

Pioneer

Service Manual

ORDER NO.
RRV4228

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-S500-K

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
VSX-S500-K	SYXCN8	AC 220 V to 230 V	
VSX-S500-K	DLXCN	AC 220 V to 240 V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
VSX-S300-K/SYXCN8	RRV4197	

For SPECIFICATIONS and PANEL FACILITIES, refer to the operating instructions.

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

● The Δ 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.

● Screws adjacent to ∇ mark on 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.)

● Nos. indicate the pages and Nos. in the service manual for the base model.

● When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω $\rightarrow$ 56 x 10¹ $\rightarrow$ 561 RD1/4PU **5 6 1** J

47k Ω $\rightarrow$ 47 x 10³ $\rightarrow$ 473 RD1/4PU **4 7 3** J

0.5 Ω $\rightarrow$ R50 RN2H **R 5 0** K

1 Ω $\rightarrow$ 1R0 RS1P **1 R 0** K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω $\rightarrow$ 562 x 10¹ $\rightarrow$ 5621 RN1/4PC **5 6 2 1** F

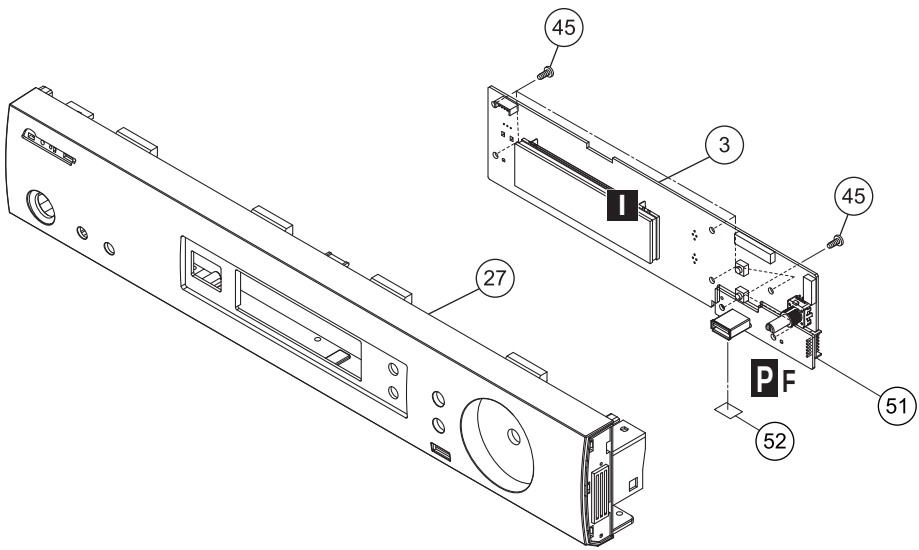
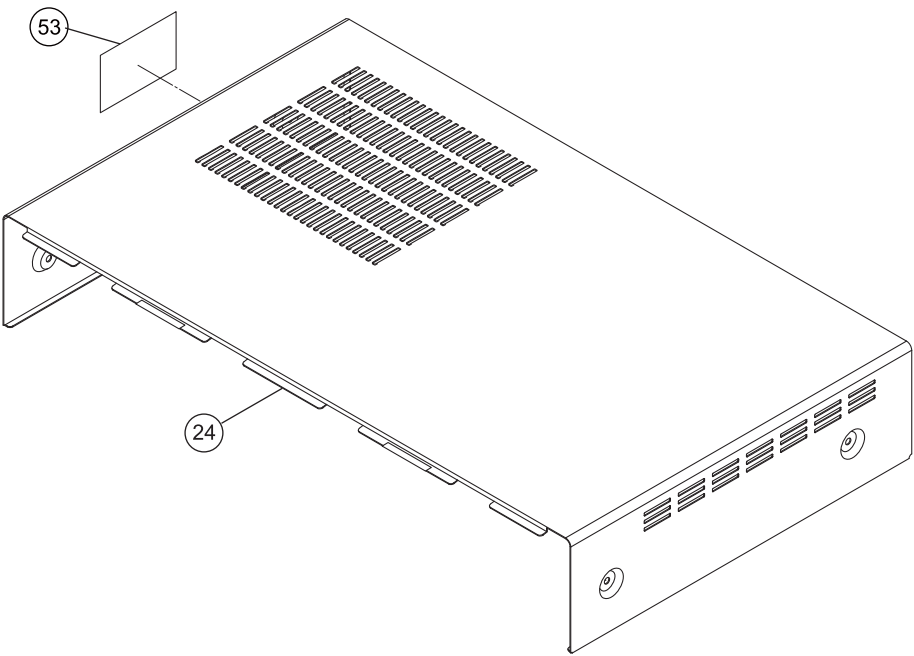
CONTRAST TABLE

