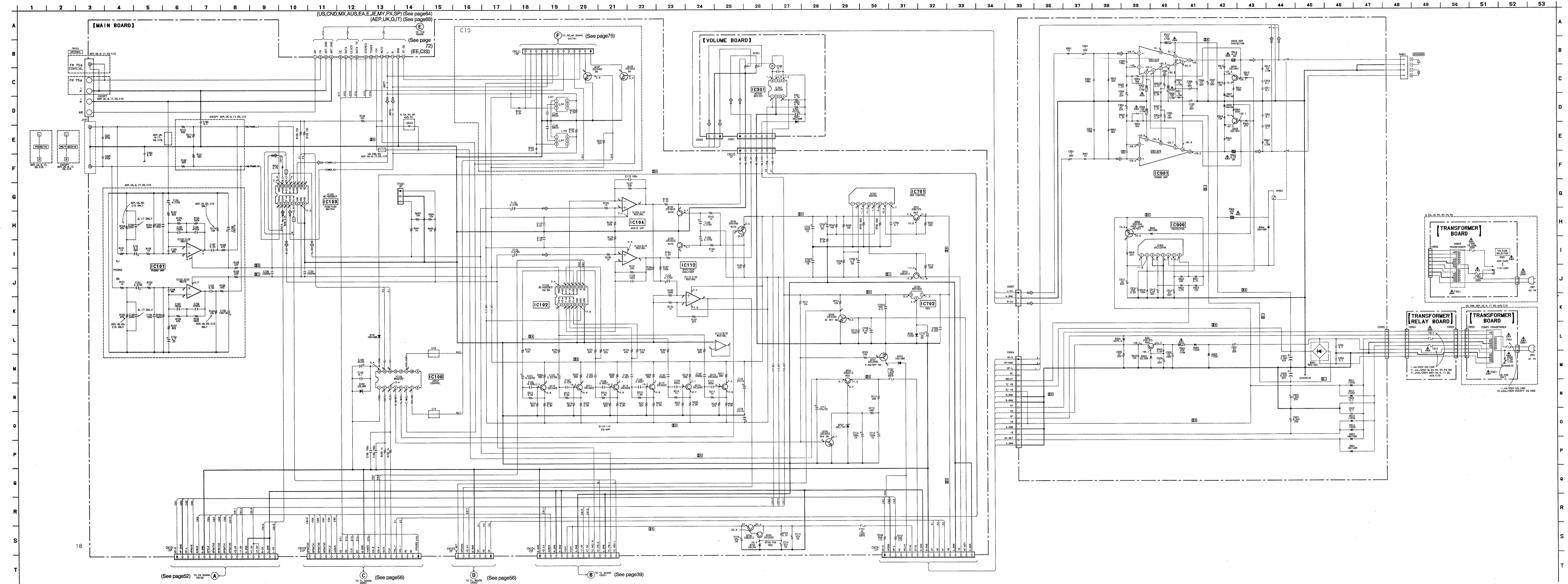
Note:  
• [Symbol] : nonflammable resistor.  
• [Symbol] : fusible resistor.

Note:  
The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Note:  
Les composants identifiés par une marque  $\Delta$  ou une ligne pointillée avec une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Abbreviations  
AUS : Australian  
CND : Canadian  
EA : Saudi Arabia  
EE : East European  
G : German  
IT : Italian  
JE : Tourist  
MY : Malaysia  
MX : Mexican  
SP : Singapore

4-6. SCHEMATIC DIAGRAM—MAIN Section—



Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- : fusible resistor.

Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

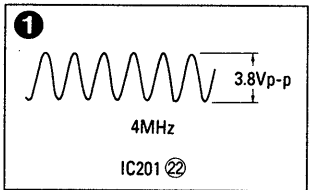
Note: Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line
- : B- Line
- : adjustment for repair.

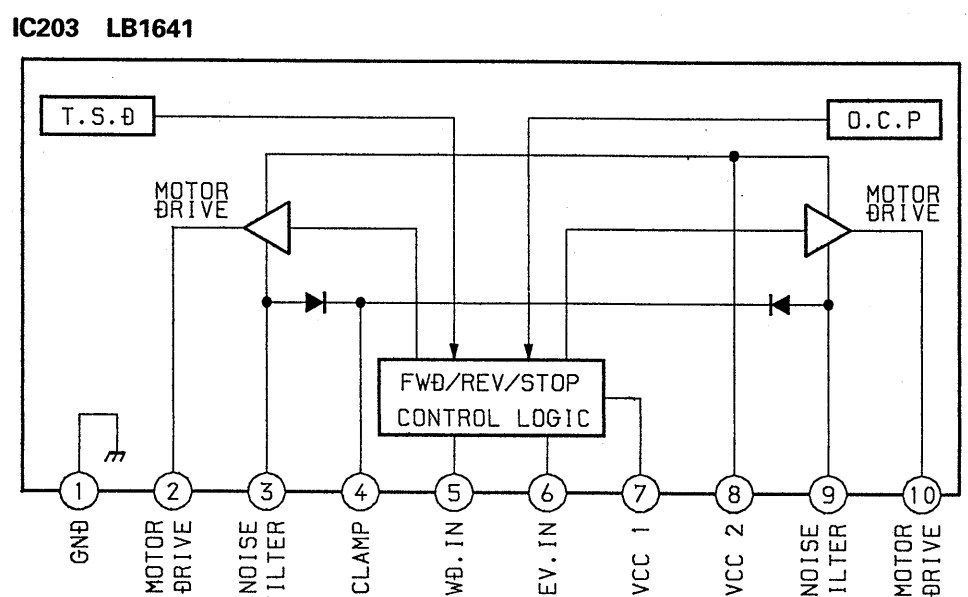
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark: PLAY BACK ( ): REC
- Voltages are taken with a VOM (Input Impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.

- : FM
- : PB (DECK A)
- : REC (DECK B)
- : PB (DECK B)

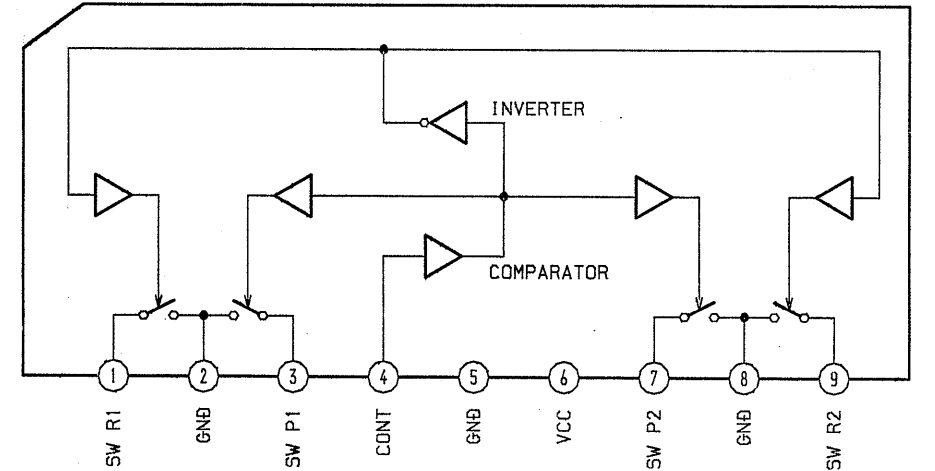
Waveform



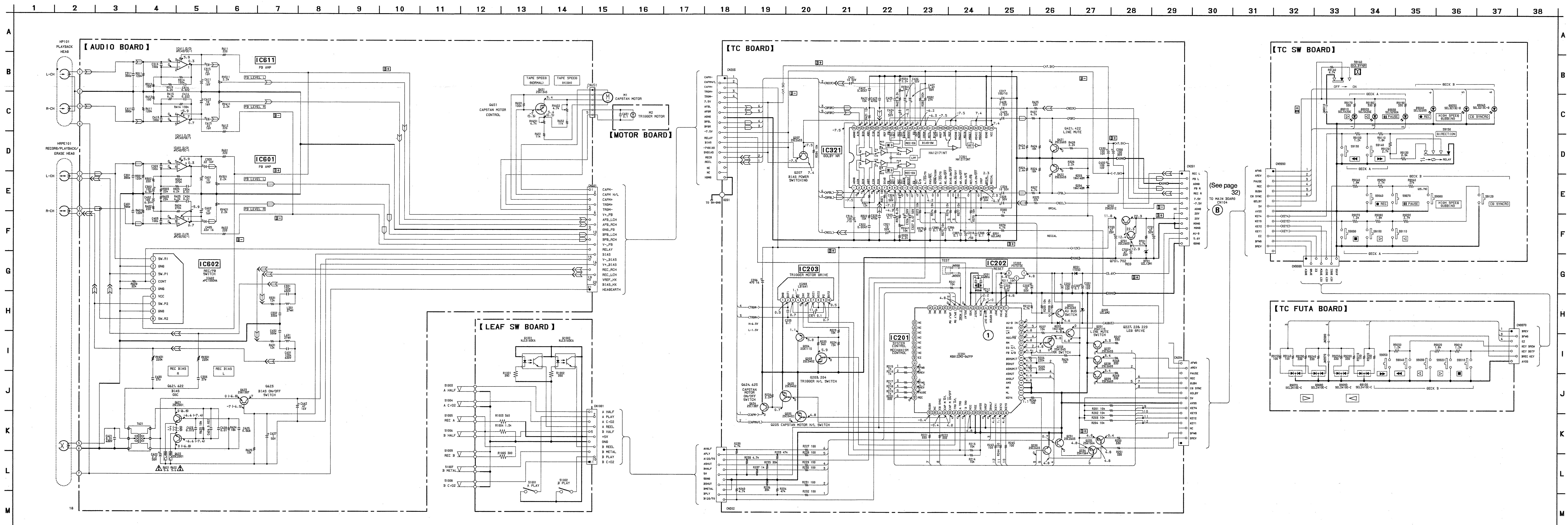
IC Block Diagrams



IC602  $\mu\text{PC1330HA}$



4-7. SCHEMATIC DIAGRAM—TC Section—



(See page 32)

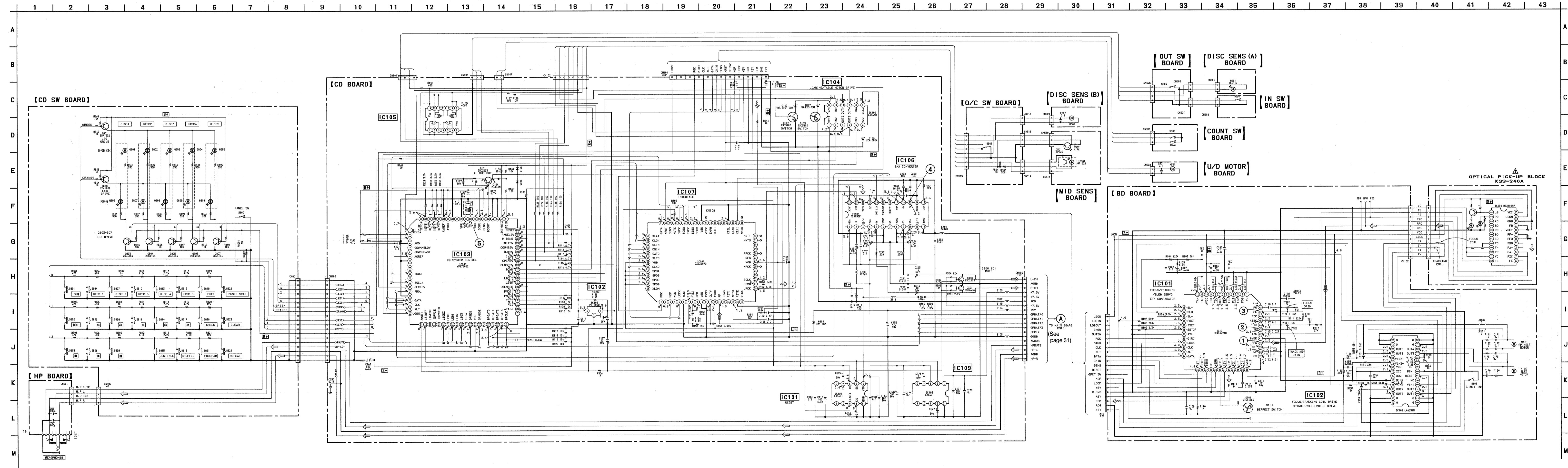
**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\mu\text{F}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.

