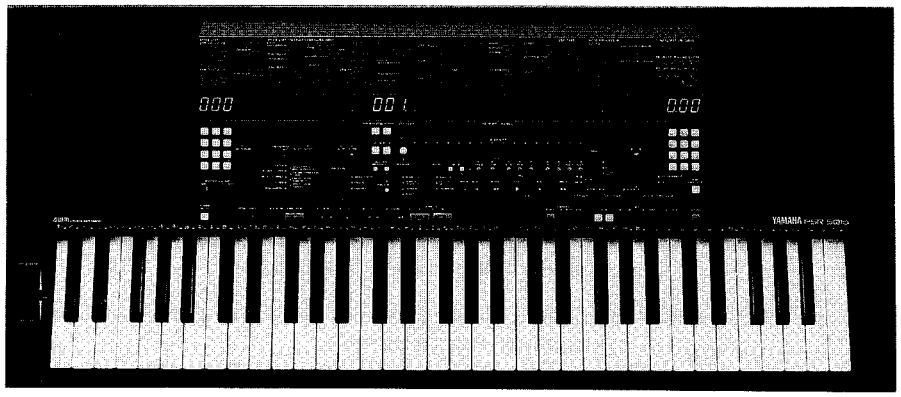
PORTATONE

PSR-SQ16

SERVICE MANUAL



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SK 001470

YAMAHA CORP.

HAMAMATSU, JAPAN

3.41K-984 Printed in Japan '92.8

■SPECIFICATIONS

Keyboard:
61 touch responsive keys (C1-C6)

Voice:
200 voices
Polyphony (Maximum number of simultaneous sound generation):
56 (28 x 2) sounds

Accompaniment:
269 Styles + 8 Custom styles

Demonstration:
Internal: 1 song
Disk: 9 songs (1 is the same as the internal song.)

Other controls:
Power switch ON/OFF, Master volume, Tempo, Metronome

SOUND MODULE
Master tuning, Transpose, DSP type, Configuration table (Custom Table Edit: Voice Number, Velocity Curve, Velocity Offset, Octave, Drum Mapping, Default Pitch Bend Sensitivity, Volume/Expression Curve, Vibrato Depth Sensitivity, Default Drum Channel)

MIDI
Input/Output filter (Channel 1 through 16/Bank 1,2/Clock/Command ON/OFF)

KEYBOARD
Velocity Fix ON/OFF, Transpose, Split point, Note processor ON/OFF

AUTO ACCOMP.
Style number, ON/OFF, Fingering (Single Finger, Fingered 1, Fingered 2), Synchro, Start/Stop, Intro, Fill 1, Fill 2, Ending, Variation A/B

KEYBOARD CHANNEL
1~16, Split assign/Solo

SEQUENCER
1~16, Recording, Recording mode (Rewrite all (Overwrite), Rewrite channel status, Overdubbing, Insert, Punch IN/OUT), Beat per measure (+/-), Song number/Custom Style number (+/-), Custom Style (On/Copy)
EDIT: Data select (Quantize, Velocity Offset, Transpose), Value -/+, Change, Clear, Note, From, To, Copy, Cut, Paste, Insert, Repeat, Reset, Rewind, Stop, Play, Forward, Step Size (1/16, 1/24, 1/192)

CHANNEL STATUS
Voice (BANK 1, 2, LOCAL OFF) Volume, Pan, DSP Depth, Vibrato Depth, Tuning (fine/coarse)

DIAL USAGE
Channel Status/position, Channel Status Privilege, (Dial + Sequencer, Dial)

Demo
Start/Stop

Pedal Assign
1, 2

COMMAND
Undo, ARE YOU SURE? (YES/NO)

DISK
File number (-/+), Load, Save, Delete, Format

Numeric buttons (in two places)
-/+, 0~9

External connectors:
Headphones, AUX. OUT (R, L+R/L), AUX. IN (R, L), Pedal (1,2), MIDI (IN, OUT, THRU, REMOTE KEYBOARD)

Amplifier Output: 8.3W x 2

Speaker: (12cm + 5 cm) x 2

Dimension (Width x Depth x Length)**:** 953 mm x 428 mm x 165 mm

Weight: 11.5 kg

Accessories:
- Demo disk
- Music stand
- Owner's Manual
- AC cord

■総合仕様

キーボード：
61鍵 (C1-C6) [タッチレスポンス機能付き]

ボイス：
200 ボイス
ポリフォニー(最大同時発音数)：56 (28x2)音

アカンパニメント：
269 スタイル+8カスタムスタイル

デモンストレーション：
内蔵 1曲
ディスク 9曲 (内1曲は内蔵と同じ)

その他のコントロール：
パワースイッチ (オン/オフ), マスターボリューム, テンポ, メトロノーム

サウンドモジュール
マスターチューニング, トランスポーズ, DSPタイプ,コンフィギュレーションテーブル (カスタムテーブルエディット；ボイスナンバー, ベロシティーカーブ, ベロシティーオフセット, オクターブ, ドラムマッピング, デフォルトピッチベンドセンシティビティー, ボリューム／エクスプレッションカーブ, ビブラートデプスセンシティビティー, デフォルトドラムチャンネル)

MIDI
インプット／アウトプットフィルター (チャンネル1～16／バンク1, 2／クロック／コマンド オン/オフ)

キーボード
ベロシティーフィックス オン/オフ, トランスポーズ, スプリットポイント, ノートプロセッサー オン/オフ

オートアカンプ
スタイルナンバー, オン/オフ, フィンガリング (シングルフィンガー, フィンガード 1, フィンガード 2), シンクロ, スタート/ストップ, イントロ, フィル 1, フィル 2, エンディング, バリエーション (A/B)

キーボードチャンネル
1～16, スプリットアサイン／ソロ

シーケンサー
1～16, 録音, 録音モード (リライトオール, リライトチャンネルステイタス, オーバーダビング, インサート, パンチイン／アウト), ビートバーメジャー (-, +), ソングナンバー/カスタムスタイルナンバー (-, +), カスタムスタイル (オン／コピー)
エディット；データセレクト (クオンタイズ, ベロシティオフセット, トランスポーズ), バリュー (-, +), チェンジ, クリア, ノート, フロム, トゥー, コピー, カット, ペースト, インサート, リピート, リセット, 巻戻し, ストップ, プレイ, 早送り, ステップサイズ (1/16, 1/24, 1/192)

チャンネルステイタス
ボイス (バンク 1, 2, ローカルオフ), ボリューム, パン, DSPデプス, ビブラートデプス, チューニング (ファイン/コース)

ダイヤルユーセージ
チャンネルステイタス/ポジション

チャンネルステイタスプリビレッジ
ダイヤル+シーケンサー/ダイヤル

デモ
スタート/ストップ

ペダルアサイン
1, 2

コマンド
アンドゥー, アーユーシュアー? (YES/NO)

ディスク
ファイルナンバー (-, +), ロード, セーブ, デリート, フォーマット

テンキー (2ヶ所)
-, +, 0～9

外部端子：
ヘッドホン, AUX. OUT (R, L+R/L), AUX. IN (R, L), ペダル(1, 2), MIDI (IN, OUT, THRU, REMOTE KEYBOARD)

アンプ出力： 8.3 W x 2

スピーカー： (12 cm + 5 cm) x 2

定格電源： AC 100 V

寸法 (幅 x 奥 x 高)： 953 mm x 428 mm x 165 mm

重量： 11.5 kg

付属品：
- デモディスク
- 譜面立て
- 取扱説明書
- ACコード
- 保証書

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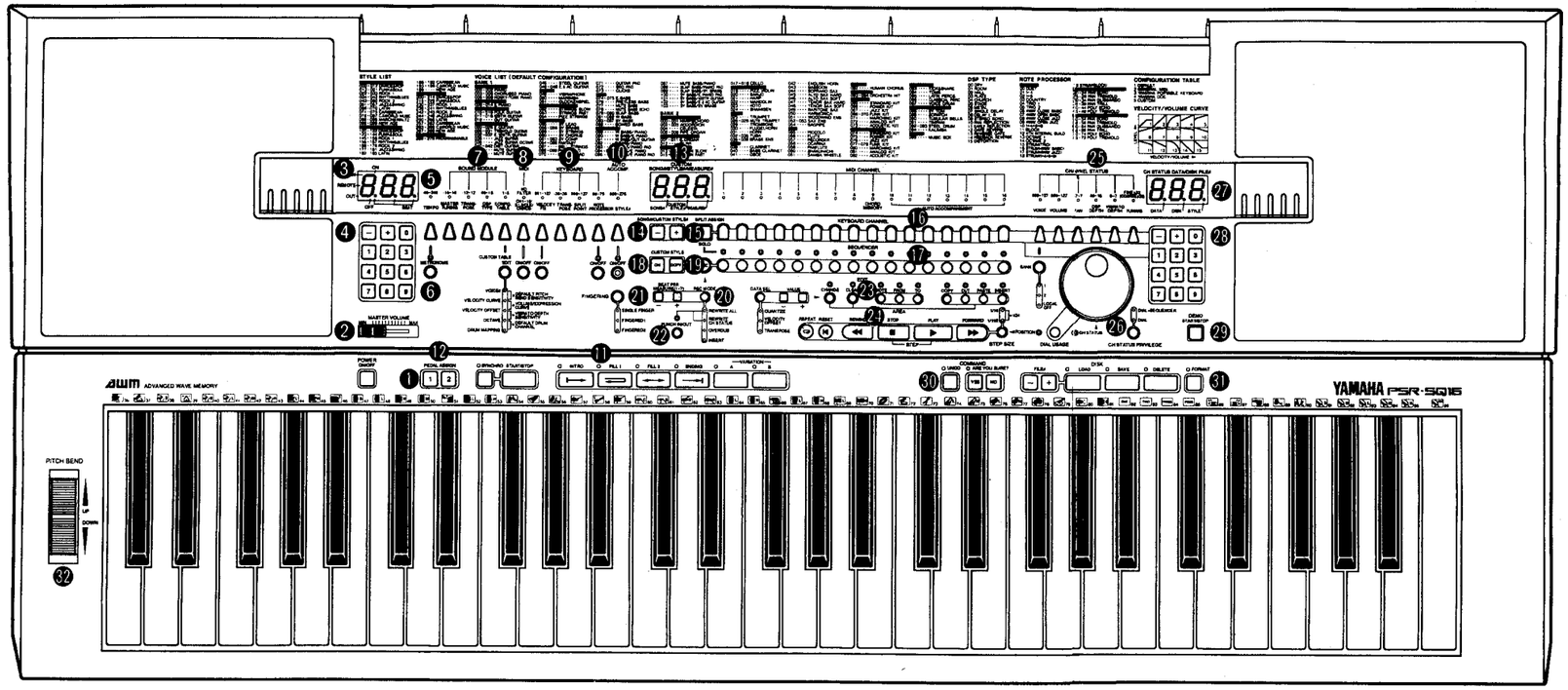
■PANEL LAYOUT（パネルレイアウト）

● Front Panel（フロントパネル）



❶ POWER ON/OFF Button
❷ MASTER VOLUME Control
❸ Left Display
❹ Left Numeric Buttons (-, +, 0~9)
❺ TEMPO Button
❻ METRONOME Button
❼ SOUND MODULE
- MASTER TUNING Button
- TRANSPOSE Button
- DSP TYPE Button
- CONFIG. TABLE Button
- CUSTOM TABLE EDIT Button

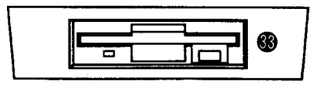
❽ MIDI
- I/O FILTER (CH1~16/B1, 2/CLK/CMNDS) Button
- I/O FILTER ON/OFF Button

❾ KEYBOARD
- VELOCITY FIX Button
- VELOCITY FIX ON/OFF Button
- TRANSPOSE Button
- SPLIT POINT Button
- NOTE PROCESSOR Button
- NOTE PROCESSOR ON/OFF Button

❿ AUTO ACCOMP.
- STYLE# Button
- ON/OFF Button
- FINGERING Button

⓫ Accompaniment Control
- SYNCHRO Button
- START/STOP Button
- INTRO↦ Button
- FILL 1⮌ Button
- FILL 2↔ Button
- ENDING–↦ Button
- VARIATION A/B Buttons

⓬ PEDAL ASSIGN 1, 2 Buttons
⓭ Center Display
⓮ SONG#/CUSTOM STYLE# (-, +) Buttons
⓯ SPLIT ASSIGN/SOLO Button
⓰ KEYBOARD CHANNEL 1~16 Buttons
⓱ SEQUENCER 1~16 Buttons
⓲ CUSTOM STYLE ON/COPY Buttons
⓳ REC Button
⓴ REC MODE Button
㉑ BEAT PER MEASURE (1~7) Button
㉒ PUNCH IN/OUT Button



㉓ EDIT
- DATA SEL Button
- VALUE -, + Buttons
- CHANGE Button
- CLEAR Button
- NOTE Button
- FROM Button
- TO Button
- COPY Button
- CUT Button
- PASTE Button
- INSERT Button

㉔ Sequencer Control
- REPEAT⮌ Button
- RESET ⏮ Button
- REWIND ◀◀ Button
- STOP ■ Button
- PLAY ▶ Button
- FORWARD ▶▶ Button
- STEP SIZE Button

㉕ CHANNEL STATUS
- VOICE Button
- BANK Button
- VOLUME Button
- PAN Button
- DSP DEPTH Button
- VIBRATO DEPTH Button
- TUNING Button

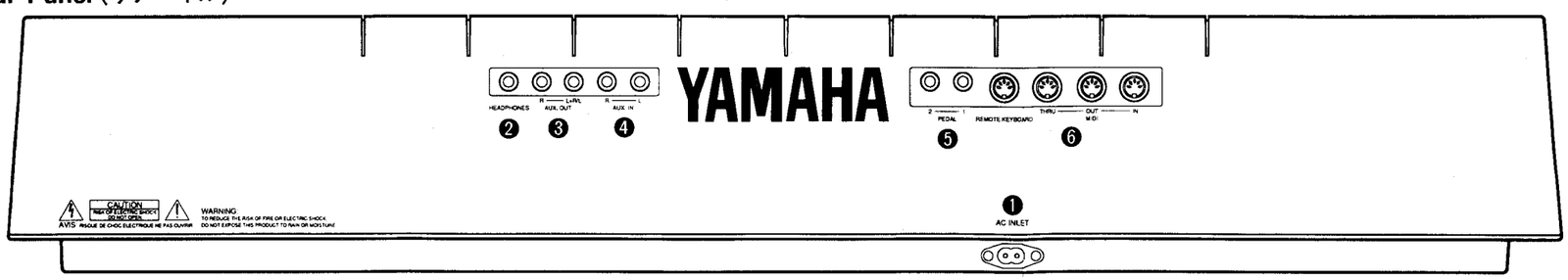
㉖ DIAL
- DIAL USAGE Button
- CH STATUS PRIVILEGE Button

㉗ Right Display
㉘ Right Numeric Buttons (-, +, 0~9)
㉙ DEMO START/STOP Button
㉚ COMMAND
- UNDO Button
- ARE YOU SURE? YES/NO Buttons

㉛ DISK
- FILE # (-, +) Buttons
- LOAD Button
- SAVE Button
- DELETE Button
- FORMAT Button

㉜ PITCH BEND Wheel
㉝ Disk Drive
- Disk Slot
- Disk In Use Indicator
- Disk Eject Button

● Rear Panel（リアパネル）



❶ AC INLET Jack　❷ HEADPHONES Jack　❸ AUX. OUT (R, L+R/L) Jacks　❹ AUX. IN (R, L) Jacks　❺ PEDAL 1, 2 Jacks　❻ MIDI (IN, OUT, THRU, REMOTE KEYBOARD) Connectors

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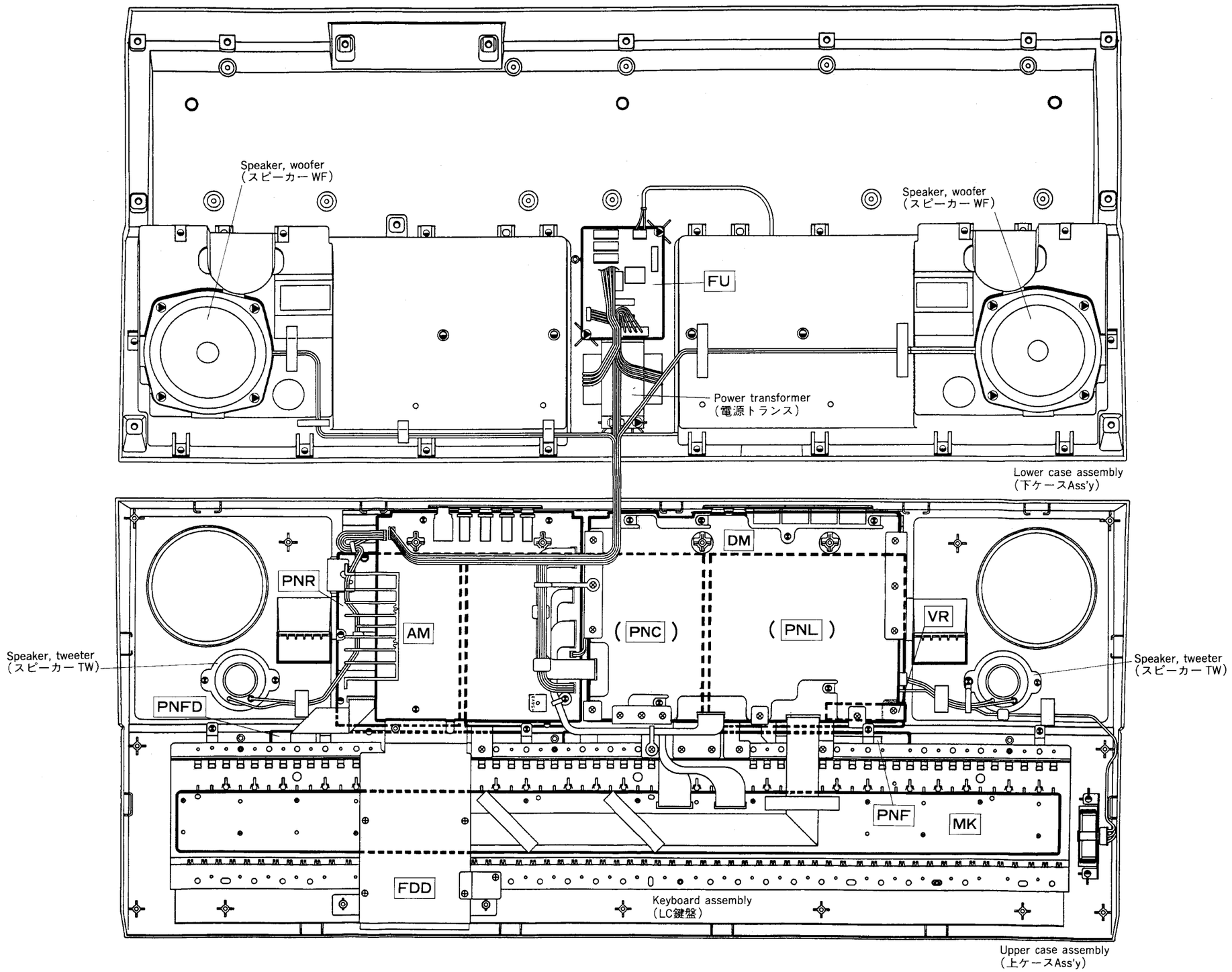
■CIRCUIT BOARD LAYOUT（ユニットレイアウト）



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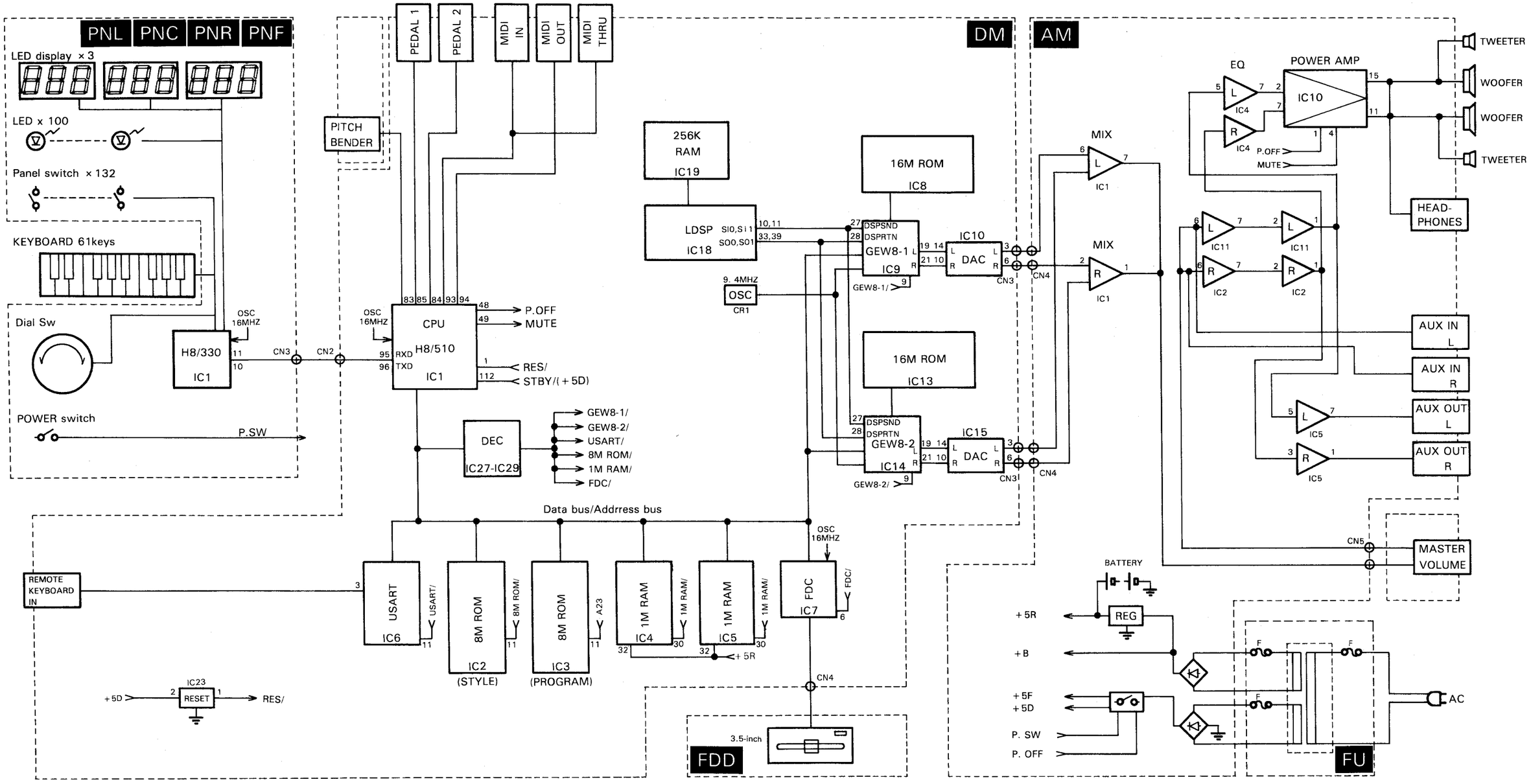
■BLOCK DIAGRAM（ブロックダイアグラム）



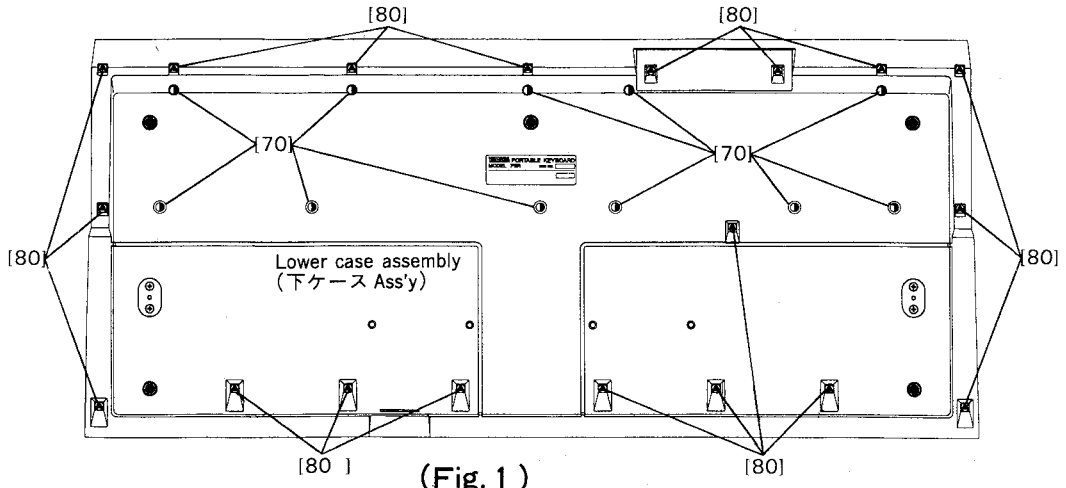
■DISASSEMBLY PROCEDURE（分解手順）

1 Lower Case Assembly

1-1 Remove the eleven (11) screws marked [70] and nineteen (19) screws marked [80], then the lower case assembly can be removed. (Fig. 1)

1. 下ケースAss'yの外し方

1-1 [70]のネジ11本と[80]のネジ19本を外し、下ケースAss'yを外します。(図1)



(Fig. 1)

[70]: Bind Head Tapping Screw-S（十バインドSタイト）3.0X8 ZMC2Y
[80]: Bind Head Tapping Screw-P（十バインドPタイト）4.0X12 ZMC2Y

2 DM Circuit Board

2-1 Remove the lower case assembly. (see procedure 1)
2-2 Remove the thirteen (13) screws marked [630a]. (Fig. 2)
2-3 Remove the six (6) screws marked [500a], then remove the shield box-B marked [610]. (Fig. 2)
2-4 Remove the DM circuit board.

