harman/kardon

AVR75/85

Dolby Digital Audio/Video Receiver

TECHNICAL MANUAL

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A Harman International Company

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ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handing and semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.

4. Use only a anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical change sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together or your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

LEAKAGE TEST (FOR SERVICE ENGINEERS IN THE U.S.A.)

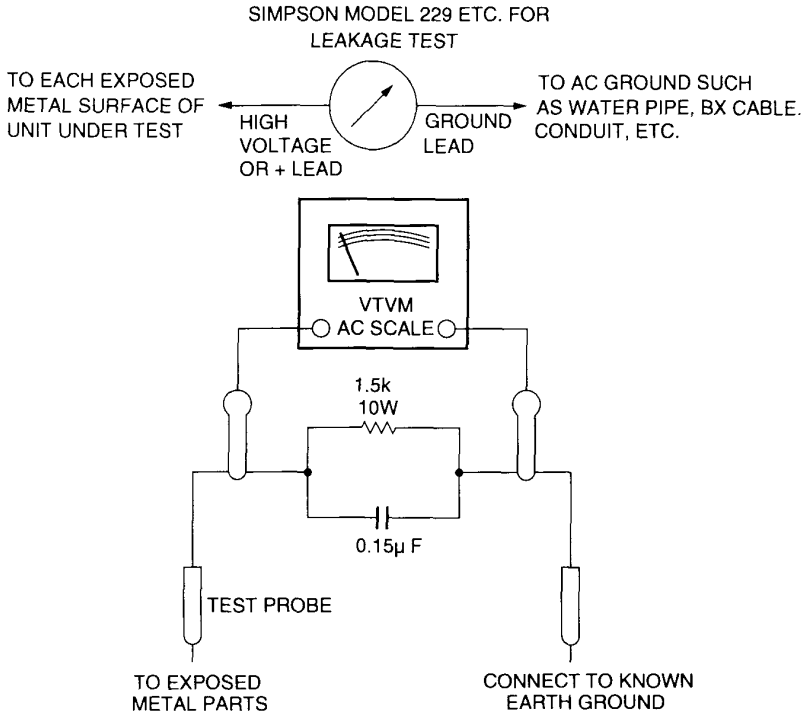
Before returning the unit to the user, preform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between parts in the unit.

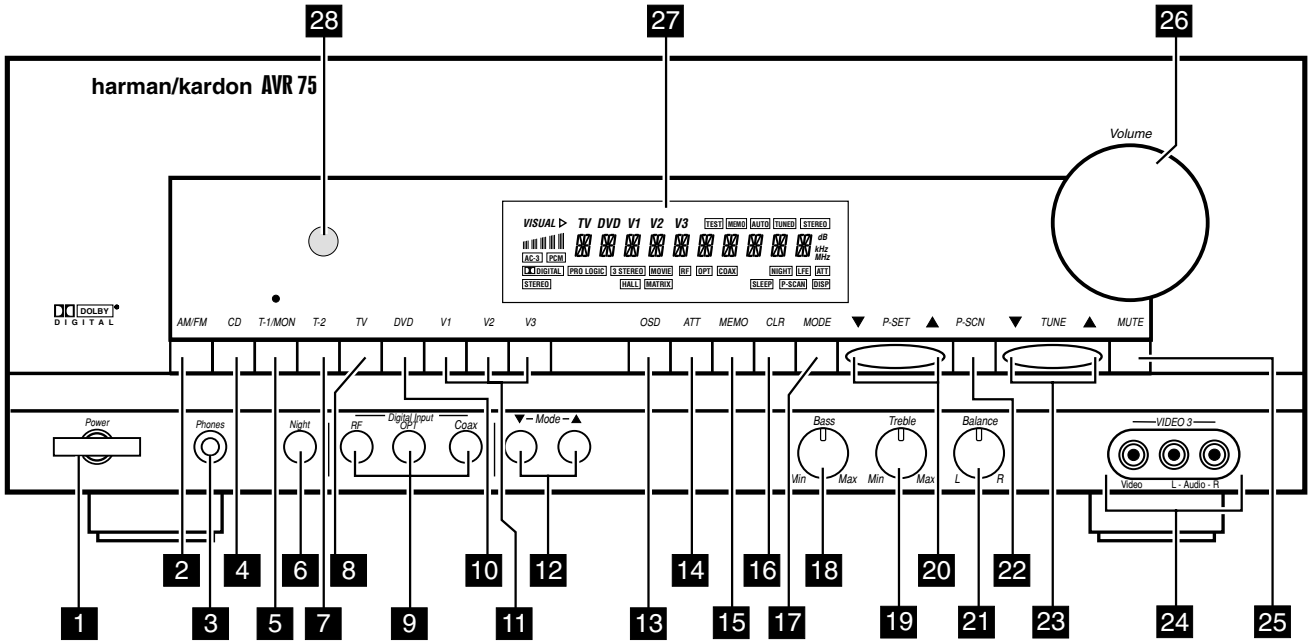
2. Be sure that any protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc. which were removed for servicing are properly reinstalled.

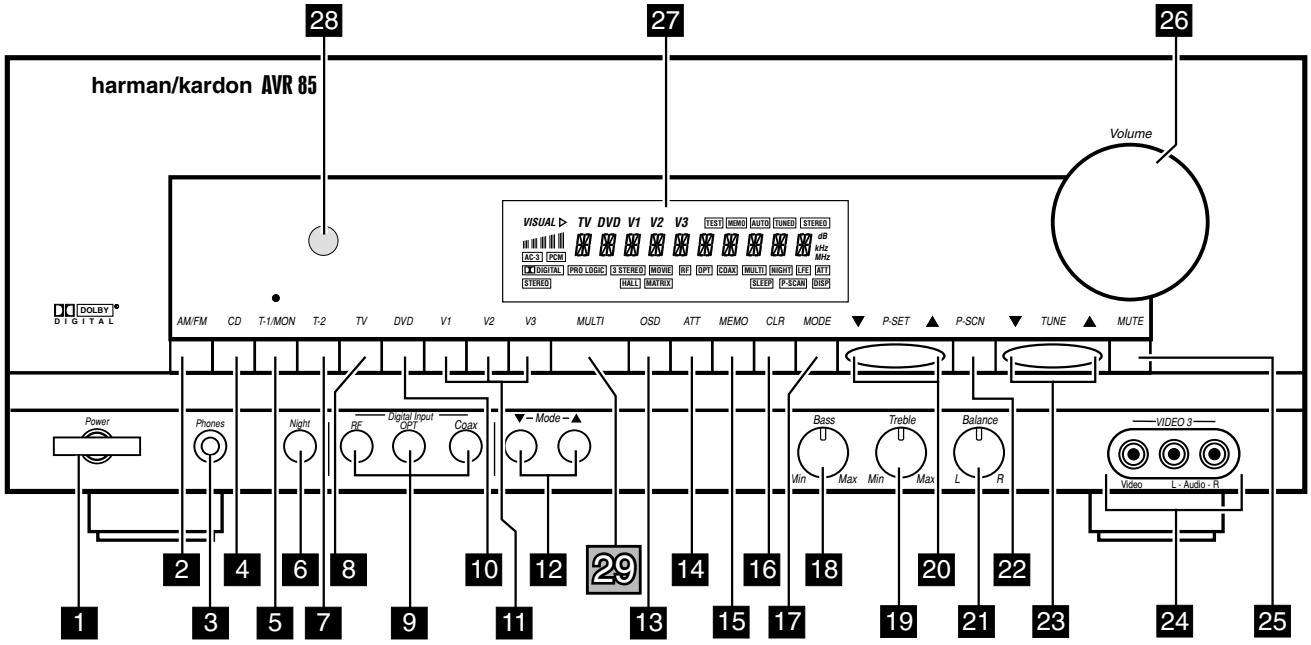
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows: Plug the power cord directly into a 120-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 Ohm, 10-watt resistor parallel by a 0.15 F capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 Ohms per volt, or higher sensitivity to measure the AC voltage drop across the resister. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.)

A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.



AVR75 & AVR85 FRONT PANEL CONTROLS





1. Power: Press this button once to turn the unit on and off. Once the unit is turned on, it may be turned off and then on again from the remote, if desired.

NOTE: When the remote is used to turn the unit off the LED surrounding the Power Switch will turn amber, indicating that the AVR75/85 is in a Standby mode. In this condition the unit is NOT disconnected from the AC main power supply.

2. AM/FM Tuner Selector: Press this button once to select the tuner. Press it again to switch between AM and FM.

3. Headphone Jack: Plug standard stereo headphones into this jack for private listening.

NOTE: When the headphones are in use the output to the speakers is muted and the surround mode is automatically switched to STEREO. When the headphones are removed from the jack, sound to the speakers is restored and the unit returns to the previous sound mode.

4. CD: Press this button to select the CD player.

5. Tape 1/Monitor: Press this button to select Tape One as the input source. A red LED above the button will illuminate to indicate that the Tape Monitor has been selected.

6. Night Mode: Press this button to activate the "Night" mode, preventing loud playback when the digital modes are in use.

7. Tape 2: Press this button to select tape 2 input.

8. TV Input: Press this button to select the source connected to the **TV Input (38)**.

9. Digital input Selectors: Press one of these buttons to select a digital input source. The digital audio source may be the same as, or different from, the analog audio of the selected video source.

10. DVD Input: Press this button to select the source connected to the **DVD Input (37)**. Note that the DVD or LV player's digital audio output is used, it must be selected separately using the **Digital Input Selectors (9)**.

11. Video Sources: Press any of these buttons to select a video input source.

12. Mode: Press these buttons to scroll up or down through the list of available surround modes.

13. OSD (On-Screen Display): Press this button to activate the Attenuation mode which cuts the analog input signal by 50% to compensate for high-level input sources.

14. ATT Attenuation Mode Select: Press this button to activate the Attenuation Mode which cuts the analog input signal by 50% to compensate for high-level input sources.

15. Memo: The memo button is used to enter stations to the tuner's preset memory in either the manual or automatic modes.

1**6. Clear:** The clear button is used to cancel tuning, memory input or when cleaning the unit's memories.

17. FM Mode: Press this button to select the tuning mode for FM stations.

18. Bass: This knob adjusts the tone of low-frequency sounds. Turn it to the right to boost bass frequencies or to the left to cut bass frequencies.

19. Treble: This knob adjusts the tone of high-frequency sounds. Turn it to the right to boost high frequencies or to the left to cut high frequencies.

20. P-Set: Press this button to manually scroll up or down through the FM or AM stations programmed into the receiver's preset memory.

21. Balance: This knob adjusts the balance between the front left and right speakers.

22. P-Scan: Press this button to automatically scan through the FM or AM stations preset into the receiver's memory. Press the button again to stop the scan when the tuner is at the desired station.

23. Tune: Press this button to manually scan up or down through the FM or AM bands.

24. Video 3 Input: Audio or Video sources connected to these jacks may be selected by pressing the **Video Source** button **(11)**.

25. Mute: Press this button to cut the output to the speakers. Press it again to return to the previous volume level.

26. Volume Control: Turn the knob clockwise to increase volume, counterclockwise to decrease the volume. Note that approximately two revolutions of the knob are required to go from no output to maximum volume.

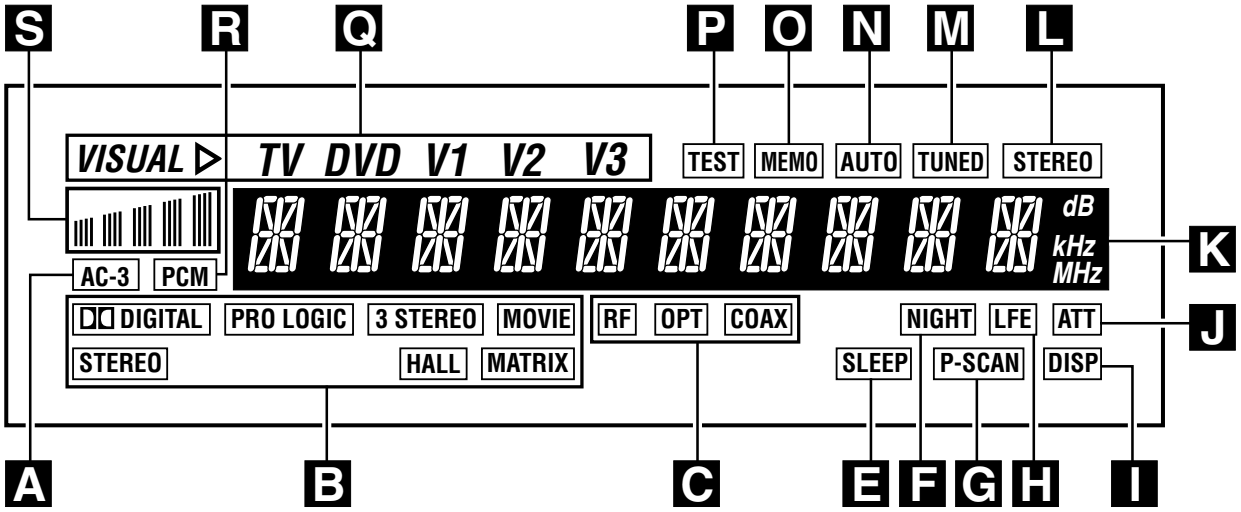
27. Information Display: This display delivers messages and status indications to help you operate the receiver. Refer to the separate diagram for complete explanation of the FL display.

28. Remote Sensor Window: The sensor behind this window receives infrared signals from the remote control. Aim the remote at this area and do not block or cover it unless an external remote sensor is installed.

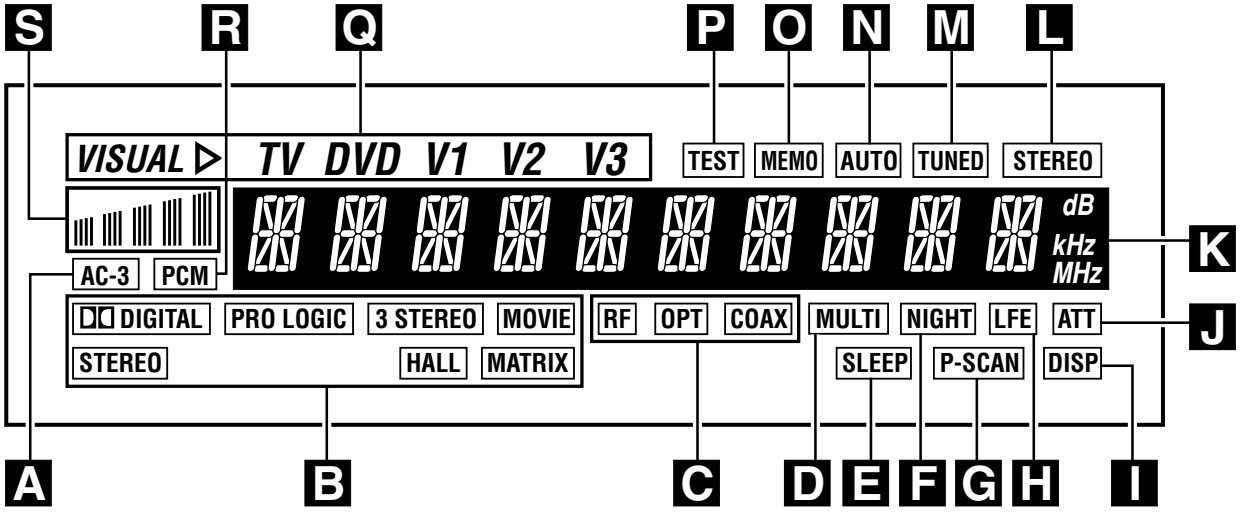
29. Multiroom Control: ***NOTE: this feature differentiates the AVR85 from the AVR75. The AVR75 does not have this feature.*** Press this button to turn the remote room feed On or Off. The MULTI indicator (D) will light or flash when the remote feed is On. Note that the remote feed will remain On after the main room power is turned Off until it is switched Off by pressing this button again.

AVR75 & AVR85 FRONT PANEL DISPLAY

AVR75 DISPLAY



AVR85 DISPLAY



A. AC-3 Indicator: This indicator illuminates when the AVR75 is decoding a Dolby Digital input source.

B. Surround Mode Status: These indicators display the currently selected surround mode.

C. Digital Mode Indicators: These indicators show which digital input is in use.

D. Multi: This indicator signifies that the AVR85 is sending a program source to a remote room location. Note that it may be illuminated even when the unit is "off" in the main listening room, signifying that operation continues at another location. When a remote command is being received via the **Multi IR connection (59)**, this indicator will flash. ***NOTE: this feature differentiates the AVR85 from the AVR75. The AVR75 does not have this feature.***

E. Sleep Indicator: This indicator lights when the AVR75/85 is in the Sleep mode.

F. Night Indicator: This indicator lights when the AVR75/85 is in Night mode, which prevents the AVR75/85 from loud playback when digital sources are in use.

G. P-Scan: This indicator flashes when the stations programmed into the tuner memory are being automatically reviewed.

H. LFE Indicator: This indicator will illuminate when the Low-Frequency Effects (LFE) option has been turned on through the controls in SETUP MENU 3.

I. DISP: This indicator lights when the FL display has been turned off using the Display button (16) to remind you that the unit is still turned on.

J. ATT Indicator: This indicator lights when the Attenuation function has been engaged to cut the input from analog sources by approximately 50%.

K. Main Information Display: This ten-digit display shows messages relating to the status, input source, surround mode, tuner, volume level or other aspects of unit's operation.

L. Stereo: This indicator lights when an FM station is broadcasting in stereo.

M. Tuned: This indicator lights when an AM or FM station is properly tuned and locked.

N. Auto: This indicator signifies that the Automatic Tuning mode is in use for FM broadcasts.

O. Memo: This indicator flashes when the **Memo** button is pressed when entering presets and other information into the tuner's memory.

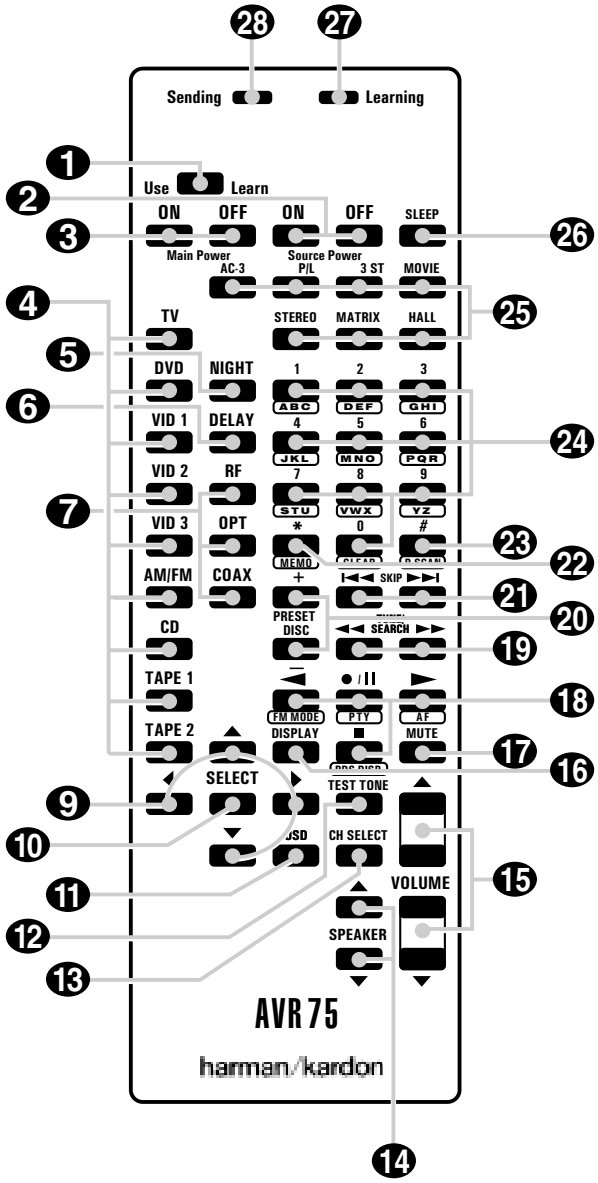
P. Test: This indicator flashes when the output levels are being set using the built-in test signal generator.

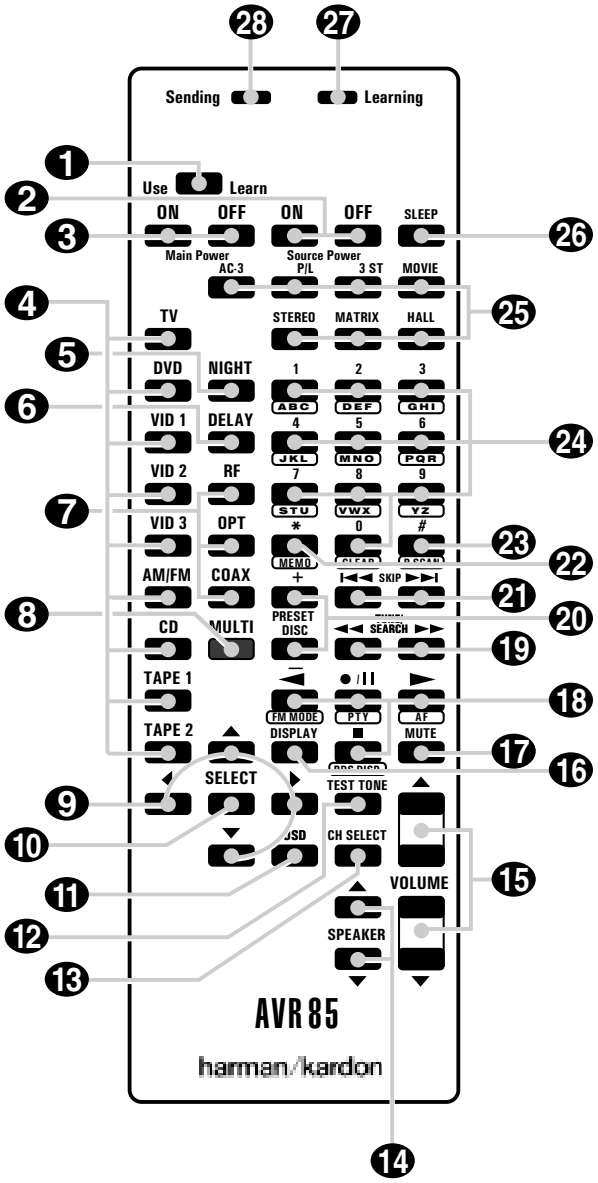
Q. "Visual" Indicator: These indicators display which input source is being fed to the video monitor output.

R. PCM Indicator: This indicator illuminates to show that a standard PCM (S/P-DIF) digital audio signal is being decoded by the digital-to-analog converter.

S. Signal Level Indication: This is a visual indication of the the strength of a radio station signal. The more bars visible, the stronger the station.

AVR75 & AVR85 REMOTE CONTROL





1. Use/Learn
2. Source Power
3. Main Power
4. Source Selection
5. Night Mode
6. Delay
7. Digital Audio Input Selectors
8. Multiroom Control
9. Menu Controls
10. Select
11. OSD
12. Test Tone
13. Channel Select
14. Speaker Level Adjust
15. Main Volume
16. Display
17. Mute
18. Transport Controls
19. Tune/Search and Fast Forward
20. Preset/Disc
21. Channel/Skip
22. Memo
23. P-Scan
24. Number Keys
25. Surround Mode Selection
26. Sleep
27. Learn LED
28. Sending LED

AVR75 & AVR85 REMOTE CONTROL INFORMATION ...continued

1. Use/Learn: This switch selects the operation mode of the remote control. Slide it to the left for normal operation. Slide it to the right when the remote is being programmed.

2. Source Power: When power on/off commands have been programmed into the remote's memory, press these buttons to control power for the last source device selected.

3. Main Power: Press these buttons to turn the unit on or off (to Standby Mode).

4. Source Selection: Pressing one of these buttons selects the input source that will be listened to through the receiver. When a source is selected the remote's transport and numeric number buttons will also transmit the commands needed to control that machine.

5. Night Mode: Press this button to activate the "Night" mode, preventing loud playback when the digital modes are in use without altering the dynamic range of the output signal.

6. Delay: Press this button to change the delay for the surround channels when the Surround Mode Menu is on the screen.

7. Digital Audio Input Selectors: Press one of these buttons to select a digital input source. The digital audio source may be the same as, or different analog audio of the selected video source.

8. Multiroom Control: Press this button to turn the remote room feed on or off. The **Multi** indicator D will light or flash when the remote feed is on. Note that the remote zone feed will remain on after the main room power is turned off until it is switched off by pressing this button again.

9. Menu Controls: These buttons control the action of the cursor or the selection of menu items when the receiver is being configured using the setup menus.

10. Select: This button enters settings to the receiver's memory during system configuration.

11. OSD: Press this button to activate the on-screen menu system.

12. Test Tone: Press this button to begin calibration of the output level for each channel. A test signal will immediately be heard from the left front speaker and the **Test** indicator P will flash.

13. Channel Select: Press this button to view a status report of the output level for each channel. When the Test Tone is audible and the system output levels are being set, pressing this button will advance the channel being adjusted in a clockwise direction to the next channel.

14. Speaker Level Adjust: When setting the system output levels, press these buttons to increase or decrease the output level.

15. Main Volume: These buttons control the unit's volume. Note that all channels are controlled simultaneously.

16. Display: Press this button to turn off all displays and indicators in the Information Display except for a small **Disp** indication in the lower right corner of the display I. Press the button again to turn the display back on.

17. Mute: Press this button to temporarily cut the audio output of the receiver. Press it again to return to the previous volume level.

18. Transport Controls: These buttons may be programmed to control the tape or disc motion of the last playback source selected with the **Source Selection** buttons ❹. Use them as you would the Play, Stop, Pause, Record, Reverse Play and Forward Play buttons on any **VCR**, **CD**, cassette, **DVD** or **LD** remote control. The Reverse Play button ◄ also operates the FM Mode function of the AVR75/85's tuner.

NOTE: The ●/II , ► and ■ buttons are also used to control the **PTY**, **AF** and **RDS Display** functions of the tuner.

19. Tune/Search & Fast Forward: These buttons may be programmed to have multiple functions, which vary according to the input device selected.

a. When the **TUNER** has been selected, these buttons are used to tune stations.

b. When **CD**, **Tape**, **DVD**, **LD** or **VCR** is the input source, these buttons act as the Fast Scan Forward ►► or Fast Scan Reverse ◄◄ controls.

20. Preset/Disc: These buttons have multiple functions, which may vary according to the input device codes programmed.

a. When the **TUNER** has been selected, these buttons will scroll up ►I or down I◄ through the stations that have been programmed in the preset memory.

b. When **CD** is selected and the unit is a CD changer, these buttons will change to the next disc + or previous disc −.

c. When **Tape 1** or **Tape 2** is the input source, and the tape machine is a compatible Harman Kardon dual cassette deck, these buttons will switch between the "A" and "B" sides.

21. Channel/Skip: These buttons have multiple functions, which vary according to the input device selected and the codes programmed from another remote.

a. When **T**V, **Vid 1** or **Vid 2** are selected, they may function as the channel up ►I or channel down I◄ tuning buttons when programmed with the codes from another unit's remote.

b. When **CD** is selected these buttons act as forward and reverse "Skip" buttons to move to the next track or chapter on the disc.

c. When a compatible Harman Kardon cassette player has been selected as **Tape 1** or **Tape** 2, these buttons move the tape forward ►I or backwards I◄ to the next selection using the Music Scan feature.

22. Memo: The memo button is used to enter stations to the tuner's preset memory in either the manual or automatic modes. It is also used in the process of clearing the memory. This button also performs the functions of the "✱" symbol on compatible equipment.

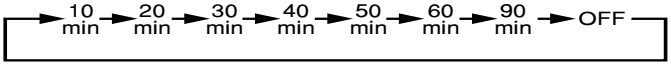
23. P-Scan: Press this button to automatically scan through the stations preset into the tuner memory. Press the button again to end the scan when the tuner stops at the desired station. This button also performs the functions of the "#" symbol on compatible equipment.

24. Number Keys: These buttons serve as a ten button numeric keypad to enter tuner preset positions. They are also to be used to select channel numbers when **TV** has been selected on the remote, or to select track numbers on a **CD**, **DVD** or **LD** player, depending on how the remote has been programmed. The letters below the buttons are used to enter information for tuner station names.

NOTE: The **0** button has a dual function. It also serves as the **CLEAR** button for use in programming the tuner or clearing the system memory.

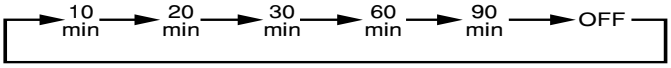
25. Surround Mode Selection: Press one of these buttons to select a surround mode for the current listening session.

26. Sleep (AVR75): Press this button when the Sleep timer has previously been activated to view the time remaining before the unit turns off to the Standby Mode. To activate the Sleep function, first put the unit in the Tuner Mode by pressing the **AM/FM** button ❹ 2. Next, press the **Sleep** button 26 and note that the **Sleep** and **Memo** indicators E O will blink. Within that blinking time press the **Memo** button ㉒ 15 and then press the **Sleep** button again to set the sleep time in the following order:



When the desired time is shown in the display, press the **Memo** button ㉒ 15 to enter the time. The unit will go into the Standby Mode when the time entered has elapsed.

26. Sleep (AVR85): Pressing this button when the Sleep timer has previously been activated allows you to view the time remaining before the timer function turns the unit off. When the remote is in the **AM/FM** mode ❹, the Sleep function may also be changed or set by pressing this button so that the **Sleep** and **Memo** indicators E O blink (timer not yet set) or Sleep time is indicated (timer set already). Within that time press the **Memo** button ㉒ 15 so that both indicators blink slowly. Now press the **Sleep** button 26 again to set the desired sleep time in the following order:

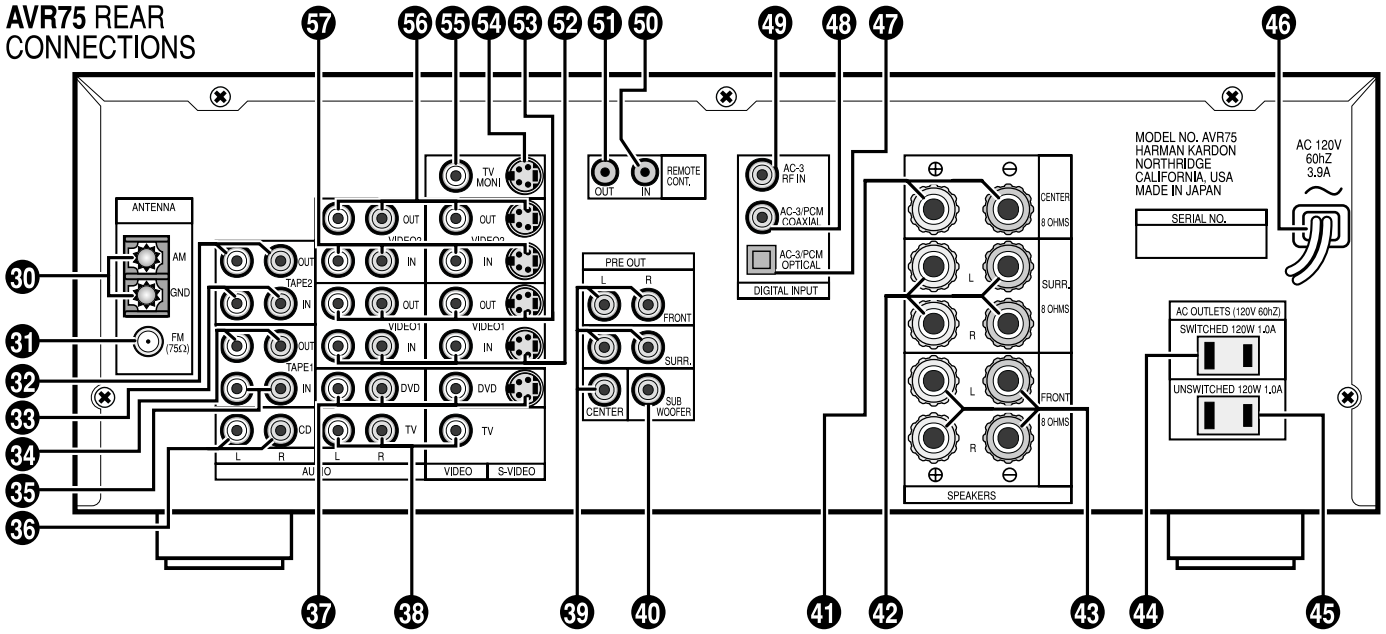


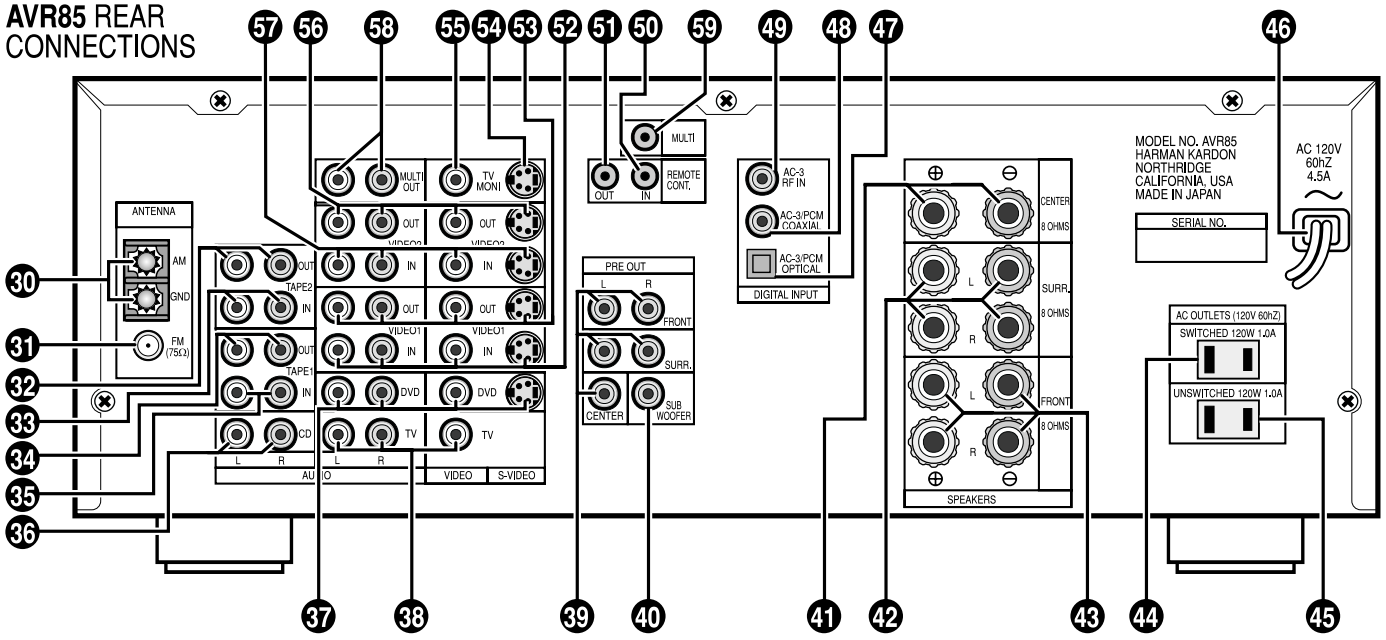
When the desired time is shown in the display, press the **Memo** button ㉒ 15 to enter the time. The unit will go into the Standby Mode when the time entered has elapsed.

27. Learn LED: This indicator will illuminate when a button on the remote is being programmed with signals from another remote during the "learning" mode. The light will go out when the signal is received and memorized.

28. Sending LED: This indicator should flash any time a button is pressed to confirm that a command is being sent to the receiver or another unit. If the light is dim or does not illuminate when a button is pressed the batteries in the remote should be replaced.

AVR75 & AVR85 REAR PANEL CONNECTIONS





30. AM Antenna: Connect the AM loop antenna supplied with the receiver to these terminals. If an external AM antenna is used, make connections to the **AM** and **GND** terminals in accordance with the instructions supplied with the antenna.

31. FM Antenna: Connect an indoor or external FM antenna to this terminal.

32. Tape 2 Out: Connect these jacks to the RECORD/INPUT jacks of a second audio recorder.

33. Tape 2 In: Connect these jacks to the PLAY/OUT jacks of a second audio recorder.

34. Tape 1 Out: Connect these jacks to the RECORD/INPUT jacks of an audio recorder.

35. Tape 1 In: Connect these jacks to the PLAY/OUT jacks of an audio recorder.

36. CD IN: Connect these jacks to the output of a compact disk player or CD changer.

37. DVD Inputs: Connect the analog audio outputs and composite or S-Video output of a DVD or LV player to these jacks.

38. TV Inputs: Connect these jacks to the audio and video outputs of a TV Tuner, Cable TV converter box, satellite receiver, or any other audio/video source.

39. Pre-Outs: If external power amplifiers are used for any channels, connect them to these jacks.

40. Subwoofer Pre-Out: Connect this jack to the line level input of a powered subwoofer. If an external subwoofer amplifier is used, connect this jack to the subwoofer amplifier input.

41. Center: Connect these terminals to the center speaker.

42. Surround: Connect these terminals to the surround speakers.

43. Front: Connect these terminals to the front speakers.

44. Switched AC Outlet: This outlet may be used to power any device that you any wish to have on when the unit is turned on.

45. Unswitched AC Outlet: This outlet, may be used to power any AC device. The power will remain on at this outlet regardless of whether the AVR75/85 is on or off.

NOTE: The power consumption of the device plugged into each of these outlets should not exceed 120 watts.

46. Power Cable: Connect the AC plug to a non-switched AC wall output.

47. AC-3/PCM Optical Input: Connect the optical digital output from a DVD player, HDTV receiver, LV player or CD player to this jack. The signal may be either a Dolby Digital (AC-3) signal or a standard PCM digital source.

48. AC-3/PCM Coaxial Input: Connect the coax digital output from a DVD player, HDTV receiver, LV player or CD player to this jack. The signal may be either a Dolby Digital (AC-3) signal or a standard PCM digital source.

49. AC-3 RF Input: Connect the AC-3 RF output of an LV player equipped for digital audio to this jack.

NOTE: Do not connect standard analog sources to these jacks **(48)(49)**.

50. Remote IR In: If the AVR75/85's front panel IR sensor is blocked due to cabinet doors or other obstructions, an external IR sensor may be used. Connect the output of the sensor to this jack.

51. Remote IR Out: This connection permits the IR sensor in the receiver to serve other remote controlled devices. Connect this jack to the "IR IN" jack on Harman Kardon or other compatible equipment.

52. VCR 1 Inputs: Connect these jacks to the audio, video and S-Video PLAY/OUT jacks of a VCR.

53. VCR 1 Outputs: Connect these jacks to the audio, video and S-Video RECORD/IN jacks of a VCR.

54. TV Monitor S-Video Output: Connect this jack to the S-Video input of the TV monitor or video projector to view S-Video sources selected by the receiver's video switcher.

NOTE: Standard (composite) video and S-Video signals will appear only at their respective output. The AVR75/85 does not convert one video format to anther.

55. TV Monitor Video Output: Connect this jack to the standard (composite) video input of a TV monitor or video projector to view the on-screen menus and the output of any standard video source selected by the receiver's video switch.

56. VCR 2 Outputs: Connect these jacks to the audio, video and S-Video RECORD/IN jacks of a second VCR.

57. VCR 2 Inputs: Connect these jacks to the audio, video and S-Video PLAY/OUT jacks of a second VCR.

58. Multiroom Audio Outputs: Connect these jacks to the optional audio power amplifier that powers remote room speakers with the input selected by the multiroom control system. This feature is found only on the AVR85.

59. Multi IR: Connect the output of an IR sensor in a remote room to this jack to operate the AVR85's multiroom control system. This feature is found only on the AVR85.

Service Bulletin #9705 for AVR85

Service bulletin # 9705 August 1997
To: All harman/kardon Service Centers
Models: **AVR85**
Subject: **No audio output**

In the event you receive an AVR85 with the complaint "no audio output" (even though the display is lit up normally), perform the necessary steps listed below:

PROCEDURE:

1) Make sure the receiver is OFF and unplugged; remove the top cover of the unit.

2) Position the unit on its side, facing it so you are looking at the bottom cover, with the front of the receiver facing left. The power transformer should be down, or nearest the work bench.

3) Remove the front right "foot" of the unit; then with a sharp pair of dikes or wire cutters cut the (16) metal connections on the bottom screen attaching it to the bottom cover. Remove bottom screen from unit; for safety continue to cut all the remaining severed metal tabs from the bottom cover.

4) Locate and discharge main power supply electrolytic capacitors C802 & C803 with a 10 ohm, 10 watt resistor. At this point, C802 & 803 are at the top of the main PCB; The two leads to C803 can be identified by the marking "-B" on the PCB; C802 is just above it. After discharge, check with voltmeter that capacitors have less than 1 volt DC across leads to confirm that discharge is complete.

5) See drawing; locate two areas of a poor solder connection due to an unintended mask, or dark-colored dot that is partially covering the solder pad(s) where the leads come through. Unsolder the connection(s) with solder wick. Clean & scrape, if necessary, with a small screwdriver the foil/pad area thoroughly and remove any excess mask residue. Re-solder the connection(s) carefully to assure good connections.

6) Turn the unit upright; locate PCB P714, the small vertical circuit board nearest the main heatsink. Unplug and remove small molex connector J701 at the top of the board; then remove the four mounting screws and metal tabs holding the top of the board in place.

7) Remove the two locks to the two sockets, J714 and J716. Take care not to damage the lock or connector while attempting to unlatch the PCB; then unplug and remove the entire PCB P714.

8) Locate 10 ohm, ¼ watt resistors RH23, RH24, R745, R746, R747, R748; test with multimeter to assure they are still 10 ohms +/- 5%. If values are different (indicating damage), replace as necessary.

9) Return PCB P714 to unit; re-attach molex connector; replace 4 screws and mounting tabs. Replace top cover of receiver.

10) Re-attach the bottom screen to the bottom cover using 12 screws, (H/K# 51260306MO); the screen will be upside-down compared to its former position when attached; replace the unit's "foot".

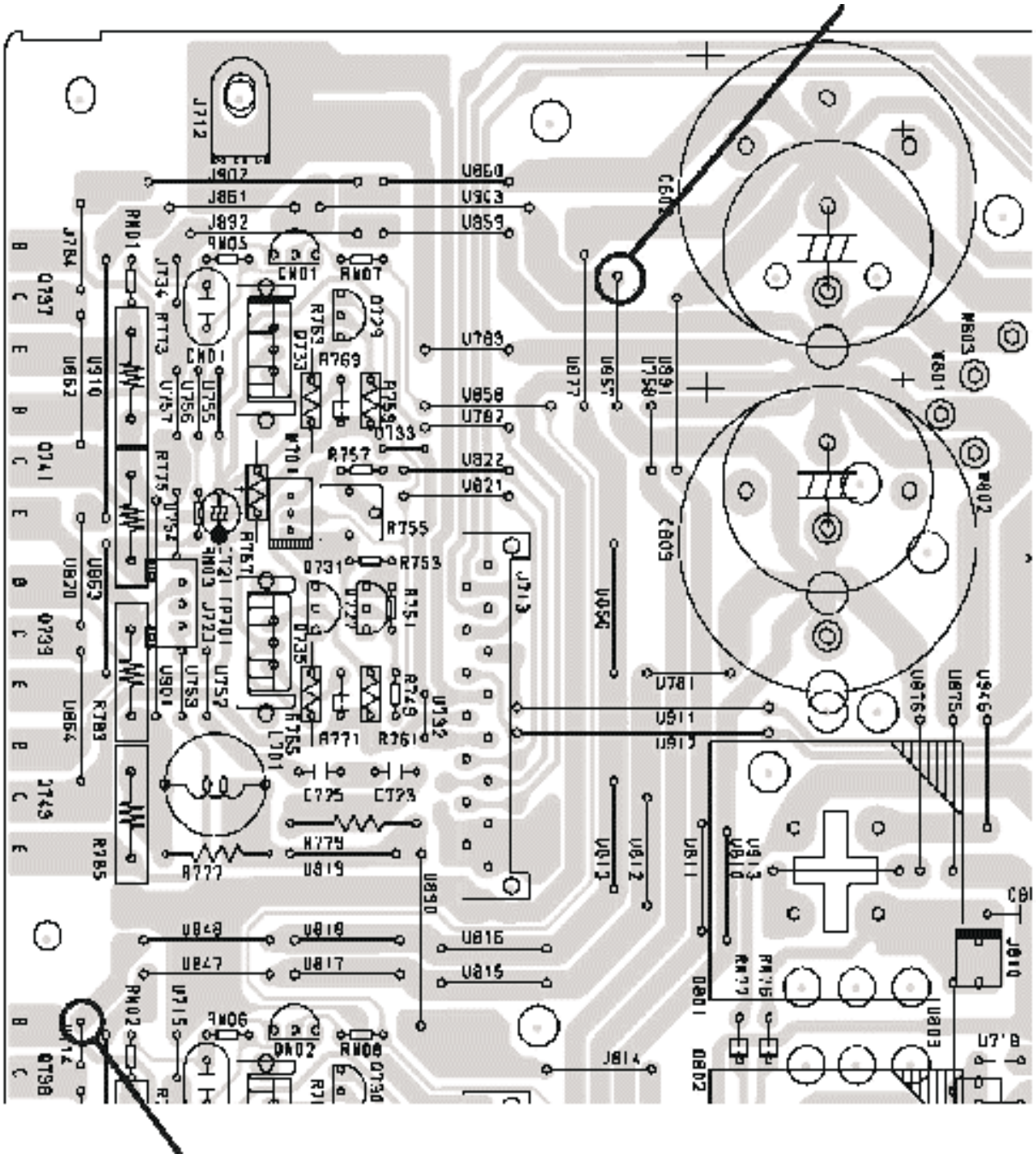
11) TO TEST:

a) Plug in the unit; connect speakers to left, right, and center output terminals.
b) Turn the unit on; switch the unit to "Prologic" mode by use of the mode buttons on the front panel.
c) Press the button "TEST TONE" on the remote control. The display should read "FRONT L" and "TEST" should flash.
d) Adjust the master volume, and verify test noise is heard from front left channel.
e) Press the button "CH SELECT" on the remote control to change to the right and center speakers, and verify test noise is heard from each one.
f) Press the button "TEST TONE" on the remote control again to exit the test.

Model	Serial number 120V	Serial number 230V	Status	Action
AVR85	MJ0011-01001 to MJ0011-02500	MJ0012-01001 to MJ0012-01500	Poor connections in two areas on main PCB	Clean & re-solder connections, check or replace RH23,RH24,R745.R746, R747, R748 if necessary
AVR85	MJ0011-02501 and above	MJ0011-01501 and above	Modified by factory	NONE REQUIRED

View is upper left-hand corner of PCB
Bottom (trace) side

CONNECTION #1



CONNECTION #2

I. SERVICE PROCEDURE

1.Tracking Point Memory

This service procedure can be used for measurement of the tuner circuit. With the **POWER ON**, press the "**PRESET UP**" button while pressing the "**MEMO**" button for at least 3 seconds or more. FLD will display "**TRACKING**". Frequencies to be memorized are as follows:

	VERSION	P1	P2	P3	P4
FM	US, Europe.	90.0	98.0	106.0	87.5

	SCAN STEP	P5	P6	P7	P8	P9	P10	P11	P12~P30
AM	10 KHz	600.0	1000.0	1400.0	520.0	←	←	←	←
	9 KHz	603.0	999.0	1404.0	531.0	←	←	←	←
	MW/LW	↑	↑	↑	171.0	207.0	270.0	152.0	531.0

2. FLD Segment Illumination

This service procedure will illuminate all segments by the following step: With the **POWER ON**, press the "**FM/AM (TUNER)**" button while pressing the "**MODE**" button for at least 3 seconds or more. This procedure takes 1 minute and 40 seconds to finish; at this point the procedure is complete.

Sequence

1. All segments will be illuminated for 5 seconds.

2. At the grid "**1G**", segments are illuminated in the following order:

3. At the grid "**2G**" to "**11G**", each segment is illuminated individually:

① KHz → ② MHz → ③ ATT → ④ LFE → ⑤ NIGHT → ⑥ MULTI → ⑦ COAX → ⑧ OPT →
⑨ RF → ⑩ MOVIE → ⑪ TAPE1 → ⑫ COPY → ⑬ VID1 → ⑭ SLEEP → ⑮ P - SCAN → ⑯ DISP

4. At the grid "**12G**", segments are illuminated in the following order:

① VISUAL → ② SIGNAL BAR (LEFT SIDE) → ③ SIGNAL BAR (2nd LEFT) → ④ SIGNAL BAR (CENTER) →
⑤ SIGNAL BAR (2nd RIGHT) → ⑥ SIGNAL BAR (RIGHT SIDE) → ⑦ AC-3 → ⑧ PCM → ⑨ DIGITAL →
⑩ PRO-LOGIC → ⑪ 3 - STEREO → ⑫ MATRIX → ⑬ HALL → ⑭ THX CINEMA → ⑮ STEREO

3. All Clear

This service program can clear all memorized operations and functions. With the **POWER ON**, press the "**CD**" button while pressing the "**MODE▲**" button for more than 3 seconds. FLD shows "**CLEAR MEMO**" and power will be **OFF**.

II. ELECTRICAL ADJUSTMENT

1. Main amp idling current adjustment.

1) With the power **OFF**, set variable resistor **R755** (Lch), **R756** (Rch) **RH28** (Center ch) on the PC board (**P704**) to the center position.

2) Locate test points J723 (Lchan) J724 (Rchan) and J725 (Centerchan). These are 3 pin female molex connectors on the MAIN PCB. Attach a DC voltmeter (set to a low range) to the two outer pins on each test point. This is best accomplished by making up a "test plug" using a male molex connector that fits into the one in the unit, with wires attached, for connection to the voltmeter. An alternate method is to use two "mini-grabbers" to attach to the two outer pins on each connection. The middle pin has no connection.

3) After the above, adjust the idling current as follows: Turn the power **ON** and adjust variable resistor **R755** (Lch), **R756** (Rch), **RH28** (Center ch) while observing the reading on the voltmeter.

*The target value is **11mV** (25 mA).

NOTE:

When a unit whose idling current has been adjusted is switched on after 1 minute it reaches about 4.7~5.5mV. After 30 minutes, it reaches a balanced state and stabilizes at **8.9-11mV** (target). Therefore, if the adjustment is made 30 seconds after the power is switched on, adjust to 3.5 ~ 4.0mV. In the same way, if 1 minute has passed since the power was switched on, adjust to 4.7 ~ 5.5mV. From 1 to 2 minutes, adjust to 6.2 ~ 6.4mV. From 2 to 4 minutes, adjust to 7.1 ~ 7.6mV. From 4 to 7 minutes, adjust to 7.9 ~ 9.0mV. After more than 7 minutes since the power was switched on, adjust to the setting of 10.5 ~ 11.2mV. Here is a reference table for the adjustment values:

Time since power switched on	Idling current adjustment
30 seconds	3.5 ~ 4.0mV
1 minute	4.7 ~ 5.5 mV
1 - 2 minutes	6.2 ~ 6.4mV
2 - 4 minutes	7.1 ~ 7.6mV
4 - 7 minutes	7.9 ~ 9.0mV
More than 7 minutes	10.5 ~ 11.2mV

III. ALIGNMENT PROCEDURES

Test Equipment Required
1) AM/FM Signal Generator
2) Video Signal Generator
3) Digital Multimeter
4) Distortion level meter

1. AM IF Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission loop antenna. (:Standard required loop)	999 KHz (Europe) 1000 KHz (USA)	Level 300 V/m (50dB/m) Mod. 400 Hz 30%	Tuning point	LA06	Output level (L or R) **Maximum** at TAPE-OUT

REMARK: For receiving antenna, the one supplied with the unit is adequate.
This adjustment is not normally necessary, because the coil LA06 is preset by the original supplier.

2. AM Tracking Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission loop antenna. (:Standard required loop)	603 kHz (Europe) 600 kHz (USA)	Level 300 - 400 V/m Mod. 400 Hz 30%	603 kHz (Europe) 600 kHz (USA)	LA01	Output level (L or R) **Maximum** at TAPE-OUT
2		1404 kHz (Europe) 1400 kHz (USA)	Level 300 - 400 V/m Mod. 400 Hz 30%	1404 KHz (Europe) 1400 KHz (USA)	CA01	Output level (L or R) **Maximum** at TAPE-OUT
3	Repeat steps 1 and 2 until sensitivity is maximized.					

3. AM Tracking Adjustment (LW)

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission loop antenna. (:Standard required loop)	171 kHz	Level 300 - 400μV/m Mod. 400 Hz 30%	171 kHz	LA03	Output level (L or R) **Maximum** at TAPE-OUT
2		270 kHz	Level 300 - 400μV/m Mod. 400 Hz 30%	270 kHz	CA08	Output level (L or R) **Maximum** at TAPE-OUT
3	Repeat step 1 and 2 until sensitivity is maximized.					

4. AM Auto Stop Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Valve
1	Signal generator output to transmission loop antenna. (:Standard required loop)	999 kHz (Europe) 1000 kHz (USA)	500 V/m (54 dB/m)	999 kHz (Europe)	RA11	"**TUNED**" indicate on FLD
2			1000 V/m (60 dB/m)	AUTO SCAN	Only Confirm	"**TUNED**" indicate on FLD

REMARK: This adjustment is related to the FM muting Level Adjustment. The FM muting Level re-adjustment is necessary after this adjustment.

5. FM MONO. Distortion Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75)	98 MHz	500 V (54 dB) MONO 1 KHz/ Dev. 40 KHz 53.3% (Europe) MONO 1 KHz/ Dev. 75 KHz 100% (USA)	98 MHz (P2)	L201	Distortion level **Minimum** at TAPE-OUT

6. FM Muting Level Adjustment

Turn the variable resistor **R212** until the word **TUNED** is not shown in the display. Then adjust the resistor **R212** in the opposite direction until **TUNED** is shown in the display.

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75)	98 MHz	6.3 V (16 dB) MONO 1 KHz/ Dev. 40 KHz 53.3% (Europe) MONO 1 KHz/ Dev. 75 KHz 100% (USA)	98 MHz (P2)	R212	"**TUNED**" indicate on FLD
2			Over mentioned level **+3 dB**	AUTO SCAN	Only Confirm	"**TUNED**" indicate on FLD

7. FM STEREO Distortion Adjustment

Adjust the **L channel** with the RF signal modulated only **L channel** first and confirm the **R channel** with the RF signal modulated only **R channel**.

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Valve
1	Signal generator output to FM antenna terminal. (75)	98 MHz	500 V (54 dB) L or R 1 kHz/ Dev. 40 kHz 53.3% PILOT 19 kHz/ Dev. 6 kHz 8% (Europe) L or R 1 kHz/ Dev. 67.5 kHz 90% PILOT 19 kHz/ Dev. 6.75 kHz 9% (USA)	98 MHz (P2)	IF COIL in FRONT END	Distortion level **Minimum** at TAPE-OUT
2					R218	Distortion level **Minimum** at TAPE-OUT

REMARK: Adjustment with **R218** is not necessary when the distortion level is less than 0.5% with adjusting IF coil.

8. FM STEREO Separation Adjustment

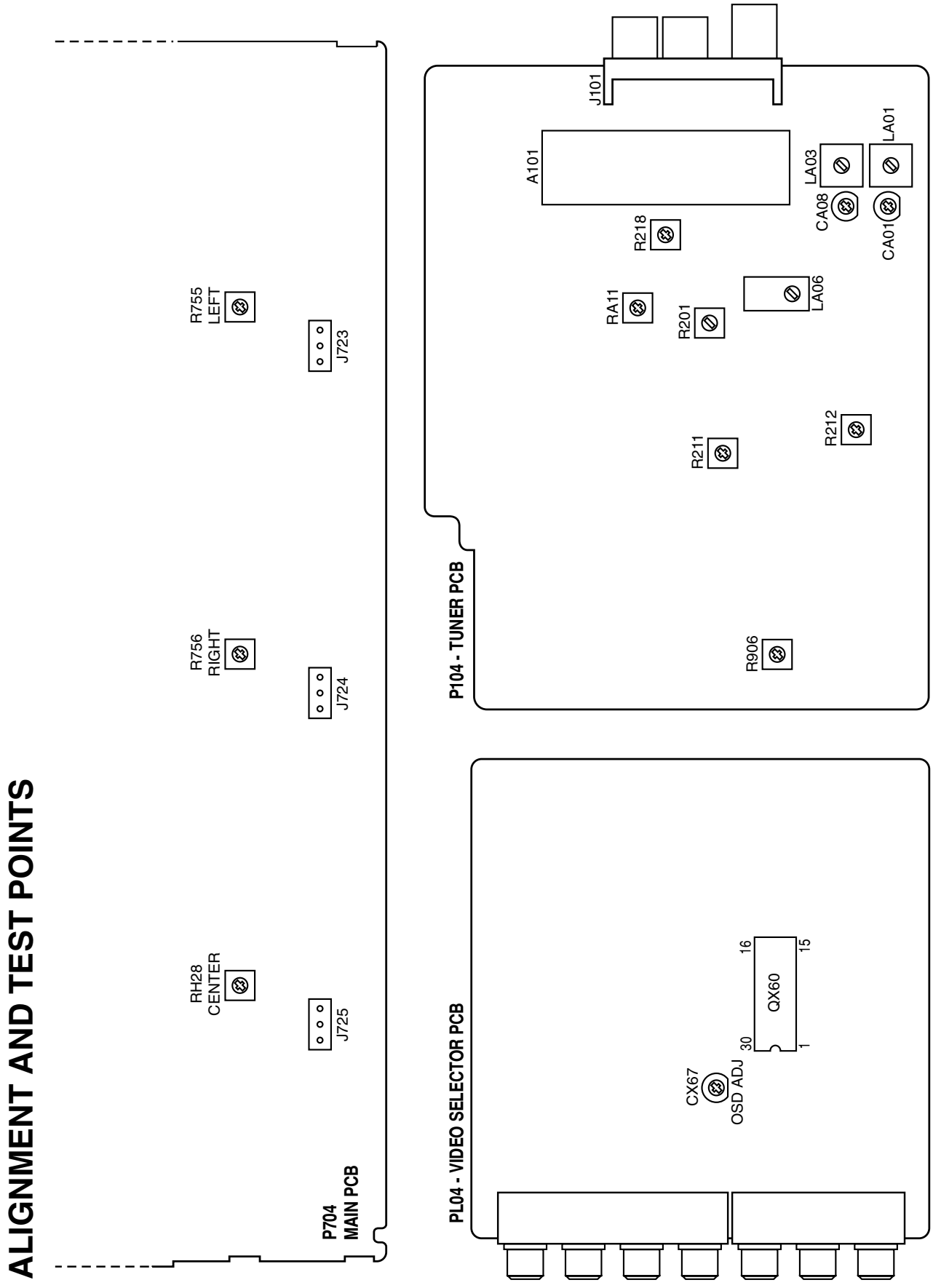
Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75)	98 MHz	Same specification as **FM STEREO distortion adjustment**. Input only **L** channel	98 MHz (P2)	R211	Output level **Minimum** at TAPE-OUT channel **R**
2		98 MHz	Same specification as **FM STEREO distortion adjustment**. Input only **R** channel	98 MHz (P2)	R211	Output level **Similar** as Rch at TAPE-OUT channel **L**

9. On Screen Display VCO Adjustment

Step	Input Signal Source and Connection	Measuring Position	Measuring Equipment	Input Selector	Adjustment Point	Adjustment Value
1	Color bar or other standard video signal. Video signal generator output to LD video input.	IC QX60 26pin and GND	DC voltmeter (Impedance > 10k /V)	LD	CX67	2.5V 0.1V

REMARK: Connect the TV monitor to the monitor output terminal of the product.

