

7-inch MULTI-DISPLAY

# FGZ000UF2

## SERVICE MANUAL

# KENWOOD

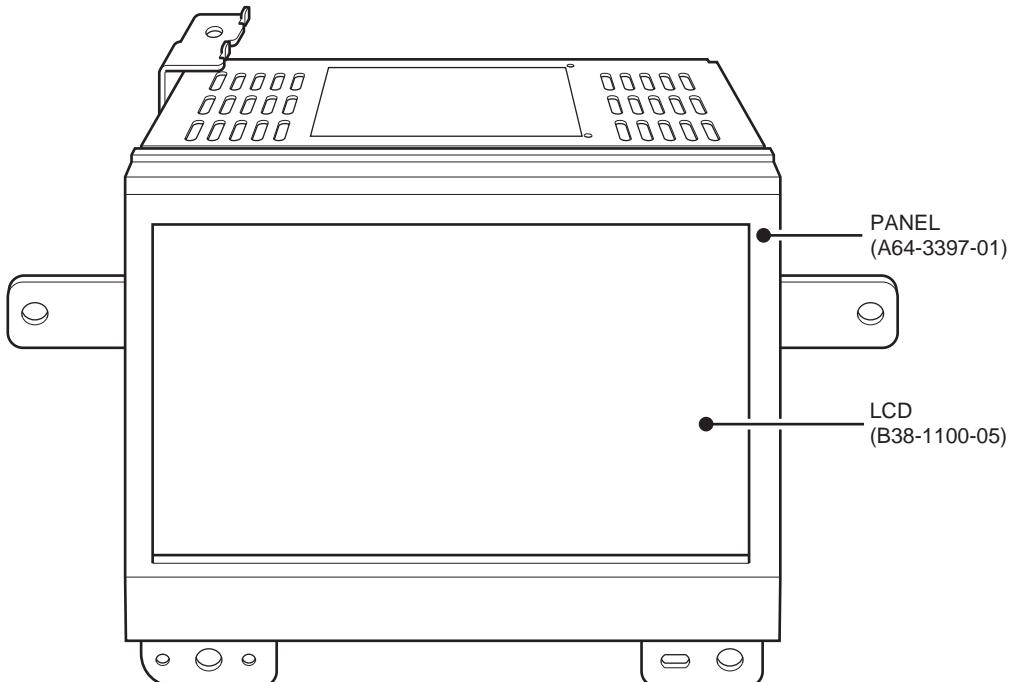
Kenwood Corporation

© 2005-7 CREATED IN JAPAN  
B53-0302-00 (N) 0

## SUBARU GENUINE

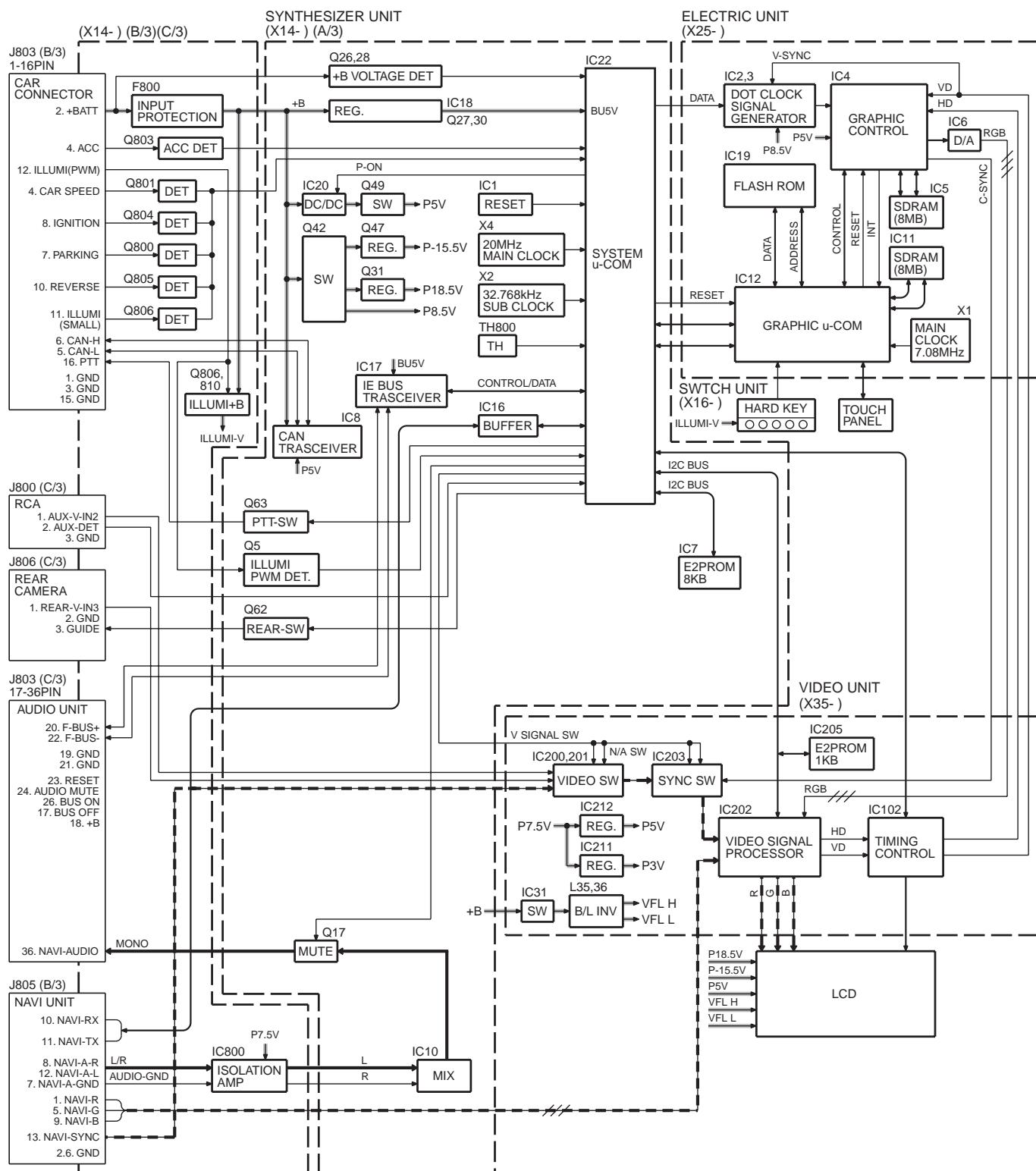
Destination North America

MODEL	PARTS No.
FGZ000UF2	86281XA00A



# FGZ000UF2

## BLOCK DIAGRAM



# COMPONENTS DESCRIPTION

## ● SYNTHESIZER UNIT (X14-9490-10)

Ref. No.	Application / Function	Operation / Condition / Compatibility
IC1	Reset IC	Backup 5V voltage monitoring. Resetting system µ-com at B.U OFF.
IC7	E2PROM	Memory for reception TV station and touch panel compensation.
IC8	CAN transceiver	Communication with vehicle unit.
IC9	Reset IC	Detects 5V power supply ON.
IC10	Ope amp	Bias power supply for internal audio circuit. Mixing L/Rch of NAVI sound.
IC16	Buffer	Protects µ-com from communication line of the NAVI unit.
IC17	BUS transceiver	Communication with the audio unit.
IC18	Regulator	5V power supply for system µ-com.
IC20	DC/DC controller	Power supply in general (Other than system µ-com, key illumination).
IC21	Reset IC	Resetting abnormalities of the system µ-com.
IC22	System µ-com	Controlling CAN communication and graphic µ-com. Setting video source, screen zooming and brightness. Communication with audio & NAVI units. Monitoring internal power supply and abnormalities power supply and temperature.
IC23	Buffer	Audio unit control. Writing to µ-com.
IC800	Isolation amplifier	Removing noise from NAVI unit.
Q1,17,50,74	Audio mute	Mute ON at power supply ON/OFF.
Q2,32,34~37, Q39,41,46,53	DC/DC controller power supply	When ACC is ON, IC20 power supply is turned ON. IC20 power supply is turned OFF, when over current detected with DC/DC output.
Q4,31,57,61	Constant voltage power supply	When Q61 is ON, outputs +18.5V.
Q5	Key Illumination light adjustment detection	ON when illumination PWM is input.
Q6	Temperature detection SW	When ACC ON, goes ON and starts temperature detection.
Q8~11,55,56,58	Video setting detection SW	ON/OFF according to screen mode and adjustment.
Q12,15,18	Audio control SW	When audio communication ON, Q18 is ON, when OFF, Q15 is ON.
Q14,47	Constant voltage power supply	-15.5V constant voltage power supply.
Q24	Power supply momentary power down detection	OFF at backup power supply momentary power down.
Q26,28	Voltage detection	When Q26 is ON, backup power supply voltage detection.
Q27,29,30,64	Constant voltage power supply	Backup 5V power supply regulator.
Q33	Over current detection	When detecting 18.5V over current, controller power supply OFF.
Q38	Over current detection	When detecting 7.5V over current, controller power supply OFF.
Q40,42	DC/DC switching	Switching of primary-side of transformer.
Q43,49	DC/DC switching	5V power supply switching.
Q44	Over current detection	When detecting -15.5V over current, controller power supply OFF.
Q48	Over current detection	When detecting 5V over current, controller power supply OFF.
Q62	Rear camera control SW	ON at adjustment of rear camera and marker.
Q66~69	Watchdog timer	Q67 is OFF at system µ-com run off.

# FGZ000UF2

## COMPONENTS DESCRIPTION

Ref. No.	Application / Function	Operation / Condition / Compatibility
Q70,71	Low voltage power supply	7.5V power supply SW (ACC : ON).
Q700~702	Audio connection detection	When audio is connected, Q700 is ON.
Q800	Parking detection	ON when vehicle is parking.
Q801	Vehicle speed detection	ON when vehicle speed pulse is input.
Q802	Reset input	System $\mu$ -com is reset when Q802 is ON.
Q803	ACC detection	ON when vehicle ACC is ON.
Q804	Ignition detection	ON when vehicle ignition is turned ON.
Q805	Reverse detection	ON when vehicle is reversed.
Q806	Small detection	ON when vehicle small light is turned ON.
Q807~811	Key illumination light adjustment power supply regulator	In accordance with PWM duty, illumination VCC (7V) is output.

### ● ELECTRIC UNIT (X25-9410-11)

Ref. No.	Application / Function	Operation / Condition / Compatibility
IC2	PLL oscillation IC	Clock signal for graphic display.
IC3	Inverter	Dot clock inverter.
IC4	Graphic controller	Graphic display control.
IC5	Graphic controller work RAM	Work area of graphic controller.
IC6	Video signal D/A conversion	Converts the 8-bit signal from graphic controller to RGB signals.
IC7	Inverter	DACK signal inverter.
IC10	OR gate	OR output of 2 write enable signals.
IC11	Graphic $\mu$ -com work RAM	Work area of graphic $\mu$ -com.
IC12	Graphic $\mu$ -com	Graphic display control.
IC19	Display program, display bitmap data	Storage of graphic display data and program data.
IC20	Inverter	Synchronization signal inverter.
IC22	Inverter	Graphic display area inverter.
IC23	AND gate	Reset timing compensation.
IC26	3-terminal regulator	Conversion from 8.5V to 5V.
IC27	Inverter	Synchronization signal inverter.
Q2~5	Touch panel voltage detection	Voltage detection at touch panel ON.

### ● VIDEO UNIT (X35-4252-71)

Ref. No.	Application / Function	Operation / Condition / Compatibility
IC31	Switching regulator	For backlight 7.5V power supply.
IC101	Ope amp	Oscillation circuit low-pass output.
IC102	Timing controller	LCD driver IC.
IC200,201	Video switch	Input video signal switching.
IC202	Synchronization separation	Separation of input video signals into horizontal and vertical synchronization.

# COMPONENTS DESCRIPTION

Ref. No.	Application / Function	Operation / Condition / Compatibility
IC203	Chroma decoder gamma compensation	Conversion of input video signal into signal suitable for LCD input.
IC205	E2PROM	I2C memory backup.
IC207	Ope amp	V-COM buffer.
IC209	Buffer with 3 circuits	Synchronization signal output buffer.
IC211	3V regulator	Constant voltage generation IC.
IC212	5V regulator	Constant voltage generation IC.
IC217	Inverter	For reversing side-black signal.
Q1	ACC ON/OFF SW	For backlight power supply.
Q2	+B SW	For backlight power supply.
Q3,4	ACC ON/OFF SW	For backlight power supply.
Q31,32	SW regulator output buffer	For FET drive.
Q33	DC/DC converter SW	For backlight power supply.
Q35,36	Inverter oscillator SW	For inverter.
Q37~39	Backlight adjustment SW	For PWM light adjustment.
Q40	Over current protection	For over current protection of backlight power supply.
Q41	Over current/voltage protection	For over current/voltage protection of backlight power supply.
Q42,43	Backlight SW	For turning backlight ON.
Q101	Oscillation circuit	For reference oscillation of timing controller.
Q102	LCD control reversal	For LCD up/down reversal control.
Q203,204	V-COM buffer	For V-COM buffer.
Q205,206	Video signal buffer	For viideo signal buffer.
Q209,210	Synchronization signal muting	For muting at adjustment of timing controller.
X200	Synchronization separation reference oscillator	500kHz
X201	Color demodulation	3.58MHz

# FGZ000UF2

## MICROCOMPUTER'S TERMINAL DESCRIPTION

### ● SYSTEM μ-com : IC22 (X14 : SYNTHESIZER UNIT)

Pin No.	Pin Name	I/O	Application	Processing Operation Description
1	NAVI-TXD	O	Transmission data output for normal NAVI communication	H, L output
2	NC	-	Not connected	Not used
3	ILL PWM	I	ILLUMI PWM input (Cycle)	PWM input
4	ILL PWM	I	ILLUMI PWM input (Oscillation width)	PWM input
5	E2PSDA	I/O	IIC clock output (E2PROM)	H, L output
6	E2PSCL	O	IIC data input/output (E2PROM)	H, L output
7	SPD	I	Vehicle speed pulse input	H, L input
8	WDP	O	Watchdog pulse output	H, L output
9,10	NC	-	Not connected	Not used
11	TYPE0	I	Destination setting input	H, L-fixed
12	NC	I	Not connected	H, L-fixed
13	CAN EN	O	CAN communication enable	H, L output
14	CAN STB	O	CAN communication standby	H, L output
15	BYTE	-	Not used	L-fixed
16	CNVSS	I	5V at ROM writing	H : Microprocessor mode, L : Single chip mode, L : Memory expansion mode
17	XCIN	I	Sub-clock input	H, L input
18	XCOOUT	O	Sub-clock output	H, L output
19	RESET	I	Reset input	H, L input, L : RESET
20	XOUT	O	Main clock input	H, L output
21	VSS1	-	GND	GND
22	XIN	I	Main clock output	H, L input
23	VCC1	-	Power supply input	VCC5V
24	NMI	I	NMI interruption input	H-fixed
25	CAN ERR	I	CAN communication condition input	H, L input, L : Error
26~29	NC	-	Not connected	Not used
30	CAN IN	I	CAN reception data input	H, L output
31	CAN OUT	O	CAN reception data output	H, L input
32	NC	-	Not connected	Not used
33	BRIGHT	O	Backlight control output	PWM output
34	VMUTE	O	Video mute control output	H, L output, L : MUTE
35	NC	-	Not connected	Not used
36	I2CSCL	O	IIC clock output (E2PROM)	H, L output
37	I2CSDA	I/O	IIC clock output (E2PROM)	H, L input/output
38	TXD1	-	Not used	Not used
39	VCC2	-	Power supply input	VCC5V
40	RXD1	-	Not used	Not used
41	VSS2	-	GND	GND
42	SCLK	-	Not used	Not used
43	BUSY	-	Not used	Not used
44	SYSDATA	O	Data output (For video control processing)	H, L output
45	SHDATA	I	Data input (For video control processing)	H, L input

# MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Application	Processing Operation Description
46	SHCLK	O	Clock output (For video control processing)	H, L output
47	SYSCS	O	Transmission request output (For video control processing)	H, L output, L : Transmission request
48	SHCS	I	Clock input (For video control processing)	H, L input, L : Transmission request
49	STB	O	AUDIO BUS communication standby output	H, L output, L : Standby
50	SI	I	AUDIO BUS communication data reception input	H, L input
51	SO	O	AUDIO BUS communication data reception output	H, L output
52	REAR GUIDE	O	Rear camera guide control output	H, L output
53	NC	-	Not used	Not used.
54	EMP	I	ROM write EPM input	L-fixed
55	NC	-	Not used	Not used
56	NAVI MUTE	O	NAVI voice signal output (At startup)	H, L output, L : MUTE
57	VSS3	-	GND	GND
58	AUDIO DET	I	Audio voltage detection input	H, L input, H : IE-BUS used
59	VCC3	-	Power supply input	VCC5V
60	AUDIO MUTE	O	AUDIO mute signal output	H, L output, L : MUTE
61	NAVI INT	O	NAVI voice signal output (At output)	H : Bch (CODEC AUDIO), L : Ach (NAVI AUDIO)
62	P ON1	O	Power supply control output	H, L output H : Power supply ON, L : Power supply OFF
63	P ON2	O	PON7.5V control output	H, L output H : Power supply ON, L : Power supply OFF
64	P ON3	O	PON18.5V control output	H, L output H : Power supply ON, L : Power supply OFF
65	CE	I	ROM writing CE input	H-fixed
66	PLLCE	O	Q2i clock generation IC mode output	H, L output, H : Program counter used PLL mode
67	PLLSDA	O	Q2i clock generation IC data output	H, L output
68	PLLSCK	O	Q2i clock generation IC clock output	H, L output
69	SHRESET	O	Graphic μ-com reset output	H, L output, L : RESET
70	SHINI	O	Graphic μ-com initial output	H, L output, L : INIT
71	SHRDY	I	Graphic communication enable condition notification input	H, L input, H : Communication preparation complete
72	SHSTBY	I	Graphic μ-com standby transition complete input	H, L input, H : Transition complete
73	SHCON	O	Graphic μ-com standby control output	H, L output, L : Standby
74	VCC4	-	Power supply input	VCC5V
75	SH VMUTE	I	Graphic μ-com video mute request input	H, L output, H : Video mute request
76	VSS4	-	GND input	GND
77	TOUCH EN	O	Graphic μ-com touch key analysis permission output	H, L output H : Analysis prohibited, L : Analysis permitted
78	TOUCH	I	Graphic μ-com touch key ON notification input	H, L input, H : Touch key ON, L : Touch key OFF
79	PTT	O	PTT output for telephone	H, L output, H : ACTIVE
80	FAULT	O	FAULT display output	H, L output
81	ON REQ	-	Not used	Not used
82	OFF REQ	-	Not used	Not used
83	BUS SYS ON	-	Not used	Not used
84	BUS SYS OFF	-	Not used	Not used

# FGZ000UF2

## MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Application	Processing Operation Description
85	NAVI ON	O	NAVI voice MUTE	
86	BEEP ON	O	BEEP sound signal	
87	NC	-	Not connected	Not used
88	KEYDET	I	Key terminal connection detection	H, L input, L : Detection
89	NC	-	Not used	Not used
90	BL ON	O	Backlight switch output	H, L output, H : Backlight ON
91	VCC5	-	Power supply input	VCC5V
92	SYNCMUTE	O	Video MUTE signal	H, L output, H : MUTE
93	VSS5	-	GND input	GND
94,95	NC	-	Not connected	Not used
96	+BDET	I	+B voltage detection input	
97	TEMPDET	I	High temperature detection	
98	PARKING	I	Parking detection input	H, L input, H : Parking ON, L : Parking OFF
99	REVERSE	I	Reverse detection input	H, L input, H : Reverse OFF, L : Reverse ON
100	IGN	I	Ignition voltage detection input	H, L input
101	ILLSMALL	I	ILLUMI ON input	H, L input, L : ILLUMI ON
102	ACC DET	I	ACC ON detection	H, L input, H : ACC OFF, L : ACC ON
103	BUDET	I	+B voltage fluctuation detection input	H, L input
104	NC	-	Not connected	Not used
105	+BDET SW	O	+B voltage detection circuit control output	H, L output
106	NC	-	Not connected	Not used
107	AUX DET	I	AUX connection detection	H, L input, H : Connection
108	REAR DET	I	Rear camera connection detection	H, L input, L : Connection
109	NC	-	Not connected	Not used
110,111	KEY-IN1,KEY-IN2	I	Key input	
112~116	NC	-	Not connected	Not used
117,118	SCAN1,SCAN2	O	Display mode selection switch output	H, L output
119~122	HPOSI1~HPOSI4	O	Horizontal position adjustment output	H, L output
123	TV/REAR SW	O	AUX/REAR SW	H, L output
124	DVD SW	O	RSE SW	H, L output
125	V/N SW	O	NAVI SW	H, L output
126	GRA SW	O	GRAPHIC SW	H, L output
127~129	NC	-	Not connected	Not used
130	VSS6	-	GND input	GND
131	NC	-	Not connected	Not used
132	VCC6	-	Power supply input	VCC5V
133	RSE DET	I	RSE connection detection	
134,135	NC	-	Not connected	Not used
136	DC DC DET	I	PON5V voltage detection input	H, L input
137	NC	I	Not connected	Not used
138	BL DET2	-	Backlight voltage detection input	Analog input
139	BL DET1	I	Backlight voltage detection input	H, L input
140	AVSS	-	GND input	GND

# MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Application	Processing Operation Description
141	NC	-	Not connected	Not used
142	VREF	I	Reference voltage input	VCC5V
143	AVCC	-	Power supply input	VCC5V
144	NAVI-RXD	I	Normal NAVI communication reception data input	H, L input

## ● GRAPHIC µ-com : IC12 (X25 : ELECTRIC UNIT)

Pin No.	Pin Name	I/O	Application	Processing Operation Description
1~5	NC	-	Not connected	L-output
6	VSS	I	Ground input	
7	A0	-	Not connected	L-output
8~11	A1~A4	O	Address bus output	H, L-output
12	VCC	-	Power supply input	
13	A5	O	Address bus output	H, L-output
14	VSS	-	Ground input	
15~25	A6~A16	O	Address bus output	H, L-output
26	VCC	-	Power supply input	
27	A17	O	Address bus output	H, L-output
28	VSS	-	Ground input	
29,30	NC	-	Not connected	L-output
31	<u>RAS</u>	O	DRAM row address strobe output	L : Row address strobe
32	<u>CASL</u>	O	DRAM low-side column address strobe output	L : Column address strobe
33	NC	-	Not connected	L-output
34	<u>CASH</u>	O	DRAM upper-side column address strobe input	L : Column address strobe
35	VSS	-	Ground input	
36	RDWR	O	DRAM write strobe output	H : Read, L : Write
37~39	A18~A20	O	Address bus output	H, L-output
40	VCC	-	Power supply input	
41	A21	-	Not connected	Not used since upper address is not used. L-output
42	VSS	-	Ground input	
43	<u>RD</u>	O	External device read strobe output	L : Read strobe
44	NC	-	Not used	
45	SH VMUTE	-	Not connected	L-output
46	NC	-	Not connected	L-output
47	<u>WRH</u>	O	External device upper-side write output	L : Write
48	<u>WRL</u>	O	External device lower-side write output	L : Write
49	<u>CS1</u>	O	Chip select output (Q2i internal register)	L : Chip select
50	<u>CS0</u>	O	Chip select output (Flash ROM)	L : Chip select
51~53	NC	-	Not connected	L-output
54	<u>CS2</u>	O	Chip select output (Q2i UGM)	L : Chip select
55	VSS	-	Ground input	
56	<u>ROM RESET</u>	-	Not connected	L-output

# FGZ000UF2

## MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Application	Processing Operation Description
57	ROM RY/ $\bar{BY}$	-	Not connected	L-output
58	NC	-	Not connected	L-output
59	DACK	O	Q2i DMA transfer strobe output	H : Not used as transfer strobe is not used. L-output
60	NC	-	Not connected	L-output
61	VSS	-	Ground input	
62	$\bar{DREQ}$	I	Q2i DMA transfer request input	L : Not used as transfer request is not sued. L-input
63	VCC	-	Power supply input	
64~68	NC	-	Not connected	L-output
69	$\bar{SYSCS}$	I	Graphic $\mu$ -com transmission request input (System $\mu$ -com transmission request output)	L : Transmission request
70	$\bar{IRL}$	I	Q2i interruption request input	L : Interruption request
71	VSS	-	Ground input	
72	$\bar{SHCON}$	I	Graphic $\mu$ -com standby control input	L : Standby
73~76	D15~D12	I/O	Data bus input/output	H, L-input/output
77	VCC	-	Power supply input	
78	D11	I/O	Data bus input/output	H, L-input/output
79	VSS	-	Ground input	
80~84	D10~D6	I/O	Data bus input/output	H, L-input/output
85	VCC	-	Power supply input	
86	D5	I/O	Data bus input/output	H, L-input/output
87	VSS	-	Ground input	
88~92	D4~D0	I/O	Data bus input/output	H, L-input/output
93	VSS	-	Ground input	
94	XTAL	I	Crystal oscillator input	
95	MD3	I	Operation mode setting input	H-input
96	EXTAL	I	Crystal oscillator input	
97	MD2	I	Operation mode setting input	L-input
98	NMI	I	Non-maskable interruption input	L-input
99	VCC	-	Power supply input	
100	NC	-	Pull-up	L-input
101	$\bar{WAIT}$	I	Q2i wait cycle insertion input	L : Wait cycle insertion
102,103	MD1, MD0	I	Operation mode setting input	H or L-input (Normal : L, Write : H)
104	PLLVCC	I	Power supply input for built-in PLL	
105	PLLCAP	I	Power supply input for built-in PLL	
106	PLLVSS	I	Ground input for built-in PLL	
107	NC	-	Not connected	L-output
108	$\bar{SHRST}$	I	Reset input	L : Reset
109	NC	-	Not connected	Not used, L-output
110,111	NC	-	Not connected	L-output
112	VCC	-	Power supply input	
113	Y-	O	Switching output for touch panel input	H, L-output

# MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Application	Processing Operation Description
114	X-	O	Switching output for touch panel input	H, L-output
115	Y+	O	Switching output for touch panel input	H, L-output
116	X+	O	Switching output for touch panel input	H, L-output
117	VSS	I	Ground input	
118	KEYDATA1	I	Touch panel data input (Y)	Analog input
119	KEYDATA2	I	Touch panel data input (X)	Analog input
120	KEY6	-	Not used.	L-fixed
121~123	KEY5~KEY3	I	Key switch input	H, L-input
124	AVSS	I	Analog ground input	
125,126	KEY2, KEY1	I	Key switch input	H, L-input
127	VREF	I	Reference voltage input	
128	AVCC	-	Analog power supply input	
129	VSS	-	Ground input	
130	SYSDATA	I	Graphic µ-com data input (system µ-com data output)	H, L-input
131	SHDATA	O	Graphic µ-com data output (system µ-com data input)	H, L-input
132	SYSCLK	I	Graphic µ-com clock input (system µ-com clock output)	H, L-input
133	ROM RXD	I	Flash ROM write data input	Normally L-input Data input when writing to flash ROM
134	ROM TXD	O	Flash ROM write data output	Normally L-output Data output when writing to flash ROM
135	VCC	-	Power supply input	
136	SHSTBY	O	Graphic µ-com standby transition complete output	H : Transition complete
137	TOUCH	O	Graphic µ-com touch key ON notice output PTT-key ON notice output	H : Touch key ON, L : Touch key OFF
138	<u>SHCS</u>	O	System µ-com transmission request output (Graphic µ-com transmission request input)	L : Transmission request
139	NC	-	Not connected	L-output
140	SHRDY	O	Graphic µ-com communication enable condition notice output	H : Communication preparation complete
141	VSS	-	Ground input	
142	NC	-	Not connected	L-output
143	<u>TOUCH EN</u>	I	Graphic µ-com touch key analysis permission input	H : Analysis prohibited L : Not used as analysis permission is not used
144	<u>SHINI</u>	I	Graphic µ-com initial input	L : Not used as RESET is not used

# FGZ000UF2

## MICROCOMPUTER'S TERMINAL DESCRIPTION

### ● GRAPHIC CONTROLLER : IC4 (X25 : ELECTRIC UNIT)

Pin No.	Pin Name	I/O	Processing Operation Description
1	DREQ	O	DMA request
2, 3	D0, D1	I/O	CPU data
4	CVCC1	-	Power supply
5	D2	I/O	CPU data
6	CGND1	-	Ground
7~11	D3~D7	I/O	CPU data
12	CGND2	-	Ground
13~15	D8~D10	I/O	CPU data
16	CVCC2	-	Power supply
17, 18	D11, D12	I/O	CPU data
19	CGND3	-	Ground
20~22	D12~D15	I/O	CPU data
23	PGND	-	Ground
24	CAP0	-	External volume terminal for communication circuit
25	PVCC	-	Power supply
26	CS0	I/O	Chip selection 0 (UGM)
27	CS1	I/O	Chip selection 1 (Internal register)
28	RD	I	Read strobe
29	WE0	I	Write pulse 0 (lower side)
30	WE1	I	Write pulse 1 (upper side)
31	DACK	I	DMA acknowledge
32	MODE0	I	Operation mode terminal 0
33	MODE1	I	Operation mode terminal 1
34	MODE2	I	Operation mode terminal 2
35	TEST	I	Test terminal
36	RESET	I	Reset
37	CLK0	I	Q2i operation clock
38	GND1	-	Ground
39, 40	A1, A2	I	CPU address
41	VCC1	-	Power supply
42~49	A3~A10	I	CPU address
50	GND2	-	Ground
51~60	A11~A20	I	CPU address
61, 62	A21, A22	-	Not connected
63	GND3	-	Ground
64~68	MD0~MD4	I/O	Memory data
69	GND4	-	Ground
70	MD5	I/O	Memory data
71	VCC2	-	Power supply
72~78	MD6~MD12	I/O	Memory data
79	GND5	-	Ground
80, 81	MD13, MD14	I/O	Memory data

# MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Processing Operation Description
82	VCC3	-	Power supply
83	MD15	I/O	Memory data
84	<u>MWE</u>	O	Memory write pulse
85, 86	<u>MRAS0, MRAS1</u>	O	Lower selection signal
87	MLCAS	O	Lower column selection signal
88	MUCAS	O	Lower column selection signal
89	GND6	-	Ground
90	<u>MOE</u>	O	Memory read pulse
91~93	MA0~MA2	O	Memory address
94	VCC4	-	Power supply
95~98	MA3~MA6	O	Memory address
99	GND7	-	Ground
100~104	MA7~MA11	O	Memory address
105	GND8	-	Ground
106	CLK1	I	Display dot clock
107	VCC5	-	Power supply
108	FCLK	O	1/2 display dot clock
109	<u>ODDF</u>	I/O	Pulse indicating odd number field
110	GND9	-	Ground
111	DCLK	O	Display clock
112	CDE	O	Color detection
113	VCC6	-	Power supply
114	DISP	O	Display period pulse
115	<u>CSYNC</u>	O	Composite synchronization signal
116	GND10	-	Ground
117	<u>H SYNC</u>	O	Horizontal synchronization
118	<u>V SYNC</u>	O	Vertical synchronization
119~121	DD0~DD2	O	Display data
122	GND11	-	Ground
123~125	DD3~DD5	O	Display data
126	VCC7	-	Power supply
127, 128	DD6, DD7	O	Display data
129	GND12	-	Ground
130~134	DD8~DD12	O	Display data
135	GND13	-	Ground
136	DD13	O	Display data
137	VCC8	-	Power supply
138~141	DD14~DD17	O	Display data
142	CGND4	-	Ground
143	<u>IRL</u>	O	Interruption request
144	<u>WAIT</u>	O	CPU wait

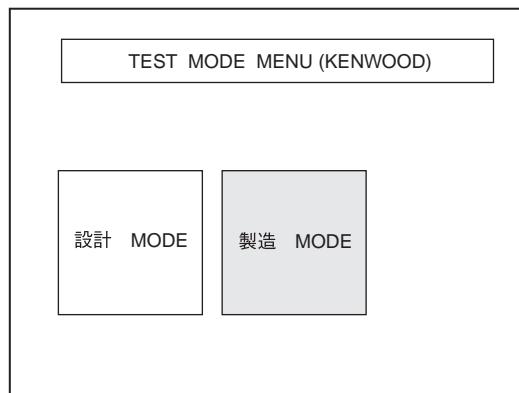
## TEST MODE

**Outline****● How to Enter the Test Mode**

Turn the power on while pressing on the 2 operation keys of "MENU" and "AUDIO" on FRC000UF2, and the touch panel on FGZ000UF2.

After ACC ON, keep on pressing on the 2 keys and the touch panel until the image (Opening Screen) appears on the screen.

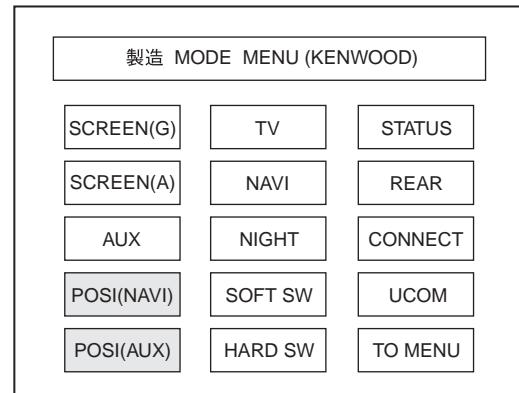
After the display of opening screen, the screen will display test items.



Test mode screen

**Manufacturing Mode****(Screen position adjustment)****● Outline of the Specifications**

When the Manufacturing Mode is entered, the Item Selection Screen is displayed and, when a button for a certain item is pressed, the item will be selected. When providing the service, the start position adjustment in the screen display only will be used.



Manufacturing mode selection screen

**● How to Release the Test Mode**

The Test Mode is released when the ACC is turned off.

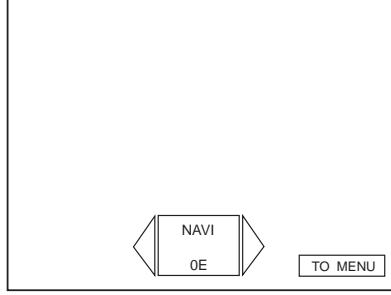
When releasing the test mode, the following are the default condition:

- Screen adjustment
- TV NAME
- Maintenance information

**● List of Specifications**

No.	Item	Screen	Operation Specification	Remarks
1	SCREEN (G) ① Brightness adjustment ② Contrast adjustment	NAVI	Adjustment (Initial position: center) Minimum (0) ↔ Center (10) ↔ Max. (20)	① The screen is switched depending on destination. ② Color bar input when NAVI is used.
2	SCREEN (A) ① Brightness adjustment ② Contrast adjustment ③ Tint ④ Color depth	AUX	Adjustment (Initial position: center) Minimum (0) ↔ Center (10) ↔ Max. (20)	① White 100% is input by VIDEO input.
3	AUX ① Image stroke (1)	AUX No OSD		① White 50% is input by AUX input.

## TEST MODE

No.	Item	Screen	Operation Specification	Remarks
4	POSITION (NAVI) ① Screen position adjustment	NAVI	Adjustment (Initial C)  Right/Left keys are made with graphics, which shifts the screen to right and left.  Adjustment range: 0~F.	① Adjustment screen in input through NAVI input.  
5	POSITION (AUX) ① Screen position adjustment	AUX	Adjustment (Initial D)  Right/Left keys are made with graphics, which shifts the screen to right and left.  Adjustment range: 0~F.	① Adjustment screen is input through VIDEO input.
6	TV ① Brightness adjustment ② Contrast adjustment ③ Tint ④ Color depth ⑤ Screen size ⑥ Channel ⑦ Sound	TV	Adjustment (Initial: Center)  -1 ↔ Center (14) ↔ +1 -1 ↔ Center (14) ↔ +1 -1 ↔ Center (10) ↔ +1 -1 ↔ Center (10) ↔ +1  Switching goes in the following order: FULL→JUST→ZOOM→NORMAL reception  TV sound is switched ON/OFF.	① In order to switch sounds, AUDIO unit is required.
7	NAVI ① White balance ② Flicker ③ Maximum brightness ④ Brightness line, reduction line ⑤ Point missing, line missing ⑥ Screen beat ⑦ Gradation characteristics ⑧ Color reproduction ⑨ Confirmation on visionary angle ⑩ Screen roughness ⑪ Image cross-talk (2)	NAVI (RGB) No OSD	NAVI screen, with maximum brightness set.  Contrast → Default Tint → Default Color depth → Default	① White 100% input ② White 50% input ③ White 100% input ④ Confirmation on the RED, GREEN, and BLUE luster screens. ⑤ Same as above. ⑥ Color bar input ⑦ Confirmation on crush of white and black. ⑧ Color bar input ⑨ Color bar input ⑩ White 50% input

# FGZ000UF2

## TEST MODE

No.	Item	Screen	Operation Specification	Remarks
8	NIGHT ① Night screen brightness	NAVI (RGB) No OSD	NAVI screen, with minimum brightness set. Contrast → Default Tint → Default Color depth → Default	① White 100% input, with NAVI (RGB) input.
9	SOFT SW ① Touch panel operation	Graphic	Numeric displays on four corners of the screen. When a number is pressed, the pressed number is displayed on the screen in a large size.	
10	HARD SW ① Hard switch	Graphic (Hard switch confirmation screen)	① By the switch information corresponding to the external switch, the tint is switched each time the switch is pressed. ② The key illumination is forced to turn on.	
11	STATUS ① Heater operation ② Confirmation on excess current ③ μ-com version ④ Destination	Graphic	① Displays internal temperature of LCD ② Displays voltage ③ Displays version ④ Displays destination	
12	REAR ① Rear image confirmation ② Guide line adjustment	Rear camera image	The “marker adjustment signal” is connected with the rear camera each time the screen is pressed. Using this the guideline position is adjusted.	
13	CONNECT ① Confirmation on the vehicle unit ② Confirmation on the connection unit ③ Confirmation on the vehicle signal ④ Confirmation on vehicle CAN	Graphic	<ul style="list-style-type: none"> <li>● Vehicle unit           <ul style="list-style-type: none"> <li>① Integrated ECU</li> <li>② Meter</li> <li>③ Air-conditioner</li> </ul> </li> <li>● Vehicle unit           <ul style="list-style-type: none"> <li>① Audio (F-BUS)</li> <li>② NAVI</li> <li>③ Rear camera</li> <li>④ TV tuner</li> <li>⑤ AUX</li> </ul> </li> <li>● Vehicle signal           <ul style="list-style-type: none"> <li>① Illumination</li> <li>② Illumination PWM</li> <li>③ IGN</li> <li>④ Parking</li> <li>⑤ Vehicle speed</li> <li>⑥ Reverse</li> </ul> </li> </ul>	<p>● Vehicle Unit (Condition) By monitoring the communication condition, “normal” or “abnormal” is displayed.</p> <p>Alongside the vehicle unit items, the conditions of the CAB BUS line are displayed.</p> <p>When a line is cut (one line out of two communication lines), “abnormal” is displayed.</p> <p>In other cases, “normal” is displayed.</p> <p>* When two lines are cut, this cannot be detected and “normal” is displayed.</p> <p>* On the CAN format, the communication is possible with only one communication line.</p> <p>This may cause the unit to display “normal”.</p> <p>● Vehicle unit (Connection) The connection condition is monitored and “connected” and “not connected” are displayed.</p> <p>● Vehicle signal The terminal conditions are displayed.</p>

# TEST MODE

No.	Item	Screen	Operation Specification	Remarks
14	μ-COM ① Connections between μ-com	Graphic	System μ-com, CAN, graphic μ-com and E2PROM connection conditions are to be confirmed.	

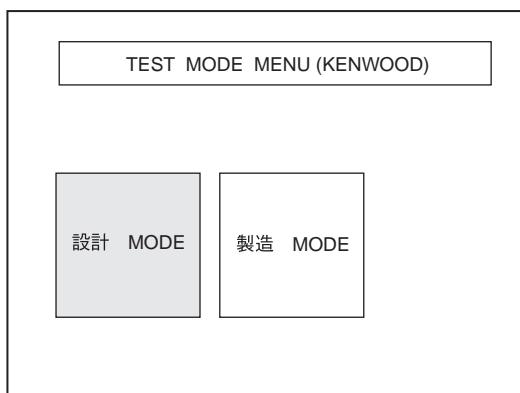
# DESIGN MODE (VIDEO ADJUSTMENT)

## ● Outline of the specifications

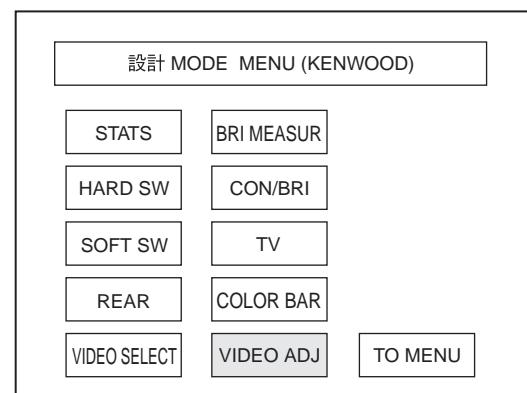
When this mode is set, the item selection screen is displayed.

Items for which the keys are depressed will be selected.

**Note:** Use only video adjustment (VIDEO ADJ). Other modes are not used for servicing.



Test mode screen



Design mode selection screen

# FGZ000UF2

## ADJUSTMENT

### ● VIDEO UNIT (X35-4252-71)

- Start a set in test mode at the time of video board adjustment.
- How to enter to test mode : Pushing operation of 2 keys right (clock)-and-left (image adj.) both ends side and a touch panel. And supply to power is ON.
- After starting : perform substrate adjustment for a video board by a design mode → VIDEO ADJ key with reference to the following item.
- Adjust a picture position by After starting : (AUX) Manufacture mode → POSI (NAVI)
- VIDEO ADJ mode : it is the rectangle color frog of middle at the time of adjustment item selection. It is considered as an adjustment end by choosing a rectangle again after adjustment.

No.	Adjustment item	The adjustment method	Adjustment part	Adjustment value	Conditions	Test point
1	Inverter power regulation	It is considered as Bright : DUTY 100% after VIDEO ADJ - key selection.  The voltage of TP577 at this time is adjusted to $7.5 \pm 0.1V$ .	VR30	$7.5 \pm 0.1V$	-	TP577
2	Timing controller free-run frequency	Consider it as microcomputer : SYNC (9 pin : TP138 of IC102) MUTE → H after Adj key selection.  VR101 (H-FREE) is turned and the frequency of the NDSH output at this time is adjusted to $15.734 \pm 0.01kHz$ .	VR101	$15.734 \pm 0.01kHz$	Input selector : AUX input non-signal	TP138
3	Chrome IC adjustment	It is made the chroma IC adjustment mode of a static test mode.	-	-	Input selector : AUX or RGB	-
3-A	Chrome VCO adjustment	1 of IC202, 4, and 5 pin are dropped on GND, and a touch panel adjusts TP320 in f shop counter.  Carry out the monitor of TP138 of IC102, and adjust VR101 in f shop counter.	CH16	$15.734 \pm 0.01kHz$	An input non-signal	TP320
3-B	Black limiter	Carry out the monitor of the waveform of TP527 with an oscilloscope.  Adjst the amplitude value so that the waveform between the pedestal to the negative pedestal is $3.5V \pm 0.1V$ .	CH5	$3.5V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP527
3-C	White limiter	Carry out the monitor of the waveform of TP527 with an oscilloscope.  Adjst the amplitude value so that the waveform between the 8 step signal to the negative 8 step signal is $3.5V \pm 0.1V$ .	CH10	$3.5V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP527

## ADJUSTMENT

No.	Adjustment item	The adjustment method	Adjustment part	Adjustment value	Conditions	Test point
3-D	Bright adjustment	Carry out the monitor of the waveform of TP527 with an oscilloscope. Adjst the amplitude value so that the waveform between the 2 step signal to the negative 2 step signal is $2.5V \pm 0.1V$ .	CH6	$2.5V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP527
3-E	Contrast	Carry out the monitor of the waveform of TP527 with an oscilloscope. Adjst the amplitude value so that the waveform between the 9 step signal to the negative 9 step signal is $3.0V \pm 0.1V$ .	CH13	$3.0V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP527
3-F	Gamma 1	Carry out the monitor of the waveform of TP527 with an oscilloscope. Adjst the amplitude value so that the waveform between the pedestal to the 3 step signal is $1.2V \pm 0.1V$ .	CH11	$1.2V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP527
3-G	Gamma 2	Carry out the monitor of the waveform of TP527 with an oscilloscope. Adjst the amplitude value so that the waveform between the pedestal to the 10 step signal is $2.9V \pm 0.1V$ .	CH12	$2.9V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP527
3-H	Y gain	Carry out the monitor of the waveform of TP527 with an oscilloscope. Adjst the amplitude value so that the waveform between the pedestal to the 9 step signal is $2.3V \pm 0.1V$ .	CH2	$2.3V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /AUX	TP527
3-I	R sub bright	Carry out the monitor of the waveform of TP528 with an oscilloscope. Adjst the amplitude value so that the waveform between the 2 step signal to the negative 2 step signal is $2.1V \pm 0.1V$ .	CH8	$2.1V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP528
3-J	B sub bright	Carry out the monitor of the waveform of TP526 with an oscilloscope. Adjst the amplitude value so that the waveform between the 2 step signal to the negative 2 step signal is $2.1V \pm 0.1V$ .	CH9	$2.1V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP526

# FGZ000UF2

## ADJUSTMENT

No.	Adjustment item	The adjustment method	Adjustment part	Adjustment value	Conditions	Test point
3-K	R sub contrast	Carry out the monitor of the waveform of TP528 with an oscilloscope. Adjst the amplitude value so that the waveform between the 10 step signal to the negative 10 step signal is $2.2V \pm 0.1V$ .	CH14	$2.2V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP528
3-L	B sub contrast	Carry out the monitor of the waveform of TP526 with an oscilloscope. Adjst the amplitude value so that the waveform between the 10 step signal to the negative 10 step signal is $2.2V \pm 0.1V$ .	CH15	$2.2V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP526
3-M	VCOM	Carry out the monitor of the waveform of TP517 with an oscilloscope. The amplitude of the adjst the wave of VCOM is $5.8V \pm 0.1V$	CH1	$5.8V \pm 0.1V$	Incoming signal : 10 STEP (NTSC) /RGB	TP517
4	Screen display starting position adjustment	A menu mode -- returning -- POSI of manufacture MODE (NAVI) MENU -- or (AUX) it chooses. Screen position adjustment of the position adjustment is carried out by a touch panel.	Panel top icon	It adjusts so that the position of the picture in a screen may become in the center.	Mono range	Screen
5	Flicker	It adjusts so that the flicker level will be minimum on screen.	VR102	Flicker minimum	Gray drawing	Screen
6	Touch-panel	After usually starting a set in the mode and pressing an information key, a SET icon and a touch compensation icon are chosen. The target which appeared in the screen is pushed in order of the lower left and the upper right.	Panel top icon	-	-	Screen

A

B

C

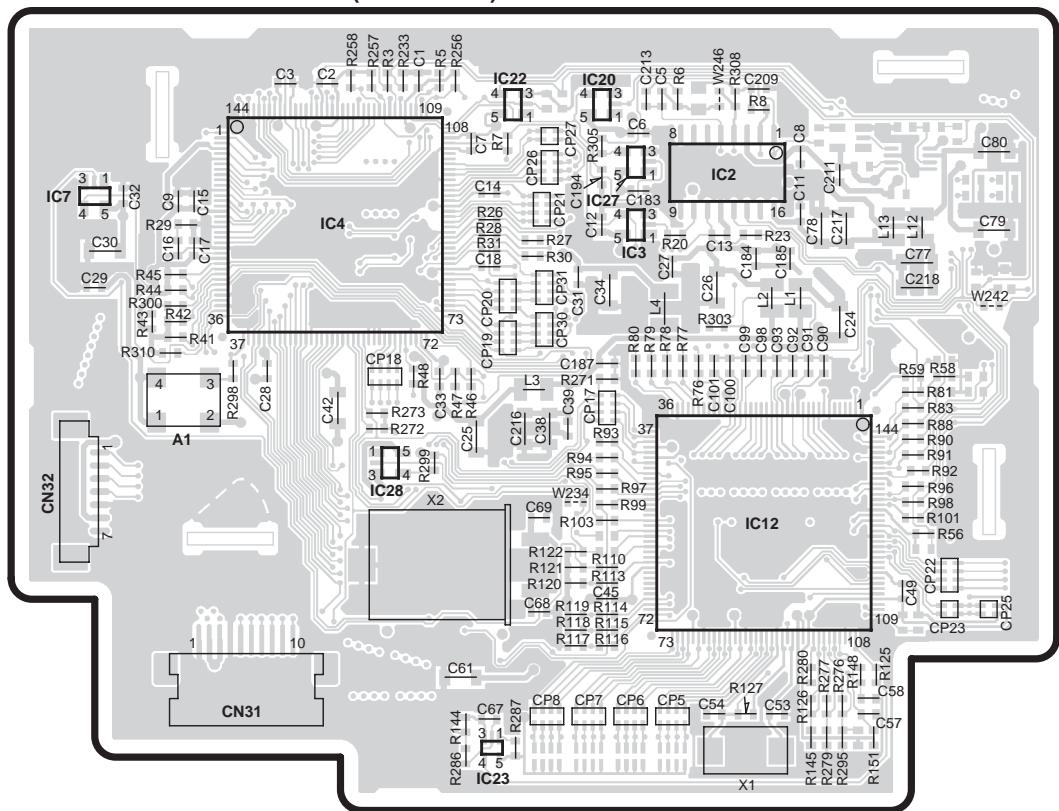
D

E

FGZ000UF2

# PC BOARD (COMPONENT SIDE VIEW)

ELECTRIC UNIT X25-9410-11 (J74-1663-02)

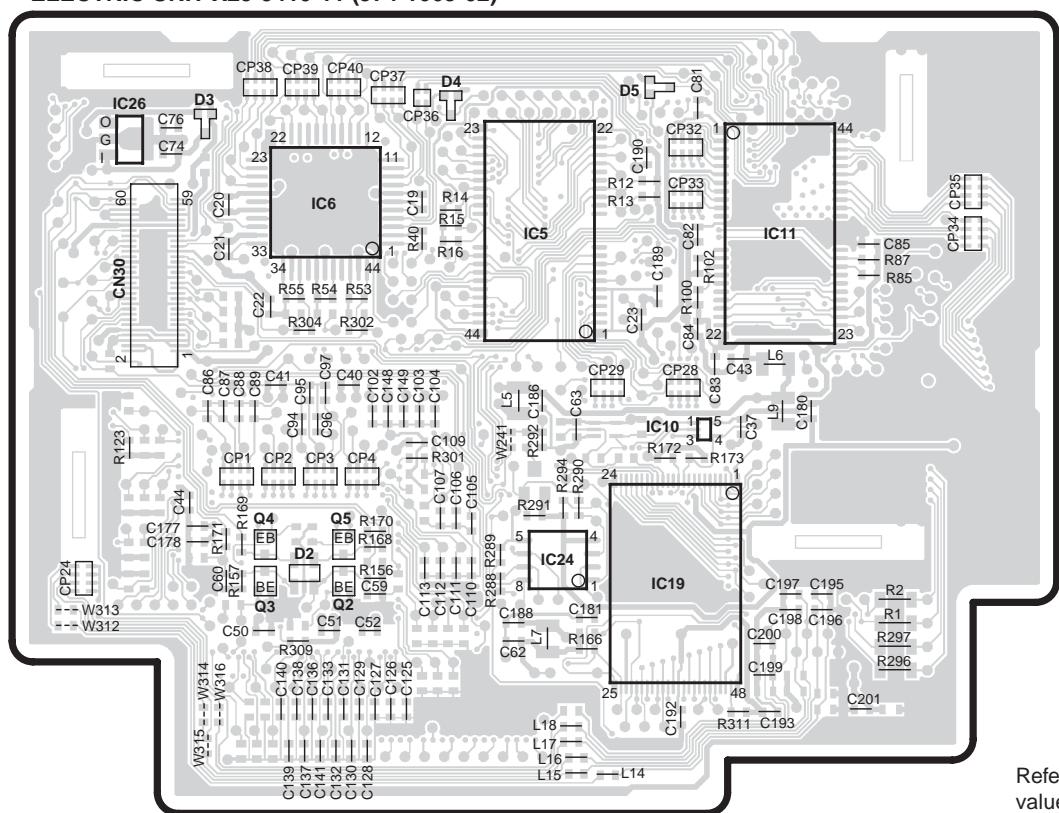


X25-9410-11

Ref. No.	Address
IC2	2C
IC3	2C
IC4	2B
IC7	2A
IC12	3C
IC20	2C
IC22	2B
IC23	4B
IC27	2C