VSX-S300-K/SYXCN8, VSX-S500-K/SYXCN8 and VSX-S500-K/DLXCN are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-S300-K/SYXCN8	VSX-S500-K/SYXCN8	VSX-S500-K/DLXCN	Remarks
NSP	P48-1	PCB ASSEMBLIES				No. 51
		1..PCB TTL Assy D-AMP	7025HK1022011-IL	7025HK1023011-IL	7025HK1023011-IL	
		2..D-AMP Assy	7028070661020-IL	7028070661010-IL	7028070661010-IL	
		2..USB Assy	Not used	7028070662010-IL	7028070662010-IL	
NSP	P48-3 P48-4 P48-5	1..PCB TTL Assy FRONT	7025HK1022014-IL	7025HK1023014-IL	7025HK1023014-IL	
		2..FRONT Assy	7028070651020-IL	7028070651010-IL	7028070651010-IL	
		2..POWER Assy	7028070652020-IL	7028070652010-IL	7028070652010-IL	
		2..MIC Assy	7028070653020-IL	7028070653010-IL	7028070653010-IL	
NSP	P48-6	1..PCB TTL Assy MAIN	7025HK1022040-IL	7025HK1023030-IL	7025HK1023010-IL	
		2..MAIN Assy	7028070671070-IL	7028070671030-IL	7028070671010-IL	
NSP	P48-10	1..PCB TTL Assy TUNER	7025HK1022043-IL	7025HK1023033-IL	7025HK1023013-IL	
		2..TUNER Assy	7028070691040-IL	7028070691020-IL	7028070691010-IL	
NSP	P48-13	1..PCB TTL Assy D-MAIN	7025HK1022046-IL	7025HK1023036-IL	7025HK1023036-IL	
		2..D-MAIN Assy	7028070684010-IL	7028070683010-IL	7028070683010-IL	
NSP	P45-6 P45-7 P45-8 P45-9 P45-13	PACKING SECTION				
		Operating Instructions	Not used	Not used	5707000005680-IL	
		Safety Brochure	5707000005850-IL	5707000005850-IL	Not used	
		Quick Start Guide	5707000005631-IL	5707000005640-IL	Not used	
		Warranty Card EU	ARY7127	ARY7127	Not used	
		Box , Gift	6007211890030-IL	6007211890060-IL	6007211890040-IL	
NSP	P45-15 P48-22 P48-27 P48-28 P48-29 P48-38 P48-38 P48-39 P48-39	Disk CD Manual	6517000000330-IL	6517000000341-IL	Not used	
		EXTERIOR SECTION				
		Speaker Sheet	1210211552000-IL	1210211542000-IL	1210211542000-IL	
		Front Panel	3067215231100-IL	3067215231000-IL	3067215231000-IL	
		Back Chassis	3207213916120-IL	3207213916020-IL	3207213916000-IL	
		Foot	4000210661000-IL	4007210661000-IL	4007210661000-IL	
		Knob	5080212461000-IL	Not used	Not used	
		Knob Assy S500SY	Not used	5088212508000-IL	5088212508000-IL	
		Button	5090213741100-IL	Not used	Not used	
		Standby Button Clear	Not used	5098214551000-IL	5098214551000-IL	
		Cushion	Not used	4050213865000-IL	4050213865000-IL	
		License Label S500	Not used	5507000007530-IL	5507000007530-IL	

Notes : The numbers in the remarks column correspond to the numbers on the "EXPLODED VIEWS".

For PCB ASSEMBLIES, Refer to "CONTRAST OF PCB ASSEMBLIES", "PCB PARTS LIST", "2. SCHEMATIC DIAGRAM", and "3. PCB CONNECTION DIAGRAM".