<p><b>Note:</b> The components identified by mark <b>A</b> or dotted line with mark <b>A</b> are critical for safety. Replace only with part number specified.</p>	<p><b>Note:</b> Les composants identifiés par une marque <b>A</b> sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
--	---

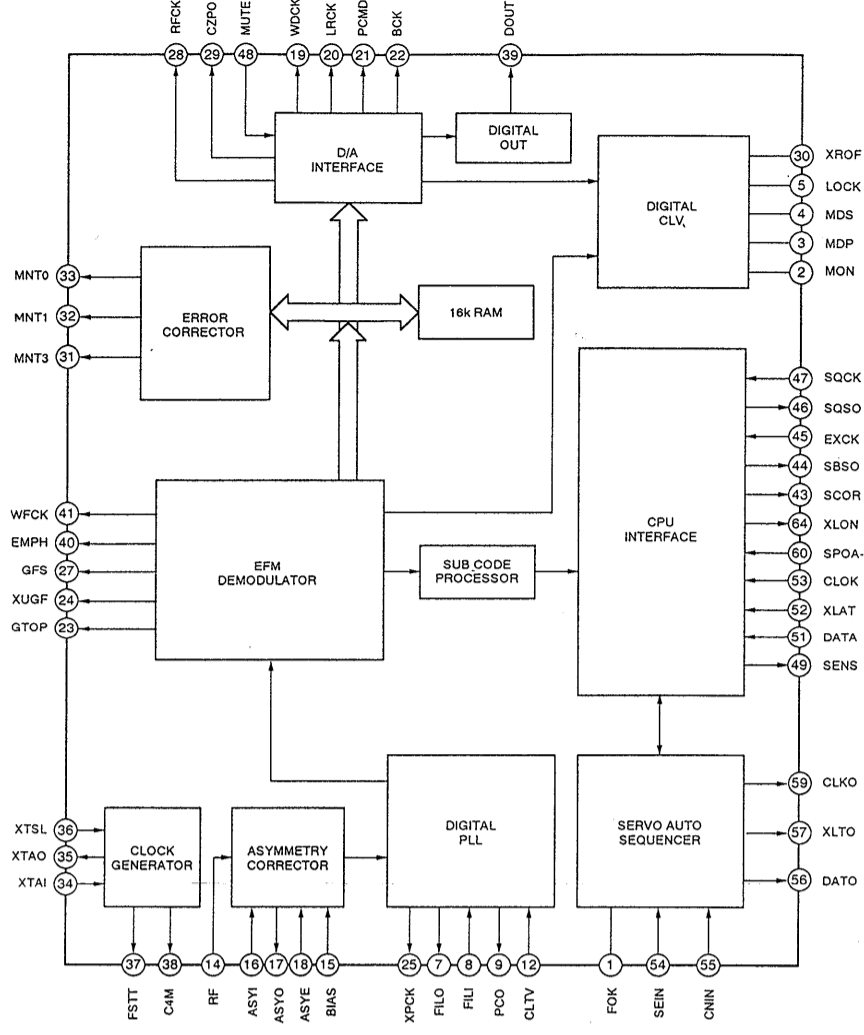
- B+** : B+ Line
- B-** : B- Line
- ADJ** : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark : CD
- Voltages are taken with a VOM (Input Impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.  $\Rightarrow$  : FM  $\Rightarrow$  : CD

4-10. SCHEMATIC DIAGRAM—CD Section— See page 54, 55 for IC Block Diagrams and Waveforms.

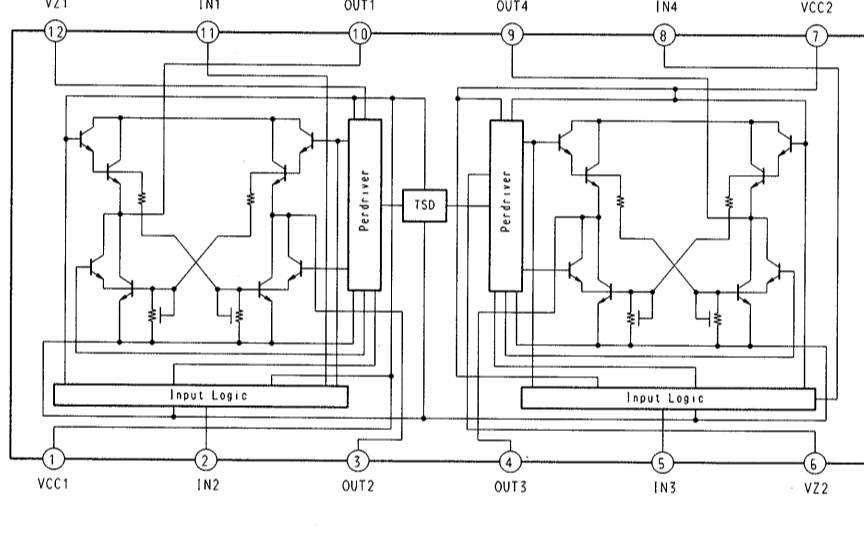


• IC Block Diagrams

IC107 CXD2517Q

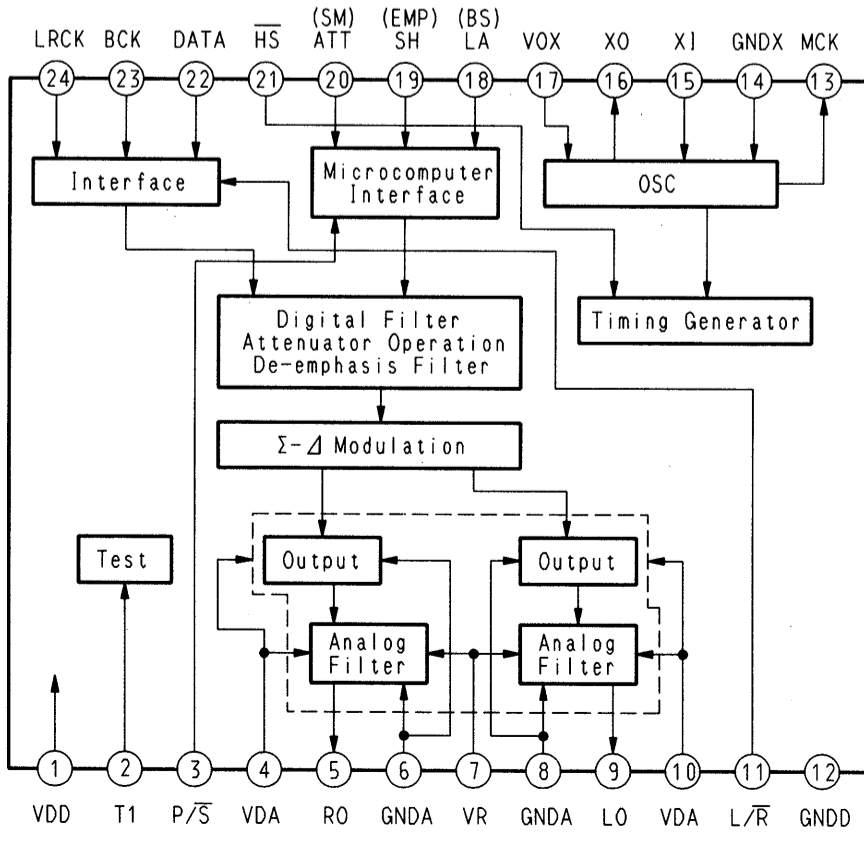


IC104 LB1648

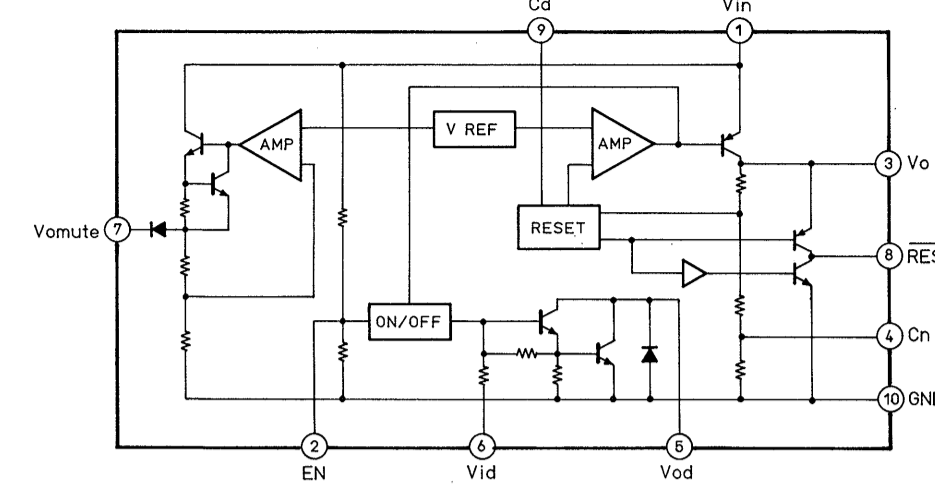


Truth table for IC104 LB1648 with columns for MODE, IN1, IN2, OUT1, OUT2, IN3, IN4, OUT3, OUT4 and rows for OPEN, FORWARD, REVERSE, BRAKE.