ALIGNMENT AND TEST POINTS



IV. TECHNICAL DESCRIPTION

This product is a “Dolby Digital (AC-3)” decoder. By connecting this product with a Dolby digital compatible component such as a DVD player or DBS tuner, it will be capable of 5.1 CH (Front L/R, Rear L/R, Center and Sub-woofer) play.

This product is composed of approximately of 5 blocks including the AC-3 decoder & DAC block (**P604**), crossover block (**PC04**), power supply block (**P704**), volume control block (**PE04**) and front key input block (**PU04**).

V. SIGNAL AND CIRCUIT DESCRIPTION

OPT/COAX (AC-3/PCM input)

This signal is based on an additional format for transmitting the AC-3 data through the conventional digital audio interface (SPDIF). This SPDIF contains the compressed data for AC-3**,** instead of PCM Audio data. Similarly to the case of ROM data, whether the data is audio or non-audio is identified according to the status in the signal. This signal can be output from a DVD player, etc.

DAI (Digital Audio Interface) Receiver

This circuit extracts various clock and data signals from the signal input in the SPDIF format.

AC-3 Decoder DSP

This circuit generates the 6-channel data (Front L/R, Rear L/R, Center and LFE) based on the data output from the DAI, and outputs the 6-channel data to the DAC as 3 sets of 2-channel data.

Crossover

This circuit consists of 100Hz HPF for each channel, 100Hz LPF for sub-woofer channel, and mixing for sub-woofer output. Depending on the speaker mode setting, frequencies of this circuit will be changed.

AVR75/85 BLOCK DIAGRAM

AVR75/85 PAGE 22 - 1 of 4

WA288J201-0 AUDIO SEL
PS04
INPUT SEL.
TAPE OUT SEL.
QS11 LC78211
QS12 LC78213
CD
TAPE1
TAPE2
TAPE1 OUT
TAPE2 OUT
-6DB ATT
QS13
FUNCTION CONTROL +15V -15V

WA288J202-0
PS54
V-AUDIO SEL
INPUT SEL.
VCR1 OUT SEL.
QS56 LC78211
QS57 LC78212
TV
DVD
VIDEO1
VIDEO2
VIDEO1 OUT
VIDEO2 OUT
FUNCTION CONTROL
(VCR2 OFF)
(VCR1 OFF)
+15V
-15V

WA288J502-0
PL94 VIDEO3 IN
AUDIO
VIDEO3
VIDEO
NJM4558DD
QS91

WA288J203-0
PL04 VIDEO SELECTOR
VIDEO SELECTOR
QL01 LC7824
TV
DVD
VIDEO1
VIDEO2
MC14576
QL03
NJM2233B
QL05
VIDEO1 OUT
VIDEO2 OUT
TV MONITOR OUT
QS0 QX40 LC74760
OSD CONTROL
FUNCTION CONTROL
+5V
-5V

WA288J502-0
PL54 S-VIDEO
S-VIDEO SELECTOR
QL52 LC7824
DVD
VIDEO1
VIDEO2
QL56 MC14576
QL57 MC14576
QL55 MC14576
QL51 LC7824
VIDEO1 OUT
VIDEO2 OUT
TV MONITOR OUT
FUNCTION CONTROL

WA288J301-0 FM/AM TUNER
P104
FM
AM
FM FRONT END
IF AMP
LA1836 FM/AM IF & MPX
FM DET.
RDS DECODE LA2232
456K
LC7218 PLL
7.2M
SYNC.PARITY LC7073
4M
+15V
RDS CONTROL
TUNINNG CONTROL
PLL CONTROL

WA288J503-0
PF04 TONE
L/R-BALANCE
BASS
TREBLE
FRONT
C
SW
+15V
-15V

STEREO/SURROUND
TC9215P
STEREO
DSP
FRONT
CENTER
SUB WOOFER
SURROUND

WG278J100-0 AC-3 DSP ASSY
P604
LPF
AK5340 ADC
RF
2.88MHZ BPF
256K SRAM
PA4007A RF DEMOD
18.432MHZ VCXO
YSS241 PRO-LOGIC DECODER
256K SRAM
YSS243 AC-3 DECODER
COAX
OPT
LC8904Q DAI
TMP87C SUB CPU
+5V
-5V
+10DB-AMP
DAC TDA1305T
FRONT L
FRONT R
SURR.L
SURR.R
CENTER
LFE

WA288J203-0
PC04
CROSS OVER
NJU7311
QX11
FRONT
SURROUND
CENTER
100HZ HPF
SPK MODE CONTROL
SUB-WOOFER
+10DB-AMP
MIX

WA288J601-0
P714
VOLTAGE AMP
HEADPHONE AMP
FRONT
CENTER

WA288J101-0
P704 MAIN AMP
MAIN AMP
P754
FRONT L G G R
CENTER CENTER G
L G G R SURROUND
SPK TERMINAL
PROTECTOR DRIVE
WA288J302-0
PN54 PROTECTOR
WA288J 202-0

WA288J508-0
HEADPHONE JACK
STEREO CONTROL
PW04

WA288J302-0
PP04 SURR.AMP
AMP
PROTECT

FRONT/CENTER AMP
SURR. AMP
+-15V/+-5V
POWER SUPPLY
MAIN AMP TRANSF.

WA288J502-0
PE04 INDIVIDUAL & MASTER ELE.-VOL. X6CH
FRONT
QE04
CENTER
SUB WOOFER
QE06
SURROUND
QE05
PRE OUT
FRONT
CENTER
SURROUND
SUB WOOFER
REMOCON IN
REMOCON OUT
+15V
-15V

VOL CONTROL
MUTE CONTROL, ETC
CROSS OVER CONTROL
10BIT PORT EXPANDER TC9174P
10BIT PORT EXPANDER TC9174P
PY04 CONNECT
WG288J201-0
+5V
+15V
-15V

FRONT/U-COM/DISPLAY
WA288J505-0
PU04
RDS CONTROL
TUNINNG CONTROL
PLL CONTROL
SUB CPU I/F
CONTROL
REMOCON
H.P ON/OFF (STEREO CONTROL)
FUNCTION CONTROL
OSD CONTROL
IR
8BIT U-COM TMP87CM71F
FL DISPLAY
KEY MATRIX
STAND-BY LED
STAND-BY CONTROL

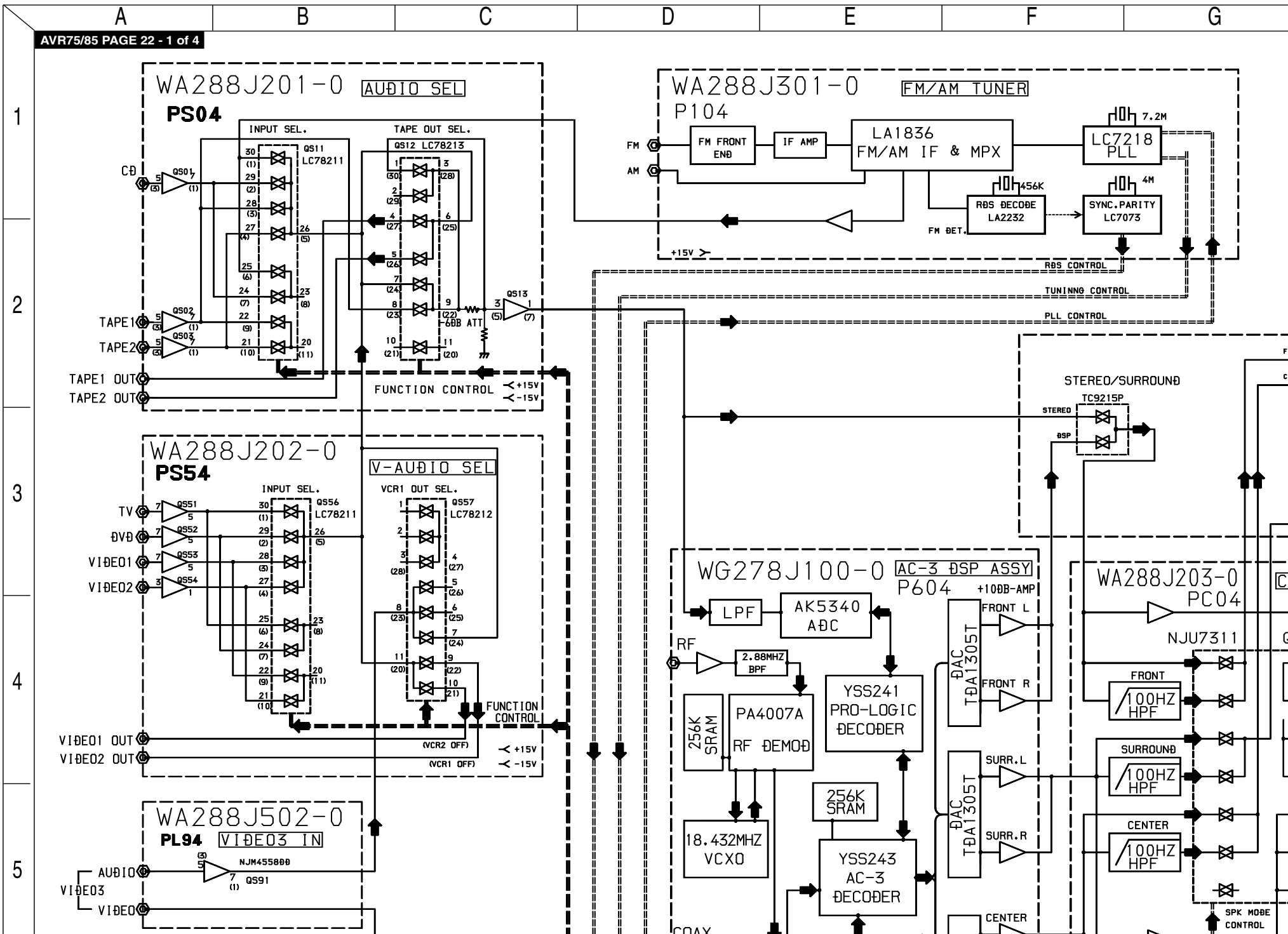
WA288J501-0
PU54 MASTER VOLUME
ROTARY ENCODER

WA288J506-0
PU94 POWER-SW

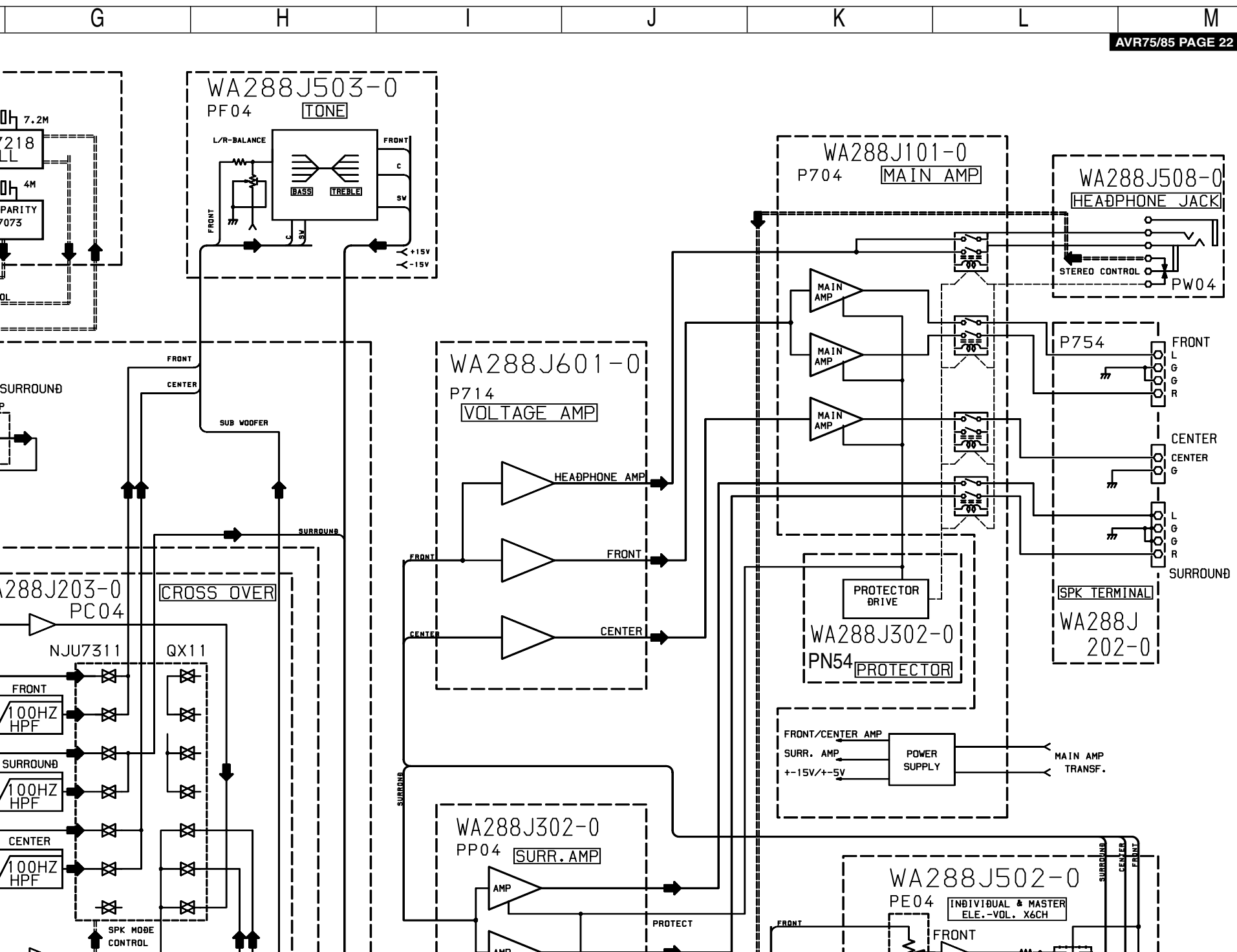
BUCK UP SUPPLY
U-COM (+6V)
MUTE DRIVE
FL 24V, -33V
POWER SUPPLY
BACK UP TRANSF.
AC OUTLET
MAIN AMP TRANSF.
TO POWER SUPPLY
PB04
WA288J304-0
AC CORD
STAND-BY CONTROL

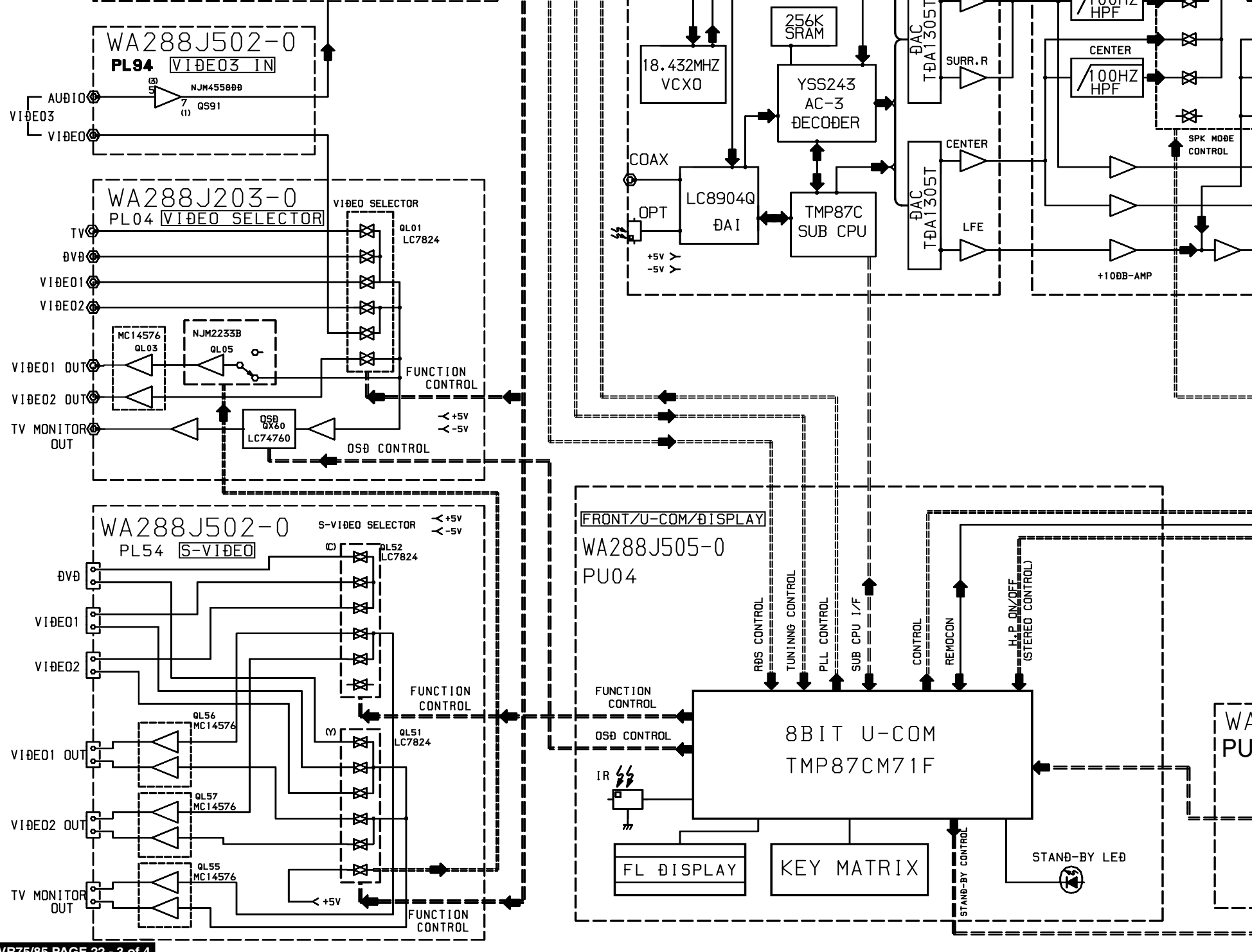
AVR75/85 BLOCK DIAGRAM

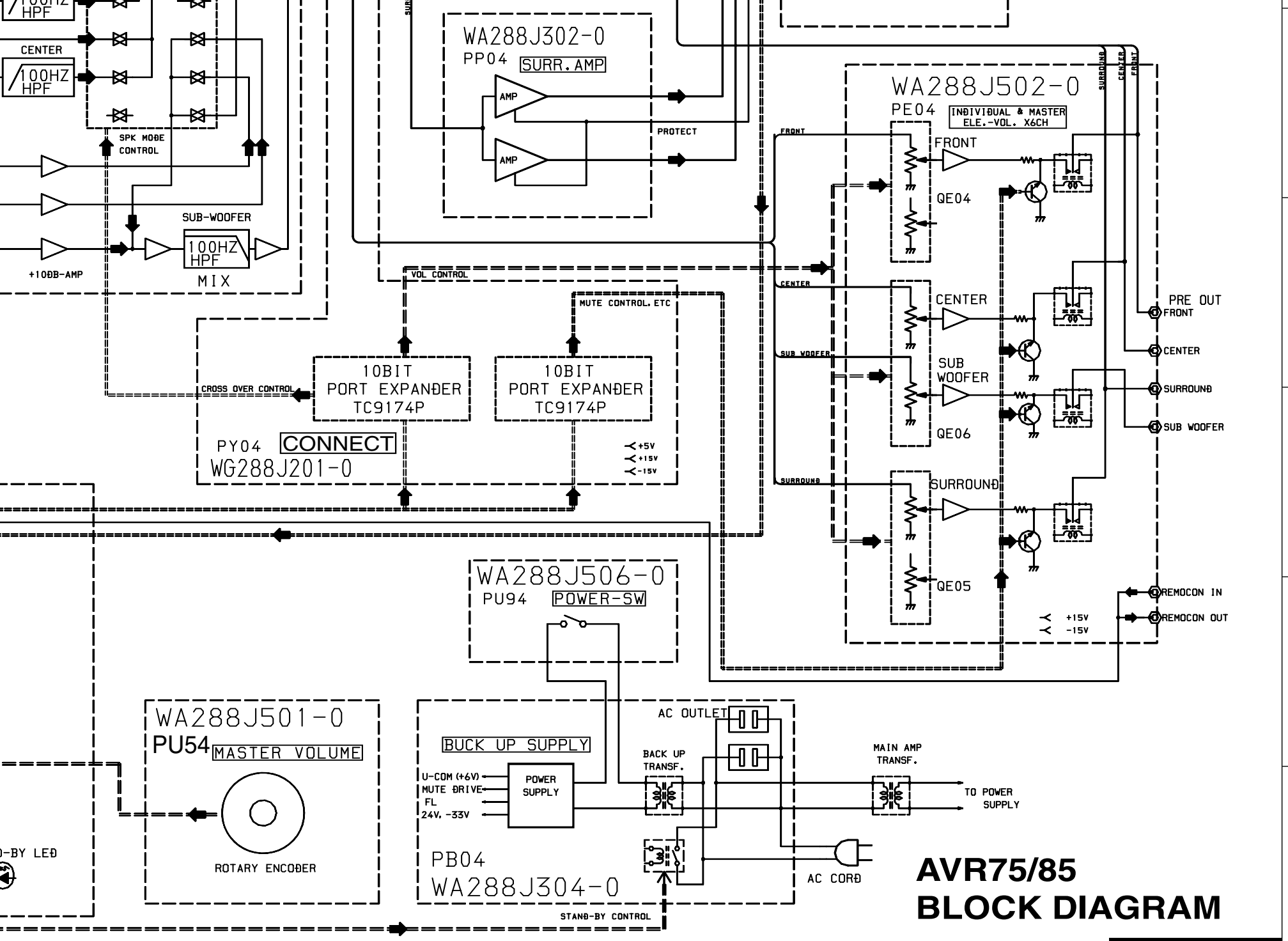
AVR75/85 PAGE 22 - 2 of 4
AVR75/85 PAGE 22 - 3 of 4
AVR75/85 PAGE 22 - 4 of 4


AVR75/85 PAGE 22 - 1 of 4
WA288J201-0 AUDIO SEL
PS04
INPUT SEL.
TAPE OUT SEL.
QS11 LC78211
QS12 LC78213
CD
TAPE1
TAPE2
TAPE1 OUT
TAPE2 OUT
60dB ATT
FUNCTION CONTROL
+15V
-15V
WA288J202-0
PS54
V-AUDIO SEL
VCR1 OUT SEL.
QS56 LC78211
QS557 LC78212
TV
DVD
VIDEO1
VIDEO2
VIDEO1 OUT
VIDEO2 OUT
(VCR2 OFF)
(VCR1 OFF)
WA288J502-0
PL94 VIDEO3 IN
NJM4558DD
QS91
AUDIO
VIDEO3
VIDEO
WA288J301-0 FM/AM TUNER
P104
FM
AM
FM FRONT END
IF AMP
LA1836
FM/AM IF & MPX
FM DET.
RDS DECODE
LA2232
SYNC.PARITY
LC7073
LC7218
PLL
7.2M
456K
4M
+15V
RDS CONTROL
TUNINNG CONTROL
PLL CONTROL
STEREO/SURROUND
TC9215P
STEREO
DSP
WG278J100-0 AC-3 DSP ASSY
P604
+10DB-AMP
LPF
AK5340
ADC
RF
2.88MHZ
BPF
256K
SRAM
PA4007A
RF DEMOD
YSS241
PRO-LOGIC
DECODER
18.432MHZ
VCXO
256K
SRAM
YSS243
AC-3
DECODER
COAX
DAC
TDA1305T
FRONT L
FRONT R
SURR.L
SURR.R
CENTER
WA288J203-0
PC04
NJU7311
FRONT
SURROUND
CENTER
100HZ
HPF
SPK MODE
CONTROL

5/85 BLOCK DIAGRAM




WA288J502-0
PL94 VIÐEO3 IN
AUÐIO
VIÐEO3
VIÐEO
NJM4558ÐÐ
QS91
WA288J203-0
PL04 VIÐEO SELECTOR
VIÐEO SELECTOR
QL01
LC7824
TV
ÐVÐ
VIÐEO1
VIÐEO2
MC14576
QL03
NJM2233B
QL05
VIÐEO1 OUT
VIÐEO2 OUT
TV MONITOR OUT
OSÐ QX60
LC74760
FUNCTION CONTROL
OSÐ CONTROL
+5V
-5V
WA288J502-0
PL54 S-VIÐEO
S-VIÐEO SELECTOR
QL52
LC7824
QL56
MC14576
QL57
MC14576
QL55
MC14576
QL51
LC7824
FRONT/U-COM/ÐISPLAY
WA288J505-0
PU04
8BIT U-COM
TMP87CM71F
RBS CONTROL
TUNINNG CONTROL
PLL CONTROL
SUB CPU I/F
CONTROL
REMOCON
H.P ON/OFF
(STEREO CONTROL)
IR
FL ÐISPLAY
KEY MATRIX
STANÐ-BY CONTROL
STANÐ-BY LEÐ
18.432MHZ
VCXO
256K
SRAM
YSS243
AC-3
ÐECOÐER
COAX
OPT
LC8904Q
ÐAI
TMP87C
SUB CPU
ÐAC
TÐA1305T
SURR.R
CENTER
LFE
100HZ
HPF
SPK MOÐE
CONTROL
+10ÐB-AMP


WA288J302-0
PP04 SURR. AMP
AMP
AMP
PROTECT
WA288J502-0
PE04 INDIVIDUAL & MASTER ELE.-VOL. X6CH
FRONT
CENTER
SUB WOOFER
SURROUND
QE04
QE06
QE05
PRE OUT
FRONT
CENTER
SURROUND
SUB WOOFER
REMOCON IN
REMOCON OUT
+15V
-15V
CENTER
/100HZ HPF
SPK MODE CONTROL
SUB-WOOFER
100HZ HPF
+10DB-AMP
MIX
VOL CONTROL
MUTE CONTROL, ETC
CROSS OVER CONTROL
10BIT PORT EXPANDER TC9174P
10BIT PORT EXPANDER TC9174P
PY04 CONNECT
WG288J201-0
+5V
+15V
-15V
WA288J506-0
PU94 POWER-SW
WA288J501-0
PU54 MASTER VOLUME
ROTARY ENCODER
BUCK UP SUPPLY
U-COM (+6V)
MUTE DRIVE
FL
24V, -33V
POWER SUPPLY
BACK UP TRANSF.
MAIN AMP TRANSF.
TO POWER SUPPLY
AC OUTLET
AC CORD
PB04
WA288J304-0
STAND-BY CONTROL
AVR75/85
BLOCK DIAGRAM

SPECIFICATIONS

Power Suppies
USA/Canada . . . . . AC 120V, 60Hz
Europe . . . . . AC 230V, 50Hz

Dimensions (W x H x D)
Inches: . . . . . 17 ½ x 6 ⅜ x 18"
mm . . . . . 444 x 162 x 457mm

Weight (lbs/kgs) 34/15.4

These specifications are service target specs. Specifications and components are subject to change without notice. Overall performance will be maintained or improved.

General Test Conditions

1	Test Methods	Test methods for Tuners and Amplifier. CP-2101, C6102, C6104
2	Power Source	The amplifier shall be tested at the (Primary power supply) conditions shown in table below.
		Destination / **Power Source**
		U — 120 Volts RMS 1% 60 Hz 2%
		N — 230 Volts RMS 1% 50 Hz 2%
3	Tuner Measurements	The FM signal shall be 500uV (65dBf) with 75kHz Deviation at 1000Hz and 50mV/m Loop injected with 30% modulation at 400Hz for AM, unless otherwise specified. TAPE OUT terminated with 47kohms load unless otherwise specified.
4	Audio Measurements	All audio measurement shall be made with test signals injected into CD. Inputs and output measured at SPEAKER outputs with 8ohms 1% non-inductive resistor load, or at TAPE OUT with 10kohms 5%//1nF 5% loads, unless otherwise specified.
5	Control Settings	Tone control : Mechanical center position Balance control : Mechanical center position Volume control : According to CP-2101 SPK SETT : ALL Large ATT : off unless otherwise specified AC-3 Section Setting Night Mode : off SPK SETT NO. 1 Front: Small, Center: Small, Surround: Small, Subw: ON SPK SETT NO. 2 Front: Large, Center: Large, Surround: Large, Subw: ON SPK SETT NO. 3 Front: Large, Center: Large, Surround: Small, Subw: OFF
6	Used Test Disc	Dolby AC-3 Demonstration & Test Laser Disc Ver. 1.0 (for AC-3 RF)

Audio Section Performance Specifications

Seq #	Test			Reference	Unit	Nominal	Limits
1	**Continuous Power Output THD 0.09%** (L/C/R) Front L/R both, Center Ch. ☐ FTC ☐ CP-2101 ■ CD Input ■ Volume Max.	8		20Hz	W	80	≧65
		8		1kHz		80	≧65
		8		20kHz		80	≧65
	Continuous Power Output Surround Ch. THD 0.7% Both Channels Driven ☐ CP-2101 ☐ FTC	Surr. Ch.	8			—	—
			8	1kHz		75	≧65
			8			—	—
	DIN 1% Power Output Front Ch. ■ CD In	8		1kHz		85	≧75
	Dynamic Power Output Front Ch. ☐ CP-2101 ☐ CD IN	8		1kHz		—	—
		4/2		1kHz		—	—
2	**Power Bandwidth** THD 0.09% Front Ch. ☐ CP-2101 ■ Volume: Max. ■ CD IN	8		32.5W	Hz	5~70k	10~60k
				W			
3	**Total Harmonics Distortion** at 65W Output Front Ch. ■ THD ☐ FTC ☐ CP-2101 ☐ Volume: Max. Front L/R both, Center Ch. ■ CD IN MODE: STEREO Surround L/R Ch. Mode: PCM STEREO Service SPK SETT NO. 2	FRONT Ch. L/R/C		20Hz	%	0.03	≦0.09
				1kHz		0.01	
				20kHz		0.05	
		Surr. Ch.		40Hz		0.5	≦0.7
				1kHz		0.5	
				20kHz		0.5	
	Total Harmonics Distortion at 0.25W Output Front Ch. ■ THD ☐ FTC ☐ CP-2101 ☐ Volume: Max. ■ CD IN MODE: STEREO			20Hz		0.05	≦0.09
				1kHz		0.05	
				20kHz		0.05	
4	**Intermodulation Distortion** at 65W Output Front channel at STEREO Mode ■ CP-2101 (SMPTE Method) ■ Volume: Max.						≦0.09
				8		0.03	
	Input Sensitivity for 1.0V Pre-Output at CD IN Measured at 1kHz Vol: Max, Mode: STEREO			Front L/R	mV	240	200~280
5	**Difference of Input Sensitivity** at each source ch., at CD IN 1KHz			Front L/R	dB	—	≦1
6	**Frequency Response at Output -3 dB** Mode: Stereo ref: 1KHz			Front L/R	Hz	10~70k	15~50k
7	**Treble Action** (L, C, R)	10KHz		Boost	dB	10	7.5~12.5
				Cut		10	
	Bass Action (L, C, R, SW)	100Hz (SW 40Hz)		Boost		10	7.5~12.5
				Cut		10	
8	**Crosstalk (between Stereo Channels)** terminated by 1k Ω ■ without Hum & Noise ■ CP-2101	Input: CD STEREO		100Hz		59	≧50
				1kHz		59	≧50
				10kHz		59	≧50

Seq #	Test		Reference	Unit	Nominal	Limits
9	**Crosstalk (between Stereo Channels)** Measured at TAPE IN terminated by 1kΩ ■ without Hum & Noise ■ CP-2101	Input: CD STEREO	100Hz	dB	80	≧70
			1kHz		80	≧70
			10kHz		80	≧70
10	**Output Impedance** Referred to 1kHz (SUB-WOOFER 40HZ) Input CD		Preout Front		550	350~750
			Preout Center			
			Preout Surround			
			Preout Sub Woofer			
			Tape/Video1		1100	1000~1200
11	**Input Impedance at 1KHz**		CD		47k	≧40k
12	**ATT Level at 1kHz**		CD	dB	6	4~8
13	**Minimum Volume Hum & Noise** Output, CD Input Using 20kHz LPF	STEREO	Front	mV	0.5	≦1.0
		Surr. Mode Pro Logic (LARGE)	Front		0.5	≦1.0
			Center		0.5	≦1.0
			Surround		0.5	≦1.0
			Sub Woofer PreOut		15	≦20
14	**Maximum Volume Hum & Noise** SPK Output, CD Input Input shorted Using: 20kHz LPF A weighted (Except Subwoofer)	Front	STEREO	mV	1.5	≦3.0
			PRO LOGIC		8.0	≦15
		Center	LARGE		8.0	≦15
		Surround	LARGE		8.0	≦15
		Sub Woofer	PRO LOGIC	uV	150	≦200
15	**Signal to Noise Ratio** at 1kHz 1W Output A weighted at short circuit ■ CP-2101		DVD 0.5V Input	dB	82	≧78
16	**Signal to Noise Ratio at DOLBY** reference Level measured CCIR/ARM weighted referred to1kHz Input shorted Measured at Preout terminal PRO LOGIC/LARGE Master Vol.: 0dB		350mV Input Front		70	≧65
			350mV Input Center		70	≧65
			350mV Input Surround		70	≧65
17	**Dolby overload CD input Level at PREOUT terminal**, THD 1% (PRO LOGIC) Vol. 0dB		1kHz	V	2	≧1.9
18	**Damping Factor** at 32.5W (8Ω) Output CD input, Front channel Surround MODE:STEREO		100Hz		—	—
			1kHz		60	≧50
			10kHz		—	—

19	**DC offset of Speaker output** Volume Min. No Load	Front	mV	—	≦60
		Center		—	≦60
		Surround		—	≦60
20	**Idling Power Consumption** at Minimum Volume Control	AC Line	W	85	70~100
21	**Power Consumption at Rated Power** L/R channel Driven	AC Line		290	245~335
22	**Power Consumption at STANDBY**	AC Line		7	≦10

Video Section Performance Specifications for Model AVR75

Seq #	Test	Reference	Units	Nominal	Limit
1	**Output Level for CVBS 1VP-p** (100%) White CVBS) Input * at Monitor Output * Output terminated by 75Ω			1.0	0.9~1.1
	Output Level Difference between each source		%	+/-3%	+/-5%
2	**Output Level for Y/C** 1Vp-p(Y), 0.28Vp-p(C) Input * Measured S-Terminal * at Monitor Output * Output Terminated by 75Ω			1.0	0.9~1.1
				0.28	0.25~0.31
	Output Level Difference between each source		%	+/-3%	+/-5%
				+/-3%	+/-5%
3	**Input Impedance** * 1MHz, 1VP-p Sine Wave Input * Output terminated by 75Ω		Ω	75	—
		TV		75	—
		Video1		75	—
		Video2		75	—
		Video3		75	—
4	**Output Impedance at 1Vp-p Output** * LD Input * 1MHz, Sine Wave	Monitor		75	—
		Video1		75	—
		Video2		75	—
5	**Frequency Response at -3dB** Referred to 1MHz measured at 1Vp-p output * Input LD * Terminated by 75Ω * Measured by Composite output	Monitor	Hz	8M	≧6M
		Video1		8M	≧6M
		Video2		8M	≧6M

FM Tuner Section Performance Specifications for Model AVR75/85

Seq #	Test		Measured	Unit	Nominal	Limits
1	**Frequency Range**		50K	MHz	87.50~ 108.00	—
2	**(MONO)** Usable Sensitivity at 75Ω	U Version	90MHz	UV (dBf)	1.3 13.5	≦2.5 ≦19.2
			98MHz		1.3 13.5	≦2.5 ≦19.2
			106MHz		1.3 13.5	≦2.5 ≦19.2
		N Version	90MHz		1.3 13.5	≦3.0 ≦20.8
			98MHz		1.3 13.5	≦3.0 ≦20.8
			106MHz		1.3 13.5	≦3.0 ≦20.8
		U, N, Version	OTHERS		2.6 19.5	≦6.0 ≦26.8
3	**3 dB Limiting Sensitivity**		98MHz		0.8 9.3	≦1.3 ≦13.5
4	**MONO Quieting Sensitivity**	U Version 50 dB	90MHz		1.9 16.8	≦3.3 ≦21.6
			98MHz		1.9 16.8	≦3.3 ≦21.6
			106MHz		1.9 16.8	≦3.3 ≦21.6
		N Version 50 dB	90MHz		1.9 16.8	≦4.5 ≦24.3
			98MHz		1.9 16.8	≦4.5 ≦24.3
			106MHz		1.9 16.8	≦4.5 ≦24.3
5	**MONO S/N Ratio at 98MHz**		500uV (65dBf)	dB	76	≧71
	MONO Hum & Noise at 98MHz				70	≧65
6	**Muting Threshold**			UV (dBf)	6.3 27.2	4~11 23.2-32.0
7	**Muting Window width at 98MHz**			kHz	±70	±30~±150
8	**Frequency Response** referred to 30Hz-15kHz De-Emphasis		75uS:U 50uS:U	dB	+0.5 -2.0	+1.0 -4.0
9	**Mono Distortion**		1kHz	%	0.2	≦0.5
10	**Overload Brake up**		98MHz	V (dBf)	1.0 71	≧0.5 ≧65

Seq #	Test		Measured	Unit	Nominal	Limits
11	**Capture Ratio at 98MHz** U: 75kHz Dev. N: 40kHz Dev.		45dBf 100uV		—	—
			65dBf 500uV		1.5	≦2.5
12	**A.C.S.** U: ± 400kHz N: ± 300kHz		98MHz		55	≧50
13	**Intermediate Frequency**		MHz		10.7	—
14	**IF Rejection**		90MHz		—	—
			98MHz		70	≧60
			106MHz		—	—
15	**Image Rejection**	U Version	90MHz		—	—
			98MHz	dB	50	≧40
			106MHz		—	—
		N Version	90MHz		—	—
			98MHz		70	≧60
			106MHz		—	—
16	**Signal +1/2 IF Rejection**		98MHz		75	≧65
17	**Other Spurious Response** Range 10MHz to 200MHz		98MHz		75	≧65
18	**AM Suppression at 98MHz**		100uV (45dBf)		—	—
			500uV (65dBf)		55	≧45
19	**Signal Strength Meter Deflection**		500uV (65dBf)	Point	5	≧4
20	**Tape Out Level** U:75kHz Dev. N:40kHz Dev.		98MHz	mV	800	600~1300

FM Tuner Section Performance Specifications for Model AVR75/85

Seq #	Test		Measured	Unit	Nominal	Limits
1	1-a (STEREO) **50dB Quieting Sensitivity** at 75Ω		90MHz	Uv (dBf)	25.2 39.2	≦40.0 ≦43.3
			98MHz		25.0 39.2	≦40.0 ≦43.3
			106MHz		25.0 39.2	≦40.0 ≦43.3
	1-b (STEREO) **Quieting Slope at 98MHz**		17uV (30dBf)	dB	—	—
			55uv (40dBf)		—	—
			170uV (50dBf)		—	—
			1mV (65dBf)		—	—
			100mV (105dBf)		—	—
2	2-a (STEREO) **S/N Ratio at 98MHz**		500uV (65dBf)		68	≧63
	2-b (STEREO) **Hum & Noise at 98MHz**		500uV (65dBf)		63	≧58
3	3-a (STEREO) **Switching Level at 98MHz**	Input Level	9% (6.75KHz)	UV (dBf)	6.3 27.2	≦11.0 ≦32.1
		Pilot Level	500uV 65dBf)	%	5	≦7
4	4-a (STEREO) **Distortion at 50dB** Quieting Sensitivity		98MHz		—	—
	4-b (STEREO) **Distortion at 98MHz** 500uV(65dBf) Input U: 67.kHz+6.75kHz Dev. N: 40.0kHz+6.00kHz Dev.		100MHz		—	—
			1kHz		0.4	≦1.0
			6kHz		—	—
5	**Separation at 98MHz** 500uV(65dBf) Input U: 67.5kHz+6.75kHz Dev. N: 40.0kHz+6.00kHz Dev.		100Hz	dB	—	—
			1kHz		40	≧30
			10kHz		—	—
	Separation at 98MHz 500uV(65dBf) Input 67.5kHz+6.75kHz		100Hz		—	—
			1kHz		—	—
		NR ON	10kHz		—	—
6	**Sub Carrier Rejection**		98MHz		70	≧60
7	**RDS Sensitivity** 67.kHz + 6.0kHz + RDS Dev.		98MHz 65dBf 500uV	kHz Dev.	0.5	≦1.2

AM Tuner Section Performance Specifications for Model AVR75/85

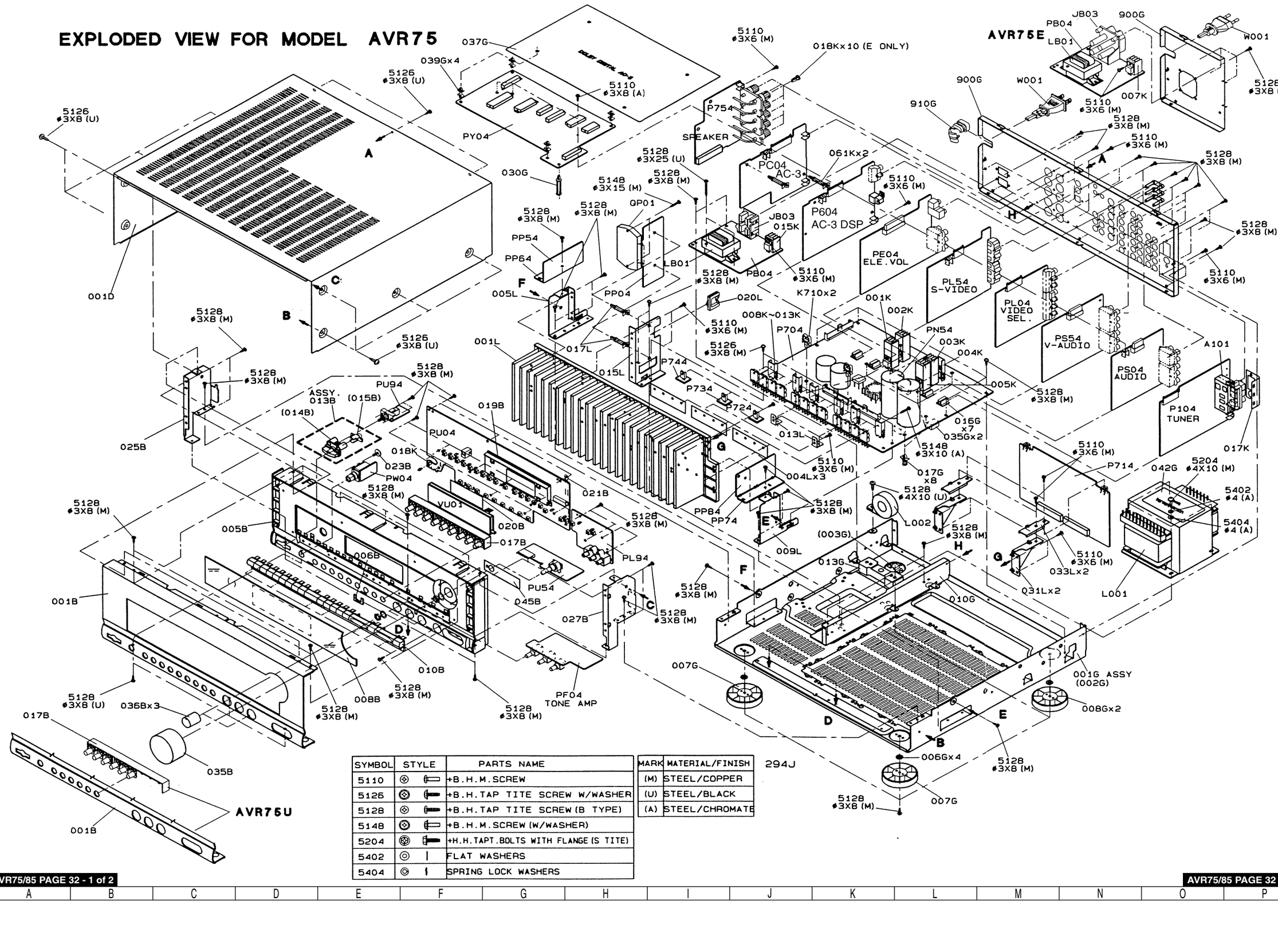
Seq #	Test		Measured	Unit	Nominal	Limits
1	**Frequency Range(MW)**	U: 10k others: 9k	10kHz STEP 9kHz STEP	kHz	520~1710 531~1602	—
	Frequency Range(LW)		1kHz		152~282	—
2	2-a **Usable Sensitivity of MW Band** Loop ANT.		603kHz 600kHz	uV/m	700	≦
			999kHz 1000kHz		500	≦
			1404kHz 1400kHz		500	≦
	2-b **Usable Sensitivity of LW Band** Loop ANT. N Version		171kHz		2000	≦
			207kHz		1500	≦
			270kHz		1500	≦
3	**IF Rejection Referred to #2-a**		999kHz 1000kHz	dB	60	≧50
4	**Image Rejection Referred to #2-a**		999kHz 1000kHz		40	≧35
5	**Spurious Rejection Referred to #2-a**		999kHz 1000kHz		65	≧55
6	**AUTO STOP Sensitivity**		999kHz 1000kHz	uV/m	500	≦1000
7	**Selectivity Referred to #2-a** at 999/1000kHz		9kHz 10kHz	dB	30	≧20
			18kHz 20kHz		70	≧60
8	**S/N Ratio at 50mV/m Input (Loop)**		999kHz 1000kHz		50	≧45
9	**Frequency Response at -3dB (Loop)**		999kHz 1000kHz	Hz	100~2.2K	150~1.8K
10	**Distortion 50mV/m Input at** 999kHz/1000kHz (Loop)		30% mod.	%	1.0	≦2.0
			90%		—	—
11	**AGC Figure of Merit Referred to** 100mV/m Input (Loop)		999kHz 1000kHz	dB	55	≧48
12	**Overload Break up** at 999kHz/1000kHz		T.H.D 10%	mV/m	1000	≧500
13	**Signal Strength Meter Deflection** at 999/1000kHz (Loop)		50mV/m	POINT	5	≧4
14	**TAPE Output Level** at 50mV/m Input (LOOP)		999kHz 1000kHz	mV	240	150~340

AC-3 Section Performance Specifications for Model AVR75/85

Seq #	Test		LD No.	Ref.	Unit	Nominal	Limits
1	**Output Level at Preout** **Input Level** 0dB fs Master Volume: 0 dB SPK SETT NO. 1	Front	38	1kHz	V	1.40	1.10~1.70
		Surround				1.40	1.10~1.70
		Center				1.40	1.10~1.70
		Subw	18	30kHz		4.4	3.60~5.10
2	**S/N Ratio at Preout** **Input Level** -20dB & silence A weight +20k LPF (except Subw) SubW: 20k LPF Master Volume: Max SPK SETT NO. 1	Front	6	1kHz	dB	80	≧74
		Surround				80	≧74
		Center				80	≧74
		Subw	24	30Hz		74	≧68
3	**T.H.D at Preout** **Input Level** -20dB fs 20k LPF Master Volume: Max SPK SETT NO.1	Front	6	1kHz	%	0.01	≦0.02
		Surround				0.01	≦0.02
		Center				0.01	≦0.02
		Subw	24	30Hz		0.07	≦0.14
4	**Channel Separation** at SPK Output (SW:Preout) Input Level 0dB fs Input f=1kHz (except Subw) f=30Hz (Subw) Master Volume; -5 dB SPK SETT NO. 1 between each CH	Front	8, 12	1kHz	dB	—	≧57
		Surround	14, 16			—	≧57
		Center	10			—	≧57
		Subw	18	30Hz		—	≧57
5	**30Hz Output Level at Preout** for Crossover Master Volume: 0dB Delay Time 0ms	Front SPK SETT No. 3	20	30Hz	V	2.70	2.0-3.5
		Subw SPK SETT No. 1				6.50	5.5-7.5
6	**Frequency Response** at 20-20kHz (subw: 500Hz) INPUT 0dB fs Master Volume: -10 dB Mode: PCM STEREO Service SPK SETT NO. 2	Front		1kHz	dB	-1	0~3
		Surround				-1	0~3
		Center				-1	0~3
		Subw		31.5Hz		-55	≦-50
		Front		1kHz		-29	≦-18
		Surround				-29	≦-18
		Center				-29	≦-18
7	**PCM OUTPUT** INPUT -20dB fs (L, R) 20kHz LPF Master Volume: Max fs: 32K, 44.1K, 48K	LEVEL		1kHz	V	0.75	0.6-0.9
		THD			%	0.01	≦0.02
		S/N			dB	80	≧74

AVR75 MECHANICAL EXPLODED VIEW (120V AND 230V)

EXPLODED VIEW FOR MODEL AVR75

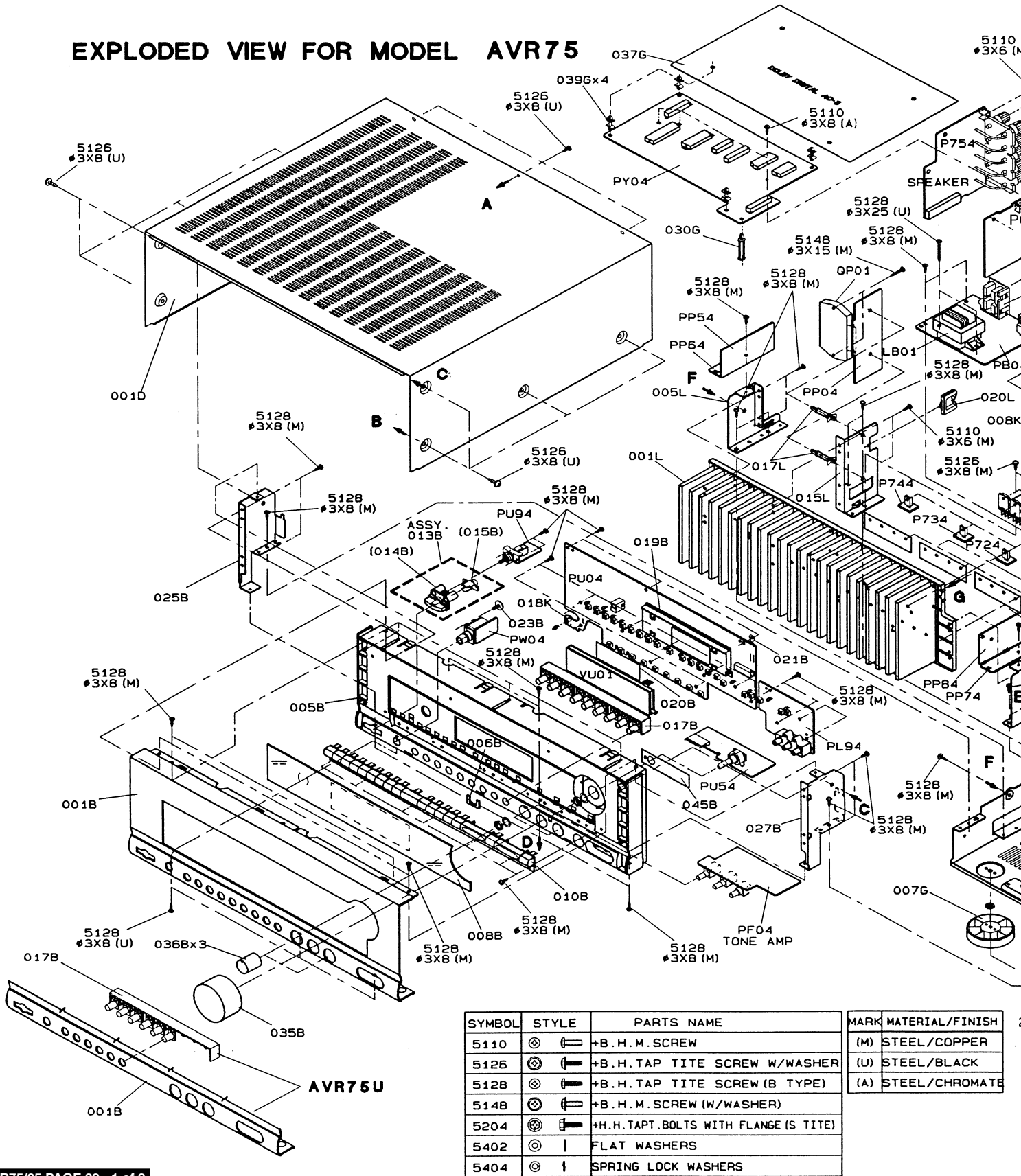


SYMBOL	STYLE	PARTS NAME
5110		+B.H.M.SCREW
5126		+B.H.TAP TITE SCREW W/WASHER
5128		+B.H.TAP TITE SCREW (B TYPE)
5148		+B.H.M.SCREW (W/WASHER)
5204		+H.H.TAPT.BOLTS WITH FLANGE (S TITE)
5402		FLAT WASHERS
5404		SPRING LOCK WASHERS

MARK	MATERIAL/FINISH
(M)	STEEL/COPPER
(U)	STEEL/BLACK
(A)	STEEL/CHROMATE

294J

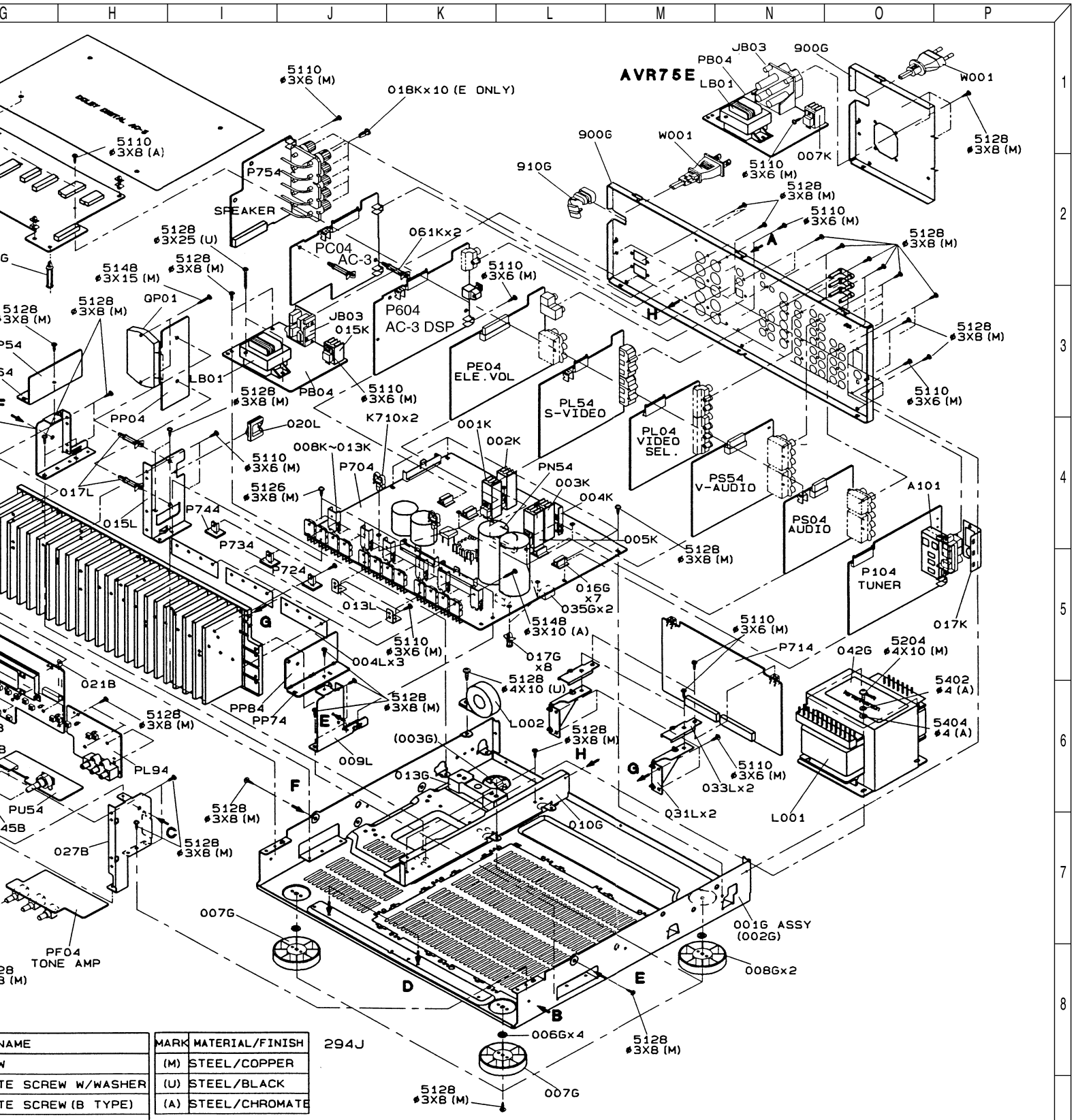
AVR75 MECHANICAL EXPLODED VIEW (12



SYMBOL	STYLE	PARTS NAME
5110		+B.H.M.SCREW
5126		+B.H.TAP TITE SCREW W/WASHER
5128		+B.H.TAP TITE SCREW(B TYPE)
5148		+B.H.M.SCREW(W/WASHER)
5204		+H.H.TAPT.BOLTS WITH FLANGE(S TITE)
5402		FLAT WASHERS
5404		SPRING LOCK WASHERS