CONTRAST OF PCB ASSEMBLIES

A F TUNER ASSY

A 7028070691040-IL, 7028070691020-IL and 7028070691010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028070691040-IL	7028070691020-IL	7028070691010-IL	Remarks
	IC129	Not used	BD2226G	BD2226G	
	IC130 REGULATOR IC	Not used	S-1170B50UC-OUJ	S-1170B50UC-OUJ	
	JA150 CN,PLUG CONTACT	Not used	G480040040020-IL	G480040040020-IL	
	CN124 CN,WAFER	Not used	L109012511510-IL	L109012511510-IL	
	601 TUNER,FM/AM	E903104100780-IL	E903104100780-IL	E903004100780-IL	

The mounting positions of the additional parts are described in the circuit diagram and PCB diagram of the parent manual.

B D F MAIN ASSY

B 7028070671070-IL, 7028070671030-IL and 7028070671010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028070671070-IL	7028070671030-IL	7028070671010-IL	Remarks
	IC108	Not used	BU4052BCF	BU4052BCF	
	IC110 MAIN Mi-Com	8952300000012-IL	8952300000051-IL	8952300000051-IL	
	Q160, Q161	Not used	Not used	J522104301210-IL	
	Q107	Not used	Not used	J520101411210-IL	
	X1002 CRYSTAL	Not used	Not used	E80014R318080-IL	

The mounting positions of the additional parts are described in the circuit diagram and PCB diagram of the parent manual.

C F F D-MAIN ASSY

C 7028070684010-IL and 7028070683010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028070684010-IL	7028070683010-IL	Remarks
NSP	IC1326	Not used	J080756000010-IL	
	IC1304	Not used	J126111710011-IL	
	IC9300	Not used	J126108618080-IL	
	IC1327	Not used	J040916100010-IL	
	IC1145, IC1147	Not used	J048030030010-IL	
	IC1328	Not used	J044341216430-IL	
	IC3011	Not used	J045495400010-IL	
NSP	IC1329	Not used	8952300000080-IL	
NSP	IC1331	Not used	J001441688310-IL	
	IC1312	Not used	TC7WHU04FU	
	IC1302	Not used	ADV7181CBSTZ-K	
	IC1311	Not used	ABT1015-K	
	IC1316 SUB Mi-Com	8952300000021-IL	8952300000060-IL	
	Q1319, Q9120, Q9141	Not used	J522101411210-IL	
	Q9119, Q9139	Not used	J520101411210-IL	
	Q1318	Not used	J500124200010-IL	
	Q1	Not used	J520103S00210-IL	
	D1, D2	Not used	K067012020020-IL	
	D10	Not used	K005041480030-IL	
	D1362, D1367	Not used	1SR154-400	
	D9302	Not used	UDZS5R1	
	X1302 CRYSTAL CHIP	Not used	E80527R000050-IL	
	CN1304 CN,WAFER	Not used	L109012521510-IL	
	CN9001 CN.WAFER 2.0mm	Not used	L102526800500-IL	
	JA1308 JACK,MODULAR	Not used	G4060RJ450120-IL	
	C1458, C1596, C1686, C1766	Not used	D050221081200-IL	
	C1868	Not used	D050221081200-IL	
	C1459	Not used	D050471081200-IL	

The mounting positions of the additional parts are described in the circuit diagram and PCB diagram of the parent manual.

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H F D-AMP ASSY

7028070661020-IL and 7028070661010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028070661020-IL	7028070661010-IL	Remarks
	JA602 TER,BOARD PUSH 8P	G598801SA050Y-IL	G614108V1010M-IL	

I F FRONT ASSY

Although 7028070651020-IL and 7028070651010-IL are different in part number and they are NOT COMPATIBLE, they consist of the same service components.

J F POWER ASSY

7028070652020-IL and 7028070652010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028070652020-IL	7028070652010-IL	Remarks
	Q708	Not used	J522102371210-IL	
	D703 LED(BLUE)	Not used	SLR343BC4T	

The mounting positions of the additional parts are described in the circuit diagram and PCB diagram of the parent manual.

K F MIC ASSY

7028070653020-IL and 7028070653010-IL are constructed the same except for the following:

Mark	Symbol and Description	7028070653020-IL	7028070653010-IL	Remarks
	JA701, JA702 JACK,D3.5	G401PJ354H70Y-IL	G401PJ354H71Y-IL	

L F POWER TRANS ASSY

8208000920021-IL has no service parts.

PCB PARTS LIST

Mark No. Description Part No.

