STR-H2800

SERVICE MANUAL

AEP Model
UK Model
E Model
Australian Model
Tourist Model

PHOTO : AEP model

STR-H2800 are the
TUNER/AMPLIFIER SECTION
in FH-E6X and MHC-2800.

SPECIFICATIONS

Tuner/Amplifier

Tuner section
System — FM stereo, FM/AM superheterodyne tuner

FM tuner section
Tuning range — 87.5 — 108 MHz
Antenna terminals — 75 ohms unbalanced
Intermediate frequency — 10.7 MHz

AM tuner section
Tuning range —
AEP, UK, EE model :
MW: 531 — 1,602 kHz
LW: 153 — 279 kHz
E, EA, AUS, JE model :
MW: 531 — 1,602 kHz
(with the MW tuning interval set at 9 kHz)
530 — 1,710 kHz
(with the MW tuning interval set at 10 kHz, except for the Middle Eastern model)
SW: 5.95 — 17.9 MHz
Antenna — AM loop antenna, External antenna terminals
Intermediate frequency — 450 kHz

Amplifier section
(AEP, UK, EE model) :
Continuous RMS power output
40 + 40 watts
(6 ohms at 1 kHz, DIN)
43 + 43 watts
(6 ohms at 1 kHz, 5% THD)
Music power output — 120 + 120 watts
(6 ohms at 1 kHz, 10% THD)

(AUS model) :
Continuos RMS power output
50 + 50 watts
(6 ohms at 1 kHz, 5% THD)
Peak music power output
700 watts (4 speakers driven)

(E, EA, JE model) :
Peak music power output
700 watts (4 speakers driven)
Continuos RMS power output
50 + 50 watts
(6 ohms at 1 kHz, 5% THD)

Inputs —
MIC MIX (minijack):
sensitivity: 1 mV,
impedance: 600 ohms
MD/DAT IN (phono jacks):
sensitivity: 250 mV,
impedance: 47 kilohms
AEP, UK, EE model :
PHONO (phono jacks):
sensitivity: 5 mV,
impedance: 47 kilohms
E, EA, AUS, JE model :
VIDEO/AUX (phono jacks):
sensitivity: 250 mV,
impedance: 47 kilohms

Outputs —
HEADPHONES
(stereo minijack):
accepts headphones of 8 ohms or more.
SPEAKER:
accepts speakers of 6 to 16 ohms.
SURROUND SPEAKER:
AEP, UK, EE model :
accepts speakers of 16 ohms.
E, EA, AUS, JE model :
accepts speakers of 8 to 16 ohms.
MD/DAT OUT
voltage: 250 mV
impedance: 2 kilohms

