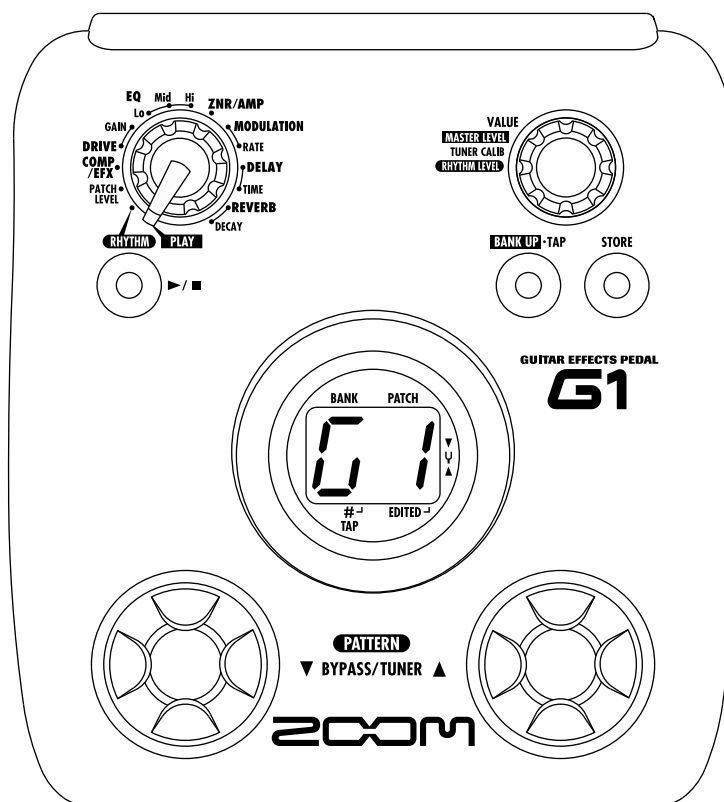


Service Manual

GUITAR EFFECTS PEDAL

G1



(C) ZOOM CORPORATION

Reproduction of this manual, in whole or in part, by any means, is prohibited.

zoom

ZOOM CORPORATION

2F, ITOHPIA IWAMOTO-CHO 2-CHOME BLDG.

2-11-2, Iwamoto-cho, Chiyoda-Ku, Tokyo 101-0032, Japan

PHONE: +81-3-5835-2200(MAIN) FAX: +81-3-5835-2201

Web Site: <http://www.zoom.co.jp>

Contents

Specifications.....	3
Function Test	4
Back Up User's Data	8
Recovering the Factory Default	10
Special function start up	11
Circuit Check Specifications	14
Circuit Diagram	15
PCB Parts Layout and Pattern	18
Exploded view	19
Parts List	20
Spare Parts Order List	23
Spare Parts Order Sheet	25
Supplement: Identification of main PCB	26

Specifications

Effect types	54
Effect modules	max. 8 simultaneous modules
Patch memory	User area: 10 patches x 4 banks = 40 Preset area: 10 patches x 4 banks = 40 Total 80 patches
Sampling frequency	96 kHz
A/D converter	24 bit, 128 times oversampling
D/A converter	24 bit, 128 times oversampling
Signal processing	32 bit
Frequency response	20 Hz – 40 kHz +1.0 dB – 4.0 dB (10kilohms load)
Display	2-digit 7-segment LED
Input	Standard mono phone jack
Rated input level	-20 dBm
Input impedance	470 kilohms
Output	Standard stereo phone jack (doubles as line/headphone jack)
Maximum output level	Line +3 dBm (output load impedance of 10 kilohms or more) Phones 20mW + 20mW (into 32ohms load)
Control input	For FP01/FP02 or FS01
Power requirements	
AC adapter	9 V DC, 300 mA (center minus plug) (ZOOM AD-0006)
Batteries	Four IEC R6 (size AA) batteries, approx. 12 hours continuous operation (alkaline batteries)
Dimensions	155 mm (D) x 136 mm (W) x 52 mm (H)
Weight	350 g (without batteries)
Options	Expression pedal FP01/FP02 or Foot switch FS01

- 0 dBm = 0.775 Vrms
- Design and specifications subject to change without notice.

Function Test

Starting in “Test mode”

- 1) Start up the G1 in the following ways using the AC adaptor AD-0006.
 - a) Connect AC adaptor holding the [BANK UP•TAP] key (SW1) and [RHYTHM] key (SW2).
 - b) Connect AC adaptor when Ground and the test point TP4.
*When set 4 batteries, connect the plug into INPUT connector (J2)
- 2) All the LEDs of 7 segment LED will be lit.

1. Display (7 segment LED)

- 1) Make sure that all LEDs are lit brightly enough (indicate “8.8.”) after power on in “Test mode”.
- 2) Press any key and make sure that all LEDs will be turned off.

2. Module selector

- 1) Turn the Module selector (VR1) clockwise to “DECAY”.
- 2) Turn the Module selector (VR1) anticlockwise by one detent.
Make sure that the following indications appear on the 7 segment LED.

Module selector	7 segment LED
DECAY/TIME	15
REVERB/DERAY	14
RATE/TIME	13
MODULATION/DELAY	12
ZNR/AMP	11
EQ_Hi	10
EQ_Mid	9
EQ_Lo	8
MIX	7
GAIN	6
DRIVE	5
EFX	4
COMP/LIMIT	3
PATCH LEVEL	2
RHYTHM	1
PLAY	0

- 3) Turn the Module selector (VR1) clockwise by one detent.
Make sure that the above values are indicated on the 7 segment LED depending on the Module selector position.

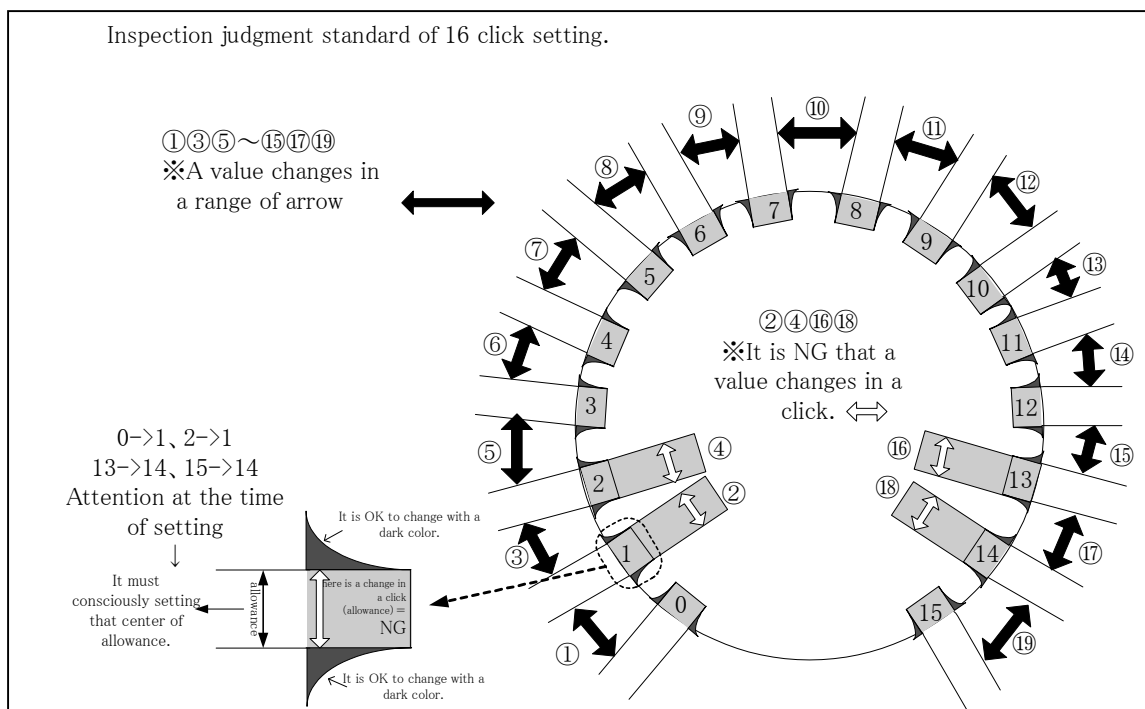


Figure 1.16 clicks value confirmation position

3. Knob

Turn the [VALUE] knob (SW6) and 7 segment LED indicates “00-FF”.
Make sure that indication smoothly changes in the range of “00-FF” and the value changes 1 step by 1 detent.

4. Flash rom

Press the [BANK UP • TAP] key (SW1).
Make sure that “ok” appears on the 7 segment LED.
If any error occurs, “nG” is indicated on the 7 segment LED.