P F USB ASSY

SEMICONDUCTORS

IC 806	J126050000060-IL
D 7-9	K005041480030-IL
D 3603,3604	K067012020020-IL

MISCELLANEOUS

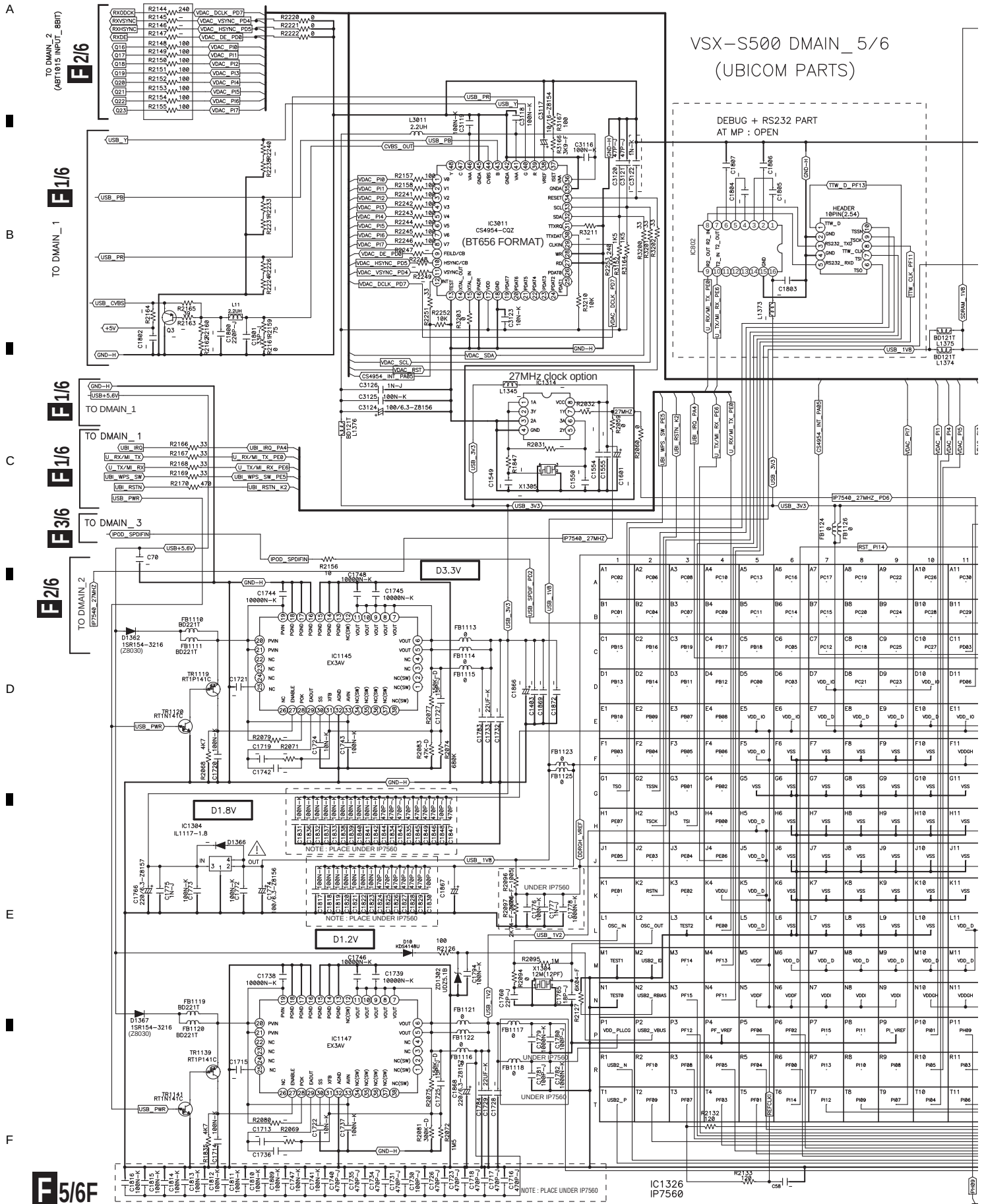
JA 3604 CN,PLUG CONTACT	G480040040040-IL
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CAPACITORS

C 5,3605	D050221081200-IL
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2. SCHEMATIC DIAGRAM