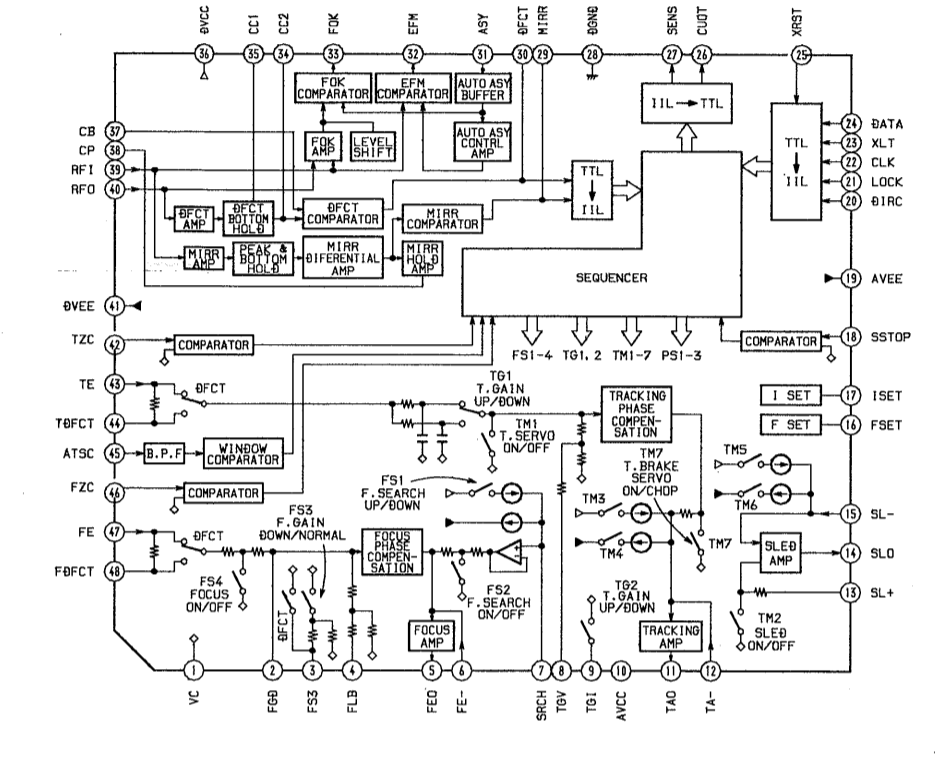
IC106 TC9293N



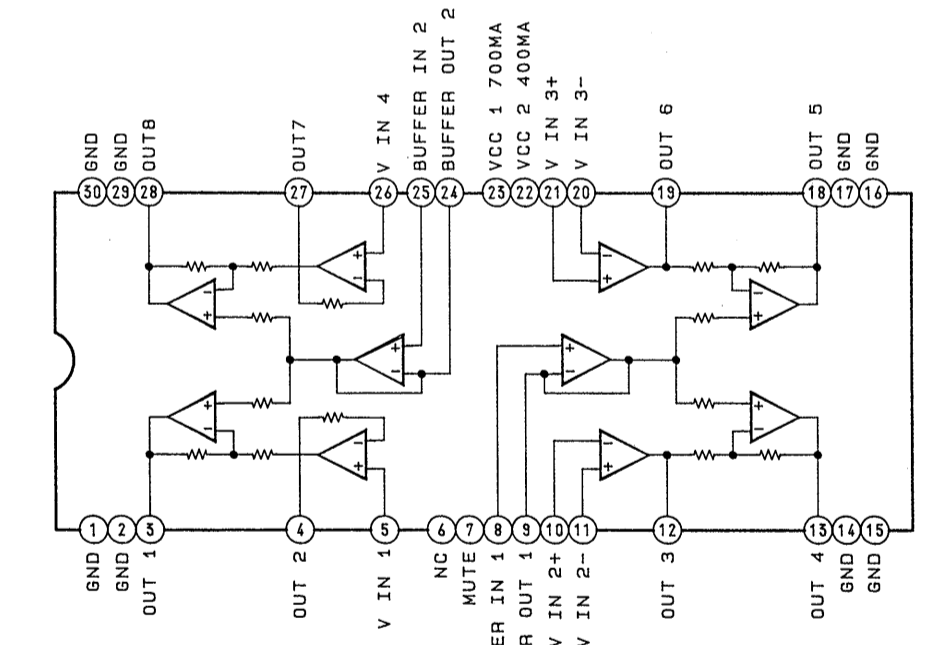
IC101, 109 LA5601



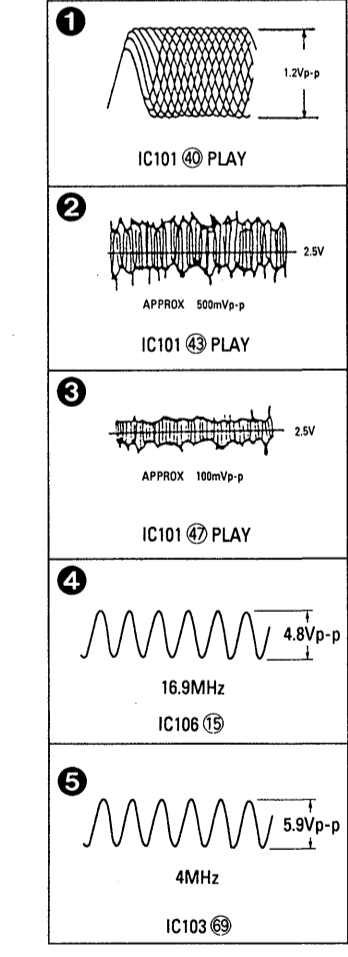
IC101 CXA1372AQ



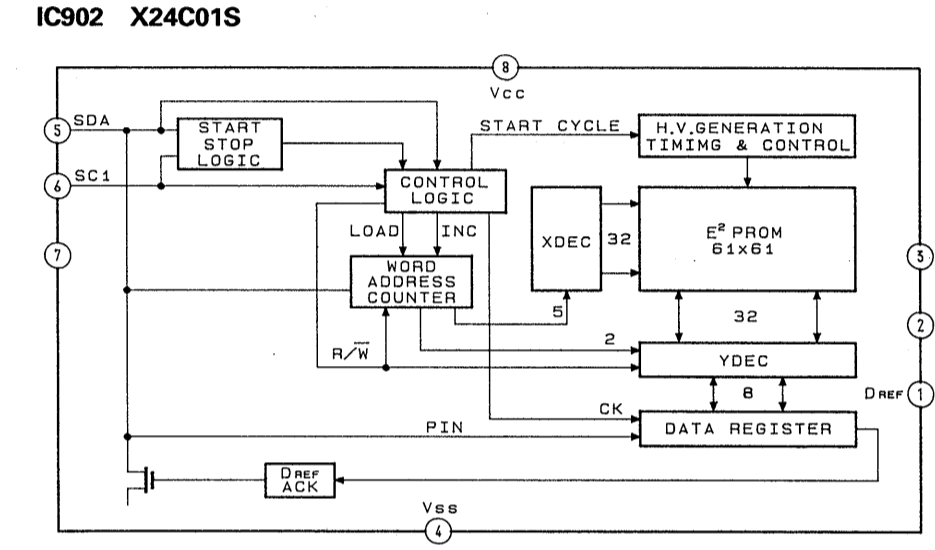
IC102 LA6532M



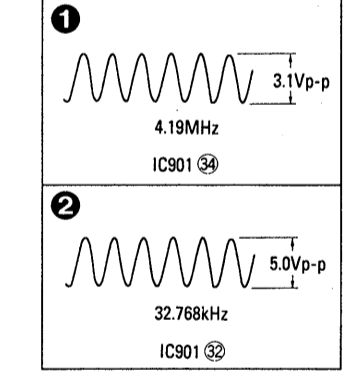
• Waveform



• IC Block Diagram

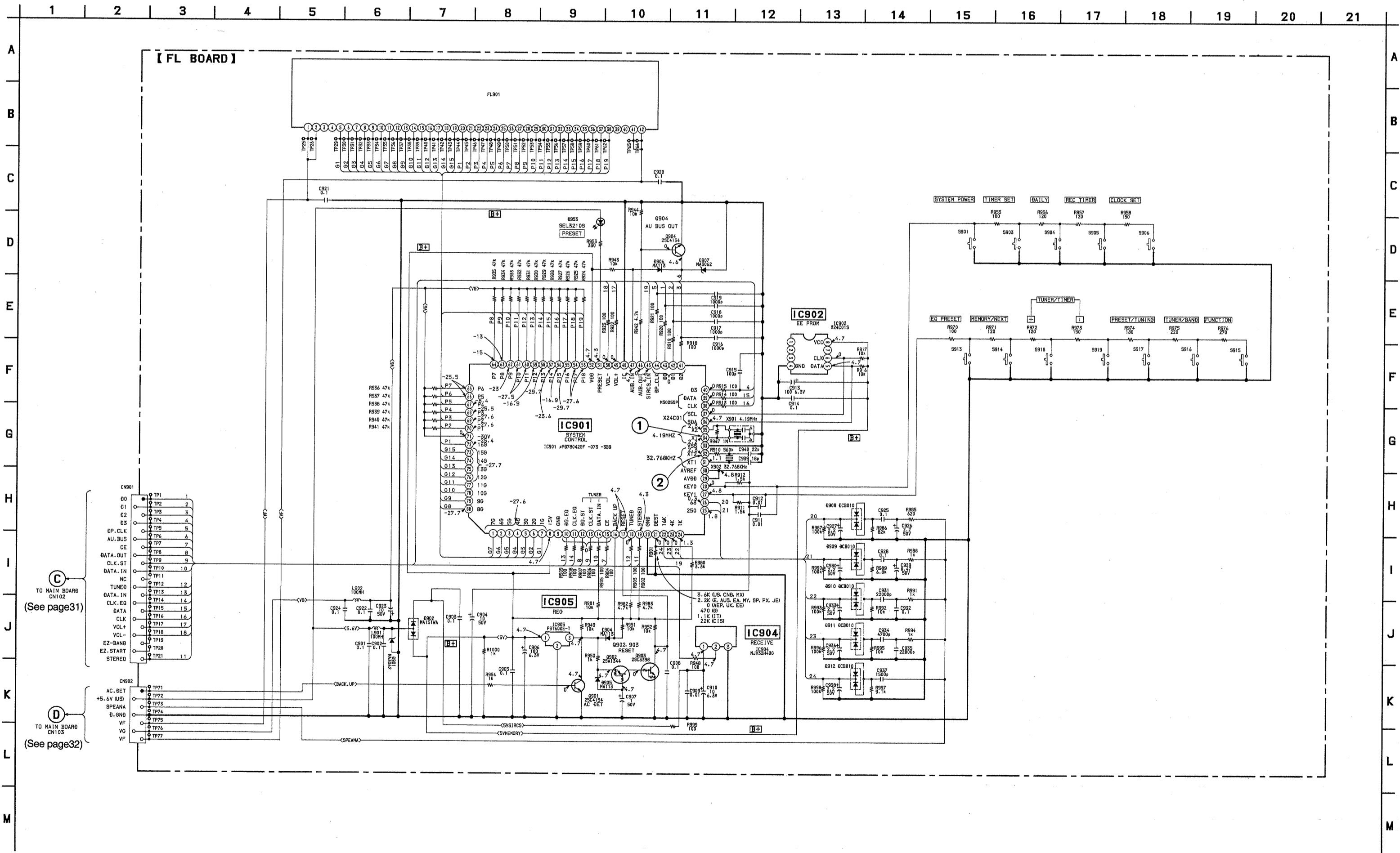


• Waveform

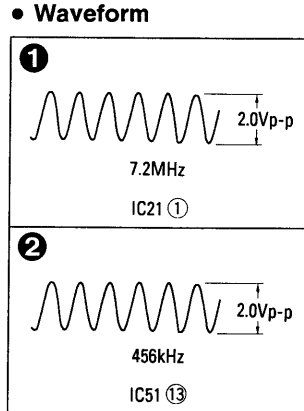
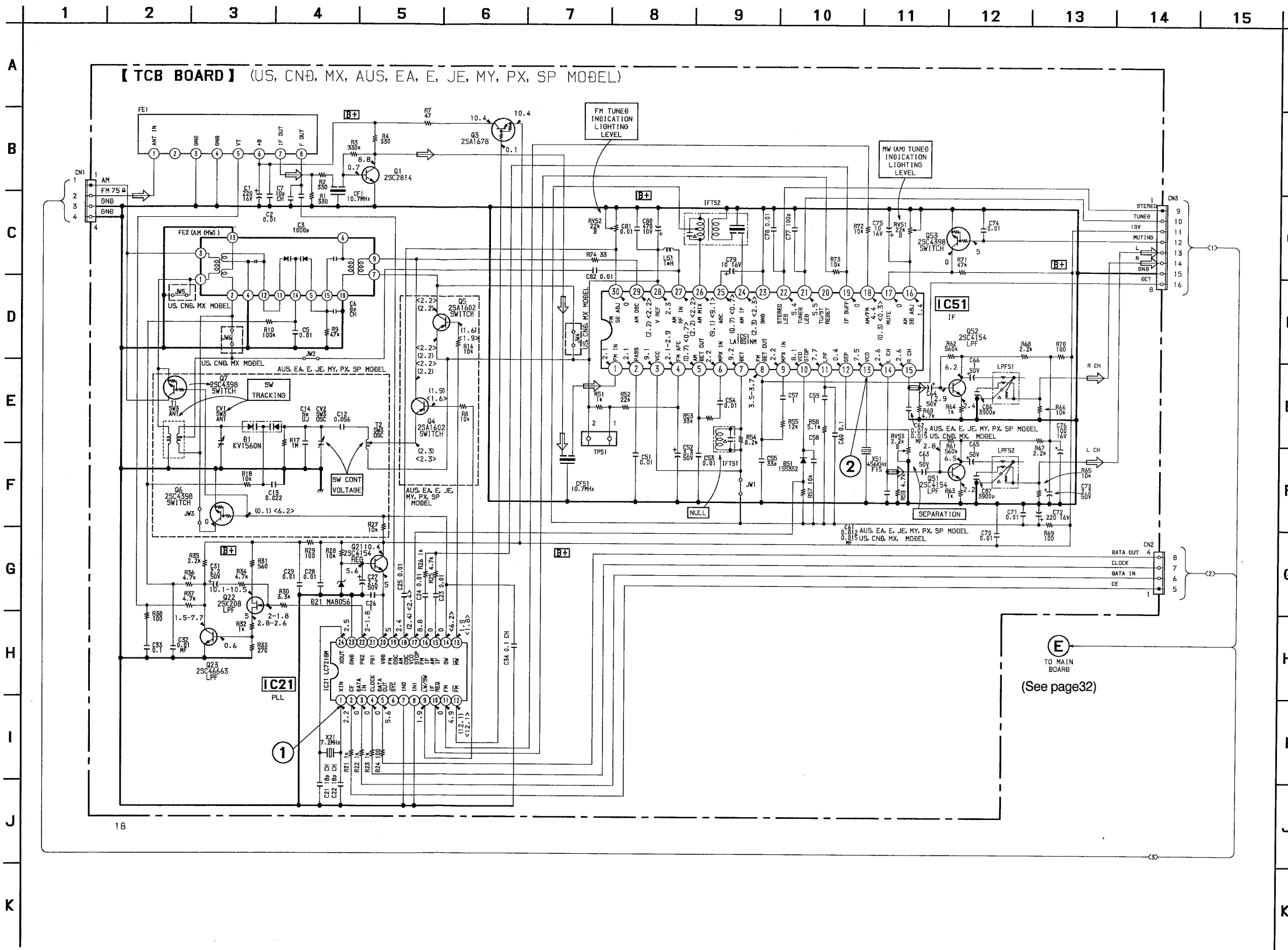


- Note: All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums. All resistors are in Ω and 1/4W or less unless otherwise specified. [B]: B+ Line Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark: FM Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances. Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances. Circled numbers refer to waveforms.

4-11. SCHEMATIC DIAGRAM—PANEL Section—



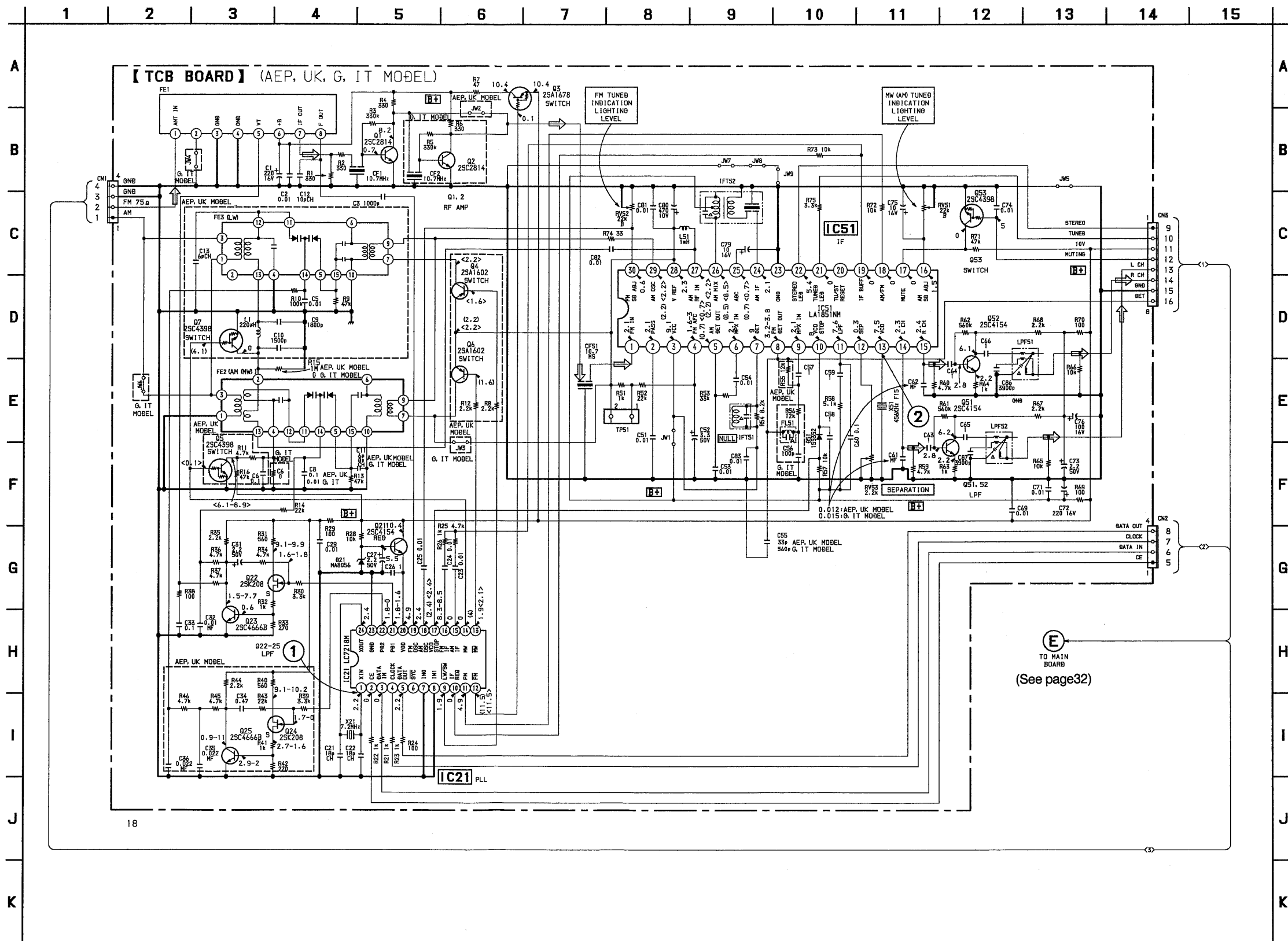
4-13. SCHEMATIC DIAGRAM—TUNER Section— (US, CND, MX, AUS, EA, E, JE, MY, PX, SP Model)



