

# GUITAR MIDI CONVERTER

# G10C

## SERVICE MANUAL

G10C



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006793

YAMAHA CORP.

HAMAMATSU, JAPAN

2K-373 K Printed in Japan '88.5.

## IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

**WARNING:** Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

**IMPORTANT:** The presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

**WARNING:** Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

**IMPORTANT:** Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

This product uses a lithium battery for memory back-up.

**WARNING:** Lithium batteries are dangerous because they can be exploded by improper handling. Observe the following precautions when handling or replacing lithium batteries.

- Leave lithium battery replacement to qualified service personnel.
- Always replace with batteries of the same type.
- When installing on the PC board, solder using the connection terminals provided on the battery cells. Never solder directly to the cells. Perform the soldering as quickly as possible.
- Never reverse the battery polarities when installing.
- Do not short the batteries.
- Do not attempt to recharge these batteries.
- Do not disassemble the batteries.
- Never heat batteries or throw them into fire.

### ADVARSEL!

Lithiumbatteri. Eksplosionsfare.

Udskiftning må kun foretages af en sagkyndig, og som beskrevet i servicemanualen.

## SPECIFICATION

### Internal Memory

Performance memory x 64  
 Velocity curve memory x 4  
 Chain memory x 4  
 TX802 preset data (performance x 64, voice x 64, system x 1)  
 G10C Performance data for TX802 x 64  
 TX81Z preset data (performance x 48, voice x 56, system x 2)  
 G10C Performance data for TX81Z x 48

### External Memory

Yamaha RAM4 data cartridge

### Controls

Gain trimmers x 6,  
 MODE SELECT (CHAIN, PLAY, EDIT, UTILITY, STORE),  
 PARAMETER (◀/INT, ▶/CRT), DATA ENTRY  
 (DEC/-1/NO/OFF, INC/+1/YES/ON), CURSOR (◀, ▶)

### Displays

40-character x 2-line backlit LCD  
 MODE SELECT key LEDs x 5  
 Note ON Indicator LEDs x 6  
 PERFORMANCE NUMBER LED Display

### Front Panel Connector

GUITAR

### Rear Panel Connectors

FOOT CONTROL, FOOT SW, -1, +1,  
 MIDI IN/OUT/THRU

### Dimensions (W x H x D)

480 x 88 x 282 mm (18-7/8" x 3-1/2" x 11-1/8")

### Weight

5.3 kg (11 lbs 11 oz.)

### Power Requirements

USA, Canada 120V  
 General model 220~240V

### Power Consumption

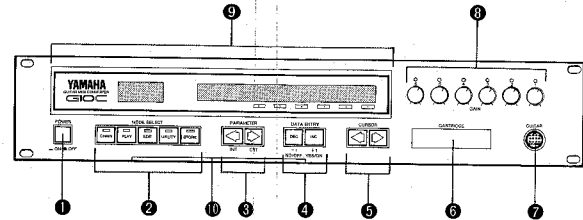
30W

### Accessory

- MIDI cable

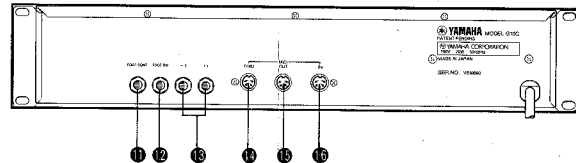
## PANEL LAYOUT

### • Front panel



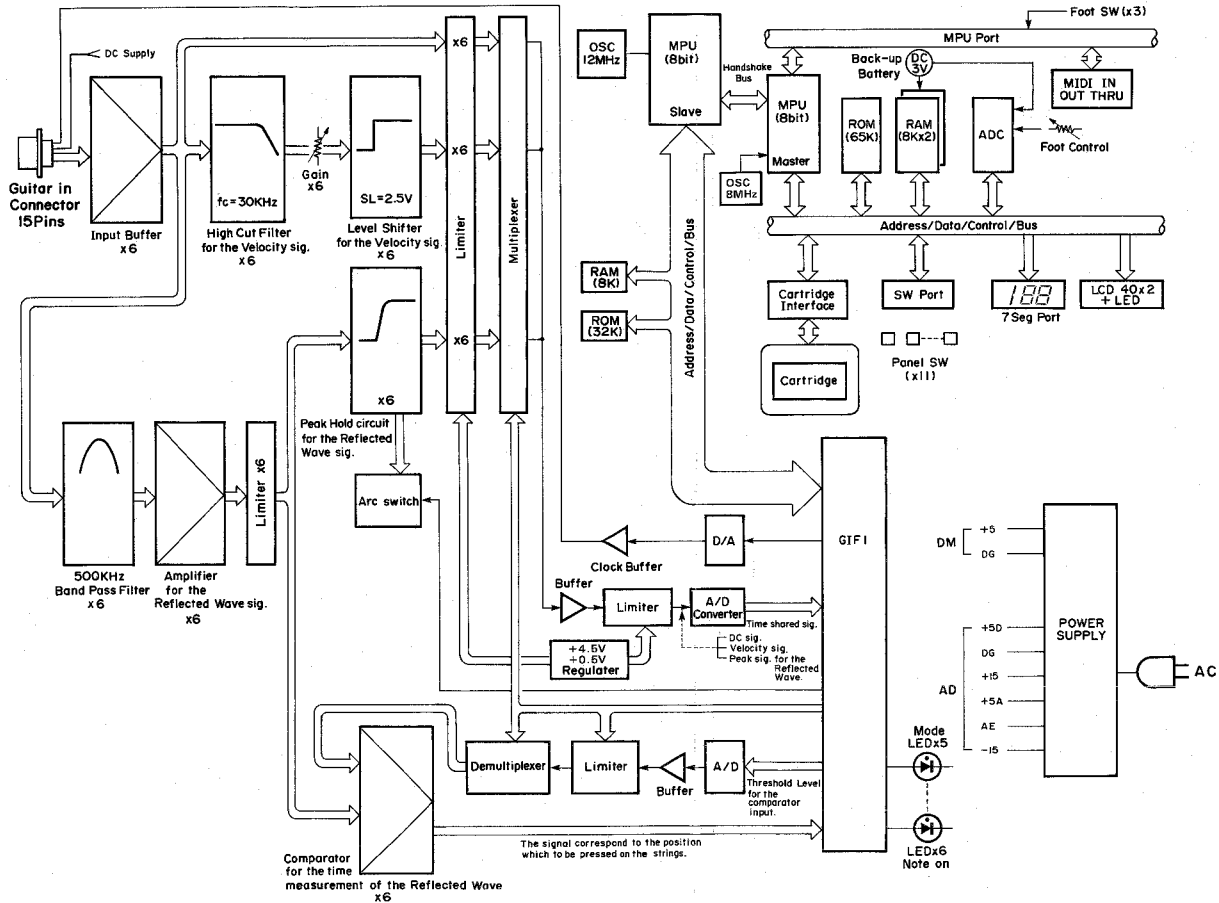
- |                       |                          |
|-----------------------|--------------------------|
| 1 POWER Switch        | 6 CARTRIDGE Slot         |
| 2 MODE SELECT Buttons | 7 GUITAR Input Connector |
| 3 PARAMETER Buttons   | 8 GAIN Controls          |
| 4 DATA ENTRY Buttons  | 9 LCD Display Panel      |
| 5 CURSOR Buttons      | 10 Guide Sheet           |

### • Rear panel

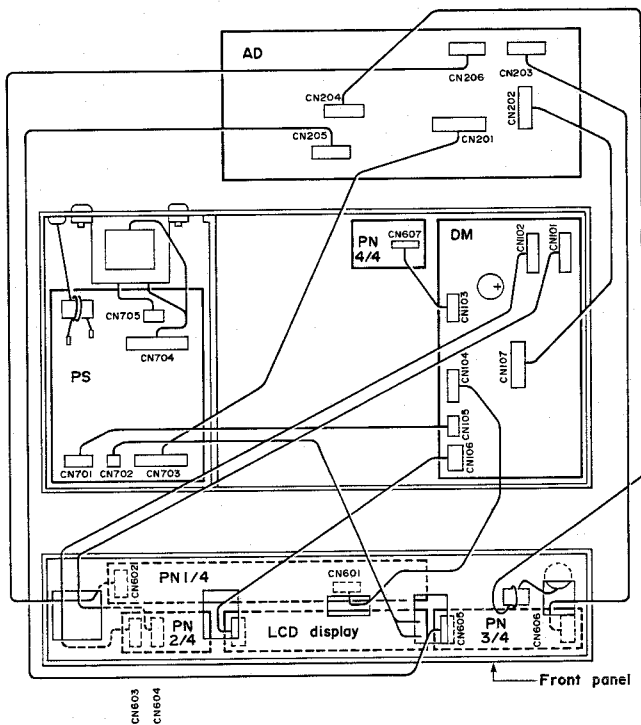


- |                    |                        |
|--------------------|------------------------|
| 11 FOOT CONT. Jack | 14 MIDI THRU Connector |
| 12 FOOT SW Jack    | 15 MIDI OUT Connector  |
| 13 -1 and +1 Jacks | 16 MIDI IN Connector   |

## BLOCK DIAGRAM



# ■CIRCUIT BOARD LAYOUT



## LSI DATA TABLE

### ● M58990P-1 (IG106100) ADC

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	IN3	I	Analog data in	15	2-6	O	Digital data output
2	IN4	I		16	REF(-)		Reference voltage (-)
3	IN5	I		17	2-8	O	Digital data output
4	IN6	I		18	2-4	O	
5	IN7	I		19	2-3	O	
6	START	I	20	2-2	O		
7	EOC	O	End of conversion data output	21	2-1	O	Address latch enable data in
8	2-5	O	Digital data output	22	ALE	I	
9	OE	I	Output enable data in	23	ADD C	I	Address data in
10	CLK	I	Clock data in	24	ADD B	I	
11	Vcc		Power Supply	25	ADD A	I	
12	REF(+)		Reference voltage (+)	26	IN 0	I	Analog data in
13	GND		Ground	27	IN 1	I	
14	2-7	O	Digital data output	28	IN 2	I	

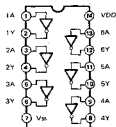
### ● HD63B03YP-N (XD245001) MPU (Master)

### ● HD63C03YP (XD529001) MPU (Slave)

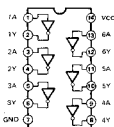
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vss	I	Ground	33	Vcc		DC Supply
2	XTAL	I	Clock	34	V15	O	
3	EXTAL	I		35	A14	O	Address bus
4	MP0	I	36	A13	O		
5	MP1	I	37	A12	O		
6	RES	I	Reset	38	A11	O	
7	STRY	I	Stand-by mode signal	39	A10	O	
8	NMI	I	Non-maskable interrupt	40	A9	O	Ground
9	P20	I/O	Port 2	41	A8	O	
10	P21	I/O		42	Vss		
11	P22	I/O		43	A7	O	
12	P23	I/O		44	A6	O	
13	P24	I/O		45	A5	O	
14	P25	I/O		46	A4	O	Address bus
15	P26	I/O	47	A3	O		
16	P27	I/O	48	A2	O		
17	P50	I/O	49	A1	O		
18	P51	I/O	50	A0	O		
19	P52	I/O	51	D7	I/O	Data bus	
20	P53	I/O	Port 5	52	D6		I/O
21	P54	I/O		53	D5		I/O
22	P55	I/O	54	D4	I/O		
23	P56	I/O	55	D5	I/O		
24	P57	I/O	56	D2	I/O		
25	P60	I/O	57	D1	I/O		
26	P61	I/O	58	D0	I/O		
27	P62	I/O	Port 6	59	BA	O	Bus available
28	P53	I/O		60	LTR	O	Load instruction resistor
29	P64	I/O		61	R/W	O	Read/Write control
30	P65	I/O		62	WR	O	Write
31	P66	I/O		63	RD	O	Read
32	P67	I/O		64	E	O	Enable