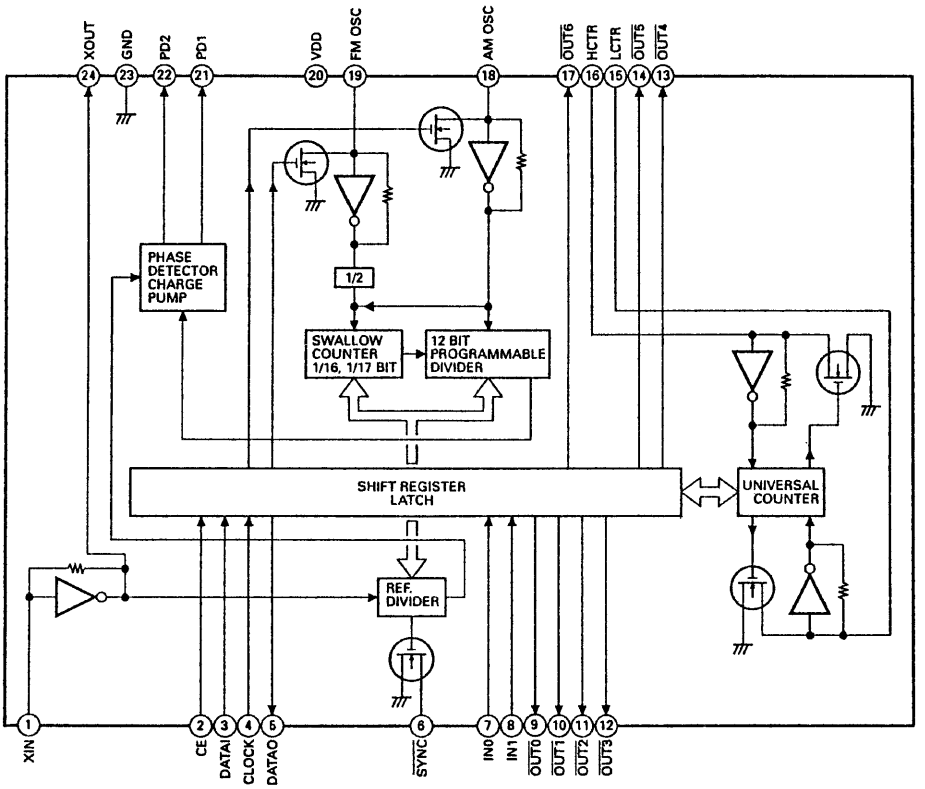
– continued on next page –

TUNER AMP

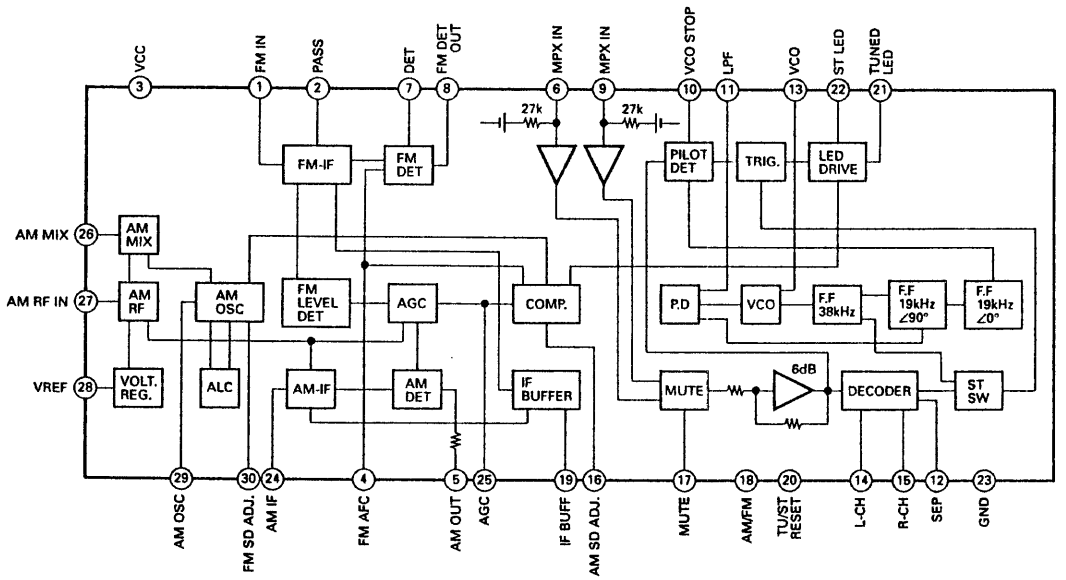
SONY®

3-5. IC BLOCK DIAGRAMS (MAIN SECTION)

