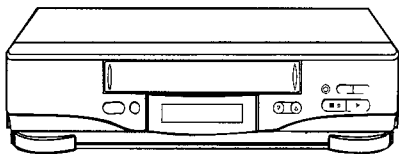
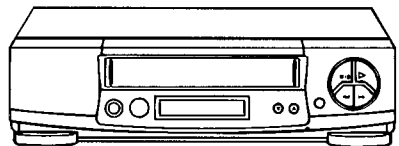


HITACHI

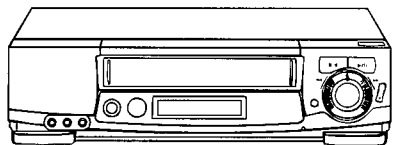
SERVICE MANUAL



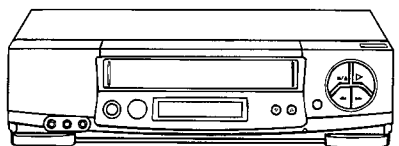
VT-FX750E(UKN)



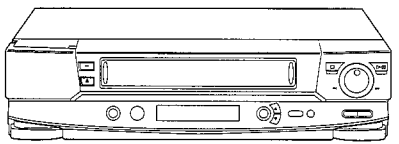
VT-FX75xE(VPS)(NA)



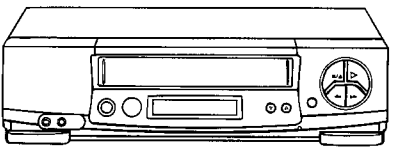
VT-FX760E



VT-FX765E



VT-FX770E



VT-MX730E

VHS

This video deck is a VHS type video recorder. For proper operation, only the VHS type cassette must be used.

TK

No.4806E

VT-FX750E(NA)(UKN)(VPS)
VT-FX751E/FX752E(VPS)
VT-FX760E(NA)(UKN)
VT-FX765E(UNK)
VT-FX770E(NAV)(UKN)
VT-MX730E(UK)

US MECHANISM

This service manual does not include information on the US Mechanism used in this model. Use this manual together with the following manual.

Manual related to the
VT-FX75xE/FX76xE/FX770E/MX730E

Name of manual	Manual No.	Chapters Included
US Mechanism	4527E	-----

VIDEO *plus+*
VIDEO *plus+*
DELUXE
SHOWVIEW
SHOWVIEW
DELUXE

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

VIDEO CASSETTE RECORDER

June

1998

Image & Information Media Systems Division, Tokai

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts have special safety-related characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for a higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual. Electrical components having such features are identified by marking with a \triangle on the schematics and the parts list in this Service Manual. The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards. Product safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies for, HITACHI Service Manual may be obtained at a nominal charge from HITACHI SALES CORPORATION.

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CHAPTER 1

GENERAL INFORMATION

SPECIFICATIONS

Format:	VHS PAL Standard	
Recording:	Rotary Two-Head Helical Scan Azimuth Recording	
Tape Speed:	23.39 mm/sec.--SP, 11.7 mm/sec.--LP	
Tape Width:	12.7 mm	
Operation Temperature:	5 °C TO 40 °C	
Video:	PAL colour (system I) & CCIR monochrome signals 625 lines [For UKN,UK] PAL colour (system B & G) & CCIR monochrome signals 625 lines [Except for UKN,UK]	
Recording Time:	240 min. with E-240 cassette--SP 480 min. with E-240 cassette--LP	
Aerial input:	VHF channels 2--12 CATV channels S1--S45] [Except for UKN, UK] CATV channels X--Z+2] UHF channels 21--69	
RF Output:	UHF channels 35 (22--69 adjustable) (System I) [For UKN, UK] UHF channels 37 (22--69 adjustable) (System G) [Except for UKN, UK]	
Video Input:	0.5 to 1.5 Vp-p 75 ohm Unbalanced	
Video Output:	1 Vp-p 75 ohm Unbalanced	
S/N Ratio (Video):	More than 43 dB	
Horizontal Resolution:	Colour 260 lines	
Audio (Linear)		
Input:	PERI: -3.8 dBm 10 Kohm, LINE: -7.8 dBm 50 Kohm	
Output:	PERI: -3.8 dBm 1 Kohm, LINE: -7.8 dBm 1 Kohm	
S/N Ratio:	43 dB	
Frequency Range:	70 Hz to 12 kHz	
Hi-Fi Audio [Except for MX730E]		
Frequency Range:	20 Hz to 20 kHz	
Dynamic Range:	More than 90 dB	
Wow and Flutter:	Less than 0.005% WRMS	
RF Audio Reception:	NICAM Digital stereo (I-PAL) [For (UKN)] NICAM Digital stereo (B/G-PAL), IGR (A2) Stereo (B/G) [For (NA),(NAV),(VPS)]	
Fast Forward/Rewind Time:	90secs. on S.FF or S.REW.	
Fast Forward/Rewind Time:	90secs. on S.FF or S.REW. [For MX730E]	
Power:	AC230V, 50 Hz	
Power Consumption:	18 W (including timer)] [For MX730E] 3.1 W (standby mode)] 21 W (including timer)] [Except for FX770E/MX730E] 3.3 W (standby mode)] 22 W (including timer)] [For FX770E] 3.9 W (standby mode)]	
Timer:	24-hour digital indication	
Cabinet Size:	380 mm (W) × 93 mm (H) × 275 mm (D) [Except for FX760E(UKN)/FX770E] 380 mm (W) × 93 mm (H) × 279 mm (D) [For FX760E(UKN)] 435 mm (W) × 98 mm (H) × 282 mm (D) [For FX770E]	
Weight:	Approx.. 3.5 kg [Except for FX770E] Approx.. 4.3 kg [For FX770E]	
Accessories Included:	1--Aerial cable 1--Infrared remote control handset 2--Batteries	

* Design and specifications are subject to change without notice.

COMPARISON OF FEATURES

	ITEM	VT-FX75xE/FX76xE/FX770E/MX730E	VT-F55xE/F64xE/F650E/F660E
GENERAL	VIDEO HEADS	DA4 Heads + Hi-Fi (Except for MX730E) DA4 Heads (For MX730E) SP : 48 µm LP : 24 µm Hi-Fi : 28 µm	DA4 Heads + Hi-Fi SP : 48 µm LP : 24 µm Hi-Fi : 28 µm
	BASIC CHASSIS TYPE	US	US
	CAPSTAN DRIVE	DIRECT DRIVE	DIRECT DRIVE
	CYLINDER MOTOR	THREE-PHASE OUTER ROTOR : 360Hz	THREE-PHASE OUTER ROTOR : 360Hz
VIDEO	PAL COLOUR	B/G (Except for UKN,UK) I (For UKN,UK)	B/G (Except for UKN) I (For UKN)
	MESECAM COLOUR	YES (For FX770E)	YES (For F660E)
TUNER	TUNING SYSTEM	F.S TUNING	F.S TUNING
	CATV	YES (Except for UKN,UK)	YES (Except for UKN)
	CHANNEL PRESET No.	49CH	49CH
	RF CONVERTER	B/G (Except for UKN,UK) I (For UKN,UK)	B/G (Except for UKN) I (For UKN)
	RF CONV. CHANNEL (32-42)	37 (Except for UKN,UK) 35 (For UKN,UK)	37 (Except for UKN) 35 (For UKN)
	A2	YES (Except for UKN,UK)	YES (Except for UKN)
	UK NICAM	YES (For UKN)	YES (For UKN)
	CT NICAM	YES (For NA,NAV)	YES (For NA,NAV)
TIMER	REC. PROGRAMME	8 PROG./1 YEAR	8 PROG./1 YEAR
	DIMMER	YES (AUTO)	YES (AUTO)
	IRT	LENGTH ONLY (For FX770E)	LENGTH ONLY (For F660E)
	BACK-UP TIME	ABOUT 30 MIN.	ABOUT 30 MIN.
	PDC	YES (Except for VPS)	YES (Except for VPS)
	VPS	YES (Except for NA)	YES (Except for NA)
OTHER FEATURES	AUTO HEAD CLEANING	YES	YES (Except for F640E)
	POWER SAVE	YES	YES
	EDIT IN/OUT JACK	NO	NO
	TAPE SPEED	SP/LP	SP/LP
	VIDEO DUB	NO	YES (For F660E)
	AUDIO DUB	NO	YES (MONAURAL) (For F660E)
	X2 PLAY	NO	NO
	SLOW/REV.SLOW PLAY	YES	YES
	F.ADV PLAY	YES	YES
	SATELLITE CONTROL	YES (For FX770E/FX765E,FX760E)	YES (For F645E/F650E/F660E)
	SHUTTLE RING	YES (For FX770E/FX760E)	YES (For F650E/F660E)
	JOG DIAL	YES (For FX770E)	YES (For F660E)
	NTSC PLAYBACK	YES (For FX770E)	YES (For F660E)
	FRONT A/V INPUT JACK	YES (Except for FX75xE)	YES (Except for F640E)
	COUNTER GO-TO	NO	NO
	TITLE INDEX	NO	NO
TROUBLE MODE	YES	YES	
TAPE NAVIGATION	YES (For FX770E)	NO	
CLOSED CAPTION	YES (For FX770E)	NO	
AUTO FEATURES	AUTO TRACKING	YES	YES
	AUTO OPERATE ON	YES	YES
	AUTO PLAY	YES	YES
	AUTO REWIND	YES	YES
	AUTO REW.SHUT OFF	YES	YES
	AUTO INSTALL	YES (For UKN,UK)	NO
	AUTO SEEK	YES (For UKN,UK)	NO
	AUTO TAPE CANCELLER	YES	YES
REMOTE CONTROL	PROGRAMME SETTING	LCD (For FX770E)	LCD (For F660E)
	CLOCK SETTING	LCD (For FX770E)	LCD (For F660E)
	VCR1/VCR2/TV	YES (For FX770E)	YES
	SHOW VIEW	YES (Except for UKN,UK)	YES (Except for UKN)
	VIDEO PLUS+	YES (For UKN,UK)	YES (For UKN)

COMPARISON OF MAIN CONTROL ICs

ITEM	VT-FX75xE/FX76xE/FX770E/MX730E	VT-F55xE/F64xE/F650E/F660E
VIDEO SYSTEM		
Y/CHROMA PROCESS	HA118211F (IC0201)	HA118203F (IC0201)
CCD DELAY	Included in IC201	MSM7470-71MS (IC0202)
PRE/REC AMP		
AUDIO HEAD AMP	AN3329S (IC1102)	LA7256 (IC1102)
VIDEO HEAD AMP	Included in IC201	HA118198F (IC1101)
AUDIO		
FM AUDIO PROCESS	AN3964FB (IC0501)	AN3964FB (IC0501)
MAIN CONTROL		
MAIN μ P (system control μ P)	HD6433977SC10F or 14F [FX75xE/FX76xE(UKN)] HD6433977SC11F [VPS,NA] HD6433977SC13F [FX770E] HD6433977SC14F [MX730E] (IC0901)	HD6433977SB54F [F55xE/F640E] HD6433977SB55F [F660E] HD6433977SB56F [F645E/F650E] (IC0901)
EEPROM	ST24C02 6 [FX770E] ST24C04 [Except for FX770E] (IC0903)	ST24C02 (IC0903)
TAPE LOADING DRIVE	BA6209 (IC0904)	BA6209 (IC0904)
SERVO CONTROL	Included in Main μ p	Included in Main μ p
NICAM (Except for VPS)		
NICAM DECORDER	TDA9874H (IC1801)	SAA7283GP (IC1801)
DUAL OPE. AMP	NJM4558M (IC1802)	NJM4558M (IC1802)
A2 (For VPS)		
ST/DUAL SOUND PROCESSOR	TDA9840T (IC1871)	TDA9840T (IC1851)
FM DEMODULATOR	TDA9821 (IC1872)	TDA9821 (IC1852)
PDC/VPS		
PDC/VPS DECODER	SDA5650 or SDA5649 (IC4581)	SDA5649 or SDA5649 (IC4581)
POWER SUPPLY		
SWITCHING DRIVER	STR-F6653 (IC0851)	FS3KM-18A (Q0851)
REAR JACK		
AUDIO SW	LA7151 (IC4551)	LA7151 (IC4551)
VIDEO SW	BH7633AS (IC4501)	BH7633AS (IC4501)
TAPE NAVIGATION (For FX770E)		
CCD μ P (NAVI control)	M37272M8-117SP (IC4301)	-----
OSD	MB90089-214FP (IC4101)	-----
E ² P ROM	AT24C16 (IC4302)	-----
RESET	RN5V545AA (IC4303)	-----
SYNC SEPARATER	MM1108XFFE (IC4304)	-----
VIDEO SW	NJM2249M (IC4103)	-----
VIDEO SW	NJM2535M (IC4102)	-----

TIPS FOR SERVICING

TROUBLE DISPLAY FUNCTION

This VCR has a function which displays mechanism malfunctions, etc. in the LCD display. Use this function to analyze the cause when the power is shut off due to a malfunction, etc. in the mechanism.

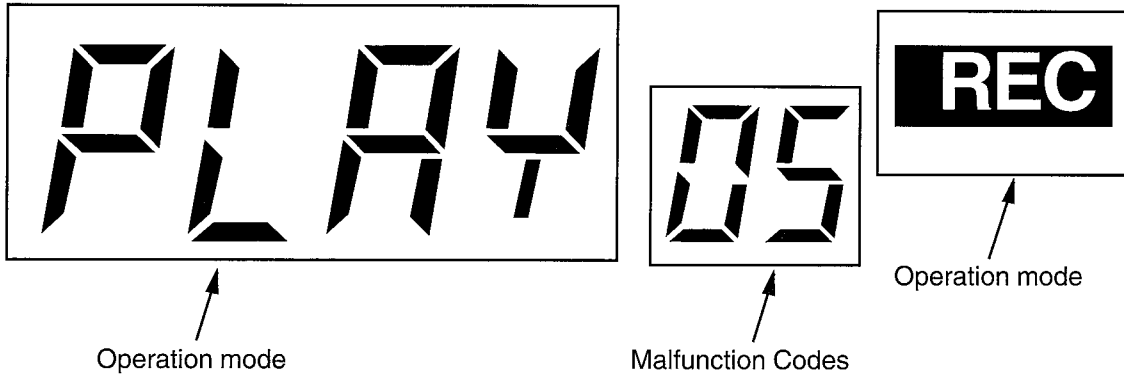
Two types of information are displayed, 1) The operation mode when the malfunction occurred, 2)Malfunction Codes.

The details of the malfunction are displayed as follows.

PROCEDURE TO DISPLAY A MALFUNCTION

Press the (CH ▼) button on the VCR when the power is turned off and hold it; the malfunction code is displayed while the button is held depressed.

LCD DISPLAY



【Display of details of malfunction】

Displayed No.	Item	Details
" 0 0 "	No malfunction	
" 0 1 "	FL mechanism lock	Malfunction in insertion/ejection of cassette
" 0 2 "	Capstan lock unloading	Malfunction of capstan motor drive during tape
" 0 4 "	Reel lock	Reel rotation trouble when tape is running
" 0 6 "	Cylinder lock	Cylinder rotation malfunction
" 0 7 "	Loading mechanism lock	Malfunction in shifting mechanism mode
" 1 6 "	Servo lock	Shorting of 5V detected

【Mode Display when Malfunction Has Occurred】

Mode	Display	Mode	Display
Stop	No Display	Playback	PLAY
Fast forward	FF	Reverse playback	-PLAY
Rewind	REW	Forward search	SRCH
High speed fast forward	FF	Reverse search	-SRCH
High speed rewind	REW	Slow motion play	SLOW
Recording	REC	Reverse motion slow play	-SLOW
Recording pause	REC (flashes)	Still motion play	STILL

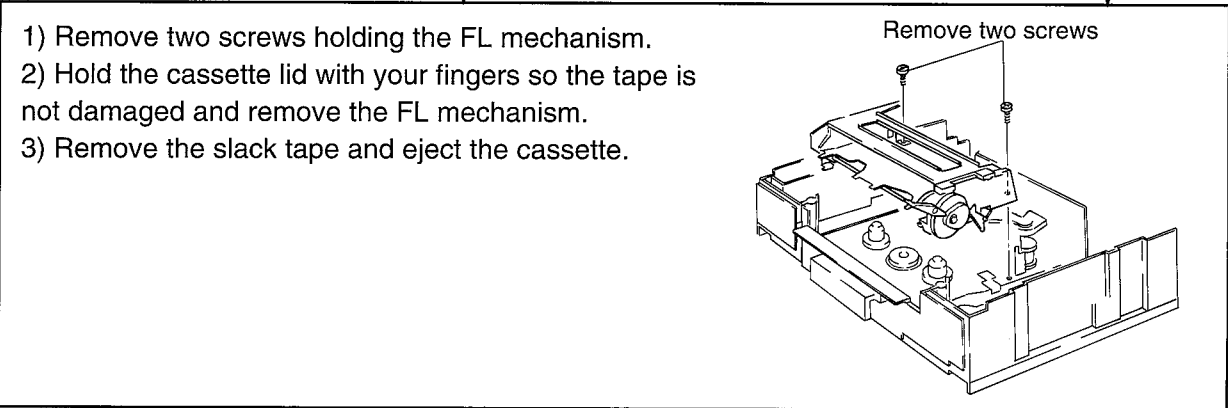
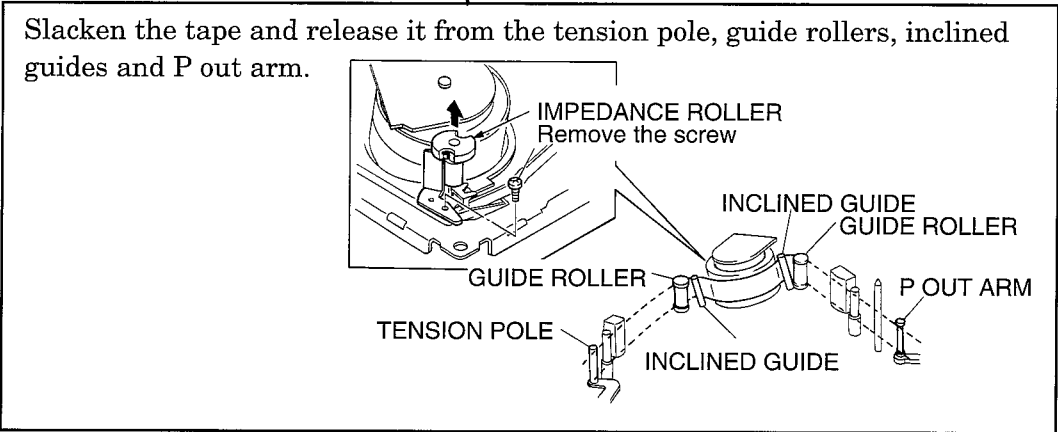
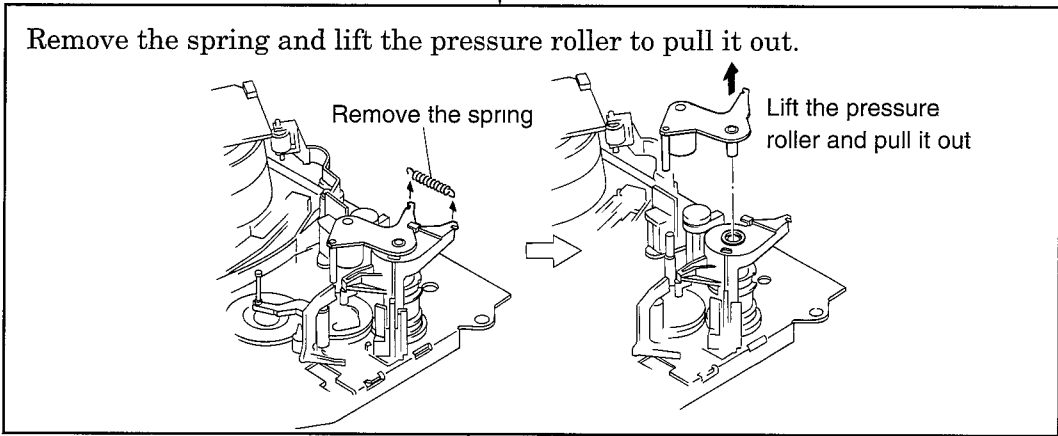
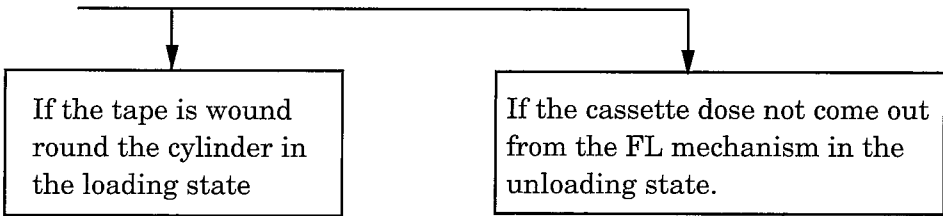
No symbols are displayed if the malfunction occurred when a cassette was inserted or ejected, or the power was switched on from off, and off from on.

How to Remove the Cassette when a Malfunction Has Occurred in the Mechanism

If a cassette is caught in the mechanism because of a malfunction in the mechanism, remove it by the following procedure.

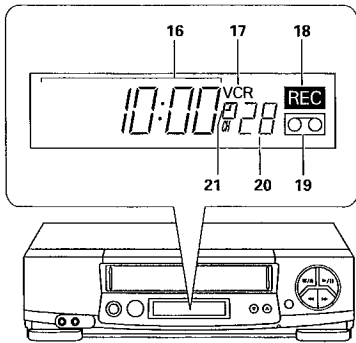
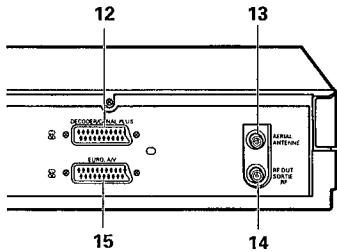
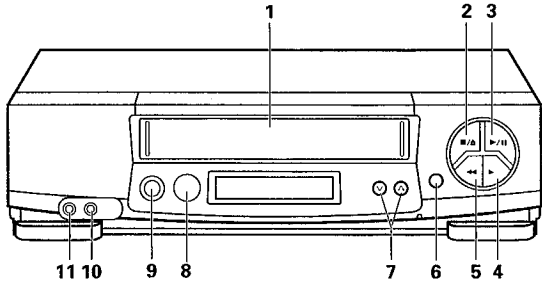
[Work Procedure]

1. Remove the top cover.
2. Remove the front panel.



CUSTOMER CONTROLS

VCR Customer Controls

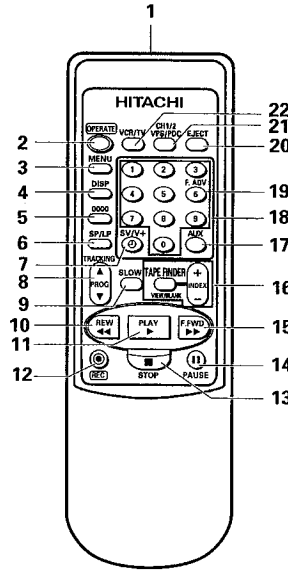


Item No	Function	Page
1	Cassette compartment	20
2	STOP/EJECT button	23
3	PLAY/STILL button	22
4	F FWD button	-
5	REW button	-
6	REC button	25
7	PROG (programme up/down) buttons	11
8	Remote control receiving window	9
9	OPERATE (Operate/Standby) button	2
10	AUDIO IN (L-mono)	41
11	VIDEO IN socket	41
12	Decoder socket	43
13	AERIAL — signal input	6
14	RF OUT — signal out to TV	6
15	Scart socket	7
VCR Display		
16	Time,	19
	Time counter or	36
	VCR mode indicator	22
	PLAY — playback	22
	SRCH — visual search	23
	SLOW — slow play	22
	REW — rewind	23
	S:REW — high speed rewind	23
	FF — fast forward	23
	S:FF — high speed fast forward	23
	STILL — play pause and frame advance	22
17	VCR, operate mode	22
18	REC — record (flashes during record pause)	25
19	Tape-in indicator	20
20	TV programme number or Auxiliary (L1/L2/L3)	25 41
21	Timer indicator	27

["-"] appears during reverse direction viewing

CUSTOMER CONTROLS

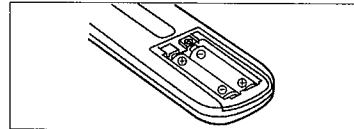
Remote Control Handset Customer Controls



Item No.	Function	Page
1	Transmission window	9
2	OPERATE—switch between operate and standby mode	27
3	MENU — to recall OSD menu	39
4	DISP — to recall on-screen display, change VCR's display	40
5	0000 — to correct an incorrect digit, reset the time counter when it appears in the VCR's display	19 36
6	SP/LP—changes tape speed during record	20
7	V+ — VIDEO Plus+ programming	28
8	PROG (programme up ▲/down ▼) button TRACKING button	11 24
9	SLOW button — press during playback to view slow motion picture	22
10	REW — fast rewind or search	23
11	PLAY — playback	22
12	REC — record button	25
13	STOP — stops play/record function	26
14	PAUSE — pause or still	22
15	F FWD — fast forward or search	23
16	TAPE FINDER buttons — used for Index search, Easy View and Blank Search Function	37
17	AUX button — select L1,L2 or L3 input	41
18	Number buttons	19
19	F ADV button — advance the picture by one frame during still playback	22
20	EJECT button — press to eject a cassette	20
21	CH1/2 NOT APPLY FOR VT-MX730E(UK) PDC button	49
22	VCR/TV select button	22

REMOTE OPERATION

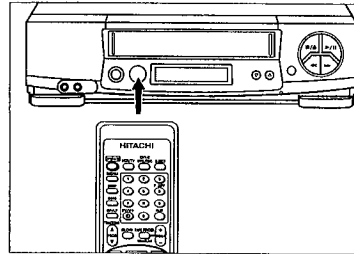
Power source of infrared remote control handset



The infrared remote control handset is powered by two batteries (size IEC standard R6) The life of the batteries is about a year although this depends on the number of times the handset is used

Replace the batteries when operation is not possible or when the operating distance becomes too small

Note: When replacing the batteries, remove the used batteries and press the OPERATE button and hold it pressed for 10 seconds, then insert the new batteries



Remote operations

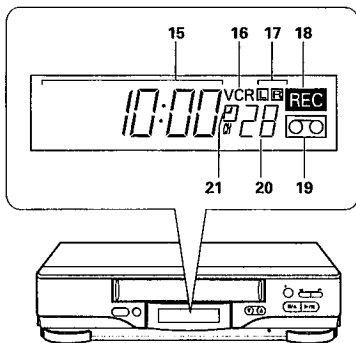
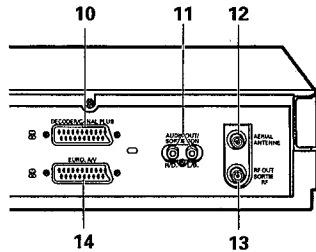
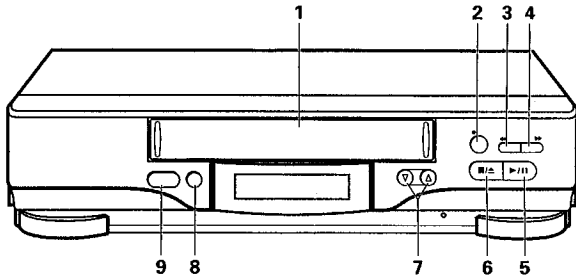
To operate this VCR with the remote control handset, point the remote control handset at the receiver on the front of the VCR

- VT-MX730E - The following are extracts from the instruction manual.

Instructions on Use and Description of New Functions

CUSTOMER CONTROLS

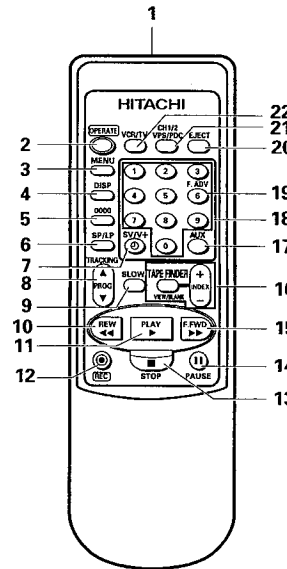
VCR Customer Controls



Item No.	Function	Page
1	Cassette compartment	20
2	REC button	25
3	Rewind button	23
4	Fast forward button	23
5	PLAY /STILL button	22
6	STOP/EJECT button	23
7	PROG (programme up/down) buttons	12
8	Remote control receiving window	9
9	OPERATE (Operate/Standby) button	2
10	Decoder socket	45
11	AUDIO OUT (L), (R) sockets for stereo system connection	43
12	AERIAL — signal input	6
13	RF OUT — signal out to TV	6
14	Scart socket	7
VCR Display		
15	Time, Time counter or VCR mode indicator	19
	PLAY — playback	22
	SRCH — visual search	22
	SLOW — slow play	22
	REW — rewind	23
	S:REW — high speed rewind	23
	FF — fast forward	23
	S:FF — high speed fast forward	23
	STILL — play pause and frame advance	22
16	VCR, operate mode	22
17	Audio indicators	24
18	REC — record (flashes during record pause)	25
19	Tape-in indicator	20
20	TV programme number or Auxiliary (L1/L2)	26
21	Timer indicator	28

CUSTOMER CONTROLS

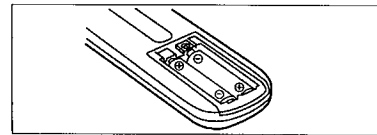
Remote Control Handset Customer Controls



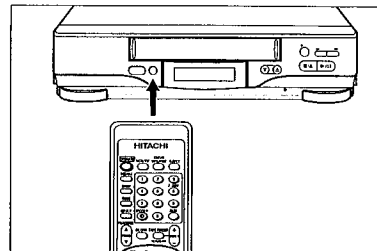
Item No.	Function	Page
1	Transmission window	9
2	OPERATE — switch between operate and standby mode	28
3	MENU — to recall OSD menu	40
4	DISP — to recall on-screen display, change VCR's display	41
5	0000 — to correct an incorrect digit, reset the time counter when it appears in the VCR's display	19
6	SP/LP — changes tape speed during record	37
7	V+ — VIDEO Plus+ programming	20
8	PROG (programme up /down) button	29
9	TRACKING button	12
9	SLOW button — press during playback	24
10	REW — fast rewind or search	22
11	PLAY — playback	23
12	REC — record button	25
13	STOP — stops play/record function	23
14	PAUSE — pause or still	22
15	F FWD — fast forward or search	23
16	TAPE FINDER button used for Index Search, Easy View and Blank search function	38
17	AUX button — select L1 or L2 input	43
18	Number buttons	19
19	F ADV button — advance the picture by one frame during still playback	22
20	EJECT button — press to eject a cassette	20
21	CH1/2 button	26
21	VPS/PDC button	52
22	VCR/TV select button	22

REMOTE OPERATION

Power source of infrared remote control handset



The infrared remote control handset is powered by two batteries (size IEC standard R6). The life of the batteries is about a year although this depends on the number of times the handset is used. Replace the batteries when operation is not possible or when the operating distance becomes too small. **Note:** When replacing the batteries, remove the used batteries and press the OPERATE button and hold it pressed for 10 seconds, then insert the new batteries.

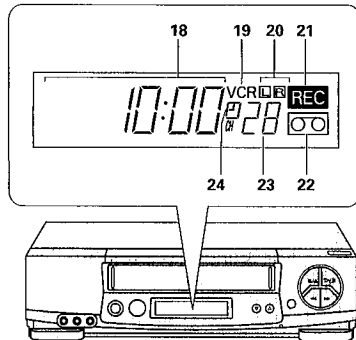
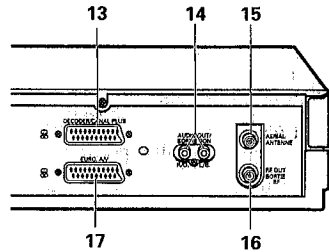
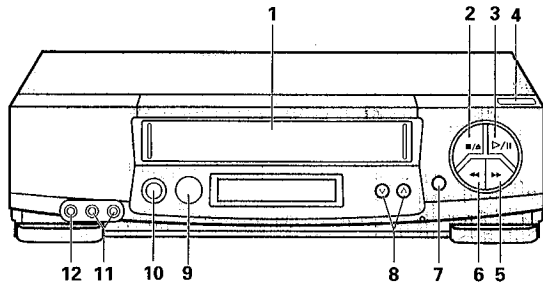


Remote operations

To operate this VCR with the remote control handset, point the remote control handset at the receiver on the front of the VCR.

CUSTOMER CONTROLS (VT-FX765E(UKN) ONLY)

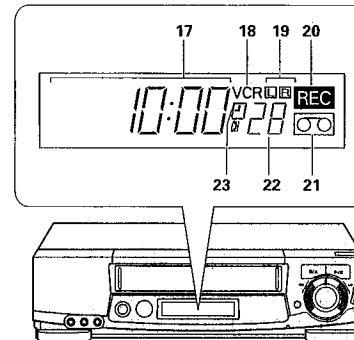
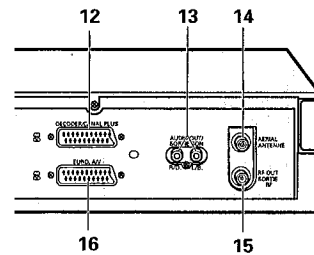
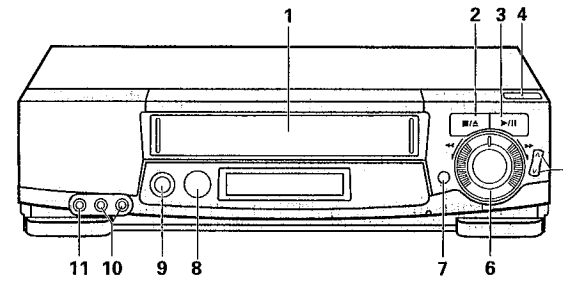
VCR Customer Controls



Item No	Function	Page
1	Cassette compartment	21
2	STOP/EJECT button	24
3	PLAY/STILL button	23
4	Infrared transmitter	49
5	F FWD button	-
6	REW button	-
7	REC button	27
8	PROG (programme up/down) buttons	14
9	Remote control receiving window	10
10	OPERATE (Operate/Standby) button	2
11	AUDIO IN (L-mono),(R) sockets	45
12	VIDEO IN socket	45
13	Decoder socket	47
14	AUDIO OUT (L, (R) sockets for stereo system connection	-
15	AERIAL — signal input	6
16	RF OUT — signal out to TV	6
17	Scart socket	7
VCR Display		
18	Time,	20
	Time counter or VCR mode indicator	39
	PLAY — playback	23
	SRCH — visual search	24
	SLOW — slow play	23
	REW — rewind	24
	S:REW — high speed rewind	24
	FF — fast forward	24
	S:FF — high speed fast forward	24
	STILL — play pause and frame advance	23
19	VCR, operate mode	23
20	Audio indicators	25
21	REC — record (flashes during record pause)	27
22	Tape-in indicator	21
23	TV programme number or Auxiliary (L1/L2/L3)	27
24	Timer indicator	30

CUSTOMER CONTROLS (VT-FX760E(UKN) ONLY)

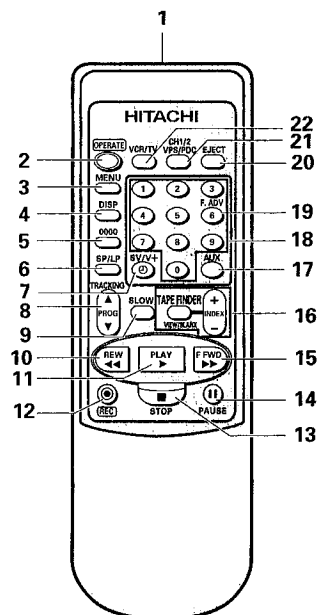
VCR Customer Controls



Item No	Function	Page
1	Cassette compartment	21
2	STOP/EJECT button	24
3	PLAY/STILL button	23
4	Infrared transmitter	49
5	PROG (programme up/down) buttons	14
6	Shuttle ring	26
7	REC button	27
8	Remote control receiving window	10
9	OPERATE (Operate/Standby) button	2
10	AUDIO IN (L-mono),(R) sockets	45
11	VIDEO IN socket	45
12	Decoder socket	47
13	AUDIO OUT (L, (R) sockets for stereo system connection	-
14	AERIAL — signal input	6
15	RF OUT — signal out to TV	6
16	Scart socket	7
VCR Display		
17	Time,	20
	Time counter or VCR mode indicator	39
	PLAY — playback	23
	SRCH — visual search	24
	SLOW — slow play	23
	REW — rewind	24
	S:REW — high speed rewind	24
	FF — fast forward	24
	S:FF — high speed fast forward	24
	STILL — play pause and frame advance	23
18	VCR, operate mode	23
19	Audio indicators	25
20	REC — record (flashes during record pause)	27
21	Tape-in indicator	21
22	TV programme number or Auxiliary (L1/L2/L3)	27
23	Timer indicator	30

CUSTOMER CONTROLS (COMMON FOR VT-FX760E and VT-FX765E)

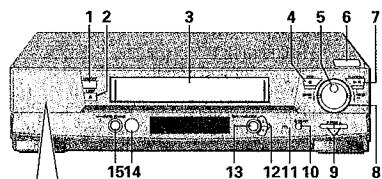
Remote Control Handset Customer Controls



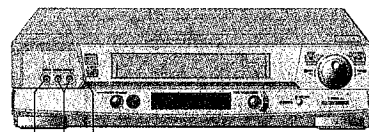
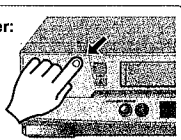
Item No.	Function	Page
1	Transmission window	10
2	OPERATE—switch between operate and standby mode	30
3	MENU — to recall OSD menu	42
4	DISP —to recall on-screen display, change VCR's display	43
5	0000 —to correct an incorrect digit, reset the time counter when it appears in the VCR's display	20 39
6	SP/LP—changes tape speed during record	21
7	V+ — VIDEO Plus+ programming	31
8	PROG (programme up ▲/down ▼) button TRACKING button	13 25
9	SLOW button — press during playback to view slow motion picture	23
10	REW — fast rewind or search	24
11	PLAY — playback	23
12	REC — record button	27
13	STOP — stops play/record function	24
14	PAUSE — pause or still	23
15	F FWD — fast forward or search	24
16	TAPE FINDER buttons — used for Index search, Easy View and Blank Search Function	40
17	AUX button — select L1,L2 or L3 input	34
18	Number buttons	20
19	F ADV button — advance the picture by one frame during still playback	23
20	EJECT button — press to eject a cassette	21
21	CH1/2 button PDC button	25 59
22	VCR/TV select button	23

CUSTOMER CONTROLS

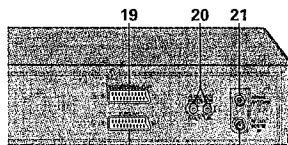
VCR Customer Controls



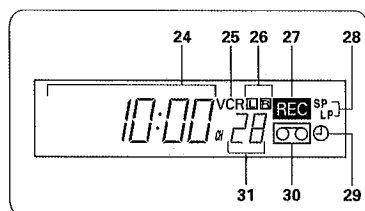
To open the cover:
Pull the cover forward



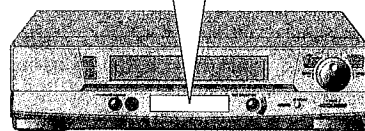
18 17 16



23 22

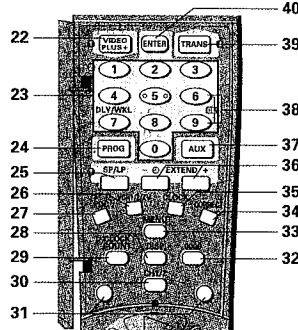
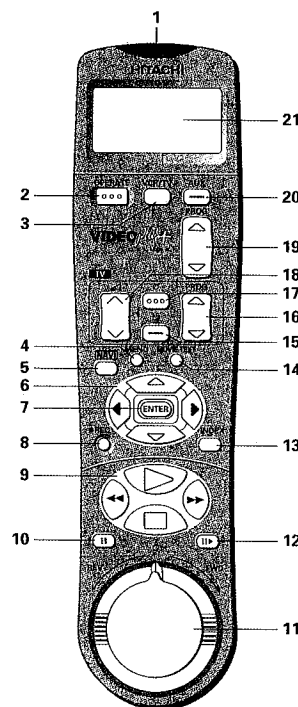


31 30 29



Item No.	Function	Page
1	OPERATE (Operate/Standby) button	2
2	EJECT button	21
3	Cassette compartment	21
4	STOP button	24
5	Jog dial	26
6	Infrared transmitter	62
7	PLAY/STILL button	23
8	Shuttle ring	26
9	PROG (programme up/down) buttons	13
10	REC/IRT button	27
11	REC (record) indicator — lights during recording (including timer recording and IRT) and recording pause	27
12	Tape navigation programme select up/down buttons	40
13	TAPE NAVIGATION button	40
14	Remote control receiving window	10
15	SUPER REWIND button	24
16	Reset switch	71
17	AUDIO IN (L-mono),(R) sockets	56
18	VIDEO IN socket	56
19	Decoder socket	60
20	AUDIO OUT (L), (R) sockets for stereo system connection	-
21	AERIAL — signal input	6
22	RF OUT — signal out to TV	6
23	Scart socket	7
VCR Display		
24	Time, VCR mode indicator, PLAY — playback, SRCH — visual search, SLOW — slow play, REW — rewind, S:REW — high speed rewind, FF — fast forward, S:FF — high speed fast forward, STILL — play pause and frame advance	20 23 23 23 23 24 24 24 24 23
25	VCR, operate mode	23
26	Audio indicators	25
27	REC — record (flashes during record pause)	27
28	Tape speed SP/LP	27
29	Timer indicator	31
30	Tape-in indicator	27
31	TV programme number or Auxiliary (L1/L2/L3)	56

Remote Control Handset Customer Controls



Item No.	Function	Page
1	Transmission window	10
2	OPERATE — switch between operate and standby mode	31
3	VCR/TV select button	23
4	MENU — to recall OSD menu	51
5	NAVI button	40
6	Cursor buttons	13
7	ENTER button	13
8	REC — record button	27
9	Tape transport button	23
	▶ — playback	
	◀ — fast rewind or search	
	▶ — fast forward or search	
	◻ — stops play/record function	
10	Pause/still button	23
11	Shuttle knob	26
12	Frame advance during still	23
13	INDEX button — INDEX feature	50
14	MOVIE TEXT button	47
15	TV mute button	68
16	TV PROG button	68
17	TV Operate button	68
18	TV volume buttons	68
Note: Four buttons 15 – 18 are used only when operating the TV		
19	PROG (programme up/down) button	13
20	AUX button — select L1, L2 or L3 input	56
21	Display clock/timer programme information	20
22	VIDEO Plus+ programming	32
23	Number buttons	20
24	PROG — to enter timer programme information	35
25	SP/LP — changes tape speed during record	21
26	VCR1/2/TV select button	10
27	PDC button	75
28	DISP — to recall on-screen display	49
29	CLOCK/COUNT — changes VCR display	48
30	CH1/2 button	25
31	These buttons are not used	-
32	0000 — clears time counter	48
33	MENU — to recall OSD menu	51
34	CORRECT button	20
35	CLOCK — enter or correct time on handset	20
36	⊖ EXTEND (- or +)	32
37	AUX — to select L1, L2 or L3 input	35
38	CL buttons — mode lock	49
39	TRANS button — transmits data	33
40	ENTER button — to enter PlusCode number	32

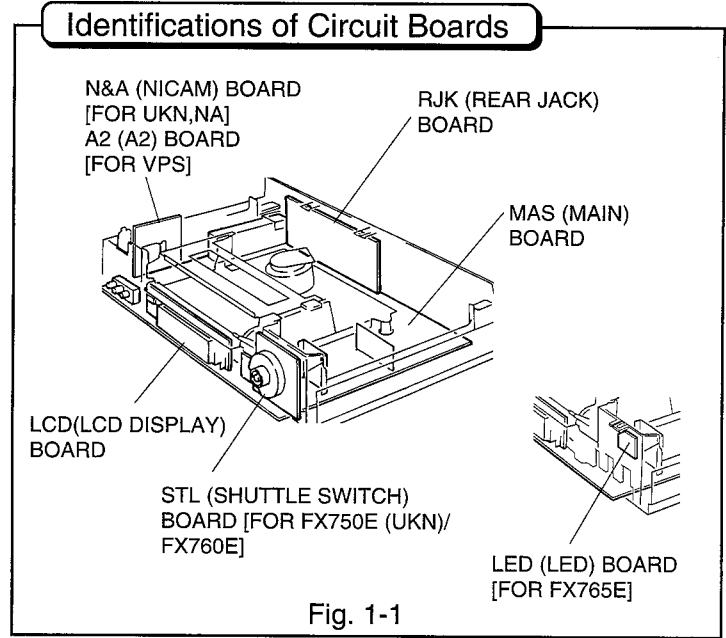
CHAPTER 2

DISASSEMBLY

- VT-FX75xE/FX76xE/MX730E -

1. Before Starting Disassembly

- 1) Unplug the power cord from the AC outlet.
- 2) [Removal procedure]
If a special procedure is required when dismantling any component, it is indicated using numbers. Follow the numbers ((1),(2),(3) ...) shown in the illustrations. [Reinstallation procedure]
Reinstall each component in the reverse order to removal when otherwise not specified.
- 3) Insert card connectors securely all the way as they are of the direct insertion type.



2. Disassembly Method

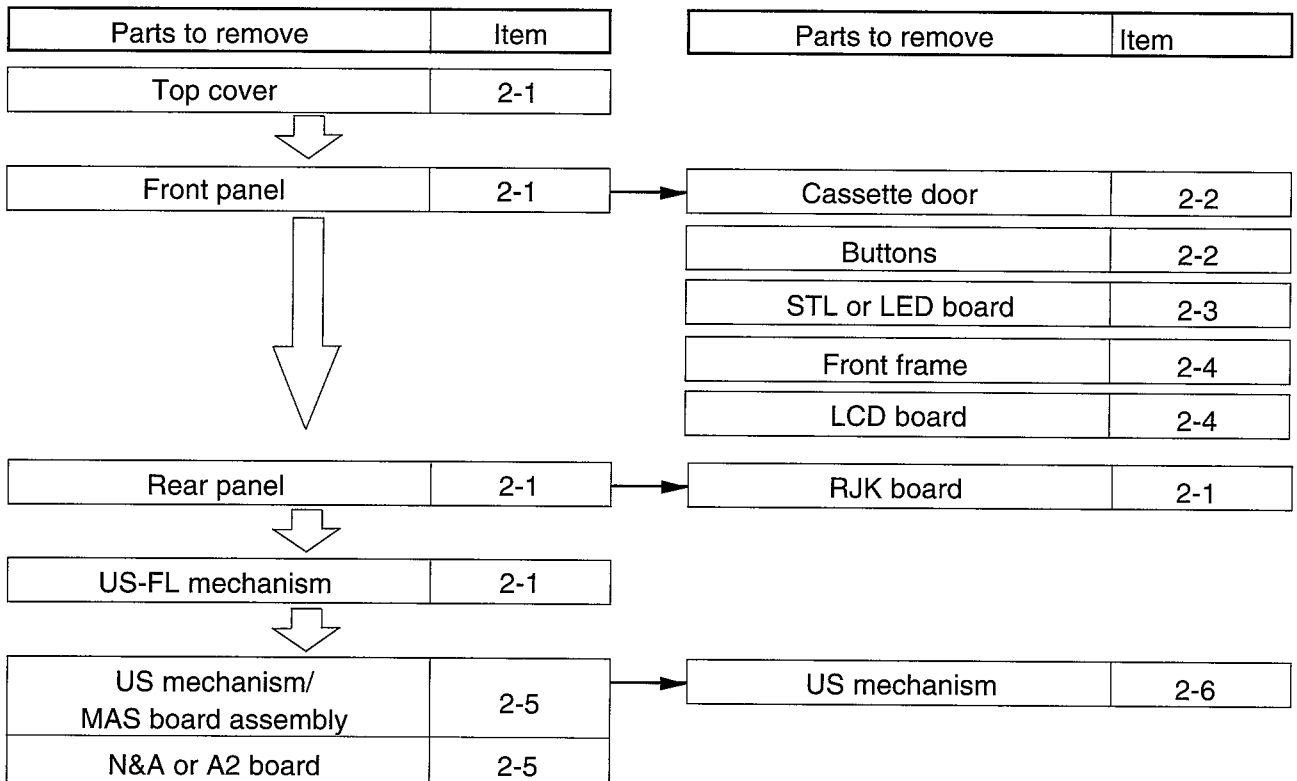
When replacing defective parts, first refer to the "Parts hierarchy chart" shown below. This chart shows the procedure for parts removal when replacing defective parts.

[How to use the parts hierarchy chart]

- (1) Locate the part to be replaced.
- (2) Check the parts in the ranks above the part to be replaced and start dismantling.
- (3) Replace the defective part and reinstall the parts in the reverse order to that shown in the parts hierarchy chart.

Parts Hierarchy Chart

Note: Dismantle parts in the eject state.



Disassembly Procedure Diagrams

Item	Parts to remove
2-1	Top cover, front panel, rear panel, RJK board and US-FL mechanism

◆ Caution when reinstalling the US-FL mechanism
 Reinstall the US-FL mechanism in the state that the cassette holder is pulled forward.
 (Otherwise, the switch arm could damage the FL switch on the MAS board.)

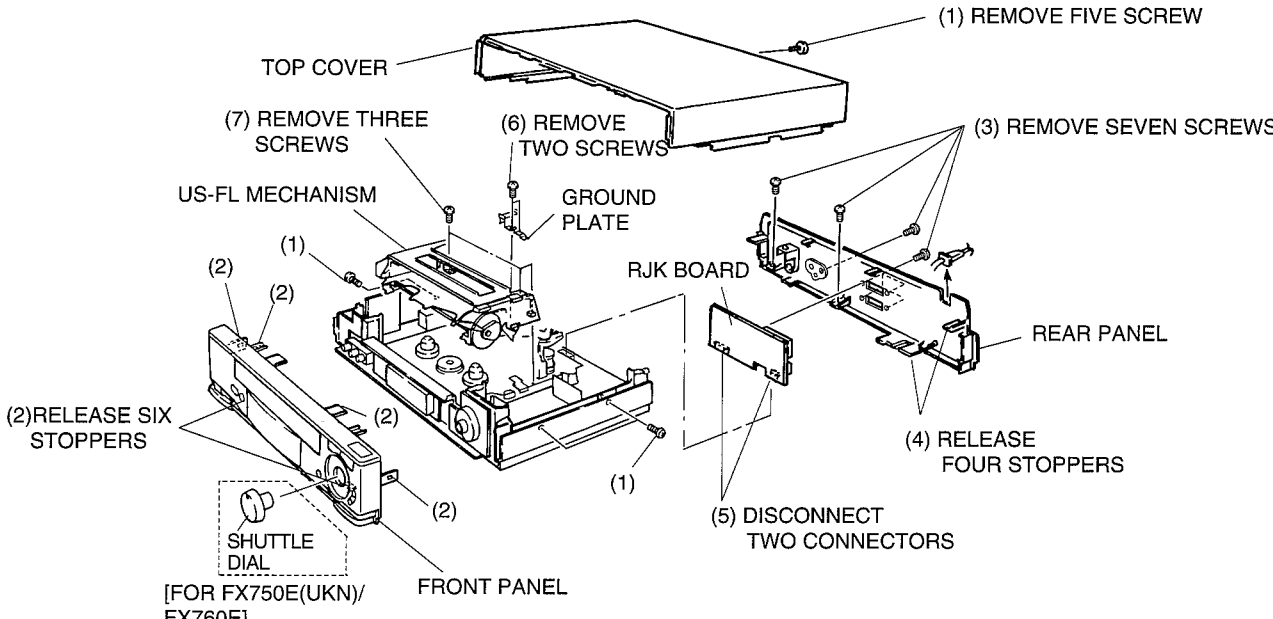


Fig. 2-1

2-2	Cassette door and buttons
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◆ Caution when reinstalling the front panel
 Reinstall the front panel in the state the cassette door is pushed so the boss of the door arm comes to the front of the boss support of the cassette door.

