HCD-H550/H550M

SERVICE MANUAL

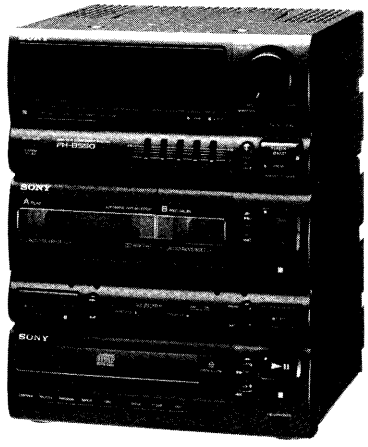


Photo: HCD-H550

AEP Model
E Model
Australian Model
PX Model
HCD-H550
US Model
Canadian Model
AEP Model
UK Model
HCD-H550M

HCD-H550/H550M are the CD player and stereo deck receiver in FH-B511/ B550/MHC-550.

CD SECTION	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM28-5BD17A
	Base Unit Type	BU-5BD17A
TAPE DECK SECTION	Model Name Using Similar Mechanism	TC-WR445
	Tape Transport Mechanism Type	TCM-220WR2

SPECIFICATIONS

CD player section

System: Compact disc digital audio system
Laser: Semiconductor laser
Wavelength: 780 – 790 nm

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range
Except CIS, EE
JE, PX model : 87.5 – 108.0 MHz
CIS, EE model : 65.0 – 74.0 MHz
87.5 – 108.0 MHz
JE, PX model : 76.0 – 108.0 MHz
Antenna
HCD-H550 : Telescopic antenna
HCD-H550M : FM lead antenna
Antenna terminals
75 ohm unbalanced
Intermediate frequency
10.7 MHz

AM tuner section

Tuning rrange
US, CND model : AM530 – 1,710 kHz
AEP, UK, CIS,
EE model : MW531 – 1,602 kHz
LW153 – 279 kHz
G model : AM531 – 1,602 kHz
IT model : AM522 – 1,611 kHz
AUS model : MW531 – 1,602 kHz
SW5.95 – 17.9 MHz
E, EA, MX, MY, SP,
PX, JE model : MW531 – 1,602 kHz
(at 9 kHz step)
MW530 – 1,710 kHz
(at 10 kHz step)
SW5.95 – 17.9 MHz
Antenna: AM loop antenna
External antenna terminals
Intermediate frequency
450 kHz

Cassette deck section

Recording system
4-track 2-channel stereo
Frequency response
(DOLBY NR OFF)
60 – 13,000 Hz (±3 dB), using TYPE I cassette (Sony HF-S)
60 – 14,000 Hz (±3 dB), using TYPE II cassette (Sony UX-S)
Wow and flutter
0.1% WRMS ±0.3% (DIN)

Amplifier section

Coutinupus RMS Power output:
30+30 watts (6 ohms at 1 kHz, 5% THD)
Peak music power output:
300 watts (2 speakers driven)

Inputs
MIX MIC (mini jack)
(EXCEPT H550: AEP, G, CIS/H550M):
Sensitivity 1 mV, impedance 600 ohms
VIDEO/AUX (H550: EXCEPT AEP, G/ H550M: US, CND): Sensitivity 450 mV, impedance 47 kilo ohms
PHONO (phono jack)
(AEP, UK, EE, G, IT): sensitivity 5 mV, impedance 47 kilohms