## IC BLOCK DIAGRAM

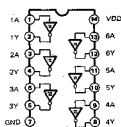
- **MC74HC04N** (IG000470)  
Hex Inverter



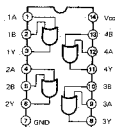
- **SN74HC05N** (IR000550)  
Hex Inverter



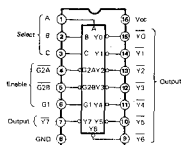
- **MC74HC14N** (IR001470)  
Hex Inverter



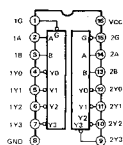
- **MC74HC32N** (IR003270)  
Quad 2 Input OR



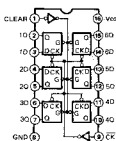
- **MC74HC138N** (IR013870)  
3 to 8 Demultiplexer



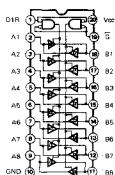
- **MC74HC139N** (IR013970)  
Dual 2 to 4 Demultiplexer



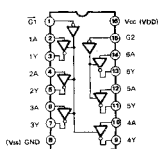
- **MC74HC174N** (IR017470)  
Hex D-Type Flip-Flop



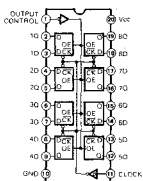
- **MC74HC245N** (IR024570)  
Octal 3-State Bus Transceiver



- **MC74HC367N** (IR036770)  
Hex 3-State Bus Buffer



- **TC40H374P** (IR078600)  
Octal 3-State D-Type Flip-Flop





## DISASSEMBLY PROCEDURE

### 1. Removal of the Top Cover

- Remove the 10 screws **A** (3 × 8 bind head screw) and remove the top cover by lifting it up. (Refer to Fig. 1)

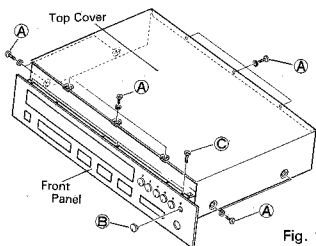


Fig. 1

### 2. Removal of the Front Panel

- Remove the top cover. (Refer to previous item)
- Pull the 6 knobs **B** out from the shaft of the each variable resistor. (Refer to Fig. 1)
- Remove the 3 screws **C** (3 × 8 bind head screw). (Refer to Fig. 1)
- Remove the 6 screws **D** (3 × 8 bind head screw) on the front edge of the bottom cover, and remove the front panel. (Refer to Fig. 2)

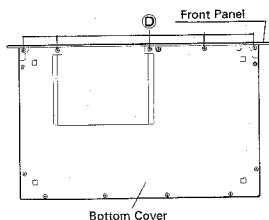


Fig. 2

### 3. Removal of the AD Circuit Board.

- Remove the top cover. (Refer to item 1)
- Remove the 6 screws **E** (3 × 8 bind head screw). (Refer to Fig. 3)
- Lift the AD circuit board up, and disconnect all connectors on the circuit board.
- Take the AD circuit board out of the unit.

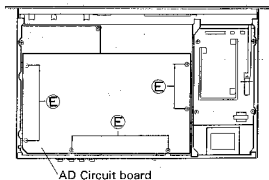


Fig. 3

### 4. Removal of the DM Circuit Board

- Remove the top cover and the front panel. (Refer to item 1, and 2)
- Pull the cartridge ass'y **F** out from the DM circuit board. (Refer to Fig. 4)
- Remove the 4 hexagonal nuts **G** (#9) on the rear panel. (Refer to Fig. 5)
- Remove the 4 screws **H** (3 × 8 bind head screw). (Refer to Fig. 6)
- Lift the board up while pushing the hook of the PCB support **J**. (Refer to Fig. 6)
- Disconnect all connectors on the circuit board.
- Slide the board ahead slightly, and take it out of the unit.

## 5. Removal of the PS Circuit Board

- Remove the top cover. (Refer to item 1)
- Remove 4 screws  $\text{K}$  ( $3 \times 8$  bind head screw). (Refer to Fig. 6)
- Lift the board up and slide it back slowly while lifting the rod  $\text{L}$  for the power switch up slightly so that the push button through the hole on the sub panel, and take it out of the unit. (Refer to Fig. 6)
- Disconnect all connectors on the circuit board.

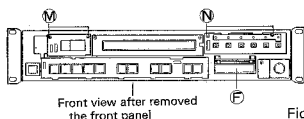


Fig. 4

## 6. Removal of the PN Circuit Board

### 6-1 Removal of the PN1/4 Circuit Board.

- Remove the top cover. (Refer to item 1)
- Remove the front panel. (Refer to item 3)
- Remove the AD circuit board. (Refer to item 3)
- Disconnect the connector on the AD and the DM circuit boards for the PN1/4 circuit board, and take the PN1/4 circuit board out of the unit.

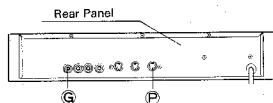


Fig. 5

### 6-2 Removal of the PN2/4 Circuit Board

- Remove the top cover, front panel and the AD circuit board as same as previous item.
- Disconnect the connectors on the DM circuit board for the PN2/4 circuit board.
- Remove the 2 screws  $\text{M}$  ( $3 \times 8$  bind head screw). (Refer to Fig. 4)
- Lift the PN2/4 circuit board up slightly, and take it out of the unit.

### 6-3 Removal of the PN3/4 Circuit Board

- Remove the top cover, front panel and the AD circuit board as same as previous item.
- Disconnect the connectors on the AD circuit board for the PN3/4 circuit board.
- Remove the 2 screws  $\text{N}$  ( $3 \times 8$  bind head screw). (Refer to Fig. 4)
- Lift the PN3/4 circuit board up slightly and take it out of the unit.

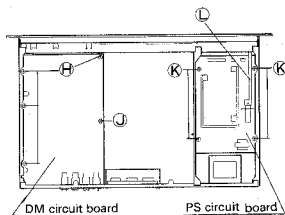


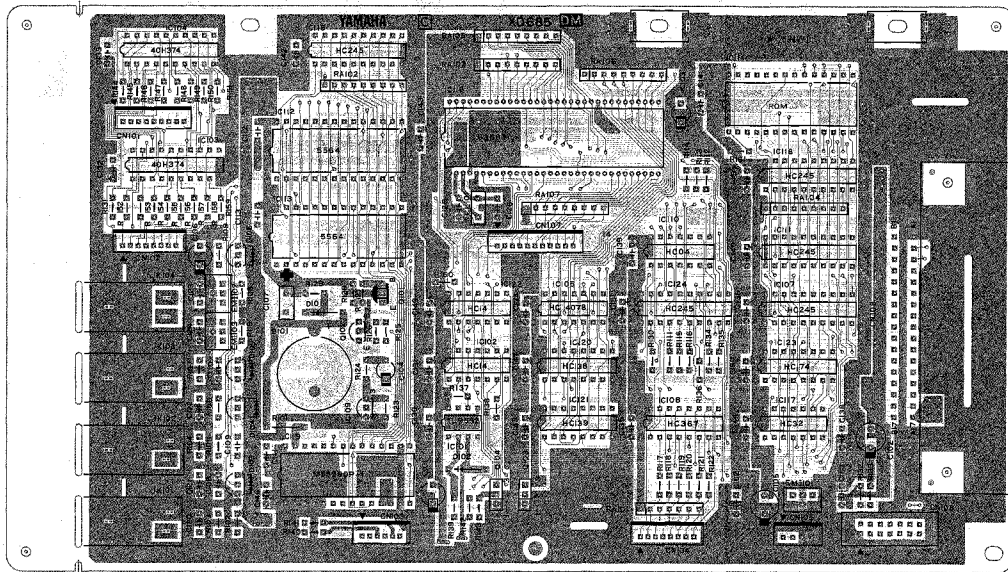
Fig. 6

### 6-4 Removal of the PN4/4 Circuit Board.

- Remove the top cover and AD circuit board.
- Disconnect the connector on the DM circuit board for the PN4/4 circuit board.
- Remove the 2 screws  $\text{P}$  ( $3 \times 8$  bind head screw), and take the PN4/4 circuit board out of the unit. (Refer to Fig. 5)

# ■ CIRCUIT BOARDS

## ● DM Circuit Board



Notes) ※ Circuit Board

DM (VE451000) XD685C0

Components Side (部品裏)

## 1. IC

IC102, 122:	MC74HC14N (IR001470) INV
IC103, 104:	TC40H274P (IG078600) D.FF
IC105:	TC74HC4039P (IR407800) DR/NOR
IC106:	MC74HC367N (IR038770) BUS DRIVER
IC107, 111, 115, 118, 124:	MC74HC245N (IR024570) BUS DRIVER
IC108:	FST318S-2 (IG116200) SYSTEM RESET
IC110:	MC74HC04N (IR000470) INV
IC112, 113:	TC5564APL-15 (XC890001) SRAM
TC114:	V1.00 (XD732900) SPACOM
IC116:	HD68B03VP-N (XD045001) MPU
IC117:	MC74HC32N (IR003270) OR
IC119:	M5890P-1 (IG108100) ADC
IC120:	MC74HC139N (IR013970) DECODER
IC121:	MC74HC139N (IR013970) DECODER
IC123:	MC74HC174N (IR017470) D.FF

## 2. Photo Coupler

IC101:

TLP562 (IK000470)

## 3. Transistor

Q101:

Q102:

Q103, 104:

2SA860 O.Y (IA095010)

2SC1815 Y (IC181520)

DTC143XF (VA024600)

## 4. Diode

D101, 102:

D103~106:

5. Resistor Array

RA101:

RA102, 103:

RA104:

RA105~107:

6. Ceramic Resonator

CL101:

7. EMI Filter

EMI101~103:

8. Lithium Battery

BA101:

9. Jack

J101~103

J104:

1SS133 (IF003450)

MC581 0.3A X2 (IF005120)

RML56-472J (VA220500)

RML58-472J (VB594000)

RML58-472J (VA238900)

RML58-103J (KZ04730)

8.00M CS48.00MT (VB817500)

LS MT Y232NB (FZ006970)

CR2032-P5-2 (VB436900)

HLJ0544 (LB301900) MONAURAL

HLJ0544 (LB302070) STEREO

## CN1

Pin No.	Pin Name	Wire Color	Destination
1	+5V	RE	PN-CN4-1
2	L1C	WH	PN-CN4-2
3	L1g	WH	PN-CN4-3
4	L1d	WH	PN-CN4-4
5	L1e	WH	PN-CN4-5
6	L2c	WH	PN-CN4-6
7	L2d	WH	PN-CN4-7
8	L3c	WH	PN-CN4-8
9	L2e	WH	PN-CN4-9

## CN2

Pin No.	Pin Name	Wire Color	Destination
1	L2b	RE	PN-CN3-1
2	L2a	WH	PN-CN3-2
3	L2g	WH	PN-CN3-3
4	L2f	WH	PN-CN3-4
5	L3b	WH	PN-CN3-5
6	L1f	WH	PN-CN3-6
7	L1a	WH	PN-CN3-7
8	L1b	WH	PN-CN3-8

## CN3

Pin No.	Pin Name	Wire Color	Destination
1	MT-	RE	PN-CN7-1
2	MT+	WH	PN-CN7-2
3	MO+	WH	PN-CN7-3
4	MO-	WH	PN-CN7-4
5	MT+	WH	PN-CN7-5
6	MT-	WH	PN-CN7-6

## CN4

Pin No.	Pin Name	Wire Color	Destination
1	SD	RE	PN-CN1-1
2	BD	WH	PN-CN1-2
3	B1	WH	PN-CN1-3
4	B2	WH	PN-CN1-4
5	B3	WH	PN-CN1-5
6	B4	WH	PN-CN1-6
7	B5	WH	PN-CN1-7
8	S1	WH	PN-CN1-8

