

XR-4880

SERVICE MANUAL

AEP Model
UK Model



Photo: XR-4880

Model Name Using Similar Mechanism	XR-C6100R
Tape Transport Mechanism Type	MG-25F-136

SPECIFICATIONS

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 - 18,000 Hz
Signal-to-noise ratio	

Cassette type

TYPE II, IV	61 dB
TYPE I	58 dB

Tuner section

FM	
Tuning range	87.5 - 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.4 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 - 15,000 Hz

MW/LW

Tuning range	MW: 531 - 1,602 kHz LW: 153 - 281 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	MW: 30 μ V LW: 50 μ V

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 - 8 ohms
Maximum power output	35 W \times 4 (at 4 ohms)

General

Outputs	Power aerial relay control lead
Tone controls	Bass \pm 8 dB at 100 Hz Treble \pm 8 dB at 10 kHz
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 188 \times 58 \times 181 mm (w/h/d)
Mounting dimensions	Approx. 182 \times 53 \times 164 mm (w/h/d)
Mass	Approx. 1.2 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/MW/LW CASSETTE CAR STEREO

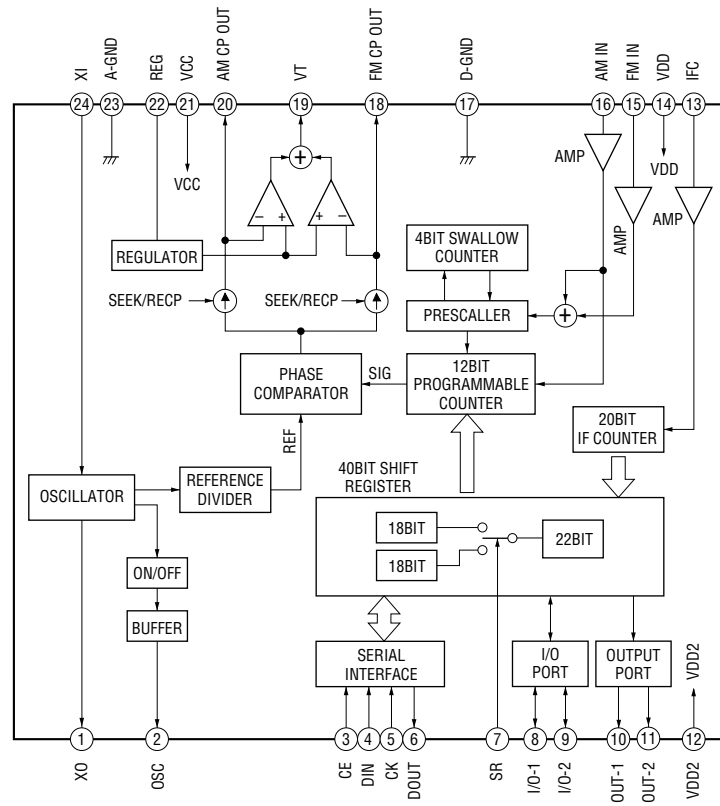


SONY®

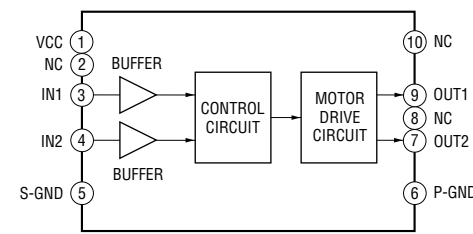
SECTION 6 DIAGRAMS

• IC Block Diagrams – MAIN Board –

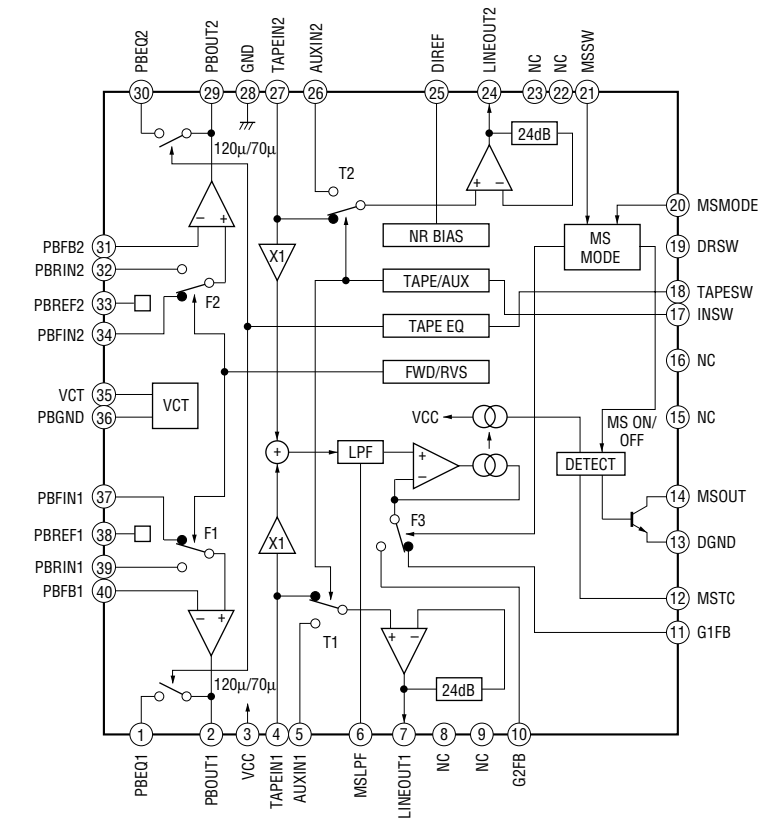
IC21 TB2118F (EL)