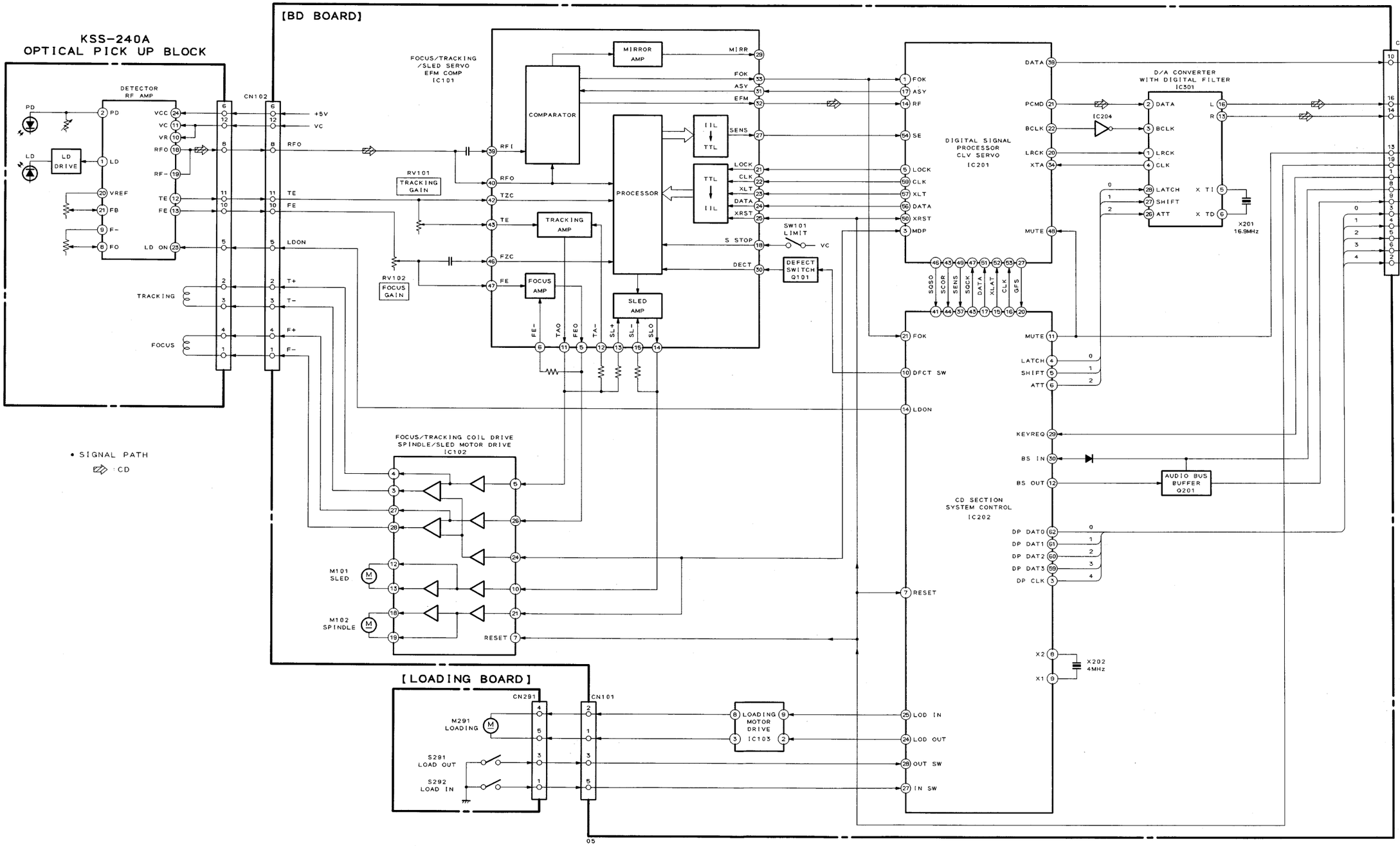
— Continued on next page —

MINI Hi-Fi COMPONENT SYSTEM

SONY®

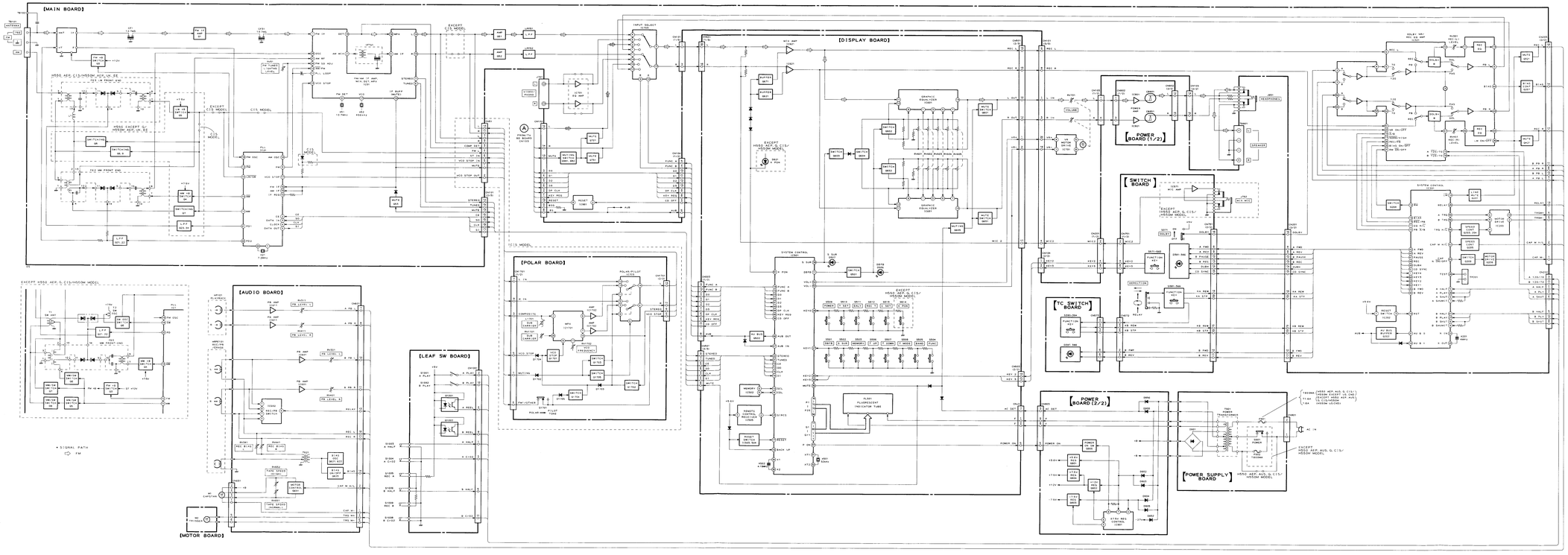
SECTION 5
DIAGRAMS

5-1. CD SECTION BLOCK DIAGRAM