## CN5

Pin No.	Pin Name	Wire Color	Destination
1	+5	RE	PS-CN1-1
2	+5	WH	PS-CN1-2
3	E	WH	PS-CN1-3
4	E	WH	PS-CN1-4

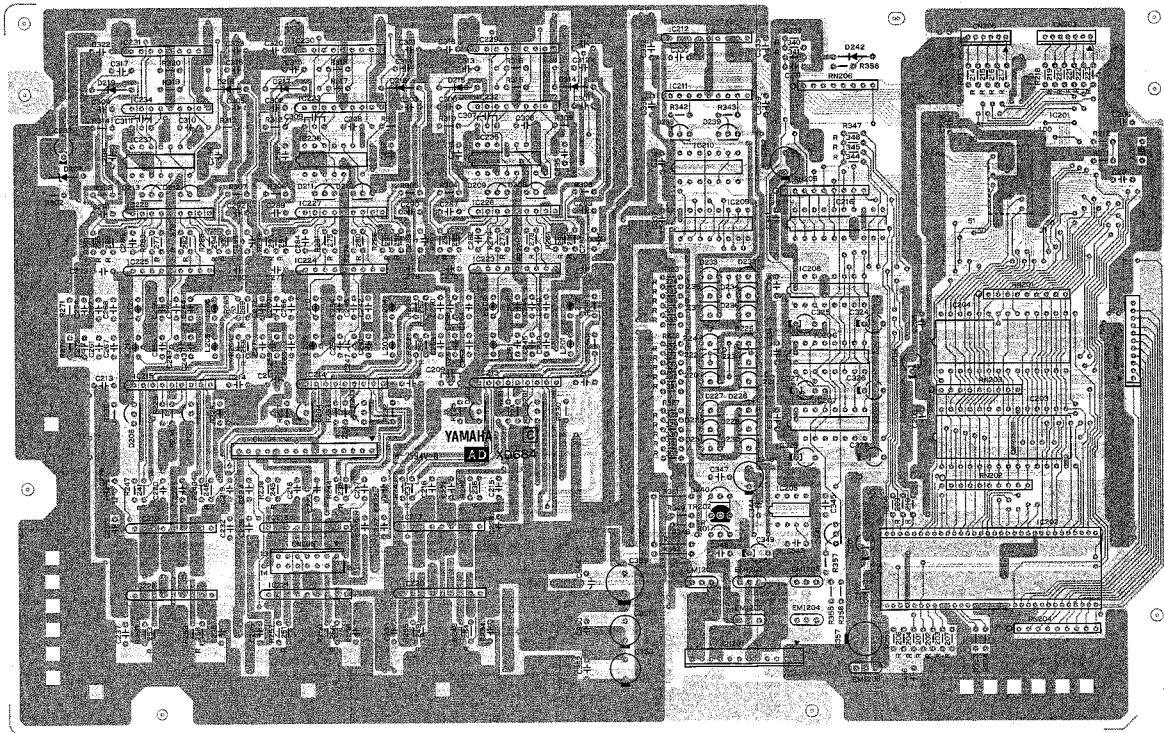
## CN6

Pin No.	Pin Name	Wire Color	Destination
1	V <sub>cc</sub>		LCD
2	V <sub>dd</sub>		LCD
3	V <sub>ee</sub>		LCD
4	RS		LCD
5	R/W		LCD
6	E		LCD
7	DB0		LCD
8	DB1		LCD
9	DB2		LCD
10	DB3		LCD
11	DB4		LCD
12	DB5		LCD
13	DB6		LCD
14	DB7		LCD

## CN7

Pin No.	Pin Name	Wire Color	Destination
1	CS	RE	AD-CN2-1
2	IS	WH	AD-CN2-2
3	HDO	WH	AD-CN2-3
4	HD1	WH	AD-CN2-4
5	HD2	WH	AD-CN2-5
6	HD3	WH	AD-CN2-6
7	HD4	WH	AD-CN2-7
8	HD5	WH	AD-CN2-8
9	HD6	WH	AD-CN2-9
10	HD7	WH	AD-CN2-10
11	RES	WH	AD-CN2-11

## ●AD Circuit Board



Notes

\* Circuit Board AD [VE410100] XD98400

1. IC  
 IC201 : LC9153A-156 (XD487A00) INT. F  
 IC202 : HD63C03VP (XB529001) MPU  
 IC203 : V1.00 (XD989B00) EPROM  
 IC204 : TC5656APL-12 (XD745A00) SRAM  
 IC205 : LM310N (IG049300) OP AMP  
 IC206-209 : MC74HC4051N (R405170) MULTIPLEXER  
 IC210 : SN74HC25N (IR000550) INV  
 IC211, 226, -234 : NJM0725 (XA778001) OP AMP  
 IC212 : NJM4556S (IG077400) OP AMP

- IC213 - 215, 223 - 225 :  
 IC216 :  
 IC217 - 222 :  
 IC225 - 237 :  
 2. Transistor  
 TR201 :  
 TR202 :  
 3. Diode Array  
 D201 - 206, 208 - 213, 220 - 241 :  
 D214 - 219, 242 :

- NJM2068S (XA956001) OP AMP  
 AD7820KN (XD696A00) AD CONV  
 NJM4558S (IG076800) OP AMP  
 NJM3190 (XB251001) COMPARETOR  
 2SC2320 F (IC232000)  
 2SA999 F (IA099550)  
 MC931 0.3A X2 (IF005120)  
 1S5133 (IF003450)

4. Zener Diode  
 D207 :  
 5. Resistor Array  
 RN201, 204 :  
 RN202, 203, 205 :  
 RN206 :  
 6. Ceramic Resonator  
 X201 :  
 7. EMI Filter  
 EM1201 - 206 :

RD5.1EB2 5.1V (IF005700)

RMLSB.1033 (H2004730)

RMLSB.4724 (VB594000)

RK06L103 (H2004780)

LSM CSA12.0MT (ID007700)

LS MT Y223NB (FZ005920)

CN1

Pin No.	Pin Name	Wire Color	Destination
1	DE	RE	PS - CN3 - 1
2	DE	WH	PS - CN3 - 2
3	+5	WH	PS - CN3 - 3
4	+5	WH	PS - CN3 - 4
5	+5	WH	PS - CN3 - 5
6	+5	WH	PS - CN3 - 6
7	+15	WH	PS - CN3 - 7
8	-15	WH	PS - CN3 - 8
9	AE	WH	PS - CN3 - 9
10	AE	WH	PS - CN3 - 10
11	+15	WH	PS - CN3 - 11
12	+15	WH	PS - CN3 - 12

CN2

Pin No.	Pin Name	Wire Color	Destination
1	IS	RE	DM - CN7 - 1
2	OS	WH	DM - CN7 - 2
3	PR0	WH	DM - CN7 - 3
4	PR1	WH	DM - CN7 - 4
5	PR2	WH	DM - CN7 - 5
6	PR3	WH	DM - CN7 - 6
7	PR4	WH	DM - CN7 - 7
8	PR5	WH	DM - CN7 - 8
9	PR6	WH	DM - CN7 - 9
10	PR7	WH	DM - CN7 - 10
11	RES	WH	DM - CN7 - 11

CN3

Pin No.	Pin Name	Wire Color	Destination
1	LS	RE	PN - CN8 - 1
2	L4	WH	PN - CN8 - 2
3	L3	WH	PN - CN8 - 3
4	L2	WH	PN - CN8 - 4
5	L1	WH	PN - CN8 - 5
6	L0	WH	PN - CN8 - 6
7	+5V	WH	PN - CN8 - 7

CN4

Pin No.	Pin Name	Wire Color	Destination
1	ST1	RE	NC
2	S1	RE	Guitar In Connector 2
3	S2	WH	NC
4	S2	WH	Guitar In Connector 4
5	S3	WH	NC
6	S3	WH	Guitar In Connector 6
7	S4E	WH	NC
8	S4	WH	Guitar In Connector 8
9	S5E	WH	NC
10	S5	WH	Guitar In Connector 10
11	S6	WH	Guitar In Connector 11
12	S6	WH	Guitar In Connector 12
13	+15	WH	Guitar In Connector 13
14	CK	WH	Guitar In Connector 14
15	E	BL	Guitar In Connector earth Lug

CN5

Pin No.	Pin Name	Wire Color	Destination
1	V1	WH	PN - CN5 - 1
2	V1	WH	PN - CN5 - 2
3	V62	WH	PN - CN5 - 3
4	V63	WH	PN - CN5 - 4
5	V52	WH	PN - CN5 - 5
6	V53	WH	PN - CN5 - 6
7	V42	WH	PN - CN5 - 7
8	V43	WH	PN - CN5 - 8
9	V32	WH	PN - CN5 - 9
10	V33	WH	PN - CN5 - 10
11	V22	WH	PN - CN5 - 11
12	V23	WH	PN - CN5 - 12
13	V12	WH	PN - CN5 - 13
14	V13	WH	PN - CN5 - 14

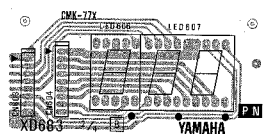
CN6

Pin No.	Pin Name	Wire Color	Destination
1	L1	RE	PN - CN2 - 1
2	L2	WH	PN - CN2 - 2
3	L2	WH	PN - CN2 - 3
4	L1	WH	PN - CN2 - 4
5	L0	WH	PN - CN2 - 5
6	+5V	WH	PN - CN2 - 6

Components Side (部品側)

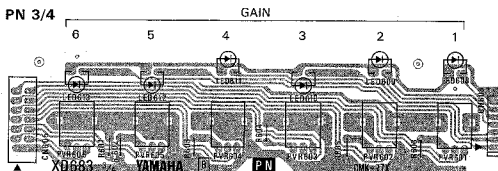
## ● PN Circuit Board

## PN 2/4



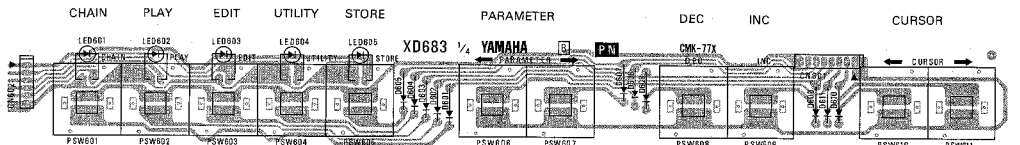
Components Side (部品側)

## PN 3/4



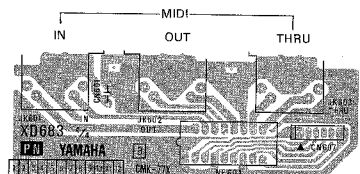
Components Side (部品側)

## PN 1/4



Components Side (部品側)

## PN4/4



Components Side (部品側)

## Notes)

※ Circuit Board

1. Diode  
D601 - 611 :2. LED  
LED601 - 605 :  
LED606 :  
LED607 :  
LED608 - 613 :3. Variable Resistor  
VR601 - 606 :4. Push Switch  
PSW601 - 611 :5. Filter  
NF6016. Jack  
J601 - 603

PN (VE579500) XD683C0

1SS133 (IF003450)

LN242RP RE (VA262300) SW INDICATOR  
SL-1199 (VF145800) 1 FIGURE  
SL-1263H (VC664700) 2 FIGURES  
TLR124 RE (IF001190) GAIN INDICATOR

