

XR-C6100

SERVICE MANUAL

Saudi Arabia Model



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

Model Name Using Similar Mechanism	NEW
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 – 20,000 Hz
Signal-to-noise ratio	

Cassette type	Dolby B NR	Dolby NR off
TYPE II, IV	67 dB	61 dB
TYPE I	64 dB	58 dB

Tuner section

FM

Tuning range	FM tuning interval: 50 kHz/200 kHz switchable 87.5 – 108.0 MHz (at 50 kHz step) 87.5 – 107.9 MHz (at 200 kHz step)
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.5 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

MW

Tuning range	MW tuning interval: 9kHz/10kHz switchable 531 – 1,602 kHz (at 9kHz step) 530 – 1,710 kHz (at 10kHz step)
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SW

Tuning range	SW tuning interval: SW1: 2,940 – 7,735 kHz SW2: 9,500 – 18,135 kHz (except for 10,140 – 11,575 kHz)
Aerial terminal	External aerial connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	40 µV

– Continued on next page –

FM/MW/SW CASSETTE CAR STEREO



SONY®

SECTION 6 DIAGRAMS

6-1. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 μ PD78058GC-F58-3B9 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	DSEL	I	Destination setting terminal Frequency select switch (S502) input in this set “L”: MW 9k step or FM 50k step, “H”: MW 10k step or FM 200k step
2	RC IN0	I	Rotary remote commander shift key A/D input terminal
3	SD IN	I	Station detector detect input from the FM/AM tuner unit (TU1) Stop level for SEEK, BTM, etc. is determined SD is present at input of “H”
4	AVSS	—	Ground terminal (for A/D converter)
5	$\overline{\text{ST}}$	I/O	Input of FM stereo detection signal from FM/AM tuner unit (TU1), and output of forced monaural control signal to FM/AM tuner unit (TU1) (Commonly used for stereo display input and forced monaural output) FM stereo detection at input of “L”, forced monaural at output of “L”
6	PLLCE	O	PLL serial chip enable output to the FM/AM PLL (IC1)
7	AVREF1	I	Reference voltage (+5V) input terminal (for D/A converter)
8	PLLSI	I	PLL serial data input from the FM/AM PLL (IC1)
9	PLLSO	O	PLL serial data output to the FM/AM PLL (IC1)
10	PLLCKO	O	PLL serial data transfer clock signal output to the FM/AM PLL (IC1)
11	P-STIN	I	Polar stereo signal input terminal Not used (fixed at “H”)
12	LCD SO	O	Serial data output to the liquid crystal display driver (IC901)
13	LCDCKO	O	Serial data transfer clock signal output to the liquid crystal display driver (IC901)
14	LCDCE	O	Chip enable output to the liquid crystal display driver (IC901)
15	$\overline{\text{LCDINH}}$	O	Blank indicate control signal output to the liquid crystal display driver (IC901) “L”: no display
16	UNISI	I	Serial data input from the bus interface (IC701) (for SONY bus)
17	UNISO	O	Serial data output to the bus interface (IC701) (for SONY bus)
18	UNICKI	I	Serial data reading clock signal input terminal (for SONY bus)
19	UNICKO	O	Serial data transfer clock signal output to the bus interface (IC701) (for SONY bus)
20	$\overline{\text{BUSON}}$	O	Bus on/off control signal output to the bus interface (IC701) (for SONY bus) “L”: bus on
21	$\overline{\text{SYSRST}}$	O	Reset signal output to the bus interface (IC701) (for SONY bus) “L”: reset
22	$\overline{\text{AMPON}}$	O	Standby control signal output to the power amplifier (IC611) “L”: standby
23	$\overline{\text{AMP MUT}}$	O	Muting control signal output to the power amplifier (IC611) “L”: muting on
24	TUNON	O	Tuner system power supply on/off control signal output to the BA3918 (IC671) “H”: tuner on
25	FM ON	O	FM system power supply on/off control signal output to the BA3918 (IC671) “H”: FM on
26	PW ON	O	Main system power supply on/off control signal output to the BA3918 (IC671) “H”: power on
27	COLOR	I	Input terminal to set whether the illumination color change function is present or not “L”: illumination color change function is present (fixed at “L” in this set)
28	$\overline{\text{AMSON}}$	O	Tape auto music sensor control signal output to the CXA2510AQ (IC301) “L” is output to lower the gain for audio level at FF/REW
29	REL	I	Reel table rotation detect signal input from the take-up and supply reel sensor
30	$\overline{\text{MTLIN}}$	I	Input terminal to set whether the auto metal function is present or not “L”: auto metal function is present Not used this function in this set (fixed at “H”)
31	POS3	I	Tape position detect input from the tape operation switch on the mechanism block
32	POS2	I	
33	GND	—	Ground terminal
34	POS0	I	Tape position detect input from the tape operation switch on the mechanism block
35	POS1	I	
36	LM LOD	O	Loading/tape operation motor control signal output to the LB1638M (IC361) (For the loading direction and forward side operation) *1