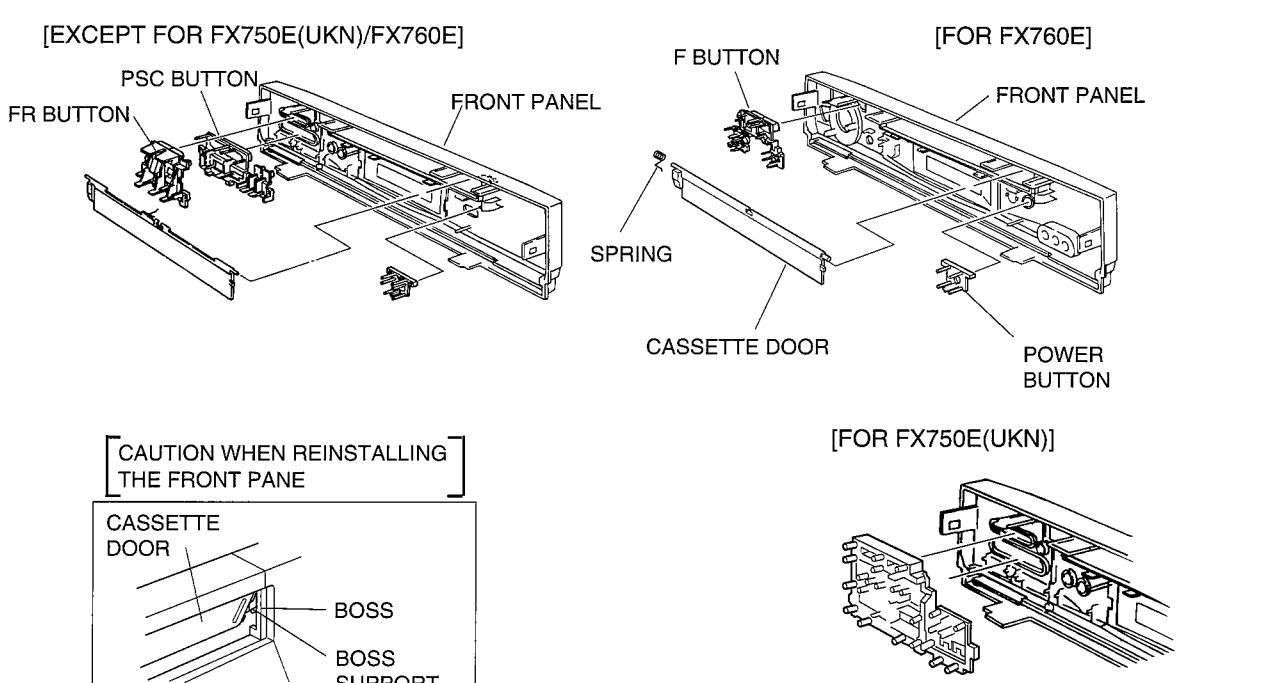
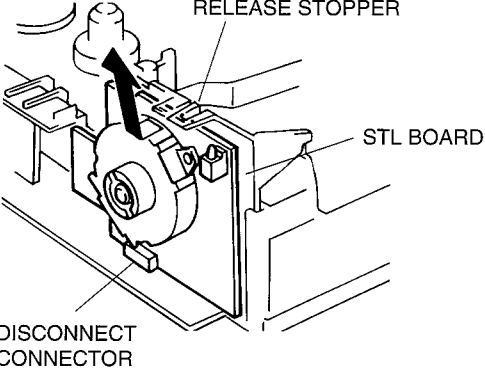
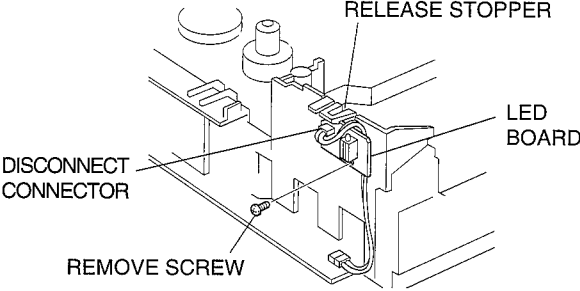
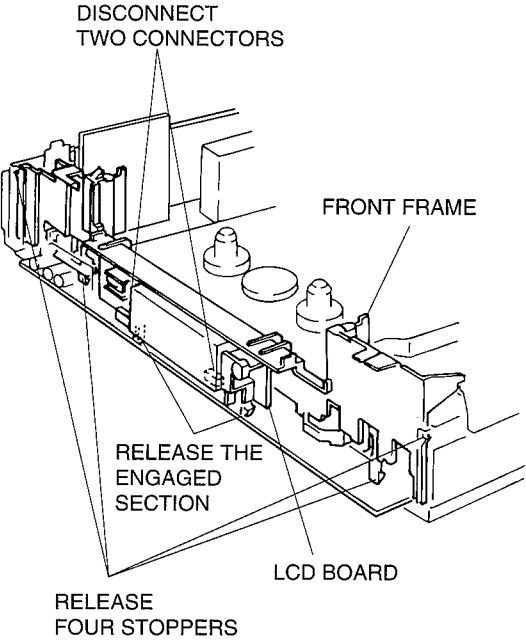
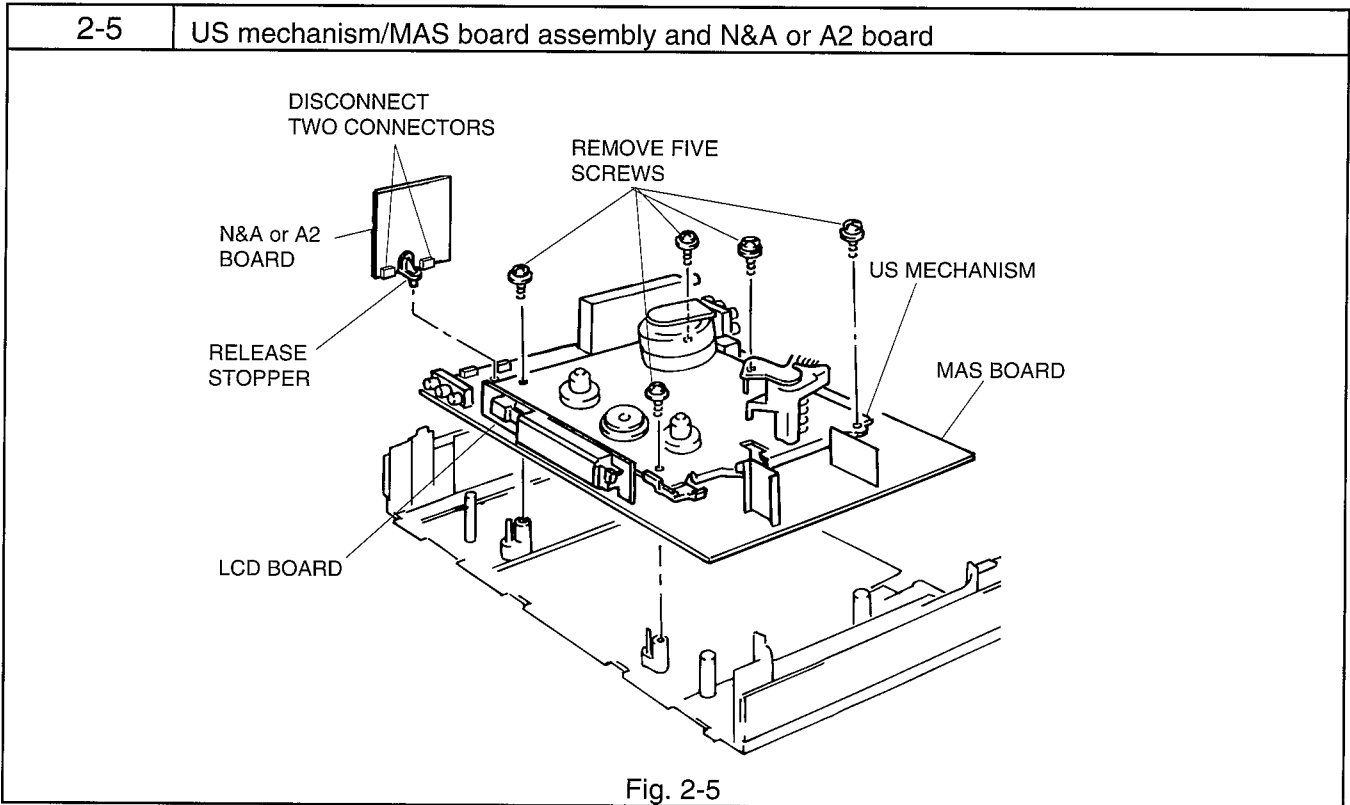


Fig. 2-2

Item	Parts to remove	
2-3	STL or LED board	2-4 Front frame and LCD board
<p>[FOR F750E(UKN)/FX760E]</p>  <p>RELEASE STOPPER</p> <p>STL BOARD</p> <p>DISCONNECT CONNECTOR</p> <p>[FOR FX765E]</p>  <p>RELEASE STOPPER</p> <p>LED BOARD</p> <p>DISCONNECT CONNECTOR</p> <p>REMOVE SCREW</p> <p>Fig. 2-3</p>		 <p>DISCONNECT TWO CONNECTORS</p> <p>FRONT FRAME</p> <p>RELEASE THE ENGAGED SECTION</p> <p>LCD BOARD</p> <p>RELEASE FOUR STOPPERS</p> <p>Fig. 2-4</p>



Item	Parts to remove
2-6	Separation of MAS board from US mechanism

[Rear of the mechanism]

DISCONNECT FOUR CONNECTORS

REMOVE TWO SCREWS

REMOVE TWO SCREWS

MAS BOARD

US MECHANISM

Fig. 2-6

Procedure to remove only the US mechanism

With this VCR the US mechanism can be removed without removing the MAS board. This is done by a different method from the normal disassembly method.

Parts to remove	Item
Top cover	2-1
↓	
Front Panel	2-1
↓	
US-FL mechanism	2-1
↓	
Remove two screws on the bottom of the VCR.	2-7
↓	
Remove five screws holding the US mechanism.	2-7

2-7	Procedure to remove only the US mechanism
-----	---

REMOVE FIVE SCREWS

REMOVE TWO SCREWS

MAS BOARD

Fig. 2-7

- VT-FX770E -

1. Before Starting Disassembly

- 1) Unplug the power cord from the AC outlet.
- 2) [Removal procedure]
If a special procedure is required when dismantling any component, it is indicated using numbers. Follow the numbers ((1),(2),(3) ...) shown in the illustrations.
[Reinstallation procedure]
Reinstall each component in the reverse order to removal when otherwise not specified.
- 3) Insert card connectors securely all the way as they are of the direct insertion type.

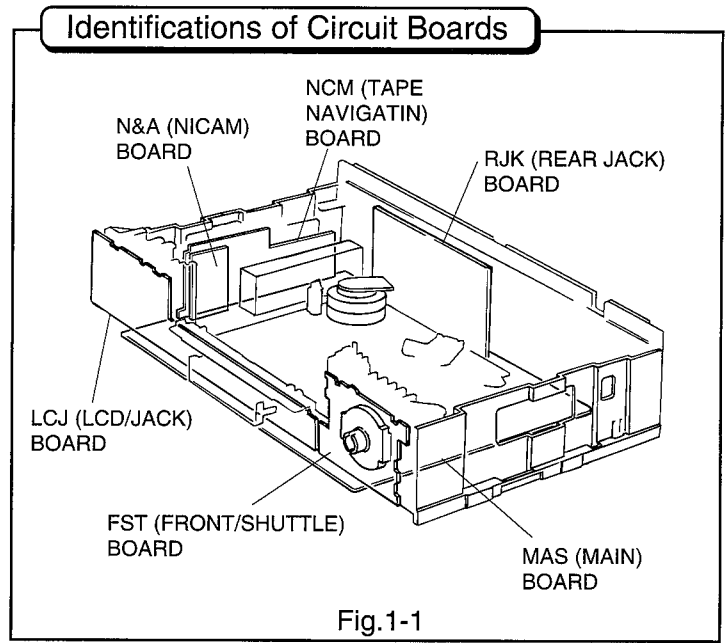


Fig.1-1

2. Disassembly Method

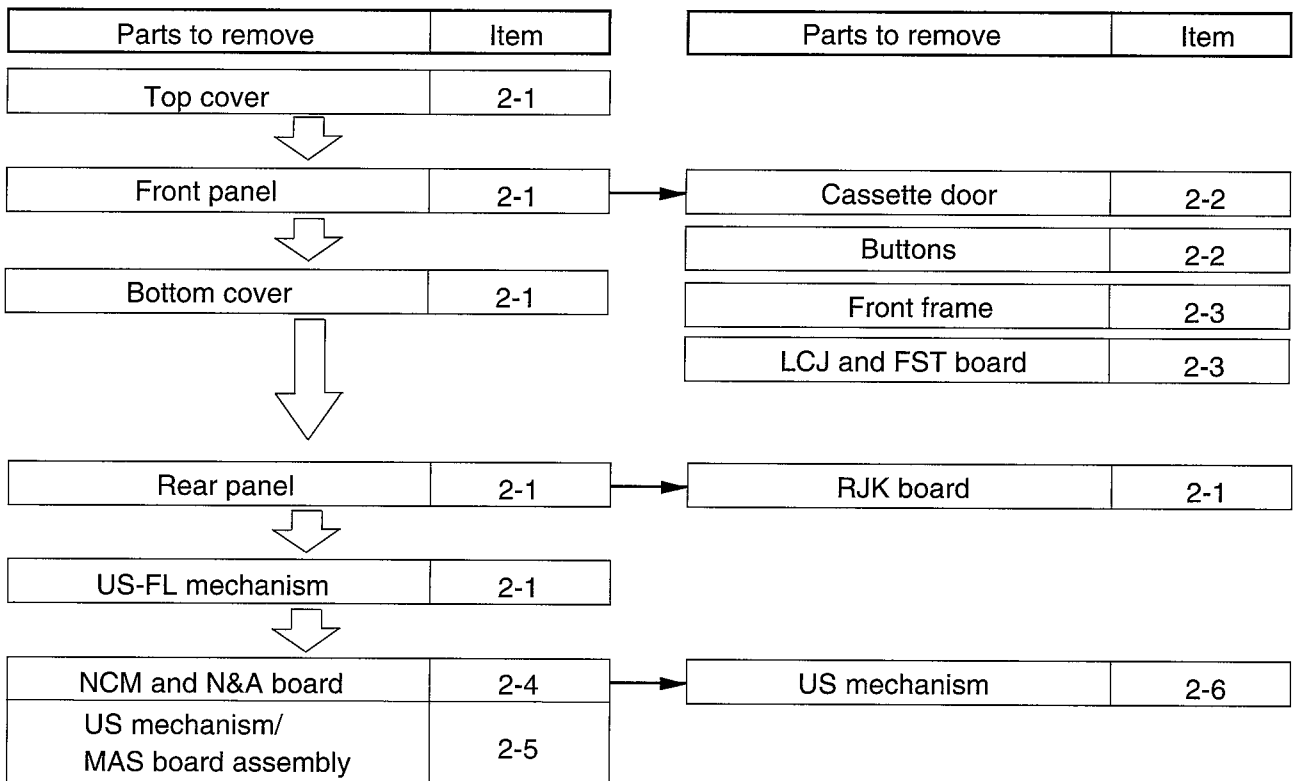
When replacing defective parts, first refer to the "Parts hierarchy chart" shown below. This chart shows the procedure for parts removal when replacing defective parts.

[How to use the parts hierarchy chart]

- (1) Locate the part to be replaced.
- (2) Check the parts in the ranks above the part to be replaced and start dismantling.
- (3) Replace the defective part and reinstall the parts in the reverse order to that shown in the parts hierarchy chart.

Parts Hierarchy Chart

Note: Dismantle parts in the eject state.



Item	Parts to remove
2-3	Front frame, LCJ and FST board

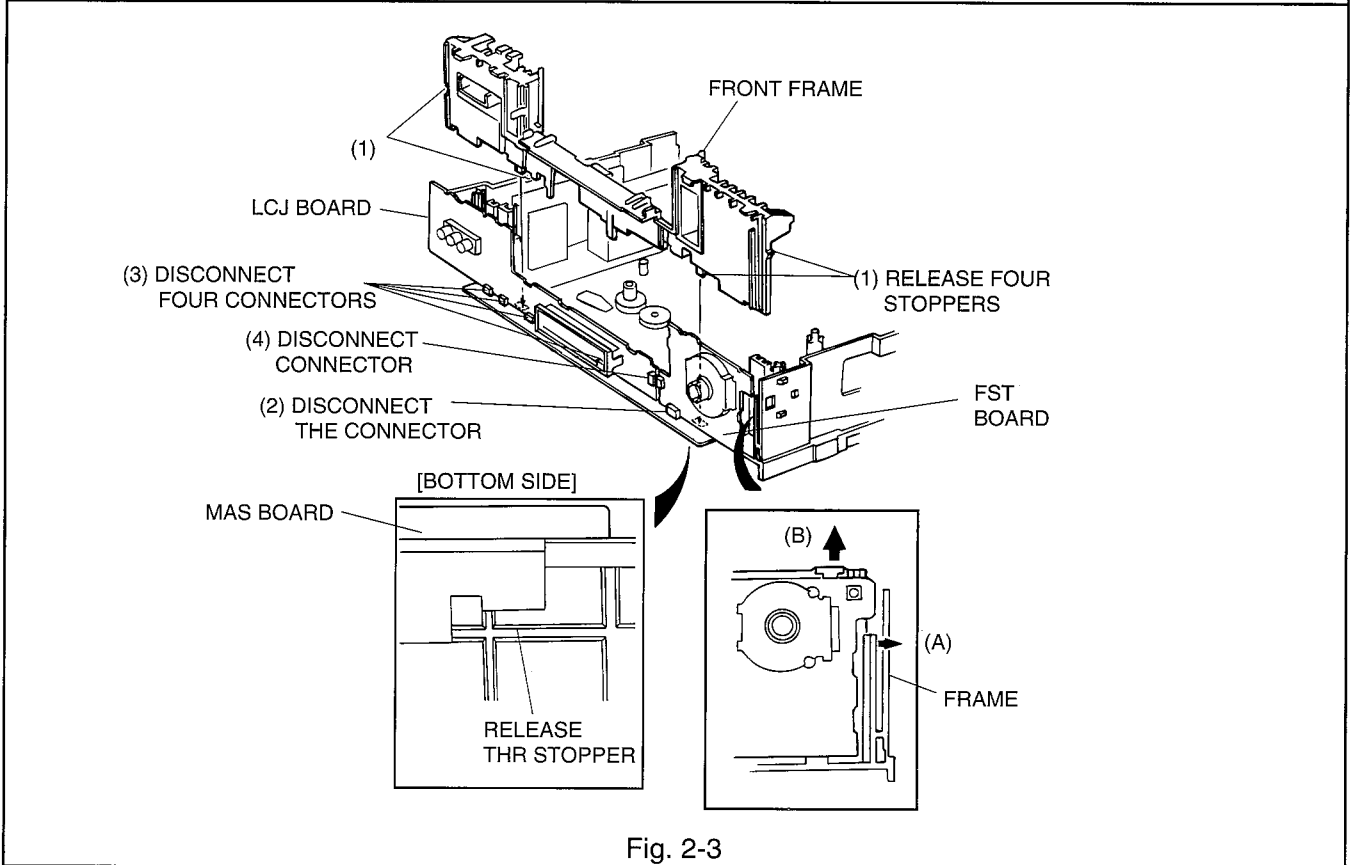


Fig. 2-3

2-4	NCM and N&A board
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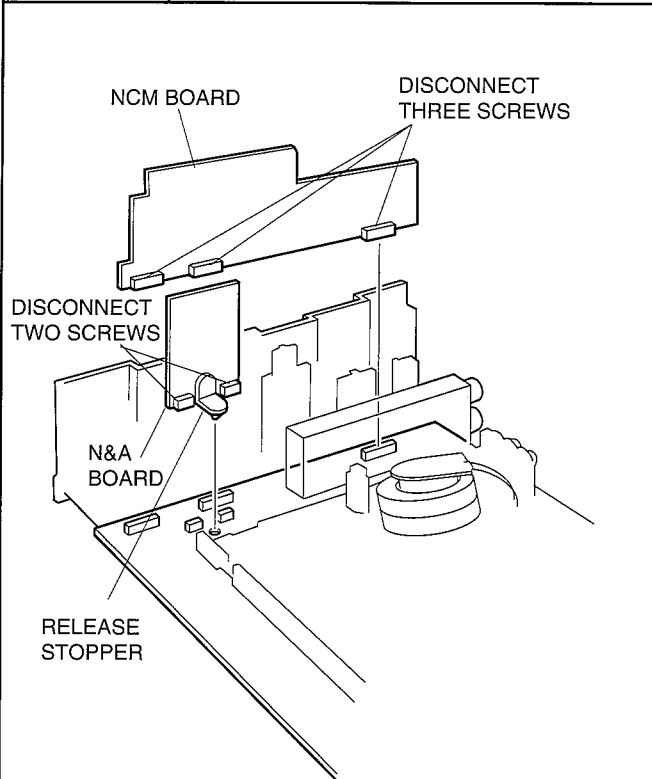


Fig. 2-4

2-5	US mechanism and MAS board assembly
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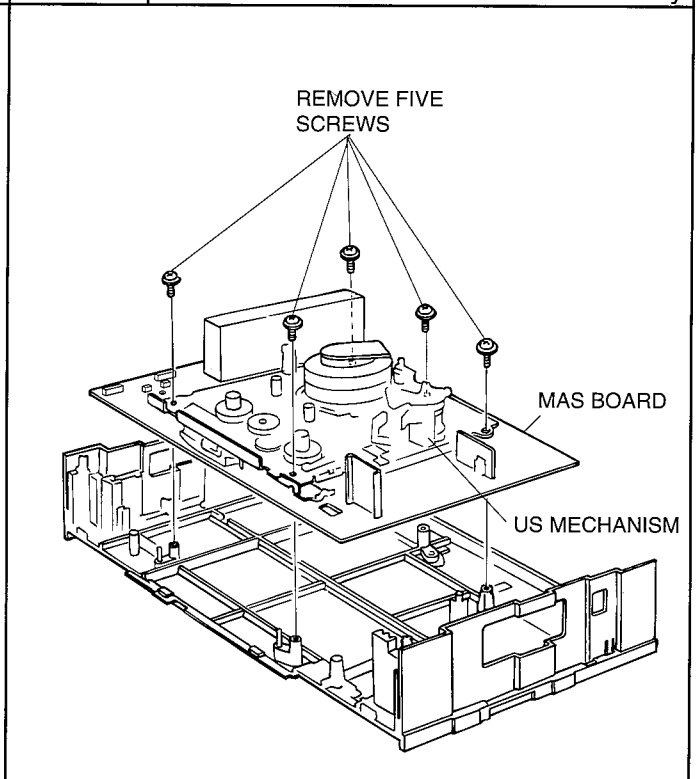


Fig. 2-5

Item	Parts to remove
2-6	Separation of MAS board from US mechanism

[Rear of the mechanism]

DISCONNECT TWO CONNECTORS

REMOVE TWO SCREWS

DISCONNECT TWO CONNECTORS

REMOVE TWO SCREWS

MAS BOARD

US MECHANISM

Fig. 2-6

Procedure to remove only the US mechanism

With this VCR the US mechanism can be removed without removing the MAS board. This is done by a different method from the normal disassembly method.

Parts to remove	Item
Top cover	2-1
↓	
Front Panel	2-1
↓	
US-FL mechanism	2-1
↓	
Remove two screws on the bottom of the VCR.	2-7
↓	
Remove five screws holding the US mechanism.	2-7

2-7	Procedure to remove only the US mechanism
-----	---

REMOVE FIVE SCREWS

US MECHANISM


MAS BOARD

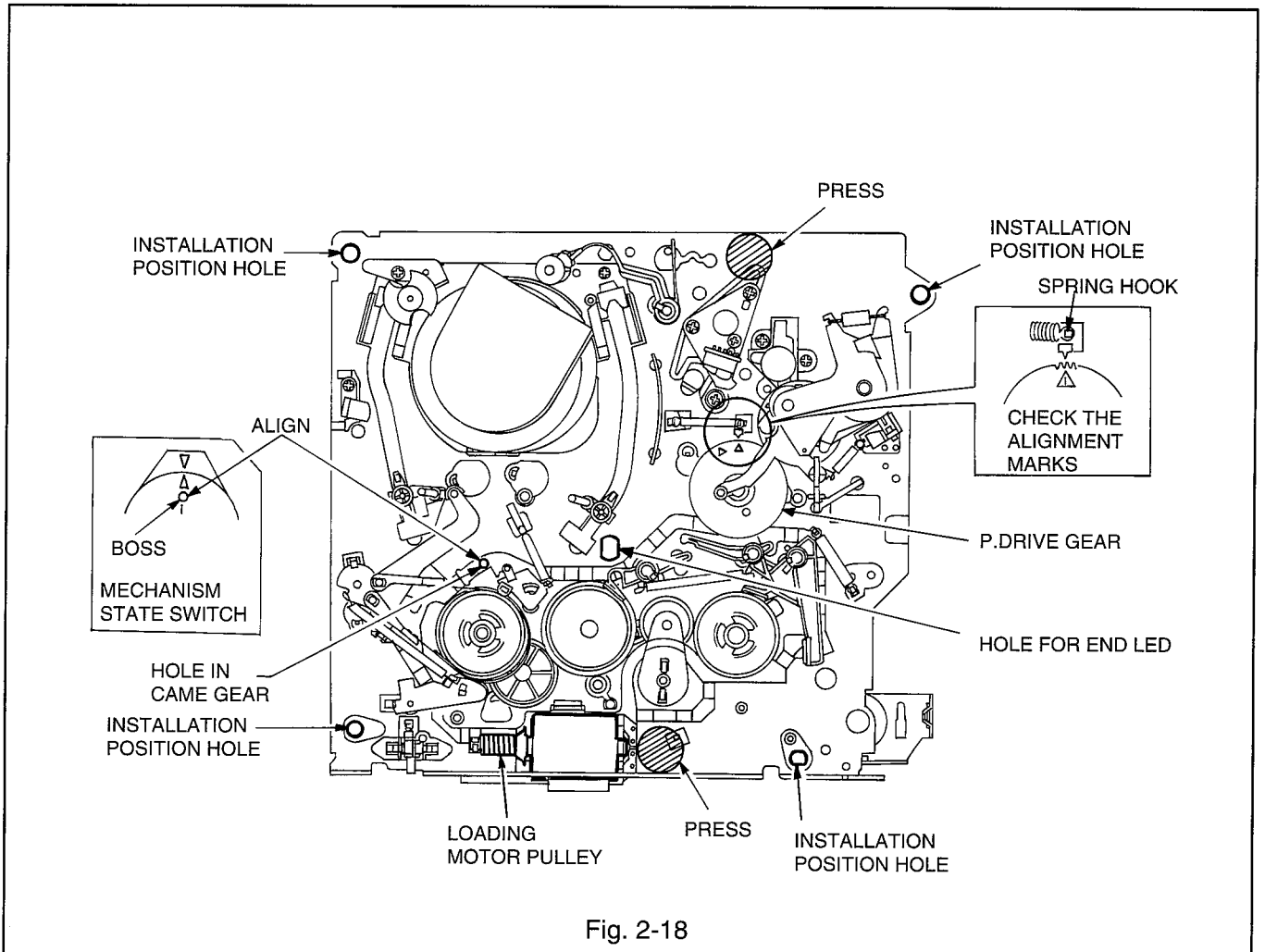
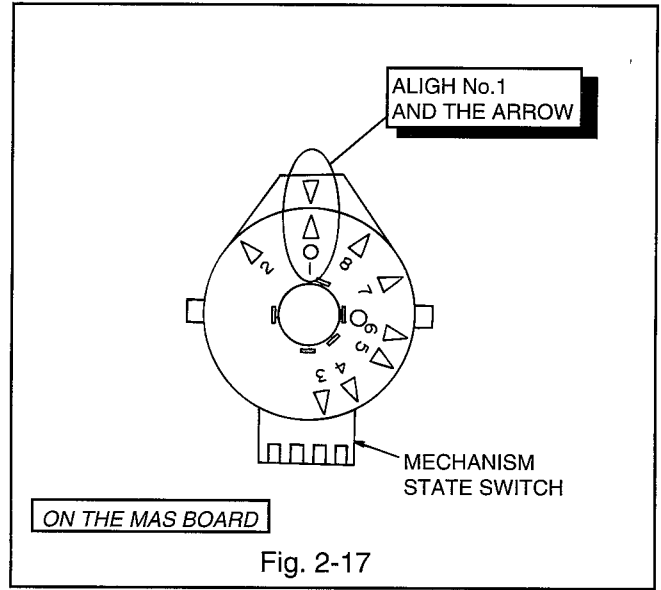
REMOVE TWO SCREWS

Fig. 2-7

Cautions When Reinstalling the US Mechanism

This VCR has mechanism sensors on the MAS board and the capstan and loading motors are connected via direct connectors. Therefore, when reinstalling the US mechanism, observe the following cautions.

- 1) Align the ∇ mark and mode no. 1 of the mechanism state switch on the MAS board. (Mode no. 1 of the mechanism state switch has a click position.)
- 2) Check that mode no. 1 on the P drive gear in the mechanism and the ∇ mark of the spring hook are aligned. If they are not aligned, turn the loading motor pulley to align them.
- 3) Pass the end LED through the hole in the mechanism and install the mechanism from immediately above using the installation position holes as reference. Check that the boss of the mechanism state switch and the hole in the cam gear are aligned.
- 4) Push the terminal sections (shaded sections ) of the capstan and loading motors and check that they are inserted securely.



CHAPTER 3

ELECTRIC CIRCUIT ADJUSTMENT AND TROUBLE DISPLAY

Service Positions

- VT-FX75xE/FX76xE/MX730E -

1. Servicing position during electrical adjustment

Perform adjustment after removing the top cover, front panel and rear panel.

When the shield cover of the connector between the cylinder motor and MAS circuit boards is removed, noise appears in the played back picture. Attach the shield cover when checking the picture on the screen.

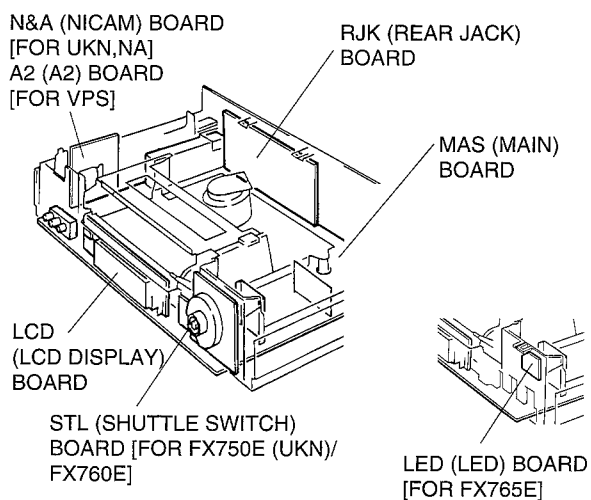


Fig. 1

2. Servicing positions when repairing and checking circuits

2-1. Procedure to set the LCD and STL or LED and N&A or A2boards to the servicing positions (Fig. 2)

- 1) Remove the top cover and front panel.
- 2) Remove the US-FL mechanism.
- 3) Remove the LCD and STL or LED boards and front frame, then reattach the LCD and STL or LED board.
- 4) Check all boards from the pattern side, shown by the arrow.

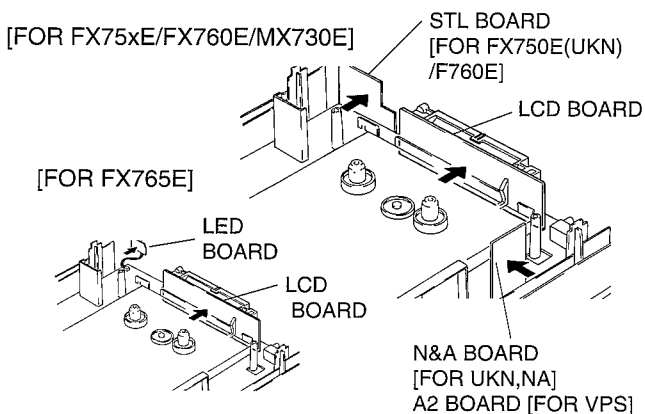


Fig. 2

2-2. Procedure to set the MAS board to the servicing position (Fig. 3)

- 1) Remove the top cover, front panel and rear panel.
- 2) Remove the US-FL mechanism and front frame.
- 3) Remove the MAS board, with the each board and the US mechanism assembled, from the frame.
- 4) Turn over the MAS board and perform checks from the pattern side indicated by the arrow.

Be careful of the following at this time.

- Lay out an insulation sheet under the boards.
 - Attach the shield cover at the rear of the cylinder.
- Attach the US-FL mechanism when loading the tape.

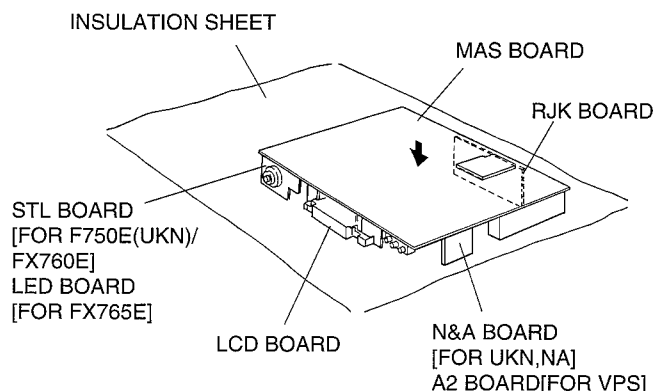


Fig. 3

3. Be careful of electric shocks

The power supply block on the right of the VCR has a heat sink which generates a high voltage. "HIGH VOLTAGE" is printed on the heat sink. Take great care when handling this heat sink when the power is turned on during servicing.

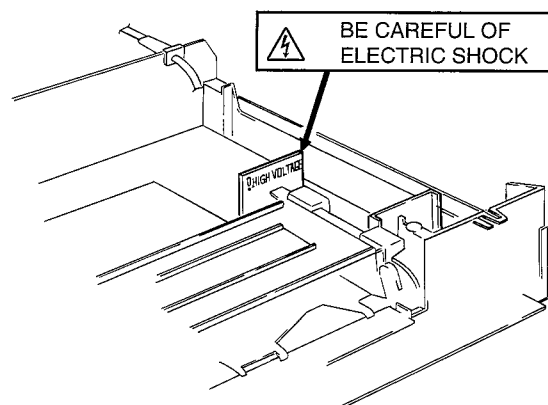


Fig. 4

Service Positions

- VT-FX770E -

1. Servicing position during electrical adjustment

Perform adjustment after removing the top cover, front panel and rear panel.

When the shield cover of the connector between the cylinder motor and MAS circuit boards is removed, noise appears in the played back picture. Attach the shield cover when checking the picture on the screen.

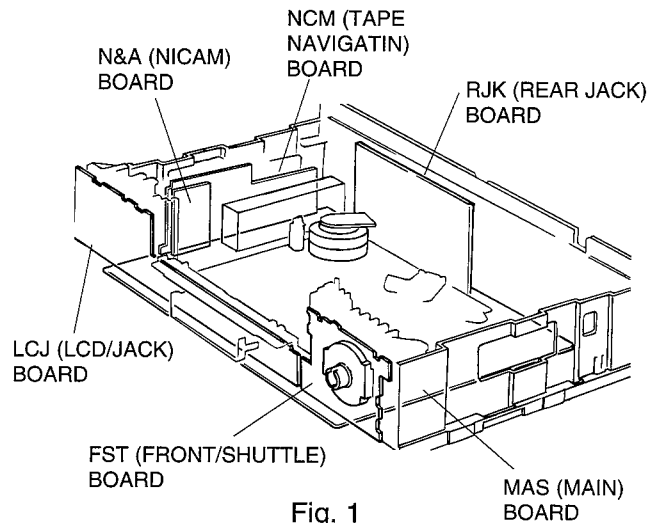


Fig. 1

2. Servicing positions when repairing and checking circuits

2-1. Procedure to set the LCJ, FST, NCM, RJK and N&A boards to the servicing positions (Fig. 2)

- 1) Remove the top cover, front panel and rear panel.
- 2) Remove the US-FL mechanism.
- 3) Remove the front frame and open each board as shown in the diagram below and perform check from the pattern side (indicated by the arrow).

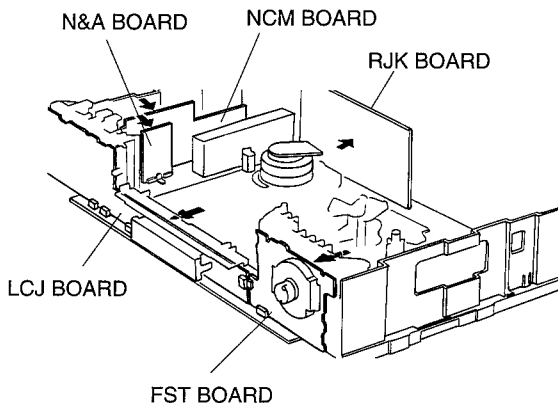


Fig. 2

2-2. Procedure to set the MAS board to the servicing position (Fig. 3)

- 1) Remove the top cover, front panel and rear panel.
- 2) Remove the US-FL mechanism and front frame.
- 3) Remove the MAS board, with each board and the US mechanism assembled on it, from the frame.
- 4) Turn over the MAS board and perform checks from the pattern side (indicated by the arrow).

Take care of the following at this time.

- Lay the insulation sheet under the boards.
- Attach the US-FL mechanism when loading a tape.

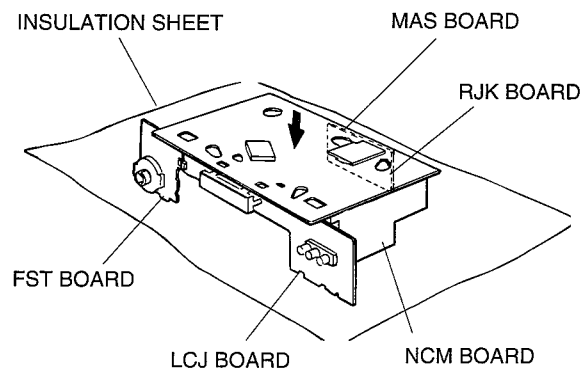


Fig. 3

3. Be careful of electric shocks

The power supply block on the right of the VCR has a heat sink which generates a high voltage. "HIGH VOLTAGE" is printed on the heat sink. Take great care when handling this heat sink when the power is turned on during servicing.

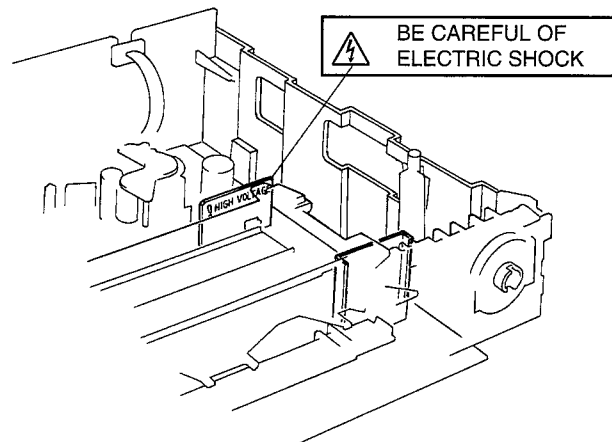


Fig. 4

Electrical Circuit Adjustment

1. Test equipment/jigs necessary for adjustment

- 1) Dual-trace oscilloscope
- 2) Colour bar generator
- 3) Voltmeter
- 4) Monitor TV (with A/V jacks)
- 5) Alignment tapes:
 - MH-2: Part No. 7099052
 - 24HMAF-2: Part No. 7099175
(Hi-Fi alignment tape)
- 6) Blank tape
- 7) C/R oscillator

2. Cautions on adjustment

- 1) The following conditions apply when otherwise not specified.
 - Probe of oscilloscope: 10:1
 - Synchronization of oscilloscope: Internal sync
 - Ground of test equipment: PG2508 pin 6
(on MAS board)
- 2) When performing more than one adjustment, follow the specified order.

3. Tips for adjustment

3-1. Procedure to reset the main microprocessor

The main microprocessor is not reset even when the power cord is unplugged from the AC outlet because its power is backed up by a backup circuit. Press S708 on the MAS board to reset the entire microprocessor. Do not press the reset switch with the power cord unplugged from the AC outlet as the slow tracking preset value could drift. If the preset value drifts, plug the power cord into an AC outlet and press the reset switch again with the power turned on. It is recommended that you press the reset switch after reinstalling the front panel.

[FOR FX75xE(NA, VPS)/FX765E/MX730E]

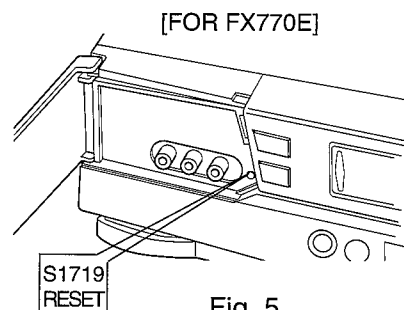
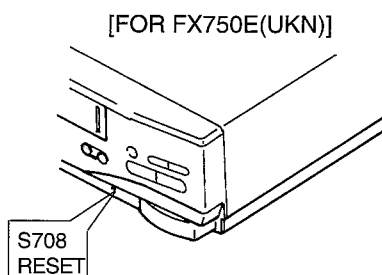
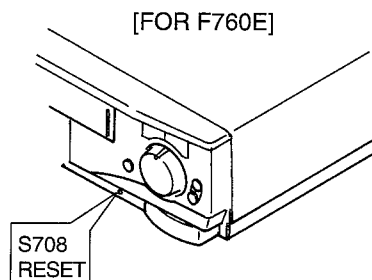
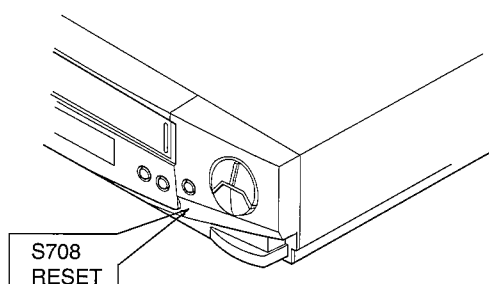


Fig. 5

3-2. Procedure to switch off the blue background function

- 1) Press the "GUIDE" button of the remote control to display the menu on the monitor TV screen.
- 2) Press 2 to select the VCR setup screen.
- 3) Press 1 to specify blue background off.

3-3. Procedure to obtain the LP head playback mode (X-value adjustment test mode)

Press the TRACKING UP(▲) and DOWN(▼) buttons of the remote control provided simultaneously when an alignment tape is being played and hold them, then press the "CHANNEL ▽" button on the VCR; The VCR enters the LP head playback mode (X-value adjustment test mode).

4. Connections of test equipment

Connect the test equipment as follows when otherwise not specified.

- 1) Connect a colour bar generator to the video input jack of the VCR.
- 2) Connect a monitor TV to the Euro Socket of the VCR.
- 3) Connect an antenna to the antenna jack and receive a TV broadcast (only for sound multiplex adjustment).

5. Test Points and Adjustment Points

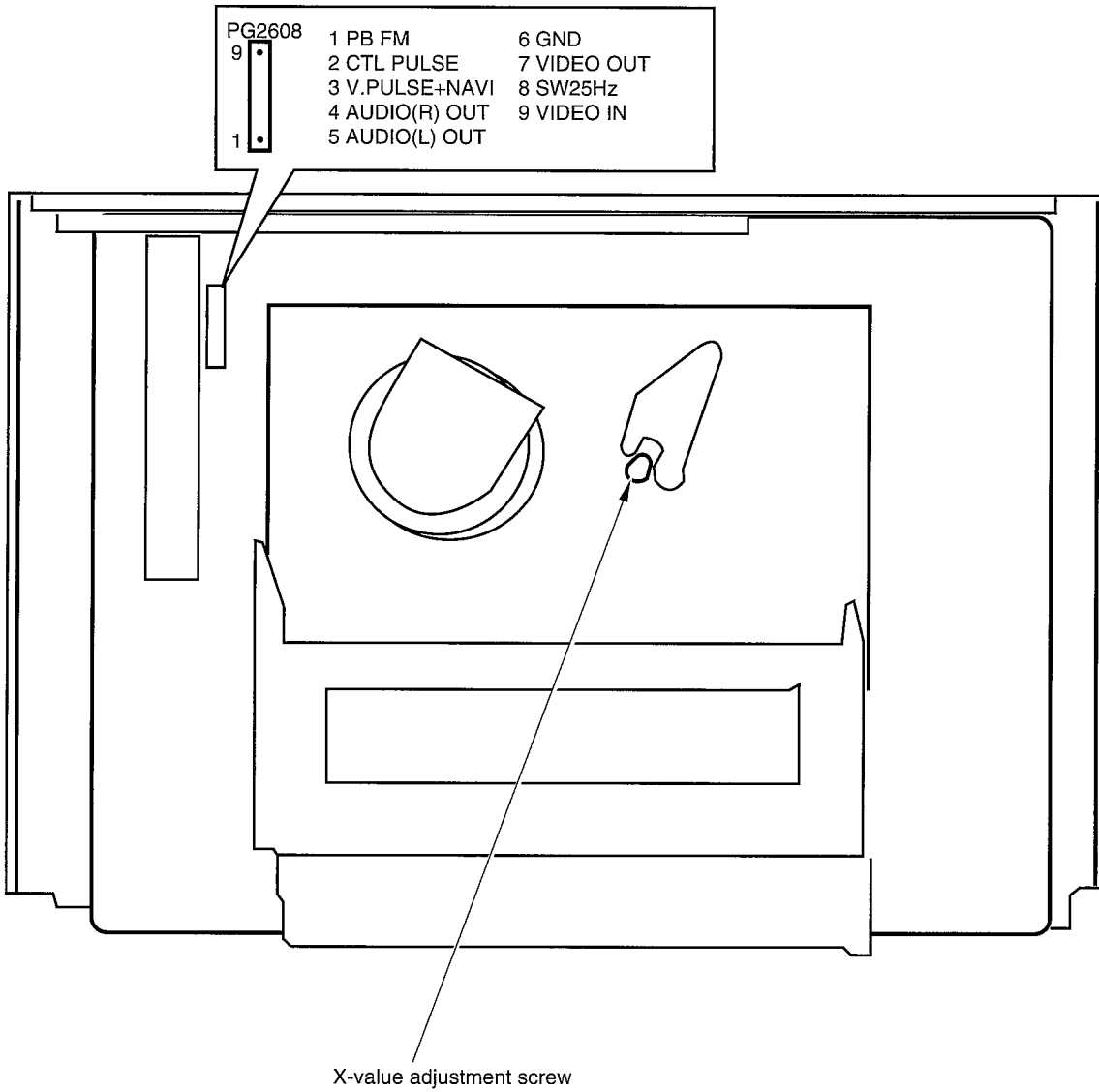


Fig. 6 MAS (Main) Circuit Board [Components Side]

6. Servo Circuit Adjustments

6-1. Switching point adjustment (Fig. 6)

Purpose:

To set the switching point of the video heads during playback to the center where the CH-1 and CH-2 envelopes overlap each other.

Fault due to incomplete adjustment:

Vertical sync signal is degraded and vertical jitter occurs.

Switching noise appears across the bottom of the screen.

Test Equipment/Jigs and Connection Points

Oscilloscope CH-1: Video out jack
CH-2: PG2508-8(SW25Hz)

Alignment tape (MH-2)

State of VCR

- 1) Play the alignment tape
- 2) Set to the X-value adjustment test mode.

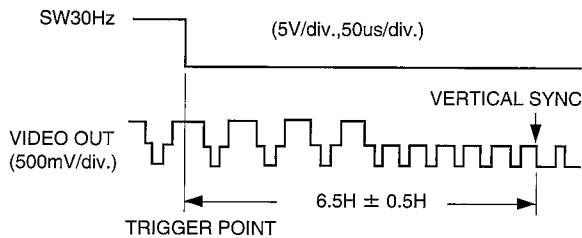
Adjustment Point

F.FWD button(S702)
REW button(S703)

Adjustment Procedure

- 1) Play the alignment tape.
- 2) Press the "TRACKING ▲" and "TRACKING ▼" buttons of the remote control provided simultaneously and hold them, then press the "CHANNEL ▽" (S707) button of the VCR to set the VCR to the test mode. (SP is switched to LP in the display.)
- 3) Press the "F.FWD" and "REW" buttons of the remote control so the phase from the vertical sync to the trailing edge (trigger position) of the SW25Hz pulse is set to $6.5H \pm 0.5H$.
- 4) Press the "STOP" button to release the test mode.

Waveforms



<Conditions of oscilloscope>

Trigger with CH-2.

Set the sync slope to "-".

6-2. X-value adjustment (Fig. 6)

Purpose:

To ensure compatibility with other VCRs.

Fault due to incomplete adjustment:

When a tape recorded by another VCR is played back, the tracking is not optimized and noise appears on the screen.

Test Equipment/Jigs and Connection Points

Oscilloscope CH-1: PG2508-1 (PB FM)
CH-2: PG2508-8 (SW25Hz)

Alignment tape (MH-2)

State of VCR

- 1) Play the alignment tape.
- 2) Set to the X-value adjustment test mode.

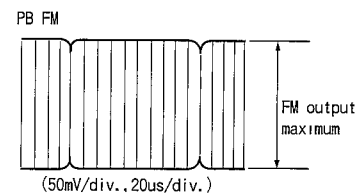
Adjustment Point

Groove for the adjustment X-value

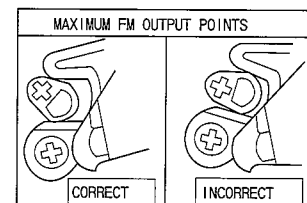
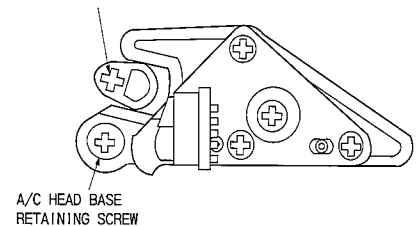
Adjustment Procedure

- 1) Play the alignment tape.
- 2) Press the "TRACKING ▲" and "TRACKING ▼" buttons of the remote control provided simultaneously and hold them, then press the "CHANNEL ▽" (S707) button of the VCR to set the VCR to the test mode. (SP is switched to LP in the display.)
- 3) Loosen the screw holding the A/C head base (do not loosen it excessively).
- 4) Insert a screwdriver into the groove for adjusting the X-value and adjust so the FM output is maximum. There are two maximum FM output points when the groove for adjusting the X-value is turned. Adjust the FM output to a maximum when the groove is at the correct position as shown in the figure below.
- 5) Press the "STOP" button to release the test mode.

Waveforms



GROOVE FOR ADJUSTMENT THE X-VALUE



Servo Circuit Adjustments

6-3. Vertical jitter adjustment

Purpose:

To suppress vertical jitter during slow and still play.

Fault due to incomplete adjustment:

Vertical jitter appears in the picture during slow and still play.

Test Equipment/Jigs and Connection Points

Monitor TV : Video output jack

Color bar generator: Video input jack

Blank tape

State of VCR

Record a color bar signal and play it using the same VCR.

Adjustment Point

TRACKING ▲ (Remote control)

TRACKING ▼ (Remote control)

Adjustment Procedure

<LP vertical jitter correction>: Record in the LP mode and play it back using the same VCR.

- 1) Press the "PAUSE" button to set the VCR to the still play mode.
- 2) Use the "TRACKING ▲" or "TRACKING ▼" buttons of the remote control to suppress vertical jitter of the picture.

<SP vertical jitter correction>: Record in the SP mode and play it back using the same VCR.

- 1) Press the "PAUSE" button to set the VCR to the still play mode.
- 2) Use the "TRACKING ▲" or "TRACKING ▼" buttons of the remote control to suppress vertical jitter in the picture.

6-4. Forward slow tracking preset adjustment

Purpose:

To adjust the timing with which the brake pulse of the capstan motor is generated during slow play so that noise is minimum.

Fault due to incomplete adjustment:

Noise appears during slow play and the picture is not clear.

Test Equipment/Jigs and Connection Points

Monitor TV : Video output jack

Color bar generator: Video input jack

Blank tape (E-180)

State of VCR

Slow tracking: Unplug the power cord to set the slow tracking to the center.

Adjustment Point

TRACKING ▲ (Remote control)

TRACKING ▼ (Remote control)

Adjustment Procedure

- 1) Record a signal on the middle of a E-180 blank tape in the LP mode and play it back using the same VCR.
- 2) Press the "TRACKING ▲" and "TRACKING ▼" buttons of the remote control (provided) simultaneously during playback and hold them, then press the "PLAY" button (S701) to set the VCR to

the forward test slow mode.