5. Product number

- 1) Press the FOOT SWITCH [^] (SW5).
Make sure that “G1” is indicated on the 7 segment LED.
- 2) Press the FOOT SWITCH [^] (SW5) again.
Make sure that “9b” is indicated on the 7 segment LED.

6. Foot pedal

- 1) Connect FP-01 or FP-02 with CONTROL IN connector (J1).
- 2) Move the expression pedal.
Make sure that the values on the display change as follows.

Expression pedal	Values
MIN (raised)	05-0C
MAX (down)	E3-FF

7. Foot switch

- 1) Connect FS-01 with CONTROL IN connector (J1).
- 2) Push the foot switch on/off.
Make sure that the values on the display change as follows.

Expression pedal	Values
OFF (not pushed)	00–01
ON (pushed)	05–09

8. Through sound

Input sine wave (440Hz, -20dBm) to the [INPUT] jack (J2) and monitor the output from the [OUTPUT] jack (J4) with loudspeakers and oscilloscope.
Make sure that the sounds from both channel of [OUTPUT] jack (J4) are at the same volume, without any noise and improper sound.

If “Mt” or “dL” is indicated on the 7 segment LED, press any key among [BANK UP • TAP] key (SW1), [STORE] (SW3) and FOOT SWITCH [^] (SW5). Then make sure that indication is changes to other.

9. SRAM (Delay sound)

- 1) Press [RHYTHM] (SW2) key and display indicates “dL”.
- 2) Input sine wave (440Hz, -20dBm) to the [INPUT] jack (J2) and monitor the output from the [OUTPUT] jack (J4) with loudspeakers and oscilloscope.
Make sure that the normal signal is output from Rch and the delayed signal is output from the Lch of [OUTPUT] jack (J4) when “dL” is constantly indicated.

10. DSP mute

- 1) Press FOOT SWITCH [v] (SW4) and display indicates “Mt”.
- 2) Input sine wave (440Hz, -20dBm) to the [INPUT] jack (J2) and monitor the output from the [OUTPUT] jack (J4) with loudspeakers and oscilloscope.
Make sure that there is no output when “Mt” is constantly indicated.

11. Restoring Factory Defaults

- 1) Power on in normal mode.
If 7segment LED doesn't blink "AL", power on pressing the "STORE" key.
note) If someone make the operation below, after that 7segment LED never show automatically "AL"
- 2) Make sure that display blinks “AL”
- 3) Press [STORE] key (SW3) and display indicates “ok”.
- 4) The units automatically reboot in normal mode.

12. Sound check 1

- 1) Connect AC adaptor and the units power on.
- 2) Make sure that display indicates [A0].
- 3) Press the FOOT SWITCH [^] (SW5) two times and make sure that display changes to [A2].
- 4) Input sine wave (440Hz, -20dBm).
- 5) Monitor output sound by speaker or oscilloscope and make sure the points below.

Output sound is distorted.

Sound doesn't include abnormal noise, and this sound isn't abnormal sound.

13. Sound check 2

- 1) Press the FOOT SWITCH [v] (SW4) and make sure that display changes to [A1]
- 2) Input sine wave (440Hz, -20dBm)
- 3) Monitor output sound by speaker or oscilloscope and make sure the points below.

Output sound is modulated.

Sound doesn't include abnormal noise, and this sound isn't abnormal sound.

- 4) Add mechanical shock to the units a few times and make sure there are no any problem like noise or sound stop.

14. Battery

- 1) Disconnect AC adaptor and set the power supply voltage to 6.0 V.
- 2) Make sure that "A0" is indicated on the 7 segment LED.
- 3) Set the power supply voltage to 3.7 V.
Make sure that the indication "bt" appears on the 7 segment LED.
- 4) Set the power supply voltage to 4.6 V.
Make sure that the 7 segment LED indication returns to the previous state.

15. Stability

Put the G1 on a surface plate, and push it diagonally.

Make sure that there is no remarkable space (less than ± 0.3 mm is acceptable).

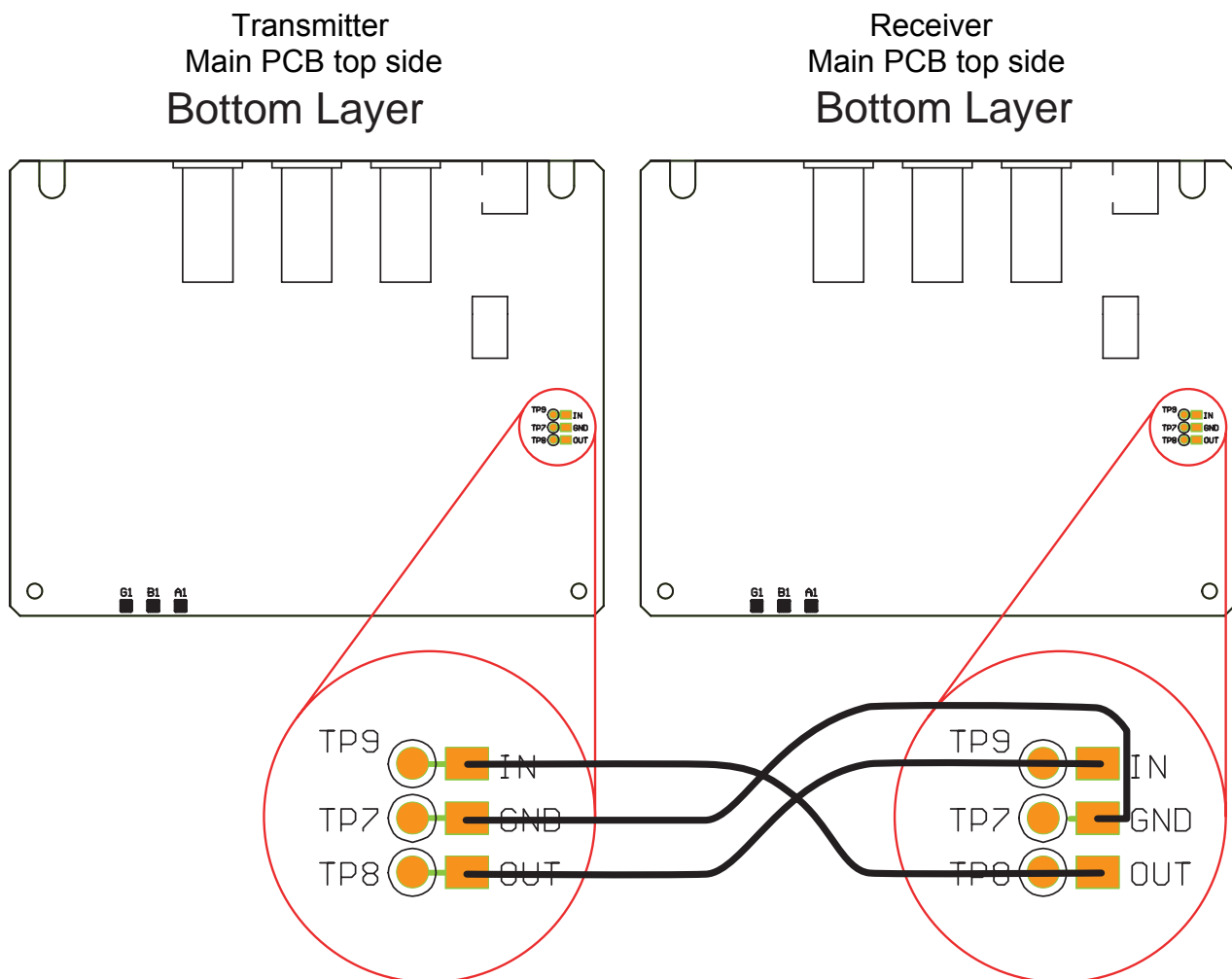
Back Up User's Data

If necessary, back up the user's effect patch data to avoid an accidental erasing.

Required

- User's G1 as a transmitter (hereinafter referred to as "the transmitter")
- Another G1 as a receiver (hereinafter referred to as "the receiver")
- Jumper wires

1. Remove the bottom plate.
2. Connect "IN" terminal of the transmitter and "OUT" terminal of the receiver.
3. Connect "OUT" terminal of the transmitter and "IN" terminal of the receiver.
4. Connect their ground terminals on the top side of the main PCB, using jumper wires (See below).



5. Turn on the power of both transmitter and receiver while holding the [STORE] (SW3) and the [BANK UP · TAP] (SW1) keys.
Make sure that the both 7segment LED lit "tr".