MARK	MATERIAL/FINISH
(M)	STEEL/COPPER
(U)	STEEL/BLACK
(A)	STEEL/CHROMATE

HANICAL EXPLODED VIEW (120V AND 230V)



NAME
W
TE SCREW W/WASHER
TE SCREW (B TYPE)
W (W/WASHER)
S WITH FLANGE (S TITE)
S
WASHERS

MARK	MATERIAL/FINISH
(M)	STEEL/COPPER
(U)	STEEL/BLACK
(A)	STEEL/CHROMATE

AVR75 MECHANICAL PARTS LIST (120V & 230V)

Ref.#	Part #	Description	Qty.
001B	260J248360	FRONT ALMI PANEL (BLACK) N	1
001B	260J248350	FRONT ALMI PANEL (BLACK) U	1
005B	260J105015	FRONT MOLD CHASSIS	1
006B	259J118010	SPACER FOR HINGE BUTTON	1
008B	260J158350	WINDOW	1
010B	260J270010	FUNCTION HINGE BUTTON	1
011B	51280308M0	B.H. TAP. SCREW FUNCTION HINGE BUTTON	7
013B	260J270520	BUTTON POWER BUTTON KIT	1
014B	260J270050	POWER BUTTON	1
015B	260J355020	POWER BUTTON LENS	1
017B	260J270020	MODE HINGE BUTTON (N)	1
017B	260J270120	MODE HINGE BUTTON (U)	1
019B	183J271022	FL HOLDER	1
020B	056J122010	STICKER ADHESIVE FOR FL	1
021B	4220005040	CLAMPER FOR FLAT CABLE	1
022B	51280308M0	B.H. TAP. SCREW FUNCTION PCB	16
023B	183J010010	SCREW PHONE PCB	1
024B	51280308M0	B.H. TAP. SCREW FOR POWER SWITCH PCB	2
025B	264J160040	FRONT LEFT SIDE BRACKET	1
026B	51280308M0	B.H. TAP. SCREW FRONT LEFT SIDE BRACKET	4
027B	264J160050	BRACKET FRONT RIGHT SIDE BRACKET	1
028B	51280308M0	B.H. TAP. SCREW FRONT RIGHT SIDE BRACKET	4
030B	51280308U0	B.H. TAP. SCREW ALMI PANEL DOWN SIDE	3
031B	51280308M0	B.H. TAP. SCREW ALMI PANEL UP CENTER	1
033B	51280308M0	B.H. TAP. SCREW FRONT PANEL ASSEMBLY	4
035B	063J154180	MAIN VOL KNOB	1
036B	042J154180	TONE VOL KNOB	3
041B	51280308M0	B.H. TAP. SCREW FOR CLAMPER	1
045B	288J123010	CONTACTOR	1
001D	264J257110	LID TOP COVER BLACK	1
005D	51260308U0	B.T.SCREW(W/W) TOP COVER REAR	3
006D	5126030SU0	B.T.SCREW(W/W) TOP COVER SIDE	8
001G	264J105500	MAIN CHASSIS ASSY	1
002G	264J105010	MAIN CHASSIS	1
003G	030J114010	STOPPER	1
006G	227J056010	BUFFER PEFU SHEET	4
007G	183J057010	LEG (FRONT)	2
008G	183J057110	LEG (REAR)	2
009G	51280308M0	B.H. TAP. SCREW LEG	4
010G	264J160010	TRANSF. BRACKET	1
011G	51280308M0	B.H. TAP. SCREW TRANSF. BRACKET	2
012G	52040410M0	H.HEAD BOLT S.F. TRANSF.	4
013G	260J271010	HOLDER SUB TRANSF BASE	1
014G	51280325U0	B.H. TAP. SCREW SUB TRANSF	2
015G	51280308M0	B.H. TAP. SCREW DENGEN PCB	2
016G	2218271020	HOLDER VERTICAL PCB SUPPORT	7
017G	054J101020	MAIN PCB SUPPORT	8
018G	278J861010	FUSE LABEL T1.6A 250V	4
020G	54040402A0	SPRING WASHER FOR TRANSF FIX	4
021G	54020401A0	FLAT WASHER P. FOR TRANSF. FIX	4
03OG	136J101020	SUPPORT FOR CONNECTOR PCB	1
031G	51280410U0	B.H. TAP. SCREW FOR EMC PART LOCK	1
031G	51280410U0	B.H. TAP. SCREW FOR EMC PART LOCK	1
035G	140S056040	BUFFER FOR MAIN PCB	2
037G	288J053012	COVER	1
039G	329K101010	SUPPORT FOR COVER	4
041G	51100306M9	B.H.M. SCREW MAIN PCB+SUB PCB	2
042G	288J861013	TRANS LABEL	1
900G	294J250020	REAR PANEL (N)	1
900G	294J250010	REAR PANEL (U)	1
901G	51280308M0	B.H. TAP. SCREW RCA	19
902G	51100306M9	B.H.M. SCREW FOR CONTRACTOR	5
903G	51100308A9	B.H.M. SCREW CONNECT PCB	5
905G	51280308M0	B.H. TAP. SCREW REAR PANEL	6
906G	51280308M0	B.H. TAP. SCREW SPEAKER TERMINAL	3
907G	51280308M0	B.H. TAP. SCREW AC OUTLET	2
907G	51280308M0	B.H. TAP. SCREW AC OUTLET	2
910G	450H259010	BUSHING AC CODE BUSH 2271	1
915G	260J861010	“UL, CUL LABEL”	1

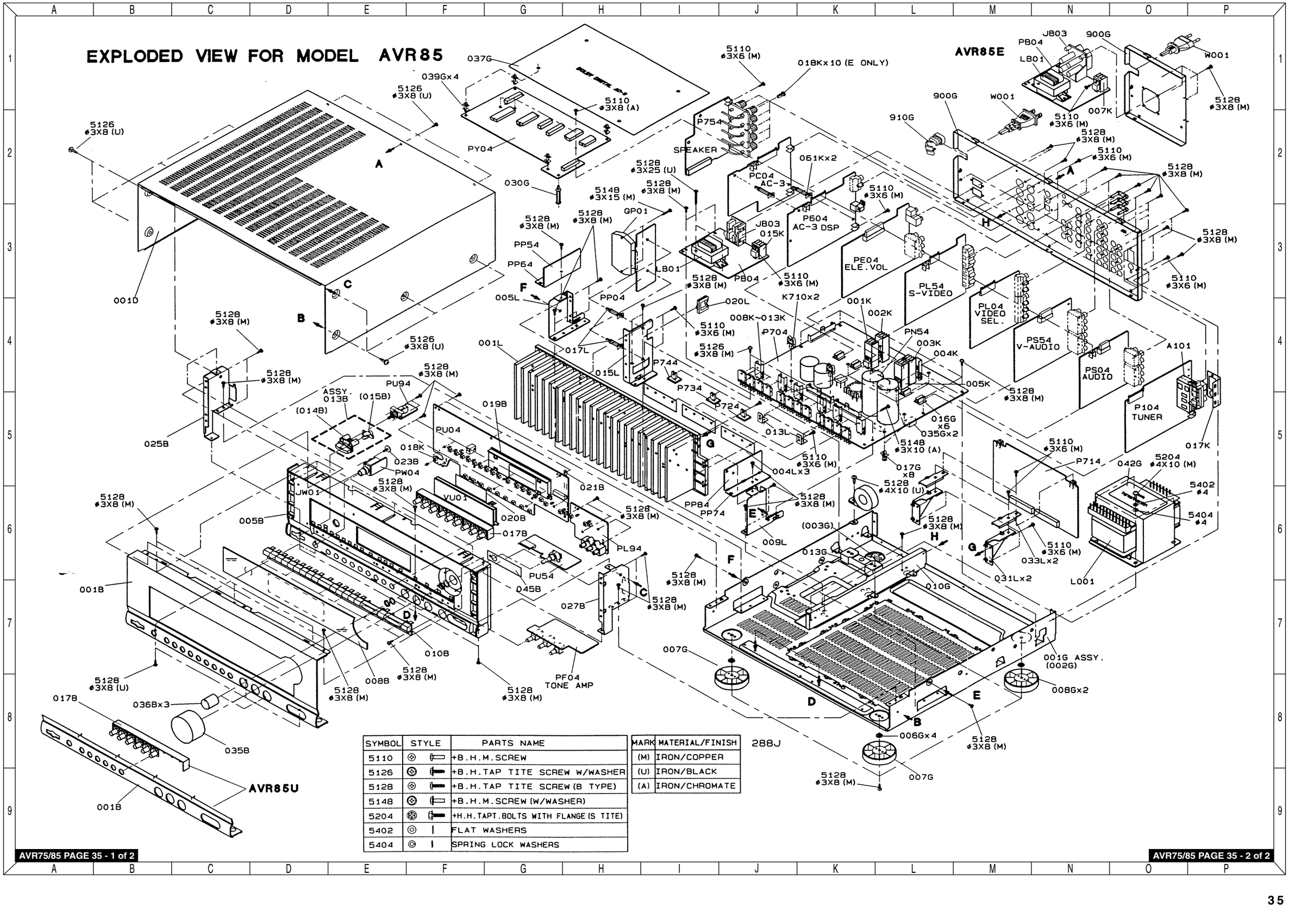
AVR75 MECHANICAL PARTS LIST (120V &230V) continued

Ref.#	Part #	Description	Qty.
920G	95109111D0	FACTORY ID TSK LABEL	1
001L	288J267010	MAIN HEATSINK	1
002L	51480310A9	F.WASHER SCREW POWER TR	12
003L	51480310A9	F.WASHER SCREW REGULATOR TR	3
004L	288J107010	SHEET FOR POWER TR	3
005L	264J160020	HEAT SINK LEFT SIDE BRACKET	1
006L	51280308M0	B.H. TAP. SCREW LEFT SIDE BRACKET	2
009L	264J160030	HEAT SINK RIGHT SIDE BRACKET	1
010L	51280308M0	B.H. TAP. SCREW RIGHT SIDE BRACKET	2
013L	261J104010	MAIN PCB RETAINER	2
014L	51100306M9	B.H.M. SCREW MAIN PCB RETAINER	2
015L	264J160060	HEATSINK CENTER BRACKET	1
016L	51100306M9	B.H.M. SCREW CENTER BRACKET	2
017L	090J101010	SURROUND PCB SUPPORT	2
018L	51480315M9	F.WASHER SCREW SURROUND PACK	2
020L	287S005010	CLAMPER FOR CORD	1
025L	51260308M0	B.T.SCREW(W/W) MAIN PCB KARI	4
026L	51260308M0	B.T.SCREW(W/W) MAIN PCB ASSEMBLY	2
027L	51280308M0	B.H. TAP. SCREW HEAT SINK ASSEMBLY	8
028L	51280308M0	B.H. TAP. SCREW SIDE PCB	2
030L	51280308M0	B.H. TAP. SCREW MAIN PCB ASSEMBLY	2
031L	288J160010	BRACKET FOR SUB PCB(1)	2
032L	51100306M9	B.H.M. SCREW BRACKET FOR SUB PCB(1)	4
033E	288J160020	BRACKET FOR SUB PCB(2)	2
034L	51100306M9	B.H.M. SCREW BRACKET FOR SUB PCB(2)	2
QP01	HC10386030	STK401 IC	1

Printed Circuit Boards

Part #	PCB Type
P714	VOLTAGE AMP PCB
P604	AC-3/DAC PCB
P704	MAIN PCB
PS04	AUDIO FUNCTION PCB
PS54	AUDIO/VIDEO PCB
PE04	ELECTRONIC VOLUME CONTROL PCB
PC04	AC-3 CROSSOVER PCB
PU94	POWER SWITCH PCB
P754	SPEAKER TERMINAL PCB
PL04	VIDEO SELECTOR PCB
PY04	CONNECT PCB
PL54	S-VIDEO PCB
P104	TUNER PCB
PB04	STANDBY PCB
PP04	SURROUND AMP PCB
PU04	FRONT PCB
PU54	MASTER VOLUME PCB
PN54	SPEAKER PROTECT PCB
PF04	TONE CONTROL PCB
PL94	AUX IN
PW04	HEADPHONE PCB

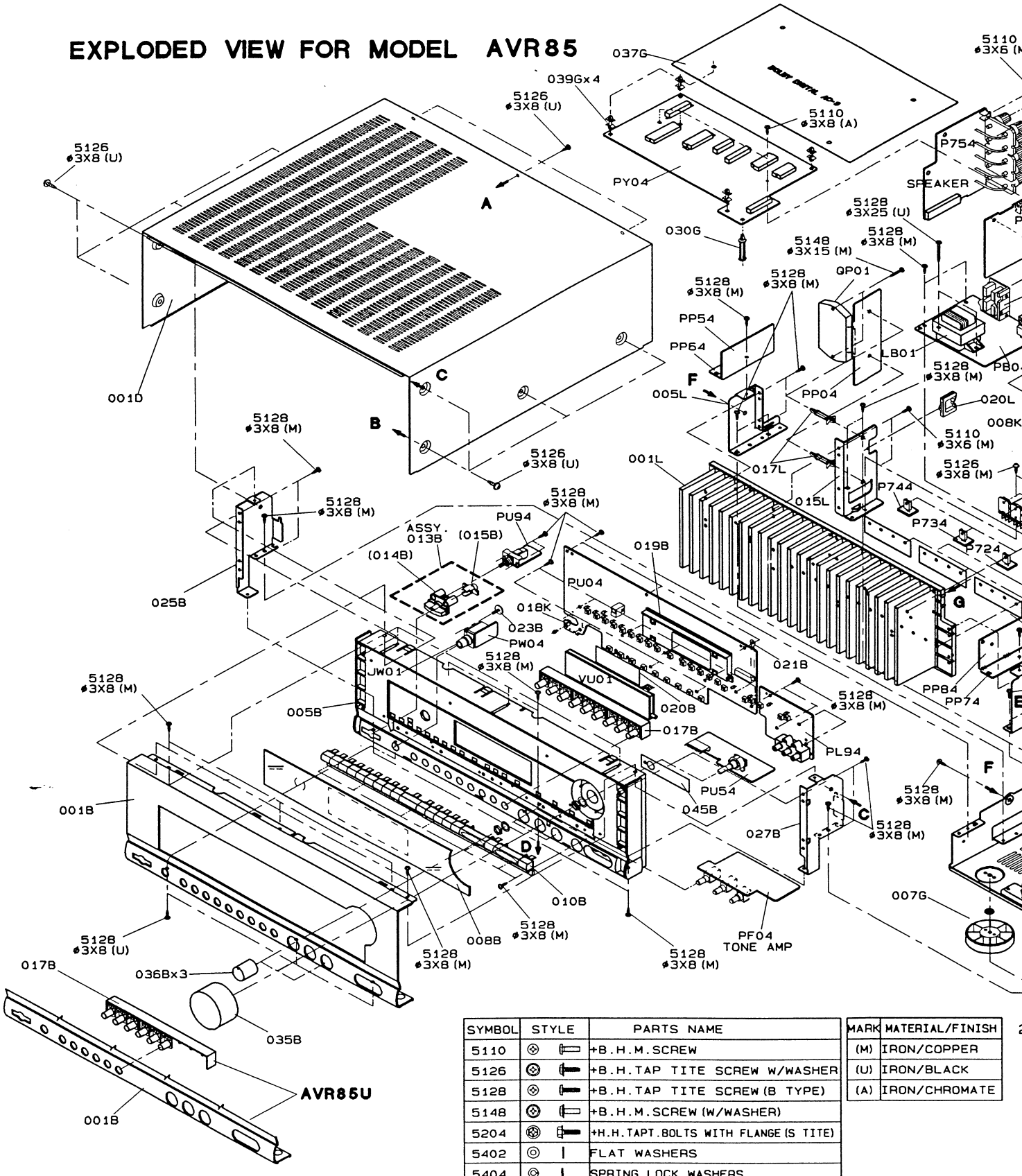
AVR85 MECHANICAL EXPLODED VIEW (120V AND 230V)



SYMBOL	STYLE	PARTS NAME
5110		+B.H.M.SCREW
5126		+B.H.TAP TITE SCREW W/WASHER
5128		+B.H.TAP TITE SCREW (B TYPE)
5148		+B.H.M.SCREW (W/WASHER)
5204		+H.H.TAPT.BOLTS WITH FLANGE (S TITE)
5402		FLAT WASHERS
5404		SPRING LOCK WASHERS

MARK	MATERIAL/FINISH
(M)	IRON/COPPER
(U)	IRON/BLACK
(A)	IRON/CHROMATE

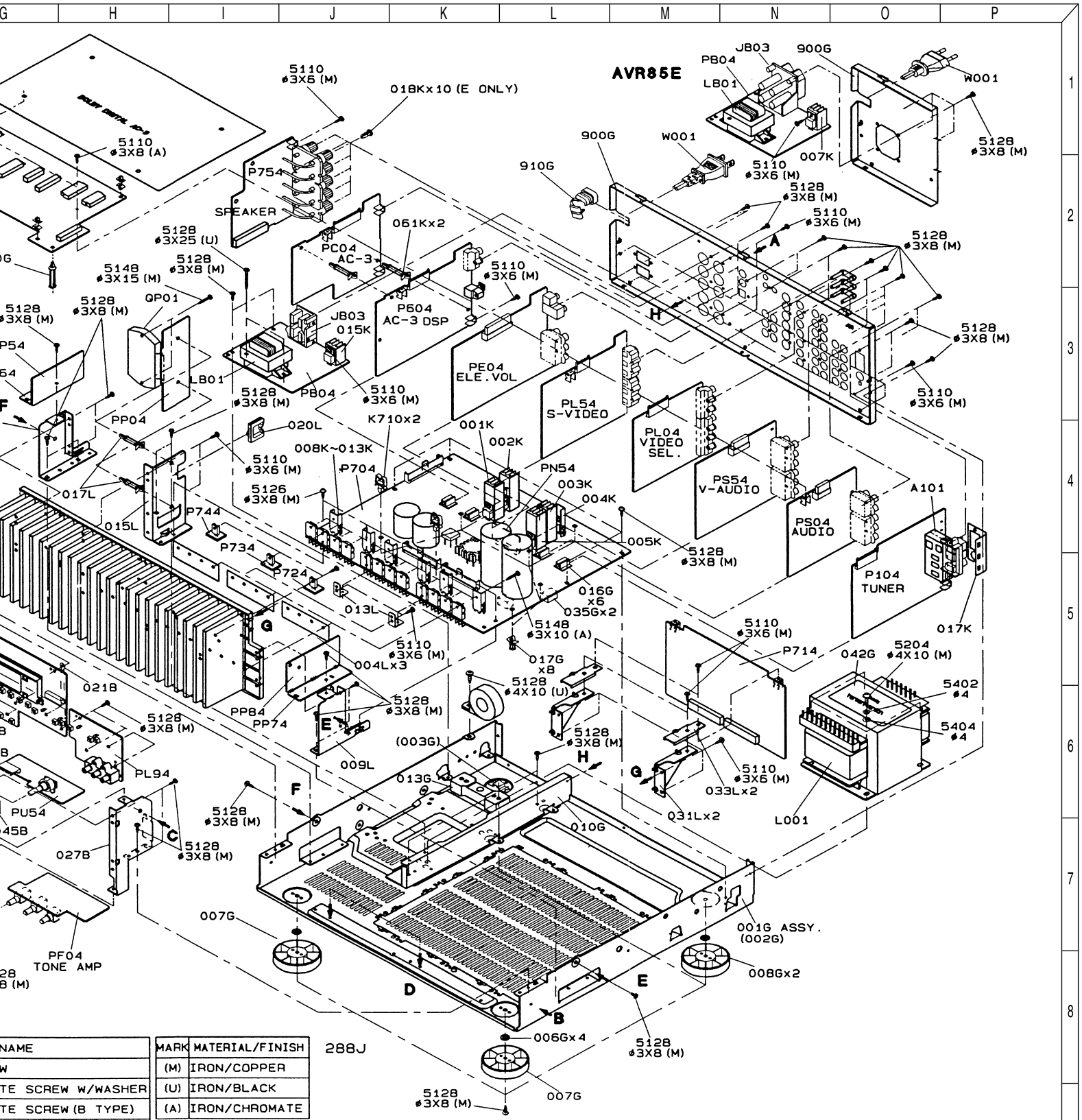
AVR85 MECHANICAL EXPLODED VIEW (12



SYMBOL	STYLE	PARTS NAME
5110		+B.H.M.SCREW
5126		+B.H.TAP TITE SCREW W/WASHER
5128		+B.H.TAP TITE SCREW (B TYPE)
5148		+B.H.M.SCREW (W/WASHER)
5204		+H.H.TAPT.BOLTS WITH FLANGE (S TITE)
5402		FLAT WASHERS
5404		SPRING LOCK WASHERS

MARK	MATERIAL/FINISH
(M)	IRON/COPPER
(U)	IRON/BLACK
(A)	IRON/CHROMATE

HANICAL EXPLODED VIEW (120V AND 230V)



NAME
W
TE SCREW W/WASHER
TE SCREW (B TYPE)
W (W/WASHER)
S WITH FLANGE (S TITE)
S
WASHERS

MARK	MATERIAL/FINISH
(M)	IRON/COPPER
(U)	IRON/BLACK
(A)	IRON/CHROMATE

288J

AVR85 MECHANICAL PARTS LIST (120V & 230V)

Ref.#	Part #	Description	Qty.
001B	260J248320	FRONT PANEL **BLACK** 120V	1
	260J248310	FRONT PANEL **BLACK** 230V	1
0058	260J105015	CHASSIS, FRONT MOLD	1
008B	260J158312	WINDOW	1
010B	260J270010	BUTTON, FUNCTION HINGE	1
011B	51280308M0	SCREW, B.H. TAP. FUNCTION HINGE BUTTON	7
013B	260J270520	BUTTON, POWER BUTTON KIT	1
014B	260J270050	BUTTON, POWER BUTTON	1
015B	260J355020	LENS, POWER BUTTON LENS	1
017B	260J270020	BUTTON, MODE HINGE **BLACK** 120V	1
	260J270120	BUTTON, MODE HINGE **BLACK** 230V	1
019B	183J271022	HOLDER, FL HOLDER	1
020B	056J122010	STICKER ADHESIVE FOR FL	1
021B	4220005040	CLAMPER FOR FLAT CABLE	1
022B	51280308M0	SCREW, B.H. TAP. FUNCTION PCB	16
023B	183J010010	SCREW, PHONE PCB	1
024B	51280308M0	SCREW, B.H. TAP. FOR POWER SWITCH	2
025B	264J160040	BRACKET, FRONT LEFT SIDE	1
026B	51280308M0	SCREW, B.H. TAP FRONT LEFT SIDE	4
027B	264J160050	BRACKET, FRONT RIGHT SIDE	1
028B	51280308M0	SCREW, B.H. TAP FRONT RIGHT SIDE BRACKET	4
030B	51280308U0	SCREW, B.H. TAP. ALUMINUM PANEL DOWN SIDE	3
031B	51280308M0	SCREW, B.H. TAP. ALUMINUM PANEL UP CENTER	1
033B	51280308M0	SCREW, B.H. TAP. FRONT PANEL ASSEMBLY	4
035B	063J154180	KNOB, MAIN BLACK KNOB	1
036B	04J154022	KNOB, VOLUME KNOB	3
041B	51280308M0	SCREW, B.H. TAP. FOR CLAMPER	1
045B	288J123010	CONTACTOR	1
001D	264J257110	LID, TOP COVER BLACK	1
005D	51260308U0	SCREW, B.T. (W/W) TOP COVER REAR	3
006D	51260308U0	SCREW, B.T. (W/W) TOP COVER SIDE	8
001G	264J105500	CHASSIS, MAIN CHASSIS ASSEMBLY	1
002G	264J105010	CHASSIS, MAIN CHASSIS	1
003G	030J114010	STOPPER	1
006G	227J056010	BUFFER, PEFU SHEET	4
007G	183J057010	LEG, FRONT	2
008G	183J057110	LEG, REAR	2
009G	51280308M0	SCREW, B.H. TAP. LEG	4
010G	264J160010	BRACKET, TRANSFORMER	1
011G	51280308M0	SCREW, B.H. TAP. TRANSFORMAER BRACKET	2
012G	5204010M0	BOLT, H. HEAD S.F. TRANSFORMER	4
013G	260J271010	HOLDER, SUB TRANSFORMER BASE	1
014G	51280325U0	SCREW, B.H. TAP. SUB SUB TRANSFORMER	2
015G	51280308M0	SCREW, B.H. TAP. DENGEN PCB	2
016G	2218271020	HOLDER, VERTICAL PCB SUPPORT	7
017G	054J101020	SUPPORT, MAIN PCB SUPPORT	8
018G	278L861010	LABEL, FUSE LABEL T1.6A 250V	4
020G	54040402A0	SPRING WASHER, FOR TRANSFORMER FIX	4
021G	54020401A0	FLAT WASHER P. WASHER FOR TRANSFORMER FIX	4
030G	136J101020	SUPPORT, FOR CONNECTOR PCB	1
013G	51280410U0	SCREW, B.H. TAP. FOR EMC PART LOCK 120V & 230V	1
035G	140S056040	BUFFER, FOR MAIN PCB	2
037G	288J053012	COVER	1
039G	329K101010	SUPPORT FOR COVER	4
041G	51100306M9	SCREW, MAIN PCB+SUB	2
042G	288J861013	LABEL, TRANSFORMER LABEL	1
900G	278J250222	REAR PANEL 120V	1
	278J250212	REAR PANEL 230V	1
901G	51280308M0	SCREW, B.H. TAP. RCA	20
902G	51100306M9	SCREW, B.H.M. FOR CONTACTOR	5
903G	51100308A9	SCREW, B.H.M. CONNECT PCB	5
905G	51280308M0	SCREW, B.H. TAP. REAR PANEL	6
906G	51280308M0	SCREW, B.H. TAP. SPEAKER TERMINAL	3
907G	51280308M0	SCREW, B.H. TAP. (120V) AC OUTLET	4
		SCREW, B.H. TAP. (230V) AC OUTLET	2
910G	450H259010	BUSHING AC CODE BUSH 2271	1

AVR85 MECHANICAL PARTS LIST (120V & 230V) continued

Ref.#	Part #	Description	Qty.
915G	260J861010	LABEL, UL, CUL LABEL	1
920G	95109111D0	LABEL, FACTORY ID TSK LABEL	1
001L	288J267010	HEATSINK, MAIN HEATSINK	1
002L	51480310A9	SCREW, F. WASHER POWER TRANSFORMER	12
003L	51480310A9	SCREW, F. WASHER REGULATOR TRANSFORMER	3
004L	288J107010	SHEET FOR POWER TRANSISTORS	3
005L	264J160020	BRACKET, HEAT SINK LEFT SIDE BRACKET	1
006L	51280308M0	SCREW, B.H. TAP. LEFT SIDE BRACKET	2
009L	264J160030	BRACKET, HEAT SINK RIGHT SIDE BRACKET	1
010L	51280308M0	SCREW, B.H. TAP. RIGHT SIDE BRACKET	2
013L	261J104010	RETAINER MAIN PCB RETAINER	2
014L	51100306M9	SCREW, B.H.M. MAIN PCB RETAINER	2
015L	264J160060	BRACKET HEATSINK CENTER BRACKET	1
016L	51100306M9	SCREW, B.H.M. CENTER BRACKET	2
017L	090J101010	SUPPORT SURROUND PCB SUPPORT	2
018L	51480315M9	SCREW, F. WASHER SURROUND PACK	2
020L	287S005010	CLAMPER CLAMPER FOR CORD	1
025L	51260308M0	SCREW (W/W) B.T. MAIN PCB KARI	4
026L	51260308M0	SCREW (W/W) B.T. MAIN PCB ASSEMBLY	2
027L	51280308M0	SCREW, B.H. TAP. HEAT SINK ASSEMBLY	8
028L	51280308M0	SCRWE, B.H. TAP. SIDE PCB	2
030L	51280308M0	SCREW, B.H. TAP. MAIN PCB ASSEMBLY	2
031L	288J160010	BRACKET BRACKET FOR SUB PCB(1)	2
032L	51100306M9	SCREW, B.H.M. BRACKET FOR PCB(1)	4
033L	288J160020	BRACKET BRACKET FOR SUB PCB(2)	2
034L	51100306M9	SCREW, B.H.M. BRACKET FOR SUB PCB(2)	2
QP01	HC10386030	STK401 IC	1

Ref.#	Part #	Description	Qty.
L001	TS60513110	POWER TRANSFORMER (120V)	1
	TS60513120	POWER TRANSFORMER (230V)	1
LB01	TS14823240	STANDBY TRANSFORMER (230V)	1
	TS14823230	STANDBY TRANSFORMER (120V)	1
W001	YC01900260	AC POWER CORD (120V)	1
	YC01800790	AC POWER CORD (230V)	1
JB03	YJ04002040	AC ACCESSORY JACK (120V)	1
	YJ04002080	AC ACCESSORY JACK (230V)	1
L002	FC50380010	FERRITE CHOKE	1
015K	009D267010	HEATSINK FOR QB01	1

Printed Circuit Boards

Part #	PCB Type
P714	VOLTAGE AMP PCB
P604	AC-3/DAC PCB
P704	MAIN PCB
PS04	AUDIO FUNCTION PCB
PS54	AUDIO/VIDEO PCB
PE04	ELECTRONIC VOLUME CONTROL PCB
PC04	AC-3 CROSSOVER PCB
PU94	POWER SWITCH PCB
P754	SPEAKER TERMINAL PCB
PL04	VIDEO SELECTOR PCB
PY04	CONNECT PCB
PL54	S-VIDEO PCB
P104	TUNER PCB
PB04	STANDBY PCB
PP04	SURROUND AMP PCB
PU04	FRONT PCB
PU54	MASTER VOLUME PCB
PN54	SPEAKER PROTECT PCB
PF04	TONE CONTROL PCB
PL94	AUX IN
PW04	HEADPHONE PCB

AVR75/85 ELECTRICAL PARTS LISTS

General Miscellaneous

REF. N0.	Part No.	Description	Qty.
WB01	YB00182170	CONNECTIVE CORD EHR-3P JB09(PB04)-JY11(PY04)	1
WF01	YB00620140	"CONNECTIVE CORD 12P JF01(PF04)-JY15(PY04), JC02"	1
WP01	YB00331070	CONNECTIVE CORD UP-3P JP01(PP04)-JV57(PE04)	1
WU02	YB00480330	CONNECTIVE CORD UP-7P JU02(PU04)-JB04(PB04)	1
WU91	YB00501450	CONNECTIVE CORD JB10-JU92-JN82-JY14	1
WU92	YB00071960	CONNECTIVE CORD UP-3P JU91(PU94)-JU06(PU04)	1
WV51	YB00331180	CONNECTIVE CORD JY16(PY04)-J701(P714)XJ804	1
WW02	YB00550780	CONNECTIVE CORD EHR-5P JW02(PW04)-J706(P704)	1
WY01	YB00451340	CONNECTIVE CORD 8P JY10(PY04)-JL92(PL94)	1
W602	YB00451350	CONNECTIVE CORD UP-7P J601(P604)-JU05(PU04)	1
W760	YB00122870	CONNECTIVE CORD VHR-5P J761(P754)-J803(P704)	1

PCB - PB04, Standby

Capacitors

CB01	EA47703516	ELECTROLY CAP 470UF 35V	1
CB02	EA10606311	ELECT. CAP. 10UF M 63V	1
CB03	EA47603511	ELECT. CAP. 47UF M 35V	1
CB05	EA47705016	ELECT. CAP. 470UF/50V	1
CB06	EA47603511	ELECTROLY CAP. 47UF 35V	1
CB07, 08	DK18103311	CERAMIC CAP. 0.01UF Z 50V	2
CB09	DK17103847	CERAMIC CAP. # 0.01UF	1
CB10	EA10606311	ELECT. CAP. 10UF M 63V	1

Diodes

DB01, 02, 03, 04	HD20002711	DIODE 1D3 1A/200V	4
DB05	HD33301001	ZENER DIODE MTZJ33D 33V	1
DB06	HD30821001	ZENER DIODE NTJ8.2C 8.2V	1
DB07, 08	HD20002711	DIODE 1D3 1A/200V	2

Fuses

FB01	FS10400860	FUSE # 8A 250V (218004) SLO-BLO EU 230V	1
FB01	FS10630540	FUSE # 6.3A 250V SM6.3 SLO-BLO USA 120V	1
FB02, 03	FS20250201	FUSE # T2.5A/250V SLO-BLO EU 230V	2

Integrated Circuit

QB01	HC38905320	IC ! PQ05RR1 5V 1A REGULATOR	1

Resistors

RB01	GG0510014X	RESISTOR ! 10 OHM +- 5% 1/4W	1
RB03	GA05471010	RESISTOR 470 OHM 1W	1
RB04, 05	GD05101161	RESISTOR 100 OHM J 1/6W	2
RB07	RC10225820	RESISTOR ! 2.2M OHMS K 1/2W	1
RB08	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	1

Transistor

QB02	HT420331E1	! 2SD2033(E) 12OV 1.8W ROHM	1

Miscellaneous

JB01	YJ08000581	JACK ! FUSE CLIP 20MM	1
JB01, 02	YJ08000170	JACK ! FUSE CLIP 20MM	2
JB02	YJ08000591	JACK ! FUSE CLIP 20MM	1
JB03	YJ04002080	JACK ! AC OUTLET 2P (N)	1
JB03	YJ04002040	JACK ! 2P AC OUTLET (CCT1304-0212)	1
JB04	YP06006670	PLUG 2MM PITCH UP CONNECTOR 7PIN	1
JB05, 06	YP04000760	PLUG CONNECTOR 2P B3P-VH	2
JB07	YL01010241	GND TERMINAL FOR PCB	1
JB09	YP0600383X	PLUG B3B-EH 3P RADIAL TAPING	1
JB10	YP06006931	PLUG UP-3P CONNECTOR	1
LB01	TS14823240	# POWER TRANSF. STANDBY EU 230V	1
LB01	TS14823230	# POWER TRANSF. STANDBY USA 120V	1
LB02	LY10240240	RELAY # VS24MB-NR TV-8 SEMKO LISTED	1
015K	009D267010	HEATSINK FOR QB01	1
016K	51100306M9	B.H.M. SCREW FOR QB01+015K	1

PCB - PC04, AC-3 Crossover

Capacitors

CC01, 02 03, 04	DF15104351	FILM CAP. 0.1UF J 50V	4
CC05, 06	DA15220111	CERAMIC CAP. 22PF	2
CC07, 08, 09, 10, 11, 12	EJ10601611	ELECTROLY CAP 10UF 16V	6
CC13, 14 15, 16	DF15104351	FILM CAP 0.1UF J 50V	4
CC17, 18, 19 20, 21, 22	EJ10601611	ELECTROLY CAP 10UF 16V	6
CC23, 24	DA15220111	CERAMIC CAP 22PF 50V	2
CC25, 26	EJ10601611	CAP 10UF 16V	2
CC27, 28	DA15220111	CERAMIC CAP 22PF 50V	2
CC29, 30, 33 34, 35, 36	EJ10601611	ELECTROLY CAP 10UF 16V	6
CC31, 32	DF15104351	FILM CAP 0.1UF J 50V	2
CC37	DA15220111	CERAMIC CAP 22PF 50V	1
CC38	DA15100121	CERAMIC CAP 10PF	1
CC39, 42, 45 47, 49	EJ10601611	CAP 10UF 16V	5
CC40	DF15104351	FILM CAP 0.1UF J 50V	1
CC41	DF15823311	FILM CAP 0.082 J 50V	1
CC43	DF15223351	"FILM CAP 0.022UF, J, M, 50V"	1
CC44	DF15154351	"FILM CAP 0.15UF, J, T, 50V"	1
CC46	DA15100121	CERAMIC CAP 10PF	1
CC48	DA15220111	CERAMIC CAP 22PF 50V	1
CC52, 53	EA10701611	CAP 100UF 16V	2
CC54, 55, 56 57, 58, 59, 62, 63, 64, 65, 66, 67, 70, 71, 75, 76, 77	DK18103311	CERAMIC CAP 0.01UF Z 50V	17

REF. NO.	Part No.	Description	Qty.
CC79	EA10601611	CAP 10UF 16V	1
CC80	EJ10601611	CAP 10UF 16V	1

Integrated Circuits

QC01, 02, 03 04, 05, 06, 07, 08, 09, 10	HC10008090	IC NJM4558DD DUAL OP-AMP	10
QC11	HC10123090	IC NJU7311L ANALOG SWITCH	1
QC12	HC10008090	IC NJM4558DD DUAL OP-AMP	1

Resistors

RC01, 02, 03, 04	GD05223161	RESISTOR 22K OHM +- 5% 1/6W	4
RC05, 06	GD05102161	RESISTOR 1K OHM 5% 1/6W	2
RC07, 08, 09, 10	GD05104161	RESISTOR 100K OHM J 1/6W	4
RC11, 12	GD05103161	RESISTOR 10K OHM J 1/6W	2
RC13, 14	GD05102161	RESISTOR 1K OHM J 1/6W	2
RC15, 16	GD05223161	RESISTOR 22K OHM J 1/6W	2
RC17, 18, 19, 20, 21, 22	GD05104161	RESISTOR 100K OHM J 1/6W	6
RC23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 36	GD05103161	RESISTOR 10K OHM J 1/6W	11
RC33, 34, 38, 39, 40	GD05104161	RESISTOR 100K OHM J 1/6W	5
RC35	GD05223161	RESISTOR 22K OHM J 1/6W	1
RC37	GD05102161	RESISTOR 1K OHM J 1/6W	1
RC41	GD05103161	RESISTOR 10K OHM J 1/6W	1
RC42	GD05822161	RESISTOR 8.2K OHM 5% 1/6W	1
RC43, 47, 48	GD05183161	RESISTOR 18K OHM 5% 1/6W	3
RC44	GD05562161	RESISTOR 5.6K OHM J 1/6W	1
RC45	GD05331161	RESISTOR 330 OHM J 1/6W	1
RC46, 49, 52 55, 58	GD05104161	RESISTOR 100K OHM J 1/6W	5
RC50, 51	GD05273161	RESISTOR 27K OHM 5% 1/6W	2
RC53, 56, 57 62, 63, 64	GD05103161	RESISTOR 10K OHM J 1/6W	6
RC54	GD05682161	RESISTOR 6.8K OHM J 1/6W	1

Miscellaneous

JC01	YP06020870	PLUG 17P A1	1
JC02	YP06007150	PLUG 2MM PITCH SIDE CONNECTOR 5P	1
JC03, 04, 05	YL01010140	TERMINAL M1698 GND TERMINAL WITH M3	3

PCB - PW04, Headphone

Capacitors

CW09, 10, 11	DA17103111	CERAMIC CAP. 0.01UF M 16V	3

Miscellaneous

JW01	YJ01004240	H.P. JACK HLJ2307-01-3160	1
JW02	YP0601045X	PLUG B5B-EH 5P RADIAL TAPING	1
WW01	YB00152110	CONNECTIVE CORD 1P 150 MM	1

REF. NO.	Part No.	Description	Qty.

PCB PU04, Front

Capacitors

CU01, 09	DA17223111	CERAMIC CAP. 0.022UF TP050F223Z TAIYO YUDEN	2
CU02	EX22300531	BIG ELECT. CAP 0.022 F 5.5V SUPER CAPACITOR	1
CU03	EJ47601011	ELECT. CAP. 47UF/10V	1
CU04	DA17223111	CERAMIC CAP. 0.022UF TP050F223Z TAIYO YUDEN	1
CU05, 08	DD38104011	CERAMIC CAP. 0.1 UF Z 50V	2
CU10	EJ22700611	ELECT. CAP. 220UF/6.3V	1
CU14, 15	DA16102111	CERAMIC CAP. 1000PF K 50V B	2

Diodes/LEDs

DU01, 02, 03	HD20029211	DIODE 1SS132	3
DU07, 08, 09 10, 11, 12, 13, 14, 15, 16, 17, 18	HD20002001	“DIODE 1SS176, MA165, 1SS254 30V 0.1A”	12
DU19	HI10062321	L.E.D. LT3D8B RED 30	1
DU20	HI10099320	L.E.D. GL3ED8 SHARP	1
DU21, 22	HD20002000	“DIODE 1SS176, MA165, 1SS245 30V 0.1A”	2
DU30, 31, 32, 33, 34, 35, 36, 37, 38	HI10095321	L.E.D. LT3K44B GREEN 30MA	9
DU40, 41, 42, 43, 45, 46, 47	HI10095321	L.E.D. LT3K44B GREEN 30MA	7

Integrated Circuits

QU01	HU288JT00F	MICROPROCESSOR TMP87CP71F-6630 8BIT U-COM	1
QU05	HC754100B0	IC 74HC541 DIP 3 STATE BUFFER/ LINE DRIVER	1

Resistors

DU39	GD05151161	RESISTOR 150 OHM +- 5%	1
RU01, 02, 03, 04, 05	GD05152161	RESISTOR 1.5K OHM +- 5% 1/6W	5
RU06, 07, 08, 09, 10	GD05222161	RESISTOR 2.2K OHM +- 5% 1/6W	5
RU11, 12, 13, 14, 15	GD05332161	RESISTOR 3.3K OHM +- 5% 1/6W	5
RU16, 17, 18, 19, 20	GD05332161	RESISTOR 6.8K OHM +- 5% 1/6W	5
RU21, 22, 23, 24, 25, 26, 27, 28, 29, 30	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	10
RU36, 37	GD05151161	RESISTOR 150 OHM +- 5% 1/6W	2
RU39	GD05101161	RESISTOR 100 OHM +- 5% 1/6W	1
RU40, 43, 44, 45, 48, 51, 53, 54, 59, 64, 65	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	11
RU41, 49, 50, 52, 55, 60, 67	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	7
RU42	GD05183161	RESISTOR 18K OHM +- 5% 1/6W	1
RU46	GD05471161	RESISTOR 470 OHM +- 5% 1/6W	1
RU47	GD05221161	RESISTOR 220 OHM +- 5% 1/6W	1
RU56, 57, 58	GD05182161	RESISTOR 1.8K OHM +- 5% 1/6W	3
RU63	GD05100161	RESISTOR 10 OHM +- 5% 1/6W	1
RU66	GD05303161	RESISTOR 330 OHM +- 5% 1/6W	1
RU68	GG0501014X	RESISTOR 1 OHM +- 5% 1/4W	1

REF. N0.	Part No.	Description	Qty.
RU69	GD05104161	RESISTOR 100K OHM +- 5% 1/6W	1

Switches

SU01, 02, 03, 04, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 22, 23, 24, 25, 26, 28, 29, 30	SP0101128X	PUSH SWITCH TACK SWITCH ALPS-SKHVAE	26

Transistors

QU02	BA20001001	"SEMICON.COMP DTC114ES/UN4211 10K, 10K"	1
QU03	BA10001001	"SEMICON.COMP DTA114ES/UN4111 10K, 10K"	1
QU04, 08, 14	BA20002001	"SEMICON.COMP DTC144ES/UN4213 47K, 47K"	3
QU06, 07, 10 12	HT30001001	"TRANSISTOR C536SP, C2458, C3311,C1740S"	4
QU09	HT10001001	"TRANSISTOR A608SP, A1048, A1309, A933S"	1
QU11, 15	BA10002001	"SEMICON.COMP DTA144ES/ UN4113 47K, 47K"	2
QU13	BA10003211	SEMICON.COMP DIGITAL TRANSISTOR DTA114TS	1

Miscellaneous

JU01	YJ07011160	JACK 9604S-23P	1
JU02	YP06007170	PLUG W-P7907	1
JU03	YJ06030640	JACK TSK-B04X-A1	1
JU04	YP06006290	PLUG S6B-XH-A	1
JU05	YP06001260	PLUG 2MM PITCH UP CONNECTOR 8PIN	1
JU06	YP06006931	PLUG UP-3P CONNECTOR	1
PU04	WA288J5010	PWB INSERT+CHIP ! UCOM/ FUNCTION-SW PCB	1
QU16	HW10001210	PHOTO UNIT IR RECEIVER RPM-670CBR H-15MM	1
VU01	HQ31210060	DISPLAY UNIT FIP12DM8R NEC 12WGIT 16SEG	1
XU01	FQ08004011	CERAMIC VIB.CST8.0MHZ (MT) TAPING	1
018K	152J118030	SPACER FOR DU20 LED SPACER	1

PCB - PL94, Aux In

Capacitor

CL91, 93, 94	EJ10601611	ELECT. CAP. 10UF/16V	3
CL92	EJ22601611	ELECT. CAP. 22UF/16V	1
CL97, 98	DA16681111	CERAMIC CAP. 680PF K 50V	2

LEDs

DU48	HI10095321	L.E.D. LT3K44B GREEN 30MA	1
DU49	HI10095321	L.E.D. LT3K44B GREEN 30MA	1

Miscellaneous

JL91	YT02030390	TERMINAL AUX YKC21-XXXX	1
JL92	YP06007260	PLUG UP-8P	1
JU52	YJ06008860	JACK 06JQ-ST	1
PL94	WA288J5040	INSERT+CHIP ! AUX IN PCB	1

REF. N0.	Part No.	Description	Qty.

Integrated Circuit

QL91	HC10008090	IC NJM4558DD DUAL OP-AMP	1

Resistors

RL91	GD05100161	RESISTOR 10 OHM +- 5% 1/6W	1
RL92	GD05750161	RESISTOR 75 OHM +- 5% 1/6W	1
RL93, 94	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	2
RL95, 96	GD05151161	RESISTOR 150 OHM +- 5% 1/6W	2
RU38	GD05100161	RESISTOR 10 OHM +- 5% 1/6W	1

Switches

SU05, 06, 21	SP0101128X	PUSH SWITCH TACK SWITCH ALPS-SKHVAE	3

Miscellaneous

WL91	SP0101128X	CONNECTIVE CORD BOARD IN/#18 OFC	1

PCB -PU54, Master Volume

Capacitors

CU71	DA16102111	CERAMIC CAP. 1000PF K 50V B	1
CU72	DA16102111	CERAMIC CAP. 1000PF K 50V B	1

Diode

DU71	HD20002000	"DIODE 1SS176, MA165, 1SS254 30V 0.1A"	1

Miscellaneous

JU51	YP06020740	PLUG TSK-B04P-A1	1

Transistors

QU71, 72	HT30001001	"TRANSISTOR C536SP, C2458, C3311, C1740S"	2

Resistors

RU71, 72	GD05104161	RESISTOR 100K OHM +- 5% 1/6W	2
RU73, 74	GD05104161	RESISTOR 220K OHM +- 5% 1/6W	2

Switch

SU75	SR02010040	ROTARY SWITCH ENCODER EC16B40B0	1

Miscellaneous

WU71	YB00152520	CONNECTIVE CORD 1P CORD RUG-NON	1

PCB - P724

Miscellaneous

J717	YP06006931	CONNECTIVE PLUG UP 3P	1
Q725	HT33423100	TRANSISTOR 2SC3423 O	1

PCB - P734

Miscellaneous

REF. NO.	Part No.	Description	Qty.
718	YP06006931	CONNECTIVE PLUG UP 3P	1
Q726	HT33423100	TRANSISTOR 2SC3423 O	1

PCB - P744

Miscellaneous

REF. NO.	Part No.	Description	Qty.
719	YP06006931	CONNECTIVE PLUG UP 3P	1
QH13	HT33423100	TRANSISTOR 2SC3423 O	1

PCB - P714, Voltage Amp

Capacitors

REF. NO.	Part No.	Description	Qty.
CH01	EA476016Q1	ELECT. CAP. 47UF/16V MATSUSHITA	1
CH02	DK16681301	CERAMIC CAP. 680PF K 50V	1
CH02, C703 C704	DD15680301	CERAMIC CAP. 68PF J CH 50V BLK	3
CH03	DF15102351	FILM CAP. J, M, 1000 PF 50V	1
CH04, 05	EA477063Q6	ELECT. CAP. 470UF/63V MATSUSHITA	2
CH06	DD10030301	CERAMIC CAP. 3PF C CJ 50V BLK	1
CH07	DK16101301	CERAMIC CAP. 100PF K 50V	1
CH08	EA108006Q1	ELECT. CAP. 1000UF/6.3V MATSUSHITA	1
CH09, 11	EA106100Q1	ELECT. CAP. 10UF/100V MATSUSHITA	2
CH12, 13	DF15104351	"FILM CAP. 0.1UF, J, N, 50V"	2
CH15, 16	DD15220550	CERAMIC CAP. 22PF J 500V CH	2
C701, 702	EA476016Q1	ELECT. CAP. 47UF/16V MATSUSHITA	2
C703, 704	DK16681301	CERAMIC CAP. 680PF K 50V	2
C705, 706	DF15102351	"FILM CAP. 0.001UF, J, M, 50V"	2
C707, 708, 709, 710	EA477063Q6	ELECT. CAP. 470UF/63V MATSUSHITA	4
C711, 712	DD10030301	CERAMIC CAP. 3PF C CJ 50V BLK	2
C713, 714	DK16101301	CERAMIC CAP. 100PF K 50V	2
C715, 716	EA108006Q1	ELECT. CAP. 1000UF/6.3V MATSUSHITA	2
C717, 718, 721, 722	EA106100Q1	ELECT. CAP. 10UF/100V MATSUSHITA	4
C723, 724, 725, 726	DF15104351	"FILM CAP. 0.1UF, J, N, 50V"	4
C740, 741, 742, 743	DD15220550	CERAMIC CAP. 22PF J 500V CH	4
CN73	EJ10601611	ELECT. CAP. 10 F M 16V	1
CN74	EJ22700611	ELECT. CAP. 220 F M 6.3V	1
CN75	DK16102300	CERAMIC CAP. 1000PF K 50V	1
CW01, 02	EA105050Q1	ELECT. CAP. 1UF/50V	2
CW03, 04	EA475050Q1	ELECT. CAP. 4.7UF/50V	2
CW05, 06	EA106050Q1	ELECT. CAP. 10UF/50V	2
CW07, 08	EA227016Q1	ELECT. CAP. 220UF/16V	2

Diodes

REF. NO.	Part No.	Description	Qty.
D701, 702	HD20029051	DIODE S5688G 400V 1A	2
D703, 704	HD20002001	"DIODE 1S1555/2473/2076, DS448, MA150"	2
DH01	HD20029051	DIODE S5688G 400V 1A	1
DH02, DN74	HD20002001	"DIODE 1S1555/2473/2076, DS448, MA150"	2

Integrated Circuit

REF. NO.	Part No.	Description	Qty.
QW01	HC10016090	IC NJM4458D DUAL OP-AMP	1

Resistors

REF. NO.	Part No.	Description	Qty.
RH01	GD05331141	RESISTOR 330 OHM +- 5% 1/4W	1
RH02	GD05333141	RESISTOR 33K OHM +- 5% 1/4W	1
RH03, 04	GD05152141	RESISTOR 1.5K OHM +- 5% 1/4W	2
RH05, 06	GD05331141	RESISTOR 330 OHM +- 5% 1/4W	2
RH07	GD05271161	RESISTOR 270 OHM +- 5% 1/6W	1
RH08	NH0510214X	FUSIBLE RESIST 1K OHM J 1/4W	1
RH09	GD05122141	RESISTOR 1.2K OHM +- 5% 1/4W	1
RH10	GD05333141	RESISTOR 33K OHM +- 5% 1/4W	1
RH11, 12, 13, 14, 15, 16, 17, 18	NF0256114X	FUSE RESISTOR 560 OHM G 1/4W	8
RH19, 20	GD05153141	RESISTOR 15K OHM +- 5% 1/4W	2
RH21, 22	NF0215114X	FUSE RESISTOR 150 OHM G 1/4W	2
RH23, 24	NH05100142	FUSIBLE RESIST 10 OHM J 1/4W	2
R701, 702	GD05331141	RESISTOR 330 OHM +- 5% 1/4W	2
R703, 704	GD05333141	RESISTOR 33K OHM +- 5% 1/4W	2
R705	GD05152141	RESISTOR 1.5K OHM +- 5% 1/4W	1
R706, 707, 708	GD05152141	RESISTOR 1.5K OHM +- 5% 1/4W	3
R709, 710, 711, 712	GD05331141	RESISTOR 330 OHM +- 5% 1/4W	4
R713, 14	GD05271161	RESISTOR 270 OHM +- 5% 1/6W	2
R715, 716	NH0510214X	FUSIBLE RESIST 1K OHM J 1/4W	2
R717, 18	GD05122141	RESISTOR 1.2K OHM +- 5% 1/4W	2
R719, 20	GD05333141	RESISTOR 33K OHM +- 5% 1/4W	2
R721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732	NF0256114X	FUSE RESISTOR 560 OHM G 1/4W	12
R733, 734 735, 736	NF0215114X	FUSE RESISTOR 150 OHM G 1/4W	4
R737, 738 739, 740	GD05153141	RESISTOR 15K OHM +- 5% 1/4W	4
R741, 742 743, 744	NF0215114X	FUSE RESISTOR 150 OHM G 1/4W	4
R745, 746, 747, 748	NH05100142	FUSIBLE RESIST 10 OHM J 1/4W	4
RN78, 79	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	2
RW01, 02	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	2
RW03, 04	GD05224161	RESISTOR 220K OHM +- 5% 1/6W	2
RW05, 06	GD05563161	RESISTOR 56K OHM +- 5% 1/6W	2
RW07, 08	GD05224161	RESISTOR 220K OHM +- 5% 1/6W	2
RW09, 10	GD05820161	RESISTOR 82 OHM +- 5% 1/6W	2
RW11, 12	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	2
RW13, 14	NH05100142	FUSIBLE RESIST 10 OHM J 1/4W	2

Transistors

REF. NO.	Part No.	Description	Qty.
QH01, 02, 03 Q701, 702, 703, 704, 705, 706	HT317751E1	TRANSISTOR 2SC1775A E RANK	9
QH04, Q707, Q708	HT317401L1	TRANSISTOR 2SC1740S(R)	3
QH05, Q709, 710	HF203731Y1	F.E.T. 2SK373-Y TPE2	3
QH06, 07 Q711, 712, 713, 714	HT109701B1	TRANSISTOR 2SA970 (BL) TOSHIBA	6

REF. N0.	Part No.	Description	Qty.
QH08, Q715, 716	HT322401B1	TRANSISTOR 2SC2240 (BL) TPE2 TOSHIBA	3
QH09, 11, Q717, 718, 721, 722,	HT111242R0	"TRANSISTOR 2SA1124 (R,S)"	6
QH10, 12, Q719, 720 723, 724	HT326322R0	"TRANSISTOR 2SC2632 (R,S)"	6
QN71	BA20001001	"SEMICON.COMP DTC114ES/ UN4211 10K, 10K"	1
QN72	HT109331Q1	TRANSISTOR 2SA933S(Q)	1
QN73	HT317401L1	TRANSISTOR 2SC1740S(R)	1
QN74, 75	HT109331Q1	TRANSISTOR 2SA933S(Q)	2
QN76	BA10009211	SEMICON.COMP DTA144TS	1

Miscellaneous

J701, 706	YP0601045X	PLUG 85B-EH	2
J702	YP06019700	PLUG TAC-P20P-A1	1
J707	YL0101241X	TERMINAL GND TERMINAL FOR PCB	1
J708, 709, 710, 712	YL01010241	TERMINAL GND TERMINAL FOR PCB	4
J713	YP06019650	PLUG TAC-P15P-A1	1
J715	YP06019650	PLUG TAC-P15P-A1	1
J714, 716	YJ06020750	JACK TAC-P15X-A1	2
J720, 721	YL01010140	TERMINAL M1698 PWB GND	2