- 3) Use the "TRACKING ▲" or "TRACKING ▼" buttons so the slow feed noise appears across the bottom of the monitor screen and then it is driven out from the bottom of the screen.
- 4) Check that no noise appears on the monitor screen.
- 5) Press the "PLAY" button to return the VCR to the playback mode (the preset data is written to the EEPROM).
- 6) Perform the same procedure to perform slow tracking preset adjustment in the SP mode.
Do not press the reset switch after adjustment when the power is not turned on as the preset value could drift. If the preset value drifts, turn the power on and press the reset switch again for recovery.

6-5. Reverse slow tracking preset adjustment

Purpose:

To adjust the timing with which the brake pulse of the capstan motor is generated during reverse slow play so that noise is minimum.

Fault due to incomplete adjustment:

Noise appears during reverse slow play and the picture is not clear.

Test Equipment/Jigs and Connection Points

Monitor TV : Video output jack

Color bar generator: Video input jack

Blank tape (E-180)

State of VCR

Slow tracking: Unplug the power cord to set the slow tracking to the center.

Adjustment Point

TRACKING ▲ (Remote control)

TRACKING ▼ (Remote control)

Adjustment Procedure

- 1) Record a signal on the middle of a E-180 blank tape in the LP mode and play it back using the same VCR.
- 2) Press the "TRACKING ▲" and "TRACKING ▼" buttons of the remote control (provided) simultaneously during still play and hold them, then press the "PLAY" button (S701) to set the VCR to the reverse test slow mode.
- 3) Use the "TRACKING ▲" or "TRACKING ▼" buttons so the slow feed noise appears across the bottom of the monitor screen and then it is driven out from the bottom of the screen.
- 4) Check that no noise appears on the monitor screen.
- 5) Press the "PLAY" button to return the VCR to the playback mode (the preset data is written to the EEPROM).
- 6) Perform the same procedure to perform reverse slow tracking preset adjustment in the SP mode.
Do not press the reset switch after adjustment when the power is not turned on as the preset value could drift. If the preset value drifts, turn the power on and press the reset switch again for recovery.

7. Audio Circuit Adjustments

7-1. Hi-Fi audio playback level check

Purpose:

To set the playback level of the Hi-Fi audio signal to the specified value.

Fault due to incomplete adjustment:

The appropriate volume cannot be obtained during playback.

Test Equipment/Jigs and Connection Points

Voltmeter

When checking L-CH:PG2508-5

When checking R-CH:PG2508-4

Hi-Fi alignment tape (24HMAF-2)

State of VCR

Play Hi-Fi alignment tape.

Adjustment procedure

Use the same checking procedure for both the L and R channels.

Check that the voltmeter reads $-7.8\text{dBs} \pm 3.0\text{dBs}$.

If it cannot be confirmed, check the playback signal system.

7-2. E-E audio level check

Purpose:

To check the audio level in the E-E mode.

Fault due to incomplete adjustment:

To sound is abnormal in the E-E mode.

Test Equipment/Jigs

1) C/R oscillator: Audio in jack(L-CH)

Audio in jack(R-CH)

2) Voltmeter: Audio out jack(L-CH)

Audio out jack(R-CH)

State of VCR

E-E mode

Adjustment procedure

1) Apply a 1kHz, -7.8dBs sinewave signal to the audio input 1 (L-CH and R-CH).

2) Check that the voltmeter reads $-6.8\text{dBs} \pm 2.0\text{dBs}$.

3) If the above cannot be confirmed, check the E-E audio line.

8. Cylinder Rotation Accumulated Hours of Usage Display

Display

This VCR has a function which displays the accumulated hours of cylinder rotation as a reference for replacing the cylinder.

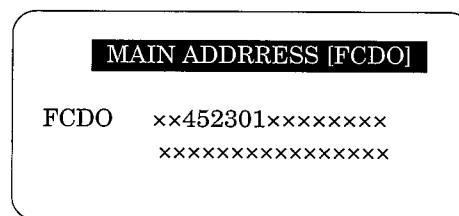
1. Method for display

simultaneously holding down the "VCR channel ▲" and "VCR channel ▼" buttons on the provided remote control, with power ON and without a cassette inserted, press the "channel up" button on the VCR. When power is turned off, the display will disappear.

2. Clearing the accumulated hours

Same as for shipment mode initial setting.

3. Example of display [In case of 12,345 hours]



VCR DISPLAY

9. List of Data in EEPROM and Initial Settings

The table below lists the data stored in ROM. It also shows the data set by shipment mode initialization, when the trouble display is cleared.

Information	Data memory ROM		List of initial data			Remarks
	IC903 VCR EEPROM	IC4302 NAVI EEPROM	Shipment mode initial data	Tape navi, map initial data	Clearing of trouble display	
Channel memory	Yes	No	Yes	No	No	
VCR mode select data	Yes	No	Yes	No	No	
Trouble display data	Yes	No	Yes	No	Yes	
Slow tracking data	Yes	No	No (set by adj.)	No	No	
Artificial V sync data	Yes	No	No (set by adj.)	No	No	
Switching point data	Yes	No	No (set by adj.)	No	No	
SAT data	Yes	No	Yes	No	No	
Tape navigation map data	No	Yes	No	Yes	No	

10. List of Hidden Commands

The following tables list the mode setting commands during adjustment and EEPROM initial setting commands.

10-1. Mode setting commands during adjustment

Item	Mode in which command is accepted	Operation	Remarks
Tracking center	Play	Press the tracking up(▲) and down(▼) buttons of the remote control simultaneously.	
X-value adjustment test mode	Play	Press the tracking up(▲) and down(▼) buttons of the remote control simultaneously and press the "CHANNEL ▽" button on the VCR.	
Forward test slow mode	Play	Press the tracking up(▲) and down(▼) buttons of the remote control simultaneously and press the "PLAY" button on the VCR.	
Reverse test slow mode	Still play	Press the tracking up(▲) and down(▼) buttons of the remote control simultaneously and press the "PLAY" button on the VCR.	

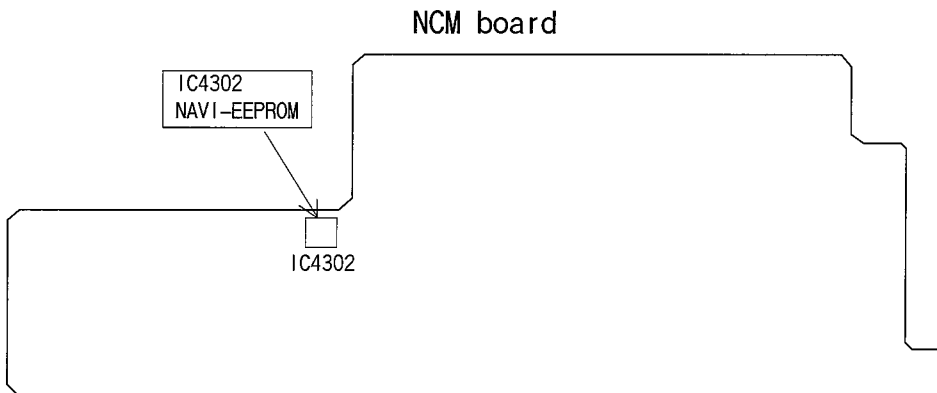
10-2. EEPROM initialization commands

Item	Mode in which command is accepted	Operation	Remarks
Shipment mode initial setting	EJECT	Press the "REC" buttons on the VCR and hold it, then press the "RESET" button used to initialize the microprocessor.	Hold the "REC" button depressed and release it after the display lights.
Clearing of trouble display	_____	Press the "PLAY" button on the VCR and hold it, then press the "RESET" button used to initialize the microprocessor.	Hold the "PLAY" button depressed and release it after the display lights.

11. Caution When Handling IC4302 (NAVI EEPROM) [VT-FX770E]

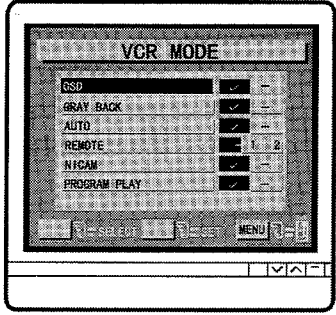
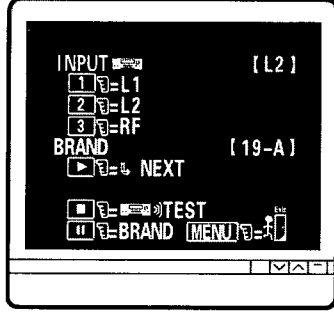
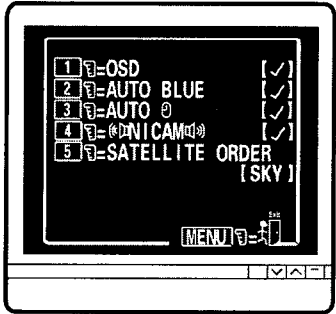
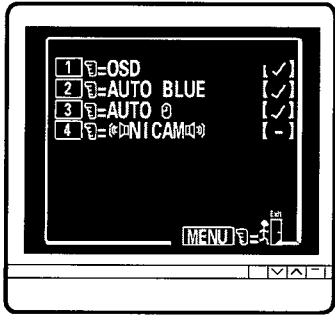
The navigation map data of the tapes on which the customer has made recordings is stored in IC4302 (NAVI EEPROM). When the CFN board is replaced, etc. during servicing, remove the ROM from the new board and install the ROM from the repaired product. Do not initialize the tape map information at this time.

Caution: Do not initialize the tape map data except when replacing IC4302 (NAVI EEPROM) due to a defect, etc. in this memory IC. Otherwise the tape navigation data stored by the customer will be erased.



12. Initial Settings of IC903(EEPROM)

The following shows the on-screen display and modes of switches when IC903 (EEPROM) is initialized.

(A)VCR SET-UP MENY	(B)SATELLITE SET-UP MENY
<p>[FOR FX770E]</p>  <p>The VCR MODE menu for FX770E shows the following options with checkmarks:</p> <ul style="list-style-type: none"> OSD GRAY BACK AUTO REMOTE HiCAM PROGRAM PLAY 	 <p>The SATELLITE SET-UP MENY for FX770E shows the following options:</p> <ul style="list-style-type: none"> INPUT [L2] 1=L1 2=L2 3=RF BRAND [19-A] ▶=NEXT TEST =BRAND MENU
<p>[FOR FX760E(UKN)/FX765E]</p>  <p>The VCR SET-UP MENY for FX760E(UKN)/FX765E shows the following options with checkmarks:</p> <ul style="list-style-type: none"> 1=OSD 2=AUTO BLUE 3=AUTO 0 4=HiCAM 5=SATELLITE ORDER [SKY] 	
<p>[FOR FX75xE/FX760E(NA)/MX730E]</p>  <p>The VCR SET-UP MENY for FX75xE/FX760E(NA)/MX730E shows the following options with checkmarks:</p> <ul style="list-style-type: none"> 1=OSD 2=AUTO BLUE 3=AUTO 0 4=HiCAM 	
<p>Note: 4 is except for VT-MX730E.</p>	

13. Caution When Replacing IC903 (EEPROM)

After replacing IC903 (EEPROM), execute the VCR initial settings and then perform the following adjustments.

	Adjustment	Page
1	Switching point adjustment	P3-5
2	Vertical jitter adjustment	P3-6
3	Forward slow tracking adjustment	P3-6
4	Reverse slow tracking adjustment	P3-6

TROUBLE DISPLAY FUNCTION

This VCR has a function which displays mechanism malfunctions, etc. in the LCD display. Use this function to analyze the cause when the power is shut off due to a malfunction, etc. in the mechanism.

Two types of information are displayed, 1)The operation mode when the malfunction occurred, 2)Malfunction Codes.

The details of the malfunction are displayed as follows.

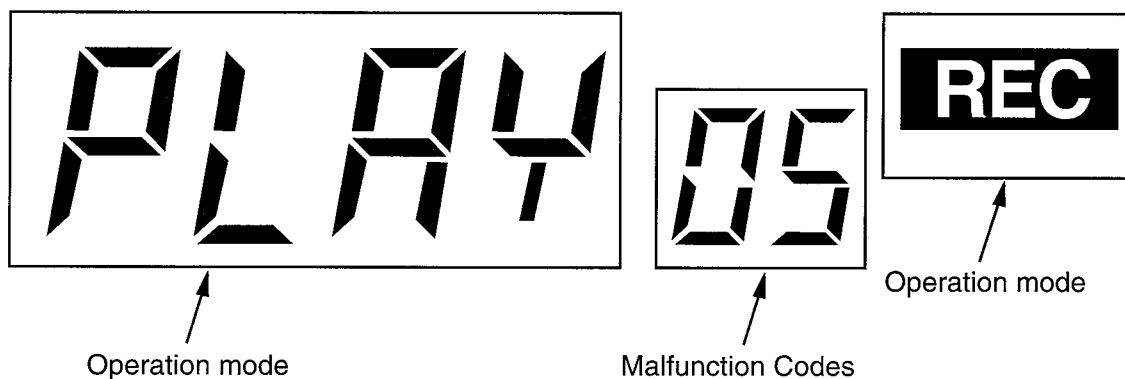
Procedure to display a malfunction

Press the (CH ▼) button on the VCR when the power is turned off and hold it; the malfunction code is displayed while the button is held depressed.

Procedure to clear the malfunction display

Press the "PLAY" button on the VCR and hold it, then press the microprocessor "RESET" button to initialize the trouble display.

LCD DISPLAY



【Display of details of malfunction】

Displayed No.	Item	Details
" 0 0 "	No malfunction	
" 0 1 "	FL mechanism lock	Malfunction in insertion/ejection of cassette
" 0 2 "	Capstan lock	Malfunction of capstan motor drive during tape unloading
" 0 4 "	Reel lock	Reel rotation trouble when tape is running
" 0 6 "	Cylinder lock	Cylinder rotation malfunction
" 0 7 "	Loading mechanism lock	Malfunction in shifting mechanism mode
" 1 6 "	Servo lock	Shorting of 5V detected

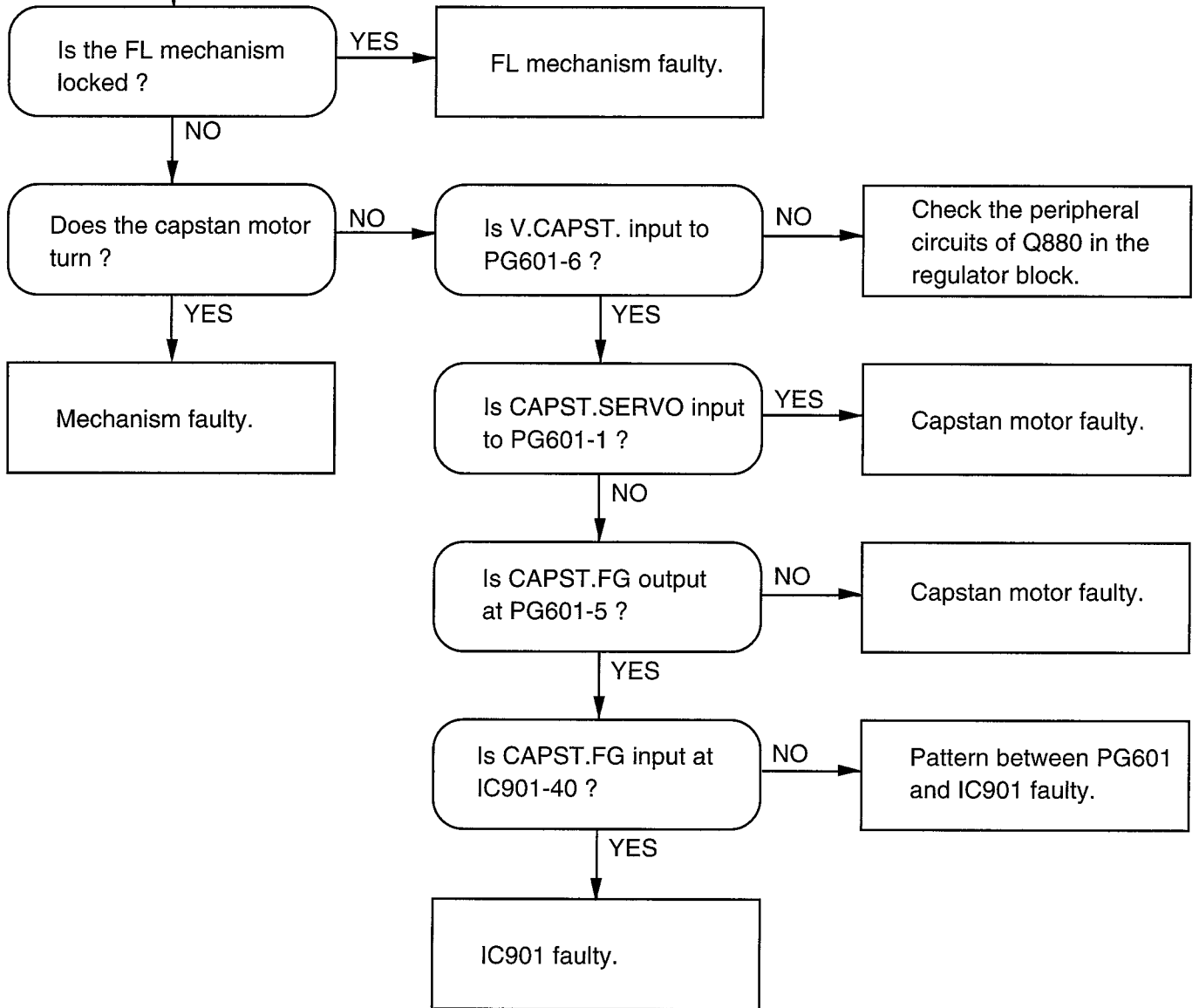
【Mode Display when Malfunction Has Occurred】

Mode	Display	Mode	Display
Stop	No Display	Playback	PLAY
Fast forward	FF	Reverse playback	-PLAY
Rewind	REW	Forward search	SRCH
High speed fast forward	FF	Reverse search	-SRCH
High speed rewind	REW	Slow motion play	SLOW
Recording	REC	Reverse motion slow play	-SLOW
Recording pause	REC (flashes)	Still motion play	STILL

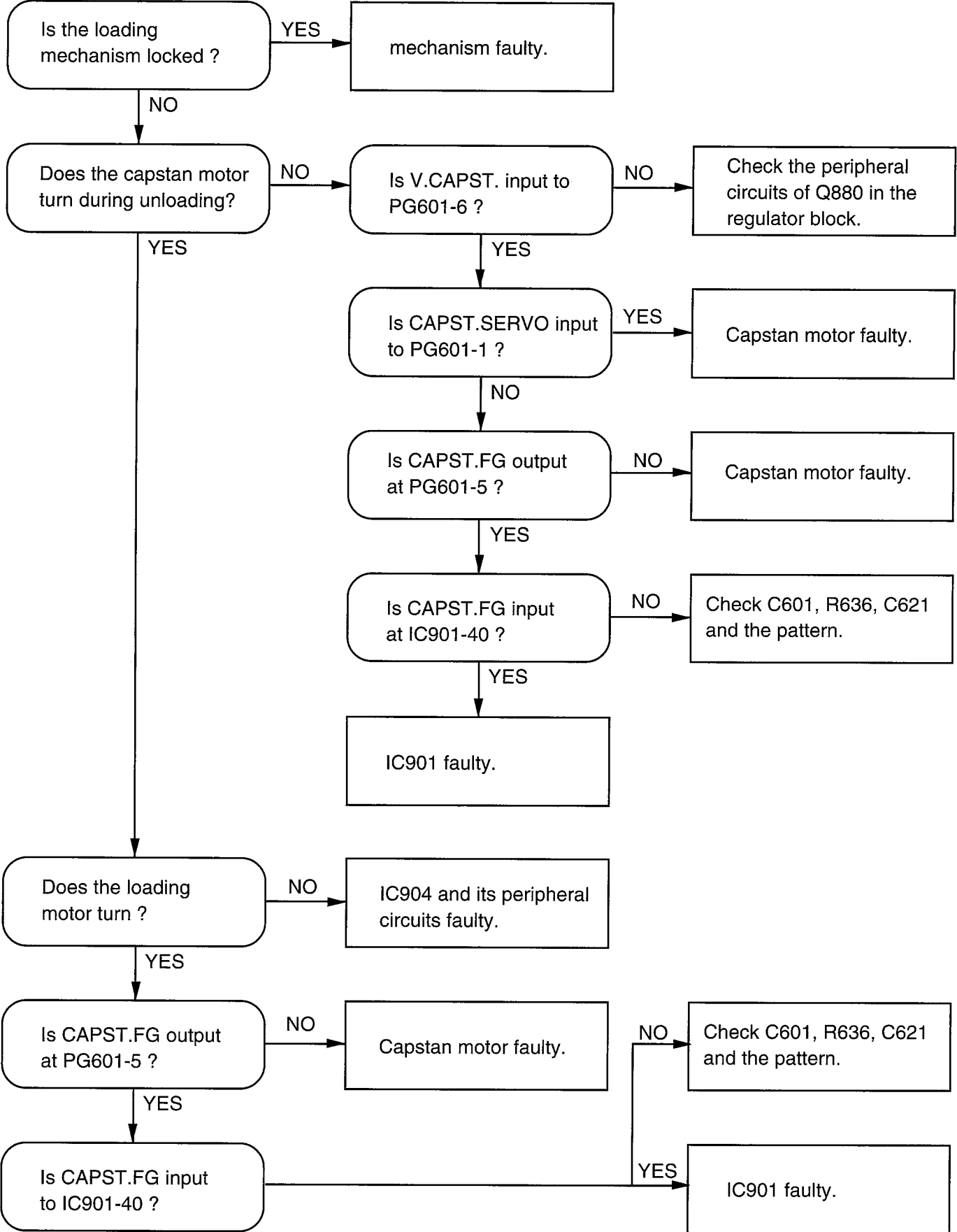
No symbols are displayed if the malfunction occurred when a cassette was inserted or ejected, or the power was switched on from off, and off from on.

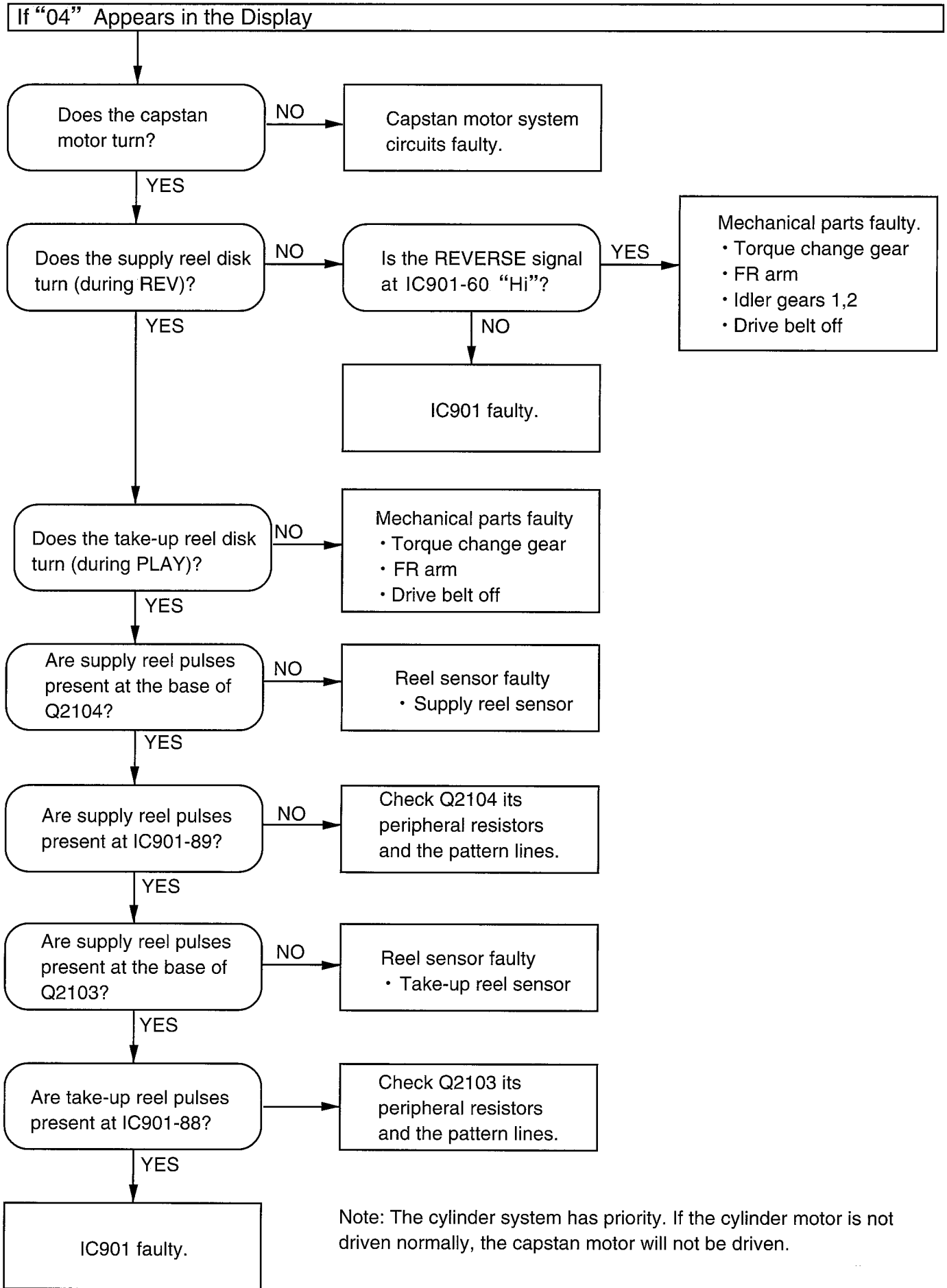
Troubleshooting According to Malfunction Display

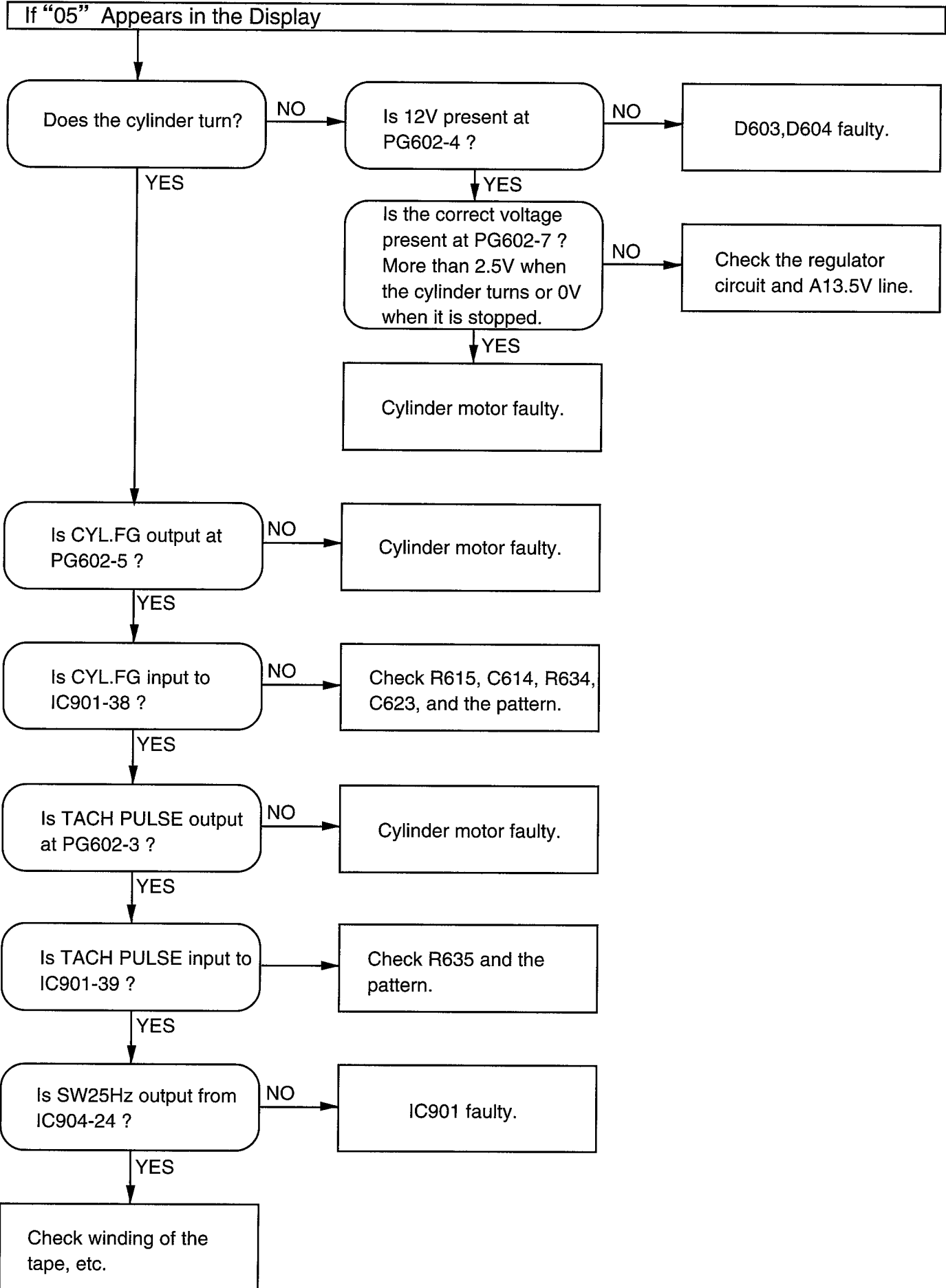
If "0 1" Appears in the Display

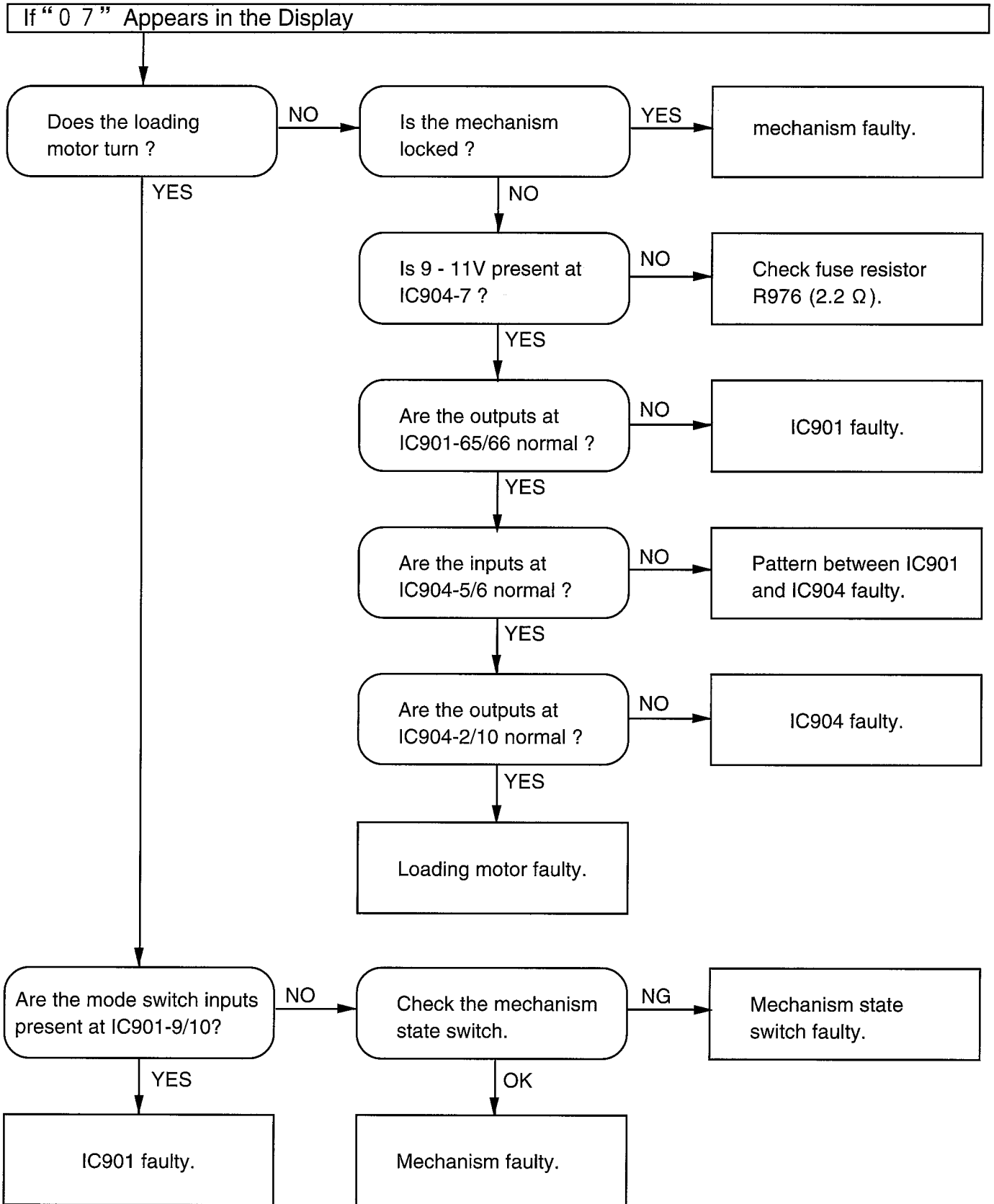


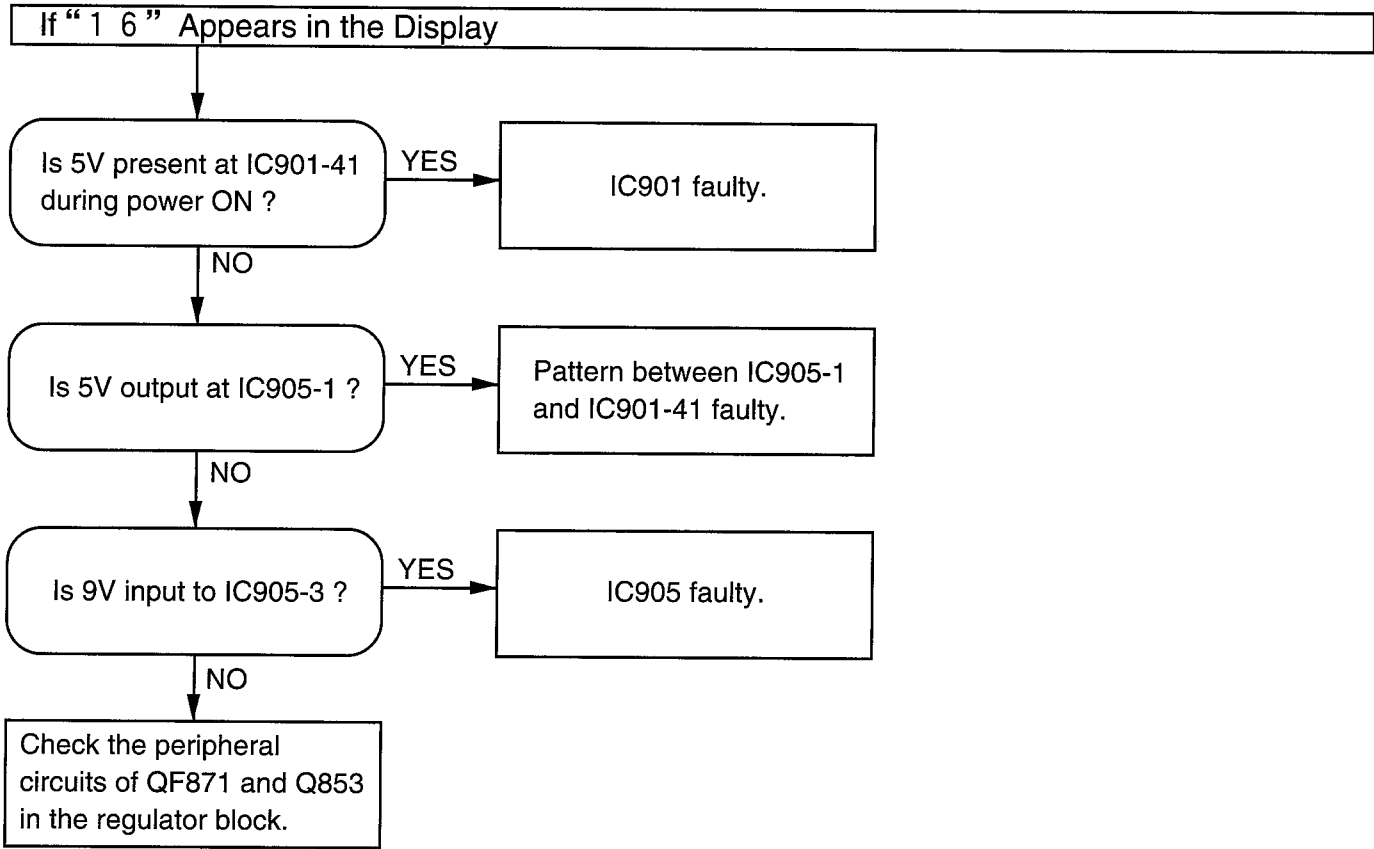
If "0 2" Appears in the Display





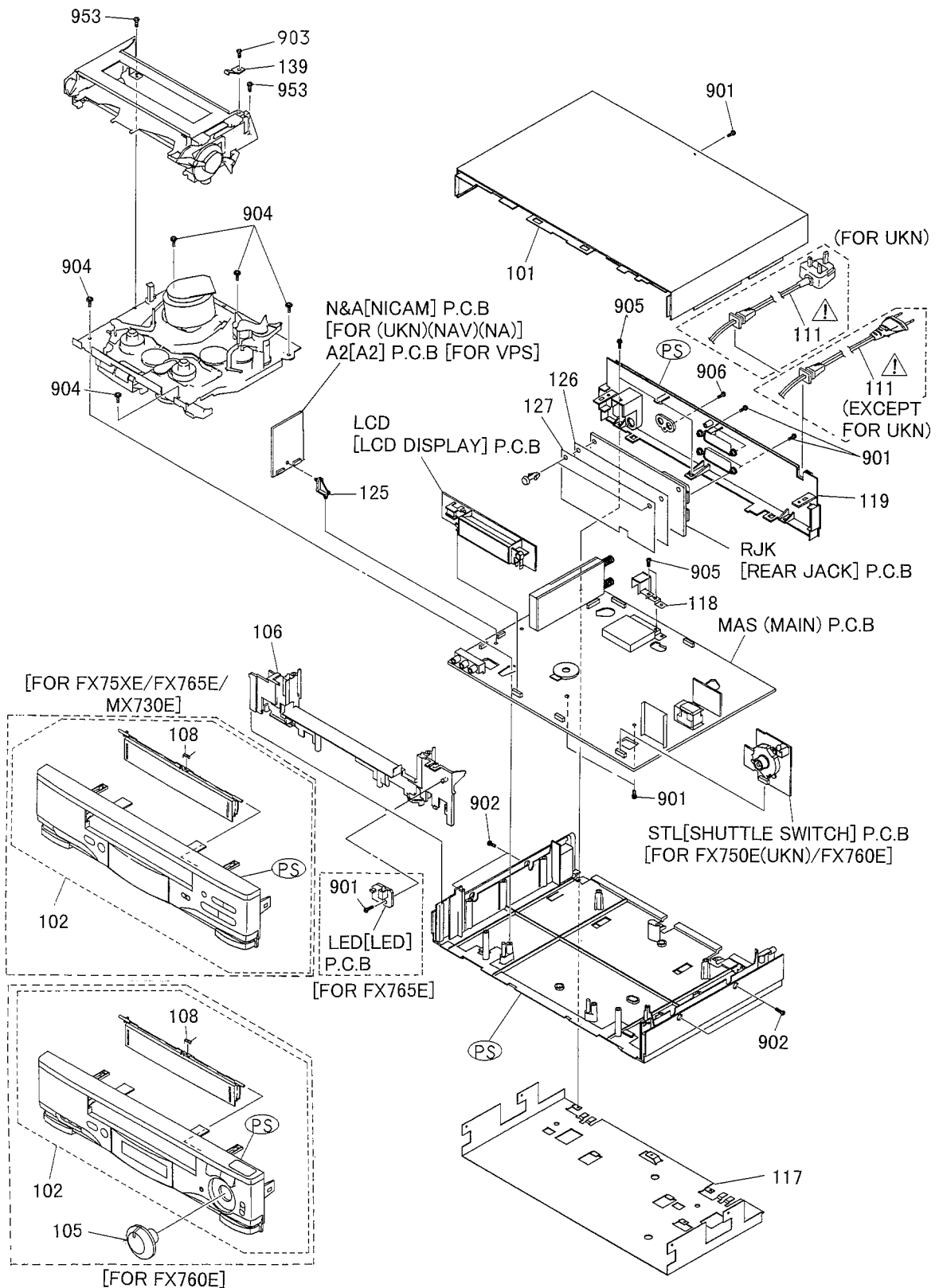






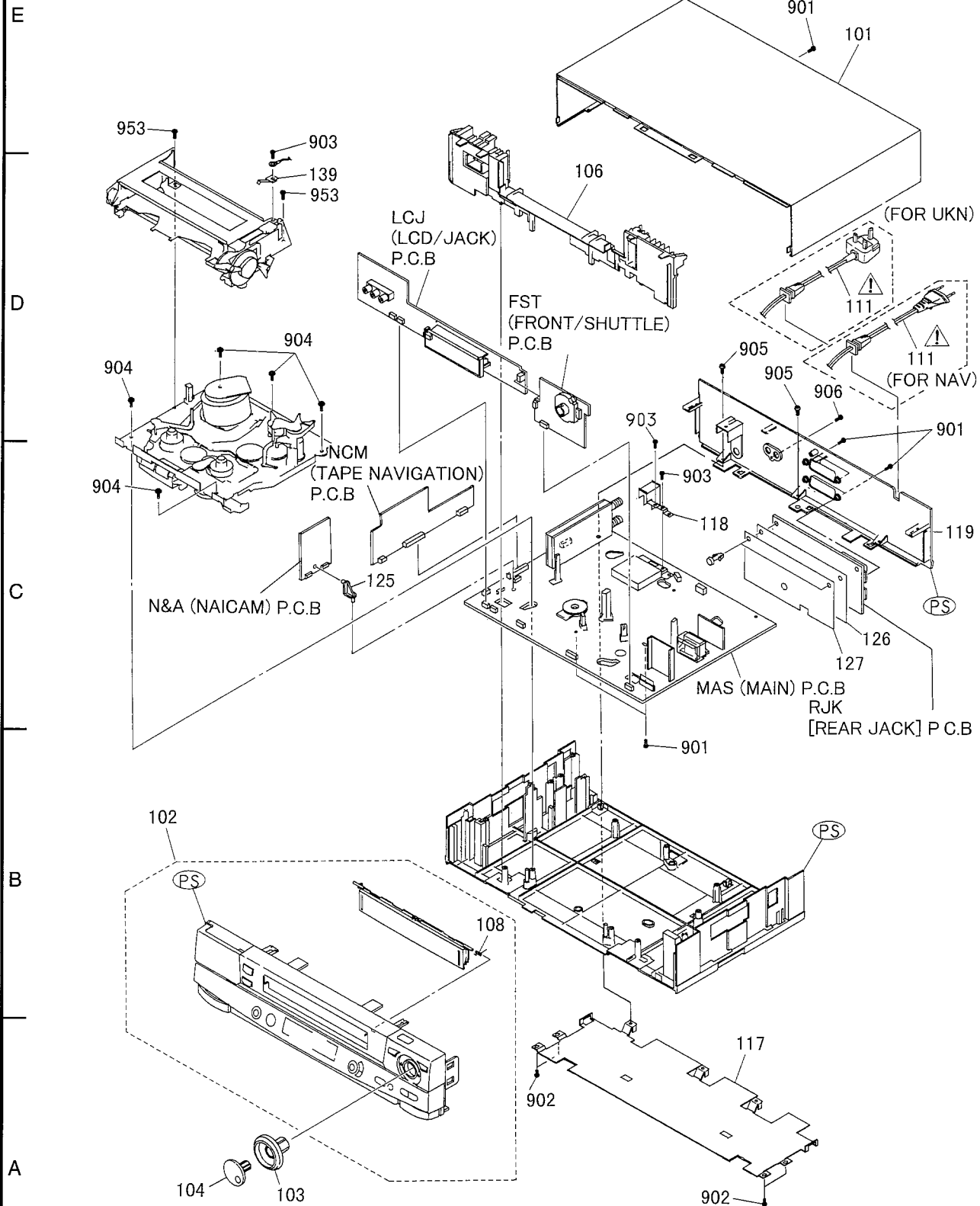
1. CABINET SECTION (VT-FX75xE/FX76xE)

NOTE: The synthetic resin members that can be dismantled are shown by abbreviations using letters.



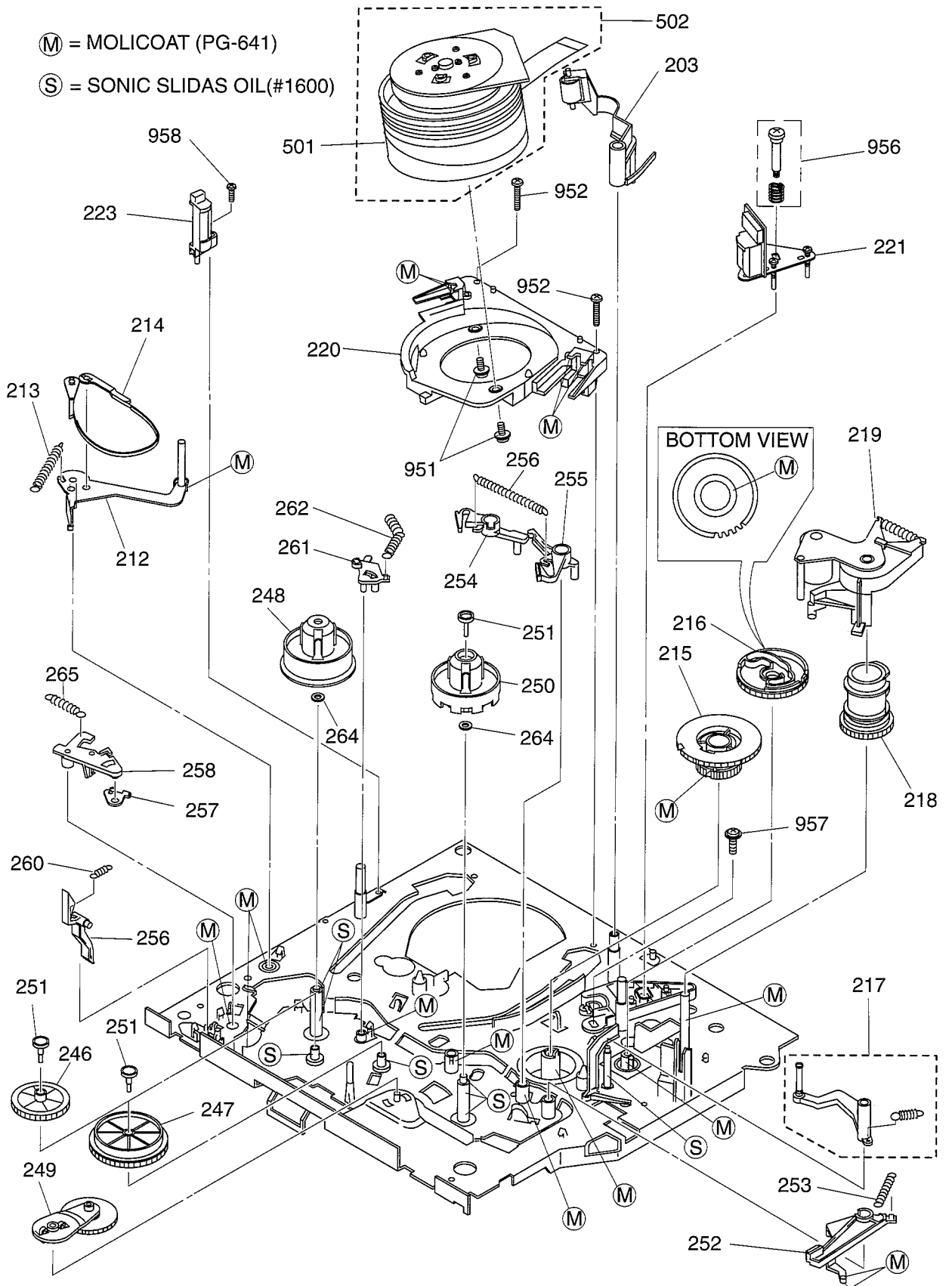
2. CABINET SECTION (VT-FX770E)

NOTE: The synthetic resin members that can be dismantled are shown by abbreviations using letters.