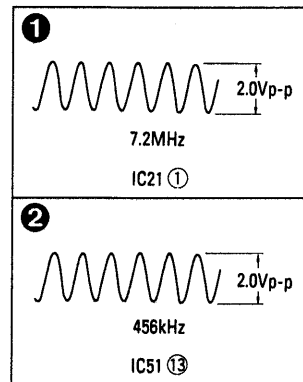
- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
  - $\triangle$ : internal component.
  - **B+**: B+ Line
  - $\square$ : adjustment for repair.
  - Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark: FM ( ):AM
  - Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
  - Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
  - Circled numbers refer to waveforms.
  - Signal path.  $\Rightarrow$ : FM
  - Abbreviations  
 CND: Canadian  
 MX: Mexican  
 AUS: Australian  
 EA: Saudi Arabia  
 JE: Tourist  
 MY: Malaysia  
 SP: Singapore



• SCHEMATIC DIAGRAM (AEP, UK, G, IT Model) • See page 62 for IC Block Diagrams.



• Waveform

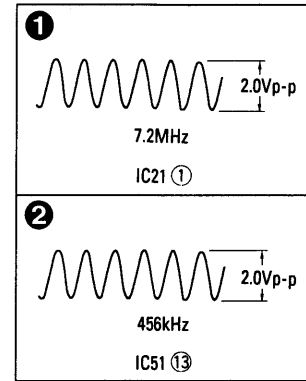


Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- $\triangle$ : internal component.
- **B+**: B+ Line
- $\square$ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
no mark: FM  
( ): AM
- Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.  
 $\Rightarrow$ : FM
- Abbreviations  
G: German  
IT: Italian

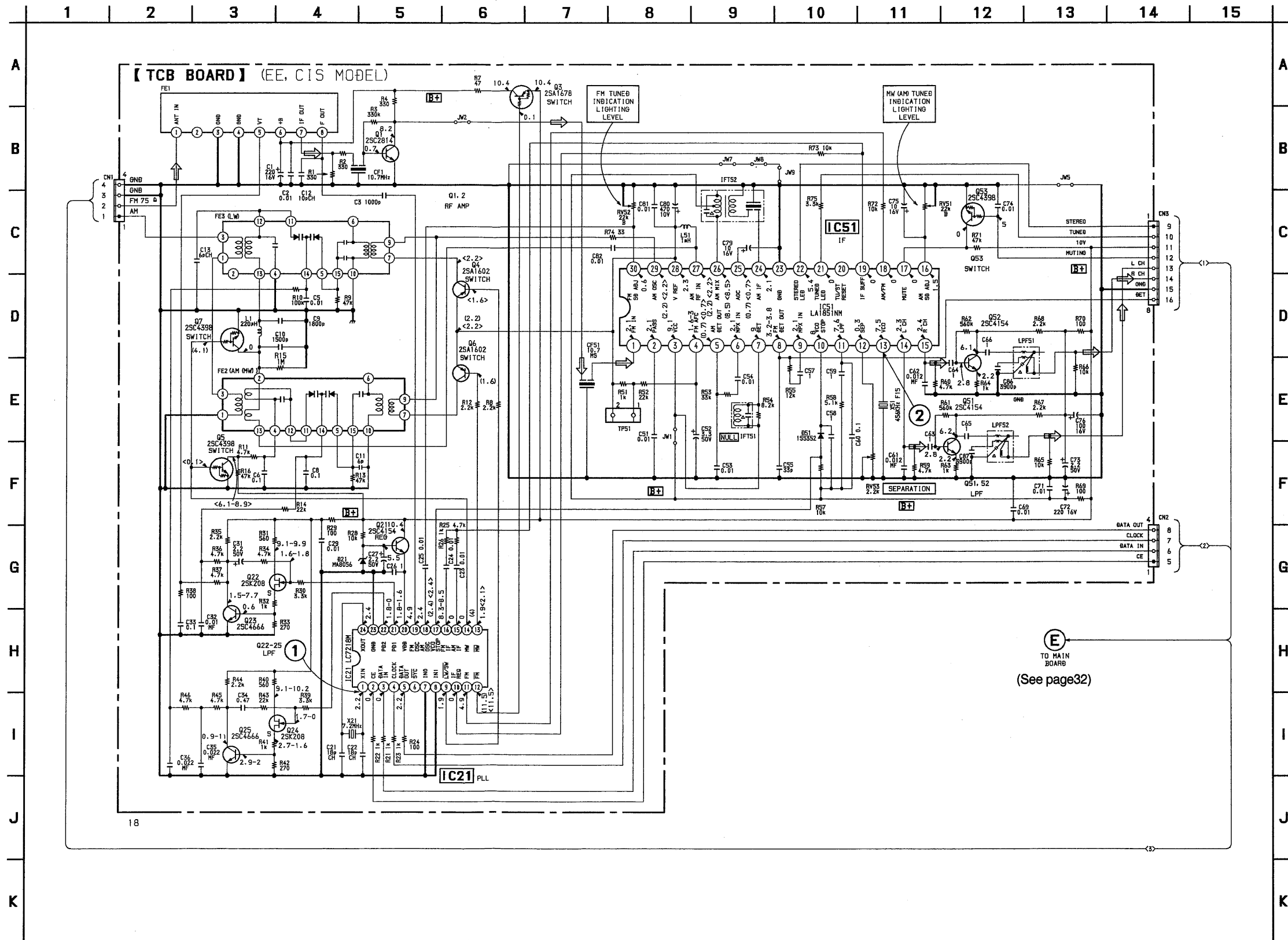
• SCHEMATIC DIAGRAM (EE, CIS Model) • See page 62 for IC Block Diagrams.

• Waveform

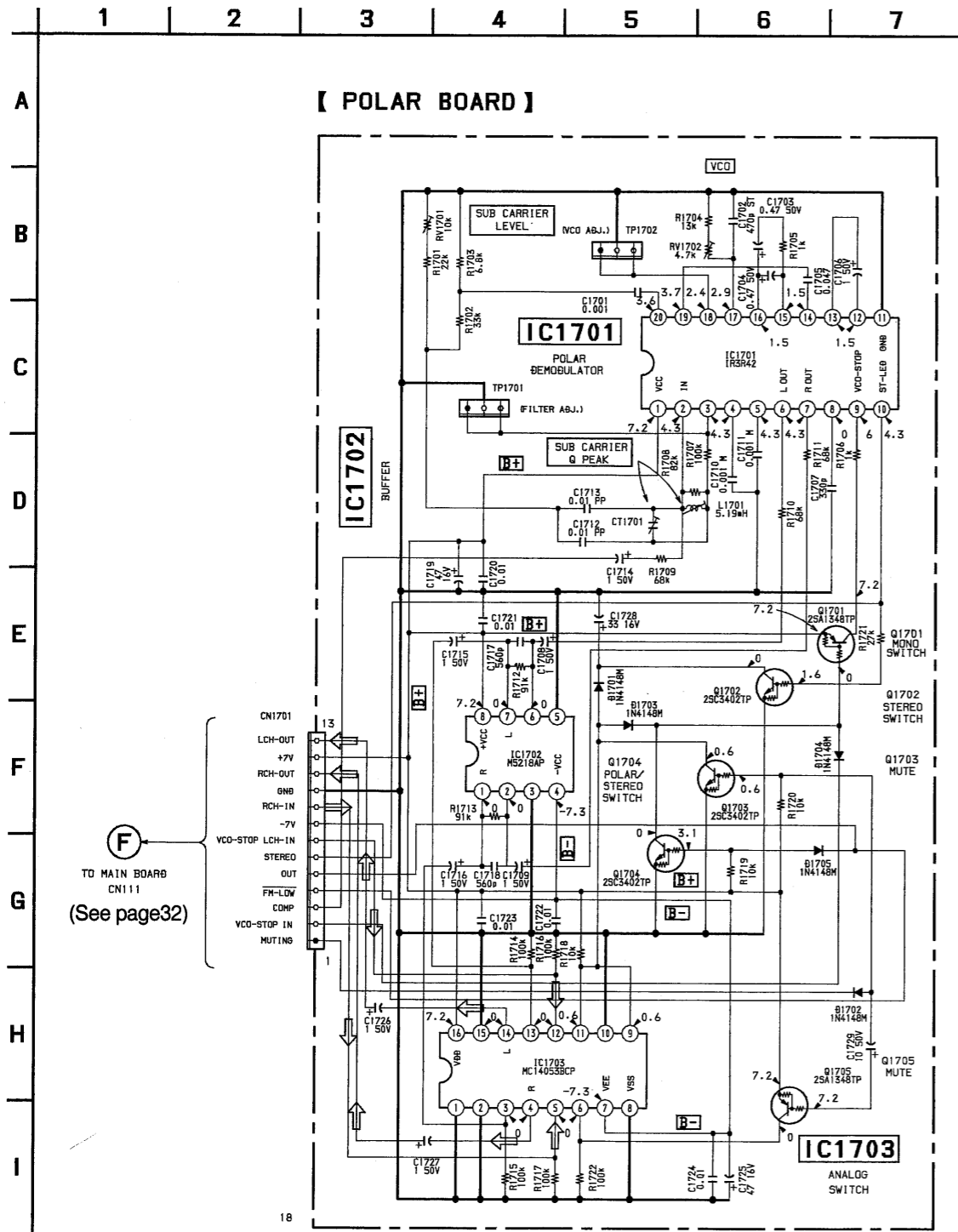


Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted,  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- $\triangle$ : internal component.
- **B+**: B+ Line
- $\square$ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
no mark: FM  
( ): AM
- Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.  
 $\Rightarrow$ : FM
- Abbreviation  
EE: East European



4-15. SCHEMATIC DIAGRAM—POLAR Section—  
(CIS model)

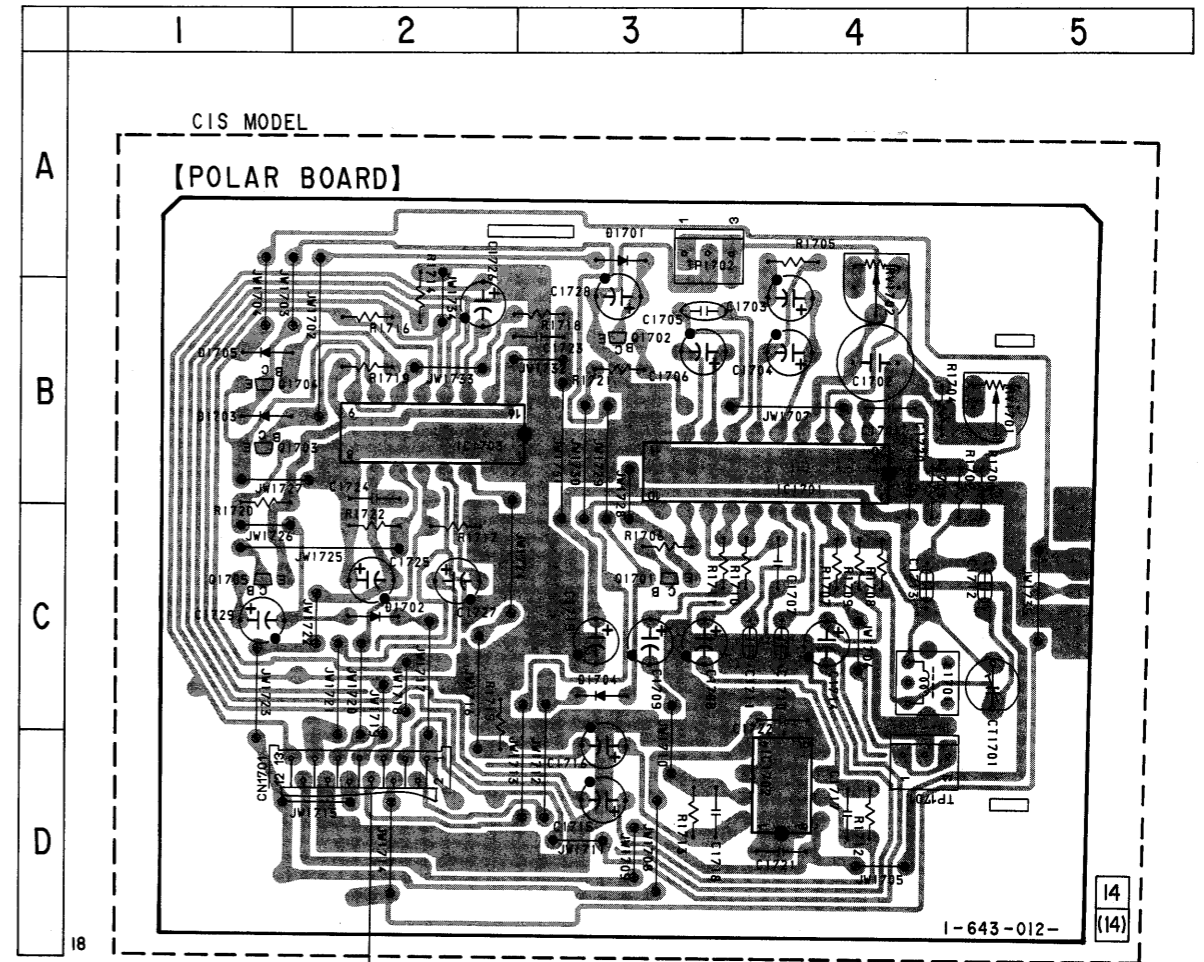


4-16. PRINTED WIRING BOARDS—POLAR Section—  
(CIS model)