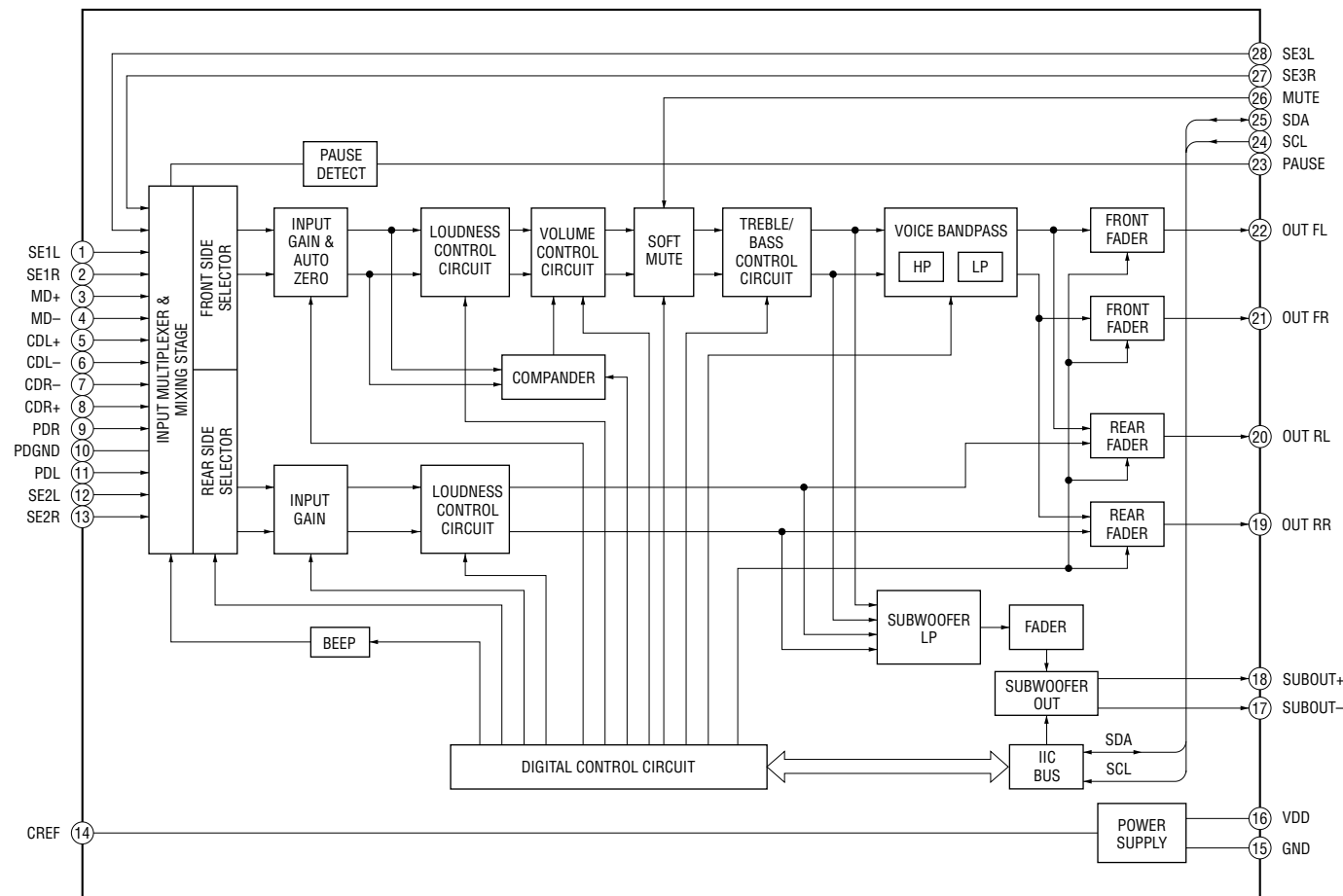
IC351 LB1930M-TLM



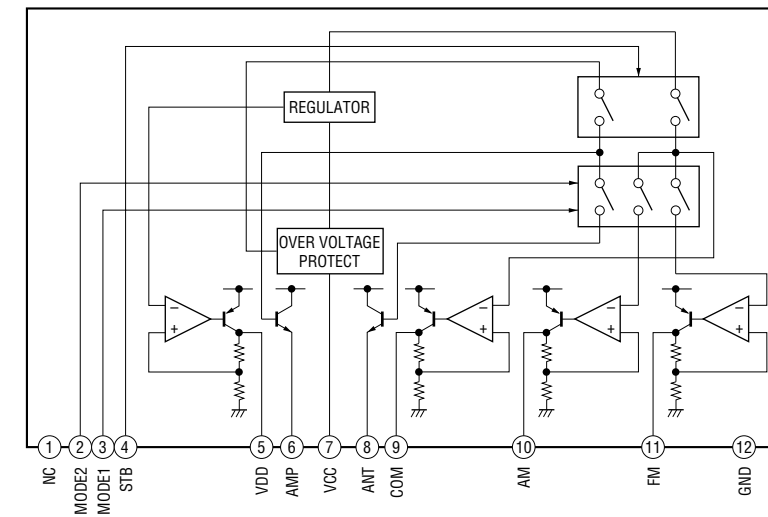
IC301 CXA2509AQ-T4



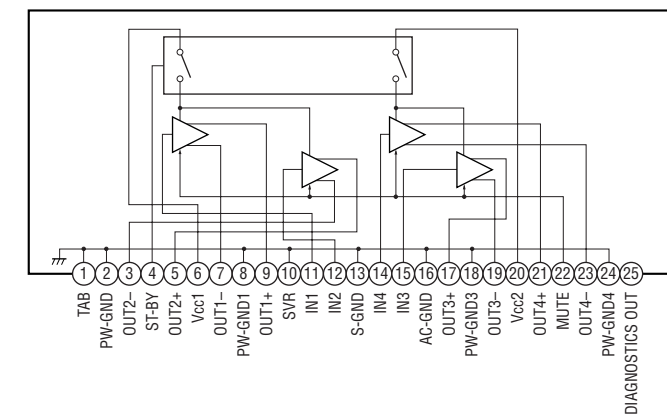