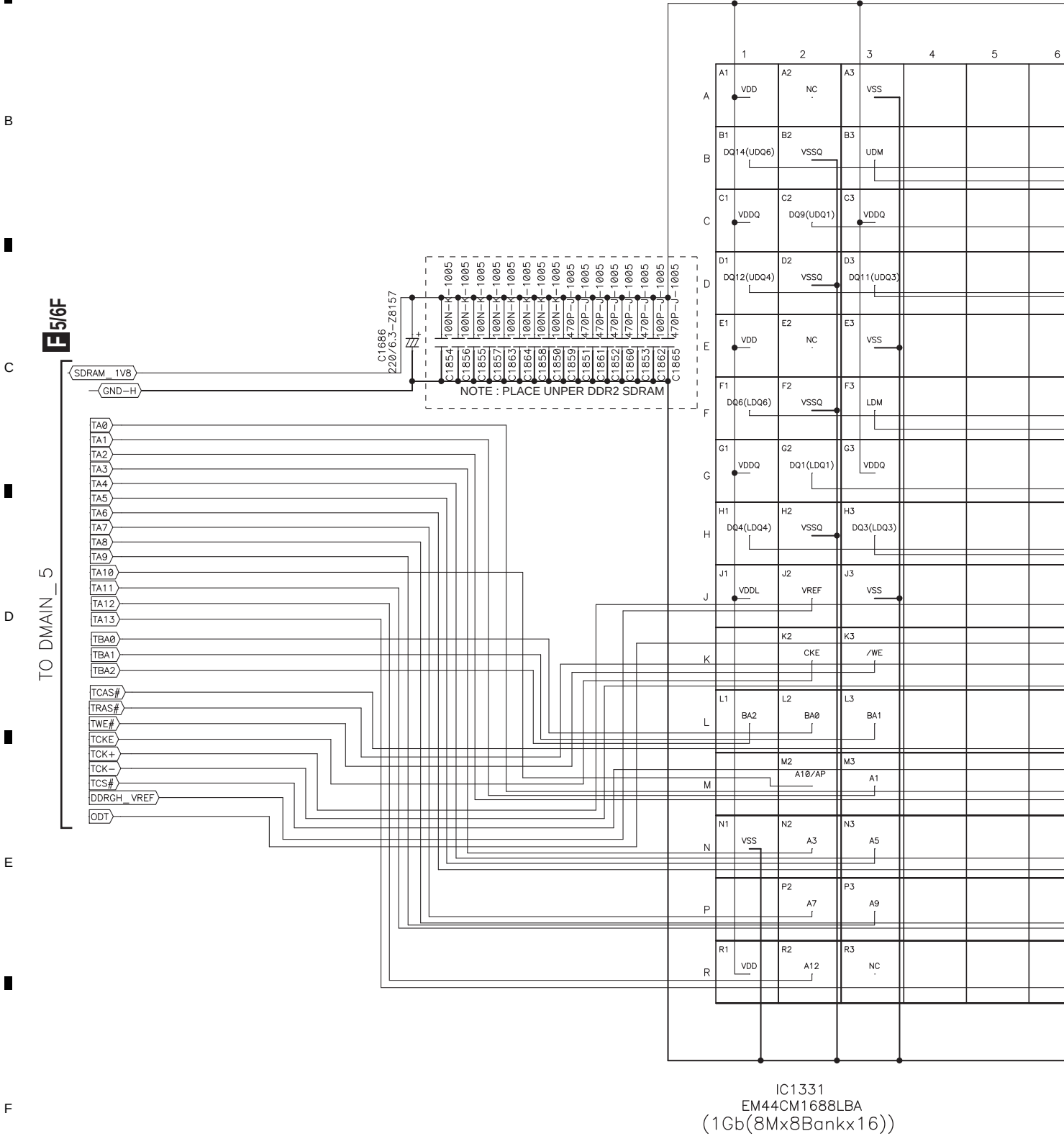
2.1 D-MAIN ASSY (5/6)



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F6/6F D-MAIN ASSY (7028070683010-IL)



VSX-S500 DMAIN_6/6 (DDR2 SDRAM PARTS)