• See page 25 for Circuit Boards Location.  
• See page 26, 27 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D1701	A-3
D1702	C-2
D1703	B-1
D1704	C-3
D1705	B-1
IC1701	B-3
IC1702	D-4
IC1703	B-2
Q1701	C-3
Q1702	B-3
Q1703	B-1
Q1704	B-1
Q1705	C-1



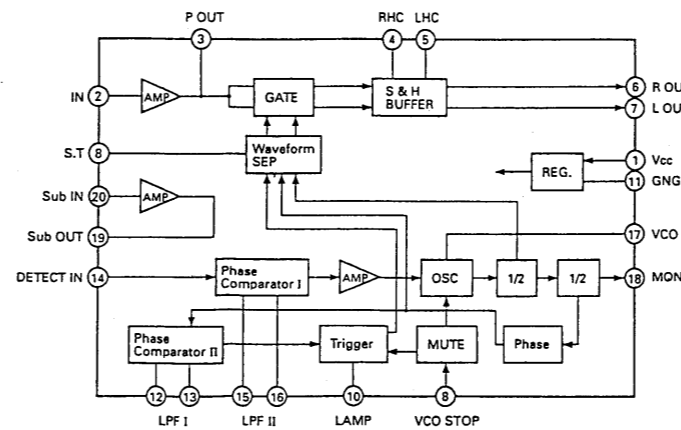
F TO MAIN BOARD (See page 29)  
CN111

Note:

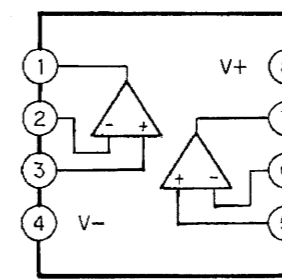
- — : parts extracted from the component side.
- ◐ : Pattern on the side which is seen.

• IC Block Diagrams

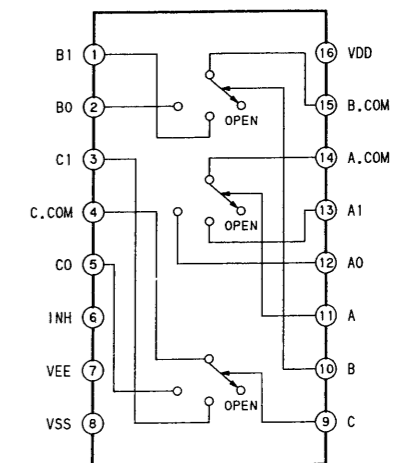
IC1701 IR3R42



IC1702 M5218AP



IC1703 MC14053BCP



Note:

- All capacitors are in  $\mu F$  unless otherwise noted.  $pF$ :  $\mu\mu F$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4 W$  or less unless otherwise specified.
- B+ : B+ Line
- B- : B- Line
- ◐ : adjustment for repair.
- Signal path.
- FM

# HCD-C33

## SONY<sup>®</sup> SERVICE MANUAL

*US Model  
Canadian Model  
AEP Model  
UK Model  
E Model  
Australian Model  
PX Model*

### SUPPLEMENT-1

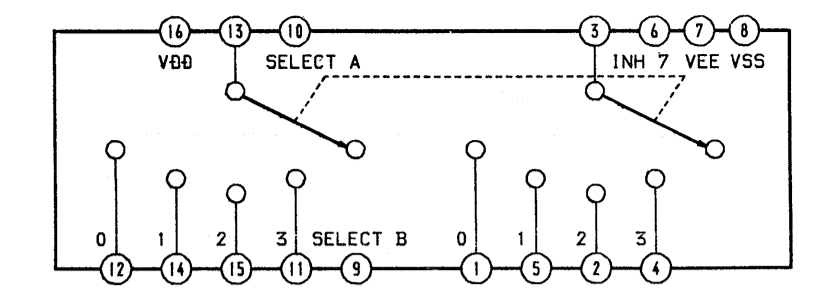
File this supplement with the service manual.

<b>Subject :</b> 1. DIAGRAMS are changed 2. Electrical parts list 3. Correction
---

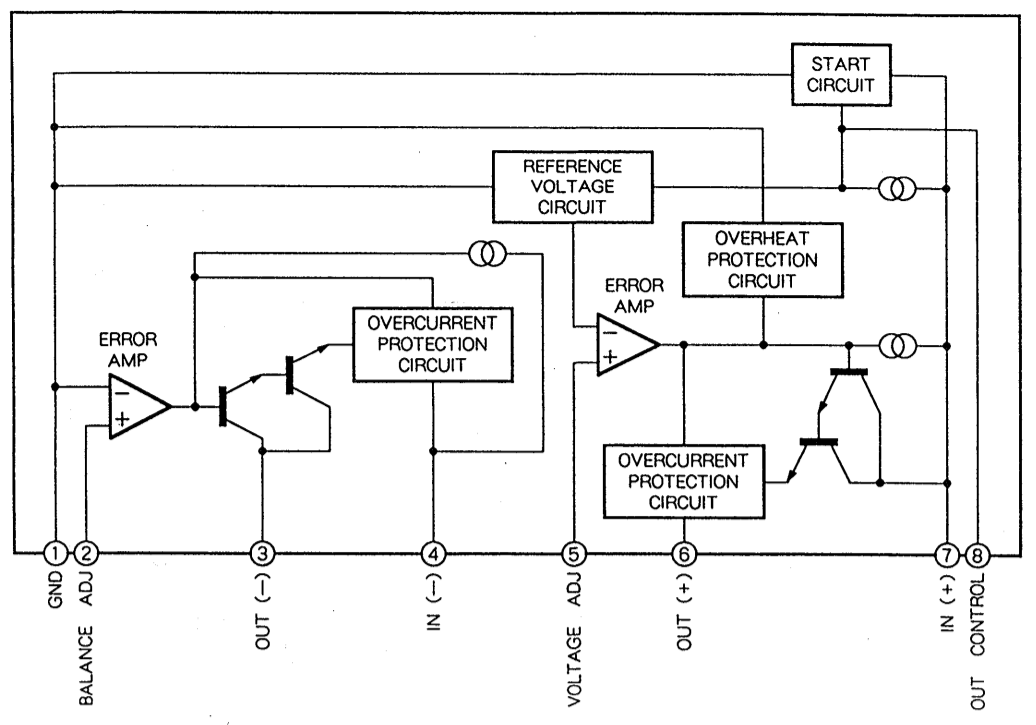
#### TABLE OF CONTENTS

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1-10.	Printed Wiring Board—POLAR Section—	39
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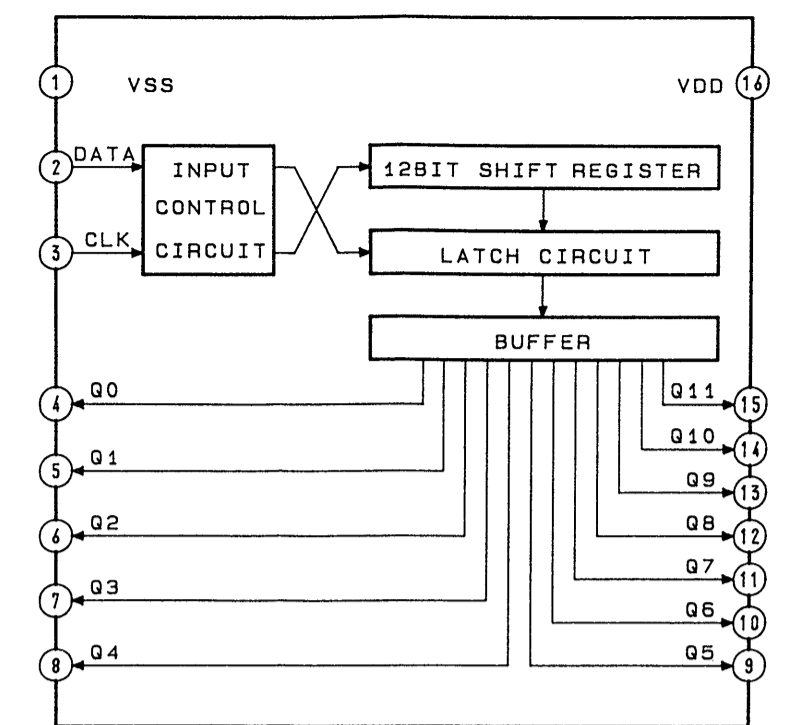
IC Block Diagrams  
IC102, 103 MC14052BCP



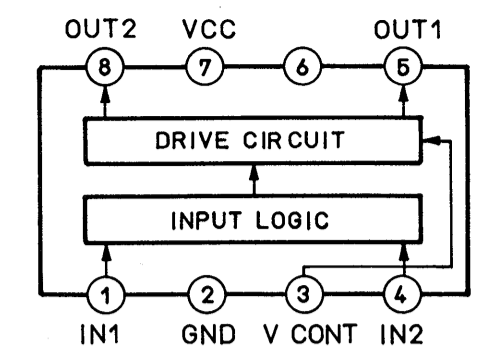
IC701 M5230L-A



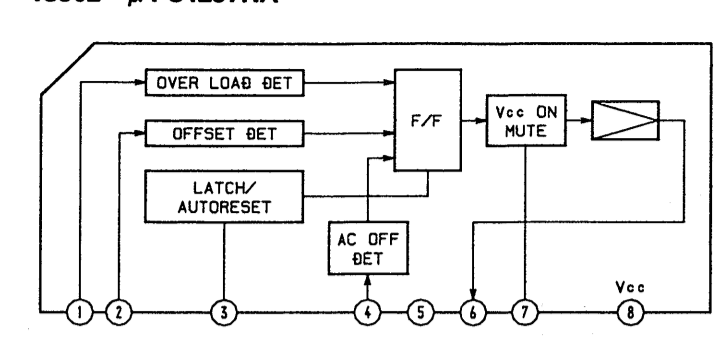
IC106 M50253P



IC301 LB1639



IC902 μPC1237HA



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μF
- 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- ⊠: nonflammable resistor.
- ⊞: fusible resistor.

Note: The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

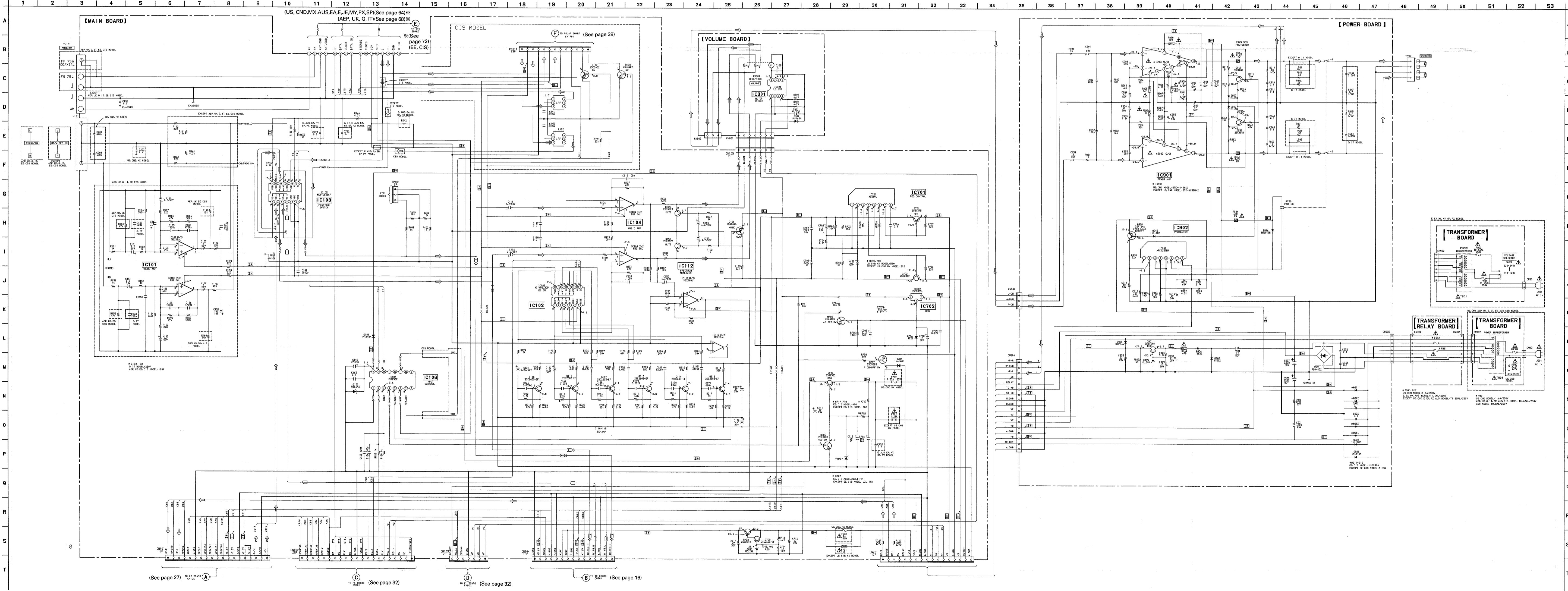
Note: Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacez que par une pièce portant le numéro spécifié.