6. Press the [BANK UP · TAP] key (SW1) of the receiver, and make sure that the 7 segment LED lit "rx". The receiver is ready to receive the data.
7. Press the [Rhythm] key (SW2) of the transmitter and make sure that the 7 segment LED lit "tx". The indication flashes on and off at once. And the transmitter starts to send the data. When sending and receiving finish successfully, and make sure that Transmitter and Receiver's both 7 segment LED are displayed same check-sum.
8. Turn the both transmitter and receiver off.
9. Take the wires away and attach the bottom plate.

Recovering the Factory Default

In the factory default condition, the patches of the user area (A0-d9) contain the same settings as the patches of the preset area (00-39).

Even after overwriting the user patches, their original content can be restored in a single operation (“All Initialize” function).

If necessary, back up the user’s patch data. Refer to page 9, 10 for details of the back up.

1. Turn the power on while holding the [STORE] key (SW3).

The indication “AL” appears on the display.

2. To carry out the All Initialize function, press the [STORE] key (SW3) once more.

All patch settings are returned to the factory default condition, and the unit switches to play mode. To cancel All Initialize, press the [RHYTHM] key (SW2) instead of the [STORE] key (SW3).

Special function start up

1. Special function and how to start up

There are some methods to start up the G1 for service.

All special functions start up the G1 in the following ways using the AC adaptor AD-0006 or connecting the plug into INPUT connector (J2) when set the battery.

Turn on the G1 holding the key in the following table.

See the following table about Special function.

Function	Keys held down
Test mode	RHYTHM + BANK UP • TAP
16 click adjust	STORE + RHYTHM
Back up user's data	STORE + BANK UP • TAP
ALL Initialization	STORE
Pre-select	UP ([^])
Revision	RHYTHM + DOWN ([v])
Version	BANK UP • TAP + UP([^])

2. Details of special function

Test mode

This startup is used for the function Test.

Refer to page 4.

16 click adjust

Adjust the threshold of 16 click vol. (from 0 click to 15 click)

1) Start up holding the [STORE] key (SW3) and [RHYTHM] key (SW2).
Make sure “1” appears on the 7 segment LED.

2) Turn the Module selector (VR1) clockwise by one detent.
Press the [STORE] key (SW3). *Refer to the figure below.
Make sure “2” appears on the 7 segment LED.

3) Turn the Module selector (VR1) clockwise by one detent.
Press the [STORE] key (SW3).
Repeat this sequence to “DECAY”.
(When “PATCH LEVEL”, 7 segment LED is displayed “3”.
When “COMP/EFX”, 7 segment LED is displayed “4”.

·
·
·

When “REVERB”, press the [STORE] key (SW3), 7 segment LED is displayed “15”.
Make sure “-14” appears on the 7 segment LED.

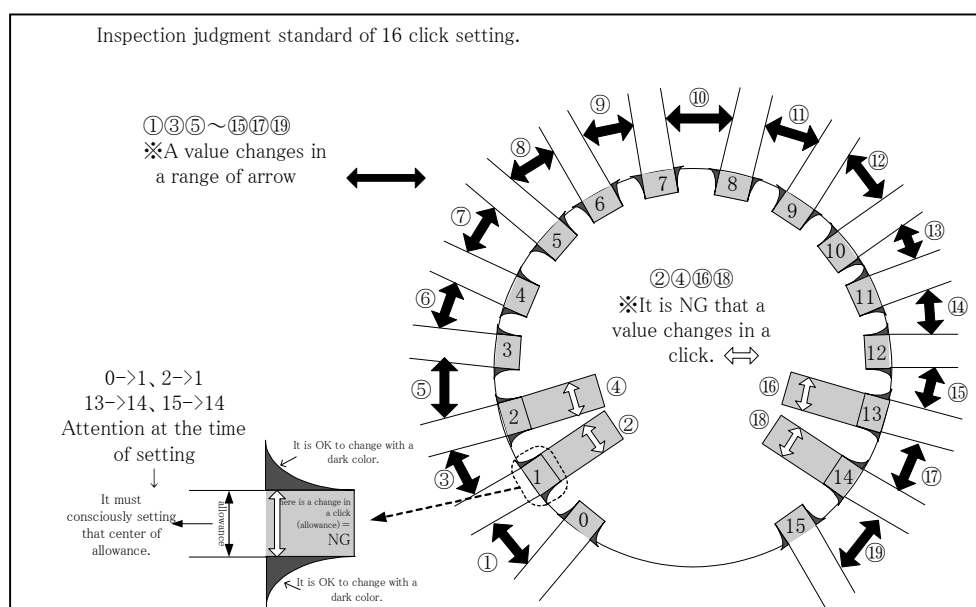
4) Turn the Module selector (VR1) anticlockwise by one detent.
Press the [STORE] key (SW3).
Make sure “-13” appears on the 7 segment LED.

- 5) Turn the Module selector (VR1) anticlockwise by one detent.
 Press the [STORE] key (SW3).
 Repeat this sequence to “PLAY”.
 (When “TIME”, 7 segment LED is displayed “-12”.
 When “DELAY”, 7 segment LED is displayed “-11”.

When “RHYTHM”, 7 segment LED is displayed “0”.)
 Make sure “ok” appears on the 7 segment LED.

- 6) Make sure that the following indications appear on the 7 segment LED.
 When the 7 segment LED is correctly displayed, Restart the G1 by press the [BANK UP • TAP] key (SW1).

Module selector	7 segment LED
PLAY	0
RHYTHM	1
PATCH LEVEL	2
COMP/EFX	3
DRIVE	4
GAIN	5
EQ Lo	6
EQ Mid	7
EQ Hi	8
ZNR/AMP	9
MODULATION	10
RATE	11
DELAY	12
TIME	13
REVERB	14
DECAY	15



ALL Initialization

This startup recovers the factory default condition.
Refer to page 10.

Pre-select

See the Operation Manual.

Back up user's data

This startup is used for back up user's data.
Refer to page 8.

Version

The 7 segment LED is displayed system version of the G1.

* It is displayed in four digits.

- 1) Start up holding the [BANK UP • TAP] key (SW1) and the FOOT SWITCH [^] (SW5).

Make sure "00" appears on the 7 segment LED.

- 2) Press the FOOT SWITCH [^](SW5) or [v] (SW4).

Make sure "10" appears on the 7 segment LED.

- 3) Restart the G1 by press the FOOT SWITCH [^] (SW5) or [v] (SW4) again.

Revision

The 7 segment LED is displayed system revision of the G1.

* It is displayed in four digits.

- 1) Start up holding the [RHYTHM] key (SW2) and the FOOT SWITCH [v] (SW4).

Make sure "00" appears on the 7 segment LED.

- 2) Press the FOOT SWITCH [^] (SW5) or [v] (SW4).

Make sure "46" appears on the 7 segment LED.

- 3) Restart the G1 by press the FOOT SWITCH [^] (SW5) or [v] (SW4) again.

Circuit Check Specifications

No.	Items	Ch	Specifications	Inputs	Conditions/notes	Display and Indicator	Keys pressed in "Test mode"
1	Current consumption		115mA±20mA	Short	Immediately after Test mode starts All LEDs are lit.	All lit	None (Start up)
2	Power supply voltage						
	3.3VA		3.3V±0.15V	Short	Immediately after Test mode starts All LEDs are lit.	All lit	None(Start up)
	+3.3VD		3.3V±0.15V	Short	Immediately after Test mode starts All LEDs are lit.	All lit	None(Start up)
	+1.26VD		1.25V±0.05V	Short	Immediately after Test mode starts All LEDs are lit.	All lit	None(Start up)
	-5VA		-4.75V±0.25V	Short	Immediately after Test mode starts All LEDs are lit.	All lit	None(Start up)
3	Output level	(L)	-22.5dBm±2dB	440Hz -20dBm	Load=32 ohms / Output waveform is not clipped.	All lit	None(Start up)
	(Load: 32 ohms)	(R)	-22.5dBm±2dB	440Hz -20dBm	Load=32 ohms / Output waveform is not clipped.	All lit	None(Start up)
4	Frequency response	(L)	-21.0dBm±2dB	20Hz -20dBm	Output waveform is not clipped.	All lit	None(Start up)
	(No Load)	(R)	-21.0dBm±2dB	20Hz -20dBm	Output waveform is not clipped.	All lit	None(Start up)
		(L)	-39.0dBm±2dB	20kHz -40dBm	Output waveform is not clipped.	All lit	None(Start up)
		(R)	-39.0dBm±2dB	20kHz -40dBm	Output waveform is not clipped.	All lit	None(Start up)
5	Noise level	(L)	-90.0dBm or less	Short	Insert IHF-A, 15KHz-LPF.	All lit	None(Start up)
	(No Load)	(R)	-80.0dBm or less	Short	Insert IHF-A, 15KHz-LPF.	All lit	None(Start up)
6	Harmonic distortion	(L)	0.1% or less	440Hz -20dBm	Delay Mode / Insert 15KHz-LPF.	"dL"	"RHYTHM" key(SW2)
	(No Load)	(R)	0.15% or less	20kHz -20dBm	Delay Mode / Insert 15KHz-LPF.	"dL"	"RHYTHM" key(SW2)
7	Function of D-MUTE	(L)	Check function of Mute	440Hz -20dBm	Press "BANK DOWN" key and check muting on/off.	"nt"	"BANK DOWN" key(SW4)
	(DSP Mute)	(R)	Check function of Mute	440Hz -20dBm	Press "BANK DOWN" key and check muting on/off.	"nt"	"BANK DOWN" key(SW4)
8	Battery warning voltage		3.7V or less (Warning voltage)		Make sure that "bt" on display is blinked at 3.7V.	"bt" blinked	
			4.5V or more (released warning)		Make sure that the warning is released at 4.5V.	Return to normal status	
9	Control input						
	Foot sw_OFF		00-01	FS-01	Make sure that value of "00-01" is displayed.		
	Foot sw_ON		05-09	FS-01	Make sure that value of "05-09" is displayed.		
	Foot pedal_MIN		05-0C	FP-01/FP-02	Make sure that value of "05-0C" is displayed by hexadecimal.		
	Foot pedal_MAX		E3-FF	FP-01/FP-02	Make sure that value of "E3-FF" is displayed by hexadecimal.		
10	System operation		Make sure that keys, dial(16click), knobs, and LEDs normally operate.				