IC331 TDA7462D



IC661 BA3918-V2

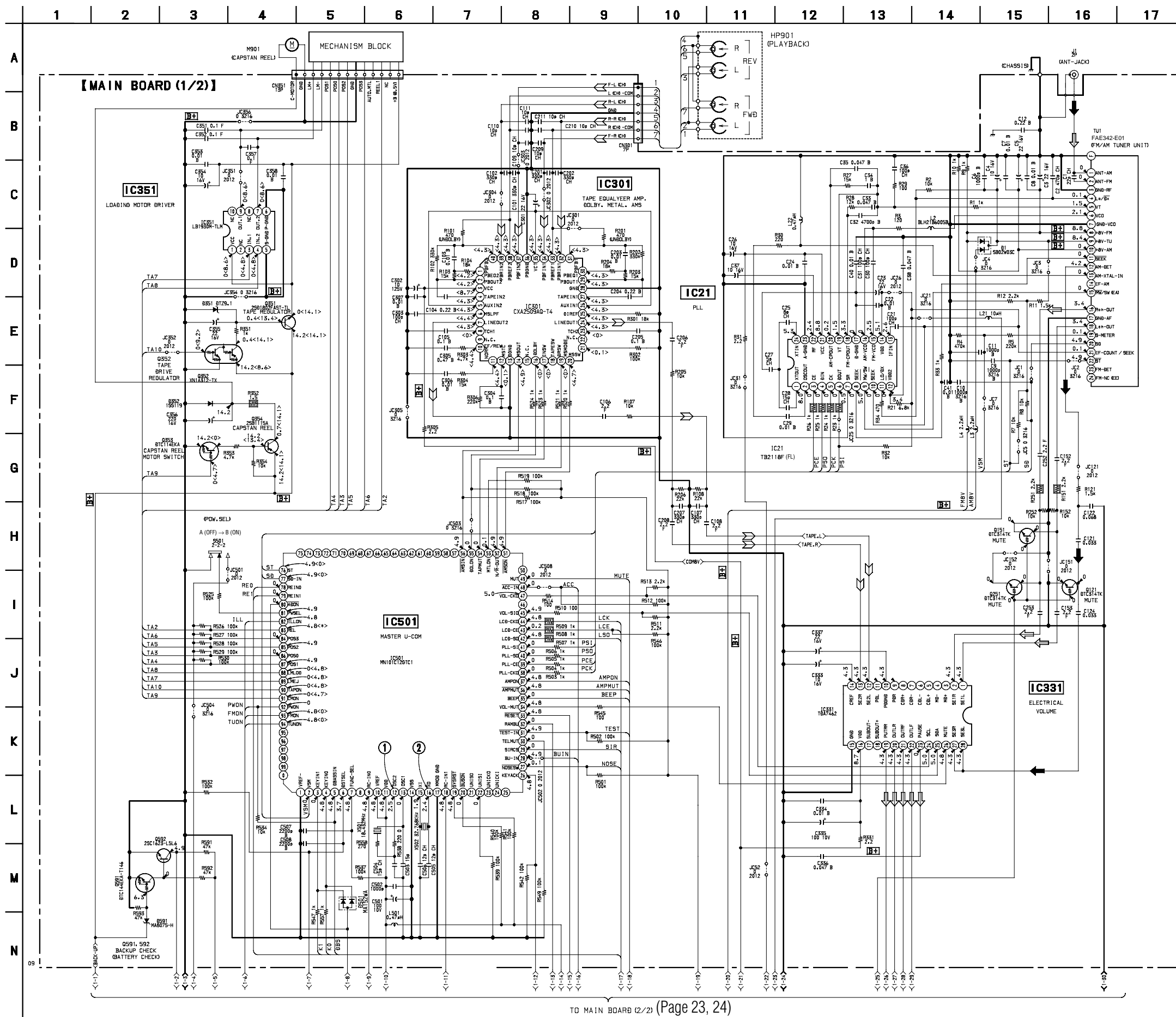


IC751 TDA7385

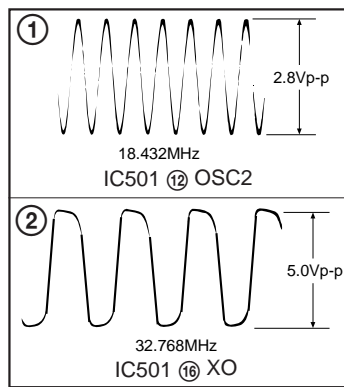


6-2. SCHEMATIC DIAGRAM — MAIN (1/2) SECTION —

- Refer to page 17 for IC Block Diagrams.
- Refer to page 29 for IC Pin Function Description.



