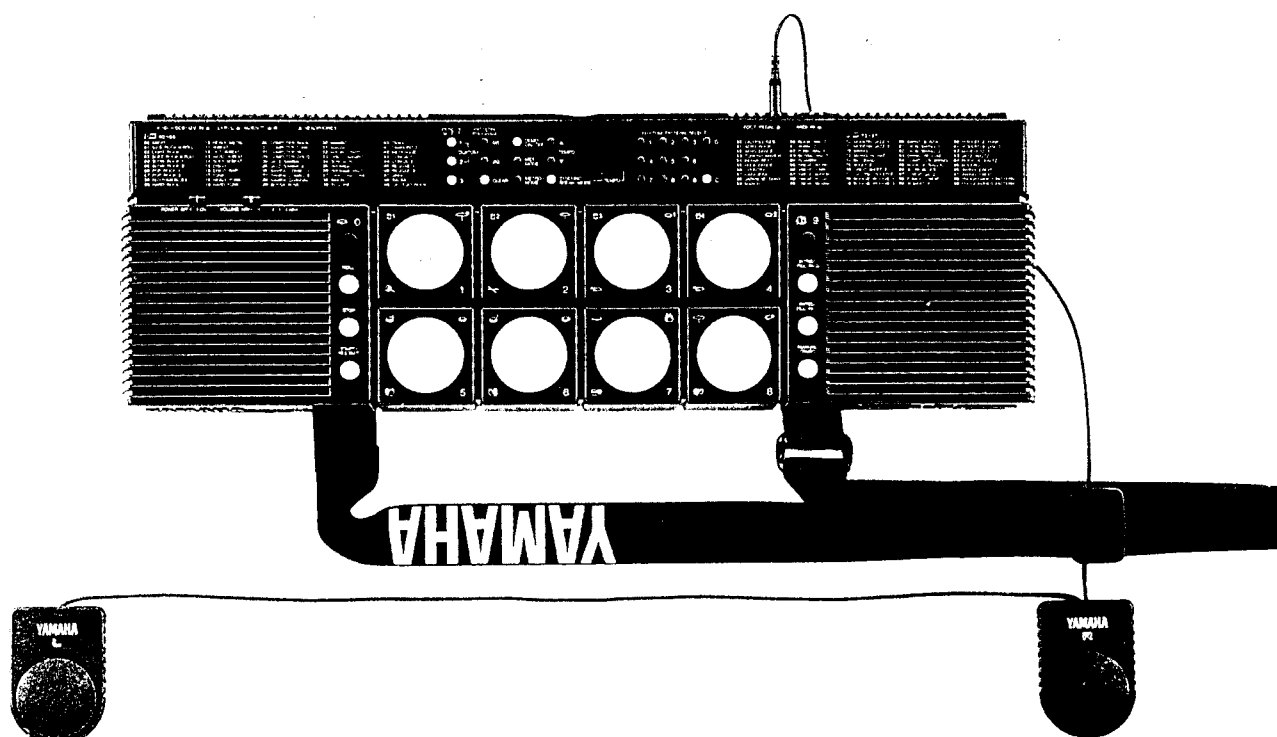


DIGITAL DRUM BANK



SERVICE MANUAL



■ CONTENTS (目次)

SPECIFICATIONS (総合仕様)	2
CIRCUIT BOARD LAYOUT (ユニットレイアウト)	3
PANEL LAYOUT (パネルレイアウト)	4
BLOCK DIAGRAM (ブロックダイアグラム)	6
INITIALING (初期設定)	8
TEST MODE (テストモード)	8
DISASSEMBLY PROCEDURE (分解手順)	10
LSI DATA TABLE (LSI端子機能表)	11
IC BLOCK DIAGRAM (ICブロック図)	12
MIDI IMPLEMENTATION CHART	13
MIDI	14
CIRCUIT BOARDS (シート基板図)	15
OVERALL CIRCUIT DIAGRAM (総回路図)	18
PARTS LIST	

001340

YAMAHA CORP.

HAMAMATSU, JAPAN

2.8K-231 © Printed in Japan '88.2

DD-10

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 or 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 specifications 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.

■ SPECIFICATIONS (総合仕様)

Percussion Pad

8 (large) pads, 2 (small) pads

Auto Rhythm Patterns (00-97)

8 beat, 50's Rock'n'Roll, Light Rock, Soft Rock'n'Roll, Slow Rock 1,2, Pop Rock 1,2, Rhythm & Blues, Hard Rock, Heavy Metal, 16 Beat, Old 16 Beat, Hard 16 Beat, Soft 16 Beat, Disco, Disco Rap, Funk, Heavy Funk, Hard Funk, Computer Rock, Computer Funk, Computer 16, Computer Disco, Jazz Samba 1,2, Samba Combo 1,2, Samba Carnival, Bossa Nova, Mambo 1,2, Mambo Fast, Disco Mambo, Son Afro, Rhumba, Rhumba Fast, Cha-Cha-Cha, Baion, Beguine, Tango, Tamborito, Merengue, Conga 1,2, Reggae 1,2, Jingo, Salsa, Calypso Rock, Calypso R&B, Afro Rock, Afro Dance, Turkish March, Indian Beat, Hula Dance, Country, Habanera, Japanese Taiko, March, Rock Waltz, 16 Waltz, Funk Waltz, Bassa Waltz, Flamenco, 5 Beat Rock, 5 Beat Funk, 5 Beat Bossa, 7 Beat Rock, 7 Beat Bossa, Modern Jazz 1,2, Swing, Swing Hi-Hat, Big Band, Shuffle, Disco Shuffle, Calypso Shuffle, Boogie Woogie 1,2, Swing Bossa, Latin Swing 1,2, Swing Reggae, Computer Swing, Rock-a-Ballad, Slow Blues, 12 Beat Jazz, Funky 12 Beat, 16 Shuffle, 16 Shuffle Funk, 16 Shuffle Disco, March 12/8, Jazz Waltz, Rock-a-Waltz, Bolero, Swing 5 Beat, Swing 7 Beat

Instrument Voices

Tom Tom 1,2,3,4, Snare Drum, Rim Shot, Hi-Hat (open), Ride Cymbal, Cabasa, Claves, Agogo (low), Agogo (high), Conga (low), Conga (high), Bongo (low), Bongo (high), Crash Cymbal, Splash Cymbal, Synth tom (low), Synth tom (high), Synth Snare, Castanet, Hand Clap, Cow bell, Hi-Hat (Closed), Bass Drum

Percussion Select

1,2,3, Custom

Pattern Program

98, 99, Clear

Demonstration

Demo on/off

Rhythm Pattern Select (10 Buttons)

1,2,3,4,5,6,7,8,9,0,C

Other controls

Power Switch, Volume, Tempo, MIDI Mode, Metronome, Syncro Break Mode, Roll, Restart/Start, Stop, Intro/Fill In 1,2, Manual Tempo

Auxiliary Jacks

DC 9—12V in, Aux out L/L + R, Aux out R, Headphones, Foot pedal, MIDI In

Main Amplifier

1.3W (RMS)×2

Speakers

10 cm (4")×2, 6 ohms

Rated Voltage

DC 9V: six 1.5V SUM-2 (AM-2), R-14 (LR-14), "C" size or equivalent batteries
AC Power adaptor (PA-1, PA-1B, PA-4) or Car Battery Adaptor (CA-1)

Dimensions (W×D×H)

543 mm×173 mm×72 mm
(21-3/8"×6-7/8"×2-7/8")

Weight

2.0 kg (4.2 lbs.) including batteries

Original Accessories

Foot pedal (L,R), Shoulder strap

パーカッション パッド

⑧×8、②×2

オートリズム・パターン (00-97)