3. US-MECHANISM (TOP VIEW) SECTION

- Ⓜ = MOLICOAT (PG-641)
- Ⓢ = SONIC SLIDAS OIL (#1600)



1

2

3

4

E

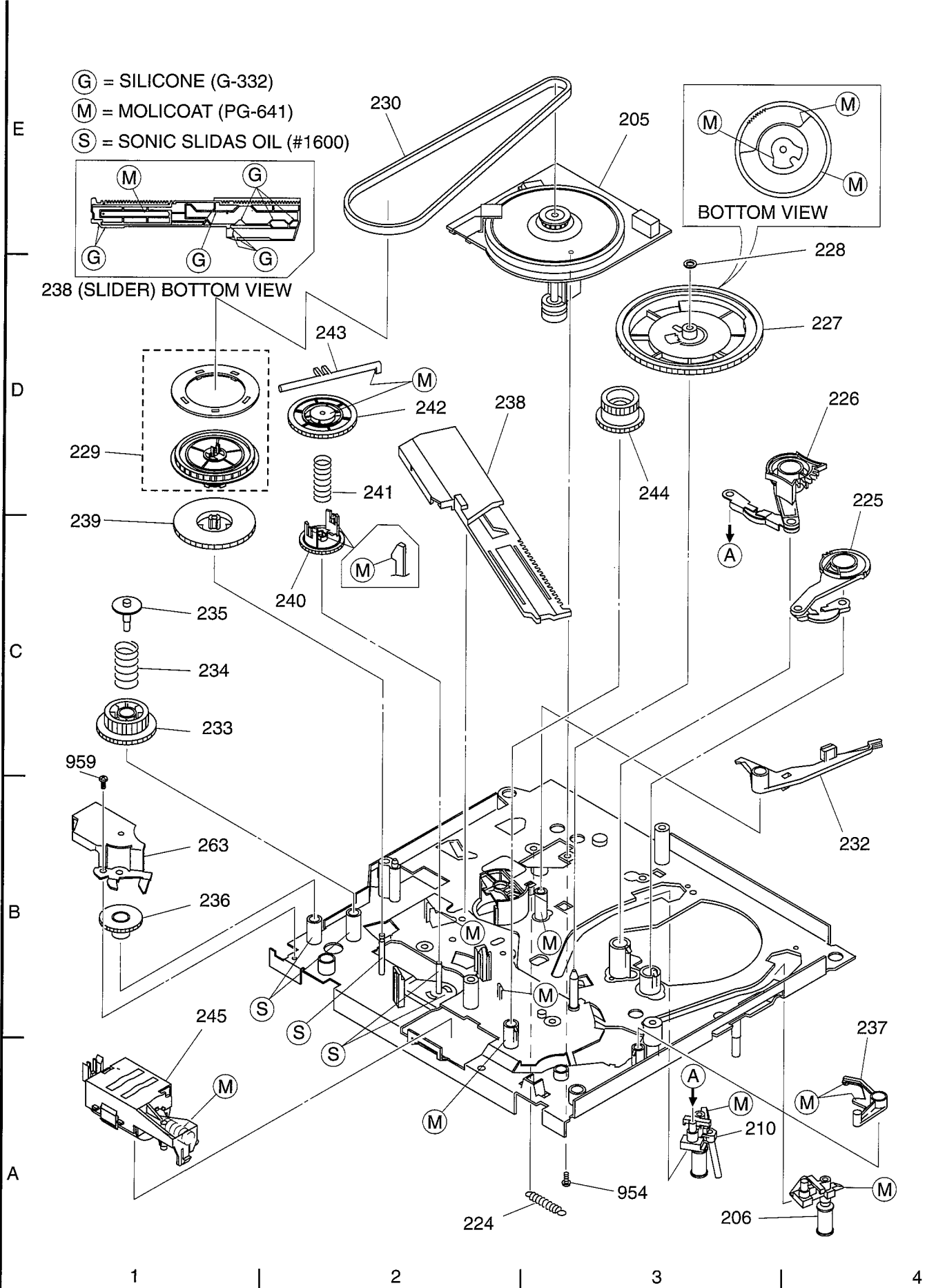
D

C

B

A

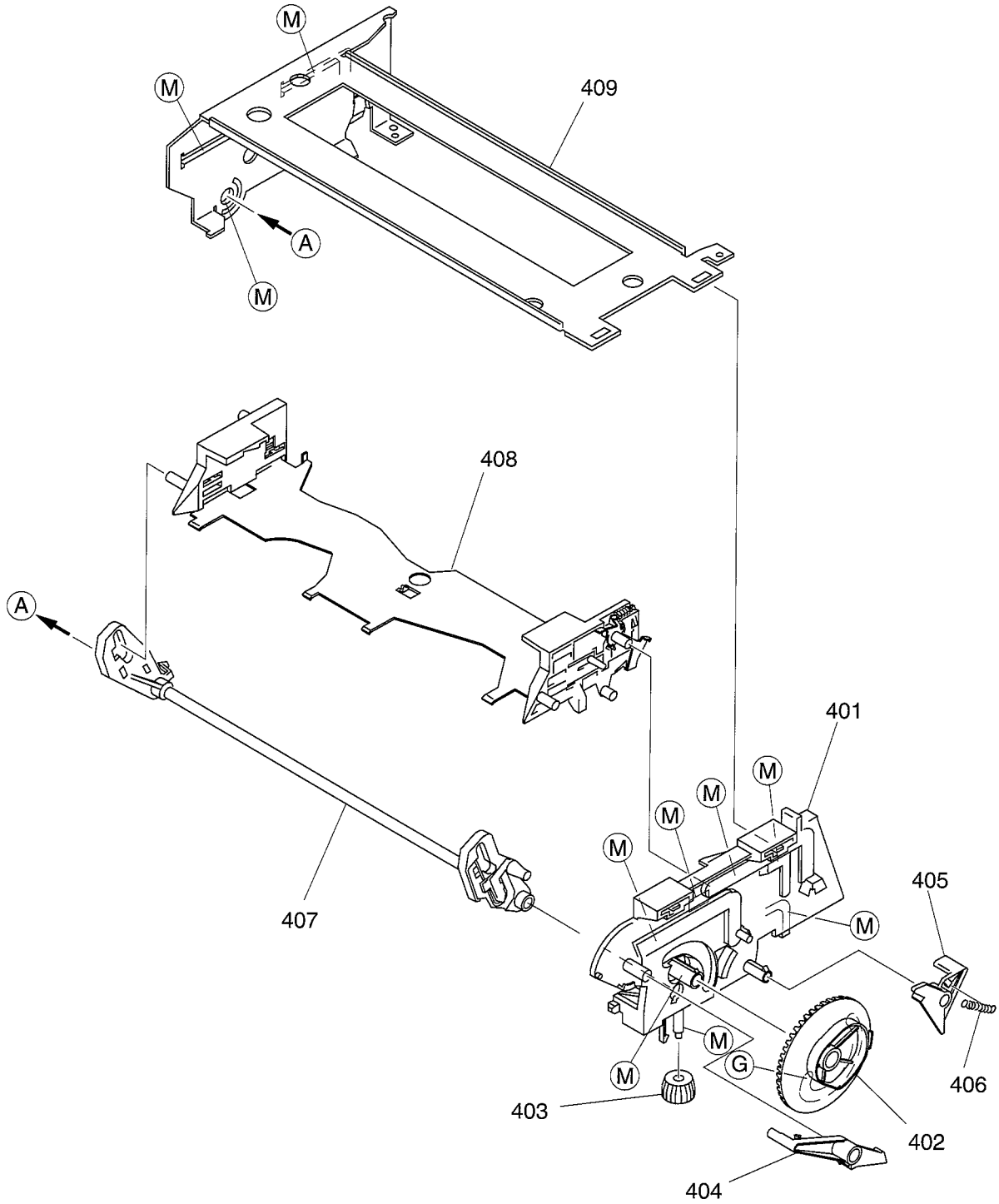
4. US-MECHANISM (BOTTOM VIEW) SECTION



5. US-FL MECHANISM SECTION

(M) = MOLICOAT (PG-641)

(G) = MOLICOAT (PG-641)



CHAPTER 5

REPLACEMENT PARTS LIST

Note 1. The model names shown in the parts list are abbreviated as follows in this supplement.
 7U:VT-FX770E(UKN), 7N:VT-FX770E(NAV), 65:VT-FX765E(UKN), 6U:VT-FX760E(UKN),
 6N:VT-FX760E(NA), 5U:VT-FX750E(UKN), 5N:VT-FX750E(NA), V:VT-FX750E/FX751E/FX752E(VPS),
 M:VT-MX730E(UK)
 2. For example, [EX 7U, 7N] may be used in place of [EXCEPT 7U, 7N]

1. MECHANICAL PARTS LIST

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
MECHANISM SECTION					
101	QA11163	COVER, TOP (HEPM) [5U, 5N, 65, 6U, 6N]	240	KF10501	GEAR, DRIVE
101	QA11463	COVER, TOP (HEPM) [V, M]	241	KL10773	SPRING
101	QA11853	COVER, TOP (HEPM) [7U, 7N]	242	KF10513	GEAR, CHANGE
102	PH16731	PANEL, FRONT (HEPM) [7U]	243	KX11411	ARM, CHANGE
102	PH16732	PANEL, FRONT (HEPM) [7N]	244	KX11371	GEAR
102	PH16951	PANEL, FRONT (HEPM) [6U]	245	KX11892	MOTOR, LOADING
102	PH16952	PANEL, FRONT (HEPM) [6N]	246	KF10521	GEAR, IDLER 1
102	PH16961	PANEL, FRONT (HEPM) [5U]	247	KF10532	GEAR, IDLER 2
102	PH16962	PANEL, FRONT (HEPM) [65]	248	KH10152	REEL, TABLE(S)
102	PH16965	PANEL, FRONT (HEPM) [V, 5N]	249	KX11423	ARM
102	PH16963	PANEL, FRONT (HEPM) [M]	250	KH10161	REEL, TABLE(T)
103	PC14932	RING, SHUTTLE	251	KX11991	STOPPER
104	PC14942	DIAL, JOG	252	KX11861	BRAKE
105	PC14361	KNOB, SHUTTLE (HEPM)	253	KL10782	SPRING, BRAKE
106	NT10486	PIECE, FRONT (HEPM) [EXCEPT 7U, 7N]	254	KX11875	BRAKE, L
106	NT11181	PIECE, FRONT (HEPM) [7U, 7N]	255	KX11883	BRAKE, R
108	KL12071	SPRING	256	KL10792	SPRING, BRAKE
△111	EV10541	AC CORD (HEPM) [7N, V, 5N, 6N]	257	KF10542	GEAR, JOG
△111	EV10551	CORD, POWER (HEPM) [7U, 5U, 65, 6U]	258	KX13132	ARM, JOG
△111	EV10491	AC CORD (HEPM) [M]	259	KX11841	ARM, REC
117	QA11151	COVER, BOTTOM (HEPM) [6U, 6N]	260	6542485	SPRING
117	QA11152	COVER, BOTTOM (HEPM) [V, 5U, 5N, 65, M]	261	KX11811	BRAKE, SUB
117	QA11911	COVER, BOTTOM (HEPM) [7U, 7N]	262	KL10903	SPRING, SUB
118	MD11281	COVER, CBA	263	KX12461	BRACKET, BASE
119	PH13721	PANEL, REAR (HEPM) [6U, 6N]	264	MN11571	WASHER
119	PH13723	PANEL, REAR (HEPM) [V, 5U, 5N, 65]	265	KL11062	SPRING, JOG
119	PH15362	PANEL, REAR (HEPM) [7U, 7N]	401	KX11773	BRACKET (R)
119	PH13724	PANEL, REAR (HEPM) [M]	402	KF10682	GEAR 1
125	6810651	HOLDER, CBA	403	KF10691	GEAR 2
126	MN12251	SHEET, INSULATE (HEPM)	404	KX11752	ARM, DOOR
127	MD11661	SHEET, SHIELD (HEPM)	405	KX11761	ARM, SWITCH
139	4826834	SPRING, EARTH	406	6323723	SPRING
203	KX11662	HEAD CLEANING MECHA	407	KX11931	ARM, DRIVE
205	GP10254	MOTOR, CAPSTAN	408	KX11922	HOLDER, CASSETTE
206	KX12294	BASE, GUIDE ROLLER (I)	409	KX11741	BRACKET (L)
210	KX12302	BASE, GUIDE ROLLER (O)	501	HX10292	CYLINDER ASSY (CY-U6S1)
212	KX11531	ARM, TENSION	901	8699412	SCREW (3X12) BLACK
213	KL10662	SPRING	902	8679408	SCREW (3.0X8) [EXCEPT 7U, 7N]
214	KX11631	BAND, TENSION	902	MK10271	SCREW (3X12DT) [7U, 7N]
215	KF10641	GEAR, DRIVE	903	8671306	SCREW (2.6X6)
216	KF10701	GEAR, IDLER	904	7781132	BT SCREW
217	KX12662	ARM, OUT	905	7784323	SCREW (3X8)
218	KX11581	GEAR, SPIRAL	906	8699410	SCREW (3X10)
219	KX11554	ARM, PINCH ROLLER	951	8652408	SCREW (PSW3X8)
220	KX11451	BASE, CYLINDER	952	0671310	DT SCREW-2.6MMDX10MM
221	KX11944	AC HEAD	953	8671306	SCREW (2.6X6)
223	5423082	FE HEAD	954	8691306	BT SCREW 2.6MM
224	KL10711	SPRING	956	KX12443	SCREW
225	KX17881	GEAR, LOADING(L)	957	MJ10341	SCREW (M2.6)
226	KX17891	GEAR, LOADING(R)	958	0671308	DT SCREW-2.6MMDX8MM
227	KF10673	GEAR, CAM	959	0671305	DT SCREW-2.6MMDX5MM
228	4344643	WASHER	ACCESSORIES		
229	KX17581	PULLEY	802	HL10953	REMOTE HAND SET (RCU-FX7) (HEPM) [5U, 65, 6U, 6N, M]
230	KX18201	BELT	802	HL10995	REMOTE HAND SET (RCU-01E) (HEPM) [V, 5N]
232	KX12031	BRAKE	802	HL11061	REMOTE HAND SET (VF-RM775E) (HEPM) [7U]
233	KF10571	GEAR, CHANGE	802	HL11062	REMOTE HAND SET (VT-RM776E) (HEPM) [7N]
234	KL10771	SPRING	803	5858315	CABLE (HEPM)
235	KX12001	STOPPER, SPRING			
236	KF10561	GEAR, IDLER			
237	KX11831	ARM, OPERATION			
238	KX11362	SLIDER			
239	KF10551	GEAR, TRANS			

Note 1. The model names shown in the parts list are abbreviated as follows in this supplement.
 7U:VT-FX770E(UKN), 7N:VT-FX770E(NAV), 6S:VT-FX765E(UKN), 6U:VT-FX760E(UKN),
 6N:VT-FX760E(NA), 5U:VT-FX750E(UKN), 5N:VT-FX750E(NA), V:VT-FX750E/FX751E/FX752E(VPS),
 M:VT-MX730E(UK)

2. For example, [EX 7U, 7N] may be used in place of [EXCEPT 7U, 7N]

3. Where different value components used for different models have the same symbol no., the model names are shown be abbreviations. However, the model names are not shown for components with a single symbol no. For these components, refer to the difference tables in the schematic and circuit board diagrams.

2. ELECTRICAL PARTS LIST

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
MAS, RJK BOARD			C0408	0800122	ELECTROLYTIC 10UF 16V
CAPACITORS			C0409	0893031	CERAMIC CHIP 1000PF+-10% 50V
			C0410	0893044	CERAMIC CHIP 0.01UF+-10% 50V
			C0411	0800175	ELECTROLYTIC 1.0UF 50V
			C0412	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0201	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0413	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0202	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0414	0800127	ELECTROLYTIC 220UF 10V
C0203	0800175	ELECTROLYTIC 1.0UF 50V[EXCEPT 7U, 7N]	C0419	0800117	ELECTROLYTIC 4.7UF 25V
C0203	0890046	CERAMIC DISC 0.1UF+80-20% 50V[7U, 7N]	C0420	AN10332R	CAPACITOR 0.027UF+-5% 100V
C0206	0800178	ELECTROLYTIC 4.7UF 35V	C0421	0209946	CERAMIC CHIP 220PF+-5% 50V
C0207	0893091	CERAMIC CHIP 0.022UF+-10% 16V	C0422	0800145	ELECTROLYTIC 100UF 16V
C0208	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0424	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0209	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0427	0893037	CERAMIC CHIP 3300PF+-10% 50V
C0211	0800138	ELECTROLYTIC 47UF 6.3V	C0429	0893091	CERAMIC CHIP 0.022UF+-10% 16V
C0213	0254458	ELECTROLYTIC 3.3UF+-20% 50V	C0434	0209945	CERAMIC DISC 180PF+-5% 50V
C0214	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0435	0209939	CERAMIC CHIP 56PF+-5% 50V
C0215	0800138	ELECTROLYTIC 47UF 6.3V	C0436	0893008	CERAMIC CHIP 0.1UF +-10% 16V
C0216	0209948	CERAMIC CHIP 330PF+-5% 50V	C0437	0800011	ELECTROLYTIC 4.7UF 35V
C0218	0800179	ELECTROLYTIC 10UF 16V	C0501	0800127	ELECTROLYTIC 220UF 10V
C0219	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0502	0800118	ELECTROLYTIC 4.7UF 35V
C0220	0890043	CERAMIC DISC 0.01UF+-20% 16V	C0503	0800118	ELECTROLYTIC 4.7UF 35V
C0221	0800112	ELECTROLYTIC 2.2UF 50V	C0504	0800118	ELECTROLYTIC 4.7UF 35V
C0222	0893008	CERAMIC CHIP 0.1UF +-10% 16V[EXCE 7U, 7N]	C0505	0800118	ELECTROLYTIC 4.7UF 35V
C0222	0893039	CERAMIC CHIP 4700PF+-10% 50V[7U, 7N]	C0506	0800135	ELECTROLYTIC 33UF 16V
C0223	0800118	ELECTROLYTIC 4.7UF 35V	C0507	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C0226	0893091	CERAMIC CHIP 0.022UF+-10% 16V	C0508	0800112	ELECTROLYTIC 2.2UF 50V
C0227	0800107	ELECTROLYTIC 0.47UF 50V	C0509	0800143	ELECTROLYTIC 100UF 6.3V
C0228	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0510	0893046	CERAMIC CHIP 0.015UF+-10% 50V
C0230	0893002	CERAMIC CHIP 0.033UF+-10% 16V	C0511	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0233	0800179	ELECTROLYTIC 10UF 16V	C0512	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0234	0800185	ELECTROLYTIC 47UF 6.3V	C0513	0800139	ELECTROLYTIC 47UF 10V
C0235	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0514	0893013	CERAMIC CHIP 0.22UF+-10% 16V
C0236	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0517	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0237	0893059	CERAMIC CHIP 0.47UF+80-20% 16V	C0518	0893046	CERAMIC CHIP 0.015UF+-10% 50V
C0238	0800176	ELECTROLYTIC 2.2UF 50V	C0519	0800143	ELECTROLYTIC 100UF 6.3V
C0239	0800175	ELECTROLYTIC 1.0UF 50V	C0520	0800112	ELECTROLYTIC 2.2UF 50V
C0241	0207444	ELECTROLYTIC 1.0UF 50V	C0521	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0242	0800179	ELECTROLYTIC 10UF 16V	C0522	0893053	CERAMIC CHIP 0.047UF+-10% 50V
C0243	0893059	CERAMIC CHIP 0.47UF+80-20% 16V	C0523	0800118	ELECTROLYTIC 4.7UF 35V
C0244	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0524	0800118	ELECTROLYTIC 4.7UF 35V
C0245	0800115	ELECTROLYTIC 3.3UF 50V	C0525	0800118	ELECTROLYTIC 4.7UF 35V
C0246	0893059	CERAMIC CHIP 0.47UF+80-20% 16V	C0526	0800118	ELECTROLYTIC 4.7UF 35V
C0247	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0527	0800118	ELECTROLYTIC 4.7UF 35V
C0249	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0528	AN00629R	CAPACITOR 0.027UF+-10% 50V
C0250	0209937	CERAMIC CHIP 39PF+-5% 50V	C0529	0800122	ELECTROLYTIC 10UF 16V
C0251	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0530	0800122	ELECTROLYTIC 10UF 16V
C0255	0209943	CERAMIC DISC 120PF+-5%	C0531	0800122	ELECTROLYTIC 10UF 16V
C0256	0209930	CERAMIC CHIP 10PF+-0.5% 50V	C0532	0800141	ELECTROLYTIC 47UF 16V
C0257	0209925	CERAMIC DISC 5PF+-0.25%	C0533	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0259	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0534	0800135	ELECTROLYTIC 33UF 16V
C0262	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0535	0893046	CERAMIC CHIP 0.015UF+-10% 50V
C0263	0209935	CERAMIC CHIP 27PF+-5% 50V	C0536	0893062	CERAMIC CHIP 1UF+80-20% 16V
C0270	0893008	CERAMIC CHIP 0.1UF +-10% 16V	C0601	0207441	ELECTROLYTIC 2.2UF 35V
C0273	0209935	CERAMIC CHIP 27PF+-5% 50V	C0604	0893091	CERAMIC CHIP 0.022UF+-10% 16V
C0278	0209936	CERAMIC CHIP 33PF+-5% 50V	C0606	0893031	CERAMIC CHIP 1000PF+-10% 50V
C0292	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0607	0209938	CERAMIC CHIP 47PF+-5% 50V
C0293	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0608	0209942	CERAMIC CHIP 100PF+-5% 50V
C0296	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0609	0800179	ELECTROLYTIC 10UF 16V
C0297	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0611	0893091	CERAMIC CHIP 0.022UF+-10% 16V
C0402	0800117	ELECTROLYTIC 4.7UF 25V	C0612	0800182	ELECTROLYTIC 22UF 16V
C0403	0800185	ELECTROLYTIC 47UF 6.3V	C0614	0893031	CERAMIC CHIP 1000PF+-10% 50V
C0404	0893044	CERAMIC CHIP 0.01UF+-10% 50V	C0615	0800042	ELECTROLYTIC 47UF 25V
C0405	0800117	ELECTROLYTIC 4.7UF 25V	C0621	0890038	CERAMIC DISC 3300PF+-20% 16V
C0406	0893035	CERAMIC CHIP 2200PF+-10% 50V	C0623	0893044	CERAMIC CHIP 0.01UF+-10% 50V
C0407	0800122	ELECTROLYTIC 10UF 16V	C0624	0893091	CERAMIC CHIP 0.022UF+-10% 16V

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
C0701	0893053	CERAMIC CHIP 0.047UF+10% 50V	C1116	0893008	CERAMIC CHIP 0.1UF +10% 16V
△C0851	AN10201S	FILM CAPACITOR 0.1UF+20% 250V	C1117	0890046	CERAMIC DISC 0.1UF+80-20% 50V
C0857	AJ10294	CERAMIC CAPACITOR 4700PF+20% 125V	C1119	0893008	CERAMIC CHIP 0.1UF +10% 16V
C0858	AJ10294	CERAMIC CAPACITOR 4700PF+20% 125V	C1120	0893008	CERAMIC CHIP 0.1UF +10% 16V
C0859	0800206	ELECTROLYTIC 47UF 35V	C1121	0893008	CERAMIC CHIP 0.1UF +10% 16V
C0860	AN10401R	CAPACITOR 0.047UF+10% 250V	C1122	0893008	CERAMIC CHIP 0.1UF +10% 16V
C0862	AL10191	ELECTROLYTIC 82UF 400V (HEPM)	C1124	0893031	CERAMIC CHIP 1000PF+10% 50V
C0863	AJ10245R	CERAMIC CHIP 2200PF+10% 50V	C1125	0800185	ELECTROLYTIC 47UF 6.3V
C0865	1143005	CERAMIC CAPACITOR 220PF+5% 1KV	C1126	0890046	CERAMIC DISC 0.1UF+80-20% 50V
C0866	0209950	CERAMIC CHIP 470PF+5% 50V	C1138	0209942	CERAMIC CHIP 100PF+5% 50V
C0871	0254403	CAPACITOR 22UF+20% 50V	C1139	0209934	CERAMIC CHIP 22PF+5% 50V
C0872	0254405	CAPACITOR 1000UF+20% 25V	C1140	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0873	0800354	ELECTROLYTIC 470UF 25V	C1141	0209950	CERAMIC CHIP 470PF+5% 50V
C0874	AL10481S	ELECTROLYTIC 3300UF 16V	C1403	0800178	ELECTROLYTIC 4.7UF 35V
C0875	0800352	ELECTROLYTIC 470UF 10V	C1404	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0876	0893044	CERAMIC CHIP 0.01UF+10% 50V	C1410	0209937	CERAMIC CHIP 39PF+5% 50V
C0877	1143001	CERAMIC CAPACITOR 56PF+5% 1KV	C1411	0209945	CERAMIC DISC 180PF+5% 50V
C0881	0800135	ELECTROLYTIC 33UF 16V	C1412	0800185	ELECTROLYTIC 47UF 6.3V
C0882	0893053	CERAMIC CHIP 0.047UF+10% 50V	C1413	0893053	CERAMIC CHIP 0.047UF+10% 50V
C0883	0800009	ELECTROLYTIC 4.7UF 25V	C1414	0800179	ELECTROLYTIC 10UF 16V
C0884	0800015	ELECTROLYTIC 10UF 16V	C1415	0800178	ELECTROLYTIC 4.7UF 35V
C0885	0893062	CERAMIC CHIP 1UF+80-20% 16V	C1419	0209931	CERAMIC CHIP 12PF+5% 50V
C0886	0893062	CERAMIC CHIP 1UF+80-20% 16V	C1422	0209938	CERAMIC CHIP 47PF+5% 50V
C0887	0890045	CERAMIC DISC 0.047UF+80-20% 50V	C1423	0800141	ELECTROLYTIC 47UF 16V
C0896	0800122	ELECTROLYTIC 10UF 16V	C1424	0893053	CERAMIC CHIP 0.047UF+10% 50V
C0902	0893044	CERAMIC CHIP 0.01UF+10% 50V	C1425	0209931	CERAMIC CHIP 12PF+5% 50V
C0903	0893053	CERAMIC CHIP 0.047UF+10% 50V	C1444	0209927	CERAMIC CHIP 7.0PF+0.5% 50V
C0904	0217516	CAPACITOR 0.047UF+80-20% 5.5V	C2101	0893031	CERAMIC CHIP 1000PF+10% 50V
C0905	0893008	CERAMIC CHIP 0.1UF +10% 16V	C2102	0893031	CERAMIC CHIP 1000PF+10% 50V
C0906	0893062	CERAMIC CHIP 1UF+80-20% 16V	C2503	0800351	ELECTROLYTIC 470UF 6.3V
C0907	0209927	CERAMIC CHIP 7.0PF+0.5% 50V	C2504	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0908	0209927	CERAMIC CHIP 7.0PF+0.5% 50V	C2507	0800011	ELECTROLYTIC 4.7UF 35V
C0909	0209932	CERAMIC CHIP 15PF+5% 50V	C2508	0893037	CERAMIC CHIP 3300PF+10% 50V
C0910	0209932	CERAMIC CHIP 15PF+5% 50V	C2509	0800041	ELECTROLYTIC 47UF 16V
C0912	0893008	CERAMIC CHIP 0.1UF +10% 16V	C2513	0800352	ELECTROLYTIC 470UF 10V
C0913	0893044	CERAMIC CHIP 0.01UF+10% 50V	C2514	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0914	0800033	ELECTROLYTIC 33UF 25V	C2515	0800139	ELECTROLYTIC 47UF 10V
C0915	0893044	CERAMIC CHIP 0.01UF+10% 50V	C2517	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0916	0893044	CERAMIC CHIP 0.01UF+10% 50V	C2518	0800044	ELECTROLYTIC 47UF 50V
C0919	0893053	CERAMIC CHIP 0.047UF+10% 50V	C2519	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0922	0893008	CERAMIC CHIP 0.1UF +10% 16V	C2520	0800353	ELECTROLYTIC 470UF 16V
C0923	0893091	CERAMIC CHIP 0.022UF+10% 16V	C2521	0800041	ELECTROLYTIC 47UF 16V
C0924	0209938	CERAMIC CHIP 47PF+5% 50V	C2522	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0925	0209938	CERAMIC CHIP 47PF+5% 50V	C2523	0893008	CERAMIC CHIP 0.1UF +10% 16V
C0926	0209930	CERAMIC CHIP 10PF+0.5% 50V	C2524	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0927	0893062	CERAMIC CHIP 1UF+80-20% 16V	C2525	0893008	CERAMIC CHIP 0.1UF +10% 16V
C0940	0209938	CERAMIC CHIP 47PF+5% 50V	C2532	0893031	CERAMIC CHIP 1000PF+10% 50V
C0941	0893062	CERAMIC CHIP 1UF+80-20% 16V	C2533	0893031	CERAMIC CHIP 1000PF+10% 50V
C0945	0893008	CERAMIC CHIP 0.1UF +10% 16V	C2534	0207458	ELECTROLYTIC 10UF 25V
C0946	0893008	CERAMIC CHIP 0.1UF +10% 16V	C2540	0893091	CERAMIC CHIP 0.022UF+10% 16V
C0950	0893013	CERAMIC CHIP 0.22UF+10% 16V	C2541	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0951	0893004	CERAMIC CHIP 0.047UF+10% 16V[7U, 7N, V]	C2542	0893044	CERAMIC CHIP 0.01UF+10% 50V
C0951	0893053	CERAMIC CHIP 0.047UF+10% 50V[5U, 5N, 65, M]	C2543	0800122	ELECTROLYTIC 10UF 16V
C0982	0893044	CERAMIC CHIP 0.01UF+10% 50V[EXCEPT M]	C2544	0893053	CERAMIC CHIP 0.047UF+10% 50V
C0982	0103855	CHIP RESISTOR 10KOHM+5% 0.1W[M]	C2545	0800179	ELECTROLYTIC 10UF 16V
C1103	0893044	CERAMIC CHIP 0.01UF+10% 50V	C2546	0207446	CERAMIC CHIP 10UF+20% 16V
C1104	0893044	CERAMIC CHIP 0.01UF+10% 50V	C2548	0893091	CERAMIC CHIP 0.022UF+10% 16V
C1105	0893044	CERAMIC CHIP 0.01UF+10% 50V	C4501	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C1106	0800185	ELECTROLYTIC 47UF 6.3V	C4502	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C1107	0893044	CERAMIC CHIP 0.01UF+10% 50V	C4503	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C1108	0893044	CERAMIC CHIP 0.01UF+10% 50V	C4504	0800141	ELECTROLYTIC 47UF 16V
C1111	0893044	CERAMIC CHIP 0.01UF+10% 50V	C4505	0890044	CERAMIC DISC 0.022UF+80-20% 25V
C1112	0800177	ELECTROLYTIC 3.3UF 50V	C4506	0800122	ELECTROLYTIC 10UF 16V
C1114	0893008	CERAMIC CHIP 0.1UF +10% 16V	C4507	0800122	ELECTROLYTIC 10UF 16V
C1115	0890046	CERAMIC DISC 0.1UF+80-20% 50V	C4508	0800122	ELECTROLYTIC 10UF 16V

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
C4509	0800122	ELECTROLYTIC 10UF 16V	R0257	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
C4510	0800122	ELECTROLYTIC 10UF 16V	R0258	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
C4511	0800122	ELECTROLYTIC 10UF 16V	R0261	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4512	0800122	ELECTROLYTIC 10UF 16V	R0263	0103881	CHIP RESISTOR 2.2MOHM+-10% 0.1W
C4513	0800141	ELECTROLYTIC 47UF 16V	R0264	0105515	CHIP RESISTOR 4.7MOHM+-5% 1/10W
C4514	0255138	ELECTROLYTIC 470UF 6.3V	R0269	0103834	CHIP RESISTOR 180OHM+-5% 0.1W
C4515	0800109	ELECTROLYTIC 1.0UF 50V	R0402	0103860	CHIP RESISTOR 27KOHM+-5% 0.1W
C4517	0255138	ELECTROLYTIC 470UF 6.3V	R0403	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
C4518	0800109	ELECTROLYTIC 1.0UF 50V	R0404	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
C4520	0890044	CERAMIC DISC 0.022UF+80-20% 25V	R0407	0103834	CHIP RESISTOR 180OHM+-5% 0.1W
C4522L	0890035	CERAMIC DISC 1000PF+-10% 50V [EXCEPT M]	R0408	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
C4522L	0890043	CERAMIC DISC 0.01UF+-20% 16V [M]	R0409	0103873	CHIP RESISTOR 330KOHM+-5% 0.1W
C4522R	0890035	CERAMIC DISC 1000PF+-10% 50V [EXCEPT M]	R0410	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
C4522R	0890043	CERAMIC DISC 0.01UF+-20% 16V [M]	R0413	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
C4524L	0890032	CERAMIC DISC 560PF+-10% 50V	R0414	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
C4524R	0890032	CERAMIC DISC 560PF+-10% 50V	R0418	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4526L	0890035	CERAMIC DISC 1000PF+-10% 50V	R0419	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
C4526R	0890035	CERAMIC DISC 1000PF+-10% 50V	R0420	0103860	CHIP RESISTOR 27KOHM+-5% 0.1W
C4528L	0890032	CERAMIC DISC 560PF+-10% 50V	R0421	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
C4528R	0890032	CERAMIC DISC 560PF+-10% 50V	R0422	0103812	CHIP RESISTOR 2.7OHM+-10% 0.1W
C4530	0890008	CERAMIC DISC 10PF+-5% 50V	R0423	0700058	CARBON FILM 22KOHM+-5% 1/8W
C4531	0890018	CERAMIC DISC 56PF+-50% 50V	R0424	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
C4532	0890018	CERAMIC DISC 56PF+-50% 50V	R0425	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
C4534	0800122	ELECTROLYTIC 10UF 16V	R0429	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
C4551	0800122	ELECTROLYTIC 10UF 16V	R0430	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
C4552	0800122	ELECTROLYTIC 10UF 16V	R0431	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4553	0800122	ELECTROLYTIC 10UF 16V	R0432	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4554	0800122	ELECTROLYTIC 10UF 16V	R0434	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W
C4555	0800122	ELECTROLYTIC 10UF 16V	R0435	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
C4556	0800122	ELECTROLYTIC 10UF 16V	R0436	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
C4557	0800122	ELECTROLYTIC 10UF 16V	R0450	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
C4558	0800122	ELECTROLYTIC 10UF 16V	R0501	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
C4559	0800122	ELECTROLYTIC 10UF 16V	R0502	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
C4560	0800122	ELECTROLYTIC 10UF 16V	R0503	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
C4561	0800122	ELECTROLYTIC 10UF 16V	R0504	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
C4562	0800122	ELECTROLYTIC 10UF 16V	R0505	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
C4563	0890045	CERAMIC DISC 0.047UF+80-20% 50V	R0506	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
C4564	0800141	ELECTROLYTIC 47UF 16V	R0507	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W
C4565	0800122	ELECTROLYTIC 10UF 16V	R0508	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
C4571L	AN00622R	CAPACITOR 0.0068UF+-10% 50V	R0509	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4571R	AN00622R	CAPACITOR 0.0068UF+-10% 50V	R0510	0104252	CHIP RESISTOR 510 OHM+-5% 1/10W
C4572L	0800122	ELECTROLYTIC 10UF 16V	R0511	AQ10296R	CHIP RESISTOR 15KOHM+-0.1% 1/10W
C4572R	0800122	ELECTROLYTIC 10UF 16V	R0512	AQ10295R	CHIP RESISTOR 11KOHM+-0.1% 1/10W
C4581	0890018	CERAMIC DISC 56PF+-50% 50V	R0516	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4582	0880016	POLYESTER FILM 0.1UF+-10% 50V	R0517	0104252	CHIP RESISTOR 510 OHM+-5% 1/10W
C4583	0800122	ELECTROLYTIC 10UF 16V	R0518	0700063	CARBON FILM 47KOHM+-5% 1/8W
C4584	AN00615R	CAPACITOR 0.0022UF+-10% 50V	R0519	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
C4585	0880187	CAPACITOR 0.033UF+-5% 50V	R0520	0700063	CARBON FILM 47KOHM+-5% 1/8W
RESISTORS					
R0212	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R0523	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0213	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R0524	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0215	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0525	0700056	CARBON FILM 15KOHM+-5% 1/8W
R0216	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R0526	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
R0217	0103860	CHIP RESISTOR 27KOHM+-5% 0.1W	R0527	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
R0229	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W	R0528	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
R0230	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R0529	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0236	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R0530	0700047	CARBON FILM 3.3KOHM+-5% 1/8W
R0238	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R0531	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W
R0239	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W	R0532	0700052	CARBON FILM 6.8KOHM+-5% 1/8W
R0241	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W	R0533	0103866	CHIP RESISTOR 82KOHM+-5% 0.1W
R0243	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W	R0534	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0253	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W	R0602	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0256	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R0605	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
			R0615	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
R0616	0700072	CARBON FILM 220KOHM+-5% 1/8W	R0888	AT10245S	RESISTOR 68 OHM+-5% 2W
R0621	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0889	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0622	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0890	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0623	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0891	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0624	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R0892	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0625	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W[EXCE 7U, 7N]	R0893	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0625	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W[7U, 7N]	R0894	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0629	0103837	CHIP RESISTOR 330 OHM+-5% 0.1W	R0895	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0630	0103837	CHIP RESISTOR 330 OHM+-5% 0.1W	R0896	0700058	CARBON FILM 22KOHM+-5% 1/8W
R0631	0103870	CHIP RESISTOR 180KOHM+-5% 0.1W	R0897	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
R0632	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0906	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0633	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W	R0907	0700053	CARBON FILM 8.2KOHM+-5% 1/8W[7N, 6N]
R0634	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0907	0700055	CARBON FILM 12KOHM+-5% 1/8W [7U, 65, 6U]
R0635	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0907	0700057	CARBON FILM 18KOHM+-5% 1/8W [V, 5N]
R0636	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W	R0907	0700058	CARBON FILM 22KOHM+-5% 1/8W [5U]
R0637	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W	R0907	0700062	CARBON FILM 39KOHM+-5% 1/8W [M]
R0701	0700029	CARBON FILM 150 OHM+-5% 1/8W	R0908	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0702	0700029	CARBON FILM 150 OHM+-5% 1/8W	R0909	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0703	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0910	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0705	0103842	CHIP RESISTOR 820 OHM+-5% 0.1W	R0911	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
R0706	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0913	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0707	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	R0914	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0708	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0915	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0709	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W	R0916	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0710	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R0917	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0711	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R0918	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0712	0103839	CHIP RESISTOR 470OHM+-5% 0.1W	R0919	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0713	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R0920	0700054	CARBON FILM 10KOHM+-5% 1/8W
R0714	0700029	CARBON FILM 150 OHM+-5% 1/8W	R0921	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0715	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W	R0922	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0716	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W	R0923	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W[EXCE 7U, 7N]
R0717	0103833	CHIP RESISTOR 150 OHM+-5% 0.1W	R0923	0700041	CARBON FILM 1.0KOHM+-5% 1/8W[7U, 7N]
R0718	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W	R0924	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R0719	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W	R0925	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R0720	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W	R0926	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
R0721	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0928	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0852	AT10211M	CHIP RESISTOR 1MOHM 1/2W	R0929	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0854	0116671	RESISTOR 100KOHM+-5% 3w	R0934	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0855	0116671	RESISTOR 100KOHM+-5% 3w	R0935	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W
R0856	AT10261S	RESISTOR 220KOHM+-5% 2W	R0936	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0859	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R0937	0103833	CHIP RESISTOR 150 OHM+-5% 0.1W[7U, 7N]
R0860	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W	R0937	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W[EX 7U, 7N]
R0861	0700038	CARBON FILM 680OHM+-5% 1/8W	R0938	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
R0862	AT10246S	RESISTOR 0.33 OHM+-5% 1W	R0939	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0863	0700022	CARBON FILM 39OHM+-5% 1/8W	R0940	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
R0864	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0943	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0866	0700038	CARBON FILM 680OHM+-5% 1/8W	R0944	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0867	0700032	CARBON FILM 220 OHM+-5% 1/8W	R0945	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0868	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0946	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0869	0104114	CHIP RESISTOR 3.3KOHM+-1% 0.1W	R0947	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0870	0105572	METAL FILM RESISTOR 2.7KOHM+-1% 1/10W	R0948	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0871	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R0949	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0872	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R0957	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
R0873	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R0960	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0874	0700058	CARBON FILM 22KOHM+-5% 1/8W	R0964	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0875	0700035	CARBON FILM 390OHM+-5% 1/8W	R0967	0700041	CARBON FILM 1.0KOHM+-5% 1/8W
R0876	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0968	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
R0877	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W	R0976	0101725	CHIP RESISTOR 2.2 OHM+-5% 1/4W
R0878	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0977	0700067	CARBON FILM 100KOHM+-5% 1/8W
R0879	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R0978	0101765	RESISTOR 10KOHM+-1% 1/8W
R0880	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R0983	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0881	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W	R0984	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0885	0700056	CARBON FILM 15KOHM+-5% 1/8W	R0985	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
R0886	0700056	CARBON FILM 15KOHM+-5% 1/8W	R0989	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
R0887	0700046	CARBON FILM 2.7KOHM+-5% 1/8W	R0991	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
R0993	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W	R4505	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R0995	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R4506	0700045	CARBON FILM 2.2KOHM+-5% 1/8W
R0996	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W	R4507	1109023	METAL FILM 75 OHM+-50% 1/8W
R0997	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W	R4508	1109023	METAL FILM 75 OHM+-50% 1/8W
R0998	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W	R4510	0700063	CARBON FILM 47KOHM+-5% 1/8W
R0999	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	R4511	0700062	CARBON FILM 39KOHM+-5% 1/8W
R1103	0103820	CHIP RESISTOR 120HM+-5% 0.1W	R4512L	0700036	CARBON FILM 470 OHM+-5% 1/8W
R1104	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W	R4512R	0700036	CARBON FILM 470 OHM+-5% 1/8W
R1120	0103839	CHIP RESISTOR 470OHM+-5% 0.1W	R4514L	0700036	CARBON FILM 470 OHM+-5% 1/8W
R1121	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W	R4514R	0700036	CARBON FILM 470 OHM+-5% 1/8W
R1409	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	R4516	0700054	CARBON FILM 10KOHM+-5% 1/8W
R1410	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W	R4517	0700054	CARBON FILM 10KOHM+-5% 1/8W
R1412	0103875	CHIP RESISTOR 470KOHM+-5% 0.1W	R4518	0700042	CARBON FILM 1.2KOHM+-5% 1/8W
R1414	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	R4521	0700027	CARBON FILM 100 OHM+-5% 1/8W [EXCEPT M]
R1416	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R4521	0700039	CARBON FILM 820 OHM+-5% 1/8W [M]
R1418	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W	R4522	0700027	CARBON FILM 100 OHM+-5% 1/8W
R1421	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W	R4571L	0700032	CARBON FILM 220 OHM+-5% 1/8W
R1423	0700038	CARBON FILM 680OHM+-5% 1/8W	R4571R	0700032	CARBON FILM 220 OHM+-5% 1/8W
R1424	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W	R4572L	0700063	CARBON FILM 47KOHM+-5% 1/8W
R1429	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R4572R	0700063	CARBON FILM 47KOHM+-5% 1/8W
R1430	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	R4573L	0700032	CARBON FILM 220 OHM+-5% 1/8W
R1431	0103839	CHIP RESISTOR 470OHM+-5% 0.1W	R4573R	0700032	CARBON FILM 220 OHM+-5% 1/8W
R1432	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W	R4584	0700081	CARBON FILM 1.0MOHM+-5% 1/8W
R1446	0209925	CERAMIC DISC 5PF+-0.25%	R4585	0101970	CARBON FILM 1200KOHM+-5% 1/8W
R2101	0700059	CARBON FILM 27KOHM+-5% 1/8W	R4587	0700067	CARBON FILM 100KOHM+-5% 1/8W
R2102	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	R4588	0101970	CARBON FILM 1200KOHM+-5% 1/8W
R2103	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	R4589	0700052	CARBON FILM 6.8KOHM+-5% 1/8W
R2104	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W	R4590	0700052	CARBON FILM 6.8KOHM+-5% 1/8W
R2105	0103867	CHIP RESISTOR 47KOHM+-5% 0.1W			SEMI-CONDUCTORS
R2106	0103837	CHIP RESISTOR 330 OHM+-5% 0.1W			
R2107	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	D0206	5339071	DIODE 1SS119
R2108	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W	D0207	5339071	DIODE 1SS119
R2109	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	D0401	5339071	DIODE 1SS119
R2110	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W	△D0851	5336552	DIODE S1WBA60
R2111	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W			
R2112	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W	D0852	CH10191M	DIODE EG01C-T
R2113	0103837	CHIP RESISTOR 330 OHM+-5% 0.1W	D0853	CH10481M	DIODE AG01Z
R2114	0103835	CHIP RESISTOR 220 OHM+-5% 0.1W	D0854	CH10481M	DIODE AG01Z
R2115	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	D0855	CH10481M	DIODE AG01Z
R2116	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	D0871	5339592	DIODE D1NL40
R2117	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W	D0872	CH10462S	DIODE S3L20U
R2506	0700036	CARBON FILM 470 OHM+-5% 1/8W	D0873	CH10641S	DIODE D3SGM
R2507	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W [M]	D0876	5339551	DIODE SS1J4
R2507	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W [EXCEPT M]	D0877	5339551	DIODE SS1J4
R2508	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	D0878	5339071	DIODE 1SS119
R2509	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W [EXCEPT M]	D0896	CH10871M	DIODE 1N4001
R2509	0103844	CHIP RESISTOR 1.2KOHM+-5% 0.1W [M]	D0897	CH10871M	DIODE 1N4001
R2510	0103863	CHIP RESISTOR 47KOHM+-5% 0.1W	D0898	CH10871M	DIODE 1N4001
R2511	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W	D0901	5339551	DIODE SS1J4
R2512	0103849	CHIP RESISTOR 3.3KOHM+-5% 0.1W	D0906	5339071	DIODE 1SS119
R2514	0101836	CARBON FILM 1.8KOHM+-5% 1/4W	D0907	5339071	DIODE 1SS119
R2518	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W	D0908	5339071	DIODE 1SS119
R2529	0103833	CHIP RESISTOR 150 OHM+-5% 0.1W	D0909	5339071	DIODE 1SS119
R2530	0103833	CHIP RESISTOR 150 OHM+-5% 0.1W	D0912	CH10871M	DIODE 1N4001
R2531	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	D0913	CH10871M	DIODE 1N4001
R2532	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	D1103	5339071	DIODE 1SS119
R2534	0103850	CHIP RESISTOR 3.9KOHM+-5% 0.1W [EXCEPT M]	D1403	5339071	DIODE 1SS119
R2534	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W [M]	D2501	5339071	DIODE 1SS119
R2535	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W	D2502	5339071	DIODE 1SS119
R2542	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W	D2503	5339071	DIODE 1SS119
R2543	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W	D2505	5339071	DIODE 1SS119
R4501	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	D4501	5339071	DIODE 1SS119
R4502	0700041	CARBON FILM 1.0KOHM+-5% 1/8W	LD2101	CH10542	DIODE GL451L1
R4503	1109023	METAL FILM 75 OHM+-50% 1/8W	IC0201	CK21372	IC HA118211AF (HEPM)
R4504	1109023	METAL FILM 75 OHM+-50% 1/8W	IC0501	CK14421	IC AN3964FB

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
IC0851	CP12461F	IC STR-F6653 (HEPM)	Q2505	5326903	TRANSISTOR UN2213
IC0871	CP11961R	IC HA17431PA	Q2506	5327021	TRANSISTOR 2SA844CD
IC0901	CK21203	IC HD6433977SC10F (HEPM) [5U, 6S, 6U]	Q2508	CA10672R	TRANSISTOR 2SD601A
IC0901	CK21204	IC HD6433977SC11F (HEPM) [V, 5N, 6N]	Q2510	5326903	TRANSISTOR UN2213
IC0901	CK21205	IC HD6433977SC13F (HEPM) [7U, 7N]	Q2511	5326904	TRANSISTOR UN2113
IC0901	CK21206	IC HD6433977SC14F (HEPM) [M]	Q4501	5327031	TRANSISTOR 2SA673(C)
IC0902	CP10312R	IC PST9129	Q4502	5327073	TRANSISTOR DTC144ES
IC0903	CP10915	IC ST24C02FB [7U, 7N]	Q4503	5327141	TRANSISTOR 2SD468C
IC0903	CP11013	IC AT24C04-10PC (HEPM) [EXCEPT 7U, 7N]	△ QF0871	5721946	PROTECTOR, ICP-N15
IC0904	CP10291	IC BA6209	△ QF0872	5721944	IC PROTECTOR, ICP-N25
IC0905	CP11361R	IC M5278L05	△ QF0873	5721943	IC PROTECTOR
IC1102	CK20671R	IC AN3329S-E1	△ QF4501	5721941	IC PROTECTOR
IC2101	CJ10391	SENSOR SG-HT10(T)	ZD0871	5339468	DIODE HZS11B3
IC2102	CJ10401	SENSOR SG-HT11(S)	ZD0872	5339482	DIODE HZS15-2
IC2501	CP12231	IC NJM2534D (HEPM)	ZD0896	5339464	DIODE HZS12A3
IC4501	CP11612	IC BH7633AS (HEPM)	ZD0901	5339275	DIODE HZS7-B2
IC4551	CP10351	IC LA7151	ZD0903	5339297	DIODE HZSSC3
IC4552	CP10351	IC LA7151	ZD2501	5339288	DIODE HZS30-3
IC4581	CP10642	IC SDA5650 (HEPM)	ZD4501	5339277	DIODE HZS6A2
△ PC0851	CF10431G	PHOTO COUPLER PC123FY	ZD4502	5339293	DIODE HZS12B2
△ PC0852	CF10431G	PHOTO COUPLER PC123FY	TRANSFORMER		
Q0202	5326903	TRANSISTOR UN2213	T0401	BT10251	TRANSFORMER, POWER
Q0219	5326903	TRANSISTOR UN2213	△ T0851	BT10481	TRANSFORMER, POWER
Q0222	5326903	TRANSISTOR UN2213	COILS		
Q0229	5326903	TRANSISTOR UN2213	L0201	5159142	CHOKE COIL 12UH
Q0232	5326903	TRANSISTOR UN2213	L0202	0770057	CHOKE COIL 100UH+-5%
Q0234	5326904	TRANSISTOR UN2113	L0205	0770057	CHOKE COIL 100UH+-5%
Q0403	CA10672R	TRANSISTOR 2SD601A	L0207	5159153	CHOKE COIL 82UH
Q0405	CA10582R	TRANSISTOR 2SB709A	L0208	0770057	CHOKE COIL 100UH+-5%
Q0406	5323172	TRANSISTOR 2SC1214CD	L0210	5159146	CHOKE COIL 27UH
Q0411	CA10582R	TRANSISTOR 2SB709A	L0401	0770057	CHOKE COIL 100UH+-5%
Q0412	CA10672R	TRANSISTOR 2SD601A	L0403	0770057	CHOKE COIL 100UH+-5%
Q0413	CA10672R	TRANSISTOR 2SD601A	L0501	0770048	CHOKE COIL 22UH+-5%
Q0701	1323082	TRANSISTOR 2SA1036K	△ L0851	BJ10251	FILTER, LC
Q0702	CA10672R	TRANSISTOR 2SD601A	L0871	BH00201R	COIL 10UH
Q0853	1321341	TRANSISTOR 2SD1765	L0872	BH00205R	COIL 22UH
Q0859	CA10672R	TRANSISTOR 2SD601A	L0901	0770057	CHOKE COIL 100UH+-5%
Q0871	5326903	TRANSISTOR UN2213	L1101	5121611	COIL
Q0873	5327063	TRANSISTOR 2SC1740S	L1102	0770057	CHOKE COIL 100UH+-5%
Q0874	5327262	TRANSISTOR 2SB1326	L1105	5121296	COIL 220UH
Q0875	CA10672R	TRANSISTOR 2SD601A	L1402	5121288	COIL 15UH
Q0876	5327262	TRANSISTOR 2SB1326	L2501	0770053	CHOKE COIL 47UH+-5%
Q0877	CA10672R	TRANSISTOR 2SD601A	L2502	0770057	CHOKE COIL 100UH+-5%
Q0878	5327262	TRANSISTOR 2SB1326	L2504	0770052	COIL, CHOKE 39UH+-5%
Q0879	5327021	TRANSISTOR 2SA844CD	L2505	0770057	CHOKE COIL 100UH+-5%
Q0880	1321341	TRANSISTOR 2SD1765	L2507	0770053	CHOKE COIL 47UH+-5%
Q0896	CF10451R	TRANSISTOR 2SC3246	L4501	0770057	CHOKE COIL 100UH+-5%
Q0901	5327261	TRANSISTOR 2SB1326(Q)	L4502	0770057	CHOKE COIL 100UH+-5%
Q0902	5326903	TRANSISTOR UN2213	L4551	0770057	CHOKE COIL 100UH+-5%
Q0909	5326903	TRANSISTOR UN2213	L4581	0770057	CHOKE COIL 100UH+-5%
Q0913	5326903	TRANSISTOR UN2213	CRYSTALS		
Q0914	5326903	TRANSISTOR UN2213	X0202	BP10541	CRYSTAL (HEPM)
Q1104	5326903	TRANSISTOR UN2213	X0901	BP10571	CRYSTAL
Q1404	CA10582R	TRANSISTOR 2SB709A	X0902	BP10251	CRYSTAL
Q1407	CA10582R	TRANSISTOR 2SB709A	X1401	BP10573	CRYSTAL (HEPM)
Q1408	CA10582R	TRANSISTOR 2SB709A	MISCELLANEOUS		
Q1409	5326903	TRANSISTOR UN2213	BLO601	BZ10471R	CORE
Q1410	CA10582R	TRANSISTOR 2SB709A			
Q2101	CF10372	TRANSISTOR PT493FL1			
Q2102	CF10372	TRANSISTOR PT493FL1			
Q2103	5326903	TRANSISTOR UN2213			
Q2104	5326903	TRANSISTOR UN2213			
Q2501	CA10672R	TRANSISTOR 2SD601A			
Q2502	CA10672R	TRANSISTOR 2SD601A			
Q2503	CA10672R	TRANSISTOR 2SD601A			