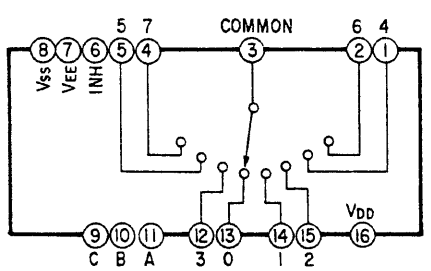
IC21 LC7218



IC51 LA1851N

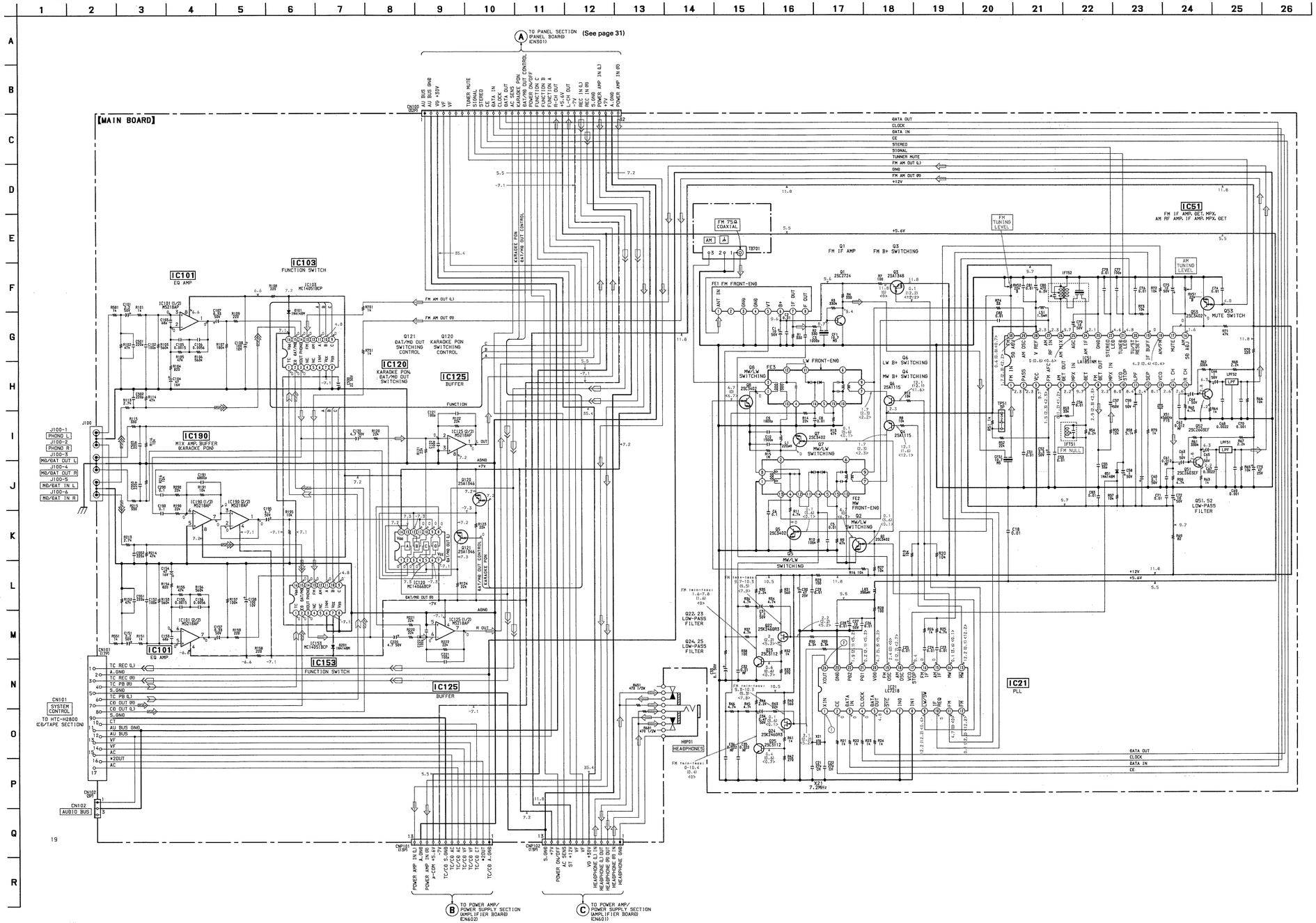


IC103, 153 MC14051BCP



3-6. SCHEMATIC DIAGRAM (MAIN SECTION) – AEP, UK, East European MODEL –

• See page 9 for waveforms and 14 for IC block diagram.