8 beat, 50's Rock'n'Roll, Light Rock, Soft Rock'n'Roll, Slow Rock 1,2, Pop Rock 1,2, Rhythm & Blues, Hard Rock, Heavy Metal, 16 Beat, Old 16 Beat, Hard 16 Beat, Soft 16 Beat, Disco, Disco Rap, Funk, Heavy Funk, Hard Funk, Computer Rock, Computer Funk, Computer 16, Computer Disco, Jazz Samba 1,2, Samba Combo 1,2, Samba Carnival, Bossa Nova, Mambo 1,2, Mambo Fast, Disco Mambo, Son Afro, Rhumba, Rhumba Fast, Cha-Cha-Cha, Baion, Beguine, Tango, Tamborito, Merengue, Conga 1,2, Reggae 1,2, Jingo, Salsa, Calypso Rock, Calypso R&B, Afro Rock, Afro Dance, Turkish March, Indian Beat, Hula Dance, Country, Habanera, Japanese Taiko, March, Rock Waltz, 16 Waltz, Funk Waltz, Bassa Waltz, Flamenco, 5 Beat Rock, 5 Beat Funk, 5 Beat Bossa, 7 Beat Rock, 7 Beat Bossa, Modern Jazz 1,2, Swing, Swing Hi-Hat, Big Band, Shuffle, Disco Shuffle, Calypso Shuffle, Boogie Woogie 1,2, Swing Bossa, Latin Swing 1,2, Swing Reggae, Computer Swing, Rock-a-Ballad, Slow Blues, 12 Beat Jazz, Funky 12 Beat, 16 Shuffle, 16 Shuffle Funk, 16 Shuffle Disco, March 12/8, Jazz Waltz, Rock-a-Waltz, Bolero, Swing 5 Beat, Swing 7 Beat

パーカッション

Tom Tom 1,2,3,4, Snare Drum, Rim Shot Hi-Hat (open), Ride Cymbal, Cabasa, Claves, Agogo (low), Agogo (high), Conga (low), Conga (high), Bongo (low), Bongo (high), Crash Cymbal, Splash Cymbal, Synth tom (low), Synth tom (high), Synth Snare, Castanet, Hand Clap, Cow bell, Hi-Hat (Closed), Bass Drum

パーカッション・セレクト

1,2,3, Custom

パターン・プログラム

98, 99, Clear

デモンストレーション

Demo on/off

リズム・パターン・セレクト・ボタン

1,2,3,4-5,6,7,8,9,0,C

その他のコントロール

Power Switch, Volume, Tempo, MIDI Mode, Metronome, Syncro Break Mode, Roll, Restart/Start, Stop, Intro/Fill In 1,2, Manual Tempo

接続端子

DC9—12V in, Aux out L/L + R, Aux out R, Headphones, Foot pedal, MIDI In

メインアンプ

1.3W×2

スピーカー

10cm×2 6オーム

消費電力

ACアダプター使用時 : 5.2W
乾電池 単2×6本時 : 2.3W
(リズム "64"、TEMPO中央)

電源アダプター

PA-1, PA-4

カーアダプター

CA-1

寸法 (W×D×H) / 重量

534mm×173mm×72mm/2.0kg (乾電池含む)

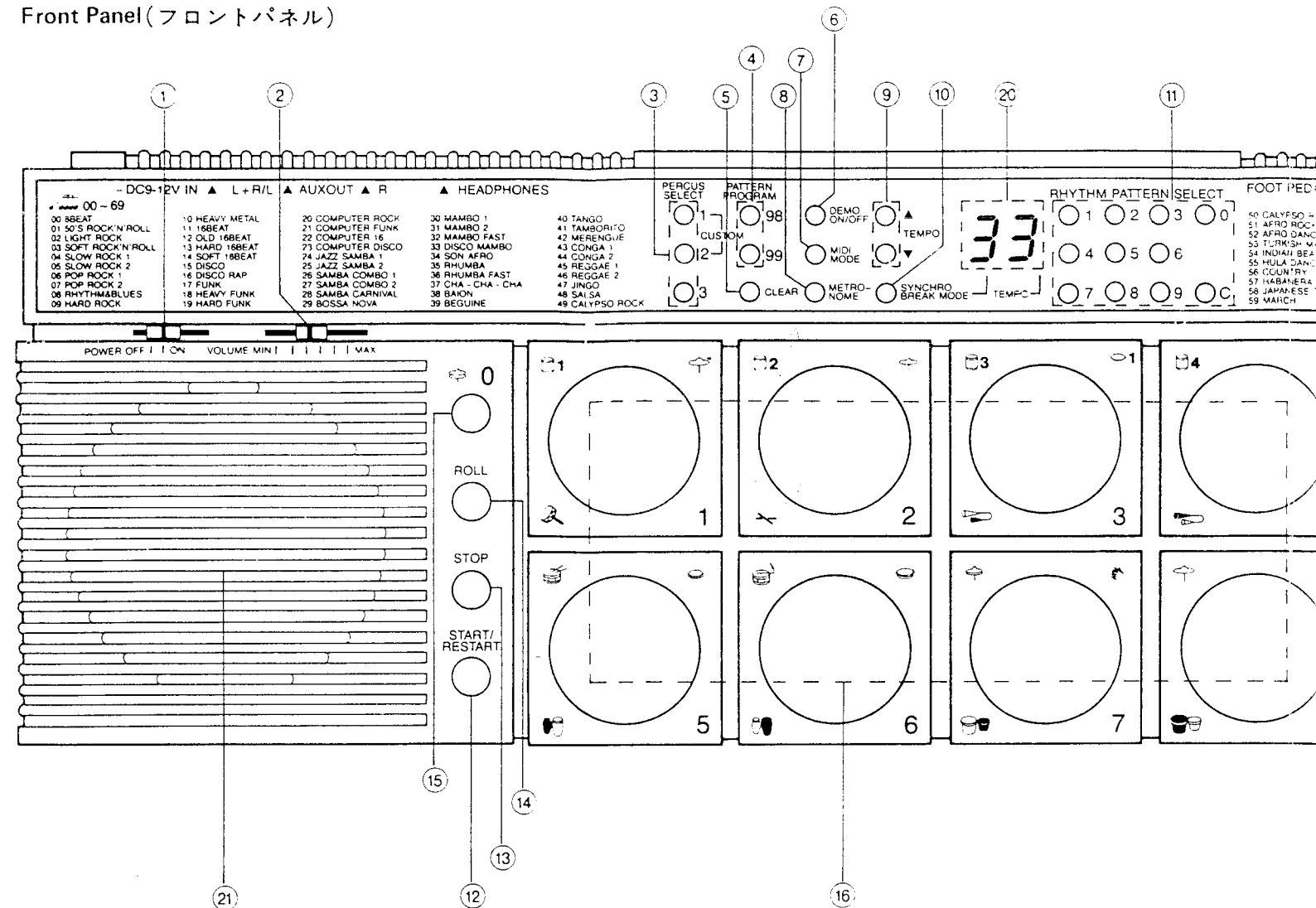
付属品

フットペダル、ストラップ

[illegible]