PCB - PP04, Surround Amp

Capacitors

CP01, 02	DK16222301	CERAMIC CAP. 2200PF K 50V	1
CP03, 04	EQ10606391	ELECT. CAP. 10UF M 63V	2
CP05, 06	EA10701611	ELECT. CAP. 100UF/16V	2
CP07, 08,	DD11100301	CERAMIC CAP. 10PF D CH 50V	2
CP09, 10, 11, 12	EJ22405011	ELECT. CAP. 0.22UF/50V	4
CP13, 15	EA10706311	ELECT. CAP. 100UF/63V	2
CP14	EA10706311	ELECT. CAP. 10UF M 63V	1
CP16	EA10606311	ELECT. CAP. 10UF M 63V	1
CP17	EJ22601011	ELECT. CAP. 22UF/10V	1
CP21, 22	DD15470301	CERAMIC CAP. 47PF J CH 50V BLK	2

Diodes

DP01, 02	HD20027011	DIODE HSS81TD 150V 150MA AXIAL TAPG.	2

Integrated Circuit

QP01	HC10386030	IC ! STK401-120 (70WX70W) POWER AMP	1

Resistors

RP01, 02, 16	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	3
RP01, 02	GD05471161	RESISTOR 470 OHM +- 5% 1/6W	2
RP03, 04	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	2
RP05, 06	GD05563161	RESISTOR 56K OHM +- 5% 1/6W	2
RP07, 08	GD05222161	RESISTOR 2.2K OHM +- 5% 1/6W	2
RP09, 10	GD05513161	RESISTOR 51K OHM +- 5% 1/6W	2
RP11, 12	GD10222050	RESISTOR 0.22 OHM +- 10% 5W	2
RP13, 14, 15	GG0510216X	RESISTOR 1K OHM +- 5% 1/6W	3
RP17, 18	GD05273161	RESISTOR 27K OHM +- 5% 1/6W	2
RP19, 20	GD05223161	RESISTOR 22K OHM +- 5% 1/6W	2
RP21, 22	GA05100010	RESISTOR 10 OHM +- 5% 1W	2
RP23, 24	GD05221161	RESISTOR 220 OHM +- 5% 1/6W (**AVR75/85 230V**)	2
RP23, 23	GD05181161	RESISTOR 180 OHM +- 5% 1/6W (**AVR75/85 120V**)	2
RP25, 26	GG0510116X	RESISTOR 100 OHM +- 5% 1/6W	2
RP27	GD05682161	RESISTOR 6.8K OHM +- 5% 1/6W	1
RP28	GD05333161	RESISTOR 33K OHM +- 5% 1/6W	1
RP29	GD05100161	RESISTOR 10 OHM +- 5% 1/6W	1
RP99	GG0510014X	RESISTOR 10 OHM J 1/4W	1

Transistors

QP02, 03	HT322402A1	TRANSISTOR 2SC2240 GR OR BL TOSHIBA	2
QP04	HT109702A1	TRANSISTOR 2SA970 (GR) OR (BL) TOSHIBA	1

Miscellaneous

JP01	YP06006931	PLUG CONNECTIVE PLUG UP 3P	1
LP01	ML08010030	AIR COIL SPK CHOCK COIL VERTICAL TYPE	1
LP02	ML08010030	AIR COIL SPK CHOCK COIL VERTICAL TYPE	1
WP02	YB00170880	CONNECTIVE CORD VHR-6P/SDN-6P TO J802(P704)	1
WP03	YB00170870	CONNECTIVE CORD 1P 170MM	1

PCB - PN54, Speaker Protect

Capacitors

CN81, 82	EJ10505011	ELECT. CAP. 1 F M 50V	2
CN83	DD38104011	CERAMIC CAP. 0.1 50V	1

Diodes

DN81, 82	HD20002001	DIODE 1SS176	2

Resistors

RN84, 87	GD05473161	RESISTOR 47K OHM J 1/6W	2
RN85	GD05104161	RESISTOR 100K OHM J 1/6W	1
RN86	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	1
RN88	GD05101161	RESISTOR 100 OHM J 1/6W	1

Transistors

QN81	BA10001001	"SEMICON.COMP DTA114ES/ UN4111 10K, 10K"	1
QN82, 83	HT322402A1	TRANSISTOR 2SC2240 GR OR BL	2

Miscellaneous

JN81	YJ06019130	JACK	1
JN82	YP06007130	3P PLUG	1
QN84	HC10042050	IC TA7317P OVERLOAD PROTECTOR	1

PCB - P604 AC-3/DAC

Capacitors

REF. NO.	Part No.	Description	Qty.
C601, 605, 606, 609, 610, 612, 623, 633, 635, 636, 637, 638, 654, 655, 656	DK9810420Y	CERAMIC CAP. GRM39F104Z16 0.1UF	15
C602, 613	EA10700611	ELECT. CAP. 100UF/6.3V	2
C603, 604	DK9610420Y	CERAMIC CAP. 0.1 +- 10% B 10V	2
C607, 608, 631, 634, 651, 653	DD9510130Y	CERAMIC CAP. 100 PF +- 5% CG 50V GR39	6
C652	DK9622230Y	CERAMIC CAP. 2200 PF +- 10% B 25V GR39	1
CD59, 60	EJ10601611	ELECT. CAP. 10UF/16V	2
CD61, 62	DF15121551	FILM CAP. 120PF 100V	2
CD63	DF15561351	FILM CAP. 560PF J 50V	1
CD64	DF15561351	FILM CAP. 560PF J 50V	1
CD65, 66	EJ10601611	ELECT. CAP. 10UF/16V	2
CD67, 68	DK9810420Y	CERAMIC CAP. GRM39F104Z16 0.1UF	2
CK01, 02, 03, 13	EJ10601611	ELECT. CAP. 10UF/16V	4
CK04, 05 06, 14	DK9810420Y	CERAMIC CAP. GRM39F104Z16 0.1UF MURATA	4
CK09, 10	DK9615230Y	CERAMIC CAP. 1500PF (GR39)	2
CK11, 12	DK9810420Y	CERAMIC CAP. GRM39F104Z16 0.1UF MURATA	2
CK15, 17, 19, 20	EA10700611	ELECT. CAP. 100UF/6.3V	4
CK16, 18	DK9810420Y	CERAMIC CAP. GRM39F104Z16 0.1UF MURATA	2
CM01	DK9622320Y	CERAMIC CAP. 0.022 UF +- 10% XTR 16V	1
CM02, 04	EA10700611	ELECT. CAP. 100UF/6.3V	2
CM03, 05, 11 13	DK9810420Y	CERAMIC CAP. GRM39F104Z16 0.1UF	4
CM06	DK9610230Y	CERAMIC CAP. 1000 PF +- 10% B 50V	1
CM14, 15	DD9515130Y	CERAMIC CAP. 150 PF +- 5% CG 50V	2
CM18	DK9610420Y	CERAMIC CAP. 0.1 UF +- 10% B 10V	1
CM19	DK9610330Y	CERAMIC CAP. 0.01UF +- 10% 50V	1
CM31, 32	DF15105351	FILM CAP. 1 UF J 50V	2
CM33, 35	EA10700611	ELECT. CAP. 100UF/6.3V	2
CM34, 36, 37 45, 51, 53, 54, 56, 57, 58, 59, 60, 63	DK9810420Y	CERAMIC CAP. GRM39F104Z16 0.1UF	13
CM39	EQ47601631	ELECT. CAP. 47UF/16V	1
CM41	DF15104351	"FILM CAP. 0.1UF, J, N, 50V"	1
CM42, 43	DK9610330Y	CERAMIC CAP. 0.01UF +- 10% 50V	2
CM44, 46	DD9518030Y	CERAMIC CAP. 18PF GR39	2
CM52	DD9510130Y	CERAMIC CAP. 100 PF +- 5% CG 50V GR39	1
CM61, 62	EA10700611	ELECT. CAP. 100UF/6.3V	2
CR01	DK9810420Y	CERAMIC CAP. GRM39F104Z16 0.1UF MURATA	1
CR02	EA10700611	ELECT. CAP. 100UF/6/3V	1
CR03	DK9610420Y	CERAMIC CAP. 0.1 UF +- 10% B 10V	1
CR04, 05	DK9610230Y	CERAMIC CAP. 1000 PF +- 10% B 50V GR36	2
CR05	DD9510130Y	CERAMIC CAP. 100 PF +- 5% CG 50V GR39	1
CR06, 08, 09, 11, 15, 16	DK9810420Y	CERAMIC CAP. GRM39F194Z16 0.1UF MURATA	6
CR07	EA10700611	ELECT. CAP. 100UF/6.3V	1
CR10	DK9610320Y	CERAMIC CAP. 0.01 UF +- 10% B 25V GR39	1
CR13, 14	DD9515030Y	CERAMIC CAP. 15 PF +- 5% CG 50V GR39	2

Diode

DM01	HZ4000342Z	CHIP DIODE KV1851-TL00 (TAPING)	1

Integrated Circuits

Q601	HC10013640	IC YSS243 (AC-3 DECODER)	1
Q602	HC10012640	IC YSS241F (PRO LOGIC DECODER)	1
Q603	HC1007600Z	IC 8X32K #NS High Speed Static RAM	1
Q604	HC715705ZY	IC TC74HC157A QUAD MULTIPLEXER	1
Q605	HC707400ZY	IC 74HC74 FLAT DUAL D TYPE FLIP-FLOP	1
Q606	HC700405WY	IC TC7W04F INVERTER X 3	1
Q607, 608	HC716400ZY	IC 74HC164F TAPING 8 Bit Shift Register	2
Q609	HC1040905Y	IC TCW125FU DUAL BUS BUFFER	1
Q651	HU278JT50F	MICROPROCESSOR TMP87CH40F (FOR AC-3 DECODE)	1
Q652	HC754100RZ	IC 74HC541 3 State Buffer/Line Driver	1
Q653	HC700000ZY	IC CMOS 74HCOO QUAD 2 INPUT NAND GATE	1
Q654	HC10075531	IC V-SENSOR IC S-806C 4.55V	1
QD01, 31	HC1012249Z	IC TDA1305T DAC	2
QD02, 32, 52	HC1002909Y	IC NJM4560M DUAL OP-AMP	3
QD51	HC1012249Z	IC TDA1305T DAC	1
QK01	HC1001748Y	IC 2CH 18BIT ADC AK5340	1
QK02, 03	HC1017209Y	IC NJM2115M DUAL OP-AMP	2
QM04	HC1006517Z	IC MC14577C VIDEO AMP	1
QM08	HC1002909Y	IC NJM4560M DUAL OP-AMP	1
QM09	HC10016660	IC PM4007A(AC-3) RF DEMODULATOR)	1
QM10	HC1007600Z	IC 8X32K SRAM #NS	1
QR01	HC10372030	IC LC8904Q DIGITAL AUDIO I/F	1
QR02	HC700000ZY	IC CMOS 74HC00 QUAD 2 INPUT NAND GATE	1

Transistors

QC53	HT328782A1	TRANSISTOR 2SC2878 A/B	1
QD54	BA10001001	.COMP TRANSISTOR DTA114ES/ETC	1
QM01, 02, 03	HX300012AY	"CHIP TR. (2SC) 2SC4081 (Q,R) 2SC4116 (Y,GR)"	3
QM05	HX300012AY	"CHIP TR. (2SC) 2SC4081 (Q,R) 2SC4116 (Y,GR)"	1
QM06, 07	HX100012AY	"CHIP TR. (2SA) 2SA1586 (Y,GR) 2SA1576A (Q,R)"	2

Resistors

L651, 652, 653, 654, 655, 656, 657, 658, 659, 671, 672, 673, 674, 675, 676	NN0500061Y	CHIP RESISTOR 0 OHM +- 5% 1/16W	15
L660	NN0522161Y	CHIP RESISTOR 220 OHM +- 5% 1/16W	1
R601, 607, 608, 621, 640	NN0510161Y	CHIP RESISTOR 100 OHM +- 5% 1/16W	5
R602	NN0512361Y	CHIP RESISTOR 12K OHM +- 5% 1/16W	1
R603	NN0582161Y	CHIP RESISTOR 820 OHM +- 5% 1/16W	1
R604, 605, 606, 609, 610, 611, 613	NN0547061Y	CHIP RESISTOR 47 OHM 1/16W	7
R631, 632, RG633, 634, 635, 636, 637, 638, 639	NN0547061Y	CHIP RESISTOR 47 OHM 1/16W	9

REF. N0.	Part No.	Description	Qty.
R651, 654	NN0547261Y	CHIP RESISTOR 4.7K OHM 1/16W	2
R652	NN0510361Y	CHIP RESISTOR 10K OHM 1/16W	1
R653	NN0510361Y	CHIP RESISTOR 2.2K OHM 1/16W	1
R655, 656, 657, 658	NN0522261Y	CHIP RESISTOR 2.2K OHM 1/16W	4
R659, 661	NN0500061Y	CHIP RESISTOR 0 OHM 1/16W	2
R693	NN0510361Y	CHIP RESISTOR 10K OHM 1/16W	1
RD01, 02, 07, 08, 31, 32, 37, 38, 51, 52, 57, 58	NN0547361Y	CHIP RESISTOR 47K OHM 1/16W	12
RD03, 04, 05 06, 09, 10, 33, 34, 35, 36, 39, 40, 53, 54, 55, 56, 62, 63, 64	NN0510361Y	CHIP RESISTOR 10K OHM +- 5% 1/16W	19
RD59	NN0510261Y	CHIP RESISTOR 1K OHM +- 5% 1/16W	1
RD60	NN0547161Y	CHIP RESISTOR 470 OHM +- 5% 1/16W	1
RD61	NN0510561Y	CHIP RESISTOR 1.0M OHM 1/16W	1
RK01, 02	NN0515361Y	CHIP RESISTOR 15K OHM 1/16W	2
RK03, 04	NN0510361Y	CHIP RESISTOR 10K OHM 1/16W	2
RK05, 06, 07, 08	NN0547261Y	CHIP RESISTOR 4.7K OHM 1/16W	4
RK09, 10 11, 12	NN0510361Y	CHIP RESISTOR 10K OHM 1/16W	4
RK13, 14 15, 16	NN0533161Y	CHIP RESISTOR 330 OHM 1/16W	4
RM01	NN0556161Y	CHIP RESISTOR 560 OHM 1/16W	1
RM02	NN0510161Y	CHIP RESISTOR 100 OHM 1/16W	1
RM03, 10, 12	NN0510261Y	CHIP RESISTOR 1K OHM 1/16W	3
RM04	NN0518261Y	CHIP RESISTOR 1.8K OHM 1/16W	1
RM05, 06, 19 35	NN0510361Y	CHIP RESISTOR 10K OHM 1/16W	4
RM07, 32	NN0547261Y	CHIP RESISTOR 4.7K OHM 1/16W	2
RM08	NN0500061Y	CHIP RESISTOR 0 OHM 1/16W	1
RM11	NN0547281Y	CHIP RESISTOR 4.7K OHM 1/16W	1
RM13	NN0515161Y	CHIP RESISTOR 150 OHM 1/16W	1
RM14	NN0522261Y	CHIP RESISTOR 2.2K OHM 1/16W	1
RM15, 16, 17, 18, 20, 21, 23	NN0510261Y	CHIP RESISTOR 1K OHM 1/16W	7
RM22	NN0547261Y	CHIP RESISTOR 4.7K OHM 1/16W	1
RM24	NN0533261Y	CHIP RESISTOR 3.3K OHM 1/16W	1
RM25	NN0582261Y	CHIP RESISTOR 8.2K OHM 1/16W	1
RM31	NN0539261Y	CHIP RESISTOR 3.9K OHM 1/16W	1
RM33	NN0510461Y	CHIP RESISTOR 100K OHM 1/16W	1
RM34, 41	NN0522361Y	CHIP RESISTOR 22K OHM 1/16W	2
RM42	NN0568361Y	CHIP RESISTOR 68K OHM 1/16W	1
RM43	NN0512161Y	CHIP RESISTOR 120 OHM 1/16W	1
RM44	NN0547361Y	CHIP RESISTOR 47K OHM 1/16W	1
RM45, 46	NN0510361Y	CHIP RESISTOR 10K OHM 1/16W	2
RM47, 48, 49	NN0547361Y	CHIP RESISTOR 47K OHM 1/16W	3
RM50	NN0522061Y	CHIP RESISTOR 22 OHM +- 5% 1/16W	1
RM61	NN0510161Y	CHIP RESISTOR 100 OHM 1/16W	1
RM62	NN0510261Y	CHIP RESISTOR 1K OHM 1/16W	1
RM63	NN0510361Y	CHIP RESISTOR 10K OHM 1/16W	1
RM64	NN0510381Y	CHIP RESISTOR 10K OHM 1/16W	1
RM65, 66	NN0500061Y	CHIP RESISTOR 0 OHM 1/16W	2
RR01, 02, 03	NN0575061Y	CHIP RESISTOR 75 OHM 1/16W	3
RR04, 06	NN0556361Y	CHIP RESISTOR 56K OHM 1/16W	1
RR05	NN0533461Y	CHIP RESISTOR 330K OHM 1/16W	1
RR07	NN0533361Y	CHIP RESISTOR 33K OHM 1/16W	1
RR08	NN0510161Y	CHIP RESISTOR 100 OHM 1/16W	1
RR09	NN0510361Y	CHIP RESISTOR 10K OHM 1/16W	1
RR10, 11	NN0512361Y	CHIP RESISTOR 12K OHM 1/16W	2
RR12, 13	NN0556261Y	CHIP RESISTOR 5.6K OHM 1/16W	2
RR14	NN0512161Y	CHIP RESISTOR 120 OHM 1/16W	1
RR15	NN0522461Y	CHIP RESISTOR 220K OHM 1/16W	1
RR16	NN0500061Y	CHIP RESISTOR 0 OHM 1/16W	1
RR17, 18, 19, 20	NN0533061Y	CHIP RESISTOR 33 OHM 1/16W	4
RR21, 23, 24	NN0500061Y	CHIP RESISTOR 0 OHM +- 5% 1/16W	3

Miscellaneous

J601	YP06020640	PLUG	1
J602, 603	YL01010140	TERMINAL M1698 GND TERMINAL WITH M3	2
J651	YJ0700677Y	JACK 53261-0790(1.25MM-7PIN)	1
JR01	YT02021400	TERMINAL YKC21-3211	1
JR02	YJ15000150	OPT. CONNECTOR GP1F32R OPTICAL RECEIVER	1
L601, 602, 603, 604	FM12223011	FILTER 0.022UF	4
L605	FC90090011	FERRITE CORE ZBF503D-00TA (NATIONAL)	1
L606	FM12223011	FILTER 0.022UF	1
LK01	FC90090011	FERRITE CORE ZBF503D-00TA (NATIONAL)	1
LM01	LU1268301Y	CHIP INDUCTANCE CHIP INDUCTOR 68UH	1
LM02	FF30288010	L.C. FILTER SBP-4930 2.88MHZ B.P.F	1
W601	NN0510361Y	CONNECTIVE CORD 1P SIN-01T1.2 BLK	1
X651	FQ0800403Y	CERAMIC VIB. 8.0MHZ TYPE(EF0 V) TAPING	1
XM01	JX1800138Y	CRYSTAL 18.432MHZ	1
XR01	JX2400138Y	CRYSTAL CX-5F 24.576MHZ	1

PCB - PU94, Power Switch

JU91	YP06006391	PLUG CONNECTIVE PLUG UP 3P	1
JU92	YP06006931	PLUG CONNECTIVE PLUG UP 3P	1
SU91	SP02011573	PUSH SWITCH ALPS LOCK TYPE	1

PCB - P704, Main

Capacitors

C801, 804	DK18103566	CERAMIC CAP. 0.01 Z E 500V	2
C802, 03	EB18906310	ELECT. CAP. 18000UF 63V D35XL80 LH6	2
C805, 806	EB68806370	ELECT. CAP. 6800UF M 63V D25XL45 LP5	2
C807, 808	DK18103311	CERAMIC CAP. 0.01UF Z 50V	2
C809, 810	EA33802516	ELECT. CAP. 3300UF/25V	2
C811, 812	DK18103311	CERAMIC CAP. 0.01UF Z 50V	2
C813, 814, 821, 822, 823	EA10701611	ELECT. CAP. 100UF/16V	5
C815, 816, 824	DK18103311	CERAMIC CAP. 0.01UF Z 50V	3
C817	EA33801616	ELECT. CAP. 3300UF M 16V	1
C818	EA22801616	ELECT. CAP. 2200UF/16V	1
C819	EA68801686	ELECT. CAP. 6800UF/16V +-20%	1

REF. N0.	Part No.	Description	Qty.
C820	DA17103111	CERAMIC CAP. 10000PF	1
C825, 826, 827, 828, 829	EA10701611	ELECT. CAP. 100UF/16V	5
C831, 832	EA22701611	ELECT. CAP. 220UF/16V	2
CN01, 02	DF15683311	FILM CAP. 0.068 J 50V	2
CN03	EA10601611	ELECT. CAP. 10UF M 16V	1
CN04	EJ33505011	ELECT. CAP. 3.3UF 50V	1
CN04	EJ22505011	ELECT. CAP. 2.2UF 50V	1
CN05	DD38104011	CERAMIC CAP. 50V DC 0.1UF +80-20%	1
CN06, 07	EJ47601611	ELECT. CAP. 47UF/16V	2
CN08	EJ10505011	ELECT. CAP. 1UF/50V	1
CN09	EJ10701611	ELECT. CAP. 100UF/16V	1
CN10, 12	DD38104011	CERAMIC CAP. 0.1 Z 50V	2
CN51	DF15683311	FILM CAP. 0.068 J 50V	1
CN71	EJ10505011	ELECT. CAP. 1UF/50V	1
CN72	EJ10605011	ELECT. CAP. 50V	1

Diodes

D801, 802	HE20012290	DIODE ! D5FB20 200V 5A W/FIN	2
D803, 804	HE20011290	DIODE ! S2VB20	1
D805, 806, 807, 808, 809	HD20002711	DIODE 1D3 1A/200V	5
DN01, 02, 03, 04, 09, 51, 72, 73	HD20002711	DIODE 1D3 1A/200V	8
DN71	HD30511001	DIODE 5.1V ZENER	1

Integrated Circuits

Q801	HC3891509F	IC ! NJM7815FA +15V 1A REGULATOR	1
Q802	HC3991509F	IC ! NJM7915FA -15V 1A REGULATOR	1
Q803	HC3890509F	IC ! NJM7805FA +5V 1A REGULATOR	1
Q804	HC3990509F	IC ! NJM7905FA -5V 1A REGULATOR	1

Plugs

J801	YP06010950	PLUG B5P-VH 5P BASE POST 7A	1
J802	YP06003690	PLUG B6P-VH 6P BASE POST 7A	1
J803	YP06010950	PLUG B5P-VH 5P BASE POST 7A	1
J804	YP06006680	PLUG W-UP7508	1

Resistors

R749, 750	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	2
R751, 752	GD05472161	RESISTOR 4.7K OHM +- 5% 1/6W	2
R753, 754	GD05562161	RESISTOR 5.6K OHM +- 5% 1/6W	2
R755, 756	RA01020781	TRIMMING RESIST 1K OHM RH0638CJ3R TYPE ALPS	2
R757, 758	GD05561161	RESISTOR 560 OHM +- 5% 1/6W	2
R759, 760, 761, 762	NF0210114X	FUSE RESISTOR 100 OHM G 1/4W	4
R763, 764 765, 766	NF0215014X	FUSE RESISTOR 15 OHM G 1/4W	4
R767, 768 769, 770, 771, 772	NF0282014X	FUSE RESISTOR ! 820HM G 1/4W	6
R773, 774 775, 776	GW10222050	RESISTOR 0.22 OHM 5W	4
R777, 778	NK05100010	METAL RESISTOR 10 OHM +- 5% 1W	2
R779, 780	NK05150020	METAL RESISTOR 15 OHM +- 5% 2W	2
R781, 782	GD05100161	RESISTOR 10 OHM +- 5% 1/6W	2
R783, 784 785, 786	GW10222050	RESISTOR 0.22 OHM 5W	4

REF. N0.	Part No.	Description	Qty.
RH25	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	1
RH26	GD05472161	RESISTOR 4.7K OHM +- 5% 1/6W	1
RH27	GD05562161	RESISTOR 5.6K OHM +- 5% 1/6W	1
RH28	RA01020781	TRIMMING RESIST 1K OHM RH0638CJ3R TYPE ALPS	1
RH29	GD05561161	RESISTOR 560 OHM +- 5% 1/6W	1
RH30, 31	NF0210114X	FUSE RESISTOR 100 OHM G 1/4W	2
RH32, 33	NF0215014X	FUSE RESISTOR 15 OHM G 1/4W	2
RH34	NF0282014X	FUSE RESISTOR ! 82 OHM G 1/4W	1
RH35, 36	NH0502214X	FUSIBLE RESIST 2.2 OHM G 1/4W	2
RH37, 38	GW10222050	RESISTOR 0.22 OHM 5W	2
RH39	NK05100010	METAL RESISTOR 10 OHM +- 5% 1W	1
RH40	NK05150020	METAL RESISTOR 15 OHM +- 5% 2W	1
RH41	GD05100161	RESISTOR 10 OHM J 1/6W	1
RH42	GD05224141	RESISTOR 220K OHM +- 5% 1/4W	1
RH43, 44	GW10222050	RESISTOR 0.22 OHM 5W	2
RN01, 02, 03, 04, 05, 06	GD05152161	RESISTOR 1.5K OHM +- 5% 1/6W	6
RN07, 08	GD05393161	RESISTOR 39K OHM +- 5% 1/6W	2
RN10, 11, 12	GD05472161	RESISTOR 4.7K OHM +- 5% 1/6W	3
RN13, 14, 21	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	3
RN15	GD05104161	RESISTOR 100K OHM +- 5% 1/6W	1
RN16	GD05822161	RESISTOR 8.2K OHM +- 5% 1/6W	1
RN20	GG0522214X	RESISTOR 2.2K OHM +- 5% 1/4W	1
RN22, 72	GD05333161	RESISTOR 33K OHM +- 5% 1/6W	2
RN23, 24, 25, 26, 55	GD05683161	RESISTOR 68K OHM +- 5% 1/6W	5
RN27, 32	GD05223161	RESISTOR 22K OHM +- 5% 1/6W	2
RN30, 31, 33 75	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	4
RN35	GG0510018X	RESISTOR ! 10 OHM +- 5% 1/6W	1
RN36, 71, 74	GD05222161	RESISTOR 2.2K OHM J 1/6W	3
RN51, 52, 53	GD05152161	RESISTOR 1.5K OHM +- 5% 1/6W	3
RN54	GD05393161	RESISTOR 39K OHM +- 5% 1/6W	1
RN61, 62	GD05472161	RESISTOR 4.7K OHM +- 5% 1/6W	2
RN73	GD05153161	RESISTOR 15K OHM +- 5% 1/6W	1
RN76, 77	NF0568114X	FUSE RESISTOR 680 OHM G 1/4W (**AVR75/85 230V**)	2
RN76, 77	NH0568114X	FUSIBLE RESIST 680 OHM J 1/4W (**AVR75/85 120V**)	2
Q805, 806	GG05022120	RESISTOR 2.2 OHM +- 5% 1/2W	2

Transistors

Q727, 728	HT322401B1	TRANSISTOR 2SC2240 (BL) TPE2 TOSHIBA	2
Q729, 730	HT326322R0	“TRANSISTOR 2SC2632 (R,S)”	2
Q731, 732	HT111242R0	“TRANSISTOR 2SA1124 (R,S)”	2
Q733, 734	HT11930000	TRANSISTOR 2SA1930 (R) OR (O)	2
Q735, 736	HT35171000	TRANSISTOR 2SC5171 (R) OR (O)	2
Q737, 738,	HT351982A0	TRANSISTOR ! 2SC5198	2
Q739, 740,	HT119412A0	TRANSISTOR ! 2SA1941	2
Q741, 742	HT351982A0	TRANSISTOR ! 2SC5198	2
Q743, 744	HT119412A0	TRANSISTOR ! 2SA1941	2
QH14	HT322401B1	TRANSISTOR 2SC2240 (BL) TPE2 TOSHIBA	1
QH15	HT326322R0	“TRANSISTOR 2SC2632 (R,S)”	1
QH16	HT111242R0	“TRANSISTOR 2SA1124 (R,S)”	1
QH17	HT11930000	TRANSISTOR 2SA1930 (R) OR (O)	1
QH18	HT35171000	TRANSISTOR 2SC5171 (R) OR (O)	3
QH19, 21	HT351982A0	TRANSISTOR ! 2SC5198	2
QH20, 22	HT119412A0	TRANSISTOR ! 2SA1941	2

REF. N0.	Part No.	Description	Qty.
QN01, 02, 51	HT322402A1	TRANSISTOR 2SC2240 OR BL	3
QN03	HT109702A1	TRANSISTOR 2SA970 () OR (BL) TOSHIBA	1
QN07	HT10001001	"TRANSISTOR A608SP, A1048, A1309, A933S"	1
QN08	HT316272B1	"TRANSISTOR 2SC1627 O,Y 80V 300MA 600MW TO"	1

Miscellaneous

001K	A009D267010	HEATSINK FOR Q801	1
002K	A009D267010	HEATSINK FOR Q802	1
003K	A009D267010	HEATSINK FOR Q803	1
004K	A009D267010	HEATSINK FOR Q804	1
005K	A009D267010	HEATSINK FOR Q805	1
006K	51280308M0	B.H. TAP. SCREW FOR Q804+004K	1
007K	51100306M9	"B.H.M. SCREW FOR 001K, 002K, 003K, 005K"	4
008K	A001J267050	HEATSINK FOR Q733	1
009K	A001J267050	HEATSINK FOR Q735	1
010K	A001J267050	HEATSINK FOR Q734	1
011K	A001J267050	HEATSINK FOR Q736	1
012K	A001J267050	HEATSINK FOR QH17	1
013K	A001J267050	HEATSINK FOR QH18	1
014K	51280308M0	B.H. TAP. SCREW FOR 008K-013K	6
017K	2886005050	CLAMPER NIFCO CLAMPER #175	2
019K	288JI52010	"GLASS TUBE 70MM TO W701, 702, 703"	3
J723, 724, 725	YP0600383X	PLUG B3B-EH 3P RADIAL TAPING	3
JN01	YP06013130	PLUG	1
LH01, L701 L702	ML08010030	AIR COIL SPK CHOCK COIL VERTICAL TYPE	3
LN01, 02, 51	LY20180020	RELAY 5A AC240V	3
LN03	LY20240410	RELAY ! MR62-24SR 24V RELAY	1
W701	YB00105440	CONNECTIVE CORD CONNECTIVE PLUG UP 3P	1
W702	YB00105440	CONNECTIVE CORD CONNECTIVE PLUG UP 3P	1
W703	YB00105440	CONNECTIVE CORD CONNECTIVE PLUG UP 3P	1
W801	YB00230470	CONNECTIVE CORD 1P 230 MM	1
W802, 803, 804	YB00430310	CONNECTIVE CORD SIN-21T-1.8 AWG18	3

PCB - PS04, Audio Function

Capacitors

CS01, 02, 03, 04, 05, 06	EJ47601611	ELECT. CAP. 47UF/16V	6
CS09, 10, 13, 14	EA10701611	ELECT. CAP. 100UF/16V	4
CS15, 16	EJ47502511	ELECT. CAP. 4.7UF/25V	2
CS17, 18	EJ10601611	ELECT. CAP. 10UF/16V	2
CS19, 21, 22	DD38104011	CERAMIC CAP. 50V DC 0.1UF +80 -20%	3
CS23, 24, 25, 26, 30	DK16151301	CERAMIC CAP. 150PF K 50V	5
CS27, 28	DK16221301	CERAMIC CAP. 220PF K 50V	2
CS29	DK16151011	CERAMIC CAP. 150PF K 50V	1
CS31, 32	DK16221301	CERAMIC CAP. 220PF K 50V	2
CS34, 35, 36, 37, 38	DK16221301	CERAMIC CAP. 220PF K 50V	5

Integrated Circuits

QS01, 02, 03	HC10008090	IC NJM4558D-D DUAL OP-AMP	3
QS11	HC10308030	IC LC78211ANALOG SWITCH	1
QS12	HC10310030	IC LC78213ANALOG SWITCH	1
QS13	HC10008090	IC NJM4558DD DUAL OP-AMP	1

Resistors

RS01, 02, 03, 04, 05, 06	GD05473161	RESISTOR 47K OHM J 1/6W	6
RS07, 08, 09 10, 11, 12	GD05102161	RESISTOR 1K OHM J 1/6W	6
RS13, 14, 15, 16, 17, 18	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	6
RS21, 22, 27, 28	GD05102161	RESISTOR 1K OHM J 1/6W	4
RS29, 30, 31, 32, 33, 34	GD05104161	RESISTOR 100K OHM J 1/6W	6
RS43, 44, 45, 46	GD05222161	RESISTOR 2.2K OHM J 1/6W	4

Miscellaneous

JS01	YT02060460	TERMINAL 14X14 RA 2L6P NI	1
JS02	YT02040940	TERMINAL RCA PIN JACK RA2L4P	1
JS03	YJ06030570	JACK 16P	1
JS04	YL01010140	TERMINAL GROUND TERMINAL FOR PCB	1

PCB - P754, Speaker Terminal

Capacitors

C727, 728, 729, 730, 731, 732, 733, 734, 764, 765	DK16221551	CERAMIC CAP. 220PF K B 500V	10

Miscellaneous

J703	YJ06020800	JACK TAC-P20X-A1	1
J704	YT01040790	TERMINAL LTS0410-1002	1
J751	YT01060020	TERMINAL LTS0610-3001	1
J752	YL01010140	TERMINAL M1698 PWB GND TERMINAL WITH M3	1
J760, 61	YP06011050	PLUG B5PS-VH	2
J762, 64, 66 768	YJ08000591	JACK CLIP FOR 20MM FUSE ON PCB	4
J763, 65, 67, 69	YJ08000581	JACK CLIP FOR 20MM FUSE ON PCB	4

PCB - PS54, Audio Video

Capacitors

C731, 732	DK18222311	CERAMIC CAP. 0.022UF Z 50V	2
CG51, 52, 55 56, 57, 58, 59, 60	EJ47502511	ELECTROLYTIC CAP. 4.7UF 25V	8
CG61, 62	DK16101391	CERAMIC CAP. 100PF K 50V	2
CG63, 64	EJ47502511	ELECTROLYTIC CAP. 4.7UF 25V	
CS51, 52, 53, 54, 55, 56, 57, 58	EJ47601611	ELECT. CAP. 47UF/16V	8
CS61, 68, 91	DD38104011	CERAMIC CAP. 50V DC 0.1UF +80 -20%	3

REF. NO.	Part No.	Description	Qty.
CS62, 63, 65, 66	EA10701611	ELECT. CAP. 100UF/16V	4
CS71, 72, 73, 74, 75, 76, 77, 78	DK16151301	CERAMIC CAP. 150PF K 50V	8
CS79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90	DK16221301	CERAMIC CAP. 220PF K 50V	12
CS93, 94	EJ47601611	ELECT. CAP. 47UF/16V	2
Diodes			
DG51	HD20002001	DIODE 1SS176, MA165, 1SS254 30V 0.1A	1
Fuses			
F760, 761, 762, 763	FS10160850	FUSE ! 1.6 A 250V BS LISTED (**AVR75/85 230V**)	4
F760, 761, 762, 763	FS10200350	FUSE ! 2A 125V UL, CSA, MITI TYPE FBT (**AVR75/85 120V**)	4
Integrated Circuit			
QG55, 56	HC10008090	IC NJM4558DD DUAL OP-AMP	2
QG57	HC10304050	IC TC9213P ELEC. VOLUME CONTROL	1
QS51, 52, 53, 54	HC10008090	IC NJM4558DD DUAL OP-AMP	4
QS56	HC10308030	IC LC78211 ANALOG SWITCH	1
QS57	HC10309030	IC LC78212 ANALOG SWITCH	1
Resistors			
RG51, 52, 55, 56	GD05473161	RESISTOR 47 OHM J 1/6W	4
RG53, 54	GD05471161	RESISTOR 470 OHM J 1/6W	2
RG57, 58	GD05104161	RESISTOR 100K OHM J 1/6W	2
RG59, 60	GD05334161	RESISTOR 330K OHM J 1/6W	2
RG61, 62	GD05152161	RESISTOR 1.5K OHM J 1/6W	2
RG63, 64	GD05472161	RESISTOR 4.7K OHM J 1/6W	2
RG65, 66	GD05331161	RESISTOR 330 OHM J 1/6W	2
RG67, 68	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	2
RG69, 70	GD05103161	RESISTOR 10K OHM J 1/6W	2
RG71, 72	GD05471161	RESISTOR 470 OHM J 1/6W	2
RG73	NF0222114X	FUSE RESISTOR 220 OHM J 1/4W	1
RG74, 75	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	2
RG76, 77	GD05101161	RESISTOR 100 OHM +- 5% 1/6W	2
RS51, 52, 53, 54, 55, 56, 57, 58, 67, 68, 69, 70, 71, 72, 73, 74, 94	GD05473161	RESISTOR 47K OHM J 1/6W	17
RS59, 60, 61, 62, 63, 64, 65, 66, 77, 78, 83, 84	GD05102161	RESISTOR 1K OHM J 1/6W	8
RS85, 86	GD05104161	RESISTOR 100K OHM J 1/6W	2
RS93	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	1
Transistors			
QG51, 52	HT421442A1	TRANSISTOR 2SD2144S/U/V	2
QG59, 60	HT421442A1	TRANSISTOR 2SD2144 S/U/V	2
QG61	HT321201A1	TRANSISTOR 2SC2120 O	1
Miscellaneous			
JS51, 52	YT02060460	TERMINAL 14X14 RA 2L6P W/R NI FLM-GND	2
JS54	YJ06030580	JACK 20P TKC-V20X-A1	1
LG01	LV20240410	RELAY MR62-24SR 24V ***AVR85 ONLY***	1

PCB - PY04, Connect

REF. NO.	Part No.	Description	Qty.
Capacitor			
CY02, 04, 14	DD38104011	CERAMIC CAP. 0.1UF 50V +80 -20%	3
CY06, 13	DD15470301	CERAMIC CAP. 47PF J CH 50V BLK	2
CY11, 94	DK18103311	CERAMIC CAP. 0.01UF Z 50V	1
CY15	DK16121301	CERAMIC CAP. 120PF K 50V	1
CY16, 17	DD15560301	CERAMIC CAP. 56PF J CH 50V	2
Diodes			
DY01, 02, 03, 04, 05, 06, 07, 08, 10, 11	HD20002001	"DIODE 1SS176, MA165, 1SS254 30V 0.1A"	10
DY09	HD20002711	DIODE 1D3 1A/200V	1
Integrated Circuit			
QY10	HC10370050	IC TC9173P PORT EXPANDER	1
QY11	HC10250050	IC TC9174P PORT EXPANDER	1
QY12	HC10262050	IC ANALOGUE SWITCH -TC9215P	1
Resistors			
RY01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 22, 24, 25, 26, 27	GD05103161	RESISTOR 10K OHM J +- 5% 1/6W	20
RY23	GD05332161	3.3K OHM 1/6W	1
RY28, 29	GD05472161	RESISTOR 4.7K OHM +- 5% 1/6W	2
RY30, 31, 32	GD05101161	RESISTOR 100 OHM +- 5% 1/6W	3
Transistor			
QY01, 03, 05, 07, 13	BA10001001	COMP TRANSISTOR DTA114ES/ETC	5
QY02, 04, 06, 08, 15	BA20002001	COMP DTC144ES/UN4213 47K, 47K	5
QY13	BA10001001	DTA114ES	1
Miscellaneous			
JY01	YJ06030140	JACK TKC-A14X-B1	1
JY02, 03	YP06020670	PLUG TKC-V16P-A1	1
JY04	YJ06030140	JACK TKC-A14X-B1	1
JY05	YJ06030100	JACK	1
JY06	YP06020700	PLUG TKC-V30P-A1	1
JY09	YJ07011160	JACK 9604S-23F 23P FFC CONNECTOR	1
JY10	YP06006931	PLUG 2MM PITCH UP CONNECTOR 8PIN	1
JY11	YP0600383X	PLUG B3B-EH 3P	1
JY12	YJ06030140	JACK TKC-A14X-B1	1
JY13	YJ06030770	JACK TSK-B17X-A1	1
JY14	YP06006931	PLUG CONNECTIVE PLUG UP 3P	1
JY15	YP06006670	PLUG 2MM PITCH UP CONNECTOR 7PIN	1
JY16	YP06004570	PLUG CONNECTOR 13P (UP)	1

PCB - PF04, Tone Control

Capacitors

REF. NO.	Part No.	Description	Qty.
CF01, 02, 03	OA10601621	ELECT. CAP. 10UF M 16V RA-2	3
CF04	EJ47601611	ELECT. CAP. 47UF/16	1
CF05, 06, 07	DK16222301	CERAMIC CAP. 2200PF K 50V	3
CF09, 10, 11	DD15101301	CERAMIC CAP. 100PF J CH 50V	3
CF13, 14, 15 17, 18, 19	DF15153351	"FILM CAP. 0.015UF, J, M, 50V"	6
CF16, 20	DF15473311	FILM CAP. 0.047 J 50V	2
CF21, 22, 23	OA47601621	ELECT. CAP. 47UF M 16V RA-2	3
CF25, 26, 27	EJ22601611	ELECT. CAP. 22UF/16V	3
CF28	OA22601621	ELECT. CAP. 22UF M 16V RA-2	1
CF29, 30, 31	DK16101301	CERAMIC CAP. 100PF K 50V (**AVR75/85 230V**)	3
CF29, 30, 31 32	DD15470301	CERAMIC CAP. 47PF J CH 50V (**AVR75/85 120V**)	4
CF40, 41	OA10701621	ELECT. CAP. 100UF M 16V RA-2	2
CF43, 44, 45, 46, 47, 48,	DA17223111	CERAMIC CAP. 0.022UF TP050F223Z TAIYO	6

Integrated Circuits

QF01	HC10031090	IC QUAD OP. AMP NJM2058D	1
QF02, 03	HC10008090	IC NJM4558D-D DUAL OP-AMP	2

Resistors

RF01, 02, 03, 04, 05, 06, 07, 08	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	8
RF09	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	1
RF10, 11, 13, 14, 15, 17, 18, 19, 20	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	9
RF21, 22, 23 24, 29, 30, 31, 32	GD05223161	RESISTOR 22K OHM +- 5% 1/6W	8
RF41, 42	RG01040150	VARIABLE RESIST 100K(B)X4	2
RF43	RK01040622	VARIABLE RESIST 100K OMH 0.5W	1
RF45, 46	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	2
RF81, 82, 83, 84	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	4

Miscellaneous

JF01	YP06006720	PLUG W-P7512*XX UP PLUG 12P	1

PCB - P104, Tuner

Capacitors

CA01	CT12000201	TRIMMING CAP. VCT51E 20PF TRIMMING	1
CA02, 203, 204, 208	DK18473311	CERAMIC CAP. 0.047UF Z 50V	4
CA03, 09	DD15150301	CERAMIC CAP. 15PF J CH 50V	2
CA04	DF15391551	FILM CAP. 390PF 100V	1
CA05	DD15470301	CERAMIC CAP. 47PF J CH 50V	1
CA06, 07, 13 14, 201, 202, 210, 218, 223, 224, 225, 226, 233, 234	DK18103311	CERAMIC CAP. 0.01UF Z 50V	14
CA08	CT12000201	TRIMMING CAP. VCT51E 20PF TRIMMING	1
CA11	DD15680301	CERAMIC CAP. 68PF J CH 50V	1
CA12	DD15151301	CERAMIC CAP. 150PF J CH 50V	1
CA18	EJ47502511	ELECT. CAP. 4.7UF/25V	1
C205, 209, 212	EJ10505011	ELECT. CAP. 1UF/50V	3
C206	EJ10601611	ELECT. CAP. 10UF/16V	1
C207	EA10701611	ELECT. CAP. 100UF/16V	1
C211	EJ22505011	ELECT. CAP. 2.2 M 50V	1
C213	EJ47405011	ELECT. CAP. 0.47UF/50V	1
C214	EA47603511	ELECT. CAP. 47UF M 35V	1
C215	DK18473311	CERAMIC CAP. 0.047UF Z 50V	1
C216	EA10701611	ELECT. CAP. 100UF/16V	1
C217	DF15562351	FILM CAP. 5600PF J 50V	1
C217, 227	DF15822351	"FILM CAP. 0.0082UF, J, M, 50V, D=9.5	1
C219	EJ10601611	ELECT. CAP. 10UF/16V	1
C220	DK16222301	CERAMIC CAP. 2200PF K 50V	1
C222	DK16152301	CERAMIC CAP. 1500PF K 50V	1
C223, 224 225, 226	DK16472301	CERAMIC CAP. 4700PF K 50V	4
C227	DF15391551	FILM CAP. 390 PF J (**AVR75/85 230V**)	1
C227	DF15822351	FILM CAP. 8200 PF J 50V (**AVR75/85 120V**)	1
C233, 234	DK18103311	CERAMIC CAP. 0.01UF Z 50V	2
C301, 302	DF15333311	FILM CAP. 0.033UF J 50V	2
C301, 302	DF15473311	FILM CAP. 0.047UF J 50V	2
C303, 304	EJ10601611	ELECT. CAP. 10UF/16V	2
C305, 306	EJ47502511	ELECT. CAP. 4.7UF/25V	2
C307, 308	EJ10601611	ELECT. CAP. 10UF/16V	2
C311, 312	EJ22601611	ELECT. CAP. 22UF/16V	2
C313	EJ10601611	ELECT. CAP. 10UF/16V	1
C314	EA47603511	ELECT. CAP. 47UF M 35V	1
C315, 316	DK16151301	CERAMIC CAP. 150PF K 50V	2
C317, 318	DK16101301	CERAMIC CAP. 100PF K 50V	2
C501, 502	DD15470301	CERAMIC CAP. 47PF J CH 50V BLK	2
C503, 508	EA10700611	ELECT. CAP. 100UF/6.3V	2
C504, 507, 511	DK18103311	CERAMIC CAP. 0.01UF Z 50V	3
C505	EJ10505011	ELECT. CAP. 1UF/50V	1
C506	EJ10405011	ELECT. CAP. 0.1UF/50V	1
C509, 510	DK16101301	CERAMIC CAP. 100PF K 50V	2

Diode

D202	HD30681001	DIODE 6.8V EQUIVALENT	1
D501	HD30511001	ZENER DIODE 5.1V ZENER EQUIVALENT	1
DA01	HD4000903X	SVC342-L TAPING TYPE	1
DA02	HD20017211	DIODE 1SS135	1
DA03	HD4000903X	SVC342-L TAPING TYPE	1
DA04	HD20017211	DIODE 1SS135	1
DA05, 06, 201	HD20002001	"DIODE 1SS176, MA165, 1SS254 30V 0.1A"	3

Integrated Circuits

Q201	HC10342030	IC LA1836 FM/AM IF, MPX IC	1
Q301	HC10008090	IC NJM4558D-D DUAL OP-AMP	1
Q501	HC10221032	IC LC7218 PLL	1

REF. N0.	Part No.	Description	Qty.
Resistors			
RA01	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	1
RA02, 04, 08 06, 209	GD05104161	RESISTOR 100K OHM +- 5% 1/6W	4
RA03, 07, 102 103	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	4
RA09, 203	GD05222161	RESISTOR 2.2K OHM +- 5% 1/6W	2
RA11	RA02230781	TRIMMING RESIST 22K OHM RH0638CJ4R TYPE ALPS	1
R201	GD05101161	RESISTOR 100 OHM J 1/6W	1
R202, 204	GD05471161	RESISTOR 470 OHM J 1/6W	2
R202	GD05391161	RESISTOR 390 OHM J 1/6W	1
R205	GD05331161	RESISTOR 330 OHM +- 5% 1/6W	1
R206	GD05153161	RESISTOR 15K OHM +- 5% 1/6W	1
R207	GG0518114X	RESISTOR ! 180 OHM J 1/4W	1
R208	GD05392161	RESISTOR 3.9K OHM +- 5% 1/6W	1
R210	GD05332161	RESISTOR 3.3K OHM +- 5% 1/6W	1
R211	RA02230781	TRIMMING RESIST 22K OHM B	1
R211	RA04720781	TRIMMING RESIST 4.7K OHM B	1
R212	RA02230781	TRIMMING RESIST 22K OHM B	1
R213	GD05220161	RESISTOR 22 OHM +- 5% 1/6W	1
R214	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	1
R215	GD05104161	RESISTOR 100K OHM J 1/6W	1
R215	GD05223161	RESISTOR 22K OHM J 1/6W	1
R216	GD05103161	RESISTOR 10K OHM J 1/6W	1
R217	GG0518114X	RESISTOR ! 180 OHM J 1/4W	1
R217	GG0522114X	RESISTOR ! 220 OHM J 1/4W	1
R218	RA04720781	TRIMMING RESIST 4.7K OHM B	1
R219	GD05334161	RESISTOR 330K OHM +- 5% 1/6W	1
R301, 302	GD05104161	RESISTOR 100K OHM +- 5% 1/6W	2
R303, 304, 305, 306	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	4
R307, 308	GD05221161	RESISTOR 220 OHM +- 5% 1/6W	2
R309, 310, 311, 312	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	4
R313	GG0522114X	RESISTOR 220 OHM +- 5% 1/4W	1
R501, 503 506, 510, 511	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	5
R502, 507	GD05332161	RESISTOR 3.3K OHM +- 5% 1/6W	2
R504, 513	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	2
R508, 516, 517	GD05473161	RESISTOR 47K OHM +- 5% 1/6W	3
R512	GA05271010	RESISTOR ! 270 OHM J 1/6W	1
R514	GG0547016X	RESISTOR ! 47 OHM J 1/6W	1
R515	GD05683161	RESISTOR 68K OHM +- 5% 1/6W	1
Transistor			
Q203	BA10001001	SEMICON.COMP DTA114ES/ UN4111 10K, 10K	1
Q204	BA20002001	SEMICON.COMP DTC144ES/ UN4213 47K, 47K	1
Q502	HF200300B1	F.E.T. 2SK30ATM Y1	1
Q503	HT30001001	TRANSISTOR C536SP, C2458, C3311, C1740S	1
QA01, 02	HT30001001	TRANSISTOR C536SP, C2458, C3311, C1740S	2
QA03	HT421442A1	TRANSISTOR 2SD2144S/U/V	1
QA04, 05	BA10002001	COMP DTA144ES/UN4113 47K, 47K	2
Q202	HT318091P1	TRANSISTOR 2SC1809S P	1

REF. N0.	Part No.	Description	Qty.
Miscellaneous			
A101	AV01202210	VHF TUNER FM FRONT END FE415-G09 (**AVR75/85 230V**)	1
A101	AV01202220	VHF TUNER FM FRONT END FE337-A05 (**AVR75/85 120V**)	1
A017K	260J123010	ROUND SHEET	1
F201	FF11070610	CERAMIC FILTER SFF10, 7MA8-A (**AVR75/85 120V**)	1
F201	FF11070620	CERAMIC FILTER SFE10, 7MS3-A (**AVR75/85 230V**)	2
F202	FF11070620	CERAMIC FILTER SFE10, 7MS3-A (**AVR75/85 BOTH 120V & 230V**)	1
J101	YT03030020	FM/AM ANT TERM.PAL TYPE EU 230V	1
J101	YT01010140	FM/AM ANT TERM.F TYPE USA 120V	1
J102	YL01010141	TERMINAL GROUND TERMINAL FOR TUNER PCB	1
J301	YP06020640	PLUG	1
LA01	LA10295170	ANT COIL MW ANT COIL 280UH	1
LA02	LO70013010	. COIL MW OSC	1
LA03	LA10295160	ANT COIL LW ANT COIL FOR LA1267	1
LA04	LO70013020	. COIL LW OSC COIL	1
LA05	LC23960711	CHOKE COIL 39MH J	1
LA06	FF10045330	CERAMIC FILTER SFL450J3	1
L201	LI70376010	"I.F.T. COIL FM COIL, M292BEAS-5968Z"	1
L301, 302	LS10293022	"M.P.X. COIL 19,38KHZ "	2
L501, 502, 503, 504	LC14733801	CHOKE COIL LAL02TA470J 47UH	4
X201	FQ04563040	CERAMIC . CSB456F33	1
X501	JX07001261	CRYSTAL AD0618CTB 7.2MHZ	1

PCB - P104 Tuner (230V) Discrepency List

Capacitors			
C901	EA10700611	ELECT. CAP. 100UF/6.3V	1
C902, 910	EJ10601611	ELECT. CAP. 10UF/16V	2
C903, 904	DK16332301	CERAMIC CAP. 3300PF K 50V	2
C905, 906	DK18103311	CERAMIC CAP. 0.01UF Z 50V	2
C907, 908	EJ10601611	ELECT. CAP. 10UF/16V	2
C909	EJ47502511	ELECT. CAP. 4.7UF/25V	1
C910	EJ10601611	ELECT. CAP. 10UF/16V	1
C911	DK18223311	CERAMIC CAP. 0.022UF Z 50V	1
C912, 913	DF15333311	FILM CAP. 0.033UF J 50V	2
C914	DF15682351	"FILM CAP. 0.0068UF, J, M, 50V"	1
C915	DK18103311	CERAMIC CAP. 0.01UF Z 50V	1
Diode			
D901	HD30511001	ZENER DIODE 5.1V ZENER EQUIVALENT	1
Integrated Circuits			
Q901	HC10315050	IC LA2232 RDS DEMODULATOR	1
902	HC10333030	IC LC7073 RDS ERROR CORRECTION	1
Transistors			
Q903	HT30001001	"TRANSISTOR C536P C2458, C3311, C1740S"	1

REF. N0.	Part No.	Description	Qty.
Resistors			
R901	GD05333161	RESISTOR 33K OHM +- 5% 1/6W	1
R902, 909, 911	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	3
R903	GD05223161	RESISTOR 22K OHM +- 5% 1/6W	1
R904, 907	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	2
R905	GD05682161	RESISTOR 6.8K OHM +- 5% 1/6W	1
R906	RA04720781	TRIMMING RESIST 4.7K OHM RH0638CS3R TYPE ALPS	1
R908	GD05332161	RESISTOR 3.3K +- OHM 5% 1/6W	1
R910	GA05221010	RESISTOR ! 220 OHM J 1W	1
X901	FQ04563040	CERAMIC VIB. CSB456F33	1
X902	FQ04004031	CERAMIC VIB. CERALOCK CST4.00MGW	1

PCB - PE04, Electronic Volume Control

Capacitors			
CE01, 02	OA10601621	ELECT. CAP. 10UF M 16V RA-2	2
CE03, 04, 05 06	EJ10601611	ELECT. CAP. 10UF/16V	4
CE07, 08, 09 10, 11, 12, 13, 14, 15, 16, 17, 18	EJ47502511	CAP 4.7UF 25V	12
CE19, 20	OA47505021	ELECT. CAP. 4.7UF M 50V RA-2	2
CE21, 22, 23, 24	EJ47502511	CAP 4.7UF 25V	4
CE25, 26	OA47505021	ELECT. CAP. 4.7UF M 50V RA-2	2
CE27, 28, 29, 30	EJ47502511	CAP 4.7UF 25V	4
CE31, 32	OA47505021	ELECT. CAP. 4.7UF M 50V RA-2	2
CE33, 34, 35	EJ47502511	CAP 4.7UF 25V	3
CE36	EJ22601611	ELECT. CAP. 22UF M 16V	1
CE37, 38	EJ10505010	ELECT. CAP. 1UF M 50V	2
CE41, 42	OA10601621	ELECT. CAP. 10UF M 16V RA-2	2
CE43, 44, 45, 46	EJ10601611	ELECT. CAP. 10UF/16V	4
CT01	DD38104011	CERAMIC CAP. 50V DC 0.1UF +80 -20%	1
CT02	EJ10601611	ELECT. CAP. 10UF/16V	1
CT04	DK18103311	CERAMIC CAP. 0.01UF Z 50V	1
CV80, 81, 82, 83, 84, 85	DK16681301	CERAMIC CAP. 680PF K 50V	6
CV94, 96, 97, 98	DK18103311	CERAMIC CAP. 0.01UF Z 50V	4
Diodes			
DV01, 02, 03	HD20002001	“DIODE 1SS176, MA165, 1SS254 30V 0.1A”	3
Integrated Circuits			
QE01, 02, 03	HC10008090	IC NJM4558DD DUAL OP-AMP	3
QE04, 05, 06	HC10304050	IC TC9213P ELECTRIC VOLUME CONTROL	3
QE07, 08, 09 10, 11, 12	HC10008090	IC NJM4558DD DUAL OP-AMP	6
QT02	HW10006320	PHOTO UNIT ! PC-817 PHOTO CUPLER 1PAIR	1
QT04	HC713200A0	IC 74LS132 QUAD NAND SCHMITT	1