* Conditions (if there is no note)

Power supply

Input signal

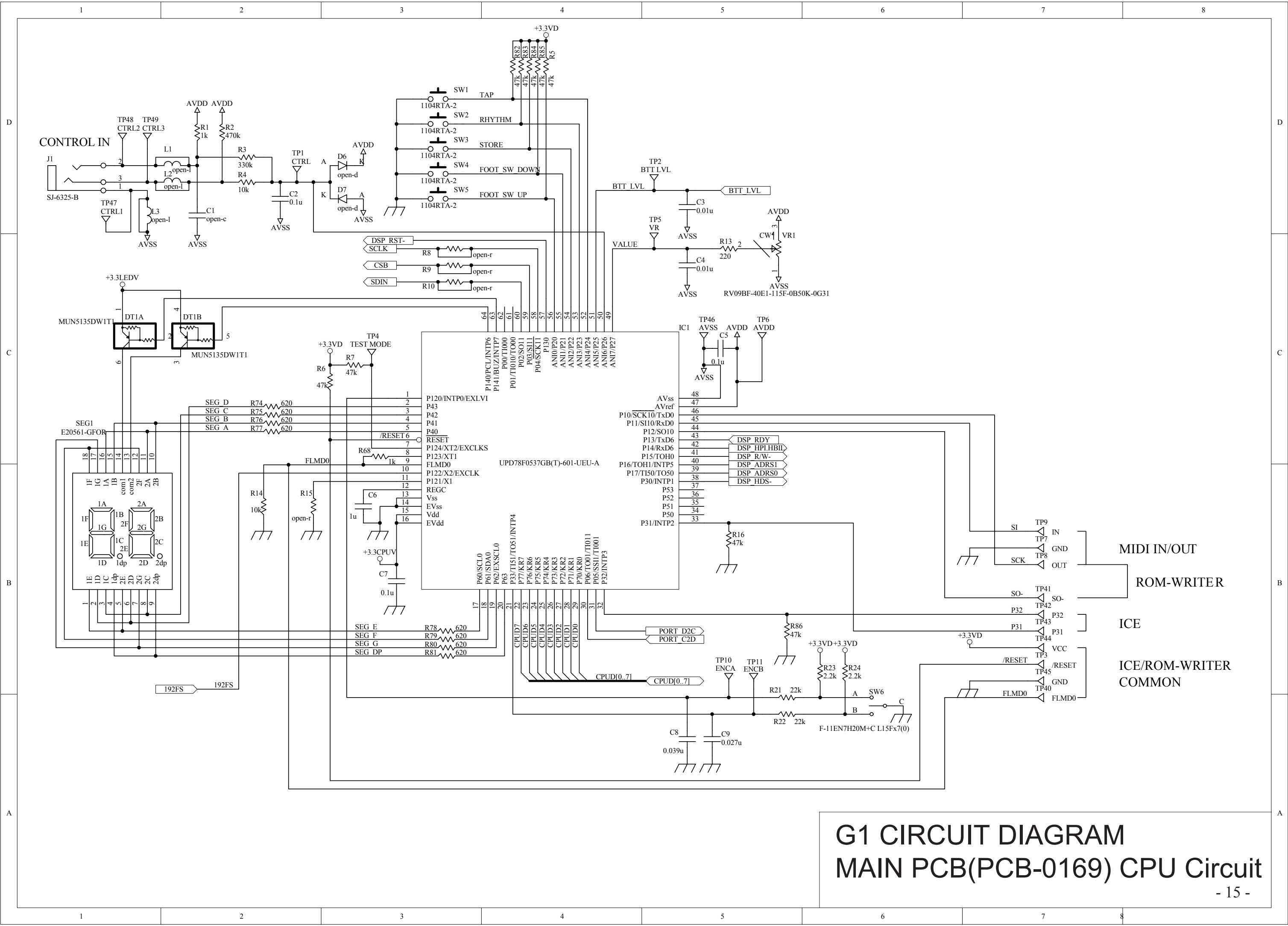
Output load

AC adaptor AD-0006

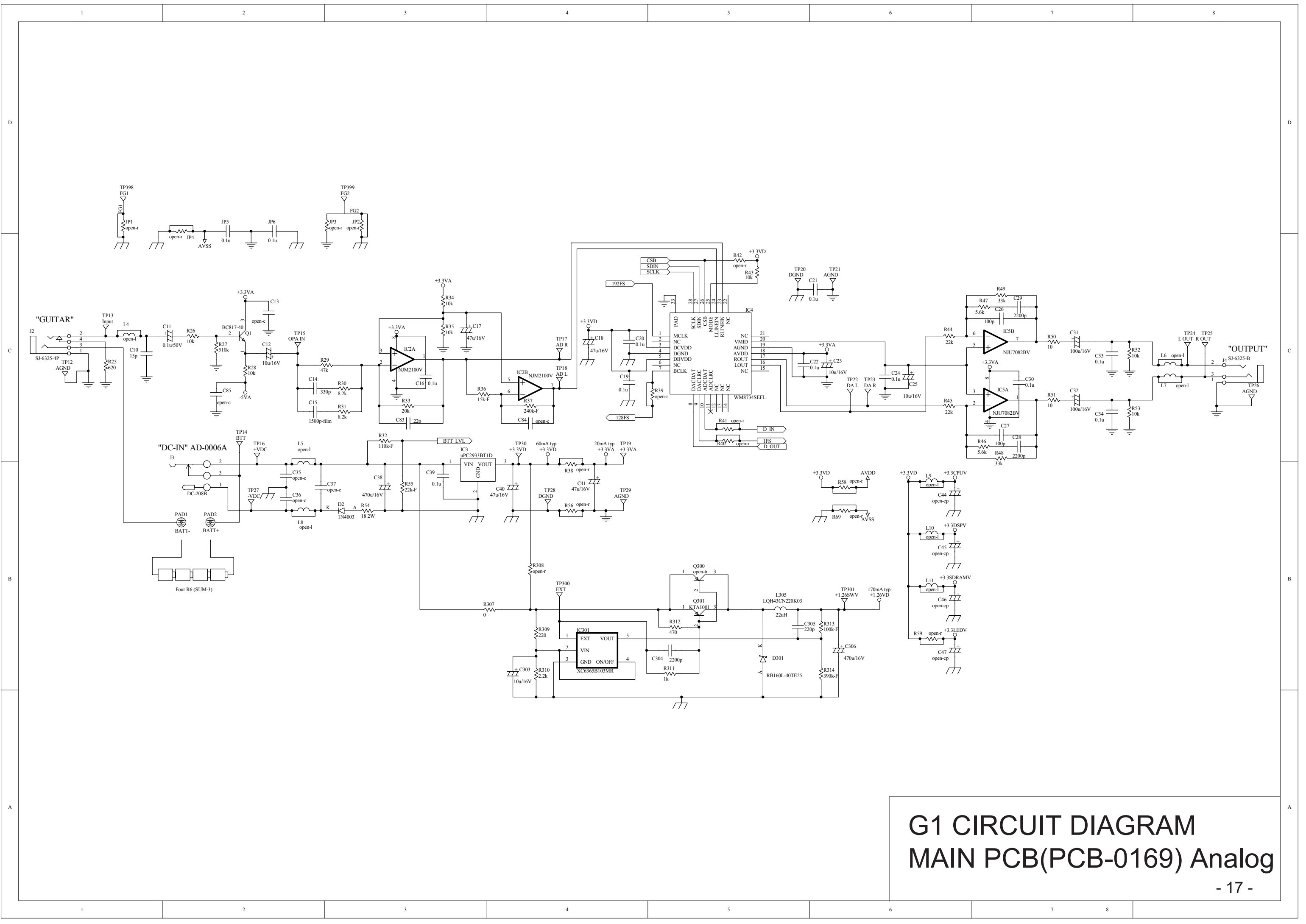
Sine wave to [INPUT] jack

None (100 kilohms or more)