A10K EVU-F2A (VE614100) GAIN VR

KHH10908 (KA907030) PANEL SW

D-03C (VA928000) NOISE FILTER

5P TCS4650 (LB500590) DIN JACK

## CN1

Pin No.	Pin Name	Wire Color	Destination
1	S0	RE	DM - CN4 - 1
2	B0	LWH	DM - CN4 - 2
3	B1	WH	DM - CN4 - 3
4	B2	WH	DM - CN4 - 4
5	B3	WH	DM - CN4 - 5
6	B4	WH	DM - CN4 - 6
7	B5	WH	DM - CN4 - 7
8	S1	WH	DM - CN4 - 8

## CN6

Pin No.	Pin Name	Wire Color	Destination
1	L5	RE	AD - CN3 - 1
2	L4	WH	AD - CN3 - 2
3	L3	WH	AD - CN3 - 3
4	L2	WH	AD - CN3 - 4
5	L1	WH	AD - CN3 - 5
6	L0	WH	AD - CN3 - 6
7	+5V	WH	AD - CN3 - 7

## CN7

Pin No.	Pin Name	Wire Color	Destination
1	M1+	RE	DM - CN2 - 1
2	M1-	WH	DM - CN2 - 2
3	MC+	WH	DM - CN3 - 3
4	MC-	WH	DM - CN3 - 4
5	MT+	WH	DM - CN3 - 5
6	MT-	WH	DM - CN3 - 6

## CN2

Pin No.	Pin Name	Wire Color	Destination
1	L4	RE	AD - CN6 - 1
2	L3	WH	AD - CN6 - 2
3	L2	WH	AD - CN6 - 3
4	L1	WH	AD - CN6 - 4
5	L0	WH	AD - CN6 - 5
6	+5V	WH	AD - CN6 - 6

## CN3

Pin No.	Pin Name	Wire Color	Destination
1	L2b	RE	DM - CN2 - 1
2	L2a	WH	DM - CN2 - 2
3	L2c	WH	DM - CN2 - 3
4	L2f	WH	DM - CN2 - 4
5	L3b	WH	DM - CN2 - 5
6	L1f	WH	DM - CN2 - 6
7	L1b	WH	DM - CN2 - 7
8	L1d	WH	DM - CN2 - 8

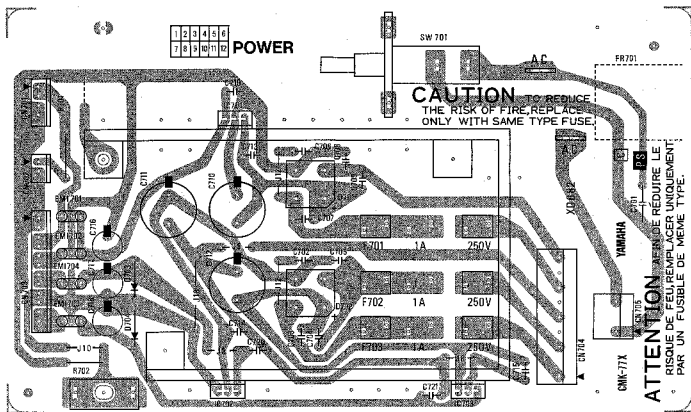
## CN4

Pin No.	Pin Name	Wire Color	Destination
1	+5V	RE	DM - CN1 - 1
2	L1C	WH	DM - CN1 - 2
3	L1a	WH	DM - CN1 - 3
4	L1d	WH	DM - CN1 - 4
5	L1e	WH	DM - CN1 - 5
6	L2c	WH	DM - CN1 - 6
7	L2d	WH	DM - CN1 - 7
8	L3c	WH	DM - CN1 - 8
9	L2a	WH	DM - CN1 - 9

## CN5

Pin No.	Pin Name	Wire Color	Destination
1	V1	AD	AD - CN5 - 1
2	V1	AD	AD - CN5 - 2
3	V62	AD	AD - CN5 - 3
4	V63	AD	AD - CN5 - 4
5	V52	AD	AD - CN5 - 5
6	V63	AD	AD - CN5 - 6
7	V42	AD	AD - CN5 - 7
8	V43	AD	AD - CN5 - 8
9	V32	AD	AD - CN5 - 9
10	V33	AD	AD - CN5 - 10
11	V22	AD	AD - CN5 - 11
12	V23	AD	AD - CN5 - 12
13	V12	AD	AD - CN5 - 13
14	V13	AD	AD - CN5 - 14

## ● PS Circuit Board



Components Side (部品側)

## Notes)

※ Circuit Board PS (VE579600) J XD682C0  
 PS (VE580000) U, C XD982C0  
 PS (VE580700) H, D XD682C0

## 1. IC

IC701 : AN7805F (XD338001) 5V REG.  
 IC702 : AN7915F (XB450001) -15V REG.  
 IC703 : AN7815F (XB449001) 15V REG.

## 2. Diode Stack

D701, 702 : S2VB20 2A 200V (IH001120)  
 D703, 704 : 10E-1 (IH000590)

## 3. EMI Filter

EMI701 - 704 LS MT Y223NB (FZ005920)

## 4. Push Switch

SW701 ESB-8213A (KAB03610) POWER

## 5. Fuse

Models	F701	F702, 703
Japanese	▽ 1A 250V	▽ 1A 250V
U.S. and Canadian	Ⓢ ST4 1A 250V	Ⓢ ST4 1A 250V
European	Ⓢ T1A 250V	Ⓢ T1A 250V

## CN1

Pin No.	Pin Name	Wire Color	Destination
1	+5V	RE	DM - CN5 - 1
2	+5V	WH	DM - CN5 - 2
3	D.G	WH	DM - CN5 - 3
4	D.G	WH	DM - CN5 - 4

## CN2

Pin No.	Pin Name	Wire Color	Destination
1	LA	RE	LCD
2	LK	WH	LCD

## CN3

Pin No.	Pin Name	Wire Color	Destination
1	D.G	RE	AD - CN1 - 1
2	D.G	WH	AD - CN1 - 2
3	+5V	WH	AD - CN1 - 3
4	+5V	WH	AD - CN1 - 4
5	+5V	WH	AD - CN1 - 5
6	+5V	WH	AD - CN1 - 6
7	-15V	WH	AD - CN1 - 7
8	-15V	WH	AD - CN1 - 8
9	A.G	WH	AD - CN1 - 9
10	A.G	WH	AD - CN1 - 10
11	+15V	WH	AD - CN1 - 11
12	+15V	WH	AD - CN1 - 12

## CN4

Pin No.	Pin Name	Wire Color	Destination
1	1	RE	P. Transformer
2	2	RE	P. Transformer
3	3		
4	4	BL	P. Transformer
5	5		
6	6	BE	P. Transformer
7	7		
8	8	BE	P. Transformer
9			
10			

## CN5

Pin No.	Pin Name	Wire Color	Destination
1	2	GY	P. Transformer
2	1	*	P. Transformer

\* J(VE), UC(BR), EV(V)

## ■ ERROR MESSAGES

### 1. Store Error Messages

**Memory protected!**

You have attempted to STORE to an internal memory location without first turning the G10C memory protect function OFF.

**CRT not ready!**

You have attempted to store to a cartridge memory location but a cartridge is not plugged into the G10 cartridge slot, or the cartridge is not properly inserted.

**CRT format error!**

You have attempted to store to a cartridge that is not properly formatted for G10C performance data.

**CRT bank unavail!**

You have attempted to store to a bank that is not available on the cartridge.

**CRT protected!**

You have attempted to store to a cartridge memory location but the cartridge MEMORY PROTECT switch is set to ON.

**CRT store error!**

An undefined error has occurred during the cartridge store operation. Try again or try a different cartridge.

### 2. MIDI Error Messages

**\*\* MIDI data error!**

A framing or overrun error has occurred.

**\*\* MIDI receive buffer full!**

Too much MIDI data was received all at once.

**\*\* MIDI checksum error!**

A data error has occurred during the data transfer.

**\*\* MIDI bulk rejected by memory protect!**

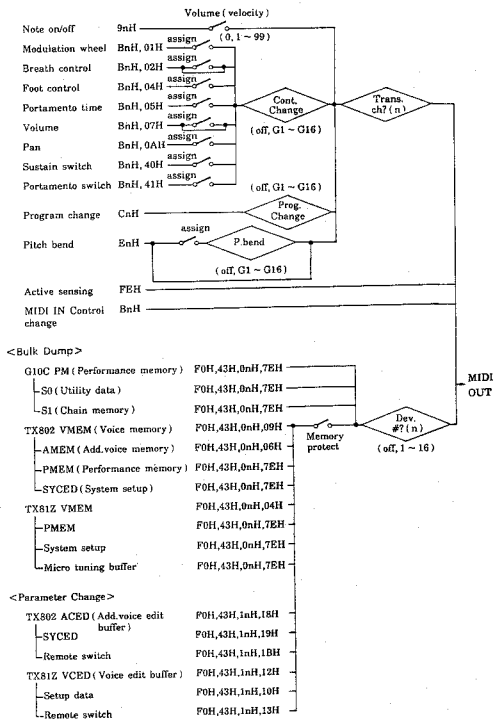
The G10C memory protect function is ON and the bulk data cannot be received.

**\*\* MIDI bulk rejected by dev# conflict!**

The device number of the transmitting device is not set to the same number as the G10C.

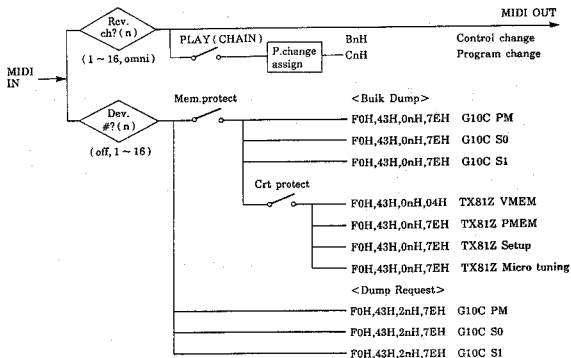
# MIDI DATA FORMAT

## 1. Transmission Conditions





## 2. Reception Conditions



## 3. Channel Message

### 3-1. Transmission

#### 3-1-1. Note ON/OFF

Transmission note range = C-2 – G8

Transmission velocity range = 0 – 127 (NOTE ON only)

NOTE ON = 0 is interpreted as NOTE OFF.

#### 3-1-2. Control Change

According to the functions assigned to the various controllers, control change data is transmitted on the currently set transmit channel as shown in the chart below.

Control No.	Parameter	Data Range
1	Modulation wheel	0 ... 127
2	Breath control	0 ... 127
4	Foot control	0 ... 127
5	Portamento time	0 ... 127
7	Volume	0 ... 127
10	Pan	0 ... 127
64	Sustain switch	0(off), 127(on)
65	Portamento switch	0(off), 127(on)

When a global channel between G1 and G16 is set, all control change data is transmitted on that channel.

Control change data received on the set receive channel is merged with internally generated data and transmitted via the MIDI OUT connector.

**3-1-3. Program Change**

When a new program is selected, the program change number assigned to that memory location is transmitted.

When a global channel between G1 and G16 is set, the program change number assigned to the 6th string is transmitted on that channel.

**3-1-4. Pitch Bend**

Pitch bend data is transmitted on the set transmission channel with 7-bit resolution. When a global channel is set, arm data is all transmitted on that channel.

**3-2. Reception****3-2-1. Control Change**

Control change data is received on the set reception channel.

**3-2-2. Program Change**

In the PLAY or CHAIN modes, program change numbers received on the set receive channel cause selection of the corresponding performance memory location or-chain step.

Receivable program change numbers and the memory locations they select are shown in the chart below.

Mode	Program Number	Performance Number
INT/CRT	1~64	INT1~64
	65~128	CRT1~64*
P1	1~64	101~164
	65~128	101~164
P2, P3	1~24	101~124
	25~48	101~124
	-	(Repeat every 24 performances)
	121~128	101~108
CHAIN	1~4	A~D

\* If no cartridge is inserted, repetition begins from INT1.

**4. System Exclusive Message****4-1. Bulk Dump**

The following bulk dump types are provided.