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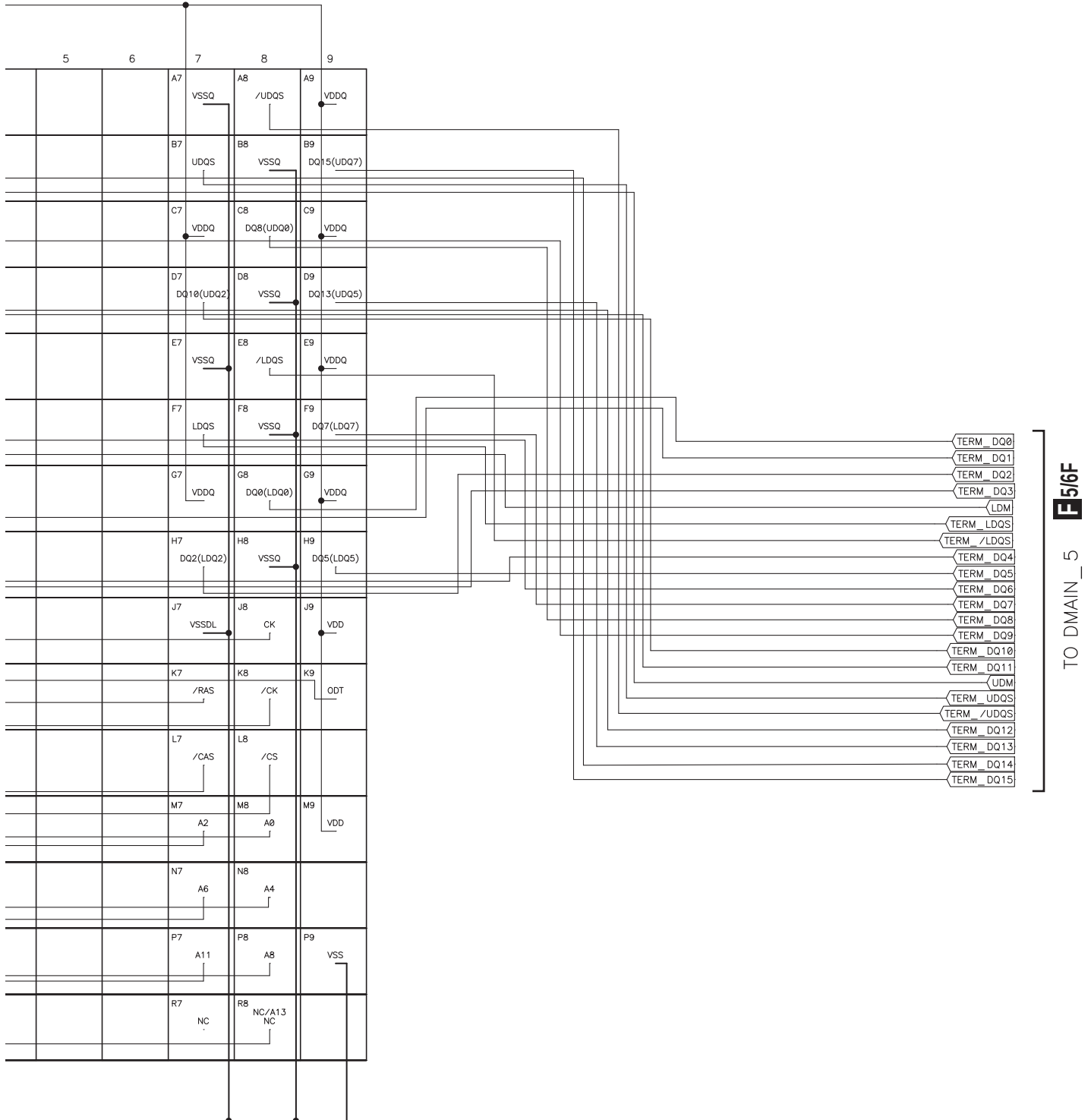
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C