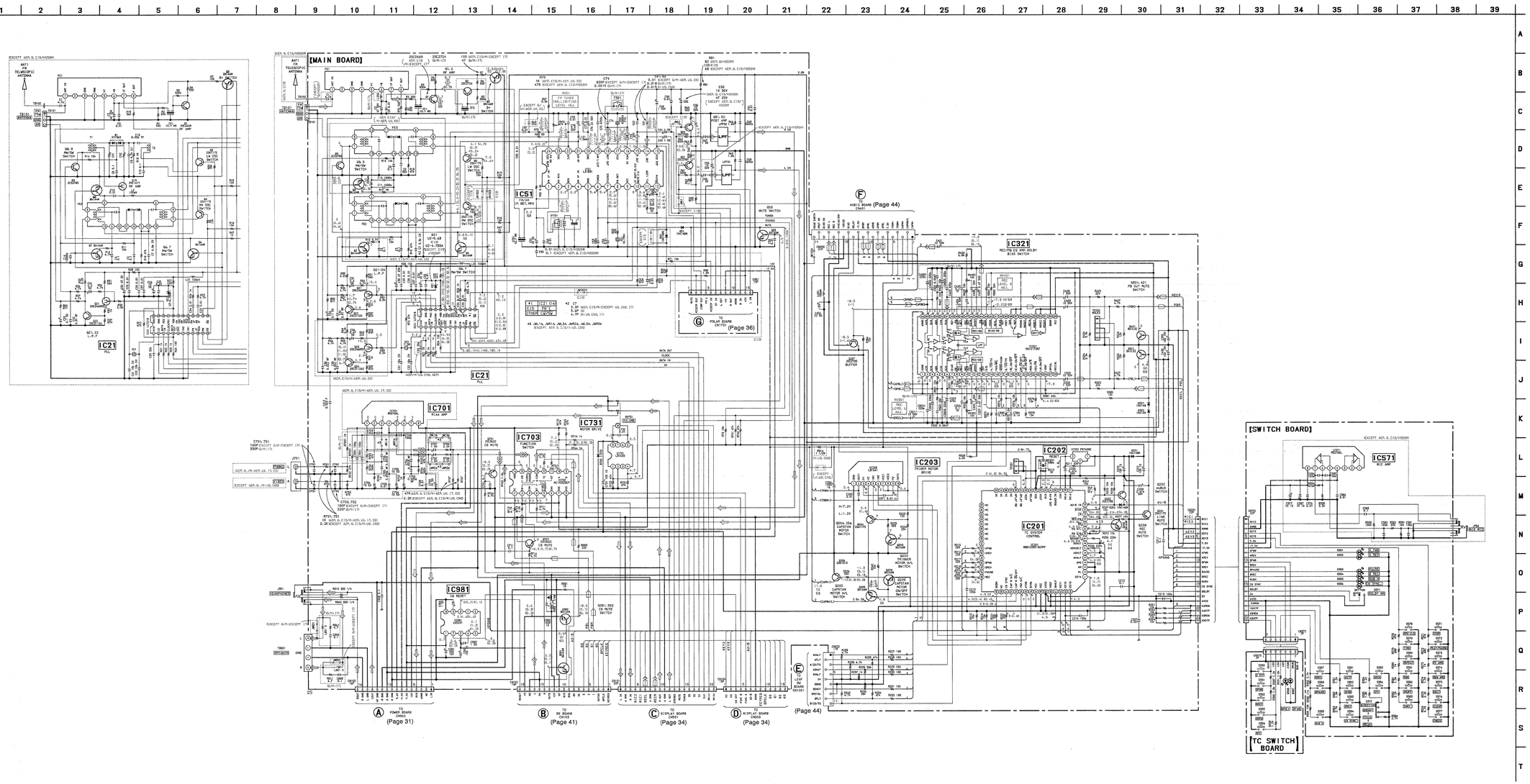
• SIGNAL PATH
: CD

5-2. OTHER SECTION BLOCK DIAGRAM



5-4. MAIN SECTION SCHEMATIC DIAGRAM

• See pages 31 to 34 for Display