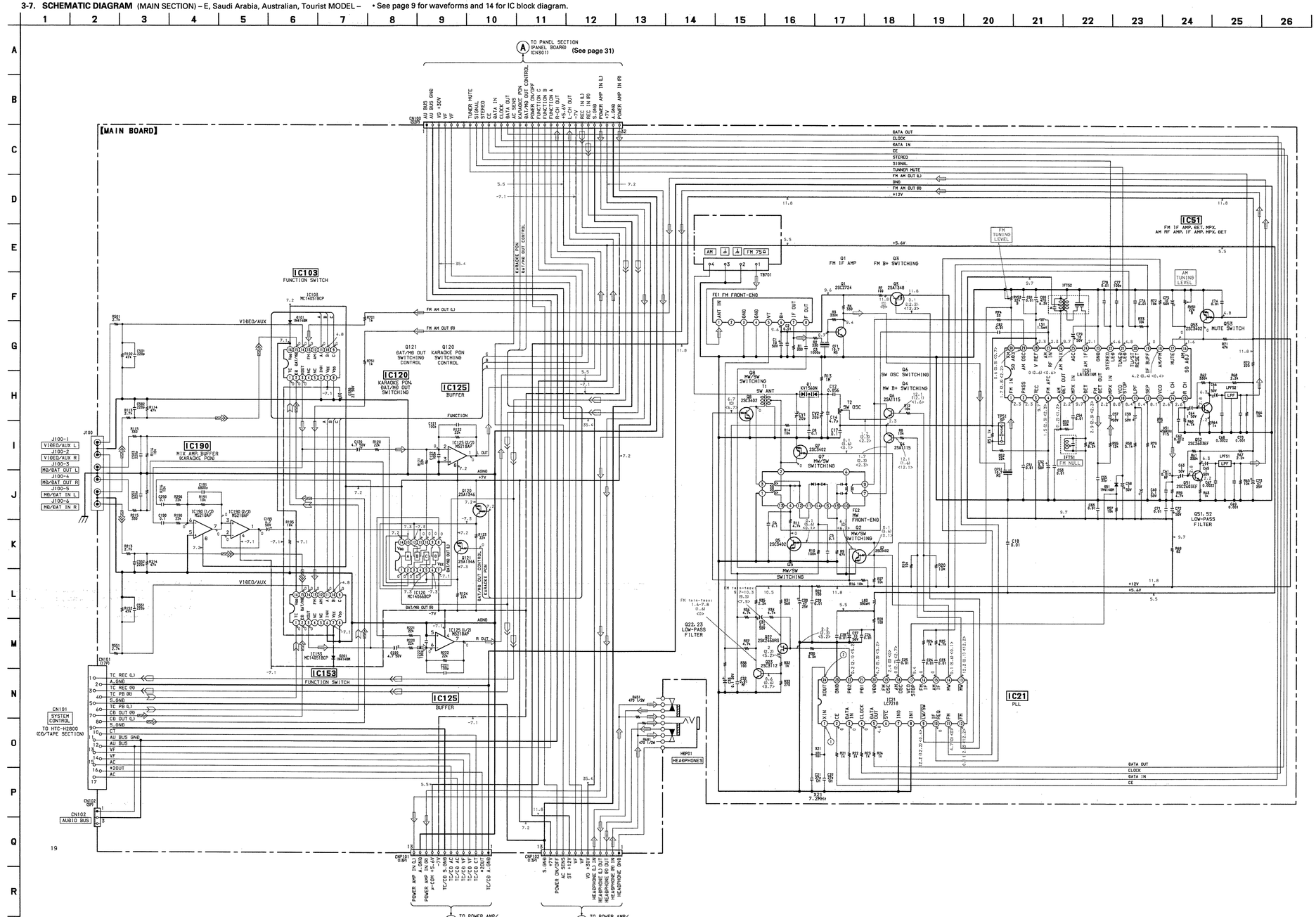


Notes on schematic diagram:

- **All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.**
- **All resistors are in ohms, 1/4W or less unless otherwise noted.**
- **△ : Internal component**
- ═══: B+ Line
- ▪ ▪ ▪ ▪ ▪: B– Line
- ▭: Adjustment for repair
- Voltage are dc with respect to ground under no -signal conditions.
- No mark : FM
  ( ) : MW
  < > : LW
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- **Signal path**
  - ⇨: FM
  - ⇨: CD
  - ⇨: MINI-DISC/DAT
  - ⇨: PLAYBACK (From HTC-H2800 deck section of playback signal)
  - ⇨: Record (To HTC-H2800 deck section of record signal.)
- **EE : East European Model**

3-7. SCHEMATIC DIAGRAM (MAIN SECTION) – E, Saudi Arabia, Australian, Tourist MODEL –

• See page 9 for waveforms and 14 for IC block diagram.