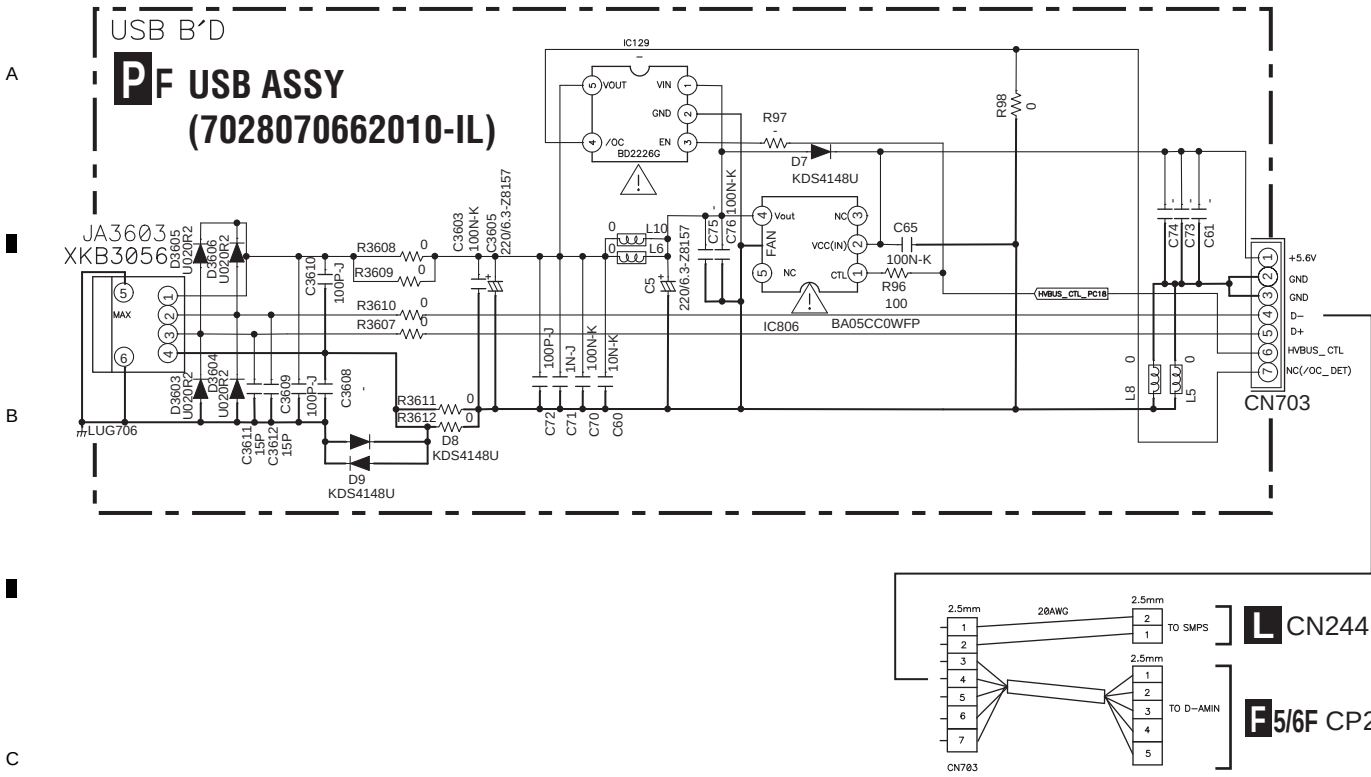
D

E

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2.3 USB ASSY

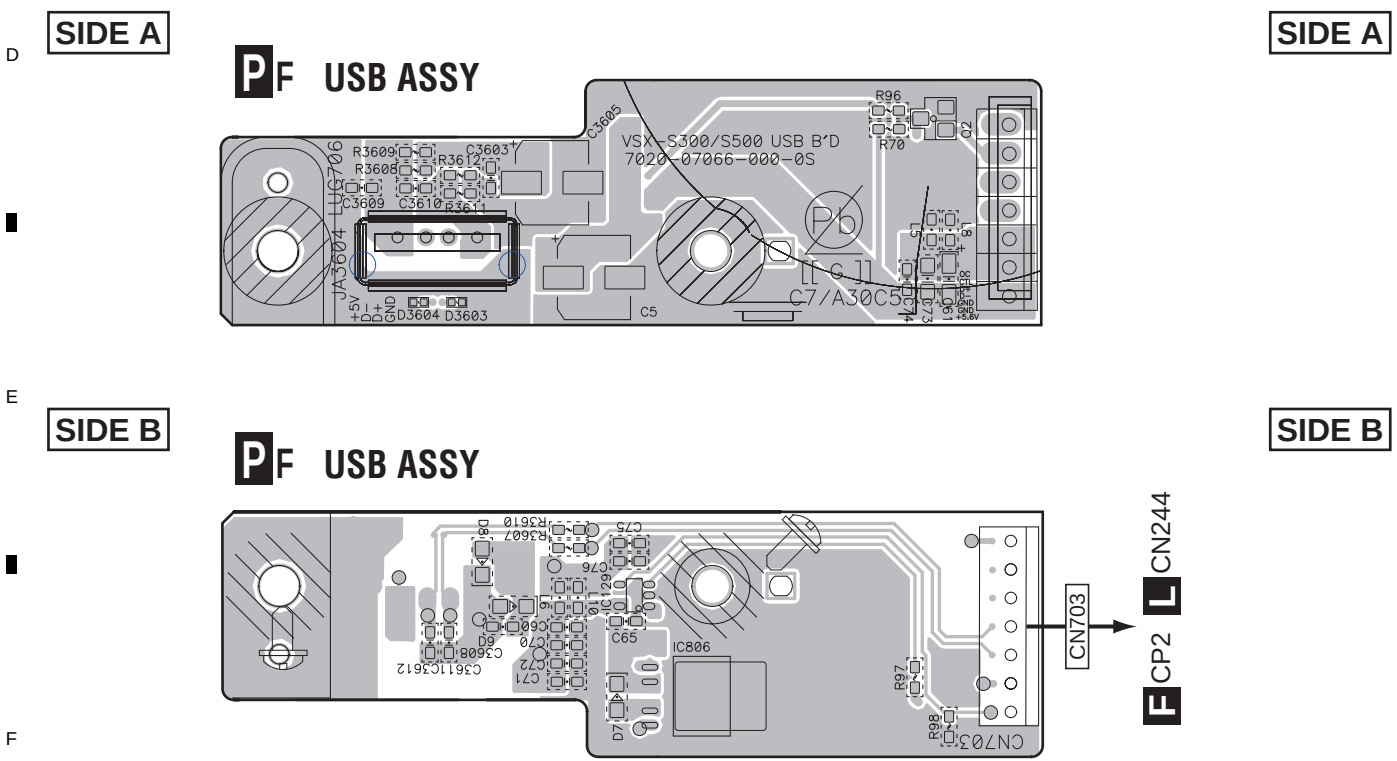


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3. PCB CONNECTION DIAGRAM

3.1 USB ASSY



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4. EACH SETTING AND ADJUSTMENT

4.1 UPDATING OF THE FIRMWARE

(4) How to Update the UBICOM firmware

[Preparation]

- (1) Copy only the "s500_v*_**.ub" file that was released into the root directory of the USB memory device.
Note: The asterisks stand for digits of a version number.
- (2) Connect the VIDEO output of this product to a TV so that you can easily recognize when rebooting is finished after updating is completed.

[How to Update]

	Character-string display section on the FL display	GUI
1. Shift the main unit to Standby mode then plug the USB memory device that contains the firmware file for updating into the main unit.		
2. During Standby mode, hold the INPUT SELECTOR button on the front panel of the main unit pressed for about 5 seconds then while still holding the button pressed, press the TV key on the remote control unit. The main unit is turned ON then shifted to Update (Special Booting) mode.		
3. While "PLEASE WAIT/CONNECTING" is displayed on the FL display, wait.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 PLEASE WAIT CONNECTING	
4. The firmware file for updating is loaded from the USB memory device then developed in the UBICOM. A message to the effect that updating is in progress will be displayed on the FL display and the GUI. When updating is finished, the UBICOM will be automatically rebooted. Let the unit do its work. It takes about 5 minutes for rebooting. Note: NEVER turn the unit OFF while updating is in progress. If you do, the unit cannot be recovered.