REF. N0.	Part No.	Description	Qty.
Resistors			
RE01, 02, 03, 04, 05, 06	GD05104161	RESISTOR 100K OHM J 1/6W	6
RE07, 08, 09, 10, 11, 12	GD05332161	RESISTOR 3.3K OHM +- 5% 1/6W	6
RE13, 14, 15, 16, 17, 18	GD05152161	RESISTOR 1.5K OHM J 1/6W	6
RE19, 20, 21, 22, 23, 24	GD05104161	RESISTOR 100K OHM J 1/6W	6
RE25, 26, 27, 28, 29, 30	GD05331161	RESISTOR 330 OHM J 1/6W	6
RE31, 32, 33, 34, 35, 36	GD05152161	RESISTOR 1.5K OHM J 1/6W	6
RE37, 38, 39, 40, 41, 42	GD05334161	RESISTOR 330K OHM J 1/6W	6
RE43, 44, 45, 46, 47, 48	GD05152161	RESISTOR 1.5K OHM J 1/6W	6
RE49, 50, 51, 52, 53, 54	GD05104161	RESISTOR 100K OHM J 1/6W	6
RE55, 56, 57, 58, 59, 60	GD05182161	RESISTOR 1.8K OHM +- 5% 1/6W	6
RE61, 62, 63, 64, 65, 66	GD05152161	RESISTOR 1.5K OHM J 1/6W	6
RE65, 66	GD05152161	RESISTOR 1.5K OHM J 1/6W	2
RE73, 74, 75, 76	GD05105161	RESISTOR 1M OHM J 1/6W	4
RT02	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	1
RT03	GD05103160	RESISTOR 10K OHM +- 5% 1/6W	1
RT05	GD05271161	RESISTOR 270 OHM +- 5% 1/6W	1
RT07	GD05222161	RESISTOR 2.2K OHM +- 5% 1/6W	1
RT20	GD05220161	RESISTOR 22 OHM 5% 1/6W	
RV69, 70, 71, 72, 73	GD05471161	RESISTOR 470 OHM +- 5% 1/6W	5
RV74	GD05221161	RESISTOR 220 OHM +- 5% 1/6W	1
RV75, 76, 77, 78, 79, 80	GD05473161	RESISTOR 47K OHM J 1/6W	6
RV81, 82, 83, 84, 85, 86, 87	GD05103161	RESISTOR 10K OHM J 1/6W +-5%	7
RV88	GD05271161	RESISTOR 270 OHM +- 5% 1/6W	1
RV89, 90, 91	NF0222114X	FUSE RESISTOR 220 OHM G 1/4W	3
RV92, 93	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	2
RV94, 95, 96, 97, 98, 99	GD05101161	RESISTOR 100 OHM +- 5% 1/6W	6
Transistors			
QT05	BA10001001	SEMICON.COMP DTA114ES/ UN4111 10K, 10K	1
QV51, 52, 53, 54, 55, 56, 60	HT328782A1	TRANSISTOR 2SC2878 A/B	7
QV57	HT321201A1	TRANSISTOR 2SC2120 O	1
Miscellaneous			
JV53	YT02060540	TERMINAL YKC21-3324	1
JV54	YJ06030600	JACK 30P TKC-V30X-A1	1
JV55	YL01010140	TERMINAL M1698 PWB GND TERMINAL WITH M3	1
JV57	YP06006931	PLUG CONNECTIVE PLUG UP 3P	1
JT03	YJ01004230	JACK HSJ1002-01-1020	1
KA04	LC14733801	CHOKE COIL LAL02TA470J 47UH	1
LV04, 05, 06	LY20240410	RELAY MR62-24SR 24V RELAY	3
UV03, 05	LC14733801	CHOKE COIL LAL02TA470J 47UH	2

PCB - PL54, S-Video

Capacitors

REF. NO.	Part No.	Description	Qty.
CL52, 53, 54, 57, 58, 59, 60, 61, 62	EJ10601611	ELECT. CAP. 10UF/16V	9
CL65, 66, 67 68	DD38104011	CERAMIC CAP. 50V DC 0.1UF +80 -20%	4
CL71	EA10700611	ELECT. CAP. 100UF/6.3V	1
CL72, 73	DK18103311	CERAMIC CAP. 0.01UF Z 50V	2
CL74, 75, 78	EA10700611	ELECT. CAP. 100UF/6.3V	3
CL76, 77, 79	DK18103311	CERAMIC CAP. 0.01UF Z 50V	3

Integrated Circuits

QL51, 52, 53, 54, 58	HC10275030	IC LC7824 ANALOG SWITCH	5
QL55, 56, 57	HC10046170	IC MC 14576 VIDEO AMP	3

Resistors

RL52, 53, 54	GD05100161	RESISTOR 10 OHM +- 5% 1/6W	3
RL57, 58, 59 60, 61, 62	GD05820161	RESISTOR 82 OHM +- 5% 1/6W	6
RL63, 64, 65, 66, 67, 68	GD05750161	RESISTOR 75 OHM +- 5% 1/6W	6
RL69, 70, 71, 72, 73, 74	GD05104161	RESISTOR 100K OHM +- 5% 1/6W	6

Miscellaneous

JL52, 53	YT02030350	3P S TERMINAL	2
JL54	YP06020600	PLUG TKC-A10P-L1	1
JL55	YL01010140	GND TERMINAL	1

PCB - PL04, Video Selector

Capacitors

CL01, 03, 05, 09	EQ22600671	ELECT. CAP. 22UF 6.3V NON-POLE	4
CL02, 04, 06 10	EJ10601611	ELECT. CAP. 10UF/16V	4
CL14, 15, 31	DD38104011	CERAMIC CAP. 50V DC 0.1UF +80 -20%	3
CL16, 17, 22 CX52, CX54	DK18103311	CERAMIC CAP. 0.01UF Z 50V	5
CL18, CL19, CX51, CX53	EA22700611	ELECT. CAP. 220UF/6.3V	2
CL20, 24	EJ22601011	ELECT. CAP. 22UF/10V	2
CL21	EA10701011	ELECT. CAP. 100UF/10V	1
CL23	EQ22600671	ELECT. CAP. 22UF 6.3V NON-POLE	1
CL25	EJ10601611	ELECT. CAP. 10UF M 16V	1
CX49	EA10601611	ELECT. CAP. 10UF 16V +- 20%	1
CX50	EA10601611	ELECT. CAP. 47UF/10V	1
CX55, 56, 57, 58	DD15220301	CERAMIC CAP. 22PF J CH 50V	4
CX59	EJ47405011	ELECT. CAP. 0.47UF/50V	1
CA60	DD15560301	CERAMIC CAP. 56PF J CH 50V	1
CX61, 63	EJ10505011	ELECT. CAP. 1UF/50V	2
CX62	DK16122301	CERAMIC CAP. 1200PF K 50V	1
CX64, 65	DF15682351	"FILM CAP. 0.0068UF, J, M, 50V"	2
CX66	DD15470301	CERAMIC CAP. 47PF J CH 50V	1
CX67	CT12000201	TRIMMING CAP. VCT51E 20PF TRIMMING	1
CX69	EA47601011	ELECT. CAP. 47UF/10V	1
CX70	EJ47502511	ELECT. CAP. 4.7UF/25V	1
CX72	DA17103111	CERAMIC CAP. 0.01UF M 16V	1
CX73	EA22700611	ELECT. CAP. 220UF/6.3V	1
CX74	EJ10505011	ELECT. CAP. 1UF/50V	1
CX75	EJ22601011	ELECT. CAP. 22UF/10V	1
CX76	EA10701011	ELECT. CAP. 100UF/10V	1

Diodes

DL01, 02, 03, 04, 05, 06, 07, 08, 09, 10, DX61	HD20002001	"DIODE 1SS176, MA165, 1SS254, 30V 0.1A"	11

Integrated Circuits

QL01	HC10275030	IC LC7824 ANALOG SW	1
QL03	HC10046170	IC MC 14576 VIDEO AMP	1
QL04, 05	HC12233090	IC NJM2233D VIDEO AMP	2
QX60	HC10328030	IC LC74760-9004 LSI	1
QX63	HC10141090	IC NJM2267D(DIP)VIDEO AMP	1

Resistors

RL01, 03, 05, 09	GD05820161	RESISTOR 82 OHM +- 5% 1/6W	4
RL02, 04, 06, 10	GD05100161	RESISTOR 10 OHM +- 5% 1/6W	4
RL07, 11, 15	GD05750161	RESISTOR 75 OHM +- 5% 1/6W	3
RL18, RX67	GD05104161	RESISTOR 100K OHM +- 5% 1/6W	2
RL19	GD05472161	RESISTOR 4.7K OHM +- 5% 1/6W	1
RX51	GD05333161	RESISTOR 33K OHM +- 5% 1/6W	1
RX52, 59	GD05221161	RESISTOR 220 OHM +- 5% 1/6W	2
RX53, 54	GD05105161	RESISTOR 1M OHM +- 5% 1/6W	2
RX55, 56, 57	GD05103161	RESISTOR 10K OHM +- 5% 1/6W	3
RX60	GD05152161	RESISTOR 1.5K OHM +- 5% 1/6W	1
RX61	GD05682161	RESISTOR 6.8K OHM +- 5% 1/6W	1
RX62, 65, 66	GD05102161	RESISTOR 1K OHM +- 5% 1/6W	3
RX68	GDO5223161	RESISTOR 22K OHM +- 5% 1/6W	1
RX69	GD05471161	RESISTOR 470 OHM +- 5% 1/6W	1

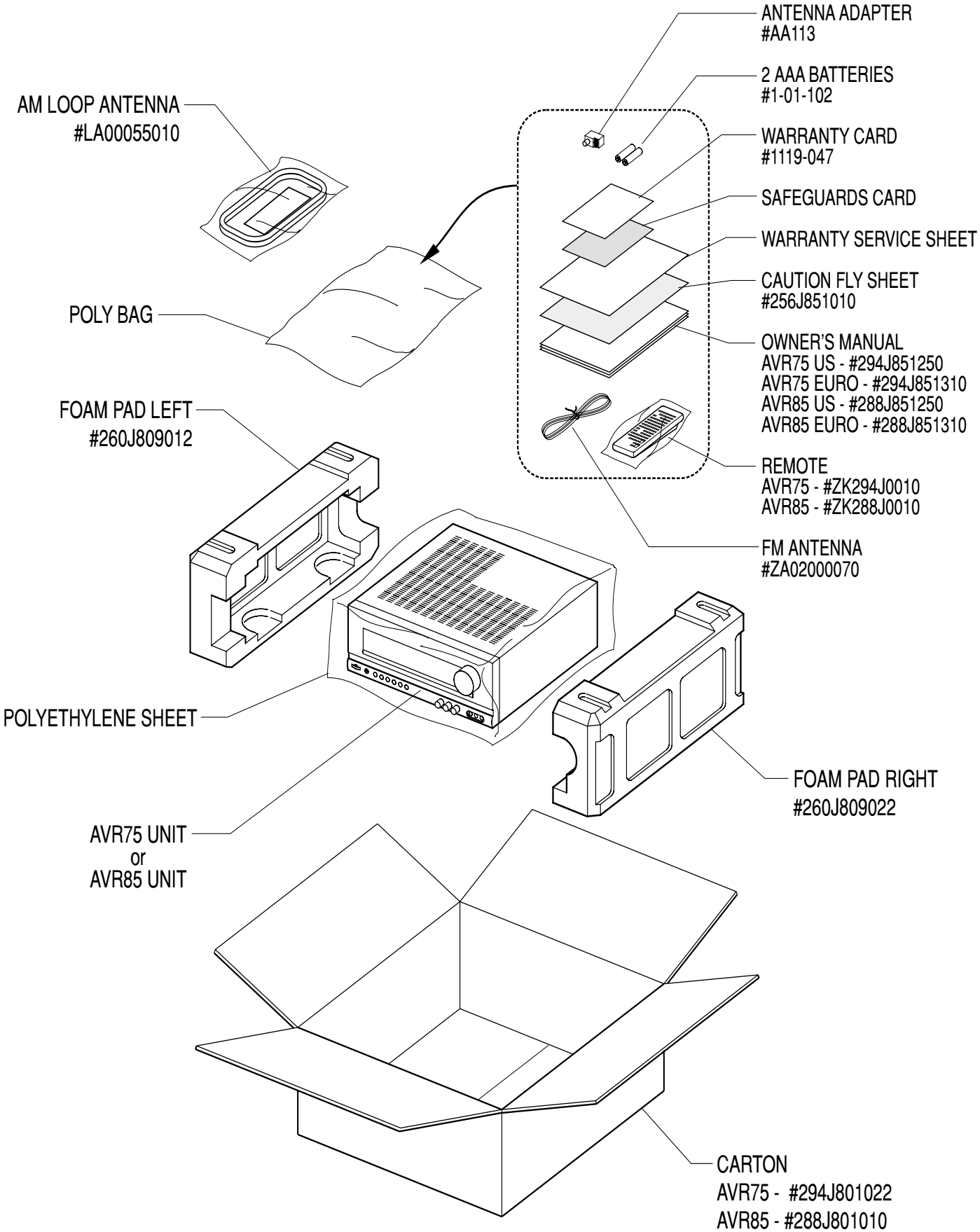
Transistors

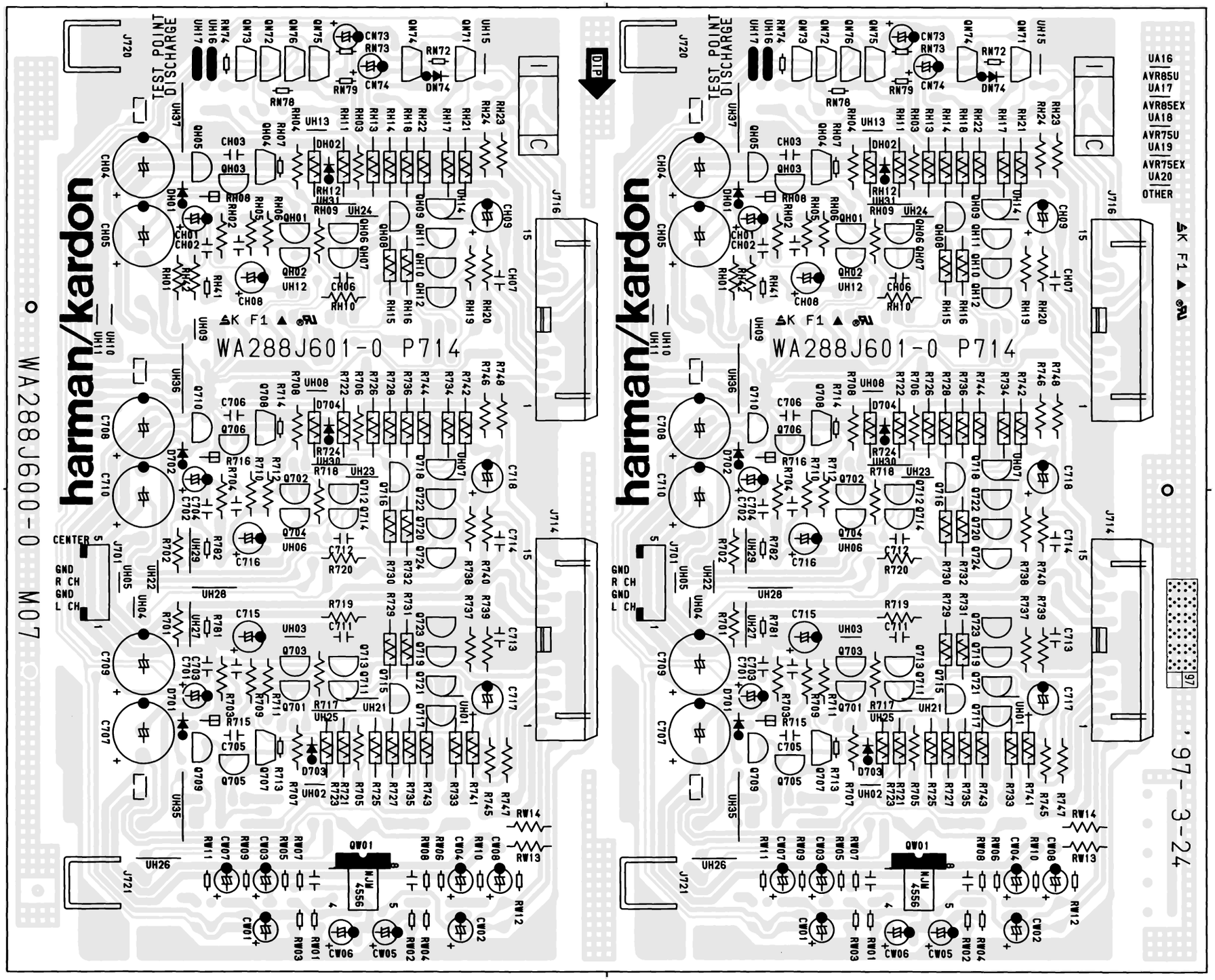
QX61	HT30001001	"TRANSISTOR C536SP, C2458, C3311, C1740S"	1
QX62	BA20002001	".COMP DTC144ES/UN4213 47K, 47K"	1
QX64	HT30001001	"TRANSISTOR C536SP, C2458, C3311, C1740S"	1

Miscellaneous

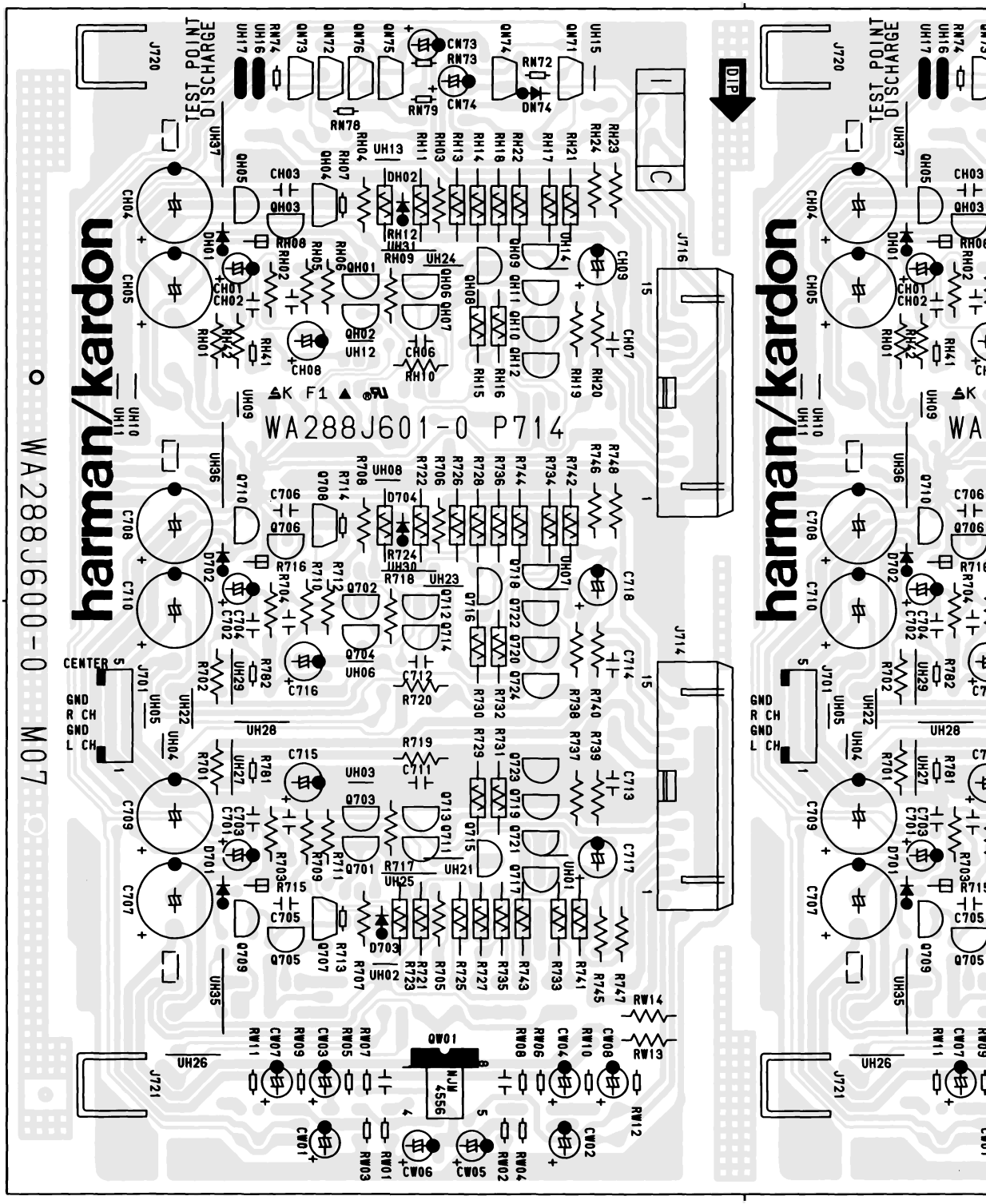
JL01	YT02041130	TERMINAL YKC21-3235	1
JL02	YT02030370	TERMINAL YKC21-3111	1
JL03	YP06020640	PLUG	1
LX51	LC12233801	CHOKE COIL LAL02TA220J 22UH	1
LX52	LC15623801	CHOKE COIL LAL02TA5R6J 5.6UH	1
LX53	FM12223011	FILTER DSS306-91-F-223Z	1
XX51	JX14001261	CRYSTAL AT49/14.31818MHZ(TP)	1
XX52	JX17001261	CRYSTAL AT49 17.7MHZ	1

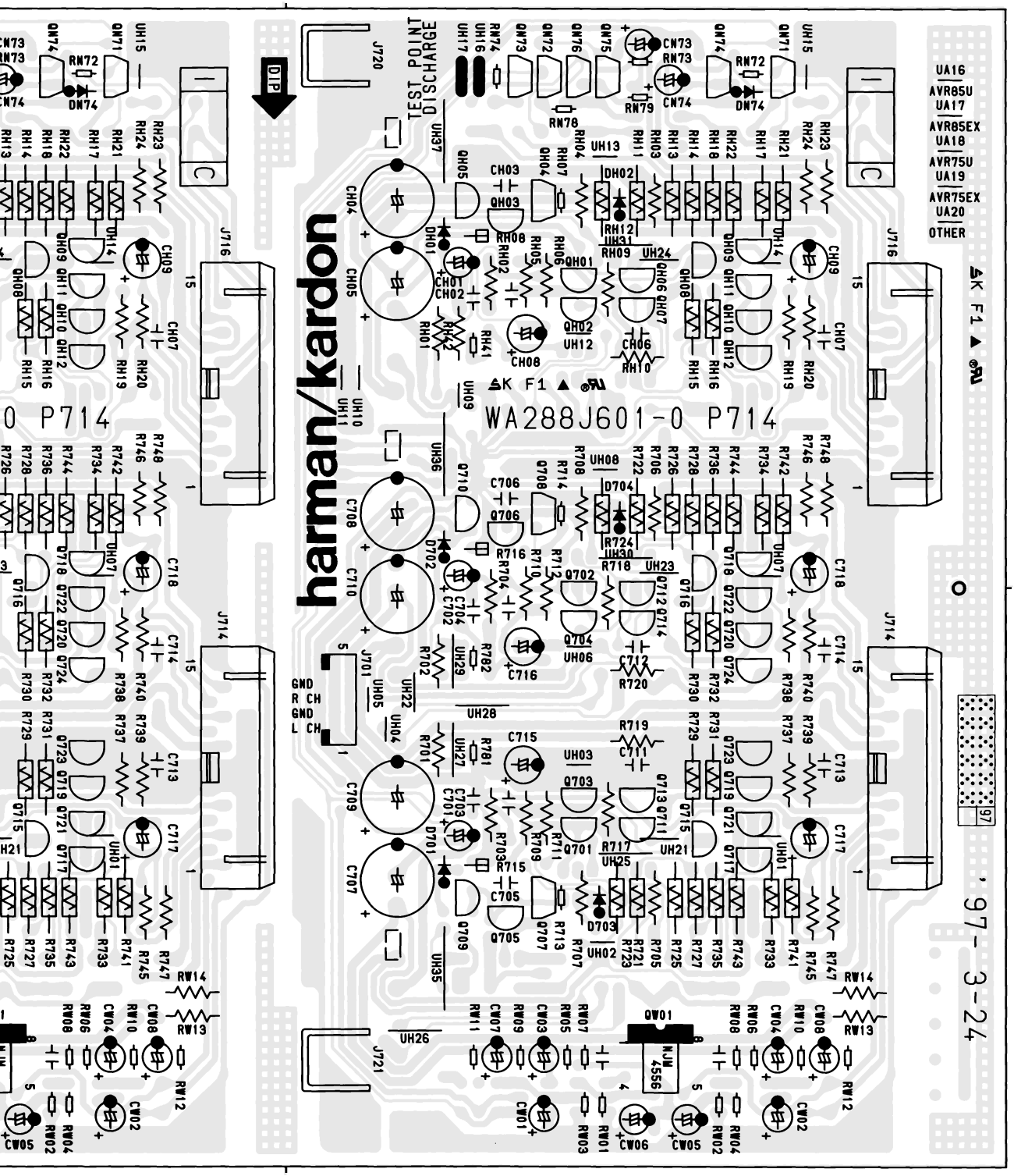
AVR78 & AVR85 PACKING EXPLODED VIEW



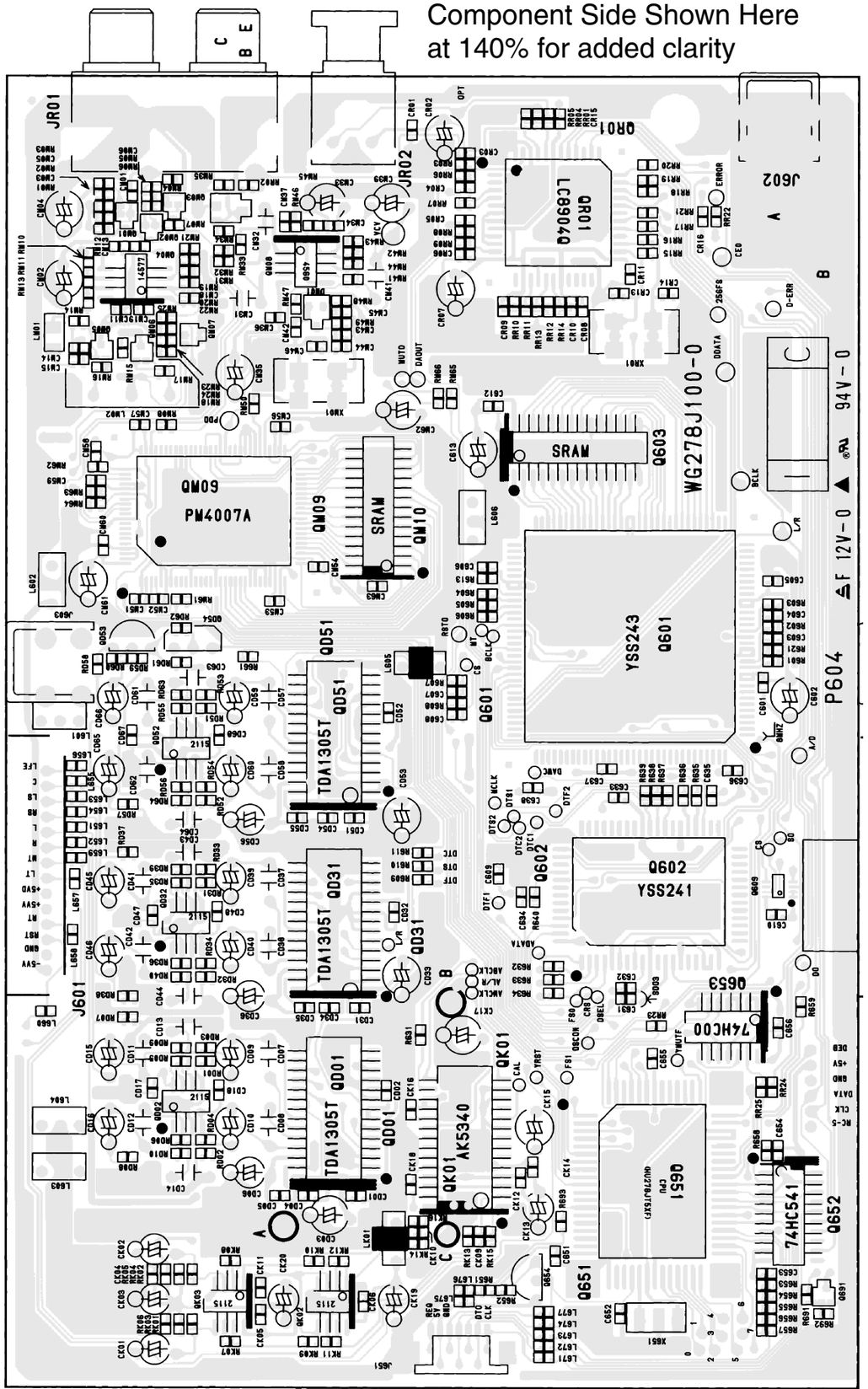

WA288J601-0 P714
WA288J600-0 M07
harman/kardon
TEST POINT
DISCHARGE
J720
J716
J714
J721
J701
CENTER
GND
R CH
GND
L CH
NJM 4556
QW01
UA16
AVR85U
UA17
AVR85EX
UA18
AVR75U
UA19
AVR75EX
UA20
OTHER
'97-3-24

VOLTAGE AMP PCB - P714

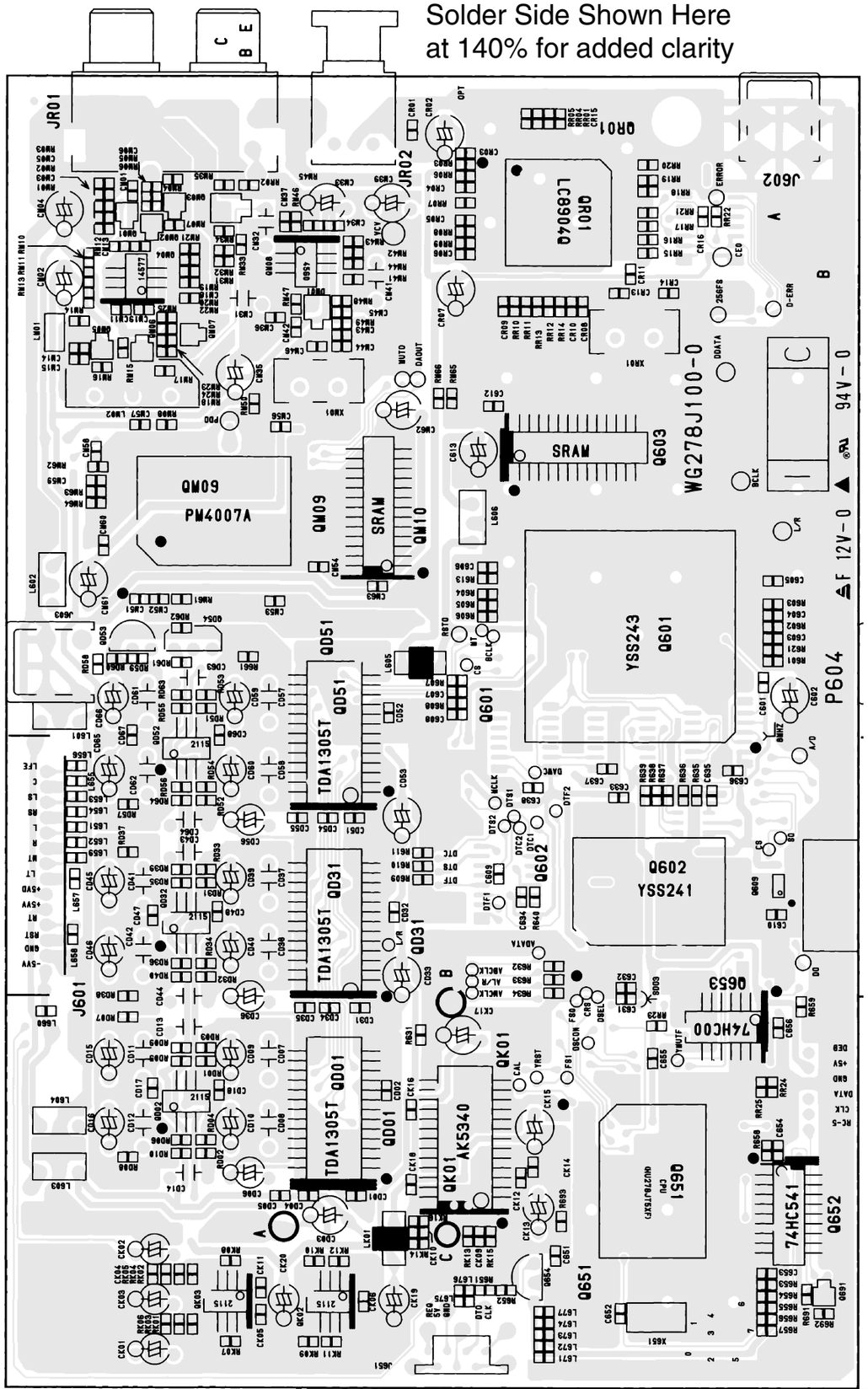



harman/kardon
WA288J601-0 P714
TEST DISCHARGE
DIP
UA16
AVR85U
UA17
AVR85EX
UA18
AVR75U
UA19
AVR75EX
UA20
OTHER
'97-3-24
GND
R CH
GND
L CH
NJM 4556

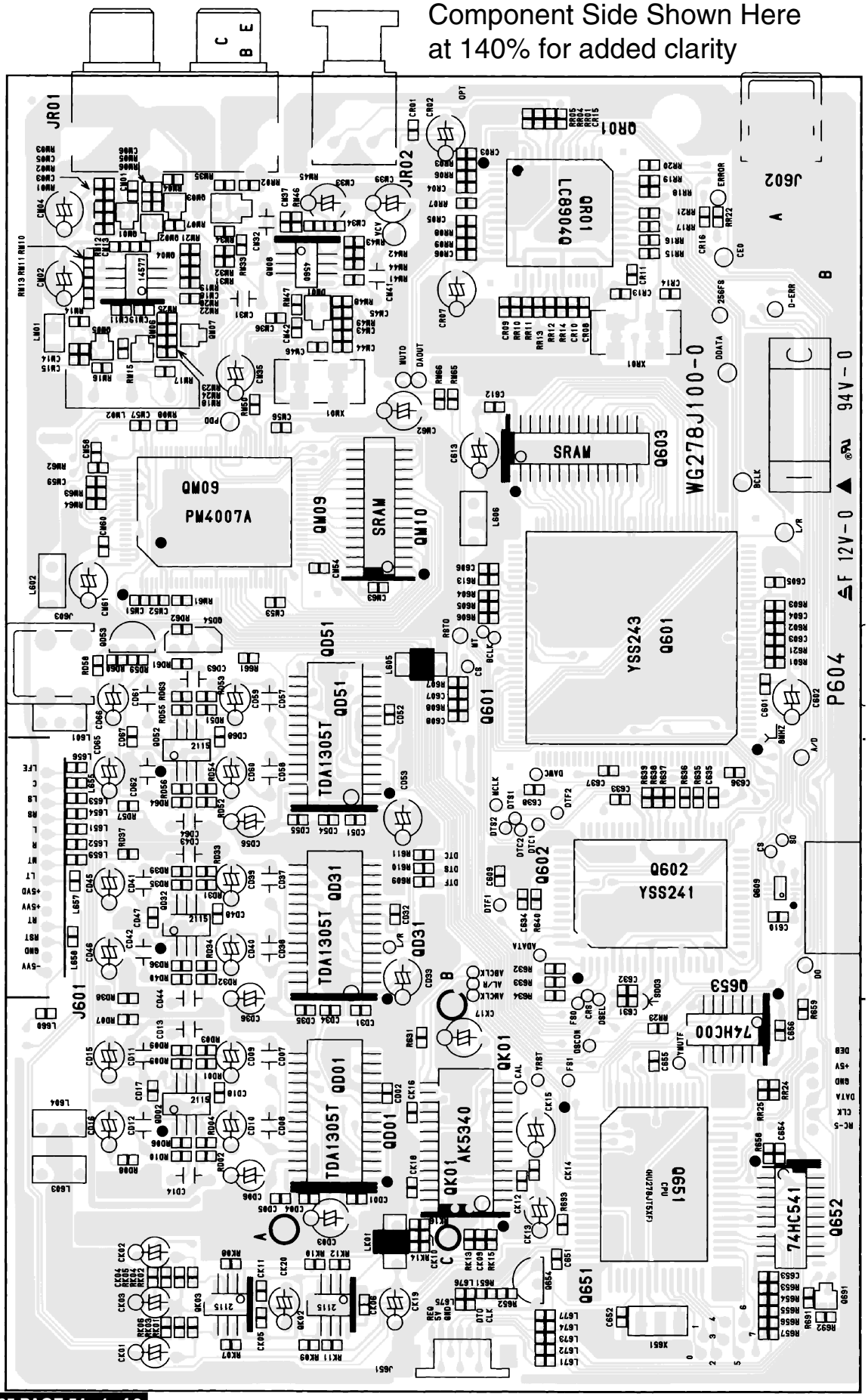
Component Side Shown Here
at 140% for added clarity



Solder Side Shown Here
at 140% for added clarity



Component Side Shown Here
at 140% for added clarity



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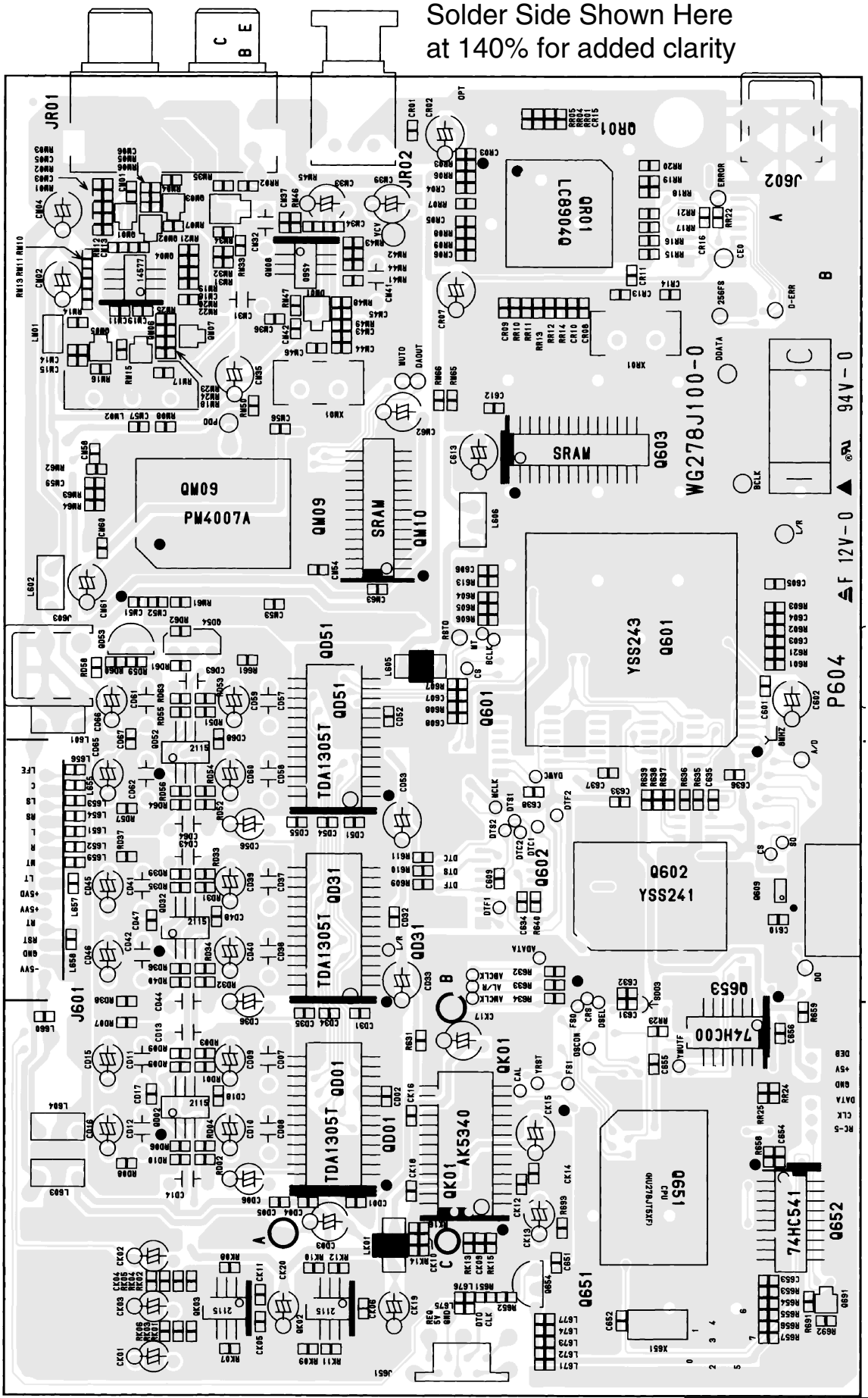
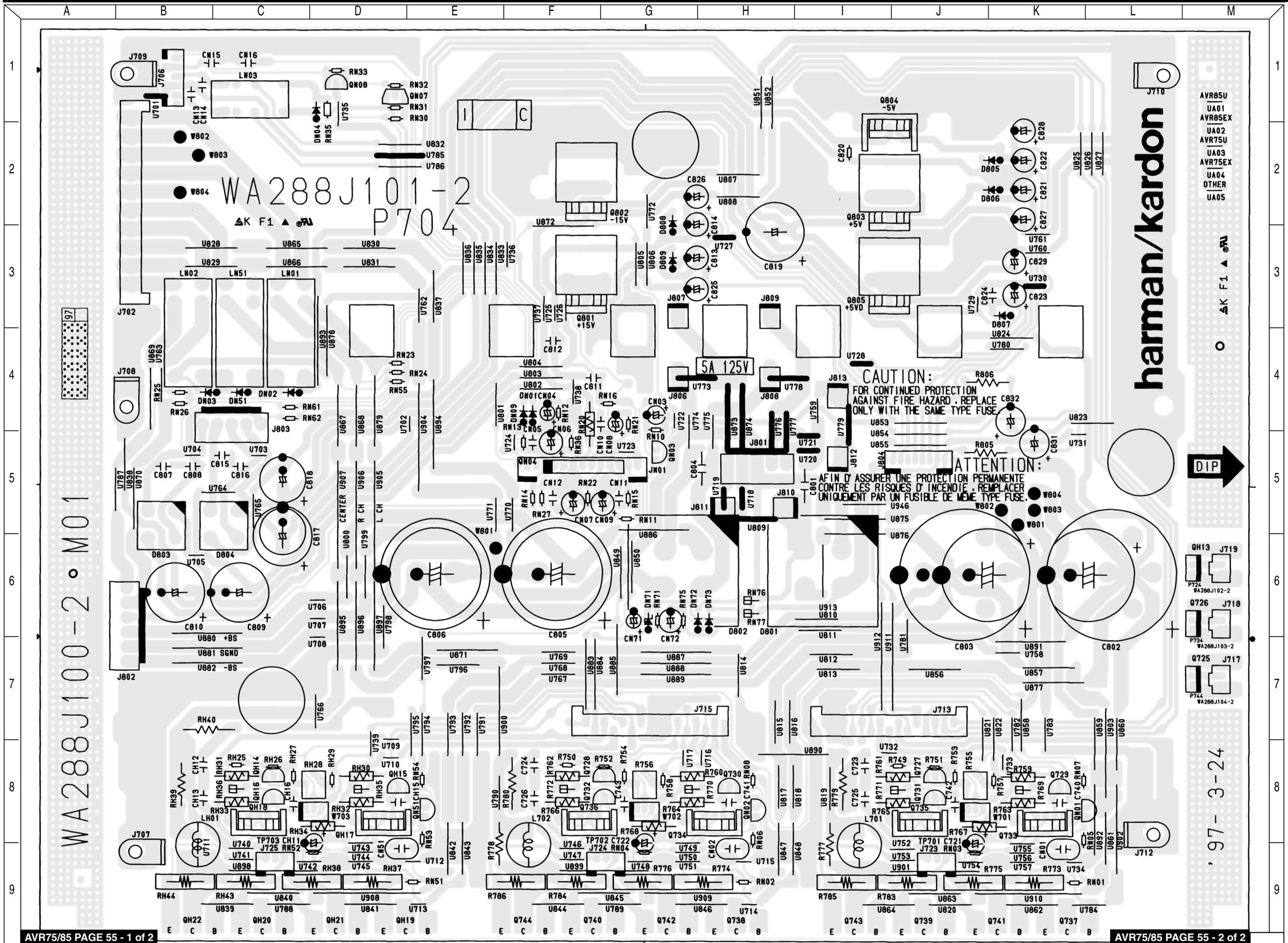
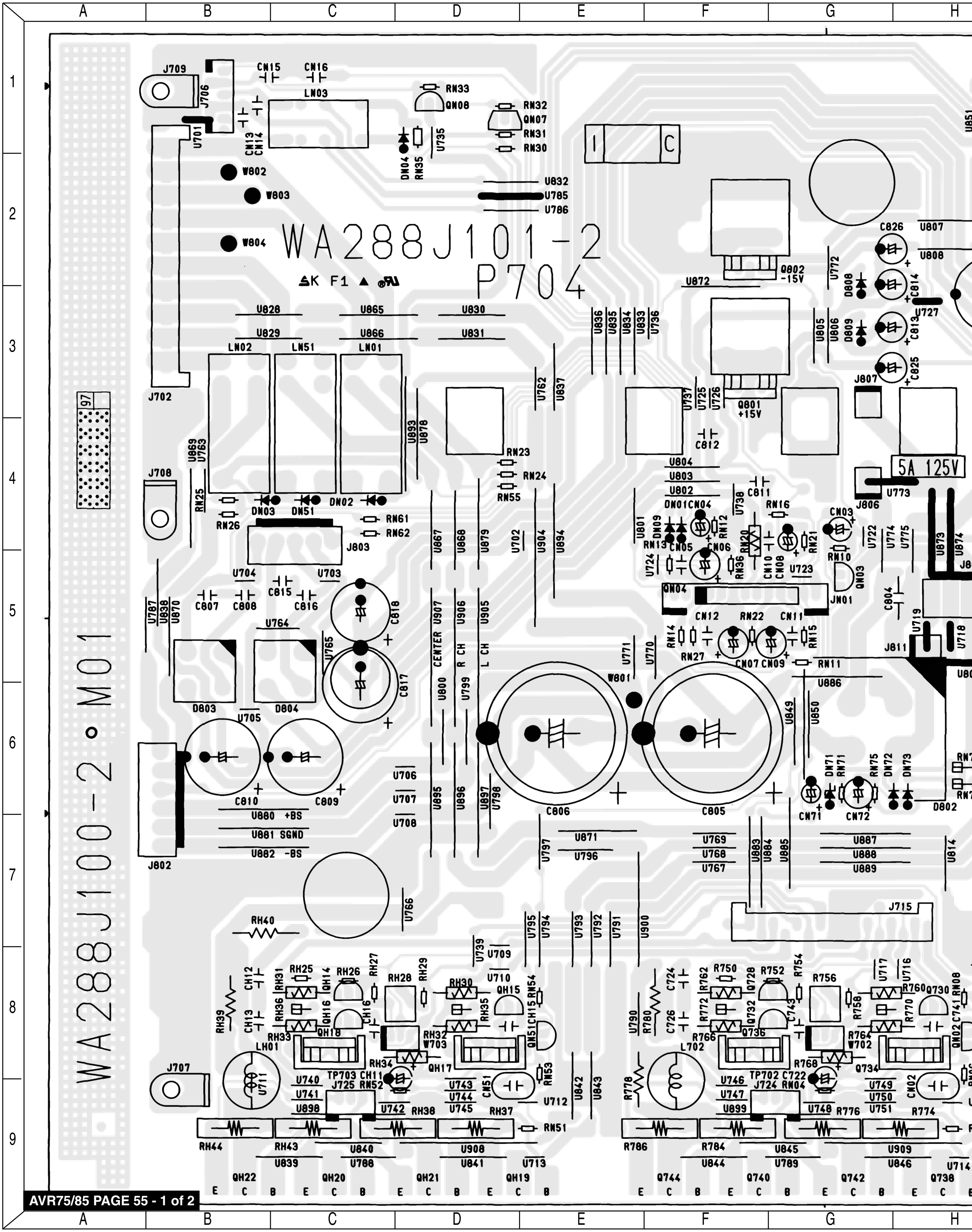
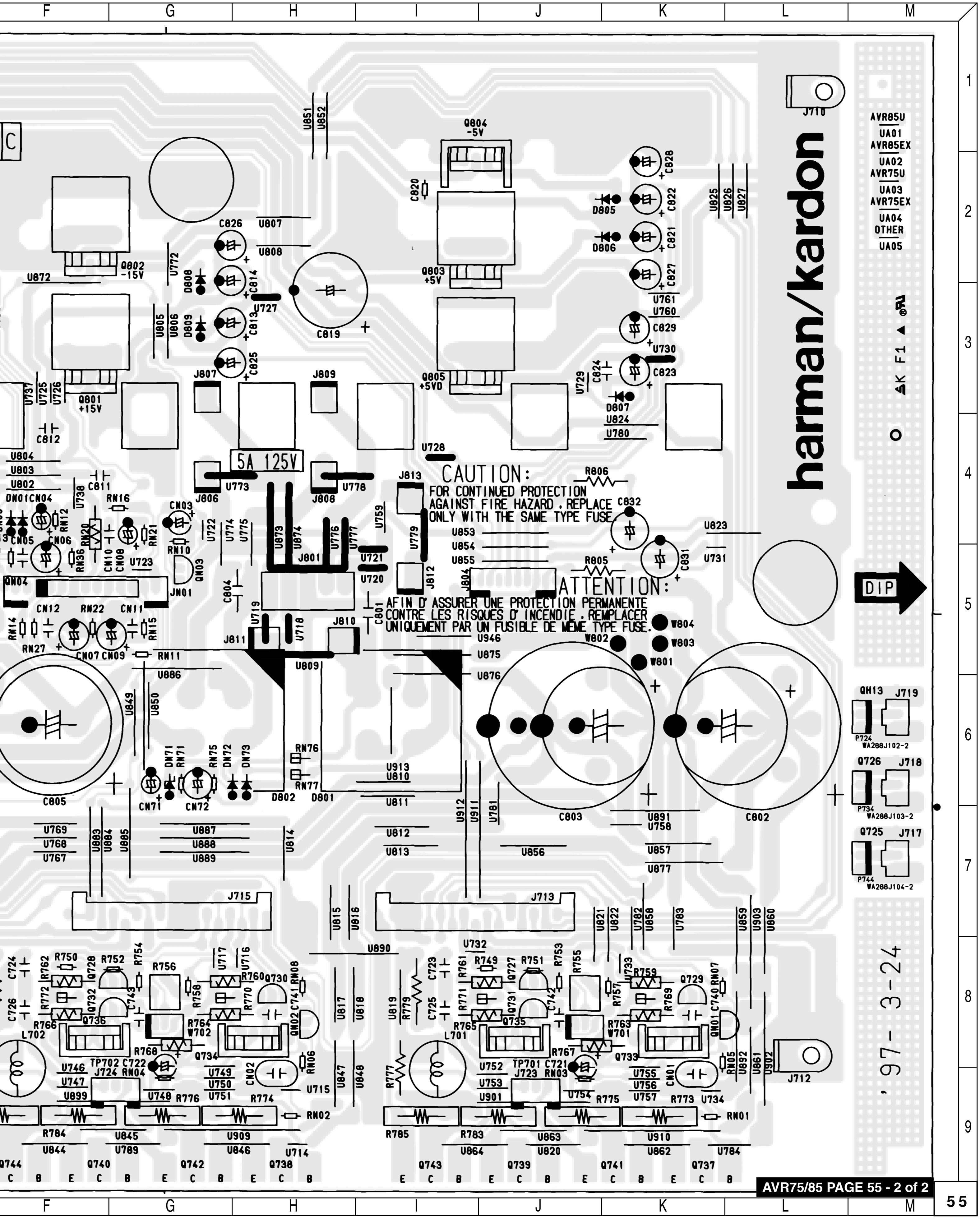
rity

Solder Side Shown Here
at 140% for added clarity




WA288J101-2
P704
WA288J100-2 • M01
• 97-3-24
harman/kardon
5A 125V
CAUTION:
FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD, REPLACE
ONLY WITH THE SAME TYPE FUSE
ATTENTION:
AFIN D'ASSURER UNE PROTECTION PERMANENTE
CONTRE LES RISQUES D'INCENDIE, REMPLACER
UNIQUEMENT PAR UN FUSIBLE DE MÊME TYPE FUSE.
DIP
AVR85U
UA01
AVR85EX
UA02
AVR75U
UA03
AVR75EX
UA04
OTHER
UA05
Q804 -5V
Q803 +5V
Q805 +5VD
Q802 -15V
Q801 +15V
U880 +BS
U881 SGND
U882 -BS


A B C D E F G H
1 2 3 4 5 6 7 8 9
WA288J101-2
P704
WA288J100-2-M01
5A 125V
CENTER
R CH
L CH
U880 +BS
U881 SGND
U882 -BS
Q802 -15V
Q801 +15V

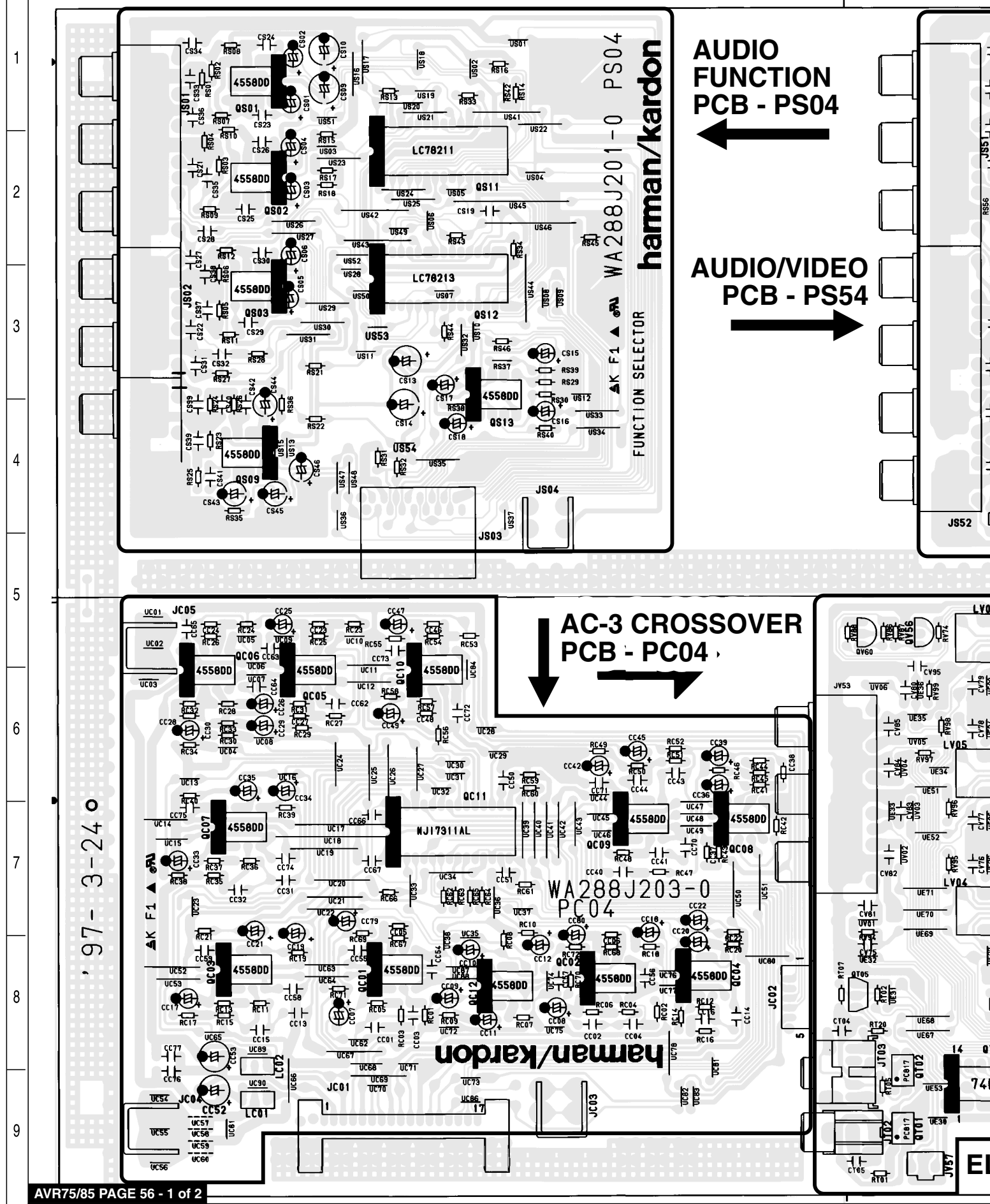

F
G
H
I
J
K
L
M
1
2
3
4
5
6
7
8
9
harman/kardon
AVR85U
UA01
AVR85EX
UA02
AVR75U
UA03
AVR75EX
UA04
OTHER
UA05
CAUTION:
FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD. REPLACE
ONLY WITH THE SAME TYPE FUSE.
ATTENTION:
AFIN D' ASSURER UNE PROTECTION PERMANENTE
CONTRE LES RISQUES D' INCENDIE. REMPLACER
UNIQUEMENT PAR UN FUSIBLE DE MÊME TYPE FUSE.
5A 125V
DIP
Q804
-5V
Q803
+5V
Q805
+5VD
Q802
-15V
Q801
+15V
'97-3-24