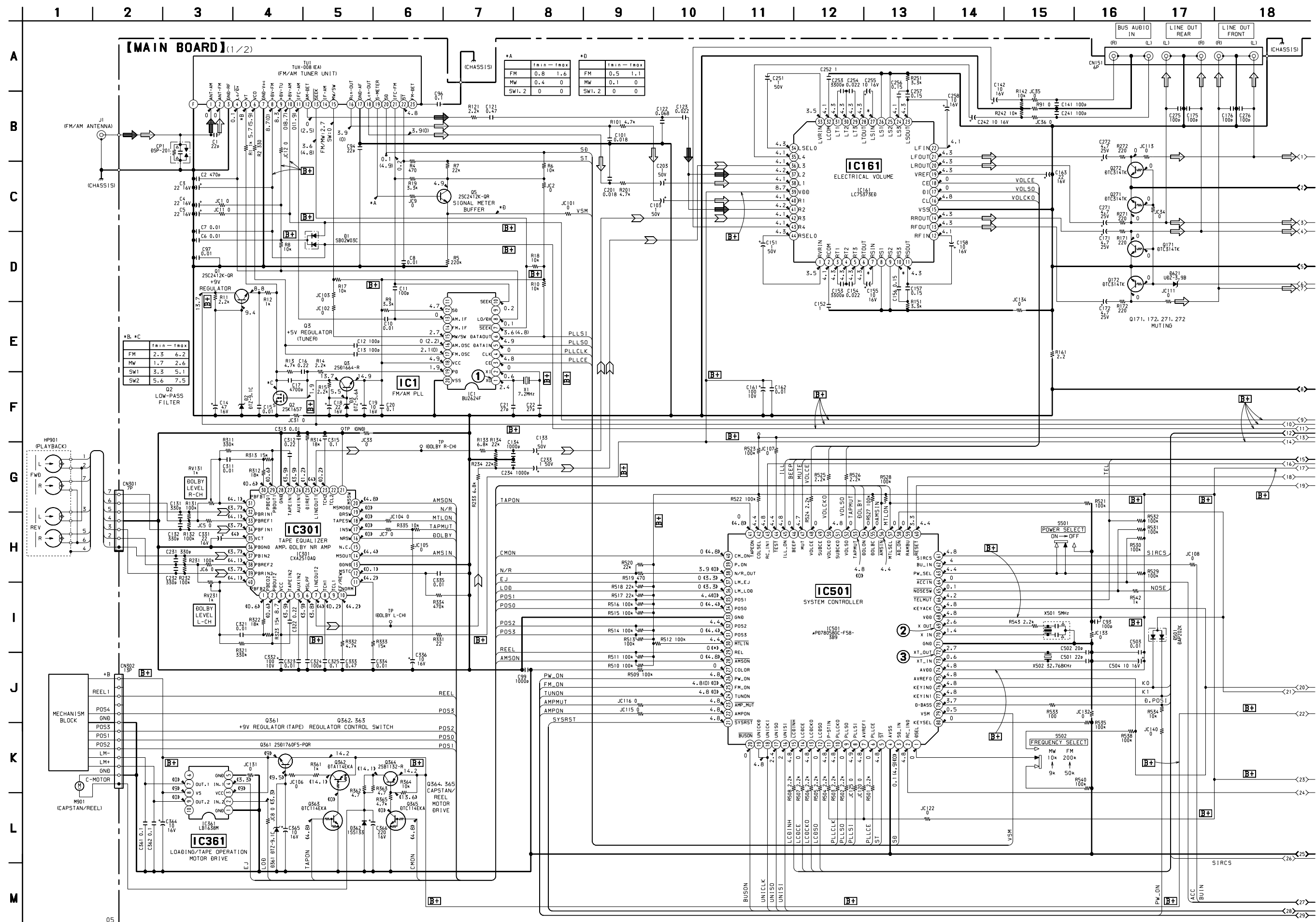
Pin No.	Pin Name	I/O	Function
37	LM EJ	O	Loading/tape operation motor control signal output to the LB1638M (IC361) (For the eject direction and reverse side operation) *1
38	$\overline{\text{N/R OUT}}$	O	Forward/reverse direction control signal output to the CXA2510AQ (IC301) “L”: forward direction, “H”: reverse direction
39	P.ON	O	Polar stereo detection signal output terminal “H”: polar stereo Not used (open)
40	CM ON	O	Capstan/reel motor (M901) drive signal output terminal “H”: motor on
41	TAPEON	O	Tape system power supply on/off control signal output terminal “H”: tape on
42	COLSEL	I	Setting terminal for the illumination color “L”: amber, “H”: green (fixed at “H”)
43	RC IN1	I	Rotary remote commander shift key A/D input terminal
44	$\overline{\text{TEST}}$	I	Setting terminal for the test mode “L”: test mode (normally fixed at “H”)
45	ILL ON	O	Power supply on/off control signal output terminal at the illumination and liquid crystal display driver (IC901) “H”: power on At power select switch (S501) on mode: “H” output at the accessory on At power select switch (S501) off mode: “H” output at the power on
46	BEEP	O	Beep sound signal output terminal
47	MUT	O	Line muting control signal output terminal “H”: line muting on
48	VOLCE	O	Chip enable signal output to the electrical volume (IC161)
49	SUBCE	O	Chip enable signal output terminal Not used in this set (open)
50	VOLCKO	O	Serial data transfer clock signal output to the electrical volume (IC161)
51	SUBCKO	O	Serial data transfer clock signal output terminal Not used in this set (open)
52	VOLSO	O	Serial data output to the electrical volume (IC161)
53	TAPMUT	O	Tape muting on/off control signal output to the CXA2510AQ (IC301) “H”: tape muting on
54	DOLON	I/O	Dolby control in/out terminal At initial mode: valid/invalid selection input of dolby function (“L” input: valid) At normal mode: dolby on/off control signal output to the CXA2510AQ (IC301) “H”: dolby on
55	DOLBC	I/O	Dolby B/C selection control in/out terminal At initial mode: dolby B only/dolby B and C type selection input (“L” input: dolby B and C) At normal mode: dolby type selection signal output “L”: dolby B, “H”: dolby C Not used this function (fixed at “H”)
56	$\overline{\text{AMSIN}}$	I	Whether a music is present or not from CXA2510AQ (IC301) is detected at auto music sensor “L”: music is present, “H”: music is not present
57	MTLSEL	I/O	METAL control in/out terminal At initial mode: auto/manual mode selection input of METAL function “L”: manual mode At manual mode: METAL on/off control signal output to the CXA2510AQ (IC301) “H”: METAL on At auto mode: input at $\overline{\text{MTLIN}}$ (pin 30)
58	$\overline{\text{AD ON}}$	O	Power supply on/off control signal output for the A/D converter “L”: power on
59	RAMBU	I	Internal RAM reset detection signal input from the RN5VD23AA (IC651) Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset
60	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC652) and reset switch (S503) “L” is input for several 100 msec after power on, then it changes to “H”
61	SIRCS	I	Sircs signal input from the remote control receiver (IC902)
62	BU IN	I	Battery detect signal input terminal “H”: battery on
63	PW SEL	I	Power select switch (S501) input terminal “L”: off (halt mode), “H”: on (operation mode)
64	$\overline{\text{ACCIN}}$	I	Accessory detect signal input terminal “L”: accessory on
65	$\overline{\text{NOSESW}}$	I	Detects the removal of the attaching and removing type front panel block “L”: attaching
66	$\overline{\text{TELMUT}}$	I	Telephone muting signal input terminal At input of “L”, the signal is attenuated by -20 dB

