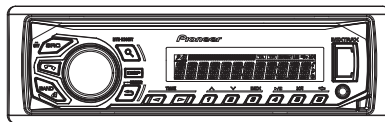


Pioneer

Service Manual



MVH-X360BT/XINEW5

ORDER NO.
CRT5389

RDS MEDIA CENTER RECEIVER

MVH-X360BT /XINEW5

MVH-X360BT /XINUC

MVH-X365BT /XINCS

MVH-X365BT /XINGS



SAFETY INFORMATION

A CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm.

B Health & Safety Code Section 25249.6 - Proposition 65

Where in a manufacturer's service documentation, for example in circuit diagrams or lists of components, a symbol is used to indicate that a specific component shall be replaced only by the component specified in that documentation for safety reasons, the following symbol shall be used:



C

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replaced only with the same or equivalent type recommended by the manufacturer.
Discard used batteries according to the manufacturer's instructions.

D

E

F

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1. SERVICE PRECAUTIONS

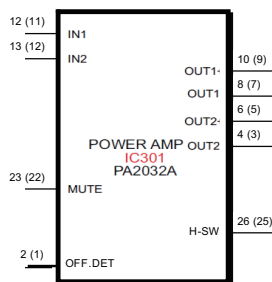
1.1 SERVICE PRECAUTIONS



1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.
4. Notes about installation and pin number description of Power IC (IC301: PA2032A)
The Power IC, PA2032A used on the Tuner Amp Unit is a 25 pin IC.
The same PCB of the Tuner Amp Unit is used for other models that use a 27 pin IC, too.
So, the PCB has lands for a 27 pin IC.
When you replace the Power IC, install the Power IC onto 25 pins (2- 26 pin) located in the center of 27 pins for IC301.

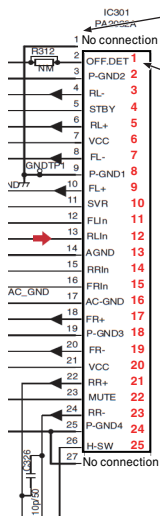
Therefore, when you check the Power IC on the block diagram, the schematic diagram and the PCB connection diagram, you have to pay attention as follows.

BLOCK DIAGRAM



The pin number is a number on the PCB (silk printing).
The number in parentheses means the pin number of IC itself.

SCHEMATIC DIAGRAM



The pin number of left side is a number on the PCB (silk printing).

The pin number of right side (in the IC frame) means the pin number of IC itself.

1.2 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.

- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40°C.
Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373°C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
GYP1006 1.0 in dia.
GYP1007 0.6 in dia.
GYP1008 0.3 in dia.

2. SPECIFICATIONS

2.1 SPECIFICATIONS

• MVH-X360BT/XINEW5

General

Power source	14.4 V DC (10.8 V to 15.1 V allowable)
Grounding system	Negative type
Maximum current consumption	10.0 A
Backup current.....	4.0 mA or less
Dimensions (W × H × D):	
DIN	
Chassis	178 mm × 50 mm × 165 mm
Nose	188 mm × 58 mm × 15 mm
D	
Chassis	178 mm × 50 mm × 165 mm
Nose	170 mm × 46 mm × 16 mm
Weight	0.7 kg

Audio

Maximum power output ...	50 W × 4
	70 W × 1/2 Ω (for subwoofer)
Continuous power output	22 W × 4 (50 Hz to 15 000 Hz, 5 % THD, 4 Ω load, both channels driven)
Load impedance	4 Ω (4 Ω to 8 Ω allowable)
Preout maximum output level	2.0 V
Loudness contour	+10 dB (100 Hz), +6.5 dB (10 kHz) (volume: -30 dB)
Equalizer (5-Band Graphic Equalizer):	
Frequency	80 Hz/250 Hz/800 Hz/2.5 kHz/8 kHz
Equalization range	±12 dB (2 dB step)
Subwoofer (mono):	
Frequency	50 Hz/63 Hz/80 Hz/100 Hz/125 Hz/160 Hz/200 Hz
Slope	-12 dB/oct, -24 dB/oct
Gain	+6 dB to -24 dB
Phase	Normal/Reverse

USB

USB standard specification	USB 2.0 full speed
Maximum current supply	1 A
USB Class	MSC (Mass Storage Class)
File system.....	FAT12, FAT16, FAT32
MP3 decoding format	MPEG-1 & 2 Audio Layer 3

WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch audio) (Windows Media Player)
WAV signal format	Linear PCM & MS ADPCM (Non-compressed)

FM tuner

Frequency range	87.5 MHz to 108.0 MHz
Usable sensitivity	9 dBf (0.8 μV/75 Ω, mono, S/N: 30 dB)
Signal-to-noise ratio	72 dB (IEC-A network)

MW tuner

Frequency range	531 kHz to 1 602 kHz
Usable sensitivity	25 μV (S/N: 20 dB)
Signal-to-noise ratio	62 dB (IEC-A network)

LW tuner

Frequency range	153 kHz to 281 kHz
Usable sensitivity	28 μV (S/N: 20 dB)
Signal-to-noise ratio	62 dB (IEC-A network)

Bluetooth

Version	Bluetooth 3.0 certified
Output power	+4 dBm Maximum (Power class 2)

Note

Specifications and the design are subject to modifications without notice.

• MVH-X360BT/XINUC

General

Power source	14.4 V DC (10.8 V to 15.1 V allowable)
Grounding system	Negative type
Maximum current consumption	10.0 A
Backup current	4.0 mA or less
Dimensions (W × H × D):	
DIN	
Chassis	178 mm × 50 mm × 165 mm (7 in. × 2 in. × 6-1/2 in.)
Nose	188 mm × 58 mm × 16 mm (7-3/8 in. × 2-1/4 in. × 5/8 in.)
D	
Chassis	178 mm × 50 mm × 165 mm (7 in. × 2 in. × 6-1/2 in.)
Nose	170 mm × 46 mm × 16 mm (6-3/4 in. × 1-3/4 in. × 5/8 in.)
Weight	0.7 kg (1.5 lbs)

Audio

Maximum power output ...	50 W × 4 70 W × 1/2 Ω (for subwoofer)
Continuous power output	22 W × 4 (50 Hz to 15 000 Hz, 5 % THD, 4 Ω load, both channels driven)
Load impedance	4 Ω (4 Ω to 8 Ω allowable)
Preout maximum output level	2.0 V
Loudness contour	+10 dB (100 Hz), +6.5 dB (10 kHz) (volume: -30 dB)
Equalizer (5-Band Graphic Equalizer):	
Frequency	80 Hz/250 Hz/800 Hz/2.5 kHz/ 8 kHz
Equalization range	±12 dB (2 dB step)
Subwoofer (mono):	
Frequency	50 Hz/63 Hz/80 Hz/100 Hz/ 125 Hz/160 Hz/200 Hz
Slope	-12 dB/oct, -24 dB/oct
Gain	+6 dB to -24 dB
Phase	Normal/Reverse

USB

USB standard specification	USB 2.0 full speed
----------------------------------	--------------------

Maximum current supply

.....	1 A
USB Class	MSC (Mass Storage Class)
File system	FAT12, FAT16, FAT32
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch audio) (Windows Media Player)
WAV signal format	Linear PCM & MS ADPCM (Non-compressed)

FM tuner

Frequency range	87.9 MHz to 107.9 MHz
Usable sensitivity	9 dBf (0.8 μ V/75 Ω , mono, S/N: 30 dB)
Signal-to-noise ratio	72 dB (IHF-A network)

AM tuner

Frequency range	530 kHz to 1 710 kHz
Usable sensitivity	25 μ V (S/N: 20 dB)
Signal-to-noise ratio	62 dB (IHF-A network)

Bluetooth

Version	Bluetooth 3.0 certified
Output power	+4 dBm Maximum (Power class 2)

CEA2006 Specifications



Power output	14 W RMS × 4 Channels (4 Ω and $\leq$ 1 % THD+N)
S/N ratio	91 dBA (reference: 1 W into 4 Ω)

Note

Specifications and the design are subject to modifications without notice.

• MVH-X365BT/XINCS

General

Rated power source	14.4 V DC
	(allowable voltage range: 12.0 V to 14.4 V DC)
Grounding system	Negative type
Maximum current consumption	10.0 A
Backup current.....	4.0 mA or less
Dimensions (W × H × D):	
DIN	
Chassis	178 mm × 50 mm × 165 mm
Nose	188 mm × 58 mm × 15 mm
D	
Chassis	178 mm × 50 mm × 165 mm
Nose	170 mm × 46 mm × 16 mm
Weight	0.7 kg

Audio

Maximum power output ...	50 W × 4
	70 W × 1/2 Ω (for subwoofer)
Continuous power output	22 W × 4 (50 Hz to 15 000 Hz, 5 % THD, 4 Ω load, both chan- nels driven)
Load impedance	4 Ω(4 Ω to 8 Ω allowable)
Preout maximum output level	2.0 V
Loudness contour	+10 dB(100 Hz), +6.5 dB (10 kHz) (volume:−30 dB)
Equalizer (5-Band Graphic Equalizer):	
Frequency	80 Hz/250 Hz/800 Hz/2.5 kHz/ 8 kHz
Equalization range	±12 dB (2 dBstep)
Subwoofer (mono):	
Frequency	50 Hz/63 Hz/80 Hz/100 Hz/ 125 Hz/160 Hz/200 Hz
Slope	−12 dB/oct, −24 dB/oct
Gain	+6 dB to −24 dB
Phase	Normal/Reverse

USB

USB standard specification	USB 2.0 full speed
Maximum current supply	1 A
USB Class	MSC(Mass Storage Class)
File system.....	FAT12, FAT16, FAT32

MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch audio) (Windows Media Player)
WAV signal format	Linear PCM & MS ADPCM (Non-compressed)

FM tuner

Frequency range	87.5 MHz to 108.0 MHz
Usable sensitivity	9 dBf(0.8 μV/75 Ω, mono, S/N: 30 dB)
Signal-to-noise ratio	72 dB (IEC-A network)

AM tuner

Frequency range	531 kHz to 1 602 kHz (9 kHz) 530 kHz to 1 640 kHz (10 kHz)
Usable sensitivity	25 μV (S/N: 20 dB)
Signal-to-noise ratio	62 dB (IEC-A network)

Bluetooth

Version	Bluetooth 3.0 certified
Output power	+4 dBm Maximum (Power class 2)

Note

Specifications and the design are subject to modifications without notice.

• MVH-X365BT/XINGS

General

Rated power source	14.4 V DC (allowable voltage range: 12.0 V to 14.4 V DC)
Grounding system	Negative type
Maximum current consumption	10.0 A
Backup current	4.0 mA or less
Dimensions (W × H × D):	
DIN	
Chassis	178 mm × 50 mm × 165 mm
Nose	188 mm × 58 mm × 15 mm
D	
Chassis	178 mm × 50 mm × 165 mm
Nose	170 mm × 46 mm × 16 mm
Weight	0.7 kg

Audio

Maximum power output	50 W × 4 70 W × 1/2 Ω (for subwoofer)
Continuous power output	22 W × 4 (50 Hz to 15 000 Hz, 5 % THD, 4 Ω load, both chan- nels driven)
Load impedance	4 Ω (4 Ω to 8 Ω allowable)
Preout maximum output level	2.0 V
Loudness contour	+10 dB (100 Hz), +6.5 dB (10 kHz) (volume: -30 dB)
Equalizer (5-Band Graphic Equalizer):	
Frequency	80 Hz/250 Hz/800 Hz/2.5 kHz/ 8 kHz
Equalization range	±12 dB (2 dB step)
Subwoofer (mono):	
Frequency	50 Hz/63 Hz/80 Hz/100 Hz/ 125 Hz/160 Hz/200 Hz
Slope	-12 dB/oct, -24 dB/oct
Gain	+6 dB to -24 dB
Phase	Normal/Reverse

USB

USB standard specification	USB 2.0 full speed
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File system	FAT12, FAT16, FAT32

MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch audio) (Windows Media Player)
WAV signal format	Linear PCM & MS ADPCM (Non-compressed)

FM tuner

Frequency range	87.5 MHz to 108.0 MHz
Usable sensitivity	9 dBf (0.8 μV/75 Ω, mono, S/N: 30 dB)
Signal-to-noise ratio	72 dB (IEC-A network)

MW tuner/AM tuner

Frequency range	531 kHz to 1 602 kHz (9 kHz) 530 kHz to 1 640 kHz (10 kHz)
Usable sensitivity	25 μV (S/N: 20 dB)
Signal-to-noise ratio	62 dB (IEC-A network)

SW tuner

Frequency range	2 300 kHz to 7 735 kHz (2 300 kHz to 2 495 kHz, 2 940 kHz to 4 215 kHz, 4 540 kHz to 5 175 kHz, 5 820 kHz to 6 455 kHz, 7 100 kHz to 7 735 kHz) 9 500 kHz to 21 975 kHz (9 500 kHz to 10 135 kHz, 11 580 kHz to 12 215 kHz, 13 570 kHz to 13 870 kHz, 15 100 kHz to 15 735 kHz, 17 500 kHz to 17 985 kHz, 18 015 kHz to 18 135 kHz, 21 340 kHz to 21 975 kHz)
Usable sensitivity	28 μV (S/N: 20 dB)
Signal-to-noise ratio	62 dB (IEC-A network)

Bluetooth

Version	Bluetooth 3.0 certified
Output power	+4 dBm Maximum (Power class 2)

Note

Specifications and the design are subject to modifications without notice.

2.2 DISC/CONTENT FORMAT

Made for



iPod



iPhone



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3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

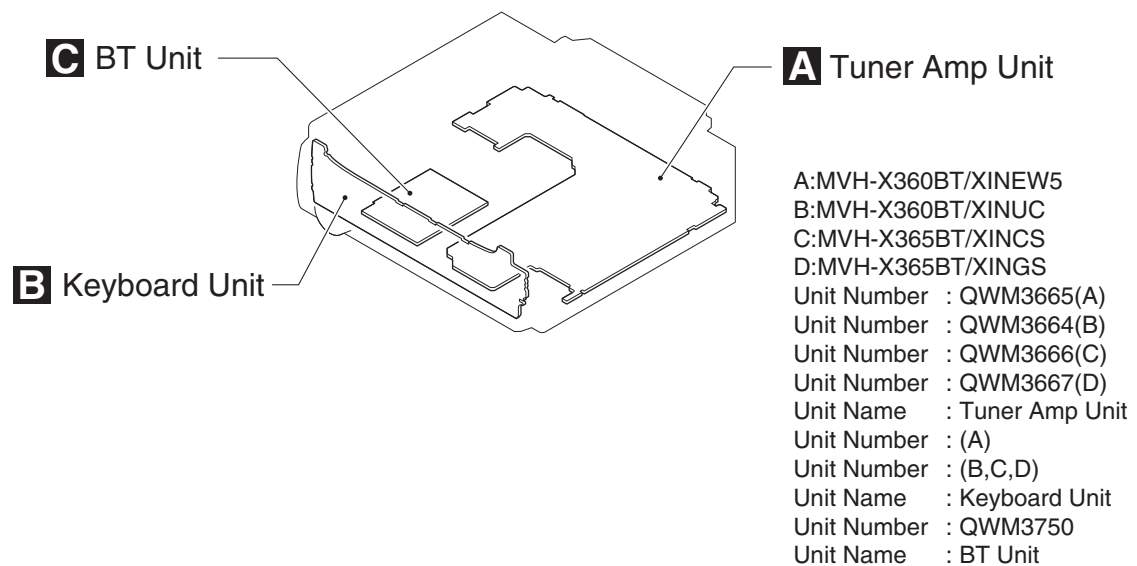
To keep the product quality after servicing, please confirm following check points.

No.		Procedures	Item to be confirmed
1		Confirm whether the customer complain has been solved. If the customer complain occurs with the specific media, use it for the operation check.	The customer complain must not be reappeared. Display, audio and operations must be normal.
2	FM/AM tuner	Check FM/AM tuner action. (Seek, Preset) Switch band to check both FM and AM.	Display, audio and operations must be normal.
3		Appearance check	No scratches or dirt on its appearance after receiving it for service.