- (1) TX802 voice memory (VMEM) & additional voice memory (AMEM).
- (2) TX81Z voice memory (VMEM).
- (3) G10C performance memory (PM).
- (4) TX802 performance memory (PMEM).
- (5) TX81Z performance memory (PMEM).
- (6) G10C utility (S0).
- (7) G10C chain (S1).
- (8) TX802 system setup (SYCED).
- (9) TX81Z setup data.

**4-1-1. TX802 VMEM & AMEM Bulk Dump**

When "TX802all" of the TX SETUP mode is executed, the data for the 64 preset voices contained in the G10C is transmitted in two groups: 1-32 and 33-64. Transmission follows the sequence given below.

- 1) Voice block parameter change (block = 0).
- 2) AMEM bulk data (1-32).
- 3) VMEM bulk data (1-32).
- 4) Voice block parameter change (block = 1).
- 5) AMEM bulk data (33-64).
- 6) VMEM bulk data (33-64).

**4-1-2. TX81Z VMEM Bulk Dump**

When "81Zall" of the TX SETUP mode is executed, the data for the 32 preset voice contained in the G10C is transmitted. Further, when the utility mode CRT TRANSMIT or CRT RECEIVE functions are executed, data for 32 voices is transferred between the TX81Z and an appropriately formatted data cartridge plugged into the G10C cartridge slot.

**4-1-3. G10C PM Bulk Dump**

Data for the 64 G10C internal performance memory locations is transmitted or received in the format shown below.

STATUS	11110000	F0H
ID	01000011	43H
SUB-STATUS	0000nnnn	0nH (n=device number)
FORMAT NUMBER	01111110	7EH
BYTE COUNT (MSB)	00011100	1CH
BYTE COUNT (LSB)	01001010	4AH
HEADER	01001100	4CH "L"
	01001101	4DH "M"
	00100000	20H " "
	00100000	20H " "
	00111000	38H "8"
	00110101	35H "5"
	00110000	30H "0"
	00111000	38H "8"
	01010000	50H "P"
	01001101	4DH "M"
DATA	0ddddddd	
	0ddddddd	
CHECKSUM	0eeeeeee	
EOX	11110111	F7H

Data size=3658 bytes, Total bulk size=3666 bytes

- Refer to the G10C Parameter Lists for details on the data contents.

**4-1-4. TX802 PMEM Bulk Dump**

When "802all" of the TX SETUP mode is executed, the 64 preset performance data groups contained in the G10C are transmitted.

**4-1-5. TX81Z PMEM Bulk Dump**

When "81Zall" of the TX SETUP mode is executed, the 24 preset performance data groups contained in the G10C are transmitted. Further, when the utility mode CRT TRANSMIT or CRT RECEIVE functions are executed, 32 performance data groups are transferred between the TX81Z and an appropriately formatted data cartridge plugged into the G10C cartridge slot.

**4-1-6. G10C S0 Bulk Dump**

The G10C utility data is transmitted using the format shown below.

F0H, 43H, 0nH, 7EH, 00H, 41H, LM8508S0, <S0data>, sum, F7H  
Data size = 65 bytes, Total bulk size = 73 bytes

- Refer to the G10C Parameter Lists for details on the data contents.

**4-1-7. G10C S1 Bulk Dump**

The G10C chain data is transmitted using the format shown below.

F0H, 43H, 0nH, 7EH, 01H, 2EH, LM8508S1, <S1data>, sum, F7H  
Data size = 174 bytes, Total bulk size = 182 bytes

- Refer to the G10C Parameter Lists for details on the data contents.

**4-1-8. TX802 SYCED Bulk Dump**

When "802all" of the TX SETUP mode is executed, the preset TX802 system setup data contained in the G10C is transmitted.

**4-1-9. TX81Z Setup Data Bulk Dump**

When "81Zall" of the TX SETUP mode is executed, the preset TX81Z setup data contained in the G10C is transmitted.

Further, when the utility mode CRT TRANSMIT or CRT RECEIVE functions are executed, TX81Z setup data is transferred between the TX81Z and an appropriately formatted data cartridge plugged into the G10C cartridge slot.

The 4 bulk data types listed below are available, and each can be transmitted individually in the utility mode.

SY.....	System
PC.....	Program Change Table
EF.....	Effect Data
MC.....	Micro-tuning Data

## 4-2. Parameter Change

In the TX SETUP mode, when "802int" is executed items (1) through (3) listed below are transmitted, and when "81Zint" is executed items (4) through (6) listed below are transmitted.

- (1) TX802 additional voice edit buffer (ACED).
- (2) TX802 system setup (SYCED).
- (3) TX802 remote switch.
- (4) TX81Z voice edit buffer (VCED).
- (5) TX81Z setup data.
- (6) TX81Z remote switch.

The parameter change format for items (1) through (4) and (6), listed above, is as shown below. Refer to 4-2-5 for the format for item (5).

```

11110000  F0H
01000011  43H
0001nnnn  1nH (n=device number)
0ggggghh  Group, sub-group number
0ppppppp  Parameter number
0ddddddd  Data
11110111  F7H
  
```

### 4-2-1. TX802 ACED Parameter Change

The following items within the TX802 additional voice buffer data group are changed.

g	h	p	Parameter	Data
6	0	15	poly/mono	1(mono)
		16	pitch bend range	12

g : Group number  
h : Sub-group number  
p : Parameter number

### 4-2-2. TX802 SYCED Parameter Change

The voice data receive block within the TX802 system data group is changed.

g	h	p	Parameter	Data
6	1	77	Voice data receive	0(block:1-32) 1(block:33-64)

### 4-2-3. TX802 Remote Switch Parameter Change

The following items within the TX802 panel switch data group are changed.

g	h	p	Switch	Data
6	3	79	+1	127(on)
		81	PERFORMANCE SELECT	127(on)
		82	VOICE SELECT	127(on)
		88	STORE	127(on)

#### 4-2-4. TX81Z VCED Parameter Change

The following items within the TX81Z voice edit buffer data group are changed.

g	h	p	Parameter	Data
4	2	63	poly/mono	1(mono)
		64	pitch bend range	12

#### 4-2-5. TX81Z Setup Data Parameter Change

The following items within the TX81Z setup data group are changed. The data format is as shown below.

```

11110000 F0H
01000011 43H
0001nnnn 1nH (n=device number)
0ggggghh Group, sub-group number
01111011 7BH
0ppppppp Parameter number
0ddddddd Data
11110111 F7H

```

g	h	p	Parameter	Data
4	0	3	program change sw.	2(ind)
		4	control change sw.	17(G16)
		5	pitch bend sw.	1(norm)
		9	combine	1(on)

#### 4-2-6. TX81Z Remote Switch Parameter Change

The following items within the TX81Z panel switch data group are remotely controlled.

g	h	p	Switch	Data
4	3	65	STORE	0(off), 127(on)
		68	PLAY	127(on)
		72	+1	127(on)

- G10C PM F0H, 43H, 2nH, 7EH, LM -- 8508PM, F7H
- G10C S0 F0H, 43H, 2nH, 7EH, LM -- 8508S0, F7H
- G10C S1 F0H, 43H, 2nH, 7EH, LM -- 8508S1, F7H

## 5. System Realtime Message 5-1. Active Sensing (FEH)

FEH is transmitted approximately every 300 milliseconds.

## 6. G10C Parameter Lists

## Performance Memory (PM)

No.	Parameter	Data
0-5	Program number (1-6)	0-127
6-11	transmit chanel (1-6)	0-15
12-17	volume (1-6)	0-99
18-23	open tuning (1-6)	0-104
24	trigger mode	0(Normal), 63(Left hand)
25	capotasto	0-23
26	legato	0(on), 31(off)
27-32	velocity curve assign (1-6)	0-3, 4-7(U1-U4)
33	sensitivity offset	0-6(-7~-1), 7-14(0~7)
34-39	mute (1-6)	0-7
40-49	performance name (10char.)	32-127
50	pitch bend send range	0-12
51	pitch bend max	0-12
52	arm control no.	0(off), 1, 2, 5, 7, 10
53	wheel direction	0(up), 1(down)
54	wheel control no.	1, 5, 10
55	foot switch no.	0(off), 64, 65
56	foot control no.	0(off), 1, 4, 5, 7, 10

## Utility Data (S0)

No.	Parameter	Data
0	device#	0(off), 1-16
1	receive ch.	0-15, 16(omni)
2	edit curve no.	0-3, 4-7(U1-U4)
3-10	curve data	1-99
11-16	bend curve	0-31
17	global ch.(control change)	0(off), 1-16
18	global ch.(program change)	0(off), 1-16
19	global ch.(pitch bend)	0(off), 1-16
20	CRT load bank	0-15
21	CRT trans bank	0-31(1A-16B)
22	CRT receive bank	0(1A), 1(1B)
23-30	velocity crv memory (U1)	1-99
31-38	velocity crv memory (U2)	1-99
39-46	velocity crv memory (U3)	1-99
47-54	velocity crv memory (U4)	1-99

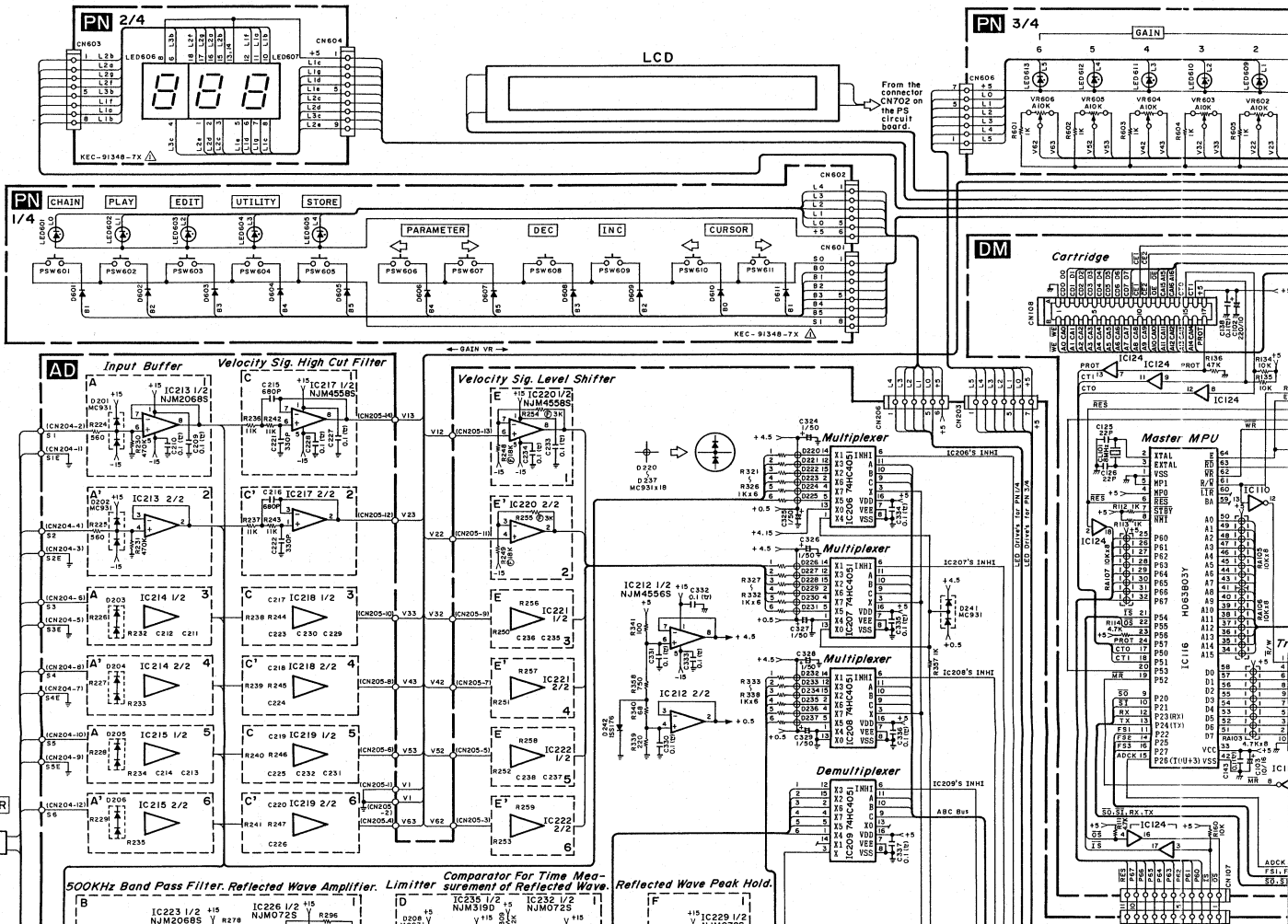
## Chain Data (S1)