AUDIO FUNCTION PCB - PS04

AUDIO/VIDEO PCB - PS54

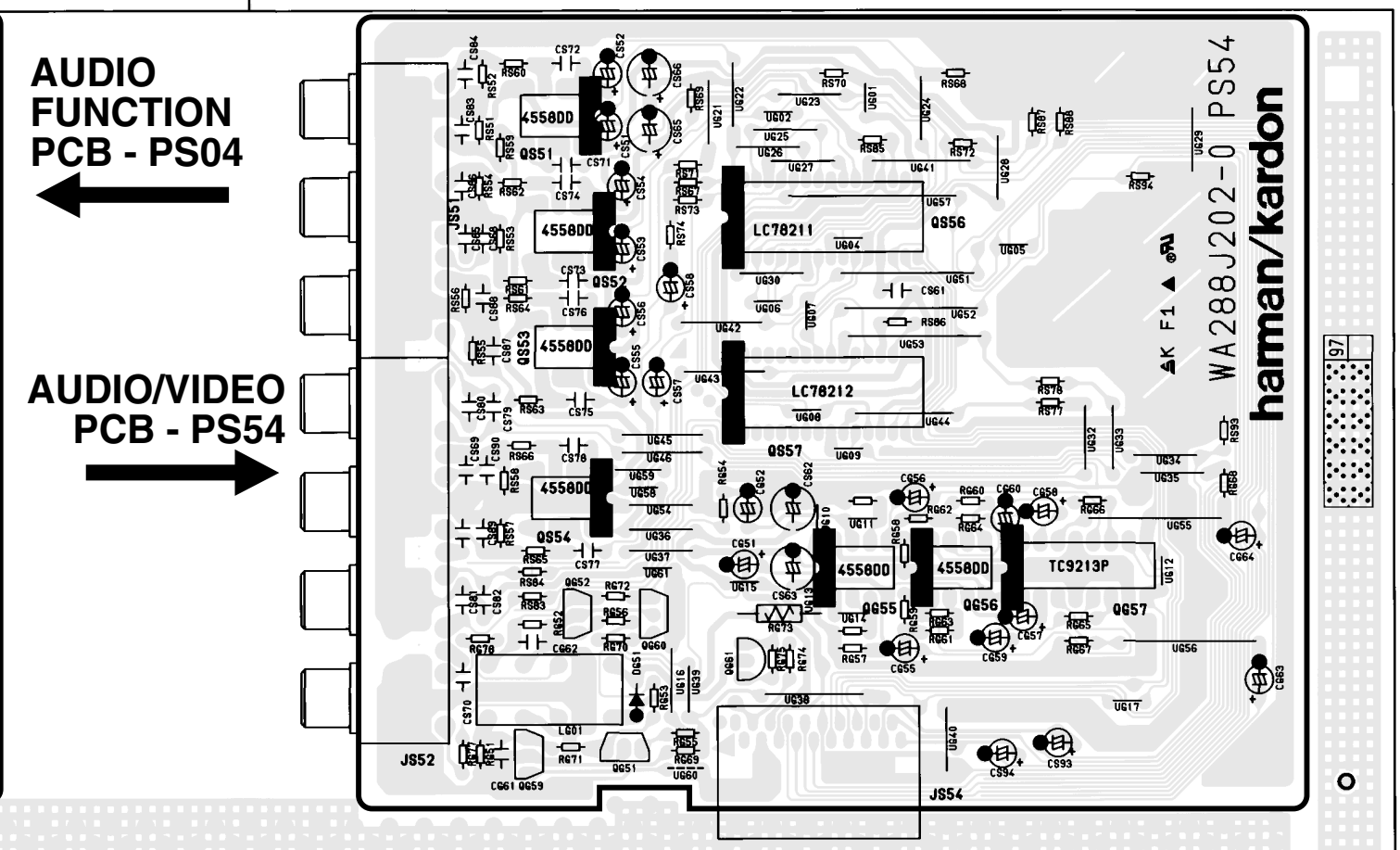
AC-3 CROSSOVER PCB - PC04

ELECTRONIC VOLUME CONTROL PCB - PE04

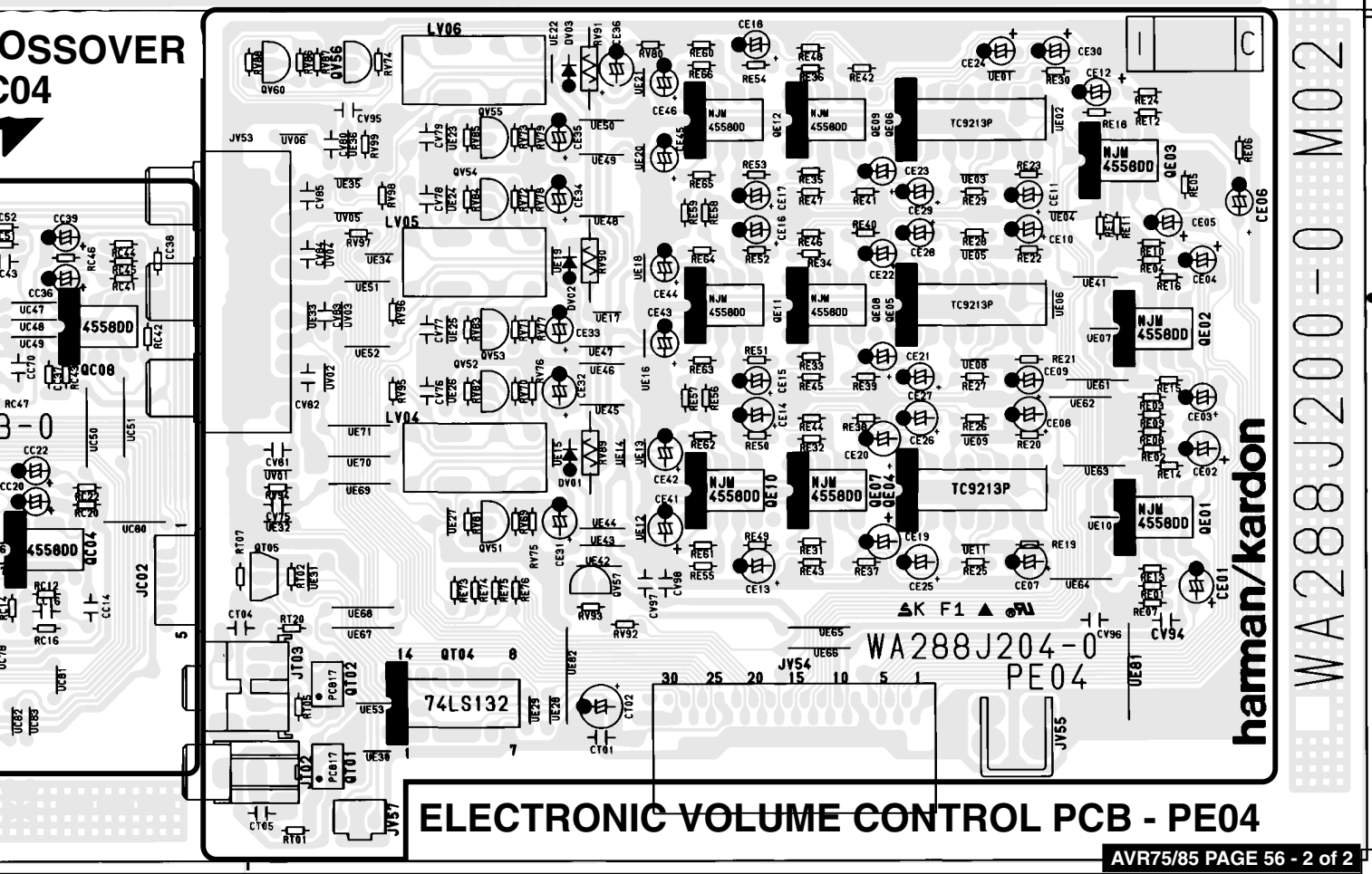

AUDIO
FUNCTION
PCB - PS04
AUDIO/VIDEO
PCB - PS54
AC-3 CROSSOVER
PCB - PC04
WA288J201-0 PS04
FUNCTION SELECTOR
WA288J203-0
PC04
LC78211
LC78213
MJ17311AL
4558DD
harman/kardon
' 97 - 3 - 24 o

AUDIO FUNCTION PCB - PS04

AUDIO/VIDEO PCB - PS54



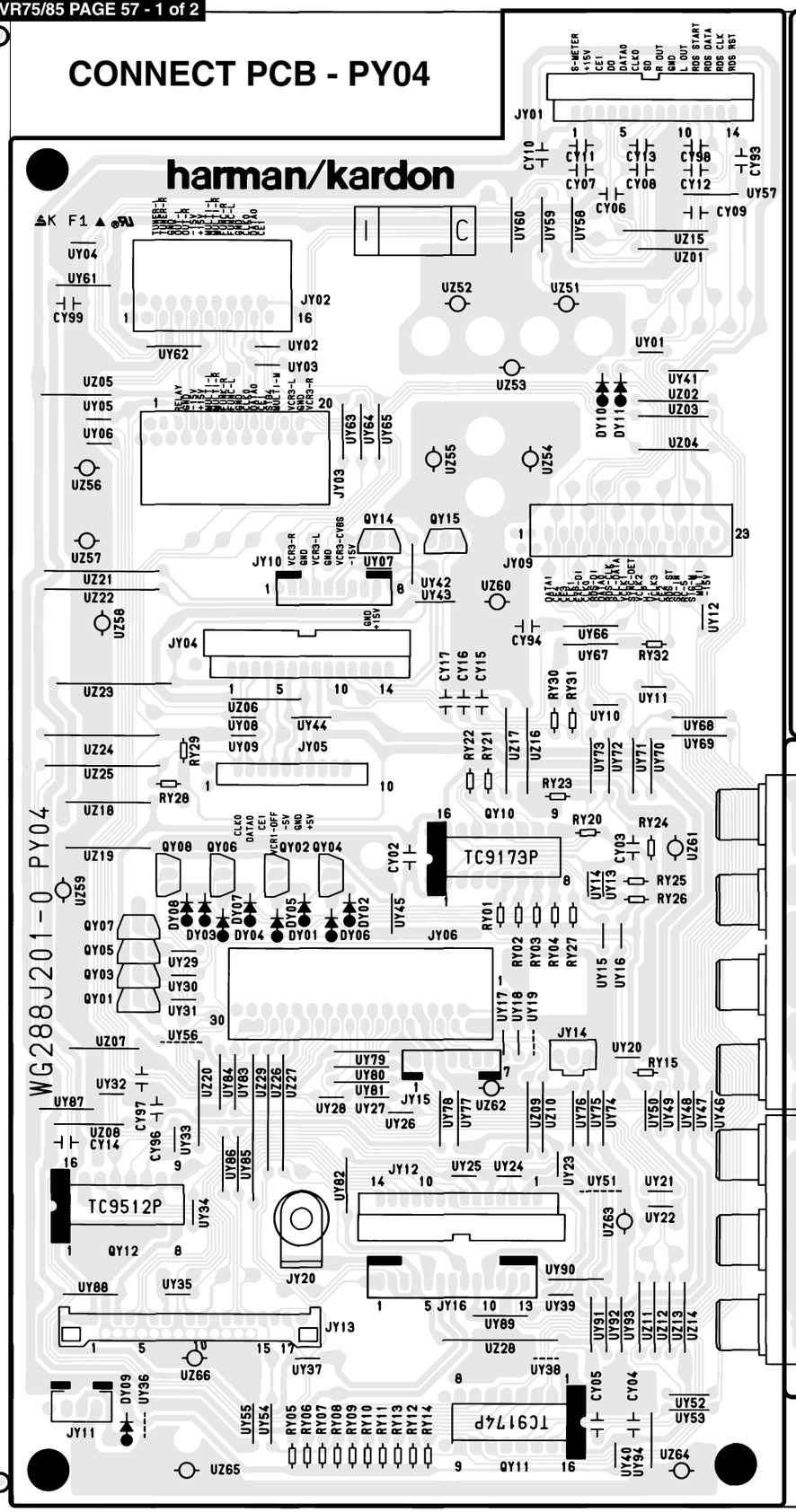
OSSOVER C04



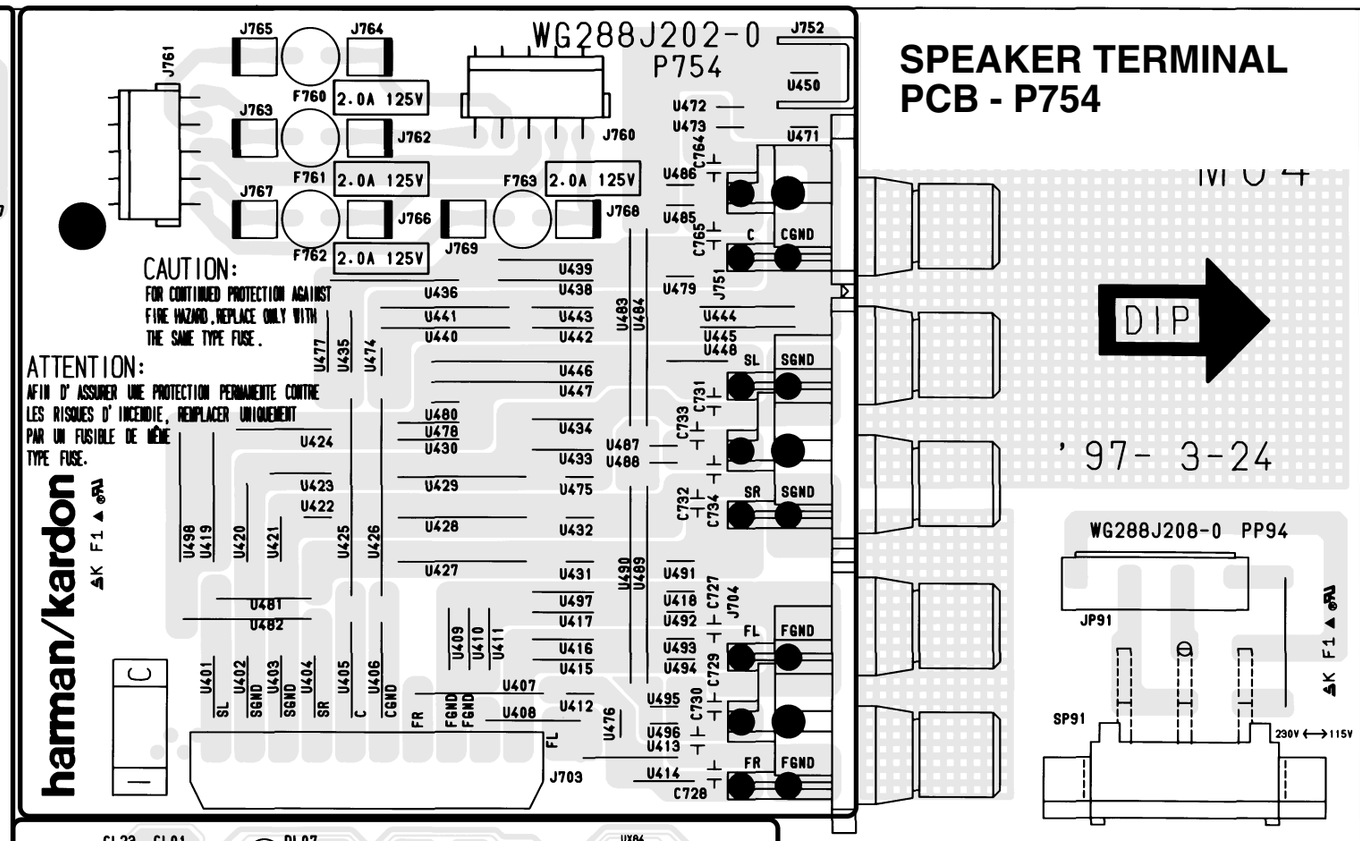
ELECTRONIC VOLUME CONTROL PCB - PE04

AVR75/85 PAGE 57 - 1 of 2

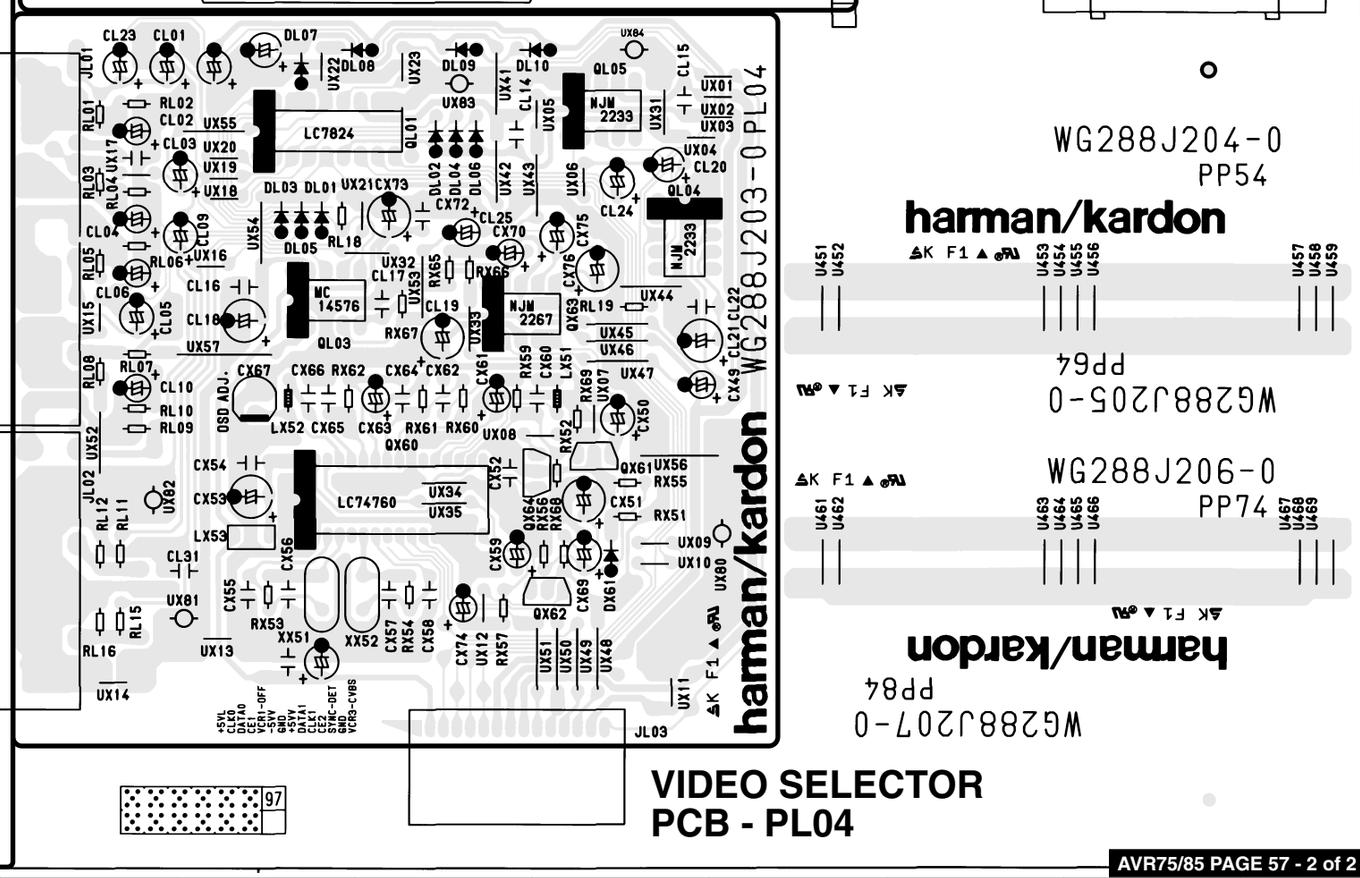
CONNECT PCB - PY04



SPEAKER TERMINAL PCB - P754



VIDEO SELECTOR PCB - PL04

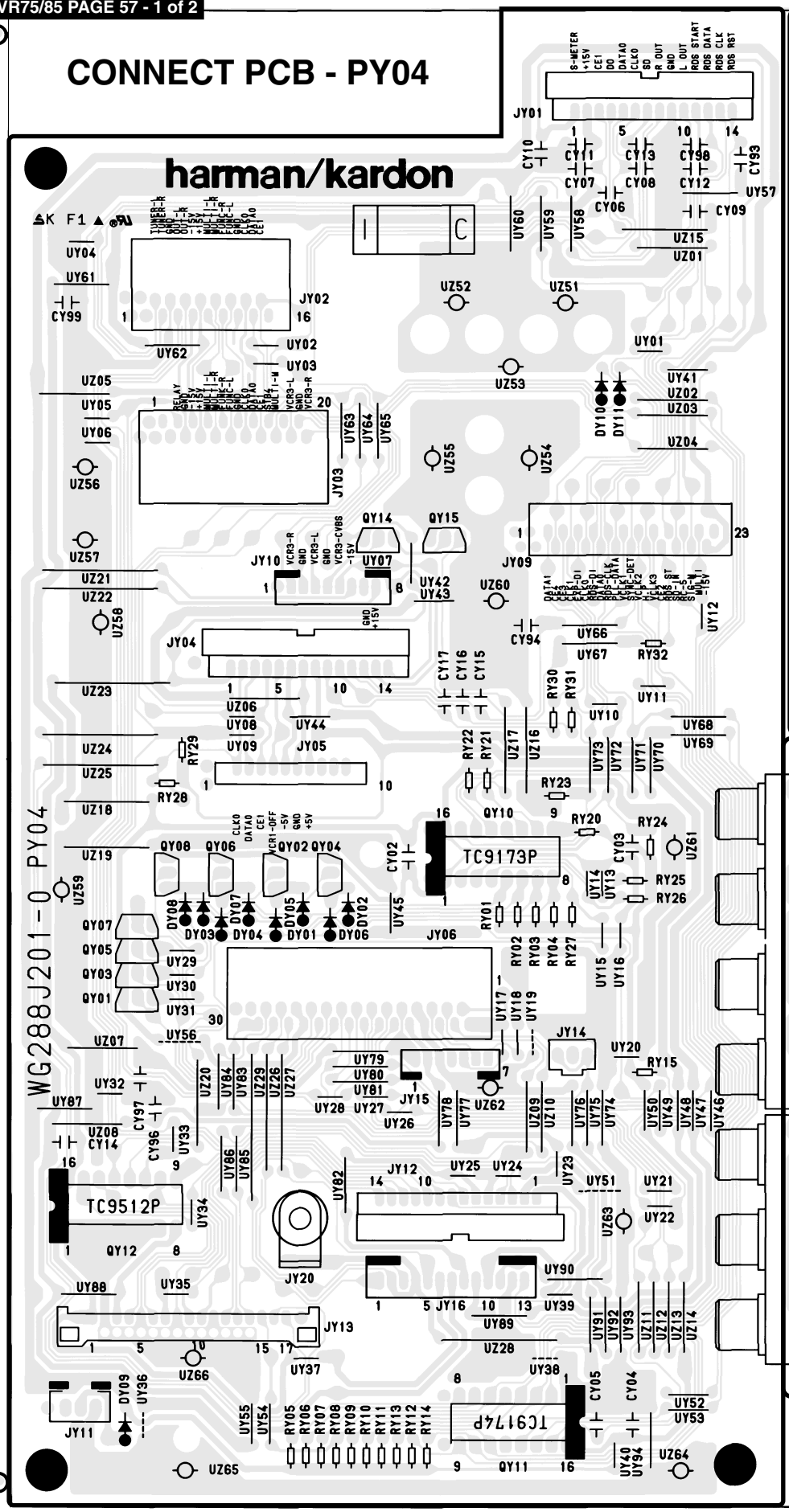


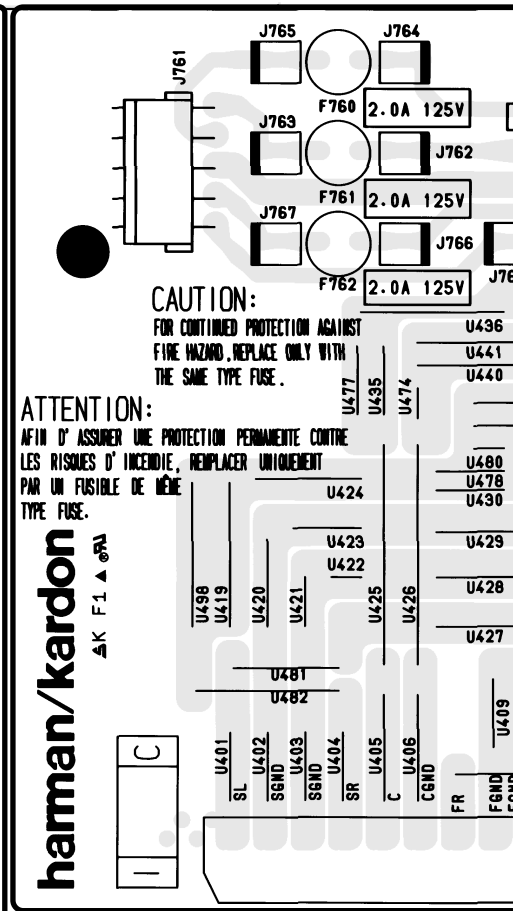
AVR75/85 PAGE 57 - 2 of 2

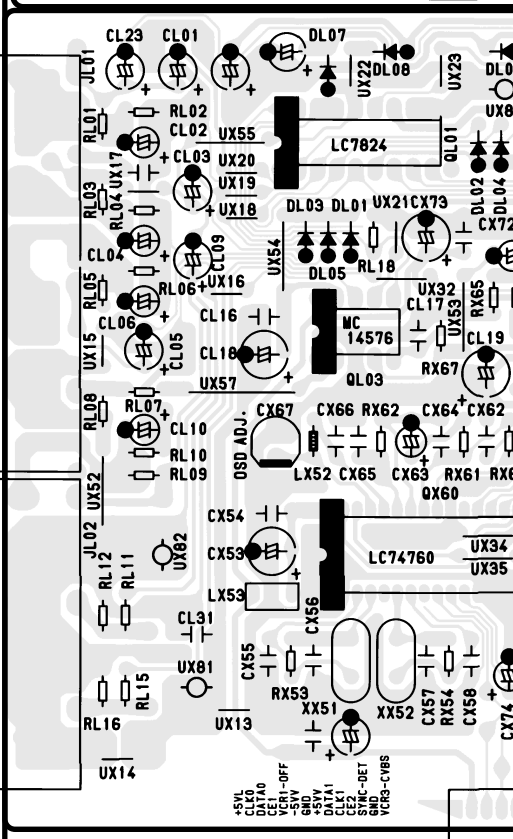
SPEAKER TERMINAL PCB - P754, VIDEO SELECTOR PCB -

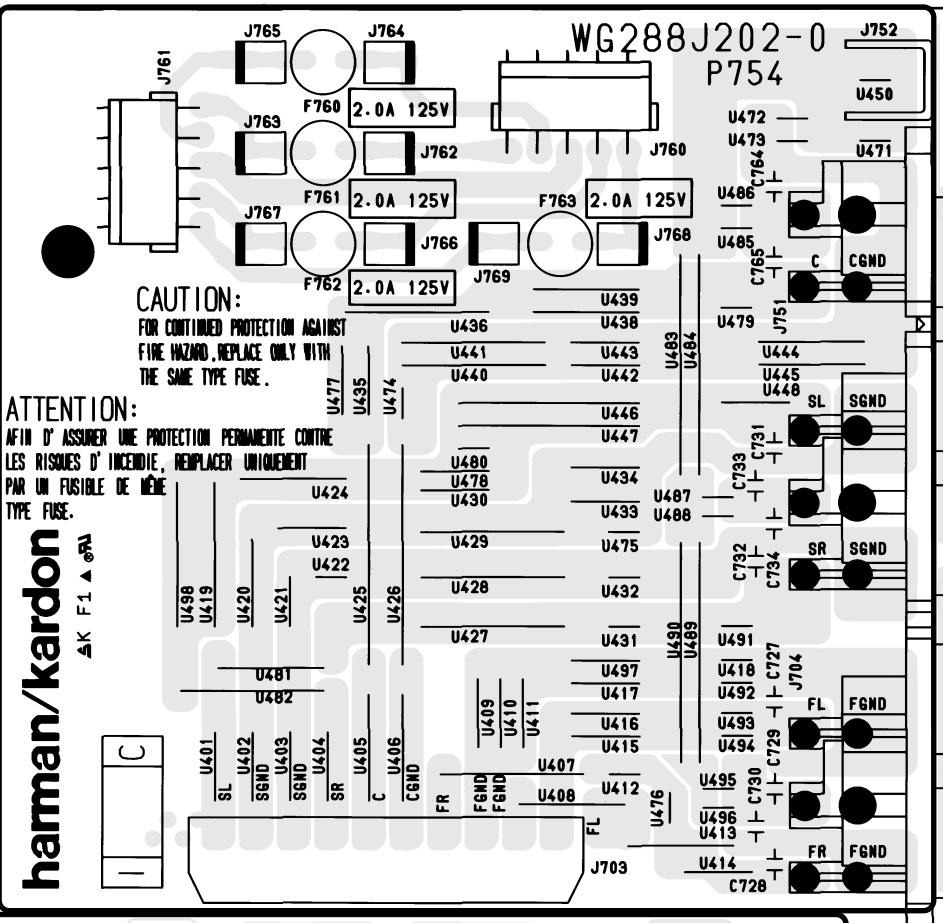
AVR75/85 PAGE 57 - 1 of 2

CONNECT PCB - PY04

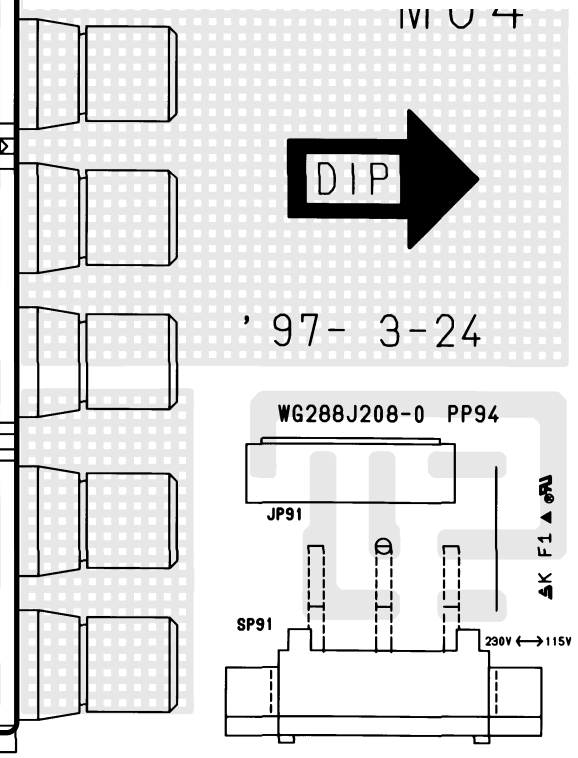


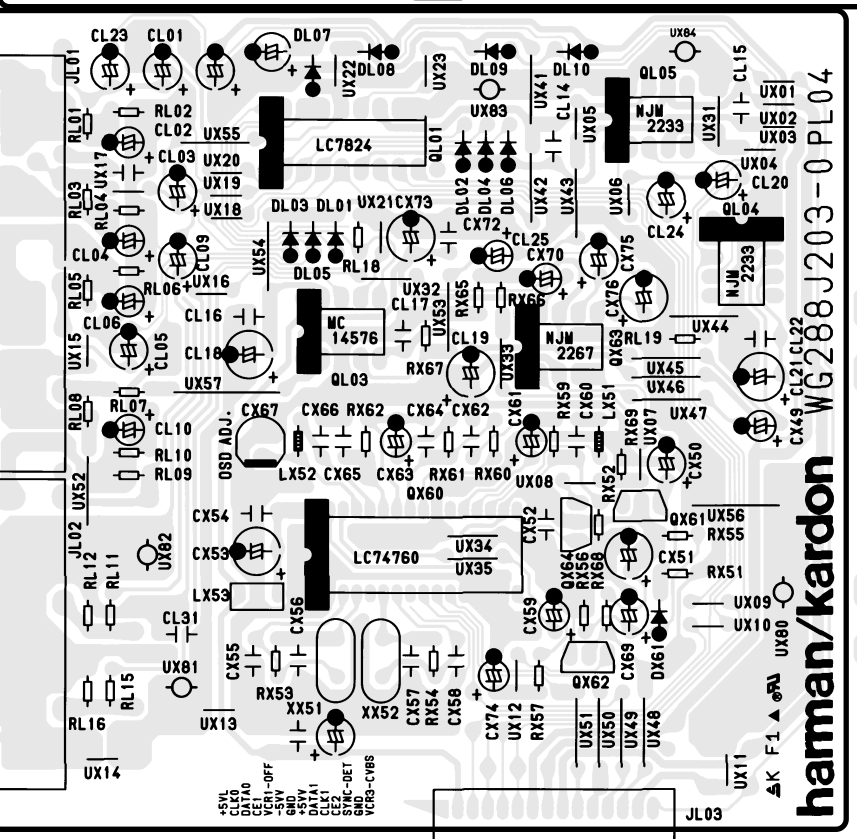


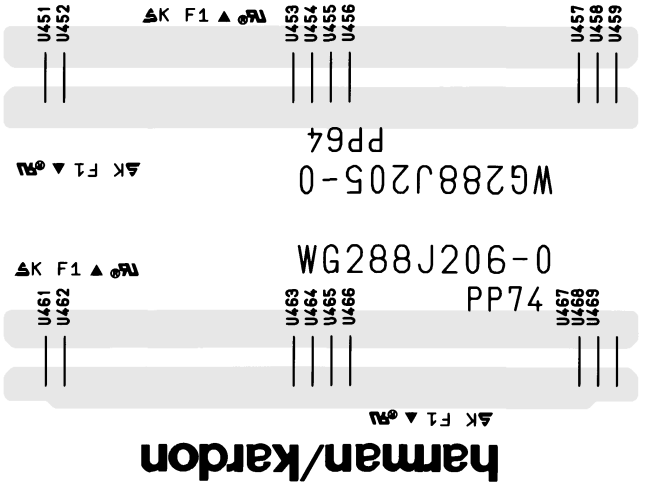




SPEAKER TERMINAL PCB - P754





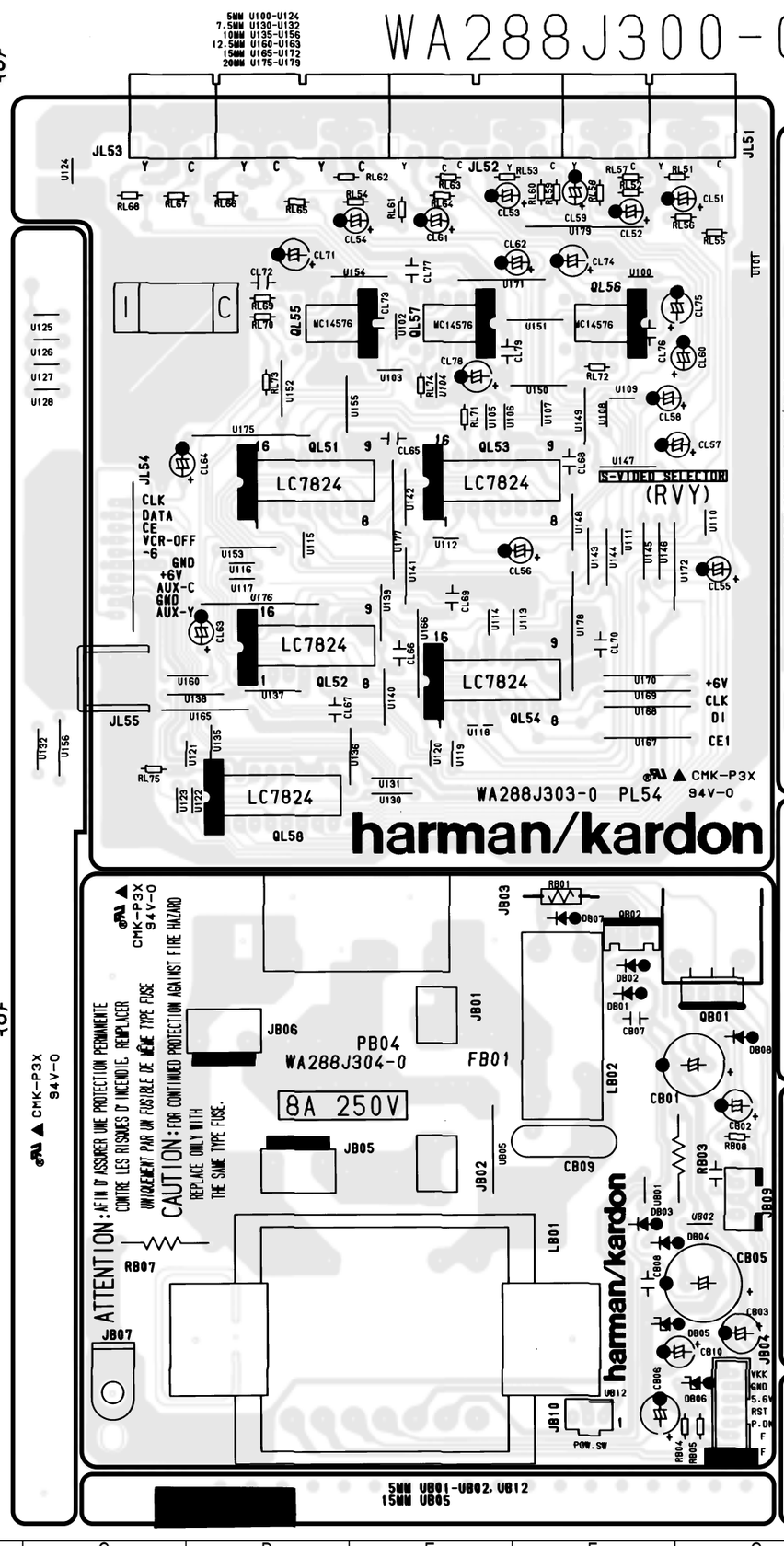


VIDEO SELECTOR PCB - PL04

S-VIDEO PCB - PL54, TUNER PCB - P104, STANDBY PCB - PB04, SURROUND AMP PCB - PP04, (FOR 120V)

S-VIDEO PCB - PL54

for 120V AVR85 ONLY



TUNER PCB - P104

for 120V

STANDBY PCB - PB04

for 120V

SURROUND AMP PCB - PP04

for 120V

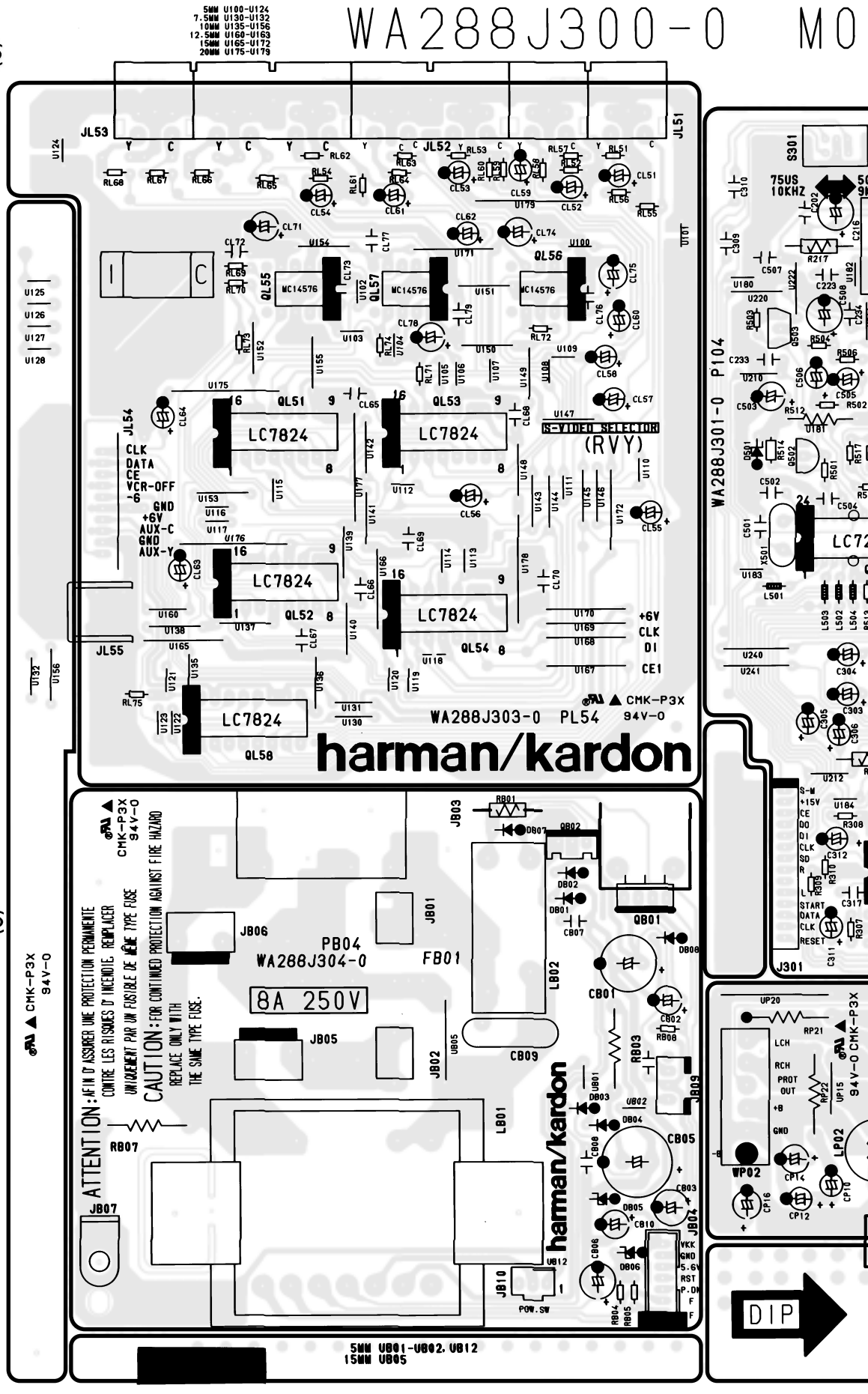
S-VIDEO PCB - PL54, TUNER PCB - P104, STANDBY PCB - PB04, SUR

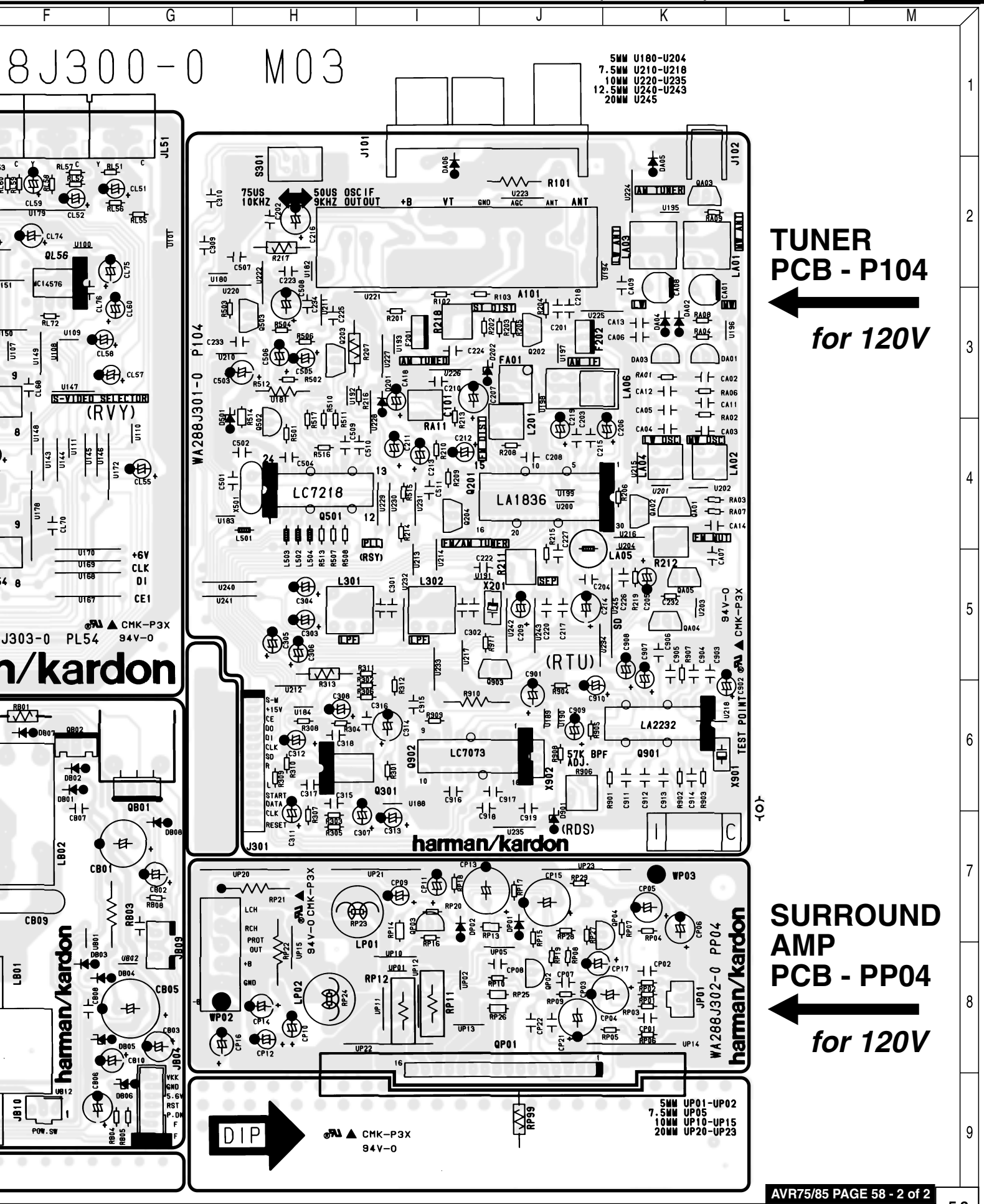
S-VIDEO PCB - PL54

for 120V AVR85 ONLY

STANDBY PCB - PB04

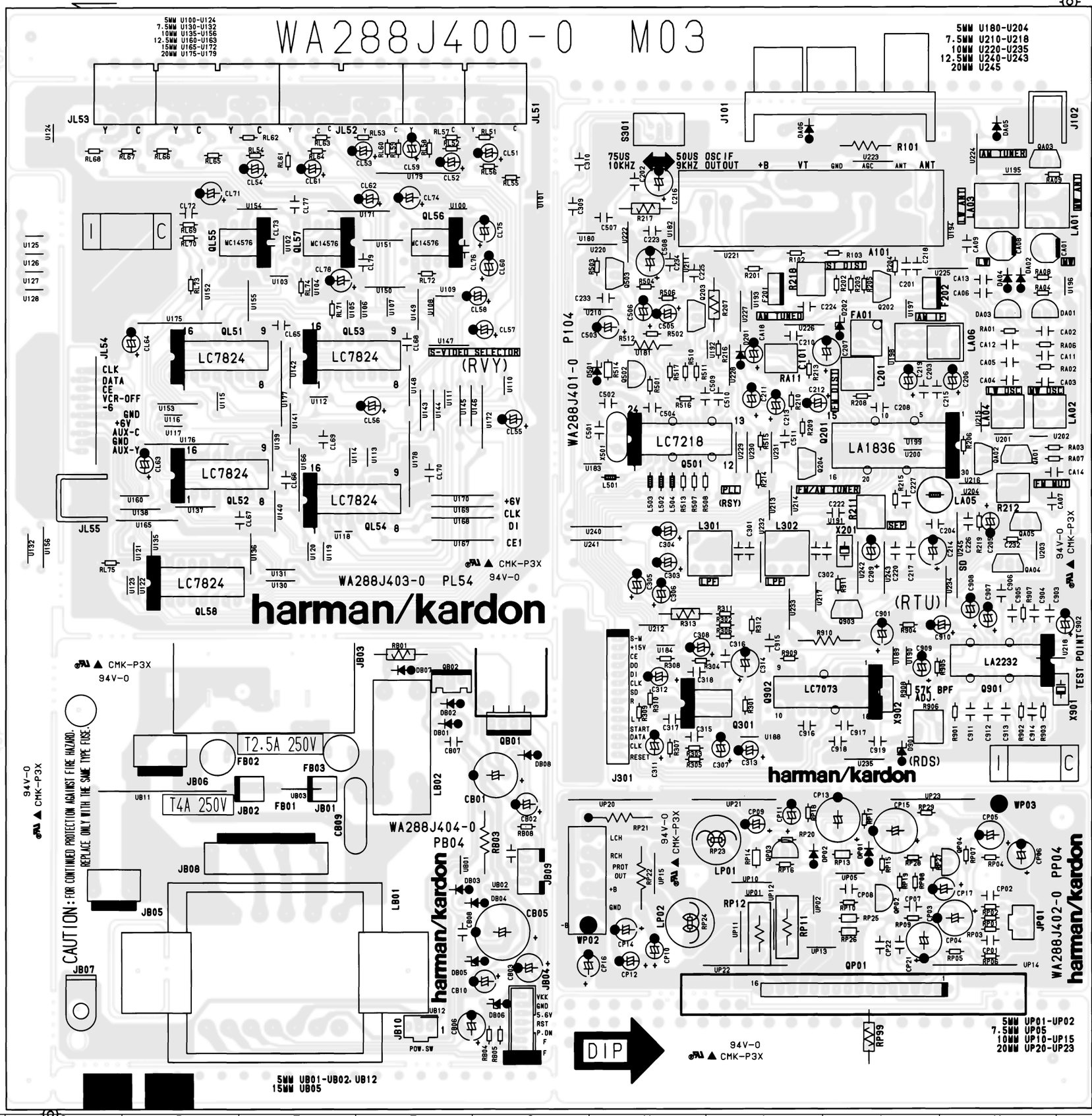
for 120V




8J300-0 M03
5MM U180-U204
7.5MM U210-U218
10MM U220-U235
12.5MM U240-U243
20MM U245
TUNER
PCB - P104
for 120V
SURROUND
AMP
PCB - PP04
for 120V
WA288J301-0 P104
WA288J302-0 PP04
LC7218
LA1836
LC7073
LA2232
harman/kardon
DIP
5MM UP01-UP02
7.5MM UP05
10MM UP10-UP15
20MM UP20-UP23

S-VIDEO PCB - PL54

for 230V AVR85 ONLY



TUNER PCB - P104

for 230V

STANDBY PCB - PB04

for 230V

SURROUND AMP PCB - PP04

for 230V

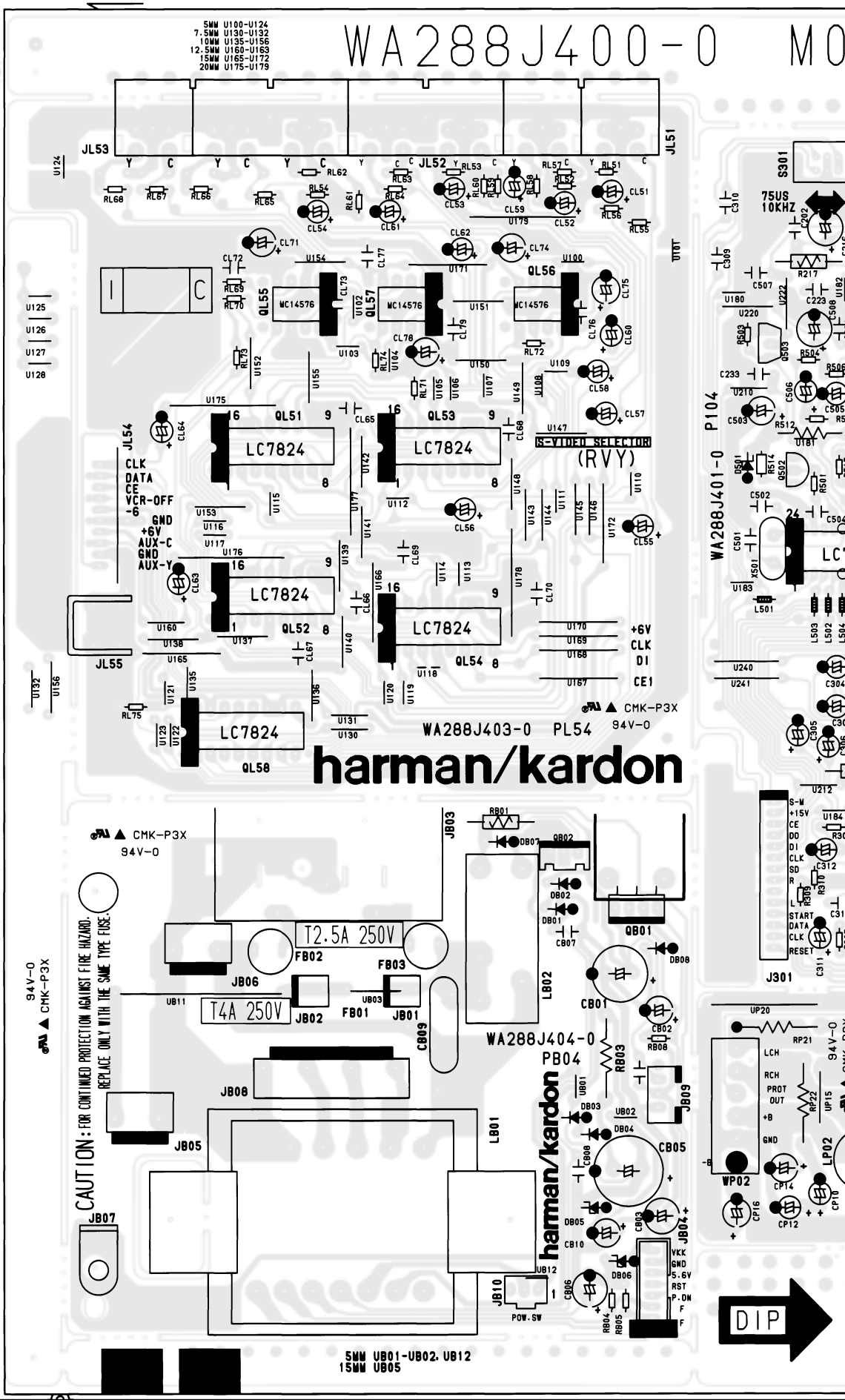
S-VIDEO PCB - PL54, TUNER PCB - P104, STANDBY PCB - PB04, SUR