See the table below for the items to be checked regarding audio:

Item to be checked regarding audio
Distortion
Noise
Volume too low
Volume too high
Volume fluctuating
Sound interrupted

3.2 PCB LOCATIONS



4. BLOCK DIAGRAM

A

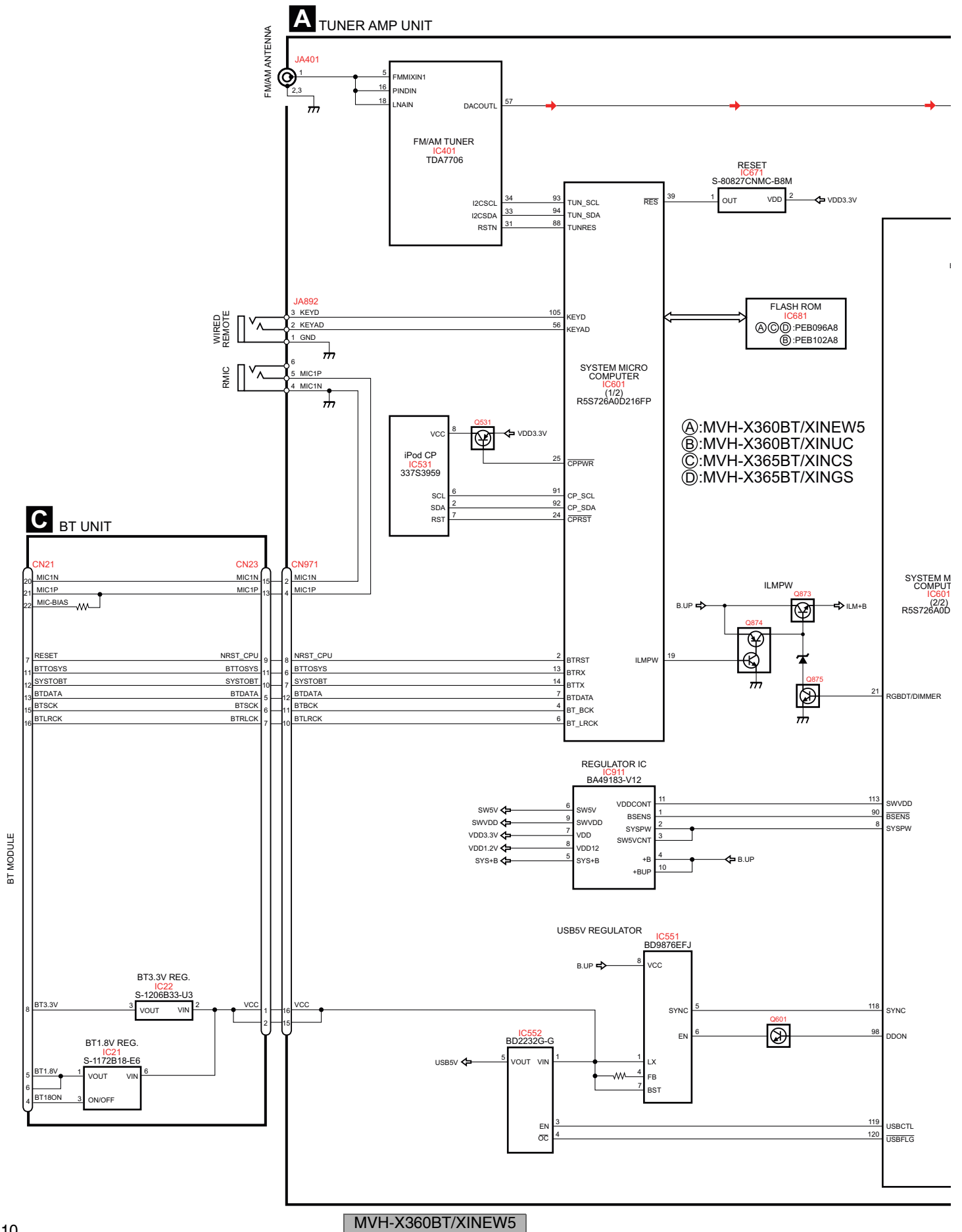
B

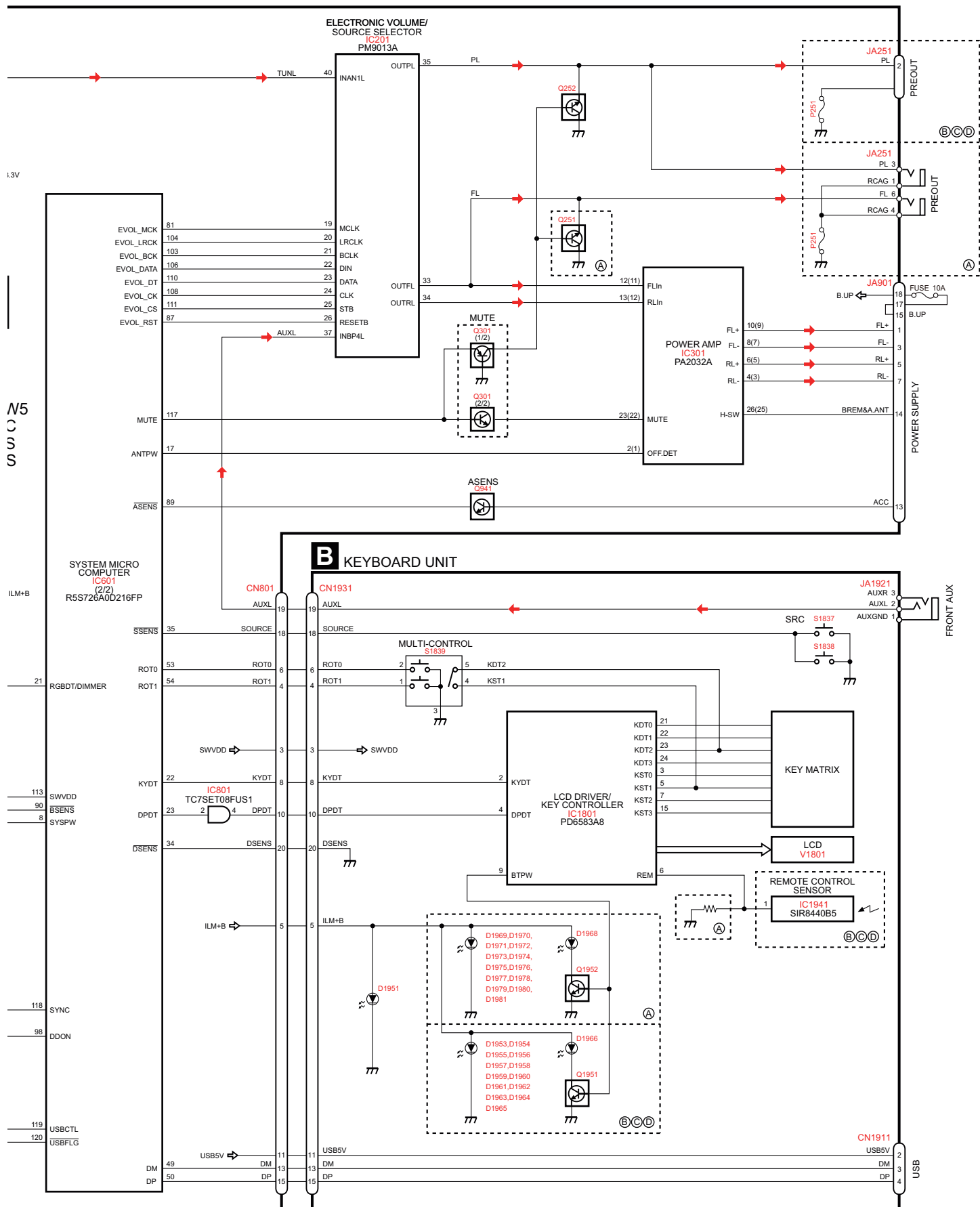
C

D

E

F





5. DIAGNOSIS

5.1 OPERATIONAL FLOWCHART

A

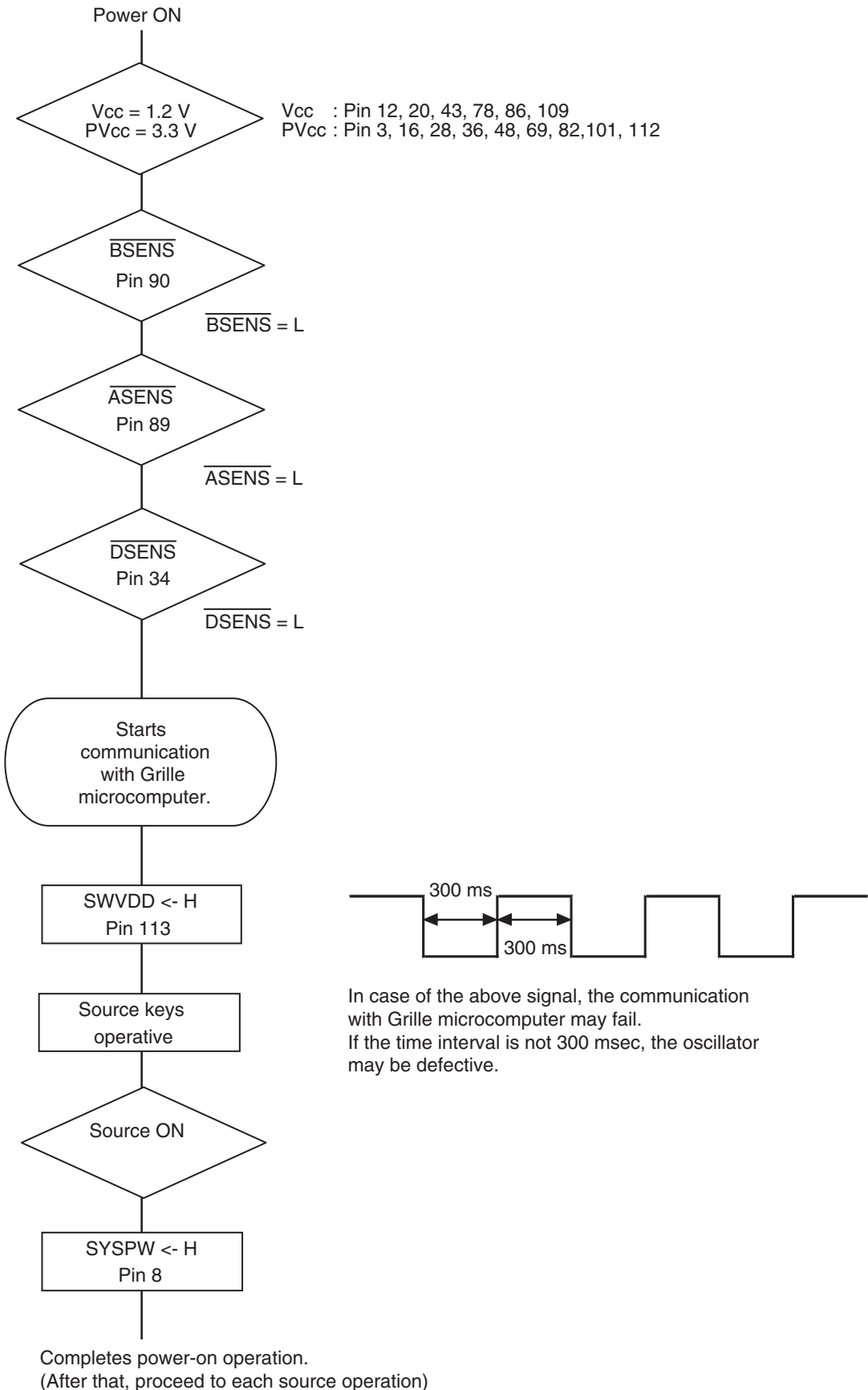
B

C

D

E

F



Common

AMP ERROR

This unit fails to operate or the speaker connection is incorrect; the protective circuit is activated.
Check the speaker connection. If the message fails to disappear even after the engine is switched off/on, contact your dealer or an authorized Pioneer Service Station for assistance.

USB storage device/iPod

FORMAT READ

Sometimes there is a delay between the start of playback and when you start to hear any sound.
Wait until the message disappears and you hear sound.

NO AUDIO

There are no songs.
Transfer the audio files to the USB storage device and connect.
The connected USB storage device has security enabled.
Follow the USB storage device instructions to disable the security.

SKIPPED

The connected USB storage device contains DRM protected files.
The protected files are skipped.

PROTECT

All the files on the connected USB storage device are embedded with DRM.
Replace the USB storage device.

N/A USB

The connected USB device is not supported by this unit.
! Connect a USB Mass Storage Class compliant device.
! Disconnect your device and replace it with a compatible USB storage device.

CHECK USB

The USB connector or USB cable has short-circuited.
Check that the USB connector or USB cable is not caught in something or damaged.

CHECK USB

The connected USB storage device consumes more than maximum allowable current.
Disconnect the USB storage device and do not use it. Turn the ignition switch to OFF; then to ACC or ON and then connect only compliant USB storage devices.

CHECK USB

The iPod operates correctly but does not charge.
Make sure the connection cable for the iPod has not shorted out (e.g., not caught in metal objects). After checking, turn the ignition switch OFF and back ON, or disconnect the iPod and reconnect.

ERROR-19

Communication failed.
Perform one of the following operations.
-Turn the ignition switch OFF and back ON.
-Disconnect the USB storage device.
-Change to a different source.
Then, return to the USB source.
iPod failure.
Disconnect the cable from the iPod. Once the iPod's main menu is displayed, reconnect the iPod and reset it.

ERROR-23

USB storage device was not formatted with FAT12, FAT16 or FAT32.
USB storage device should be formatted with FAT12, FAT16 or FAT32.

ERROR-16

The iPod firmware version is old.
Update the iPod version.
iPod failure.
Disconnect the cable from the iPod. Once the iPod's main menu is displayed, reconnect the iPod and reset it.

STOP

There are no songs in the current list.
Select a list that contains songs.

NOT FOUND

No related songs.
Transfer songs to the iPod.

Bluetooth device

ERROR-10

The power failed for the Bluetooth module of this unit.
Turn the ignition switch OFF and then to ACC or ON.
If the error message is still displayed after performing the above action, please contact your dealer or an authorized Pioneer Service Station.

Application

NO BT DEVICE GO TO BT MENU TO REGISTER

No Bluetooth device found.
Follow the instructions that appear on the screen.

CONN. FAILED PRESS BAND KEY TO RETRAY

Bluetooth connection failed.
Follow the instructions that appear on the screen.

DISCONNECTED PRESS BAND KEY TO RETRAY

Bluetooth connection failed.
Follow the instructions that appear on the screen.

CHECK APP

Connection to the application failed.
Follow the instructions that appear on the screen.

START UP APP

The application has not started running yet.
Follow the instructions that appear on the screen.

Pandora (/GS, /UC)

ERROR-19

Communication failed.
Disconnect the cable from the device. Once the device's main menu is displayed, reconnect the device and reset it.

START UP APP

The Pandora application has not started running yet.
Start up the Pandora application.

INOPERABLE

The operation was disabled.
Run the same command for another track.

TRY AGAIN

Unable to save thumb rating.
Unable to save BookMark.
Unable to add station.
Try again later.

MAINTENANCE

Pandora system is undergoing maintenance.
Try again later.

SKIP LIMIT

Skip limit reached.
! Do not exceed the skip limit.
! Due to music licensing restrictions, Pandora limits the total number of skips per hour.

CHECK APP

This version of the Pandora application is not supported.
Connect a device that has a compatible version of the Pandora application installed.

CHECK DEVICE

Device error message displayed in Pandora application.
Unable to play music from Pandora.
Please check your connected device.

NO STATION

No station found.
Create a station in the Pandora application on your connected device.

NO ACTIVE ST

No station selected.
Select a station.

NO BT DEVICE GO TO BT MENU TO REGISTER

No Bluetooth device found.
Follow the instructions that appear on the screen.

CONN. FAILED PRESS BAND KEY TO RETRAY

Bluetooth connection failed.
Follow the instructions that appear on the screen.

CHECK APP PRESS BAND KEY TO RETRAY

Connection to the Pandora application failed.
Follow the instructions that appear on the screen.

DISCONNECTED PRESS BAND KEY TO RETRAY

Bluetooth connection lost.
Follow the instructions that appear on the screen.

STATION FULL

A new station cannot be added.
Delete an old station to open a spot for a new one.

CAN.T DELETE

The station could not be deleted.
Run the same command for another station.

NO NETWORK

The connected device is out of area.
Connect the connected device to a network.

NO SERVICE

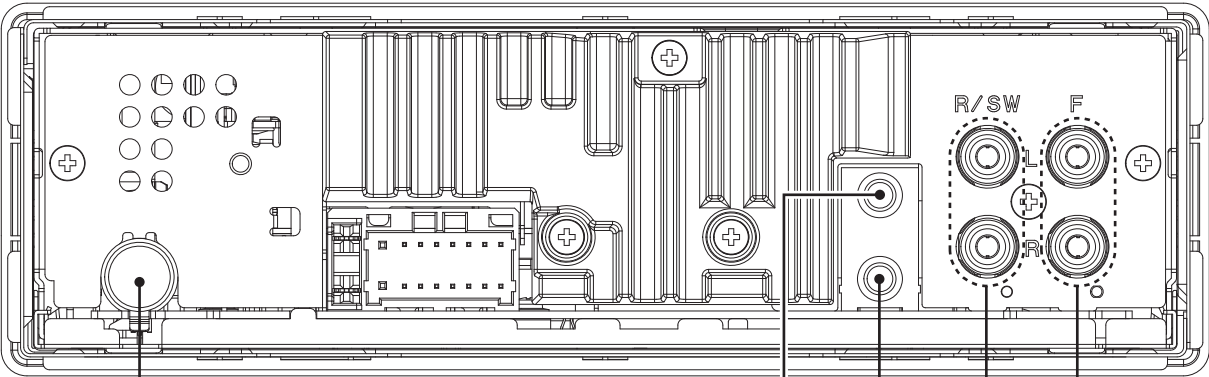
The connected device is out of area.
Connect the connected device to a network.

CAN.T PLAY

The operation was disabled.
Run the same command for another station.

1 2 3 4

5.3 CONNECTOR FUNCTION DESCRIPTION



ANTENNA INPUT

15	13	11	9	7	5	3	1
16	14	12	10	8	6	4	2

MICROPHONE INPUT

WIRED REMOTE CONTROL

FRONT OUTPUT (EW5 Only)

REAR OUTPUT or SUBWOOFER OUTPUT

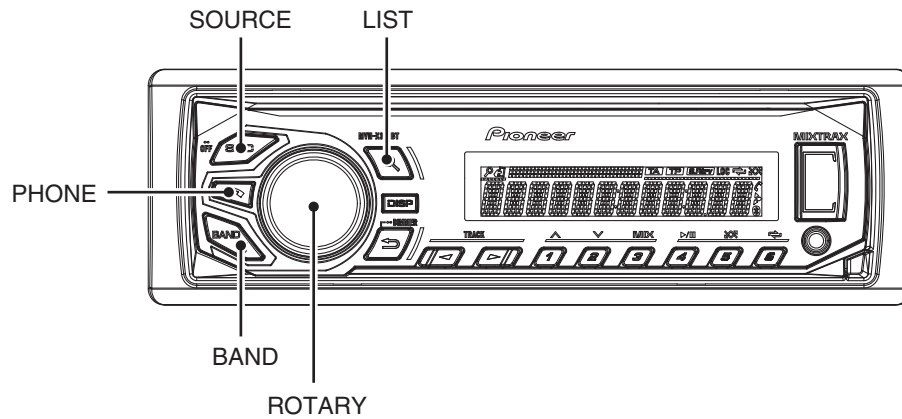
- | | |
|-------|----------|
| 1 FL+ | 9 NC |
| 2 FR+ | 10 NC |
| 3 FL- | 11 NC |
| 4 FR- | 12 NC |
| 5 RL+ | 13 ACC |
| 6 RR+ | 14 B.REM |
| 7 RL- | 15 B.UP |
| 8 RR- | 16 GND |

6. SERVICE MODE

6.1 DISPLAY TEST MODE 1

[How to enter Test mode]

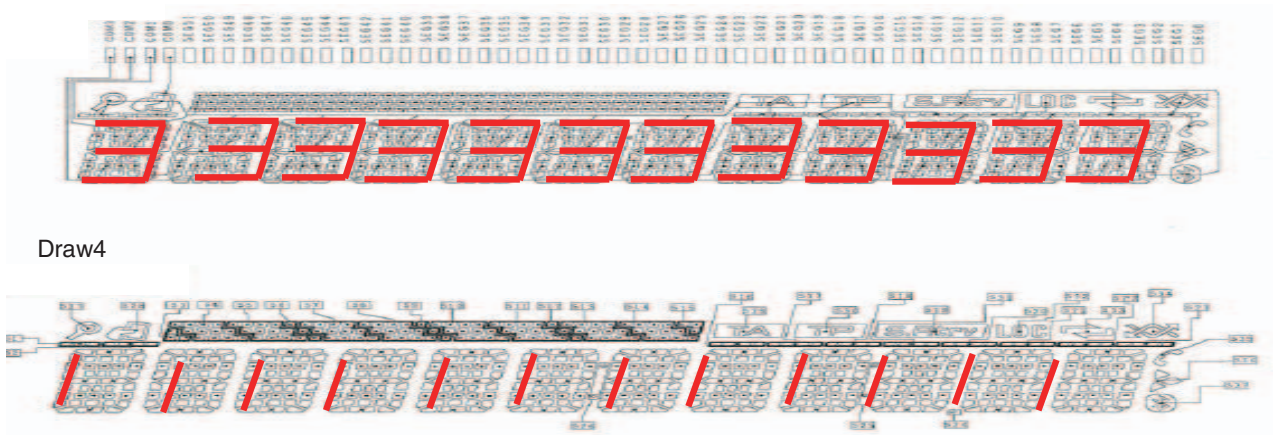
Press and hold "PHONE" and "LIST" buttons together, and turn BUP and ACC on.