- B+ : B+ Line
- B- : B- Line
- no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path:
  - FM: REC (DECK B)
  - CD: PB (DECK B)

- Abbreviations:
  - AUS: Australian
  - CND: Canadian
  - EE: Saudi Arabia
  - G: German
  - IT: Italian
  - MY: Malaysia
  - MX: Mexican
  - SP: Singapore

Pages marked with # indicate pages in original service manual.

1-2. SCHEMATIC DIAGRAM—MAIN Section—



(See page 27) (A)

(See page 32) (C)

(See page 32) (D)

(See page 16) (B)

Note on Schematic Diagram:

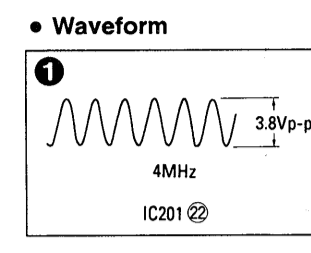
- All capacitors are in  $\mu F$  unless otherwise noted.  $pF$ ;  $\mu F$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/2 W$  or less unless otherwise specified.
- : fusible resistor.

**Note:** The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

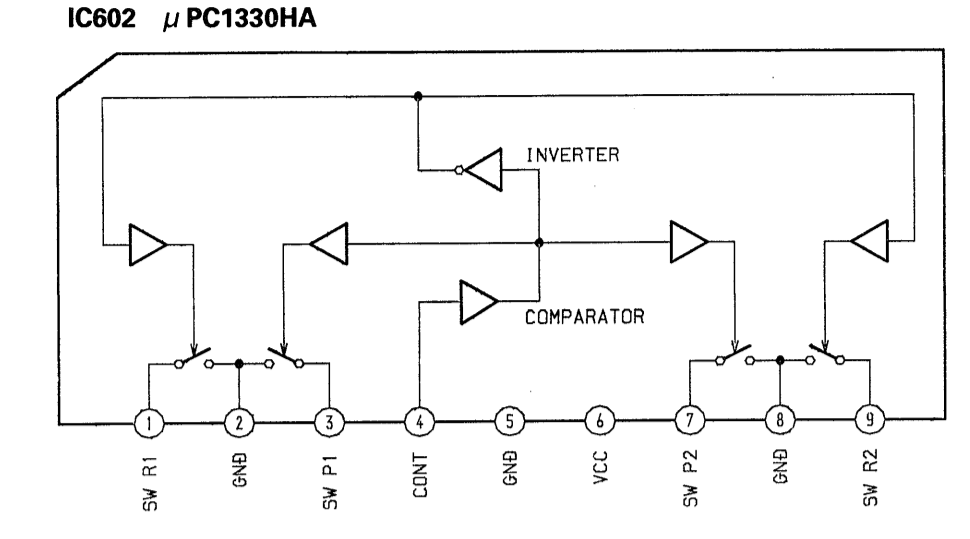
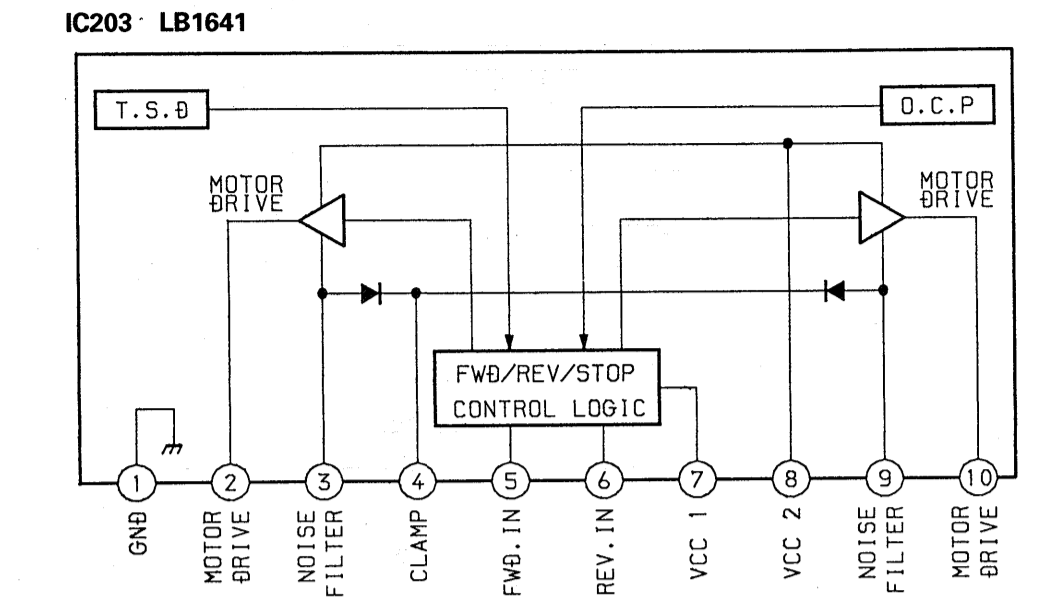
**Note:** Les composants identifiés par une marque ou une ligne pointillée avec une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line
- : B-Line
- : adjustment for repair.

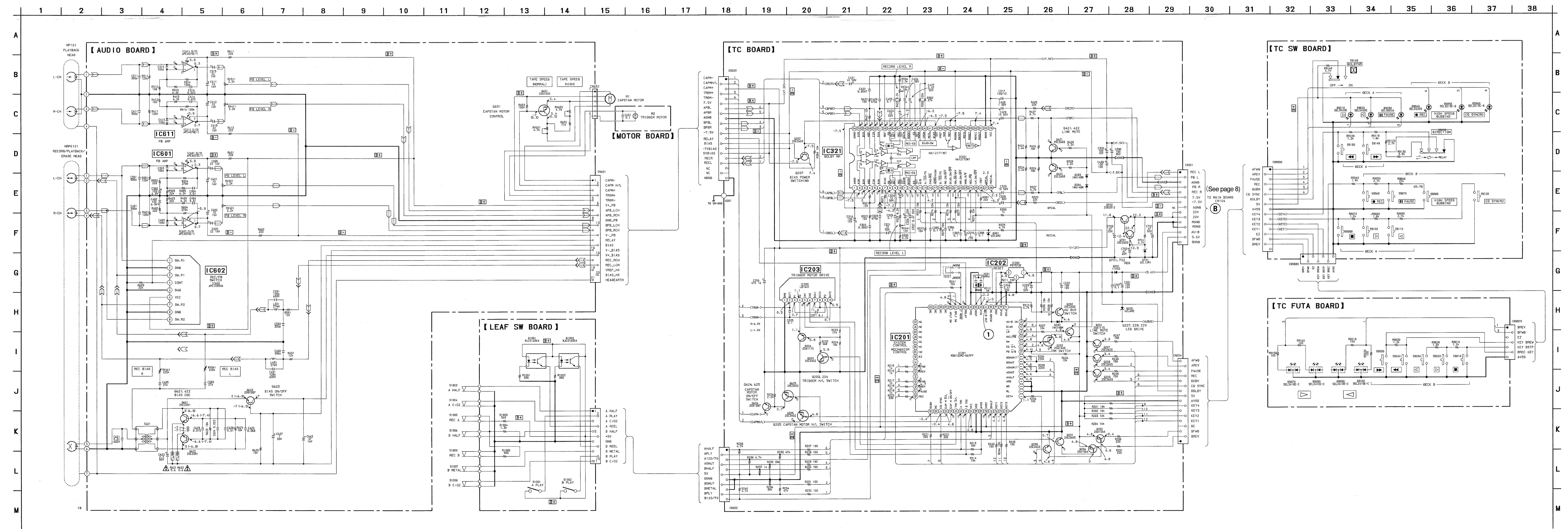
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark: PLAY BACK ( ): REC
- Voltagés are taken with a VOM (Input Impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path: : FM : PB (DECK A) : REC (DECK B) : PB (DECK B)



IC Block Diagrams



1-3. SCHEMATIC DIAGRAM—TC Section—



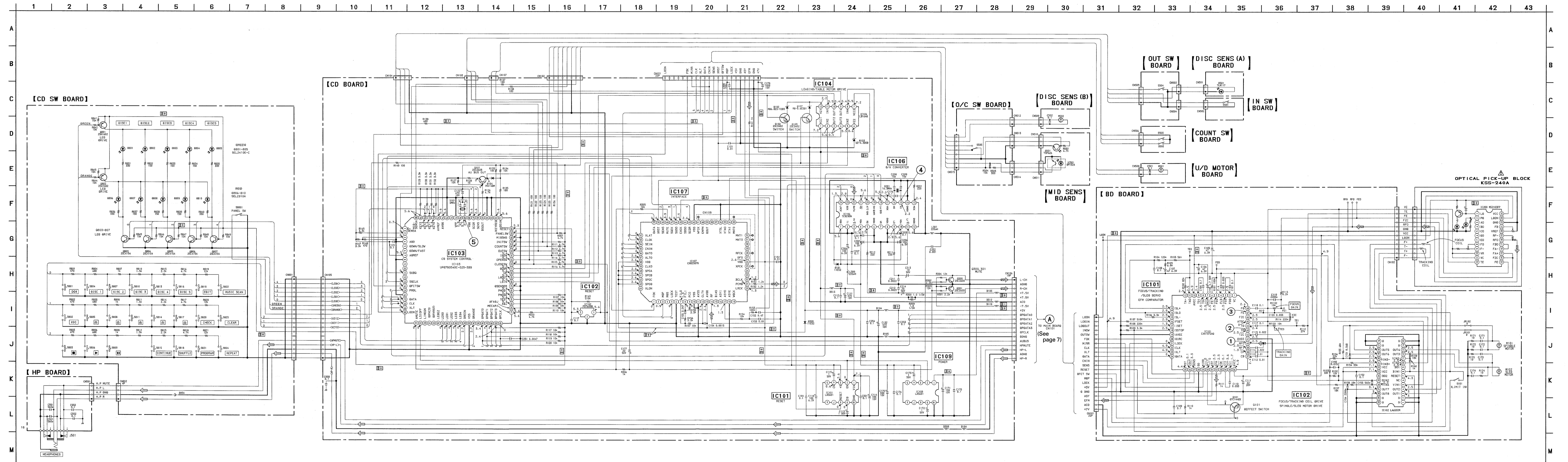
**Note on Schematic Diagram:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.

<p><b>Note:</b> The components identified by mark <b>A</b> or dotted line with mark <b>A</b> are critical for safety. Replace only with part number specified.</p>	<p><b>Note:</b> Les composants identifiés par une marque <b>A</b> sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
--	---

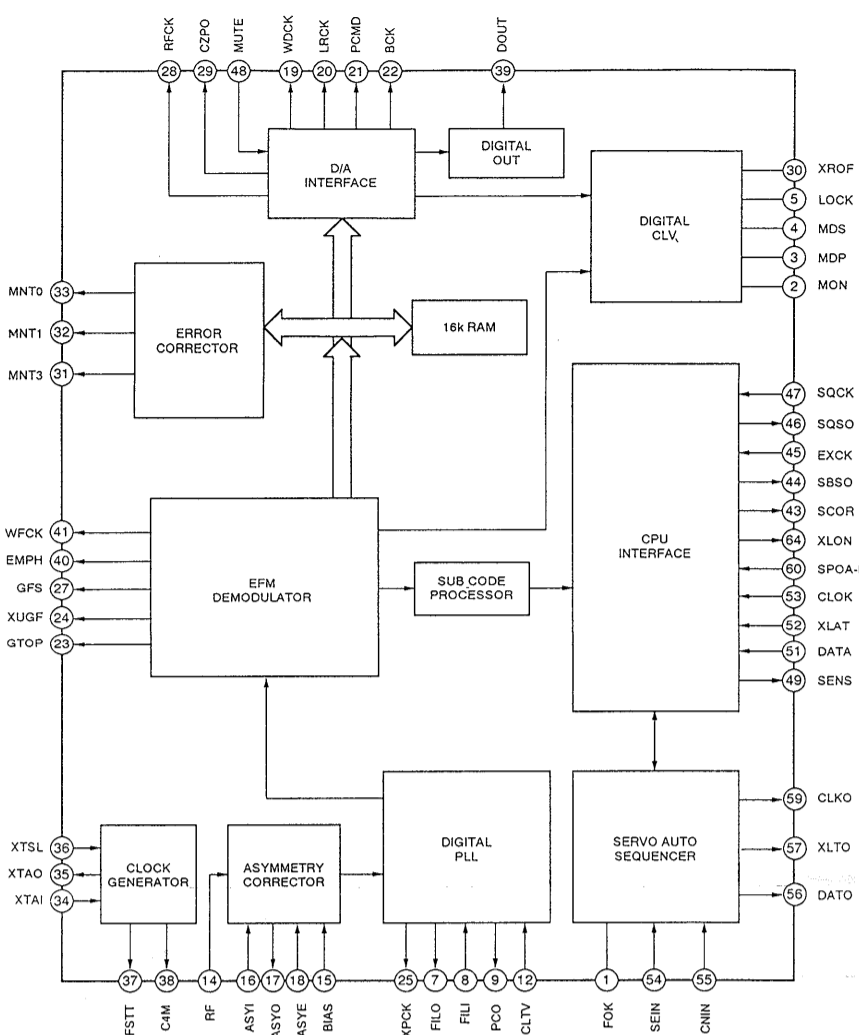
- B+** : B+ Line
- B-** : B- Line
- ADJ** : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark : CD
- Voltagés are taken with a VOM (input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path:  
 : FM : CD

1-6. SCHEMATIC DIAGRAM—CD Section— See page 30, 31 for IC Block Diagrams and Waveforms.