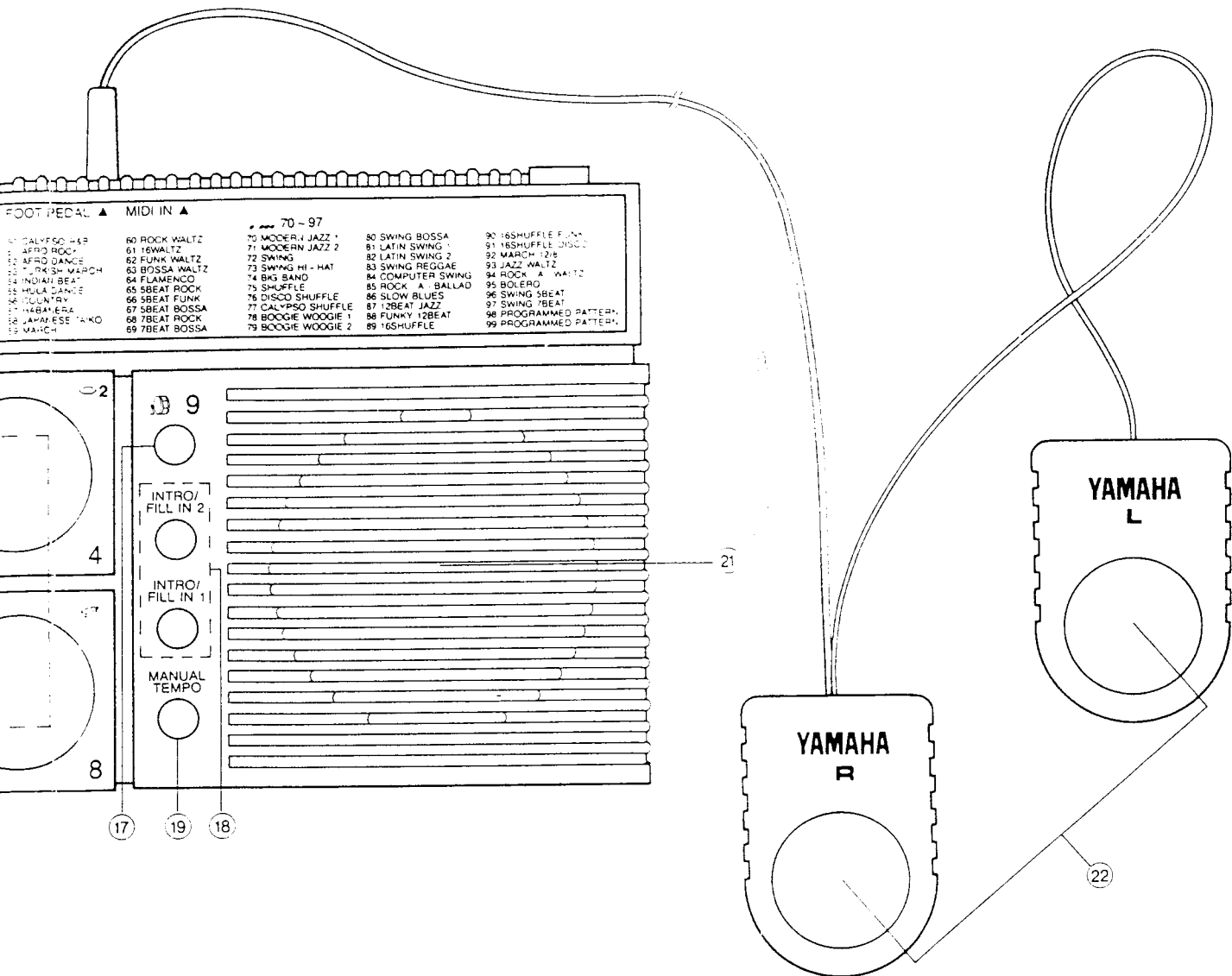
PANEL LAYOUT (パネルレイアウト)

Front Panel (フロントパネル)

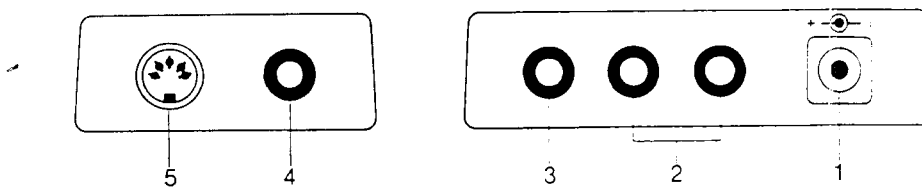


- ① Power Switch
- ② Volume Control
- ③ Percussion Selectors
- ④ Pattern Program Selectors
- ⑤ Clear Button
- ⑥ Demonstration On/Off
- ⑦ MIDI Mode Selector
- ⑧ Metronome Selector
- ⑨ Tempo Controls
- ⑩ Synchro Break Mode Selector
- ⑪ Rhythm Pattern Select Button
- ⑫ Start/Restart Selector
- ⑬ Stop
- ⑭ Roll Function Button
- ⑮ Percussion Button 0
- ⑯ Percussion Pads 1-8
- ⑰ Percussion Button 9
- ⑱ Intro/Fill In Selectors
- ⑲ Manual Tempo Control
- ⑳ LED indicator
- ㉑ Speakers
- ㉒ Foot Pedals

- ① パワースイッチ
- ② マスターボリューム
- ③ パーカッションセクター
- ④ パターンプログラムセクター
- ⑤ クリアー
- ⑥ デモンストレーション
- ⑦ MIDIモードセクター
- ⑧ メトロノーム
- ⑨ テンポコントロール
- ⑩ シンクロ・ブレイクモードセクター
- ⑪ リズムセクター
- ⑫ スタート/リスタート
- ⑬ ストップ
- ⑭ ロール
- ⑮ ハイハットオープンコントロール
- ⑯ パッド1-8
- ⑰ バスドラム
- ⑱ イントロ/フィルイン
- ⑲ マニュアルテンポコントロール
- ⑳ LED表示器
- ㉑ スピーカ
- ㉒ フットペダル