		Grille condition	
Conf. item	Operate	Show LCD	ILM
All light up	PHONE + LIST	Draw 1	ILM(1)
All light off	SOURCE	No light Draw2	No light
Conf. LCD pattern 1 (* And change ILM color)	BAND	Draw 3	ILM(2) (If not have, ILM(1) light on)
Conf. LCD pattern 2	ROTARY center	Draw 4	ILM(1)

Drawings Style

Draw1 ALL light up
Draw2 ALL light off
Draw3



A The information such as the system microcomputer version is checked.

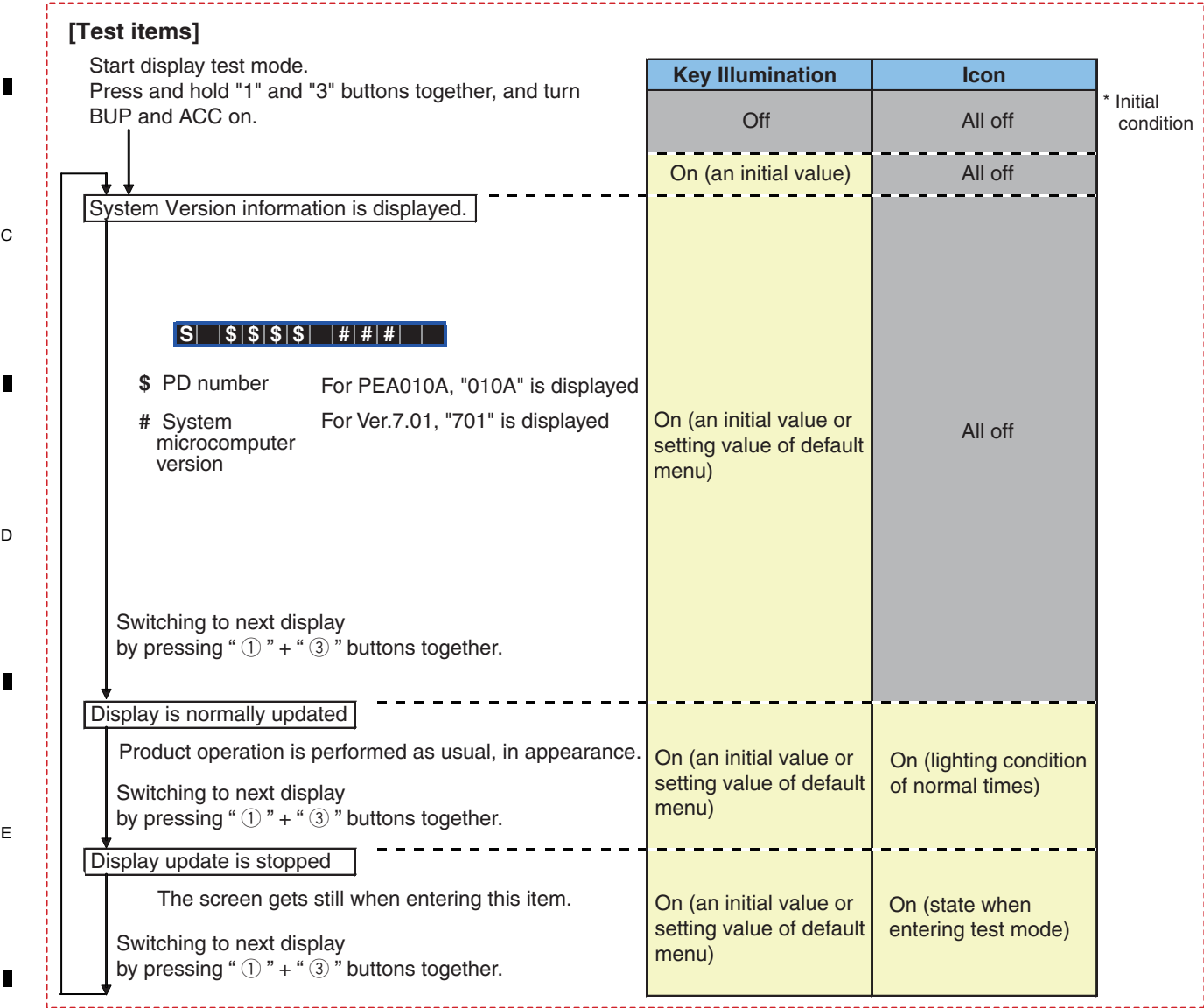
[How to enter Test mode]

Press and hold "1" and "3" buttons together, and turn BUP and ACC on.

[Operation key]

Operation key	Processing	Remarks
① + ③	Enter display test mode Switch to next test mode	

B



F

6.3 SOFTWARE VERSION UP METHOD

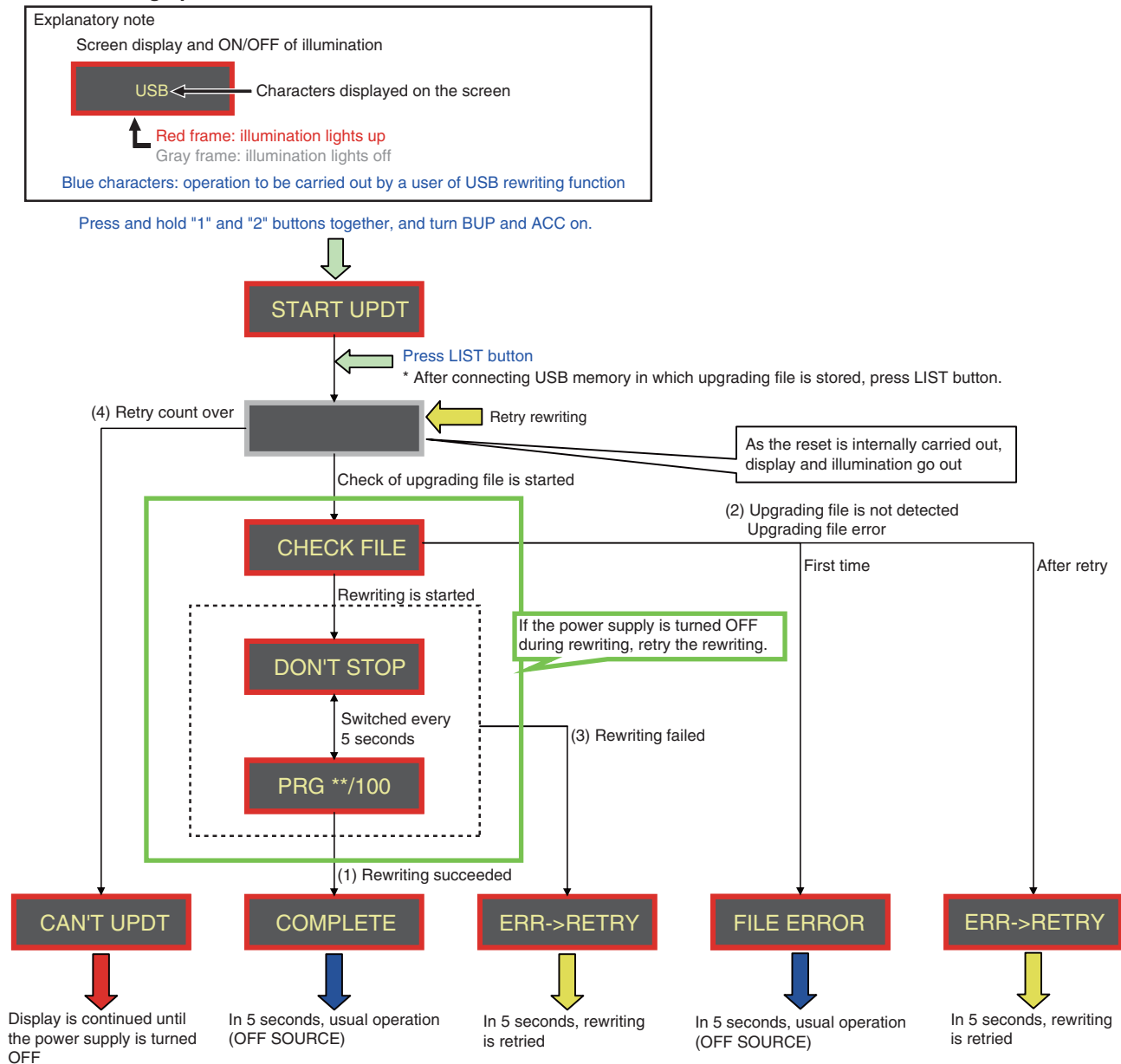
Overview

This mode is used for upgrading the MCU software of system using USB memory.

How to enter in USB rewriting mode

Press and hold "1" and "2" buttons together, and turn BUP and ACC on.

USB rewriting operation flow



Result of rewriting

(1) Rewriting succeeded	Displayed when USB rewriting is normally terminated. In 5 seconds, usual operation (OFF SOURCE) is started.
(2) Upgrading file error Upgrading file is not detected	Displayed when there is no upgrading file in USB memory or the data of upgrading file is different. In 5 seconds, usual operation (OFF SOURCE) is started. If the upgrading file error is detected or the upgrading file is not detected after the rewriting is retried, the rewriting is failed. In 5 seconds, rewriting is retried.
(3) Rewriting failed	Displayed when the writing of upgrading file in serial Flash is not normally terminated. Or, displayed if the upgrading file error is detected or the upgrading file is not detected after the rewriting is retried. In 5 seconds, rewriting is retried.
(4) Retry count over	Displayed when the retry becomes unavailable because the retry count is exceeded. The display is continued until the power supply is turned OFF. If the power supply is turned ON again, the display is not changed. The upgrading using USB is disabled, so it is necessary to write programs in serial Flash using E10A.

7. DISASSEMBLY

While the photograph shown is slightly different from this model in shape, the disassembly procedure is the same.

● Removing the Panel Assy (Fig.1)

- ➡ 1 Release the two latches.
- ➡ 2 Release the two latches and then remove the Panel Assy.

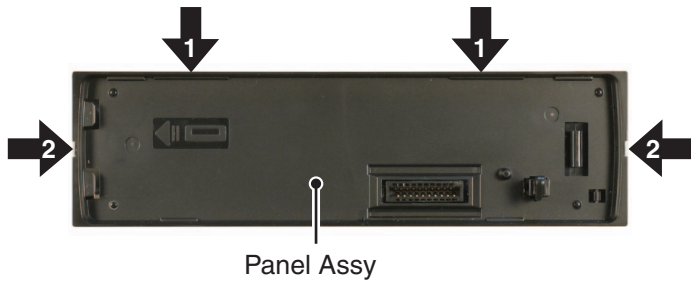
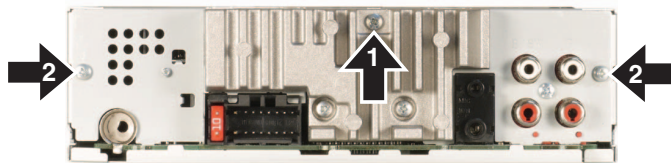


Fig.1

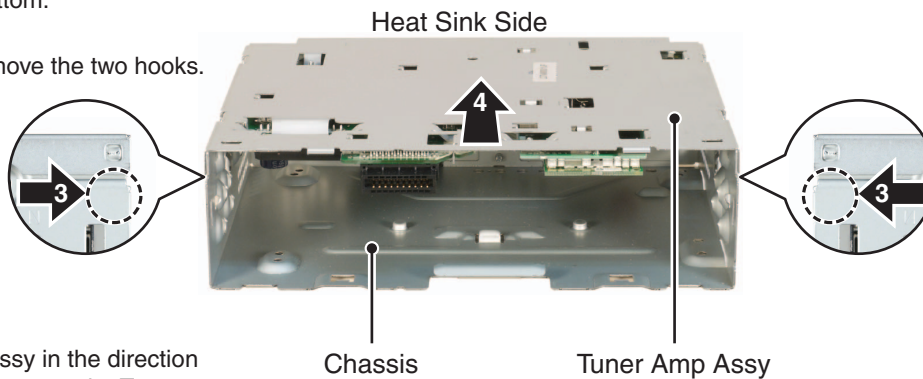
● Removing the Tuner Amp Assy (Fig.2)

- ➡ 1 Remove the screw.
- ➡ 2 Remove the two screws.



The Chassis side is made a bottom.

- ➡ 3 Push the area and remove the two hooks.



- ➡ 4 Slide the Tuner Amp Assy in the direction of the arrow and then remove the Tuner Amp Assy.

Fig.2

● Removing the Tuner Amp Unit and the BT Unit (Fig.3)

- ➡ 1 Disconnect the connector.
- ➡ 2 Remove the two screws.
- ➡ 3 Remove the two screws and then remove the Tuner Amp Unit.
- ➡ 4 Remove the screw and then remove the BT Unit.

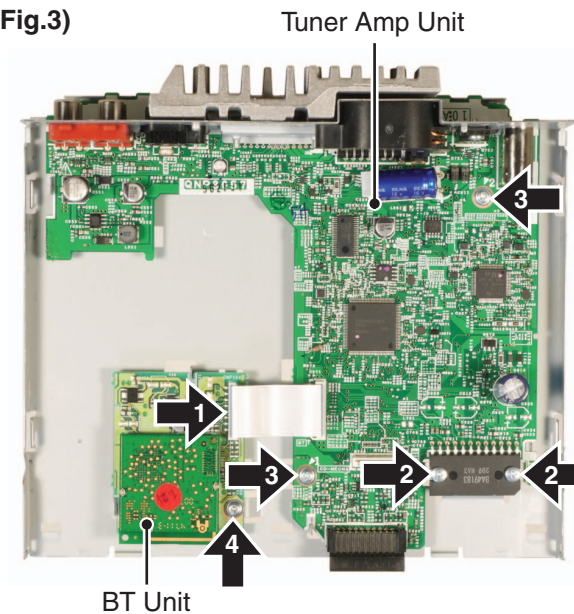


Fig.3

● Disassembling the Panel Part (Fig.4, 5)

1. Remove the arm while bending the rib of the panel upward.

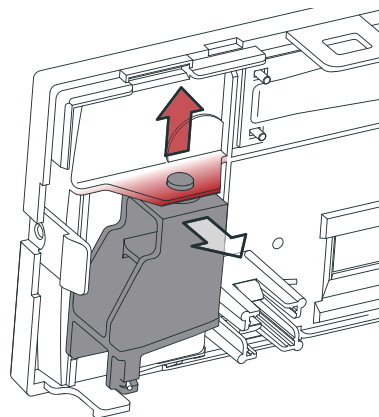


Fig.4

2. Press the upside hook and the bottom side hook of the button at the same time, and pull out the button.

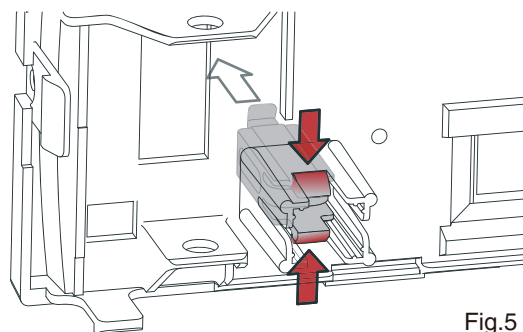


Fig.5

● Assembling the Panel Part (Fig.6, 7, 8)

1. Attach the button from the front side of the panel.

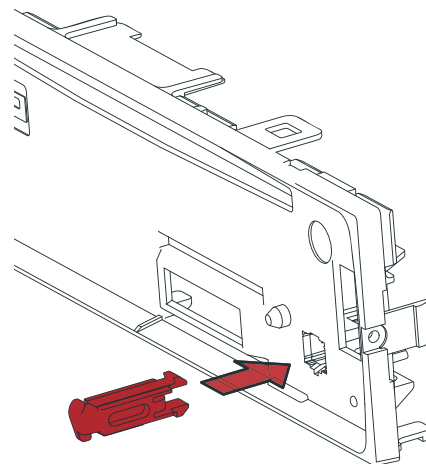


Fig.6

2. Attach the spring to the arm as shown in the figure.

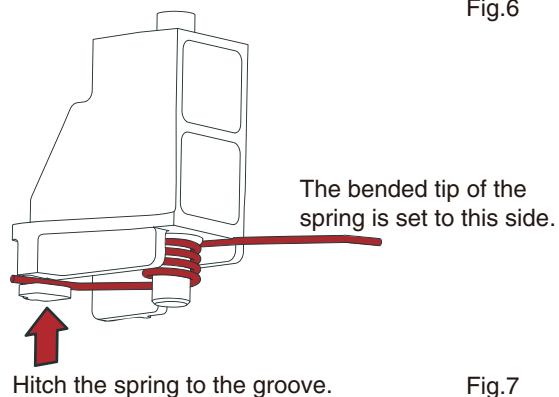


Fig.7

A

3. Fit the spring in the groove at the position shown in the figure.

4. Fit the boss on the lower side of the arm in the lower hole of the panel, and then warp the rib on the panel in the direction shown in the figure and fit the boss of the arm in the panel.