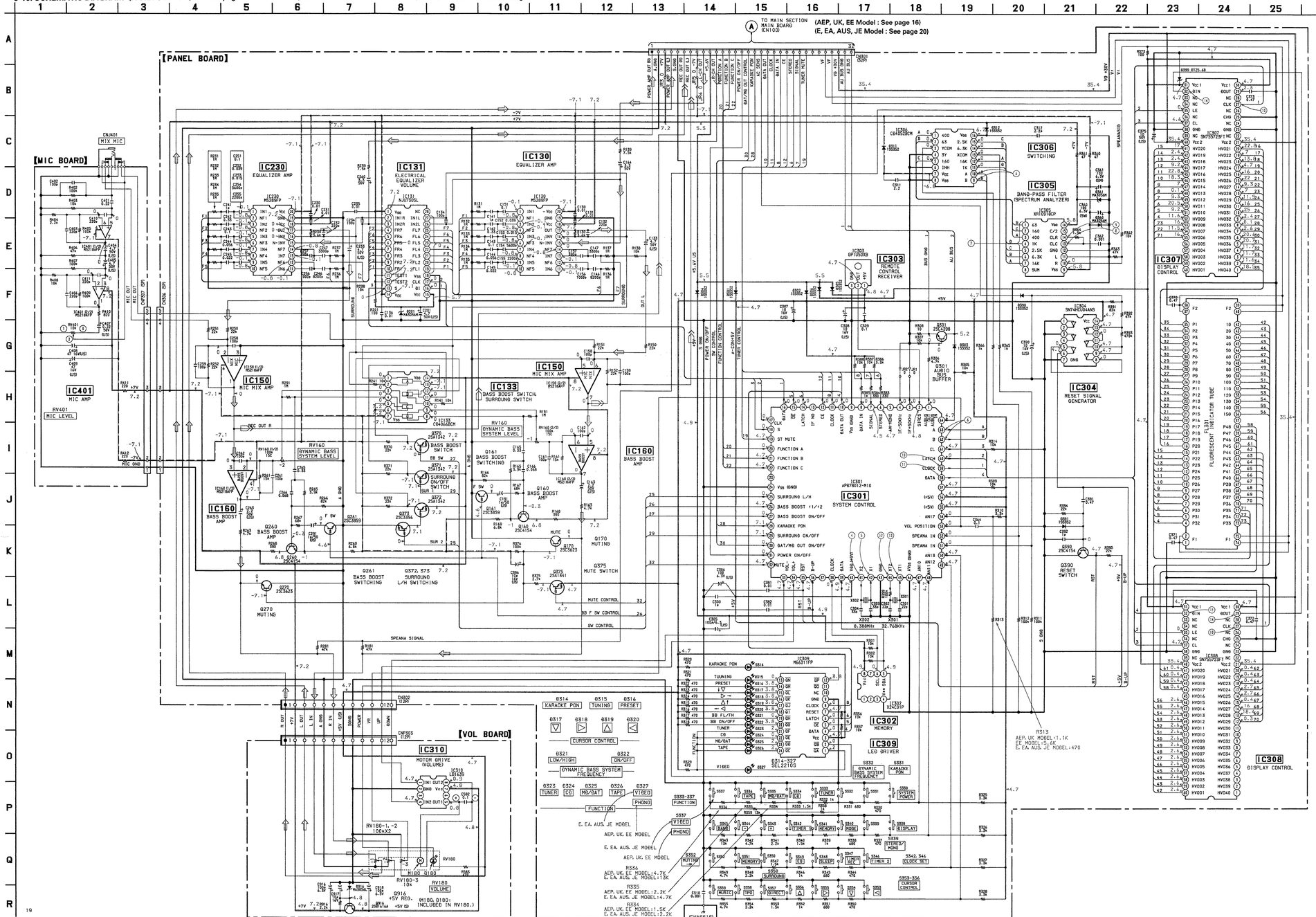
Notes on schematic diagram:

- **All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.**
- **All resistors are in ohms, 1/4W or less unless otherwise noted.**
- △ : **Internal component**
- ▬▬: B+ Line
- ▪▪▪▪: B– Line
- ▭: Adjustment for repair
- Voltage are dc with respect to ground under no -signal conditions.
- No mark : FM
  ( ) : MW
  < > : SW
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- **Signal path**
  : FM
  : CD
  : MINI-DISC/DAT
  : PLAYBACK (From HTC-H2800 deck section of playback signal)
  : Record (To HTC-H2800 deck section of record signal.)

- **EA : Saudi Arabia Model**
- **AUS : Australian Model**
- **JE : Tourist Model**

3-10. SCHEMATIC DIAGRAM (PANEL SECTION)

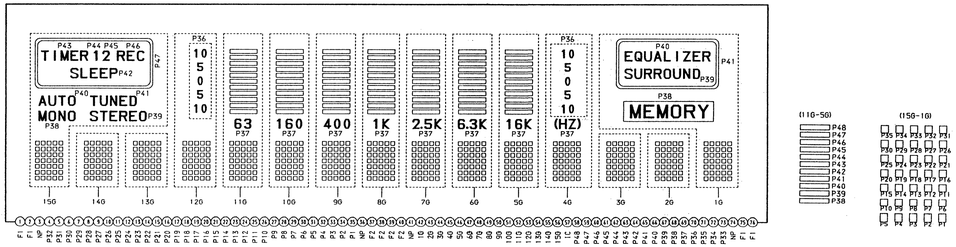
• See page 9 for waveforms, 33 for fluorescent indicator tube (FL301) and 33 for IC block diagram.