Section Schematic Diagram and page 49 for IC Block Diagrams.



Note:

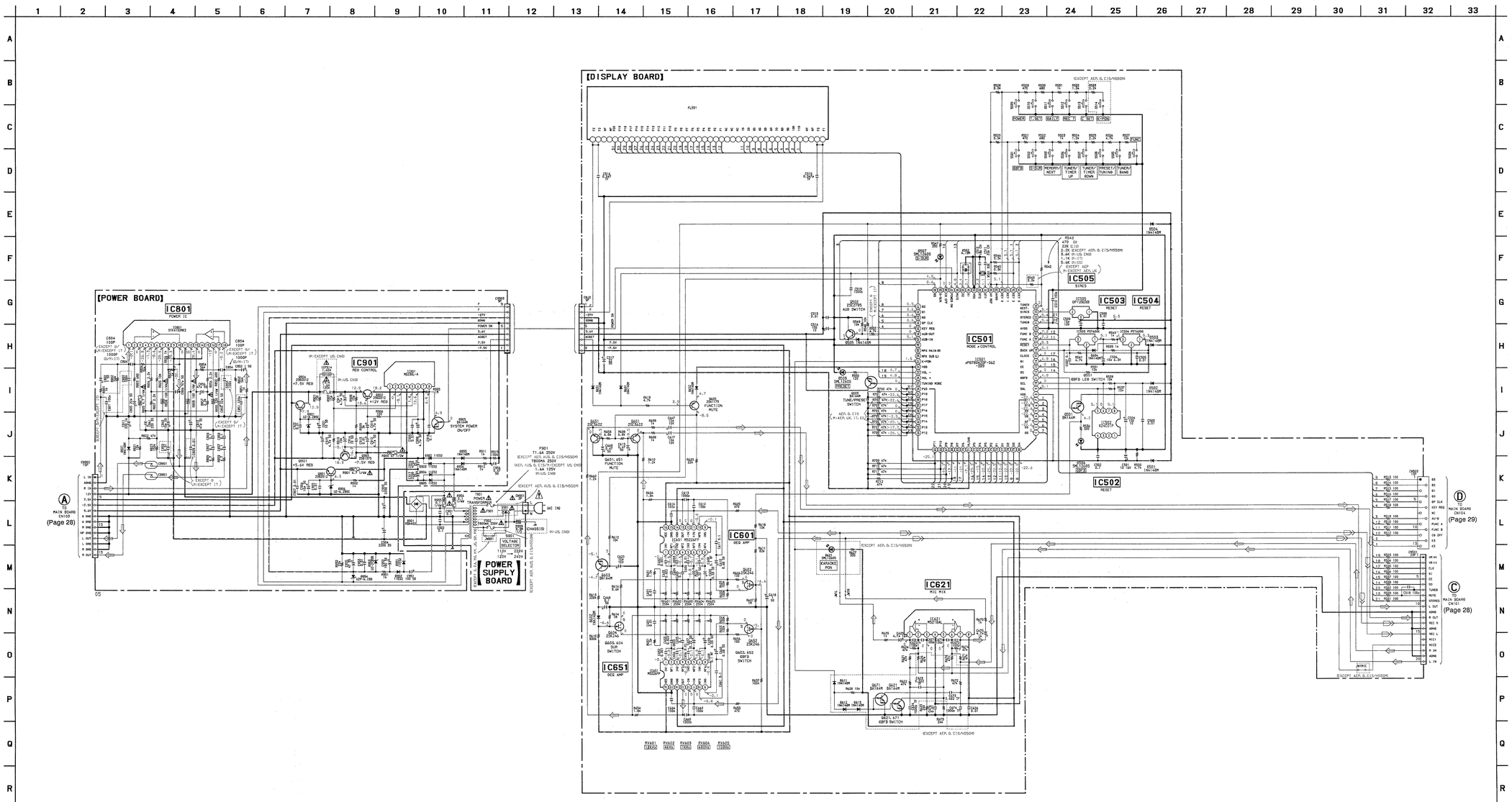
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- : fusible resistor.