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
BL0602	BZ10471R	CORE	C1826	0893004	CERAMIC CHIP 0.047UF+-10% 16V
BL0603	BZ10471R	CORE	C1827	0800316	ELECTROLYTIC 47UF 10V
BL0604	5272376	FILTER	C1828	0893004	CERAMIC CHIP 0.047UF+-10% 16V
BL0851	BZ10471R	CORE	C1851L	0800291	ELECTROLYTIC 10UF 16V
BL0852	BZ10471R	CORE	C1851R	0800291	ELECTROLYTIC 10UF 16V
BL0853	BZ10471R	CORE	C1852L	0209853	CERAMIC DISC 68PF+-5% 50V
BL0854	BZ10471R	CORE	C1852R	0209853	CERAMIC DISC 68PF+-5% 50V
BL0871	BZ10471R	CORE	C1853L	0800291	ELECTROLYTIC 10UF 16V
BL0872	BZ10471R	CORE	C1853R	0800291	ELECTROLYTIC 10UF 16V
BL0873	BZ10471R	CORE	C1854L	0800291	ELECTROLYTIC 10UF 16V
BL0874	5274522	CORE	C1854R	0800291	ELECTROLYTIC 10UF 16V
BL2501	BZ10471R	CORE	C1855L	0893037	CERAMIC CHIP 3300PF+-10% 50V
BL2502	BZ10471R	CORE	C1855R	0893037	CERAMIC CHIP 3300PF+-10% 50V
BL4501L	BZ10471R	CORE	C1861	0893004	CERAMIC CHIP 0.047UF+-10% 16V
BL4501R	BZ10471R	CORE	C1862	0893008	CERAMIC CHIP 0.1UF +-10% 16V
BL4502L	BZ10471R	CORE			
BL4502R	BZ10471R	CORE			RESISTORS
BL4503L	BZ10471R	CORE	R1802	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
BL4503R	BZ10471R	CORE	R1803	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
BL4503L	BZ10471R	CORE			
BL4503R	BZ10471R	CORE	R1804	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
BL4504L	BZ10471R	CORE	R1805	0103854	CHIP RESISTOR 8.2KOHM+-5% 0.1W
BL4504R	BZ10471R	CORE	R1806	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
BL4571R	BZ10471R	CORE	R1807	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
△ F0851	5721061	FUSE 1.6A	R1813	0103860	CHIP RESISTOR 27KOHM+-5% 0.1W
FE2501	HC10351	TUNER IF UNIT (HEPM) [7U, 5U, 65, 6U, M]	R1816	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
FE2501	HC10352	TUNER IF UNIT (HEPM) [7N, V, 5N, 6N]	R1817	0700053	CARBON FILM 8.2KOHM+-5% 1/8W
△ FH0851	5722413	HOLDER, FUSE (HEPM)	R1851L	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
△ FH0852	5722413	HOLDER, FUSE (HEPM)	R1851R	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
J4501	EQ10261	JACK	R1852L	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
J4502	EQ10262	JACK	R1852R	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
J4571	ES10391	JACK (HEPM)	R1853L	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
JK2503	ES10373	JACK (HEPM)	R1853R	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
S0704	FE10141R	SWITCH	R1854L	0103868	CHIP RESISTOR 120KOHM+-5% 0.1W
S0706	FE10141R	SWITCH	R1854R	0103868	CHIP RESISTOR 120KOHM+-5% 0.1W
S0707	FE10141R	SWITCH	R1855L	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
S0708	5636101	SWITCH	R1855R	0103862	CHIP RESISTOR 39KOHM+-5% 0.1W
S0709	FE10141R	SWITCH	R1856L	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
S0710	FE10141R	SWITCH	R1856R	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
S0711	FE10141R	SWITCH	R1857L	0103832	CHIP RESISTOR 120OHM+-5% 0.1W
S0712	FE10142R	SWITCH	R1857R	0103832	CHIP RESISTOR 120OHM+-5% 0.1W
S2101	FD10211	SWITCH, MODE			SEMI-CONDUCTORS
S2102	5635631	SWITCH	D1801	CC11071R	DIODE HVU202A
S2103	5635631	SWITCH	IC1801	CK21161	IC TDA9874H (HEPM)
	N&A BOARD (FOR UKN, NA, NAV)		IC1802	5352714	IC NJM4558M
	CAPACITORS				COILS
C1801	0893079	CERAMIC DISC 0.01UF+80-20% 50V	L1802	0770048	CHOKE COIL 22UH+-5%
C1803	0893079	CERAMIC DISC 0.01UF+80-20% 50V	L1803	0770057	CHOKE COIL 100UH+-5%
C1805	0893079	CERAMIC DISC 0.01UF+80-20% 50V	L1805	5121284	COIL 3.3UH
C1807	0880019	POLYESTER FILM 0.33UF+-10% 50V	L1851L	5159113	COIL, CHOKE 8.2MH
C1808	0893083	CHIP CERAMIC 0.033UF 50V	L1851R	5159113	COIL, CHOKE 8.2MH
C1809	0209932	CERAMIC CHIP 15PF+-5% 50V			CRYSTAL
C1810	0209933	CERAMIC CHIP 18PF+-5% 50V	X1801	BP10821	CRYSTAL
C1812	0893079	CERAMIC DISC 0.01UF+80-20% 50V			MISCELLANEOUS
C1814	0893027	CERAMIC CHIP 0.1UF+-10% 25V	BL1801	BM00154R	COIL
C1815	0209896	CERAMIC CHIP 47PF+-5% 50V	BL1802	BM00154R	COIL
C1816	0800279	CAPACITOR 1.0UF+-20% 50V			
C1817	0893079	CERAMIC DISC 0.01UF+80-20% 50V			
C1819	0893079	CERAMIC DISC 0.01UF+80-20% 50V			
C1821	0800291	ELECTROLYTIC 10UF 16V			
C1822	0800316	ELECTROLYTIC 47UF 10V			
C1824	0893079	CERAMIC DISC 0.01UF+80-20% 50V			
C1825	0800316	ELECTROLYTIC 47UF 10V			

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
A2 BOARD (FOR VPS)					
CAPACITORS					
C1857	0800185	ELECTROLYTIC 47UF 6.3V	C1701	0800185	ELECTROLYTIC 47UF 6.3V
C1858	0890043	CERAMIC DISC 0.01UF+-20% 16V	C1702	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C1860	0800176	ELECTROLYTIC 2.2UF 50V	C1703	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C1861	0800176	ELECTROLYTIC 2.2UF 50V	C1704	0890045	CERAMIC DISC 0.047UF+80-20% 50V
C1862	0800178	ELECTROLYTIC 4.7UF 35V	C1705	0890035	CERAMIC DISC 1000PF+-10% 50V
C1863	0800178	ELECTROLYTIC 4.7UF 35V	C1706	0800185	ELECTROLYTIC 47UF 6.3V
C1864	0800015	ELECTROLYTIC 10UF 16V	C1707	0800112	ELECTROLYTIC 2.2UF 50V
C1865	0800179	ELECTROLYTIC 10UF 16V	RESISTORS		
C1871	0800176	ELECTROLYTIC 2.2UF 50V	R1701	0700036	CARBON FILM 470 OHM+-5% 1/8W
C1872	0800176	ELECTROLYTIC 2.2UF 50V	R1702	0700036	CARBON FILM 470 OHM+-5% 1/8W
C1873	AJ10176R	CERAMIC CAPACITOR 5.0PF+-0.25% 50V	R1703	0700038	CARBON FILM 680OHM+-5% 1/8W
C1874	0890043	CERAMIC DISC 0.01UF+-20% 16V	R1704	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
C1876	0890043	CERAMIC DISC 0.01UF+-20% 16V	R1705	0700067	CARBON FILM 100KOHM+-5% 1/8W
C1879	0800176	ELECTROLYTIC 2.2UF 50V	R1719	0700054	CARBON FILM 10KOHM+-5% 1/8W
C1881	0890045	CERAMIC DISC 0.047UF+80-20% 50V	R1720	0700051	CARBON FILM 5.6KOHM+-5% 1/8W
C1882	0890046	CERAMIC DISC 0.1UF+80-20% 50V	R1721	0700039	CARBON FILM 820OHM+-5% 1/8W
C1890	0890043	CERAMIC DISC 0.01UF+-20% 16V	R1722	0700048	CARBON FILM 3.9KOHM+-5% 1/8W
C1891	0890043	CERAMIC DISC 0.01UF+-20% 16V	R1723	0700037	CARBON FILM 560OHM+-5% 1/8W
C1895	0890025	CERAMIC DISC 180PF+-10% 50V	R1724	0700047	CARBON FILM 3.3KOHM+-5% 1/8W
C1896	0800187	ELECTROLYTIC 100UF 6.3V	R1725	0700045	CARBON FILM 2.2KOHM+-5% 1/8W
C1897	0890036	CERAMIC DISC 1500PF+-20% 16V	R1726	0700035	CARBON FILM 390OHM+-5% 1/8W
C1898	0800179	ELECTROLYTIC 10UF 16V	R1727	0700044	CARBON FILM 1.8KOHM+-5% 1/8W
C1899	0890046	CERAMIC DISC 0.1UF+80-20% 50V	R1728	0700054	CARBON FILM 10KOHM+-5% 1/8W
RESISTORS			R1729	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R1864	0700034	CARBON FILM 330OHM+-5% 1/8W	R1730	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R1865	0700034	CARBON FILM 330OHM+-5% 1/8W	R1731	0700049	CARBON FILM 4.7KOHM+-5% 1/8W
R1870	0700038	CARBON FILM 680OHM+-5% 1/8W	R1732	0700063	CARBON FILM 47KOHM+-5% 1/8W
R1871	0700037	CARBON FILM 560OHM+-5% 1/8W	R1733	0700034	CARBON FILM 330OHM+-5% 1/8W
R1872	0700031	CARBON FILM 180OHM+-5% 1/8W	R1735	0700033	CARBON FILM 270OHM+-5% 1/8W
R1873	0700049	CARBON FILM 4.7KOHM+-5% 1/8W	SEMI-CONDUCTORS		
R1874	0700037	CARBON FILM 560OHM+-5% 1/8W	D1701	5339071	DIODE 1SS119
R1875	0700028	CARBON FILM 120OHM+-5% 1/8W	D1702	CH11171M	DIODE AK04
R1876	0700028	CARBON FILM 120OHM+-5% 1/8W	IC1701	CZ10182	IC BU9716AK (HEPM)
R1877	0700049	CARBON FILM 4.7KOHM+-5% 1/8W	LD1701	CH11141R	DIODE SEL6414E (HEPM)
R1878	0700059	CARBON FILM 27KOHM+-5% 1/8W	LD1702	CH11141R	DIODE SEL6414E (HEPM)
R1899	0700059	CARBON FILM 27KOHM+-5% 1/8W	LD1703	CH11141R	DIODE SEL6414E (HEPM)
SEMI-CONDUCTORS			LD1704	CH11141R	DIODE SEL6414E (HEPM)
IC1871	CK14551	IC TDA9840T	LD1705	CH11141R	DIODE SEL6414E (HEPM)
IC1872	1346191	IC TDA9821	LD1706	CH11231R	DIODE SEL5220STH8F (HEPM)
COILS			LD1708	CH10472R	DIODE SEL6410E
L1871	0770057	CHOKE COIL 100UH+-5%	Q1702	5327063	TRANSISTOR 2SC1740S
L1872	5159111	CHOKE COIL 5600UH	Q1703	CF10851R	TRANSISTOR DTC124ESA (HEPM)
CRYSTAL			Q1704	CF10851R	TRANSISTOR DTC124ESA (HEPM)
X1871	BP10571	CRYSTAL	Q1706	CF10851R	TRANSISTOR DTC124ESA (HEPM)
MISCELLANEOUS			COIL		
CF1871	5160561	FILTER	L1701	0770057	CHOKE COIL 100UH+-5%
CF1872	5160562	FILTER	MISCELLANEOUS		
LCJ BOARD (FOR FX770E)			IR1701	CJ10341	MODULE PIC-21043TE3 (HEPM)
CAPACITORS			LCD1701	DB10371	DISPLAY, LIQUID CRYSTAL (HEPM)
			LMP1701	DP10221	LIGHT, BACK
			LMP1702	DP10221	LIGHT, BACK
			LMP1703	DP10221	LIGHT, BACK
			LMP1704	DP10221	LIGHT, BACK
			S1710	5634884	SWITCH
			S1711	5634884	SWITCH
			S1712	5634884	SWITCH

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
S1713	5634884	SWITCH	CAPACITORS		
S1714	5634884	SWITCH			
S1715	5634884	SWITCH			
S1719	5634884	SWITCH			
FST BOARD (FOR FX770E)			C1701	0800185	ELECTROLYTIC 47UF 6.3V
CAPACITORS			C1702	0890103	CERAMIC DISC 47000PF+80-20% 12V
C2701	AJ10241R	CERAMIC CAPACITOR 100PF+10% 50V	C1703	0890103	CERAMIC DISC 47000PF+80-20% 12V
C2702	AJ10241R	CERAMIC CAPACITOR 100PF+10% 50V	C1704	0890103	CERAMIC DISC 47000PF+80-20% 12V
C2703	0890046	CERAMIC DISC 0.1UF+80-20% 50V	C1705	0890035	CERAMIC DISC 1000PF+10% 50V
C2704	0890044	CERAMIC DISC 0.022UF+80-20% 25V	C1706	0800185	ELECTROLYTIC 47UF 6.3V
RESISTORS			RESISTORS		
R2701	0700057	CARBON FILM 18KOHM+5% 1/8W	R1701	0700054	CARBON FILM 10KOHM+5% 1/8W
R2702	0700054	CARBON FILM 10KOHM+5% 1/8W	R1702	0700063	CARBON FILM 47KOHM+5% 1/8W
R2703	0700057	CARBON FILM 18KOHM+5% 1/8W	R1703	0700032	CARBON FILM 220 OHM+5% 1/8W
R2704	0700054	CARBON FILM 10KOHM+5% 1/8W	R1703	0700039	CARBON FILM 820OHM+5% 1/8W
R2706	0700041	CARBON FILM 1.0KOHM+5% 1/8W	R1704	0700032	CARBON FILM 220 OHM+5% 1/8W[V, 5U, 5N, M]
R2707	0700039	CARBON FILM 820OHM+5% 1/8W	R1704	0700039	CARBON FILM 820OHM+5% 1/8W [65, 6U, 6N]
R2708	0700041	CARBON FILM 1.0KOHM+5% 1/8W	R1708	0700049	CARBON FILM 4.7KOHM+5% 1/8W
R2709	0700027	CARBON FILM 100 OHM+5% 1/8W	R1709	0700034	CARBON FILM 330OHM+5% 1/8W[V, 5U, M]
R2710	0700041	CARBON FILM 1.0KOHM+5% 1/8W	R1709	0700038	CARBON FILM 680OHM+5% 1/8W[V, 5N]
R2711	0700032	CARBON FILM 220 OHM+5% 1/8W	R1710	0700034	CARBON FILM 330OHM+5% 1/8W[V, 5U, M]
R2712	0700041	CARBON FILM 1.0KOHM+5% 1/8W	R1710	0700038	CARBON FILM 680OHM+5% 1/8W[V, 5N]
R2713	0700029	CARBON FILM 150 OHM+5% 1/8W	R1711	0700049	CARBON FILM 4.7KOHM+5% 1/8W
R2714	0700043	CARBON FILM 1.5KOHM+5% 1/8W	R1712	0700049	CARBON FILM 4.7KOHM+5% 1/8W
R2715	0700052	CARBON FILM 6.8KOHM+5% 1/8W	R1713	0700049	CARBON FILM 4.7KOHM+5% 1/8W
R2716	0700067	CARBON FILM 100KOHM+5% 1/8W	R1714	0700033	CARBON FILM 270OHM+5% 1/8W
R2717	0700067	CARBON FILM 100KOHM+5% 1/8W	SEMI-CONDUCTORS		
R2718	0700067	CARBON FILM 100KOHM+5% 1/8W	D1701	5339071	DIODE 1SS119
R2719	0700041	CARBON FILM 1.0KOHM+5% 1/8W	LD1701	CH11141R	DIODE SEL6414E (HEPM)
R2720	0700041	CARBON FILM 1.0KOHM+5% 1/8W	LD1702	CH11141R	DIODE SEL6414E (HEPM)
R2721	0700067	CARBON FILM 100KOHM+5% 1/8W	LD1703	CH11141R	DIODE SEL6414E (HEPM)
R2722	0700054	CARBON FILM 10KOHM+5% 1/8W	LD1704	CH11141R	DIODE SEL6414E (HEPM)
R2723	0700063	CARBON FILM 47KOHM+5% 1/8W	IC1701	CZ10182	IC BU9716AK (HEPM)
R2724	0700049	CARBON FILM 4.7KOHM+5% 1/8W	IR1701	CJ10411	IC TSOP1738SB1
R2725	0700049	CARBON FILM 4.7KOHM+5% 1/8W	Q1701	5327071	TRANSISTOR DTC124ES
R2727	0700063	CARBON FILM 47KOHM+5% 1/8W	Q1702	5327071	TRANSISTOR DTC124ES
R2728	0700063	CARBON FILM 47KOHM+5% 1/8W	MISCELLANEOUS		
SEMI-CONDUCTORS			LCD1701	DB10341	FLOURESENT DISPLAY
IC2701	CK12311	IC UPD17103GS-752	LMP1701	DP10221	LIGHT, BACK
LD2701	CH11131	DIODE LF60 (HEPM)	LMP1702	DP10221	LIGHT, BACK
Q2701	CF10852R	TRANSISTOR DTC144ESA	LMP1703	DP10221	LIGHT, BACK
Q2702	CF10852R	TRANSISTOR DTC144ESA	S1701	5634884	SWITCH
CRYSTAL			SHU BOARD (FX760E/FX750E(UKN))		
X2701	BP10451G	CRYSTAL	RESISTORS		
MISCELLANEOUS			R2701	0700057	CARBON FILM 18KOHM+5% 1/8W
S2701	5634884	SWITCH	R2702	0700054	CARBON FILM 10KOHM+5% 1/8W
S2704	5634884	SWITCH	R2703	0700057	CARBON FILM 18KOHM+5% 1/8W
S2706	5634884	SWITCH	R2704	0700054	CARBON FILM 10KOHM+5% 1/8W
S2708	5634884	SWITCH	R2705	0700041	CARBON FILM 1.0KOHM+5% 1/8W
S2709	5634884	SWITCH	R2706	0700039	CARBON FILM 820OHM+5% 1/8W
S2721	FH10231	SWITCH	R2707	0700041	CARBON FILM 1.0KOHM+5% 1/8W
LCD BOARD (FX75xE/FX76xE/MX730E)			R2708	0700041	CARBON FILM 1.0KOHM+5% 1/8W
			R2709	0700027	CARBON FILM 100 OHM+5% 1/8W
			R2710	0700041	CARBON FILM 1.0KOHM+5% 1/8W
			R2711	0700032	CARBON FILM 220 OHM+5% 1/8W
			R2712	0700043	CARBON FILM 1.5KOHM+5% 1/8W
			R2713	0700029	CARBON FILM 150 OHM+5% 1/8W
			R2714	0700044	CARBON FILM 1.8KOHM+5% 1/8W

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
SEMI-CONDUCTOR			RESISTORS		
LD2701	CH10791	DIODE SLP932C-20	R4101	0103836	CHIP RESISTOR 270 OHM+-5% 0.1W
MISCELLANEOUS			R4105	0103853	CHIP RESISTOR 6.8KOHM+-5% 0.1W
S2701	FH10271	SWITCH	R4106	0103846	CHIP RESISTOR 1.8KOHM+-5% 0.1W
S2702	5634884	SWITCH	R4108	0103875	CHIP RESISTOR 470KOHM+-5% 0.1W
S2703	5634884	SWITCH	R4113	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
S2704	5634884	SWITCH	R4114	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
S2705	5634884	SWITCH	R4123	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
S2706	5634884	SWITCH	R4129	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
S2707	5634884	SWITCH	R4130	0103842	CHIP RESISTOR 820 OHM+-5% 0.1W
S2710	5634884	SWITCH	R4132	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
S2712	5634884	SWITCH	R4133	0103841	CHIP RESISTOR 680 OHM+-5% 0.1W
S2713	5634884	SWITCH	R4134	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
S2714	5634884	SWITCH	R4137	0104271	CHIP RESISTOR 15KOHM+-1% 1/10W
S2715	5634884	SWITCH	R4138	0104112	CHIP RESISTOR 47KOHM+-1% 0.1W
S2716	5634884	SWITCH	R4140	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
NCM BOARD (FOR FX770E)			R4141	0103857	CHIP RESISTOR 15KOHM+-5% 0.1W
CAPACITORS			R4148	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4103	0800109	ELECTROLYTIC 1.0UF 50V	R4149	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4104	0209927	CERAMIC CHIP 7.0PF+-0.5% 50V	R4215	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
C4105	0209933	CERAMIC CHIP 18PF+-5% 50V	R4216	0103867	CHIP RESISTOR 100KOHM+-5% 0.1W
C4106	0209936	CERAMIC CHIP 33PF+-5% 50V	R4301	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
C4107	0209935	CERAMIC CHIP 27PF+-5% 50V	R4303	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
C4110	0800122	ELECTROLYTIC 10UF 16V	R4304	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
C4111	0893093	CERAMIC CHIP 2.2UF+80-20% 16V	R4305	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
C4112	0893093	CERAMIC CHIP 2.2UF+80-20% 16V	R4307	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
C4120	0209897	CERAMIC CHIP 56PF+-5% 50V	R4309	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
C4121	0893014	CERAMIC CHIP 0.01UF+-10% 25V	R4310	0103848	CHIP RESISTOR 2.7KOHM+-5% 0.1W
C4123	0800135	ELECTROLYTIC 33UF 16V	R4316	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
C4124	0893014	CERAMIC CHIP 0.01UF+-10% 25V	R4317	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
C4128	0800122	ELECTROLYTIC 10UF 16V	R4322	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
C4129	0800109	ELECTROLYTIC 1.0UF 50V	R4323	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
C4130	0893086	CERAMIC CHIP 0.1UF+80-20% 50V	R4328	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
C4131	0800128	ELECTROLYTIC 22UF 16V	R4329	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
C4132	0207445	ELECTROLYTIC 4.7UF 16V	R4330	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
C4216	0893079	CERAMIC DISC 0.01UF+80-20% 50V	R4331	0103831	CHIP RESISTOR 100 OHM+-5% 0.1W
C4217	0800122	ELECTROLYTIC 10UF 16V	R4335	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4301	0893048	CERAMIC CHIP 0.022UF+-10% 50V	R4336	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
C4302	0893062	CERAMIC CHIP 1UF+80-20% 16V	R4337	0103861	CHIP RESISTOR 33KOHM+-5% 0.1W
C4303	0893031	CERAMIC CHIP 1000PF+-10% 50V	R4338	0105147	CHIP RESISTOR 100KOHM+-1% 1/10W
C4304	0209945	CERAMIC DISC 180PF+-5% 50V	R4339	0103866	CHIP RESISTOR 82KOHM+-5% 0.1W
C4305	0893086	CERAMIC CHIP 0.1UF+80-20% 50V	R4340	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
C4307	0893079	CERAMIC DISC 0.01UF+80-20% 50V	R4341	0103869	CHIP RESISTOR 150KOHM+-5% 0.1W
C4308	0202163	CERAMIC CAPACITOR 560PF+-5% 50V	R4342	0700027	CARBON FILM 100 OHM+-5% 1/8W
C4309	0800115	ELECTROLYTIC 3.3UF 50V	R4344	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
C4310	0893037	CERAMIC CHIP 3300PF+-10% 50V	R4345	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
C4311	0893062	CERAMIC CHIP 1UF+80-20% 16V	R4346	0103859	CHIP RESISTOR 22KOHM+-5% 0.1W
C4312	0800122	ELECTROLYTIC 10UF 16V	R4347	0103838	RESISTOR CHIP 390OHM+-5% 0.1W
C4313	0893086	CERAMIC CHIP 0.1UF+80-20% 50V	R4348	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
C4314	0202163	CERAMIC CAPACITOR 560PF+-5% 50V	R4349	0103834	CHIP RESISTOR 180OHM+-5% 0.1W
C4315	0202163	CERAMIC CAPACITOR 560PF+-5% 50V	R4350	0103840	CHIP RESISTOR 560 OHM+-5% 0.1W
C4316	0893062	CERAMIC CHIP 1UF+80-20% 16V	R4351	0103879	CHIP RESISTOR 1MOHM+-5% 0.1W
C4317	0209942	CERAMIC CHIP 100PF+-5% 50V	R4352	0103839	CHIP RESISTOR 470OHM+-5% 0.1W
C4318	0800351	ELECTROLYTIC 470UF 6.3V	R4353	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
C4319	0893079	CERAMIC DISC 0.01UF+80-20% 50V	R4354	0103852	CHIP RESISTOR 5.6KOHM+-5% 0.1W
C4322	0800365	ELECTROLYTIC 2200UF 6V	R4363	0103845	CHIP RESISTOR 1.5KOHM+-5% 0.1W
C4323	0893048	CERAMIC CHIP 0.022UF+-10% 50V	R4364	0103847	CHIP RESISTOR 2.2KOHM+-5% 0.1W
C4329	0893014	CERAMIC CHIP 0.01UF+-10% 25V	R4365	0103851	CHIP RESISTOR 4.7KOHM+-5% 0.1W
			R4368	0103843	CHIP RESISTOR 1KOHM+-5% 0.1W
			R4369	0103855	CHIP RESISTOR 10KOHM+-5% 0.1W
			SEMI-CONDUCTORS		

SYMBOL NO	P-NO	DESCRIPTION	SYMBOL NO	P-NO	DESCRIPTION
D4101	5339071	DIODE 1SS119			
D4102	5339071	DIODE 1SS119			
D4301	CH11171M	DIODE AK04			
D4302	5339071	DIODE 1SS119			
D4303	5339071	DIODE 1SS119			
IC4101	CK15468R	IC MB90089-214 (HEPM)			
IC4102	CK13503R	IC NJM2535M			
IC4103	1352032	IC NJM2249M			
IC4301	CP12218	IC M37272M8-117SP (HEPM)			
IC4302	CK14883	IC AT24C16N			
IC4303	CK19602R	IC RN5VS45AA			
IC4304	CK11252	IC MM1108XFFE			
Q4104	CA10672R	TRANSISTOR 2SD601A			
Q4107	CA10582R	TRANSISTOR 2SB709A			
Q4108	CA10672R	TRANSISTOR 2SD601A			
Q4109	CA10582R	TRANSISTOR 2SB709A			
Q4110	CA10672R	TRANSISTOR 2SD601A			
Q4111	5326903	TRANSISTOR UN2213			
Q4115	CA10672R	TRANSISTOR 2SD601A			
Q4116	5326903	TRANSISTOR UN2213			
Q4303	CA10672R	TRANSISTOR 2SD601A			
Q4304	CA10672R	TRANSISTOR 2SD601A			
Q4305	CA10672R	TRANSISTOR 2SD601A			
Q4306	CA10672R	TRANSISTOR 2SD601A			
Q4310	5326903	TRANSISTOR UN2213			
Q4313	CA10672R	TRANSISTOR 2SD601A			
Q4314	CA10672R	TRANSISTOR 2SD601A			
ZD4301	5339297	DIODE HZS5C3			
COILS					
L4101	5159145	CHOKE COIL 22UH			
L4102	5121289	COIL 22UH			
L4301	0770057	CHOKE COIL 100UH±5%			
L4302	0770057	CHOKE COIL 100UH±5%			
CRYSTALS					
X4101	BP10832R	CRYSTAL (HEPM)			
X4301	BP10381R	CRYSTAL			
MISCELLANEOUS					
BL4301	BZ10471R	CORE			

Cautions when using schematic diagrams

Caution for safety

The parts marked \triangle are critical for safety. Be sure to use the specified parts to ensure safety when replacing them.

1. Values in schematic diagrams

The values, dielectric strength (power capacitance) and tolerances of the resistors (excluding variable resistors) and capacitors are indicated in the schematic diagrams using abbreviations.

[Resistors]

Item	Indication
Value	No indication Ω K k Ω M M Ω
Tolerance	No indication $\pm 5\%$ (All tolerances other than $\pm 5\%$ are indicated in the schematic diagrams)
Power capacitance	No indication 1/8W (1/16W for leadless resistors without indication) All capacitances other than the above are indicated in the schematic diagrams.

[Capacitors]

Item	Indication
Value	No indication μF P pF
Dielectric strength	No indication 50V (All dielectric strengths other than 50V are indicated in the schematic diagrams.)

[Coils]

Item	Indication
Value	μ μH m mH

Cautions when using circuit board diagrams

1. Identifications of sides A/B in circuit board diagrams

1) Board having a pattern on one side and parts on both sides.

Side A: Shows discrete parts, viewed from the pattern side.

Side B: Shows leadless parts, viewed from the pattern side.

2) Board having patterns on both sides and parts on both sides.

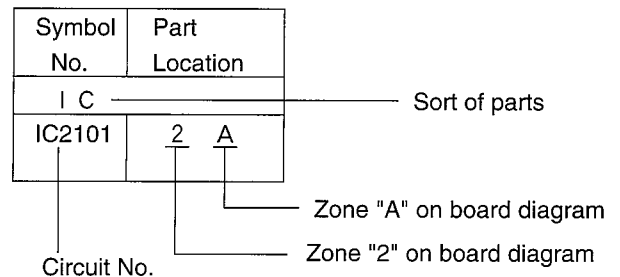
Side A: Shows parts and patterns which can be seen when the case is opened.

Side B: Shows parts and the pattern on the back of side A.

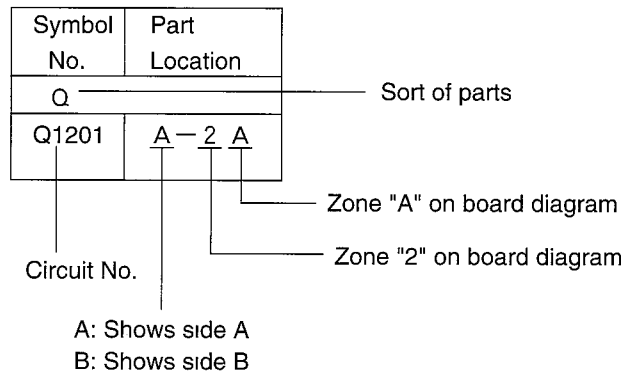
2. Table for indexing locations of parts

This table shows locations of each part on the circuit board diagrams. The locations are indicated using the guide scales on the external lines of diagrams.

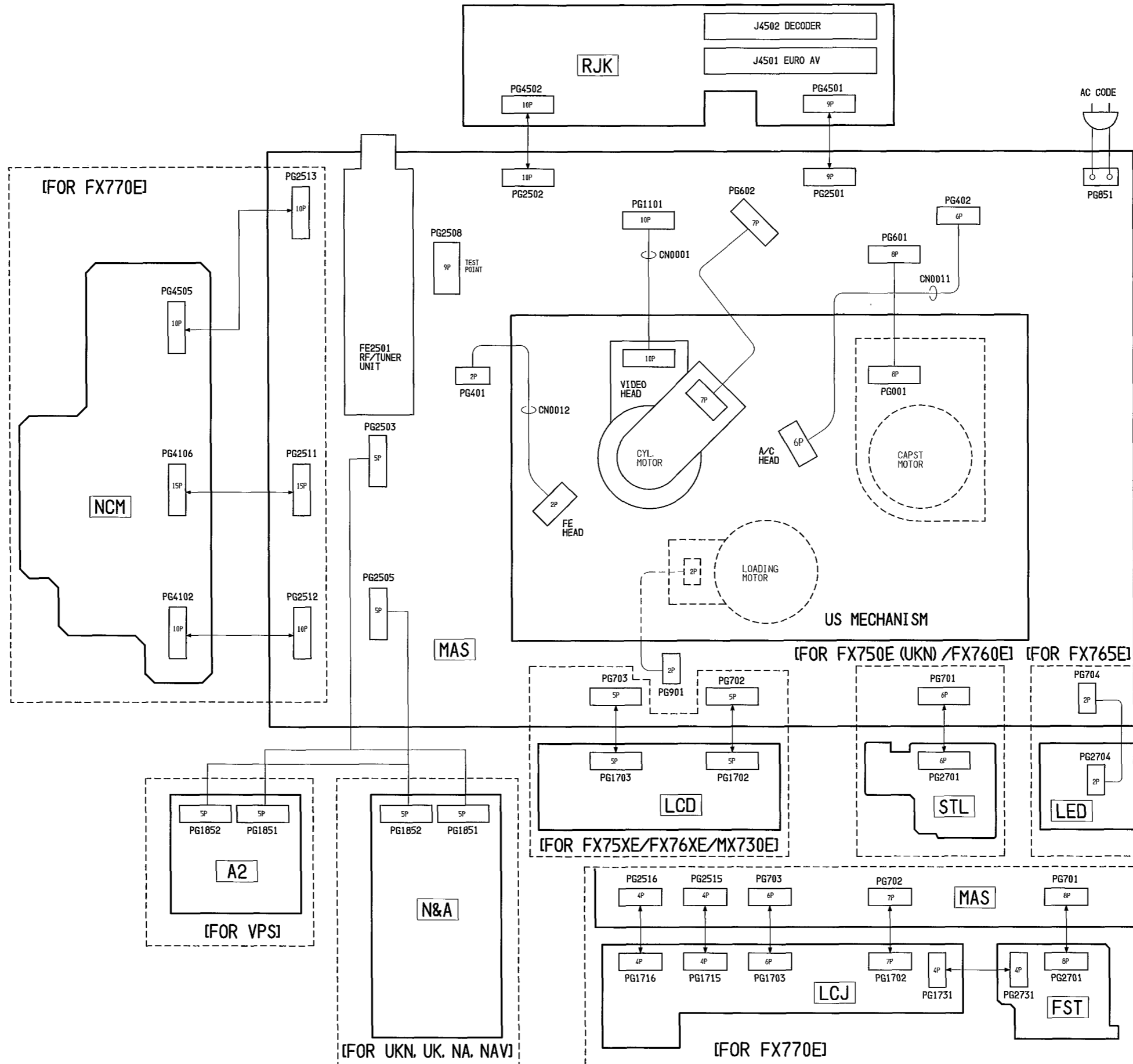
1) In case of one-layer board



2) In case of side A/B indication board



CONNECTION DIAGRAM



E
D
C
B
A

1

2

3

4

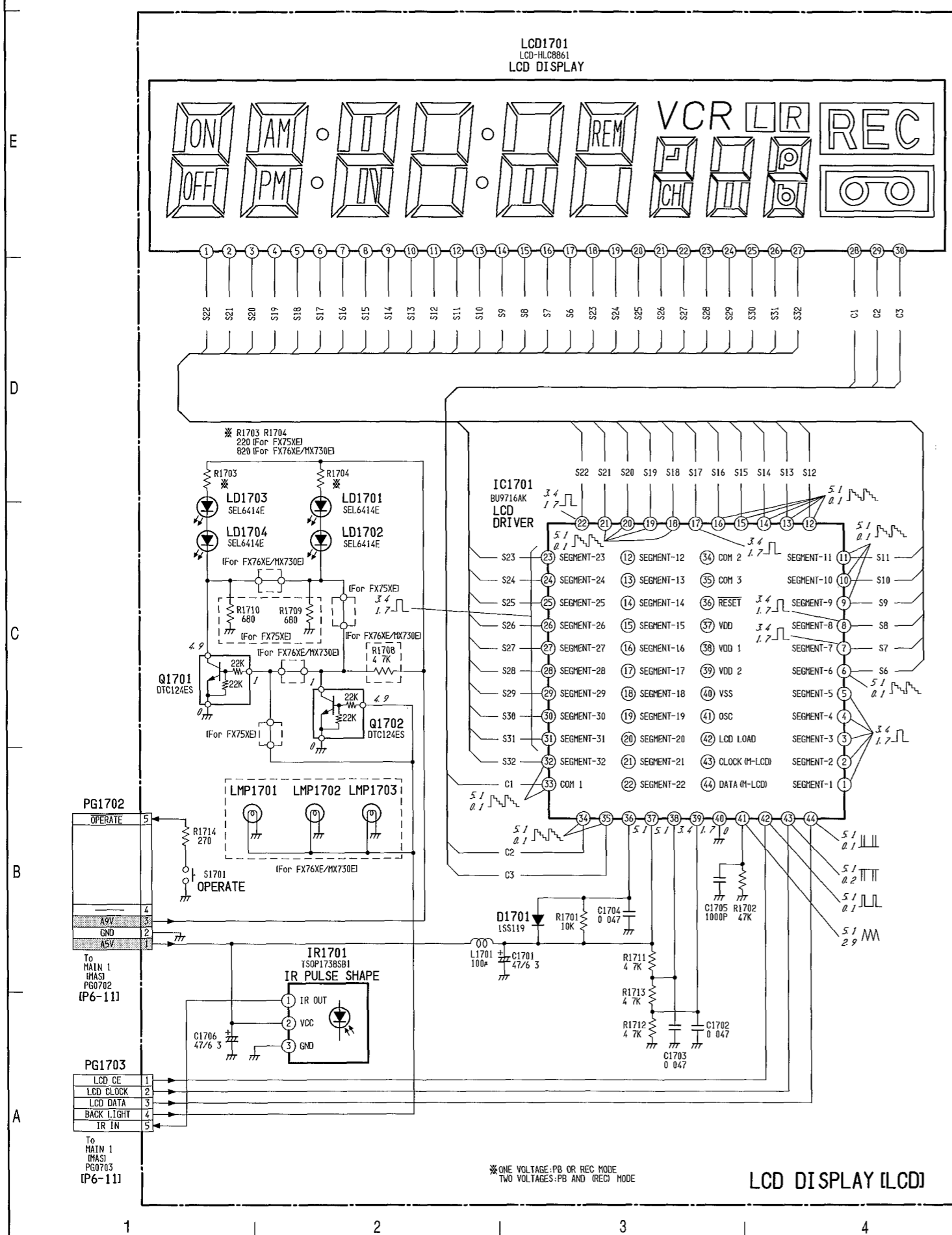
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6

7

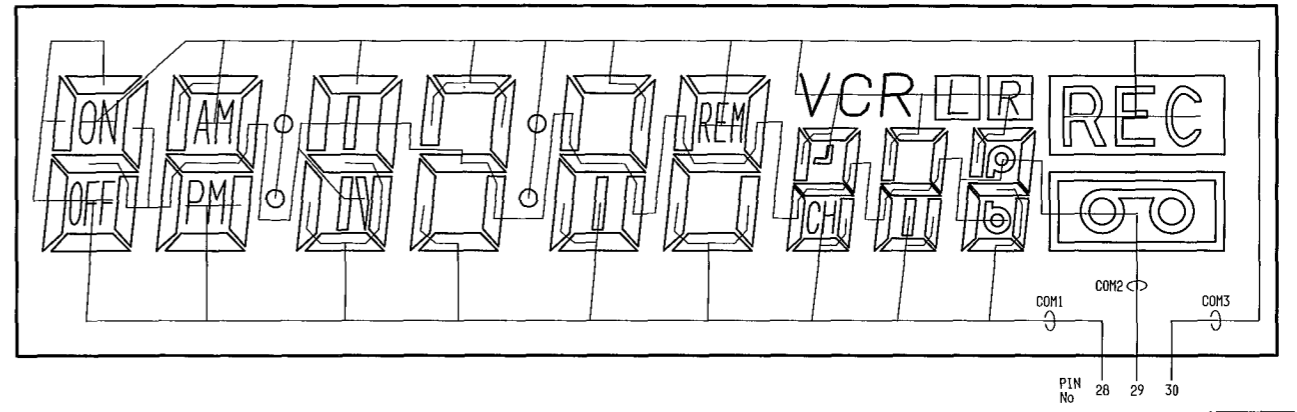
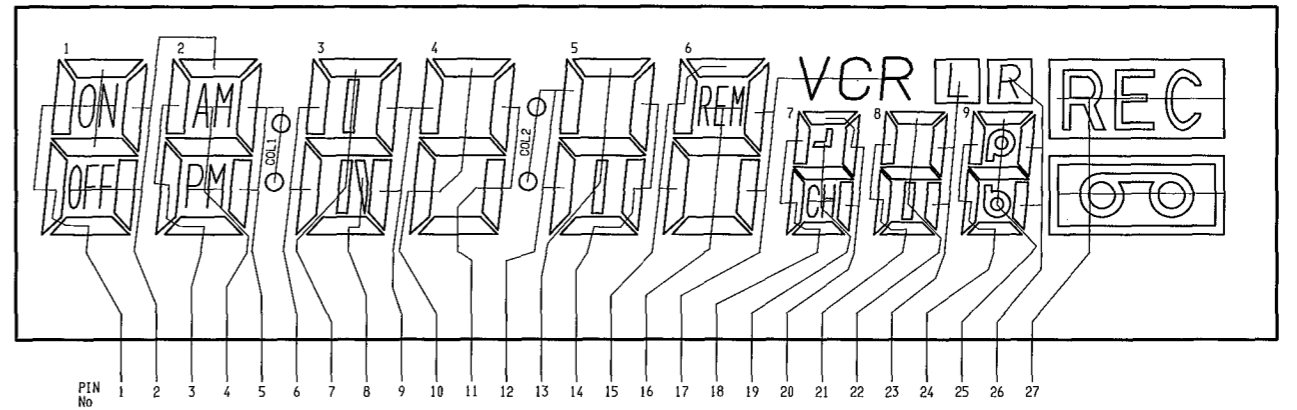
8

LCD DISPLAY [LCD] SCHEMATIC DIAGRAM [EXCEPT FOR VT-FX770E]



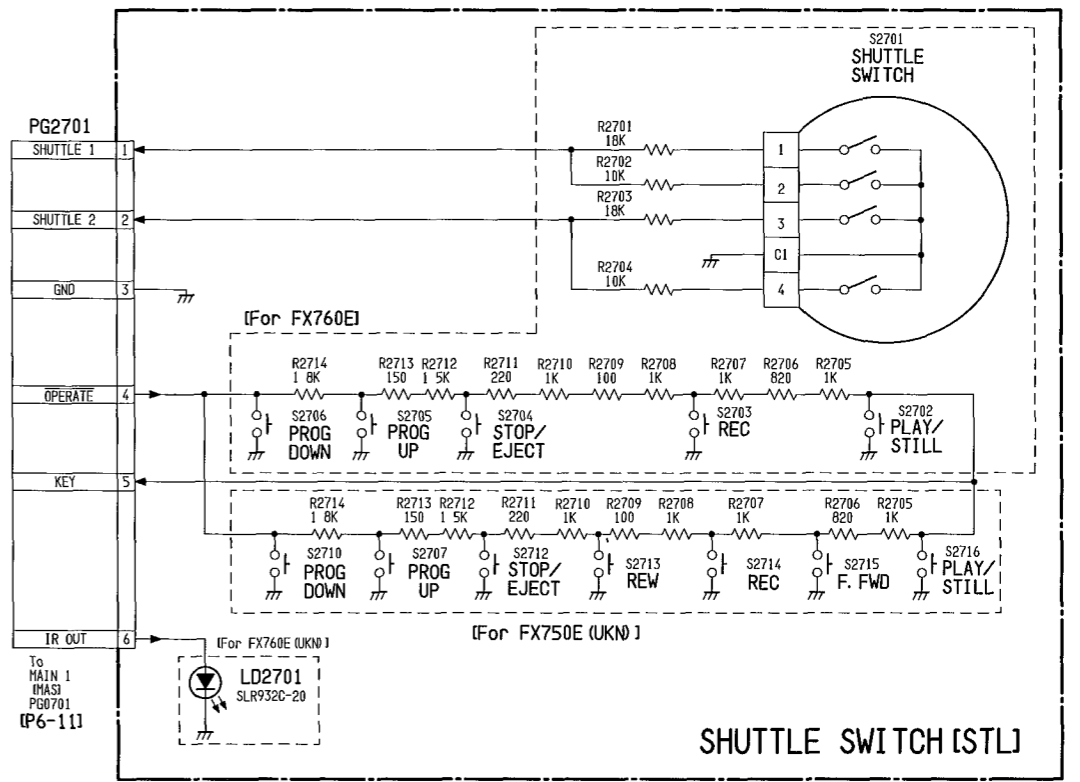
LCD DISPLAY 6 - 3

LCD GRID TABLE



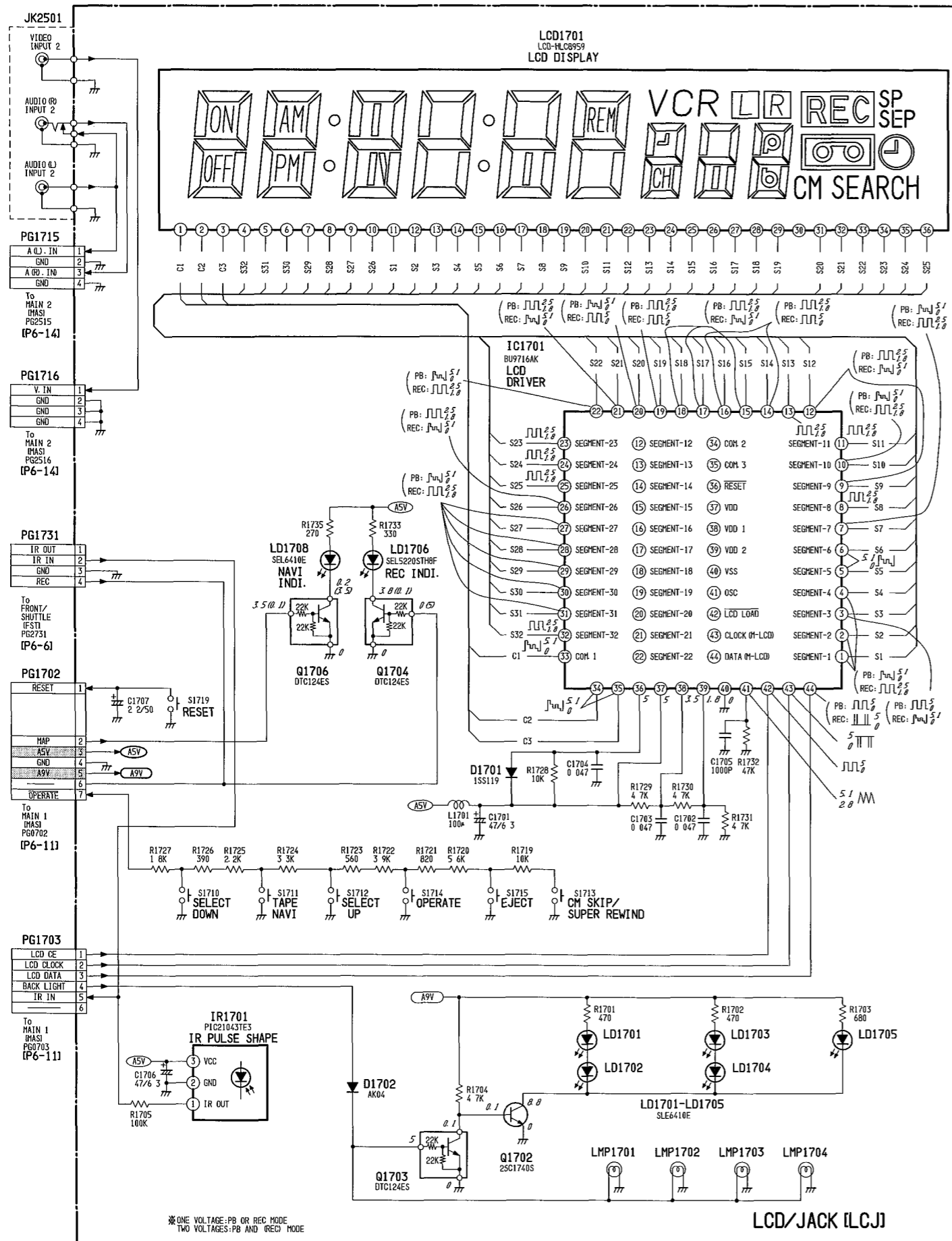
PIN No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
COM1	1a	OFF	2d	PM	2c	3e	3j	3d	3c	4e	4d	5e	5j	5d	6e	6d	6c	7d	CH	7c	8d	8j	8c	9d	9j	9c	---	COM	---	
COM2	1g	1bc	2e	2g	2b	3f	3hj	3k	3b	4g	4c	5f	5g	5c	6f	6g	6b	7e	7g	7b	8e	8g	8b	9e	9b	9b	---	COM	---	
COM3	ON	2a	2f	AM	COL1	---	3a	---	4f	4a	4b	COL2	5a	5b	6a	REM	VCR	7f	7a	8f	8a	9f	9a	---	---	---	---	---	---	

SHUTTLE SWITCHI [STL] SCHEMATIC DIAGRAM [EXCEPT FOR VT-FX770E]

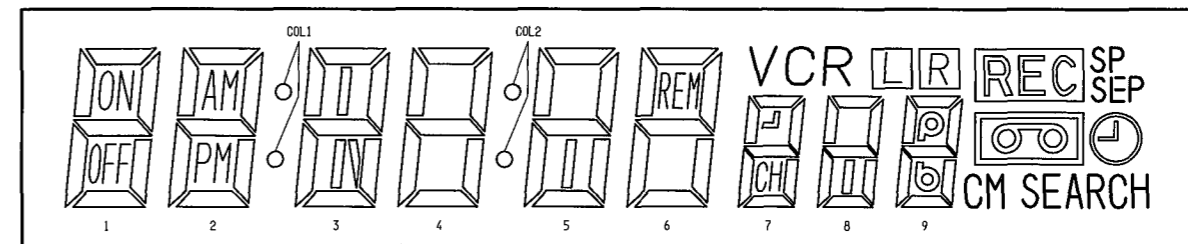


LCD GRID TABLE, SHUTTLE SWITCH 6 - 4

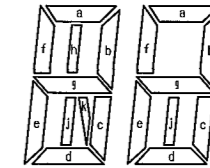
LCD/JACK [LCJ] SCHEMATIC DIAGRAM [FOR VT-FX770E]



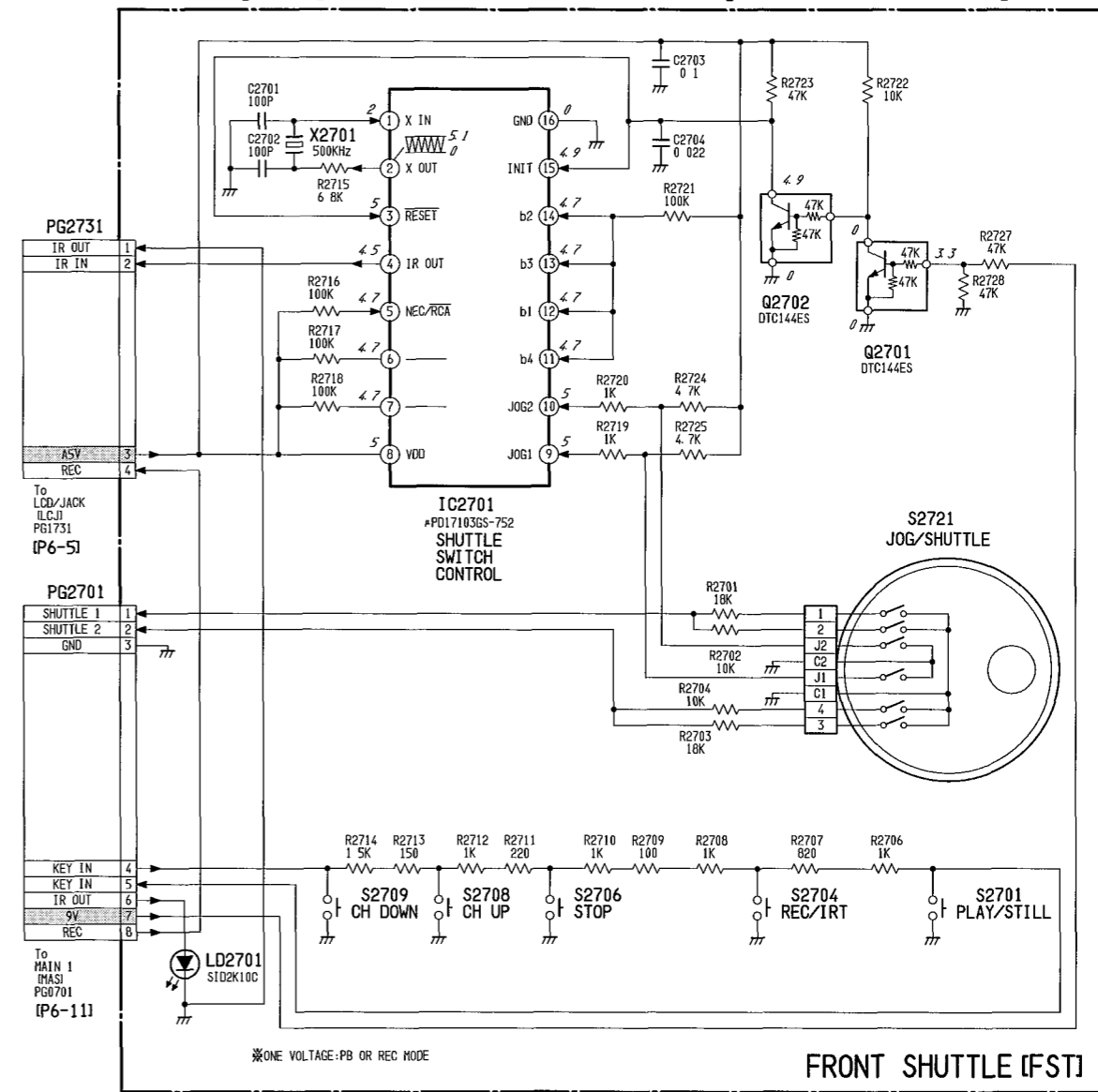
LCD GRID TABLE



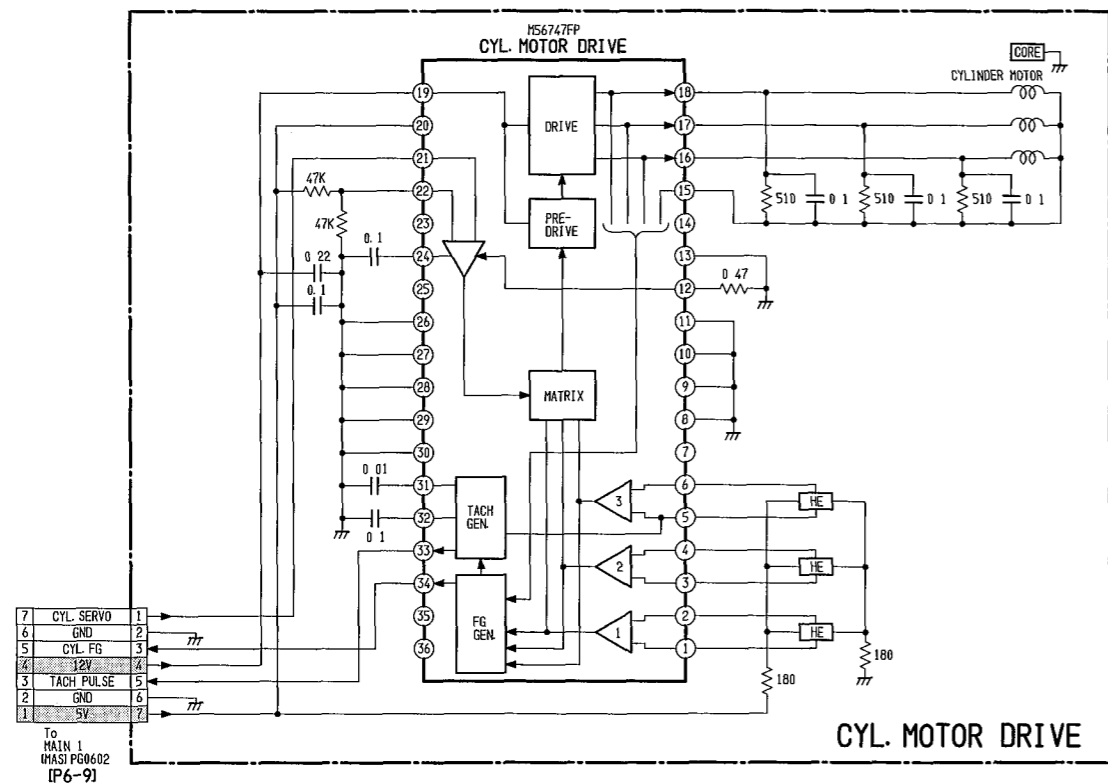
PIN No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
COM1	COM1	—	—	1adef	OFF	2d	PM	2c	3e	3g	3d	3c	4e	4d	5e	5i	5d	6e
COM2	—	COM2	—	1g	1bc	2e	2g	2b	3f	3hi	3k	3b	4g	4c	5f	5g	5c	6f
COM3	—	—	COM3	ON	2a	2f	AM	COL1	—	3a	—	4f	4a	4b	COL2	5a	5b	6a
PIN No	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
COM1	6d	6c	7d	CH	7c	8d	8i	8c	9d	9g	9c	—	—	SP	S	—	—	—
COM2	6g	6b	7e	7g	7b	8e	8g	8b	9e	9b	N C	—	—	LP	—	—	—	—
COM3	REM	VCR	7f	—	7a	8f	8a	—	9f	9a	—	—	—	REC	—	—	—	—