Notes on schematic diagram:

- **All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.**
- **All resistors are in ohms, 1/4W or less unless otherwise noted.**
- ——: B+ Line
- – – –: B– Line
- Voltage are dc with respect to ground under no -signal conditions.
- No mark : FM
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- **Signal path**
  - : FM
  - : Record (To HTC-H2800 deck section of record signal.)
- EE : East European Model
- EA : Saudi Arabia Model
- AUS : Australian Model
- JE : Tourist Model

3-11. FLUORESCENT INDICATOR TUBE (FL301)

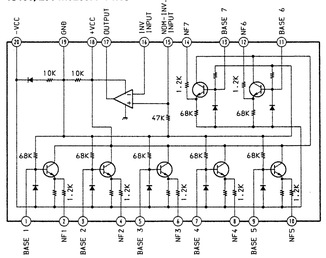


● SEMICONDUCTOR LOCATION
(POWER AMP/POWER SUPPLY SECTION)

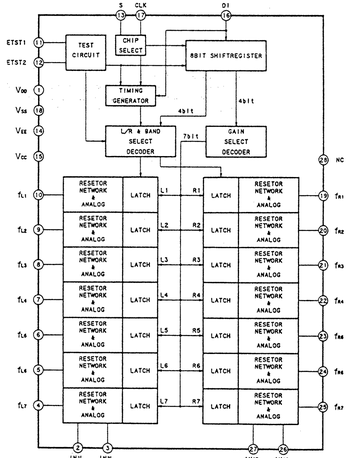
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D601	D-9	D924	E-9	Q905	H-8
D602	D-12	D930	F-9	Q920	G-9
D604	B-13	D931	F-9	Q921	H-9
D605	C-13	D940	G-7	Q922	G-9
D651	D-7			Q923	H-7
		IC601	C-9		
D900	G-9	IC602	C-14	Q924	H-7
D901	H-9	IC902	H-7	Q930	E-9
D902	H-9			Q940	G-7
D903	H-10	Q601	C-11		
D904	H-10	Q602	D-14		
		Q603	D-14		
D905	D-10	Q651	C-7		
D906	D-10	Q903	H-8		
D920	G-9				
D921	H-9	Q904	H-7		

3-12. IC BLOCK DIAGRAMS (PANEL SECTION)