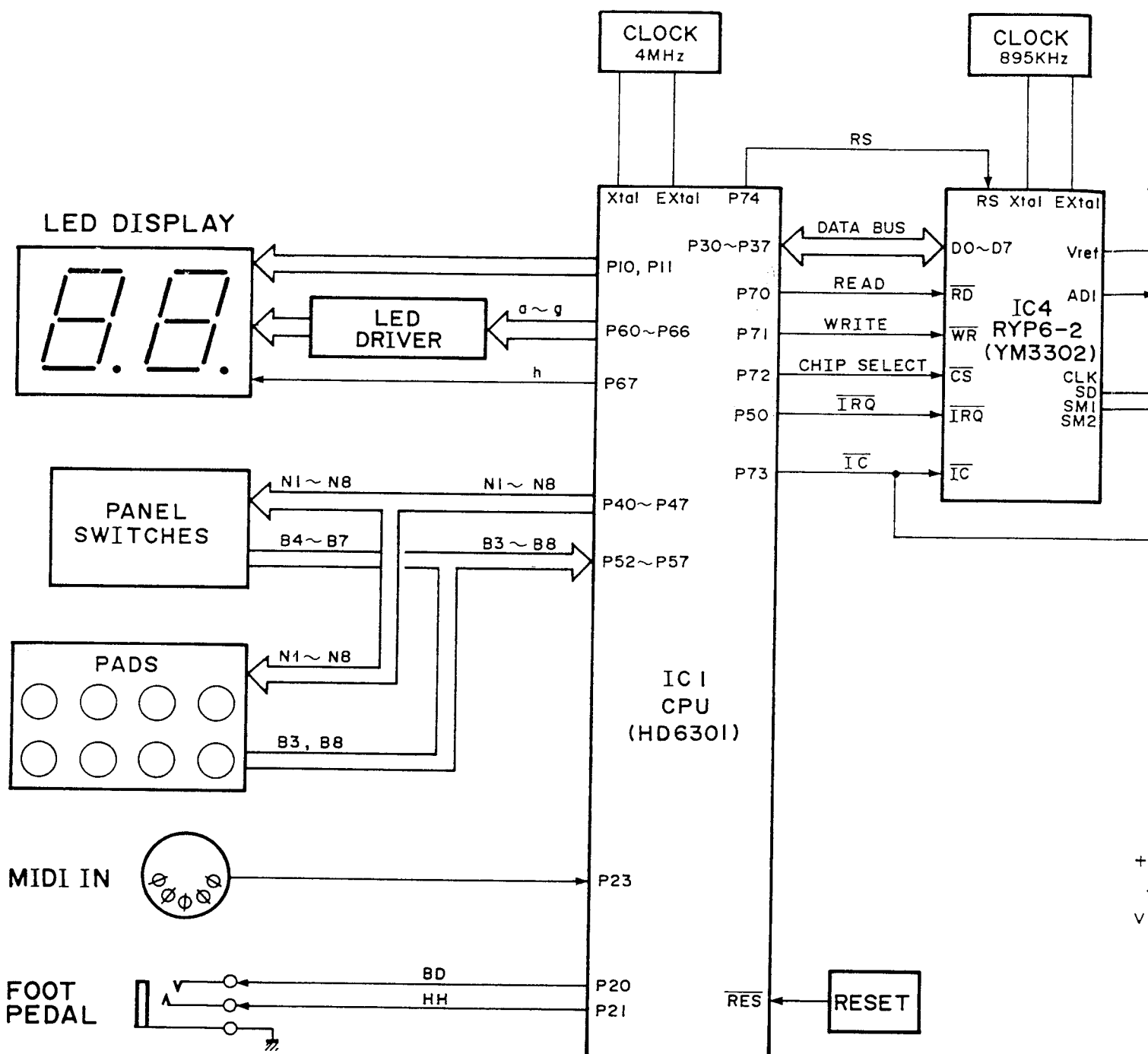


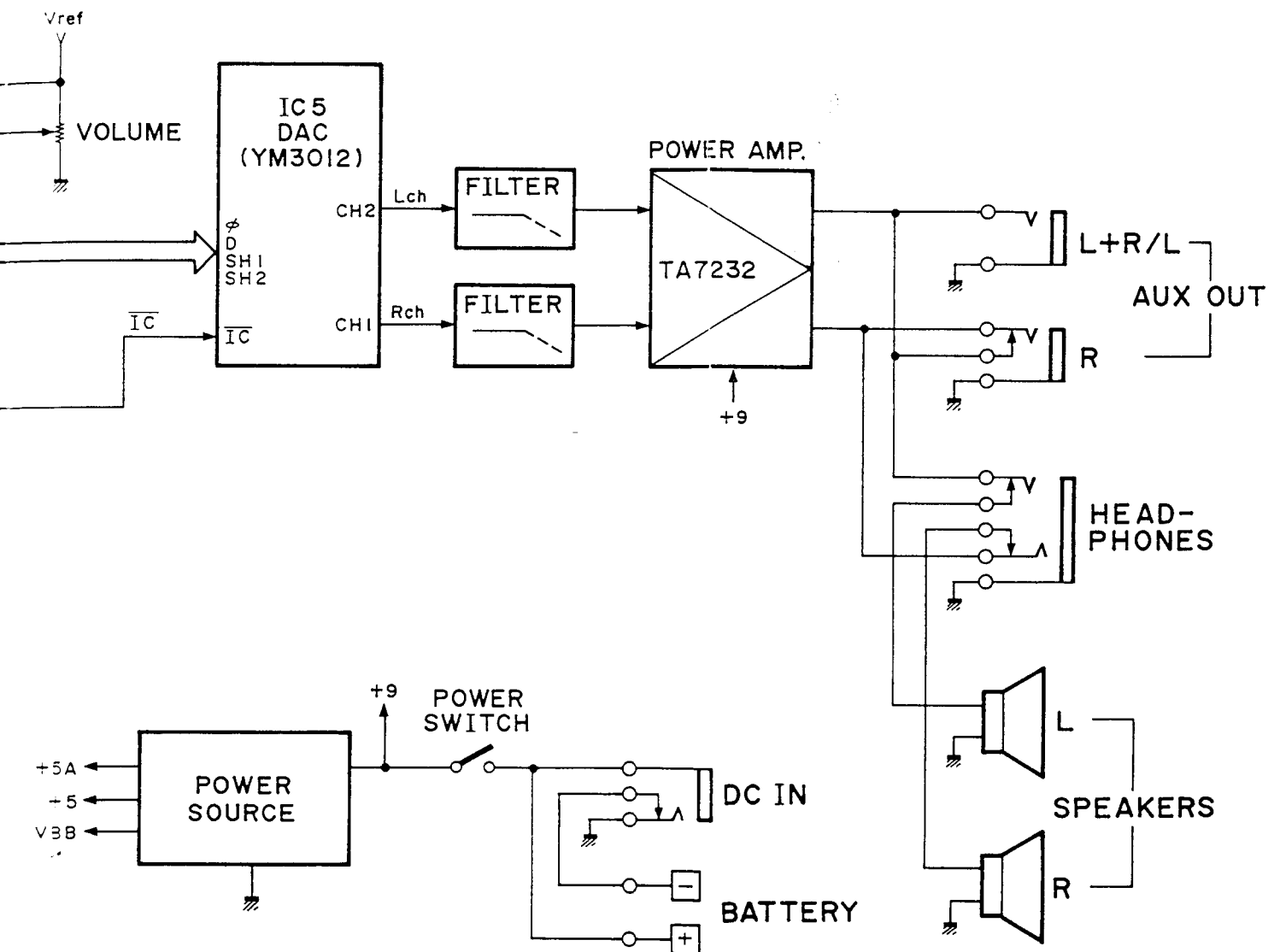
● Rear Panel (リアパネル)



1. External Power source (DC9-12V IN) jack
2. AUX OUT (L + R/L), AUX OUT R jacks
3. Headphones
4. Foot pedal jack
5. MIDI IN

1. DC-IN ジャック 9V-12V
2. AUX OUT L+R/L 端子
AUX OUT R 端子
3. ヘッドホン 端子
4. フットペダル接続端子
5. MIDI IN

BLOCK DIAGRAM (ブロックダイアグラム)



■INITIALIZING（初期設定）

- Initializing
While pressing the RHYTHM PATTERN SELECT "8" and "9" switches, turn on the POWER switch. Memories will be set as shown below.

Custom Drum "98"		Rhythm pattern "00"
"99"		Rhythm pattern "00"
Custom Percussion set	PAD "0"	 HI-HAT control
	"1"	 CRUSH SYMBAL
	"2"	 TOM 2
	"3"	 TOM 3
	"4"	 RIDE SYMBAL
	"5"	 SNARE DRUM
	"6"	 RIM SHOT
	"7"	 HI-HAT
	"8"	 TOM 4
	"9"	 BASS DRUM
MIDI basic channel		16ch

- 初期化の方法
リズムパターンセレクトの“8”と“9”を押したまま電源スイッチをONにすると、イニシャライズされ、下記のようにセットされます。

■TEST MODE（テストモード）

- Test Mode Entry
While pressing the RHYTHM PATTERN SELECT "0" and "1" switches, turn on the POWER switch.
1. Dots in the LED display will light alternately.
 2. Press a numeric button, LED display will indicate it's figure.
 3. Connect foot pedals to the FOOT PEDAL jacks. If foot pedals are on, TOM 1 and SYNTH TOM HIGH tone will be produced.

Pedal Name	Instrument
Bass Drum (L ch)	TOM 1
Hi - Hat (R ch)	SYNTH TOM High

4. When you operate the VOLUME, output levels are to be varied.
5. Connect the SHS-10 to the MIDI IN jack. And turn on the DEMO switch of the SHS-10, demonstration rhythm will start.
6. If you press the panel switches, tone will be produced as follows.

- テストモードへの入り方
リズムパターンセレクトの“0”と“1”を押したまま、電源スイッチをONにすると、テストモードに入ります。
テストモードでは以下の様に動作します。

1. LEDディスプレイのドットは、交互に点灯します。
2. リズムパターンセレクトの0～9を押すと、LEDディスプレイにその数字が表示されます。
3. FOOT PEDAL端子にフットペダルを接続してペダルをONすると、以下の楽器音が鳴ります。

ペダル名称	楽器名称
バスドラム (Lch)	タム 1
ハイハット (Rch)	シンセタム High

4. VOLUMEを動かす事により、音量が変わります。
5. MIDI INにSHS-10を接続し、デモをONすると、デモのリズムパターンが、再生されます。
6. パネルスイッチを押すと、下表の楽器音が鳴ります。

Switch Name (スイッチ名称)	Instrument Name (楽器名称)
START / RESET	CASTANET
STOP	BONGO High
INTRO / FILL IN 1	CONGA Low
2	TOM TOM 4
MANUAL TEMPO	CHINA CYMBAL
PERCUS SELECT 1	AGOGO High
2	AGOGO Low
3	CLAVES
PAD 1 Soft / Hard	TOM 3 / HAND CLAP
2 Soft / Hard	RIM SHOT / AGOGO High
3 Soft / Hard	RIDE SYMBAL / CLAVES
4 Soft / Hard	HI-HAT Close / BONGO Low
5 Soft / Hard	TOM 2 / BASS DRUM
6 Soft / Hard	TOM 4 / CABASA
7 Soft / Hard	SNARE / AGOGO Low
8 Soft / Hard	HI-HAT Open / BONGO High
HI - HAT control	CASTANET
BASS-DRUM	SYNTH TOM Low
ROLL	CONGA High
TEMPO ▲	CONGA Low
▼	AGOGO High
PATTERN PROGRAM 98	CRASH CYMBAL
99	CHINA CYMBAL
CLEAR	SYNTH SNARE
RHYTHM PATTERN SELECT 0	METRO Low
1	HI-HAT Close
2	TOM 1
3	TOM 2
4	TOM 3
5	RIM SHOT
6	SNARE DRUM
7	RIDE CYMBAL
8	HI-HAT Open
9	HI-HAT Close
C	BASS DRUM
METRONOME	CABASA
DEMO ON/OFF	SPLASH CYMBAL
MIDI MODE	HAND CLAP
SYNCHRO BREAK MODE	BONGO Low