PHONES: 32 ohms



G1 CIRCUIT DIAGRAM
MAIN PCB(PCB-0169) CPU Circuit
- 15 -

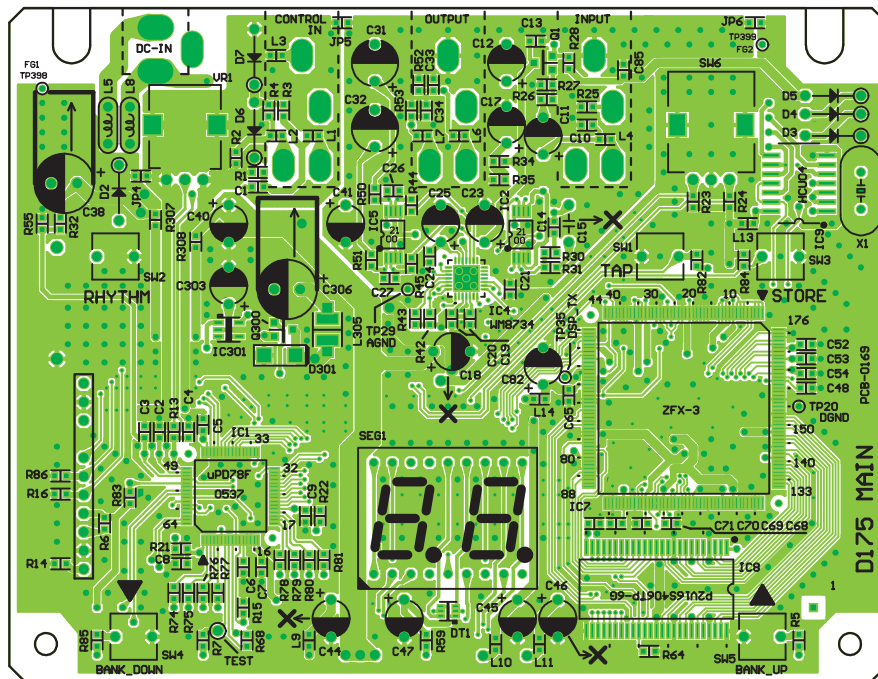


G1 CIRCUIT DIAGRAM
MAIN PCB(PCB-0169) Analog
- 17 -

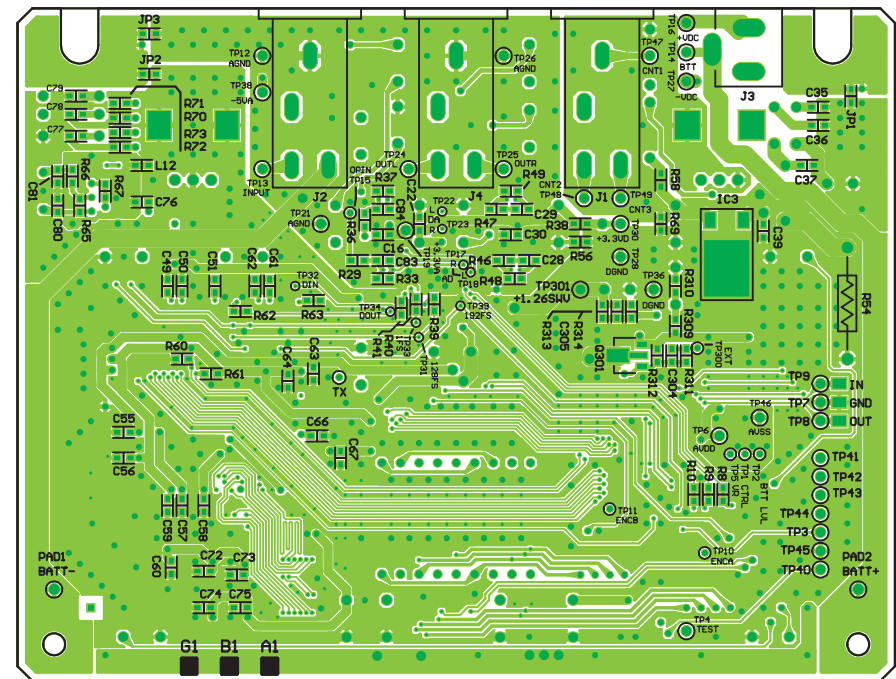
PCB Parts Layout and Pattern

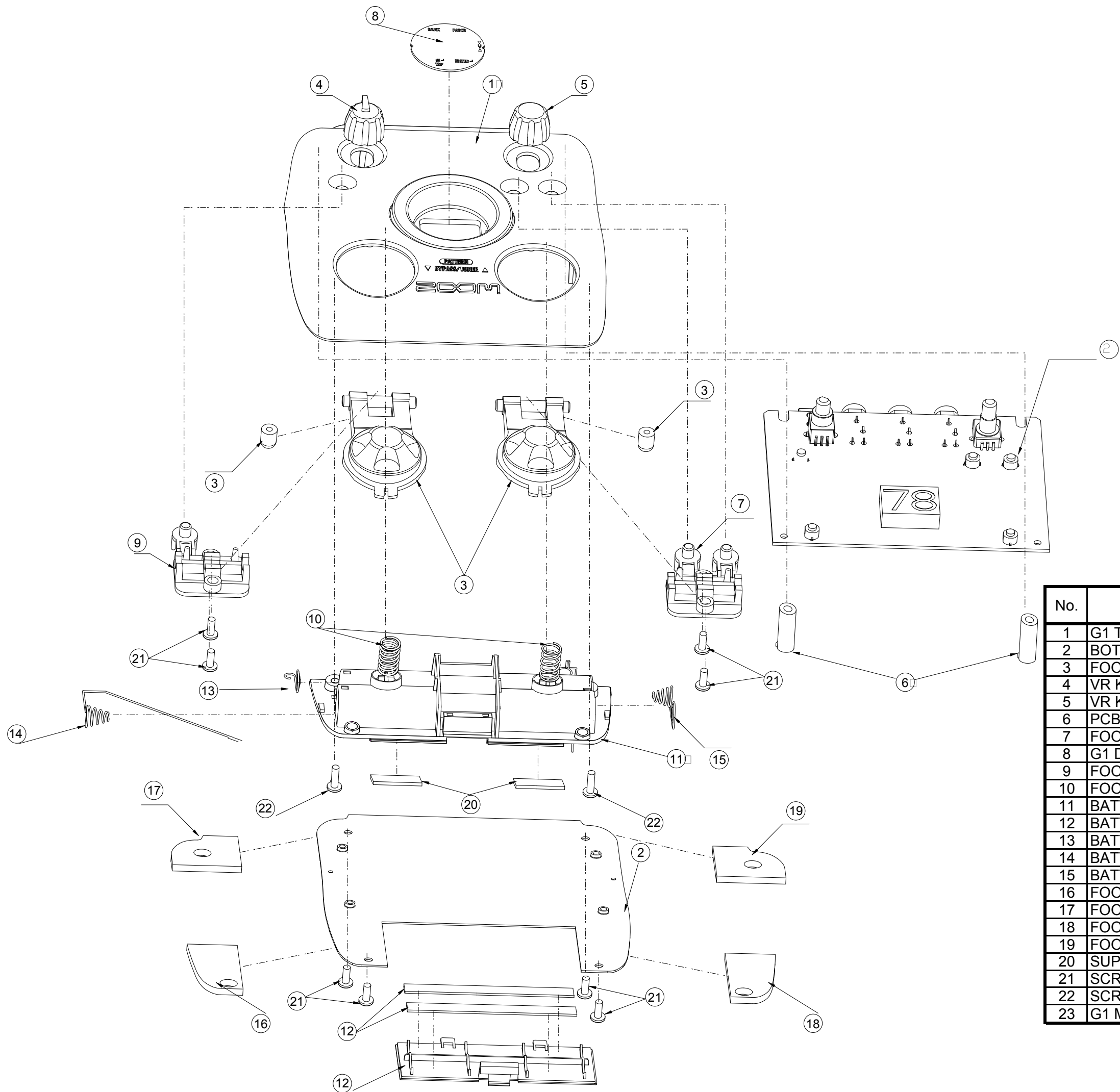
PCB-0169

Top Layer



Bottom Layer





No.	PART NAME	DRAWING NO	Code No.	Q'TY
1	G1 TOP CASE	Z2B-0226	SP02358	1
2	BOTTOM CASE	Z2A-0125	SP02359	1
3	FOOT SW ASSY	Z2B-0227, Z2D-0067	SP02360	2
4	VR KNOB 1	Z2B-0228-B	SP02361	1
5	VR KNOB 2	Z2B-0229	SP02362	1
6	PCB SPACER	Z2B-0232	SP02373	2
7	FOOT SW PLATE R	Z2B-0233	SP02374	1
8	G1 DISPLAY SHEET	Z2E-0216	SP02363	1
9	FOOT SW PLATE L	Z2B-0234	SP02375	1
10	FOOT SW SPRING	Z2A-0126	SP02369	2
11	BATT CASE	Z2B-0230	SP02376	1
12	BATT CASE COVER ASSY	Z2B-0231, Z2E-0190	SP02377	1
13	BATT SPRING (+)	Z2A-0127	SP02370	1
14	BATT SPRING (-)	Z2A-0128	SP02371	1
15	BATT SPRING (+/-)	Z2A-0129	SP02372	1
16	FOOT RUBBER 1-L	Z2D-0068	SP02364	1
17	FOOT RUBBER 2-L	Z2D-0069	SP02365	1
18	FOOT RUBBER 1-R	Z2D-0070	SP02366	1
19	FOOT RUBBER 2-R	Z2D-0071	SP02367	1
20	SUPPORT FOOT RUBBER	Z2D-0072	SP02368	2
21	SCREW	M3x8L P-tight	SP01185	8
22	SCREW	M3x10 P-tight	SP02074	2
23	G1 Main PCB assy	PCB-0169	SP40171	1

Exploded View

Parts List

MAIN PCB Partslist

PCB-0169

No.	NAME	SUB	SPECIFICATIONS	DESCRIPTION	REFERENCE No.	Qty
1	MPU	*16	UPD78F0537GB(T)-UEU-A	LQFP-64pin 10x10	IC1	0
	MPU	*16	UPD78F0537GB(T)-601-UEU-A	LQFP-64pin 10x10	IC1	1
2	DSP		ZFX-3	LQFP-176pin 0.5-26X26	IC7	1
3	SDRAM	*2	P2V16S406TP-6G	TSOP-50pin	IC8	0
	SDRAM	*2	IS42S16100C1-7 TL	TSOP-50pin	IC8	0
	SDRAM	*2	RMS116T(LF)-7A	TSOP-50pin	IC8	0
	SDRAM	*2	EM636165TS-7G	TSOP-50pin	IC8	1
4	AD/DA		WM8734SEFL/R	QFN-28pin 5x5	IC4	1
5	LOGIC IC	*3	SN74HCU04ANSR	SOP-14pin	IC9	1
	LOGIC IC	*3	SN74HCU04DR	SOIC-14pin	IC9	0
	LOGIC IC	*3	SN74LVU04ANSR	SOP-14pin	IC9	0
	LOGIC IC	*3	SN74HCU04ANSR	SOP-14pin	IC9	0
	LOGIC IC	*3	MC74HCU04ADR	SOIC-14pin	IC9	0
6	OPAMP		NJM2100V-TE1	SSOP-8pin	IC2	1
7	OPAMP		NJU7082BV-TE1	SSOP-8pin	IC5	1
8	Voltage Regulator	*4	uPC2933BT1D-AT	TO252	IC3	0
	Voltage Regulator	*4	uPC2933BT-AZ	SC63	IC3	0
	Voltage Regulator	*4	LR1116AL-33-TN3-D-R	TO252	IC3	1
9	DC-DC converter		XC6365B103MR	SOT-23-5	IC301	1