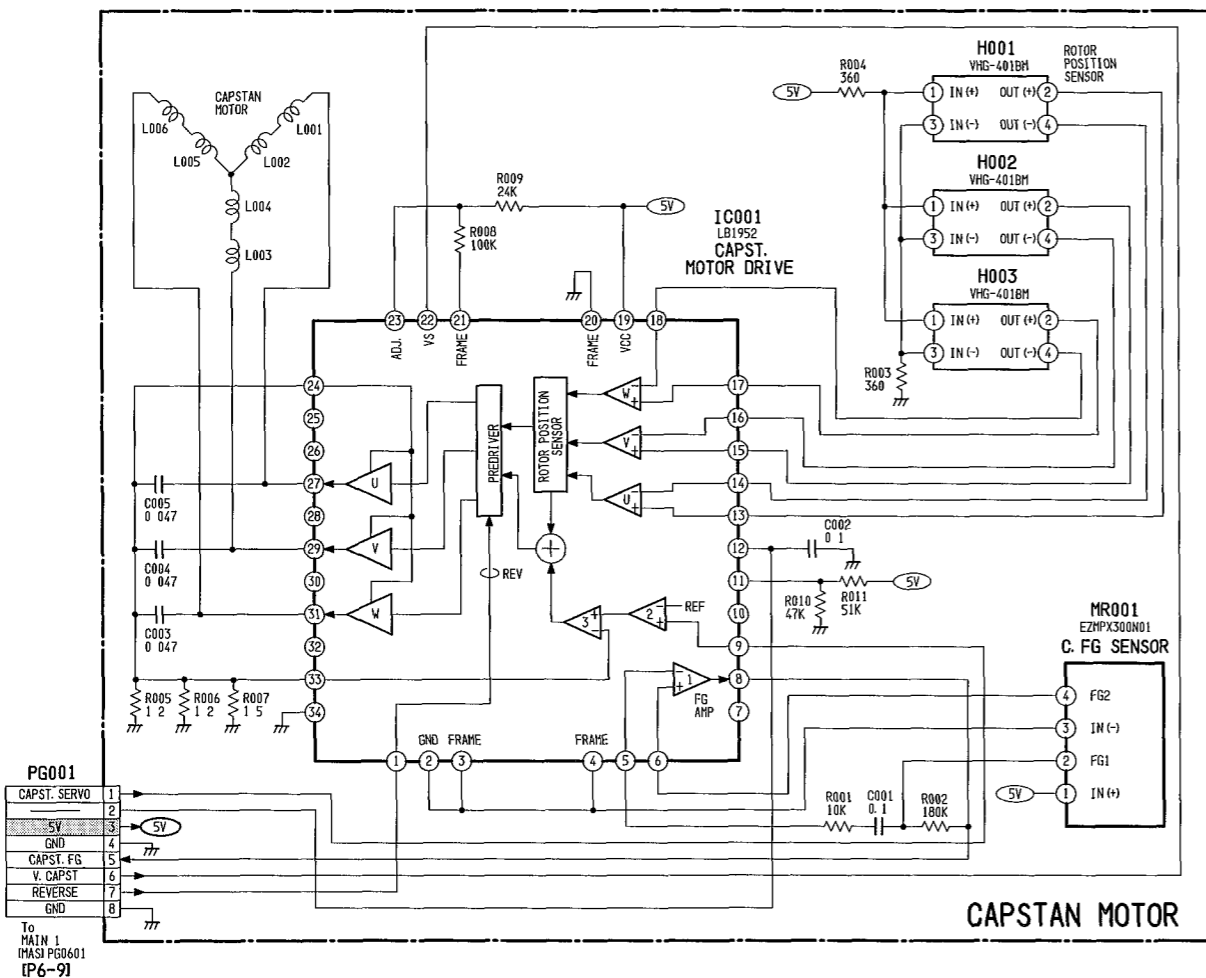
FRONT SHUTTLE [FST] SCHEMATIC DIAGRAM [FOR VT-FX770E]



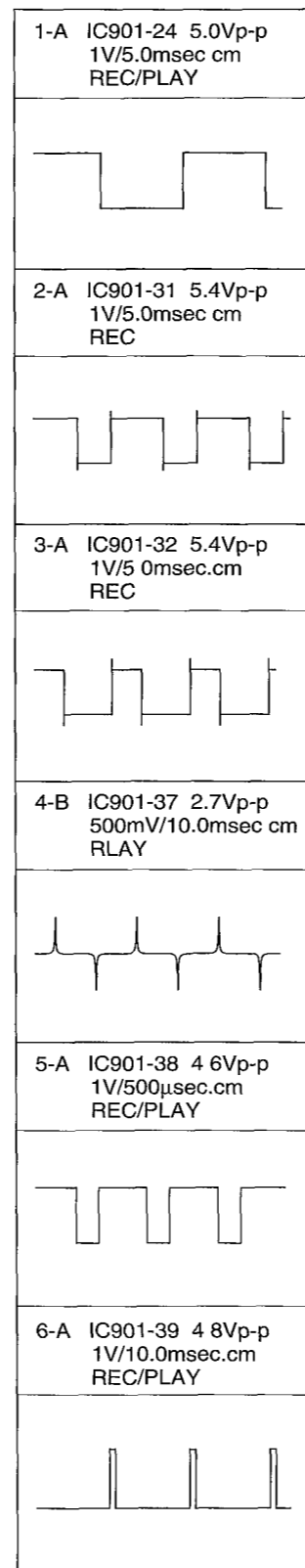
CYL. MOTOR DRIVE SCHEMATIC DIAGRAM



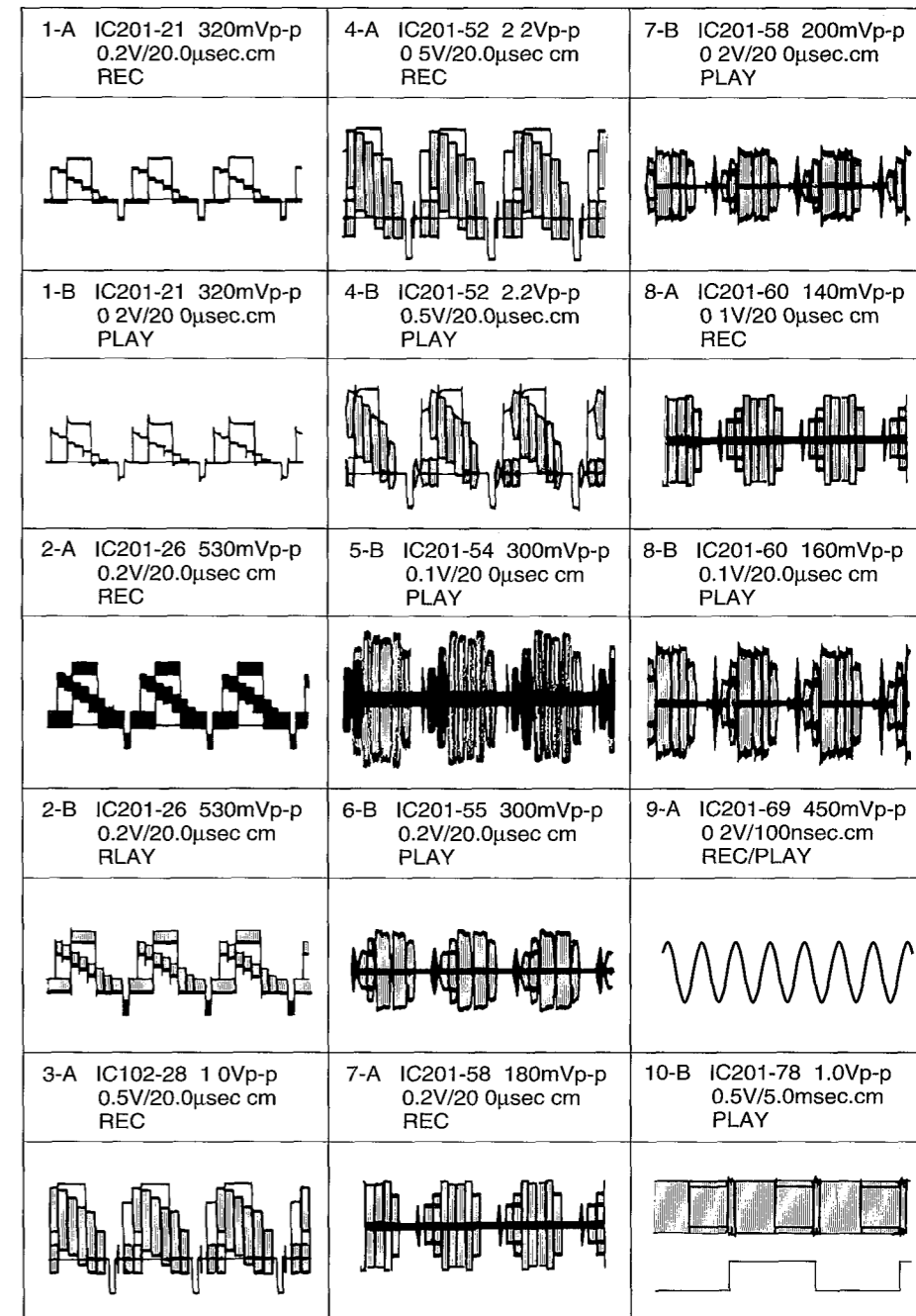
CAPSTAN MOTOR SCHEMATIC DIAGRAM



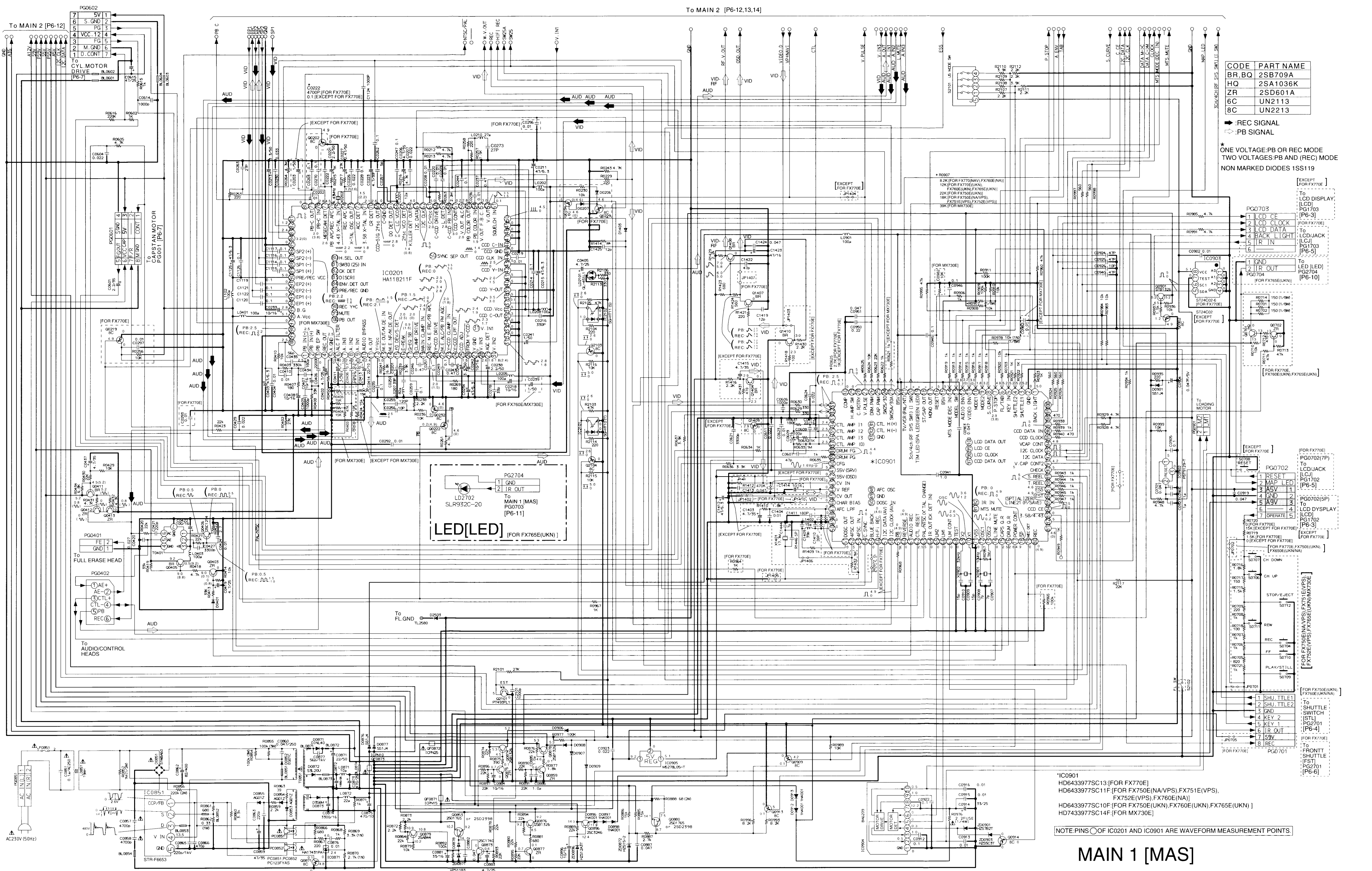
SERVO WAVEFORMS



Y/CHROMA WAVEFORMS

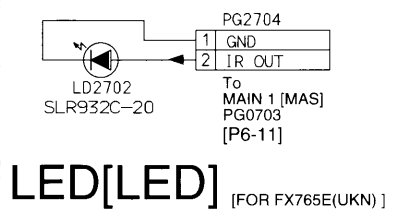


MAIN 1 [MAS] /LED [LED] SCHEMATIC DIAGRAM



CODE	PART NAME
BR, BQ	2SB709A
HQ	2SA1036K
ZR	2SD601A
6C	UN2113
8C	UN2213

● : REC SIGNAL
 ○ : PB SIGNAL
 * ONE VOLTAGE: PB OR REC MODE
 TWO VOLTAGES: PB AND (REC) MODE
 NON MARKED DIODES 1SS119

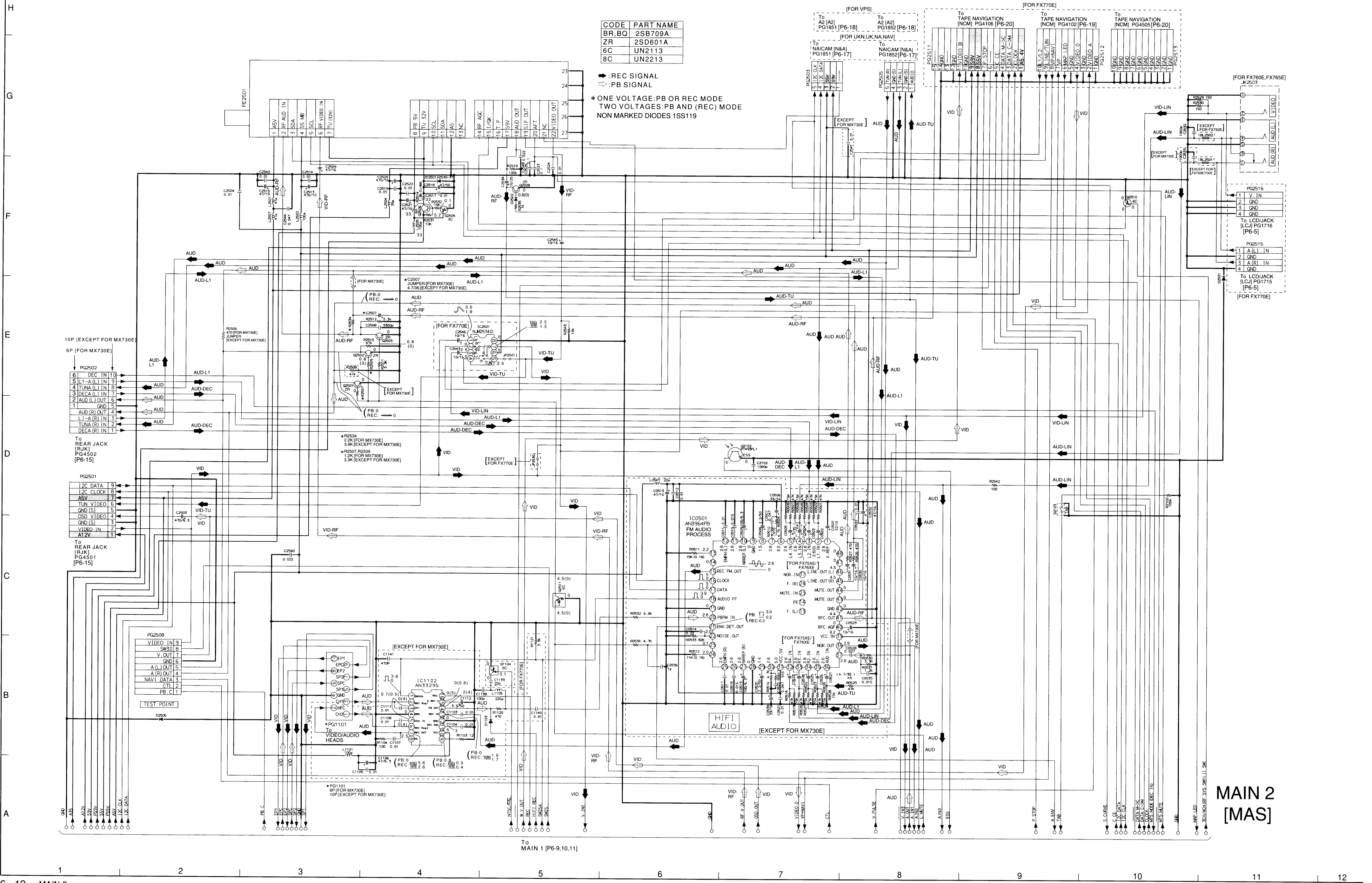


IC901
 HD6433977SC13: [FOR FX770E]
 HD6433977SC11F: [FOR FX750E(NA/VPS), FX751E(VPS),
 FX752E(VPS), FX760E(NA)]
 HD6433977SC10F: [FOR FX750E(UKN), FX760E(UKN), FX765E(UKN)]
 HD7433977SC14F: [FOR MX730E]

NOTE: PINS OF IC201 AND IC901 ARE WAVEFORM MEASUREMENT POINTS.

MAIN 1 [MAS]

MAIN 2 [MAS] SCHEMATIC DIAGRAM

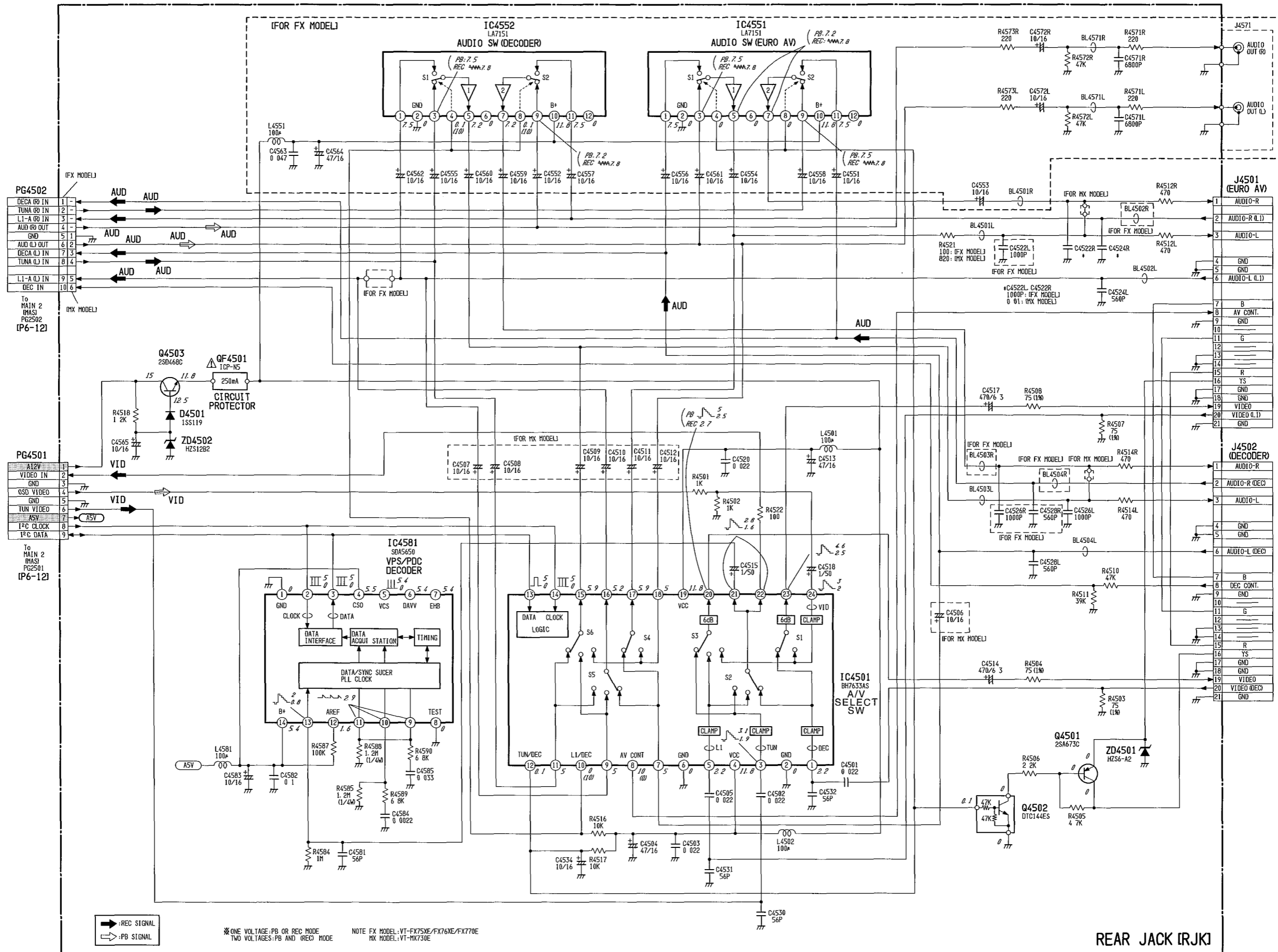


CODE	PART NAME
BR, BQ	2SB709A
ZR	2SD601A
6C	UN2113
8C	UN2213

▲ : REC SIGNAL
 ▼ : PB SIGNAL
 * ONE VOLTAGE: PB OR REC MODE
 TWO VOLTAGES: PB AND (REC) MODE
 NON MARKED DIODES 1S5119

MAIN 2 [MAS]

REAR JACK [RJK] SCHEMATIC DIAGRAM



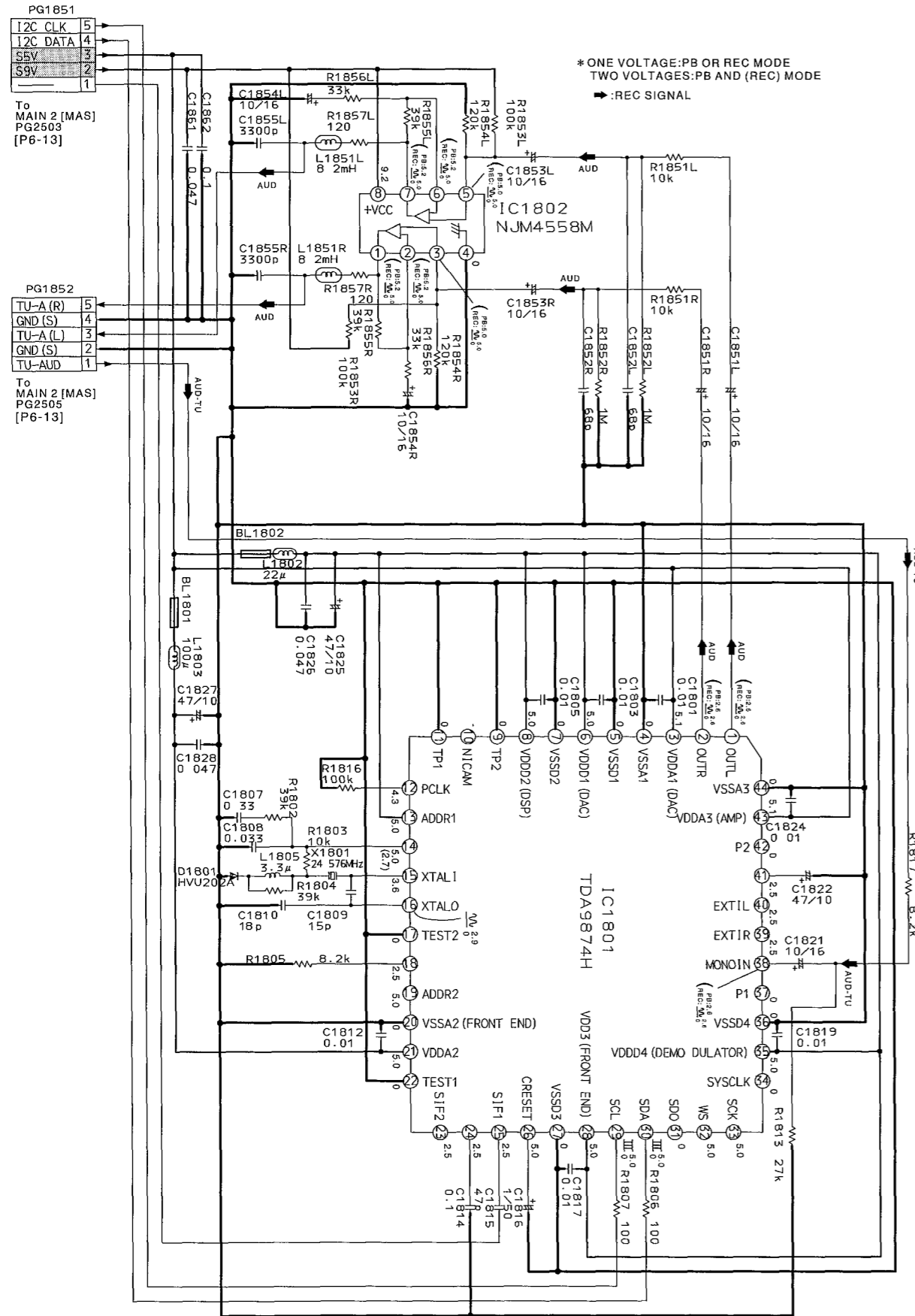
→ :REC SIGNAL
 ⇨ :PB SIGNAL

*ONE VOLTAGE:PB OR REC MODE
 TWO VOLTAGES:PB AND (REC) MODE
 NOTE FX MODEL:VT-FX75XE/FX76XE/FX770E
 HX MODEL:VT-HX730E

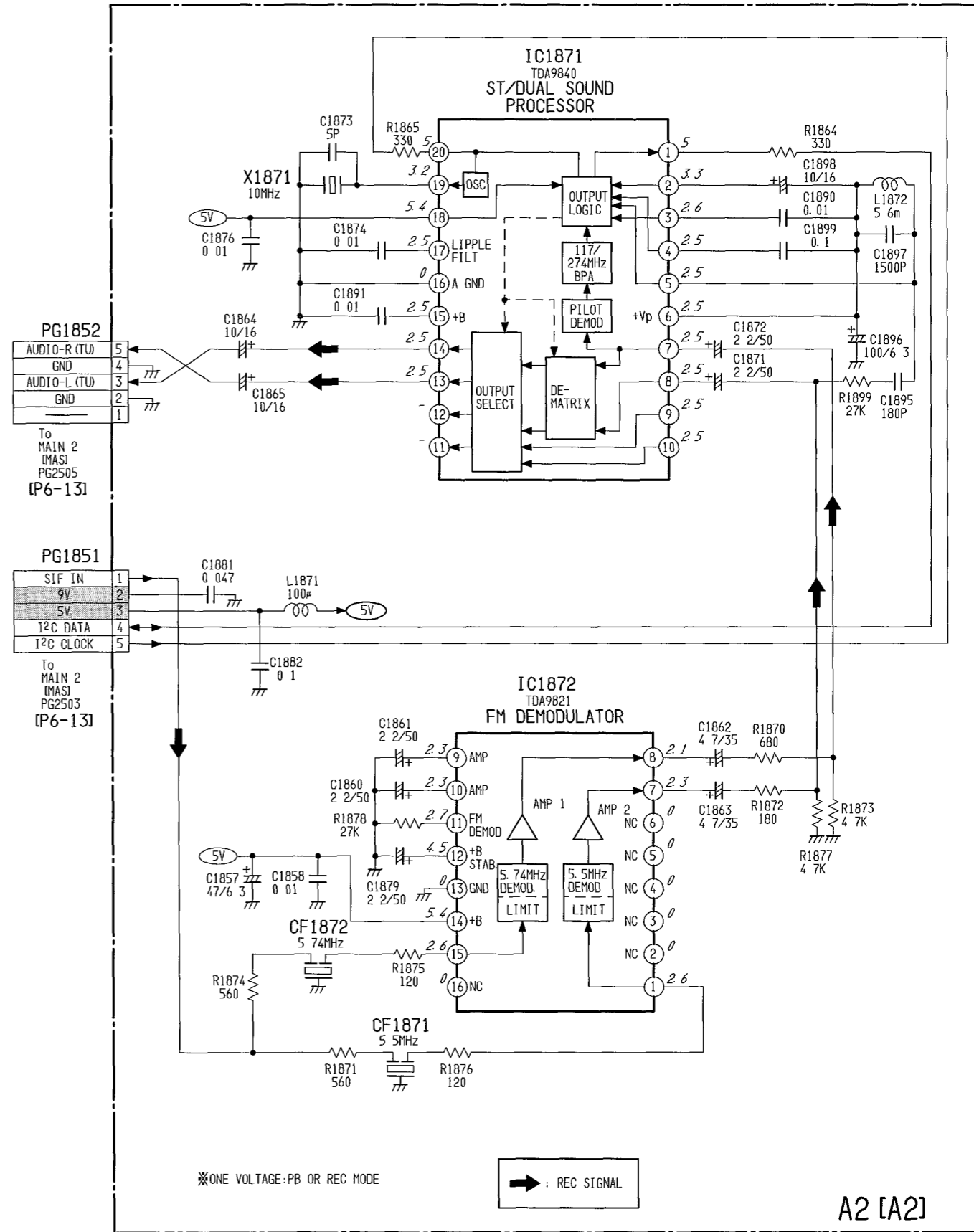
REAR JACK [RJK]

NICAM [N&A] SCHEMATIC DIAGRAM [FOR UKN, UK, NA, NAV]

A2 [A2] SCHEMATIC DIAGRAM [FOR VPS]

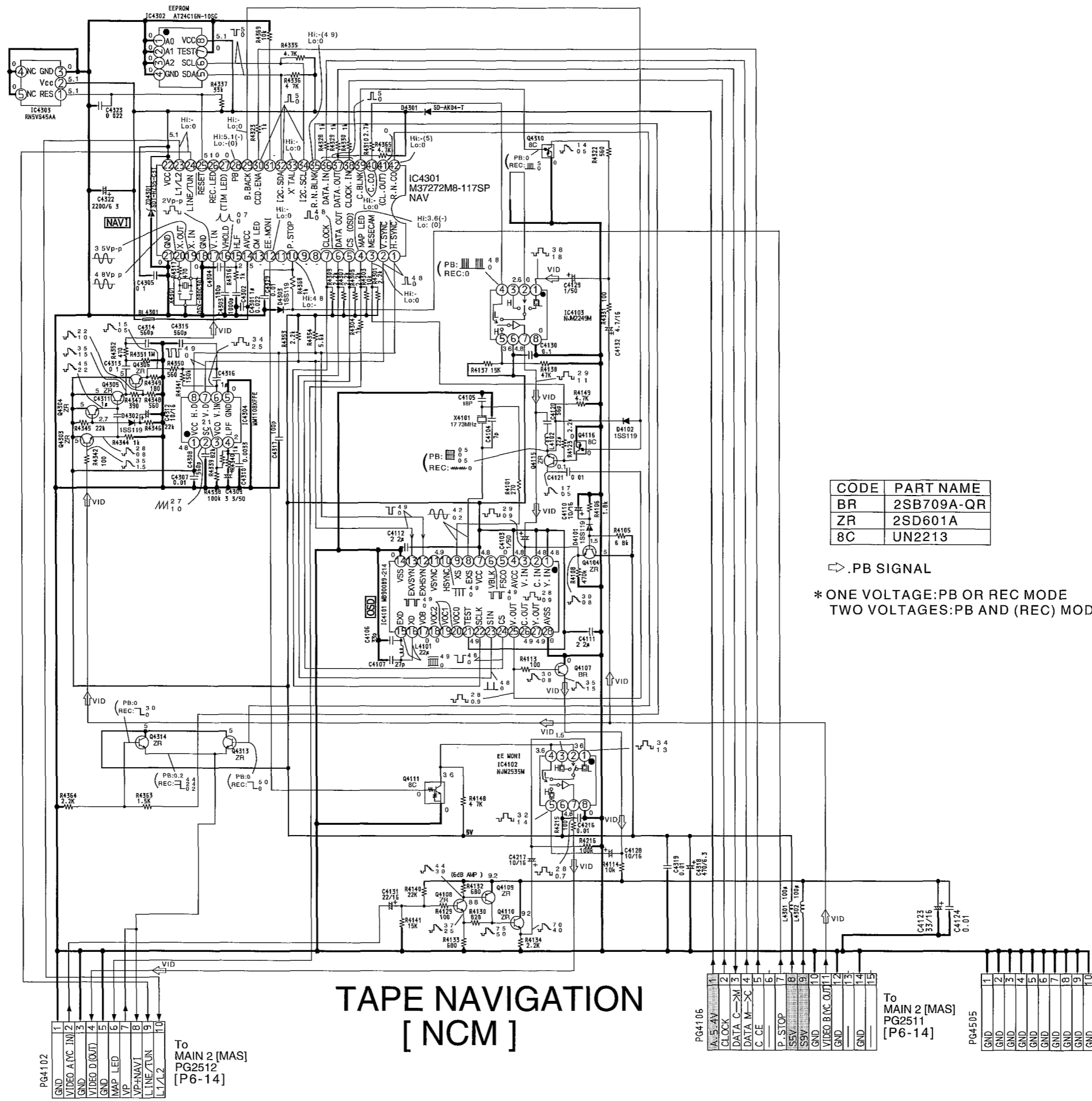


NICAM [N&A]



A2 [A2]

TAPE NAVIGATION [NCM]
SCHEMATIC DIAGRAM



CODE	PART NAME
BR	2SB709A-QR
ZR	2SD601A
8C	UN2213

□ .PB SIGNAL
* ONE VOLTAGE:PB OR REC MODE
TWO VOLTAGES:PB AND (REC) MODE

TAPE NAVIGATION
[NCM]

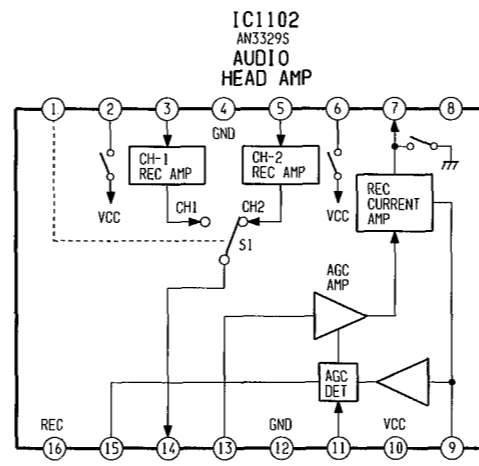
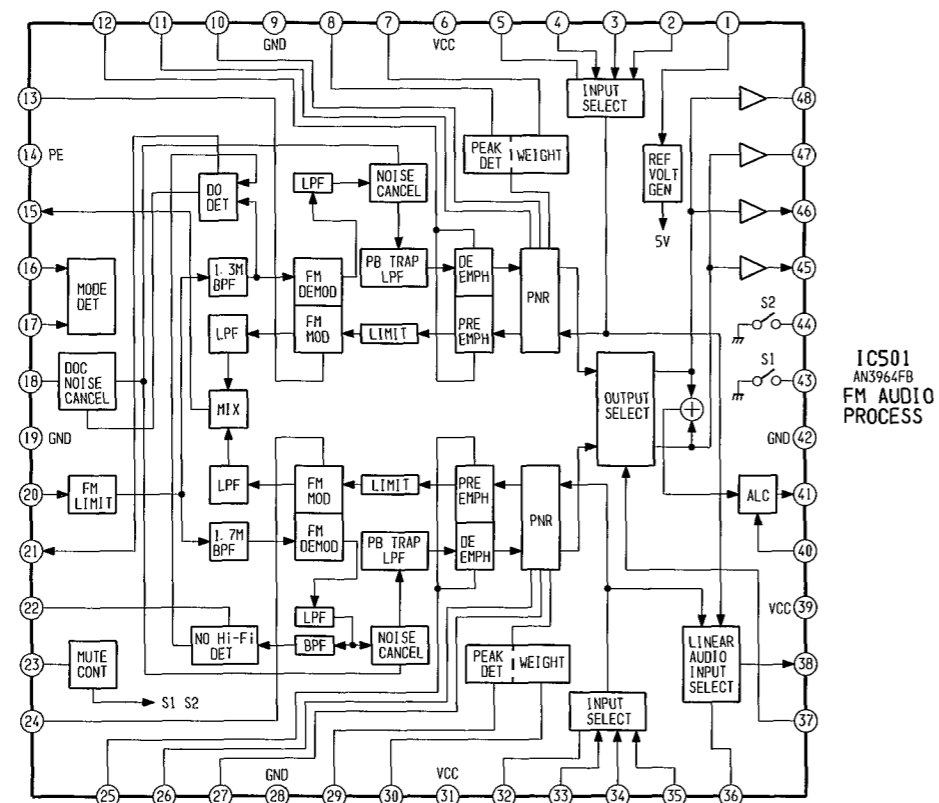
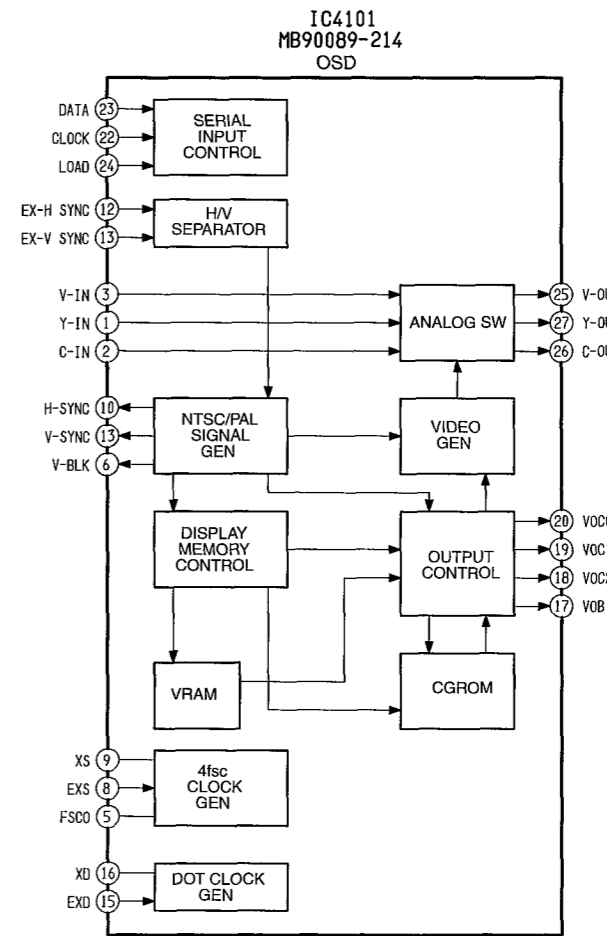
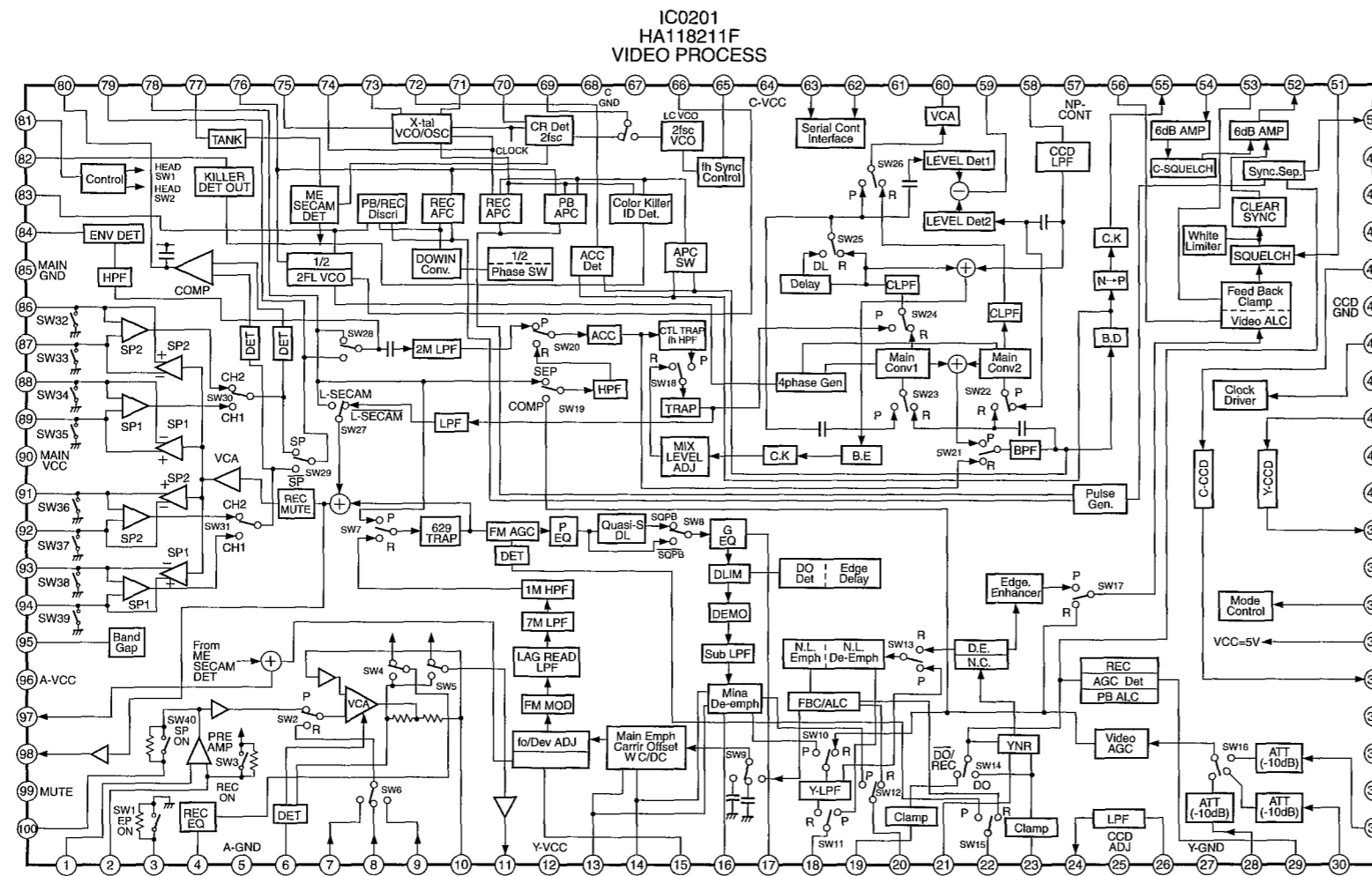
PG4102
1 GND
2 VIDEO A.Y.C. [IN]
3 GND
4 VIDEO D.(OUT)
5 GND
6 MAP LED
7 VP
8 VP+NAV1
9 LINE/TUN L1/L2
10
To MAIN 2 [MAS]
PG2512
[P6-14]

PG4106
1 A. 5.4V
2 CLOCK
3 DATA C->M
4 DATA M->C
5 C-CE
6
7 P-STOP
8 SSV
9 SSV
10 GND
11 VIDEO B.Y.C. OUT1
12 GND
13 GND
14
15

To MAIN 2 [MAS]
PG2511
[P6-14]

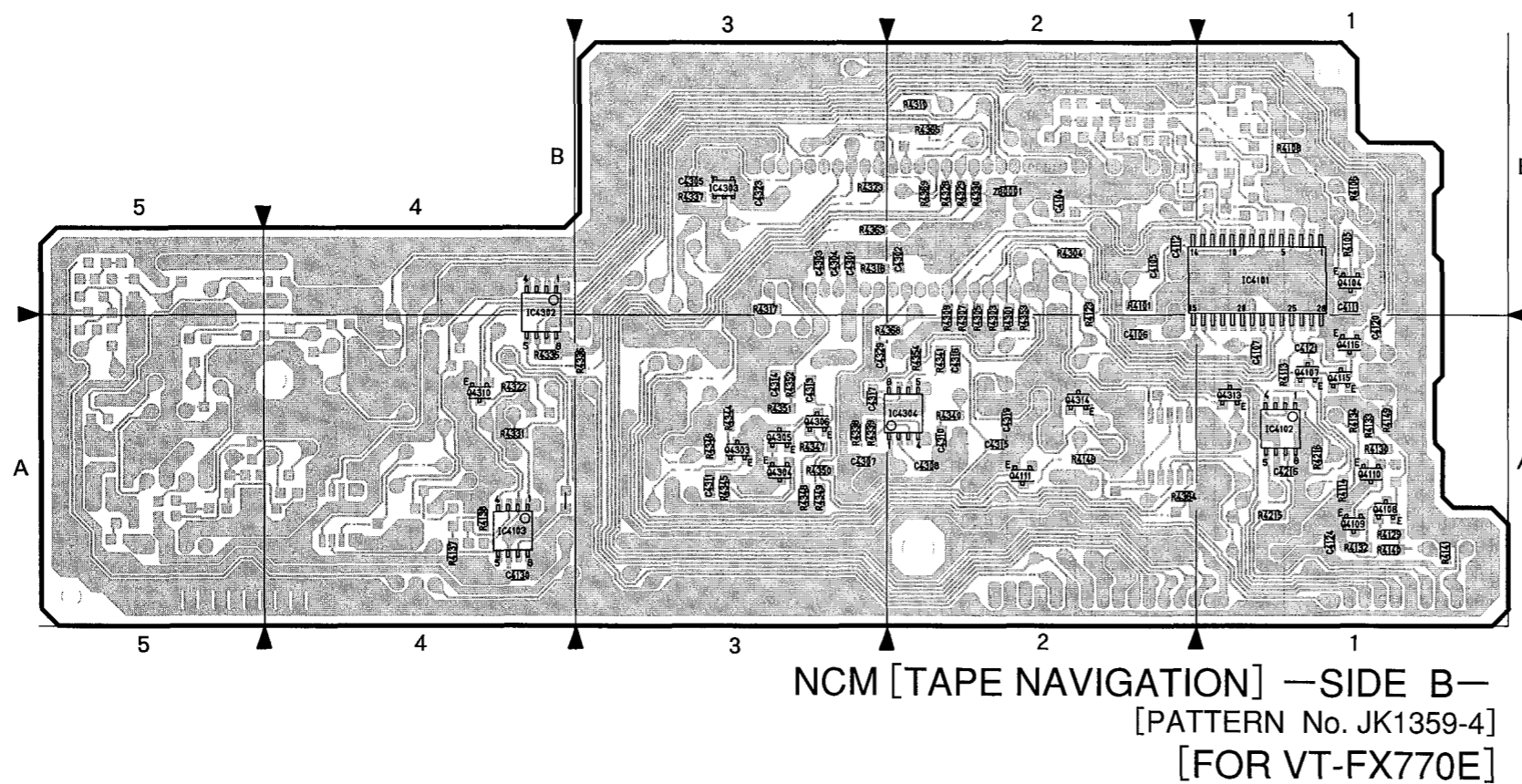
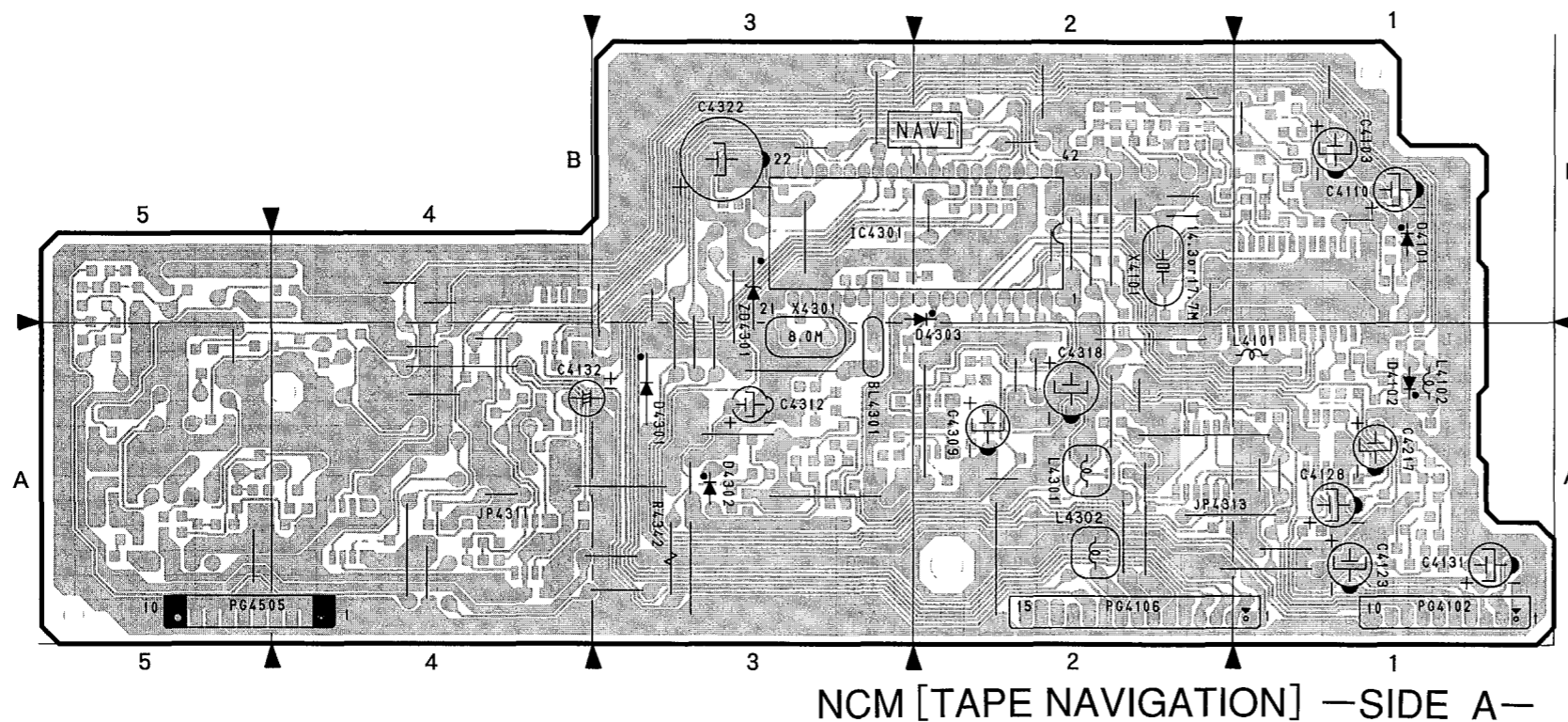
PG4505
1 GND
2 GND
3 GND
4 GND
5 GND
6 GND
7 GND
8 GND
9 GND
10 GND
To MAIN 2 [MAS]
PG2513
[P6-14]