• Waveforms

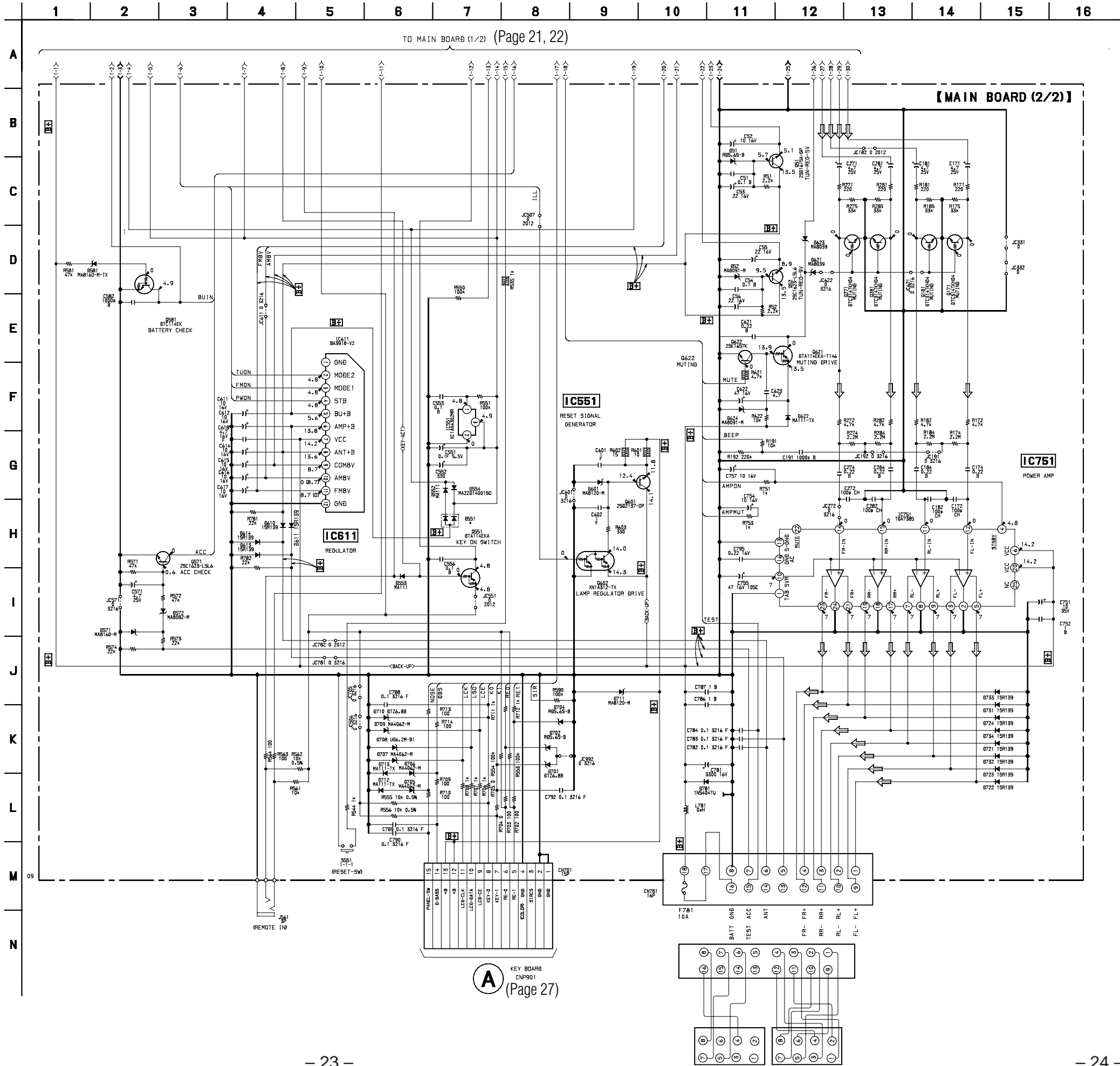


Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- Δ : internal component.
- \square : panel designation.
- **B+** : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : FM
- < : TAPE PLAYBACK
- * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 M Ω). 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 : AM (MW)
- \Rightarrow : TAPE PLAYBACK

6-3. SCHEMATIC DIAGRAM — MAIN (2/2) SECTION —

- Refer to page 17 for IC Block Diagrams.
- Refer to page 19 for Printed Wiring Board.