# (FOIL SIDE VIEW)

ELECTRIC UNIT X25-9410-11 (J74-1663-02)



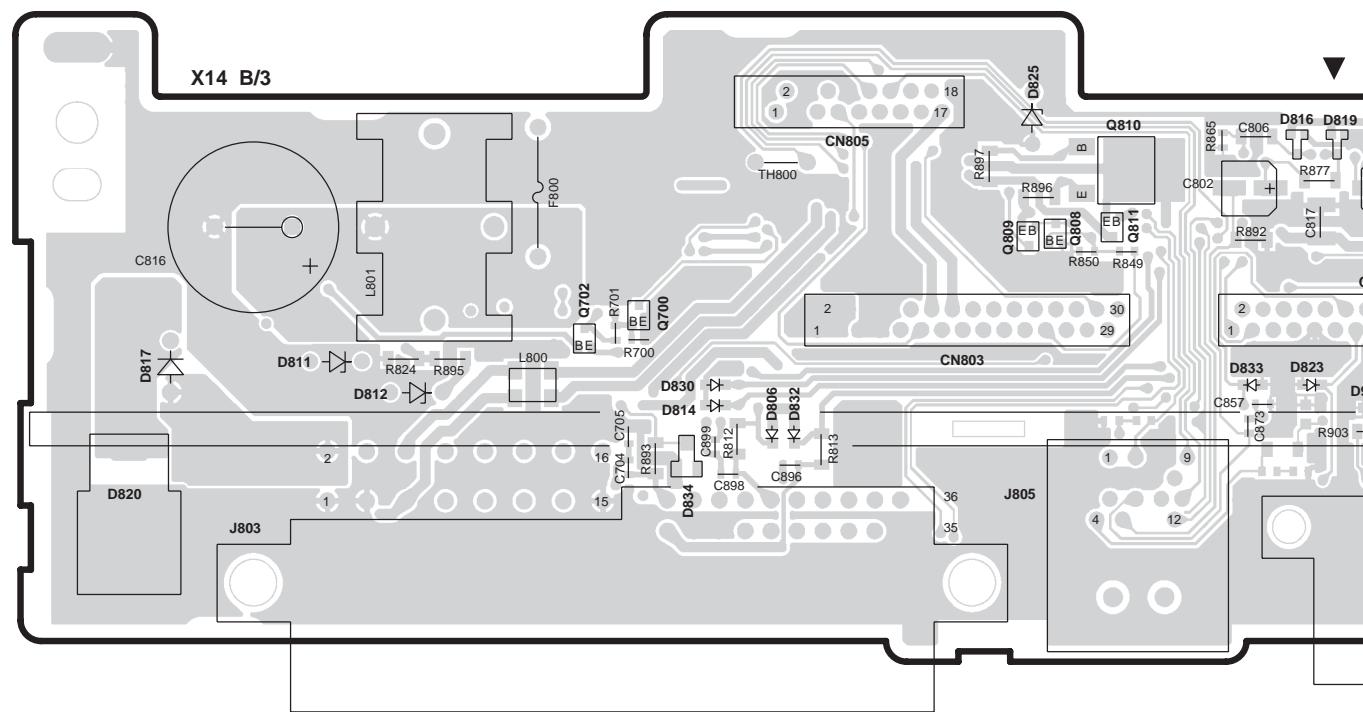
X25-9410-11

Ref. No.	Address
IC5	5B
IC6	5B
IC10	6C
IC11	5C
IC19	6C
IC26	5A
Q2	6B
Q3	6A
Q4	6A
Q5	6B

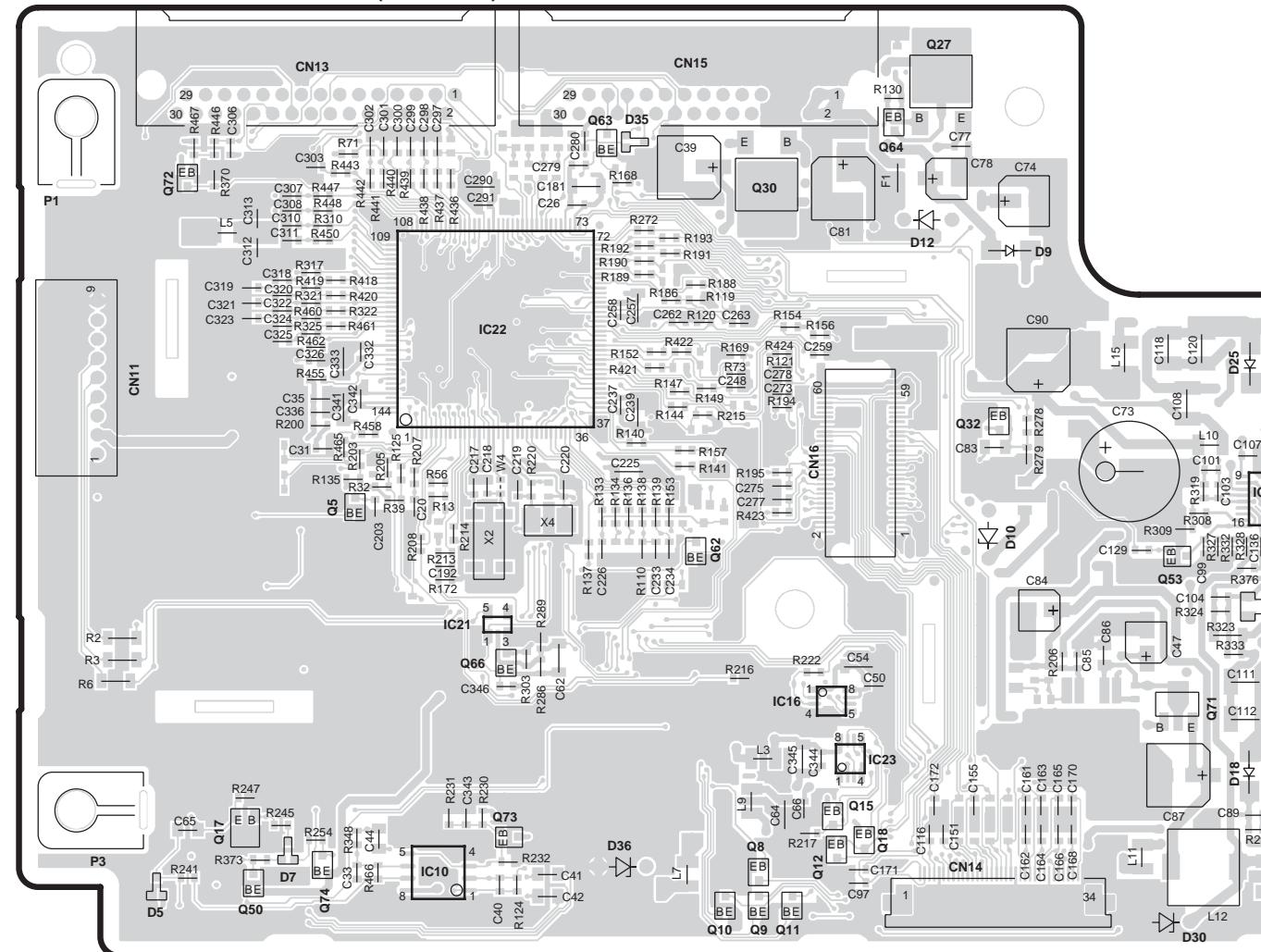
Refer to the schematic diagram for the values of resistors and capacitors.

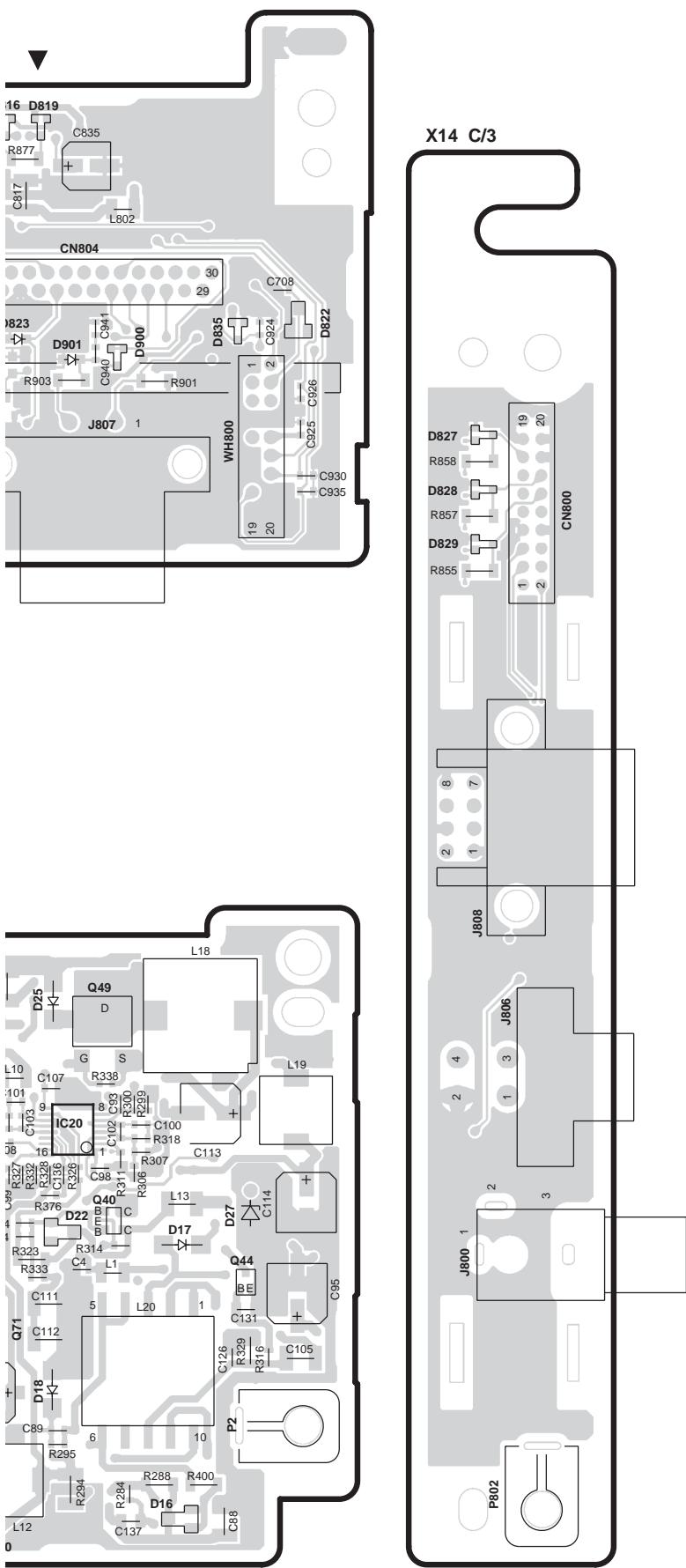
FGZ000UF2

# PC BOARD (COMPONENT SIDE VIEW)



**SYNTHESIZER UNIT X14-9490-10 A/3 (J74-1631-02)**





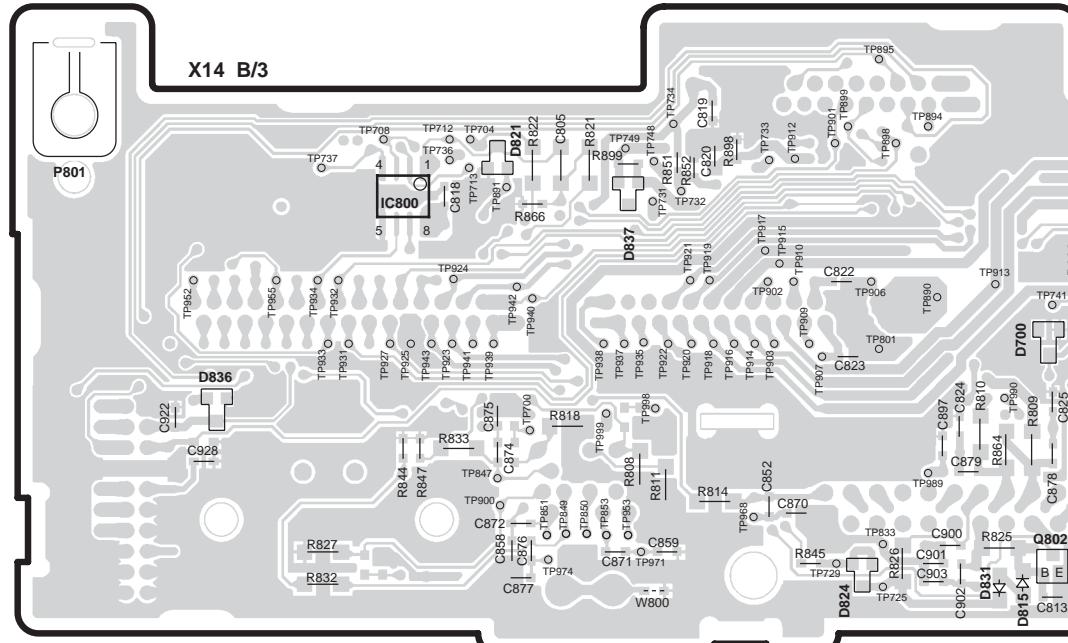
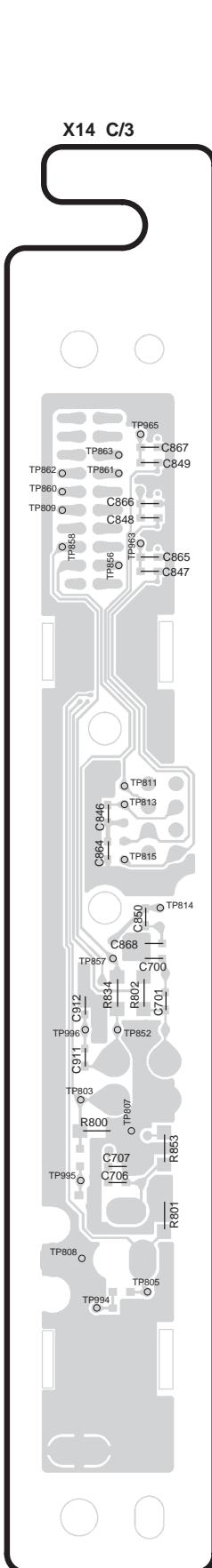
X14-9490-10

Ref. No.	Address
IC10	7G
IC16	6I
IC20	5K
IC21	6H
IC22	5H
IC23	6I
Q5	6G
Q8	7I
Q9	7I
Q10	7H
Q11	7I
Q12	7I
Q15	7I
Q17	7G
Q18	7I
Q27	4I
Q30	4I
Q32	5I
Q40	6K
Q44	6K
Q49	5K
Q50	7G
Q53	6J
Q62	6H
Q64	4I
Q66	6H
Q71	6J
Q72	4F
Q73	7H
Q74	7G
Q700	2H
Q702	2H
Q808	2I
Q809	2I
Q810	2J
Q811	2J

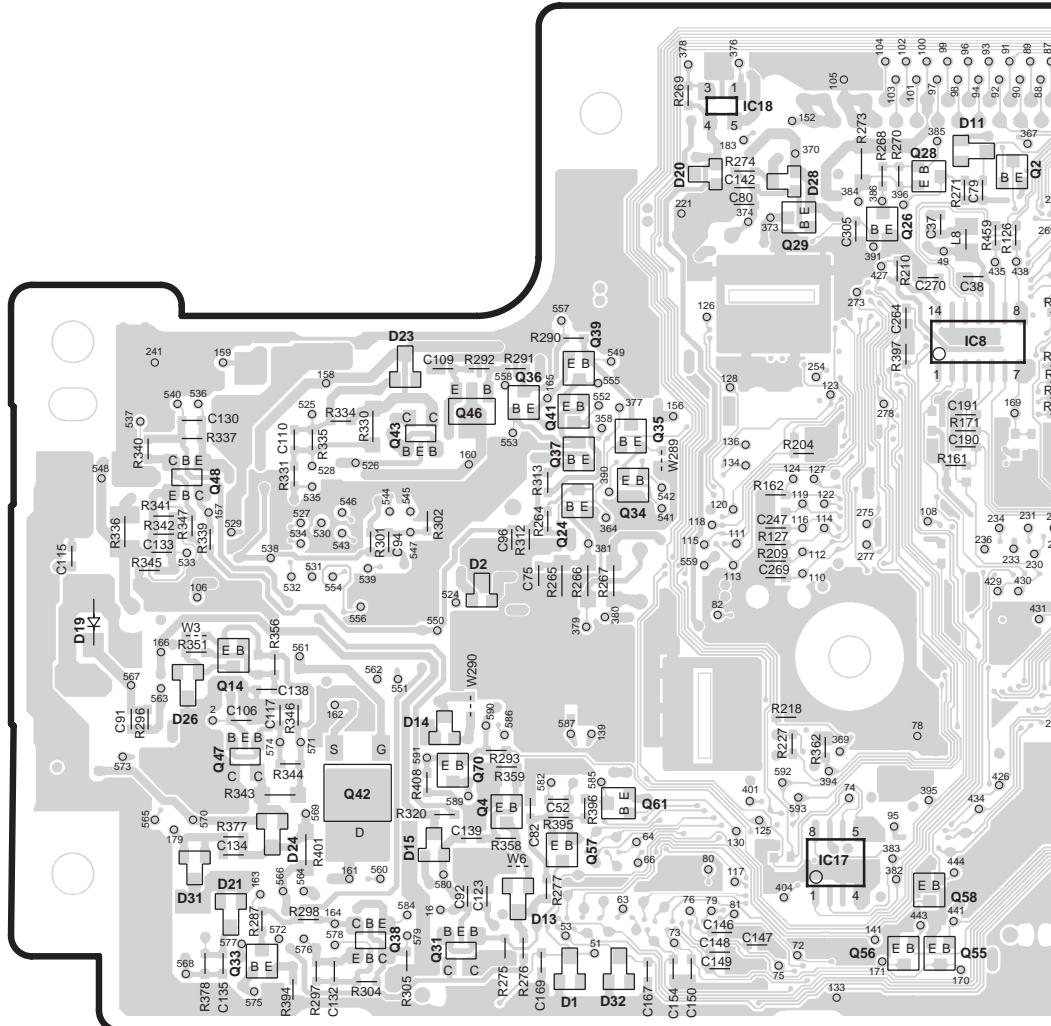
Refer to the schematic diagram for the values of resistors and capacitors.

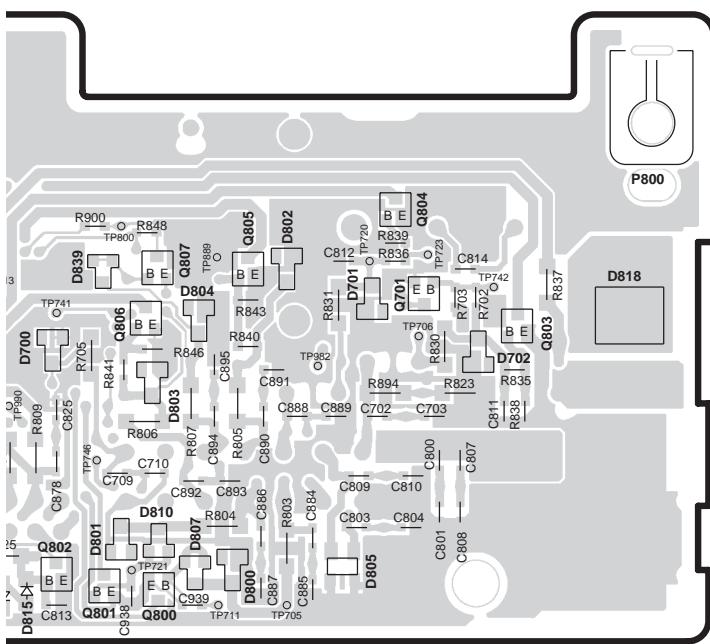
FGZ000UF2

# PC BOARD (FOIL SIDE VIEW)



**SYNTHESIZER UNIT X14-9490-10 A/3 (J74-1631-02)**

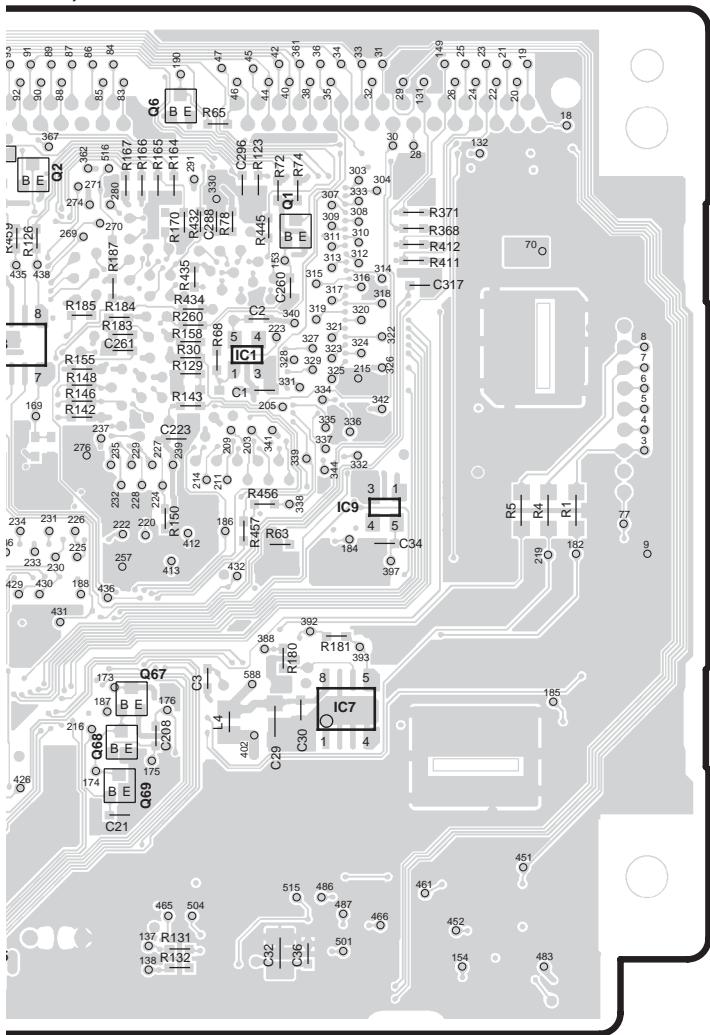




X14-9490-10

Ref. No.	Address
IC1	5U
IC7	6V
IC8	5T
IC9	5V
IC17	7T
IC18	4S
IC800	2R
Q1	4U
Q2	4U
Q4	6S
Q6	4U
Q14	6R
Q24	5S
Q26	4T
Q28	4T
Q29	4T
Q31	7R
Q33	7R
Q34	5S
Q35	5S
Q36	5S
Q37	5S
Q38	7R
Q39	5S
Q41	5S
Q42	6R
Q43	5R
Q46	5R
Q47	6R
Q48	5R
Q55	7T
Q56	7T
Q57	7S
Q58	7T
Q61	6S
Q67	6U
Q68	6U
Q69	6U
Q70	6S
Q701	2V
Q800	3U
Q801	3U
Q802	3U
Q803	2V
Q804	2V
Q805	2U
Q806	2U
Q807	2U

631-02)

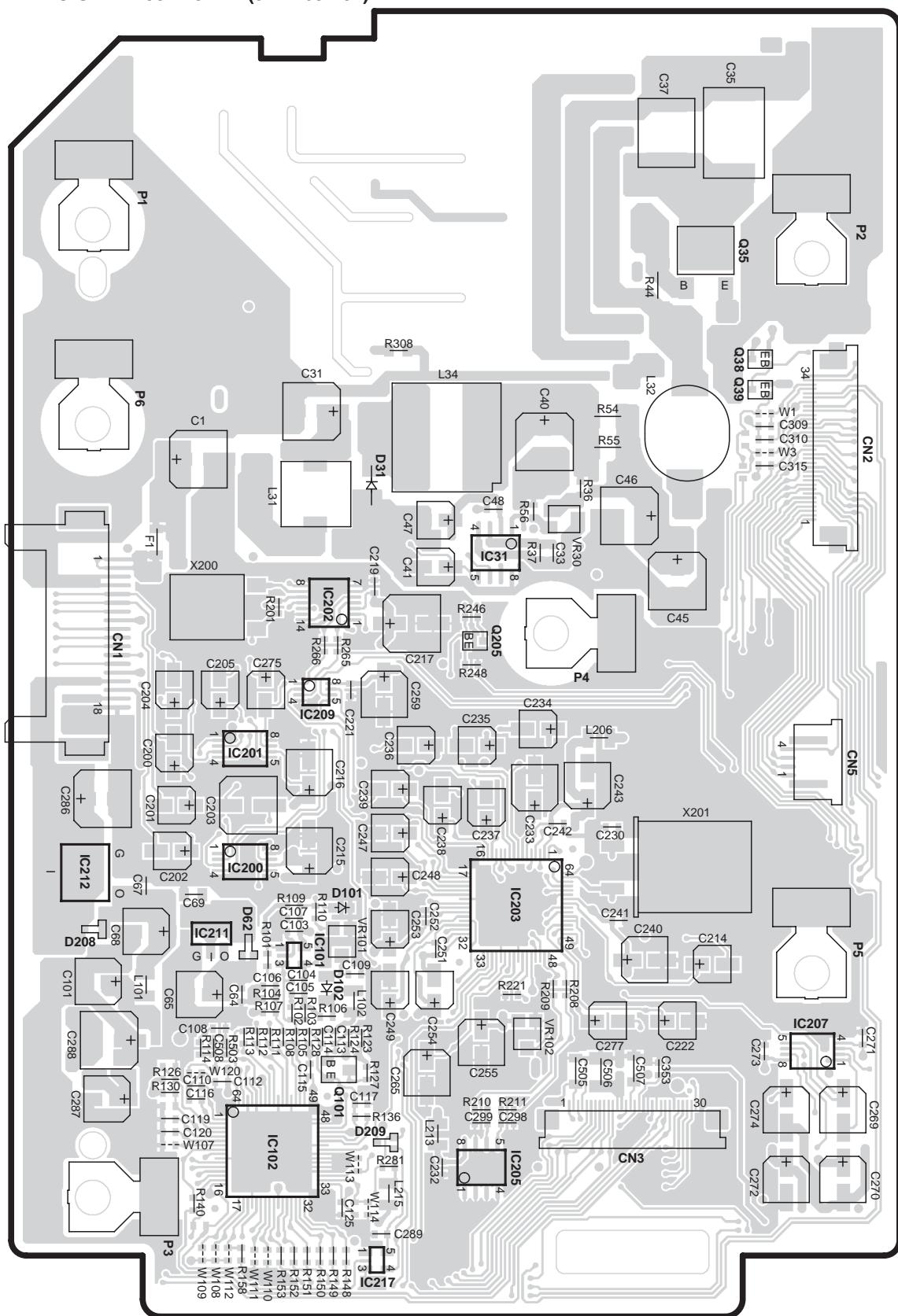


Refer to the schematic diagram for the values of resistors and capacitors.