B

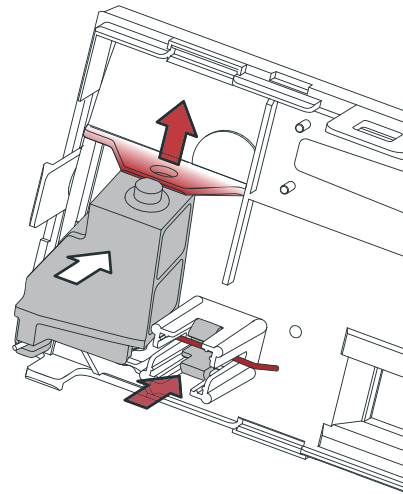


Fig.8

C

D

E

F

8. EACH SETTING AND ADJUSTMENT

8.1 PCL OUTPUT CONFIRMATION



● PCL Output

In the normal operation mode (with the detachable panel installed, the ACC switched ON, the standby mode cancelled), shift the TESTIN IC601(Pin 99) terminal to H.

The clock signal is output from the PCL terminal IC601(Pin115).

The frequency of the clock signal is 600 kHz that is divided by 20th of the oscillation frequency of X601 (12MHz).

The clock signal should be 600 kHz(- 25 Hz, + 25 Hz).

If the clock signal is out of the range, the X'tal (X601) should be replaced with new one.

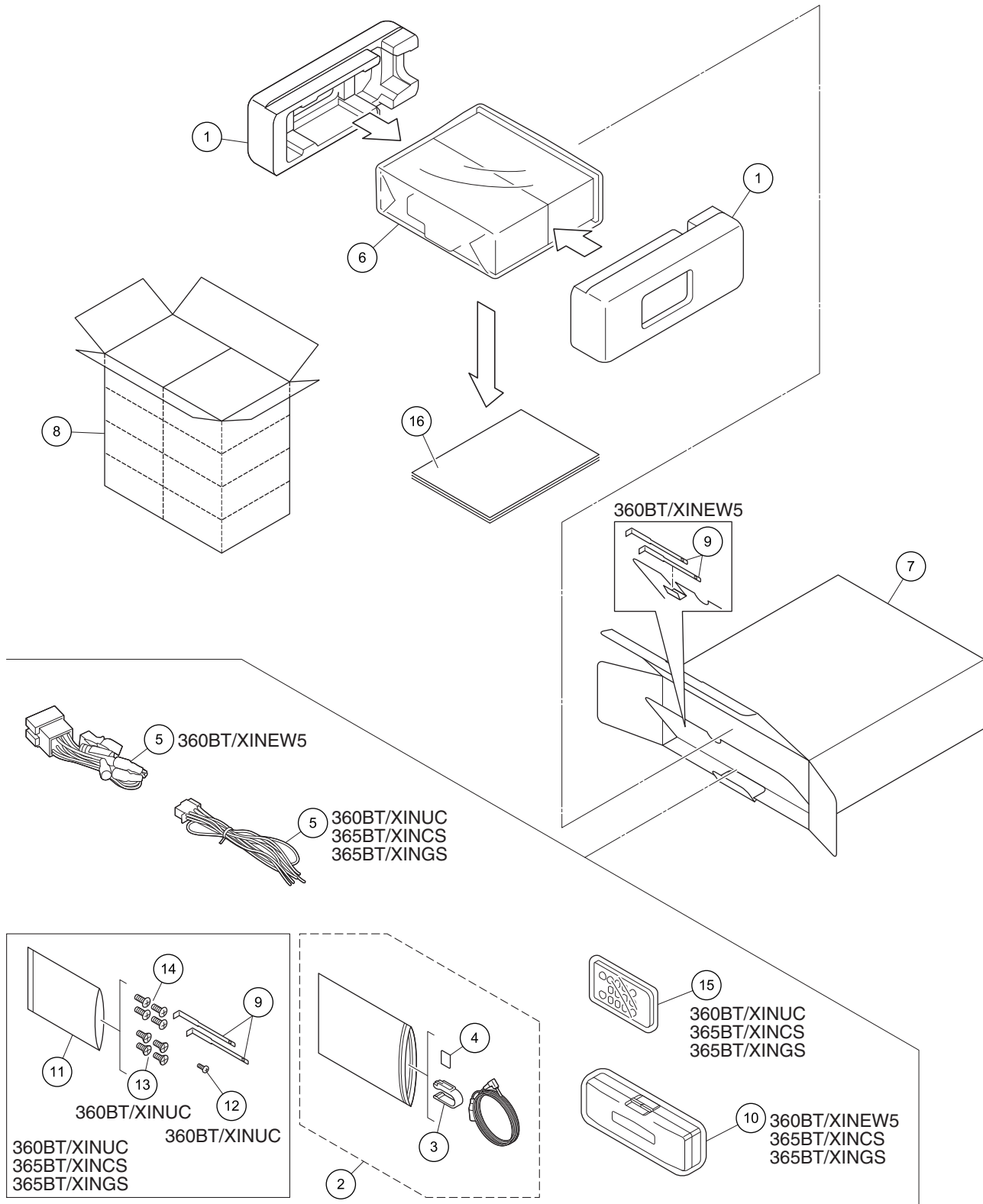
9. EXPLODED VIEWS AND PARTS LIST

NOTES :

- Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screw adjacent to ▽ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.

(In the case of no amount instructions, apply as you think it appropriate.)

9.1 PACKING



Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Protector	CHP4595	10	Case Assy	See Contrast table (2)
2	Microphone Assy	CPM1083	11	Polyethylene Bag	See Contrast table (2)
3	Holder	CZN7192	12	Screw	See Contrast table (2)
4	Cushion	CZN7193	13	Screw	See Contrast table (2)
5	Cord Assy	See Contrast table (2)	14	Screw	See Contrast table (2)
6	Polyethylene Bag	See Contrast table (2)	15	Card Remote Control Unit	See Contrast table (2)
7	Unit Box	See Contrast table (2)	16-1	Owner's Manual	See Contrast table (2)
8	Contain Box	See Contrast table (2)	* 16-2	Warranty Card	See Contrast table (2)
9	Handle	QNC3021			

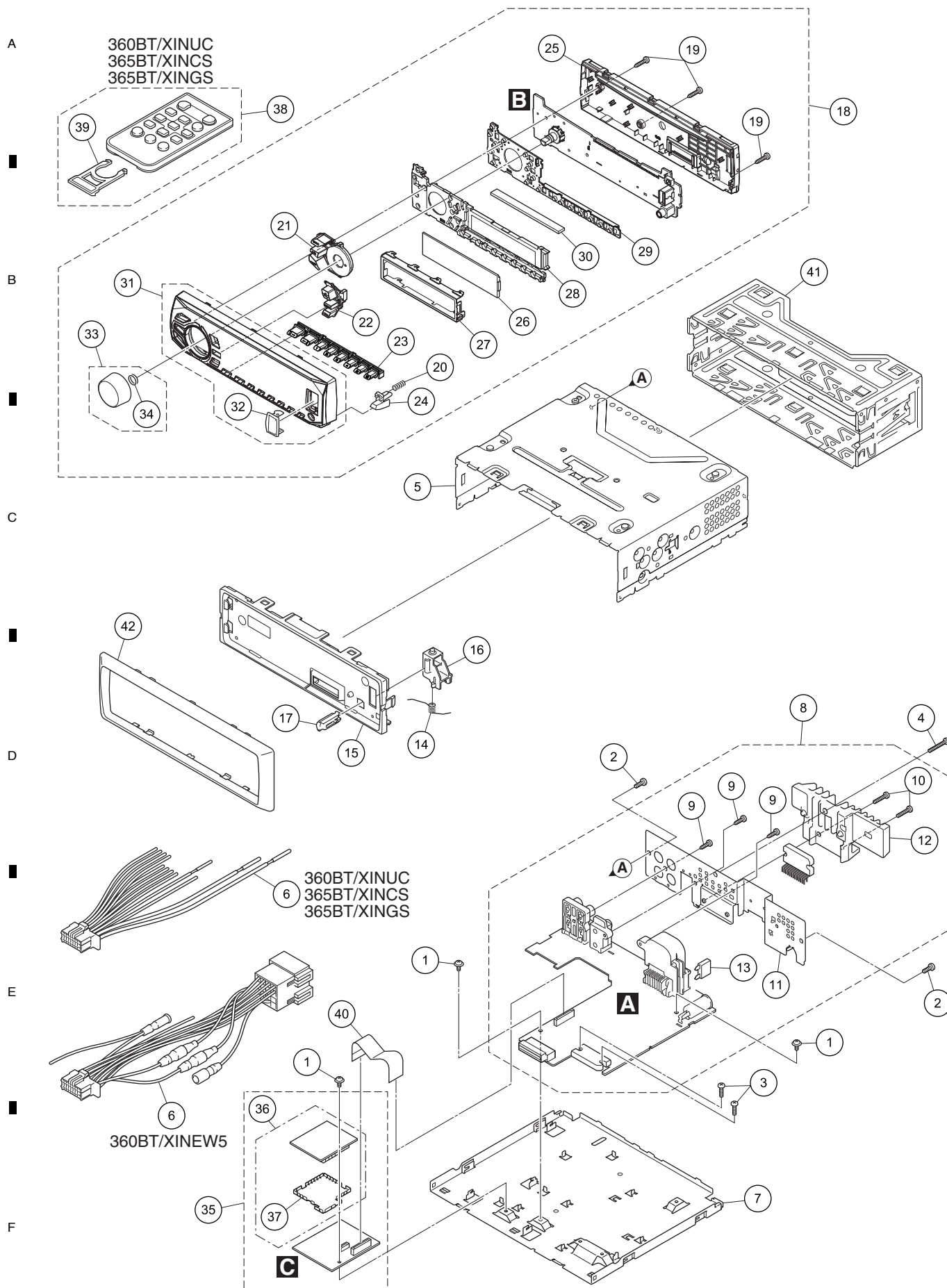
(2) CONTRAST TABLE
MVH-X360BT/XINEW5, MVH-X360BT/XINUC, MVH-X365BT/XINCS and MVH-X365BT/XINGS are constructed the same except for the following:

Mark	No.	Description	MVH-X360BT /XINEW5	MVH-X360BT /XINUC	MVH-X365BT /XINCS	MVH-X365BT /XINGS
	5	Cord Assy	QDP3014	CDP1480	CDP1480	CDP1480
	6	Polyethylene Bag	QEG3001	CEG1173	QEG3001	QEG3001
	7	Unit Box	QHG3531	QHG3539	QHG3532	QHG3533
	8	Contain Box	QHL3531	QHL3539	QHL3532	QHL3533
	10	Case Assy	QXA3129	Not used	QXA3129	QXA3129
	11	Polyethylene Bag	Not used	CEG1160	CEG1160	CEG1160
	12	Screw	Not used	BPZ20P060FTC	Not used	Not used
	13	Screw	Not used	CRZ50P090FTC	Not used	Not used
	14	Screw	Not used	TRZ50P080FTC	TRZ50P080FTC	TRZ50P080FTC
	15	Card Remote Control Unit	Not used	QXE1044	QXE1044	QXE1044
	16-1	Owner's Manual	QRD3211	QRD3221	QRD3212	QRD3213
*	16-2	Warranty Card	CRY1376	QRY3001	Not used	Not used

Owner's Manual,Installation Manual

Part No.	Language
QRD3211	English, French, Italian, Spanish(Espanol), German, Dutch, Russian
QRD3212	English, Spanish(Espanol), Portuguese(B)
QRD3213	English, Traditional Chinese, Arabic, Persian
QRD3221	English, French, Spanish(Espanol)

9.2 EXTERIOR



Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	ASZ26P050FTC	22	Button (DISP)	QAC3125
2	Screw	BSZ26P060FTC	23	Button (< > 1-6)	QAC3126
3	Screw	BSZ26P080FTC	24	Button (DETACH)	QAC3127
4	Screw	BSZ26P120FTC	25	Cover	QNS3567
5	Chassis	CNA3181			
6	Cord Assy	See Contrast table (2)	26	Segment LCD (V1801)	CAW2024
7	Case	QNB3014	27	Holder	QNC3067
8	Tuner Amp Unit	See Contrast table (2)	28	Lighting Conductor	QNV3069
9	Screw	BPZ26P080FTC	29	Contact Rubber	QNV3070
10	Screw	BSZ26P120FTC	30	Rubber Connector	QNV3071
11	Holder	See Contrast table (2)	31	Grille Unit	See Contrast table (2)
12	Heat Sink	See Contrast table (2)	32	Door	QAT3011
13	Fuse (10 A)	YEK5001	33	Knob Unit	See Contrast table (2)
14	Spring	QBH3001	34	Spring	YBL5010
15	Panel	QNS3289	35	BT Unit	QWM3750
16	Arm	QNV3025	36	BT Module	YWX5044
17	Button	QNV3026	37	Shield Case	YNC5123
18	Detachable Grille Assy	See Contrast table (2)	38	Card Remote Control Unit	See Contrast table (2)
19	Screw	BPZ20P100FTC	39	Cover	See Contrast table (2)
20	Spring	CBH2210	40	FFC	QDE3028
21	Button (SRC, BAND)	QAC3120	41	Holder	QNC3020
			42	Panel	QNS3568

(2) CONTRAST TABLE
 MVH-X360BT/XINEW5, MVH-X360BT/XINUC, MVH-X365BT/XINCS and MVH-X365BT/XINGS are constructed the same except for the following:

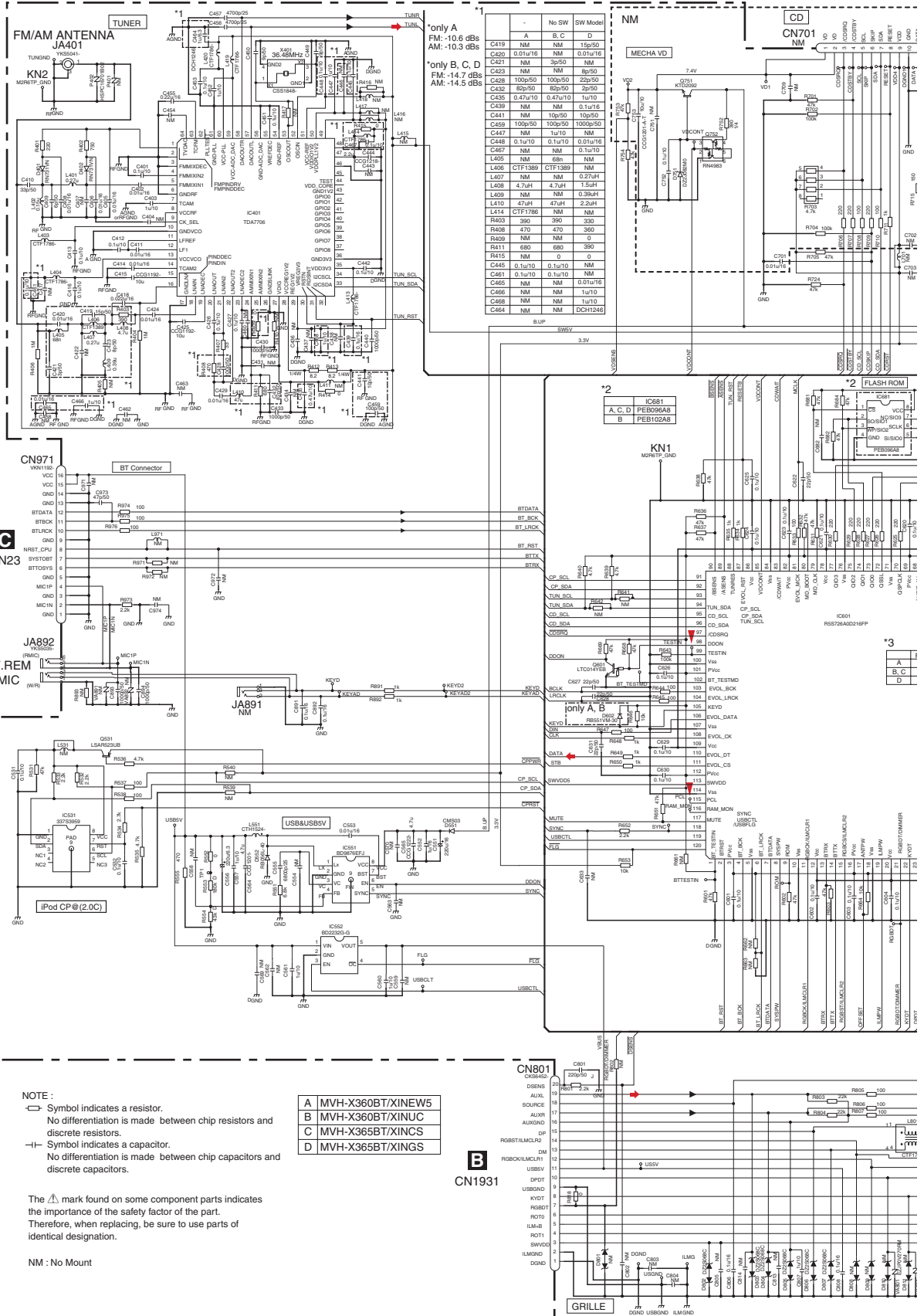
Mark	No.	Description	MVH-X360BT /XINEW5	MVH-X360BT /XINUC	MVH-X365BT /XINCS	MVH-X365BT /XINGS
	6	Cord Assy	QDP3014	CDP1480	CDP1480	CDP1480
	8	Tuner Amp Unit	QWM3665	QWM3664	QWM3666	QWM3667
	11	Holder	QNC3053	QNC3054	QNC3054	QNC3054
	12	Heat Sink	QNR3010	QNR3010	QNR3010	QNR3002
	18	Detachable Grille Assy	QXA3858	QXA4069	QXA3859	QXA4037
	31	Grille Unit	QXA3890	QXA4070	QXA3891	QXA3869
	33	Knob Unit	QXA3671	QXA3670	QXA3670	QXA3670
	38	Card Remote Control Unit	Not used	QXE1044	QXE1044	QXE1044
	39	Cover	Not used	CNS7068	CNS7068	CNS7068