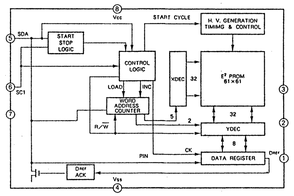
IC130, 230 M5289FP-71NC



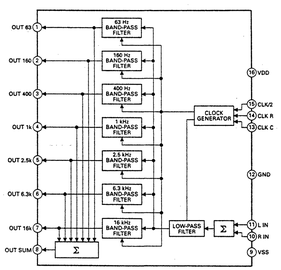
IC131 NJU7305L



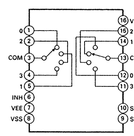
IC302 X24C01P



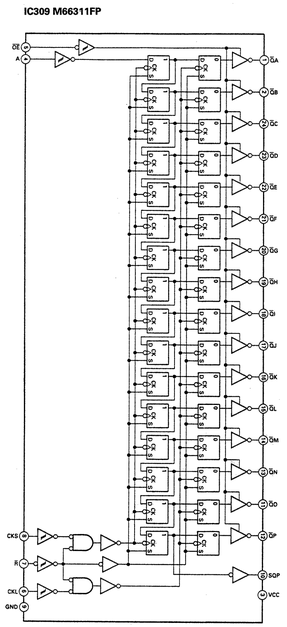
IC305 XR1901DCP



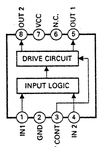
IC306 CD4052BCM



IC309 M66311FP

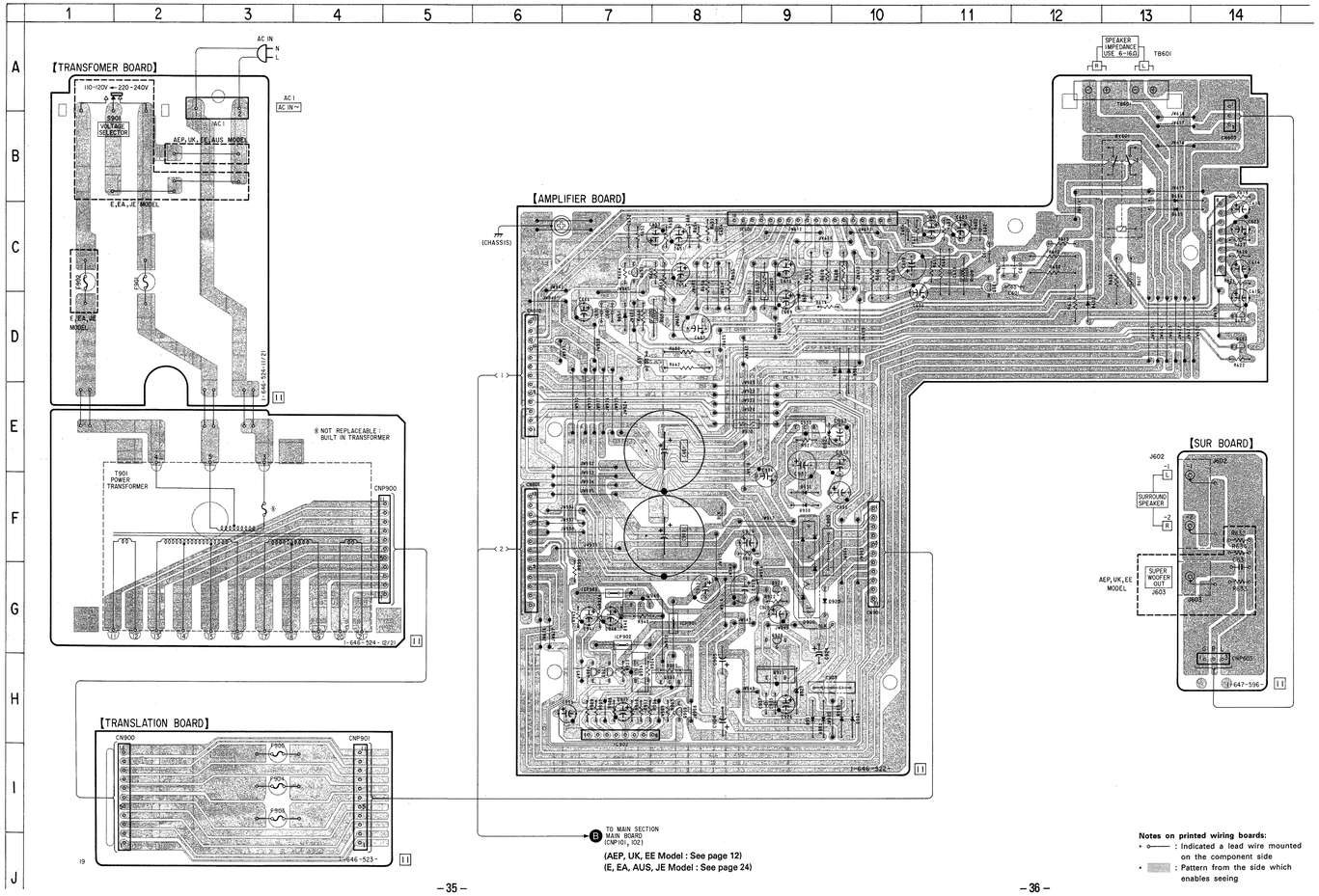


IC310 LB1639



3-13. PRINTED WIRING BOARDS (POWER AMP/POWER SUPPLY SECTION)

• See page 8 for semiconductor lead layouts and 10 for circuit boards location.



Notes on printed wiring boards:
- o——— : Indicated a lead wire mounted on the component side
- ▒▒▒ : Pattern from the side which enables seeing

【AMPLIFIER BOARD】

IC601
AEP,UK,EE MODEL : STK4142MK2
E,EA,AUS,JE MODEL : STK4172MK2

IC601 POWER AMP

HEADPHONE GND
HEADPHONE (R) IN
HEADPHONE (R) OUT
HEADPHONE (L) OUT
HEADPHONE (L) IN
VB +30V
VF
VF
ST +12V
AC SENS
POWER ON/OFF
+7V
S.GND
CN601 13P

To MAIN SECTION MAIN BOARD (CNP102) C

(AEP, UK, EE Model : See page 16)

(E, EA, AUS, JE Model : See page 20)