Note:	Note:
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	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.
- : panel designation.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM (Common)
  ( ) : MW
  < > : LW
  [ ] : DECK B REC
  (( )) : DECK B PB
  ✻ : Impossible to measure
- Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : FM
  : PB (DECK B)
  : REC (DECK B)
  : CD
  : PHONO
- Abbreviations

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

5-5. DISPLAY SECTION SCHEMATIC DIAGRAM



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- ⚠ : fusible resistor.

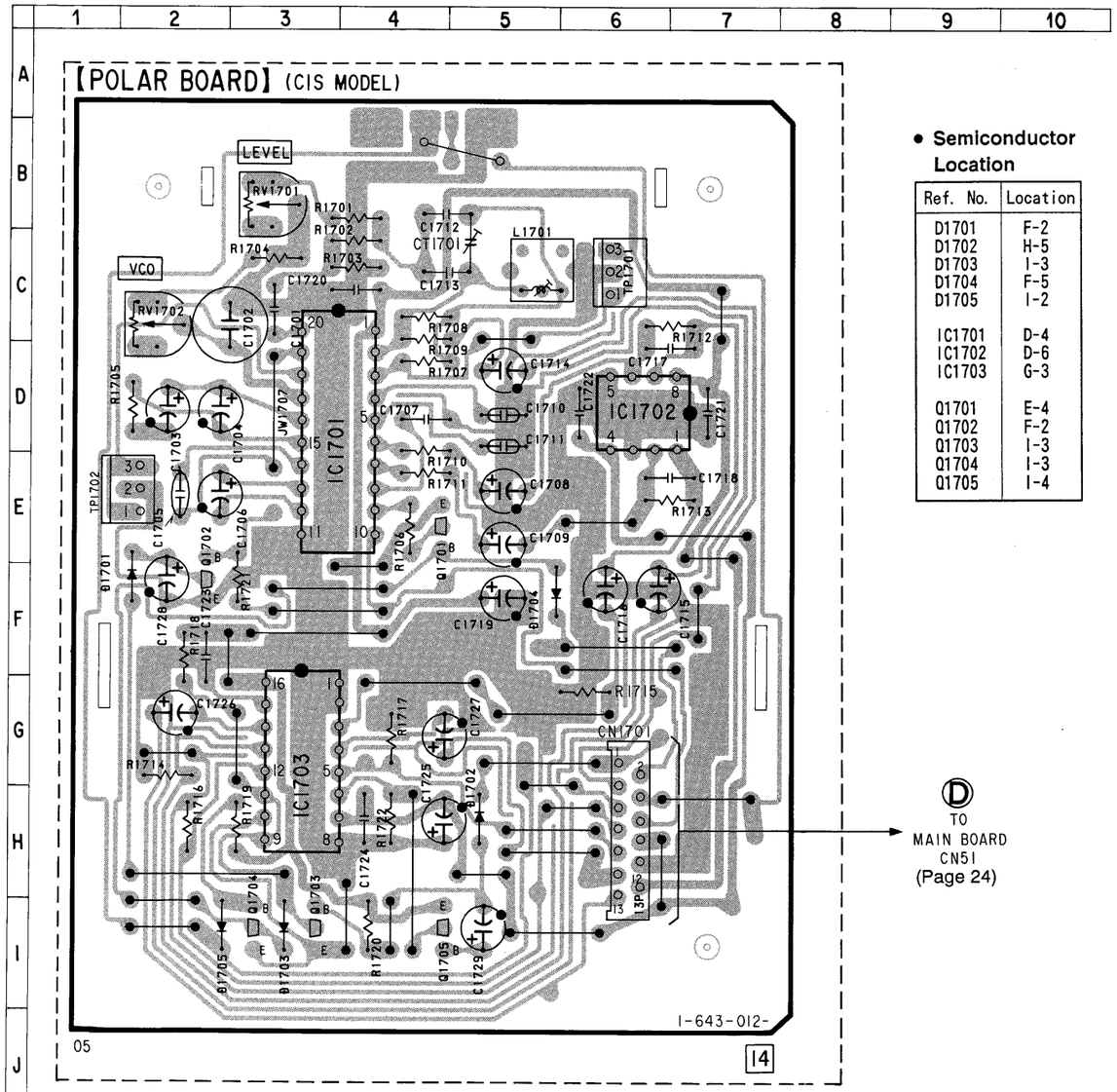
Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ⊖ : B + Line.
- ⊕ : B − Line.
- ▭ : panel designation.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ✻ : Impossible to measure
- Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ⇨ : REC (DECK B)
- Abbreviations