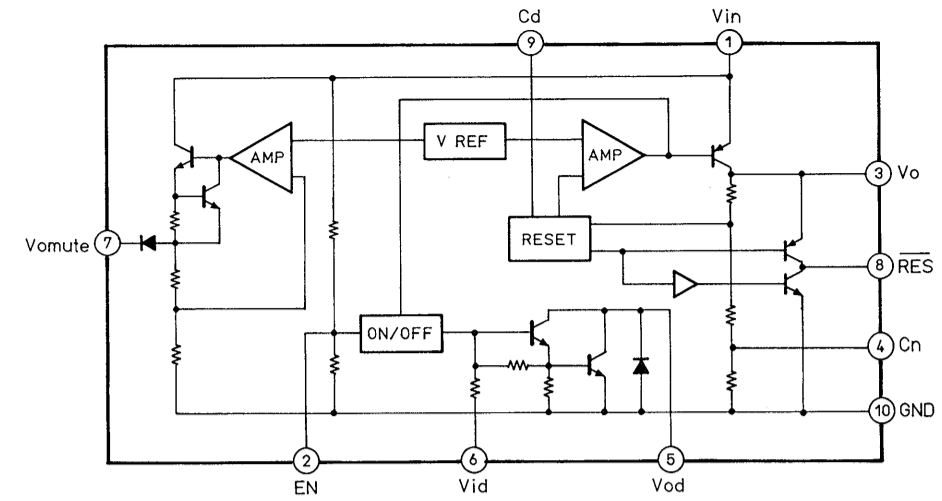


• IC Block Diagrams

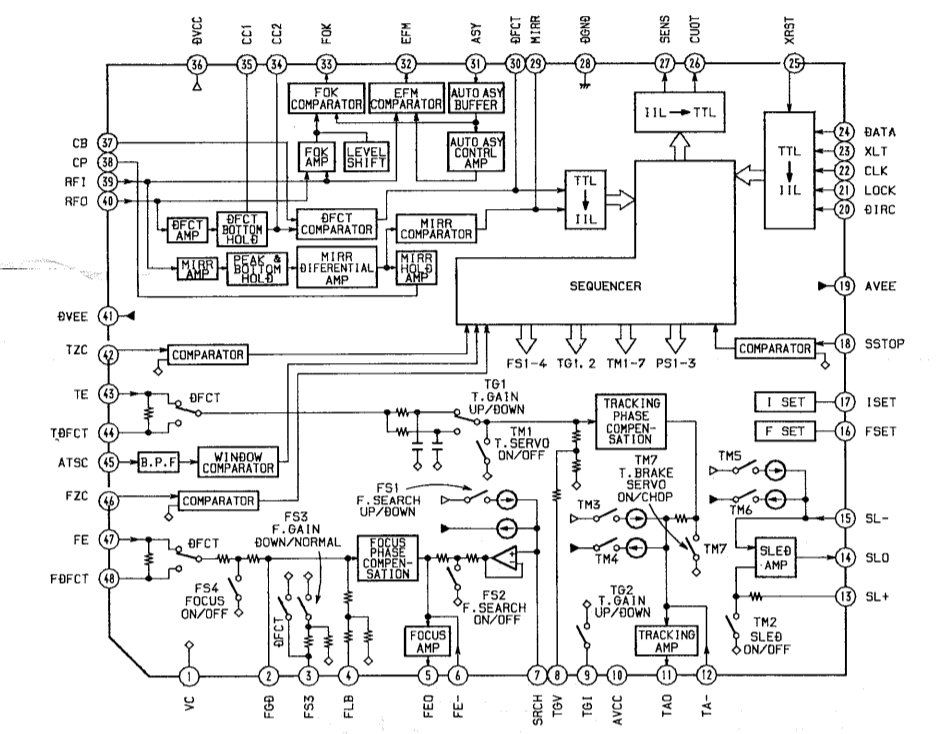
IC107 CXD2507Q



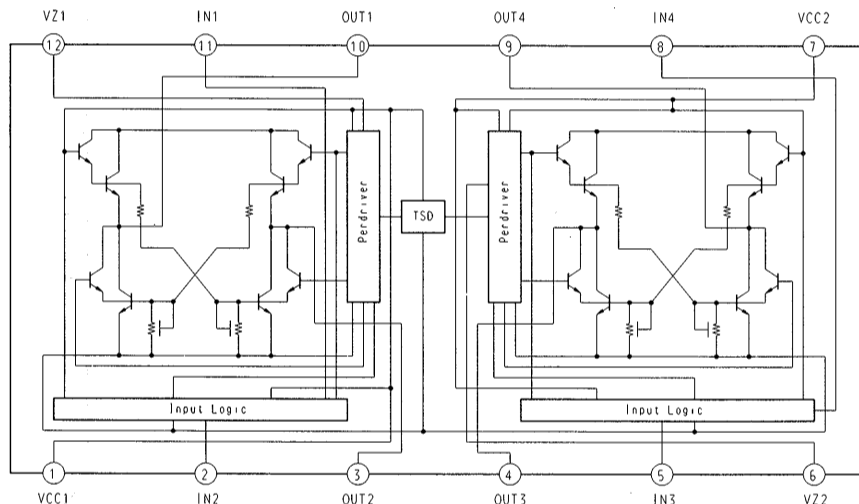
IC101, 109 LA5601



IC101 CXA1372AQ

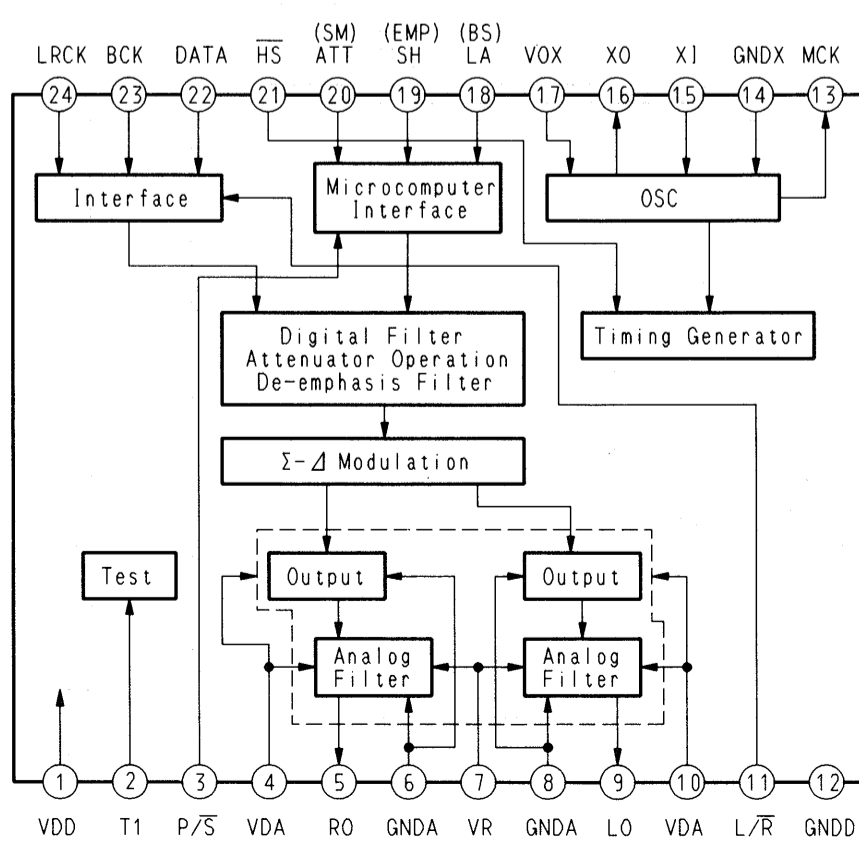


IC104 LB1648



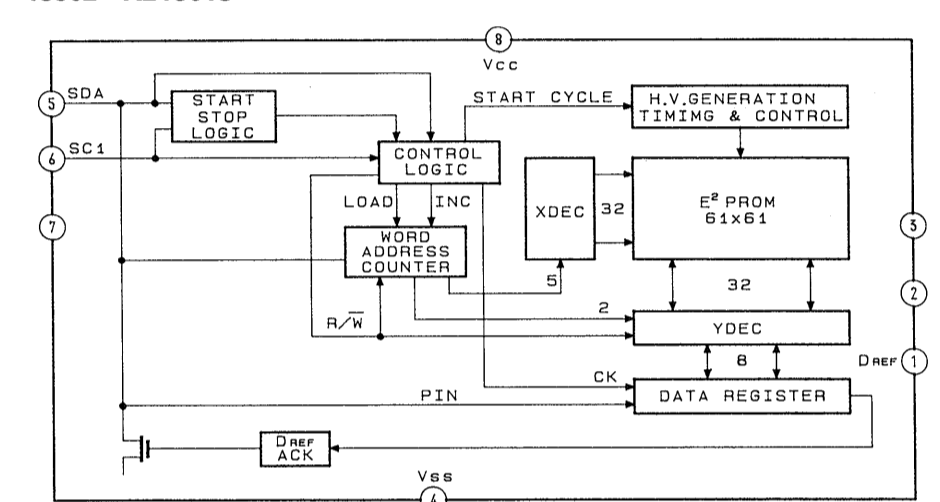
MODE	IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
OPEN	0	0	OPEN	OPEN	0	0	OPEN	OPEN
FORWARD	1	0	H	L	1	0	H	L
REVERSE	0	1	L	H	0	1	L	H
BRAKE	1	1	L	L	1	1	L	L