FGZ000UF2

## **PC BOARD (COMPONENT SIDE VIEW)**

**VIDEO UNIT X35-4252-71 (J74-1651-02)**

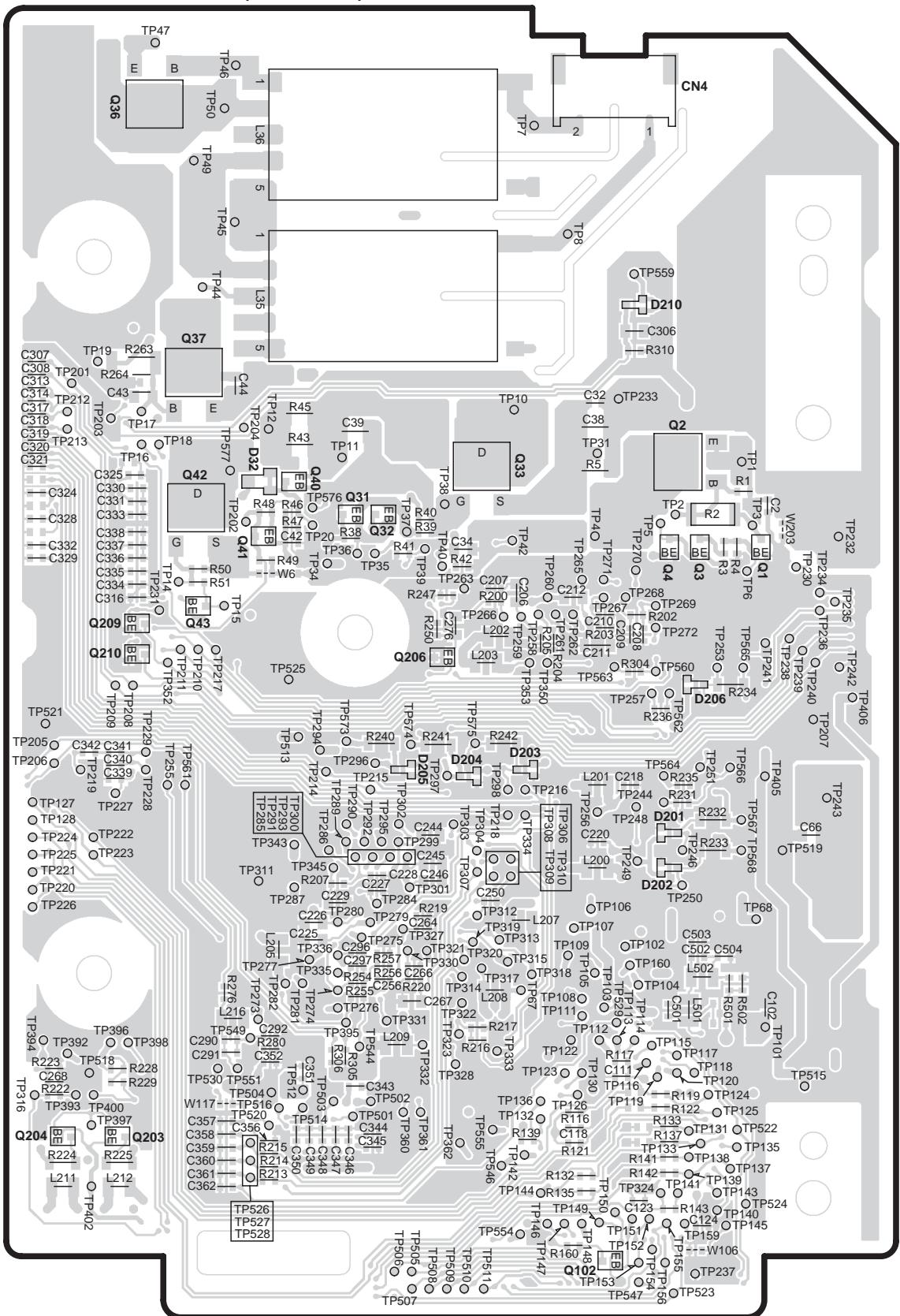


Ref No.	Address
IC31	4AB
IC101	5AA
IC102	6AA
IC200	5AA
IC201	5AA
IC202	4AA
IC203	5AB
IC205	6AB
IC207	6AC
IC209	4AA
IC211	5AA
IC212	5Z
IC217	7AA
Q35	2AC
Q38	3AC
Q39	3AC
Q101	6AA
Q205	4AB

Refer to the schematic diagram for the values of resistors and capacitors.

# PC BOARD (FOIL SIDE VIEW)

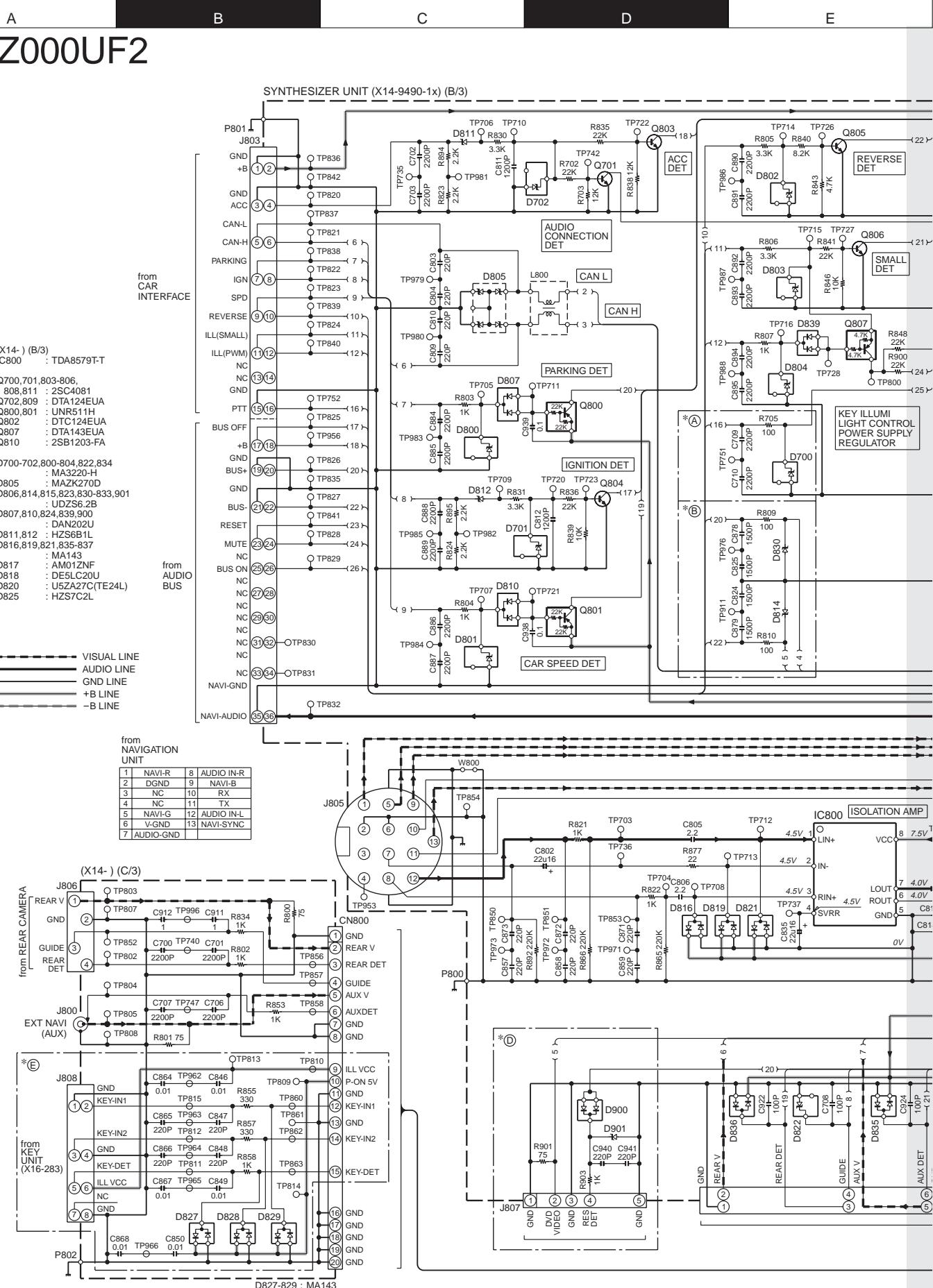
**VIDEO UNIT X35-4252-71 (J74-1651-02)**



X35-4252-71	
Ref No.	Address
Q1	4AH
Q2	3AG
Q3	4AH
Q4	4AG
Q31	3AF
Q32	4AF
Q33	3AG
Q36	2AE
Q37	3AE
Q40	3AF
Q41	4AF
Q42	3AE
Q43	4AE
Q102	7AG
Q203	6AE
Q204	6AE
Q206	4AF
Q209	4AE
Q210	4AE

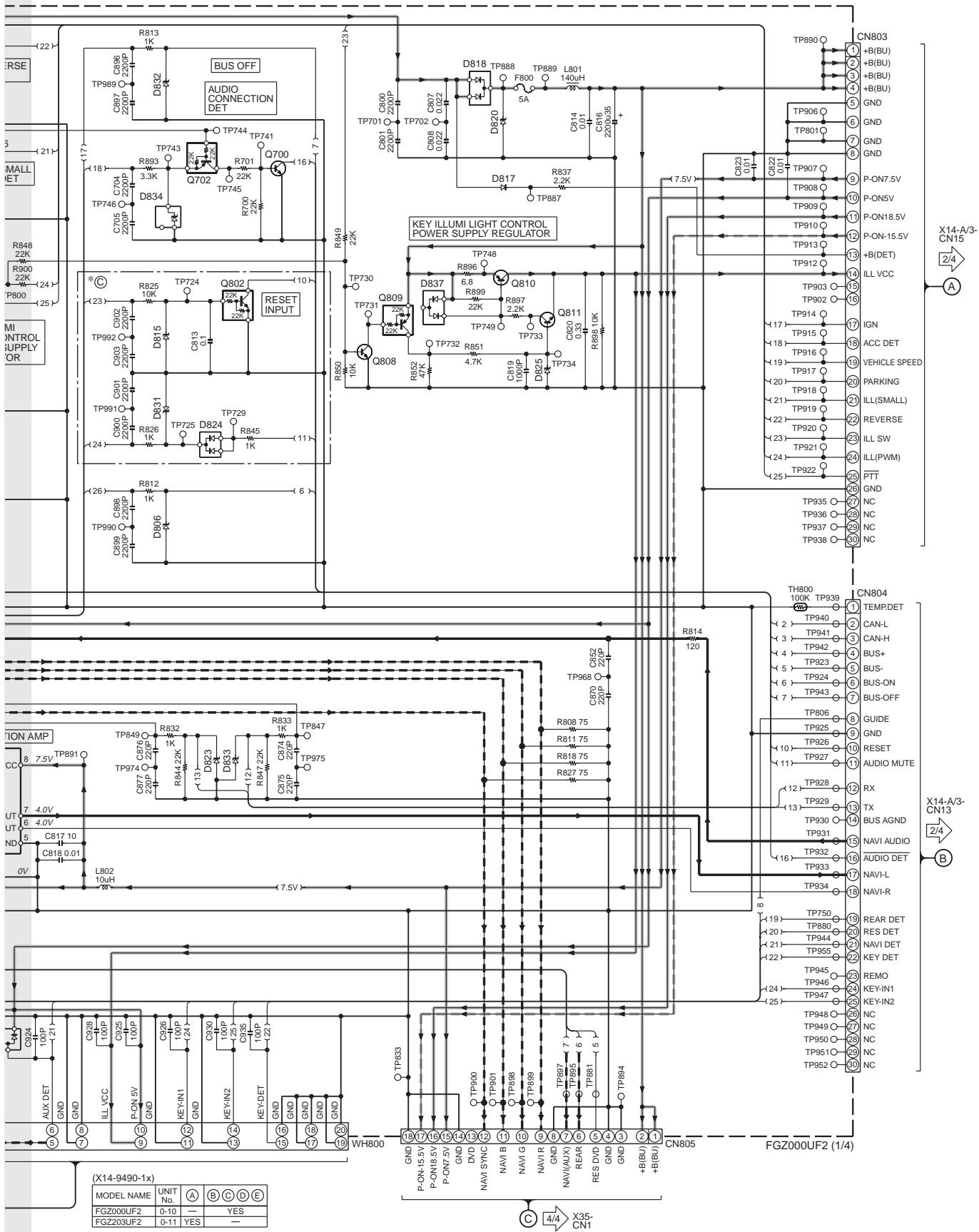
Refer to the schematic diagram for the values of resistors and capacitors.

# FGZ000UF2



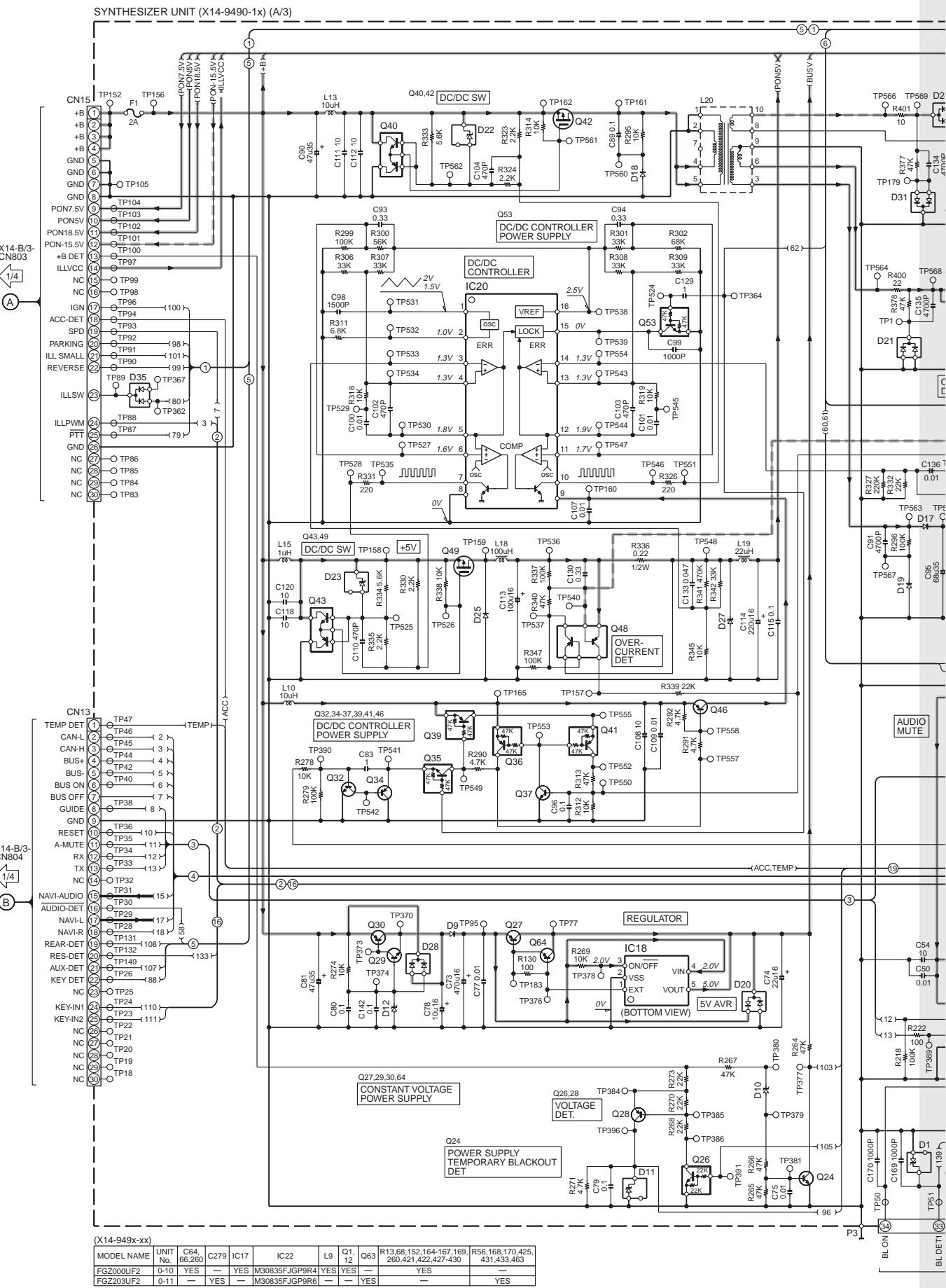
**CAUTION :** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

△ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

# FGZ000UF2



P

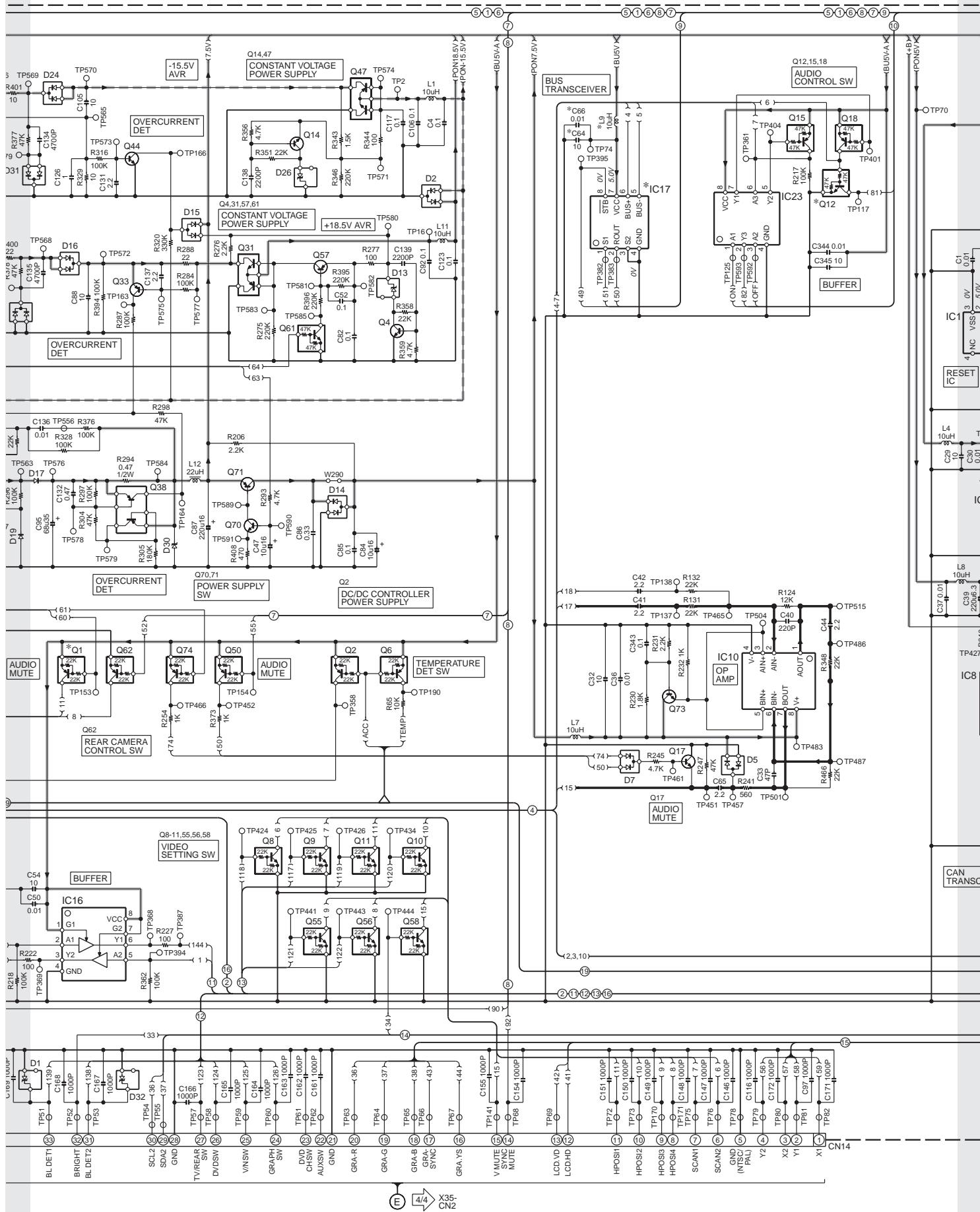
Q

R

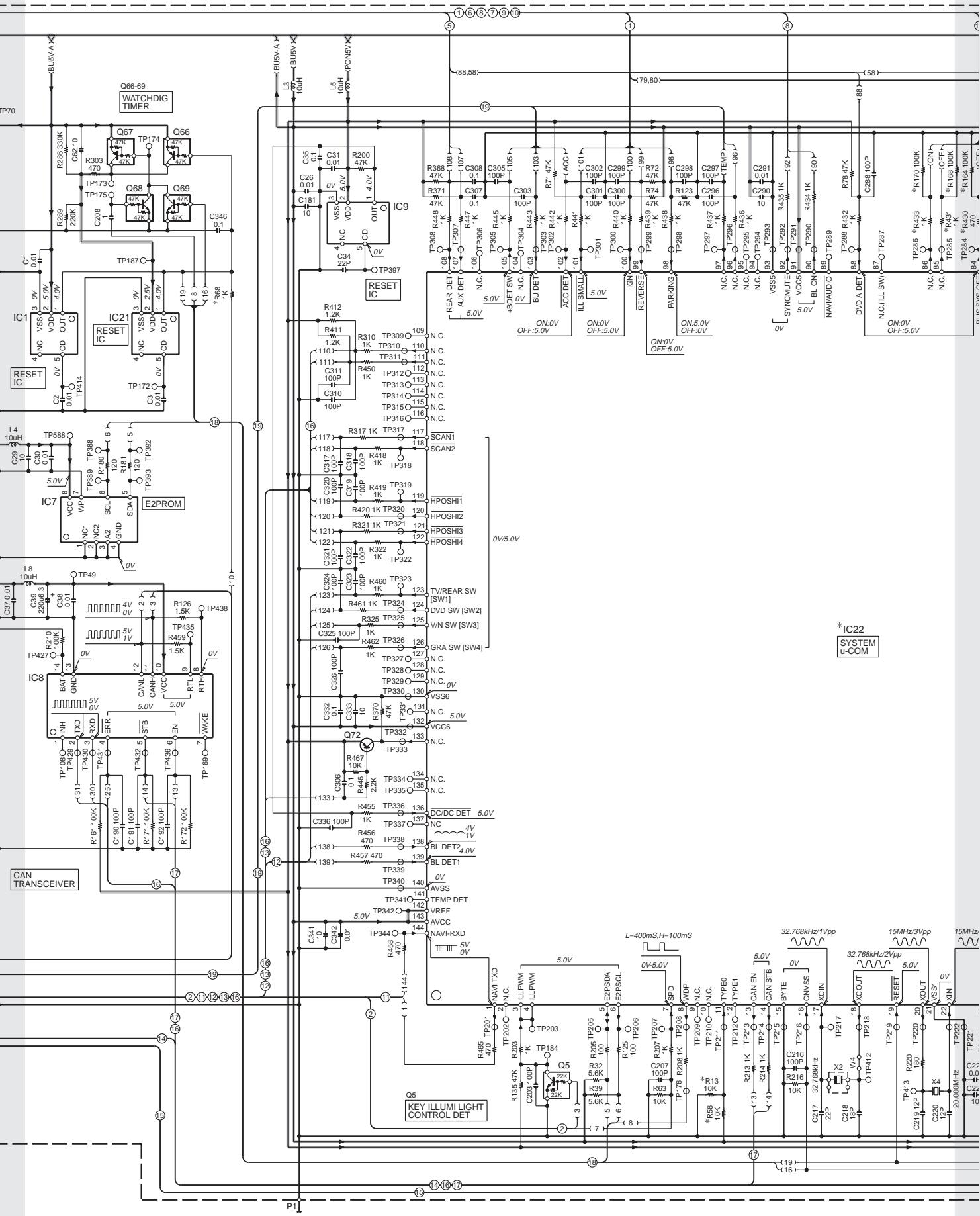
S

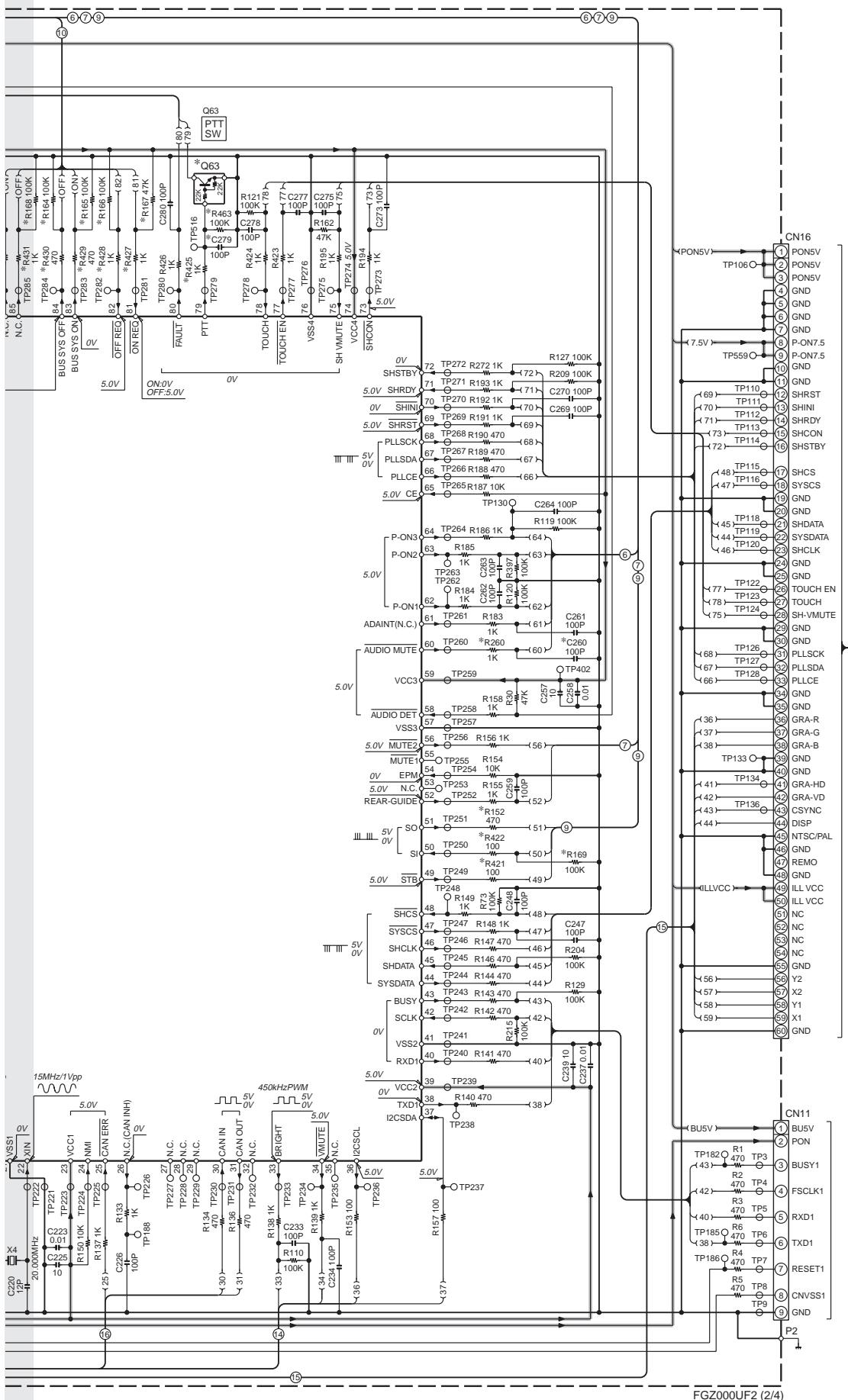
T

## FGZ000UF2



FGZ000UF2





**CAUTION :** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

△ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

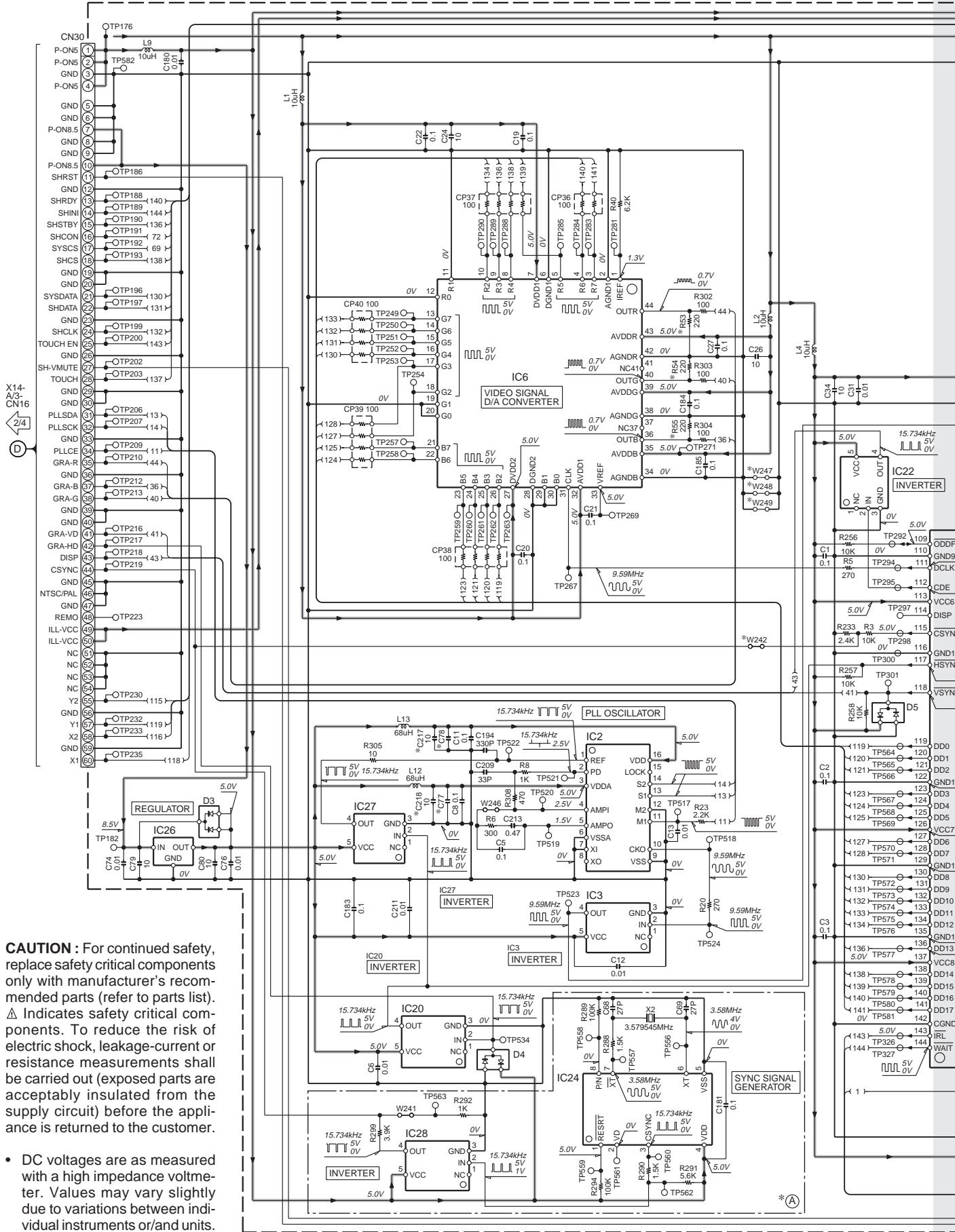
IC1.9 : S-80943CNMC  
IC7 : S-24CS08AFJ-TB  
IC8 : TJA1054  
IC10 : NJM4565MD-ZB  
IC16 : TC7WH126FU  
IC18 : HA12187FP  
IC20 : BA9743AFV  
IC21 : S-80925CNMC  
IC22 : \*  
IC23 : TC7WHU04FU

Q1,2,6,50,74 : DTA124EUA  
Q4,14,24,29,32,37,44,70,73 : 2SC4081  
Q5,6,11,26,55,56,58,62,63 : DTC124EUA  
Q12,35,53,61,68,69 : DTC144EUA  
Q15,18,36,39,41,66,67 : DTA144EUA  
Q17 : 2SD2114K  
Q27,30 : 2SB1203-FA  
Q28,33,34,57,64,72 : 2SA1576A  
Q31,40,43,47 : FMY6  
Q38,48 : IMT1A  
Q42,49 : 2SJ327Z  
Q46,71 : 2SB1188(R,R)

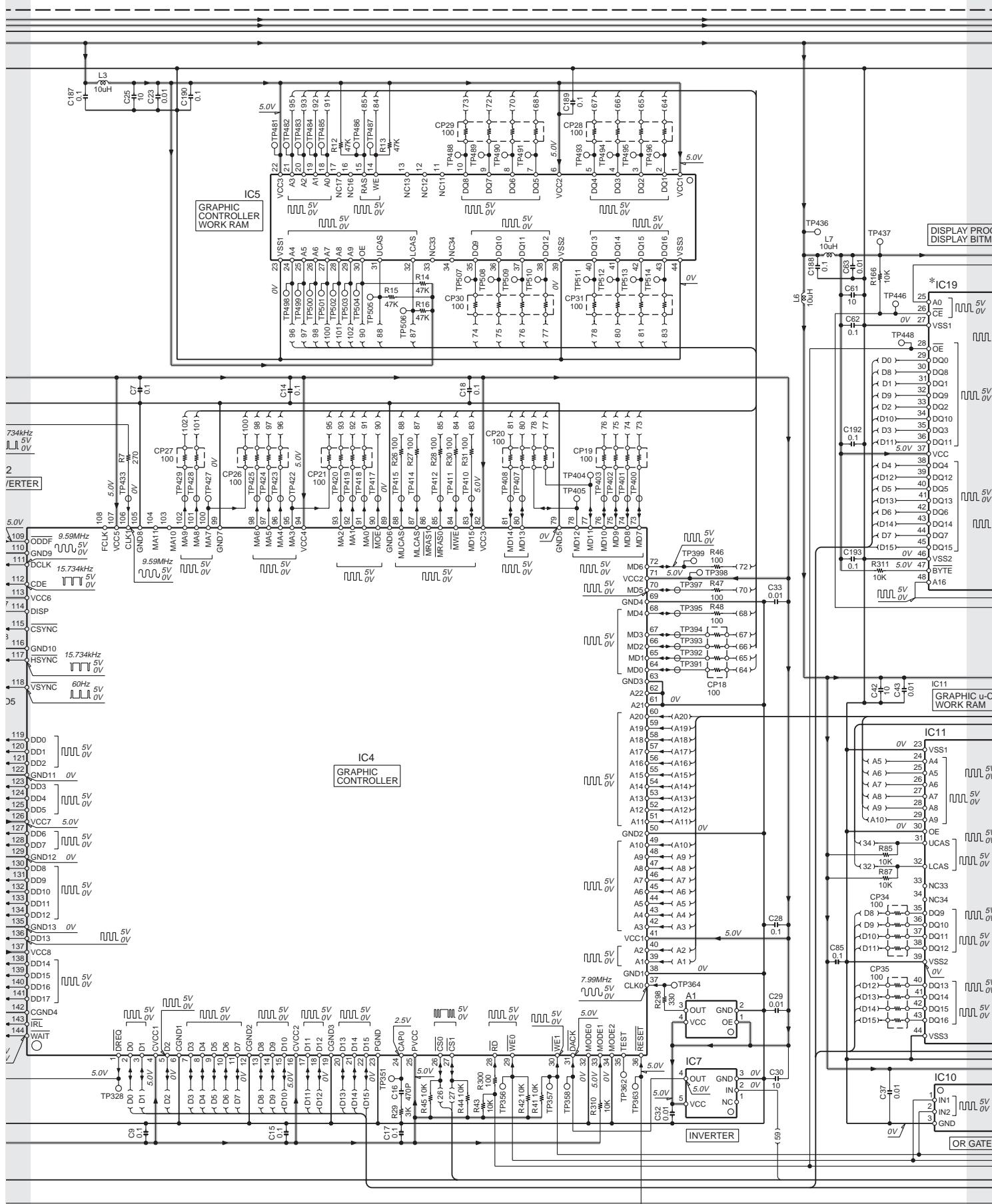
D1 : MA3056-M  
D2,5,14,20 : MA143  
D7,28,35 : DAN20U  
D9,18,19 : 1SR154-400  
D10,27 : HZS6B1L  
D11,32 : HZS16L  
D12 : HZM16N(B2)  
D13,22,23 : DAP20U  
D15 : 1SS164  
D16,21,24,31 : EC31QS06TE12L  
D17,25 : HZM13N(B1)  
D26 : HZS11B2L  
D30 : HZS11B2L