10. SCHEMATIC DIAGRAM

10.1 TUNER AMP UNIT (GUIDE PAGE)

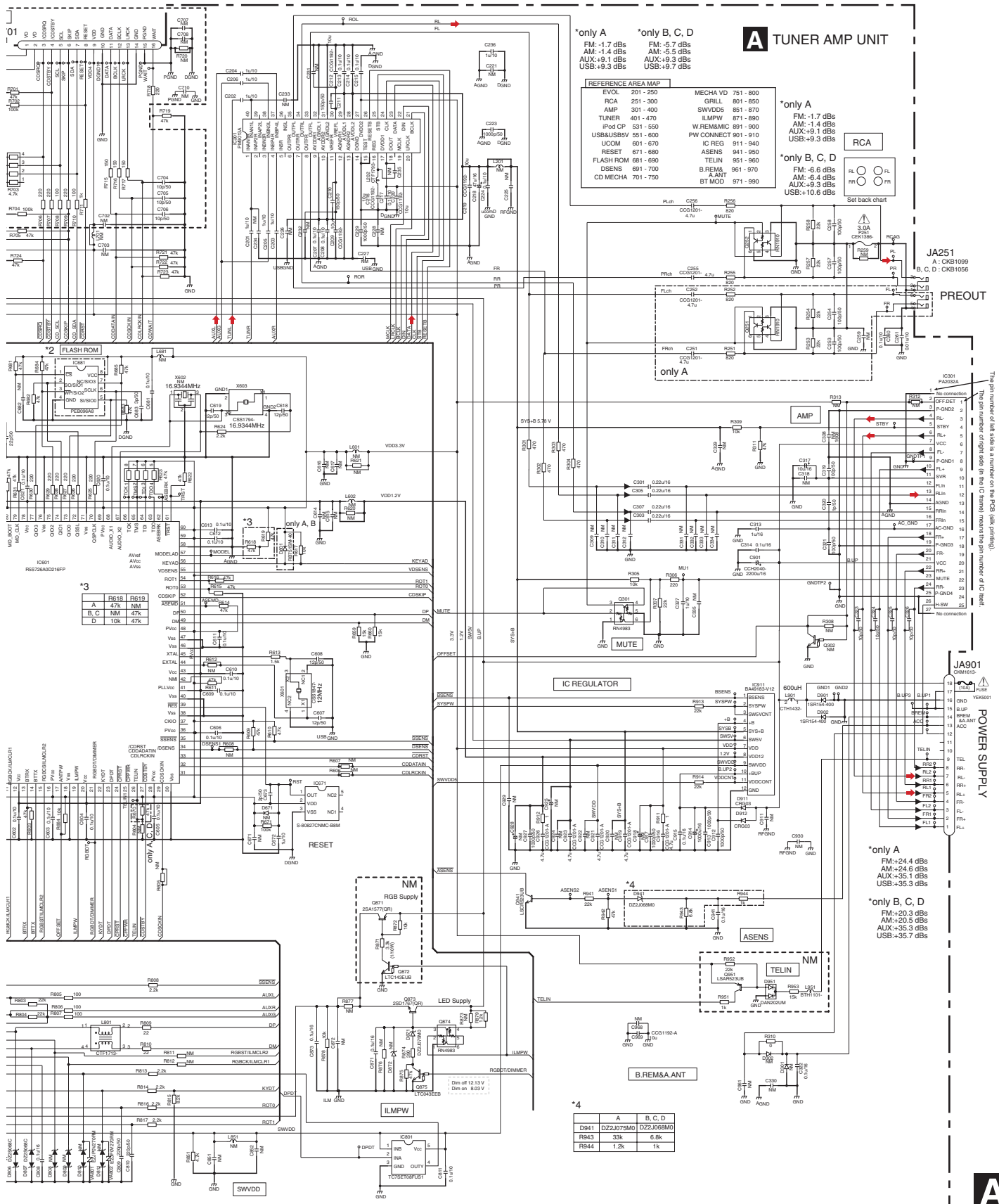
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

A-a



MVH-X360BT/XINEW5

A-b



A TUNER AMP UNIT

*only A

FM: -1.7 dBs
AM: -1.4 dBs
AUX: +9.1 dBs
USB: +9.3 dBs

REFERENCE AREA MAP

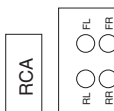
EVOL 201 - 250
RCA 251 - 300
AMP 301 - 400
TUNER 401 - 470
I/Pd CP 531 - 550
USB&ASBVS 551 - 600
UCOM 601 - 670
RESET 671 - 680
FLASH ROM 681 - 690
DSNS 691 - 700
CD MECHA 701 - 750

*only A

FM: -1.7 dBs
AM: -1.4 dBs
AUX: +9.1 dBs
USB: +9.3 dBs

*only B, C, D

FM: -6.6 dBs
AM: -6.4 dBs
AUX: +9.3 dBs
USB: +10.6 dBs



Set back chart

3.0A
CEK1386

100p/50

22K

22K

22K

22K

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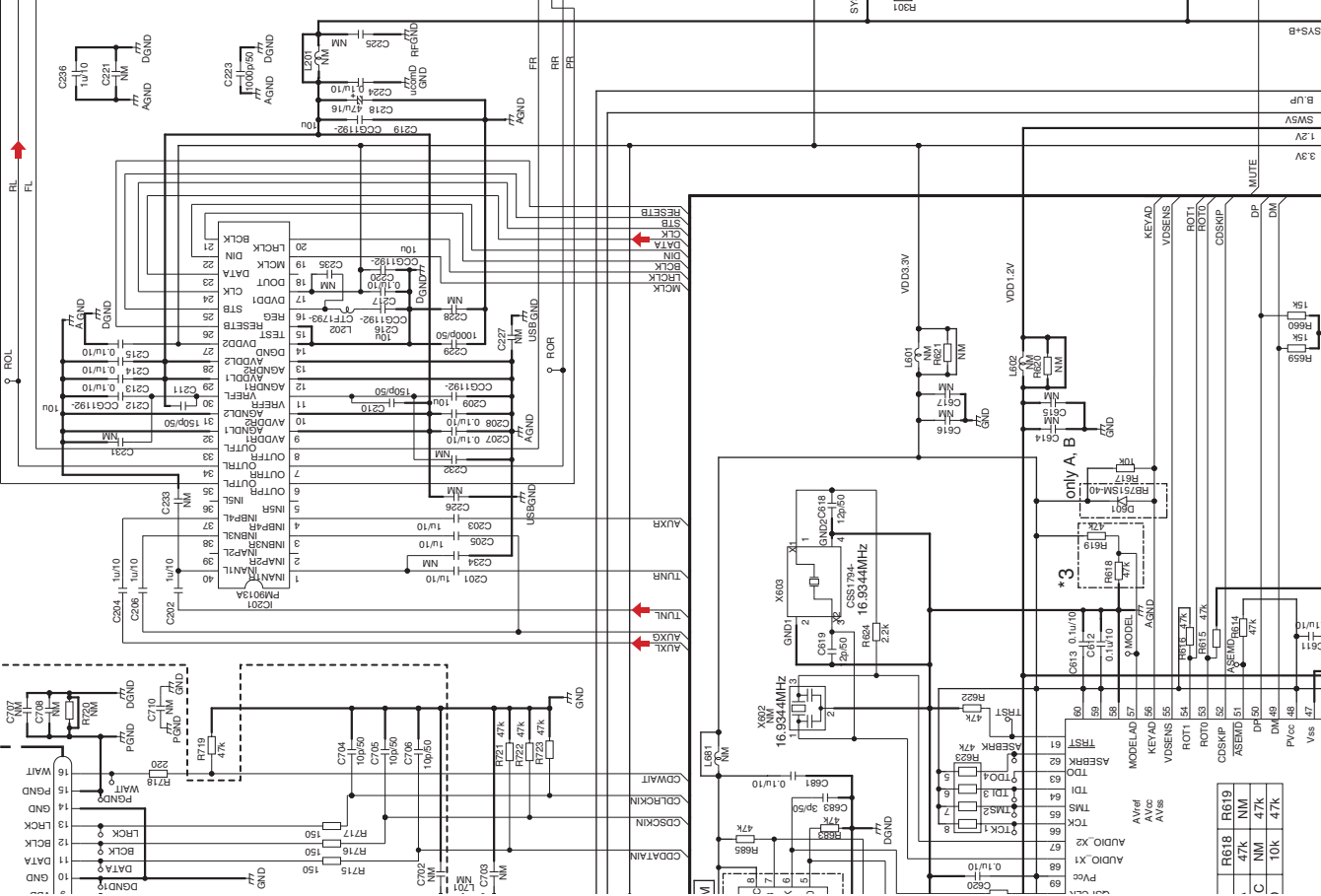
22K

22K

22K

22K

22K

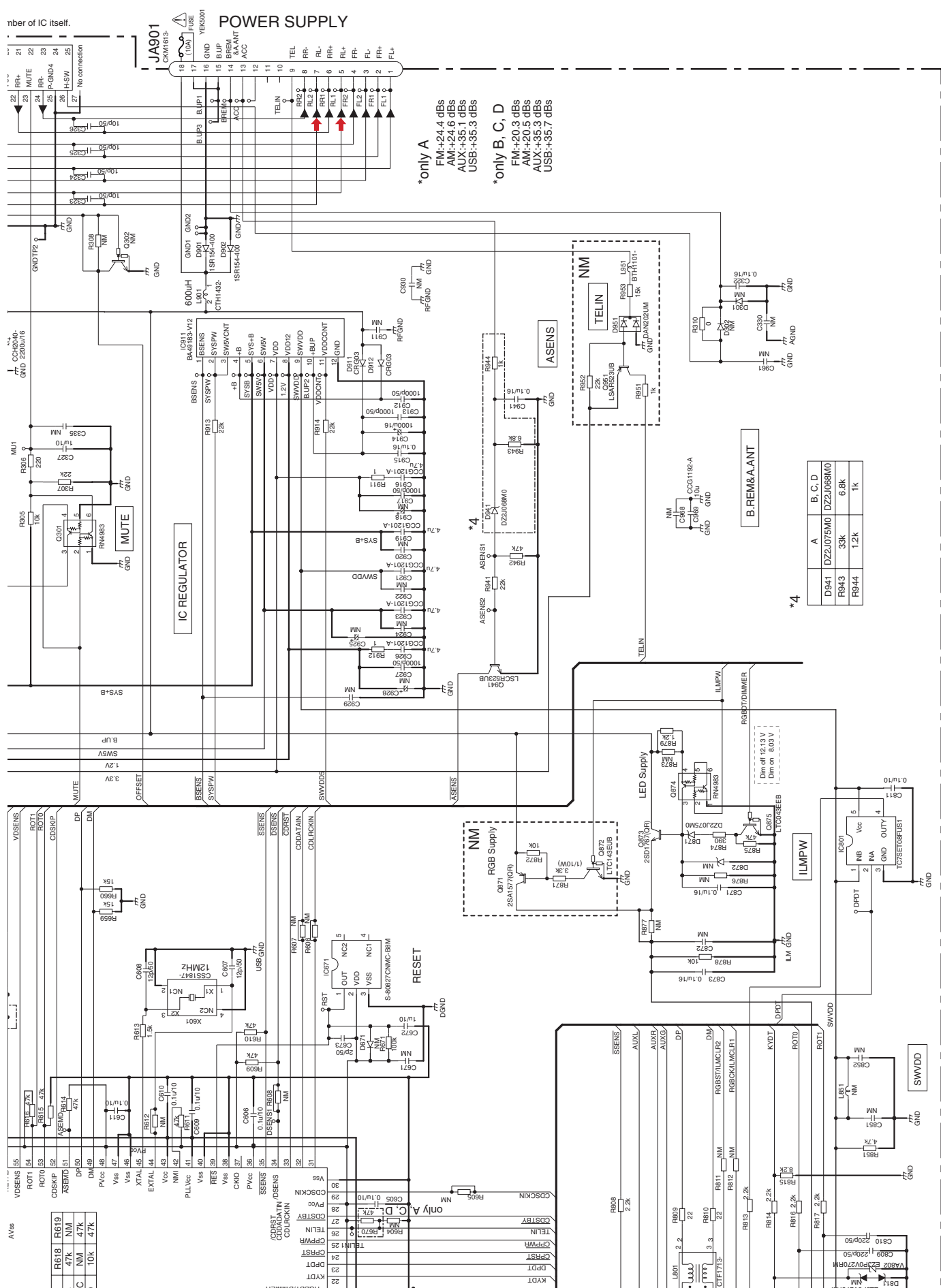


A-b

MVH-X360BT/XINEW5

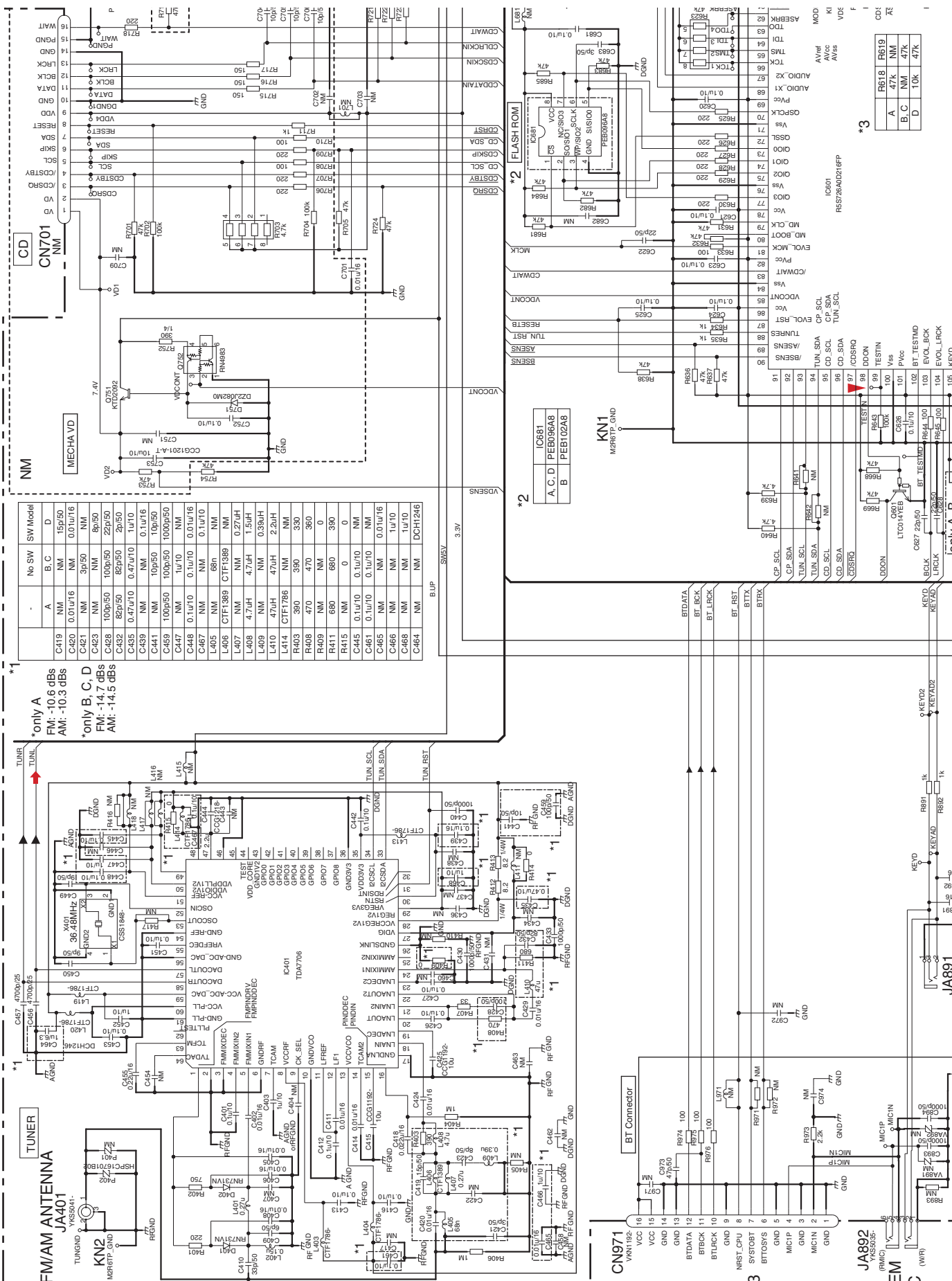
The pin number of left side is a number on the PCB (silk printing).

The pin number of right side (in the IC frame) means the pin number of IC itself.