IC106 TC9293N

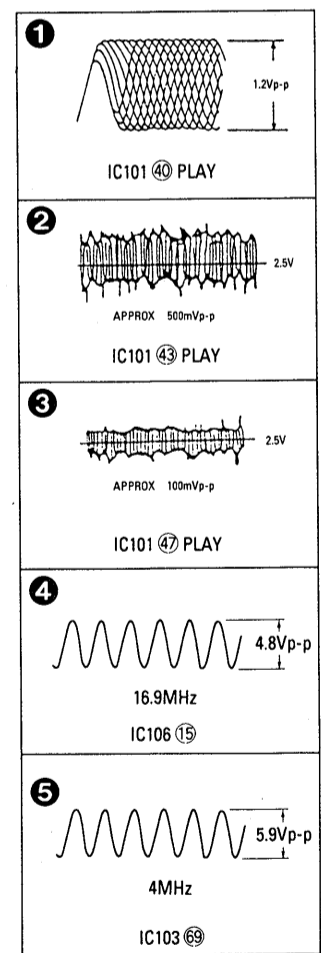


• IC Block Diagram

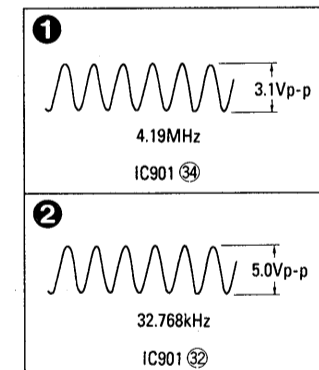
IC902 X24C01S



• Waveform

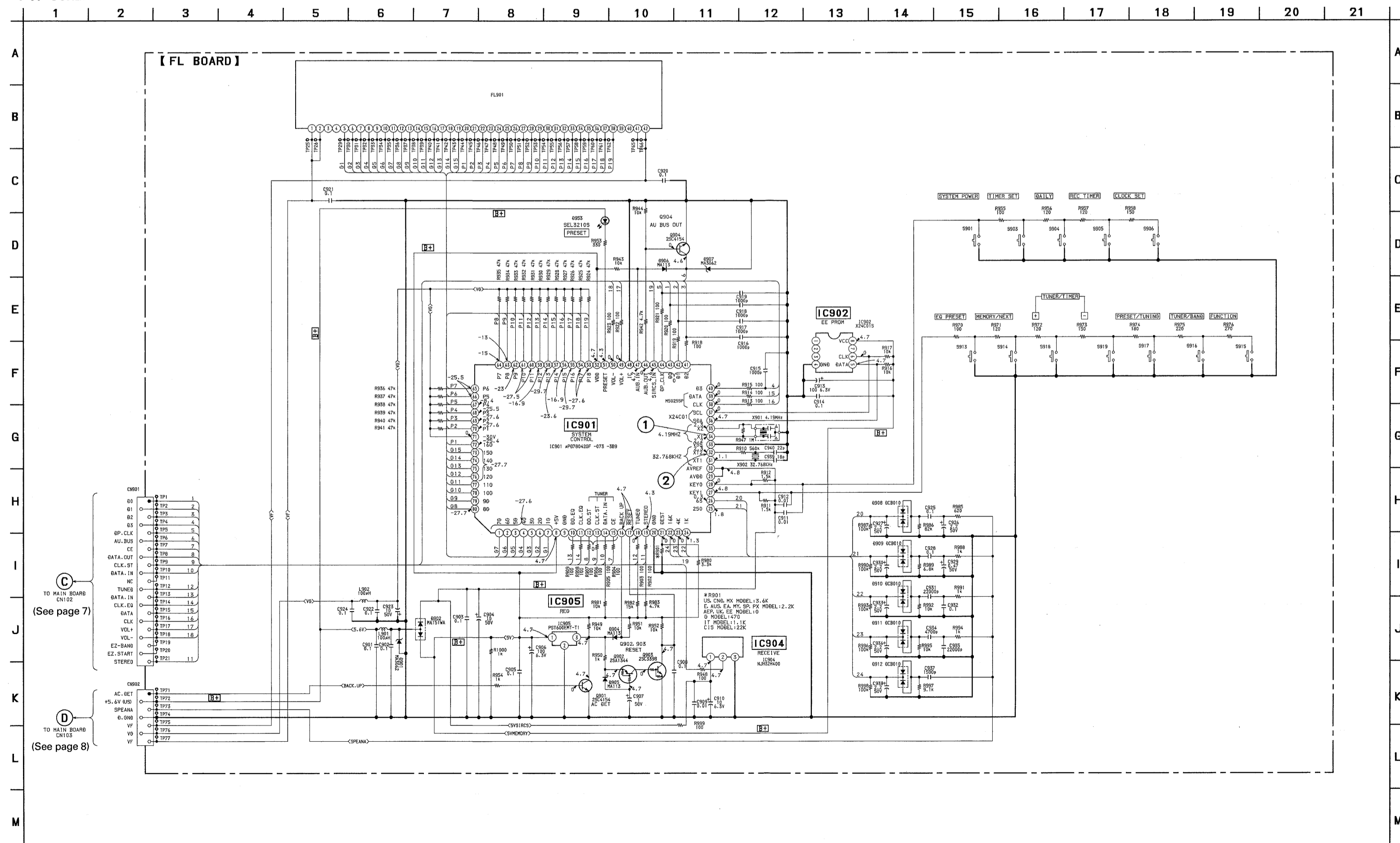


• Waveform



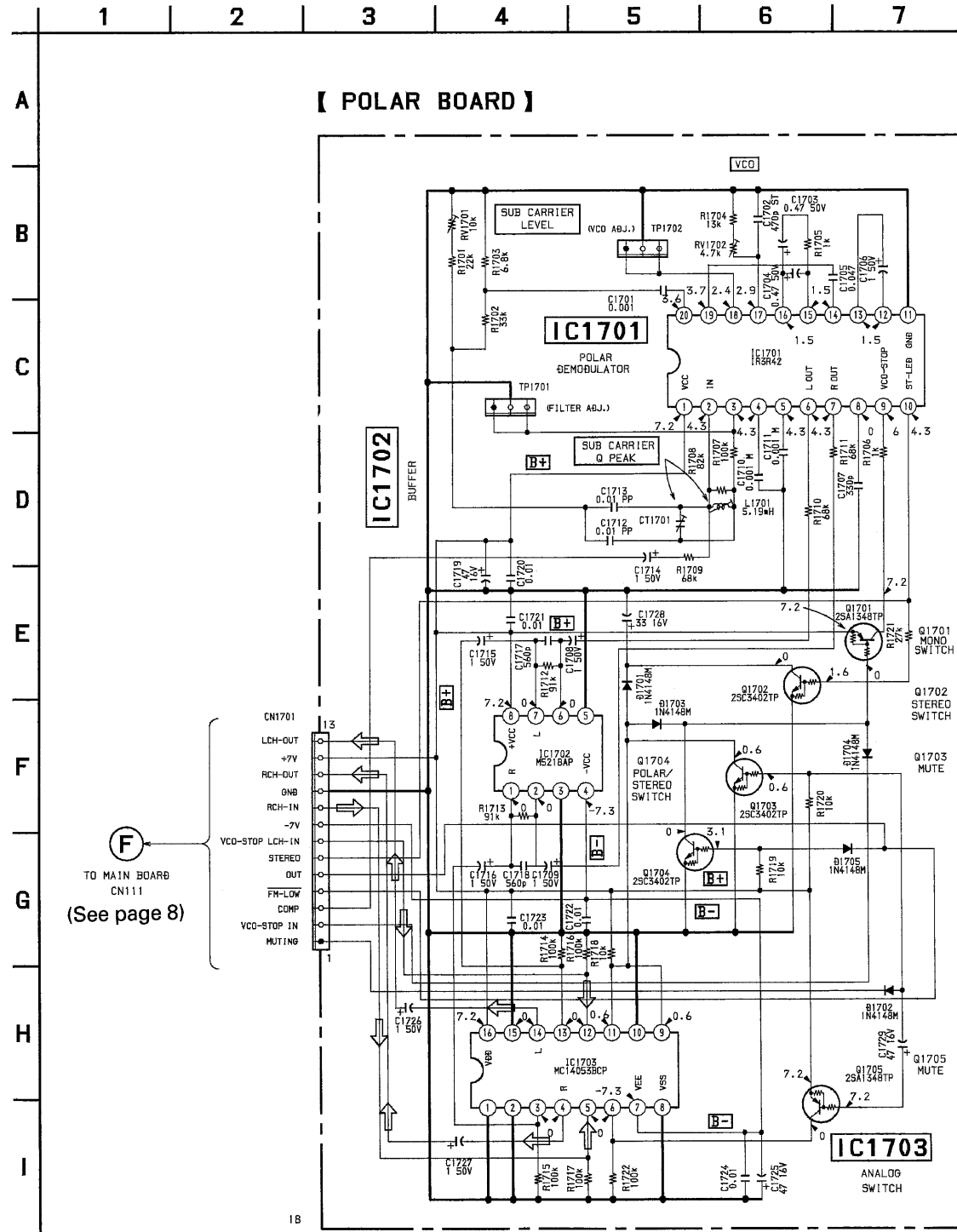
- Note on Schematic Diagram:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50V or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{2}\text{W}$  or less unless otherwise specified.
  - [B]: B+ Line
  - Voltage and waveforms are dc with respect to ground under no-signal conditions.
  - no mark: FM
  - Volts are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
  - Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
  - Circled numbers refer to waveforms.

1-7. SCHEMATIC DIAGRAM—PANEL Section—





1-9. SCHEMATIC DIAGRAM—POLAR Section—  
(CIS model)



Note on Schematic Diagram:

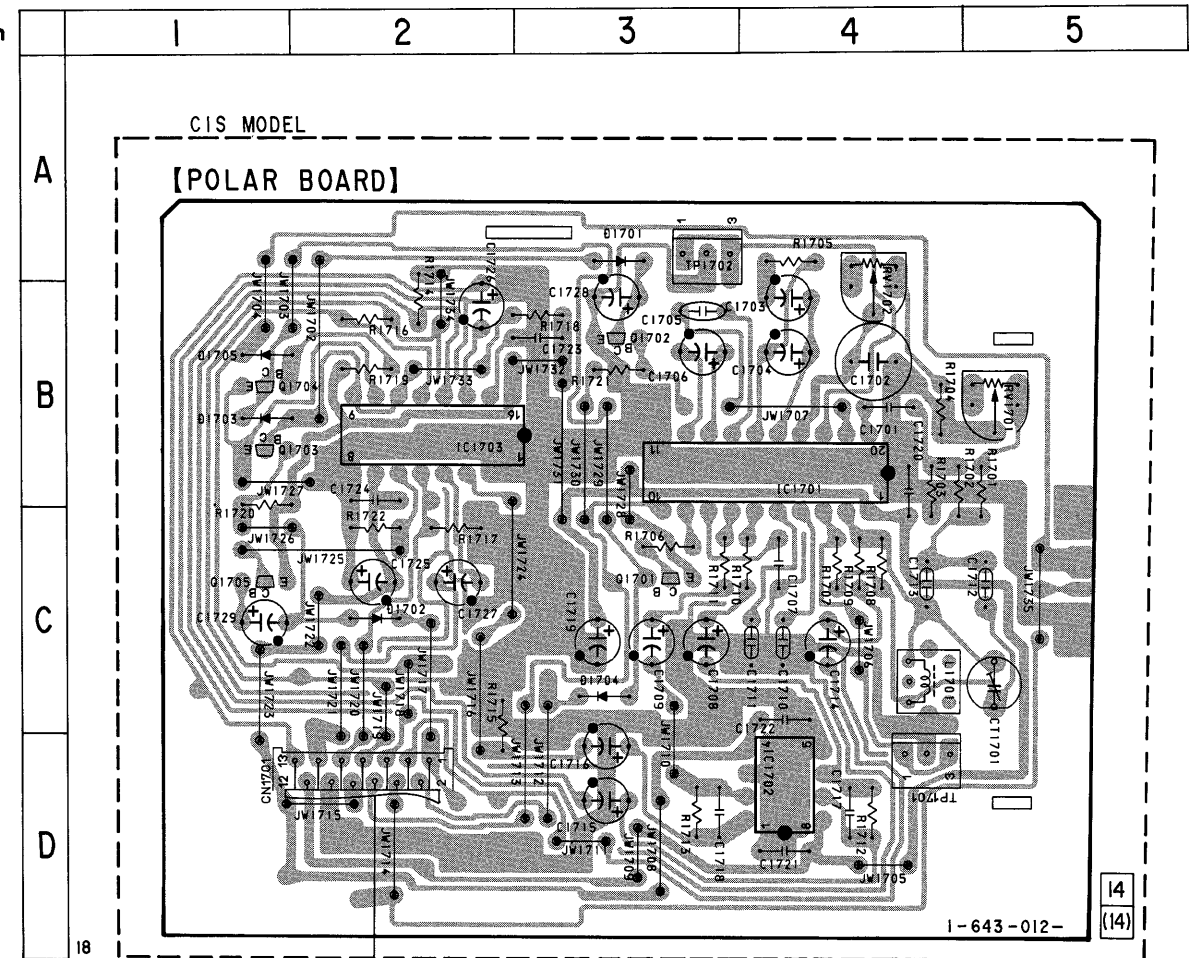
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}W$  or less unless otherwise specified.
- **B+** : B+ Line
- **B-** : B- Line
- : adjustment for repair.
- Voltage is dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input Impedance  $10M\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\Rightarrow$  : FM

1-10. PRINTED WIRING BOARD—POLAR Section—  
(CIS model)

• See page 25-27 for Circuit Boards Location and Semiconductor Lead Layouts in original service manual.

• Semiconductor Location

Ref. No.	Location
D1701	A-3
D1702	C-2
D1703	B-1
D1704	C-3
D1705	B-1
IC1701	B-3
IC1702	D-4
IC1703	B-2
Q1701	C-3
Q1702	B-3
Q1703	B-1
Q1704	B-1
Q1705	C-1

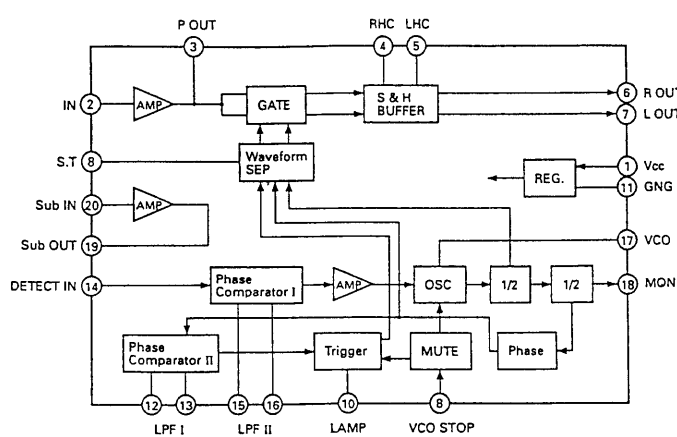


Note on Printed Wiring Board:

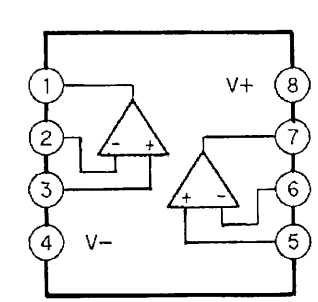
- $\circ$  : parts extracted from the component side.
- $\otimes$  : Pattern on the side which is seen.

• IC Block Diagrams

IC1701 IR3R42



IC1702 M5218AP



IC1703  $\mu\text{PD4053BC}$