# FGZ000UF2

## ELECTRIC UNIT (X25-941x-xx)

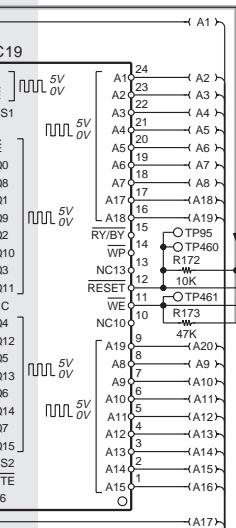


FGZ000UF2

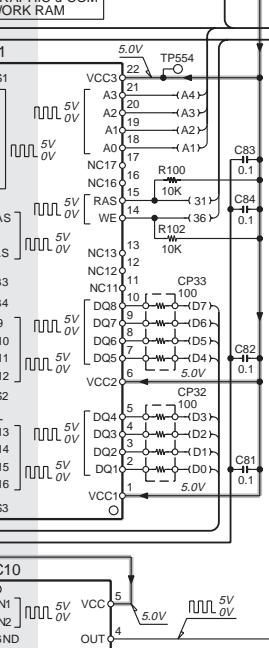


# FGZ000UF2

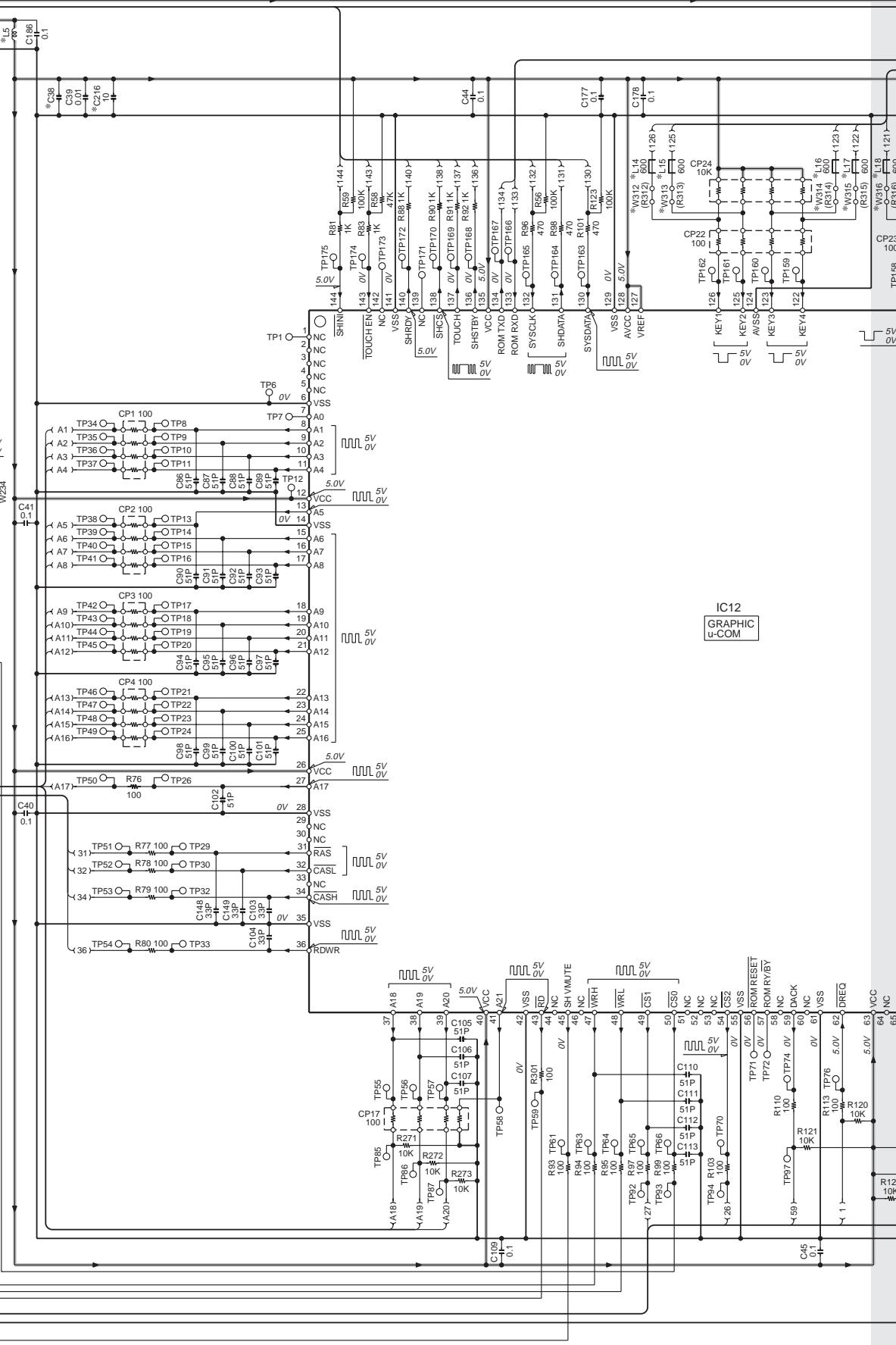
SPLAY PROGRAM  
SPLAY BITMAP DATA

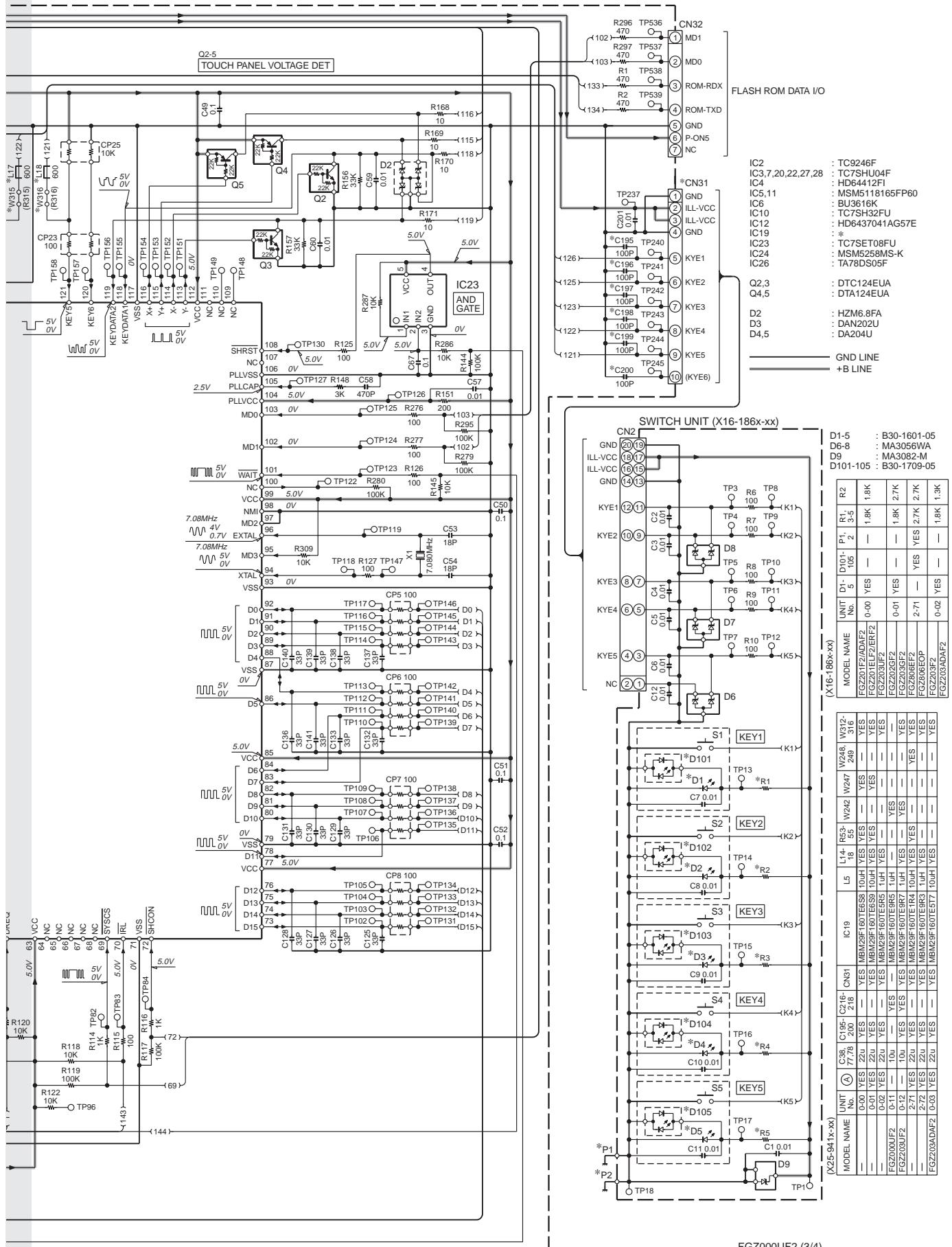


GRAPHIC u-COM WORK RAM



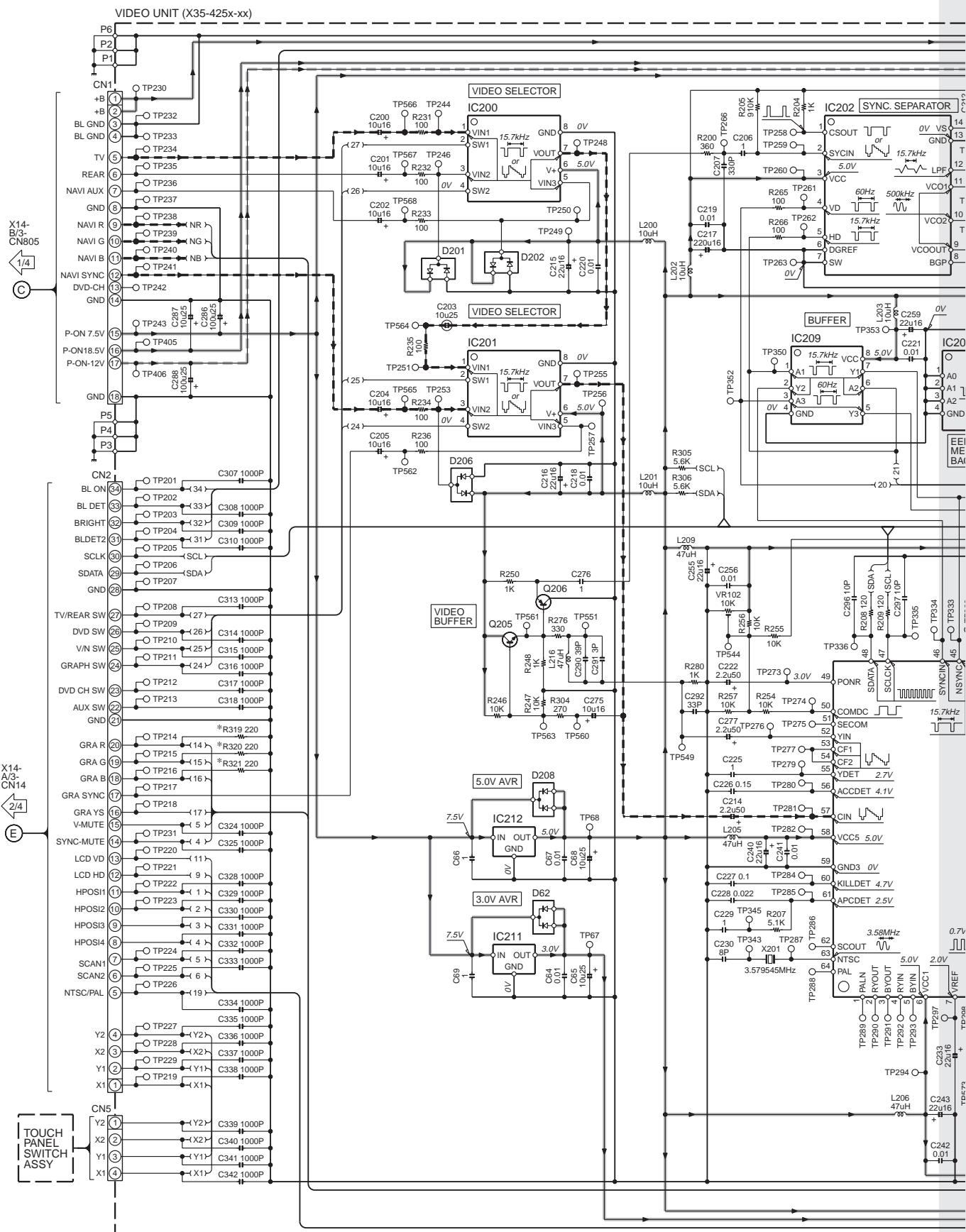
OR GATE



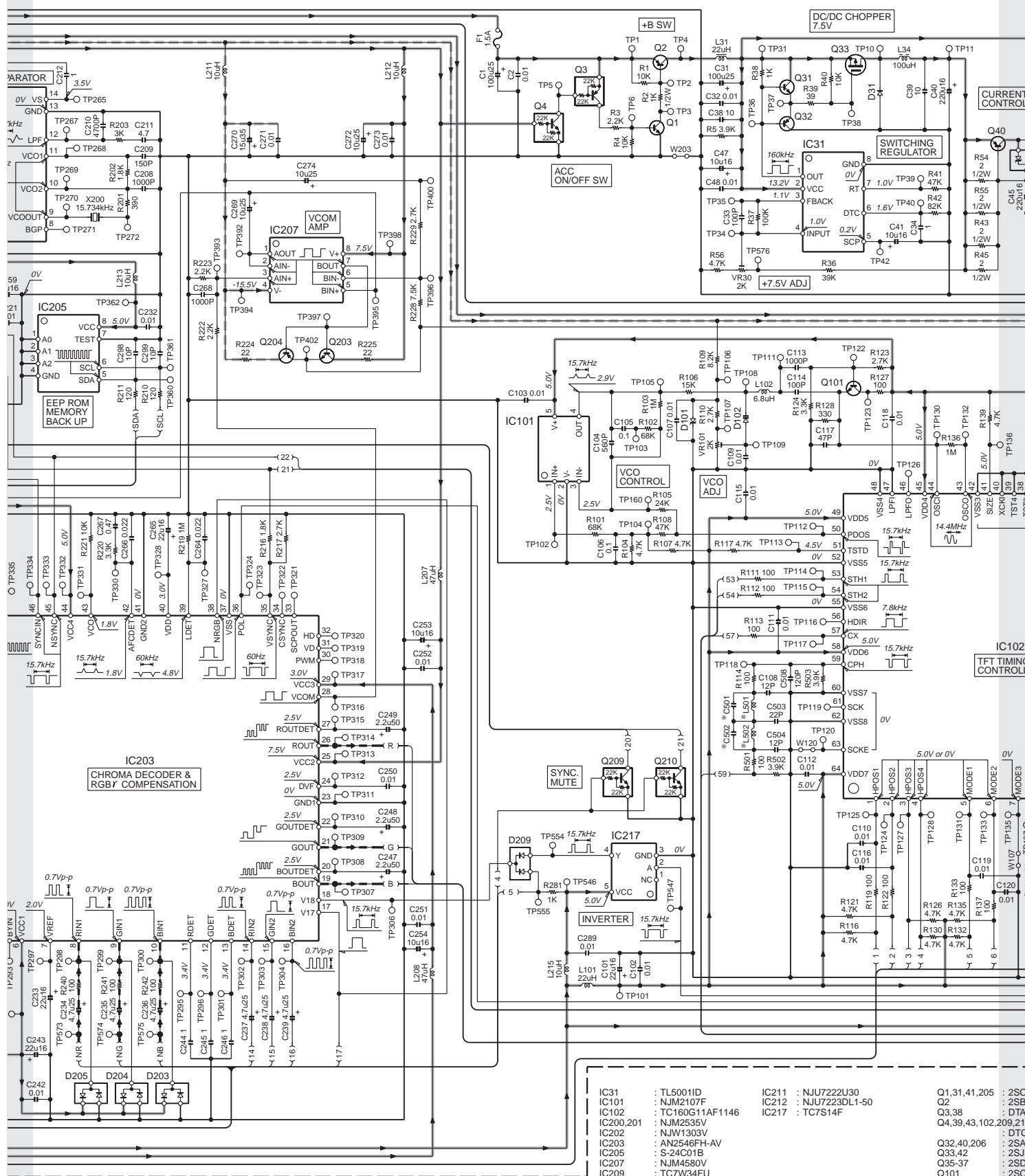


FGZ000UF2 (3/4)

# FGZ000UF2

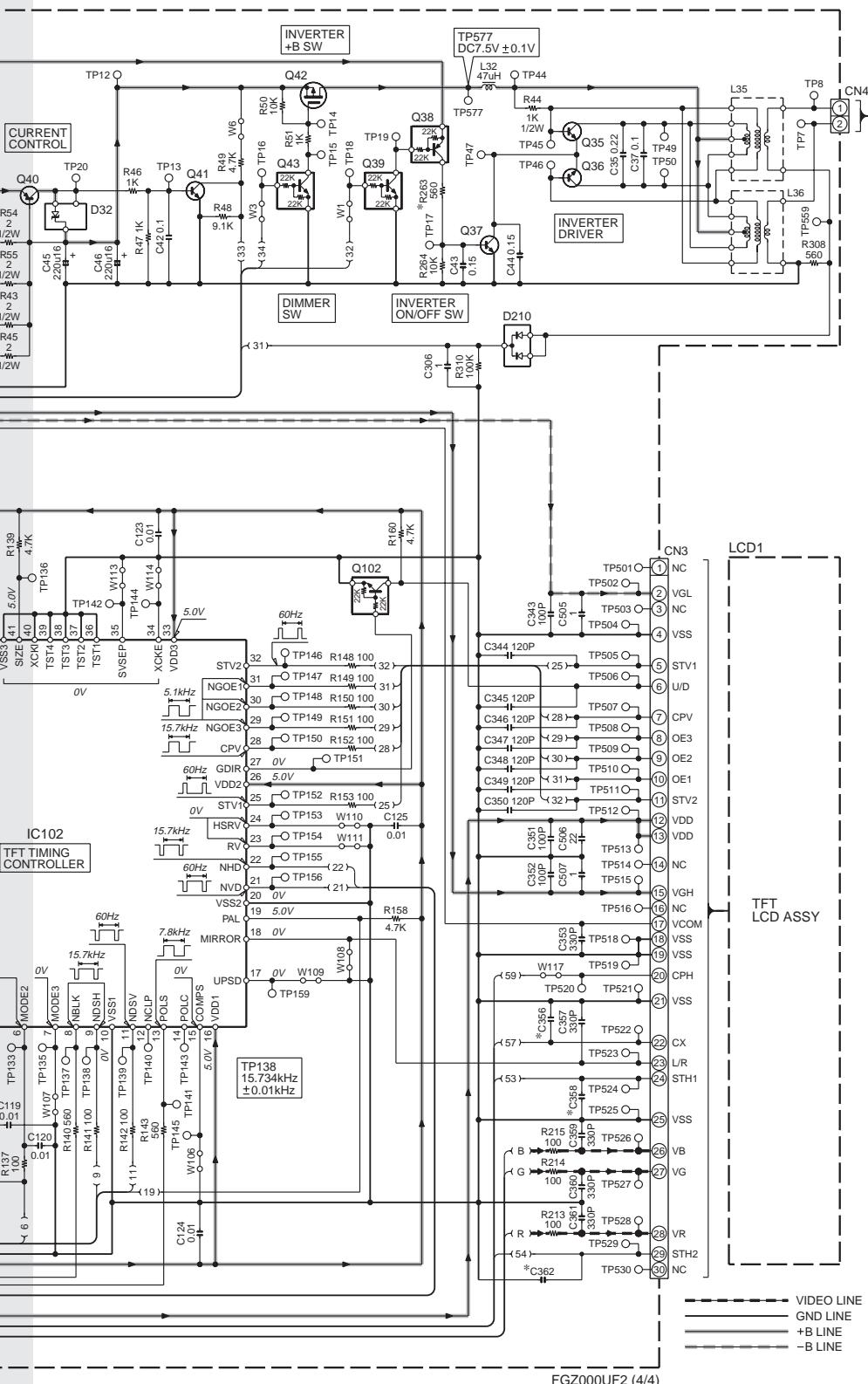


**FGZ000UF2**



IC31	: TL5001ID	IC211	: NJU7222U30	Q1,31,41,205	: 2S
IC101	: NJM2107F	IC212	: NJU7223DL1-50	Q2	: 2S
IC102	: TC160G11AF1146	IC217	: TC7S14F	Q3,38	: DT
IC200,201	: NJM2535V			Q4,39,43,102,209,2	
IC202	: NJW1303V				: DT
IC203	: AN2546FH-AV			Q32,40,206	: 2S
IC205	: S-24C01B			Q33,42	: 2S
IC207	: NJM4580V			Q35-37	: 2S
IC209	: TC7W34FU			Q101	: 2S

# FGZ000UF2

DAP202U  
DA204U

1

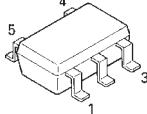


MA143

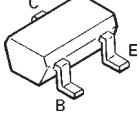


2

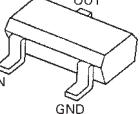
TC7SET08FU

DTA144EUA  
2SA1576A  
2SD2114K

3

NJM4580V  
TC7WHU04FU  
TC7WH126FU2SC2411K  
2SC4081

3

DTA124EUA  
DTA143EUA  
DTC124EUA  
DTC144EUA

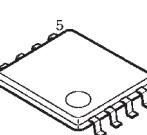
4

NJM4565MD-ZB



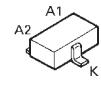
4

HA12187FP



5

DAN202U



6

**CAUTION :** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

△ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

FGZ000UF2 (4/4)

(X35-425x-xx)										
MODEL NAME	UNIT No.	C356	C358	C362	C501	C502	L501, 502	R263	R319- 321	
FGZ201F2/A/DAF2	0-0	120P	51P	120P	6P	3P	1uH	560 1/4W	NO	
FGZ201ELF2/ERF2	0-01	120P	51P	120P	6P	3P	1uH	560 1/2W	YES	
FGZ202GF2	2-71	270P	68P	220P	10P	5P	0.56uH	560 1/2W	YES	
FGZ206EF2										
FGZ206EOP										
FGZ000UF2										
FGZ203UF2										

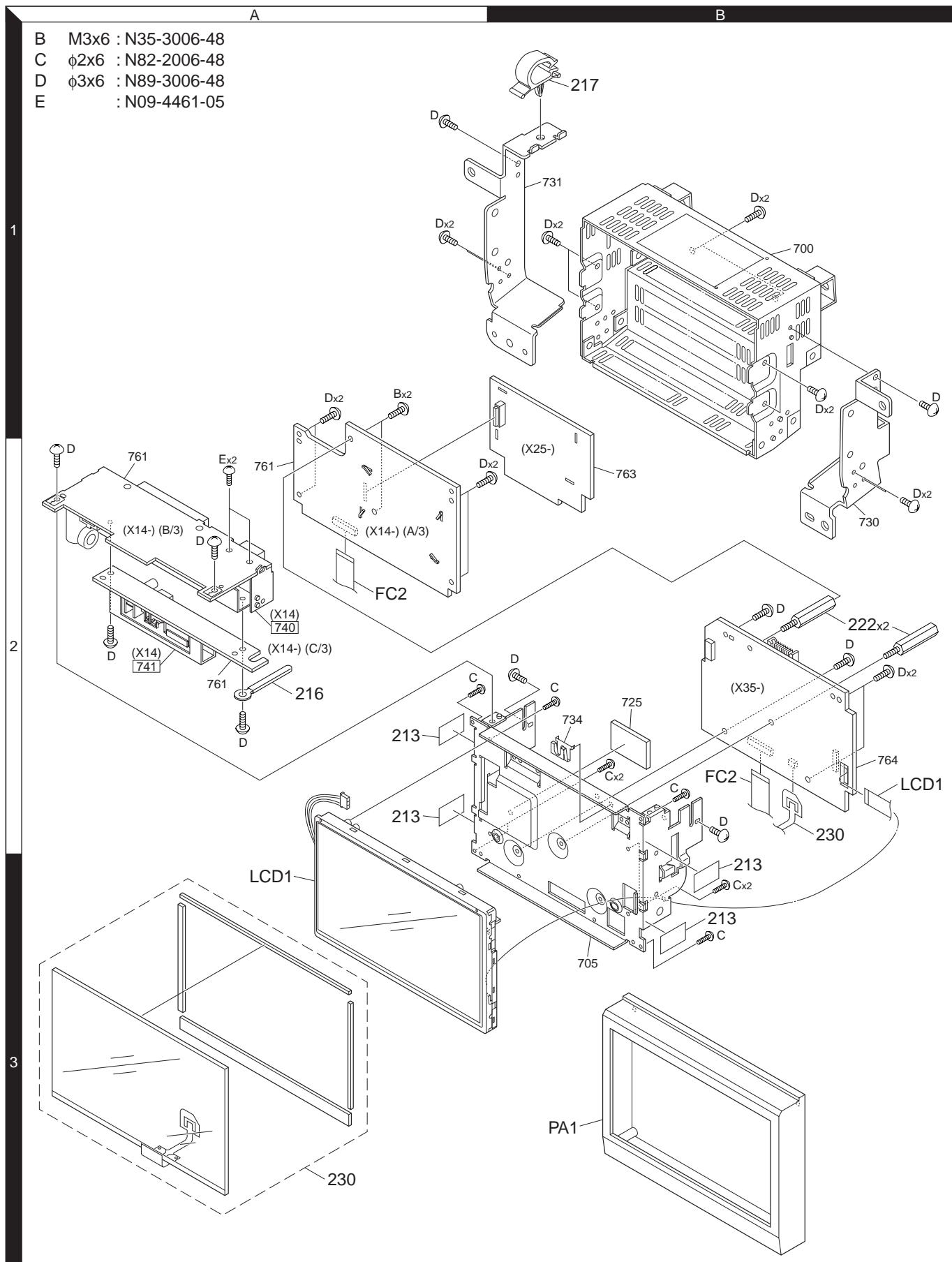
.205 : 2SC4081  
2SB1203-FA  
DTA124EUA  
2SA1576A  
2SJ327Z  
2SD1803  
2SC2411K

.102,209,210 : DTC124EUA  
2SA1576A  
2SJ327Z  
2SD1803  
2SC2411K

.206 : Q203 : 2SC4097  
Q204 : 2SA1577  
D31 : RB060L-40  
D32,208-210 : DAN202U  
D101 : MA8051-M  
D102 : MA335  
D201-206 : DA204U

7

## EXPLODED VIEW



Parts with the exploded numbers larger than 700 are not supplied.

# FGZ000UF2

## PARTS LIST

\* New parts

Parts without **Parts No.** are not supplied.

Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.

Teile ohne **Parts No.** werden nicht geliefert.

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
<b>FGZ000UF2</b>					
PA1	3B	*	A64-3397-01	PANEL	
LCD1	3A		B38-1100-05	LCD	
FC2	2A		E39-0525-05	FLAT CABLE	
213	2A		G16-1461-04	SHEET	
-			H21-1155-04	PROTECTION SHEET (SCREEN)	
216	2A		J19-4635-05	LEAD HOLDER	
217	1B	*	J19-7035-15	HOLDER	
222	2B		J39-0856-05	SPACER	
B	1A		N35-3006-48	BINDING HEAD MACHINE SCREW	
C	2B		N82-2006-48	BINDING HEAD TAPTITE SCREW	
D	1A		N89-3006-48	BINDING HEAD TAPTITE SCREW	
230	3A		S79-0852-05	SWITCH ASSY	

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
C88			C93-1289-05	CERAMIC	10UF	Z	
C89			CK73GB1H104K	CHIP C	0.10UF	K	
C90			C92-1491-05	ELECTRO	47UF	35WV	
C91			CK73GB1H472K	CHIP C	4700PF	K	
C92			CK73GB1H104K	CHIP C	0.10UF	K	
C93,94			CK73GB1A334K	CHIP C	0.33UF	K	
C95			C92-1490-05	ELECTRO	68UF	35WV	
C96			CK73GB1H104K	CHIP C	0.10UF	K	
C97			CK73GB1H102K	CHIP C	1000PF	K	
C98			CK73GB1H152K	CHIP C	1500PF	K	
C99			CK73GB1H102K	CHIP C	1000PF	K	
C100,101			CK73GB1H103K	CHIP C	0.010UF	K	
C102-104			CC73GCH1H471J	CHIP C	470PF	J	
C105			C93-1289-05	CERAMIC	10UF	Z	
C106			CK73GB1H104K	CHIP C	0.10UF	K	
C107			CK73GB1H103K	CHIP C	0.010UF	K	
C108			C93-1289-05	CERAMIC	10UF	Z	
C109			CK73GB1H103K	CHIP C	0.010UF	K	
C110			CC73GCH1H471J	CHIP C	470PF	J	
C111,112			C93-1289-05	CERAMIC	10UF	Z	
C113			C92-1427-05	ELECTRO	100UF	16WV	
C114			C92-1610-05	ELECTRO	220UF	16WV	
C115			CK73GB1H104K	CHIP C	0.10UF	K	
C116			CK73GB1H102K	CHIP C	1000PF	K	
C117			CK73GB1H104K	CHIP C	0.10UF	K	
C118			C93-1289-05	CERAMIC	10UF	Z	
C120			C93-1289-05	CERAMIC	10UF	Z	
C123			CK73GB1H104K	CHIP C	0.10UF	K	
C126			CK73GB0J105K	CHIP C	1.0UF	K	
C129			CK73GB0J105K	CHIP C	1.0UF	K	
C130			CK73GB1A334K	CHIP C	0.33UF	K	
C131			CK73FB1A225K	CHIP C	2.2UF	K	
C132			CK73GB1A474K	CHIP C	0.47UF	K	
C133			CK73GB1H473K	CHIP C	0.047UF	K	
C134,135			CK73GB1H472K	CHIP C	4700PF	K	
C136			CK73GB1H103K	CHIP C	0.010UF	K	
C137			CK73FB1A225K	CHIP C	2.2UF	K	
C138,139			CK73GB1H222K	CHIP C	2200PF	K	
C142			CK73GB1H104K	CHIP C	0.10UF	K	
C146-151			CK73GB1H102K	CHIP C	1000PF	K	
C154,155			CK73GB1H102K	CHIP C	1000PF	K	
C161-172			CK73GB1H102K	CHIP C	1000PF	K	
C181			CK73EB0J106K	CHIP C	10UF	K	
C190-192			CC73GCH1H101J	CHIP C	100PF	J	
C203			CC73GCH1H101J	CHIP C	100PF	J	
C207			CC73GCH1H101J	CHIP C	100PF	J	
C208			CK73GB0J105K	CHIP C	1.0UF	K	
C216			CC73GCH1H101J	CHIP C	100PF	J	
C217			CC73GCH1H220J	CHIP C	22PF	J	
C218			CC73GCH1H180J	CHIP C	18PF	J	
C219,220			CC73GCH1H120J	CHIP C	12PF	J	
C223			CK73GB1H103K	CHIP C	0.010UF	K	
C225			CK73EB0J106K	CHIP C	10UF	K	
C226			CC73GCH1H101J	CHIP C	100PF	J	
C233,234			CC73GCH1H101J	CHIP C	100PF	J	

E : Europe    K : North America    M : Other Areas    W : Without Europe

△ Indicates safety critical components.

## PARTS LIST

## SYNTHESIZER UNIT (X14-9490-10)

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
C237			CK73GB1H103K	CHIP C	0.010UF	K		C870-877			CC73GCH1H221J	CHIP C	220PF	J	
C239			CK73EB0J106K	CHIP C	10UF	K		C878,879			CK73GB1H152K	CHIP C	1500PF	K	
C247,248			CC73GCH1H101J	CHIP C	100PF	J		C884-903			CK73GB1H222K	CHIP C	2200PF	K	
C257			CK73EB0J106K	CHIP C	10UF	K		C911,912			CK73GB1A105K	CHIP C	1.0UF	K	
C258			CK73GB1H103K	CHIP C	0.010UF	K		C922			CC73GCH1H101J	CHIP C	100PF	J	
C259-264			CC73GCH1H101J	CHIP C	100PF	J		C924-926			CC73GCH1H101J	CHIP C	100PF	J	
C269,270			CC73GCH1H101J	CHIP C	100PF	J		C928			CC73GCH1H101J	CHIP C	100PF	J	
C273			CC73GCH1H101J	CHIP C	100PF	J		C930			CC73GCH1H101J	CHIP C	100PF	J	
C275			CC73GCH1H101J	CHIP C	100PF	J		C935			CC73GCH1H101J	CHIP C	100PF	J	
C277,278			CC73GCH1H101J	CHIP C	100PF	J		C938,939			CK73GB1H104K	CHIP C	0.10UF	K	
C280			CC73GCH1H101J	CHIP C	100PF	J		C940,941			CC73GCH1H221J	CHIP C	220PF	J	
C288			CC73GCH1H101J	CHIP C	100PF	J		CN11			E41-0948-05	PIN ASSY			
C290			CK73EB0J106K	CHIP C	10UF	K		CN13			E41-2092-05	PIN ASSY			
C291			CK73GB1H103K	CHIP C	0.010UF	K		CN14			E40-9744-05	FLAT CABLE CONNECTOR			
C296-303			CC73GCH1H101J	CHIP C	100PF	J		CN15			E41-2092-05	PIN ASSY			
C305			CC73GCH1H101J	CHIP C	100PF	J		CN16			E41-0232-05	PIN ASSY			
C306-308			CK73GB1H104K	CHIP C	0.10UF	K		CN800			E41-0245-05	PIN ASSY			
C310,311			CC73GCH1H101J	CHIP C	100PF	J		CN803,804			E41-2091-05	PIN ASSY			
C317-326			CC73GCH1H101J	CHIP C	100PF	J		CN805			E41-0377-05	PIN ASSY			
C332			CK73GB1H104K	CHIP C	0.10UF	K		J800			E63-0886-05	PIN JACK			
C333			CK73EB0J106K	CHIP C	10UF	K		J803			E58-0934-05	RECTANGULAR RECEPTACLE			
C336			CC73GCH1H101J	CHIP C	100PF	J		J805			E56-0809-05	CYLINDRICAL RECEPTACLE			
C341			CK73EB0J106K	CHIP C	10UF	K		J806			E08-0413-05	RECTANGULAR RECEPTACLE			
C342			CK73GB1H103K	CHIP C	0.010UF	K		J807		*	E58-0989-05	RECTANGULAR RECEPTACLE			
C343			CK73GB1H104K	CHIP C	0.10UF	K		J808		*	E58-1002-05	RECTANGULAR RECEPTACLE			
C344			CK73GB1H103K	CHIP C	0.010UF	K		WH800			E39-0523-15	WIRING HARNESS			
C345			CK73EB0J106K	CHIP C	10UF	K		F1			F53-0215-05	FUSE (2A)			
C346			CK73GB1H104K	CHIP C	0.10UF	K		F800			F53-0212-05	FUSE (UL, CSA) (5A)			
C700-707			CK73GB1H222K	CHIP C	2200PF	K		L1			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
C708			CC73GCH1H101J	CHIP C	100PF	J		L3-5			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
C800,801			CK73GB1H222K	CHIP C	2200PF	K		L7-11			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
C802			C92-0672-05	ELECTRO	22UF	16WV		L12			L33-1177-05	CHOKE COIL			
C803,804			CC73GCH1H221J	CHIP C	220PF	J		L13			L33-2209-05	SMALL FIXED INDUCTOR (1UH)			
C805,806			CK73EB1C225K	CHIP C	2.2UF	K		L15			L33-2209-05	SMALL FIXED INDUCTOR (1UH)			
C807,808			CK73GB1H223K	CHIP C	0.022UF	K		L18			L33-1166-05	CHOKE COIL			
C809,810			CC73GCH1H221J	CHIP C	220PF	J		L19			L33-1177-05	CHOKE COIL			
C811,812			CK73GB1H122K	CHIP C	1200PF	K		L20		*	L19-0767-05	TRANSFORMER FOR CONVERTER			
C813			CK73GB1H104K	CHIP C	0.10UF	K		L800			L79-0981-05	LINE FILTER			
C814			CK73GB1H103K	CHIP C	0.010UF	K		L801			L33-1082-05	CHOKE COIL			
C816			C90-5615-05	ELECTRO	2200UF	35WV		L802			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
C817			CK73DF1C106Z	CHIP C	10UF	Z		X2			L77-2739-05	CRYSTAL RESONATOR (32.768KHZ)			
C818			CK73GB1H103K	CHIP C	0.010UF	K		X4		*	L77-2852-05	CRYSTAL RESONATOR (20MHZ)			
C819			CK73GB1H102K	CHIP C	1000PF	K		E	2A		N09-4461-05	TAPTITE SCREW			
C820			CK73FB1C334K	CHIP C	0.33UF	K		R1-6			RK73EB2E471J	CHIP R	470	J 1/4W	
C822,823			CK73GB1H103K	CHIP C	0.010UF	K		R13			RK73GB2A103J	CHIP R	10K	J 1/10W	
C824,825			CK73GB1H152K	CHIP C	1500PF	K		R30			RK73GB2A473J	CHIP R	47K	J 1/10W	
C835			C92-0672-05	ELECTRO	22UF	16WV		R32			RK73GB2A562J	CHIP R	5.6K	J 1/10W	
C846			CK73GB1H103K	CHIP C	0.010UF	K		R39			RK73GB2A562J	CHIP R	5.6K	J 1/10W	
C847,848			CC73GCH1H221J	CHIP C	220PF	J		R63			RK73GB2A103J	CHIP R	10K	J 1/10W	
C849,850			CK73GB1H103K	CHIP C	0.010UF	K		R65			RK73GB2A103J	CHIP R	10K	J 1/10W	
C852			CC73GCH1H221J	CHIP C	220PF	J		R68			RK73GB2A102J	CHIP R	1.0K	J 1/10W	
C857-859			CC73GCH1H221J	CHIP C	220PF	J		R71,72			RK73GB2A473J	CHIP R	47K	J 1/10W	
C864			CK73GB1H103K	CHIP C	0.010UF	K		R73			RK73GB2A104J	CHIP R	100K	J 1/10W	
C865,866			CC73GCH1H221J	CHIP C	220PF	J									
C867,868			CK73GB1H103K	CHIP C	0.010UF	K									

E : Europe K : North America M : Other Areas W : Without Europe

△ Indicates safety critical components.