10	D-Transistor	*5	MUN5135DW1T1G	SC88	DT1	1
	D-Transistor	*5	UMB10N	SC88	DT1	0
11	Transistor	*6	BC817-40	SC59	Q1	1
	Transistor	*6	BC817-40LT1G	SC59	Q1	0
12	Transistor		KTA1001-Y	SC62	Q301	1
13	Transistor		open-tr	SC59	Q300	0
14	7SEG LED	*7	E20561-GFOR	DIP-18pin	SEG1	1
	7SEG LED	*7	TOD-5261BH-D-K	DIP-18pin	SEG1	0
	7SEG LED	*7	LN526RA	DIP-18pin	SEG1	0
15	Diode		1N4003	Pitch=7.5mm	D2	1
16	Diode		1SS133-77	Pitch=7.5mm	D3 D4 D5	3
17	Diode		open-d	SC59	D6 D7	0
18	Shottky Diode	*15	RB160L-40TE25	PMDS SOD-106	D301	1
	Shottky Diode	*15	SK14	PMDS SOD-106	D301	0
19	Crystal Oscillator	*8	HC-49U/S 18.432MHz	2pin CITIZEN	X1	0
	Crystal Oscillator	*8	HC-49/S3 18.432MHz	2pin KYUSHUDENTSU	X1	0
	Crystal Oscillator	*8	HC-49U/S 18.432MHz	2pin SKC	X1	1
	Crystal Oscillator	*8	HC-49/S3 18.432MHz	2pin SEEK	X1	0
20	Chip Inductor		BLM18AG102S	1608(0603)	L14	1
21	Chip Inductor		LQH43CN220K03L	SMD 4532	L305	1
22	Chip Inductor		open-l	1608(0603)	L1 L2 L3 L4 L6 L7 L9 L10 L11 L12 L13	0
23	Capacitor		0.1u/50V	D=4.0_6.3mm H=7.0_11.5mm Pitch=5mm	C11	1
24	Capacitor	*17	10u/16V	D=4.0_6.3mm H=7.0_11.5mm Pitch=5mm	C12 C82	2
	Capacitor	*17	10u/16V	D=4.0_6.3mm H=7.0mm Pitch=5mm	C23 C25 C303	3
25	Capacitor	*18	47u/16V	D=4.0_6.3mm H=7.0_11.5mm Pitch=5mm	C17 C18	2
	Capacitor	*18	47u/16V	D=4.0_6.3mm H=7.0mm Pitch=5mm	C40 C41	2
26	Capacitor	*19	100u/16V	D=4.0_8.0mm H=7.0_11.5mm Pitch=5mm	C32	1
	Capacitor	*19	100u/16V	D=4.0_8.0mm H=7.0mm Pitch=5mm	C31	1
27	Capacitor		470u/16V	D=4.0_8.0mm H=7.0_11.5mm Pitch=5mm	C38 C306	2
28	Capacitor		open-cp	D=4.0_6.3mm H=7.0 Pitch=5mm	C44 C45 C46 C47	0
29	Chip Capacitor		12p-J CH 50V (25V)	1608(0603)	C80 C81	2
30	Chip Capacitor		15p-J CH 50V (25V)	1608(0603)	C10	1
31	Chip Capacitor		22p-J CH 50V (25V)	1608(0603)	C83	1
32	Chip Capacitor		100p-J CH 50V (25V)	1608(0603)	C26 C27	2
33	Chip Capacitor		330p-J CH 50V (25V)	1608(0603)	C14	1
34	Chip Capacitor		220p-J CH 50V (25V)	1608(0603)	C305	1
35	Chip Capacitor		470p-J CH 50V (25V)	1608(0603)	C48	1
36	Chip Capacitor		2200p-K B 50V (25V)	1608(0603)	C28 C29 C304	3
37	Chip Capacitor		0.01u-K B 50V (25V)	1608(0603)	C3 C4	2
38	Chip Capacitor		0.027u-K B 50V (25V)	1608(0603)	C9	1
39	Chip Capacitor		0.039u-K B 50V (25V)	1608(0603)	C8	1