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

5-6. POLAR PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

See page 47 for Semiconductor Lead Layouts and Circuit Boards Location.

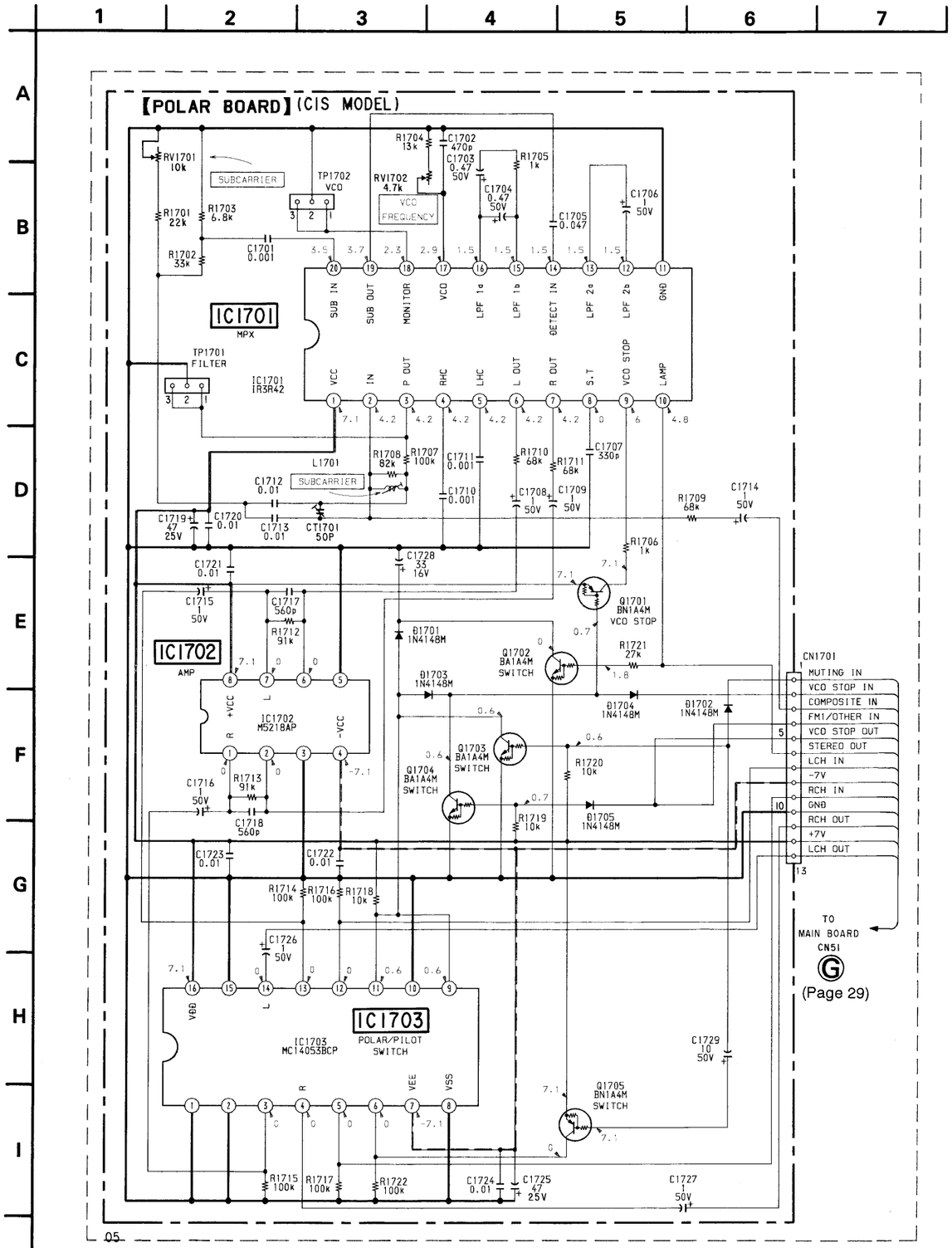