Pin No.	Pin Name	I/O	Function
67	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of “H”
68	VDD	—	Power supply terminal (+5V)
69	X OUT	O	Main system clock output terminal (5 MHz)
70	X IN	I	Main system clock input terminal (5 MHz)
71	GND	—	Ground terminal
72	XT OUT	O	Sub system clock output terminal (32.768 kHz)
73	XT IN	I	Sub system clock input terminal (32.768 kHz)
74	AVDD	—	Power supply terminal (+5V) (for A/D converter)
75	AVREF0	I	Reference voltage input terminal (+5V) (for A/D converter)
76	KEYIN0	I	Key input terminal (A/D input) OFF, SOURCE, MODE ◀▶, SEEK AMS + ▶▶▶▶, SEEK AMS ◀◀◀◀, VOLUME –, SEL, VOLUME +, DSPL, ATT keys input (LSW901 to LSW910)
77	KEYIN1	I	Key input terminal (A/D input) ▲, INTRO 1, REPEAT 2, SHUF/□ 3, BL SKIP 6, ATA 5, BANK/MTL 4, BTM LCL, FILE, PRESET DISC +/- keys input (LSW921 to LSW931)
78	D-BASS	I	D-BASS switch (SW951) input (A/D input)
79	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TU1)
80	KEYSEL	I	Setting terminal for the key (fixed at “L”)