No.	NAME	SUB	SPECIFICATIONS	DESCRIPTION	REFERENCE No.	Q'ty
40	Chip Capacitor		0.1u-Z F 25V	1608(0603)	C2 C5 C7 C16 C19 C20 C21 C22 C24 C30 C33 C34 C39 C49 C51 C52 C53 C54 C55 C56 C57 C58 C60 C62 C63 C64 C65 C66 C67 C68 C69 C71 C72 C73 C74 C75 C76 JP5 JP6	39
41	Chip Capacitor		GRM188B11A105KA61D (1.0u-K B)	1608(0603)	C6 C77 C78 C79	4
42	Chip Capacitor		open-c	1608(0603)	C1 C13 C35 C36 C37 C50 C59 C61 C70 C84	0
43	Film Capacitor		1500p-K 100V (50V)	Radial Pitch=5mm	C15	1
44	Resistor		18-J 2W	Lead-form : Floated type pitch=15mm	R54	1
45	Chip Resistor		0ohm	1608(0603)	R307	1
46	Chip Resistor		10-J	1608(0603)	R70 R71 R72 R73 R50 R51	6
47	Chip Resistor		220-J	1608(0603)	R13 R66 R309	3
48	Chip Resistor		470-J	1608(0603)	R312	1
49	Chip Resistor		620-J	1608(0603)	R25 R74 R75 R76 R77 R78 R79 R80 R81	9
50	Chip Resistor		1k-J	1608(0603)	R1 R311 R68	3
51	Chip Resistor		2.2k-J	1608(0603)	R23 R24 R310	3
52	Chip Resistor		5.6k-J	1608(0603)	R46 R47	2
53	Chip Resistor		8.2k-J	1608(0603)	R30 R31	2
54	Chip Resistor		10k-J	1608(0603)	R4 R14 R26 R28 R34 R35 R43 R52 R53	9
55	Chip Resistor		20k-J	1608(0603)	R33	1
56	Chip Resistor		22k-J	1608(0603)	R21 R22 R44 R45	4
57	Chip Resistor		33k-J	1608(0603)	R48 R49	2
58	Chip Resistor		47k-J	1608(0603)	R5 R6 R7 R16 R29 R60 R61 R82 R83 R84 R85 R86	12
59	Chip Resistor		330k-J	1608(0603)	R3	1
60	Chip Resistor		470k-J	1608(0603)	R2	1
61	Chip Resistor		510k-J	1608(0603)	R27	1
62	Chip Resistor		1M-J	1608(0603)	R65	1
63	Chip Resistor		15k-F	1608(0603)	R36	1
64	Chip Resistor		22k-F	1608(0603)	R55	1
65	Chip Resistor		100k-F	1608(0603)	R313	1
66	Chip Resistor		110k-F	1608(0603)	R32	1
67	Chip Resistor		240k-F	1608(0603)	R37	1
68	Chip Resistor		390k-F	1608(0603)	R314	1
69	Chip Resistor		open-r	1608(0603)	R8 R9 R10 R15 R38 R39 R40 R41 R42 R56 R58 R59 R62 R63 R64 R67 R69 R308 JP1 JP2 JP3 JP4	0
70	TACT SW	*13	1104RTA-2		SW1 SW2 SW3 SW4 SW5	0
	TACT SW	*13	SKRGAED010		SW1 SW2 SW3 SW4 SW5	5
	TACT SW	*13	EVQ11L05R		SW1 SW2 SW3 SW4 SW5	0
71	Potentiometer	*9	RK09D1130 (LM=20)	50k-B 16detent vertical	VR1	1
	Potentiometer	*9	RV09BF-40E1-115F-0B50K-0G31	50k-B 16detent vertical	VR1	0
	Potentiometer	*9	F-09115N-2+16C B50k-a0 L10FCx4.5(T)	50k-B 16detent vertical	VR1	0
72	Rotary Encoder		F-11EN7H20M+C L15Fx7(0)	Vertical type	SW6	1
73	Stereo Phone Jack	*10	SJ-6325-B		J1 J4	2
	Stereo Phone Jack	*10	YKB21-5010		J1 J4	0
74	Stereo Phone Jack	*11	SJ-6325-4P	with SW	J2	1
	Stereo Phone Jack	*11	YKB21-5074		J2	0
75	DC Jack	*12	DC-208B		J3	1
	DC Jack	*12	HEC2305-016250		J3	0
	DC Jack	*12	SCD438CCS0033B00G		J3	0
	DC Jack	*12	DS-208 D=2.0mm		J3	0
76	JP		open-jp	Pitch=5mm	L5 L8	0
77	PCB		PCB-0169	(23) FR-4 2layer, Weight is 90g		1

MECHANICAL PARTS LIST

No.	PART NAME	SUB	DROWING NO	MATERIAL	DESCRIPTION	Q'TY
1	G1 TOP CASE		Z2B-0226	ABS (natural)	(1) paint & silk print Surface :Silver	1
2	BOTTOM CASE		Z2A-0125	SECC t=0.8	(2)	1
3	FOOT SW		Z2B-0227	ABS (black)	(3)	2
12	FOOT SW RUBBER		Z2D-0067	TPE (yellow or white)	(3)	2
4	VR KNOB 1		Z2B-0228-B	ABS (black)	(4)	1
5	VR KNOB 2		Z2B-0229	ABS (balck)	(5)	1
8	PCB SPACER		Z2B-0232	ABS (Chromium coating)	(6)	2
9	FOOT SW PLATE R include TACT SW BUTTON		Z2B-0233	ABS (black)	(7)	1
10	G1 DISPLAY SHEET		Z2E-0216	PCV / with adhesive tape φ40mm t=1.0mm	(8) with silk print :3 colors	1
11	FOOT SW PLATE L include TACT SW BUTTON		Z2B-0234	ABS (black)	(9)	1
13	FOOT SW SPRING		Z2A-0126	SUS 304 WPB d=0.8	(10)	2
6	BATT CASE		Z2B-0230	ABS (black)	(11)	1
7	BATT CASE COVER		Z2B-0231	ABS (black)	(12)	1
20	BATTERY CUSHION		Z2E-0190	sponge 73.4X10.2x3(t)mm with adhesive tape	(12)	2
14	BATT SPRING (+)		Z2A-0127	SUS304 d=0.7	(13)	1
15	BATT SPRING (-)		Z2A-0128	SUS304 d=0.7	(14)	1
16	BATT SPRING (+/-)		Z2A-0129	SUS304 d=0.7	(15)	1
18	FOOT RUBBER 1-L		Z2D-0068	Sponge rubber, H=40, with adhesive tape	(16)	1
19	FOOT RUBBER 2-L		Z2D-0069	Rubber, H=60, with adhesive tape	(17)	1
21	FOOT RUBBER 1-R		Z2D-0070	Sponge rubber H=40, with adhesive tape	(18)	1
22	FOOT RUBBER 2-R		Z2D-0071	Rubber H=60, with adhesive tape	(19)	1
24	SUPPORT FOOT RUBBER		Z2D-0072	6*20*3.3mm, H=65, with adhesive tape	(20)	2
17	SCREW		M3X8 P-tight		(21)	8
23	SCREW		M3x10 P-tight		(22)	2

PACKING PARTS LIST

No.	PART NAME	SUB	SPECIFICATIONS	MATERIAL	DESCRIPTION	120US QTY
1	G1 Gift Box		Z2F-0046	corrugated cardboard.	Printing color : 4C	1
	G1 AC Adapter Spacer		Z2F-0057	corrugated cardboard, A3b, T=3mm	Printing color : Black	1
2	G1 MASTER Carton Box		Z2F-0047	double wall corrugated cardboard.	Printing color : Black	0.1
3	Poly Bag for Unit			200X300mm		1
4	Poly Bag for Manual			200X300mm (for A5 size)		1
5	Serial Label for Carton Box		Z2E-0192			0.1
6	Serial Label for Unit		Z2E-0193			2
7	G1 JAN Bar-Code Label		Z8F-0084-A4 for CM			0
	G1 JAN Bar-Code Label		Z8F-0084-A4 for 120US			2.1
	G1 JAN Bar-Code Label		Z8F-0084-A4 for 120GL			0
	G1 JAN Bar-Code Label		Z8F-0084-A4 for 220BX			0
	G1 JAN Bar-Code Label		Z8F-0084-A4 for 240UK			0
8	G1 USA Bar-Code Label for Gift Box		A69			1
	G1 USA Bar-Code Label for Carton Box		A69			0.1
9	FCC Label		Z2I-0729	Aluminum label		1
10	Destination Label		Z2E-0194 for CM			0
	Destination Label		Z2E-0194 for 120US			0.2
	Destination Label		Z2E-0194 for 120GL			0
	Destination Label		Z2E-0194 for 220BX			0
	Destination Label		Z2E-0194 for 240UK			0
11	G1/G1X Operation Manual		G1/G1X-5010-1	paper of fine quality, A5 28page, Warranty Card JP sticks on a back cover.	JAPANESE	0
12	G1/G1X Operation Manual		G1/G1X-5000-1	paper of fine quality A5 28page	ENGLISH	1
13	G1/G1X Operation Manual		G1/G1X-5002-1	paper of fine quality A5 28page	GERMAN	0
14	G1/G1X Operation Manual		G1/G1X-5003-1	paper of fine quality A5 28page	FRENCH	0
15	G1/G1X Operation Manual		G1/G1X-5004-1	paper of fine quality A5 28page	ITALIAN	0
16	G1/G1X Operation Manual		G1/G1X-5005-1	paper of fine quality A5 28page	SPANISH	0
17	G1/G1X Operation Manual		G1/G1X-5006-1	paper of fine quality A5 28page	PORTUGUESE	0
18	G1/G1X Operation Manual		G1/G1X-5007-1	paper of fine quality A5 28page	CHINESE	0
19	Warranty Card US		Z2I-0730	Stamp: none	for US	1
20	G1/G1X Patch List Sheet		Z2I-0725	A4 Both side printing Language:Japanese and English		1
21	G1 Logo Label for Unit		Z2E-0216	Aluminum label		1
22	G1/G1X Display signal chart sheet		Z2I-0726	Film-coated paper Both side printing		1
23	AC Adaptor		AD-0006D for 120US and 120GL	with gift box	Supplied by ZOOM	1
24	AC Adaptor		AD-0006E for 220BX	with gift box	Supplied by ZOOM	0
25	AC Adaptor		AD-0006F for 240UK	with gift box	Supplied by ZOOM	0
26	ZOOM Logo Tape		Z2E-0218			0.005