A-a

A-a A-b



2

	R618	R619
A	47k	NM
B,C	NM	47k
D	10k	47k

W. REN & MIC

10.2 KEYBOARD UNIT

A

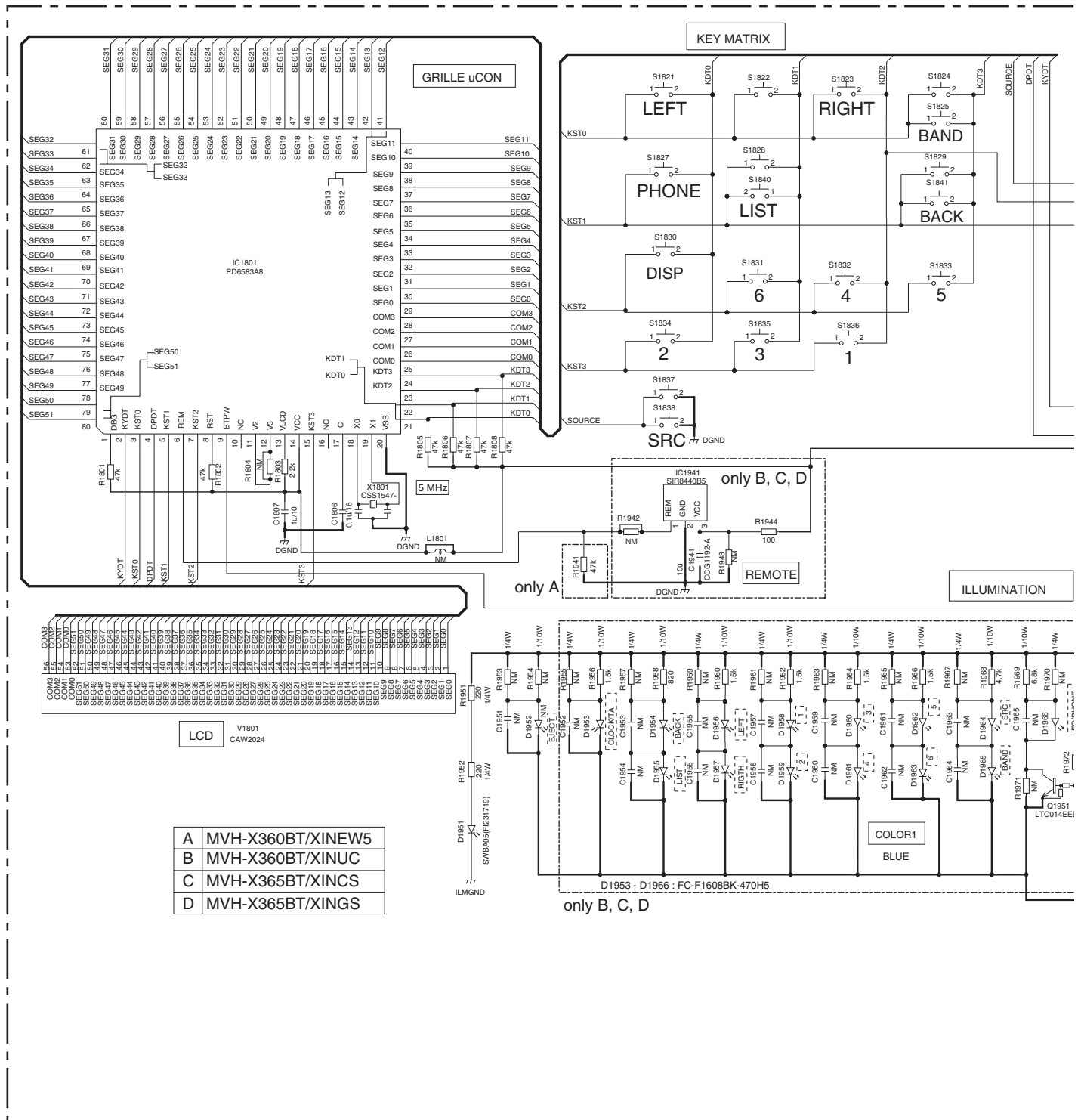
B

C

D

E

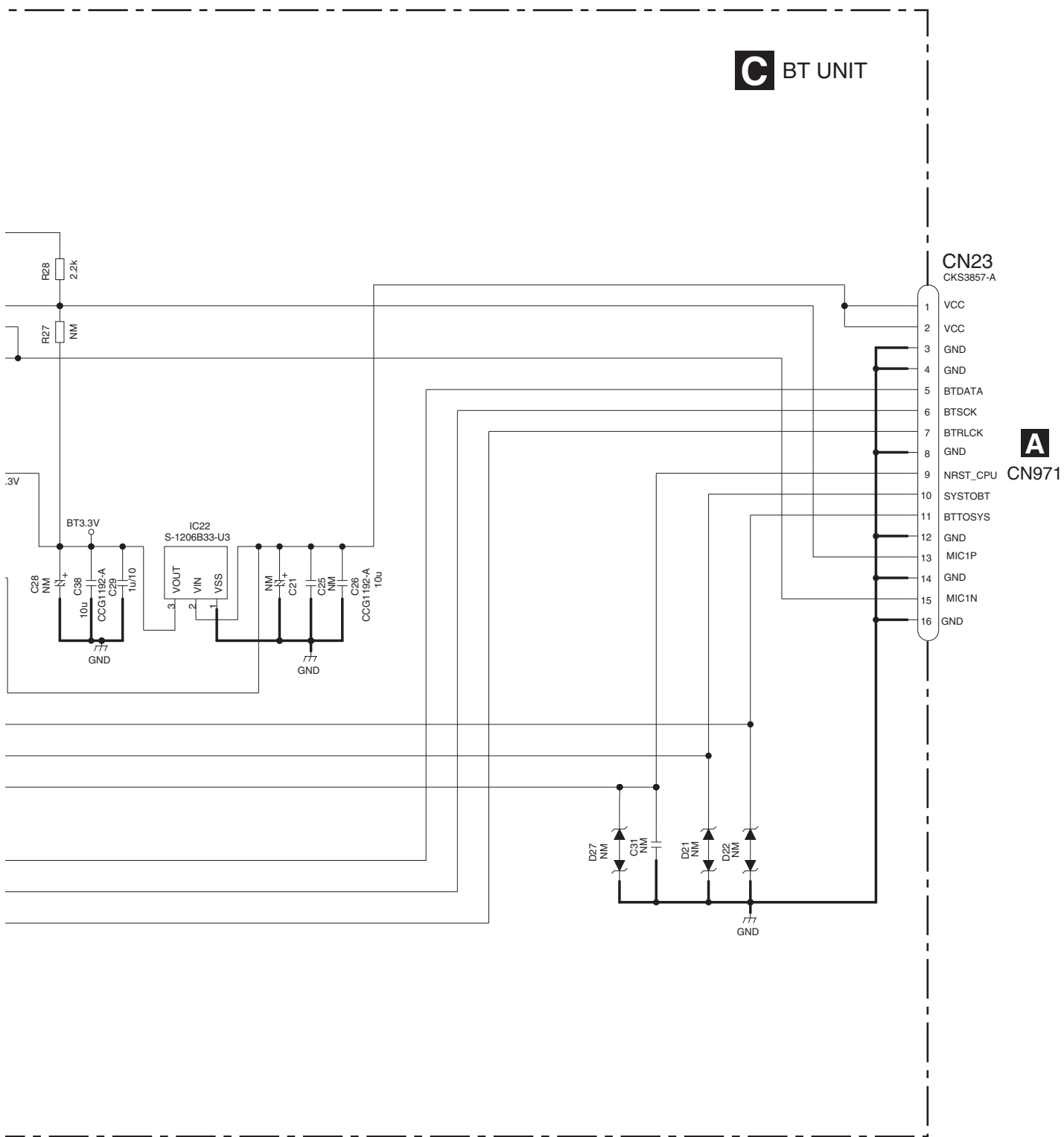
F



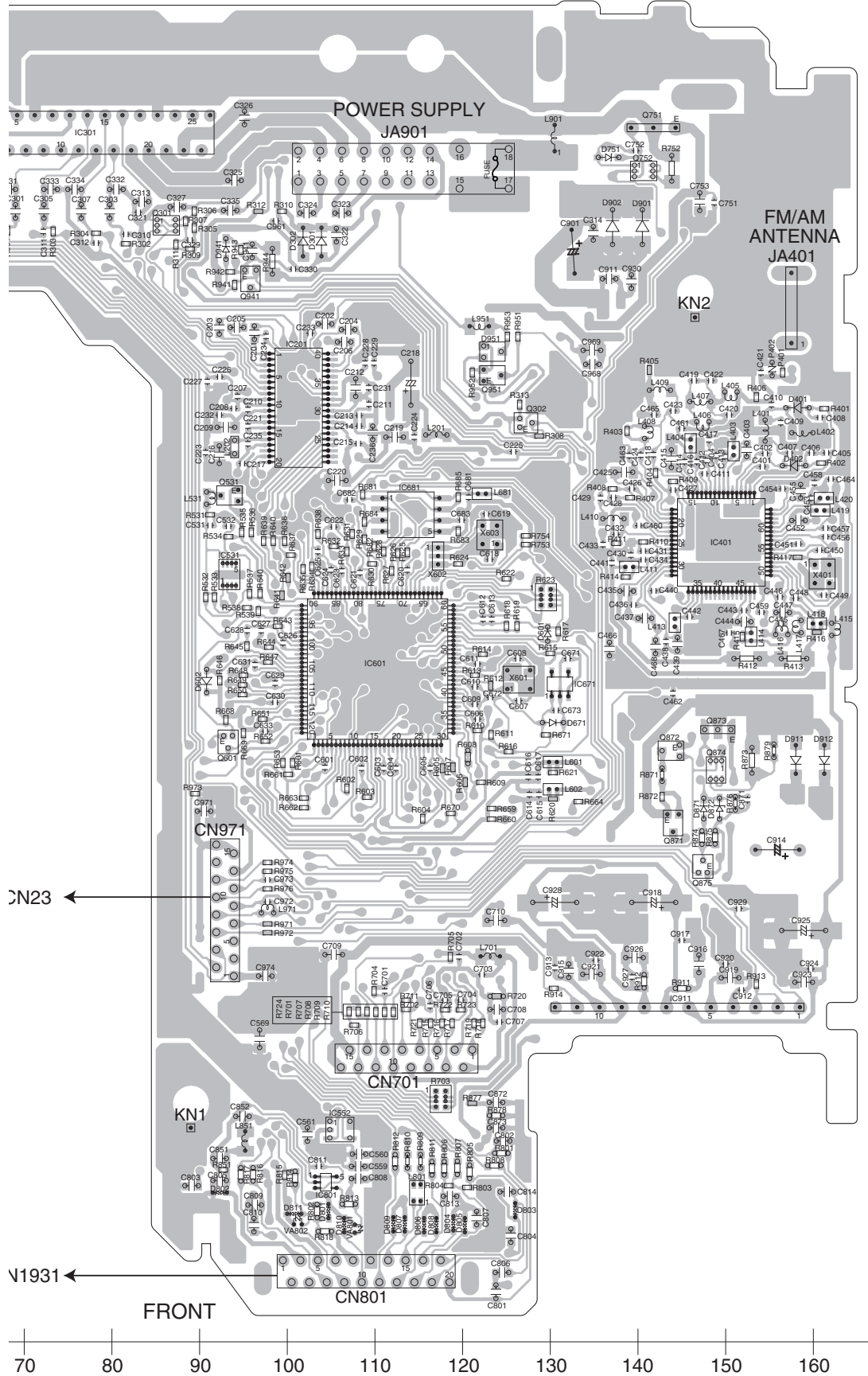


10.3 BT UNIT

BT MODULE



SIDE A



A

A TUNER AMP UNIT

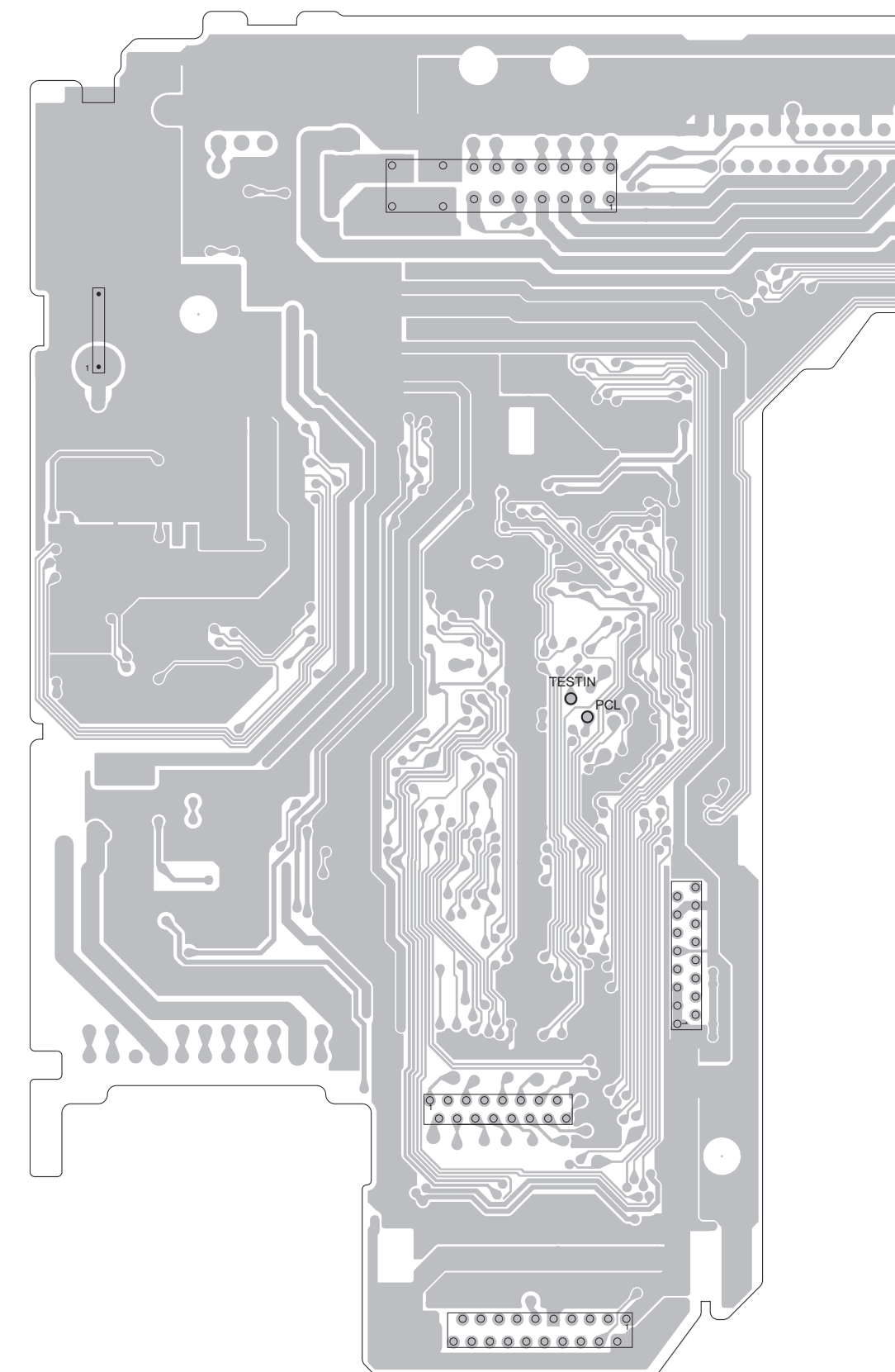
B

C

D

E

F



160

150

140

130

120

110

100

90

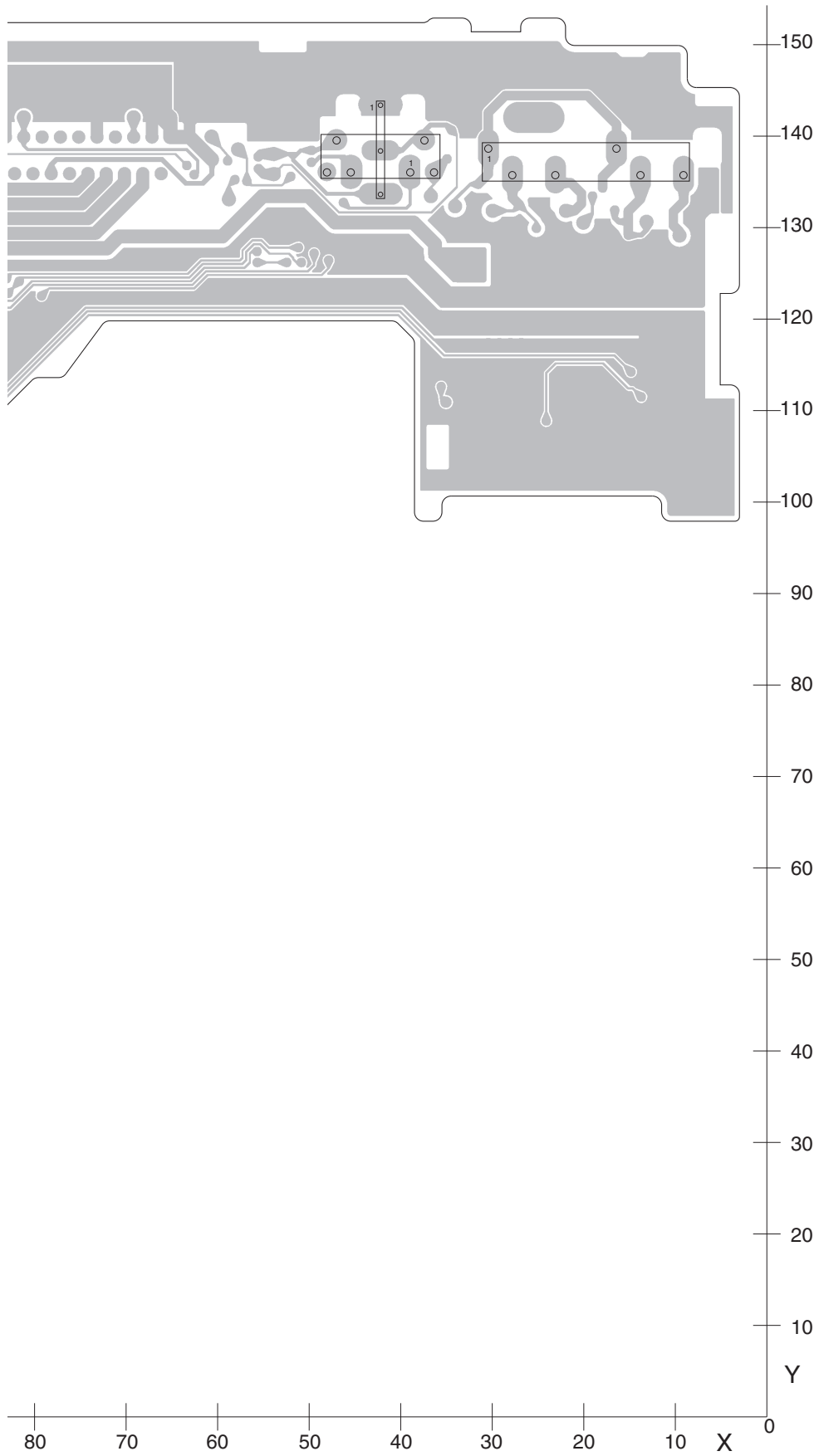
80

70

MVH-X360BT/XINEW5

SIDE B

A



B

C

D

E

F

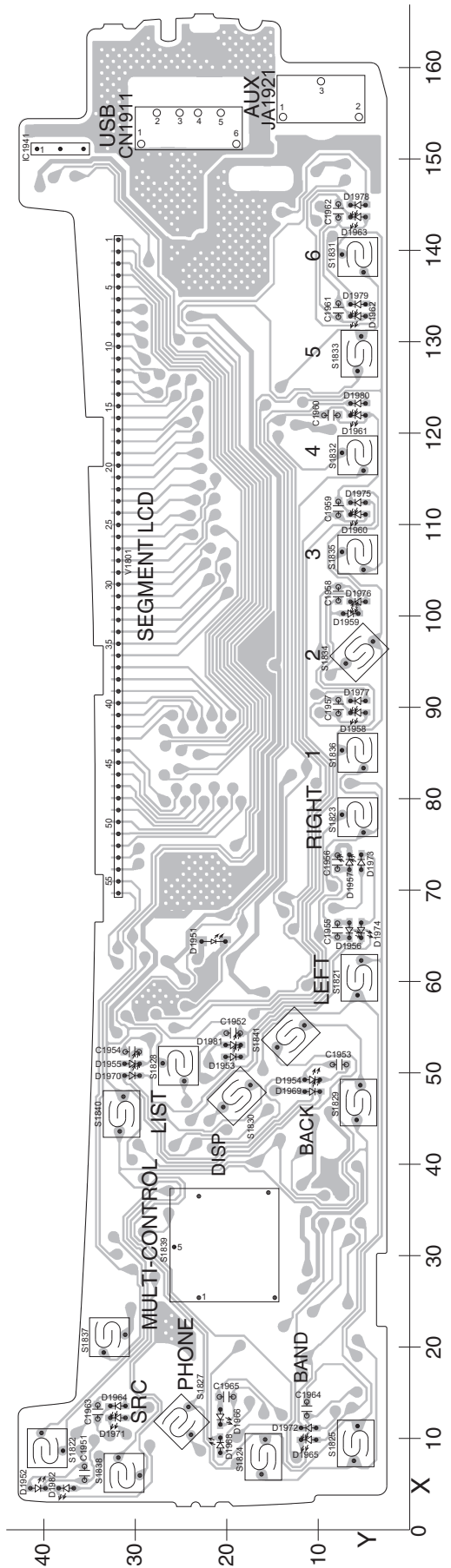
MVH-X360BT/XINEW5

A

11.2 KEYBOARD UNIT

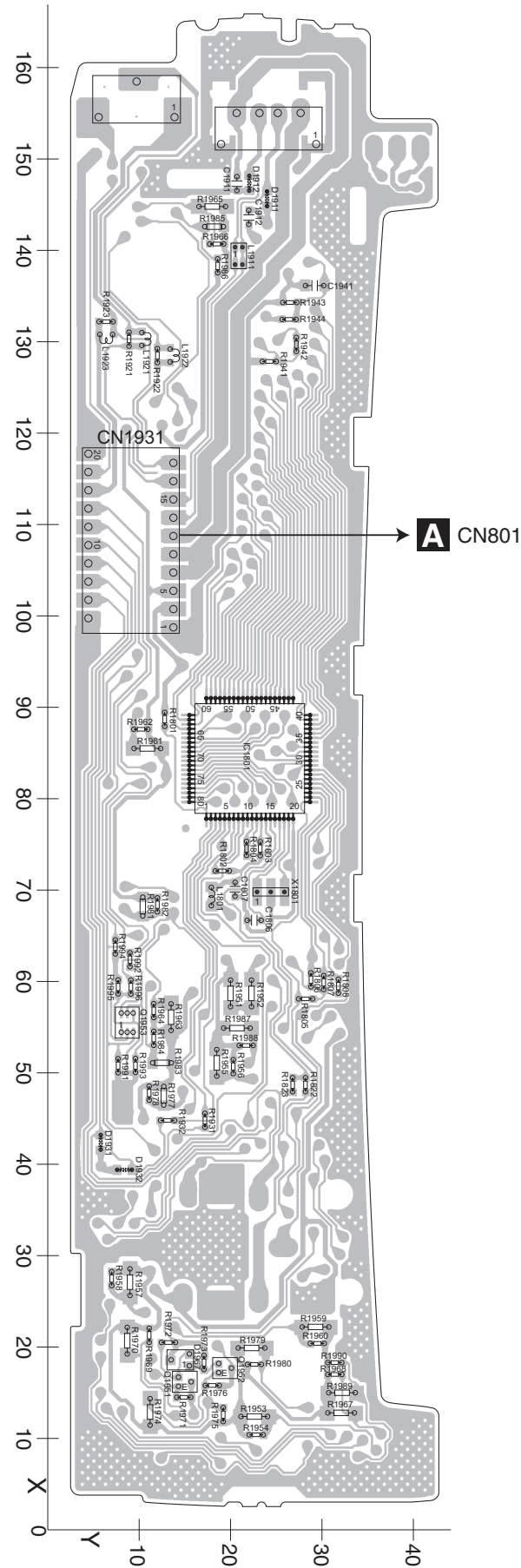
B KEYBOARD UNIT

SIDE A



B KEYBOARD UNIT

SIDE B

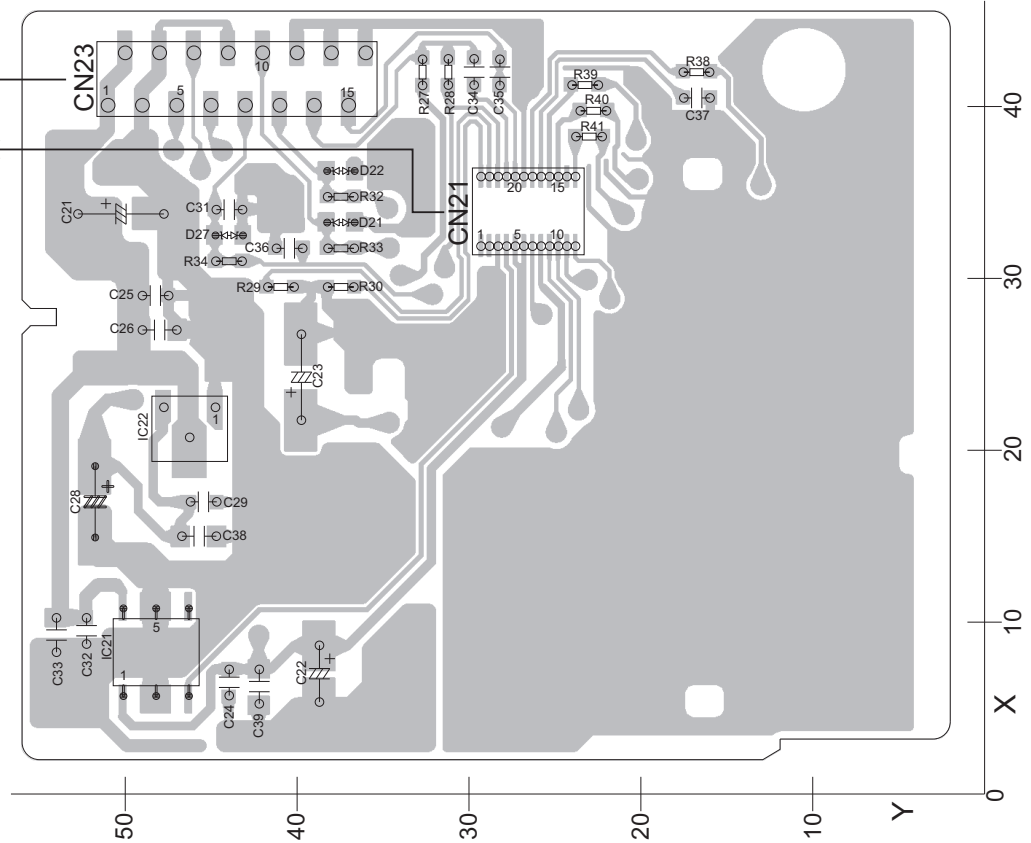


11.3 BT UNIT

C BT UNIT

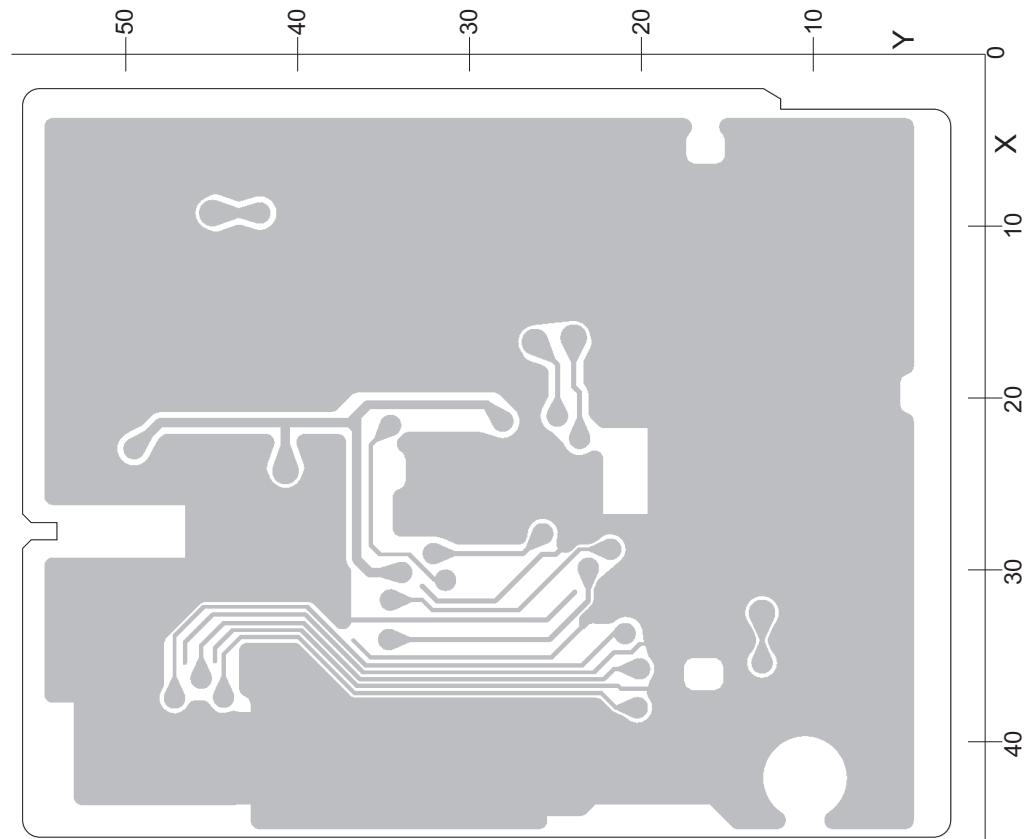
SIDE A

A CN971
BT MODULE



C BT UNIT

SIDE B



5		6		7		8	
<u>Circuit Symbol and No.</u>		<u>Part No.</u>		<u>Circuit Symbol and No.</u>		<u>Part No.</u>	
L 408	(A,141,104) Inductor(A,B,C)	LCTC4R7K1608		R 412	(A,152,78)	RS1/4SA8R2J	
	(A,141,104) Inductor(D)	LCTC1R5K1608		R 413	(A,158,78)	RS1/4SA8R2J	
L 409	(A,143,109) Chip Coil(D)	LCTAWR39J2520		R 414	(A,139,87)	RS1/16SS0R0J	
L 410	(A,137,94) Chip Coil(A,B,C)	LCTAW470J2520		R 415	(A,152,80) (B,C,D)	RS1/16SS0R0J	A
	(A,137,94) Inductor(D)	LCTAW2R2J2520		R 531	(A,91,94)	RS1/16SS473J	
L 413	(A,144,82) Inductor	CTF1786		R 532	(A,91,85)	RS1/16SS222J	
L 414	(A,153,80) Inductor(A)	CTF1786		R 533	(A,92,85)	RS1/16SS222J	
L 419	(A,161,95) Inductor	CTF1786		R 534	(A,93,92)	RS1/16SS272J	
L 420	(A,161,96) Inductor	CTF1786		R 535	(A,95,92)	RS1/16SS472J	
L 551	(A,30,107) Inductor	CTH1524		R 536	(A,96,92)	RS1/16SS472J	
L 801	(A,115,17) Inductor	CTF1713		R 537	(A,96,85)	RS1/16SS101J	
L 901	(A,112,141) Choke Coil 600 uH	CTH1432		R 538	(A,95,84)	RS1/16SS101J	
X 401	(A,161,88) Crystal Resonator 36.48 MHz	CSS1848		R 551	(A,25,111)	RS1/16SS682J	
X 601	(A,126,76) Crystal Resonator 12 MHz	CSS1847		R 552	(A,30,112)	RS1/16SS0R0J	
X 603	(A,123,92) Resonator 16.93 MHz	CSS1794		R 553	(A,27,112)	RS1/16SS1803D	B
⚠ P251	(A,6,130) Fuse 3.0 A	CEK1386		R 554	(A,27,110)	RS1/16SS4302D	
P 402	(A,155,111) Surge Absorber	HSPC16701B02		R 555	(A,39,124)	RS1/10SR471J	
VA801	(A,108,13) SMD Varistor	MLV0402ES012V0010N		R 601	(A,101,66)	RS1/16SS473J	
VA802	(A,101,13) SMD Varistor	MLV0402ES012V0010N		R 602	(A,107,63)	RS1/16SS473J	
CN801	(A,109,4) Connector	CKS6452		R 603	(A,109,62)	RS1/16SS473J	
CN971	(A,93,49) Connector	VKN1192		R 609	(A,122,64)	RS1/16SS473J	
JA251	(A,19,138) Pin Jack(A)	CKB1099		R 610	(A,122,70)	RS1/16SS473J	