2. DMシートの外し方

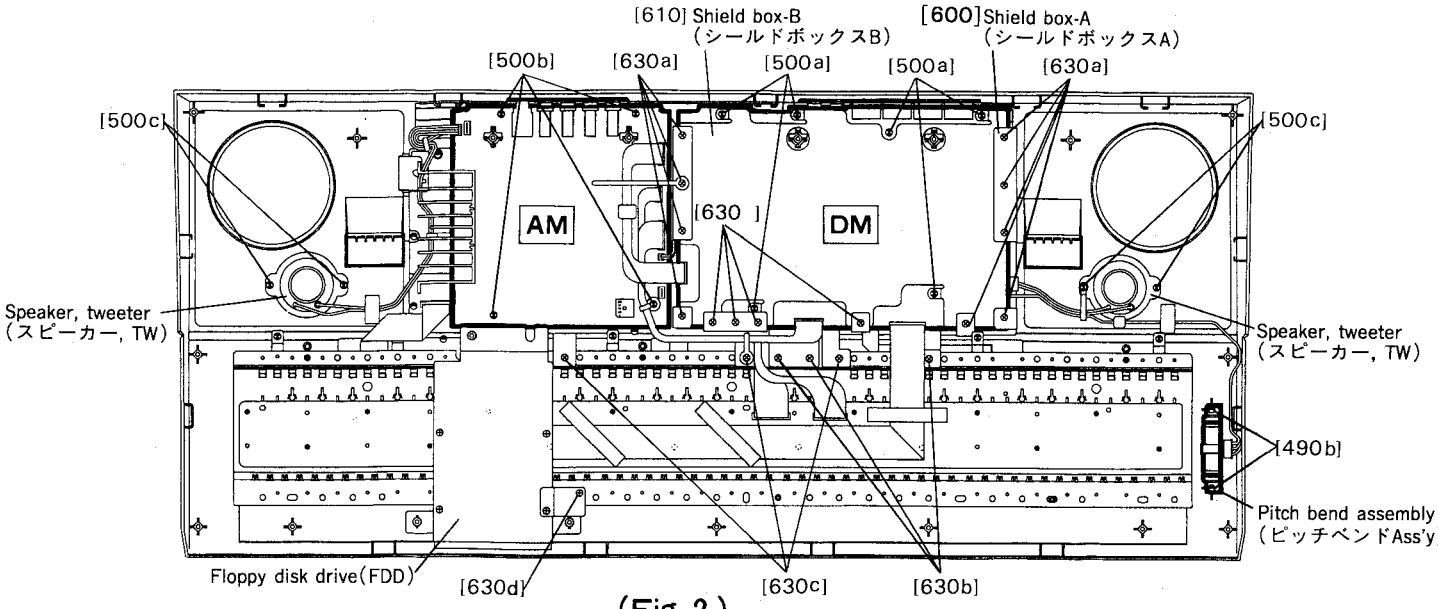
2-1 下ケースAss'yを外します。(1項参照)
2-2 [630a]のネジ13本を外します。(図2)
2-3 [500a]のネジ6本を外し、[610]のシールドボックスBを外します。(図2)
2-4 DMシートを外します。

3 AM Circuit Board

3-1 Remove the lower case assembly. (see procedure 1)
3-2 Remove the four (4) screws marked [500b], then the AM circuit board can be removed. (Fig. 2)

3. AMシートの外し方

3-1 下ケースAss'yを外します。(1項参照)
3-2 [500b]のネジ4本を外し、AMシートを外します。(図2)



(Fig. 2)

[500]: Trus Head Tapping Screw-P（十トラスPタイト）3.0X8 ZMC2Y
[630]: Bind Head Tapping Screw-S（十バインドSタイト）3.0X6 ZMC2Y

4 Pitch Bend Control Assembly

4-1 Remove the lower case assembly. (see procedure 1)
4-2 Remove the two (2) screws marked [490b], then the pitch bend control assembly can be removed. (Fig. 2)

5 Tweeter, Speaker

5-1 Remove the lower case assembly. (see procedure 1)
5-2 Remove the four (4) screws marked [500c], then the right and left tweeters can be removed. (Fig. 2)

6 VR Circuit Board

6-1 Pull off the MASTER VOLUME control knob.
6-2 Remove the lower case assembly. (see procedure 1)
6-3 Remove the DM circuit board. (see procedure 2)
6-4 Remove the two (2) screws marked [490a], then the VR circuit board can be removed. (Fig. 3)

7 PNC Circuit Board

7-1 Remove the lower case assembly. (see procedure 1)
7-2 Remove the DM circuit board. (see procedure 2)
7-3 Remove the AM circuit board. (see procedure 3)
7-4 Remove the three (3) screws marked [630b], then remove the shield box-A marked [600]. (Fig. 2)
7-5 Remove the three (3) screws marked [630c]. (Fig. 2)
7-6 Remove the twenty (20) screws marked [490h], then remove the shield sheet-B marked [590]. (Fig. 3)
7-7 Remove the ten (10) screws marked [490c], then the PNC circuit board can be removed. (Fig. 3)

4. ピッチベンドAss'yの外し方

4-1 下ケースAss'yを外します。(1項参照)
4-2 [490b]のネジ2本を外し、ピッチベンドAss'yを外します。(図2)

5. スピーカ（ツィータ）の外し方

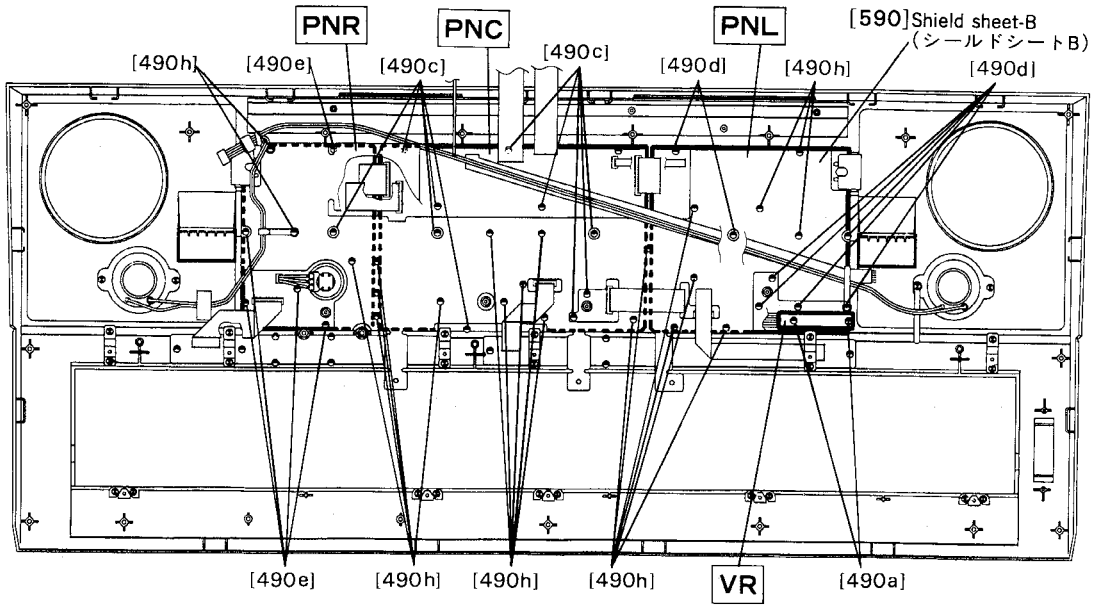
5-1 下ケースAss'yを外します。(1項参照)
5-2 [500c]のネジ4本を外し、左右のツィータを外します。(図2)

6. VRシートの外し方

6-1 パネル上からマスターボリュームツマミを外します。
6-2 下ケースAss'yを外します。(1項参照)
6-3 DMシートを外します。(2項参照)
6-4 [490a]のネジ2本を外し、VRシートを外します。(図3)

7. PNCシートの外し方

7-1 下ケースAss'yを外します。(1項参照)
7-2 DMシートを外します。(2項参照)
7-3 AMシートを外します。(3項参照)
7-4 [630b]のネジ3本を外し、[600]のシールドボックスAを外します。(図2)
7-5 [630c]のネジ3本を外します。(図2)
7-6 [490h]のネジ20本を外し、[590]のシールドシートBを外します。(図3)
7-7 [490c]のネジ10本を外し、PNCシートを外します。(図3)



(Fig. 3) [490]: BW Head Tapping Screw-P (十BWHPタイト) 2.6X8 ZMC2Y

8 PNL Circuit Board

8-1 Remove the lower case assembly. (see procedure 1)
8-2 Remove the DM circuit board. (see procedure 2)
8-3 Remove the AM circuit board. (see procedure 3)
8-4 Remove the VR circuit board. (see procedure 4)
8-5 Remove the three (3) screws marked [630b], then remove the shield box-A marked [600]. (Fig. 2)
8-6 Remove the three (3) screws marked [630c]. (Fig. 2)
8-7 Remove the twenty (20) screws marked [490h], then remove the shield sheet-B marked [590]. (Fig. 3)
8-8 Remove the seven (7) screws marked [490d], then the PNL circuit board can be removed. (Fig. 3)

9 PNR Circuit Board

9-1 Pull off the encoder knob, and then loosen the hexagonal nut. (Fig. Ⓐ)
9-2 Remove the lower case assembly. (see procedure 1)
9-3 Remove the DM circuit board. (see procedure 2)
9-4 Remove the AM circuit board. (see procedure 3)
9-5 Remove the three (3) screws marked [630b], then remove the shield box-A marked [600]. (Fig. 2)
9-6 Remove the three (3) screws marked [630c]. (Fig. 2)
9-7 Remove the twenty (20) screws marked [490h], then remove the shield sheet-B marked [590]. (Fig. 3)
9-8 Remove the five (5) screws marked [490e], then the PNR circuit board can be removed. (Fig. 3)

10 Floppy Disk Drive

10-1 Remove the lower case assembly. (see procedure 1)
10-2 Remove the screw marked [630d], then remove the floppy disk drive with the holder and shield plate. (Fig. 2)
10-2 Remove the four (4) screws marked [520], then remove the holder and shield plate from the floppy disk drive. (Fig. 4)

8. PNLシートの外し方

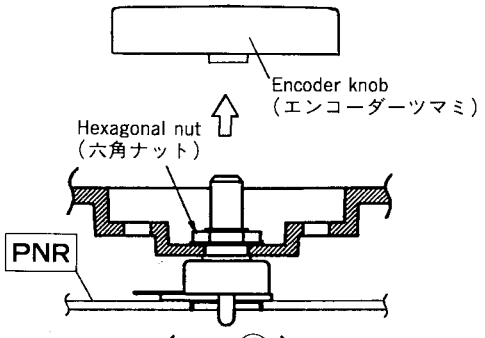
8-1 下ケースAss'yを外します。(1項参照)
8-2 DMシートを外します。(2項参照)
8-3 AMシートを外します。(3項参照)
8-4 VRシートを外します。(6項参照)
8-5 [630b]のネジ3本を外し、[600]のシールドボックスAを外します。(図2)
8-6 [630c]のネジ3本を外します。(図2)
8-7 [490h]のネジ20本を外し、[590]のシールドシートBを外します。(図3)
8-8 [490d]のネジ7本を外し、PNLシートを外します。(図3)

9. PNRシートの外し方

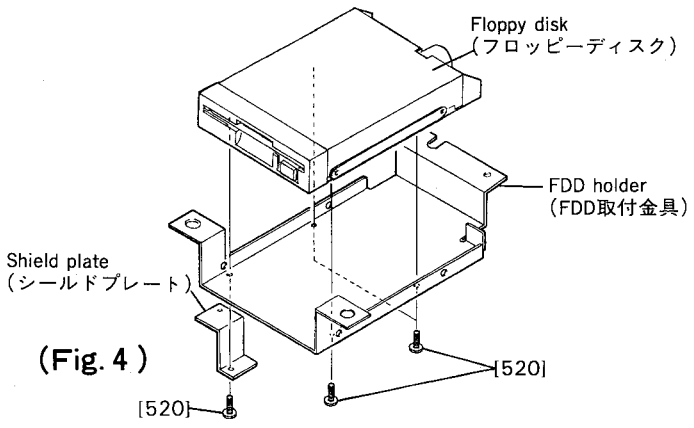
9-1 パネル上のエンコーダツマミを外し、エンコーダーの付属品である六角ナットを外します。(図Ⓐ)
9-2 下ケースAss'yを外します。(1項参照)
9-3 DMシートを外します。(2項参照)
9-4 AMシートを外します。(3項参照)
9-5 [630b]のネジ3本を外し、[600]のシールドボックスAを外します。(図2)
9-6 [630c]のネジ3本を外します。(図2)
9-7 [490h]のネジ20本を外し、[590]のシールドシートBを外します。(図3)
9-8 [490e]のネジ5本を外し、PNRシートを外します。(図3)

10. FDDの外し方

10-1 下ケースAss'yを外します。(1項参照)
10-2 [630d]のネジ1本を外し、FDD取付金具とシールドプレート共にFDDを外します。(図2)
10-3 [520]のネジ4本を外し、FDDからFDD取付金具とシールドプレートを外します。(図4)



(Fig. Ⓐ)



(Fig. 4)

[520]: Pan Head Screw (十ナベ小ネジ) ISO3.0X5 ZMC2Y

11 FU Circuit Board

11-1 Remove the lower case assembly. (see procedure 1)
11-2 U.S. model only: Remove the four (4) screws marked [120], then remove the box-U. (Fig. 5)
11-3 Remove the two (2) screws marked [130a], then the FU circuit board can be removed. (Fig. 5)

12 Power Transformer

12-1 Remove the lower case assembly. (see procedure 1)
12-2 Remove the FU circuit board. (see procedure 11)
12-3 U.S. model only: Remove the two (2) screws marked [140]. (Fig. 5)
12-3 Remove the four (4) screws marked [130b], then the power transformer can be removed. (Fig. 5)

13 Woofer, Speaker

13-1 Remove the lower case assembly. (see procedure 1)
13-2 Remove the eight (8) screws marked [130c], then the right and left woofers can be removed. (Fig. 5)

[120]: Bind Head Tapping Screw-P (十バインドPタイト) 3.0X10 ZMC2BL
[130]: Bind Head Tapping Screw-P (十バインドPタイト) 4.0X12 ZMC2Y
[140]: Bind Head Tapping Screw-P (十バインドPタイト) 4.0X10 ZMC2Y

11. FUシートの外し方

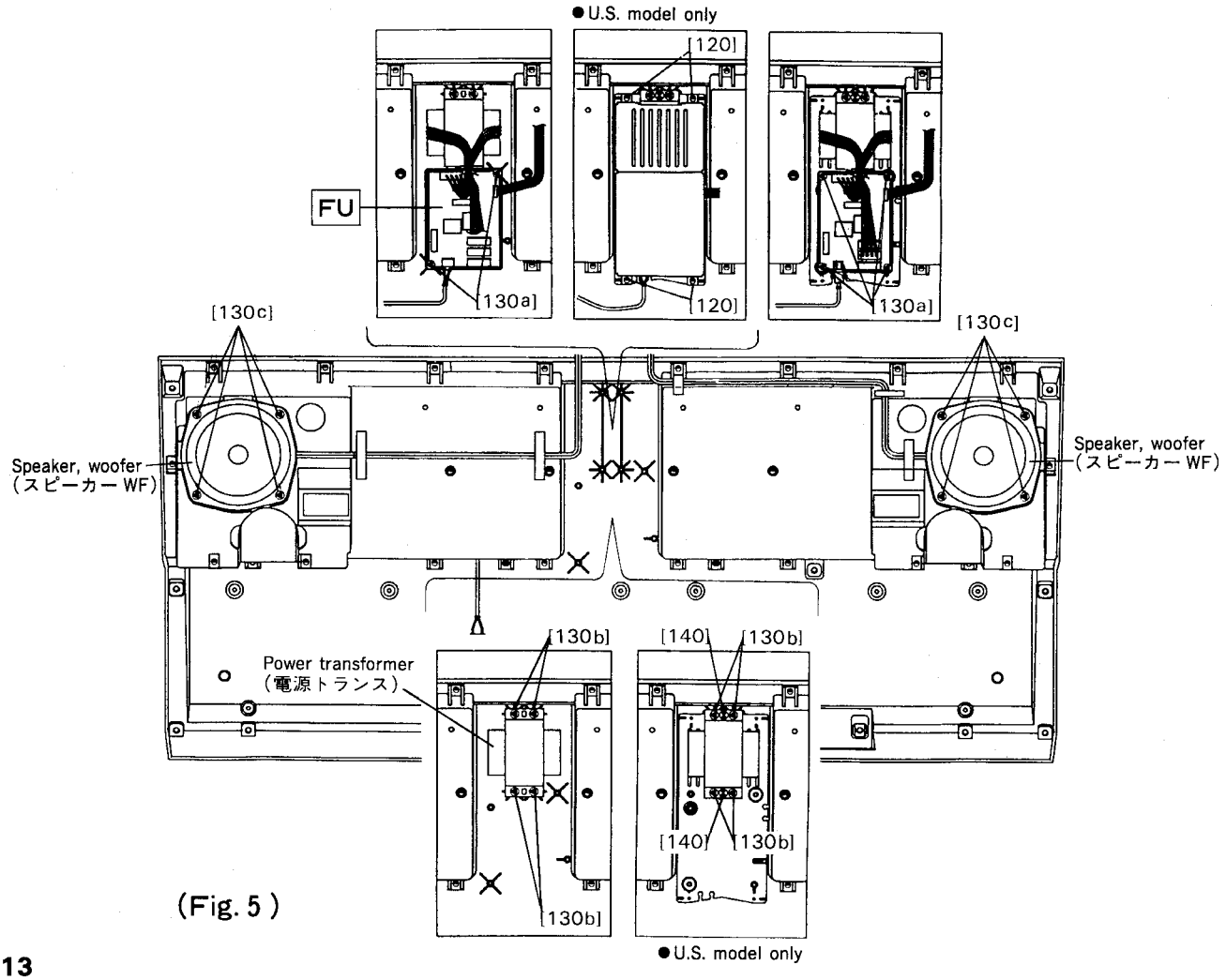
11-1 下ケースAss'yを外します。(1項参照)
11-2 [130a]のネジ2本を外し、FUシートを外します。(図5)
※[120]のネジと電源ボックスUは、U.S.モデルのみに使用されています。

12. 電源トランスの外し方

12-1 下ケースAss'yを外します。(1項参照)
12-2 FUシートを外します。(11項参照)
12-3 [130b]のネジ4本を外し、電源トランスを外します。(図5)
※[140]のネジは、U.S.モデルのみに使用されています。

13. スピーカ（ウーファ）の外し方

13-1 下ケースAss'yを外します。(1項参照)
13-2 [130c]のネジ8本を外し、左右のウーファを外します。(図5)



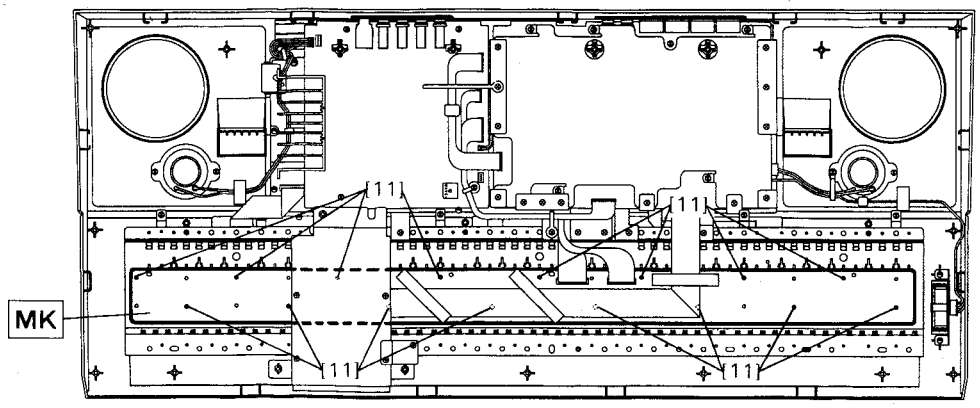
(Fig. 5)

14 MK Circuit Board

14-1 Remove the lower case assembly. (see procedure 1)
14-2 Remove the sixteen (16) screws marked [11], then the MK circuit board can be removed. (Fig.6)

14. MKシートの外し方

14-1 下ケースAss'yを外します。(1項参照)
14-2 [11]のネジ16本を外し、MKシートを外します。(図6)



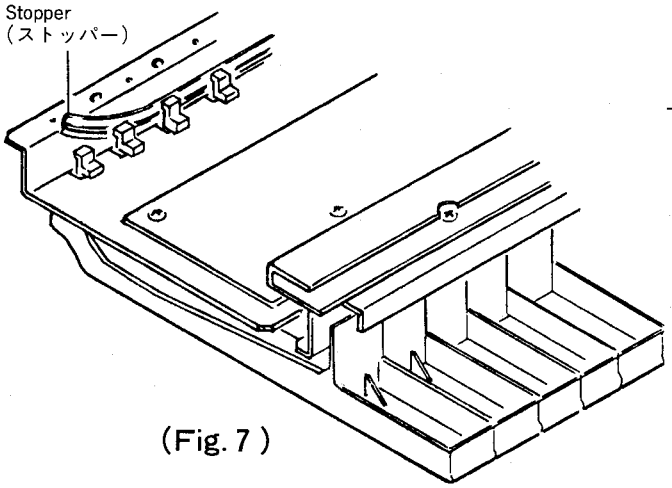
(Fig. 6) [11]: Bind Head Tapping Screw (十バインドエバタイト) CE 3.0X10 ZMC2Y

15 Keyboard Assembly

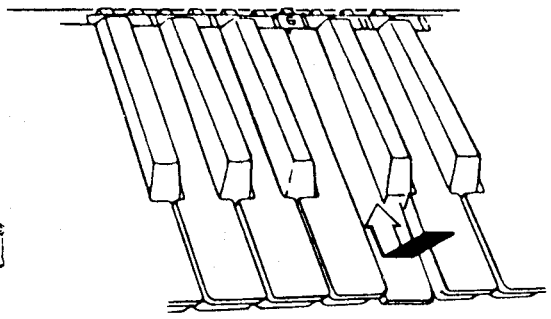
15-1 Remove the lower case assembly. (see procedure 1)
15-2 Remove the floppy disk drive with the holder, then take the keyboard assembly out of the unit.
15-3 Remove the stopper. (Fig. 7)
15-4 Press a key in the direction of the arrow indicated in the illustration, then lift the key up and remove it. (Fig. 8)

15. 鍵盤Ass'yと鍵盤の外し方

15-1 下ケースAss'yを外します。(1項参照)
15-2 FDD取付金具と共にFDDを外し、鍵盤Ass'yを外します。
15-3 ストッパーを外します。(図7)
15-4 鍵盤を図に示した矢印の方向に押して外し、上に持ち上げるようにして外します。(図8)



(Fig. 7)



(Fig. 8)

16 PNF Circuit Board

16-1 Remove the lower case assembly. (see procedure 1)
16-2 Remove the floppy disk drive with the holder, then take the keyboard assembly out of the unit.
16-3 Remove the four (4) screws marked [500d], then remove the two (2) holder-B. (Fig. 9)
16-4 Remove the eight (8) screws marked [490f], then the PNF circuit board can be removed. (Fig. 10)

16. PNFシートの外し方

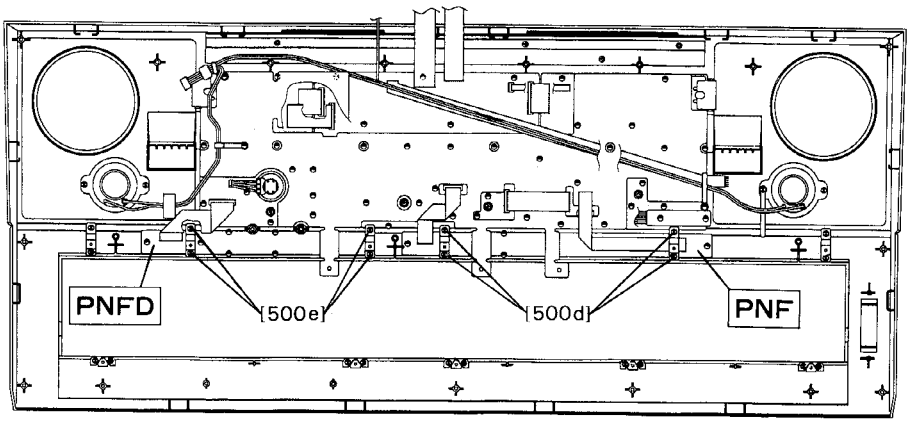
16-1 下ケースAss'yを外します。(1項参照)
16-2 FDD取付金具と共にFDDを外し、鍵盤Ass'yを外します。
16-3 [500d]のネジ4本を外し、MK取付金具B2個を外します。(図9)
16-4 [490f]のネジ8本を外し、PNFシートを外します。(図10)