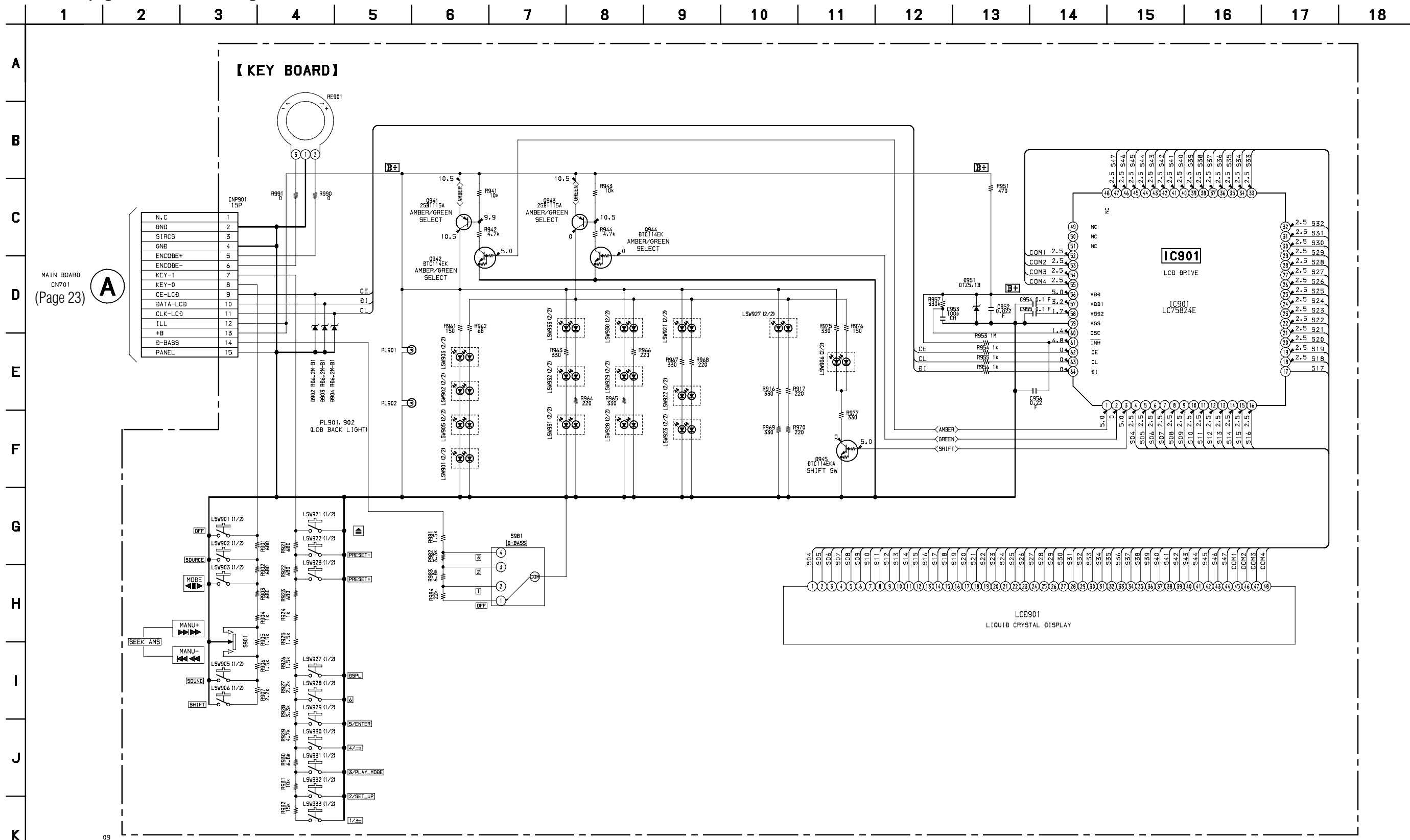


Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : μpF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
- \square : panel designation.
- **B+** : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : FM
- < > : TAPE PLAYBACK
- * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 M Ω). 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.
- \square : FM
- \blacksquare : AM (MW)
- \triangleright : TAPE PLAYBACK

6-5. SCHEMATIC DIAGRAM — PANEL SECTION —

• Refer to page 25 for Printed Wiring Board.



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : μpF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Δ : internal component.
- : panel designation.
- B+ : B+ Line.

- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- \circ : FM
- $<$: TAPE PLAYBACK
- * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 M Ω). 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 : AM (MW)
- \curvearrowright : TAPE PLAYBACK

6-6. IC PIN FUNCTION DESCRIPTION
• IC501 MASTER U-COM (MN101C12GTC1)

Pin No.	Pin Name	I/O	Function
1	VREF-	–	Basic voltage (- side) of AD conversion input
2	VSM	I	FM/AM common signal meter A/D conversion input terminal
3	KEYIN1	I	KEY (AD conversion) input
4	KEYIN0	I	
5	DBASS IN	I	Position detecting AD input terminal of D-BASS
6	DSTSEL	I	Terminal for setting to select the value of destination
7	FUNC-SEL	I	Function selecting (AD conversion) input
8	–	O	Not used
9	RC-IN0	I	Rotary commander (AD conversion) input
10	VREF+	I	Basic voltage (+side) of AD conversion input
11	VDD	–	Power supply
12	OSC2	–	Radiator (18.432 MHz) connecting terminal
13	OSC1	–	
14	VSS	–	Ground
15	XI	–	Sub clock (for clock) radiator (32 kHz) connecting terminal
16	XO	–	
17	MMOD GND	–	Ground
18	RC-IN1	I	Rotary commander shift input
19	$\overline{\text{SYSRST}}$	O	SYSTEM RESET control output
20	$\overline{\text{BUSON}}$	O	BUS ON control output
21	UNISO	O	Serial data output
22	UNISI	I	Serial data input
23	UNICKO	O	Serial clock output
24	UNICKI	I	Serial clock input
25	–	O	Not used
26	KEYACK	I	Key input acknowledge
27	$\overline{\text{NOSES\overline{W}}}$	I	Removing/attaching front panel detection input
28	BU-IN	I	BACK-UP detection input terminal
29	SIRCS	I	Remote control input
30	TELMUT	I	TELEPHONE MUTE detection input
31	$\overline{\text{TEST-IN}}$	I	Test mode setting input terminal
32	RAMBU	I	Reset detection input of RAM
33	$\overline{\text{RESET}}$	I	Reset input terminal
34	VOL-MUT	O	Electrical volume mute control output
35	BEEP	O	Control output for buzzer
36	$\overline{\text{AMPMUT}}$	O	Power amplifier mute control output terminal
37	AMPON	O	Power amplifier STANDBY control terminal
38	PLL-CKD	O	PLL CLK output terminal
39	PLL-CE	O	PLL CE output terminal
40	PLL-SO	O	PLL DATA output terminal
41	PLL-SI	I	PLL DATA input terminal
42	LCD-SO	O	LCD serial data output
43	LCD-CE	O	LCD chip enable output terminal
44	LCD-CKO	O	LCD serial clock output
45	VOL-SIO	O	Electrical volume serial data output
46	–	O	Not used
47	VOL-CKD	O	Electrical volume serial data output
48	$\overline{\text{ACC-IN}}$	I	Accessory power supply detection input
49	MUT	O	System MUTE control output

Pin No.	Pin Name	I/O	Function
50	NCO	O	Not used
51	$\overline{\text{AMSON}}$	O	“L” is output in AMS mode
52	N/ $\overline{\text{R}}$ -OUT	O	FWD/REV control output
53	MTLON	I/O	Metal control input/output
54	TAPMUT	O	Tape mute control output
55	DOLON	I/O	Dolby control input/output
56	$\overline{\text{AMSIN}}$	I	Input to detect existence of song during AMS mode
57 to 75	NCO	O	Not used
76	ST	I/O	Combination stereo input and monaural output
77	SD-IN	I	SIGNAL DETECTOR input terminal
78	REIN 1	I	Rotary encoder input terminal
79	REIN 0	I	
80	$\overline{\text{ADON}}$	O	Power supply control output of AD conversion
81	PW SEL	I	Power selection initialise
82	ILLON	O	Illumination power supply control output
83	REL	I	Input to detect rotation of reel table
84	POS3	I	Tape position signal detection input
85	POS2	I	
86	POS0	I	
87	POS1	I	
88	LM LOD	O	Loading motor control output (to a direction of loading)
89	LM EJ	O	Loading motor control output (to a direction of ejection)
90	TAPON	O	TAPE power supply control output When ‘on’ is output, “H” is output, otherwise when ‘off’ is output, “L” is output.
91	CM ON	O	Capstan motor control signal output terminal of TAPE
92	PW ON	O	System power supply control output
93	FM ON	O	FM power supply control output terminal
94	TUNON	O	TUNER power supply control output terminal
95	DAVSS	–	Ground
96 to 99	NCO	O	Not used
100	DAVDD	–	Not used (Power supply for DA converter)