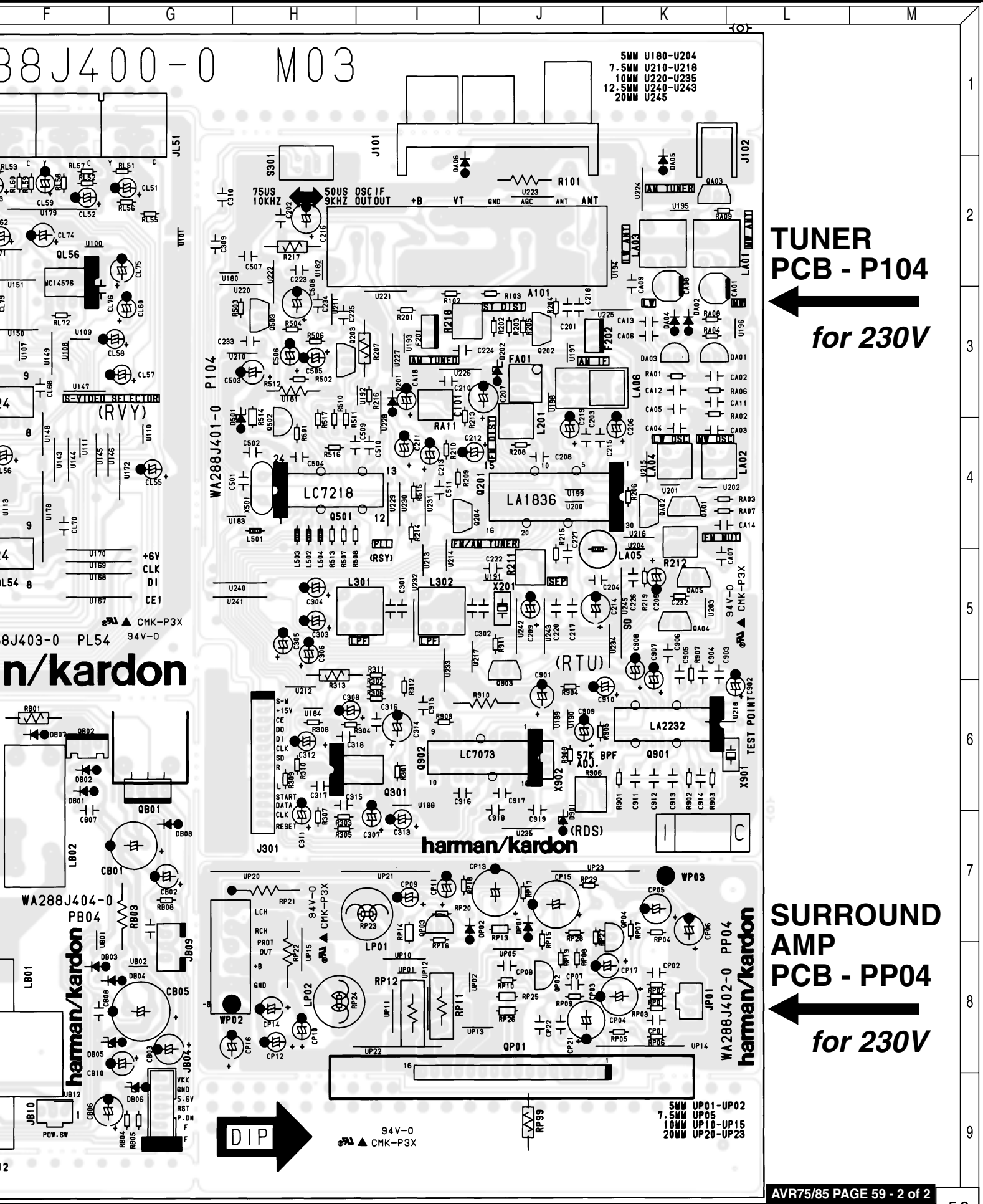
S-VIDEO PCB - PL54

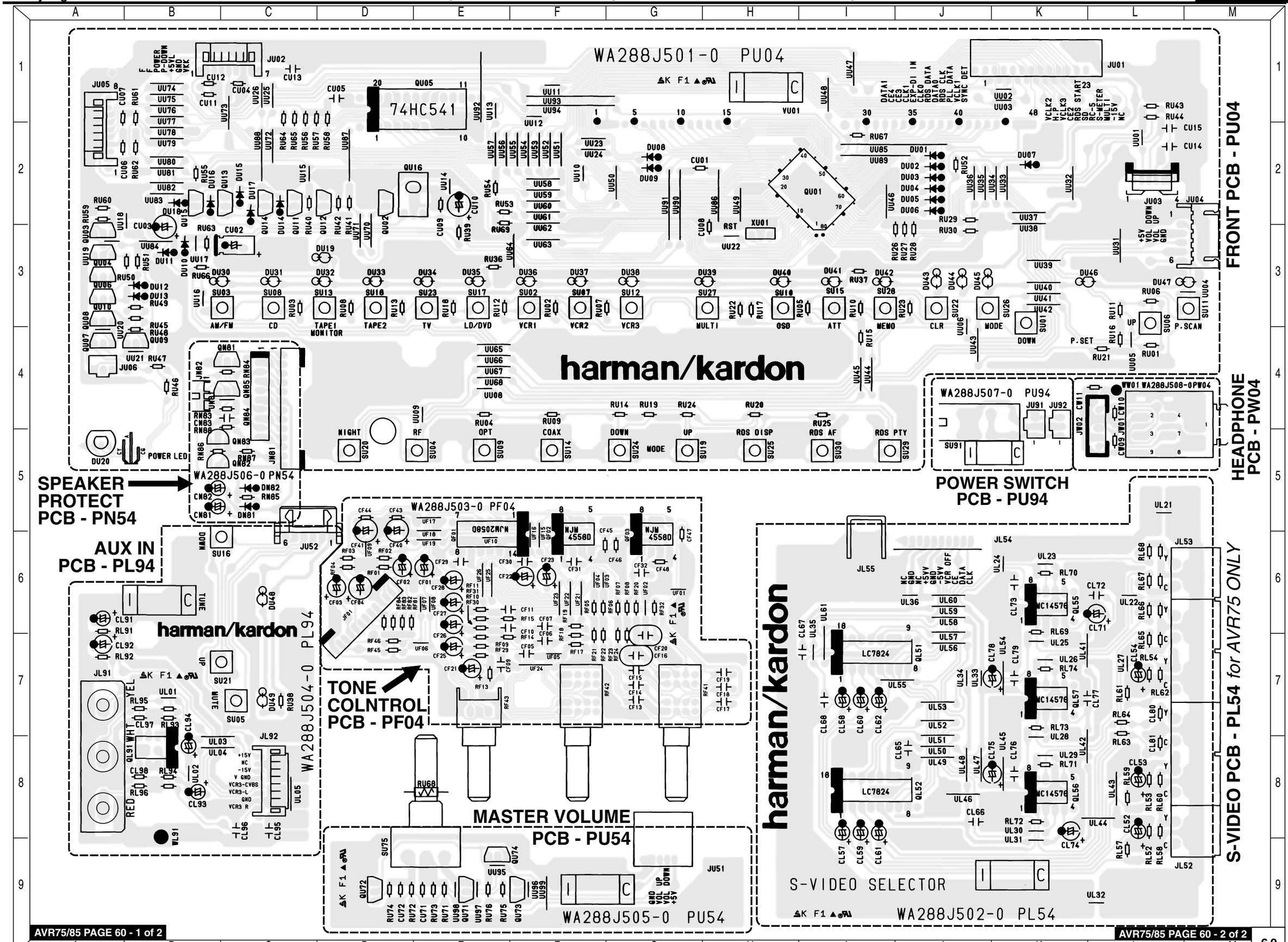
for 230V AVR85 ONLY

STANDBY PCB - PB04

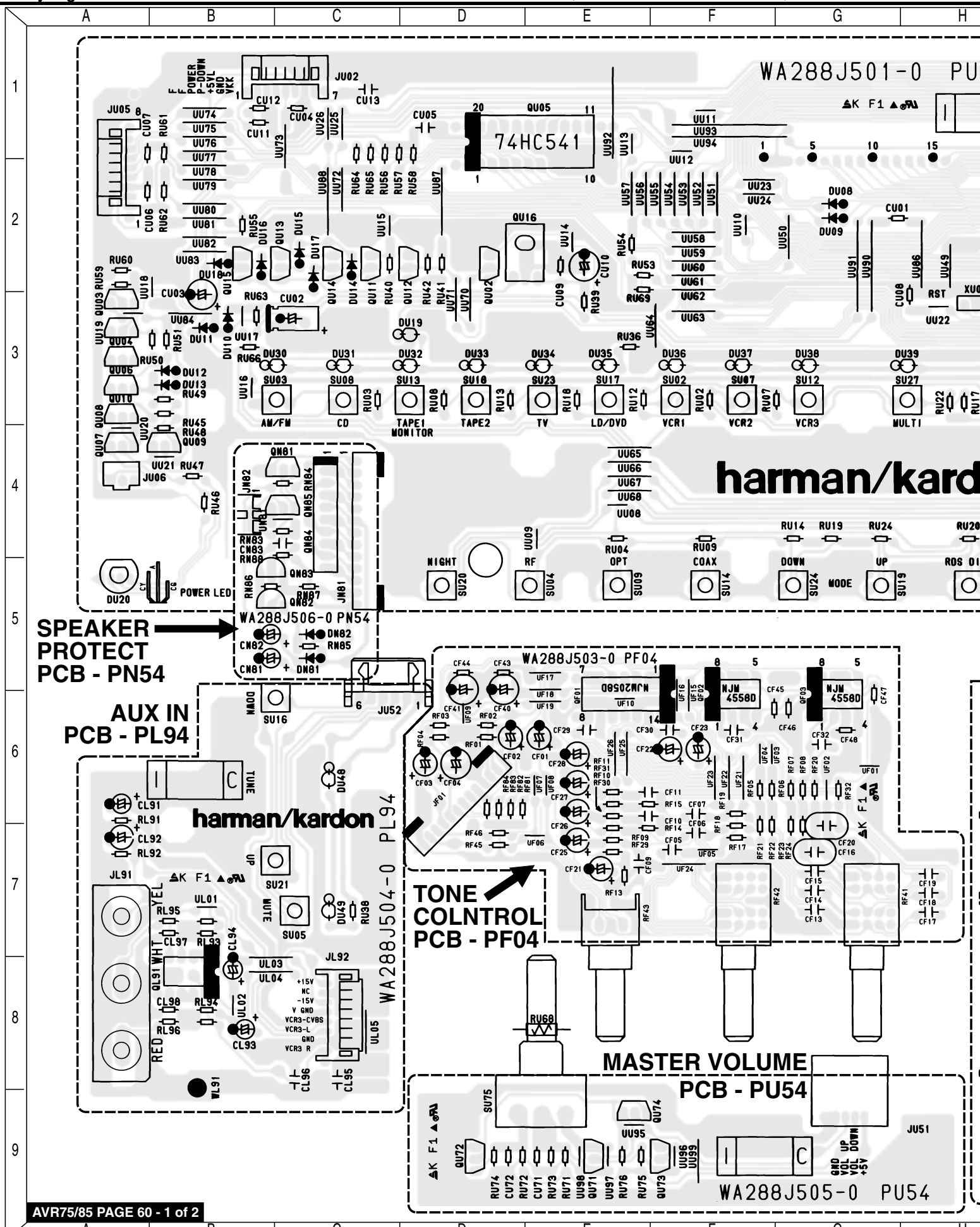
for 230V

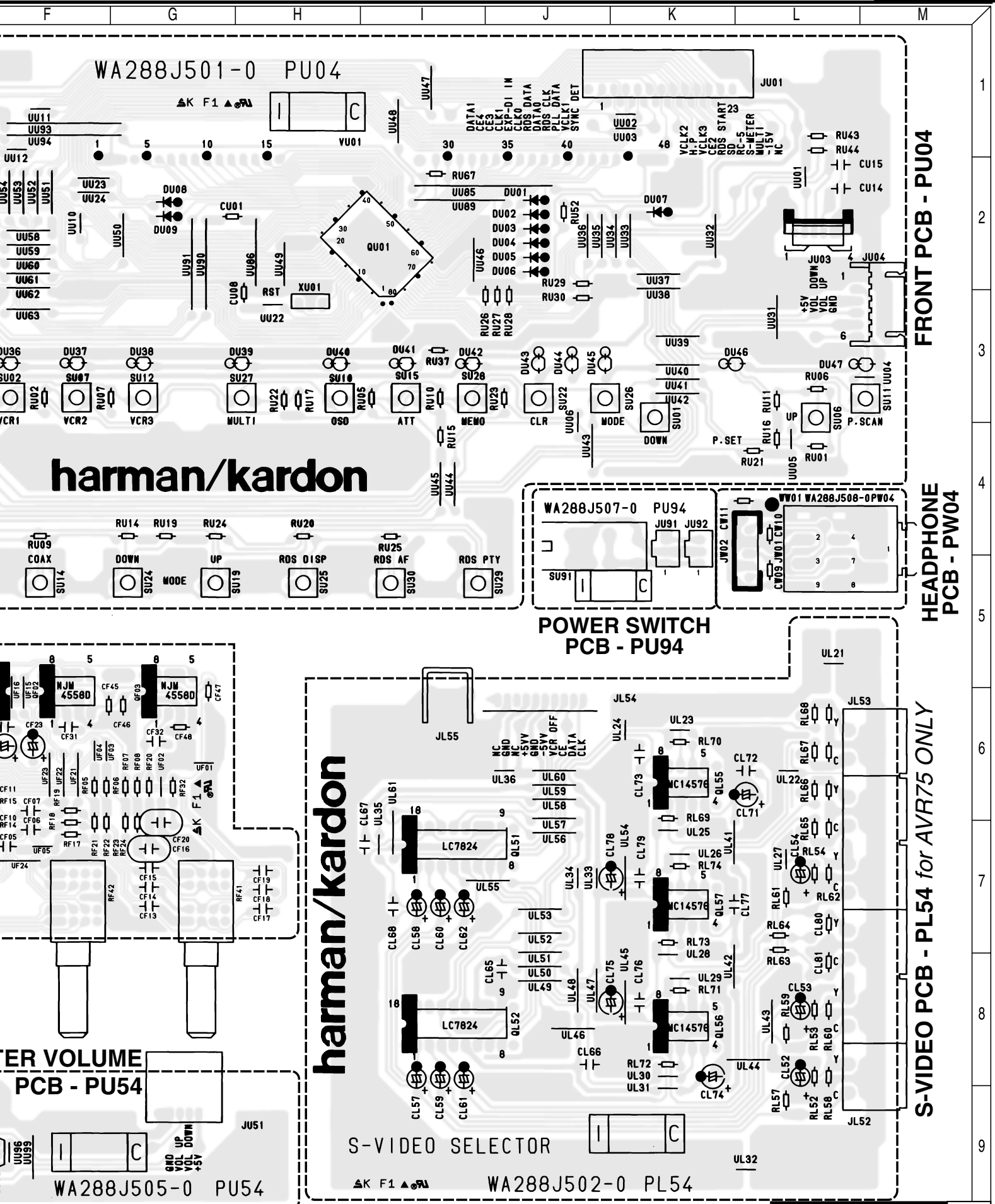



TUNER
PCB - P104
for 230V
SURROUND
AMP
PCB - PP04
for 230V
WA288J401-0 P104
WA288J404-0 PB04
WA288J402-0 PP04
harman/kardon
LC7218
LA1836
LC7073
LA2232
94V-0 CMK-P3X
DIP


WA288J501-0 PU04
FRONT PCB - PU04
harman/kardon
SPEAKER PROTECT PCB - PN54
WA288J506-0 PN54
AUX IN PCB - PL94
WA288J504-0 PL94
TONE COLNTROL PCB - PF04
WA288J503-0 PF04
MASTER VOLUME PCB - PU54
WA288J505-0 PU54
POWER SWITCH PCB - PU94
WA288J507-0 PU94
HEADPHONE PCB - PW04
WW01 WA288J508-0PW04
S-VIDEO PCB - PL54 for AVR75 ONLY
WA288J502-0 PL54
S-VIDEO SELECTOR
74HC541
NJM4558D
NJM2068D
LC7824
MC14576
AM/FM
CD
TAPE1 MONITOR
TAPE2
TV
LD/DVD
VCR1
VCR2
VCR3
MULTI
OSD
ATT
MEMO
CLR
MODE
DOWN
P.SET
UP
P.SCAN
NIGHT
RF
OPT
COAX
DOWN
MODE
UP
RDS DISP
RDS AF
RDS PTY
POWER LED

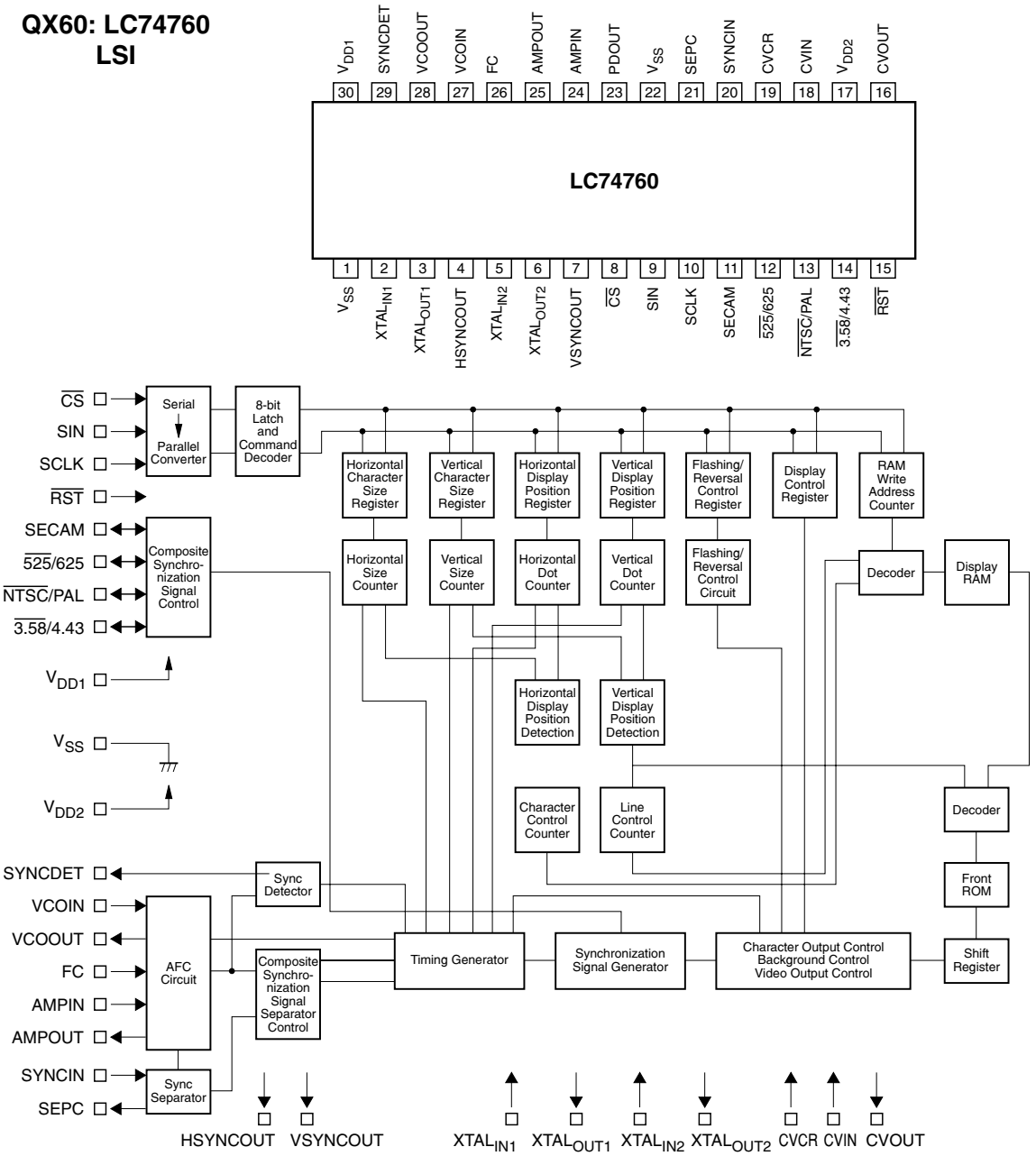
FRONT PCB - PU04, S-VIDEO PCB - PL54, MASTER VOLUME PCB - P
TONE CONTROL PCB - PF04, AUX IN PCB - PL94, POWER SWITCH P



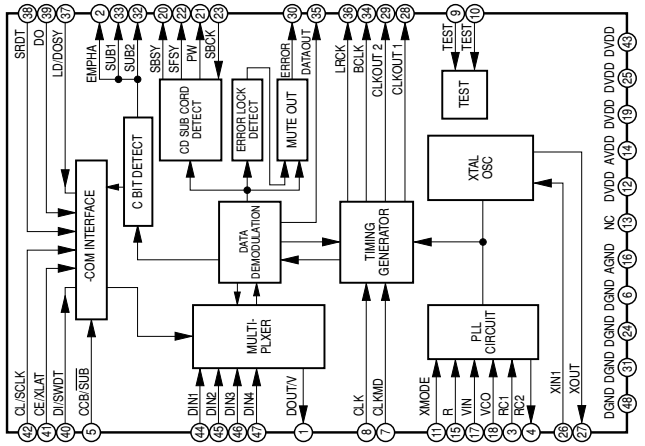

WA288J501-0 PU04
FRONT PCB - PU04
harman/kardon
WA288J507-0 PU94
POWER SWITCH
PCB - PU94
HEADPHONE
PCB - PW04
S-VIDEO PCB - PL54 for AVR75 ONLY
S-VIDEO SELECTOR
WA288J502-0 PL54
TER VOLUME
PCB - PU54
WA288J505-0 PU54

INTEGRATED CIRCUIT DIAGRAMS 1

QX60: LC74760 LSI

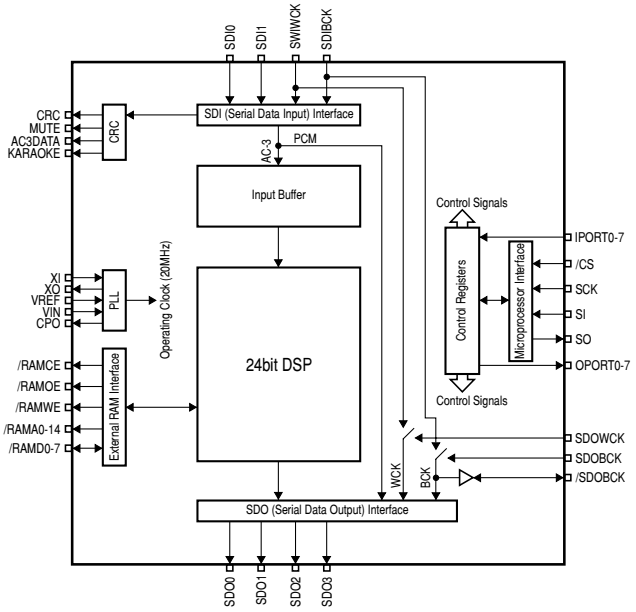


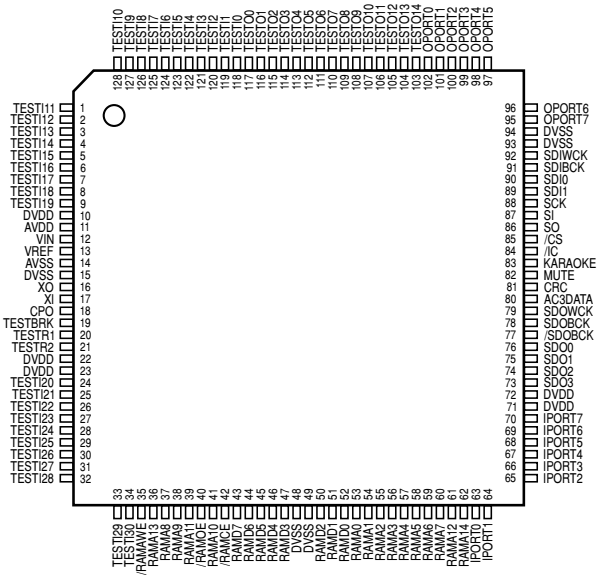
QR01: LC8904Q DIGITAL AUDIO I/F



INTEGRATED CIRCUIT DIAGRAMS 2

Q601: YSS243 AC-3 DECODER





No.	Name	I/O	Function
1	TEST11	I	N.C.
2	TEST12	I	N.C.
3	TEST13	I	N.C.
4	TEST14	I	N.C.
5	TEST15	I	N.C.
6	TEST16	I	N.C.
7	TEST17	I	N.C.
8	TEST18	I	N.C.
9	TEST19	I	N.C.
10	DVDD	-	+5VD
11	AVDD	-	+5VD
12	VIN	AI	PLL input
13	VREF	AI	PLL input
14	AVSS	-	GND
15	DVSS	-	GND
16	XO	O	N.C.
17	XI	I	External clock input
18	CPO	AO	PLL output
19	TESTBRK	I	N.C.
20	TESTR1	I	N.C.
21	TESTR2	I	N.C.
22	DVDD	-	+5VD
23	DVDD	-	+5VD
24	TEST20	I	N.C.
25	TEST21	I	N.C.
26	TEST22	I	N.C.
27	TEST23	I	N.C.
28	TEST24	I	N.C.
29	TEST25	I	N.C.
30	TEST26	I	N.C.
31	TEST27	I	N.C.
32	TEST28	I	N.C.
33	TEST29	I	N.C.
34	TEST30	I	N.C.
35	/RAMWE	O	SRAM /WE
36	RAMA13	O	SRAM A13
37	RAMA8	O	SRAM A8
38	RAMA9	O	SRAM A9
39	RAMA11	O	SRAM A11
40	/RAMOE	O	SRAM /OE
41	RAMA10	O	SRAM A10
42	/RAMCE	O	SRAM /CE
43	RAMD7	I/O	SRAM D7
44	RAMD6	I/O	SRAM D6
45	RAMD5	I/O	SRAM D5
46	RAMD4	I/O	SRAM D4
47	RAMD3	I/O	SRAM D3
48	DVSS	-	GND
49	DVSS	-	GND
50	RAMD2	I/O	SRAM D2
51	RAMD1	I/O	SRAM D1
52	RAMD0	I/O	SRAM D0
53	RAMA0	O	SRAM A0
54	RAMA1	O	SRAM A1
55	RAMA2	O	SRAM A2
56	RAMA3	O	SRAM A3
57	RAMA4	O	SRAM A4
58	RAMA5	O	SRAM A5
59	RAMA6	O	SRAM A6
60	RAMA7	O	SRAM A7
61	RAMA12	O	SRAM A12
62	RAMA14	O	SRAM A14
63	IPORT0	I	N.C.
64	IPORT1	I	N.C.

No.	Name	I/O	Function
65	IPORT2	I	N.C.
66	IPORT3	I	N.C.
67	IPORT4	I	N.C.
68	IPORT5	I	N.C.
69	IPORT6	I	N.C.
70	IPORT7	I	N.C.
71	DVDD	-	+5VD
72	DVDD	-	+5VD
73	SDO3	O	PCM MIX0, MIX1 output
74	SDO2	O	PCM C, LFE output
75	SDO1	O	PCM LS, RS output
76	SDO0	O	PCM L, R output
77	/SDOBCK	O	N.C.
78	SDOBCK	I	SDO bit clock input
79	SDOWCK	I	SDO work clock input
80	AC3DATA	O	N.C.
81	CRC	O	N.C.
82	MUTE	O	Set to 1 if error data is detected when auto muting function triggered
83	KARAOKE	O	N.C.
84	/IC	I	Initial clear
85	/CS	I	m-com interface chip select input
86	SO	O	m-com interface data output
87	SI	I	m-com interface data input
88	SCK	I	m-com interface clock input
89	SDI1	I	N.C.
90	SDI0	I	AC-3 bit stream (or PCM) data input
91	SDIBCK	I	SDI bit clock input
92	SDIWCK	I	SDI work clock input
93	DVSS	-	GND
94	DVSS	-	GND
95	OPORT7	O	N.C.
96	OPORT6	O	N.C.
97	OPORT5	O	N.C.
98	OPORT4	O	N.C.
99	OPORT3	O	N.C.
100	OPORT2	O	N.C.
101	OPORT1	O	N.C.
102	OPORT0	O	N.C.
103	TESTO14	O	N.C.
104	TESTO13	O	N.C.
105	TESTO12	O	N.C.
106	TESTO11	O	N.C.
107	TESTO10	O	N.C.
108	TESTO9	O	N.C.
109	TESTO8	O	N.C.
110	TESTO7	O	N.C.
111	TESTO6	O	N.C.
112	TESTO5	O	N.C.
113	TESTO4	O	N.C.
114	TESTO3	O	N.C.
115	TESTO2	O	N.C.
116	TESTO1	O	N.C.
117	TESTO0	O	N.C.
118	TESTI0	I	N.C.
119	TESTI1	I	N.C.
120	TESTI2	I	N.C.
121	TESTI3	I	N.C.
122	TESTI4	I	N.C.
123	TESTI5	I	N.C.
124	TESTI6	I	N.C.
125	TESTI7	I	N.C.
126	TESTI8	I	N.C.
127	TESTI9	I	N.C.
128	TESTI10	I	N.C.

INTEGRATED CIRCUIT DIAGRAMS 3

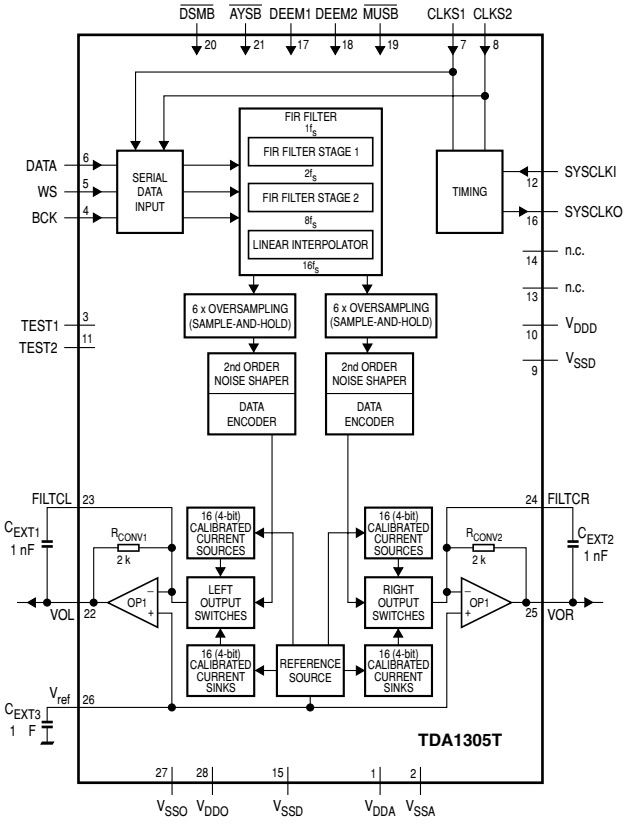
Q651: SUB CPU (AC-3 DSP) TMP87CH40F MICROPROCESSOR

PORT No.	PORT NAME	I/O	SIGNAL NAME	FUNCTION NOTES
1	P76	O	CAL	RESET&CALIBRATE FOR ADC H:RESET&CAL,L:NORMAL
2	P77	O	RSTO	RESET OUT FOR DAI&DEMODURATOR L:RESET,H:NORMAL
3	P00	O	CS	SPI CHIP SELECT FOR YSS243
4	P01	O	CRS	SPI CPU I/F RESET FOR YSS241
5	P02	O	FS0	Fs SET FOR YSS241
6	P03	O	FS1	Fs SET FOR YSS241
7	P04	O	MUTE-S	DAC MUTE CONT. OUT L:MUTE H:NORMAL
8	P05	O	EMP-1	DAC EMP.CONT.1
9	P06	O	EMP-2	DAC EMP.CONT.2
10	P07	O	YRST	RESET OUTPUT FOR YSS241&243L:RESET H:NORMAL
11	P10/INT0			N.C.
12	P11/INT1			N.C.
13	P12/INT2	I	(DEBUG)	FIXED+5V
14	P13/DVO			N.C.
15	P14/PPG			N.C.
16	P15/TC2			N.C.
17	P16			N.C.
18	P17			N.C.
19	P20/INT5	I/O	IFREQ	REQUEST SIGNAL FOR MAIN CPU I/F
20	TEST			GND
21	P21/XTIN			N.C.
22	P22/XTO			N.C.
23	RESET	I	RSTI	RESET INPUT FROM MAIN CPU L:RESET
24	XIN	I	XIN	FOR CPU OSC
25	XOUT	O	XOUT	FOR CPU OSC
26	VSS			GND
27	P30			
28	P31			N.C.
29	P32			N.C.
30	P33			N.C.
31	P34			N.C.
32	P35			N.C.
33	P36			N.C.
34	P37			N.C.
35	P40	O	CE0	CHIP ENABLE OUT FOR I/F TO DAI(LC8904Q)
36	P41	I/O	IFACK	ACKNOWLEDGE SIGNAL FOR MAIN CPU I/F
37	P42/SCK1	O	CL/SCK	SPI CLOCK OUT TO DAI(LC8904Q)&YSS241,243
38	P43/SI1	I	DO/SO	SPI DATA IN FROM DAI&DSP(YSS243)
39	P44/SO1	O	DI/SI	SPI DATA OUT TO DAI&DSP(YSS241&243)
40	P45/SCK2	O	IFCLK	I/F CLOCK OUT TO MAIN CPU
41	P46/SI2	I	IFDATAI	I/F DATA IN FROM MAIN CPU
42	P47/SO2	O	IFDATAO	I/F DATA OUT TO MAIN CPU
43	P50/INT3	I	C1F0	DEMODURATOR ERROR INPUT(FOR DEBUG USE ONLY)
44	P51/INT4	I	ERROR	DAI ERROR INPUT L:Error H:OK
45	P52/PDO			N.C.
46	P53			N.C.
47	P54			N.C.
48	VASS			GND
49	VAREF			GND
50	P60/AIN0	O	DEBO	CHIP ENABLE OUT FOR DEBUG USE ONLY
51	P61/AIN1			N.C.
52	P62/AIN2	I	YMUTE	YSS241 ERROR MUTE INPUT(H:MUTEON,L:MUTEOFF)
53	P63/AIN3			N.C.
54	P64/AIN4			N.C.
55	P65/AIN5			N.C.
56	P66/AIN6			N.C.
57	P67/AIN7			N.C.
58	VDD			+5V
59	P70	O	OSCON	PM4007A OSC CONTROL H:ONL:STOP
60	P71	O	DSEL	DATA SELECT(YSS243or241)H:241L:243
61	P72	O	LFE-ATT	LFEATT.CONT.H0dB L:-10dB,OFF
62	P73	O	A/D	ADC/DAI SELECT H:DAI L:ADC
63	P74	O	RF/OTH	RF/OTHER SELECT H:RF L:THER
64	P75	O	MUTE-1	MUTE CONTROLLED BY SUB CPU H:NORMAL L:MUTE

QD01, QD31, QD51: TDA1305T D/A CONVERTER

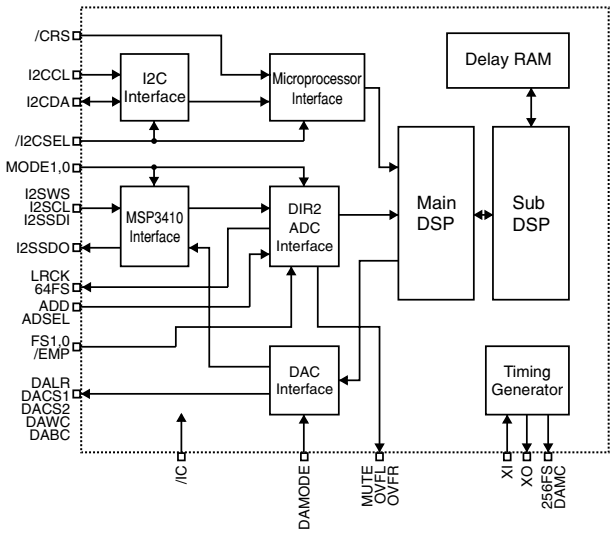
PINNING

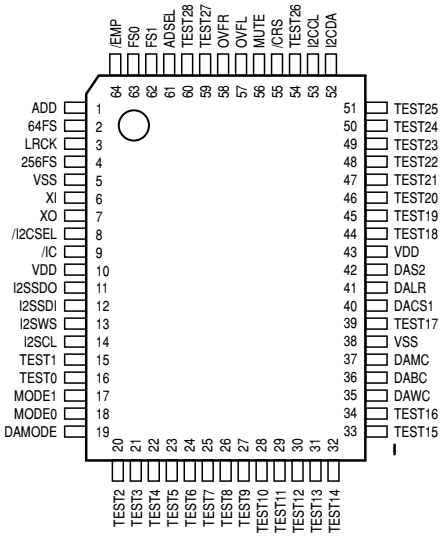
SYMBOL	PIN	DESCRIPTION
V_{DDA}	1	analog supply voltage
V_{SSA}	2	analog ground
TEST1	3	test input; pin should be connected to ground (internal pull-down resistor)
BCK	4	bit clock input
WS	5	word select input
DATA	6	data input
CLKS1	7	clock selection 1 input
CLKS2	8	clock selection 2 input
V_{SSD}	9	digital ground
V_{DDD}	10	digital supply voltage
TEST2	11	test input; pin should be connected to ground (internal pull-down resistor)
SYSCLKI	12	system clock input
n.c.	13	not connected (this pin should be left open-circuit)
n.c.	14	not connected (this pin should be left open-circuit)
V_{SSD}	15	digital ground
SYSCLKO	16	system clock output
DEEM1	17	de-emphasis on/off; f_{DEEM} 32 kHz, 44 kHz and 48 kHz
DEEM2	18	de-emphasis on/off; f_{DEEM} 32 kHz, 44 kHz and 48 kHz
$\overline{MUSB}$	19	mute input (active LOW)
$\overline{DSMB}$	20	double-speed mode input (active LOW)
$\overline{ATSB}$	21	12 dB attenuation input (active LOW)
VOL	22	left channel output
FILTCL	23	capacitor for left channel 1st order filter function should be connected between pins 22 and 23
FILTCR	24	capacitor for right channel 1st order filter function should be connected between pins 25 and 24
VOR	25	right channel output
V_{ref}	26	internal reference voltage for output channels ($0.5V_{DD}$)
V_{SSO}	27	operational amplifier ground
V_{DDO}	28	operational amplifier supply voltage



INTEGRATED CIRCUIT DIAGRAMS 4

Q602: YSS241 PRO LOGIC DECODER

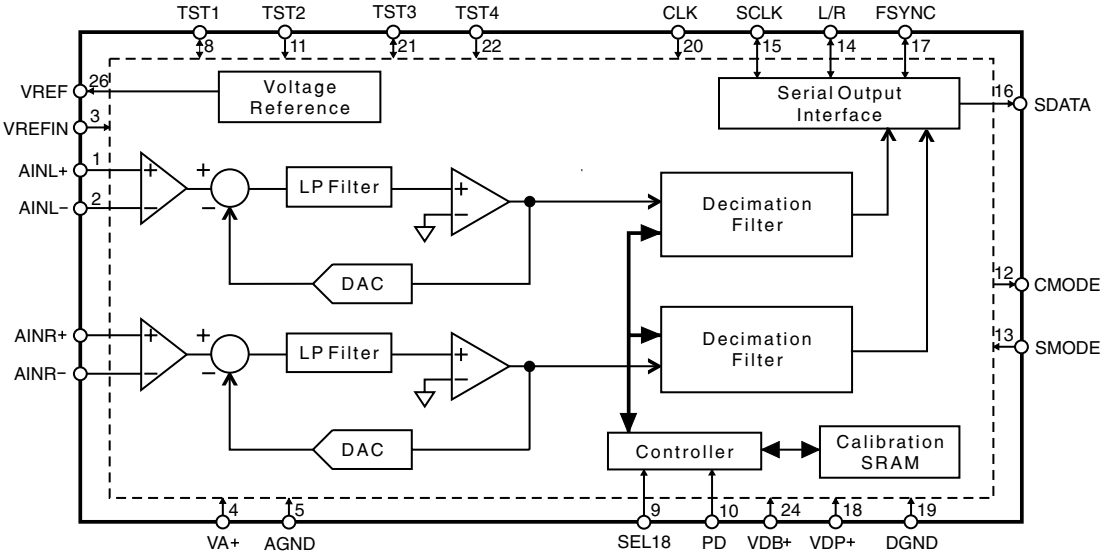




No	Name	I/O	Function
1	ADD	I	A/D CONVERTER SOUND DATA INPUT
2	64FS	O	ADC BIT CLOCK OUTPUT
3	LRCK	O	ADC L/R CLOCK OUTPUT
4	256FS	O	ADC MASTER CLOCK OUTPUT
5	VSS	-	GND
6	XI	I	EXTERNAL CLOCK OUTPUT
7	XO	O	N.C.
8	/I2CSEL	I	SELECTS CPU INTERFACE (“H”: SERIAL 3-WIRE TYPE, “L”: 12C BUS TYPE)
9	/IC	I	INITIAL CLEAR INPUT
10	VDD	-	+5VD
11	I2SSDO	O	INVALID
12	I2SSDI	I	DIR2 SOUND DATA INPUT
13	I2SWS	I	DIR2 L/R CLOCK INPUT
14	I2SCL	I	GND
15	TEST1	I	N.C.
16	TEST0	I	N.C.
17	MODE1	I	N.C.
18	MODE0	I	N.C.
19	DAMODE	I	SELECTS AUDIO DATA OUTPUT FORMAT
20	TEST2	I	N.C.
21	TEST3	I	N.C.
22	TEST4	I	N.C.
23	TEST5	I	N.C.
24	TEST6	I	N.C.
25	TEST7	I	N.C.
26	TEST8	I	N.C
27	TEST9	I	N.C.
28	TEST10	I	N.C.
29	TEST11	I	N.C.
30	TEST12	I	N.C.
31	TEST13	I	N.C.
32	TEST14	I	N.C.

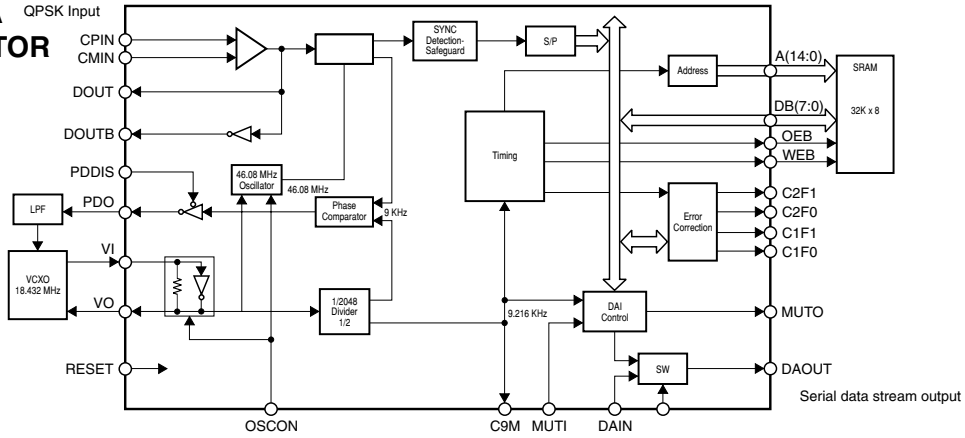
No	Name	I/O	Function
33	TEST15	I	N.C.
34	TEST16	I	N.C.
35	DAWC	O	DAC L/R CLOCK OUTPUT
36	DABC	O	DAC BIT CLOCK OUTPUT
37	DAMC	O	DAC MASTER CLOCK
38	VSS	-	GND
39	TEST17	I	N.C.
40	DACS1	O	DAC AUDIO DATA OUTPUT
41	DALR	O	DAC AUDIO DATA OUTPUT
42	DAS2	O	DAC AUDIO DATA OUTPUT
43	VDD	-	+5V
44	TEST18	O	N.C.
45	TEST19	O	N.C.
46	TEST20	I	N.C.
47	TEST21	O	N.C.
48	TEST22	I	N.C.
49	TEST23	I	N.C.
50	TEST24	I	N.C.
51	TEST25	I	N.C.
52	I2CDA	I/OD	CPU/I2C BUS INTERFACE SERIAL DATA INPUT
53	I2CCL	I	CPU/I2C BUS INTERFACE BIT CLOCK INPUT
54	TEST26	O	N.C.
55	/CRS	I	SERIAL 3-WIRE TYPE (/I2CSEL= “H”) :CPU INTERFACE RESET INPUT
56	MUTE	O	SYSTEM MUTE DETECTION
57	OVFL	O	N.C.
58	OVFR	O	N.C.
59	TEST27	O	N.C.
60	TEST28	O	N.C.
61	ADSEL	I	AUDIO DATA INPUT SWITCH (“H” :ADD INPUT, “L” :I2SSDI INPUT)
62	FS1	I	SAMPLING FREQUENCY SWITCHER (VALID ONLY WHEN ADSEL = “L”)
63	FS0	I	SAMPLING FREQUENCY SWITCHER (VALID ONLY WHEN ADSEL = “L”)
64	/EMP	I	DE-EMPHASIS PROCESSING (“L” :ON)

QK01: AK5340 A/D CONVERTER



INTEGRATED CIRCUIT DIAGRAMS 5

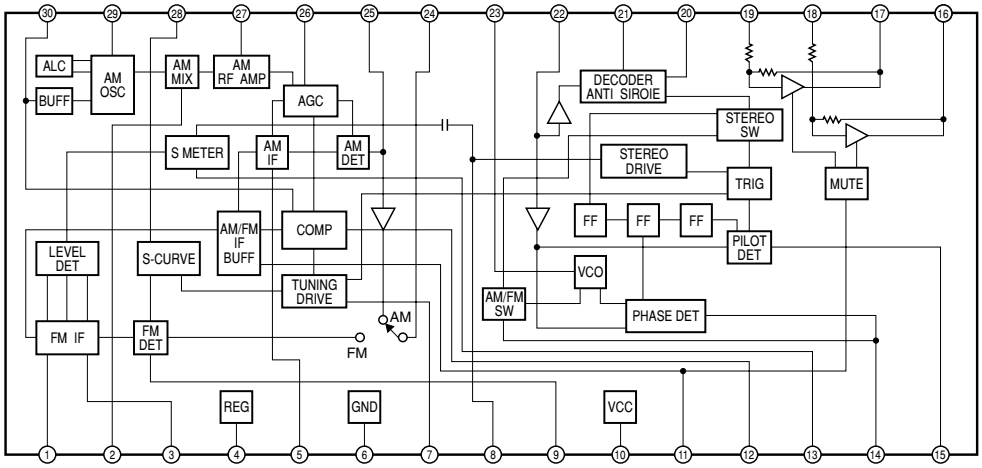
QM09: PM4007A RF DEMODULATOR



No.	Name	I/O	Function
1	GND	-	GND
2	VDD	-	+5VD
3	RESET	I	System Reset At "L" reset
4	OSCON	I	Oscillator Control At "H" during normal operation At "L" during standby
5	DATA	I	TEST
6	MCK	I	TEST
7	MLTB	I	TEST
8	IDST	O	TEST
9	IDCK	O	TEST
10	IDO	O	TEST
11	TM0	I	TEST
12	ECCK	O	TEST
13	DEN	O	TEST
14	DRY	O	TEST
15	MSYC	O	TEST
16	TM1	I	TEST
17	A0	O	RAM A0
18	A1	O	RAM A1
19	A2	O	RAM A2
20	A3	O	RAM A3
21	A4	O	RAM A4
22	A5	O	RAM A5
23	TM2	I	TEST
24	TM3	I	TEST
25	XOUT	O	TEST
26	XIN	I	TEST
27	XENT	I	TEST
28	GND	-	GND
29	VDD	-	+5VD
30	A6	O	RAM A6
31	A7	O	RAM A7
32	GND	-	GND
33	VDD	-	+5VD
34	A12	O	RAM A12
35	A14	O	RAM A14
36	WEB	O	RAM WEB
37	A13	O	RAM A13
38	A8	O	RAM A8
39	A9	O	RAM A9
40	GND	-	GND
41	A11	O	RAM A11
42	OEB	O	RAM OE
43	A10	O	RAM A10
44	DB7	B	RAM D7
45	DB6	B	RAM D6
46	DB5	B	RAM D5
47	DB4	B	RAM D4
48	DB3	B	RAM D3
49	DB2	B	RAM D2
50	DB1	B	RAM D1

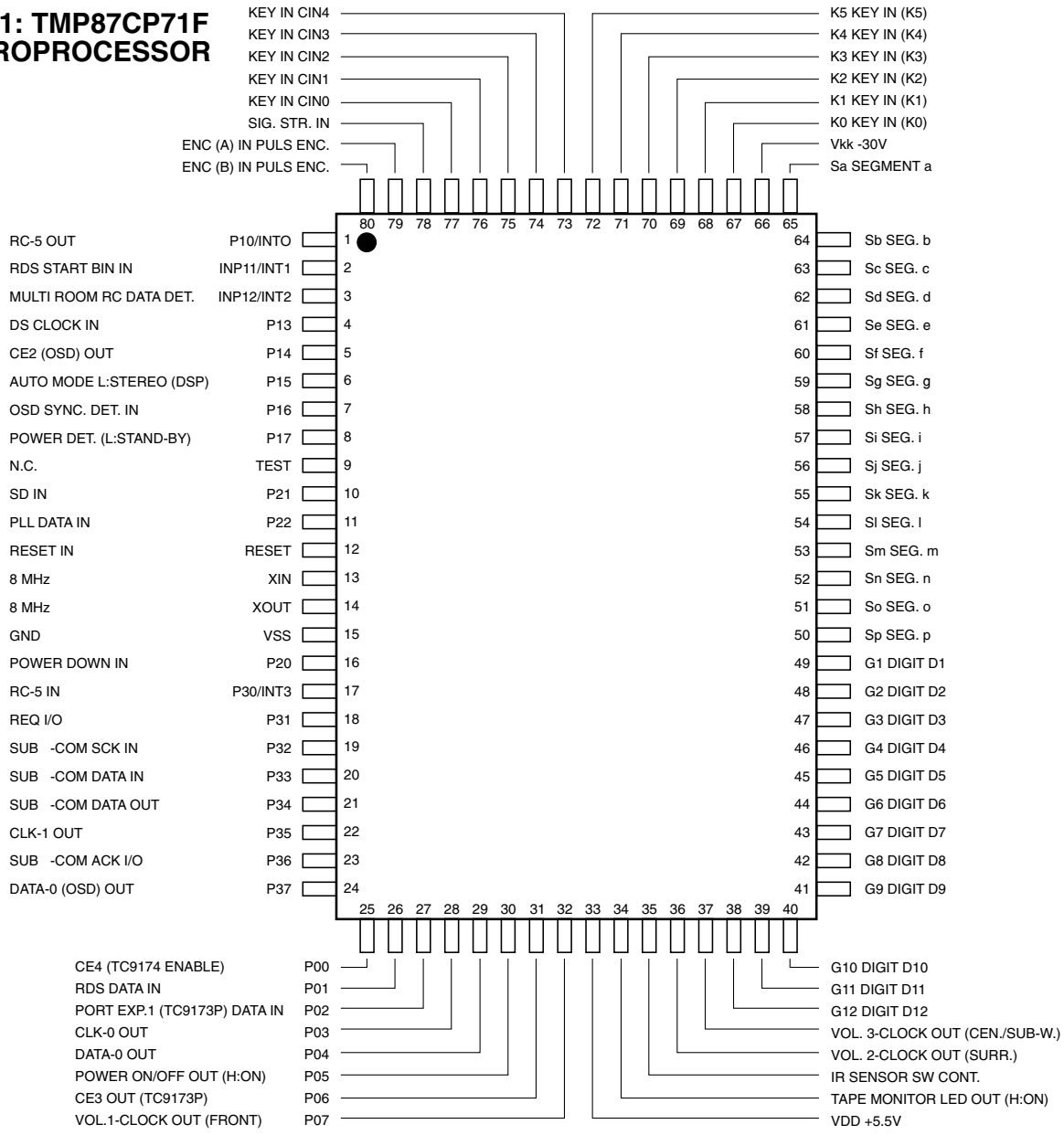
No.	Name	I/O	Function
51	DB0	B	RAM D0
52	VDD	-	+5VD
53	GND	-	GND
54	TI1	I	TEST
55	VIN	I	VCXO input
56	VOUT	O	VCXO output
57	TI2	I	TEST
58	TI3	I	TEST
59	TLDB	I	TEST
60	TCK	I	TEST
61	TRP	O	TEST
62	TDO	O	TEST
63	PDO	O	Phase comparator output (3-state)
64	TI4	I	TEST
65	PDDIS	I	Control input for PDO out At "L" Output ON
66	MUTO	O	Muting output. Mutes at "H." Sets to "H" when MUTI = H or the AC-3 period cannot be received.
67	TI5	I	TEST
68	VLDY	O	TEST
69	DASYO	O	TEST
70	DAOUT	O	Digital OUT (serial data stream output)
71	DAIN	I	Digital external input: Sets to DAOUT when DASEL is at "H"
72	DASEL	I	Selects digital OUT
73	TI8	I	TEST
74	C2F1	O	N.C.
75	C2F0	O	N.C.
76	C1F1	O	N.C.
77	C1F0	O	Displays C1 correction error status. Outputs error count at C1.
78	MUTI	I	Muting input. Mutes at "H."
79	VDD	-	+5VD
80	GND	-	GND
81	AVDD	-	+5VD
82	CPIN	I	Analog converter inverted input
83	CMIN	I	Analog converter inverted input
84	AGND	-	GND
85	TM4	I	TEST
86	VDD	-	+5VD
87	DIN	I	TEST
88	DOUT	O	Analog converter inverted input
89	DOUTB	O	Analog converter inverted reverse output
90	C9M	O	N.C.
91	GND	-	GND
92	WINGT	O	TEST
93	SYST0	O	TEST
94	SYST1	O	TEST
95	ADST0	O	TEST
96	ADST1	O	TEST
97	TM5	I	TEST
98	BUNRI	I	TEST
99	AGND	-	GND
100	AVDD	-	+5VD

Q201: LA1836 FM/AM IF, MPX

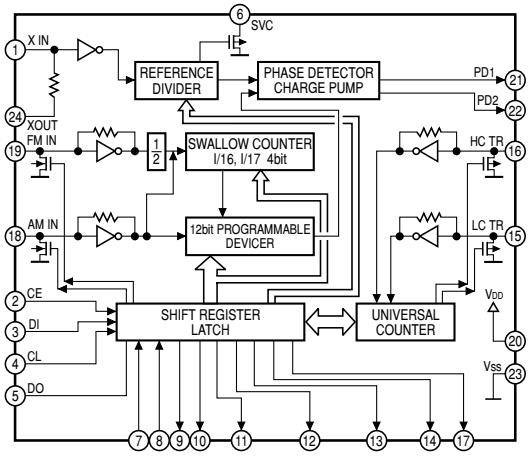


INTEGRATED CIRCUIT DIAGRAMS 6

QU01: TMP87CP71F MICROPROCESSOR

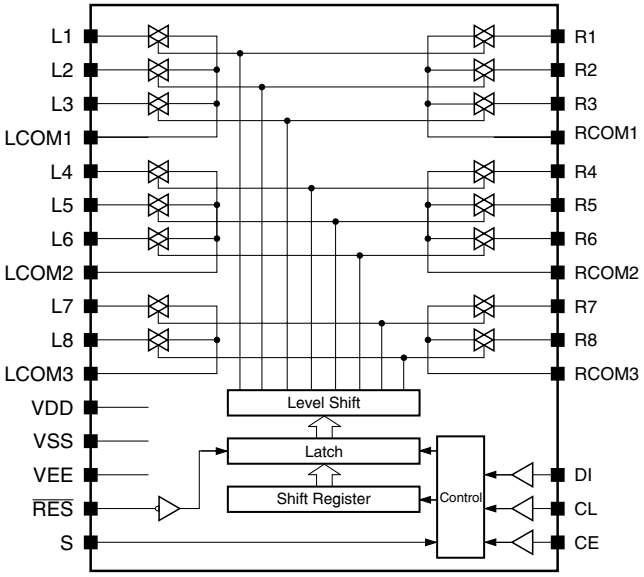


Q501: LC7218 PPL

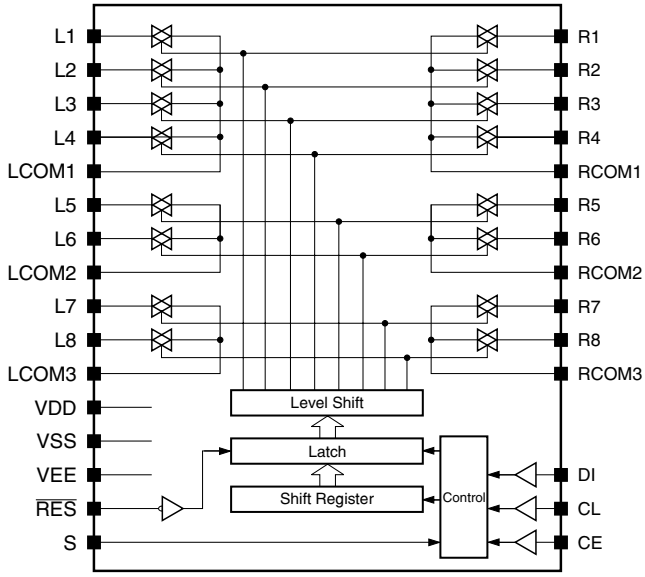


INTEGRATED CIRCUIT DIAGRAMS 7

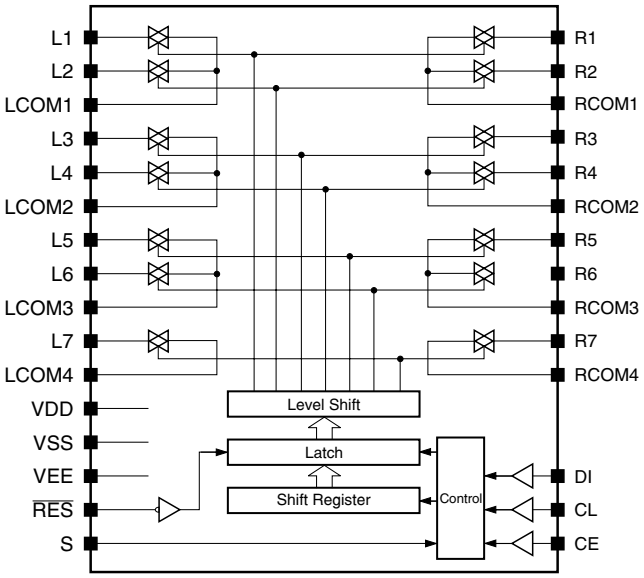
QS57 - LC78212 ANALOG SWITCH



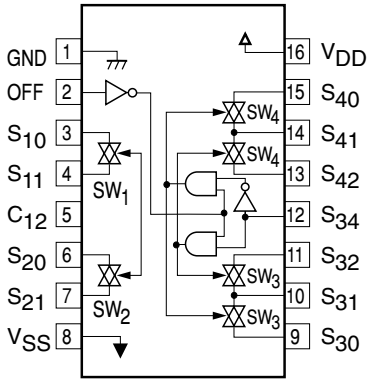
Q511, Q556 - LC78211 ANALOG SWITCH



Q512 - LC78213 ANALOG SWITCH

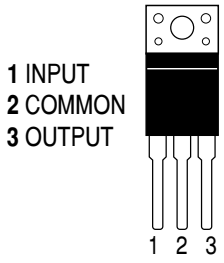


QY12 - TC9215 ANALOG SWITCH



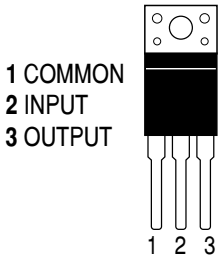
+5, +15V REGULATORS

Q801 - NJM7815
Q803 - NJM7805

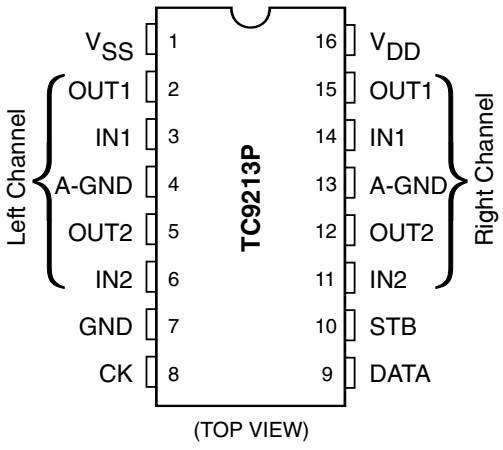


-5, -15V REGULATORS

Q802 - NJM7915
Q804 - NJM7905



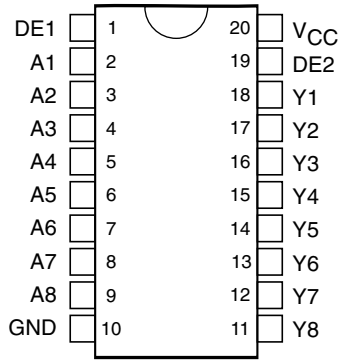
QE04, 05, 06, QG04-07, QG57 - TC9213P ELECTRIC VOLUME CONTROL