## PARTS LIST

## SYNTHESIZER UNIT (X14-9490-10)

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
R74			RK73GB2A473J	CHIP R	47K	J	1/10W	R241			RK73GB2A561J	CHIP R	560	J	1/10W
R78			RK73GB2A473J	CHIP R	47K	J	1/10W	R245			RK73GB2A472J	CHIP R	4.7K	J	1/10W
R110			RK73GB2A104J	CHIP R	100K	J	1/10W	R247			RK73GB2A473J	CHIP R	47K	J	1/10W
R119-121			RK73GB2A104J	CHIP R	100K	J	1/10W	R254			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R123			RK73GB2A473J	CHIP R	47K	J	1/10W	R260			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R124			RK73GB2A123J	CHIP R	12K	J	1/10W	R264			RK73GB2A473J	CHIP R	47K	J	1/10W
R125			RK73GB2A101J	CHIP R	100	J	1/10W	R265-267			RK73EB2E473J	CHIP R	47K	J	1/4W
R126			RK73GB2A152J	CHIP R	1.5K	J	1/10W	R268			RK73GH2A223D	CHIP R	22K	D	1/10W
R127			RK73GB2A104J	CHIP R	100K	J	1/10W	R269			RK73GB2A103J	CHIP R	10K	J	1/10W
R129			RK73GB2A104J	CHIP R	100K	J	1/10W	R270			RK73GB2A223J	CHIP R	22K	J	1/10W
R130			RK73GB2A101J	CHIP R	100	J	1/10W	R271			RK73GH2A472D	CHIP R	4.7K	D	1/10W
R131,132			RK73GB2A223J	CHIP R	22K	J	1/10W	R272			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R133			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R273			RK73EH2E223D	CHIP R	22K	D	1/4W
R134			RK73GB2A471J	CHIP R	470	J	1/10W	R274			RK73GB2A103J	CHIP R	10K	J	1/10W
R135			RK73GB2A473J	CHIP R	47K	J	1/10W	R275			RK73GB2A224J	CHIP R	220K	J	1/10W
R136			RK73GB2A471J	CHIP R	470	J	1/10W	R276			RK73GB2A222J	CHIP R	2.2K	J	1/10W
R137-139			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R277			RK73GB2A101J	CHIP R	100	J	1/10W
R140-144			RK73GB2A471J	CHIP R	470	J	1/10W	R278			RK73GB2A103J	CHIP R	10K	J	1/10W
R146,147			RK73GB2A471J	CHIP R	470	J	1/10W	R279			RK73GB2A104J	CHIP R	100K	J	1/10W
R148,149			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R284			RK73GB2A104J	CHIP R	100K	J	1/10W
R150			RK73GB2A103J	CHIP R	10K	J	1/10W	R286			RK73GB2A334J	CHIP R	330K	J	1/10W
R152			RK73GB2A471J	CHIP R	470	J	1/10W	R287			RK73GB2A104J	CHIP R	100K	J	1/10W
R153			RK73GB2A101J	CHIP R	100	J	1/10W	R288			RK73EB2E220J	CHIP R	22	J	1/4W
R154			RK73GB2A103J	CHIP R	10K	J	1/10W	R289			RK73GB2A224J	CHIP R	220K	J	1/10W
R155,156			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R290-293			RK73GB2A472J	CHIP R	4.7K	J	1/10W
R157			RK73GB2A101J	CHIP R	100	J	1/10W	R294			R92-3352-05	CHIP R	0.47	J	1/2W
R158			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R295			RK73GB2A103J	CHIP R	10K	J	1/10W
R161			RK73GB2A104J	CHIP R	100K	J	1/10W	R296,297			RK73GB2A104J	CHIP R	100K	J	1/10W
R162			RK73GB2A473J	CHIP R	47K	J	1/10W	R298			RK73GB2A473J	CHIP R	47K	J	1/10W
R164-166			RK73GB2A104J	CHIP R	100K	J	1/10W	R299			RK73GH2A104D	CHIP R	100K	D	1/10W
R167			RK73GB2A473J	CHIP R	47K	J	1/10W	R300			RK73GH2A563D	CHIP R	56K	D	1/10W
R169			RK73GB2A104J	CHIP R	100K	J	1/10W	R301			RK73GH2A333D	CHIP R	33K	D	1/10W
R171,172			RK73GB2A104J	CHIP R	100K	J	1/10W	R302			RK73GH2A683D	CHIP R	68K	D	1/10W
R180,181			RK73GB2A121J	CHIP R	120	J	1/10W	R303			RK73GB2A471J	CHIP R	470	J	1/10W
R183-186			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R304			RK73GB2A473J	CHIP R	47K	J	1/10W
R187			RK73GB2A103J	CHIP R	10K	J	1/10W	R305			RK73GB2A184J	CHIP R	180K	J	1/10W
R188-190			RK73GB2A471J	CHIP R	470	J	1/10W	R306-309			RK73GH2A333D	CHIP R	33K	D	1/10W
R191-195			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R310			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R200			RK73GB2A473J	CHIP R	47K	J	1/10W	R311			RK73GB2A682J	CHIP R	6.8K	J	1/10W
R203			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R312			RK73GB2A103J	CHIP R	10K	J	1/10W
R204			RK73GB2A104J	CHIP R	100K	J	1/10W	R313			RK73GB2A473J	CHIP R	47K	J	1/10W
R205			RK73GB2A101J	CHIP R	100	J	1/10W	R314			RK73GB2A103J	CHIP R	10K	J	1/10W
R206			RK73GB2A222J	CHIP R	2.2K	J	1/10W	R316			RK73GB2A104J	CHIP R	100K	J	1/10W
R207,208			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R317			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R209,210			RK73GB2A104J	CHIP R	100K	J	1/10W	R318,319			RK73GB2A103J	CHIP R	10K	J	1/10W
R213,214			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R320			RK73GB2A334J	CHIP R	330K	J	1/10W
R215			RK73GB2A104J	CHIP R	100K	J	1/10W	R321,322			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R216			RK73GB2A103J	CHIP R	10K	J	1/10W	R323			RK73EB2E222J	CHIP R	2.2K	J	1/4W
R217,218			RK73GB2A104J	CHIP R	100K	J	1/10W	R324			RK73GB2A222J	CHIP R	2.2K	J	1/10W
R220			RK73GB2A181J	CHIP R	180	J	1/10W	R325			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R222			RK73GB2A101J	CHIP R	100	J	1/10W	R326			RK73GB2A221J	CHIP R	220	J	1/10W
R227			RK73GB2A101J	CHIP R	100	J	1/10W	R327			RK73GB2A224J	CHIP R	220K	J	1/10W
R230			RK73GB2A182J	CHIP R	1.8K	J	1/10W	R328			RK73GH2A104D	CHIP R	100K	D	1/10W
R231			RK73GB2A222J	CHIP R	2.2K	J	1/10W	R329			RK73EB2E100J	CHIP R	10	J	1/4W
R232			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R330			RK73EB2E222J	CHIP R	2.2K	J	1/4W

E : Europe K : North America M : Other Areas W : Without Europe

△ Indicates safety critical components.

## PARTS LIST

## SYNTHESIZER UNIT (X14-9490-10)

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
R331			RK73GB2A221J	CHIP R	220	J	1/10W	R802-804			RK73EB2E102J	CHIP R	1.0K	J	1/4W
R332			RK73GH2A223D	CHIP R	22K	D	1/10W	R805,806			RK73EB2E332J	CHIP R	3.3K	J	1/4W
R333,334			RK73GB2A562J	CHIP R	5.6K	J	1/10W	R807			RK73EB2E102J	CHIP R	1.0K	J	1/4W
R335			RK73GB2A222J	CHIP R	2.2K	J	1/10W	R808			RK73EB2E750J	CHIP R	75	J	1/4W
R336			R92-3099-05	CHIP R	0.22	J	1/2W	R809,810			RK73EB2E101J	CHIP R	100	J	1/4W
R337			RK73GB2A104J	CHIP R	100K	J	1/10W	R811			RK73EB2E750J	CHIP R	75	J	1/4W
R338			RK73GB2A103J	CHIP R	10K	J	1/10W	R812,813			RK73EB2E102J	CHIP R	1.0K	J	1/4W
R339			RK73GB2A223J	CHIP R	22K	J	1/10W	R814			RK73EB2E121J	CHIP R	120	J	1/4W
R340			RK73GB2A473J	CHIP R	47K	J	1/10W	R818			RK73EB2E750J	CHIP R	75	J	1/4W
R341			RK73GB2A474J	CHIP R	470K	J	1/10W	R821,822			RK73EB2E102J	CHIP R	1.0K	J	1/4W
R342			RK73GH2A333D	CHIP R	33K	D	1/10W	R823,824			RK73EB2E222J	CHIP R	2.2K	J	1/4W
R343			RK73EB2E152J	CHIP R	1.5K	J	1/4W	R825			RK73EB2E103J	CHIP R	10K	J	1/4W
R344			RK73GB2A101J	CHIP R	100	J	1/10W	R826			RK73EB2E102J	CHIP R	1.0K	J	1/4W
R345			RK73GH2A103D	CHIP R	10K	D	1/10W	R827			RK73EB2E750J	CHIP R	75	J	1/4W
R346			RK73GB2A224J	CHIP R	220K	J	1/10W	R830,831			RK73EB2E332J	CHIP R	3.3K	J	1/4W
R347			RK73GB2A104J	CHIP R	100K	J	1/10W	R832-834			RK73EB2E102J	CHIP R	1.0K	J	1/4W
R348			RK73GB2A223J	CHIP R	22K	J	1/10W	R835,836			RK73GB2A223J	CHIP R	22K	J	1/10W
R351			RK73GB2A223J	CHIP R	22K	J	1/10W	R837			RK73EB2E222J	CHIP R	2.2K	J	1/4W
R356			RK73GB2A472J	CHIP R	4.7K	J	1/10W	R838			RK73GB2A123J	CHIP R	12K	J	1/10W
R358			RK73GB2A223J	CHIP R	22K	J	1/10W	R839			RK73GB2A103J	CHIP R	10K	J	1/10W
R359			RK73GB2A472J	CHIP R	4.7K	J	1/10W	R840			RK73GB2A822J	CHIP R	8.2K	J	1/10W
R362			RK73GB2A104J	CHIP R	100K	J	1/10W	R841			RK73GB2A223J	CHIP R	22K	J	1/10W
R368			RK73GB2A473J	CHIP R	47K	J	1/10W	R843			RK73GB2A472J	CHIP R	4.7K	J	1/10W
R370,371			RK73GB2A473J	CHIP R	47K	J	1/10W	R844			RK73GB2A223J	CHIP R	22K	J	1/10W
R373			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R845			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R376			RK73GB2A104J	CHIP R	100K	J	1/10W	R846			RK73GB2A103J	CHIP R	10K	J	1/10W
R377,378			RK73GB2A473J	CHIP R	47K	J	1/10W	R847-849			RK73GB2A223J	CHIP R	22K	J	1/10W
R394			RK73GB2A104J	CHIP R	100K	J	1/10W	R850			RK73GB2A103J	CHIP R	10K	J	1/10W
R395,396			RK73GB2A224J	CHIP R	220K	J	1/10W	R851			RK73GB2A472J	CHIP R	4.7K	J	1/10W
R397			RK73GB2A104J	CHIP R	100K	J	1/10W	R852			RK73GB2A473J	CHIP R	47K	J	1/10W
R400			RK73EB2E220J	CHIP R	22	J	1/4W	R853			RK73EB2E102J	CHIP R	1.0K	J	1/4W
R401			RK73EB2E100J	CHIP R	10	J	1/4W	R855			RK73EB2E331J	CHIP R	330	J	1/4W
R408			RK73GB2A471J	CHIP R	470	J	1/10W	R857			RK73EB2E331J	CHIP R	330	J	1/4W
R411,412			RK73GB2A122J	CHIP R	1.2K	J	1/10W	R858			RK73EB2E102J	CHIP R	1.0K	J	1/4W
R418-420			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R865,866			RK73GB2A224J	CHIP R	220K	J	1/10W
R421,422			RK73GB2A101J	CHIP R	100	J	1/10W	R877			RK73EB2E220J	CHIP R	22	J	1/4W
R423,424			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R892			RK73EB2E224J	CHIP R	220K	J	1/4W
R426-428			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R893			RK73EB2E332J	CHIP R	3.3K	J	1/4W
R429,430			RK73GB2A471J	CHIP R	470	J	1/10W	R894,895			RK73EB2E222J	CHIP R	2.2K	J	1/4W
R432			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R896			R92-3409-05	CHIP R	6.8	F	1/4W
R434-443			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R897			RK73EB2E222J	CHIP R	2.2K	J	1/4W
R445			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R898			RK73GB2A103J	CHIP R	10K	J	1/10W
R446			RK73GB2A222J	CHIP R	2.2K	J	1/10W	R899,900			RK73GB2A223J	CHIP R	22K	J	1/10W
R447,448			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R901			RK73EB2E750J	CHIP R	75	J	1/4W
R450			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R903			RK73EB2E102J	CHIP R	1.0K	J	1/4W
R455			RK73GB2A102J	CHIP R	1.0K	J	1/10W	W4			R92-1252-05	CHIP R	0 OHM	J	1/16W
R456-458			RK73GB2A471J	CHIP R	470	J	1/10W	W290			R92-1252-05	CHIP R	0 OHM	J	1/16W
R459			RK73GB2A152J	CHIP R	1.5K	J	1/10W	W800			R92-1252-05	CHIP R	0 OHM	J	1/16W
R460-462			RK73GB2A102J	CHIP R	1.0K	J	1/10W	D1			MA3056-M		ZENER DIODE		
R465			RK73GB2A471J	CHIP R	470	J	1/10W	D2			MA143		DIODE		
R466			RK73GB2A223J	CHIP R	22K	J	1/10W	D5			MA143		DIODE		
R467			RK73GB2A103J	CHIP R	10K	J	1/10W	D7			DAN202U		DIODE		
R700-702			RK73GB2A223J	CHIP R	22K	J	1/10W	D9			1SR154-400		DIODE		
R703			RK73GB2A123J	CHIP R	12K	J	1/10W	D10			HZS6B1L		ZENER DIODE		
R800,801			RK73EB2E750J	CHIP R	75	J	1/4W								

E : Europe K : North America M : Other Areas W : Without Europe

△ Indicates safety critical components.

## PARTS LIST

## SYNTHESIZER UNIT (X14-9490-10)

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
D11			MA3047-H	ZENER DIODE		IC22		*	M30835FJGP9R4	MICROCONTROLLER IC	
D12			HZS161L	ZENER DIODE		IC23			TC7WHU04FU	MOS-IC	
D13			HZM16N(B2)	ZENER DIODE		IC800			TDA8579T-T	ANALOGUE IC	
D14			MA143	DIODE		Q1,2			DTA124EUA	DIGITAL TRANSISTOR	
D15			DAP202U	DIODE		Q4			2SC4081	TRANSISTOR	
D16			1SS184	DIODE		Q5			DTC124EUA	DIGITAL TRANSISTOR	
D17			EC31QS06TE12L	DIODE		Q6			DTA124EUA	DIGITAL TRANSISTOR	
D18,19			1SR154-400	DIODE		Q8-11			DTC124EUA	DIGITAL TRANSISTOR	
D20			MA143	DIODE		Q12			DTC144EUA	DIGITAL TRANSISTOR	
D21			1SS184	DIODE		Q14			2SC4081	TRANSISTOR	
D22,23			HZM16N(B2)	ZENER DIODE		Q15			DTA144EUA	DIGITAL TRANSISTOR	
D24			1SS184	DIODE		Q17			2SD2114K	TRANSISTOR	
D25			EC31QS06TE12L	DIODE		Q18			DTA144EUA	DIGITAL TRANSISTOR	
D26			HZM13N(B1)	ZENER DIODE		Q24			2SC4081	TRANSISTOR	
D27			HZS6B1L	ZENER DIODE		Q26			DTC124EUA	DIGITAL TRANSISTOR	
D28			DAN202U	DIODE		Q27			2SB1203-FA	TRANSISTOR	
D30			HZS11B2L	ZENER DIODE		Q28			2SA1576A	TRANSISTOR	
D31			1SS184	DIODE		Q29			2SC4081	TRANSISTOR	
D32			MA3047-H	ZENER DIODE		Q30			2SB1203-FA	TRANSISTOR	
D35			DAN202U	DIODE		Q31			FMY6	TRANSISTOR	
D701,702			MA3220-H	ZENER DIODE		Q32			2SC4081	TRANSISTOR	
D800-804			MA3220-H	ZENER DIODE		Q33,34			2SA1576A	TRANSISTOR	
D805			MAZK270D	ZENER DIODE		Q35			DTC144EUA	DIGITAL TRANSISTOR	
D806			UDZS6.2B	ZENER DIODE		Q36			DTA144EUA	DIGITAL TRANSISTOR	
D807			DAN202U	DIODE		Q37			2SC4081	TRANSISTOR	
D810			DAN202U	DIODE		Q38			IMT1A	TRANSISTOR	
D811,812			HZS6B1L	ZENER DIODE		Q39			DTA144EUA	DIGITAL TRANSISTOR	
D814,815			UDZS6.2B	ZENER DIODE		Q40			FMY6	TRANSISTOR	
D816			MA143	DIODE		Q41			DTA144EUA	DIGITAL TRANSISTOR	
D817			AM01ZNF	DIODE		Q42			2SJ327Z	FET	
D818			DE5LC20U	DIODE		Q43			FMY6	TRANSISTOR	
D819			MA143	DIODE		Q44			2SC4081	TRANSISTOR	
D820			U5ZA27C(TE24L)	DIODE		Q46			2SB1188(Q,R)	TRANSISTOR	
D821			MA143	DIODE		Q47			FMY6	TRANSISTOR	
D822			MA3220-H	ZENER DIODE		Q48			IMT1A	TRANSISTOR	
D823			UDZS6.2B	ZENER DIODE		Q49			2SJ327Z	FET	
D824			DAN202U	DIODE		Q50			DTA124EUA	DIGITAL TRANSISTOR	
D825			HZS7C2L	ZENER DIODE		Q53			DTC144EUA	DIGITAL TRANSISTOR	
D827-829			MA143	DIODE		Q55,56			DTC124EUA	DIGITAL TRANSISTOR	
D830-833			UDZS6.2B	ZENER DIODE		Q57			2SA1576A	TRANSISTOR	
D834			MA3220-H	ZENER DIODE		Q58			DTC124EUA	DIGITAL TRANSISTOR	
D835-837			MA143	DIODE		Q61			DTC144EUA	DIGITAL TRANSISTOR	
D839			DAN202U	DIODE		Q62			DTC124EUA	DIGITAL TRANSISTOR	
D900			DAN202U	DIODE		Q64			2SA1576A	TRANSISTOR	
D901			UDZS6.2B	ZENER DIODE		Q66,67			DTA144EUA	DIGITAL TRANSISTOR	
IC1			S-80943CNMC	ANALOGUE IC		Q68,69			DTC144EUA	DIGITAL TRANSISTOR	
IC7			S-24CS08AFJ-TB	ROM IC		Q70			2SC4081	TRANSISTOR	
IC8			TJA1054	MOS-IC		Q71			2SB1188(Q,R)	TRANSISTOR	
IC9			S-80943CNMC	ANALOGUE IC		Q72			2SA1576A	TRANSISTOR	
IC10			NJM4565MD-ZB	ANALOGUE IC		Q73			2SC4081	TRANSISTOR	
IC16			TC7WH126FU	MOS-IC		Q74			DTA124EUA	DIGITAL TRANSISTOR	
IC17			HA12187FP	ANALOGUE IC		Q700,701			2SC4081	TRANSISTOR	
IC18			S-816A50AMC-T2	ANALOGUE IC		Q702			DTA124EUA	DIGITAL TRANSISTOR	
IC20			BA9743AFV	ANALOGUE IC		Q800,801			UNR511H	TRANSISTOR	
IC21			S-80925CNMC	ANALOGUE IC		Q802			DTC124EUA	DIGITAL TRANSISTOR	

E : Europe K : North America M : Other Areas W : Without Europe

△ Indicates safety critical components.

## PARTS LIST

## SYNTHESIZER UNIT (X14-9490-10)

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
Q803-806			2SC4081	TRANSISTOR			
Q807			DTA143EUA	DIGITAL TRANSISTOR			
Q808			2SC4081	TRANSISTOR			
Q809			DTA124EUA	DIGITAL TRANSISTOR			
Q810			2SB1203-FA	TRANSISTOR			
Q811			2SC4081	TRANSISTOR			
TH800			NTSA0WF104FN6A	THERMISTOR			

## ELECTRIC UNIT (X25-9410-11)

C1-3			CK73GB1C104K	CHIP C	0.10UF	K	
C5			CK73GB1H104K	CHIP C	0.10UF	K	
C6			CK73GB1H103K	CHIP C	0.010UF	K	
C7			CK73GB1C104K	CHIP C	0.10UF	K	
C8			CK73GB1H104K	CHIP C	0.10UF	K	
C9			CK73GB1C104K	CHIP C	0.10UF	K	
C11			CK73GB1H104K	CHIP C	0.10UF	K	
C12,13			CK73GB1H103K	CHIP C	0.010UF	K	
C14,15			CK73GB1C104K	CHIP C	0.10UF	K	
C16			CC73GCH1H471J	CHIP C	470PF	J	
C17-22			CK73GB1C104K	CHIP C	0.10UF	K	
C23			CK73GB1H103K	CHIP C	0.010UF	K	
C24-26			CK73EB0J106K	CHIP C	10UF	K	
C27			CK73GB1H104K	CHIP C	0.10UF	K	
C28			CK73GB1C104K	CHIP C	0.10UF	K	
C29			CK73GB1H103K	CHIP C	0.010UF	K	
C30			CK73EB0J106K	CHIP C	10UF	K	
C31-33			CK73GB1H103K	CHIP C	0.010UF	K	
C34			CK73EB0J106K	CHIP C	10UF	K	
C37			CK73GB1H103K	CHIP C	0.010UF	K	
C38			CK73EB0J106K	CHIP C	10UF	K	
C39			CK73GB1H103K	CHIP C	0.010UF	K	
C40,41			CK73GB1C104K	CHIP C	0.10UF	K	
C42			CK73EB0J106K	CHIP C	10UF	K	
C43			CK73GB1H103K	CHIP C	0.010UF	K	
C44,45			CK73GB1C104K	CHIP C	0.10UF	K	
C49-52			CK73GB1C104K	CHIP C	0.10UF	K	
C53,54			CC73GCH1H180J	CHIP C	18PF	J	
C57			CK73GB1H103K	CHIP C	0.010UF	K	
C58			CC73GCH1H471J	CHIP C	470PF	J	
C59,60			CK73GB1H103K	CHIP C	0.010UF	K	
C61			CK73EB0J106K	CHIP C	10UF	K	
C62			CK73GB1C104K	CHIP C	0.10UF	K	
C63			CK73GB1H103K	CHIP C	0.010UF	K	
C67			CK73GB1H104K	CHIP C	0.10UF	K	
C74			CK73GB1H103K	CHIP C	0.010UF	K	
C76			CK73GB1H103K	CHIP C	0.010UF	K	
C77,78			CK73EB0J106K	CHIP C	10UF	K	
C79			CK73EB1A106K	CHIP C	10UF	K	
C80			CK73EB0J106K	CHIP C	10UF	K	
C81-85			CK73GB1C104K	CHIP C	0.10UF	K	
C86-102			CC73GCH1H510J	CHIP C	51PF	J	
C103,104			CC73GCH1H330J	CHIP C	33PF	J	
C105-107			CC73GCH1H510J	CHIP C	51PF	J	
C109			CK73GB1C104K	CHIP C	0.10UF	K	
C110-113			CC73GCH1H510J	CHIP C	51PF	J	

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
C125-133			CC73GCH1H330J	CHIP C	33PF	J	
C136-141			CC73GCH1H330J	CHIP C	33PF	J	
C148,149			CC73GCH1H330J	CHIP C	33PF	J	
C177,178			CK73GB1C104K	CHIP C	0.10UF	K	
C180			CK73GB1H103K	CHIP C	0.010UF	K	
C183-190			CK73GB1H104K	CHIP C	0.10UF	K	
C192,193			CK73GB1H104K	CHIP C	0.10UF	K	
C194			CC73GCH1H331J	CHIP C	330PF	J	
C201			CK73GB1H103K	CHIP C	0.010UF	K	
C209			CC73GCH1H330J	CHIP C	33PF	J	
C211			CK73GB1H103K	CHIP C	0.010UF	K	
C213			CK73GB1A474K	CHIP C	0.47UF	K	
C216-218			CK73EB0J106K	CHIP C	10UF	K	
CN30			E41-0234-05				SOCKET FOR PIN ASSY
CN32			E40-9706-05				PIN ASSY
L1-3			L40-1001-78				SMALL FIXED INDUCTOR (10UH)
L4			L33-1998-05				SMALL FIXED INDUCTOR (10UH)
L5			L40-1092-78				SMALL FIXED INDUCTOR (1UH)
L6,7			L40-1001-78				SMALL FIXED INDUCTOR (10UH)
L9			L40-1001-78				SMALL FIXED INDUCTOR (10UH)
L12,13			L41-6805-33				SMALL FIXED INDUCTOR (68UH)
X1			L77-2770-05				CRYSTAL RESONATOR (7.08MHZ)
CP1-8			R90-1014-05				MULTI-COMP 100 X4
CP17-22			R90-1014-05				MULTI-COMP 100 X4
CP23			R90-1019-05				MULTI-COMP 100 X2
CP24			R90-0714-05				MULTI-COMP 10K X4
CP25			R90-0726-05				MULTI-COMP 10K X2
CP26			R90-1014-05				MULTI-COMP 100 X4
CP27			R90-1019-05				MULTI-COMP 100 X2
CP28-35			R90-1014-05				MULTI-COMP 100 X4
CP36			R90-1019-05				MULTI-COMP 100 X2
CP37-40			R90-1014-05				MULTI-COMP 100 X4
R1,2			RK73EB2E471J	CHIP R	470	J	1/4W
R3			RK73GB2A103J	CHIP R	10K	J	1/10W
R5			RK73GB2A271J	CHIP R	270	J	1/10W
R6			RK73GH2A301D	CHIP R	300	D	1/10W
R7			RK73GB2A271J	CHIP R	270	J	1/10W
R8			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R12-16			RK73GB2A473J	CHIP R	47K	J	1/10W
R20			RK73GB2A271J	CHIP R	270	J	1/10W
R23			RK73GB2A222J	CHIP R	2.2K	J	1/10W
R26-28			RK73GB2A101J	CHIP R	100	J	1/10W
R29			RK73GB2A302J	CHIP R	3.0K	J	1/10W
R30,31			RK73GB2A101J	CHIP R	100	J	1/10W
R40			RK73GB2A622J	CHIP R	6.2K	J	1/10W
R41-45			RK73GB2A103J	CHIP R	10K	J	1/10W
R46-48			RK73GB2A101J	CHIP R	100	J	1/10W
R56			RK73GB2A104J	CHIP R	100K	J	1/10W
R58			RK73GB2A473J	CHIP R	47K	J	1/10W
R59			RK73GB2A104J	CHIP R	100K	J	1/10W
R76-80			RK73GB2A101J	CHIP R	100	J	1/10W
R81			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R83			RK73GB2A102J	CHIP R	1.0K	J	1/10W

E : Europe K : North America M : Other Areas W : Without Europe

△ Indicates safety critical components.