17 PNFD Circuit Board

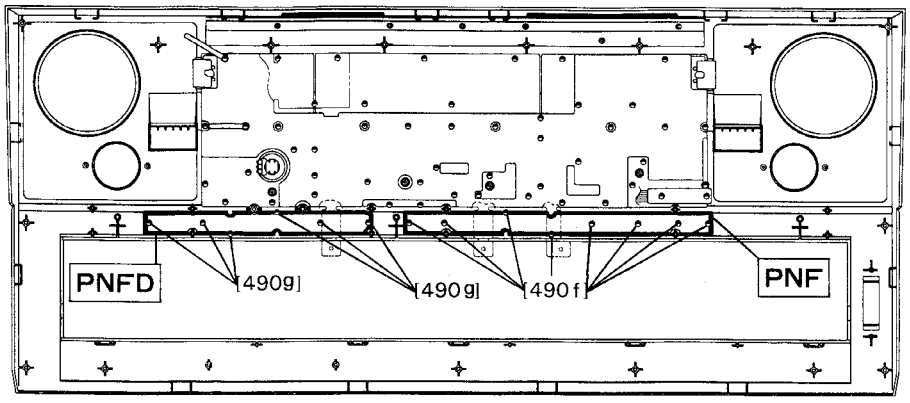
17-1 Remove the lower case assembly. (see procedure 1)
17-2 Remove the floppy disk drive with the holder, then take the keyboard assembly out of the unit.
17-3 Remove the four (4) screws marked [500e], then remove the two (2) holder-B. (Fig. 9)
17-4 Remove the six (6) screws marked [490g], then the PNFD circuit board can be removed. (Fig. 10)

17. PNFDシートの外し方

17-1 下ケースAss'yを外します。(1項参照)
17-2 FDD取付金具と共にFDDを外し、鍵盤Ass'yを外します。
17-3 [500e]のネジ4本を外し、MK取付金具B2個を外します。(図9)
17-4 [490g]のネジ6本を外し、PNFDシートを外します。(図10)



(Fig. 9) [500]: Trus Head Tapping Screw-P (十トラスPタイト) 3.0X8 ZMC2Y



(Fig.10) [490]: BW Head Tapping Screw-P (十BWHPタイト) 2.6X8 ZMC2Y

■LSI PIN DESCRIPTION (LSI端子機能表)

● HD6415108F10 <H8/510> (XJ797A00) CPU

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	$\overline{RES}$	I	Reset	57	P41	I/O	Port 4
2	$\overline{NMI}$	I	Non-maskable interrupt	58	P42	I/O	
3	VSS		Ground	59	P43	I/O	
4	D0	I/O	Data bus	60	P44	I/O	
5	D1	I/O		61	P45	I/O	
6	D2	I/O		62	P46	I/O	
7	D3	I/O		63	P47	I/O	
8	D4	I/O		64	VSS		Ground
9	D5	I/O		65	P50	I/O	Power supply
10	D6	I/O		66	P51	I/O	
11	D7	I/O		67	P52	I/O	
12	D8	I/O		68	P53	I/O	
13	D9	I/O		69	P54	I/O	
14	D10	I/O		70	P55	I/O	
15	D11	I/O		71	P56	I/O	
16	D12	I/O		72	P57	I/O	
17	D13	I/O		73	P60	I/O	Port 6
18	D14	I/O		74	P61	I/O	
19	D15	I/O		75	P62	I/O	
20	VSS		Ground	76	P63	I/O	
21	A0	O	Address bus	77	P64	I/O	
22	A1	O		78	P65	I/O	
23	A2	O		79	P66	I/O	
24	A3	O		80	P67	I/O	
25	A4	O		81	VSS		Ground
26	A5	O		82	AVSS		Analog ground
27	A6	O		83	AN0	I	Analog signal input
28	A7	O		84	AN1	I	
29	A8	O		85	AN2	I	
30	A9	O		86	AN3	I	
31	A10	O		87	AVCC		Analog power supply
32	A11	O		88	VCC		Power supply
33	A12	O		89	P80/$\overline{IRQ0}$	I/O	Port 8
34	A13	O		90	P81/$\overline{IRQ1}$	I/O	
35	A14	O		91	P82/SCK1	I/O	
36	A15	O		92	P83/SCK2	I/O	
37	VSS	O	(Ground)	93	P84/RXD1	I/O	
38	A16	O		94	P85/TXD1	I/O	
39	A17	O		95	P86/RXD2	I/O	
40	A18	O		96	P87/TXD2	I/O	
41	A19	O		97	VSS		Ground
42	A20	O		98	EXTAL		Clock
43	A21	O		99	XTAL		
44	A22	O		100	VSS		Ground
45	A23	O		101	ø	O	Sync-signal
46	$\overline{VSS}$		Ground	102	$\overline{E}$	O	Enable
47	P30/$\overline{WAIT}$	I/O	Port 3	103	$\overline{AS}$	O	Address strobe
48	P31	I/O		104	$\overline{RD}$	O	Read control
49	P32	I/O		105	$\overline{HWR}$	O	H/Write control
50	P33	I/O		106	$\overline{LWR}$	O	L/Write control
51	P34	I/O		107	$\overline{RFSH}$	I	Refresh
52	P35	I/O		108	VCC		Power supply
53	P36	I/O		109	MD0	I	Mode select
54	P37	I/O		110	MD1	I	
55	VCC		Power supply	111	$\overline{MD2}$	I	
56	P40	I/O	Port 4	112	$\overline{STBY}$	I	Stand-by mode signal

• HD6433308RL24F <H8/330> (XK013B00) CPU

Pin No.	Name	I/O	Function	Pin No.	Name	I/O	Function
1	$\overline{RES}$	I	Reset	41	P42	I/O	
2	XTAL	I	Clock	42	P43	I/O	
3	EXTAL	I		43	P44	I/O	Port 4
4	MD1	I	Mode select	44	P45	I/O	
5	MD0	I		45	P46	I/O	
6	$\overline{NMI}$	I	Non-maskable interupt	46	P47	I/O	
7	$\overline{STBY}$	I	stand-by mode signal	47	VCC		Power supply
8	VCC		Power supply	48	P27	I/O	
9	ARXD	I/O	Port 5	49	P26	I/O	
10	ATXD	I/O	(Receive data)	50	P25	I/O	
11	P50	I/O	(Transmit data)	51	P24	I/O	Address bus/Port 2
12	VSS		Ground	52	P23	I/O	
13	P97	I/O	(Wait)	53	P22	I/O	
14	P96	I/O	(Clock	54	P21	I/O	
15	P95	I/O	(Address strobe)	55	P20	I/O	
16	P94	I/O	(Write strobe)	56	VSS		Ground
17	P93	I/O	(Read strobe)	57	P17	I/O	
18	P92	I/O		58	P16	I/O	
19	P91	I/O	Port 9	59	P15	I/O	
20	P90	I/O		60	P14	I/O	
21	P60	I/O		61	P13	I/O	Address bus/Port 1
22	P61	I/O		62	P12	I/O	
23	P62	I/O		63	P11	I/O	
24	P63	I/O	Port 6	64	P10	I/O	
25	P64	I/O		65	P30	I/O	
26	P65	I/O		66	P31	I/O	
27	P66	I/O		67	P32	I/O	
28	P67	I/O		68	P33	I/O	Data bas/Port 3
29	AVCC		Analog power supply	69	P34	I/O	
30	P70	I		70	P35	I/O	
31	P71	I		71	P36	I/O	
32	P72	I	Analog input/Part 7	72	P37	I/O	
33	P73	I		73	VSS		Ground
34	P74	I		74	P80	I/O	Enable
35	P75	I		75	P81	I/O	I/O strobe
36	P76	I		76	P82	I/O	
37	P77	I		77	P83	I/O	Port 8
38	AVSS		Analog ground	78	P84	I/O	
39	P40	I/O	Port 4	79	P85	I/O	
40	P41	I/O		80	P86	I/O	

•HD63266FP (X1939A00) FDC (Floppy Disk Controller)

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	8/5	I	Data transmision speed	33	$\overline{TRK0}$	I	Track 00 signal
2	XTALSET		Clock select	34	$\overline{INDEX}$	I	Index signal
3	$\overline{RESET}$	I	Reset	35	$\overline{RDATA}$	I	Read data input from FDD
4	E/$\overline{RD}$	I	Enable /Read	36	XTAL2		} Clock
5	$\overline{WR}$	I	Read /write /Write	37	EXTAL2		
6	$\overline{CS}$	I	Chip select	38	NC		
7	$\overline{DACK}$	I	DMA acknowledge	39	XTAL1		} Clock
8	RS0	I	} Register select	40	EXTAL1		
9	RS1	I		41	VSS4		} Ground
10	VSS1		} Ground	42	VSS5		
11	VSS2			43	NC		
12	D0	I/O	} Data bus	44	VCC2		} Power supply
13	D1	I/O		45	VCC3		
14	D2	I/O		46	VCC4		
15	D3	I/O		47	$\overline{WGATE}$	O	Write control
16	D4	I/O		48	$\overline{WDATA}$	O	Write data to FDD
17	D5	I/O		49	VSS		Ground
18	D6	I/O		50	$\overline{STEP}$	O	Step signal to control head of FDD
19	D7	I/O		51	$\overline{HDIR}$		Head direction
20	$\overline{DREQ}$	O	DMA request	52	$\overline{HLOAD}$	O	Head load
21	$\overline{IRQ}$	O	Interrupt request	53	$\overline{HSEL}$	O	Head select
22	$\overline{DEND}$	I	Data end	54	VSS7		Ground
23	VSS3		Ground	55	$\overline{DS0}$	O	} Drive select
24	1/2EX			56	$\overline{DS1}$	O	
25	VCC1		Power supply	57	$\overline{DS2}$	O	
26	NUMI	I		58	$\overline{DS3}$	O	
27	NUM2	I		59	VSS8		Ground
28	IFS	I	Host interface select	60	$\overline{MON0}$	O	} Motor on
29	SFORM	I	Format data	61	$\overline{MON1}$	O	
30	$\overline{INP}$	I	Index pulse	62	$\overline{MON2}$	O	
31	$\overline{READY}$	I	Ready from FDD	63	$\overline{MON3}$	O	
32	$\overline{WPRT}$	I	Write protected signal	64	VSS9		Ground

• μ PD8251AFC (IG139400) USART (Universal Synchronous Asynchronous Receiver Transmitter)

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	D2	I/O	} Data bus	15	TXRDY	O	Transmitter ready
2	D3	I/O		16	SY/$\overline{BD}$	I/O	SYNC Detect/Break Detect
3	RXD	I	Serial data in	17	$\overline{CTS}$	I	Clear to Send
4	GND		Ground	18	TEMP	O	Transmitter empty
5	D4	I/O	} Data bases (A0 ~ A3)	19	TXD	O	Serial data out
6	D5	I/O		20	CLK	I	Clock
7	D6	I/O		21	$\overline{RST}$	I	Reset
8	D7	I/O		22	$\overline{DSR}$	I	Data set ready
9	$\overline{TXC}$	I	Transmitter clock	23	$\overline{RTS}$	O	Request to Send
10	$\overline{WR}$	I	Write	24	$\overline{DTR}$	O	Data terminal ready
11	$\overline{CS}$	I	Chip select	25	$\overline{RXC}$	I	Receiver clock
12	C/$\overline{D}$	I	Control/Data	26	Vcc		DC Voltage (+5V)
			"H" : Control/Statas"L" : Data	27	D0	I/O	} Data bus
13	$\overline{RD}$	I	Read	28	D1	I/O	
14	RXRDY	O	Receiver ready				

• YMW-258-F (XJ427A00) GEW8 (AWM & FM Tone Generator)

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	NC			41	Vss		Ground
2	Vss		Ground	42	NC		
3	D0	I/O	CPU data bus	43	Vss		Ground
4	D7	I/O		44	AB0	O	Voice memory address bus
5	A0	I	CPU address bus	45	DB7	I/O	Voice memory data bus
6	A1	I		46	AB1	O	Voice memory address bus
7	A2	I		47	AB2	O	
8	A3	I		48	AB10	O	
9	$\overline{CS}$	I	Chip select	49	AB3	O	
10	$\overline{RD}$	I	Read control	50	AB4	O	
11	$\overline{WR}$	I	Write control	51	AB11	O	
12	XIN		Clock	52	AB5	O	
13	XOUT			53	AB9	O	
14	$\overline{IC}$	I	Initial clear	54	AB6	O	
15	TST0		Test pin	55	AB8	O	
16	TST1			56	AB7	O	
17	Vss		Ground	57	AB13	O	
18	DITHER		Not used	58	AB12	O	
19	DACLD	O	Data output, L channel	59	AB14	O	
20	DACDCLK	O	Bit clock output to DAC	60	AB15	O	
21	DACRD	O	Data output, R channel	61	AB17	O	
22	DACLE	O	Word clock output to DAC	62	Vss		Ground
23	NC			63	Vss		
24	DACMC	O	System clock output to DAC	64	Vss		
25	CH27		Not used	65	Vss		
26	DSPSYW			66	AB15	O	Voice memory address bus
27	DSPSEND			67	AB18	O	
28	$\overline{DSPRET}$			68	AB19	O	
29	$\overline{DSPIC}$			69	AB20	O	
30	DSPCDS			70	AB21	O	
31	DSPCLK			71	MRD($\overline{MWR}$)	O	Memory read control
32	VDD		Power supply	72	VDD		Power supply
33	DB3	I/O	Voice memory data bus	73	MWR($\overline{MRD}$)	O	Memory write control
34	DB2	I/O		74	D3	I/O	CPU data bus
35	DB4	I/O		75	D4	I/O	
36	DB1	I/O		76	D2	I/O	
37	DB5	I/O		77	D5	I/O	
38	DB0	I/O		78	D1	I/O	
39	DB6	I/O		79	D6	I/O	
40	NC			80	Vss		Ground

• YM3413 (XE449A00) LDSP (Digital Signal Proccesor)

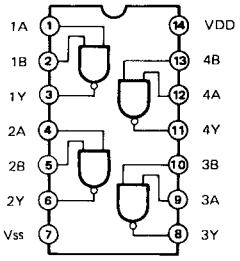
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	VDD		DC supply (+5V)	21	A5	O	Address bus
2	D7	I/O	Data bus	22	A6	O	
3	D6	I/O		23	A7	O	
4	D5	I/O		24	A8	O	
5	D4	I/O		25	A9	O	
6	D3	I/O		26	A10	O	
7	D2	I/O		27	A11	O	
8	D1	I/O		28	A12	O	
9	D0	I/O		29	A13	O	
10	SI0	I	Serial data input	30	A14	O	
11	SI1	I		31	A15	O	
12	SYW	I	Sync pulse	32	A16	O	
13	$\overline{WE}$	O	Write enable	33	SO0	O	Serial data output
14	$\overline{OE}$	O	Output enable	34	XCLK	I	Clock
15	A0	O	Address bus	35	$\overline{IC}$	I	Initial Clear
16	A1	O		36	$\overline{CRS}$	I	CD counter reset
17	A2	O		37	CDI	I	CD input
18	A3	O		38	CDo	O	CD output
19	A4	O		39	SO1	O	Serial data output
20	Vss		Ground	40	CLK	I	Clock

● PCM69P-C (XJ429A00) DAC (Digital to Analog Converter)

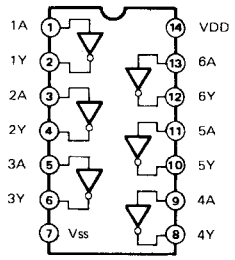
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	+Vcc		Analog power supply	9	DGND		Digital ground
2	VC, L		V-common, L channel	10	DA, R	I	Data input, R channel
3	IO, L	O	Current output, L channel	11	BCK	I	Bit clock
4	SER		Servo filter	12	CLK	I	System clock
5	REF		Reference filter	13	WDCK	I	Word clock
6	IO, R	O	Current output, R channel	14	DA, L	I	Data input, L channel
7	VC, R		V-common, R channel	15	TP1		Test pin
8	AGND		Analog ground	16	+VDD		Digital power supply

■IC BLOCK DIAGRAM (IC ブロック図)

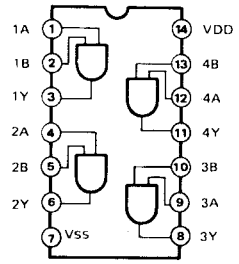
● HD74AC00P (XK273A00)
Quad 2 Input NAND



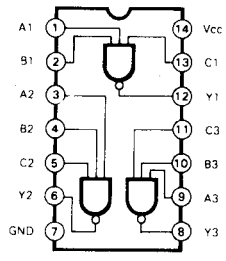
● TC74HC04P (IR000400)
Hex Inverter



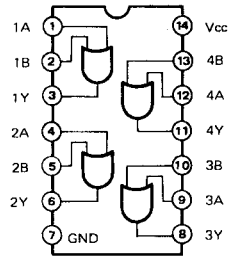
● TC74HC08AP (IR000800)
Quad 2 Input AND



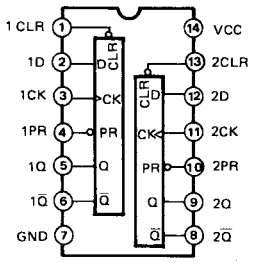
● TC74HC10AP (IR001000)
Triple 3 Input NAND



● TC74HC32AP (IR003200)
Quad 2 Input OR

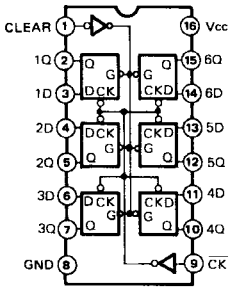


● TC74HC74AP (IR007400)
Dual D-Type Flip-Flop

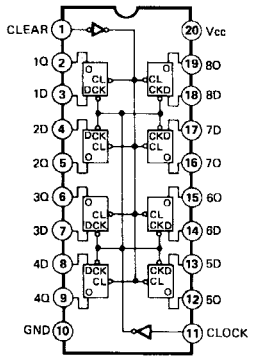


INPUTS				OUTPUTS	
PR	CLR	CLK	D	Q	Q
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H	H
H	H	↑	H	H	L
H	H	↑	L	L	H
H	H	L	X	Q_o	$\bar{Q}_o$

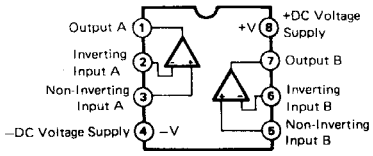
● **TC74HC174AP** (IR017400)
Hex D-Type Flip-Flop



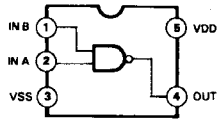
● **TC74HC273AP** (IR027300)
Octal D-Type Flip-Flop



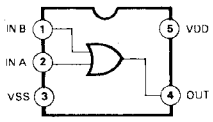
● **μ PC4570C** (XC520A00)
Dual Operational Amplifier



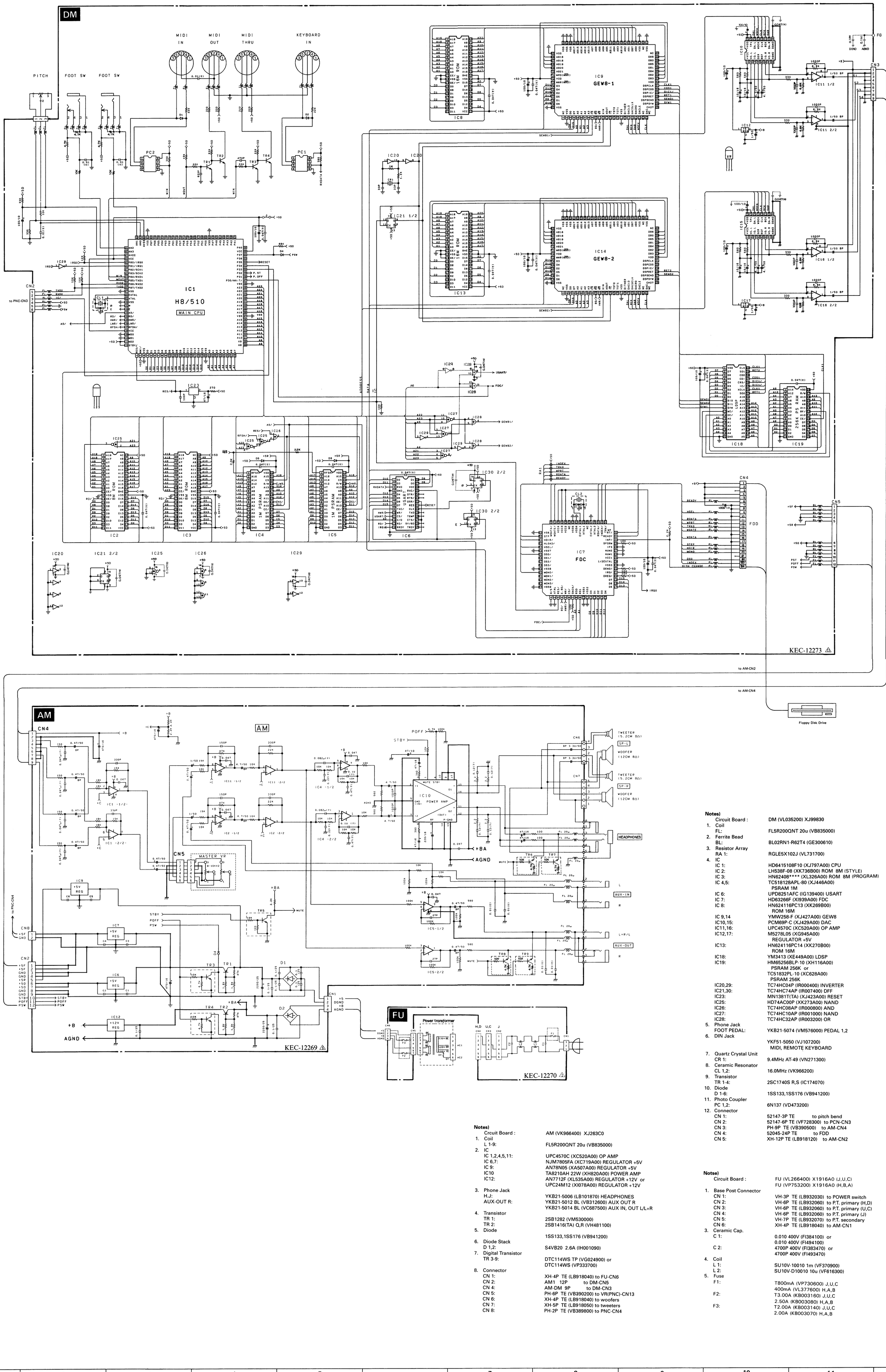
● **SC7S32FER** (XI000A00)
2 Input NAND Gate



● **SC7SU04FER** (X1348A00)
2 Input OR Gate



■ PSR-SQ16 OVERALL CIRCUIT DIAGRAM 1/2 (DM, AM, FU)



Notes)

Circuit Board : DM (VL035200) XJ99830

1. Coil
   FL: FL5R200QNT 20u (VB835000)
2. Ferrite Bead
   BL: BL02RN1-R62T4 (GE300610)
3. Resistor Array
   RA 1: RGLE5X102J (VL731700)
4. IC
   IC 1: HD6415108F10 (XJ797A00) CPU
   IC 2: LH538F-08 (XK736B00) ROM 8M (STYLE)
   IC 3: HN62408**** (XL326A00) ROM 8M (PROGRAM)
   IC 4,5: TC518128APL-80 (XJ446A00) PSRAM 1M
   IC 6: UPD8251AFC (IG139400) USART
   IC 7: HD63266F (XI939A00) FDC
   IC 8: HN624116PC13 (XK269B00) ROM 16M
   IC 9,14 YMW258-F (XJ427A00) GEW8
   IC10,15: PCM69P-C (XJ429A00) DAC
   IC11,16: UPC4570C (XC520A00) OP AMP
   IC12,17: M5278L05 (XG945A00) REGULATOR +5V
   IC13: HN624116PC14 (XK270B00) ROM 16M
   IC18: YM3413 (XE449A00) LDSP
   IC19: HM65256BLP-10 (XH116A00) PSRAM 256K or TC51832PL-10 (XC628A00) PSRAM 256K
   IC20,29: TC74HC04P (IR000400) INVERTER
   IC21,30: TC74HC74AP (IR007400) DFF
   IC23: MN1381T(TA) (XJ423A00) RESET
   IC25: HD74AC00P (XK273A00) NAND
   IC26: TC74HC08AP (IR000800) AND
   IC27: TC74HC10AP (IR001000) NAND
   IC28: TC74HC32AP (IR003200) OR
5. Phone Jack
   FOOT PEDAL: YKB21-5074 (VM576000) PEDAL 1,2
6. DIN Jack
   YKF51-5050 (VJ107200) MIDI, REMOTE KEYBOARD
7. Quartz Crystal Unit
   CR 1: 9.4MHz AT-49 (VN271300)
8. Ceramic Resonator
   CL 1,2: 16.0MHz (VK966200)
9. Transistor
   TR 1-4: 2SC1740S R,S (IC174070)
10. Diode
    D 1-6: 1SS133,1SS176 (VB941200)
11. Photo Coupler
    PC 1,2: 6N137 (VD473200)
12. Connector
    CN 1: 52147-3P TE to pitch bend
    CN 2: 52147-6P TE (VF728300) to PCN-CN3
    CN 3: PH-9P TE (VB390500) to AM-CN4
    CN 4: 52045-24P TE to FDD
    CN 5: XH-12P TE (LB918120) to AM-CN2

Notes)