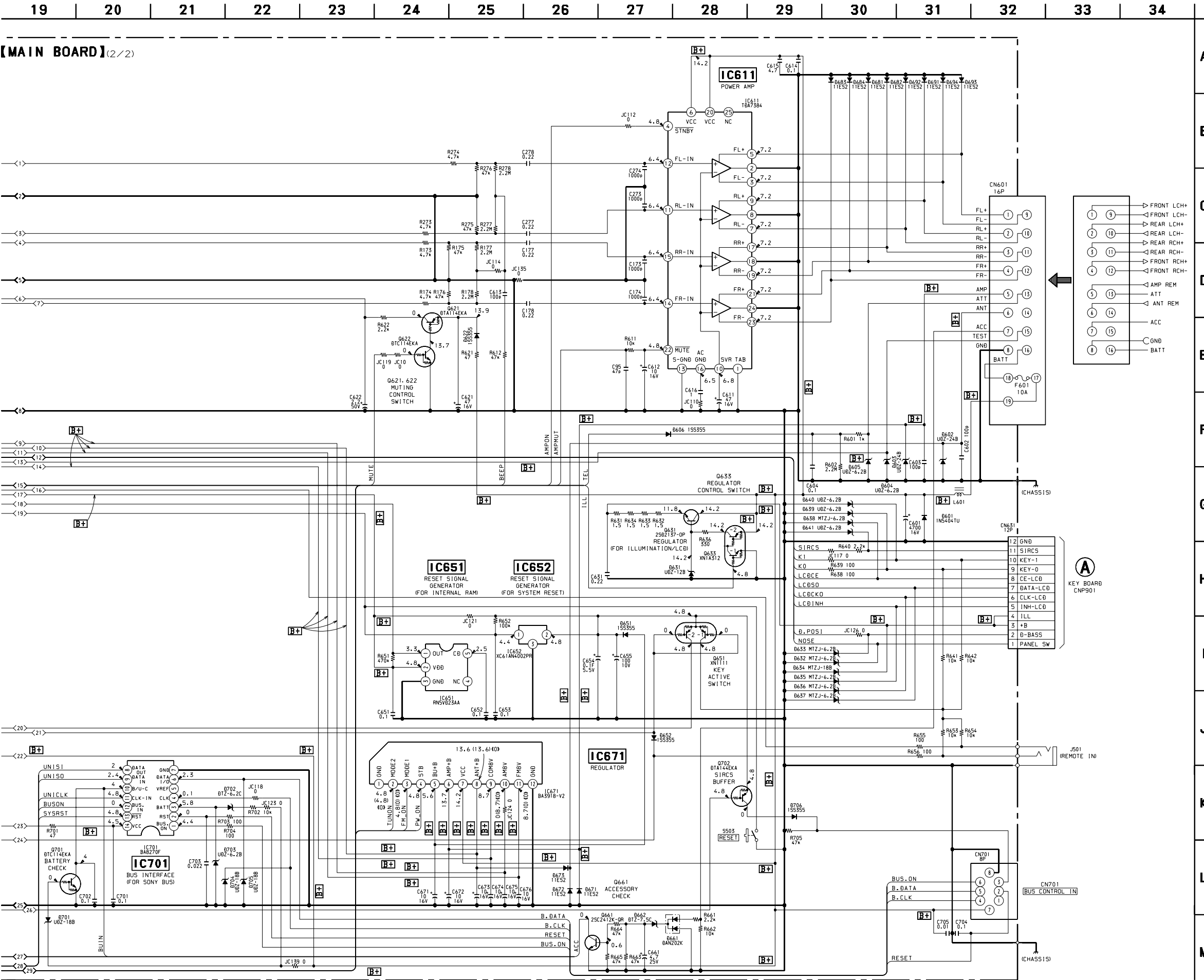
*1 loading/tape operation motor control

MODE TERMINAL	STOP	LOADING/ FORWARD	EJECT/ REVERSE	BRAKE
LM LOD (pin ③⑥)	“L”	“H”	“L”	“H”
LM EJ (pin ③⑦)	“L”	“L”	“H”	“H”

6-4. SCHEMATIC DIAGRAM – MAIN Section (1/2) – • See page 31 and 32 for IC Block Diagrams.