- **Semiconductor Location**

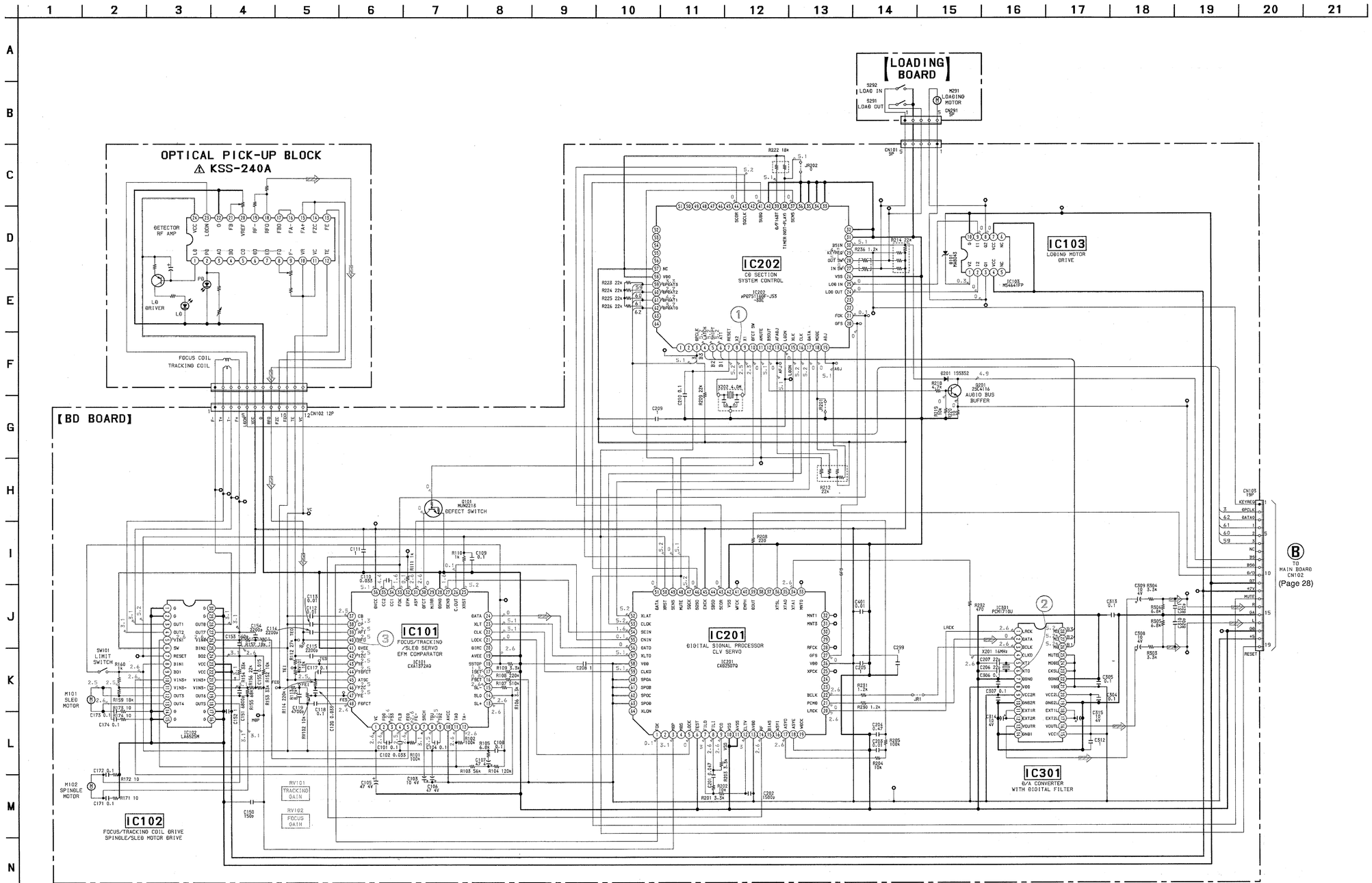
Ref. No.	Location
D1701	F-2
D1702	H-5
D1703	I-3
D1704	F-5
D1705	I-2
IC1701	D-4
IC1702	D-6
IC1703	G-3
Q1701	E-4
Q1702	F-2
Q1703	I-3
Q1704	I-3
Q1705	I-4