Crcuit Board : AM (VK966400) XJ263C0

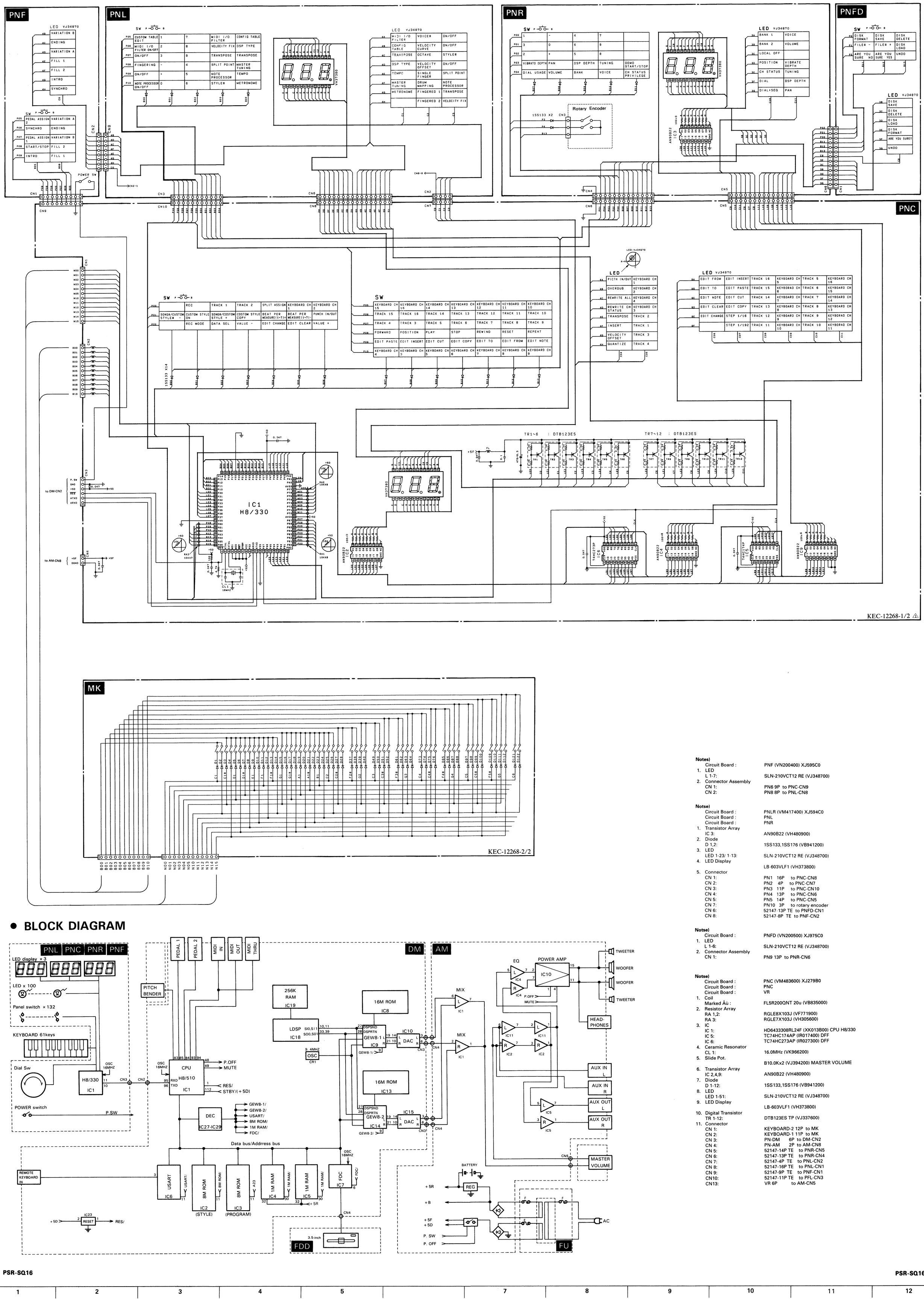
1. Coil
   L 1-9: FL5R200QNT 20u (VB835000)
2. IC
   IC 1,2,4,5,11: UPC4570C (XC520A00) OP AMP
   IC 6,7: NJM7805FA (XC719A00) REGULATOR +5V
   IC 9: AN78N05 (XA507A00) REGULATOR +5V
   IC10 TA8210AH 22W (XH820A00) POWER AMP
   IC12: AN7712F (XL535A00) REGULATOR +12V or UPC24M12 (XI078A00) REGULATOR +12V
3. Phone Jack
   H.J: YKB21-5006 (LB101870) HEADPHONES
   AUX-OUT R: YKB21-5012 BL (VB312600) AUX OUT R
   YKB21-5014 BL (VC687500) AUX IN, OUT L/L+R
4. Transistor
   TR 1: 2SB1282 (VM530000)
   TR 2: 2SB1416(TA) Q,R (VH481100)
5. Diode
   1SS133,1SS176 (VB941200)
6. Diode Stack
   D 1,2: S4VB20 2.6A (IH001090)
7. Digital Transistor
   TR 3-9: DTC114WS TP (VG024900) or DTC114WS (VP333700)
8. Connector
   CN 1: XH-4P TE (LB918040) to FU-CN6
   CN 2: AM1 12P to DM-CN5
   CN 4: AM-DM 9P to DM-CN3
   CN 5: PH-6P TE (VB390200) to VR(PNC)-CN13
   CN 6: XH-4P TE (LB918040) to woofers
   CN 7: XH-5P TE (LB918050) to tweeters
   CN 8: PH-2P TE (VB389800) to PNC-CN4

Notse)

Circuit Board : FU (VL266400) X1916A0 (J,U,C)
FU (VP753200) X1916A0 (H,B,A)

1. Base Post Connector
   CN 1: VH-3P TE (LB932030) to POWER switch
   CN 2: VH-6P TE (LB932060) to P.T. primary (H,D)
   CN 3: VH-6P TE (LB932060) to P.T. primary (U,C)
   CN 4: VH-6P TE (LB932060) to P.T. primary (J)
   CN 5: VH-7P TE (LB932070) to P.T. secondary
   CN 6: XH-4P TE (LB918040) to AM-CN1
3. Ceramic Cap.
   C 1: 0.010 400V (FI384100) or 0.010 400V (FI494100)
   C 2: 4700P 400V (FI383470) or 4700P 400V (FI493470)
4. Coil
   L 1: SU10V-10010 1m (VF370900)
   L 2: SU10V-D10010 10u (VF616300)
5. Fuse
   F1: T800mA (VP730600) J,U,C
   400mA (VL377600) H,A,B
   F2: T3.00A (KB003160) J,U,C
   2.50A (KB003080) H,A,B
   F3: T2.00A (KB003140) J,U,C
   2.00A (KB003070) H,A,B

■ PSR-SQ16 OVERALL CIRCUIT DIAGRAM 2/2 (PNF, FNL, PNR, PNFD, PNC, MK)



KEC-12268-1/2 ⚠

KEC-12268-2/2

● BLOCK DIAGRAM

Notes)

Circuit Board : PNF (VN200400) XJ595C0
1. LED
   L 1-7: SLN-210VCT12 RE (VJ348700)
2. Connector Assembly
   CN 1: PN6 9P to PNC-CN9
   CN 2: PN8 8P to PNL-CN8

Notse)

Circuit Board : PNLR (VM417400) XJ594C0
Circuit Board : PNL
Circuit Board : PNR
1. Transistor Array
   IC 3: AN90B22 (VH480900)
2. Diode
   D 1,2: 1SS133,1SS176 (VB941200)
3. LED
   LED 1-23/ 1-13: SLN-210VCT12 RE (VJ348700)
4. LED Display
   LB-603VLF1 (VH373800)
5. Connector
   CN 1: PN1 16P to PNC-CN8
   CN 2: PN2 4P to PNC-CN7
   CN 3: PN3 11P to PNC-CN10
   CN 4: PN4 13P to PNC-CN6
   CN 5: PN5 14P to PNC-CN5
   CN 7: PN10 3P to rotary encoder
   CN 6: 52147-13P TE to PNFD-CN1
   CN 8: 52147-8P TE to PNF-CN2

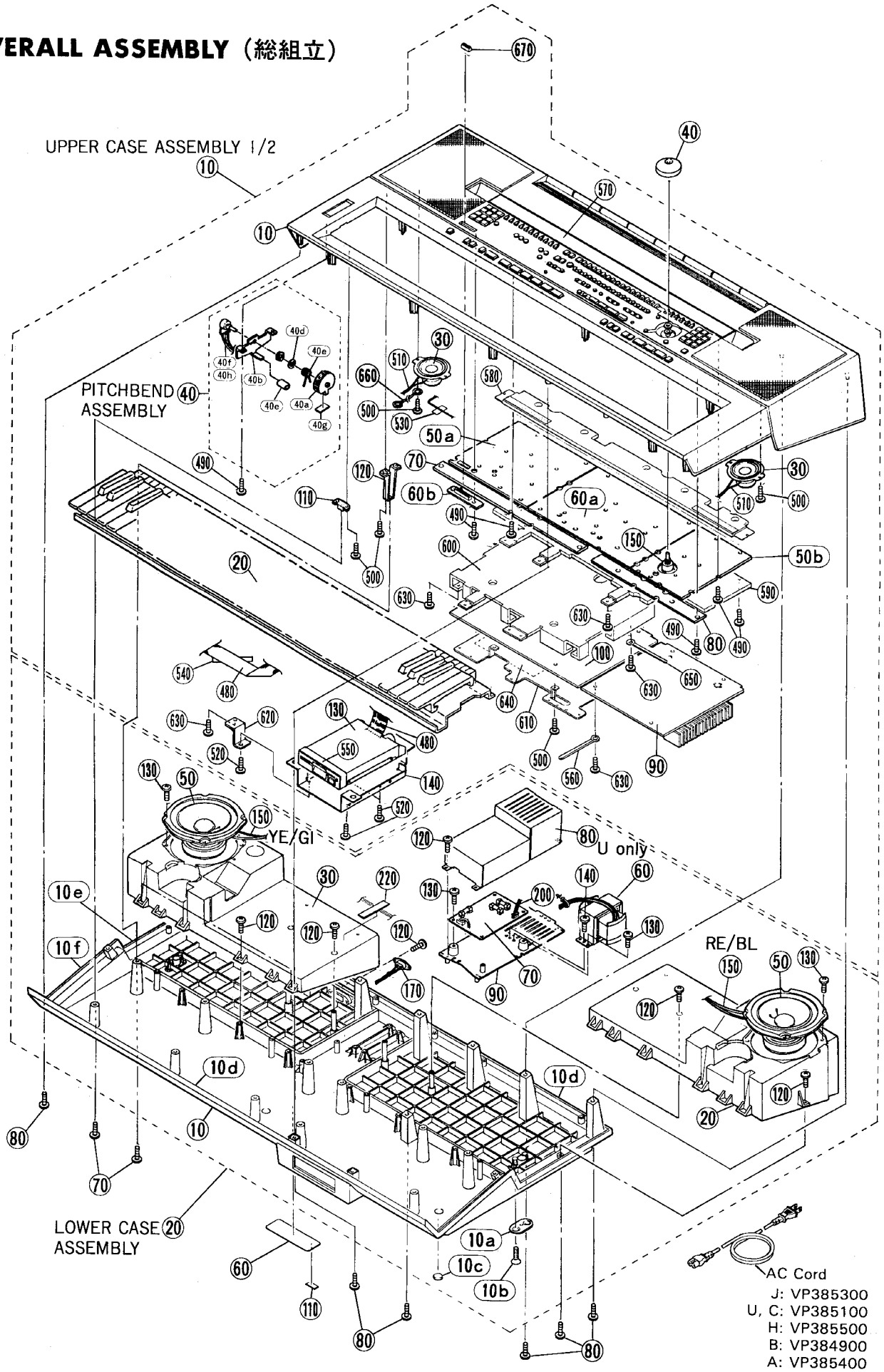
Notse)

Circuit Board : PNFD (VN200500) XJ975C0
1. LED
   L 1-6: SLN-210VCT12 RE (VJ348700)
2. Connector Assembly
   CN 1: PN9 13P to PNR-CN6

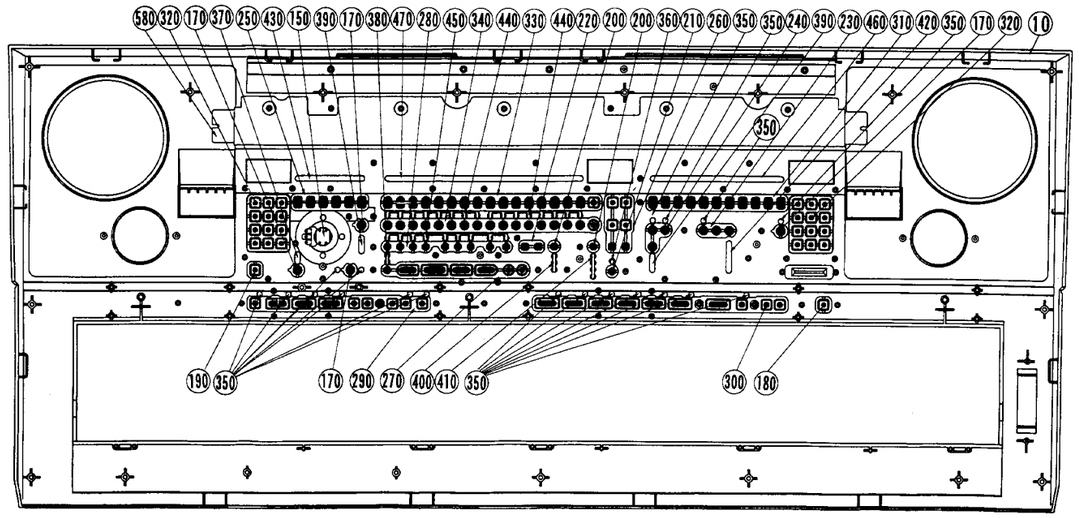
Notse)

Circuit Board : PNC (VM483600) XJ279B0
Circuit Board : PNC
Circuit Board : VR
1. Coil
   Marked Âù : FL5R200ΩNT 20u (VB835000)
2. Resistor Array
   RA 1,2: RGLE8X103J (VF771900)
   RA 3: RGLE7X103J (VH305600)
3. IC
   IC 1: HD6433308RL24F (XK013B00) CPU H8/330
   IC 5: TC74HC174AP (IR017400) DFF
   IC 6: TC74HC273AP (IR027300) DFF
4. Ceramic Resonator
   CL 1: 16.0MHz (VK966200)
5. Slide Pot.
   B10.0Kx2 (VJ394200) MASTER VOLUME
6. Transistor Array
   IC 2,4,9: AN90B22 (VH480900)
7. Diode
   D 1-12: 1SS133,1SS176 (VB941200)
8. LED
   LED 1-51: SLN-210VCT12 RE (VJ348700)
9. LED Display
   LB-603VLF1 (VH373800)
10. Digital Transistor
    TR 1-12: DTB123ES TP (VJ337600)
11. Connector
    CN 1: KEYBOARD-2 12P to MK
    CN 2: KEYBOARD-1 11P to MK
    CN 3: PN-DM 6P to DM-CN2
    CN 4: PN-AM 2P to AM-CN8
    CN 5: 52147-14P TE to PNR-CN5
    CN 6: 52147-13P TE to PNR-CN4
    CN 7: 52147-4P TE to PNL-CN2
    CN 8: 52147-16P TE to PNL-CN1
    CN 9: 52147-9P TE to PNF-CN1
    CN10: 52147-11P TE to PFL-CN3
    CN13: VR 6P to AM-CN5

■OVERALL ASSEMBLY (総組立)



● UPPER CASE ASSEMBLY 2/2



Ref. No.	Part No.	Description		部品名	Remarks	ランク
		<OVERALL ASSEMBLY>		<総組立>	PSR-SQ16	
10	--	Upper Case Assembly		上ケースAssy	JUCHB (VM48280)	
10	--	Upper Case Assembly		上ケースAssy	A (VL75740)	
20	--	Upper Case Assembly		下ケースAssy	J (VL75750)	
20	--	Lower Case Assembly		下ケースAssy	U (VM48290)	
20	--	Lower Case Assembly		下ケースAssy	C (VM48300)	
20	--	Lower Case Assembly		下ケースAssy	H,B,A (VM48310)	
＊ 40	VL921100	Encoder Knob		エンコーダーツマミ		03
60	--	Name Plate		銘板		
70	EP600070	Bind Head Tapping Screw-S	3.0X8 ZMC2Y	+バインドSタイト	11pcs	01
80	EP640110	Bind Head Tapping Screw-P	4.0X12 ZMC2Y	+バインドPタイト	19pcs	01
110	--	Label	DATE CODE	ラベル	U (VA03930)	

＊：New Parts（新規部品） NR ランク：Japan Only

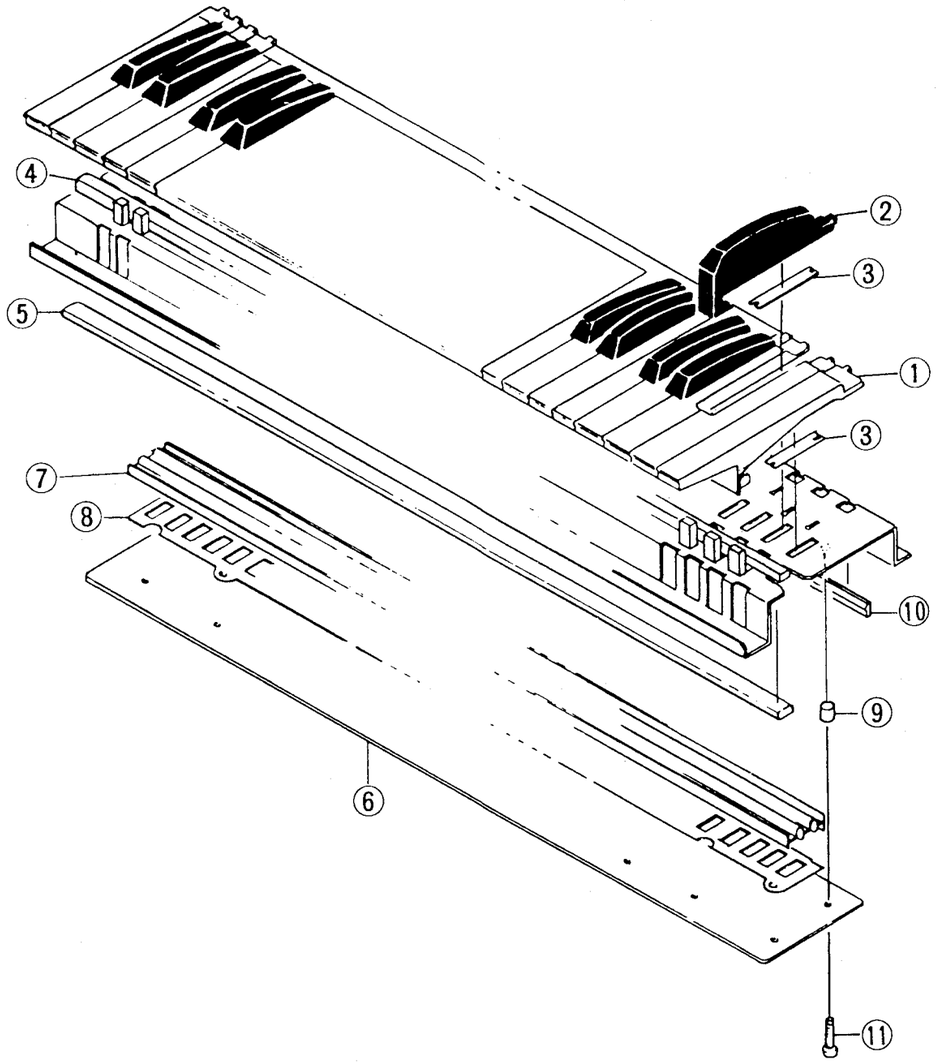
Ref. No.	Part No.	Description		部品名	Remarks	ランク
		<LOWER CASE ASSEMBLY>		<下ケースAssy>	PSR-SQ16	
＊ 10	VM487500	Lower Case		下ケース加工品		17
＊ 10a	VL920900	Holder, Stand		スタンド金具	2pcs	05
10b	VC923800	Flat Head Tapping Screw-P	4.0X12 ZMC2BL	+皿Pタイト	4pcs	01
10c	CB043750	Foot	BL	ゴム足	5pcs	01
10d	--	Vibration-proof Tape	900X15X0.5	防振テープ	2pcs (VN13880)	
10e	--	Vibration-proof Tape	200X15X0.5	防振テープ	2pcs (VN13890)	
10f	--	Vibration-proof Tape	150X15X0.5	防振テープ	2pcs (VN13900)	
＊ 20	VM487300	Speaker Box	RIGHT	SPBOX加工品 R		10
＊ 30	VM487400	Speaker Box	LEFT	SPBOX加工品 L		10
＊ 50	XJ999B00	Speaker	12.0cm 8ohm 20W	スピーカ	2pcs	09
＊ 60	XJ466A00	Power Transformer		電源トランス		11
＊ 70	VL266400	Circuit Board	FU	FUシート	J,U,C	10
＊ 70	VP753200	Circuit Board	FU	FUシート	H,B,A	
＊ 80	VL921200	Box, PS	UPPER	電源BOX上	U	08
＊ 90	VL921300	Box, PS	LOWER	電源BOX下	U	06
120	EP630660	Bind Head Tapping Screw-P	3.0X10 ZMC2BL	+バインドPタイト	24pcs	01
130	EP640110	Bind Head Tapping Screw-P	4.0X12 ZMC2Y	+バインドPタイト	14pcs (U:16pcs)	01
140	EP640500	Bind Head Tapping Screw-P	4.0X10 ZMC2Y	+バインドPタイト	2pcs (U only)	01
150	--	Connector Assembly	SP-WOOFER	SP束線 ウーハー	(VP15940)	
170	--	Connector Assembly	AC-IN	ACーIN束線	(VM65650)	
200	--	Connector Assembly	AM3	AM束線3 コア付	6pcs (V003890)	
220	--	Filament Tape	12X50	粘着テープ	(VA12610)	

＊：New Parts（新規部品） NR ランク：Japan Only

Ref. No.	Part No.	Description		部品名	Remarks	ランク
		<上ケースAssy>		<上ケースAssy>	PSR-SQ16	
＊ 10	VM488000	Upper Case		上ケース加工品		22
＊ 20	VN225200	Keyboard Assembly	C61K6	LC鍵盤Assy		26
＊ 30	XK000B00	Speaker	5.2cm 8ohm 20W	スピーカ	2pcs	05
40	--	Pitch Bend Assembly		ピッチベンドAssy	(VM48820)	
＊ 50	VM417400	Circuit Board	PNLR	PNLRシート		18
50a	--	Circuit Board	PNL	PNLシート		
50b	--	Circuit Board	PNR	PNRシート		
＊ 60	VM483600	Circuit Board	PNC	PNCシート		24
60a	--	Circuit Board	PNC	PNCシート		
60b	--	Circuit Board	VR	VRシート		
＊ 70	VN200400	Circuit Board	PNF	PNFシート		
＊ 80	VN200500	Circuit Board	PNFD	PNFDシート		
＊ 90	VK966400	Circuit Board	AM	AMシート		23
＊ 100	VL035200	Circuit Board	DM	DMシート		57
＊ 110	VL920700	Holder, MK	A	MK取付金具 A	5pcs	03
＊ 120	VL920800	Holder, MK	B	MK取付金具 B	6pcs	03
130	VM488300	Floppy Disk Drive	EME-213YV 3.5"	3.5"FDD		23
＊ 140	VL921000	Holder, FDD		FDD取付金具		07
＊ 150	VM456700	Encoder	EVQ WQH F15 24B	16形エンコーダ		04
＊ 170	VL856000	Rubber Contact	1K-A	ラバー 1K-A	4pcs	03
＊ 180	VL856100	Rubber Contact	1K-B	ラバー 1K-B		03
＊ 190	VL856200	Rubber Contact	1K-C	ラバー 1K-C		03
＊ 200	VL856300	Rubber Contact	1K-D B	ラバー 1K-D	2pcs	03
＊ 210	VL886400	Rubber Contact	1K-D R	ラバー 1K-D		03
＊ 220	VL856600	Rubber Contact	2C-C	ラバー 2K-C		03
＊ 230	VL856700	Rubber Contact	3K	ラバー 3K		04
＊ 240	VL856500	Rubber Contact	3K-B	ラバー 3K-B		04
＊ 250	VL856800	Rubber Contact	6K	ラバー 6K		05
＊ 260	VL856400	Rubber Contact	6K-B	ラバー 6K-B		05
＊ 270	VL856900	Rubber Contact	7K	ラバー 7K		06
＊ 280	VL857000	Rubber Contact	9K-A	ラバー 9K-A		05
＊ 290	VL857100	Rubber Contact	9K-B	ラバー 9K-B		07
＊ 300	VL857200	Rubber Contact	10K	ラバー 10K		07
＊ 310	VL857300	Rubber Contact	11K	ラバー 11K		05
＊ 320	VL857400	Rubber Contact	12K	ラバー 12K	2pcs	06
＊ 330	VL857500	Rubber Contact	17-A	ラバー 17K-A		06
＊ 340	VL857600	Rubber Contact	17-B	ラバー 17K-B		06
＊ 350	VL857700	Lens	1P-A	レンズ 1P-A	19pcs	03
＊ 360	VL857800	Lens	1P-B	レンズ 1P-B		03
＊ 370	VL857900	Lens	2P-A	レンズ 2P-A		03
＊ 380	VL858000	Lens	2P-B	レンズ 2P-B		03
＊ 390	VL858100	Lens	3P-A	レンズ 3P-A	2pcs	03
＊ 400	VL858200	Lens	3P-B	レンズ 3P-B		03
＊ 410	VL858300	Lens	4P	レンズ 4P		03
＊ 420	VL858400	Lens	5P	レンズ 5P		03
＊ 430	VL858500	Lens	6P	レンズ 6P		03
＊ 440	VL858600	Lens	8P	レンズ 8P	2pcs	03
＊ 450	VL858700	Lens	9P	レンズ 9P		03
＊ 460	VL858800	Lens	11P	レンズ 11P		04
＊ 470	VL858900	Lens	16P	レンズ 16P		04
＊ 480	VP123000	Cable	24P FFC	ケーブル		07
＊ 490	VH241000	BW Head Tapping Screw-P	2.6X8 ZMC2Y	+BWHPタイト	69pcs	01
500	VK228200	Trus Head Tapping Screw-P	3.0X8 ZMC2Y	+トラスPタイト	36pcs	01
510	--	Connector Assembly	SP-TWEETER	SP束線 ツイータ	(VP15930)	
＊ 520	03751110	Pan Head Screw	IS03.0X5 ZMC2Y	+ナベ小ネジ	4pcs	
530	--	Filament Tape	12X50	粘着テープ	3pcs (VA12610)	
540	--	Filament Tape	12X70	粘着テープ	3pcs (VN19540)	
550	--	Adhesive Tape	#590S W=15	綿粘着テープ	(ZL35000)	
560	--	Cord Binder	S-72BR L=50 RE	束線止め	6pcs (VD80840)	
＊ 570	VM488500	Panel Seal		パネルシール		07
＊ 580	VP135700	Shield Sheet	A	シールドシート A		07
＊ 590	VP136000	Shield Sheet	B	シールドシート B		11
＊ 600	VP136300	Shield Box	A	シールドボックス A		11
＊ 610	VP136400	Shield Box	B	シールドボックス B		07
＊ 620	VP243800	Shield Plate		シールドプレート		03
＊ 630	EP600410	Bind Head Tapping Screw-S	3.0X6 ZMC2Y	+バインドSタイト	22pcs	
＊ 640	VP343300	Insulation Sheet		絶縁シート		04
650	--	Cord Binder	S-14B-R(80mm)RE	束線止め 赤	(VD80010)	
660	--	GND Wire	B	アース線 B	(VP56720)	
670	VL192500	Knob	BL	スライドツマミ		02