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 UB I COM UPGRADE MODE OK 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 UB I COM UPGRADE FILE SEARCH 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 UB I COM UPGRADE FILE SEARCH OK 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 UB I COM UPGRADE UPGRADE 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 UB I COM UPGRADE COMPLETE	Programing device ••• Please do not use the device until it restarts!
5. Updating is completed when rebooting is finished, and the GUI menu is displayed.		
6. Check that the version of the firmware has been upgraded.		

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Note

If the main unit is turned OFF or if there is a power failure while upgrading is in progress, upgrading will fail. In such a case, follow the procedures described below.

[Preparation]

Change the filename of the firmware for updating from "s500_v*_*.ub" to "upgrade.ub."

B

[How to Update]

	Character-string display section on the FL display	GUI
1. Shift the main unit to Standby mode then plug the USB memory device that contains the firmware file for updating into the main unit.		No output
2. During Standby mode, hold the INPUT SELECTOR button on the front panel of the main unit pressed for about 5 seconds then while still holding the button pressed, press the TV key on the remote control unit. The main unit is turned ON then shifted to Update (Special Booting) mode.		
3. "PLEASE WAIT/CONNECTING" is displayed on the FL display. Although the same message continues to be displayed until upgrading is finished, upgrading progresses. Wait until the unit is automatically rebooted and the GUI menu is displayed. (About 4-5 minutes)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 PLEASE WAIT CONNECTING	
4. When rebooting is finished, upgrading is completed.		

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