No.	Parameter	Data
0	total no.	0-20
1	Step 1 performance no.	0-63(INT), 64-127(CRT)
2	" performance bank	0(INT/CRT), 1(P1), 2(P2), 3(P3)
3	Step 2 performance no.	
4	" performance bank	
.	.	
.	.	
.	.	
39	Step 20 performance no.	
40	" performance bank	

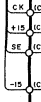
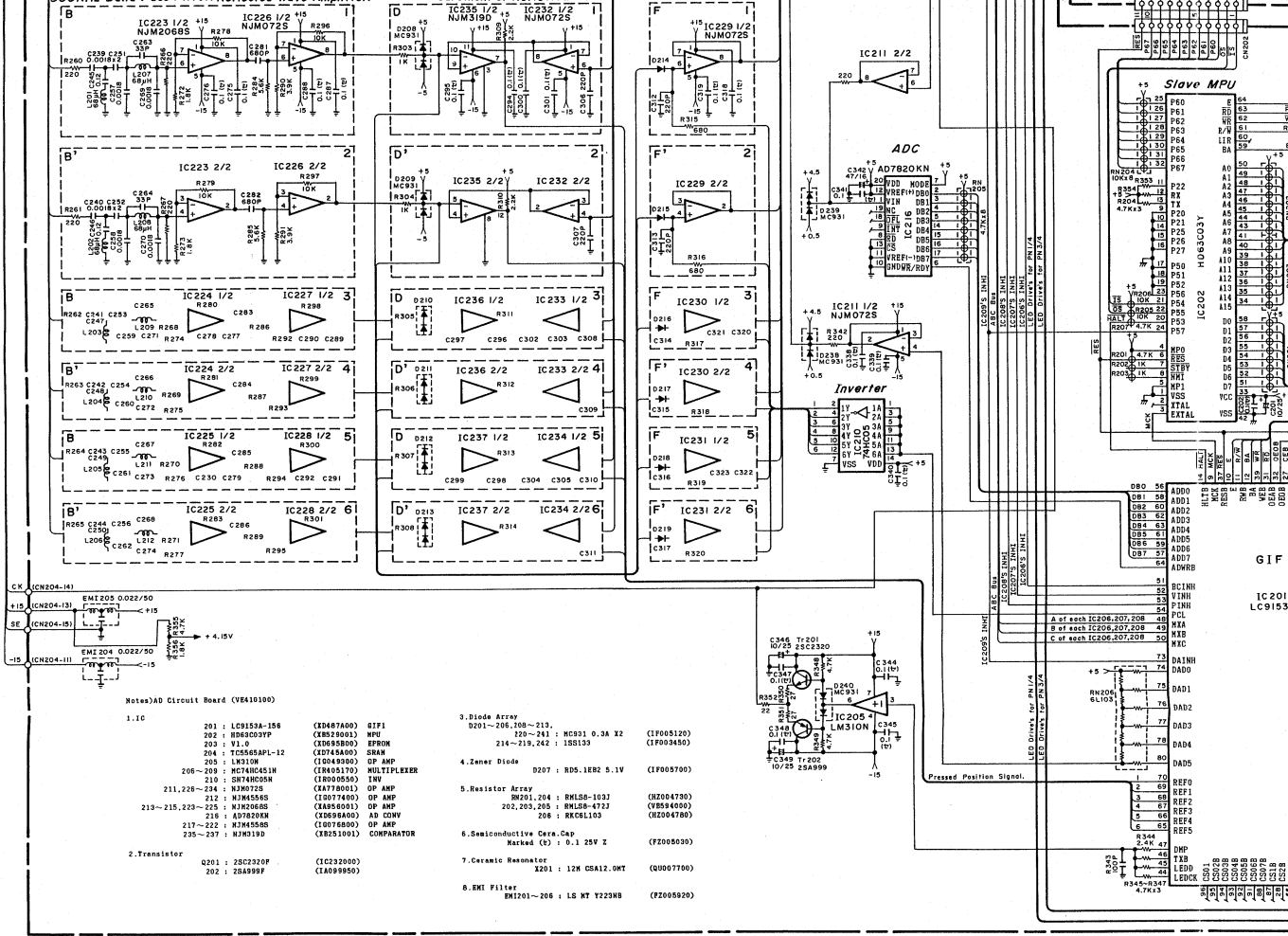
Function	Transmitted	Recognized	Remarks
Basic Default	1 - 16	1 - 16	memorized
Channel Changed	1 - 16	1 - 16	
Mode Default	x	x	
Mode Messages	x	x	
Mode Altered	*****	x	
Note	0 - 127	x	
Number : True voice	*****	x	
Velocity Note ON	o 9nH,v=1-127	x	
Velocity Note OFF	x 9nH,v=0	x	
After Key's	x	x	
Touch Ch's	x	x	
Pitch Bender	o *1	x	7 bit resolution
Control 1	o *2		Modulation wheel
Control 2	o *2		Breath control
Control 4	o *2		Foot control
Control 5	o *2		Portamento time
Control 7	o *2		Volume
Change 10	o *2		Pan
Control 64	o *2		Sustain
Control 65	o *2		Portamento
Control 0 - 121	o *3	o *3	
Prog	o 0 - 127	o 0 - 127	
Change : True #	*****	0 - 127	
System Exclusive	o *4	o *4	Bulk data
System : Song Pos	x	x	
System : Song Sel	x	x	
Common : Tune	x	x	
System : Clock	x	x	
Real Time : Commands	x	x	
Aux : Local ON/OFF	x	x	
Aux : All Notes OFF	x	x	
Mes- : Active Sense	o	x	
sages : Reset	x	x	
Notes: *1	= Transmit if pitch bend switch is on.		
Notes: *2	= Transmit if control change switch is on.		
Notes: *3	= Control change messages received from MIDI IN are only bypassed to MIDI OUT.		
Notes: *4	= Transmit/receive if system exclusive switch is on.		



# ■ G10C OVERALL CIRCUIT DIAGRAM

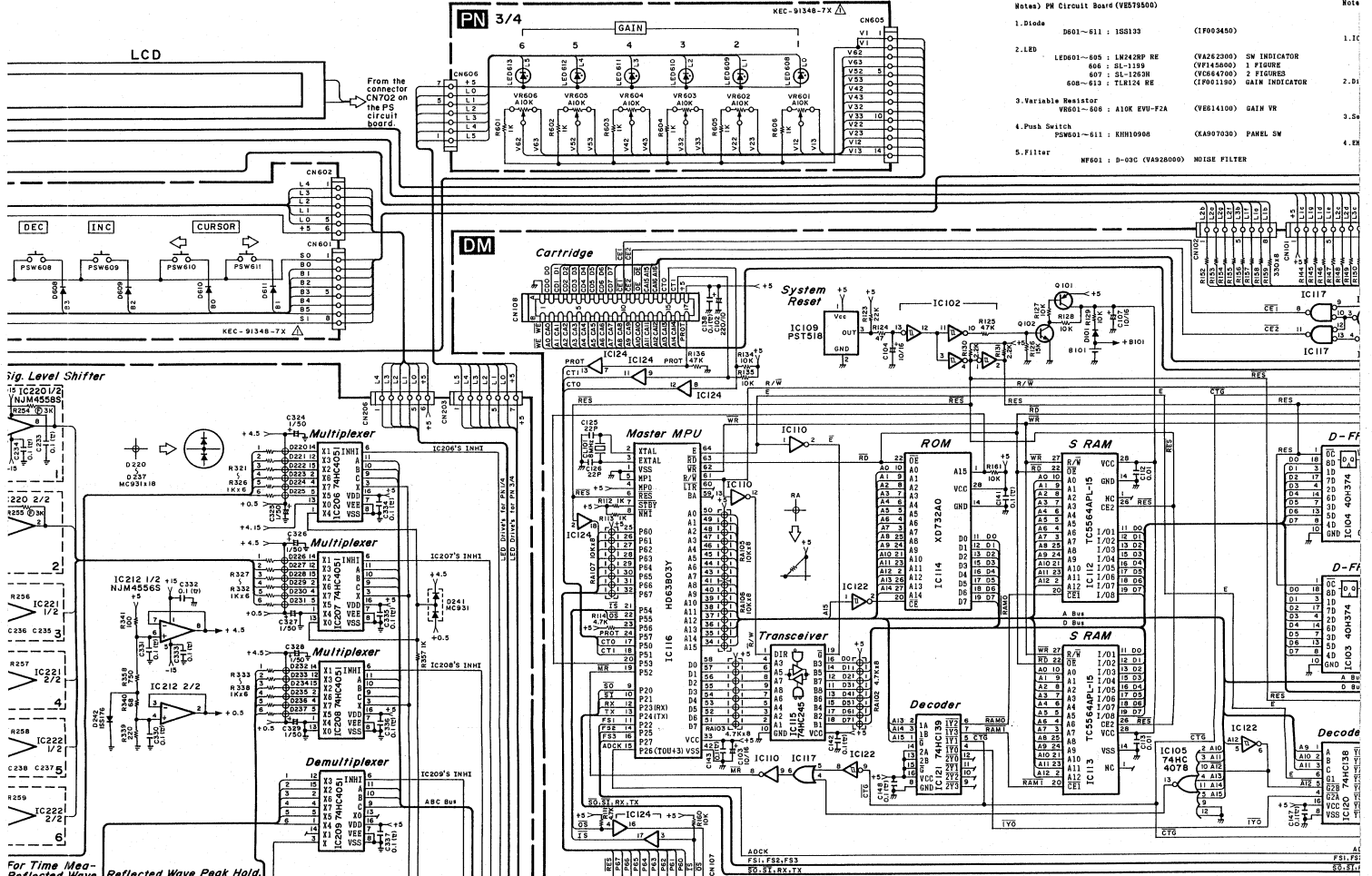


**1500MHz Band Pass Filter. Reflected Wave Amplifier. Limiter. Compressor. Limiting Wave Peak. Reflected Wave Amplifier. Reflected Wave Peak. Reflected Wave Peak.**



Notes: AD Circuit Board (V843100)