＊：New Parts（新規部品） NR ランク：Japan Only

■KEYBOARD ASSEMBLY（鍵盤 Ass'y）

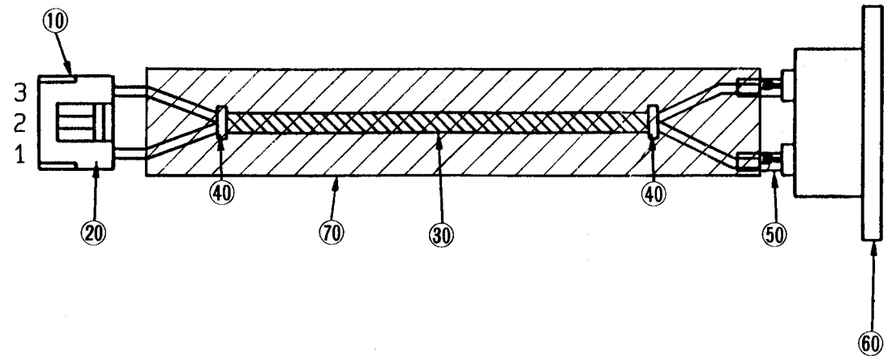


	Ref. No.	Part No.	Description		部品名	Remarks	ランク
＊		VN225200	<KEYBOARD ASSEMBLY>	C61K6	＜ＬＣ鍵盤Ａｓｓｙ＞	PSR-SQ16	26
	1	VA850000	White Key	CF	白鍵ＣＦ		02
	1	VA850100	White Key	D	白鍵Ｄ		02
	1	VA850200	White Key	BE	白鍵ＢＥ		02
	1	VA850300	White Key	G	白鍵Ｇ		02
	1	VA850400	White Key	A	白鍵Ａ		02
	1	VA853800	White Key	C'	白鍵Ｃ		02
	2	VA850500	Black Key		黒鍵		01
	3	VC077600	Spring		バネ		01
	4	VC079500	Felt	830X9X3.5 RE	フェルトアカ		03
	5	VC078900	Felt	820X6X4 RE	フェルトアカ		03
	6	VC099400	Circuit Board	MK C61	ＭＫシートＣ６１		12
	7	VC077700	Rubber Contact		可動導電ゴム		08
	8	VC078600	Insulation Spacer		絶縁スペーサー		03
	9	EZ000460	Spacer	#00374 4.0X5	スペーサー	16pcs	01
	10	VC079800	Stopper		ストッパー		02
	11	EP600170	Bind Head Tapping Screw	CE 3.0X10 ZMC2Y	＋バインドエバタイト	16pcs	01

＊：New Parts（新規部品） NR

ランク：Japan Only

■AC-IN CONNECTOR ASSEMBLY（AC-IN束線）

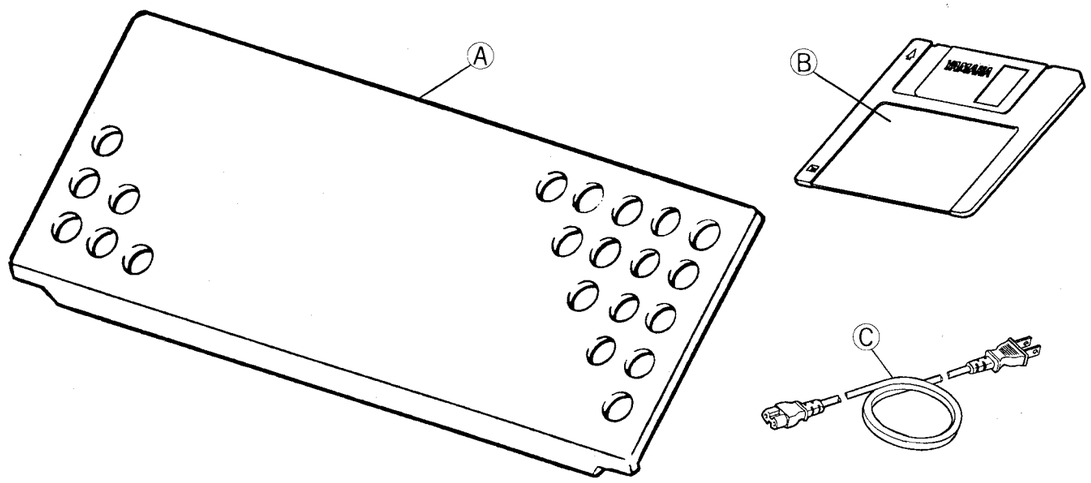


Ref. No.	Part No.	Description		部品名	Remarks	ランク
	--	<CONNECTOR ASSEMBLY>	AC-IN	＜ＡＣ－ＩＮ束線＞	PSR-SQ16(VM6565)	
10	LB015030	Connector Housing	VH-3P	ハウジング		01
20	LB101710	Connector Pin	SVH-21T-P1.1	圧着端子		01
40	CB069250	Cord Binder	BK-1	インシュロックタイ		01
50	--	Tube	M4.0	スミチューブ	(CH00427)	
60	VF139800	AC Inlet	SOT-15Y	電源コネクタ	AC Inlet	03
70	--	Vibration-proof Sponge	330X40	防振スポンジ	(VP19050)	

＊：New Parts（新規部品） NR

ランク：Japan Only

■ACCESSORIES（付属品）



Ref. No.	Part No.	Description		部品名	Remarks	ランク
		<ACCESSORIES>		＜付属品＞		
＊ A	VN470500	Music Rest	BL	譜面立て Ｈ（ＵＬ）		08
＊ B	VM496700	Floppy Disk	DEMO	フロッピーディスク		04
＊ C	VP385300	AC Cord		電源コード	J	05
＊ C	VP385100	AC Cord		電源コード	U,C	
＊ C	VP385500	AC Cord		電源コード	H	05
＊ C	VP384900	AC Cord		電源コード	B	
＊ C	VP385400	AC Cord		電源コード	A	06

＊：New Parts（新規部品） NR

ランク：Japan Only

■ELECTRICAL PARTS（電気部品）

	Ref. No.	Part No.	Description		部品名	Remarks	ランク
			<ELECTRICAL PARTS>		<電気部品>	PSR-SQ16	
*		VK966400	Circuit Board	AM	AMシート		23
*		VL035200	Circuit Board	DM	DMシート		57
*		VL266400	Circuit Board	FU	FUシート	J,U,C	10
*		VP753200	Circuit Board	FU	FUシート	H,B,A	
		VC099400	Circuit Board	C61	MKシートC61		12
*		VM483600	Circuit Board	PNC	PNCシート		24
		--	Circuit Board	PNC-PNC	PNCシート		
		--	Circuit Board	VR-PNC	VRシート		
*		VN200400	Circuit Board	PNF	PNFシート		
*		VN200500	Circuit Board	PNFD	PNFDシート		
*		VM417400	Circuit Board	PNLR	PNLRシート		18
		--	Circuit Board	PNL-PNLR	PNLシート		
		--	Circuit Board	PNR-PNLR	PNRシート		
*		VK966400	Circuit Board	AM	AMシート		23
		EP030600	Bind Head Tapping Screw-2	3.0X6 ZMC2Y	+バインドTP 2種		01
*		EP030010	Bind Head Tapping Screw-2	3.0X10 ZMC2Y	+バインドTP2種溝		01
		--	Mylar Cap.	0.0470 50V K	マイラーコン	(UA31447)	
		--	Mylar Cap.	0.0820 50V K	マイラーコン	(UA31482)	
		--	Mylar Cap.	0.1000 50V K	マイラーコン	(UA31510)	
		--	Mylar Cap.	0.1200 50V K	マイラーコン	(UA31512)	
		--	Mylar Cap.	0.2200 50V J	マイラーコン	(UA35522)	
		--	Mylar Cap.	0.4700 50V J	マイラーコン	(UA65547)	
		--	Ceramic Cap.-SL	27P 50V J	円筒セラ（SL）	(VD84060)	
		--	Ceramic Cap.-B	150P 50V K	円筒セラ（B）	(VD84150)	
		--	Ceramic Cap.-B	330P 50V K	円筒セラ（B）	(VD84200)	
		--	Ceramic Cap.-B	1000P 50V K	円筒セラ（B）	(VD84260)	
		VD843800	Ceramic Cap.-Y	10000P 16V N	円筒セラ（Y）		01
		VK392400	Ceramic Cap.-F	47000P 50V Z	円筒セラ（F）		01
		UJ727470	Electrolytic Cap.	47.00 10.0V	ケミコン		01
		UJ837470	Electrolytic Cap.	47.00 16.0V	ケミコン		01
		UJ838470	Electrolytic Cap.	470.00 16.0V	ケミコン		01
		UJ848470	Electrolytic Cap.	470.00 25.0V	ケミコン		01
		UJ865470	Electrolytic Cap.	0.47 50.0V	ケミコン		01
		UJ866100	Electrolytic Cap.	1.00 50.0V	ケミコン		01
		UJ866470	Electrolytic Cap.	4.70 50.0V	ケミコン		01
		UJ749220	Electrolytic Cap.	2200 25.0V	ケミコン		03
		UK565470	Electrolytic Cap.-BP	0.47 50.0V	BPケミコン		01
		--	Electrolytic Cap.-BP	4.70 50.0V	BPケミコン	(UK56647)	
		--	Electrolytic Cap.-BP	3.30 50.0V	BPケミコン	(VN06500)	
		VC694800	Semiconductive Cera. Cap.	0.1000 25V Z	半導体セラコン		01
		VB835000	Coil	FL5R200QNT 20u	コイル		01
		XC520A00	IC	UPC4570C	IC	OP AMP	01
		XH820A00	IC	TA8210AH 22W	IC	POWER AMP	07
		XA507A00	IC	AN78N05	IC	REGULATOR +5V	02
		XC719A00	IC	NJM7805FA	IC	REGULATOR +5V	02
		XI078A00	IC	UPC24M12	IC	REGULATOR +12V	03
*		XL535A00	IC	AN7712F	IC	REGULATOR +12V	
		LB101870	Phone Jack	YKB21-5006	ホーンジャック	HEADPHONES	03
		VB312600	Phone Jack	YKB21-5012 BL	ホーンジャック（黒）	AUX OUT R	02
		VC687500	Phone Jack	YKB21-5014 BL	ホーンジャック（黒）	AUX IN, OUT L	01
		LB918040	Base Post Connector	XH-4P TE	ベーススツキポスト		01
		LB918050	Base Post Connector	XH-5P TE	ベーススツキポスト		01
		VB389800	Base Post Connector	PH-2P TE	コネクタベースポスト		01
		VB390200	Base Post Connector	PH-6P TE	コネクタベースポスト		01
		VH481100	Transistor	2SB1416(TA) Q,R	トランジスタ		01
*		VM530000	Transistor	2SB1282	トランジスタ		03
		VB941200	Diode	1SS133,1SS176	ダイオード		01
		IH001090	Diode Stack	S4VB20 2.6A	ダイオードスタック		04
		VG024900	Digital Transistor	DTC114WS TP	デジタルトランジスタ		01
*		VP333700	Digital Transistor	DTC114WS	デジタルトランジスタ		01
*		VK974100	Heat Sink		放熱板		05
		--	Connector Assembly	AM1	AM束線1	(VM44660)	
		--	Connector Assembly	AM4	AM束線4	(VN94000)	
		--	Connector Assembly	AM-DM	AM-DM束線 コア	(VQ03880)	
		--	GND Wire	C	アース線C	(VP62830)	
*		VL035200	Circuit Board	DM	DMシート		57
		--	Ceramic Cap.-SL	33P 50V J	円筒セラ（SL）	(VD84070)	
		--	Ceramic Cap.-B	100P 50V K	円筒セラ（B）	(VD84130)	
		--	Ceramic Cap.-B	470P 50V K	円筒セラ（B）	(VD84220)	
		--	Ceramic Cap.-B	820P 50V K	円筒セラ（B）	(VD84250)	
		--	Ceramic Cap.-B	1000P 50V K	円筒セラ（B）	(VD84260)	
		VD843800	Ceramic Cap.-Y	10000P 16V N	円筒セラ（Y）		01
		VK392400	Ceramic Cap.-F	47000P 50V Z	円筒セラ（F）		01
		UJ828100	Electrolytic Cap.	100.00 10.0V	ケミコン		01
		UJ837100	Electrolytic Cap.	10.00 16.0V	ケミコン		01
		UJ837470	Electrolytic Cap.	47.00 16.0V	ケミコン		01

＊：New Parts（新規部品） NR

ランク：Japan Only

	Ref. No.	Part No.	Description	部品名	Remarks	ランク
		UJ866100	Electrolytic Cap. 1.00 50.0V	ケミコン		01
		UJ866470	Electrolytic Cap. 4.70 50.0V	ケミコン		01
		VF637900	Electrolytic Cap. 1000 10.0V	ケミコン		01
		UK866100	Electrolytic Cap.-BP 1.00 50.0V	BPケミコン		01
		VB835000	Coil FL5R200QNT 20u	コイル		01
		GE300610	Ferrite Bead BL02RN1-R62T4	フェライトビーズ		01
*		VL731700	Resistor Array RGLE5X102J	抵抗アレイ		01
		XC520A00	IC UPC4570C	IC	OP AMP	01
		XG945A00	IC M5278L05	IC	REGULATOR +5V	01
		IR000400	IC TC74HC04P	IC	INVERTER	03
		IR000800	IC TC74HC08AP	IC	AND	03
		IR001000	IC TC74HC10AP	IC	NAND	03
		IR003200	IC TC74HC32AP	IC	OR	03
		IR007400	IC TC74HC74AP	IC	DFF	04
		XJ423A00	IC MN1381T(TA)	IC	RESET	02
*		XK273A00	IC HD74AC00P	IC	NAND	02
		IG139400	IC UPD8251AFC	IC	USART	08
		XI939A00	IC HD63266F	IC	FDC	09
*		XJ797A00	IC HD6415108F10	IC	CPU	09
		XJ446A00	IC TC518128APL-80	IC	PSRAM 1M	16
*		XK269B00	IC HN624116PC13	IC	ROM 16M	20
*		XK270B00	IC HN624116PC14	IC	ROM 16M	20
*		XK736B00	IC LH538F-08	IC	ROM 8M	16
*		XL326A00	IC HN62408****	IC	ROM 8M	
		XE449A00	IC YM3413	IC	LDSP	10
		XJ427A00	IC YMW258-F	IC	GEW8	09
		XJ429A00	IC PCM69P-C	IC	DAC	08
		XC628A00	IC TC51832PL-10	IC	PSRAM 256K	09
		XH116A00	IC HM65256BLP-10	IC	PSRAM 256K	09
*		VM576000	Phone Jack YKB21-5074	ホーンジャック (黒)	PEDAL 1,2	02
		VJ107200	DIN Jack YKF51-5050	DINコネクタ	MIDI, REMOTE	01
		LB918120	Base Post Connector XH-12P TE	ベースツキポスト		02
		VB390500	Base Post Connector PH-9P TE	コネクタベースポスト		03
		VF728300	Connector 52147-6P TE	コネクタ		01
	--		Wire Trap 52147-3P TE	ワイヤートラップ	(VK02470)	
	--		Connector 52045-24P TE	コネクタ	(VP12770)	
*		VN271300	Quartz Crystal Unit 9.4MHz AT-49	水晶振動子		03
*		VK966200	Ceramic Resonator 16.0MHz	セラミック振動子		02
		IC174070	Transistor 2SC1740S R,S	トランジスタ		01
		VB941200	Diode 1SS133,1SS176	ダイオード		01
		VD473200	Photo Coupler 6N137	フォトカプラ		05
	--		GND Wire A	アース線A	(VP56710)	
*		VL266400	Circuit Board FU	FUシート	J,U,C	10
*		VP753200	Circuit Board FU	FUシート	H,B,A	
*		VL377600	Fuse 400mA	ヒューズ	H,B,A	01
*		KB003070	Fuse 2.00A	ヒューズ	H,B,A	01
*		VP730600	Fuse T800mA	ヒューズ	J,U,C	
*		KB003160	Fuse T3.00A	ヒューズ	J,U,C	01
*		KB003140	Fuse T2.00A	ヒューズ	J,U,C	01
		LB918040	Base Post Connector XH-4P TE	ベースツキポスト		01
		LB932030	Base Post Connector VH-3P TE	ベースポスト		01
		LB932060	Base Post Connector VH-6P TE	ベースポスト		01
		LB932070	Base Post Connector VH-7P TE	ベースポスト		01
		LB201530	Fuse Holder PC-FH1	ヒューズホルダ		01
		FI384100	Ceramic Cap. 0.010 400V	規格認定コン		01
		FI494100	Ceramic Cap. 0.010 400V	規格認定コン		01
		FI383470	Ceramic Cap. 4700P 400V	規格認定コン		01
		FI493470	Ceramic Cap. 4700P 400V	規格認定コン		01
		VF370900	Coil SU10V-10010 1m	コイル		03
		VF616300	Coil SU10V-D10010	SUコイル		03
		VC099400	Circuit Board C61	MKシートC61		12
		VB941200	Diode 1SS133,1SS176	ダイオード		01
		LB918110	Base Post Connector XH-11P TE	ベースツキポスト		01
		LB918120	Base Post Connector XH-12P TE	ベースツキポスト		02
*		VM483600	Circuit Board PNC	PNCシート		24
	--		Circuit Board PNC	PNCシート		
	--		Circuit Board VR	VRシート		
		EP600130	Bind Head Tapping Screw-B 3.0X6 ZMC2Y	+バインドBタイト	1pc.	01
		VK392400	Ceramic Cap. 47000P 50V Z	円筒セラ (F)		01
		VH337900	Electrolytic Cap.-RS 470.00 6.3V	ケミコン RS		01
		VC694800	Semiconductive Cera. Cap. 0.1000 25V Z	半導体セラコン		01
		VB835000	Coil FL5R200QNT 20u	コイル		01
		VF771900	Resistor Array RGLE8X103J	抵抗アレイ		01
		VH305600	Resistor Array RGLE7X103J	抵抗アレイ		01
		IR017400	IC TC74HC174AP	IC	DFF	05
		IR027300	IC TC74HC273AP	IC	DFF	06

* : New Parts (新規部品) NR

ランク : Japan Only

	Ref. No.	Part No.	Description		部品名	Remarks	ランク
*		XK013B00	IC	HD6433308RL24F	ＩＣ	CPU H8/330	09
		--	Connector	52147-16P TE	コネクタ	(VJ86160)	
		--	Wire Trap	52147-4P TE	ワイヤートラップ	(VK02480)	
		--	Wire Trap	52147-9P TE	ワイヤートラップ	(VK02530)	
		--	Wire Trap	52147-11P TE	ワイヤートラップ	(VK02550)	
		--	Wire Trap	52147-13P TE	ワイヤートラップ	(VK02570)	
		--	Wire Trap	52147-14P TE	ワイヤートラップ	(VK02580)	
*		VK966200	Ceramic Resonator	16.0MHz	セラミック振動子		02
		VJ394200	Slide Pot.	B10.0Kx2	二連スライドＶＲ	MASTER VOLUME	03
		VH480900	Transistor Array	AN90B22	トランジスタアレイ		02
		VB941200	Diode	1SS133,1SS176	ダイオード		01
		VJ348700	LED	SLN-210VCT12 RE	ＬＥＤ		01
		VH373800	LED Display	LB-603VLF1	ＬＥＤディスプレイ		05
		VJ337600	Digital Transistor	DTB123ES TP	デジタルトランジスタ		01
		--	Connector Assembly	VR	ＶＲ束線	(VM44650)	
		--	Connector Assembly	KEYBOARD-1	鍵盤束線１	(VM67040)	
		--	Connector Assembly	KEYBOARD-2	鍵盤束線２	(VM67050)	
		--	Connector Assembly	PN-DM	ＰＮ－ＤＭ束線	(VN03190)	
		--	Connector Assembly	PN-AM	ＰＮ－ＡＭ束線	(VN63750)	
*		VN200400	Circuit Board	PNF	ＰＮＦシート		
*		VM417500	Circuit Board	PNF ASSEMBY	ＰＮＦシート集成		11
		VJ348700	LED	SLN-210VCT12 RE	ＬＥＤ		01
		--	Vibration-proof Sponge	90X70	防振スポンジ	(VP19060)	
		--	Vibration-proof Sponge	150X50	防振スポンジ	(VP19080)	
		--	Connector Assembly	PN6	ＰＮ６束線	(VM44200)	
		--	Connector Assembly	PN8	ＰＮ８束線	(VM44230)	
*		VN200500	Circuit Board	PNFD	ＰＮＦＤシート		
*		VM417600	Circuit Board	PNFD ASSY	ＰＮＦＤシート集成		10
		VJ348700	LED	SLN-210VCT12 RE	ＬＥＤ		01
		--	Vibration-proof Sponge	90X70	防振スポンジ	(VP19060)	
		--	Connector Assembly	PN9	ＰＮ９束線	(VM67240)	
*		VM417400	Circuit Board	PNLR	ＰＮＬＲシート		18
		--	Circuit Board	PNL	ＰＮＬシート		
		--	Circuit Board	PNR	ＰＮＲシート		
		--	Wire Trap	52147-8P TE	ワイヤートラップ	(VK02520)	
		--	Wire Trap	52147-13P TE	ワイヤートラップ	(VK02570)	
		VH480900	Transistor Array	AN90B22	トランジスタアレイ		02
		VB941200	Diode	1SS133,1SS176	ダイオード		01
		VJ348700	LED	SLN-210VCT12 RE	ＬＥＤ		01
		VH373800	LED Display	LB-603VLF1	ＬＥＤディスプレイ		05
		--	Vibration-proof Sponge	40X35	防振スポンジ	(VP19010)	
		--	Vibration-proof Sponge	90X35	防振スポンジ	(VP51340)	
		--	Connector Assembly	PN1	ＰＮ１束線	(VM44130)	
		--	Connector Assembly	PN2	ＰＮ２束線	(VM44140)	
		--	Connector Assembly	PN3	ＰＮ３束線	(VM44160)	
		--	Connector Assembly	PN4	ＰＮ４束線	(VM44170)	
		--	Connector Assembly	PN5	ＰＮ５束線	(VM44180)	
		--	Connector Assembly	PN10	ＰＮ１０束線	(VM67250)	
		--	Connector Assembly	AM4	ＡＭ束線４	(VN94000)	
		--	Connector Assembly	PLN	ＰＮＬ線材	(V004420)	
		VM488300	Floppy Disk Drive	EME-213YV 3.5"	３．５"ＦＤＤ		23
*		XK000B00	Speaker	5.2cm 8ohm 20W	スピーカ		05
*		XJ999B00	Speaker	12.0cm 8ohm 20W	スピーカ		09
*		XJ466A00	Power Transformer		電源トランス		11
		VL491200	Variable Resistor	B10.0K	ロータリーＶＲ	PITCH BEND	03
		VF139800	AC Inlet	SOT-15Y	電源コネクタ	AC Inlet	03
*		VN998200	Ferrite Core	BP53RB200100N0M	フェライトコア		02

＊：New Parts（新規部品）　NR　　ランク：Japan Only

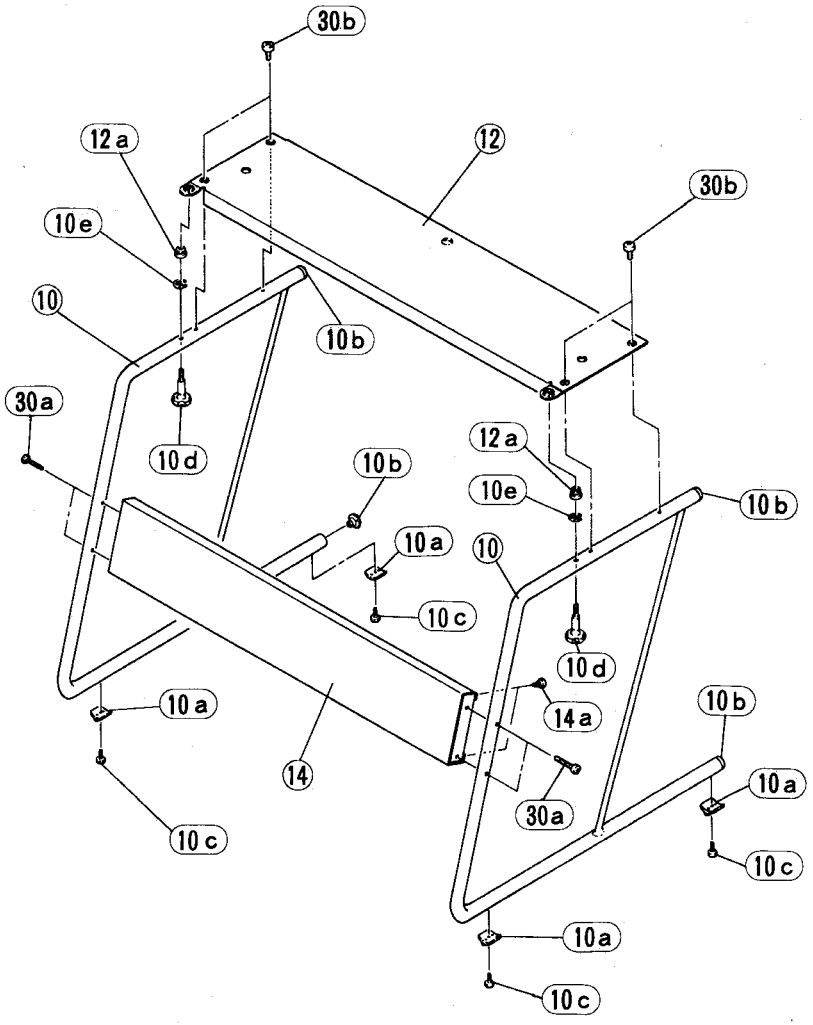
■ CONNECTOR ASSEMBLY (束線)