	(A,19,138) Pin Jack(B,C,D)	CKB1056		R 611	(A,123,69)	RS1/16SS473J	
JA401	(A,158,129) Antenna Jack	YKS5041		R 613	(A,121,76)	RS1/16SS152J	
JA892	(A,42,141) Jack	YKS5035		R 614	(A,122,78)	RS1/16SS473J	
JA901	(A,113,141) Connector	CKM1613					C
⚠	Fuse (10 A)	YEK5001		R 615	(A,130,79)	RS1/16SS473J	
				R 616	(A,125,67)	RS1/16SS473J	
				R 617	(A,131,81)	RS1/16SS103J	
				R 618	(A,125,82) (A)	RS1/16SS473J	
					(A,125,82) (D)	RS1/16SS103J	
				R 619	(A,126,82) (B,C,D)	RS1/16SS473J	
				R 622	(A,125,87)	RS1/16SS473J	
R 251	(A,18,131) (A)	RS1/16SS821J					
R 252	(A,13,128) (A)	RS1/16SS821J					
R 253	(A,15,131) (A)	RS1/16SS223J					
R 254	(A,11,131) (A)	RS1/16SS223J		R 623	(A,130,85)	RAB4CQ473J	
R 255	(A,29,132)	RS1/16SS821J		R 624	(A,120,89)	RS1/16SS222J	
				R 625	(A,114,90)	RS1/16SS221J	
				R 626	(A,113,90)	RS1/16SS221J	
R 256	(A,19,131)	RS1/16SS821J					D
R 257	(A,28,131)	RS1/16SS223J					
R 258	(A,21,131)	RS1/16SS223J		R 627	(A,112,88)	RS1/16SS221J	
R 301	(A,68,127)	RS1/16SS471J		R 628	(A,111,90)	RS1/16SS221J	
R 302	(A,82,125)	RS1/16SS471J		R 629	(A,109,92)	RS1/16SS221J	
				R 630	(A,110,89)	RS1/16SS221J	
				R 631	(A,107,92)	RS1/16SS473J	
R 303	(A,73,127)	RS1/16SS471J					
R 304	(A,78,126)	RS1/16SS471J					
R 305	(A,89,127)	RS1/16SS103J		R 632	(A,105,91)	RS1/16SS473J	
R 306	(A,89,129)	RS1/16SS221J		R 633	(A,107,90)	RS1/16SS101J	
R 307	(A,88,128)	RS1/16SS223J		R 634	(A,103,88)	RS1/16SS102J	
				R 635	(A,102,88)	RS1/16SS102J	
				R 636	(A,100,91)	RS1/16SS473J	
R 309	(A,89,125)	RS1/16SS103J					
R 310	(A,99,129)	RS1/16SS0R0J					
R 311	(A,87,125)	RS1/16SS473J		R 637	(A,100,90)	RS1/16SS473J	E
R 401	(A,161,106)	RS1/16SS221J		R 638	(A,104,92)	RS1/16SS473J	
R 402	(A,161,100)	RS1/16SS751J		R 639	(A,97,91)	RS1/16SS472J	
				R 640	(A,98,91)	RS1/16SS472J	
				R 643	(A,99,82)	RS1/16SS104J	
R 403	(A,139,104) (A,B,C)	RS1/16SS391J					
	(A,139,104) (D)	RS1/16SS331J					
R 404	(A,142,99)	RS1/16SS105J		R 644	(A,98,79)	RS1/16SS101J	
R 406	(A,154,108)	RS1/16SS105J		R 645	(A,95,79)	RS1/16SS101J	
				R 646	(A,92,75)	RS1/16SS103J	
R 407	(A,139,96)	RS1/16SS330J		R 647	(A,98,78)	RS1/16SS101J	
R 408	(A,137,97) (A,B,C)	RS1/16SS471J		R 648	(A,95,76)	RS1/16SS102J	
	(A,137,97) (D)	RS1/16SS361J					
R 409	(A,144,98) (D)	RS1/16SS0R0J		R 649	(A,95,75)	RS1/16SS102J	F
				R 650	(A,95,74)	RS1/16SS102J	
R 411	(A,138,91) (A,B,C)	RS1/16SS681J		R 651	(A,97,71)	RS1/16SS473J	
	(A,138,91) (D)	RS1/16SS391J		R 652	(A,98,69)	RS1/16SS222J	
				R 653	(A,100,66)	RS1/16SS103J	