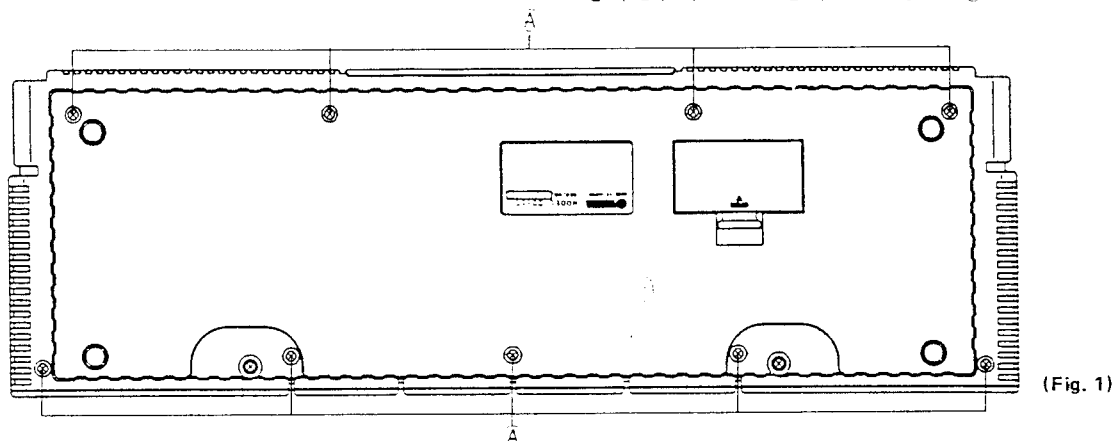
■ DISASSEMBLY PROCEDURE (分解手順)

1. Removal of bottom case

Remove the 9 bind tapping screws (A) (3x8) and remove the lower case. (Fig. 1)

1. ボトムケースの外し方

本体の裏側のバインドタッピングネジ(A) (3×8) 9本を外し、ドケースを外します。(Fig.1)



(Fig. 1)

2. Removal of M circuit board

Remove the bottom case.
Remove the 28 bind tapping screws (B) (3x8) and remove the M circuit board. (Fig. 2)

2. Mシートの外し方

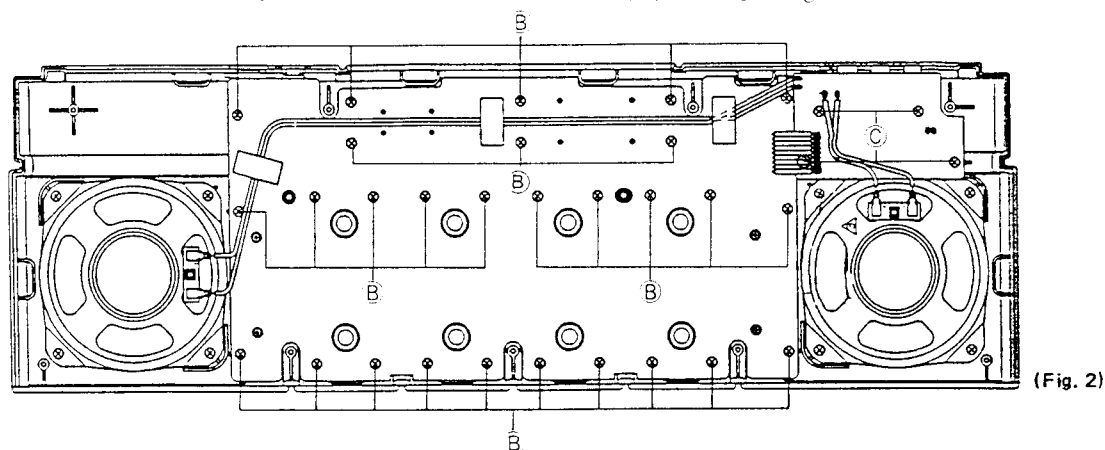
ボトムケースを外します。
バインドタッピングネジ(B) (3×8) 28本を外し、Mシートを外します。(Fig.2)

3. Removal of HP circuit board

Remove the bottom case.
Remove the 4 bind tapping screws (C) (3x8) and remove the HP circuit board. (Fig. 2)

3. HPシートの外し方

ボトムケースを外します。
バインドタッピングネジ(C) (3×8) 4本を外し、HPシートを外します。(Fig.2)



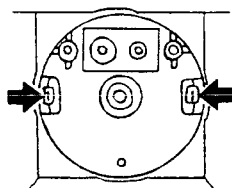
(Fig. 2)

4. Removal of pad

Remove the bottom case.
Remove the M circuit board. And push the hooks as shown below and push the pad to outside. (Fig. 3)

4. パッドの外し方

ボトムケースを外します。
パッドを外す場合は、Mシートを外し、パッドのツメを内側へ押し込み、パッドを外側へ押し出します。(Fig.3)



(Fig. 3)

LSI DATA TABLE (LSI端子機能表)

● HD6301Y0D84P (XD773A00) CPU

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vss		Ground	33	Vcc		DC Supply (+5V)
2	XTAL	I	Clock (4MHz)	34	P47	O	Port 4
3	EXTAL	I		35	P46	O	
4	MP0	I	Mode program	36	P45	O	
5	MP1	I		37	P44	O	
6	RES	I	Reset	38	P43	O	Port 1
7	STBY	I	Stand-by mode signal	39	P42	O	
8	NMI	I	Non-maskable interrupt	40	P41	O	
9	P20	I/O	Port 2	41	P40	O	
10	P21	I/O		42	Vss		Ground
11	P22	I/O		43	P17	O	Port 3
12	P23	I/O		44	P16	O	
13	P24	I/O		45	P15	O	
14	P25	I/O		46	P14	O	
15	P26	I/O	Port 5	47	P13	O	Port 7
16	P27	I/O		48	P12	O	
17	P50	I/O		49	P11	O	
18	P51	I/O		50	P10	O	
19	P52	I/O		51	P37	I/O	Port 6
20	P53	I/O		52	P36	I/O	
21	P54	I/O		53	P35	I/O	
22	P55	I/O		54	P34	I/O	
23	P56	I/O	Port 6	55	P33	I/O	Port 7
24	P57	I/O		56	P32	I/O	
25	P60	I/O		57	P31	I/O	
26	P61	I/O		58	P30	I/O	
27	P62	I/O		59	P74	O	Enable
28	P63	I/O		60	P73	O	
29	P64	I/O		61	P72	O	
30	P65	I/O		62	P71	O	
31	P66	I/O		63	P70	O	
32	P67	I/O		64	E	O	

● Mode Program

	MP0	MP1
Mode 1	H	L
Mode 2	L	H
Mode 3	H	H

● Port

	Mode 1, 2	Mode 3
Port 1	Address bus (A0 ~ A7)	O Port
Port 2	I/O Port	I/O Port
Port 3	Data bus (D0 ~ D7)	I/O Port
Port 4	Address bus (A8 ~ A15)	O Port
Port 5	I/O Port	I Port
Port 6	I/O Port	I/O Port
Port 7	RD, WR, R/W, LTR, BA	O Port

● YM3012 (IT301200) Digital to Analog Converter

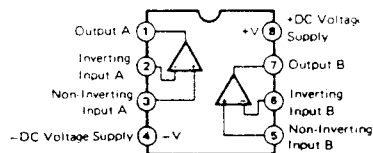
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	VDD		DC supply (+5V)	9	CH1	O	Sample and hold analog SW output, (ch1)
2	ϕ	I	Timing clock	10	CH2	O	" (ch2)
3	DG		Digital ground	11	COM	I	Ch1 ch2 analog SW common input
4	D	I	Serial data input	12	BUF	O	Analog output to Buffer AMP
5	SH2	I	Sample and hold (ch2)	13	V/2		Middle point 1/2 VDD bias
6	SH1	I	" (ch1)	14	BC	I	Bias compensation
7	IC	I	Initial clear	15	RA	O	Bias R
8	AG		Analog ground	16	AG		Analog ground