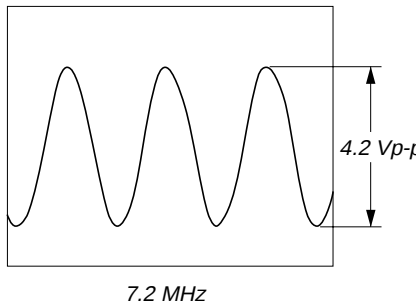


6-5. SCHEMATIC DIAGRAM – MAIN Section (2/2) – • See page 32 for IC Block Diagrams.

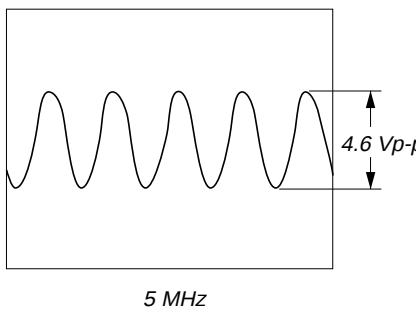


• Waveforms

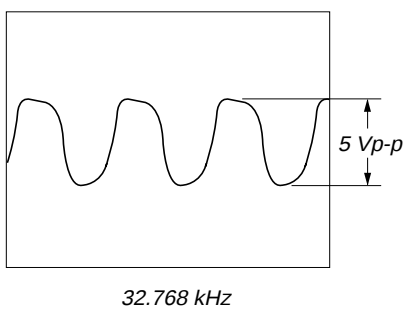
① IC1 ① (XO)



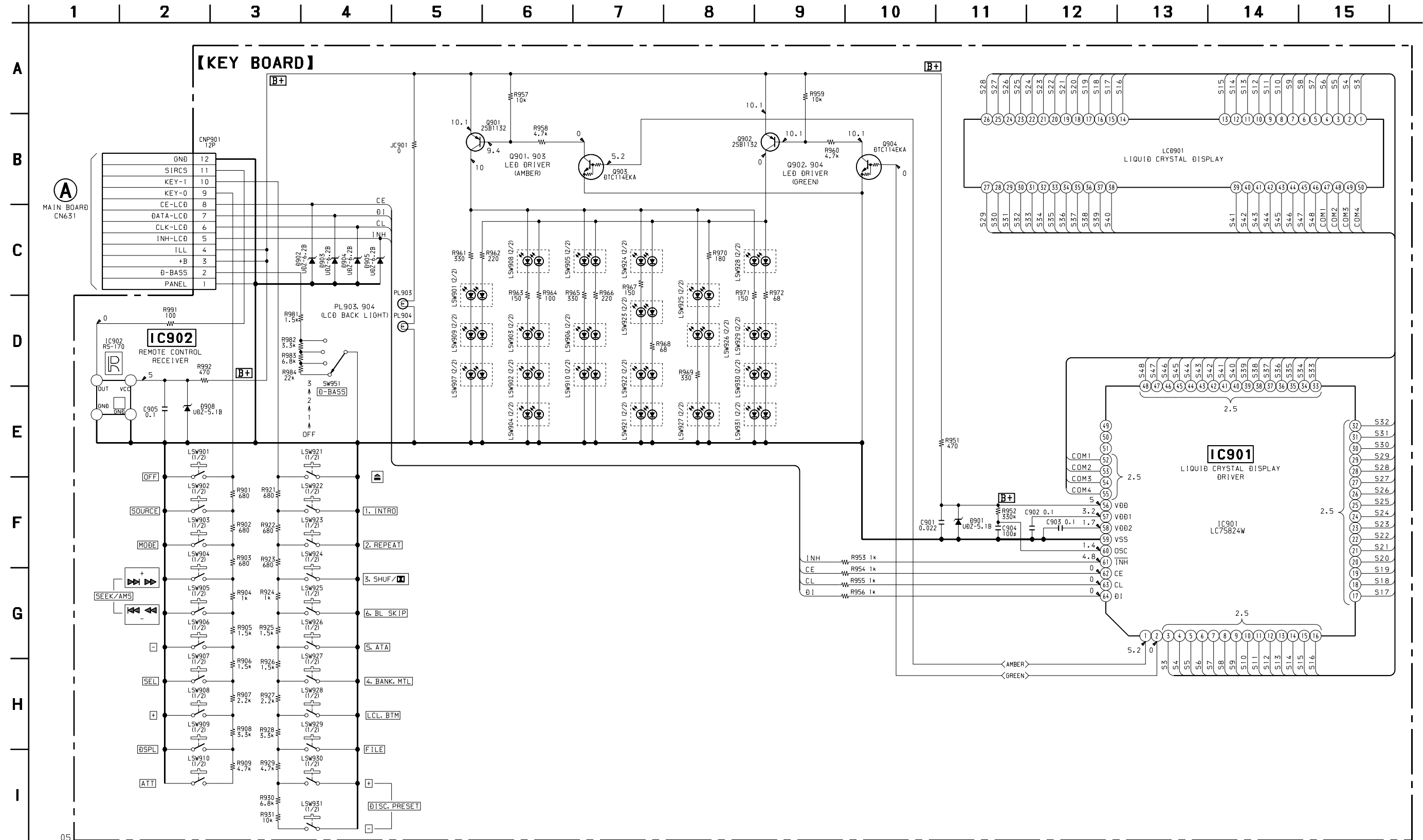
② IC501 ② (XOUT)