## PARTS LIST

## ELECTRIC UNIT (X25-9410-11)

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
R85			RK73GB2A103J	CHIP R	10K	J	1/10W
R87			RK73GB2A103J	CHIP R	10K	J	1/10W
R88			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R90-92			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R93-95			RK73GB2A101J	CHIP R	100	J	1/10W
R96			RK73GB2A471J	CHIP R	470	J	1/10W
R97			RK73GB2A101J	CHIP R	100	J	1/10W
R98			RK73GB2A471J	CHIP R	470	J	1/10W
R99			RK73GB2A101J	CHIP R	100	J	1/10W
R100			RK73GB2A103J	CHIP R	10K	J	1/10W
R101			RK73GB2A471J	CHIP R	470	J	1/10W
R102			RK73GB2A103J	CHIP R	10K	J	1/10W
R103			RK73GB2A101J	CHIP R	100	J	1/10W
R110			RK73GB2A101J	CHIP R	100	J	1/10W
R113			RK73GB2A101J	CHIP R	100	J	1/10W
R114			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R115			RK73GB2A101J	CHIP R	100	J	1/10W
R116			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R117			RK73GB2A104J	CHIP R	100K	J	1/10W
R118			RK73GB2A103J	CHIP R	10K	J	1/10W
R119			RK73GB2A104J	CHIP R	100K	J	1/10W
R120-122			RK73GB2A103J	CHIP R	10K	J	1/10W
R123			RK73GB2A104J	CHIP R	100K	J	1/10W
R125-127			RK73GB2A101J	CHIP R	100	J	1/10W
R144			RK73GB2A104J	CHIP R	100K	J	1/10W
R145			RK73GB2A103J	CHIP R	10K	J	1/10W
R148			RK73GB2A302J	CHIP R	3.0K	J	1/10W
R151			RK73GB2A201J	CHIP R	200	J	1/10W
R156,157			RK73GB2A33J	CHIP R	33K	J	1/10W
R166			RK73GB2A103J	CHIP R	10K	J	1/10W
R168-171			RK73GB2A100J	CHIP R	10	J	1/10W
R172			RK73GB2A103J	CHIP R	10K	J	1/10W
R173			RK73GB2A473J	CHIP R	47K	J	1/10W
R233			RK73GB2A242J	CHIP R	2.4K	J	1/10W
R256-258			RK73GB2A103J	CHIP R	10K	J	1/10W
R271-273			RK73GB2A103J	CHIP R	10K	J	1/10W
R276,277			RK73GB2A101J	CHIP R	100	J	1/10W
R279,280			RK73GB2A104J	CHIP R	100K	J	1/10W
R286,287			RK73GB2A103J	CHIP R	10K	J	1/10W
R295			RK73GB2A104J	CHIP R	100K	J	1/10W
R296,297			RK73EB2E471J	CHIP R	470	J	1/4W
R298			RK73GB2A33J	CHIP R	330	J	1/10W
R300-304			RK73GB2A101J	CHIP R	100	J	1/10W
R305			RK73GB2A100J	CHIP R	10	J	1/10W
R308			RK73GB2A471J	CHIP R	470	J	1/10W
R309-311			RK73GB2A103J	CHIP R	10K	J	1/10W
W234			R92-1252-05	CHIP R	0 OHM	J	1/16W
W242			R92-1252-05	CHIP R	0 OHM	J	1/16W
W246			R92-1252-05	CHIP R	0 OHM	J	1/16W
D2			HZM6.8FA	ZENER DIODE			
D3			DAN202U	DIODE			
D4,5			DA204U	DIODE			
IC2			TC9246F	MOS-IC			
IC3			TC7SHU04F	MOS-IC			

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
IC4			HD64412FI	MOS-IC			
IC5			MSM5118165FP60	DRAM IC			
IC6			BU3616K	MOS-IC			
IC7			TC7SHU04F	MOS-IC			
IC10			TC7SH32FU	MOS-IC			
IC11			MSM5118165FP60	DRAM IC			
IC12		*	HD6437041AG57E	MICROCONTROLLER IC			
IC19			MBM29F160TE9R5	ROM IC			
IC20			TC7SHU04F	MOS-IC			
IC22			TC7SHU04F	MOS-IC			
IC23			TC7SET08FU	MOS-IC			
IC26			TA78DS05F	ANALOGUE IC			
IC27			TC7SHU04F	MOS-IC			
Q2,3			DTC124EUA	DIGITAL TRANSISTOR			
Q4,5			DTA124EUA	DIGITAL TRANSISTOR			
A1			W02-3152-05	OSCILLATING MODULE			
VIDEO UNIT (X35-4252-71)							
C1			C92-1486-05	ELECTRO	100UF	25WV	
C2			CK73GB1H103K	CHIP C	0.010UF	K	
C31			C92-1486-05	ELECTRO	100UF	25WV	
C32			CK73GB1H103K	CHIP C	0.010UF	K	
C33			CC73GCH1H101J	CHIP C	100PF	J	
C34			CK73FB1C105K	CHIP C	1.0UF	K	
C35			C93-1222-05	CERAMIC	0.22UF	J	
C37			C93-1127-05	PPS-C	0.10UF	J	
C38,39			C93-1289-05	CERAMIC	10UF	Z	
C40			C92-1610-05	ELECTRO	220UF	16WV	
C41			C92-0671-05	ELECTRO	10UF	16WV	
C42			CK73GB1C104K	CHIP C	0.10UF	K	
C43,44			CK73FB1C154K	CHIP C	0.15UF	K	
C45,46			C92-1610-05	ELECTRO	220UF	16WV	
C47			C92-0671-05	ELECTRO	10UF	16WV	
C48			CK73GB1H103K	CHIP C	0.010UF	K	
C64			CK73GB1H103K	CHIP C	0.010UF	K	
C65			C92-0676-05	ELECTRO	10UF	25WV	
C66			CK73FB1C105K	CHIP C	1.0UF	K	
C67			CK73GB1H103K	CHIP C	0.010UF	K	
C68			C92-0676-05	ELECTRO	10UF	25WV	
C69			CK73FB1C105K	CHIP C	1.0UF	K	
C101			C92-0672-05	ELECTRO	22UF	16WV	
C102,103			CK73GB1H103K	CHIP C	0.010UF	K	
C104			CC73GCH1H561J	CHIP C	560PF	J	
C105,106			CK73GB1C104K	CHIP C	0.10UF	K	
C107			CK73GB1H103K	CHIP C	0.010UF	K	
C108			CC73GCH1H120J	CHIP C	12PF	J	
C109-112			CK73GB1H103K	CHIP C	0.010UF	K	
C113			CC73GCH1E102J	CHIP C	1000PF	J	
C114			CC73GCH1H101J	CHIP C	100PF	J	
C115,116			CK73GB1H103K	CHIP C	0.010UF	K	
C117			CC73GCH1H470J	CHIP C	47PF	J	
C118-120			CK73GB1H103K	CHIP C	0.010UF	K	
C123-125			CK73GB1H103K	CHIP C	0.010UF	K	
C200-202			C92-0671-05	ELECTRO	10UF	16WV	
C203			C92-1488-05	NP-ELECT	10UF	25WV	

E : Europe K : North America M : Other Areas W : Without Europe

△ Indicates safety critical components.

## PARTS LIST

## VIDEO UNIT (X35-4252-71)

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
C204,205			C92-0671-05	ELECTRO	10UF	16WV		C307-310			CK73GB1H102K	CHIP C	1000PF	K	
C206			CK73FB1C105K	CHIP C	1.0UF	K		C313-318			CK73GB1H102K	CHIP C	1000PF	K	
C207			CC73GCH1H331J	CHIP C	330PF	J		C324,325			CK73GB1H102K	CHIP C	1000PF	K	
C208			CC73GCH1E102J	CHIP C	1000PF	J		C328-342			CK73GB1H102K	CHIP C	1000PF	K	
C209			CC73GCH1H151J	CHIP C	150PF	J		C343			CC73GCH1H101J	CHIP C	100PF	J	
C210			CK73GB1H472K	CHIP C	4700PF	K		C344-350			CC73GCH1H121J	CHIP C	120PF	J	
C211			CK73EB1A475K	CHIP C	4.7UF	K		C351,352			CC73GCH1H101J	CHIP C	100PF	J	
C212			CK73FB1C105K	CHIP C	1.0UF	K		C353			CC73GCH1H331J	CHIP C	330PF	J	
C214			C92-0687-05	ELECTRO	2.2UF	50WV		C356			CC73GCH1H271J	CHIP C	270PF	J	
C215,216			C92-0672-05	ELECTRO	22UF	16WV		C357			CC73GCH1H331J	CHIP C	330PF	J	
C217			C92-1610-05	ELECTRO	220UF	16WV		C358			CC73GCH1H680J	CHIP C	68PF	J	
C218-221			CK73GB1H103K	CHIP C	0.010UF	K		C359-361			CC73GCH1H331J	CHIP C	330PF	J	
C222			C92-0687-05	ELECTRO	2.2UF	50WV		C362			CC73GCH1H221J	CHIP C	220PF	J	
C225			CK73FB1C105K	CHIP C	1.0UF	K		C501			CC73GCH1H100D	CHIP C	10PF	D	
C226			CK73FB1C154K	CHIP C	0.15UF	K		C502			CC73GCH1H050C	CHIP C	5.0PF	C	
C227			CK73GB1H104K	CHIP C	0.10UF	K		C503			CC73GCH1H220J	CHIP C	22PF	J	
C228			CK73GB1H223K	CHIP C	0.022UF	K		C504			CC73GCH1H120J	CHIP C	12PF	J	
C229			CK73FB1C105K	CHIP C	1.0UF	K		C505			CK73EB1E105K	CHIP C	1.0UF	K	
C230			CC73GCH1H080D	CHIP C	8.0PF	D		C506			C93-1290-05	CERAMIC	22UF	M	
C232			CK73GB1H103K	CHIP C	0.010UF	K		C507			CK73EB1E105K	CHIP C	1.0UF	K	
C233			C92-0672-05	ELECTRO	22UF	16WV		C508			CC73GCH1H121J	CHIP C	120PF	J	
C234-239			C92-0675-05	ELECTRO	4.7UF	25WV									
C240			C92-0672-05	ELECTRO	22UF	16WV		CN1			E41-0378-05	PIN ASSY			
C241,242			CK73GB1H103K	CHIP C	0.010UF	K		CN2			E40-9781-05	FLAT CABLE CONNECTOR			
C243			C92-0672-05	ELECTRO	22UF	16WV		CN3			E41-0231-05	FLAT CABLE CONNECTOR			
C244-246			CK73FB1C105K	CHIP C	1.0UF	K		CN4			E40-9484-05	PIN ASSY			
C247-249			C92-0687-05	ELECTRO	2.2UF	50WV		CN5			E40-9637-05	FLAT CABLE CONNECTOR			
C250-252			CK73GB1H103K	CHIP C	0.010UF	K		F1			F53-0198-05	FUSE (1.5A)			
C253,254			C92-0671-05	ELECTRO	10UF	16WV									
C255			C92-0672-05	ELECTRO	22UF	16WV		L31			L33-1177-05	CHOKE COIL			
C256			CK73GB1H103K	CHIP C	0.010UF	K		L32			L33-1893-05	CHOKE COIL			
C259			C92-0672-05	ELECTRO	22UF	16WV		L34			L33-1166-05	CHOKE COIL			
C264			CK73GB1H223K	CHIP C	0.022UF	K		L35,36			L19-0731-05	TRANSFORMER FOR CONVERTER			
C265			C92-0672-05	ELECTRO	22UF	16WV		L101			L41-2205-33	SMALL FIXED INDUCTOR (22UH)			
C266			CK73GB1H223K	CHIP C	0.022UF	K		L102			L41-6895-33	SMALL FIXED INDUCTOR (6.8UH)			
C267			CK73FB1C474K	CHIP C	0.47UF	K		L200-203			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
C268			CK73GB1H102K	CHIP C	1000PF	K		L205-209			L41-4705-33	SMALL FIXED INDUCTOR (47UH)			
C269			C92-0676-05	ELECTRO	10UF	25WV		L211-213			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
C270			C92-1821-05	ELECTRO	15UF	35WV		L215			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
C271			CK73GB1H103K	CHIP C	0.010UF	K		L216			L41-4705-33	SMALL FIXED INDUCTOR (47UH)			
C272			C92-0676-05	ELECTRO	10UF	25WV		L501,502			L41-5685-33	SMALL FIXED INDUCTOR (0.56UH)			
C273			CK73GB1H103K	CHIP C	0.010UF	K		X200			L78-0549-05	RESONATOR (15.734KHZ)			
C274			C92-0676-05	ELECTRO	10UF	25WV		X201			L77-2818-05	CRYSTAL RESONATOR (3.579545MHZ)			
C275			C92-0671-05	ELECTRO	10UF	16WV		R1			RK73GB2A103J	CHIP R	10K	J 1/10W	
C276			CK73FB1C105K	CHIP C	1.0UF	K		R2			R92-0365-05	CHIP R	1.0K	J 1/2W	
C277			C92-0687-05	ELECTRO	2.2UF	50WV		R3			RK73GB2A222J	CHIP R	2.2K	J 1/10W	
C286			C92-1486-05	ELECTRO	100UF	25WV		R4			RK73GB2A103J	CHIP R	10K	J 1/10W	
C287			C92-0676-05	ELECTRO	10UF	25WV		R5			RK73EB2E392J	CHIP R	3.9K	J 1/4W	
C288			C92-1486-05	ELECTRO	100UF	25WV		R36			RK73GB2A393J	CHIP R	39K	J 1/10W	
C289			CK73GB1H103K	CHIP C	0.010UF	K		R37			RK73GB2A104J	CHIP R	100K	J 1/10W	
C290			CC73GCH1H390J	CHIP C	39PF	J		R38			RK73GB2A390J	CHIP R	1.0K	J 1/10W	
C291			CC73GCH1H030C	CHIP C	3.0PF	C		R39			RK73GB2A103J	CHIP R	39	J 1/10W	
C292			CC73GCH1H330J	CHIP C	33PF	J		R40			RK73GB2A103J	CHIP R	10K	J 1/10W	
C296-299			CC73GCH1H100D	CHIP C	10PF	D		R41			RK73GB2A473J	CHIP R	47K	J 1/10W	
C306			CK73FB1C105K	CHIP C	1.0UF	K		R42			RK73GB2A823J	CHIP R	82K	J 1/10W	

E : Europe K : North America M : Other Areas W : Without Europe

△ Indicates safety critical components.

## PARTS LIST

VIDEO UNIT (X35-4252-71)

Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description			Desti- nation
R43			R92-3359-05	CHIP R	2.0	F	1/2W	R221			RK73GB2A103J	CHIP R	10K	J	1/10W
R44			R92-0365-05	CHIP R	1.0K	J	1/2W	R222,223			RK73GB2A222J	CHIP R	2.2K	J	1/10W
R45			R92-3359-05	CHIP R	2.0	F	1/2W	R224,225			RK73EB2E220J	CHIP R	22	J	1/4W
R46,47			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R228			RK73GB2A752J	CHIP R	7.5K	J	1/10W
R48			RK73GH2A912D	CHIP R	9.1K	D	1/10W	R229			RK73GB2A272J	CHIP R	2.7K	J	1/10W
R49			RK73GH2A472D	CHIP R	4.7K	D	1/10W	R231			RK73GB2A101J	CHIP R	100	J	1/10W
R50			RK73GB2A103J	CHIP R	10K	J	1/10W	R232-234			RK73EB2E101J	CHIP R	100	J	1/4W
R51			RK73GB2A102J	CHIP R	1.0K	J	1/10W	R235,236			RK73GB2A101J	CHIP R	100	J	1/10W
R54,55			R92-3359-05	CHIP R	2.0	F	1/2W	R240-242			RK73EB2E101J	CHIP R	100	J	1/4W
R56			RK73GB2A472J	CHIP R	4.7K	J	1/10W	R246,247			RK73GB2A103J	CHIP R	10K	J	1/10W
R101,102			RK73GB2A683J	CHIP R	68K	J	1/10W	R248			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R103			RK73GB2A105J	CHIP R	1.0M	J	1/10W	R250			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R104			RK73GB2A472J	CHIP R	4.7K	J	1/10W	R254-257			RK73GB2A103J	CHIP R	10K	J	1/10W
R105			RK73GB2A243J	CHIP R	24K	J	1/10W	R263			R92-2018-05	CHIP R	560	J	1/2W
R106			RK73GB2A153J	CHIP R	15K	J	1/10W	R264			RK73GB2A103J	CHIP R	10K	J	1/10W
R107			RK73GB2A472J	CHIP R	4.7K	J	1/10W	R265,266			RK73GB2A101J	CHIP R	100	J	1/10W
R108			RK73GB2A473J	CHIP R	47K	J	1/10W	R276			RK73GB2A331J	CHIP R	330	J	1/10W
R109			RK73GB2A822J	CHIP R	8.2K	J	1/10W	R280,281			RK73GB2A102J	CHIP R	1.0K	J	1/10W
R110			RK73GB2A272J	CHIP R	2.7K	J	1/10W	R304			RK73GB2A271J	CHIP R	270	J	1/10W
R111-114			RK73GB2A101J	CHIP R	100	J	1/10W	R305,306			RK73GB2A562J	CHIP R	5.6K	J	1/10W
R116,117			RK73GB2A472J	CHIP R	4.7K	J	1/10W	R308			RK73FB2B561J	CHIP R	560	J	1/8W
R119			RK73GB2A101J	CHIP R	100	J	1/10W	R310			RK73GB2A104J	CHIP R	100K	J	1/10W
R121			RK73GB2A472J	CHIP R	4.7K	J	1/10W	R319-321			RK73GB2A221J	CHIP R	220	J	1/10W
R122			RK73GB2A101J	CHIP R	100	J	1/10W	R501			RK73GB2A101J	CHIP R	100	J	1/10W
R123			RK73GB2A272J	CHIP R	2.7K	J	1/10W	R502,503			RK73GB2A392J	CHIP R	3.9K	J	1/10W
R124			RK73GB2A332J	CHIP R	3.3K	J	1/10W	VR30			R32-0244-05	SEMI FIXED VARIABLE RESISTOR (2K)			
R126			RK73GB2A472J	CHIP R	4.7K	J	1/10W	VR101			R32-0244-05	SEMI FIXED VARIABLE RESISTOR (2K)			
R127			RK73GB2A101J	CHIP R	100	J	1/10W	VR102			R32-0235-05	SEMI FIXED VARIABLE RESISTOR (10K)			
R128			RK73GB2A331J	CHIP R	330	J	1/10W	W1			R92-1252-05	CHIP R	0 OHM	J	1/16W
R130			RK73GB2A472J	CHIP R	4.7K	J	1/10W	W3			R92-1252-05	CHIP R	0 OHM	J	1/16W
R132			RK73GB2A472J	CHIP R	4.7K	J	1/10W	W6			R92-1252-05	CHIP R	0 OHM	J	1/16W
R133			RK73GB2A101J	CHIP R	100	J	1/10W	W106-114			R92-1252-05	CHIP R	0 OHM	J	1/16W
R135			RK73GB2A472J	CHIP R	4.7K	J	1/10W	W117			R92-1252-05	CHIP R	0 OHM	J	1/16W
R136			RK73GB2A105J	CHIP R	1.0M	J	1/10W	W120			R92-1252-05	CHIP R	0 OHM	J	1/16W
R137			RK73GB2A101J	CHIP R	100	J	1/10W	W203			R92-1252-05	CHIP R	0 OHM	J	1/16W
R139			RK73GB2A472J	CHIP R	4.7K	J	1/10W	D31			RB060L-40	DIODE			
R140			RK73GB2A561J	CHIP R	560	J	1/10W	D32			MA3110-M	ZENER DIODE			
R141,142			RK73GB2A101J	CHIP R	100	J	1/10W	D62			DAN202U	DIODE			
R143			RK73GB2A561J	CHIP R	560	J	1/10W	D101			MA8051-M	ZENER DIODE			
R148-153			RK73GB2A101J	CHIP R	100	J	1/10W	D102			MA335	VARIABLE CAPACITANCE DIODE			
R158			RK73GB2A472J	CHIP R	4.7K	J	1/10W	D201-206			DA204U	DIODE			
R160			RK73GB2A472J	CHIP R	4.7K	J	1/10W	D208-210			DAN202U	DIODE			
R200			RK73GB2A361J	CHIP R	360	J	1/10W	IC31			TL5001ID	ANALOGUE IC			
R201			RK73GB2A391J	CHIP R	390	J	1/10W	IC101			NJM2107F	ANALOGUE IC			
R202			RK73GB2A182J	CHIP R	1.8K	J	1/10W	IC102			TC160G11AF1146	MOS-IC			
R203			RK73GB2A302J	CHIP R	3.0K	J	1/10W	IC200,201			NJM2535V	ANALOGUE IC			
R204			RK73GB2A102J	CHIP R	1.0K	J	1/10W	IC202			NJW1303V	ANALOGUE IC			
R205			RK73GB2A914J	CHIP R	910K	J	1/10W	IC203			AN2546FH-AV	ANALOGUE IC			
R207			RK73GB2A512J	CHIP R	5.1K	J	1/10W	IC205			S-24C01B	ROM IC			
R208-211			RK73GB2A121J	CHIP R	120	J	1/10W	IC207			NJM4580V	ANALOGUE IC			
R213-215			RK73GB2A101J	CHIP R	100	J	1/10W	IC209			TC7W34FU	MOS-IC			
R216			RK73GB2A182J	CHIP R	1.8K	J	1/10W	IC211			NJU7222U30	ANALOGUE IC			
R217			RK73GB2A272J	CHIP R	2.7K	J	1/10W	IC212			NJU7223DL1-50	ANALOGUE IC			
R219			RK73GB2A105J	CHIP R	1.0M	J	1/10W	IC217			TC7S14F	MOS-IC			
R220			RK73GB2A332J	CHIP R	3.3K	J	1/10W	Q1			2SC4081	TRANSISTOR			

E : Europe K : North America M : Other Areas W : Without Europe

△ Indicates safety critical components.

# PARTS LIST

## VIDEO UNIT (X35-4252-71)

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
Q2			2SB1203-FA	TRANSISTOR							
Q3			DTA124EUA	DIGITAL TRANSISTOR							
Q4			DTC124EUA	DIGITAL TRANSISTOR							
Q31			2SC4081	TRANSISTOR							
Q32			2SA1576A	TRANSISTOR							
Q33			2SJ327Z	FET							
Q35-37			2SD1803	TRANSISTOR							
Q38			DTA124EUA	DIGITAL TRANSISTOR							
Q39			DTC124EUA	DIGITAL TRANSISTOR							
Q40			2SA1576A	TRANSISTOR							
Q41			2SC4081	TRANSISTOR							
Q42			2SJ327Z	FET							
Q43			DTC124EUA	DIGITAL TRANSISTOR							
Q101			2SC2411K	TRANSISTOR							
Q102			DTC124EUA	DIGITAL TRANSISTOR							
Q203			2SC4097	TRANSISTOR							
Q204			2SA1577	TRANSISTOR							
Q205			2SC4081	TRANSISTOR							
Q206			2SA1576A	TRANSISTOR							
Q209,210			DTC124EUA	DIGITAL TRANSISTOR							

E : Europe   K : North America   M : Other Areas   W : Without Europe

△ Indicates safety critical components.

# FGZ000UF2

## SPECIFICATIONS

### Monitor Unit

Screen size .....	7.0 inches wide
Display system .....	Transparent TN LCD panel
Drive system .....	TFT active matrix system
Number of pixels .....	400 H x 234 V x RGB
Effective pixels .....	99.99%
Pixel arrangement .....	RGB striped arrangement
Back lighting .....	Cold cathode tube

### General

Operating voltage .....	13.2V DC (10.8~15.6V)
-------------------------	-----------------------

---

KENWOOD follows a policy of continuous advancements in development.

For this reason specifications may be changed without notice.

Although the effective pixels for the liquid crystal panel is given as 99.99% or more, 0.01% of pixels may not light or may light incorrectly.

---