IC BLOCK DIAGRAM



NCM CIRCUIT BOARD

IDENTIFICATION OF PARTS LOCATIONS

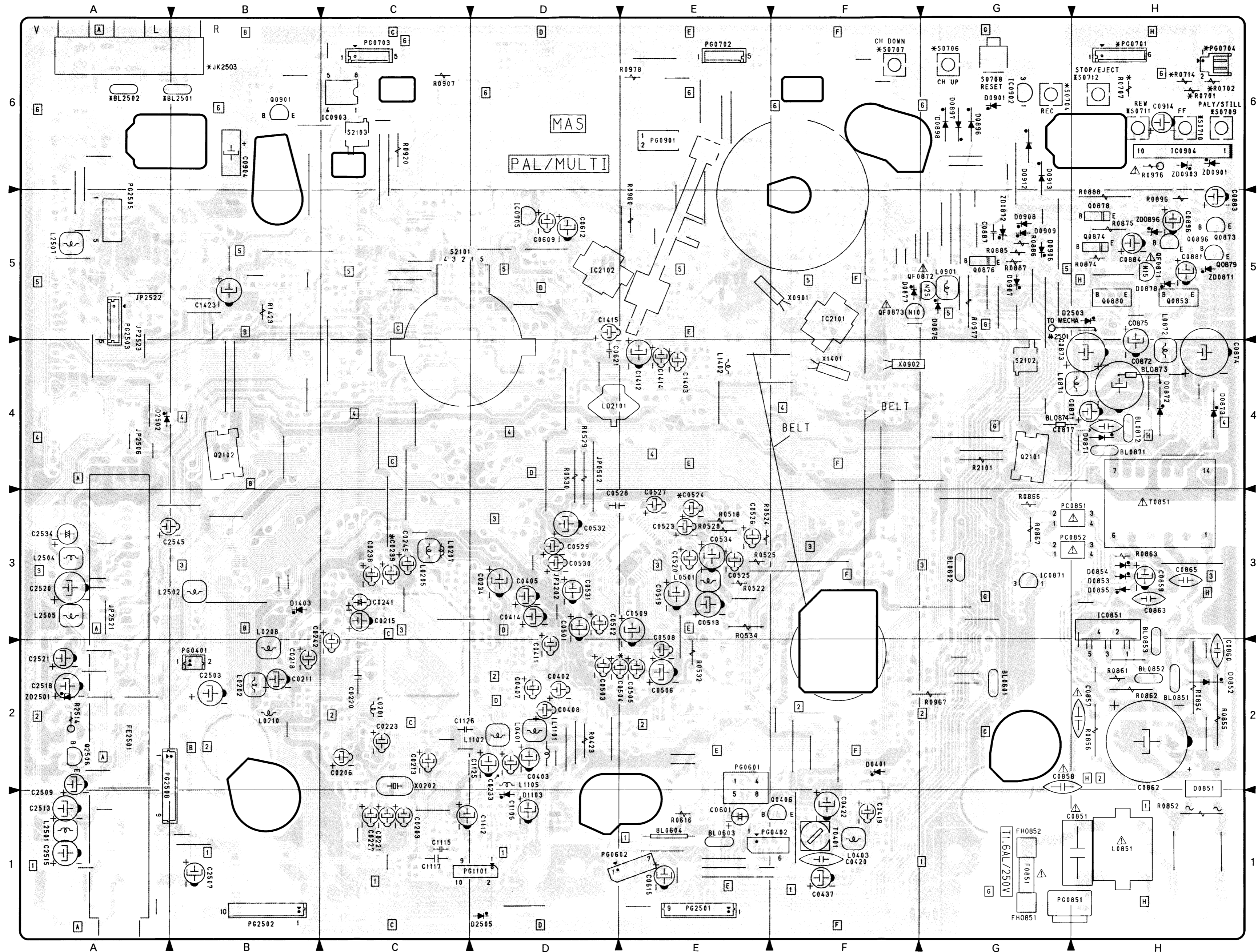


Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location
BL		L4102	A-1A	R4330	B-2B
BL4301	A-3A	L4301	A-2A	R4331	B-4A
C		L4302	A-2A	R4335	B-4A
C4103	A-1B	PG		R4336	B-3A
C4104	B-2B	PG4102	A-1A	R4337	B-3B
C4105	B-2B	PG4106	A-2A	R4338	B-3A
C4106	B-2A	PG4505	A-5A	R4339	B-3A
C4107	B-1A	Q		R4341	B-2A
C4110	A-1B	Q4104	B-1B	R4342	A-3A
C4111	B-1B	Q4107	B-1A	R4344	B-3A
C4112	B-2B	Q4108	B-1A	R4345	B-3A
C4120	B-1A	Q4109	B-1A	R4346	B-3A
C4121	B-1A	Q4110	B-1A	R4347	B-3A
C4123	A-1A	Q4111	B-2A	R4348	B-3A
C4124	B-1A	Q4115	B-1A	R4349	B-3A
C4128	A-1A	Q4116	B-1A	R4350	B-3A
C4130	B-4A	Q4303	B-3A	R4351	B-3A
C4131	A-1A	Q4304	B-3A	R4352	B-3A
C4132	A-4A	Q4305	B-3A	R4353	B-2A
C4216	B-1A	Q4306	B-3A	R4354	B-2A
C4217	A-1A	Q4310	B-4A	R4363	B-3B
C4301	B-3B	Q4313	B-1A	R4364	B-2A
C4302	B-2B	Q4314	B-2A	R4365	B-2B
C4303	B-3B	R		R4368	B-2A
C4304	B-3B	R4101	B-2B	R4369	B-2B
C4305	B-3B	R4105	B-1B	X	
C4307	B-3A	R4106	B-1B	X4101	A-2B
C4308	B-2A	R4108	B-1B	X4301	A-3A
C4309	A-2A	R4113	B-1A	ZD	
C4310	B-2A	R4114	B-1A	ZD4301	A-3B
C4311	B-3A	R4123	B-2B		
C4312	A-3A	R4129	B-1A		
C4313	B-3A	R4130	B-1A		
C4314	B-3A	R4132	B-1A		
C4315	B-2A	R4133	B-1A		
C4316	B-2A	R4134	B-1A		
C4317	B-3A	R4137	B-4A		
C4318	A-2A	R4138	B-4A		
C4319	B-2A	R4140	B-1A		
C4322	A-3B	R4141	B-1A		
C4323	B-3B	R4148	B-2A		
C4329	B-3A	R4149	B-1A		
D		R4215	B-1A		
D4101	A-1B	R4216	B-1A		
D4102	A-1A	R4301	B-2A		
D4301	A-3A	R4303	B-2A		
D4302	A-3A	R4304	B-2B		
D4303	A-2B	R4305	B-2A		
IC		R4307	B-2A		
IC4101	B-1B	R4309	B-2A		
IC4102	B-1A	R4310	B-2B		
IC4103	B-4A	R4316	B-3B		
IC4301	A-2B	R4317	B-3B		
IC4302	B-4B	R4320	B-2A		
IC4303	B-3B	R4322	B-4A		
IC4304	B-2A	R4323	B-3B		
L		R4328	B-2B		
L4101	A-1A	R4329	B-2B		

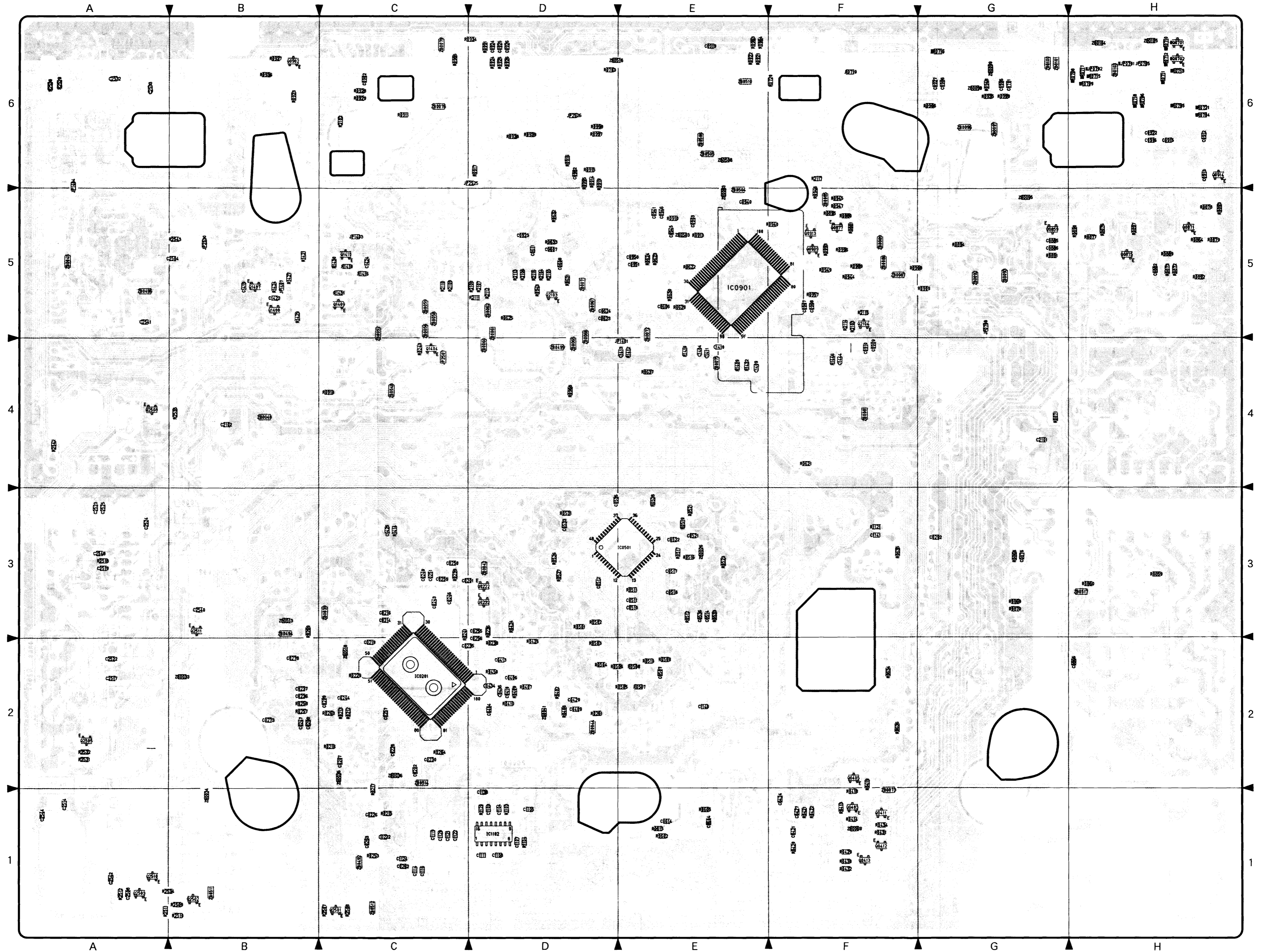
IDENTIFICATION OF PARTS LOCATION

MAS [FOR VT-FX75xE/FX76xE]

Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location
#		C0257	B-2C	C0532	A-3D	C0922	B-6H	C2514	B-1A	IC0902	A-6G	Q0222	B-3D	R0241	B-3C	R0532	A-2E	R0872	B-5H	R0949	B-5F	R2510	B-1B				
#2501	A-5H	C0259	B-3C	C0533	B-3D	C0923	B-5D	C2515	A-1A	IC0903	A-6C	Q0232	B-3D	R0243	B-4C	R0533	B-3E	R0873	B-5H	R0957	B-5F	R2511	B-1A				
BL		C0262	B-1C	C0534	A-3E	C0924	B-6D	C2517	B-2A	IC0904	A-6H	Q0403	B-1F	R0253	B-1C	R0534	A-3E	R0874	A-5H	R0960	A-5E	R2512	B-1A				
BL0601	A-2G	C0263	B-1C	C0535	B-3D	C0925	B-6D	C2518	A-2A	IC0905	A-5D	Q0405	B-2F	R0257	B-2B	R0602	B-1E	R0875	A-5H	R0967	A-2G	R2514	A-2A				
BL0602	A-3G	C0273	B-2B	C0536	B-3E	C0926	B-6D	C2519	B-3A	IC1102	B-1D	Q0406	A-1F	R0258	B-2B	R0605	B-1E	R0876	B-5H	R0968	B-4D	R2518	B-3A				
BL0603	A-1E	C0278	B-2B	C0601	A-1E	C0927	B-6G	C2520	A-3A	IC2101	A-5F	Q0411	B-1F	R0261	B-2D	R0615	B-1E	R0877	B-5H	R0976	A-6H	R2529	B-6A				
BL0604	A-1E	C0292	B-3G	C0604	B-1E	C0940	B-5E	C2521	A-2A	IC2102	A-5D	Q0412	B-1F	R0263	B-2C	R0616	A-1E	R0878	B-5H	R0977	A-5G	R2530	B-6A				
BL0851	A-2H	C0402	A-2D	C0606	B-5E	C0941	B-5E	C2522	B-2A	JK		Q0413	B-1F	R0264	B-2C	R0621	B-4F	R0879	B-5H	R0978	A-6E	R2531	B-2A				
BL0852	A-2H	C0403	A-2D	C0607	B-5D	C0945	B-5E	C2523	B-3A	JK2503	A-6A	Q0701	B-6H	R0269	B-3B	R0622	B-5E	R0880	B-5F	R0983	B-6E	R2532	B-2A				
BL0853	A-2H	C0404	B-2D	C0608	B-5D	C0946	B-5E	C2524	B-3A	JP		Q0702	B-6H	R0402	B-2D	R0623	B-5E	R0881	B-5F	R0984	B-6E	R2534	B-1B				
BL0871	A-4H	C0405	A-3D	C0609	A-5D	C0950	B-5E	C2525	B-3A	JP0701	B-6H	Q0853	A-5H	R0407	B-2D	R0624	B-5E	R0885	A-5G	R0985	B-6C	R2535	B-4B				
BL0872	A-4H	C0406	B-2D	C0611	B-5D	C0951	B-5E	C2532	B-6A	JP0702	B-6H	Q0859	B-5G	R0408	B-2D	R0625	B-5D	R0886	A-5G	R0989	B-5F	R2542	B-4A				
BL0873	A-4H	C0407	A-2D	C0612	A-5D	C0982	B-6D	C2533	B-6A	L		Q0871	B-5H	R0409	B-2D	R0629	B-5E	R0887	A-5G	R0991	B-6D	R2543	B-5B				
BL0874	A-4G	C0408	A-2D	C0614	B-1E	C1103	B-1D	C2534	A-3A	L0201	A-2C	Q0873	A-5H	R0410	B-2D	R0630	B-5E	R0888	A-5H	R0993	B-5F	S					
BL2501	A-6B	C0409	B-2D	C0615	A-1E	C1104	B-1D	C2540	B-3B	L0202	A-2B	Q0874	A-5H	R0413	B-1F	R0631	B-5D	R0889	B-5H	R0995	B-6D	S0704	A-6G				
BL2502	A-6A	C0410	B-2D	C0621	A-4D	C1105	B-1D	C2541	B-5A	L0205	A-3C	Q0875	B-5H	R0414	B-1F	R0632	B-5D	R0890	B-5H	R0996	B-5F	S0706	A-6G				
C		C0411	A-2D	C0623	B-5D	C1106	A-1D	C2542	B-1A	L0207	A-3C	Q0876	A-5G	R0418	B-1F	R0633	B-5D	R0891	B-5G	R0997	B-6D	S0707	A-6F				
C0201	B-3D	C0413	B-2D	C0624	B-5D	C1107	B-1D	C2544	B-1A	L0208	A-2B	Q0877	B-5F	R0419	B-2F	R0634	B-2F	R0892	B-5H	R0998	B-6D	S0708	A-6G				
C0202	B-2C	C0414	A-3D	C0701	B-6G	C1108	B-1D	C2545	A-3A	L0210	A-2B	Q0878	A-5H	R0420	B-1F	R0635	B-3F	R0893	B-5H	R0999	B-6G	S0709	A-6H				
C0203	A-1C	C0419	A-1F	C0851	A-1H	C1111	B-1D	C2548	B-3A	L0401	A-2D	Q0879	A-5H	R0421	B-1F	R0636	B-2F	R0894	B-5G	R1103	B-1D	S0710	A-6H				
C0206	A-2C	C0420	A-1F	C0857	A-2H	C1112	A-1C	D		L0403	A-1F	Q0880	A-5H	R0422	B-1F	R0637	B-4E	R0895	B-5F	R1104	B-1D	S0711	A-6H				
C0207	B-2C	C0421	B-1F	C0858	A-2G	C1114	B-1C	D0401	A-2F	L0501	A-3E	Q0896	A-5H	R0423	A-2D	R0701	A-6H	R0896	A-5H	R1120	B-1D	S0712	A-6H				
C0208	B-2B	C0422	A-1F	C0859	A-3H	C1115	A-1C	D0851	A-2H	L0851	A-1H	Q0901	A-6B	R0424	B-3D	R0702	A-6H	R0897	B-5H	R1121	B-3F	S2101	A-5C				
C0209	B-2C	C0424	B-1F	C0860	A-2H	C1116	B-1C	D0852	A-2H	L0871	A-4H	Q0902	B-6B	R0425	B-2D	R0703	B-6D	R0906	B-6G	R1409	B-4E	S2102	A-4G				
C0211	A-2B	C0427	B-1F	C0862	A-2H	C1117	A-1C	D0853	A-3H	L0872	A-4H	Q0909	B-5F	R0429	B-1F	R0704	B-6H	R0907	A-6C	R1410	B-4E	S2103	A-6C				
C0213	A-2C	C0429	B-2D	C0863	A-3H	C1119	B-1C	D0854	A-3H	L0901	A-5G	Q0913	B-5F	R0430	B-1F	R0705	B-6H	R0908	B-5F	R1412	B-4E	T					
C0214	B-3C	C0434	B-2D	C0865	A-3H	C1120	B-1C	D0855	A-3H	L1101	A-2D	Q0914	B-6H	R0431	B-1F	R0706	B-6H	R0909	B-5G	R1414	B-3C	T0401	A-1F				
C0215	A-3C	C0435	B-2D	C0866	B-2H	C1121	B-1C	D0871	A-4H	L1102	A-2D	Q1404	B-4C	R0432	B-1F	R0707	A-6H	R0910	B-5E	R1416	B-5C	T0851	A-3H				
C0216	B-3C	C0437	A-1F	C0871	A-4H	C1122	B-1C	D0872	A-4H	L1105	A-2D	Q1407	B-5B	R0434	B-1F	R0708	B-6H	R0911	B-6C	R1418	B-5C	X					
C0218	A-2B	C0501	A-3D	C0872	A-4H	C1124	B-1C	D0873	A-4H	L1402	A-4E	Q1408	B-5B	R0450	B-2D	R0709	B-6H	R0913	B-5E	R1421	B-5B	X0202	A-2C				
C0219	B-2C	C0502	A-3D	C0873	A-4H	C1125	A-2D	D0876	A-5G	L2501	A-1A	Q1409	B-5C	R0501	B-3D	R0710	B-6H	R0914	B-6D	R1423	A-5B	X0901	A-5F				
C0220	A-2C	C0503	A-2D	C0874	A-4H	C1126	A-2C	D0877	A-5F	L2502	A-3B	Q1410	B-5C	R0502	B-3D	R0711	B-6H	R0915	B-6D	R1424	B-5B	X0902	A-4F				
C0221	A-1C	C0504	A-2E	C0875	A-4H	C1138	B-1D	D0878	A-5H	L2504	A-3A	Q2101	A-4G	R0503	B-2D	R0712	B-6H	R0916	B-6D	R1427	B-5B	X1401	A-4F				
C0222	B-1C	C0505	A-2E	C0876	B-3G	C1140	B-2E	D0896	A-6G	L2505	A-3A	Q2102	A-4B	R0504	B-2D	R0713	B-6H	R0917	B-6D	R1429	B-5B	ZD					
C0223	A-2C	C0506	A-2E	C0877	A-4H	C1141	B-3F	D0897	A-6G	L2507	A-5A	Q2103	B-5D	R0505	B-2E	R0714	A-6H	R0918	B-4C	R1430	B-5C	ZD0871	A-5H				
C0226	B-1C	C0507	B-2E	C0881	A-5H	C1403	A-4E	D0898	A-6G	LD		Q2104	B-5F	R0506	B-2E	R0715	B-6H	R0919	B-6D	R1431	B-5C	ZD0872	A-5G				
C0227	A-1C	C0508	A-2E	C0882	B-5H	C1404	B-4E	D0901	A-6G	LD2101	A-4D	Q2501	B-1C	R0507	B-2E	R0716	B-6G	R0920	A-6C	R1432	B-4E	ZD0896	A-5H				
C0228	B-2C	C0509	A-3E	C0883	A-5H	C1409	B-4E	D0906	A-5G	PC		Q2502	B-1B	R0508	B-2E	R0717	B-6H	R0921	B-6E	R1446	B-4F	ZD0901	A-6H				
C0230	B-2C	C0510	B-3E	C0884	A-5H	C1410	B-4E	D0907	A-5G	PC0851	A-3H	Q2503	B-1A	R0509	B-2E	R0718	B-6H	R0922	B-6E	R2101	A-4G	ZD0903	A-6H				
C0233	A-2D	C0511	B-3E	C0885	B-5G	C1411	B-4E	D0908	A-5G	PC0852	A-3H	Q2505	B-2A	R0510	B-2E	R0719	B-6F	R0923	B-6B	R2102	B-6C	ZD2501	A-2A				
C0234	A-3D	C0512	B-3D	C0886	B-5G	C1412	A-4E	D0909	A-5G	PG		Q2506	A-2A	R0511	B-3E	R0720	B-6F	R0924	B-6D	R2103	B-5F						
C0235	B-2D	C0513	A-3E	C0887	A-5G	C1413	B-4E	D0912	A-6G	PG0401	A-2B	Q2508	B-4A	R0512	B-3E	R0721	B-6H	R0925	B-6D	R2104	B-5D						
C0236	B-2B	C0514	B-3E	C0896	A-5H	C1414	A-4E	D0913	A-6G	PG0402	A-1F	Q2510	B-1A	R0516	B-3E	R0852	A-1H	R0926	B-6D	R2105	B-5D						
C0237	B-2B	C0517	B-3E	C0902	B-6C	C1415	A-5D	D1103	A-1D	PG0601	A-2E	Q2511	B-3B	R0517	B-3E	R0854	A-2H	R0928	B-6C	R2106	B-5D						
C0238	A-3C	C0518	B-3E	C0903	B-5E	C1419	B-5B	D1403	A-3B	PG0602	A-1E	QF		R0518	A-3E	R0855	A-2H	R0929	B-6C	R2107	B-5D						
C0239	A-3C	C0519	A-3E	C0904	A-6B	C1422	B-5B	D2502	A-4A	PG0701	A-6H	QF0871	A-5H	R0519	B-3E	R0856	A-2H	R0934	B-6D	R2108	B-5D						
C0241	A-3C	C0520	A-3E	C0905	B-6G	C1423	A-5B	D2503	A-5H	PG0702	A-6E	QF0872	A-5G	R0520	A-3E	R0859	B-3H	R0935	B-6G	R2109	B-5C						
C0242	A-2C	C0521	B-3E	C0906	B-6G	C1424	B-5C	D2505	A-1D	PG0703	A-6C	QF0873	A-5F	R0521	B-3E	R0860	B-3H	R0936	B-6B	R2110	B-5C						
C0243	B-3C	C0522	B-3E	C0907	B-5F	C1425	B-3C	F		PG0704	A-6H	R		R0522	A-3E	R0861	A-2H	R0937	B-6B	R2111	B-5D						
C0244	B-2C	C0523	A-3E	C0908	B-5F	C1444	B-4F	F0851	A-1G	PG0851	A-1G	R0212	B-2C	R0523	B-3E	R0862	A-2H	R0938	B-6D	R2112	B-5D						
C0245	A-3C	C0524	A-3E	C0909	B-4F	C2101	B-4G	FE		PG0901	A-6E	R0213	B-2C	R0524	A-3E	R0863	A-3H	R0939	B-6D	R2113	B-5D						
C0246	B-3C	C0525	A-3E	C0910	B-4F	C2102	B-4B	FE2501	A-2A	PG1101	A-1D	R0215	B-1C	R0525	A-3E	R0864	B-5H	R0940	B-5F	R2114	B-5F						
C0247	B-2B	C0526	A-3E	C0912	B-6H	C2503	A-2B	IC		PG2501	A-1E	R0216	B-2C	R0526	B-3D	R0866	A-3G	R0944	B-5D	R2115	B-5F						
C0249	B-3C	C0527	A-3E	C0913	B-6H	C2504	B-5B	IC0201	B-2C	PG2502	A-1B	R0217	B-1C	R0527	B-3D	R0867	A-3G	R0945	B-5F	R2116	B-6F						
C0250	B-3C	C0528	A-3D	C0914	A-6H	C2507	A-1B	IC0501	B-3E	PG2503	A-5A	R0229	B-2C	R0528	B-3E	R0868	B-3G	R0946	B-5F	R2117	B-6F						
C0251	B-3C	C0529	A-3D	C0915	B-6H	C2508	B-1A	IC0851	A-3H	PG2505	A-5A	R0236	B-3D	R0529	A-4D	R0869	B-3G	R0947	B-5F	R2507	B-1C						
C0255	B-3D	C0530	A-3D	C0916	B-6H	C2509	A-2A	IC0871	A-3G	PG2508	A-2B	R0238	B-2D	R0530	A-4D	R0870	B-3G	R0948	B-6G	R2508	B-1C						
C0256	B-2D	C0531	A-3D	C0919	B-6E	C2513	A-1A	IC0901	B-5E	Q		R0239	B-3C	R0531	B-3D	R0871	B-4H			R2509	B-1B						



MAS [MAIN] -SIDE A-
[PATTERN No. JK1365-4]
[FOR VT-FX75xE/FX76xE]



MAS [MAIN] -SIDE B-
[PATTERN No. JK1365-4]
[FOR VT-FX75XE/FX76XE]

DIFFERENCE TABLE

MAS -SIDE B- [FOR VT-FX-75xE/FX76xE]

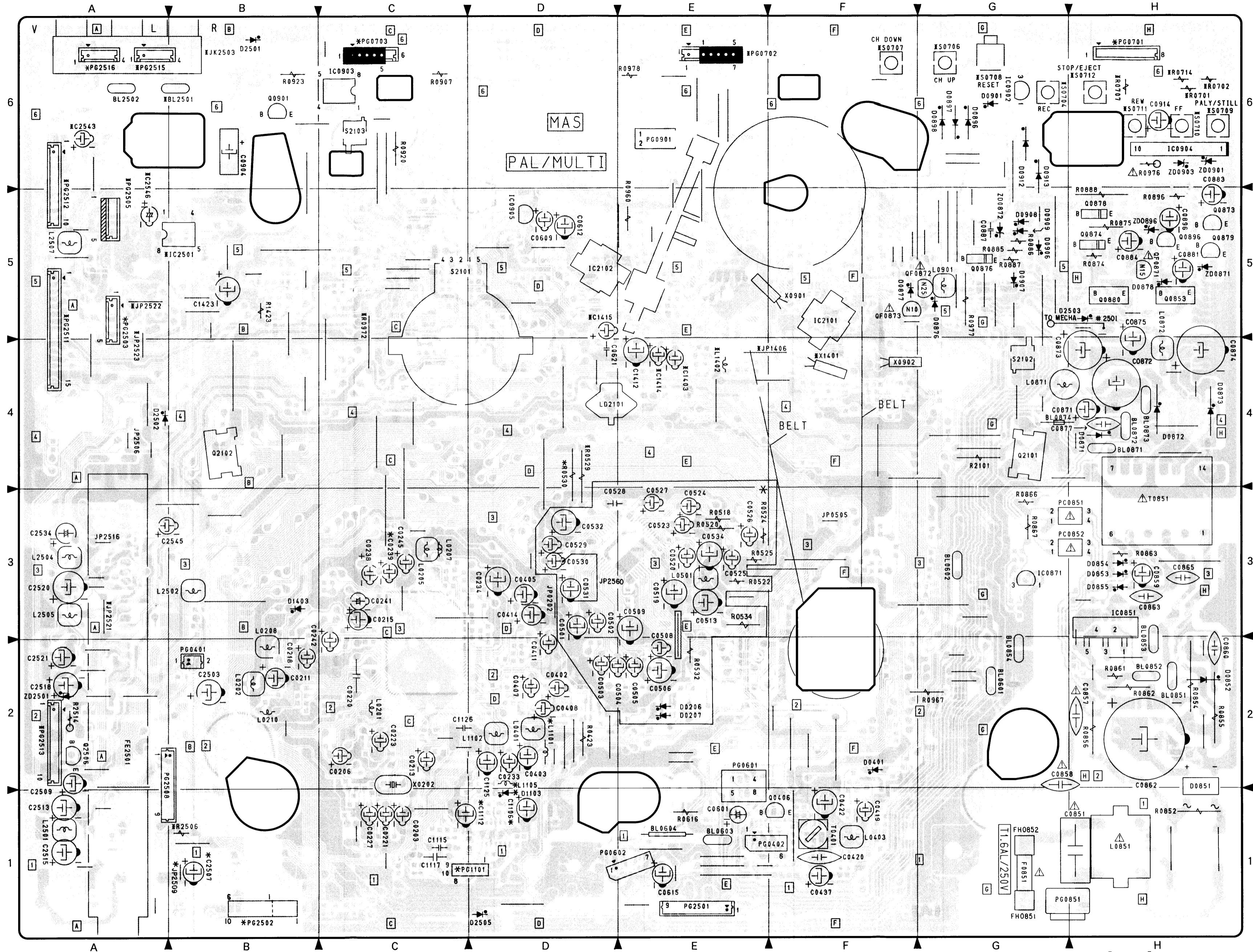
NOTE: This table lists the different components marked with asterisks (*) in the circuit board diagrams.

Table with 6 columns: SYMBOL No., FX750E (UKN), FX75XE (NA/VPS), FX760EX (UKN), FX760E (NA), FX765E (UKN). Rows include JP0701, Q0701, R0704, etc., with 'X' or 'O' markers.

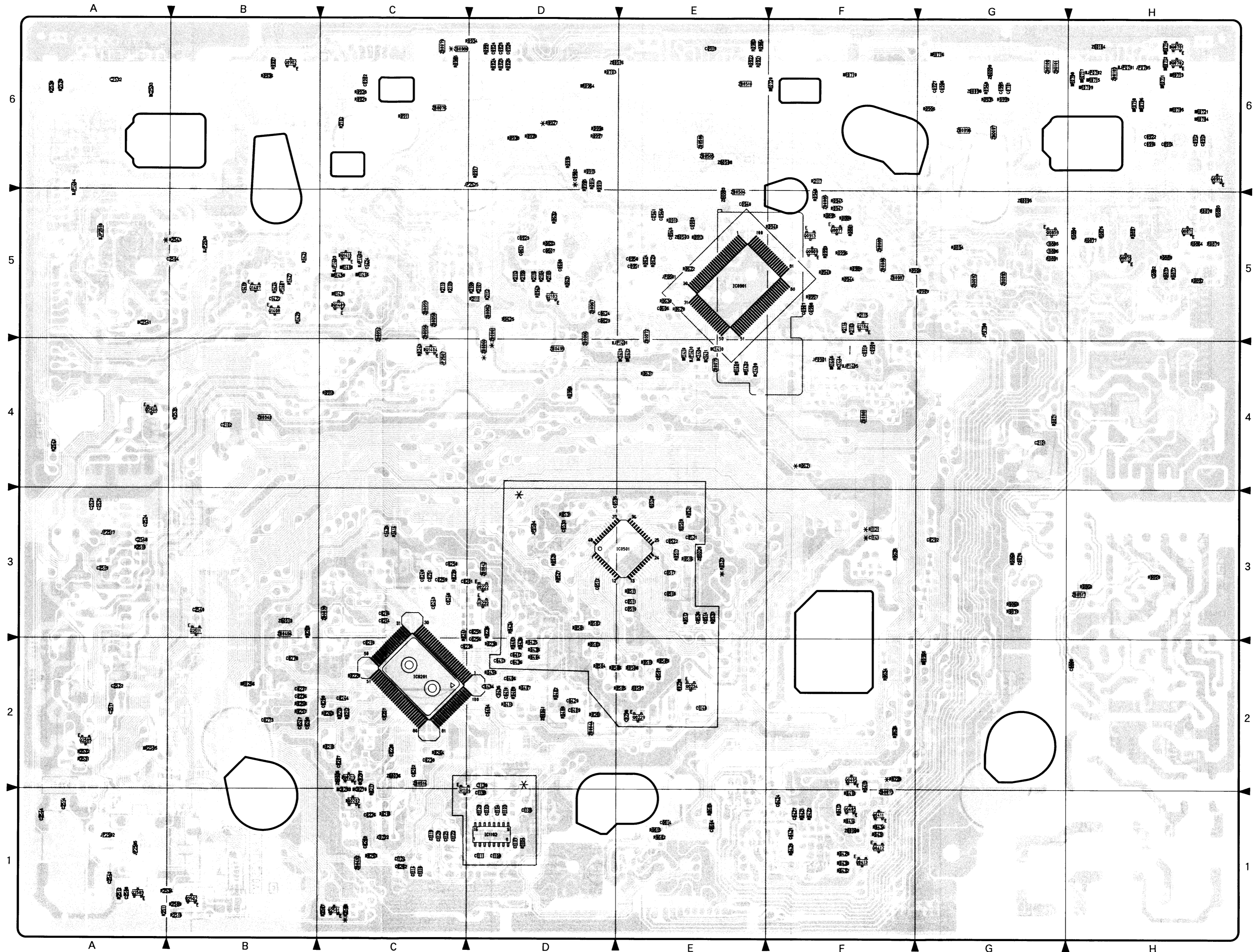
IDENTIFICATION OF PARTS LOCATIONS

MAS [FOR VT-FX-75xE/FX76xE]

Large grid of parts locations with columns for Symbol No. and Parts Location. Includes categories like #, BL, C, D, IC, JK, JP, L, LD, PC, PG, QF, R, S, T, X, ZD.

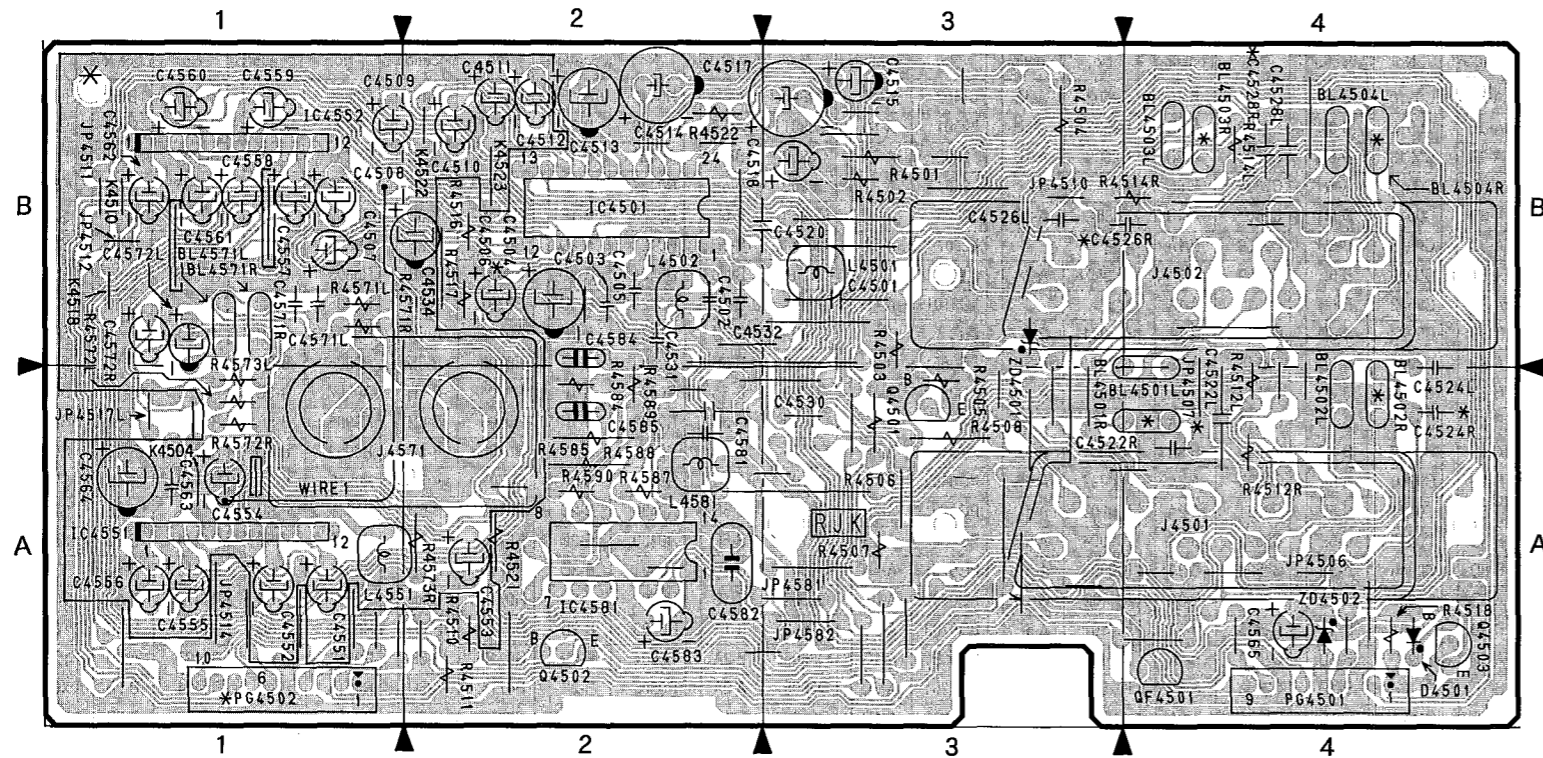


MAS [MAIN] -SIDE A-
[PATTERN No. JK1365-6]
[FOR VT-FX770E/MX730E]

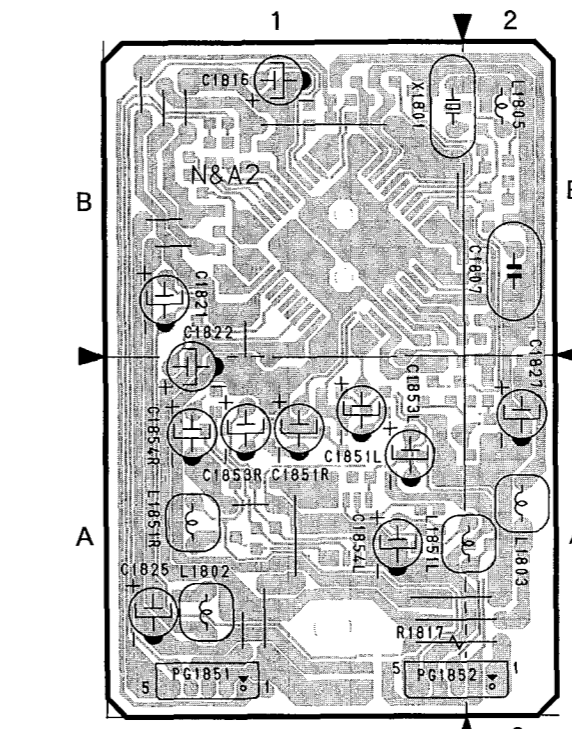


MAS [MAIN] -SIDE B-
[PATTERN No. JK1365-6]
[FOR VT-FX770E/FX730E]

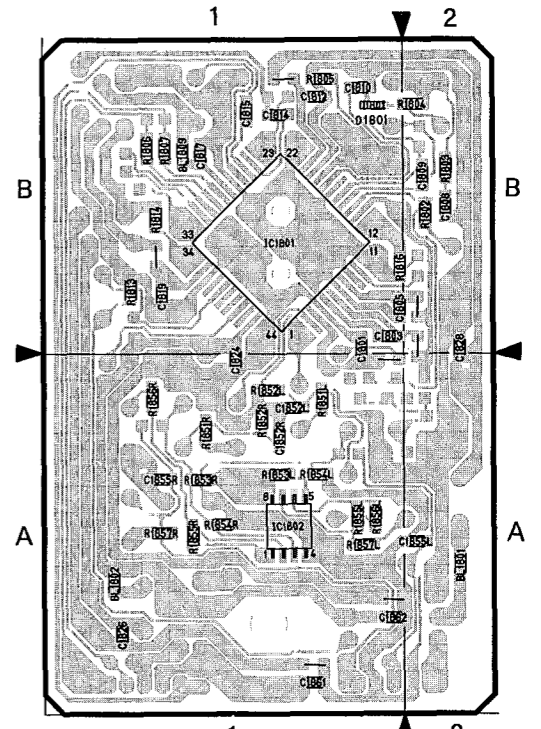
RJK, N&A CIRCUIT BOARDS



RJK [REAR JACK]
[PATTERN No. JK1195-5]



N&A [NICAM] -SIDE A-



N&A [NICAM] -SIDE B-
[PATTERN No. JK1360-3]
[FOR UKN,UK,NA,NAV]

IDENTIFICATION OF PARTS LOCATION

RJK

Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location
BL		C4515	3B	C4561	1B	JP4507	4A	R4503	3B
BL4501L	4A	C4517	3B	C4562	1B	JP4511	1B	R4504	3B
BL4501R	4A	C4518	3B	C4563	1A	JP4512	1B	R4505	3A
BL4502L	4A	C4520	3B	C4564	1A	K		R4506	3A
BL4502R	4A	C4522L	4A	C4565	4A	K4504	1A	R4507	3A
BL4503L	4B	C4522R	4A	C4571L	1B	K4510	1B	R4508	3A
BL4503R	4B	C4524L	4A	C4571R	1B	K4518	1B	R4510	2A
BL4504L	4B	C4524R	4A	C4572L	1B	K4522	2B	R4511	2A
BL4504R	4B	C4526L	3B	C4572R	1B	K4523	2B	R4512L	4A
BL4571L	1B	C4526R	4B	C4581	2A	L		R4512R	4A
BL4571R	1B	C4528L	4B	C4582	2A	L4501	3B	R4514L	4B
C		C4528R	4B	C4583	2A	L4502	2B	R4516	2B
C4501	3B	C4530	2A	C4584	2B	L4551	1A	R4517	2B
C4502	2B	C4531	2B	C4585	2A	L4581	2A	R4518	4A
C4503	2B	C4532	2B	D		PG		R4521	2A
C4504	2B	C4534	2B	D4501	4A	PG4501	4A	R4522	2B
C4505	2B	C4551	1A	IC		PG4502	1A	R4522	2B
C4506	2B	C4552	1A	IC4501	2B	Q		R4571L	1B
C4507	1B	C4553	2A	IC4551	1A	Q4501	3A	R4571R	1B
C4508	1B	C4554	1A	IC4552	1B	Q4502	2A	R4572L	1A
C4509	1B	C4555	1A	IC4581	2A	Q4503	4A	R4572R	1A
C4510	2B	C4556	1A	J		QF		R4573L	1A
C4511	2B	C4557	1B	J4501	4A	QF4501	4A	R4573R	2A
C4512	2B	C4558	1B	J4502	4B	R		R4584	2A
C4513	2B	C4559	1B	J4571	1A	R4501	3B	R4585	2A
C4514	2B	C4560	1B	JP		R4502	3B	R4587	2A

DIFFERENCE TABLE

RJK
NOTE: This table lists the different components marked with asterisks (*) in the circuit board diagrams

SYMBOL No.	FX75XE FX76XE FX770E	MX730E	SYMBOL No.	FX75XE FX76XE FX770E	MX730E
BL4501R	○	×	C4562	○	×
BL4502R	○	×	C4563	○	×
BL4503R	○	×	C4564	○	×
BL4504R	○	×	C4571L	○	×
BL4571L	○	×	C4571R	○	×
BL4571R	○	×	C4572L	○	×
C4506	×	○	C4572R	○	×
C4507	×	○	C4572R	○	×
C4508	×	○	IC4551	○	×
C4509	×	○	IC4552	○	×
C4510	×	○	J4571	○	×
C4511	×	○	JP4507	×	○
C4512	×	○	JP4510	×	○
C4524R	○	×	JP4511	×	○
C4526R	○	×	JP4512	○	×
C4528R	○	×	K4504	○	×
C4534	○	×	K4510	×	○
C4551	○	×	K4518	×	○
C4552	○	×	K4522	×	○
C4553	○	×	L5551	○	×
C4554	○	×	PG4502	10P	6P
C4555	○	×	R4571L	○	×
C4556	○	×	R4571R	○	×
C4557	○	×	R4572L	○	×
C4558	○	×	R4572R	○	×
C4559	○	×	R4573L	○	×
C4560	○	×	R4573R	○	×
C4561	○	×	WIRE1	○	×

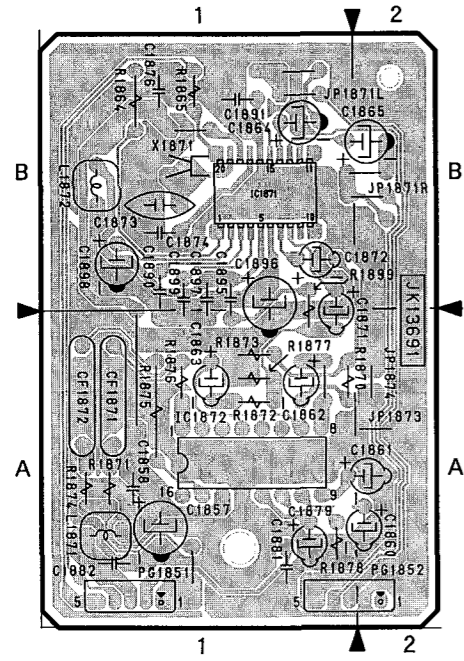
IDENTIFICATION OF PARTS LOCATION

N&A

Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location
BL		C1851R	A-1A	R1803	B-2B
BL1801	B-2A	C1852L	B-1A	R1804	B-2B
BL1802	B-1A	C1852R	B-1A	R1805	B-1B
BL1809	B-1B	C1853L	A-1A	R1806	B-1B
C		C1853R	A-1A	R1807	B-1B
C1801	B-1B	C1854L	A-1A	R1813	B-1B
C1803	B-1B	C1854R	A-1A	R1814	B-1B
C1805	B-1B	C1855L	B-2A	R1816	B-1B
C1807	A-2B	C1855R	B-1A	R1817	A-1A
C1808	B-2B	C1861	B-1A	R1851L	B-1A
C1809	B-2B	C1862	B-1A	R1851R	B-1A
C1810	B-1B	D		R1852L	B-1A
C1812	B-1B	D1801	B-1B	R1852R	B-1A
C1814	B-1B	IC		R1853L	B-1A
C1815	B-1B	IC1801	B-1B	R1853R	B-1A
C1816	A-1B	L		R1854L	B-1A
C1817	B-1B	L1802	A-1A	R1854R	B-1A
C1819	B-1B	L1803	A-2A	R1855L	B-1A
C1821	A-1B	L1805	A-2B	R1855R	B-1A
C1822	A-1A	L1851L	A-2A	R1856L	B-1A
C1824	B-1A	L1851R	A-1A	R1856R	B-1A
C1825	A-1A	PG		R1857L	B-1A
C1826	B-1A	PG1851	A-1A	R1857R	B-1A
C1827	A-2A	PG1852	A-1A	X	
C1828	B-2B	R		X1801	A-1B
C1851L	A-1A	R1802	B-2B		

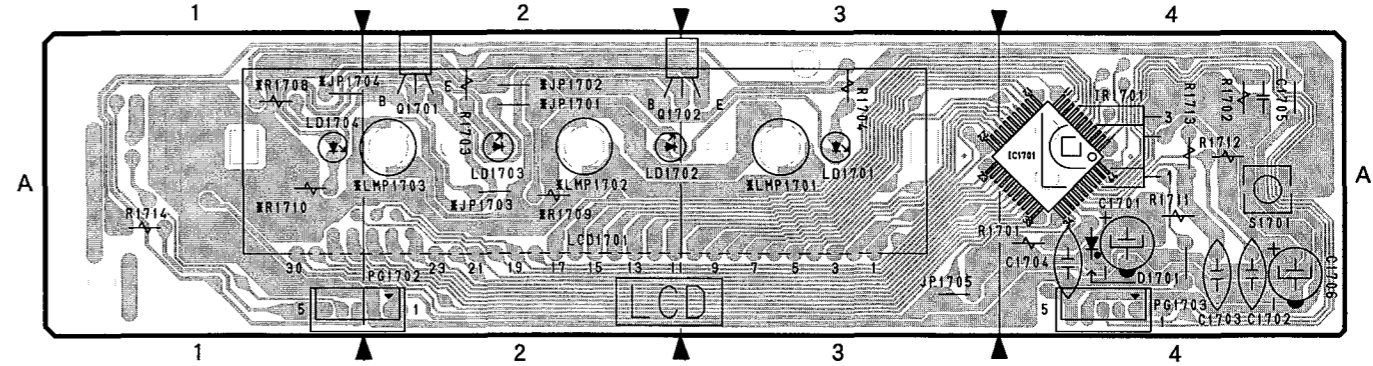
A2, LED, STL, LCD CIRCUIT BOARDS

IDENTIFICATION OF PARTS LOCATIONS



A2 [A2]
[PATTERN No. JK1369-2]
[FOR VPS]

Symbol No	Parts Location	Symbol No	Parts Location
C		CF1872	1A
C1857	1A	IC	
C1858	1A	IC1871	1B
C1860	2A	IC1872	1A
C1861	2A	L	
C1862	1A	L1871	1A
C1863	1A	L1872	1B
C1864	1B	PG	
C1865	2B	PG1851	1A
C1871	1A	PG1852	1A
C1872	1B	R	
C1873	1B	R1864	1B
C1874	1B	R1865	1B
C1876	1B	R1870	1A
C1879	1A	R1871	1A
C1881	1A	R1872	1A
C1882	1A	R1873	1A
C1890	1B	R1874	1A
C1891	1B	R1875	1A
C1895	1B	R1876	1A
C1896	1B	R1877	1A
C1897	1B	R1878	1A
C1898	1B	R1899	1A
C1899	1B	X	
CF		X1871	1B
CF1871	1A		



LCD [LCD DISPLAY]
[PATTERN No. JK1361-2]
[EXCEPT FOR VT-FX770E]

IDENTIFICATION OF PARTS LOCATION

STL

Symbol No	Parts Location
JP	
JP2703	1B
LD	
LD2701	1A
PG	
PG2701	2B
R	
R2701	2B
R2702	2B
R2703	2B
R2704	2B
R2705	1A
R2706	1A
R2707	1A
R2708	2A
R2709	2A
R2710	2A
R2711	2A
R2712	2A
R2713	1A
R2714	1B
S	
S2701	2B
S2702	1A
S2703	2B
S2704	2A
S2705	1A
S2706	1B
S2707	3B
S2710	3B
S2712	2A
S2713	2A
S2714	2A
S2715	1A
S2716	1A