- YM3302 (XD210001) RYP6 (Rhythm Generator 6-2)

Pin No.	Pin Name	I/O	Function	Pin No.	Pin Name	I/O	Function
1	Vss	I	Digital ground	15	$\overline{CS}$	I	Chip select
2	XTAL	I	} Clock	16	$\overline{IRQ}$	O	Interrupt request
3	EXTAL	I		17	$\overline{IC}$	I	Initial clear
4	$\overline{RD}$	I	Read control	18	$\overline{TCL}$	I	Tempo clock
5	$\overline{WR}$	I	Write control	19	$\overline{TEST}$	I	Test pin
6	D0	I/O	} Data bus	20	SM1	O	} Sample and hold
7	D1	I/O		21	SM2	O	
8	D2	I/O		22	SD	O	Serial data output
9	D3	I/O		23	CLK	O	Clock output
10	D4	I/O		24	Vss	I	AD ground
11	D5	I/O		25	VREF	I	Reference voltage for ADC
12	D6	I/O		26	AD1	I	} Analog data input
13	D7	I/O		27	AD2	I	
14	RS	I	Register select	28	VDD	I	Digital DC supply

■ IC BLOCK DIAGRAM (ICブロック図)

- NJM4558DV (IG001390)
Dual Operational Amplifier



D-10 MIDI Implementation Chart

Function		Recognized		Remarks
		mode "00"	mode "99"	
Basic Channel	Default Changed	1—16* 1—16*	1—16* 1—16*	*memorized
Mode	Default Messages Altered	Mode 3 × *****	OMNI OFF × *****	
Note Number:	True Voice	38—75 *	× *****	See the Appended Table 1.
Velocity	Note ON Note OFF	○ 9nH, v = 1—127 ×	×	
After Touch	key's Ch's	×	×	
Pitch Bender		×	×	
Control Change		×		
Prog Change	: True #	×	○ 0—99 0—99 *1	
System Exclusive		×	×	
System Common	: Song Pos : Song Sel : Tune	×	×	
System Real Time	: Clock : Commands	×	○ *2 ○ *3	
Aux Message	: Local ON/OFF : All Notes OFF : Active Sense : Reset	×	×	

Notes

*1 = recognized as preset rhythm pattern number
 *2 = internal/external clock auto change
 *3 = start, stop only

Mode 1: OMNI ON, POLY
 Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
 Mode 4: OMNI OFF, MONO

○: Yes
 ×: No

<table 1>

* not assign

Note Num.	instrument name	Note Num.	instrument name
38	synth snare	58	*
39	*	59	hi-hat open
40	synth tom low	60	ride cymbal
41	synth tom low	61	splash cymbal
42	synth tom high	62	ride cymbal
43	synth tom high	63	crash cymbal
44	bass drum	64	conga low
45	bass drum	65	conga high
46	rim	66	conga high
47	tom 4	67	bongo low
48	tom 3	68	bongo high
49	snare	69	*
50	tom 2	70	*
51	rim	71	*
52	snare	72	castanet
53	tom 1	73	claves
54	hand clap	74	agogo low
55	cow bell	75	agogo high
56	cabasa	—	
57	hi-hat close	—	

MIDI

1 SETTING THE MIDI RECEIVE CHANNEL

To set any of 16 MIDI RECEIVE CHANNELS, press the MIDI MODE selector and a numeric button (01—16) simultaneously.

Note:

But DD-10 will not receive the signal from other MIDI equipment which is not in same channel. Because the "Key note information" and "Program change" are "Channel message".

2 MIDI MODE

By using the MIDI MODE selector, you can choose any of two MIDI modes.

- (1) Press the MIDI MODE selector and input "00" using the "9" RHYTHM PATTERN SELECT section. This will put the DD-10 in the MIDI key note Mode.

- Key notes will be received on the basic channel.

- (2) Press the MIDI MODE selector and input "99" using the "9" buttons in the RHYTHM PATTERN SELECT section. This will put the DD-10 in the MIDI self-pattern mode.

- Real time signal reception (start, stop, and timing clock).
- Rhythm pattern will be synchronized by the timing clock of the other instrument. If the timing signal is not received, the rhythm pattern will be synchronized by the DD-10's own timing clock.
- Receiving "Program Change" signal.

MIDIスイッチを押しながらテンキー2桁を押すことにより以下の3つの設定ができます。尚、この際C (CANCEL) スイッチは、リズムパターン変更の時と同様に働きます。

1. MIDIレシーブモード1(キーノート モード)

<操作>MIDI+00

- ・キーノートをベーシックchより受けます。(オムニオフ、デフォルトは16ch)
- ・リアルタイムメッセージは一切受けません。(アクティブセンスは受けます。)
- ・プログラムチェンジは一切受けません。

2. MIDIレシーブモード2(セルフパターン モード)

<操作> MIDI+99

- ・キーノートは一切受けません。
- ・リアルタイムメッセージ (スタート、ストップ、タイミングクロック) を受けて動作します。
- (注)1. クロックは外部クロックの有無を検出し、有れば外部クロックに従います。外部クロックが来ていない場合は、内部クロックに従います。
- 2. スタート、ストップについては、パネルもMIDIも並列有効です。
- ・プログラムチェンジを、ベーシックchより受けます。(オムニオフ、デフォルトは16ch)
- ・MIDIレシーブモード1,2は、フリップフロップ動作(デフォルトはモード1)

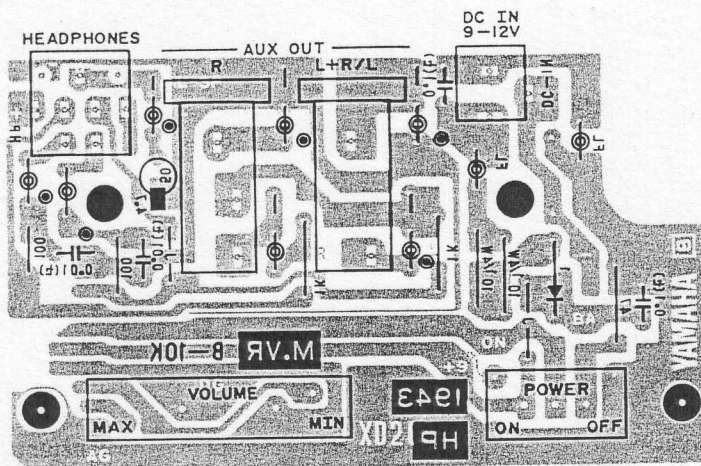
3. レシーブ チャンネル切替

<操作>MIDI+01~16(チャンネルNo.)

- ・デフォルトは16ch
- ・モード1及びモード2のベーシックチャンネルの切替。
- ※尚ベーシックチャンネルは、電源を切っても記憶されています。

■ CIRCUIT BOARDS (シート基板図)