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- : B + Line.
- : B – Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.



5-8. CD SECTION SCHEMATIC DIAGRAM • See page 49 for IC Block iagrams.



• Wave forms

❶ 5Vp-p, 4MHz — IC202⑧

❷ 3.3Vp-p, 16MHz — IC301⑥

❸ 1.2Vp-p — IC101㊹play (RFO)

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.

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

- ▭▭▭ : B + Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : CD
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

5-9. TAPE SECTION SCHEMATIC DIAGRAM

【AUDIO BOARD】

HP101 PLAYBACK HEAD

HRPE101 RECORD/PLAYBACK/ERASE HEAD

L-CH

R-CH

IC611 (2/2) μPC4570C-1

IC611 (1/2) μPC4570C-1

IC611 PB AMP

PB LEVEL L

PB LEVEL R

IC601 (2/2) μPC4570C-1

IC601 (1/2) μPC4570C-1

IC601 PB AMP

PB LEVEL L

PB LEVEL R

IC602 REC/PB SWITCH

IC602 μPC1330HA

SW.R1
GND
SW.P1
CONT
GND
VCC
SW.P2
GND
SW.R2

REC BIAS R

REC BIAS L

Q621, 622 BIAS OSC

Q623 BIAS ON/OFF SWITCH

Q621 2SC2001

Q622 2SC2001

Q623 2SB1387

T621

CN602 2P

(CHASSIS)

RV651 TAPE SPEED (NORMAL)

RV652 TAPE SPEED (HIGH)

Q651 2SA1345

Q651 CAPSTAN MOTOR CONTROL

M1 CAPSTAN MOTOR

M2 TRIGGER MOTOR

【MOTOR BOARD】

CN651

CN601

CAPM−
CAPM H/L
CAPM+
TRGM+
TRGM−
V+_PB
APB_LCH
APB_RCH
GND_PB
BPB_LCH
BPB_RCH
V−_PB
RELAY
BIAS
V−_BIAS
V+_BIAS
REC_RCH
REC_LCH
VREF_HX
BIAS_HX
HEADEARTH

(F) TO MAIN BOARD CN203 (Page 29)

【LEAF SW BOARD】

Q1001 NJL5165KA

Q1002 NJL5165KA

S1003 A HALF

S1004 A CrO2

S1005 REC A

S1006 B HALF

S1009 REC B

S1008 B CrO2

S1001 A PLAY

S1002 B PLAY

CN1001

A HALF
A PLAY
A CrO2
A REEL
B HALF
+5V
GND
B REEL
B METAL
B PLAY
B CrO2

(E) TO MAIN BOARD CN202 (Page 29)

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- : fusible resistor.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	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.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : REC (Common)
  ( ) : PB
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : PB (DECK B)
  : REC (DECK A)
  : REC (DECK B)