	1	2	3	4
	<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
	R 659 (A,123,61)	RS1/16SS153J	C 203 (A,92,116)	CKSRYB105K10
	R 660 (A,123,60)	RS1/16SS153J	C 204 (A,107,115)	CKSRYB105K10
	R 664 (A,133,62)	RS1/16SS103J	C 205 (A,94,116)	CKSRYB105K10
A	R 668 (A,93,71)	RS1/16SS473J	C 206 (A,107,114)	CKSRYB105K10
	R 669 (A,95,69)	RS1/16SS473J	C 207 (A,94,108)	CKSSYB104K10
	R 670 (A,119,60) (A,C,D)	RS1/16SS473J	C 208 (A,94,106)	CKSSYB104K10
	R 671 (A,130,69)	RS1/16SS104J	C 209 (A,93,104) 10 uF	CCG1192
	R 681 (A,109,97)	RS1/16SS473J	C 210 (A,96,106)	CCSSCH151J50
	R 682 (A,110,91)	RS1/16SS473J	C 211 (A,109,107)	CCSSCH151J50
	R 683 (A,120,92)	RS1/16SS473J	C 212 (A,108,109) 10 uF	CCG1192
	R 684 (A,109,94)	RS1/16SS473J	C 213 (A,108,106)	CKSSYB104K10
	R 685 (A,120,96)	RS1/16SS473J	C 214 (A,108,104)	CKSSYB104K10
	R 705 (A,119,44)	RS1/16SS473J	C 215 (A,108,102)	CKSSYB104K10
B	R 719 (A,121,36)	RS1/16SS473J	C 216 (A,92,101) 10 uF	CCG1192
	R 721 (A,115,36)	RS1/16SS473J	C 217 (A,95,100)	CKSSYB104K10
	R 722 (A,118,38)	RS1/16SS473J	C 218 (A,114,109)	XCEVW470M16
	R 723 (A,120,38)	RS1/16SS473J	C 219 (A,112,103) 10 uF	CCG1192
	R 724 (A,107,38)	RS1/16SS473J	C 220 (A,106,98) 10 uF	CCG1192
	R 754 (A,127,92)	RS1/16SS473J	C 223 (A,91,101)	CKSSYB102K50
	R 801 (A,124,22)	RS1/10SR222J	C 224 (A,115,103)	CKSSYB104K10
	R 803 (A,121,18)	RS1/16SS223J	C 229 (A,110,112)	CKSSYB102K50
	R 804 (A,118,18)	RS1/16SS223J	C 236 (A,110,104)	CKSRYB105K10
	R 805 (A,121,19)	RS1/10SR101J	C 251 (A,35,128) 4.7 uF(A)	CCG1201
	R 806 (A,118,20)	RS1/10SR101J	C 252 (A,17,127) 4.7 uF(A)	CCG1201
C	R 807 (A,119,20)	RS1/10SR101J	C 253 (A,17,130) (A)	CCSSCH101J50
	R 808 (A,124,20)	RS1/10SR222J	C 254 (A,10,130) (A)	CCSSCH101J50
	R 809 (A,115,21)	RS1/10SR220J	C 255 (A,35,132) 4.7 uF	CCG1201
	R 810 (A,114,21)	RS1/10SR220J	C 256 (A,31,130) 4.7 uF	CCG1201
	R 813 (A,107,16)	RS1/10SR222J	C 257 (A,26,131)	CCSSCH101J50
	R 814 (A,101,19)	RS1/10SR222J	C 258 (A,20,131)	CCSSCH101J50
	R 815 (A,100,19)	RS1/16SS822J	C 260 (A,33,138)	CKSSYB104K10
	R 816 (A,96,19)	RS1/10SR222J	C 261 (A,6,133)	CKSSYB103K16
	R 817 (A,95,19)	RS1/10SR222J	C 301 (A,69,129)	CKSRYB224K16
	R 818 (A,104,13)	RS1/10SR0R0J	C 303 (A,80,129)	CKSRYB224K16
	R 851 (A,93,20)	RS1/16SS472J	C 305 (A,72,129)	CKSRYB224K16
D	R 874 (A,147,58)	RS1/10SR391J	C 307 (A,77,129)	CKSRYB224K16
	R 875 (A,149,58)	RS1/10SR473J	C 313 (A,83,130)	CKSRYB105K16
	R 878 (A,124,26)	RS1/10SR103J	C 314 (A,135,126)	CKSRYB104K16
	R 879 (A,156,67)	RS1/10SR122J	C 317 (A,60,129)	XCEVW100M16
	R 891 (A,58,138)	RS1/16SS102J	C 319 (A,62,134)	CCSSCH101J50
	R 892 (A,58,136)	RS1/16SS102J	C 320 (A,64,134)	CCSSCK1R0C50
	R 911 (A,145,40)	RS1/10SR1R0J	C 321 (A,83,129)	CCSSCH101J50
	R 912 (A,141,41)	RS1/10SR1R0J	C 322 (A,106,126)	CKSRYB104K16
	R 913 (A,154,41)	RS1/16SS223J	C 323 (A,106,129)	CCSRCH100D50
	R 914 (A,130,40)	RS1/16SS223J	C 324 (A,102,129)	CCSRCH100D50
	R 941 (A,94,121)	RS1/16SS223J	C 325 (A,94,132)	CCSRCH100D50
E	R 942 (A,94,122)	RS1/16SS473J	C 326 (A,95,140)	CCSRCH100D50
	R 943 (A,95,125) (A)	RS1/16SS333J	C 327 (A,87,129)	CKSRYB105K10
	(A,95,125) (B,C,D)	RS1/16SS682J	C 401 (A,154,100)	CKSSYB104K10
	R 944 (A,98,123) (A)	RS1/4SA122J	C 402 (A,155,101)	CKSSYB103K16
	(A,98,123) (B,C,D)	RS1/4SA102J	C 403 (A,152,102)	CKSRYB105K10
	R 973 (A,90,63)	RS1/16SS222J	C 405 (A,162,101)	CKSSYB103K16
	R 974 (A,98,55)	RS1/16SS101J	C 406 (A,160,101)	CKSSYB103K16
	R 975 (A,98,54)	RS1/16SS101J	C 408 (A,161,105)	CKSSYB103K16
	R 976 (A,98,52)	RS1/16SS101J	C 409 (A,156,105)	CCSSCH6R0D50
			C 410 (A,155,107)	CCSSCH330J50
			C 411 (A,148,99)	CKSSYB103K16
			C 412 (A,148,101)	CKSSYB104K10
F	C 201 (A,96,115)	CKSRYB105K10	C 413 (A,150,101)	CKSSYB104K10
	C 202 (A,104,116)	CKSRYB105K10	C 414 (A,145,100)	CKSSYB103K16

CAPACITORS

5		6		7		8	
Circuit Symbol and No.		Part No.		Circuit Symbol and No.		Part No.	
C 415	(A,144,101) 10 uF	CCG1192		C 605	(A,116,65)	CKSSYB104K10	
C 416	(A,147,100)	CKSSYB104K10		C 606	(A,122,71)	CKSSYB104K10	
C 418	(A,142,101)	CKSSYB223K16		C 607	(A,126,73)	CCSSCH120J50	
C 419	(A,146,110) (D)	CCSSCH150J50					
C 420	(A,150,106) (A,D)	CKSSYB103K16		C 608	(A,126,78)	CCSSCH120J50	
C 421	(A,154,111) (B,C)	CCSSCJ3R0C50		C 609	(A,121,73)	CKSSYB104K10	
C 423	(A,144,106) (D)	CCSSCH8R0D50		C 610	(A,121,75)	CKSSYB104K10	
C 424	(A,140,101)	CKSSYB103K16		C 611	(A,122,77)	CKSSYB104K10	
C 425	(A,138,99) 10 uF	CCG1192		C 612	(A,122,82)	CKSSYB104K10	
C 426	(A,139,97)	CKSSYB104K10		C 613	(A,123,82)	CKSSYB104K10	
C 427	(A,144,97)	CKSSYB104K10		C 618	(A,123,89)	CCSSCH120J50	
				C 619	(A,123,94)	CCSSCH120J50	
C 428	(A,137,96) (A,B,C)	CCSSCH101J50		C 620	(A,114,88)	CKSSYB104K10	
	(A,137,96) (D)	CCSSCH220J50		C 621	(A,108,88)	CKSSYB104K10	
C 429	(A,136,96)	CKSSYB103K16					
C 430	(A,139,90)	CKSSYB102K50		C 622	(A,105,93)	CCSSCH220J50	
C 432	(A,138,92) (A,B,C)	CCSSCH820J50		C 623	(A,106,88)	CKSSYB104K10	
	(A,138,92) (D)	CCSSCK2R0C50		C 624	(A,105,88)	CKSSYB104K10	
C 433	(A,136,91)	CKSSYB102K50		C 625	(A,104,90)	CKSSYB104K10	
				C 626	(A,100,80)	CKSSYB104K10	
C 435	(A,139,86) (A,B,C)	CKSRYB474K10					
	(A,139,86) (D)	CKSRYB105K10		C 627	(A,97,81)	CCSSCH220J50	
C 439	(A,145,80) (D)	CKSRYB104K16		C 628	(A,95,81)	CCSSCH220J50	
C 440	(A,142,86)	CKSSYB102K50		C 629	(A,99,75)	CKSSYB104K10	
C 441	(A,137,89) (B,C,D)	CCSSCH100D50		C 630	(A,99,73)	CKSSYB104K10	
				C 631	(A,96,77)	CCSSCH220J50	
C 442	(A,146,83)	CKSSYB104K10					
C 444	(A,152,82) 2.2 uF	CCG1218		C 672	(A,123,73) 1 uF	DCH1246	
C 445	(A,156,82) (A,B,C)	CKSSYB104K10		C 681	(A,121,96)	CKSSYB104K10	
C 447	(A,157,83) (B,C)	CKSRYB105K10		C 683	(A,120,94)	CCSSCJ3R0C50	
				C 801	(A,124,6)	CCSRCH221J50	
C 448	(A,158,85) (A,B,C)	CKSSYB104K10		C 806	(A,125,8)	CKSRYB104K16	
	(A,158,85) (D)	CKSSYB103K16					
C 449	(A,161,85)	CCSSCH9R0D50		C 807	(A,122,14)	CKSRYB105K10	
C 450	(A,161,90)	CCSSCH9R0D50		C 808	(A,108,19)	CKSRYB104K16	
C 451	(A,158,91)	CKSSYB104K10		C 809	(A,96,16)	CCSRCH221J50	
C 452	(A,158,94)	CKSRYB105K10		C 810	(A,96,13)	CCSRCH221J50	
				C 811	(A,104,20)	CKSSYB104K10	
C 453	(A,160,96)	CKSSYB104K10					
C 455	(A,159,97)	CKSRYB224K16		C 871	(A,153,62)	CKSSYB104K16	
C 456	(A,161,92)	CKSSYB472K25		C 873	(A,124,24)	CKSRYB104K16	
C 457	(A,161,93)	CKSSYB472K25		C 891	(A,52,138)	CKSRYB104K16	
C 459	(A,154,83) (A,B,C)	CCSSCH101J50		C 892	(A,34,139)	CKSRYB104K16	
	(A,154,83) (D)	CKSSYB102K50		C 893	(A,34,135)	CKSRYB102K50	
C 461	(A,145,104) (A,B,C)	CKSSYB104K10		C 894	(A,52,134)	CKSRYB102K50	
C 464	(A,162,98) 1 uF(D)	DCH1246		C 901	(A,133,124) 2 200 uF/16 V	CCH2040	
C 465	(A,142,106) (D)	CKSSYB103K16		C 912	(A,152,40)	CKSSYB102K50	
C 466	(A,137,79) (D)	CKSRYB105K10		C 913	(A,131,43)	CKSSYB102K50	
C 467	(A,150,81) (D)	CKSSYB104K10		C 914	(A,156,56)	XCEAT102M16	
C 468	(A,142,79) (D)	CKSRYB105K10		C 915	(A,132,42)	CKSRYB104K16	
C 531	(A,91,93)	CKSSYB104K10		C 916	(A,147,43) 4.7 uF	CCG1201	
C 532	(A,93,93)	CKSSYB104K10		C 917	(A,145,46)	CKSSYB102K50	
C 551	(A,13,121)	XCEVW221M16		C 919	(A,151,42) 4.7 uF	CCG1201	
C 552	(A,13,107)	CKSRYB105K16		C 921	(A,135,42) 4.7 uF	CCG1201	
C 553	(A,15,110)	CKSSYB103K16		C 923	(A,159,41) 4.7 uF	CCG1201	
C 555	(A,25,112)	CKSSYB682K25		C 926	(A,140,44) 4.7 uF	CCG1201	
C 556	(A,32,120)	CEVQW221M6R3		C 927	(A,139,42)	CKSSYB102K50	
C 557	(A,32,116)	CKSRYB105K10		C 941	(A,96,124)	CKSRYB104K16	
C 560	(A,108,21)	CKSRYB105K10		C 969	(A,135,113) 10 uF	CCG1192	
C 561	(A,102,24)	CKSRYB105K10		C 973	(A,98,53)	CCSSCH470J50	
C 564	(A,32,114) 4.7 uF	CCG1201					
C 565	(A,15,107) 4.7 uF	CCG1222					
C 601	(A,104,66)	CKSSYB104K10					
C 602	(A,109,65)	CKSSYB104K10					
C 603	(A,111,65)	CKSSYB104K10					
C 604	(A,112,65)	CKSSYB104K10					

Unit Number : (A)

Unit Number : (B,C,D)

Unit Name : Keyboard Unit

B
Unit Number : (A)
Unit Number : (B,C,D)
Unit Name : Keyboard Unit

Circuit Symbol and No.**Part No.****Circuit Symbol and No.****Part No.****MISCELLANEOUS**

A	IC 1801	(B,84,22) IC	PD6583A8
	IC 1941	(A,156,38) IR RC REC Module(B,C,D)	SIR8440B5
	Q 1951	(B,16,15) Transistor(B,C,D)	LTC014EEB
	Q 1952	(B,18,19) Transistor(A)	LTC014EEB
	D 1951	(A,64,21) White LED	SWBA05(FI231719)

R 1952	(B,59,22)	RS1/4SA221J
R 1956	(B,51,20) (B,C,D)	RS1/10SR152J

R 1958	(B,28,7) (B,C,D)	RS1/10SR821J
R 1960	(B,20,30) (B,C,D)	RS1/10SR152J
R 1962	(B,88,10) (B,C,D)	RS1/10SR152J
R 1964	(B,57,12) (B,C,D)	RS1/10SR152J
R 1966	(B,141,19) (B,C,D)	RS1/10SR152J

R 1968	(B,17,31) (B,C,D)	RS1/10SR472J
R 1969	(B,21,11) (B,C,D)	RS1/10SR682J
R 1972	(B,21,13) (B,C,D)	RS1/10SR0R0J
R 1973	(B,18,17) (A)	RS1/10SR0R0J
R 1975	(B,13,19) (A)	RS1/10SR472J

R 1977	(B,48,13) (A)	RS1/8SQ102J
R 1980	(B,18,23) (A)	RS1/10SR392J
R 1981	(B,68,10) (A)	RS1/8SQ122J
R 1983	(B,51,13) (A)	RS1/8SQ821J
R 1985	(B,143,18) (A)	RS1/8SQ821J

R 1987	(B,55,21) (A)	RS1/4SA122J
R 1991	(B,51,8) (B,C,D)	RS1/10SR0R0J
R 1996	(B,59,9) (A)	RS1/10SR0R0J

CAPACITORS

C 1806	(B,67,23)	CKSRYB104K16
C 1807	(B,70,21)	CKSRYB105K10
C 1911	(B,147,21)	CKSRYB104K16
C 1912	(B,144,22)	CKSRYB104K16
C 1941	(B,136,29) 10 uF(B,C,D)	CCG1192

**Unit Number : QWM3750****Unit Name : BT Unit****MISCELLANEOUS**

IC 21	(A,8,48) Regulator IC	S-1172B18-E6
IC 22	(A,21,46) IC	S-1206B33-U3
CN21	(A,34,27) Connector	CKS6346
CN23	(A,42,44) Connector	CKS3857

RESISTORS

R 28	(A,42,31)	RS1/10SR222J
R 29	(A,30,41)	RS1/10SR102J
R 30	(A,30,37)	RS1/10SR102J
R 38	(A,42,17)	RS1/10SR0R0J
R 39	(A,41,23)	RS1/10SR221J

R 40	(A,40,23)	RS1/10SR221J
R 41	(A,38,23)	RS1/10SR221J

CAPACITORS

C 23	(A,24,40)	XCEVW221M4
C 24	(A,7,44)	CKSRYB105K10
C 26	(A,27,48) 10 uF	CCG1192
C 29	(A,17,45)	CKSRYB105K10
C 33	(A,9,54) 10 uF	CCG1192

C 34	(A,42,30)	CKSRYB105K10
C 36	(A,32,40)	CKSRYB104K16
C 38	(A,15,46) 10 uF	CCG1192
C 39	(A,6,42) 10 uF	CCG1192

D 1953	(A,52,19) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1954	(A,49,11) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1955	(A,51,30) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1956	(A,66,7) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1957	(A,73,7) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1958	(A,89,6) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1959	(A,100,6) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1960	(A,111,6) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1961	(A,122,6) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1962	(A,133,6) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1963	(A,144,6) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1964	(A,14,32) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1965	(A,10,11) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1966	(A,12,21) Blue LED (B,C,D)	FC-F1608BK-470H5
D 1968	(A,9,21) LED(Red) (A)	SML-D12V8W(PQ)
D 1969	(A,48,11) LED(Red) (A)	SML-D12V8W(PQ)
D 1970	(A,50,30) LED(Red) (A)	SML-D12V8W(PQ)
D 1971	(A,12,32) LED(Red) (A)	SML-D12V8W(PQ)
D 1972	(A,11,11) LED(Red) (A)	SML-D12V8W(PQ)
D 1973	(A,73,5) LED(Red) (A)	SML-D12V8W(PQ)
D 1974	(A,66,5) LED(Red) (A)	SML-D12V8W(PQ)
D 1975	(A,112,6) LED(Red) (A)	SML-D12V8W(PQ)
D 1976	(A,102,6) LED(Red) (A)	SML-D12V8W(PQ)
D 1977	(A,91,6) LED(Red) (A)	SML-D12V8W(PQ)
D 1978	(A,145,6) LED(Red) (A)	SML-D12V8W(PQ)
D 1979	(A,134,6) LED(Red) (A)	SML-D12V8W(PQ)
D 1980	(A,123,6) LED(Red) (A)	SML-D12V8W(PQ)
D 1981	(A,53,19) LED(Red) (A)	SML-D12V8W(PQ)
L 1921	(B,130,10) Inductor	CTF1389
L 1922	(B,129,13) Inductor	CTF1389
L 1923	(B,131,6) Inductor	CTF1389
X 1801	(B,70,24) Ceramic Resonator 5.00 MHz	CSS1547
S 1839	(A,31,19) Encoder(MULTI-CONTROL)	CSD1168
CN1911	(A,155,24) Connector	CKS6443
CN1931	(B,108,9) Connector	CKS6451
JA 1921	(A,155,10) Jack	CKN1090
V 1801	(A,141,32) Segment LCD	CAW2024

RESISTORS

R 1801	(B,89,13)	RS1/10SR473J
R 1802	(B,72,19)	RS1/10SR473J
R 1803	(B,75,23)	RS1/10SR222J
R 1805	(B,58,28)	RS1/10SR473J
R 1806	(B,60,29)	RS1/10SR473J
R 1807	(B,60,30)	RS1/10SR473J
R 1808	(B,60,32)	RS1/10SR473J
R 1823	(B,49,27)	RS1/10SR273J
R 1931	(B,45,17)	RS1/10SR222J
R 1932	(B,45,13)	RS1/10SR222J
R 1941	(B,128,24) (A)	RS1/10SR473J
R 1944	(B,132,26) (B,C,D)	RS1/10SR101J
R 1951	(B,59,20)	RS1/4SA221J