● HP Circuit Board



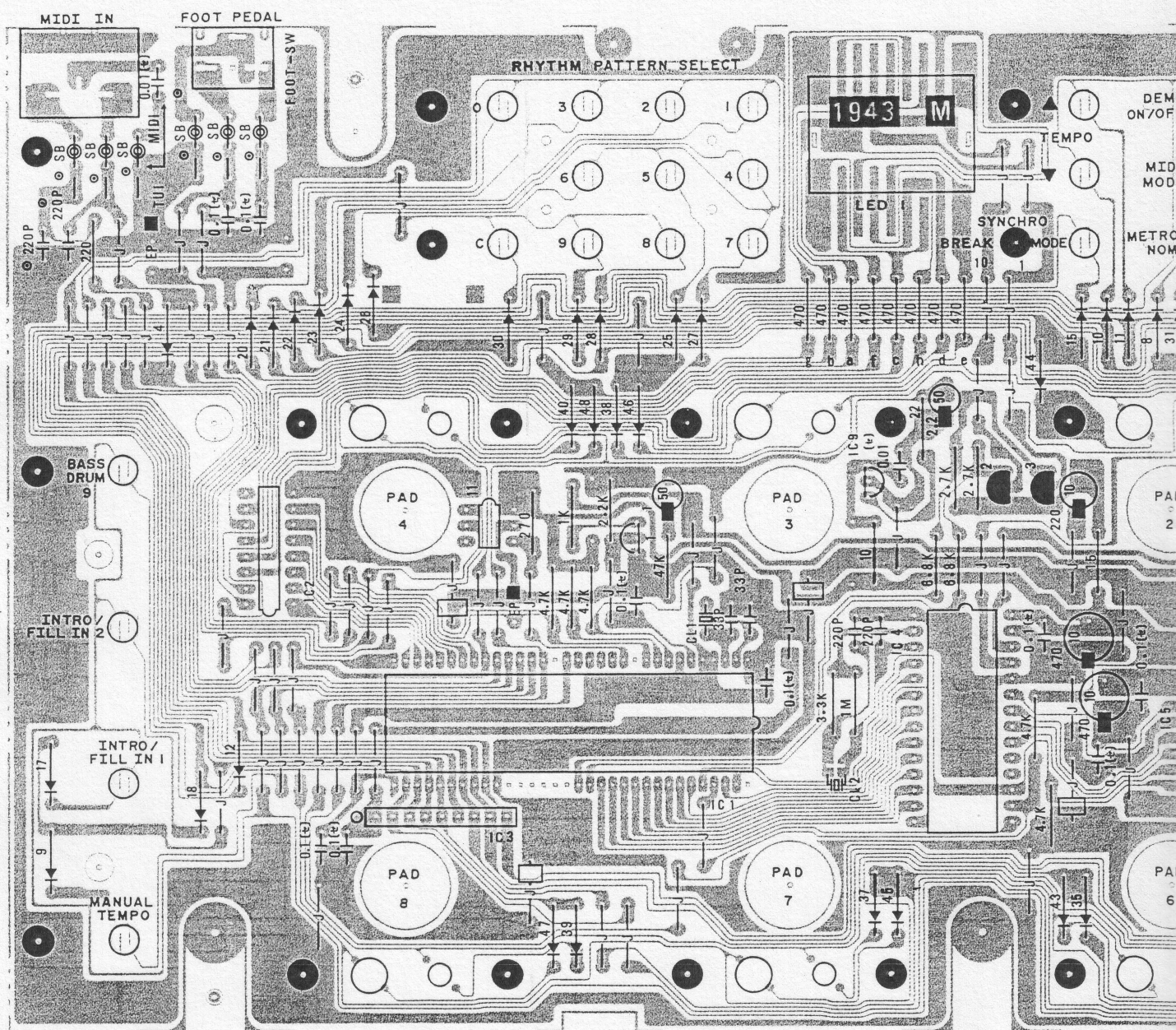
Pattern Side (パターン側)

Notes)

Circuit Board: HP (VE498100) XD209B0

1. Diode  1: 10E-1 (1H000590)
2. Slide Pot. B10.0K RSCA1 (VA855700) VOLUME
3. Coil
- Marked  : LAL02TB3R3K 3.3 (VD825400)
- Marked FL : FL5R200QNT 20μ (VB835000)
4. Slide Switch SSG1 (VA856400) POWER

● M Circuit Board



Notes)

Circuit Board: M (VE028000) XD12610

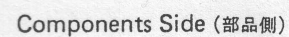
1. IC
 IC 1: HD6301Y0D84P (XD773A00) CPU
 IC 4: YM3302 (XD210001) RYP6-2
 IC 5: YM3012 (IT301200) SUX DAC
 IC 6, 7: NJM4558DV (IG001390) OP AMP.
 IC 8: TA7232P (XC229001) P AMP. 2.2W 2CH
 IC 9: PST518A-2 (XC722001) RESET
 IC10: LVC550C (XD774A00) REGULATOR
2. Photo Coupler
 IC11: PC-900 (IK000420)

3. Transistor

- | | | |
|--|-------|-------------------------|
| | 1: | 2SC2603 E, F (IC260310) |
| | 2, 3: | 2SA1115 E, F (IA111510) |
| | 4: | 2SC3419 (VA712800) |

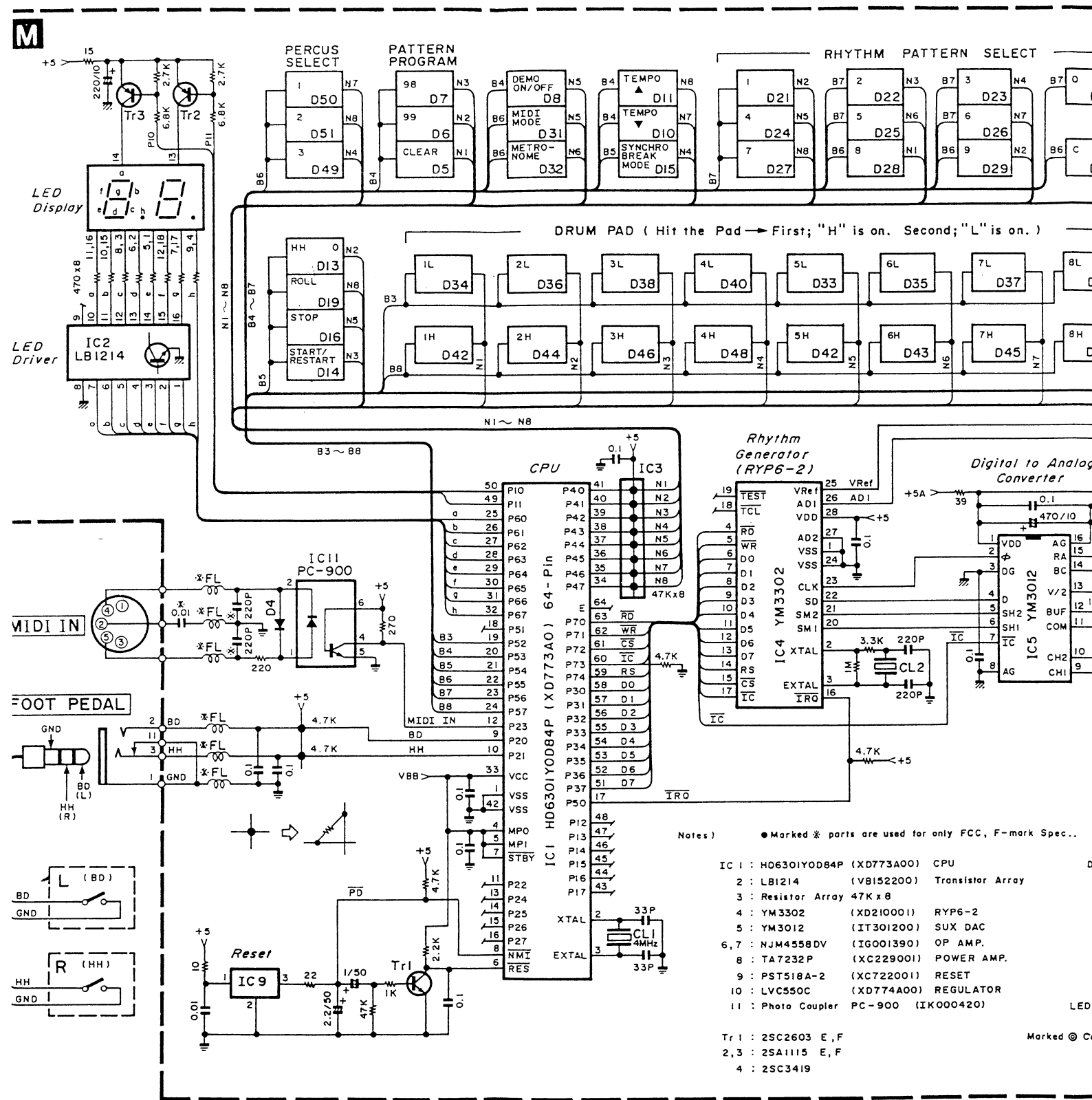
4. Transistor Array
 IC2: LB1214 (VB152200)
5. Diode