LCD

Symbol No	Parts Location	Symbol No	Parts Location
C		R1703	2A
C1701	4A	R1704	3A
C1702	4A	R1708	1A
C1703	4A	R1709	2A
C1704	4A	R1710	1A
C1705	4A	R1711	4A
C1706	4A	R1712	4A
D		R1713	4A
D1701	4A	R1714	1A
IC		S	
IC1701	4A	S1701	4A
IR			
IR1701	4A		
JP			
JP1701	2A		
JP1702	2A		
LCD			
LCD1701	2A		
LD			
LD1701	3A		
LD1702	2A		
LD1703	2A		
LD1704	1A		
LMP			
LMP1701	3A		
LMP1702	2A		
LMP1703	2A		
PG			
PG1702	1A		
PG1703	4A		
Q			
Q1701	2A		
Q1702	3A		
R			
R1701	4A		
R1702	4A		

DIFFERENCE TABLE

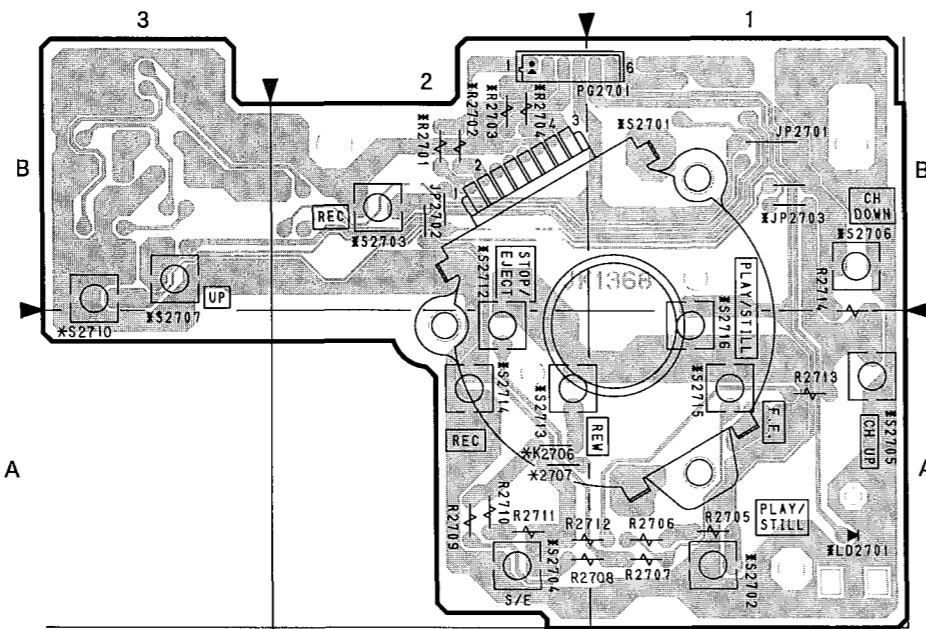
NOTE: This table lists the different components marked with asterisks (*) in the circuit board diagrams

LCD

SYMBOL No	FX75XE	FX76XE
JP1701	×	○
JP1702	○	×
JP1703	○	×
JP1704	×	○
LMP1701	×	○
LMP1702	×	○
LMP1703	×	○
R1708	×	○
R1709	○	×
R1710	○	×

STL

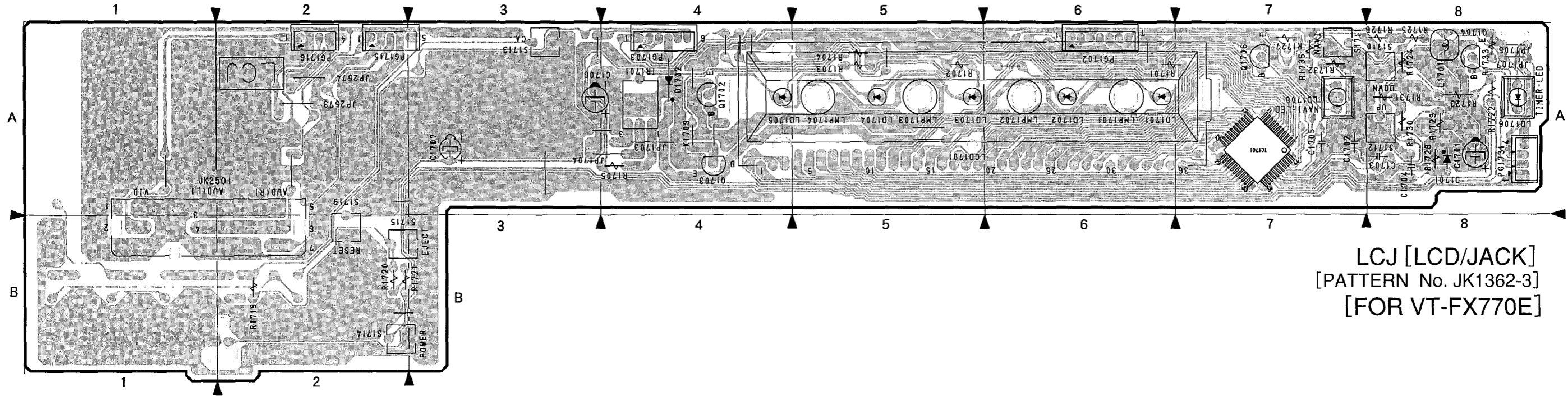
SYMBOL No.	FX760E (UKN)	FX760E (NA)	FX750E (UKN)
JP2703	×	×	○
K2706	×	×	○
K2707	×	×	○
LD2701	○	×	×
R2701	○	○	×
R2702	○	○	×
R2703	○	○	×
R2704	○	○	×
S2701	○	○	×
S2702	○	○	×
S2703	○	○	×
S2704	○	○	×
S2705	○	○	×
S2706	○	○	×
S2707	×	×	○
S2710	×	×	○
S2712	×	×	○
S2713	×	×	○
S2714	×	×	○
S2715	×	×	○
S2716	×	×	○



LED [LED]
[PATTERN No. JK1365-4]
[FOR VT-FX765E]

STL [SHUTTLE SWITCH]
[PATTERN No. JK1368-2]
[FOR VT-FX75XE/FX76XE]

LCJ, FST CIRCUIT BOARDS [FOR VT-FX770E]



LCJ [LCD/JACK]
[PATTERN No. JK1362-3]
[FOR VT-FX770E]

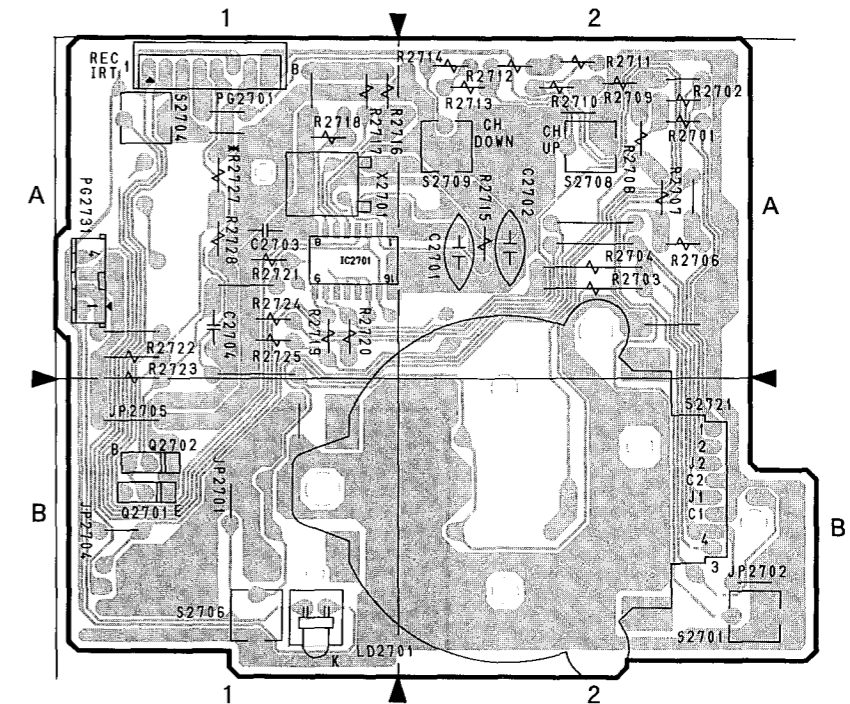
IDENTIFICATION OF PARTS LOCATION

LCJ

Symbol No	Parts Location	Symbol No	Parts Location	Symbol No	Parts Location
C		LD1705	4A	R1720	2B
C1701	8A	LD1706	8A	R1721	2B
C1702	7A	LD1708	7A	R1722	8A
C1703	8A	LMP		R1723	8A
C1704	8A	LMP1701	6A	R1724	8A
C1705	7A	LMP1702	6A	R1725	8A
C1706	3A	LMP1703	5A	R1726	8A
C1707	3A	LMP1704	5A	R1727	7A
D		PG		R1728	8A
D1701	8A	PG1702	6A	R1729	8A
D1702	4A	PG1703	4A	R1730	8A
IC		PG1715	2A	R1731	8A
IC1701	7A	PG1716	2A	R1732	7A
IR		PG1731	8A	R1733	8A
IR1701	4A	Q		R1735	7A
JK		Q1702	4A	S	
JK2501	1B	Q1703	4A	S1710	8A
L		Q1704	8A	S1711	7A
L1701	8A	Q1706	7A	S1712	8A
LCD		R		S1713	3A
LCD1701	5A	R1701	6A	S1714	2B
LD		R1702	5A	S1715	2B
LD1701	6A	R1703	5A	S1719	2B
LD1702	6A	R1704	5A		
LD1703	5A	R1705	4A		
LD1704	5A	R1719	2B		

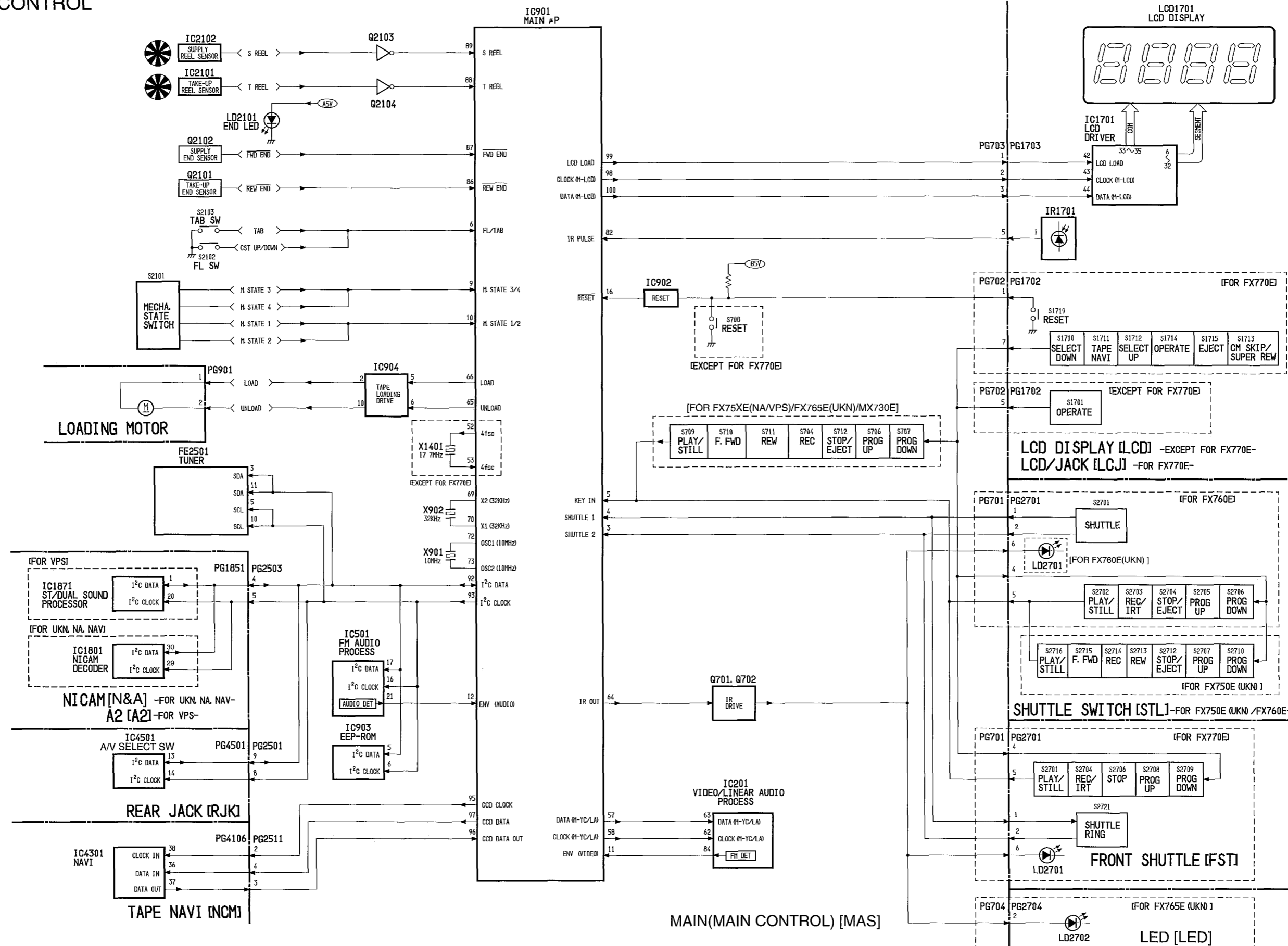
FST

Symbol No	Parts Location	Symbol No	Parts Location
C		R2712	2A
C2701	2A	R2713	2A
C2702	2A	R2714	2A
C2703	1A	R2715	2A
C2704	1A	R2716	1A
IC		R2717	1A
IC2701	1A	R2718	1A
LD		R2719	1A
LD2701	1B	R2720	1A
PG		R2721	1A
PG2701	1A	R2722	1A
PG2731	1A	R2723	1A
Q		R2724	1A
Q2701	1B	R2725	1A
Q2702	1B	R2727	1A
R		R2728	1A
R2701	2A	S	
R2702	2A	S2701	3B
R2703	2A	S2704	1A
R2704	2A	S2706	1B
R2706	2A	S2708	2A
R2707	2A	S2709	2A
R2708	2A	S2721	2B
R2709	2A	X	
R2710	2A	X2701	1A
R2711	2A		



FST [FRONT SHUTTLE]
[PATTERN No. JK1362-3]
[FOR VT-FX770E]

BLOCK DIAGRAMS
SYSTEM CONTROL



E
D
C
B
A

SERVO

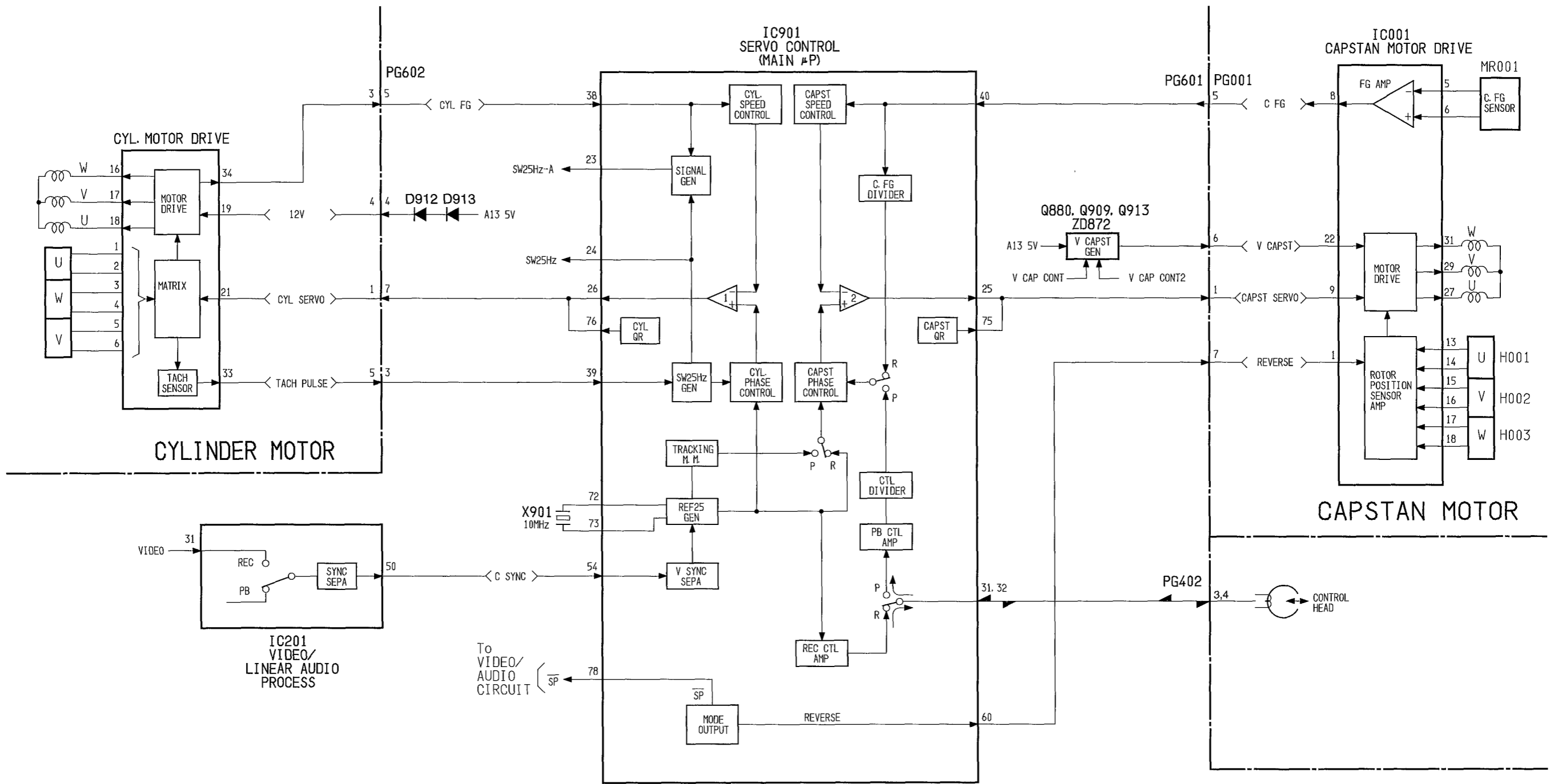
E

D

C

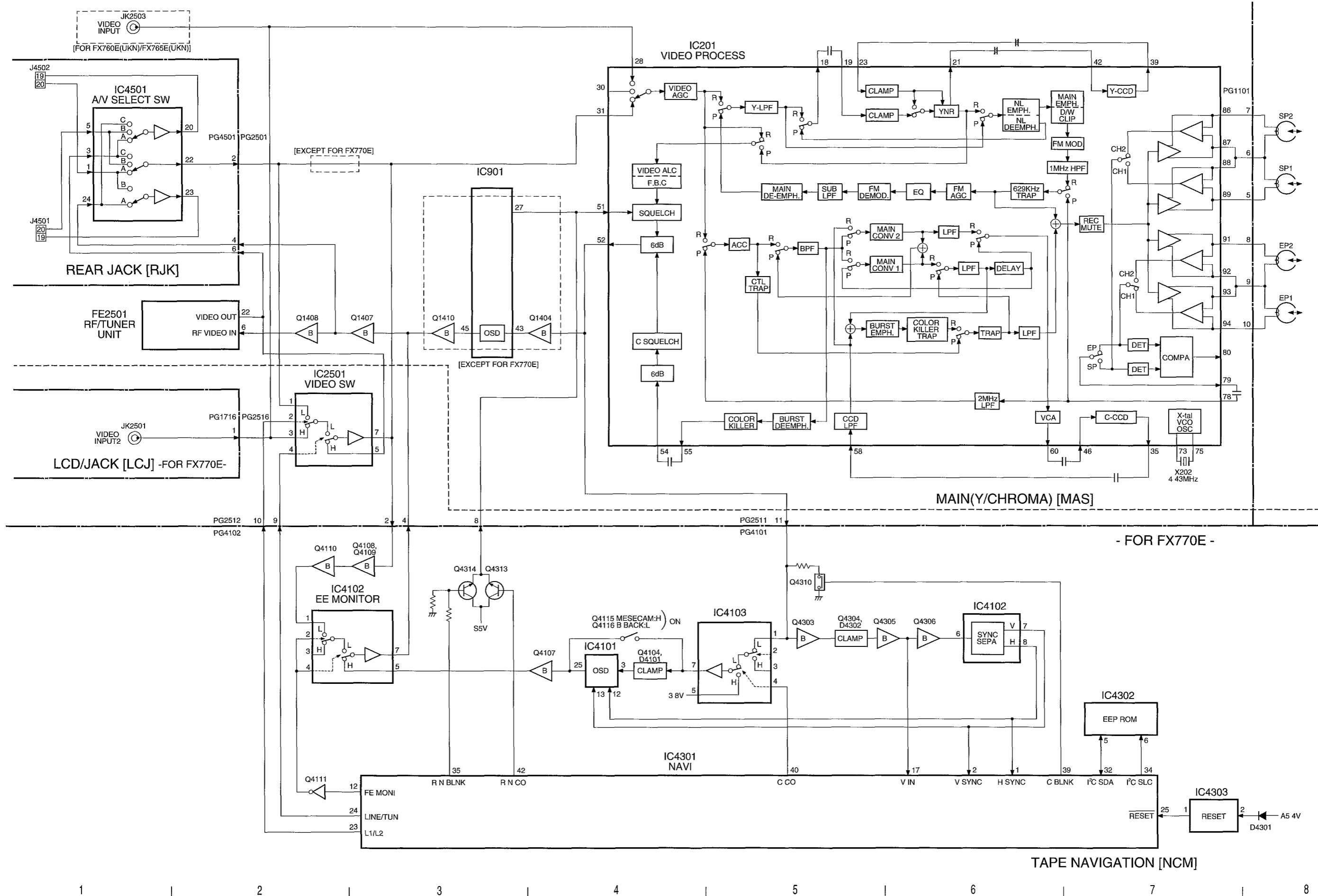
B

A



MAIN(SERVO) [MAS]

1 2 3 4 5 6 7 8



POWER SUPPLY

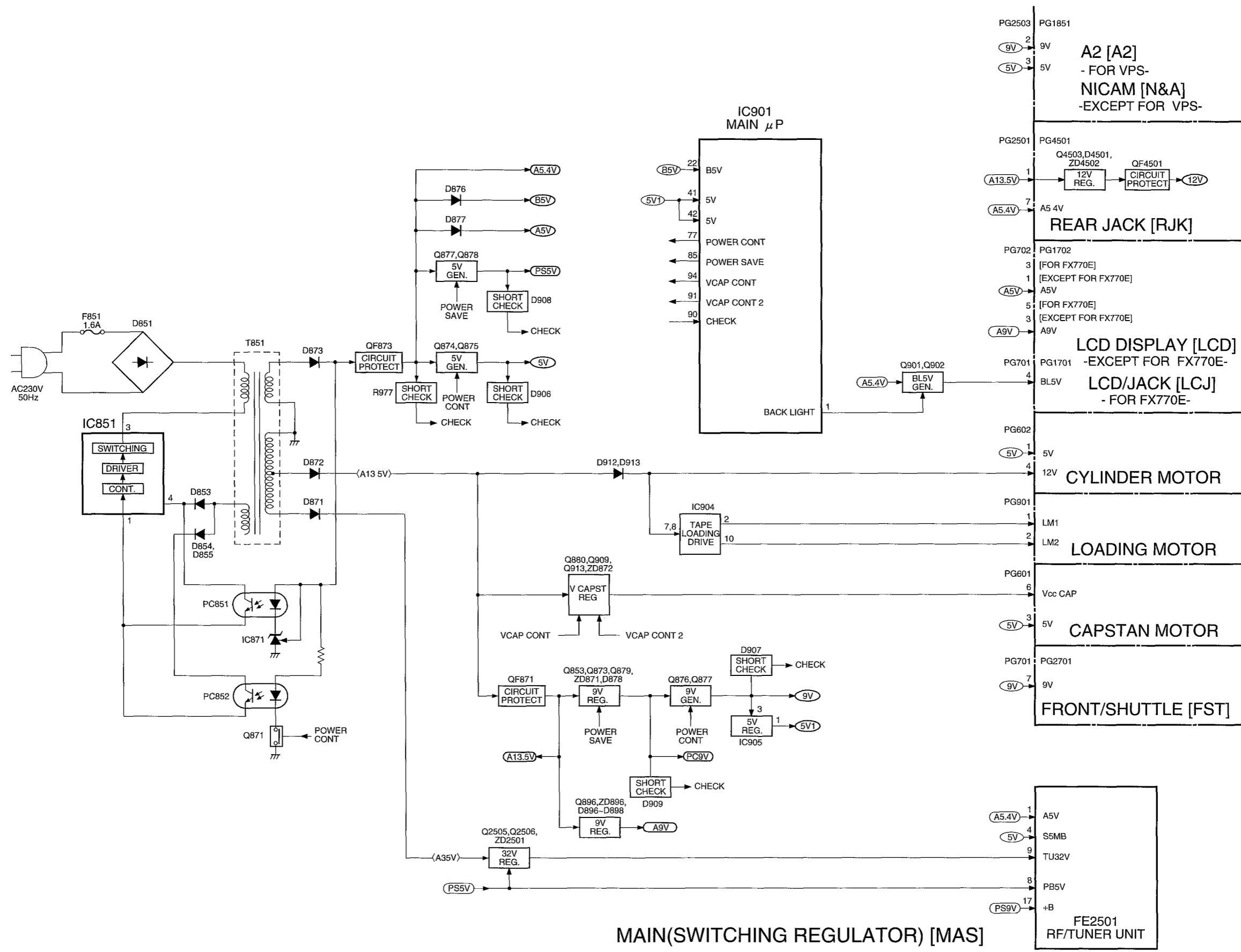
E

D

C

B

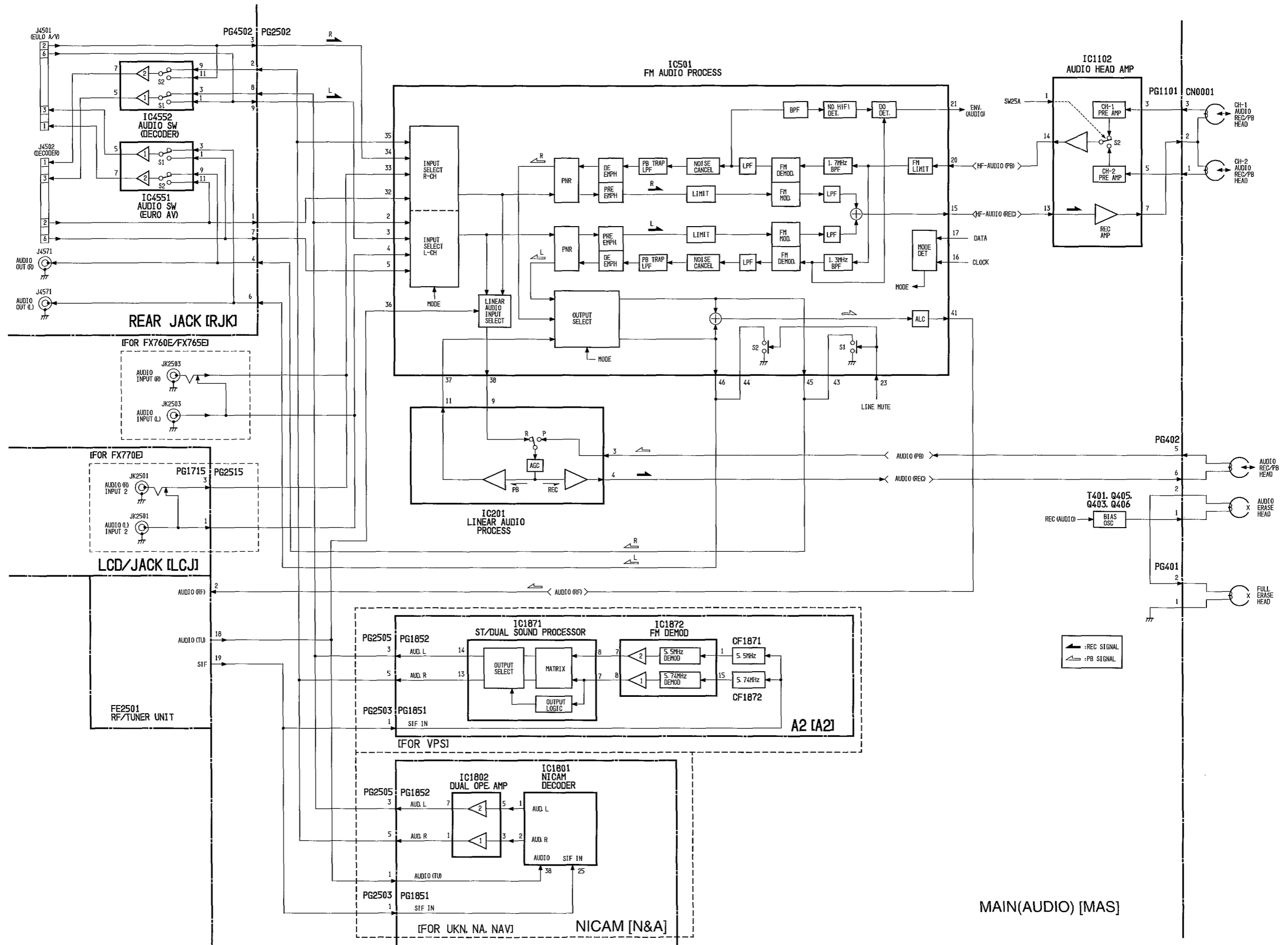
A



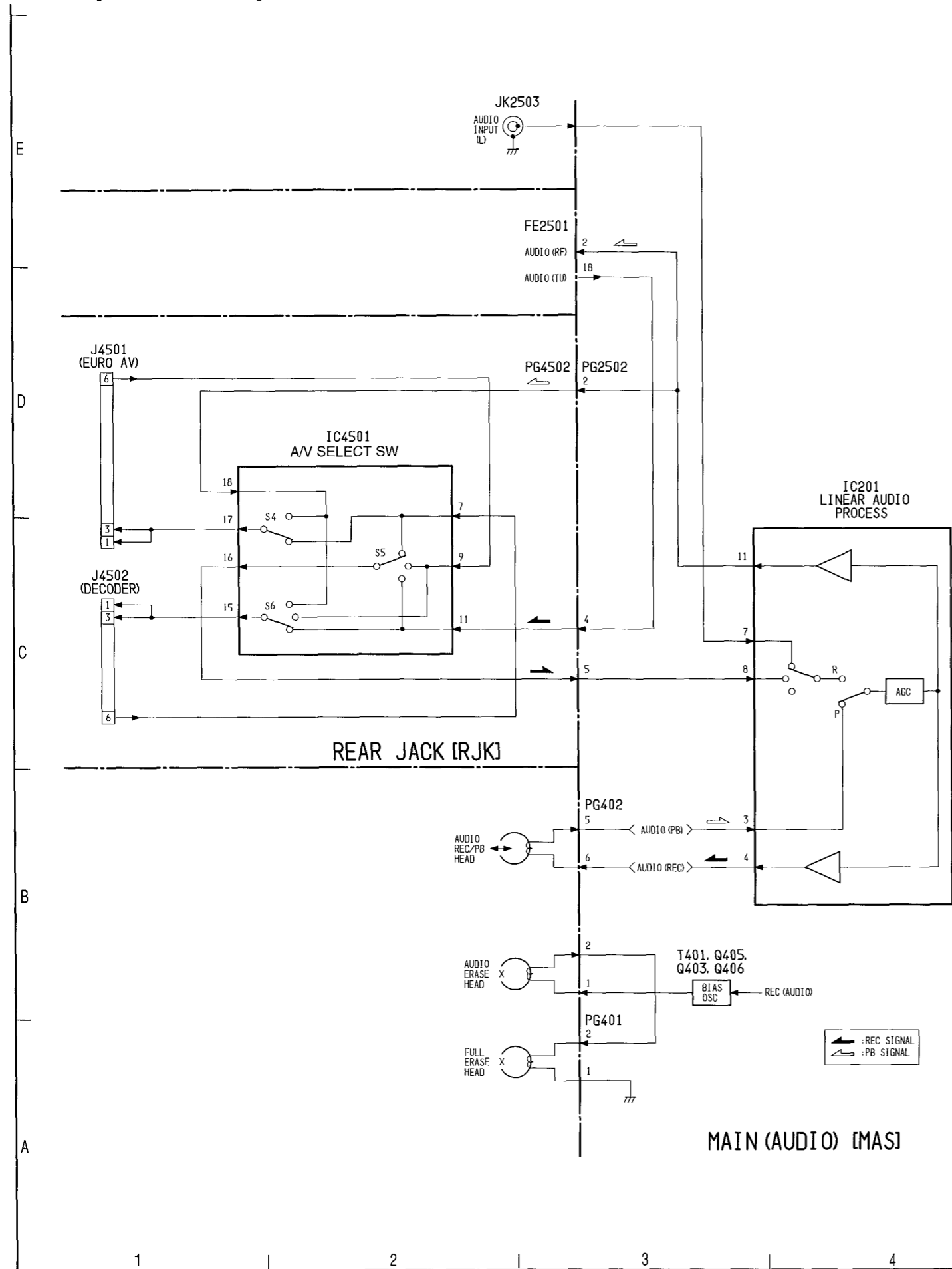
MAIN(SWITCHING REGULATOR) [MAS]

1 2 3 4 5 6 7 8

AUDIO [FOR FX75xE/FX76xE/FX770E]



MAIN(AUDIO) [MAS]



1. LCD DRIVER μ P (IC1701)

Pin No.	I/O	Active Level	Abbreviation	Function
1	-	-	SEGMENT (1)	Not used.
2	-	-	SEGMENT (2)	
5	-	-	SEGMENT (5)	
6	O	Pulse	SEGMENT (6)	
7	O	Pulse	SEGMENT (7)	
31	O	Pulse	SEGMENT (31)	LCD segment control outputs
32	O	Pulse	SEGMENT (32)	
33	O	Pulse	COM1	
34	O	Pulse	COM2	LCD common (COM) control outputs
35	O	Pulse	COM3	
36	I	Lo	RESET (L)	Initializes the LCD- μ P when power is supplied.
37	I	Hi	VDD	A5V power input
38	I	-	VDD 1	LCD drive bias
39	I	-	VDD 2	LCD drive bias
40	I	Lo	VSS	Ground
41	I/O	-	OSC	Generates a 32kHz signal for key scanning.
42	I	Lo	LCD LOAD	LOAD signal between the LCD- μ P and M- μ P. "Lo" input enables chip select.
43	I	Pulse	CLOCK (M-LCD)	The data is transferred from the M- μ P, synchronized with the clock signal
44	I	Pulse	DATA (M-LCD)	

2. MAIN μ P (IC901)

Pin No.	I/O	Active Level	Abbreviation	Function																																				
1	O	Hi	BACK LIGHT	LCD backlight control signal. When LED lights: "L"; When LAMP lights: "H".																																				
2	-	-	GND	Ground																																				
3	I	A/D	SHUTTLE 2 (CLOCK FAST)	SHUTTLE A/D input signals <table border="1"> <thead> <tr> <th></th> <th>-X11</th> <th>-X5</th> <th>-X1</th> <th>-X1/7</th> <th>0</th> <th>X1/7</th> <th>X1</th> <th>X5</th> <th>X11</th> </tr> </thead> <tbody> <tr> <td>SHU 1</td> <td>2.5/1.9</td> <td>1.9/2.5</td> <td>2.5</td> <td>1.9</td> <td>5.0</td> <td>3.2</td> <td>5.0</td> <td>5.0/3.2</td> <td>5.0/3.2</td> </tr> <tr> <td>SHU 2</td> <td>2.5</td> <td>1.9</td> <td>3.2</td> <td>3.2/5.0</td> <td>5.0</td> <td>5.0/3.2</td> <td>3.2</td> <td>1.9</td> <td>2.5</td> </tr> </tbody> </table>		-X11	-X5	-X1	-X1/7	0	X1/7	X1	X5	X11	SHU 1	2.5/1.9	1.9/2.5	2.5	1.9	5.0	3.2	5.0	5.0/3.2	5.0/3.2	SHU 2	2.5	1.9	3.2	3.2/5.0	5.0	5.0/3.2	3.2	1.9	2.5						
	-X11	-X5	-X1		-X1/7	0	X1/7	X1	X5	X11																														
SHU 1	2.5/1.9	1.9/2.5	2.5	1.9	5.0	3.2	5.0	5.0/3.2	5.0/3.2																															
SHU 2	2.5	1.9	3.2	3.2/5.0	5.0	5.0/3.2	3.2	1.9	2.5																															
4	I	A/D	SHUTTLE 1	* CLOCK FAST when SHUTTLE 2 is 5 V or less																																				
5	I	A/D	KEY IN	Front key voltage data input																																				
6	I	A/D	FL/TAB	FL mechanism loading/unloading detection, and TAB detection. Loading/unloading completed: 1.24 V or more; In transition state: less than 1.24 V / TAB present: 3.75 V or more																																				
7	I	Lo	P STOP	Power failure detection signal. "L" is input when power failure is detected ("L" when microprocessor voltage is 4.7 V or less).																																				
8	I	Hi	S. CURVE	Fine tuning detection signal																																				
9	I	A/D	MODE 2	Mechanism mode switching signals <table border="1"> <thead> <tr> <th>Position</th> <th>2</th> <th>8</th> <th>7</th> <th>6</th> <th>1</th> <th>5</th> <th>4</th> <th>3</th> </tr> <tr> <td></td> <td>UL</td> <td>FF/REW</td> <td>STP2</td> <td>R/P</td> <td>FL</td> <td>FS</td> <td>RFS</td> <td>REV</td> </tr> </thead> <tbody> <tr> <td>MODE 1</td> <td>3.05</td> <td>3.0</td> <td>2.50</td> <td>1.80</td> <td>1.80</td> <td>0.00</td> <td>0.00</td> <td>0.00V</td> </tr> <tr> <td>MODE 2</td> <td>2.50</td> <td>0.00</td> <td>2.50</td> <td>3.05</td> <td>0.00</td> <td>3.05</td> <td>2.50</td> <td>1.80V</td> </tr> </tbody> </table>	Position	2	8	7	6	1	5	4	3		UL	FF/REW	STP2	R/P	FL	FS	RFS	REV	MODE 1	3.05	3.0	2.50	1.80	1.80	0.00	0.00	0.00V	MODE 2	2.50	0.00	2.50	3.05	0.00	3.05	2.50	1.80V
Position	2	8	7		6	1	5	4	3																															
	UL	FF/REW	STP2	R/P	FL	FS	RFS	REV																																
MODE 1	3.05	3.0	2.50	1.80	1.80	0.00	0.00	0.00V																																
MODE 2	2.50	0.00	2.50	3.05	0.00	3.05	2.50	1.80V																																
10	I	A/D	MODE 1																																					
11	I	A/D	VIDEO ENV	Signals are A/D converted and input for autotracking																																				
12	I	A/D	AUDIO ENV																																					
13	I	A/D	MDOEL SW	Switches models according to the input signal.																																				
14	I	A/D	DEC IN	DECODER detection signal																																				
15	I	-	VREF	A/D converter reference voltage																																				
16	I	Lo	RESET	"L" input resets the microprocessor.																																				
17	O	-	NC																																					
18	O	Hi	ST/SAP OUT	When SAP audio is output: "H"																																				
19	O	Hi	GREEN MODE	GREEN MODE output. GREEN MODE: "H"																																				
20	O	-	NC																																					
21	O	-	NC																																					
22	I	-	VCC	Connected to backup power supply.																																				
23	O	Pulse	SW25A	SW25 pulse for switching Hi-Fi heads																																				
24	O	Pulse	SW25	SW25 pulse for switching WYC heads																																				
25	O	PWM	CAP PWM	Capstan motor control PWM output																																				
26	O	PWM	DRUM PWM	Drum motor control PWM output																																				
27	O	Hi	V PULSE	Artificial V sync pulse output																																				
28	O	Pulse	C. ROTARY	Chroma rotation control signal. EX-OR with SW25 and H.AMP SW.																																				
29	O	Hi/Lo	H. AMP SW	DA4 head switching signal																																				
30	I	Hi/Lo	COMP	Compares outputs from SP and LP heads: when the LP head output is higher, "H" is input.																																				
31	I/O	Pulse	CTL H (+)	CTL pulse input/output																																				
32	I/O	Pulse	CTL H (-)	CTL pulse input/output																																				
33	-	-	Vss (SRV)	GND																																				
34	I	Pulse	CTL AMP I1	CTL amp gain switching input																																				
35	I	Pulse	CTL AMP I2	CTL amp negative feedback input																																				
36	I	Pulse	CTL AMP I3	CTL amp input																																				
37	O	Pulse	CTL AMP (O)	CTL amp output																																				
38	I	Pulse	DRUM FG	Drum FG input																																				
39	I	Pulse	DRUM PG	Drum PG input																																				
40	I	Pulse	CFG	CFG input signal																																				
41	I	-	Vcc (SRV)	S5V power supply for SRV																																				

Pin No.	I/O	Active Level	Abbreviation	Function															
42	I	–	Vcc (OSD)	5V power supply for OSD															
43	I	–	CV IN	Video signal input (2 Vp-p, with sync tip clamp circuit)															
44	I	–	Vref	Reference bias, clamp bias monitor pin															
45	O	–	CV OUT	Composite video signal output (2 Vp-p)															
46	I	–	CHAR Bias	For externally adjusting character luminance level															
47	I	–	AFC LPF	An LPF for AFC is externally attached.															
48	I	–	AFC OSC	Oscillator for AFC															
49	I	–	GND (OSD)	Ground															
50	I	Pulse	DOSC IN	LC or RC oscillator for generating dot clock															
51	O	Pulse	DOSC OUT	LC or RC oscillator for generating dot clock															
52	O	–	4fsc OUT	4fsc or 2fsc oscillator															
53	I	–	4fsc IN	4fsc or 2fsc oscillator															
54	I	Pulse	C. SYNC	C.SYNC input for video output															
55	O	Hi	BLUE BACK	"H" during OSD blue background															
56	O	Hi	HiFi REC	Hi-Fi audio recording signal. REC and V.DUB: "H". REC PAUSE and V.DUB PAUSE: "L".															
57	I/O	Pulse	I2C DATA (AV)	I2C communication data signal															
58	O	Pulse	I2C CLK (AV)	I2C communication clock signal															
59	O	Lo	PB	Sets the video system to the playback mode. During playback: "L"															
60	O	Hi	REVERSE	Capstan motor reverse control output ("H" for reverse drive)															
61	O	Hi	A. REC	Linear audio recording signal. REC, A.DUB and A.DUB PAUSE: "H". REC PAUSE: "L"															
62	O	Hi	CTL RESET	Adds reset pulse to CTL during REVERSE SLOW.															
63	O	Hi/Lo	PAL/NTSC	Video switching. NTSC playback: "L", PAL playback: "H". The output is fixed at "L" for models without PAL or NTSC playback.															
64	O	Pulse	IR OUT	IR output that controls cable box (satellite decoder). The output is fixed at "L" for models without SAT															
65	O	Hi	LM2 (UNLOAD)	Loading motor control outputs.															
66	O	Hi	LM1 (LOAD)																
<table border="1"> <thead> <tr> <th></th> <th>Stop</th> <th>Loading</th> <th>Unloading</th> <th>Brake</th> </tr> </thead> <tbody> <tr> <td>LM1 (LOAD)</td> <td>L</td> <td>H</td> <td>L</td> <td>H</td> </tr> <tr> <td>LM2 (UNLOAD)</td> <td>L</td> <td>L</td> <td>H</td> <td>H</td> </tr> </tbody> </table>						Stop	Loading	Unloading	Brake	LM1 (LOAD)	L	H	L	H	LM2 (UNLOAD)	L	L	H	H
	Stop	Loading	Unloading	Brake															
LM1 (LOAD)	L	H	L	H															
LM2 (UNLOAD)	L	L	H	H															
67	O	Hi/Lo	LM CONT	Loading motor voltage control output															
68	–	–	TEST	Ground															
69	I	–	XCIN	For the connection of 32.768kHz crystal oscillator (tolerance: within ± 5 ppm)															
70	O	–	XCOUT																
71	I	–	GND	Ground															
72	I	–	XIN	For the connection of 10MHz ceramic oscillator (tolerance: within ± 0.50 ppm)															
73	O	–	XOUT																
74	O	Hi	L. MUTE	Audio output system muting control. "H": Muting ON (used in common with FTZ muting)															
75	I/O	Hi/Lo	CAPS Q. R	Capstan control signal. "H": Voltage control, "OPEN": Servo control, "L": Braking															
76	I/O	Hi/Lo	DRUM Q. R	Cylinder control signal. Horizontal jitter correction.															
77	O	Hi	POWER CONT	Switches S power supply on and off. "H": Power ON, "L": Power OFF (or "OPEN": When microprocessor is initialized)															
78	O	Lo	SP	Tape speed control. PAL/NTSC SP mode: "L"															
79	I	Hi/Lo	MESECAM DET	MESECAM signal detection input. When MESECAM signal detected: "H". Not connected and fixed at "L" for PAL models, not handling MESECAM signal.															
80	O	Hi	REC	Video signal recording control. REC LED control signal. During REC, REC PAUSE, V.DUB, V.DUB PAUSE: "H".															
81	O	Hi	MTS MUTE	Tuner audio muting signal. During playback, line input: "H". During MPX muting for channel switching: "H"															

Pin No.	I/O	Active Level	Abbreviation	Function																																																
82	I	Pulse	IR. IN	Remote control receiving signal																																																
83	O	–	NC																																																	
84	I	Hi	CCD CE	CCD microprocessor chip enable																																																
85	O	Hi	P. SAVE	Detects VPS/PDC programming status and switches S power on and off. Power ON: "H", Power OFF: ""L", Standby with VPS/PDC programming: "H"																																																
86	I	Lo	EST	End sensor inputs.																																																
87	I	Lo	ESS	1. Used to detect whether or not a cassette is loaded into the US mechanism. With cassette: ESS or EST is "H". Without cassette: Both ESS and EST are "L" 2. Used to detect the start and end of tape. Tape start: EST "L" and ESS "H". Tape end: EST "H" and ESS "L"																																																
88	I	Pulse	T. REEL	Reel pulses for detecting rotation of take-up reel disk																																																
89	I	Pulse	S. REEL	Reel pulses for detecting rotation of supply reel disk																																																
90	I	Lo	CHECK	Signal to detect short-circuit in S5V, S9V, PS5V and PS9V																																																
91	O	Hi/Mid/Lo	V CAP. CONT 2	Sets capstan motor voltage during playback, fast forward/rewind and slow. <table border="1" style="display: inline-table; margin-right: 20px;"> <thead> <tr> <th colspan="3">FF/REW</th> </tr> <tr> <th>FF/REW</th> <th>91, 94</th> <th>V</th> </tr> </thead> <tbody> <tr> <td>During S.L acceleration</td> <td>L L</td> <td>13.5</td> </tr> <tr> <td>Less than EPX1</td> <td>L L</td> <td>13.5</td> </tr> <tr> <td>EPX1-SPX6</td> <td>L H</td> <td>9.5</td> </tr> <tr> <td>More than SPX6</td> <td>L L</td> <td>13.5</td> </tr> <tr> <td>Low-speed FF/REW</td> <td>L L</td> <td>13.5</td> </tr> </tbody> </table> <table border="1" style="display: inline-table; margin-right: 20px;"> <thead> <tr> <th colspan="3">PB/REC/SR</th> </tr> <tr> <th></th> <th>91, 94</th> <th>V</th> </tr> </thead> <tbody> <tr> <td>X1</td> <td>H H</td> <td>7.5</td> </tr> <tr> <td>X3-X5</td> <td>L H</td> <td>9.5</td> </tr> <tr> <td>X7</td> <td>L L</td> <td>13.5</td> </tr> </tbody> </table> <table border="1" style="display: inline-table;"> <thead> <tr> <th colspan="3">SLOW</th> </tr> <tr> <th></th> <th>91, 94</th> <th>V</th> </tr> </thead> <tbody> <tr> <td>BRAKE</td> <td>L H</td> <td>9.5</td> </tr> <tr> <td>SP ACCEL</td> <td>L L</td> <td>13.5</td> </tr> </tbody> </table> <p>* 13.5 V in modes other than above (pins 91 and 94 are "L")</p>	FF/REW			FF/REW	91, 94	V	During S.L acceleration	L L	13.5	Less than EPX1	L L	13.5	EPX1-SPX6	L H	9.5	More than SPX6	L L	13.5	Low-speed FF/REW	L L	13.5	PB/REC/SR				91, 94	V	X1	H H	7.5	X3-X5	L H	9.5	X7	L L	13.5	SLOW				91, 94	V	BRAKE	L H	9.5	SP ACCEL	L L	13.5
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SP ACCEL	L L	13.5																																																		
94	O	Hi/Mid/Lo	V CAP. CONT																																																	
92	I/O	Pulse	I2C DATA	I2C communication data signal																																																
93	O	Pulse	I2C CLOCK	I2C communication clock signal																																																
95	O	Pulse	CCD CLOCK	Clock signal for CCD communications																																																
96	I	Pulse	CCD DATA IN	CCD data input																																																
97	O	Pulse	CCD DATA OUT	CCD data output																																																
98	O	Pulse	LCD CLOCK	Clock for serial data output to LCD																																																
99	O	Hi	LCD CE	Data load signal to LCD																																																
100	O	Pulse	CCD DATA	Serial data to LCD																																																

3. CCD μ P (IC4301)

Pin No.	I/O	Active Level	Abbreviation	Function
1	I	Pulse	H. SYNC	H.SYNC inversion input
2	I	Pulse	V. SYNC	V.SYNC inversion input
3	O	Hi/Lo	MESECAM DET	OSD chroma addition, Closed Caption through mode. Expansion output of MAIN μ P MESECAM DET input. MESECAM: "H"
4	O	Hi/Lo	MAP LED	Lights when NAVI data retrieval and registration are completed: "H" During retrieval: Blinks
5	O	Pulse	OSD CS	OSD IC chip selection
6	O	Pulse	OSD/CM DATA OUT	Data output to OSD IC and CM microprocessor
7	O	Pulse	OSD/CM CLOCK	Clock used to transfer data to OSD IC and CM microprocessor
8	I	Pulse	CM DATA IN	Data input from CM microprocessor
9	I	Hi/Lo	CM EVENT	CM EVENT input
10	I	Hi/Lo	P. STOP	Power failure detection input
11	O	-	NC	
12	O	Hi/Lo	CM LED	CM LED output (unused)
13	O	Hi/Lo	EE MONI	EE monitor: "H"
14	I	-	AVCC	Power supply of analog circuits
15	O	-	HLF	For the connection of filter
16	I	-	VHOLD	For the connection of capacitor
17	I	-	CVIN	Video signal input
18	I	-	CNVSS	Ground
19	I	-	XIN	8MHz oscillator input/output
20	O	-	XOUT	
21	-	-	GND	Ground
22	A5V	-	VCC	Power supply (A5V)
23	O	Hi/Lo	L3/L3	Video switching output for EE monitor. L1/L2/TUN: "L", L3: "H"
24	O	-	NC	
25	I	Lo	RESET	Reset input. RESET: "L"
26	O	Hi/Lo	REC LED	Lights during REC, REC PAUSE, TIMER REC, IRT "H" Off during V.DUB, V.DUB PAUSE, A.DUB, A.DUB PAUSE. "L"
27	O	Hi/Lo	TIM LED	Lights during timer standby: "H"
28	O	Hi/Lo	PB	VP Plus/NAVI DATA switching output. During PLAY (VP Plus through): "H"
29	O	Hi/Lo	BLUE BACK	VP Plus/NAVI DATA switching output: Expansion output of MAIN μ P BLUE BACK output. During no signal (VP Plus through): "H"
30	I	Pulse	CCD. ENABLE	CCD microprocessor enable input from MAIN μ P
31	O	-	NC	
32	O	Pulse	I ² CCLK	Communications with EEPROM
33	O	Hi/Lo	X'TAL CHANGE	
34	I/O	Pulse	I ² C DATA	Communications with EEPROM
35	O	Pulse	R.N. BLANK	Blank output for NAVI data
36	I	Pulse	DATA IN (M \rightarrow C)	Data input from MAIN μ P
37	O	Pulse	DATA OUT (C \rightarrow M)	Data output to MAIN μ P
38	I	Pulse	CLOCK IN	Clock for communications with MAIN μ P
39	O	Pulse	C. BLANK	Blank output for Closed Caption
40	O	Pulse	C. CO	Closed Caption output
41	O	-	NC	
42	O	Pulse	R.N. CO	NAVI data output

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