TC/CD A.GND
* 2 OUT
TC/CD CT
TC/CD VF
TC/CD VF
TC/CD AC
TC/CD AC
TC/CD S.GND
-7V
+5.6V
POWER AMP IN (R)
A.GND
POWER AMP IN (L)
CN602 13P

To MAIN SECTION MAIN BOARD (CNP101) B

(AEP, UK, EE Model : See page 16)

(E, EA, AUS, JE Model : See page 20)

(CHASSIS)

IC601(1/2)
R605,606,655,656
AEP,UK,EE MODEL: 2.2K 1/2W
E,EA,AUS,JE MODEL: 3.3K 1/2W
Q601,651 OVERLOAD DET

Q602 PROTECT SWITCH
D602 1N4148M
IC602 PROTECTOR
Q603 SWITCHING
Q930 REG.
C901,902
AEP,UK,EE MODEL : 4700/42V
E,EA,AUS,JE MODEL : 4700/50V

IC902 REG. CONTROL
Q905 POWER ON/OFF SWITCHING
Q940 REG
Q920,921 REG.
Q923,924 POWER ON/OFF SWITCHING
Q922 TUNER B+ SWITCHING
Q903,904 REG.
D901-D904 11ES2
D905,906 1N4148M

D604,605 1N4148M

【TRANSLATION BOARD】

【TRANSFORMER BOARD】

AEP,UK,EE,AUS MODEL

T901 POWER TRANSFORMER
AC1 AC IN~
AC IN
F901 T2A
F902 T2A
F903 T2.5A
F904 T2.5A
F905 T2.5A
S901 VOLTAGE SELECTOR
110 - 120V
220 - 240V
※NOT REPLACEABLE: BUILT IN TRANSFORMER

E,EA,JE MODEL

SPEAKER IMPEDANCE USE 6-16Ω

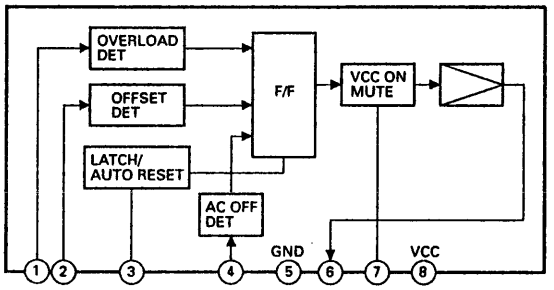
CN603 3P
CNP603 3P
TB601
J602-1 L
SURROUND SPEAKER
J602-2 R
J603
SUPER WOOFER OUT

AEP,UK,EE MODEL

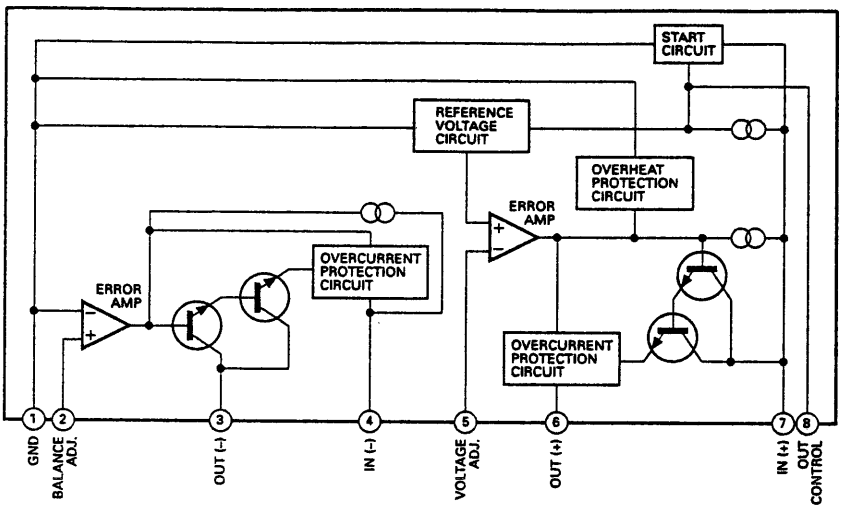
【SUR BOARD】

3-15. IC BLOCK DIAGRAM (POWER AMP/POWER SUPPLY SECTION)

IC602 μPC1237HA



IC902 M5230L



Notes on schematic diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- : Nonflammable resistor
- : Fuse resistor

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

- : B+ Line
- : B− Line
- Voltage are dc with respect to ground under no -signal conditions.
- 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

- EE : East European Model
- EA : Saudi Arabia Model
- AUS : Australian Model
- JE : Tourist Model