Spare Parts Order List

The parts with "*" are available from G1

PCB

G2Series=G2, G2.1u, B2, B2.1u, A2, A2.1u

Code No.	PART NAME	SPECIFICATIONS	COMMON USE	Q'TY	PRICE (Japanese yen)
PCB ASSEMBLY					
SP40171	G1 Main PCB assy	PCB-0169	FR-4 2layer,120mm x 92mm (PCB-0169)	1	

MAIN PCB Partslist : PCB-0169

Code No.	PART NAME	SPECIFICATIONS	COMMON USE	Q'TY	PRICE (Japanese yen)
MICRO PROCESSOR					
SP02349	MPU	UPD78F0537GB(T)-601-UEU-A (for G1/G1X)		1	
SIGNAL PROCESSOR					
SP02033	DSP	ZFX-3	G2Series, G7.1ut, G9.2tt	1	
MEMORY					
SP02148	SDRAM	EM636165TS-7G (Same as SP2034)	G7.1ut, G9.2tt	1	
A/D, D/A CONVERTER					
SP02350	AD/DA	WM8734SEFL/R		1	
DIGITAL IC					
SP02036	LOGIC IC	SN74HCU04ANSR	G2Series	1	
ANALOG					
SP00752	OPAMP	NJM2100V-TE1	MRS-4, MRS-8, PS-04, PS-02, MRS-1608	1	
SP00703	OPAMP	NJU7082BV-TE1	MRS-4, MRS-8, PS-04, PS-02	1	
POWER SUPPLY					
SP02351	Voltage Regulator	uPC2933BT (Same as LR1116AL-33-TN3-D-R)		1	
SP02352	DC-DC converter	XC6365B103MR		1	
TRANSISTOR					
SP00628	D-Transistor	MUN5135DW1T1G (Same as UMB10N)	G2Series, MRS-8, RT-223, GFX-1, MRS-1608, etc	10	
SP02040	Transistor	BC817-40	G2Series	10	
SP02353	Transistor	KTA1001-Y		10	
DISPLAY DEVICE					
SP02046	7SEG LED	E20561-GFOR	G2Series, G7.1ut, G9.2tt	1	
DIODE					
SP00123	Diode	1N4003	G7.1ut, G9.2tt, G2Series, GFX-1, GFX-3, GFX-8 etc	5	
SP00352	Diode	1SS133T-77	G7.1ut, G9.2tt, G2Series, GFX-3, GFX-5, MRS-1608 etc	5	
SP00704	Chip Shottky Diode	RB160L-40TE25	G7.1ut, G9.2tt, G2Series, MRT-3, MRS-4, PS-02, PS-04	5	
OSCILLATOR					
SP02354	Crystal Oscillator	HC-49U/S 18.432MHz (SKC)		1	
INDUCTOR					
SP01762	Chip Inductor	BLM18AG102SN1	G7.1ut, G9.2tt, G2Series, MRS-8	10	
SP02043	Chip Inductor	LQH43CN220K03L	G2Series	1	
RESISTOR					
SP02355	Resistor	18-J 2W		1	
SWITCH					
SP00671	TACT SW	SKRGAED010 (Same as EVQ11L05R, SKQNAE)	G7.1ut, G9.2tt, G2Series, GFX-1, GFX-3	10	
POTENTIOMETER					
SP02356	Potentiometer	RK09D1130 (Same as RV09BF-40E1-115F-0B50K-0G31)		1	
ENCODER					
SP02357	Rotary Encoder	F-11EN7H20M+C L15Fx7(O)		1	
JACK, SOCKET					
SP00440	Stereo Phone Jack	SJ-6325-B (Same as YKB21-5010)	505, 505SK, GFX-707, GFX-708	1	
SP01920	Stereo Phone Jack	SJ-6325-4P (Same as YKB21-5074)	MRS-8, PS-02, MRS-1044, MRS-802, MRS-1608	1	
SP01950	DC Jack	DC-208B (Same as DC-208)	G2Series	1	

MECHANICAL PARTS LIST

Code No.	PART NAME	DRAWING NO	COMMON USE	Q'TY	PRICE (Japanese yen)
TOP COVER					
SP02358	TOP CASE	Z2B-0226		1	
LOWER PANEL					
SP02359	BOTTOM CASE	Z2A-0125		1	
FOOT SWITCH					
SP02360	FOOT SW ASSY	Z2B-0227, Z2D-0067		1	
KNOB					
SP02361	VR KNOB 1	Z2B-0228-B		1	
SP02362	VR KNOB 2	Z2B-0229		1	
SHEET, COLOR FILTER					
SP02363	G1 DISPLAY SHEET	Z2E-0216		1	
RUBBER, SPRING					
SP02364	FOOT RUBBER 1-L	Z2D-0068		1	
SP02365	FOOT RUBBER 2-L	Z2D-0069		1	
SP02366	FOOT RUBBER 1-R	Z2D-0070		1	
SP02367	FOOT RUBBER 2-R	Z2D-0071		1	
SP02368	SUPPORT FOOT RUBBER	Z2D-0072		1	
SP02369	FOOT SW SPRING	Z2A-0126		1	
SP02370	BATT SPRING (+)	Z2A-0127		1	
SP02371	BATT SPRING (-)	Z2A-0128		1	
SP02372	BATT SPRING (+/-)	Z2A-0129		1	
SCREW, WASHER, NUT					
SP01185	SCREW	M3x8L P-tight, SWCH(Fe), Chromate	G7.1ut, G9.2tt, G2Series, MRT-3	10	
SP02074	SCREW	M3x10 P-tight, SWCH(Fe), Chromate	G2Series	10	
OTHER MOULDING PARTS					
SP02373	PCB SPACER	Z2B-0232		1	
SP02374	FOOT SW PLATE R	Z2B-0233		1	
SP02375	FOOT SW PLATE L	Z2B-0234		1	
SP02376	BATT CASE	Z2B-0230		1	
SP02377	BATT CASE COVER ASSY	Z2B-0231, Z2E-0190		1	

PACKING PARTS LIST

Code No.	PART NAME	DRAWING NO	COMMON USE	Q'TY	PRICE (Japanese yen)
CARTON BOX					
* KS00176	Gift Box	Z2F-0046		1	
* KS00179	G1 AC Adapter Spacer	Z2F-0057		1	
* KS00177	MASTER Carton Box	Z2F-0047		1	
LABEL, SEAL					
SP01189	FCC Label	Z2I-0729	G7.1ut, G9.2tt, G2Series,GFX-1,GFX-3,MRT-3B,MRS-4B	1	
MANUAL					
* OM00419	Operation Manual	Japanese		1	
* OM00420	Operation Manual	English		1	
* OM00421	Operation Manual	German		1	
* OM00422	Operation Manual	French		1	
* OM00423	Operation Manual	Italian		1	
* OM00424	Operation Manual	Spanish		1	
* OM00425	Operation Manual	Chinese		1	
* OM00426	Operation Manual	Portuguese		1	
CARD, SHEET					
* SP00984	Warranty Card US	Z2I-0730		1	
* SP02378	Patch List Sheet	Z2I-0725		1	
* SP02379	Logo Label for Unit	Z2E-0216		1	
* SP02380	G1 Display signal chart sheet	Z2I-0726		1	

page of

Supplement: Identification of main PCB

Main PCB is common use for other production. Therefore, this main PCB has check box to identify which production will be used for.

See below figure, it shows check box location on the main PCB.