Ref. No.	Part No.	Description		部品名	Remarks	ランク
		<CONNECTOR ASSEMBLY>		<束線>	PSR-SQ16	
	--	Connector Assembly	SP-TWEETER	SP束線 ツイータ	(VP15930)	
10	LB009040	Connector Housing	XH-4P	コネクタハウジング		01
20	LB101130	Connector Pin	SXH-001T-P0.6	圧着端子		01
* 30	VN998200	Ferrite Core	BP53RB200100N0M	フェライトコア		02
40	--	Vibration-proof Sponge	40X35	防振スポンジ	(VP19010)	
50	--	Vibration-proof Sponge	90X70	防振スポンジ	(VP19060)	
60	--	Vibration-proof Sponge	645X30	防振スポンジ	(VP19150)	
70	--	Vibration-proof Sponge	235X30	防振スポンジ	(VP19110)	
	--	Connector Assembly	SP-WOOFER	SP束線 ウーハー	(VP15940)	
10	LB009050	Connector Housing	XH-5P	コネクタハウジング		01
20	LB101130	Connector Pin	SXH-001T-P0.6	圧着端子		01
* 30	VN998200	Ferrite Core	BP53RB200100N0M	フェライトコア		02
40	--	Vibration-proof Sponge	290X40	防振スポンジ	(VP19120)	
50	--	Vibration-proof Sponge	90X70	防振スポンジ	(VP19060)	
60	--	Vibration-proof Sponge	530X40	防振スポンジ	(VP19140)	
	--	Connector Assembly	AM3	AM束線3 コア付	(VO03890)	
10	LB009040	Connector Housing	XH-4P	コネクタハウジング		01
20	LB101130	Connector Pin	SXH-001T-P0.6	圧着端子		01
30	CB069250	Cord Binder	BK-1	インシュロックタイ		01
* 40	VN998200	Ferrite Core	BP53RB200100N0M	フェライトコア		02
50	--	Vibration-proof Sponge	190X40	防振スポンジ	(VP19090)	
60	--	Vibration-proof Sponge	90X70	防振スポンジ	(VP19060)	
70	--	Vibration-proof Sponge	330X70	防振スポンジ	(VP19130)	
	--	Connector Assembly	VR	VR束線	(VM44650)	
	--	Vibration-proof Sponge	440X50	防振スポンジ	(VP12410)	
1	VB304700	Connector Housing	PH-6P	コネクタハウジング		01
2	VB936800	Connector Contact	SPH-002T-P0.5S	コンタクト		01
4	LB101380	Connector Pin	SAN-002T-0.8A	圧着端子		01
5	--	Board-In Connector	SAN-6P	ボードイン	(LB92406)	
	--	Connector Assembly	KEYBOARD-2	鍵盤束線1	(VM67040)	
	LA004980	Connector Pin	SCN-001T-1.0	圧着端子		01
	LB101130	Connector Pin	SXH-001T-P0.6	圧着端子		01
	--	Connector Housing	XH-11P	コネクタハウジング	(LB00911)	
	--	Connector Housing	SCN-11P TE	コネクタハウジング	(LA00509)	
	--	Vibration-proof Sponge	330X70	防振スポンジ	(VP19130)	
	--	Connector Assembly	KEYBOARD-2	鍵盤束線2	(VM67050)	
	LA004980	Connector Pin	SCN-001T-1.0	圧着端子		01
	LB101130	Connector Pin	SXH-001T-P0.6	圧着端子		01
	LB009120	Connector Housing	XH-12P	コネクタハウジング		01
	--	Connector Housing	SCN-12P TE	コネクタハウジング	(LA00510)	
	--	Vibration-proof Sponge	270X70	防振スポンジ	(VP12390)	
	--	Connector Assembly	PN-DM	PN-DM束線	(VN03190)	
10	--	Vibration-proof Sponge	440X50	防振スポンジ	(VP12410)	
	--	Connector Assembly	PN-AM	PN-AM束線	(VN63750)	
	LB101380	Connector Pin	SAN-002T-0.8A	圧着端子		01
	VB936800	Connector Contact	SPH-002T-P0.5S	コンタクト		01
	LB924020	Board-In Connector	SAN-2P	ボードイン		01
	VB304300	Connector Housing	PH-2P	コネクタハウジング		01
	--	Vibration-proof Sponge	160X30	防振スポンジ	(VP19070)	
	--	Connector Assembly	AM1	AM束線1	(VM44660)	
	--	Vibration-proof Sponge	270X70	防振スポンジ	(VP12390)	
1	LB009120	Connector Housing	XH-2P	コネクタハウジング		01
2	LB101130	Connector Pin	SXH-001T-P0.6	圧着端子		01
4	LA004980	Connector Pin	SCN-001T-1.0	圧着端子		01
5	--	Connector Housing	SCN-12P TE	コネクタハウジング	(LA00510)	
	--	Connector Assembly	AM-DM	AM-DM束線 コア	(VO03880)	
10	--	Connector Housing	PH-9P	コネクタハウジング	(VB93850)	
20	VB936800	Connector Contact	SPH-002T-P0.5S	コンタクト		01
30	LB101380	Connector Pin	SAN-002T-0.8A	圧着端子		01
40	--	Board-In Connector	SAN-9P	ボードイン	(LB92409)	
50	VI491100	Ferrite Core	BP53RB19012080M	フェライトコア		02
60	--	Vibration-proof Sponge	70X50	防振スポンジ	(VP19040)	
70	--	Vibration-proof Sponge	90X70	防振スポンジ	(VP19060)	

＊：New Parts (新規部品)　NR

ランク：Japan Only

■ STAND (スタンド) LC-5 (Option別売品)



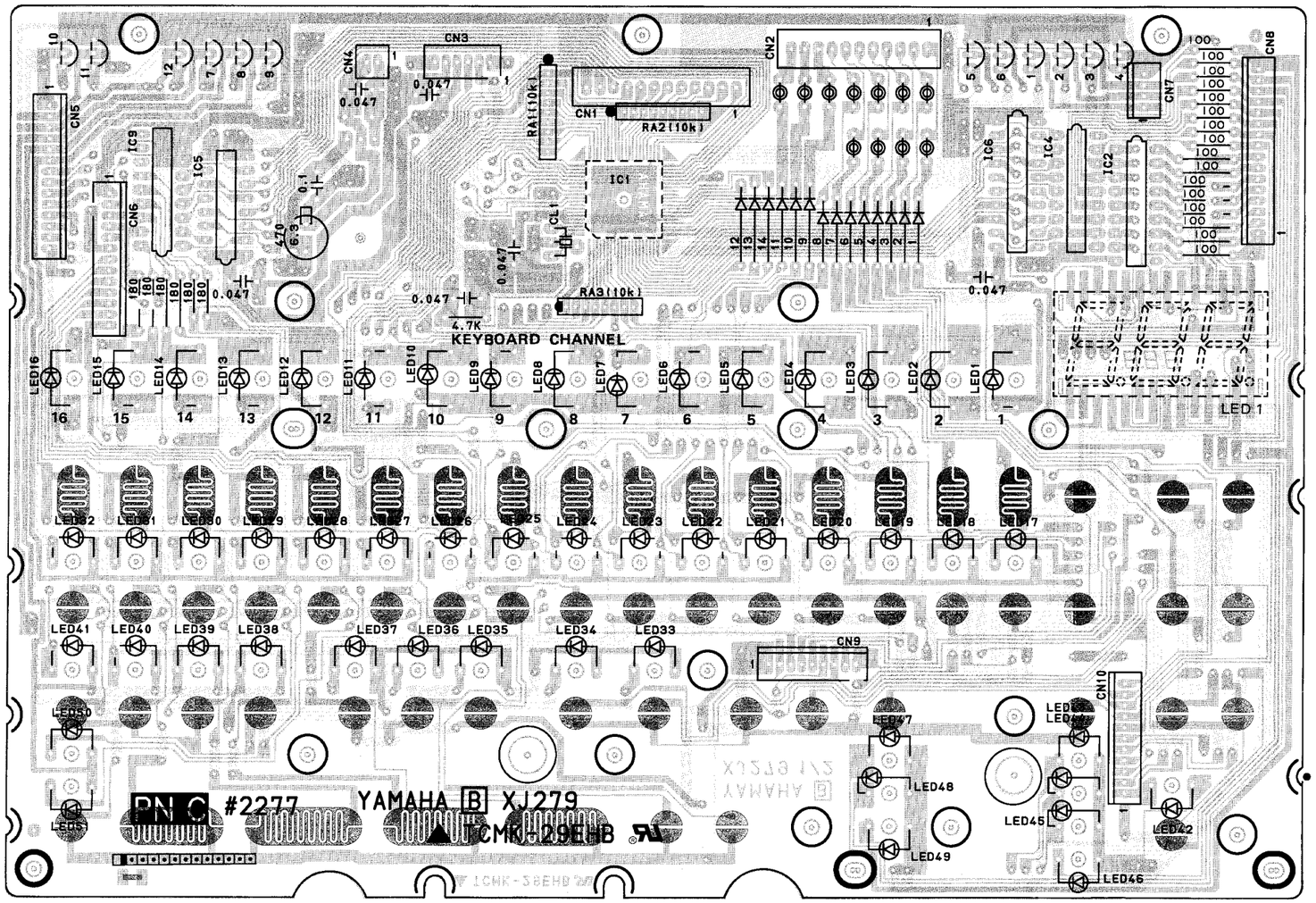
Ref. No.	Part No.	Description		部品名	Remarks	ランク
		<STAND ASSEMBLY>	LC-5	<スタンドAssy>	PSR-SQ16 OPTION	
10	VK803400	Leg Assembly		脚Assy	2pcs	18
10a	VE159100	Foot	BL	すべり座	4pcs	01
10b	VE159100	Cap	BL	キャップ	4pcs	01
10c	EP630230	Bind Head Tapping Screw-C	3.0X8 ZMC2BL	+バインドCタイト	4pcs	01
10d	VK693500	Knob Bolt	5.0X45 KG-B1	ノブボルト	2pcs	05
10e	EW600140	E-shaped Ring	φ4.0 ZMC2Y	E形止め輪	2pcs	01
12	VK832000	Base Plate Assembly		台座Assy		14
12a	VL034300	Rubber Spacer		ゴムスペーサー	2pcs	04
14	VK740600	Name Plate	(YAMAHA)	ネームプレート		
* 14a	EP640230	Bind Head Tapping Screw-C	4.0X6 ZMC2Y	+バインドCタイト	4pcs	
30	VK825400	Scerw Set		ネジセット		06
30a	EA350402	Pan Head Scerw	5.0X40 FCM3BL	ナベ小ネジ	4pcs	01
30b	VL182900	Bind Head Screw	5.0X6 ZMC2BL	バインド小ネジ	4pcs	

＊：New Parts (新規部品)　NR　　ランク：Japan Only

PSR-SQ16

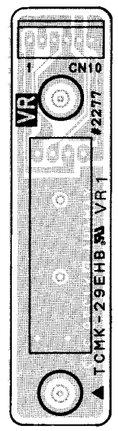
● PNC Circuit Board

PNC



Components side (部品側)

VR

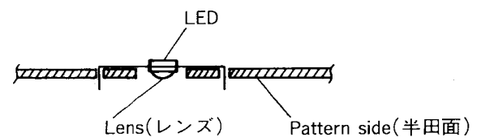


MASTER VOLUME

Notse)

	Circuit Board :	PNC (VM483600) XJ279B0
	Circuit Board :	PNC
	Circuit Board :	VR
1.	Coil	
	Marked Åù :	FL5R200QNT 20u (VB835000)
2.	Resistor Array	
	RA 1,2:	RGLE8X103J (VF771900)
	RA 3:	RGLE7X103J (VH305600)
3.	IC	
	IC 1:	HD6433308RL24F (XK013B00) CPU H8/330
	IC 5:	TC74HC174AP (IR017400) DFF
	IC 6:	TC74HC273AP (IR027300) DFF
4.	Ceramic Resonator	
	CL 1:	16.0MHz (VK966200)
5.	Slide Pot.	
		B10.0Kx2 (VJ394200) MASTER VOLUME
6.	Transistor Array	
	IC 2,4,9:	AN90B22 (VH480900)
7.	Diode	
	D 1-12:	1SS133,1SS176 (VB941200)
8.	LED	
	LED 1-51:	SLN-210VCT12 RE (VJ348700)
9.	LED Display	
		LB-603VLF1 (VH373800)
10.	Digital Transistor	
	TR 1-12:	DTB123ES TP (VJ337600)
11.	Connector	
	CN 1:	KEYBOARD-2 12P to MK
	CN 2:	KEYBOARD-1 11P to MK
	CN 3:	PN-DM 6P to DM-CN2
	CN 4:	PN-AM 2P to AM-CN8
	CN 5:	52147-14P TE to PNR-CN5
	CN 6:	52147-13P TE to PNR-CN4
	CN 7:	52147-4P TE to PNL-CN2
	CN 8:	52147-16P TE to PNL-CN1
	CN 9:	52147-9P TE to PNF-CN1
	CN10:	52147-11P TE to PFL-CN3
	CN13:	VR 6P to AM-CN5

● LED installation(LEDの取付け)

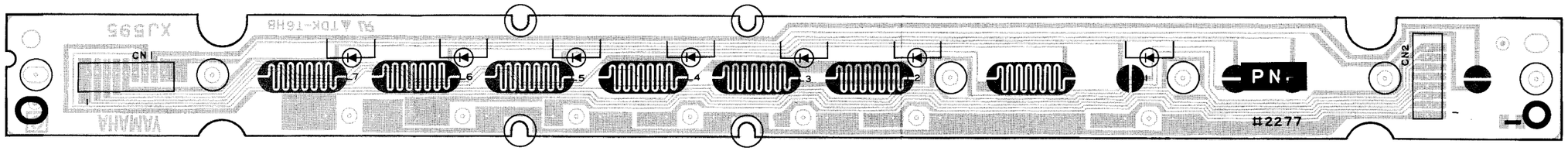


2NA-VM48360 ⚠5

PSR-SQ16

PSR-SQ16

● PNF Circuit Board

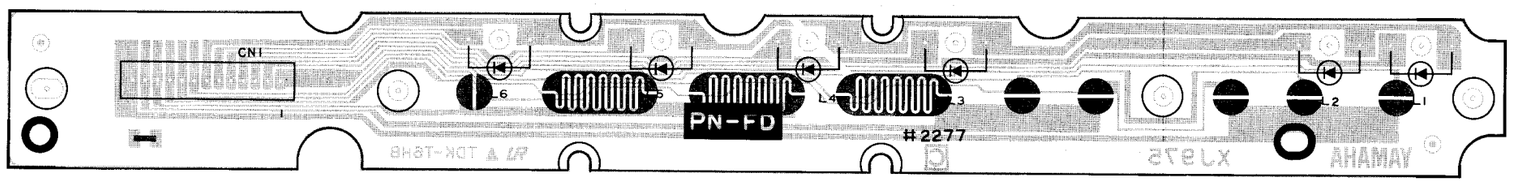


Components side (部品側)

Notes)

	Circuit Board :	PNF (VN200400) XJ595C0
1.	LED	
	L 1-7:	SLN-210VCT12 RE (VJ348700)
2.	Connector Assembly	
	CN 1:	PN6 9P to PNC-CN9
	CN 2:	PN8 8P to PNL-CN8

● PNFD Circuit Board

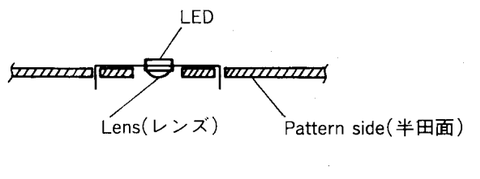


Components side (部品側)

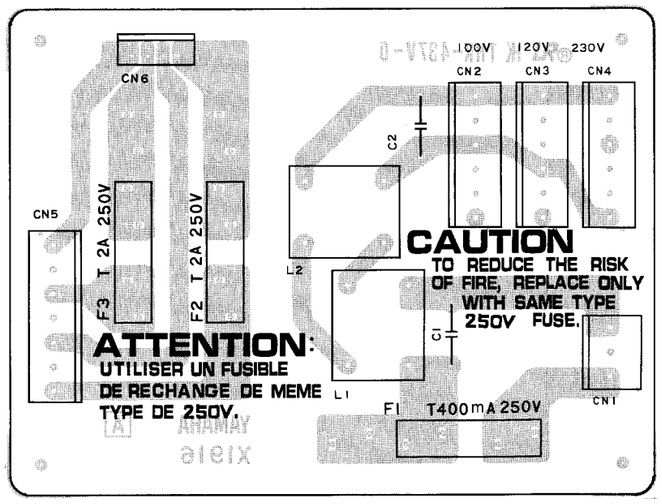
Notse)

	Circuit Board :	PNFD (VN200500) XJ975C0
1.	LED	
	L 1-6:	SLN-210VCT12 RE (VJ348700)
2.	Connector Assembly	
	CN 1:	PN9 13P to PNR-CN6

● LED installation(LEDの取付け)



●FU シート



Components side (部品側)

Notse)

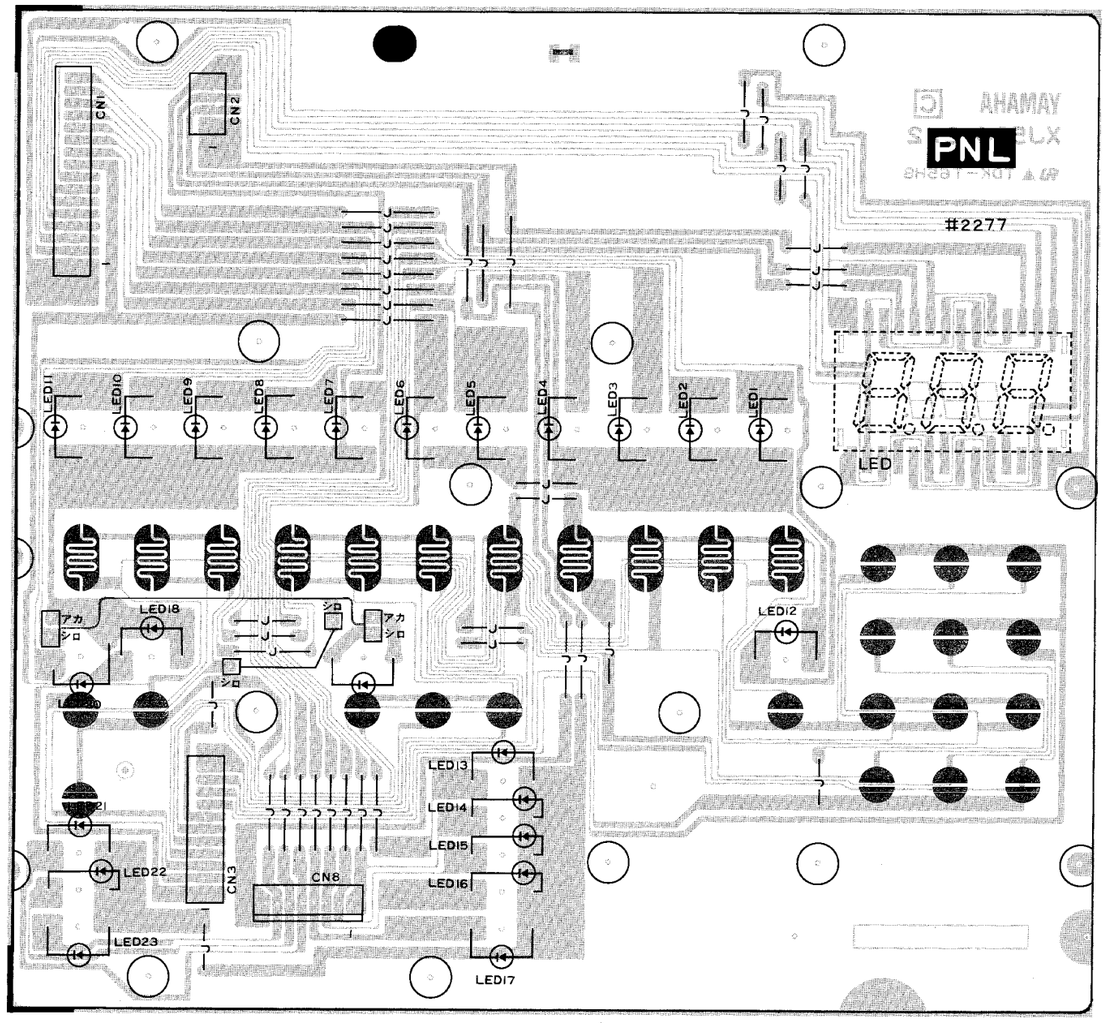
	Circuit Board :	FU (VL266400) X1916A0 (J,U,C)
		FU (VP753200) X1916A0 (H,B,A)
1.	Base Post Connector	
	CN 1:	VH-3P TE (LB932030) to POWER switch
	CN 2:	VH-6P TE (LB932060) to P.T. primary (H,D)
	CN 3:	VH-6P TE (LB932060) to P.T. primary (U,C)
	CN 4:	VH-6P TE (LB932060) to P.T. primary (J)
	CN 5:	VH-7P TE (LB932070) to P.T. secondary
	CN 6:	XH-4P TE (LB918040) to AM-CN1
3.	Ceramic Cap.	
	C 1:	0.010 400V (FI384100) or
		0.010 400V (FI494100)
	C 2:	4700P 400V (FI383470) or
		4700P 400V (FI493470)
4.	Coil	
	L 1:	SU10V-10010 1m (VF370900)
	L 2:	SU10V-D10010 10u (VF616300)
5.	Fuse	
	F1:	T800mA (VP730600) J,U,C
		400mA (VL377600) H,A,B
	F2:	T3.00A (KB003160) J,U,C
		2.50A (KB003080) H,A,B
	F3:	T2.00A (KB003140) J,U,C
		2.00A (KB003070) H,A,B

PNF: 2NA-VM41750 ⚠
PNFD: 2NA-VM41760 ⚠
FU: 2NA-VL26640 ⚠

PSR-SQ16

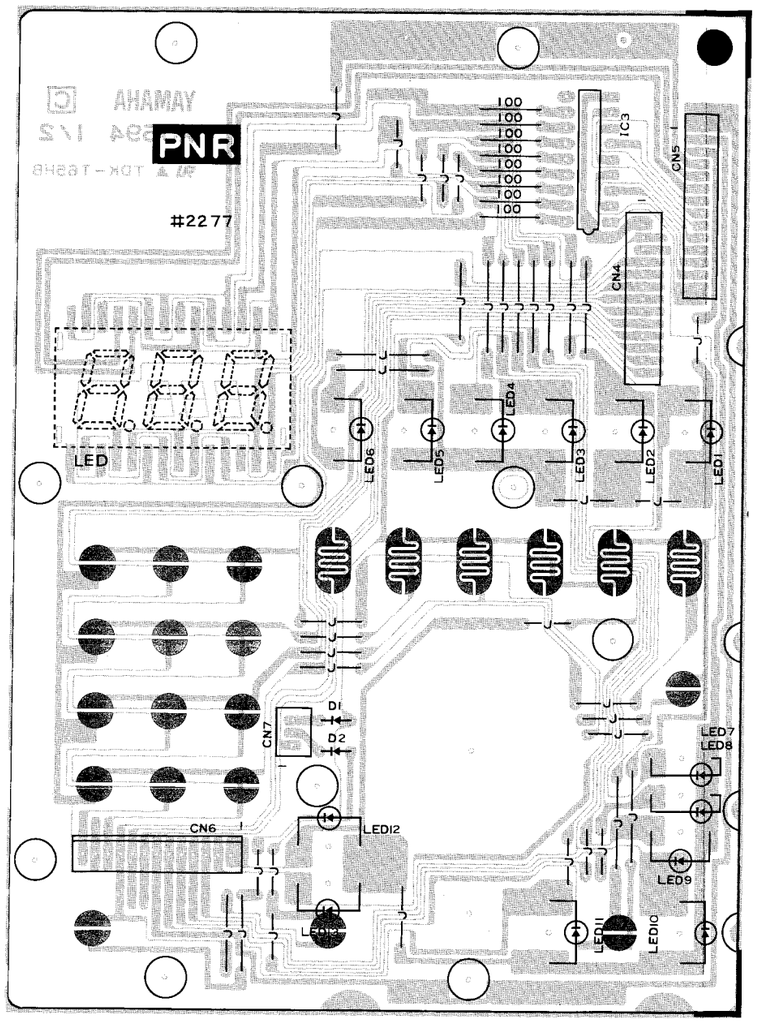
● PNLR Circuit Board

PNL



Components side(部品側)