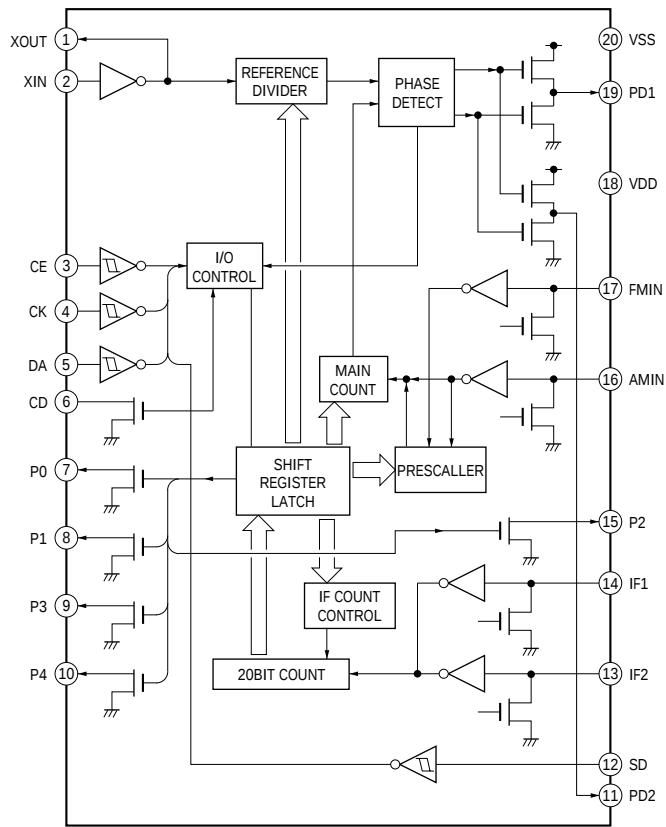
③ IC501 ③ (XT_OUT)



6-7. SCHEMATIC DIAGRAM – PANEL Section –



IC1 BU2624F-E2

[illegible]

The pin diagram shows the ADXL345 accelerometer with the following connections:

- Pin 1 (BUS ON):** Connected to Pin 14 (VCC).
- Pin 2 (RST):** Connected to Pin 13 (RST).
- Pin 3 (BATT):** Connected to Pin 10 (BU IN).
- Pin 4 (CLK):** Connected to Pin 11 (CLK IN) through an inverter.
- Pin 5 (VREF):** Connected to Pin 9 (DATA IN) through an inverter.
- Pin 6 (DATA):** Connected to Pin 8 (DATA OUT) through an inverter.
- Pin 7 (GND):** Ground connection.
- Pin 8 (DATA OUT):** Output pin, connected to Pin 6 (DATA) through an inverter.
- Pin 9 (DATA IN):** Input pin, connected to Pin 5 (VREF) through an inverter.
- Pin 10 (BU IN):** Connected to Pin 3 (BATT).
- Pin 11 (CLK IN):** Connected to Pin 4 (CLK) through an inverter.
- Pin 12 (BUS ON):** Connected to Pin 1 (BUS ON).
- Pin 13 (RST):** Connected to Pin 2 (RST).
- Pin 14 (VCC):** Connected to Pin 1 (BUS ON).