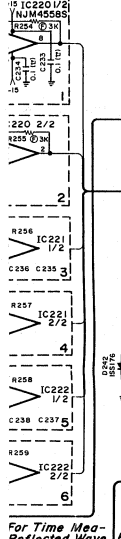
- |               |   |                |                                  |                                       |
|---------------|---|----------------|----------------------------------|---------------------------------------|
| 1. IC         | 201 : LC9153A-156 (E8467600) GTF1             | 3. Diode Array | 201-206, 208-213. (R8529001) MPU | 120-241 : MC931 0.3A X2 (F905120)     |
|               | 202 : HD650037P (R8529001) MPU                |                | 207-210, 212 : 180133 (F903460)  |                                       |
|               | 203 : V1.0 (R265800) EPROM                    |                | 214-219, 242 : 180133 (F903460)  |                                       |
|               | 204 : TC5556APL-12                            |                |                                  |                                       |
|               | 205 : LM310M (I0049000) OP AMP                |                |                                  |                                       |
|               | 206-209 : MC74HC451N (R845100) MULTIPLEXER    |                |                                  |                                       |
|               | 210 : SH74HC05M (R8000500) INV                |                |                                  |                                       |
|               | 211, 226-234 : NJM0725 (R8478001) OP AMP      |                |                                  |                                       |
|               | 212 : NJM4558S (I0077400) OP AMP              |                |                                  |                                       |
|               | 213-215, 223-225 : NJM2008D (R8580001) OP AMP |                |                                  |                                       |
|               | 216 : AD7820K (R8058000) AD CONV              |                |                                  |                                       |
|               | 217-222 : NJM4558S (I0076800) OP AMP          |                |                                  |                                       |
|               | 235-237 : NJM519D (R8251001) COMPARATOR       |                |                                  |                                       |
| 2. Transistor | Q201 : 2SC2320P (C232000) (I8099900)          | 4. Zener Diode | D207 : RDS.18R2.5.1V (F9005700)  | 5. Resistor Array                     |
|               | Q22 : 2SA999F (I8099900)                      |                |                                  | R021, 204 : RHL5B-103J (R2004700)     |
|               |   |                |                                  | 202, 203, 205 : RHL5B-472J (R8584000) |
|               |   |                |                                  | 206 : R02L103 (R2004700)              |
|               |   |                |                                  | 6. Semi-conductive Cer. Cap           |
|               |   |                |                                  | Marked (C) : 0.1 25V Z (F2005030)     |
|               |   |                |                                  | 7. Ceramic Resonator                  |
|               |   |                |                                  | X201 : 12M C8A12.0MT (Q0000700)       |
|               |   |                |                                  | 8. EMI Filter                         |
|               |   |                |                                  | EM201-206 : LS NT Y23298 (F2005030)   |



- Notes FM Circuit Board (V6515000)
1. Diode D601-611 : 1SD333 (C1903450) 1. IC
  2. LED LED601-605 : LM242RP RE (V6145000) 1 FIGURE  
606 : SL-1199 (V6547000) 2 FIGURES  
608-611 : TLM124 BE (C1901190) GAIN INDICATOR 2. Di
  3. Variable Resistor VR601-606 : A10K EVU-F2A (V6514100) GAIN VR 3.5a
  4. Push Switch PSW601-611 : KH10906 (C6907030) PANEL SW 4. EM
  5. Filter NF601 : D-03C (V4928000) NOISE FILTER

Notes DM Circuit Board (V6451000)

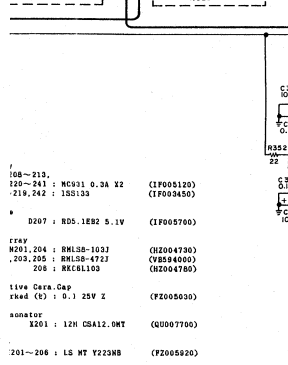
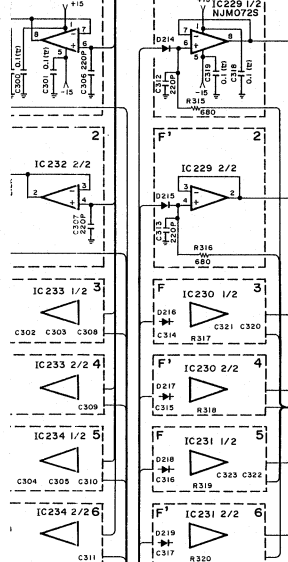
Fig. Level Shifter



For Time Meas-  
ured Reflected Wave Peak Hold.  
IC232 1/2

For Time Maa-  
Reflected Wave.  
IC232 1/2  
NJM072S

Reflected Wave Peak Hold.  
IC229 1/2  
NJM072S



108-213, (IF905120)  
120-241 : NC831 0.3A X2 (IF903454)  
218,242 : 150133

D207 : RDS-1E82 5.1V (FF905700)

CR47  
R201,204 : RHL3B-472J (RZ004730)  
R203,205 : RHL3B-472J (RZ045400)  
Z08 : RKEC1103 (RZ004780)

1194 Cara.Cap  
read (C) : 0.1 25V Z (FF205030)

sonator  
R203 : 12H CGA12.0MT (Q0907760)

203-208 : LS MT V2239B (FF205020)

IC211 2/2

ADC

AD7820KN

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

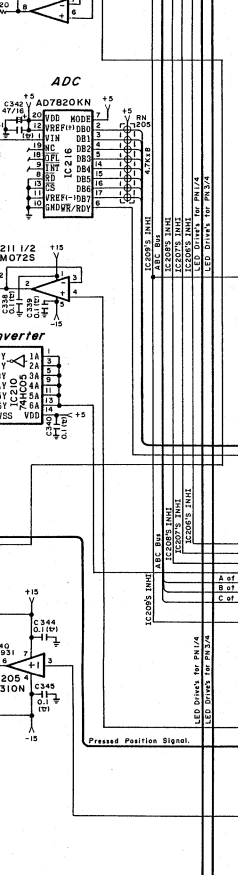
IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2



Slave MPU

32K EPROM

8K RAM

IC202

IC201

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Inverter

IC205

IC206

IC211 1/2

IC211 2/2

IC229 1/2

IC230 1/2

IC230 2/2

IC231 1/2

IC231 2/2

IC232 2/2

IC233 1/2

IC233 2/2

IC234 1/2

IC234 2/2

Notes: PM Circuit Board (VE579500)

- Diode D601-611: 1SS133 (1F00450)
- LED L6001-605: LW242RP RE (VA282300) SW INDICATOR  
L601-606: 80L-1190 (VF445000) 1 FIGURE  
L607-612: 807: SL-12620 (VF844700) 2 FIGURES  
L613-618: TK124 RE (F0041190) GAIN INDICATOR
- Variable Resistor VR601-606: A10K EVU-F2A (VE614100) GAIN VR
- Push Switch SW601-611: KRH10506 (CA507030) PANEL SW
- Filter NF601: D-03C (VA928000) NOISE FILTER

Notes: PS Circuit Board

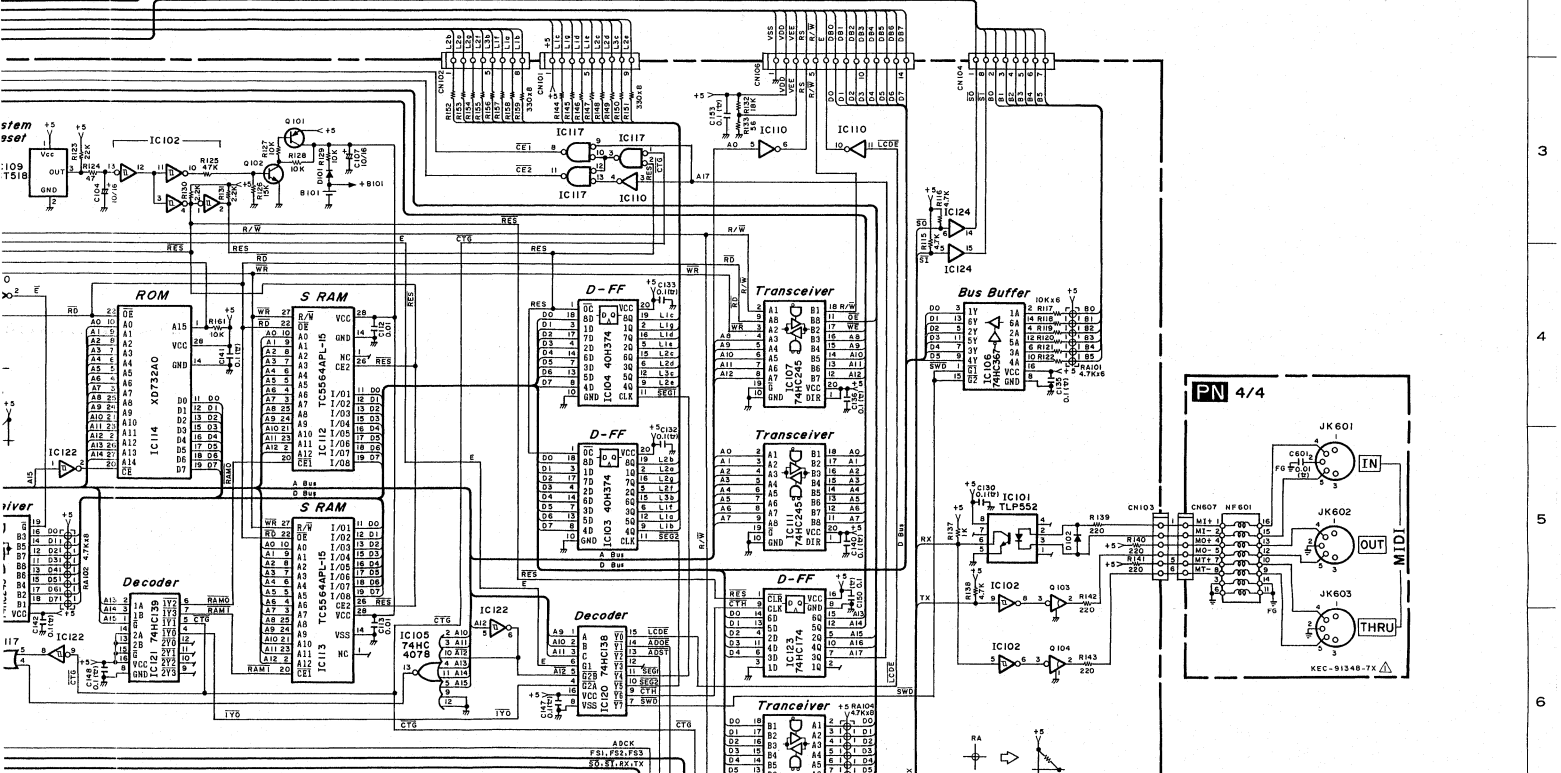
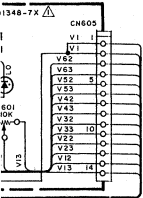
- IC 701: AN7805VF (XD330001) 5V REG.  
702: AN7915VF (XB450001) -15V REG.  
703: AN7815VF (EB449001) 15V REG.
- Diode Stack P701,702: S2V820 2A 200V 703,704: 10E-1 (H0005090)
- Semiconductive Data. Cap. Marked (c): 0.1 25V Z (FZ005030)
- EMI Filter EM701-704: LS WT Y223NB (FZ005920)