PNR

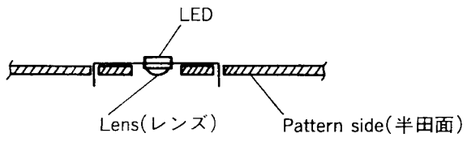


Components side(部品側)

Notse)

	Circuit Board :	PNLR (VM417400) XJ594C0
	Circuit Board :	PNL
	Circuit Board :	PNR
1.	Transistor Array	
	IC 3:	AN90B22 (VH480900)
2.	Diode	
	D 1,2:	1SS133,1SS176 (VB941200)
3.	LED	
	LED 1-23/ 1-13:	SLN-210VCT12 RE (VJ348700)
4.	LED Display	
		LB-603VLF1 (VH373800)
5.	Connector	
	CN 1:	PN1 16P to PNC-CN8
	CN 2:	PN2 4P to PNC-CN7
	CN 3:	PN3 11P to PNC-CN10
	CN 4:	PN4 13P to PNC-CN6
	CN 5:	PN5 14P to PNC-CN5
	CN 7:	PN10 3P to rotary encoder
	CN 6:	52147-13P TE to PNFD-CN1
	CN 8:	52147-8P TE to PNF-CN2

● LED installation(LEDの取付け)

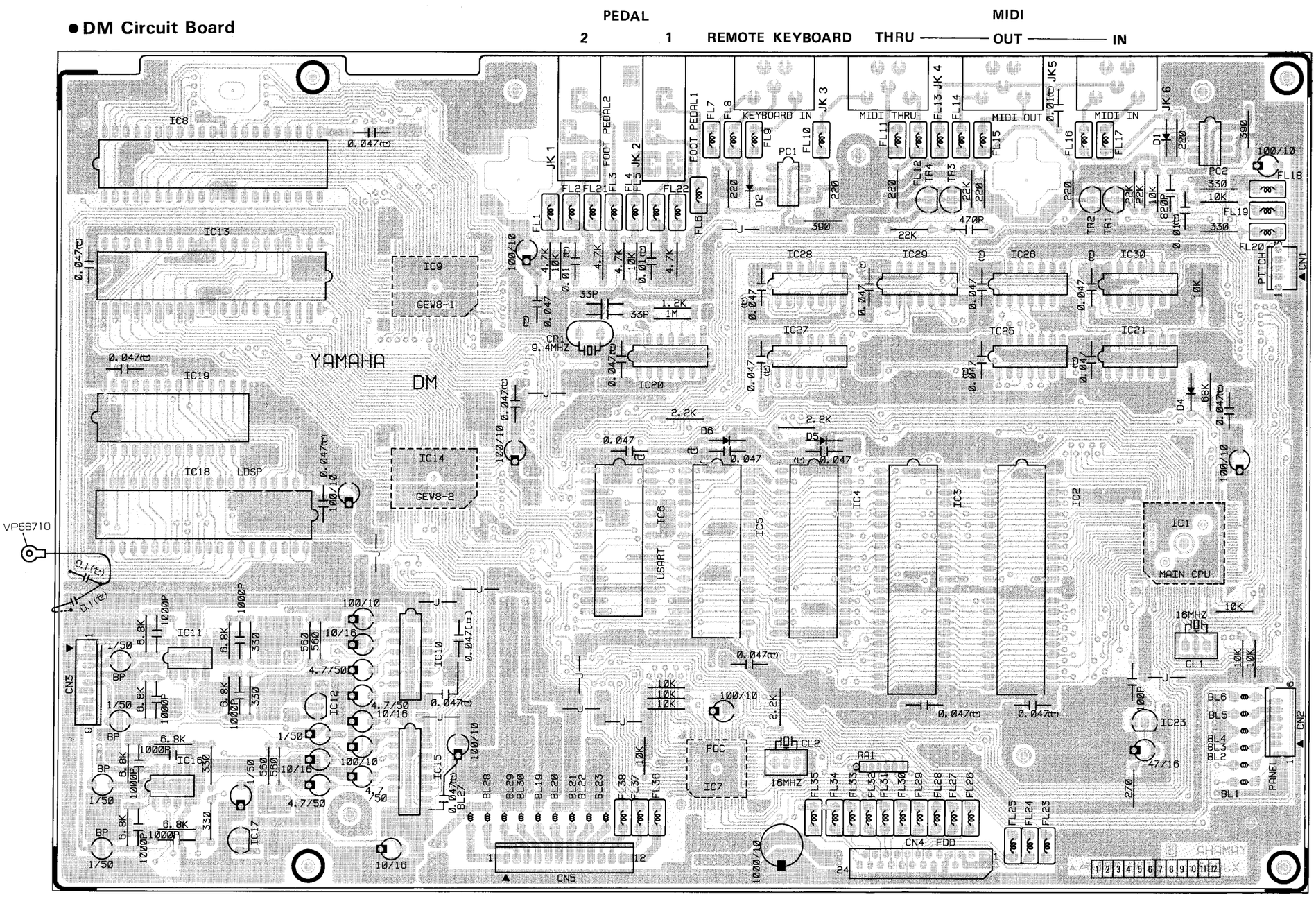


2NA-VM41740 ⚠

PSR-SQ16

■CIRCUIT BOARDS（シート基板図）

● DM Circuit Board



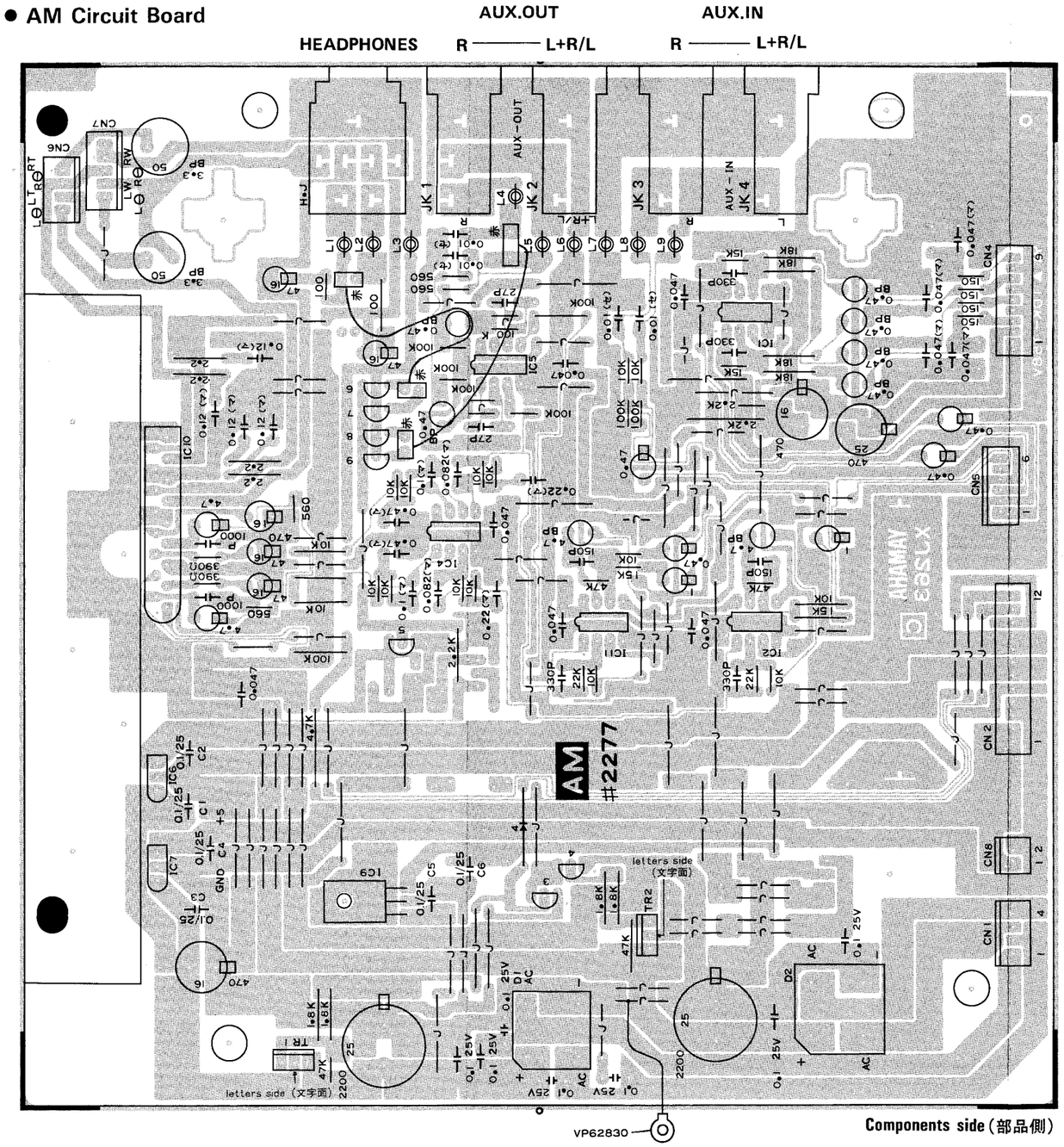
Components side（部品側）

Notes)

	Circuit Board :	DM (VL035200) XJ99830
1.	Coil	
	FL:	FL5R200QNT 20u (VB835000)
2.	Ferrite Bead	
	BL:	BL02RN1-R62T4 (GE300610)
3.	Resistor Array	
	RA 1:	RGLE5X102J (VL731700)
4.	IC	
	IC 1:	HD6415108F10 (XJ797A00) CPU
	IC 2:	LH538F-08 (XK736B00) ROM 8M (STYLE)
	IC 3:	HN62408**** (XL326A00) ROM 8M (PROGRAM)
	IC 4,5:	TC518128APL-80 (XJ446A00) PSRAM 1M
	IC 6:	UPD8251AFC (IG139400) USART
	IC 7:	HD63266F (XI939A00) FDC
	IC 8:	HN624116PC13 (XK269B00) ROM 16M
	IC 9,14	YMW258-F (XJ427A00) GEW8
	IC10,15:	PCM69P-C (XJ429A00) DAC
	IC11,16:	UPC4570C (XC520A00) OP AMP
	IC12,17:	M5278L05 (XG945A00) REGULATOR +5V
	IC13:	HN624116PC14 (XK270B00) ROM 16M
	IC18:	YM3413 (XE449A00) LDSP
	IC19:	HM65256BLP-10 (XH116A00) PSRAM 256K or TC51832PL-10 (XC628A00) PSRAM 256K
	IC20,29:	TC74HC04P (IR000400) INVERTER
	IC21,30:	TC74HC74AP (IR007400) DFF
	IC23:	MN1381T(TA) (XJ423A00) RESET
	IC25:	HD74AC00P (XK273A00) NAND
	IC26:	TC74HC08AP (IR000800) AND
	IC27:	TC74HC10AP (IR001000) NAND
	IC28:	TC74HC32AP (IR003200) OR
5.	Phone Jack	
	FOOT PEDAL:	YKB21-5074 (VM576000) PEDAL 1,2
6.	DIN Jack	
		YKF51-5050 (VJ107200) MIDI, REMOTE KEYBOARD
7.	Quartz Crystal Unit	
	CR 1:	9.4MHz AT-49 (VN271300)
8.	Ceramic Resonator	
	CL 1,2:	16.0MHz (VK966200)
9.	Transistor	
	TR 1-4:	2SC1740S R,S (IC174070)
10.	Diode	
	D 1-6:	1SS133,1SS176 (VB941200)
11.	Photo Coupler	
	PC 1,2:	6N137 (VD473200)
12.	Connector	
	CN 1:	52147-3P TE to pitch bend
	CN 2:	52147-6P TE (VF728300) to PCN-CN3
	CN 3:	PH-9P TE (VB390500) to AM-CN4
	CN 4:	52045-24P TE to FDD
	CN 5:	XH-12P TE (LB918120) to AM-CN2

2NA-VL03520 ⚠

● AM Circuit Board



Components side (部品側)

Notes)

Crcuit Board : AM (VK966400) XJ263C0

1. Coil
   L 1-9: FL5R200QNT 20u (VB835000)
2. IC
   IC 1,2,4,5,11: UPC4570C (XC520A00) OP AMP
   IC 6,7: NJM7805FA (XC719A00) REGULATOR +5V
   IC 9: AN78N05 (XA507A00) REGULATOR +5V
   IC10 TA8210AH 22W (XH820A00) POWER AMP
   IC12: AN7712F (XL535A00) REGULATOR +12V or
   UPC24M12 (XI078A00) REGULATOR +12V
3. Phone Jack
   H.J: YKB21-5006 (LB101870) HEADPHONES
   AUX-OUT R: YKB21-5012 BL (VB312600) AUX OUT R
   YKB21-5014 BL (VC687500) AUX IN, OUT L/L+R
4. Transistor
   TR 1: 2SB1282 (VM530000)
   TR 2: 2SB1416(TA) Q,R (VH481100)
5. Diode
   1SS133,1SS176 (VB941200)
6. Diode Stack
   D 1,2: S4VB20 2.6A (IH001090)
7. Digital Transistor
   TR 3-9: DTC114WS TP (VG024900) or
   DTC114WS (VP333700)
8. Connector
   CN 1: XH-4P TE (LB918040) to FU-CN6
   CN 2: AM1 12P to DM-CN5
   CN 4: AM-DM 9P to DM-CN3
   CN 5: PH-6P TE (VB390200) to VR(PNC)-CN13
   CN 6: XH-4P TE (LB918040) to woofers
   CN 7: XH-5P TE (LB918050) to tweeters
   CN 8: PH-2P TE (VB389800) to PNC-CN4

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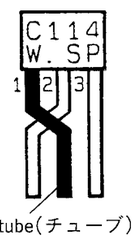
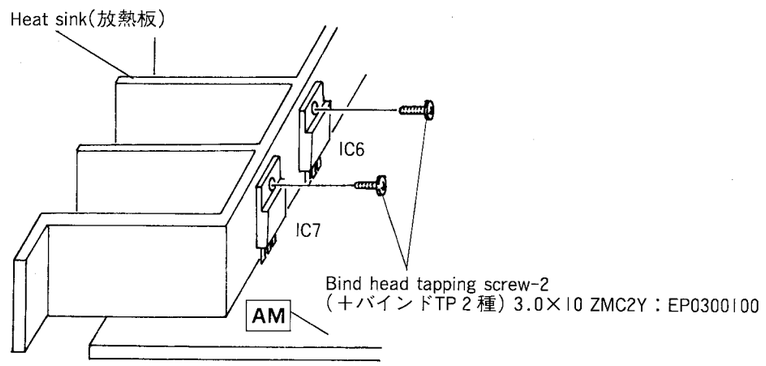
● Transistors TR6－TR9 installation
（トランジスタTR6～TR9の取付け）



● IC6 and IC7 installation(IC6, IC7の取付け)



The heat sink is retained to the AM circuit board with the bind head tapping screws, 3.0×6 ZMC2Y.
（放熱板は、＋バインドTP 2 種3.0× 6 ZMC2YでAMシートに取付けられています。）

2NA-VK96640

■TEST PROGRAM

1. POWER SWITCH
2. HOW TO ENTER THE TEST PROGRAM
3. ROM
   PROGRAM ROM (000000h—07FFFFh)
   STYLE ROM1 (080000h—0FFFFFh)
   STYLE ROM2 (A00000h—AFFFFFh)
   WAVE ROM1
   WAVE ROM2
4. MEMORY BACKUP
5. WORK ROM
6. FDD
7. PANEL SWITCH, LED, AUDIO LEVEL
8. KEYBOARD
9. LDSP
10. PITCH BEND
11. FOOT PEDAL 1
12. FOOT PEDAL 2
13. MIDI
14. USART
15. EXIT

1. Power switch

Before entering the test, turn the POWER switch on, and check the power supply. If the memorized data in RAM has been useless, the data will be initialized.

2. How to enter the test program

(1) Hold down the two right most white keys, and you will enter the normal test mode. (Before starting up the test program, turn the power switch on by the normal method at least once.)
(2) Hold down the three right most white keys, turn the power supply on, and you will enter the test mode without executing the backup RAM test. (Turning the power switch on by the normal method before starting up this test program is unnecessary.)
(3) Hold down the four right most white keys, turn the power supply on, and you will enter the test mode without excuting the backup RAM and FDD tests. (Turning the power switch on by the normal method before starting up this test program is unnecessary.)
(4) Hold down the two right most black keys, turn the power switch on, and you will enter the test mode which, when you play the keys, produces sounds with the ORGAN 1 voice, and with VELOCITY = 110, and VOLUME = 100. (Before starting up the test program, turn the power switch on by the normal method at least once.)

3. ROM

ROM check is automatically performed when the test program starts up.

Test result

Each ROM version appears in the LED display as shown below.

LEFT DISPLAY	CENTER DISPLAY		RIGHT DISPALY	
Program ROM	Style ROM1	Style ROM2	Wave ROM1	Wave ROM2
2 0 0	1	1	4	4

The result of the ROM check does not appear on the LED display.

4. Memory backup

When the test program starts up, checking of the following operations is automatically executed: bus of the backup RAM, chip enable, lead cable, and backup power supply.
(This executes only when you start up the test program by turning on the power switch while pressing the two right most white or two right most black keys.)

Test result

"Er1" appears in the center display when NG.
Press the [+] key under the center display to to the next test.

Remark

If the power supply has not been turned on by normal start-up before executing the backup RAM test, or if the test program has been started up twice in succession, an error will occur.
(Turn on the power supply by the normal method before executing the backup RAM test.)

5. WORK RAM (900000h - 907FFFh)

When the test program starts up, a check of the following operations is automatically executed: bus of the WORK RAM, chip enable, and lead cable.

Test result

"Er2" appears in the center display when NG.
Press the [+] key under the center display to move to the next test.

6. FDD

When the test program starts up, FDD operation checking is automatically performed.
Insert a formatted floppy disk with the protect switch off into the slot.
After entering the test mode, execute the FDD test by simultaneously pressing the [FORMAT] and [SAVE] switches.

Test result

"End" appears on the center display when OK.
"Er3" appears on the center display when NG.
Press the [+] key under the center display and "End" will appear in the display, and the FDD test will be performed.

Remark

Under the following circumstances, errors occur during the FDD test.
(1) When the disk is not inserted into the slot completely.
(2) When an unformatted disk is used.
(3) When a disk's protect switch is ON.

7. Panel switch conductivity, LED, and audio level test

This test will check panel switch conductivity, lighting of the LEDs, audio signals, and the DAC and its surroundings. While the panel switch is ON, sound is generated in the pitch shown in table 1. If you press a switch that has a LED, the LED lights up at the same time that the sound is produced. (see table 1 on page 39.)

Test result

Each dot in the LED display flashes once in succession from the left to the right. While the panel switch is on, a sine wave is generated from the left speaker, at a pitch shown in table 1, by using GEW8-1, and also from the right speaker, by using the GEW8-2. The level of the sine wave is VELOCITY = 95 and VOLUME = 100.
When a switch with a LED is pressed, the LED lights up. If one switch has multiple LEDs, a new LED lights up with each press of the switch. When a numeric key is pressed, or a dial is moved, the figure appears in the LED display. The displayed figure moves to the right each time the switch is pressed, and the right most figure displayed will next move to the left most position.

Remark

In some cases the normal position of the generated sine wave may seem a bit dislocated but it is not.
Press the [FORMAT] and [SAVE] switches simultaneously to start up the FDD test.

8. Keyboard

Check keyboard conducting and SUB-CPU by scaling the keyboard, and then check sound generation and the NOTE and VELOCITY value that appear in the LED display.

Test result

When you play the keys, the NOTE and VELOCITY value of the key you pressed appear in the LED display as shown below.

LEFT DISPLAY	CENTER DISPLAY	RIGHT DISPLAY
	NOTE (36 ~ 96)	VELOCITY (1 ~ 127)
S u b	5 0	1 0 0

When the NOTE number is an odd number, the sine wave is output by using the GEW8-1. When the NOTE number is an even number, the sine wave is output by using the GEW8-2.
The sine wave generated in this test is output by passing the Through program of LDSP. Use this mode when executing the LDSP test.

If you enter the test program by holding down the two right most black keys and then turning on the power supply switch, sound is produced with the ORGAN 1 voice, and with VELOCITY = 110, and VOLUME = 100, and with the following specifications.
(1) Sound is produced with VELOCITY = 110 regardless of whether the NOTE number is an odd or even number.
(2) The signal output by this test does not pass the LDSP. Therefore, the LDSP test cannot be performed.

9. LDSP

Play the keys to output the signal, and check the operation of the LDSP and LDSP RAM by listening.

Test result

If, when a key is played, the output signal is distorted, or no sound is generated, the LDSP seems to be abnormal.

Remark

If you enter the test program by holding down the two right most black keys and then turning on the power supply switch, the signal output when the keys are pressed does not pass the LDSP. Therefore, the LDSP test cannot be carried out.

10. Pitch bend

Check the pitch bend circuit by moving the pitch bend controller, and then checking the sound produced and the value that appears on the display.

Test result

The following appears in the LED display during the test.

LEFT DISPLAY	CENTER DISPLAY VOLUME (– 64 ~ 63)	RIGHT DISPLAY
p b	0	– – –

When you turn the pitch bend controller upwards, C4 sine wave is output. The sine wave is output only when VELOCITY = 113/127 (CENTER DISPLAY = 49) or more. When you turn the pitch bend controller downwards, C3 sine wave is output. The sine wave is output only when VELOCITY = 14/127 (CENTER DISPLAY = -50) or less. When the pitch bend returns to the center after being released, "0" appears in the center display.

11. Foot pedal 1

Press the foot pedal connected to [PEDAL 1] and check the foot pedal circuit and its surroundings by checking the sound generation and the value that appears on the LED display.

Test result

The following appears on the LED display during the test.

LEFT DISPLAY	CENTER DISPLAY AD (0 ~ 127)	RIGHT DISPLAY
F C 1	0	– – –

When the pedal AD value is minimum (0), C3 sine wave is output.
When the pedal AD value is maximum (127), C4 sine wave is output.
The sine wave is generated from the left channel speaker by using the GEW8-1, and from the right channel speaker by using the GEW8-2.

12. Foot pedal 2

Press the foot pedal connected to [PEDAL 2] and check the foot pedal circuit and its surroundings by checking the sound generation and the value that appears on the LED display.

Test result

The following appears on the LED display during the test.

LEFT DISPLAY	CENTER DISPLAY AD (0 ~ 127)	RIGHT DISPLAY
F C 2	0	– – –

When the pedal AD value is minimum (0), C3 sine wave is output.
When the pedal AD value is maximum (127), C4 sine wave is output.
The sine wave is generated from the left channel speaker by using the GEW8-1, and from the right channel speaker by using the GEW8-2.

13. MIDI

Connect the [MIDI IN] terminal to the [MIDI OUT] terminal via a MIDI cable.

Tests result

When the [MIDI IN] terminal is connected to the [MIDI OUT] terminal with the MIDI cable, the A3 and A4 pitch sine waves are output alternately. The A3 sine wave is output from the left speaker and the A4 sine wave is output from the right speaker.
When the MIDI cable is disconnected, sound generation stops.

14. USART

Output sine wave by connecting the [REMOTE KEYBOARD] to the [MIDI OUT] terminal via a MIDI cable, and check USART and the circuit of the [REMOTE KEYBOARD] terminal and its surroundings.

Test result

The following appears on the LED display during the test.

LEFT DISPLAY	CENTER DISPLAY	RIGHT DISPLAY
S u b	6 9	9 5

"69" and "81" display alternately.

When you enter the test program by holding down the white key, and then turning on the power supply switch, the A3 and A4 pitch sine waves are output from the center.
When you enter the test program by holding down the two right most black keys, and then turning on the power supply switch, the A3 and A4 pitch ORGAN1 signals are output from the center.
When the MIDI cable is disconnected sound generation stops.

15. Exit

Quit the test by turning the power switch off.