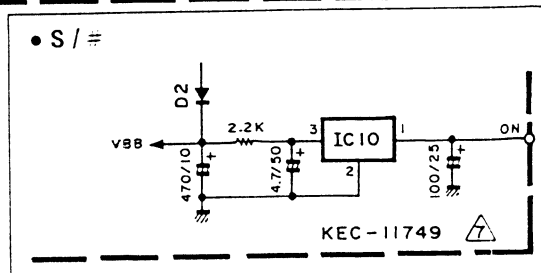
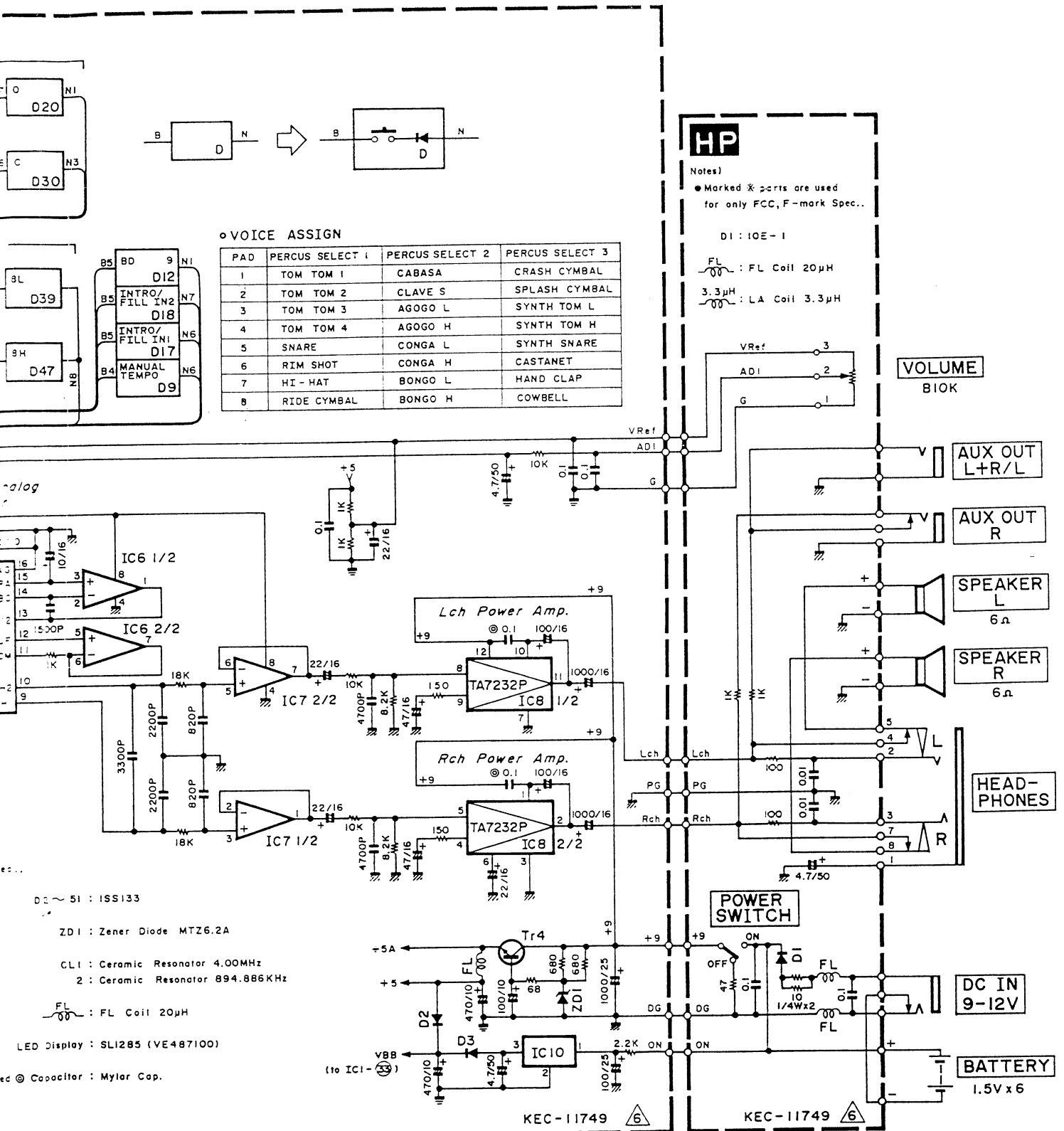
→ 2 ~ 51: 1SS133 (IF003450)



11. Marked * parts are used for only FCC, F-mark Spec.

OVERALL CIRCUIT DIAGRAM (総回路図)



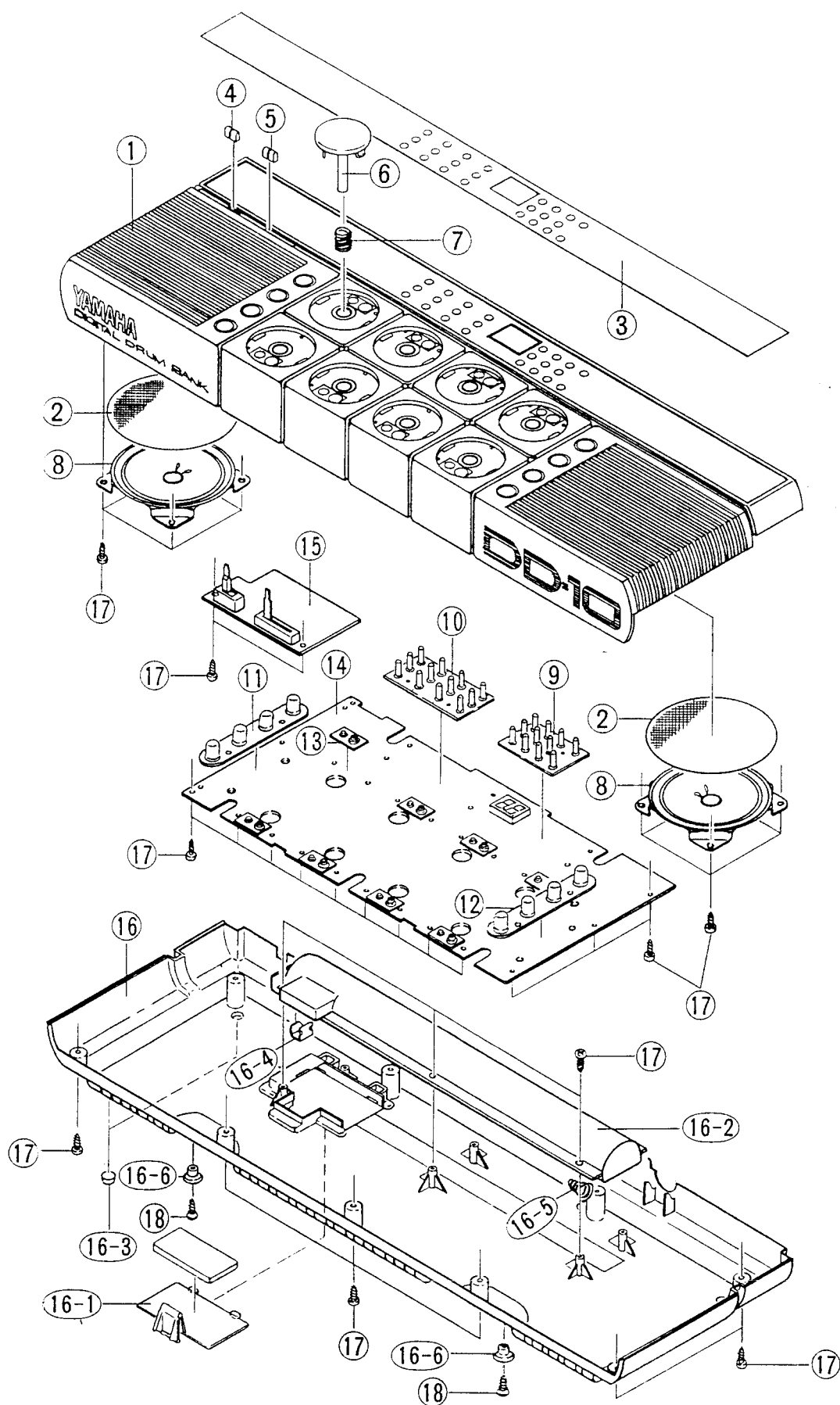


DIGITAL DRUM BANK

DD-10

PARTS LIST

OVERALL ASSEMBLY (総組立)



2

■ ELECTRICAL PARTS (電気部品)

[illegible]