(VE579600) J (VE580000) U.C (VE580700) H.D

5. Push Switch SW701: E5B-6212A (K8803610) POWER

6. Fuse

	F701	F702,703
Japanese	W 1A 250V	W 1A 250V
US and Canadian	Q ST4 1A 250V	Q ST4 1A 250V
North European	Q T1A 250V	Q T1A 250V



stem  
set

109  
TS1B

0  
2  
E

river

117

2

3

4

5

6



GUITAR MIDI CONVERTER

# G10C

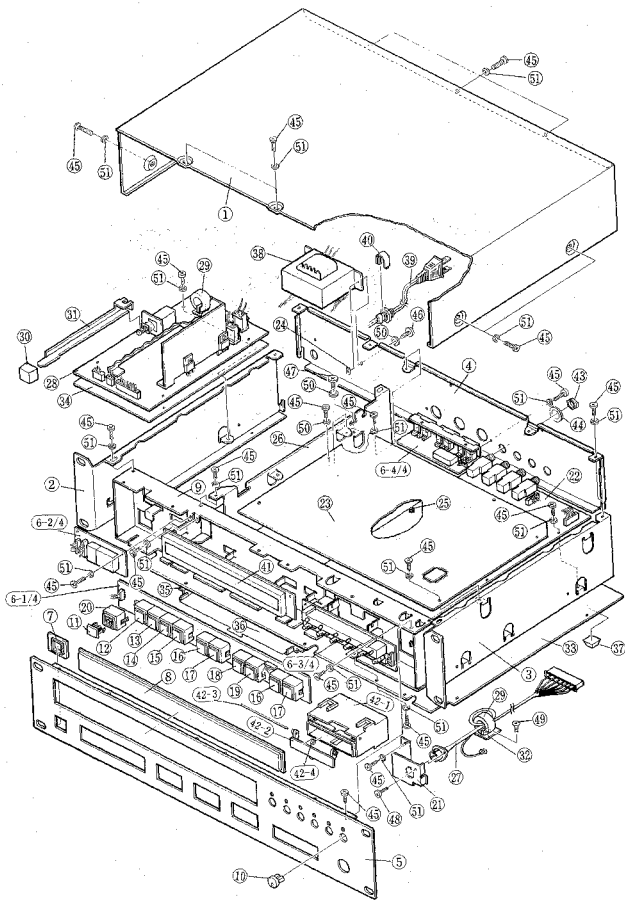
## PARTS LIST

Notes DESTINATION ABBREVIATIONS

J : Japanese model	A : Australian model
U : U.S.A. model	E : European model
C : Canadian model	D : West German model
X : General model	B : British model
M : South African model	I : Indonesian model
H : North European model	

G10C

# OVERALL ASSEMBLY





## OVERALL ASSEMBLY

Ref	Part No	Description		部品名	Remarks	ラン
1	VE248000	Top Cover		トップカバー (L)		09
2	VE807400	Side Board	Left	側板 (R)		05
3	VE807400	Side Board	Right	側板 (R)		08
4	VE806900	Rear Panel		リアパネル	J	08
4	VE807000	Rear Panel		リアパネル	U	08
4	VE807100	Rear Panel		リアパネル	C	08
4	VE807200	Rear Panel		リアパネル	HD	08
5	VE806800	Front Panel		フロントパネル		12
5	VE579500	Circuit Board		PONシート		17
7	VA029600	Escutcheon		SWエスカッション		02
8	VE807800	Cover Meter		メーターカバー		07
9	VE807600	Front Sub Panel		フロントサブパネル		07
10	VB182000	Knob		丸ノブ		01
11	VF471500	Top Cap	WHITE BEIGE	トップキャップ		01
12	VF471700	Top Cap		トップキャップ	CHAIN PLAY	
13	VF471800	Top Cap		トップキャップ	EDIT	
14	VF472000	Top Cap		トップキャップ	UTILITY	
15	VF472100	Top Cap		トップキャップ	STORE	
16	VF472200	Top Cap		トップキャップ	←←←	
17	VF472400	Top Cap		トップキャップ	→→→	
18	VF472500	Top Cap		トップキャップ	DEC	
19	VF472700	Top Cap		トップキャップ	INC	
20	VD756000	Escutcheon		SW エスカッション		01
21	VF068900	Angle		コネクタアングル		02
22	VE451000	Circuit Board	DN	DMシート		33
23	VE470100	Circuit Board	AD	ADシート		43
24	VD247000	Plate Nut		プレートナット		01
25	VF192100	PCB Support	PCB4S	P/CBサポート		01
26	VE807500	Stay		ステー		05
27	VF168300	Wire Assy		ワイヤー IN 束線		
28	VE576800	Circuit Board	PS	PSシート	J	15
28	VE580000	Circuit Board	PS	PSシート	U,C	15
28	VE580700	Circuit Board	PS	PSシート	H,D	15
29	VC362700	Ferrite Core	FR25/15/12	フェライトコア	1400L	04
30	CB812380	Push Button		プッシュボタン		01
31	VF575000	Knob		ノブ		02
32	CB835580	Band Relief		バンド固定具		07
33	VB248100	Bottom Cover		ボトムカバー		02
34	VF390500	Isolation Sheet		絶縁シート		04
35	VC075400	OP Guide Halder		OPガイドホルダー		04
36	VF109400	OP Guide Sheet		OPガイドシート		07
37	CB037120	Foot		すべり座		01
38	VE714600	Power Transformer Ass'y		トランス Ass'y	J	10
38	VE714700	Power Transformer Ass'y		トランス Ass'y	U,C	10
38	VE714800	Power Transformer Ass'y		トランス Ass'y	H,D	10
39	VD279200	AC Cord	7A 2.5W	電源コード 2芯	J	04
39	VD279400	AC Cord	10A 2.5W	電源コード 2芯	U	07
39	VD279500	AC Cord	10A 2.5W	電源コード 3芯	C	07
39	VD280400	AC Cord	2.5A 2.5W	電源コード 2芯	H,D	05
40	CR811230	Cord Strain Relief	SR-6N-4	コードストッパー	U	02
40	CB806850	Cord Strain Relief	SR-6N3-4	コードストッパー	C	02
40	CB072750	Cord Strain Relief	SR-4N-4	コードストッパー	H,D	01
41	VC004500	LCD Display	DMC40267UV-YGR	液晶ディスプレイ		22
42	VB671900	Cartridge Ass'y		カートリッジ Ass'y		05
42-1	VB076600	Cartridge Guide		カートリッジガイド		02
42-2	VB670700	Cover		蓋		03
42-3	VB670800	Shaft		軸		01
43	AA828090	Spring		スプリング		01
44	LX200050	Hexagonal Nut	9.0 PNN336	特殊六角ナット		01
44	LX200010	Flat Washer	9X14X0.5 FCN#3	特殊平 washer		01
45	ED330080	Bind Head Screw	3.0X6 FCN3BL	バインド小ネジ		01
46	ED340120	Bind Head Screw	4.0X12 FCN3BL	バインド小ネジ		01
47	ED340080	Bind Head Screw	4.0X6 FCN3BL	バインド小ネジ		01
48	ED326060	Bind Head Screw	2.8X6 FCN3BL	バインド小ネジ		01
49	EY980730	Flat Head Screw	3.0X6 ZNC2BL	平小ネジ		01
50	EY203040	Flat Washer	4.0 FCN3BL	平ワッシャー		01
51	EY203030	Flat Washer	3.0 FCN3BL	平ワッシャー		01

## ■ ELECTRICAL PARTS

Ref	Part No	Description		部品名	Remarks	ランク
	VE451000	Circuit Board	DW	DMSシート		33
	VE410100	Circuit Board	AD	ADシート		43
	VE579600	Circuit Board	PS	PSシート		15
	VE580000	Circuit Board	PS	PSシート		15
	VE580700	Circuit Board	PS	PSシート		15
	VE579500	Circuit Board	PN	PNシート		17
	VE461000	Circuit Board	DW	DMSシート		33
	IG116200	IC	PST5188-2	IC	SYSTEM RESET	04
	IG078600	IC	TC40H374P	IC	D.F.F	07
	IR000470	IC	MC74HC04N	IC	INV	01
	IR001470	IC	MC74HC14N	IC	INV	03
	IR003270	IC	MC74HC32N	IC	OR	02
	IR013670	IC	MC74HC138N	IC	DECODER	02
	IR013970	IC	MC74HC139N	IC	DECODER	02
	IR017470	IC	MC74HC174N	IC	D.F.F	03
	IR024570	IC	MC74HC245N	IC	BUS DRIVER	06
	IR036770	IC	MC74HC357N	IC	BUS DRIVER	03
	IR407800	IC	TC74HC4078P	IC	OR/NOR	02
	XD245001	IC	H063803YP-N	IC	MPU	08
	XC890001	IC	TC5654APL-15	IC	SRAM	08
	XD732800	IC	V1.00	IC	EPR0M	06
	IG106100	IC	M58990P-1	IC	ADC	09
	JK000470	Photo Coupler	TLP552	フォトカプラー		06
	VA024600	Digital Transistor	DTC143XF	デジタルトランジスタ		03
	IA095910	Transistor	2SA2SA950 0.Y	トランジスタ		03
	IC181520	Transistor	2SC23C1815 Y	トランジスタ		03
	IF003450	Diode	1SS133	ダイオード		01
	IF005120	Diode Array	MC931 0.3A X2	ダイオードアレイ		01
	H2004730	Resistor Array	RML58-103J	抵抗アレイ		02
	VA220500	Resistor Array	RKLS6-472J	抵抗アレイ		01
	VA238800	Resistor Array	RKLS8-473J	抵抗アレイ		01
	VB594000	Resistor Array	RKLS8-472J	抵抗アレイ		01
	FZ005030	Semiconductive Cera. Cap.	0.1 25V Z	半導体セラコン		01
	FZ006970	EMI Filter	LS MT Y223NB	LCフィルタ EMI		02
	VB817500	Ceramic Resonator	8.00H CSA6.00MT	セラミック共振子		03
	LB301800	Phone Jack	BLJ0544	ホンネコネクタ	MORAUAL	03
	LB302070	Phone Jack	BLJ0544	ホンネコネクタ	STEREO	03
	WB436900	Lithium Battery	CR2032-P5-2	リチウム電池		05
	VE410100	Circuit Board	AD	ADシート		43
	IG049300	IC	LW310N	IC	OP AMP	06
	IG076600	IC	NJM4568S	IC	OP AMP	03
	IG077400	IC	NJM4568S	IC	OP AMP	04
	XA778001	IC	NJM072S	IC	OP AMP	03
	XA956001	IC	NJM2068S	IC	OP AMP	03
	XB251001	IC	NJM319D	IC	COMPARATOR	05
	IR000550	IC	SN74HC05N	IC	INV	02
	IR405170	IC	MC74HC4051N	IC	MULTIPLEXER	02
	VE529001	IC	H063803YP	IC	MPU	13
	XD987600	IC	LC9153A-156	IC	INT.F	09
	XD745400	IC	TC5654APL-12	IC	SRAM	07
	X0605800	IC	V1.00	IC	EPR0M	06
	XD090400	IC	AD7820KN	IC	AD CONV	09
	IA098950	Transistor	2SA2SA999 F	トランジスタ		03
	IC232000	Transistor	2SC23C2320 F	トランジスタ		03
	IF003450	Diode	1SS133	ダイオード		01
	IF005120	Diode Array	MC931 0.3A X2	ダイオードアレイ		01
	IF005760	Zener Diode	RD5.1EB2 5.1V	ツェナーダイオード		01
	H2004730	Resistor Array	RKLS8-103J	抵抗アレイ		02
	H2004780	Resistor Array	RKCL6103	抵抗アレイ		03
	VB594000	Resistor Array	RKLS8-472J	抵抗アレイ		01
	FZ005030	Semiconductive Cera. Cap.	0.1 25V Z	半導体セラコン		01
	QU007700	Ceramic Resonator	12M CSA12.0NT	セラミック共振子		03
	FZ006920	EMI Filter	LS MT Y223NB	LCフィルタ EMI		02
	VE579600	Circuit Board	PS	PSシート	J	15
	VE580000	Circuit Board	PS	PSシート	U.C	15
	VE580700	Circuit Board	PS	PSシート	H.D	15
	XB449001	IC	AN7815F	IC	15V REG.	04
	XB450001	IC	AN7915F	IC	-15V REG.	04
	YD338001	IC	AN7805F	IC	5V REG.	03
	IR000590	Diode	10E-1	ダイオード		03
	IR009120	Diode Stack	S2VB20 2A 200V	ダイオードスタック		03
	HL314100	Metal Oxide Film Resistor	10 1W J	酸化金属膜抵抗		01
	FZ005030	Semiconductive Cera. Cap.	0.1 25V Z	半導体セラコン		01
	F1404100	Ceramic Cap.	0.01 400V	セラミックコン		01
	FJ259220	Electrolytic Cap.	2200 35V	電解コン		04
	UI030470	Electrolytic Cap.	4700 16V	電解コン		04