Table 1

No.	SWITCH	NAME	NOTE	OCTAVE	NOTE NO.
1	19	TEN KEY LEFT -	C	2	48
2	20	TEN KEY LEFT +	C#	2	49
3	21	TEN KEY LEFT 0	D	2	50
4	16	TEN KEY LEFT 1	D#	2	51
5	17	TEN KEY LEFT 2	E	2	52
6	18	TEN KEY LEFT 3	F	2	53
7	30	TEN KEY LEFT 4	F#	2	54
8	31	TEN KEY LEFT 5	G	2	55
9	32	TEN KEY LEFT 6	G#	2	56
10	27	TEN KEY LEFT 7	A	2	57
11	28	TEN KEY LEFT 8	A#	2	58
12	29	TEN KEY LEFT 9	B	2	59
13	53	TEMPO	C	3	60
14	52	MASTER TUNING	C#	3	61
15	51	TRANSPOSE	D	3	62
16	50	DSP TYPE	D#	3	63
17	49	CONFIG TABLE	E	3	64
18	38	MIDI I/O FILTER	F	3	65
19	39	VELOCITY FIX	F#	3	66
20	40	KEYBOARD TRANSPOSE	G	3	67
21	41	SPLIT POINT	G#	3	68
22	42	NOTE PROCESSOR	A	3	69
23	43	STYLE#	A#	3	70
24	54	METRONOME	B	3	71
25	5	CUSTOM TABLE	C	4	72
26	6	MIDI I/ FILTER ON/OFF	C#	4	73
27	7	VELOCITY FIX ON/OFF	D	4	74
28	10	NOTE PROCESSOR ON/OFF	D#	4	75
29	9	AUTO ACCOMP ON/OFF	E	4	76
30	8	FINGERING	F	4	77
31	1	SONG#/CUSTOM STYLE#(-)	F#	4	78
32	23	SONG#/CUSTOM STYLE#(+)	G	4	79
33	44	SPLIT ASSIGN	G#	4	80
34	55	KEYBOARD CHANNEL 1	A	4	81
35	66	KEYBOARD CHANNEL 2	A#	4	82
36	98	KEYBOARD CHANNEL 3	B	4	83
37	87	KEYBOARD CHANNEL 4	C	2	48
38	109	KEYBOARD CHANNEL 5	C#	2	49
39	120	KEYBOARD CHANNEL 6	D	2	50
40	131	KEYBOARD CHANNEL 7	D#	2	51
41	142	KEYBOARD CHANNEL 8	E	2	52
42	153	KEYBOARD CHANNEL 9	F	2	53
43	148	KEYBOARD CHANNEL 10	F#	2	54
44	137	KEYBOARD CHANNEL 11	G	2	55
45	126	KEYBOARD CHANNEL 12	G#	2	56
46	115	KEYBOARD CHANNEL 13	A	2	57
47	104	KEYBOARD CHANNEL 14	A#	2	58
48	82	KEYBOARD CHANNEL 15	B	2	59
49	93	KEYBOARD CHANNEL 16	C	3	60
50	108	CUSTOM STYLE ON	C#	3	61
51	34	CUSTOM STYLE COPY	D	3	62
52	11	REC	D#	3	63
53	22	SEQUENCER 1	E	3	64
54	33	SEQUENCER 2	F	3	65
55	95	SEQUENCER 3	F#	3	66
56	40	SEQUENCER 4	G	3	67
57	41	SEQUENCER 5	G#	3	68
58	42	SEQUENCER 6	A	3	69
59	43	SEQUENCER 7	A#	3	70
60	54	SEQUENCER 8	B	3	71
61	5	SEQUENCER 9	C	4	72
62	6	SEQUENCER 10	C#	4	73
63	7	SEQUENCER 11	D	4	74
64	10	SEQUENCER 12	D#	4	75
65	9	SEQUENCER 13	E	4	76
66	8	SEQUENCER 14	F	4	77
67	1	SEQUENCER 15	F#	4	78
68	23	SEQUENCER 16	G	4	79
69	44	BEAT PER MEASURE -	G#	4	80
70	55	BEAT PER MEASURE +	A	4	81

No.	SWITCH	NAME	NOTE	OCTAVE	NOTE NO.
71	66	REC MODE	A#	4	82
72	98	DATA SEL	B	4	83
73	35	VALUE -	C	2	48
74	68	VALUE +	C#	2	49
75	46	EDIT CHANGE	D	2	50
76	57	EDIT CLEAR	D#	2	51
77	152	EDIT NOTE	E	2	52
78	141	EDIT FROM	F	2	53
79	130	EDIT TO	F#	2	54
80	119	EDIT COPY	G	2	55
81	108	EDIT CUT	G#	2	56
82	86	EDIT PASTE	A	2	57
83	97	EDIT INSERT	A#	2	58
84	67	PUNCH IN/OUT	B	2	59
85	151	REPEAT	C	3	60
86	140	RESET	C#	3	61
87	129	REWIND	D	3	62
88	118	STOP	D#	3	63
89	107	PLAY	E	3	64
90	85	FORWARD	F	3	65
91	96	STEP	F#	3	66
92	114	VOICE	G	3	67
93	92	VOLUME	G#	3	68
94	91	PAN	A	3	69
95	102	DSP DEPTH	A#	3	70
96	80	VIBRATO DEPTH	B	3	71
97	113	TUNING	C	4	72
98	103	BANK	C#	4	73
99	81	DIAL USAGE	D	4	74
100	125	CH STATUS PRIVILEGE	D#	4	75
101	124	DEMO START/STOP	E	4	76
102	88	TEN KEY RIGHT -	F	4	77
103	90	TEN KEY RIGHT +	F#	4	78
104	89	TEN KEY RIGHT 0	G	4	79
105	77	TEN KEY RIGHT 1	G#	4	80
106	79	TEN KEY RIGHT 2	A	4	81
107	78	TEN KEY RIGHT 3	A#	4	82
108	99	TEN KEY RIGHT 4	B	4	83
109	101	TEN KEY RIGHT 5	C	2	48
110	100	TEN KEY RIGHT 6	C#	2	49
111	110	TEN KEY RIGHT 7	D	2	50
112	112	TEN KEY RIGHT 8	D#	2	51
113	111	TEN KEY RIGHT 9	E	2	52
114	62	PEDAL ASSIGN 1	F	2	53
115	60	PEDAL ASSIGN 2	F#	2	54
116	61	SYNCHRO	G	2	55
117	63	START/STOP	G#	2	56
118	64	INTRO	A	2	57
119	75	FILL1	A#	2	58
120	74	FILL2	B	2	59
121	72	ENDING	C	3	60
122	71	VARIATION A	C#	3	61
123	73	VARIATION B	D	3	62
124	145	UNDO	D#	3	63
125	134	ARE YOU SURE? YES	E	3	64
126	123	ARE YOU SURE? NO	F	3	65
127	122	FILE# -	F#	3	66
128	133	FILE# +	G	3	67
129	144	LOAD	G#	3	68
130	132	SAVE	A	3	69
131	143	DELETE	A#	3	70
132	121	FORMAT	B	3	71

■ERROR MESSAGES

If an error occurs during disk operation, one of the following Error Messages will appear in the right-hand digital display. Refer to the list below for solutions to these errors.

Disk Error Message 0 ....No Disk.

If you press the LOAD or SAVE button when there is no disk in the drive, this message will appear. Also, if you eject a disk during LOAD, SAVE, or FORMAT operations, this error message will appear.

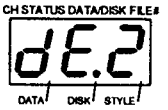
➪ Insert the disk into the drive and start the operation again.

Disk Error Message 1 ... Unformatted Disk.

If you insert an unformatted disk into the disk drive and press FILE# +/-, LOAD, SAVE, etc., this error message will appear.

➪ You can either format the disk by pressing the FORMAT button, or eject the disk and insert another disk that is already formatted.

Disk Error Message 2 ....No Data in the File.



If there is no data in the file and you press the LOAD or DELETE button, this error message will appear.

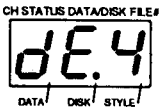
➪ Select a file that contains data.

Disk Error Message 3 ....Memory Full.

If the amount of data on a file to be loaded is too large for the memory space remaining in the PSR-SQ16, this error message will appear.

➪ Delete unnecessary song data stored in the PSR-SQ16's internal memory or write the new data over it. If this error message still displays when all song data or custom style data has been deleted, then the file is too big for the PSR-SQ16's memory.

Disk Error Message 4 ....Load Error.



If you attempt to load data from a faulty disk (i.e. the disk is deformed or scratched) into the PSR-SQ16, this error message will appear. Data loaded up to the point of the error will be discarded, and data previously stored in the selected SONG # or CUSTOM STYLE # will also be lost.

➪ Try loading data from the disk once again. If the same error occurs, then the problem is the disk. Use another disk and try again.

Disk Error Message 5 .... Data Error.

If performance data that is not compatible with the PSR-SQ16 is loaded, this error message will appear. Data loaded up to the point of the error will be discarded, and data previously stored in the selected SONG # or CUSTOM STYLE # will also be lost.

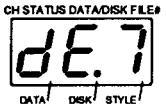
➪ Try loading the data from the disk once again. If the same error occurs, then the problem is the disk. Use another disk and try again.

Disk Error Message 6 .... File Exists.

When you try to save data into a file that already contains data, this error message will appear.

➪ If you wish to replace the old file with the new file, press the COMMAND (ARE YOU SURE?) YES button. If you want to save the new data using another file name, pressing the NO button will return the PSR-SQ16 to the File Select mode, where you can select a new File Number.

Disk Error Message 7 .... Disk Full



If the data to be saved to a disk is too large for the memory space remaining on a disk, this error message occurs.

➪ Overwrite to an unnecessary file on the disk, or delete the file and try the save operation again, or use another disk.

Disk Error Message 8 .... Write Error

If an error occurs during a SAVE operation, this error message will appear.

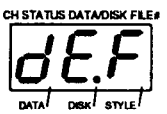
➪ Try saving the data on the disk once again. If the same error occurs, then the problem is the disk. Use another disk and try again.

Disk Error Message 9 .... Write Protect

If the Write Protect tab of a disk is in the locked position, this message will appear.

➪ Set the Write Protect tab to the unlocked position and try the operation again.

Disk Error Message F .... Protected File



If you try to SAVE or DELETE a "Read Only" (in this file the MS-DOS file attribute is set to "Read Only") or system file, this message will appear.

➪ These files are protected so that they cannot be altered. The PSR-SQ16 is unable to perform SAVE or DELETE operations on these files.

* MS-DOS is a registered trademark of Microsoft Corporation.

* *When an error message appears in the right-hand digital display, pressing any button returns the PSR-SQ16 to normal mode.*

■MIDI DATA FORMAT(MIDI データフォーマット)

● Control Change Data Specifications

Data format : BnH -> cc -> vv

BnH : Control Event (n=channel number)
cc : Control Number
vv : Control Value

cc=00H; Bank Select MSB

vv= 00H - 7FH : Ignored

cc=20H; Bank Select LSB

vv= 00H - 02H : BANK 0, 1, LOCAL OFF
03H - 7FH : LOCAL OFF

cc=01H; Vibrato

vv= 00H - 0FH : 0 (off)
10H - 1FH : 1 (minimum)
20H - 2FH : 2
30H - 3FH : 3
40H - 4FH : 4 (initialization setting)
50H - 5FH : 5
60H - 6FH : 6
70H - 7FH : 7 (maximum)

* The default setting is 4, and each voice has its own value.

cc=06H; Data entry MSB

This is used with the Regitered parameter.

cc=26H; Data entry LSB

This is used with the Regitered parameter.

cc=07H; Volume

vv= 00H : 000 (no sound)
01H : 001 (-48dB)
7FH : 127 (maximum)

* When there is no transmission data, the default setting is 64H (100 on the panel)

cc=0AH; Pan

vv= 00-0B : -7 (left end)
0C-13 : -6
14-1B : -5
1C-23 : -4
24-2B : -3
2C-33 : -2
34-3B : -1
3C-43 : 0 (center, initialization setting)
44-4B : 1
4C-53 : 2
54-5B : 3
5C-63 : 4
64-6B : 5
6C-73 : 6
74-7F : 7 (right end)

vv= 01H :Fine tuning

Data entry
MSB= 00H : -32 (-100 cent)
40H : 0
7EH : +32 (+100 cent)
LSB= 00H-7FH : Ignored

vv= 02H : Coarse tuning

Data entry
MSB= 1CH : -36 (-3600 cent)
40H : 0
64H : +36 (+3600 cent)
LSB= 00H-7FH : Ignored

cc=0BH; Expression

vv= 00H : 000 (no sound)
01H : 001 (-48dB)
7FH : 127 (maximum)

* When there is no transmission data, the default setting is 7FH

cc=40H; Sustain

vv= 00H-3FH : OFF
40H-7FH : ON

* Default setting is OFF.

cc=5BH; Reverb

vv= 00H-07H : 0 (off)
08H-0FH : 1
10H-17H : 2
18H-1FH : 3
20H-27H : 4 (initial value)
28H-2FH : 5
30H-37H : 6
38H-3FH : 7
40H-47H : 8
48H-4FH : 9
50H-57H : 10
58H-5FH : 11
60H-67H : 12
68H-6FH : 13
70H-77H : 14
78H-7FH : 15 (maximum)

cc=64H; Registered parameter LSB

vv= 00H : Pitch bend sensitivity

Data entry
MSB= 00H : 0
01H : 1(1 semitone)
02H : 2
03H : 3
04H : 4
05H : 5
06H : 6
07H : 7
08H : 8
09H : 9
0AH : 10
0BH : 11
0CH : 12 (1 octave, initialization setting)
0DH-7FH : Ignored
LSB= 00H-7FH : Ignored

cc=65H; Registered parameter MSB

vv= 00H-7FH : Ignored

cc=79H; Reset All Controllers

vv= 00H (fixed)

cc=7BH; All Note Off

vv= 00H (fixed)

● Exclusive Data Specifications

Classification	Data	Name	Remarks	Trans.	Recp.
Configuration setting	F0 43 76 05 02 F7	PSR-SQ16 default ON	Made automatically in the beginning of the song data (in the beginning of the Track Chunk).	○	○
	F0 7E 7F 09 01 F7	GM system ON		○	○
	F0 7E 7F 09 02 F7	GM system OFF		○	○
	F0 43 73 01 14 F7	DOC ON		○	○
	F0 43 73 01 13 F7	DOC OFF		○	○
	F0 43 76 05 01 F7	Portable keyboard standard voice ON		○	○
	F0 43 76 05 00 F7	Portable keyboard standard voice OFF		○	○
Auto Accompaniment switch control	F0 43 76 04 08 cc dl dh F7		Recorded and played back only in Channel 9 of the PSR-SQ16's sequencer.		
	cc=00	Style #	dl+dh×128=Style No.	○	○
	cc=01	Control Switch	dl= 00 dh= 01: Start, 00: Stop	○	○
			01 01: Synchro on, 00: off	○	○
			02 01: Auto Accomp. on, 00: off	○	○
			03 00: Single Finger, 01: Fingered1, 02: Fingered2	○	○
			04 01: Intro on, 00: off	○	○
			05 01: Fill 1 on, 00: off	○	○
			06 01: Fill 2 on, 00: off	○	○
			07 01: Ending on, 00: off	○	○
			08 00: Variation A, 01: Variation B	○	○
	cc=02	Track Switch	dl=track # (MIDI Ch#)	○	○
			dh=on/off of the track 01: on, 00: off	○	○

The following is the exclusive data used for song data files. This data cannot be transmitted or received by MIDI.

Classification	Data	Name	Remarks	Trans.	Recp.
Condition setup (panel initialization setting)	F0 43 00 7C 2E 00 50 4B 20 20 53 51 31 36 20 20 00 00 <DATA> F7	<DATA> = panel initialization setting bulk data	Automatically created at the end of song data (just prior to the End of Track).	×	×
Configuration data	F0 43 76 0F <DATA> F7	<DATA> Custom Configuration data	Automatically created at the end of song data (just prior to the End of Track).	×	×
Chord memory status	F0 43 76 10 <DATA> F7	<DATA>= PSR-SQ16 internal chord	PSR-SQ16's exclusive internal chord, enabling proper playback of the chord memory (created automatically).	×	×
Custom accompaniment relation	F0 43 76 0C <DATA> F7	PSR-SQ16's exclusive chord, used in the Custom Accompaniment file		×	×

■MIDI IMPLEMENTATION CHART

[Portable Keyboard] Date: 1992. 4.4

Model: PSR-SQ16 MIDI Implementation Chart (Body, Tone Generator section) Version: 1.00

Function		Transmitted (*1)	Recognized (Tone Generator section)	Remarks
Basic	Default	1~16 Channel (*2)	1~16 Channel (*2)	
Channel	Changed	1~16 Channel (*2)	1~16 Channel (*2)	
Mode	Default	(*3)	(*4)	
	Messages	X	X	
	Altered	**********	X	
Note		0~127	0~127	
Number :	True voice	**********	0~127	
Velocity	Note on	O 9nH, v=1~127	O 9nH, v=1~127	
	Note off	X 9nH, v=0	X 9nH, v=0 or 8nH	
After	Key's	X	X	
Touch	Ch's	X	O (*5)	
Pitch Bender		O (*6)	O (*7)	
	0, 32	O (*8)	O (*9)	Bank Select
	1	O	O	Vibrato
Control	7	O	O	Volume
Change	10	O	O	Pan
	11	O	O	Expression
	64	O	O	Sustain
	91	O	O	Reverb Depth
	100, 101	O	O	Registered Parameter Number (*10)
	121	X	O	Reset All Controller
Program		O 0~127	O 0~127 (*11)	
Change :	True #	**********	0~127	
System Exclusive		O	O	(*12)
System :	Song Position	X	X	
:	Song Select	X	X	
Common :	Tune	X	X	
System :	Clock	O (*13)	X	
Real Time :	Commands	O (*13)	X	Start/Stop (*14)
Aux :	Local ON/OFF	X	X	
	All Note OFF	X	O	
Messages :	Active Sense	O	O	
	Reset	X	X	

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO O : Yes

Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO X : No

*1. Transmission of panel functions except for the Sequencer, Foot Controller, Foot Switch, Wheel, keyboard performance, and Auto Accompaniment.
*2. ON/OFF can be specified for each Channel. This information is stored in memory, but will be erased if the power supply cord is unplugged. Also, this information is saved to disk with Song data.
*3. Transmission to one or more channels is possible. Therefore, mode concept is not applied.
*4. Mode concept is not applied due to multi-timbre and dynamic voice allocation reception.
*5. After Touch is used as vibrato.
*6. Different value ranges are transmitted, depending upon the panel's Pitch Bend Range.
Example)
When the Pitch Bend Range is 12: 00H, 00H ~ 7FH, 7FH
When the Pitch Bend Range is 1: 76H, 3AH ~ 0AH, 45H
*7. Reception is enabled by applying the Pitch Bend Sensitivity set on the panel.
Example)
When Pitch Bend Sensitivity is 12: -12 ~ 12 (semitone units)
When Pitch Bend Sensitivity is 1: -1 ~ 1 (semitone units)
*8. Only LSB is effective. (0, 1, and 2).
*9. Only LSB is effective. With 2 or more, sound is not generated.
*10. The following correspond in this way:
Pitch Bend Sensitivity : BnH, 64H, 00H, 65H, 00H
Master tune (fine): BnH, 64H, 01H, 65H, 00H
Master tune (coarse): BnH, 64H, 02H, 65H, 00H
*11. For default configuration, Bank 1 generates 0~103, and Bank 2 generates 0~95.
*12. Refer to MIDI data format.
*13. ON/OFF can be specified.
*14. This START/STOP corresponds to the panel START/STOP switches.

※1： シーケンサー部を除くパネル、フットコントローラー、フットスイッチ、ホイールおよび、鍵盤演奏、自動伴奏部の送信。

※2： チャンネル毎にオン・オフ指定が可能です。電源コードを抜かない限り記憶されます。また、ソングデータと一緒にディスクにセーブされます。

※3： 1つまたは複数のチャンネルに選択的に送信可能なため、モードの概念は当てはまりません。

※4： マルチティンバー、ダイナミックボイスアロケーション受信のため、モードの概念は当てはまりません。

※5： アフタータッチはビブラートとして扱います。

※6： パネル上のピッチベンドレンジによって、異なった範囲の値を送信します。
例）ピッチベンドレンジ12の場合：00H, 00H～7FH, 7FH
ピッチベンドレンジ1の場合： 76H, 3AH～0AH, 45H

※7： パネル上で設定したピッチベンドセンヒティビティーを適用して受信します。
例）ピッチベンドセンヒティビティー12の場合：-12～12 (半音単位)
ピッチベンドセンヒティビティー1の場合： -1～1 (半音単位)

※8： LSBのみ有効。(0, 1, 2のみ。)

※9： LSBのみ有効。2以上では発音しません。

※10： ピッチベンドセンシティビティー： BnH, 64H, 00H, 65H, 00H
マスターチューン (ファイン)： BnH, 64H, 01H, 65H, 00H
マスターチューン (コース)： BnH, 64H, 02H, 65H, 00H

※11： デフォルトコンフィギュレーションの場合は、バンク1では0～103、バンク2では0～95のみ発音します。

※12： MIDIデータフォーマット参照。

※13： オン／オフ指定が可能です。

※14： ここでのスタート／ストップはパネルのSTART/STOPスイッチに対応します。

[Portable Keyboard]
Model: PSR-SQ16

MIDI Implementation Chart (REMOTE KEYBOARD Terminal)

Date: 1992. 4.4
Version: 1.00

Function		Transmitted	Recognized (REMOTE KEYBOARD Terminal)	Remarks
Basic Channel	Default	**********	1~16 Channel (*1) (*2)	
	Changed	**********	1~16 Channel (*1) (*2)	
Mode	Default	**********	(*3)	
	Messages	**********	X	
	Altered	**********	X	
Note Number :	True voice	**********	0~127	
		**********	0~127	
Velocity	Note on	**********	O 9nH, v=1~127	
	Note off	**********	X 9nH, v=0 or 8nH	
After Touch	Key's	**********	X	
	Ch's	**********	O (*4)	
Pitch Bender		**********	O (*5)	
Control Change	0, 32	**********	O (*6)	Bank Select
	1	**********	O	Vibrato
	7	**********	O	Volume
	10	**********	O	Pan
	11	**********	O	Expression
	64	**********	O	Sustain
	91	**********	O	Reverb Depth
	100, 101	**********	O	Registered Parameter Number (*7)
Program Change :	True #	**********	O 0~127	
		**********	0~127	
System Exclusive		**********	O	(*8)
System : Common :	Song Position	**********	X	
	Song Select	**********	X	
	Tune	**********	X	
System Real Time :	Clock	**********	O (*9)	
	Commands	**********	O (*9)	Start/Stop (*10)
Aux : Messages :	Local ON/OFF	**********	X	
	All Note OFF	**********	O	
	Active Sense	**********	O	
	Reset	**********	X	

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
O : Yes
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO
X : No

*1. ON/OFF can be specified for each channel. This information is stored in memory, but will be erased if the power supply cord is unplugged. Also, this information is saved to disk with Song data.

*2. MIDI channel received from a REMOTE KEYBOARD is converted to the KEYBOARD CHANNEL specified by the PSR-SQ16. Sound is then generated.

*3. Reception from one or more Channels is possible. Therefore, mode concept is not applied.

*4. After Touch is used as vibrato.

*5. Pitch Bend data received from a REMOTE KEYBOARD performs the same operation as the Pitch Bend wheel operating fully within its maximum +/- range (within the range of 00H, 00H ~ 7FH, 7FH).

*6. Only LSB is effective. (only 0, 1, and 2)

*7. The following correspond in this way:
Pitch Bend Sensitivity : BnH, 64H, 00H, 65H, 00H
Master tuning (fine): BnH, 64H, 01H, 65H, 00H
Master tuning (coarse): BnH, 64H, 02H, 65H, 00H

*8. Refer to MIDI data format.

*9. ON/OFF can be specified.

*10. This START/STOP corresponds to the panel START/STOP switches.

※1： チャンネル毎にオン・オフ指定が可能です。電源コードを抜かない限り記憶されます。また、ソングデータと一緒にディスクにセーブされます。

※2： REMOTE KEYBOARDから受信したMIDIデータのチャンネルは、PSR-SQ16本体で指定したKEYBOARD CHANNELに変換して発音します。

※3： 1つまたは複数のチャンネルに選択的に受信可能なため、モードの概念は当てはまりません。

※4： アフタータッチはビブラートとして扱います。

※5： REMOTE KEYBOARDから受信したピッチベンドデータは、00H, 00H～7FH, 7FHの範囲で本体上のピッチベンドホイールが+/-可動範囲いっぱいまで動作したときと同じ働きをします。

※6： LSBのみ有効。(0, 1, 2のみ。)

※7： ピッチベンドセンシティビティー： BnH, 64H, 00H, 65H, 00H
マスターチューン (ファイン)： BnH, 64H, 01H, 65H, 00H
マスターチューン (コース)： BnH, 64H, 02H, 65H, 00H
に対応します。

※8： MIDIデータフォーマット参照。

※9： オン／オフ指定が可能です。

※10： ここでのスタート／ストップはパネルのSTART/STOPスイッチに対応します。

[Portable Keyboard]
Model: PSR-SQ16

MIDI Implementation Chart (Sequencer section)

Date: 1992. 4.4
Version: 1.00

Function		Transmitted	Recognized (MIDI IN Terminal)	Remarks
Basic Channel	Default	1~16 Channel (*1)	1~16 Channel (*1)	
	Changed	1~16 Channel (*1)	1~16 Channel (*1)	
Mode	Default	(*2)	(*2)	
	Messages	X	X	
	Altered	**********	X	
Note Number :	True voice	0~127 **********	0~127 **********	
Velocity	Note on	O 9nH, v=1~127	O 9nH, v=1~127	
	Note off	X 9nH, v=0	X 9nH, v=0 or 8nH	
After Touch	Key's	X	X	
	Ch's	O	O	
Pitch Bender		O	O	
Control Change	0~120	O	O	
	121	O	O	Reset All Controller
Program Change :	True #	O 0~127 **********	O 0~127 0~127	
System Exclusive		O	O	(*3)
System : Common :	Song Position	O (*4)	O (*4) (*5)	
	Song Select	O (*4)	O (*4) (*6)	
	Tune	X	X	
System Real Time :	Clock	O (*4)	O (*4)	
	Commands	O (*4)	O (*4)	
Aux :	Local ON/OFF	X	X	
	All Note OFF	O	O	
Messages :	Active Sense	X	X	
	Reset	X	X	

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

*1. ON/OFF can be specified for each Channel. This information is saved in memory, but will be erased if the power supply cord is unplugged. Also, this information is saved to disk with Song data.

*2. Mode concept is not applied, due to multi-timbre transmission and reception.

*3. Refer to MIDI data format.

*4. ON/OFF can be specified.

*5. Moves to the beginning of the closest measure, in accordance with the received song's position.

*6. Songs 9 ~ 16 correspond to Custom styles 269 ~ 276.

※1： チャンネル毎にオン・オフ指定が可能です。電源コードを抜かない限り記憶されます。また、ソングデータと一緒にディスクにセーブされます。

※2： マルチティンバー送受信のため、モードの概念は当てはまりません。

※3： MIDIデータフォーマット参照。

※4： オン／オフ指定が可能です。

※5： 受信したソングポジションにより、もよりの小節の最初の位置に移動します。

※6： ソングセレクト9～16はカスタムスタイル269～276に対応します。