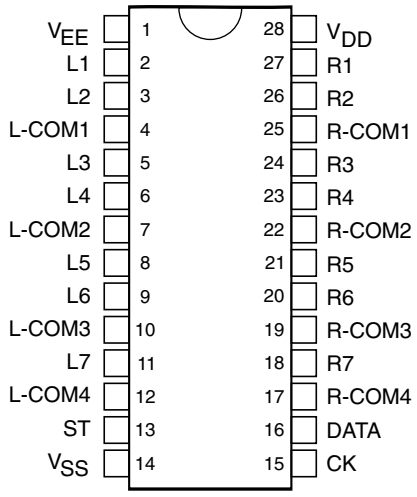
(TOP VIEW)

INTEGRATED CIRCUIT DIAGRAMS 8

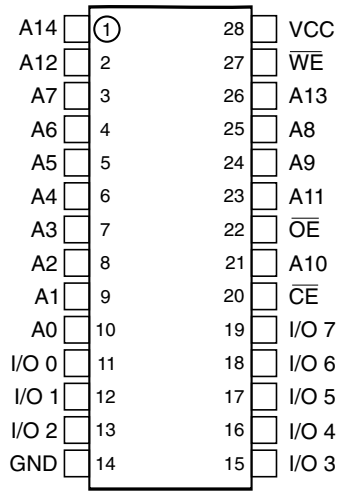
Q652 - 74HC541
3-STATE BUFFER/
LINE DRIVER



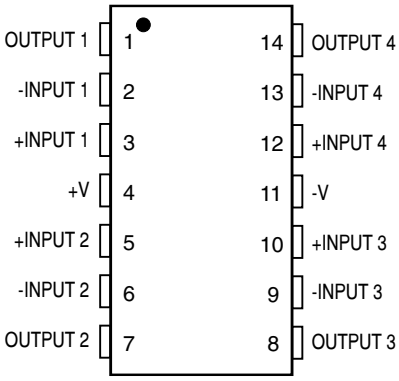
QC11 - NJU7311L
ANALOG SWITCH



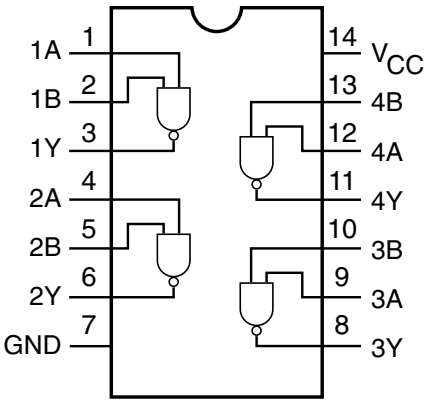
QM10 - 8X32 SRAM



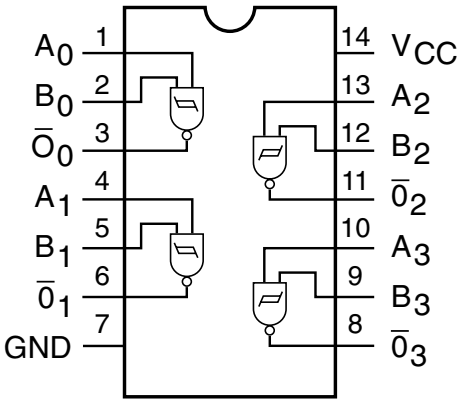
QF01 - NJM2058
QUAD OP-AMP



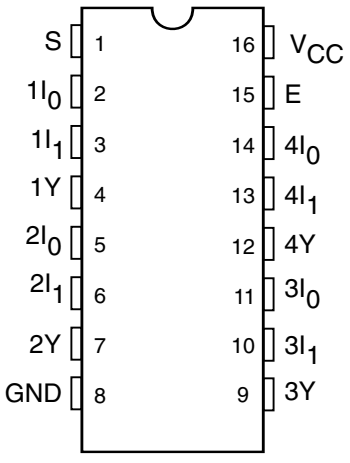
QR02 - TC74CH00AP
QUAD 2-INPUT NAND GATE



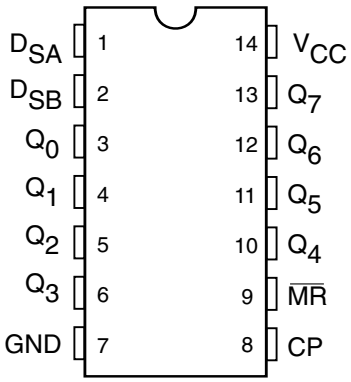
QT04 - 74LS132
QUAD 2-INPUT NAND
SCHMITT TRIGGER



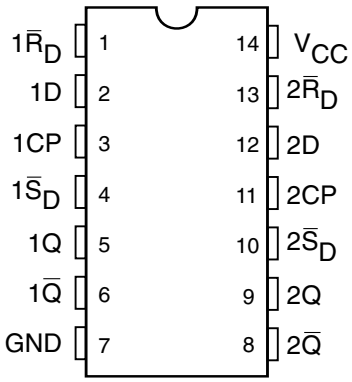
Q604 - 74HC157A
QUAD 2-INPUT MULTIPLEXER



Q607, 608 - 74HC164E
8-BIT SERIAL-IN/PARALLEL-OUT
SHIFT REGISTER

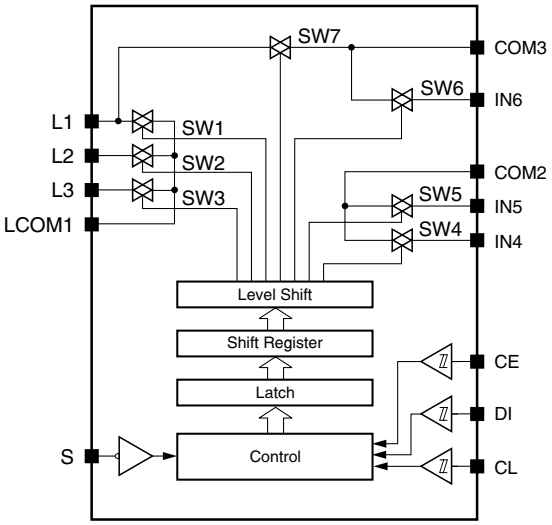


Q605 - 74HC74
DUAL D-TYPE FLIP-FLOP

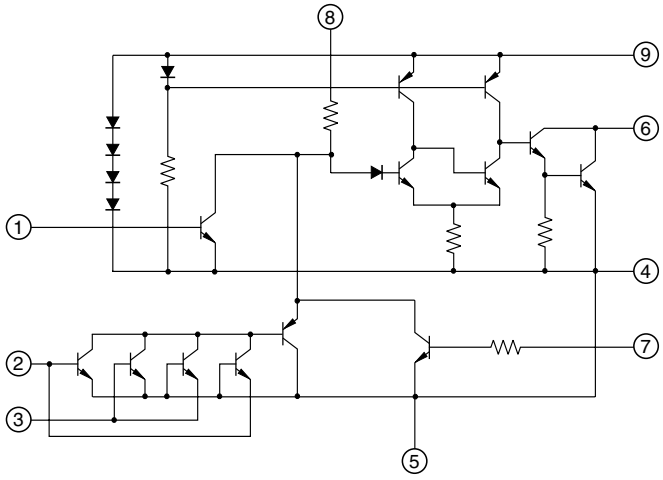


INTEGRATED CIRCUIT DIAGRAMS 9

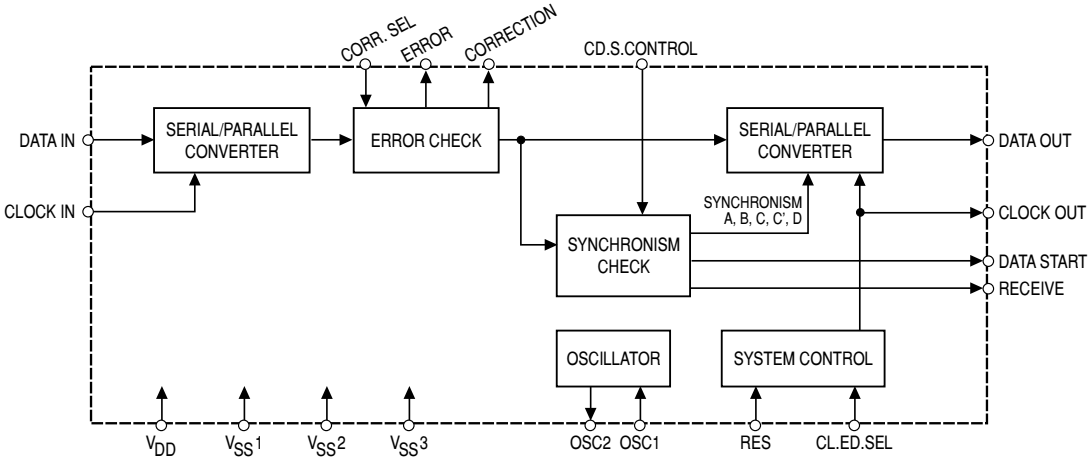
QL01, QL51, QL52 - LC7824 ANALOG SWITCH



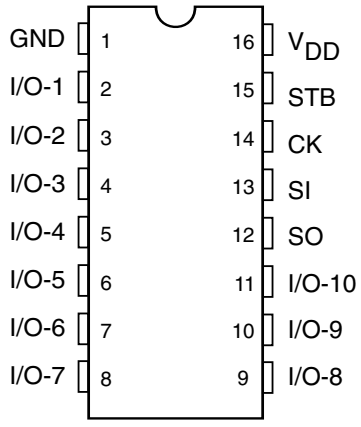
QN84 - TA7317P OVERLOAD PROTECTOR



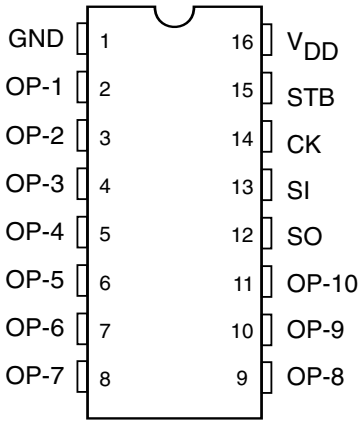
Q902 - LC7073 RDS ERROR MODULATOR



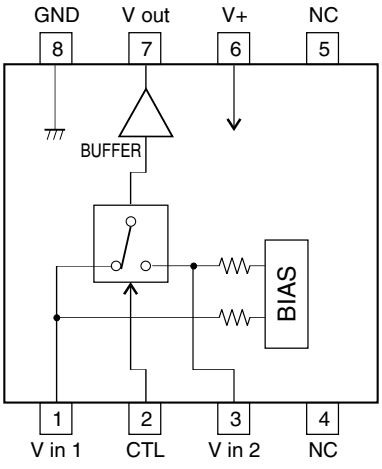
QY10 - TC9173 PORT EXPANDER



QY11 - TC9174P PORT EXPANDER

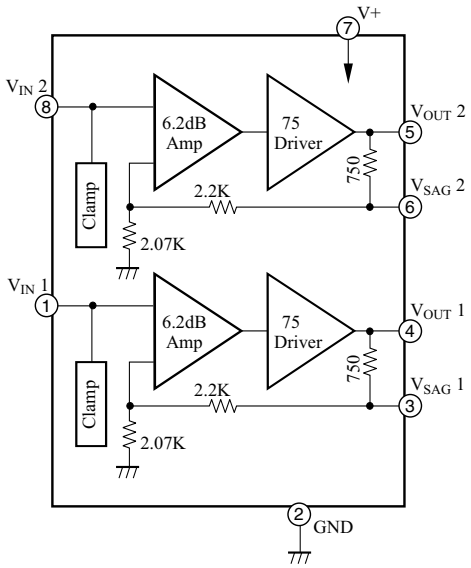


QL04, QL05 - NJM2233D VIDEO AMP

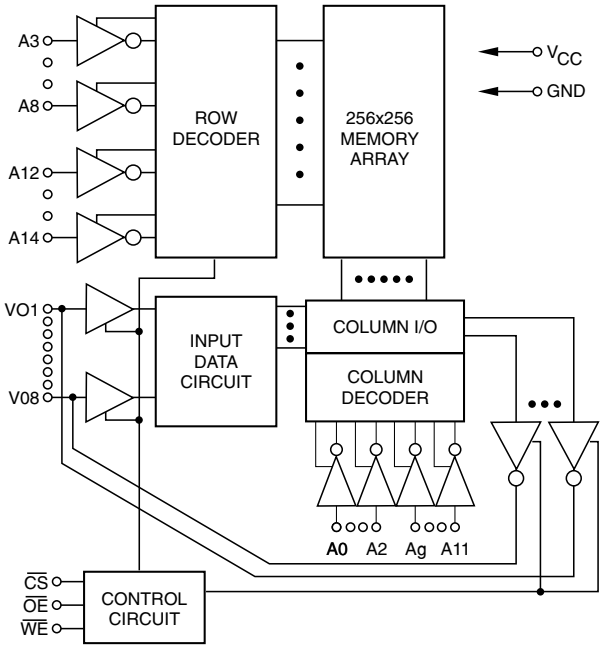


INTEGRATED CIRCUIT DIAGRAMS 10

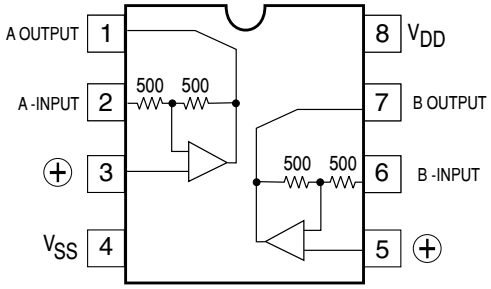
QX63 - NJM2267D VIDEO AMP



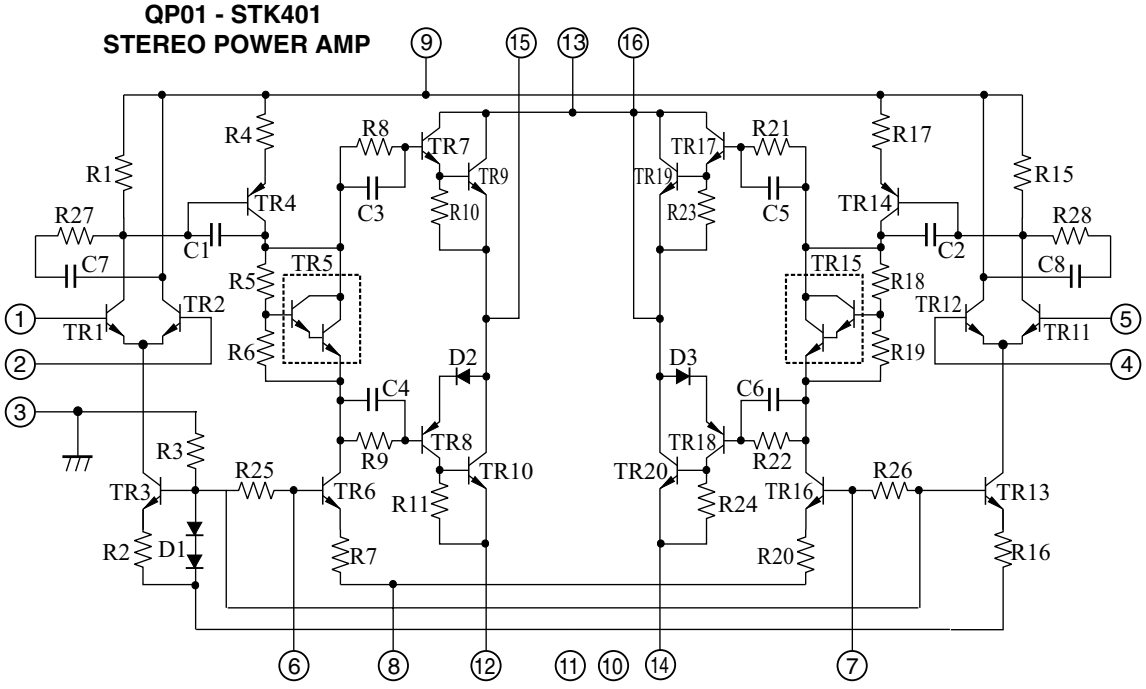
Q603 - HM62H256AJ-15T 32Kx8 HIGH SPEED CMOS STATIC RAM



QL03, QL55-57 - MC14576S, MC14577A VIDEO AMP

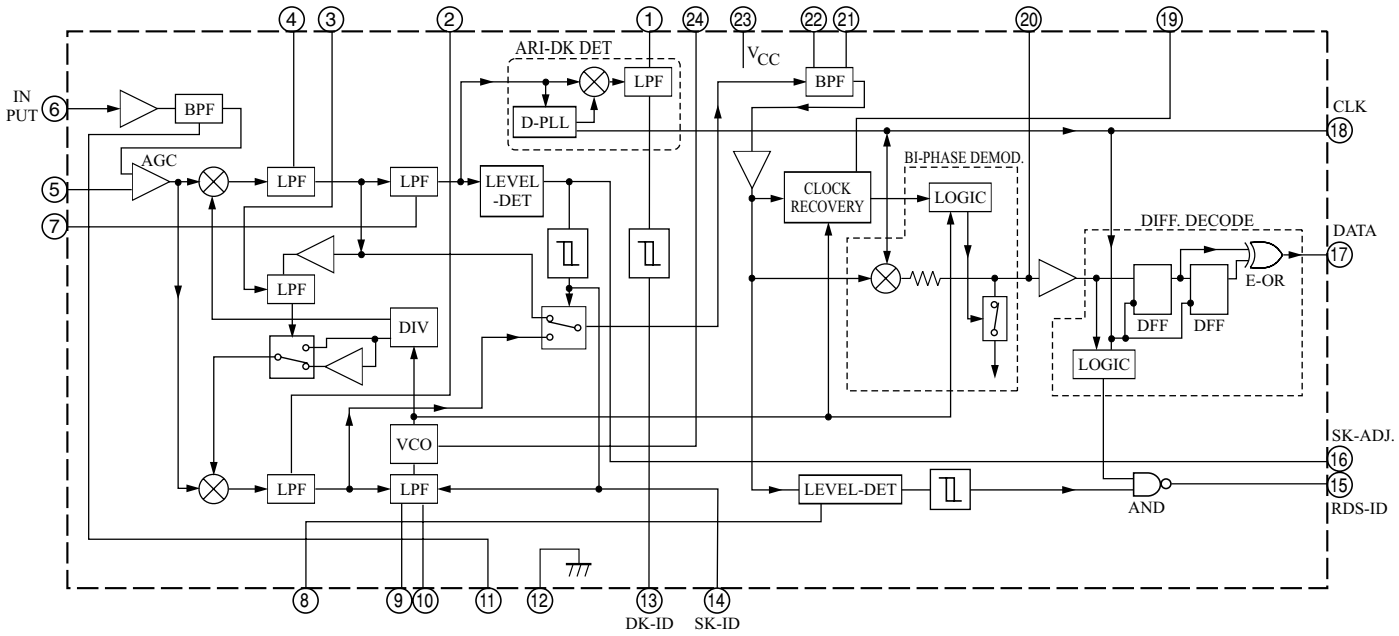


QP01 - STK401 STEREO POWER AMP

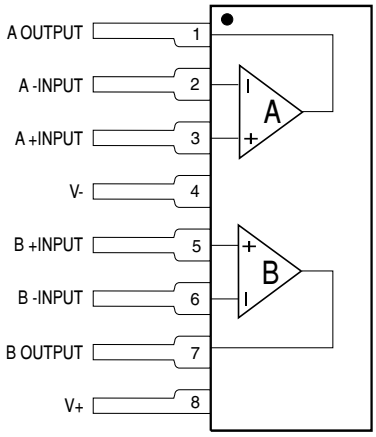


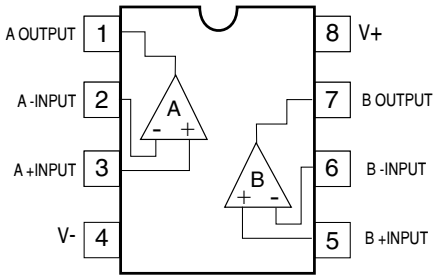
INTEGRATED CIRCUIT DIAGRAMS 11

Q901 - LA2232 RDS MODULATOR

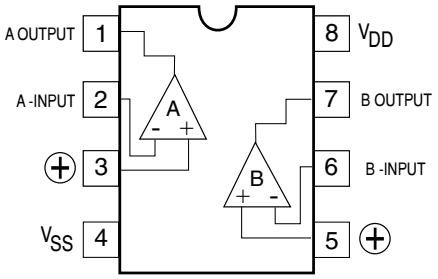


QD02, 32, 52, QM08 - NJM4560M OP-AMP
Q301, QE01-03, QC01-10, QE07-12, QC12, QL91, QS01-03, QW01, QS13, QS51-54, QF02, 03, QG55, 56 NJM4558DD - OP-AMP

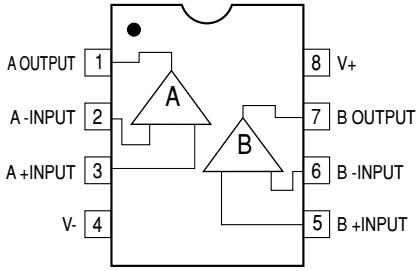




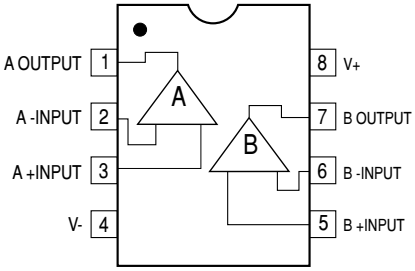
QM04 - MC14577C VIDEO AMP



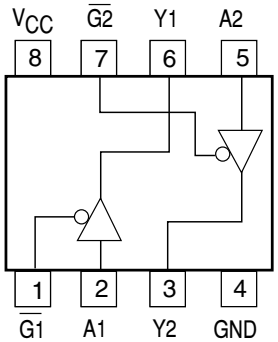
QK02, QK03 - NJM2115M OP-AMP



QW01 - NJM2115M DUAL OP-AMP

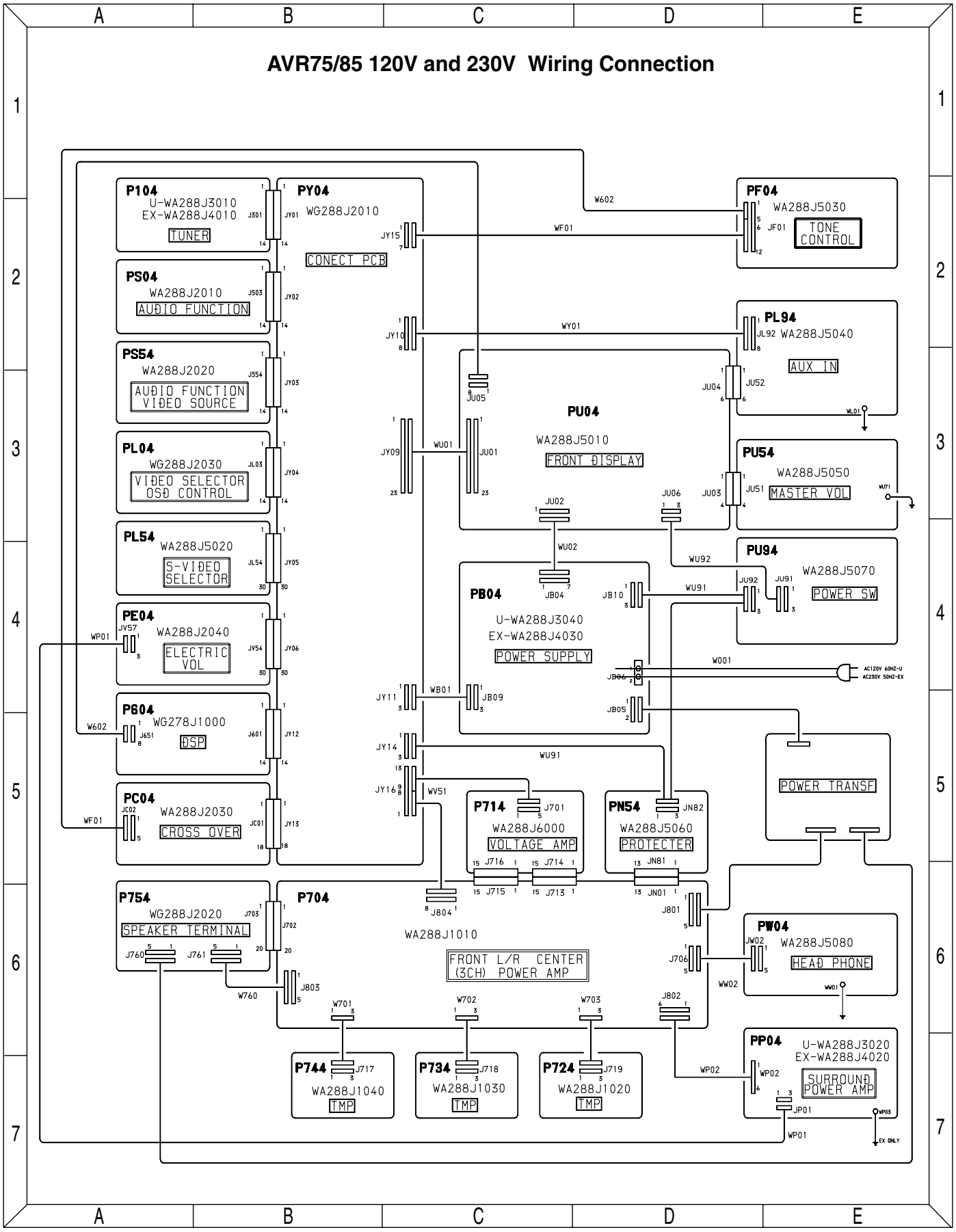


Q609 - TCW125FU DUAL BUS BUFFER

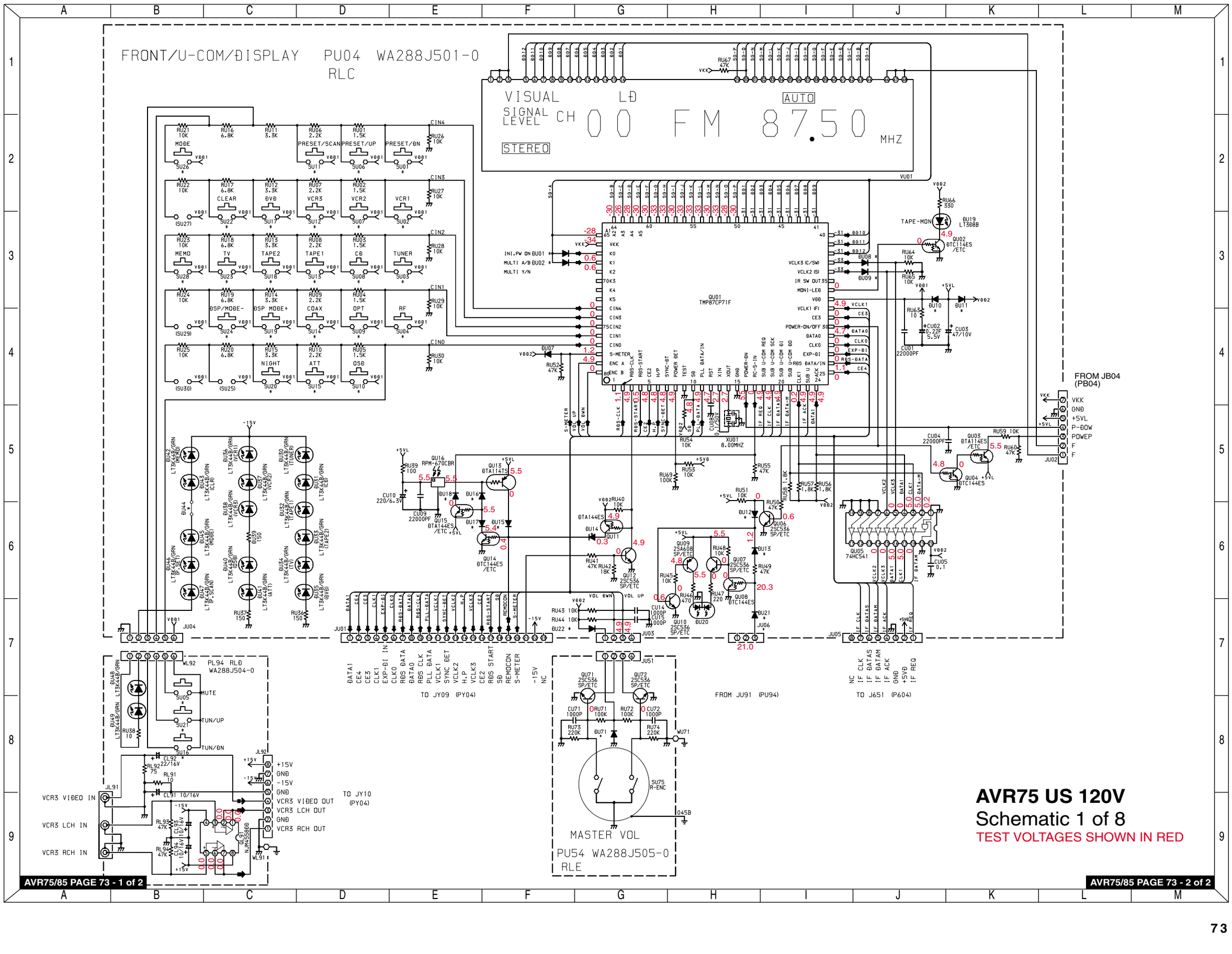


AVR75/85 WIRING DIAGRAM (120V & 230V)

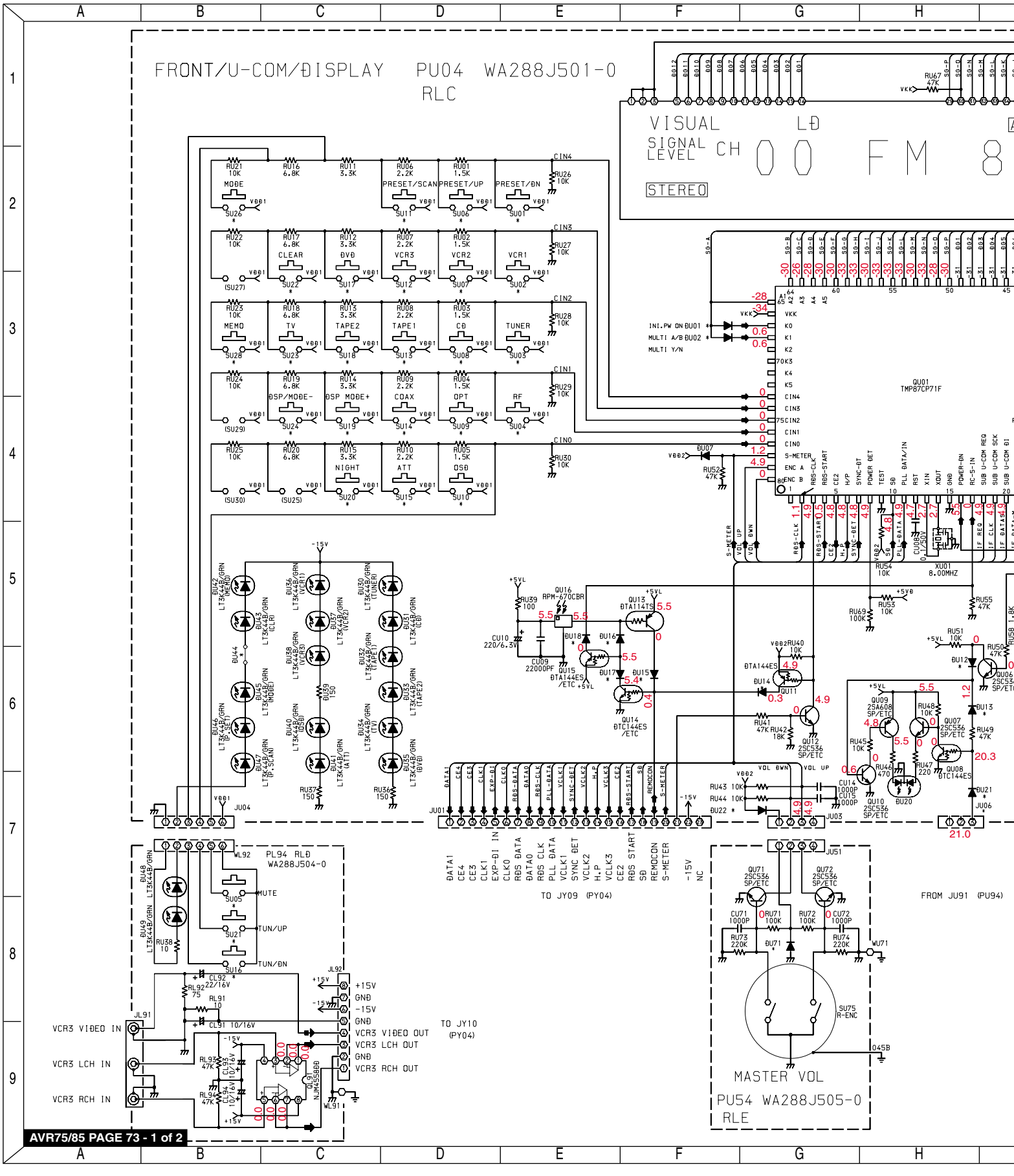
AVR75/85 120V and 230V Wiring Connection



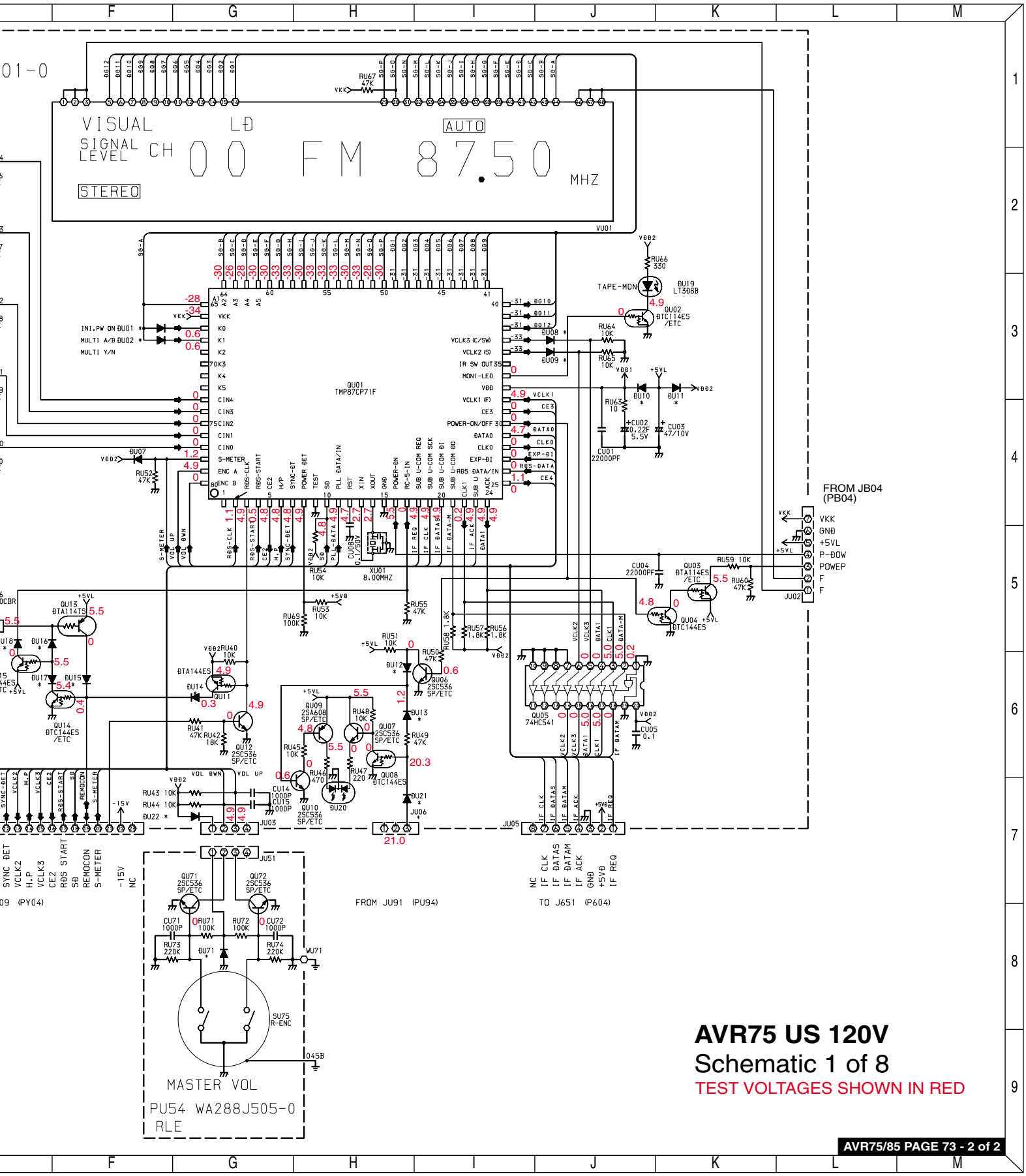
AVR75 (120V) SCHEMATIC DIAGRAM 1 of 8 (FRONT PCB PU04, MASTER VOLUME PCB PU54, AUX IN PL94)



AVR75 (120V) SCHEMATIC DIAGRAM 1 of 8 (FRONT PCB PU04, MASTER V



RAM 1 of 8 (FRONT PCB PU04, MASTER VOLUME PCB PU54, AUX IN PL94)

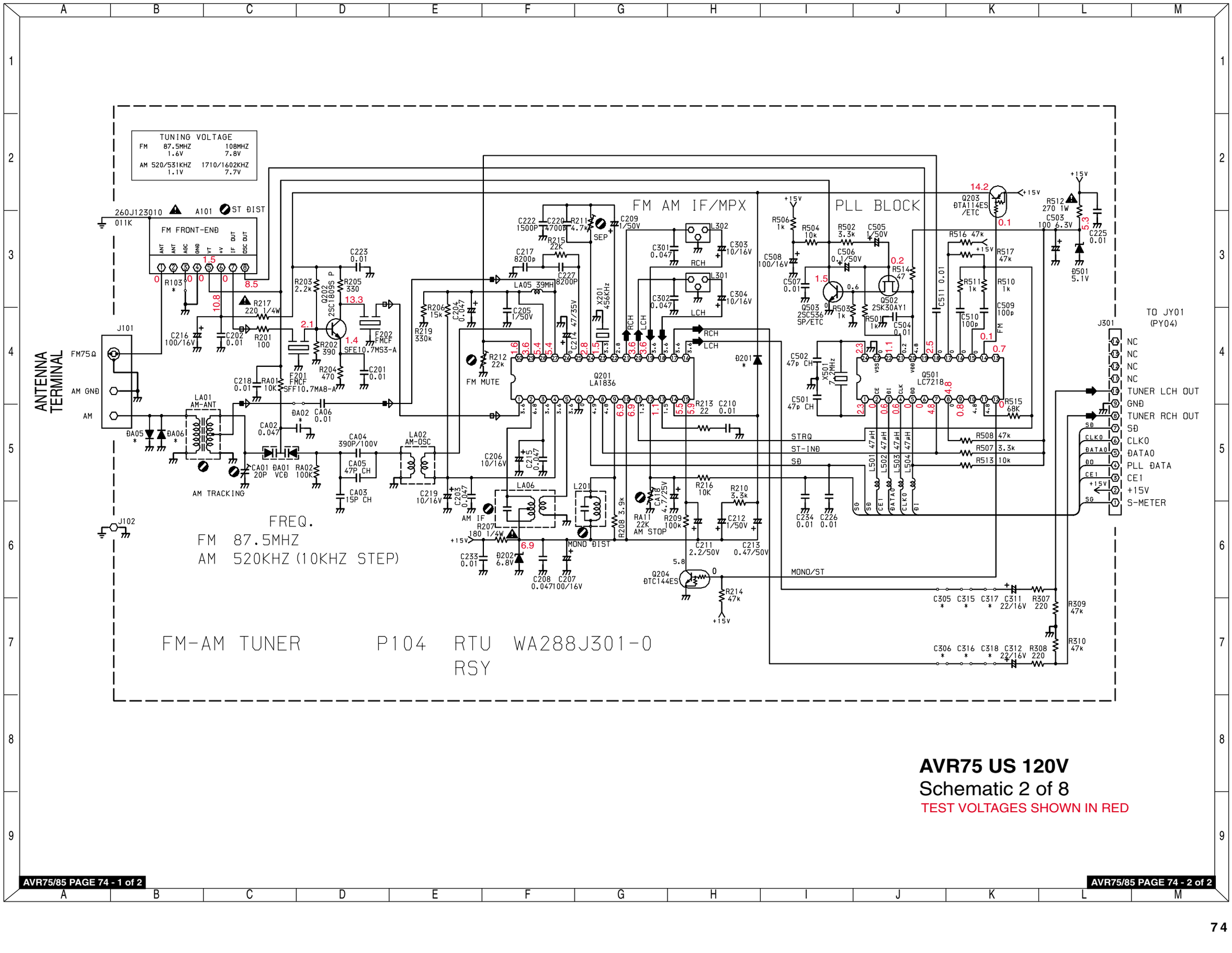


AVR75 US 120V

Schematic 1 of 8

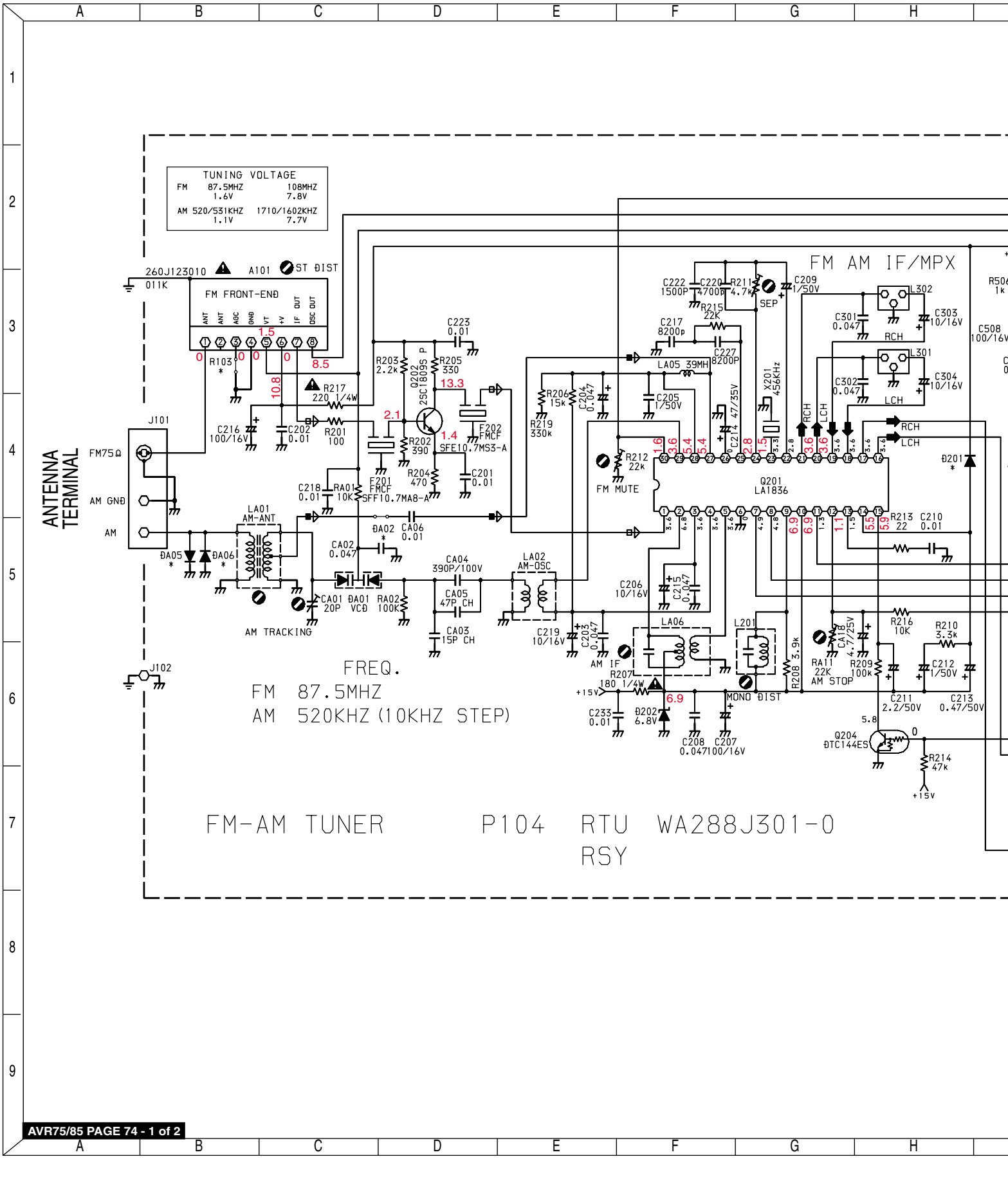
TEST VOLTAGES SHOWN IN RED

AVR75 (120V) SCHEMATIC DIAGRAM 2 of 8 (TUNER PCB P104)

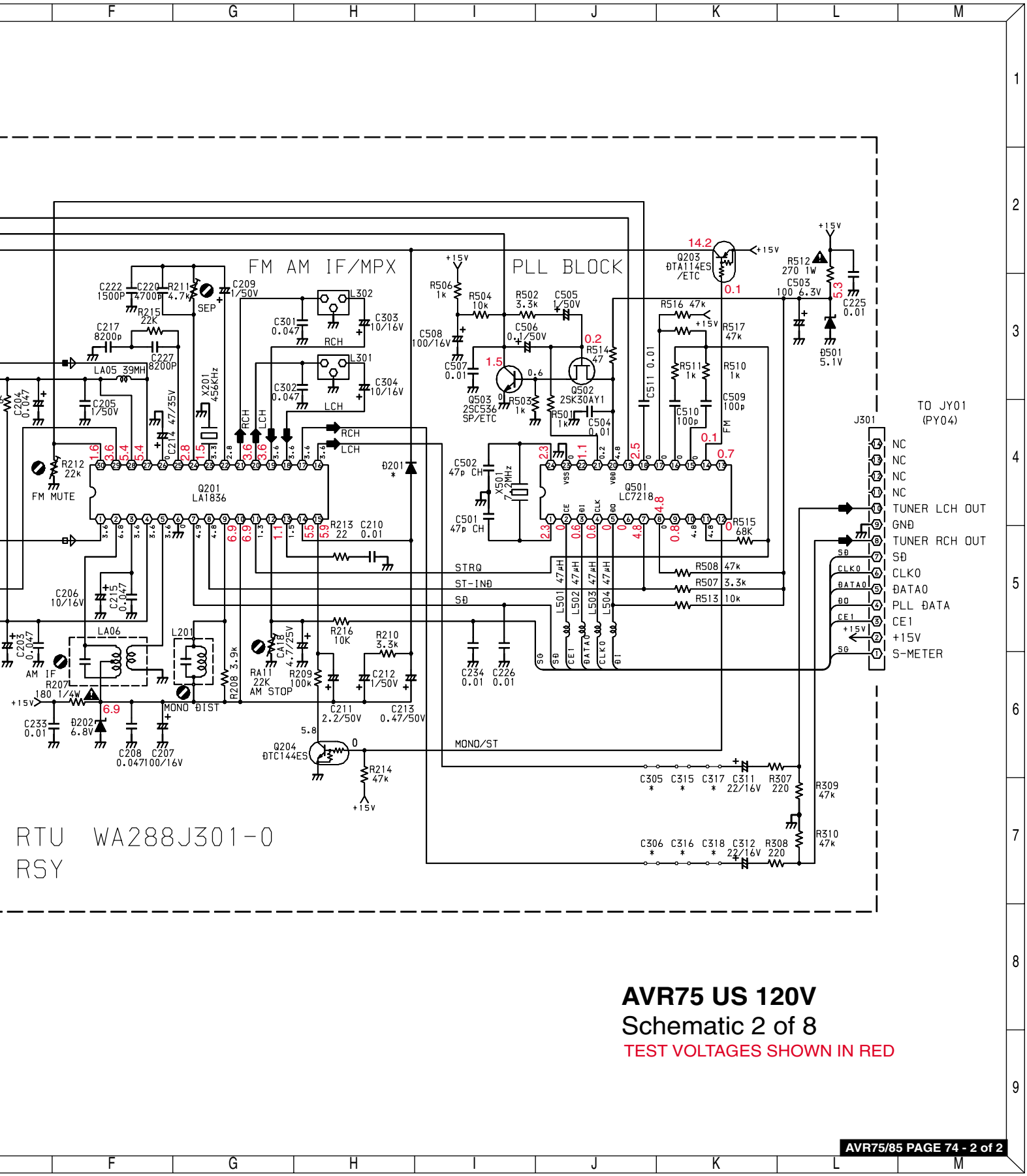


AVR75 US 120V
Schematic 2 of 8
TEST VOLTAGES SHOWN IN RED

AVR75 (120V) SCHEMATIC DIAGRAM 2 of 8 (TUNER



0V) SCHEMATIC DIAGRAM 2 of 8 (TUNER PCB P104)

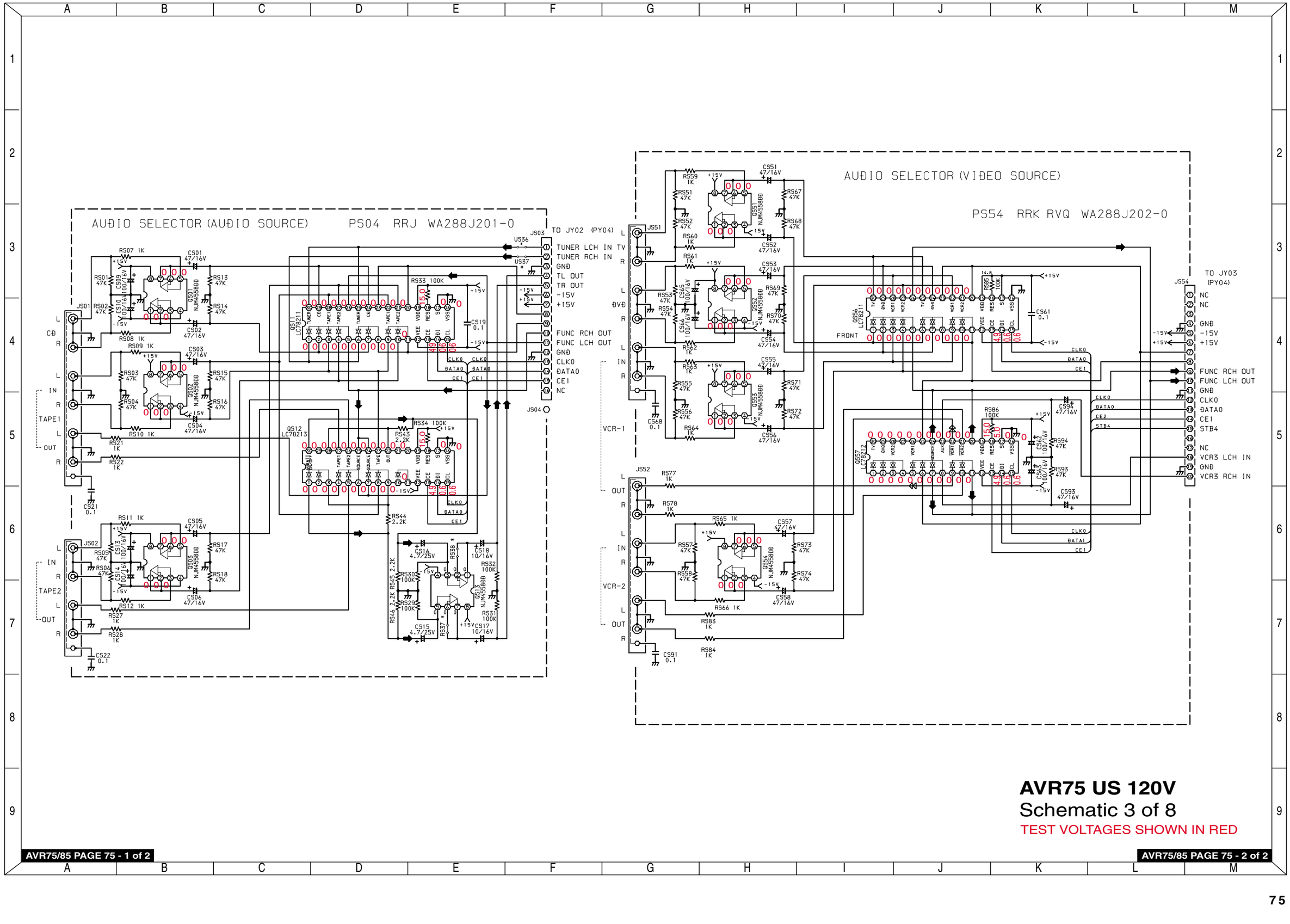


AVR75 US 120V

Schematic 2 of 8

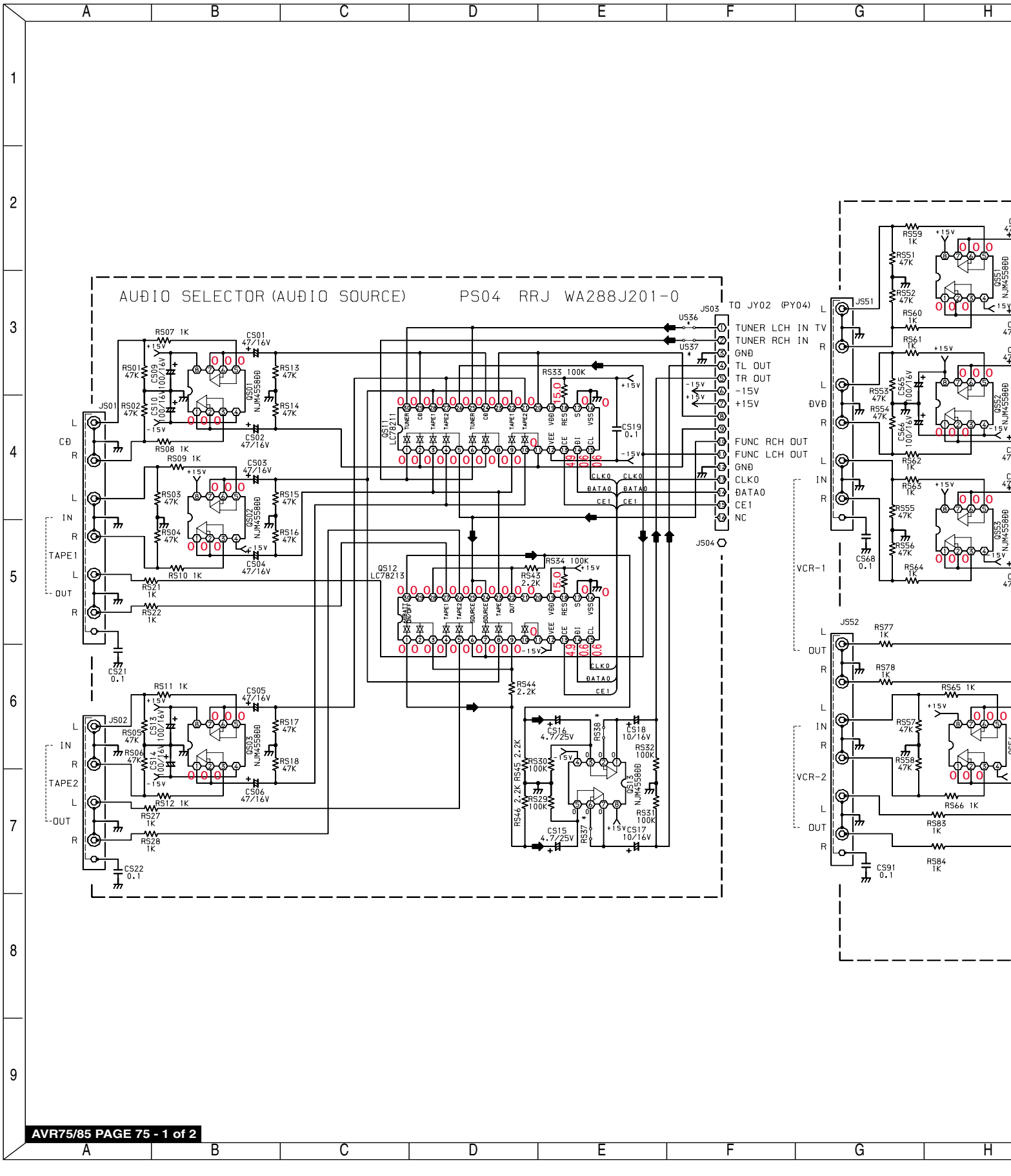
TEST VOLTAGES SHOWN IN RED

AVR75 (120V) SCHEMATIC DIAGRAM 3 of 8 (AUDIO SELECTOR PCB PS04, AUDIO/VIDEO PCB PS54)

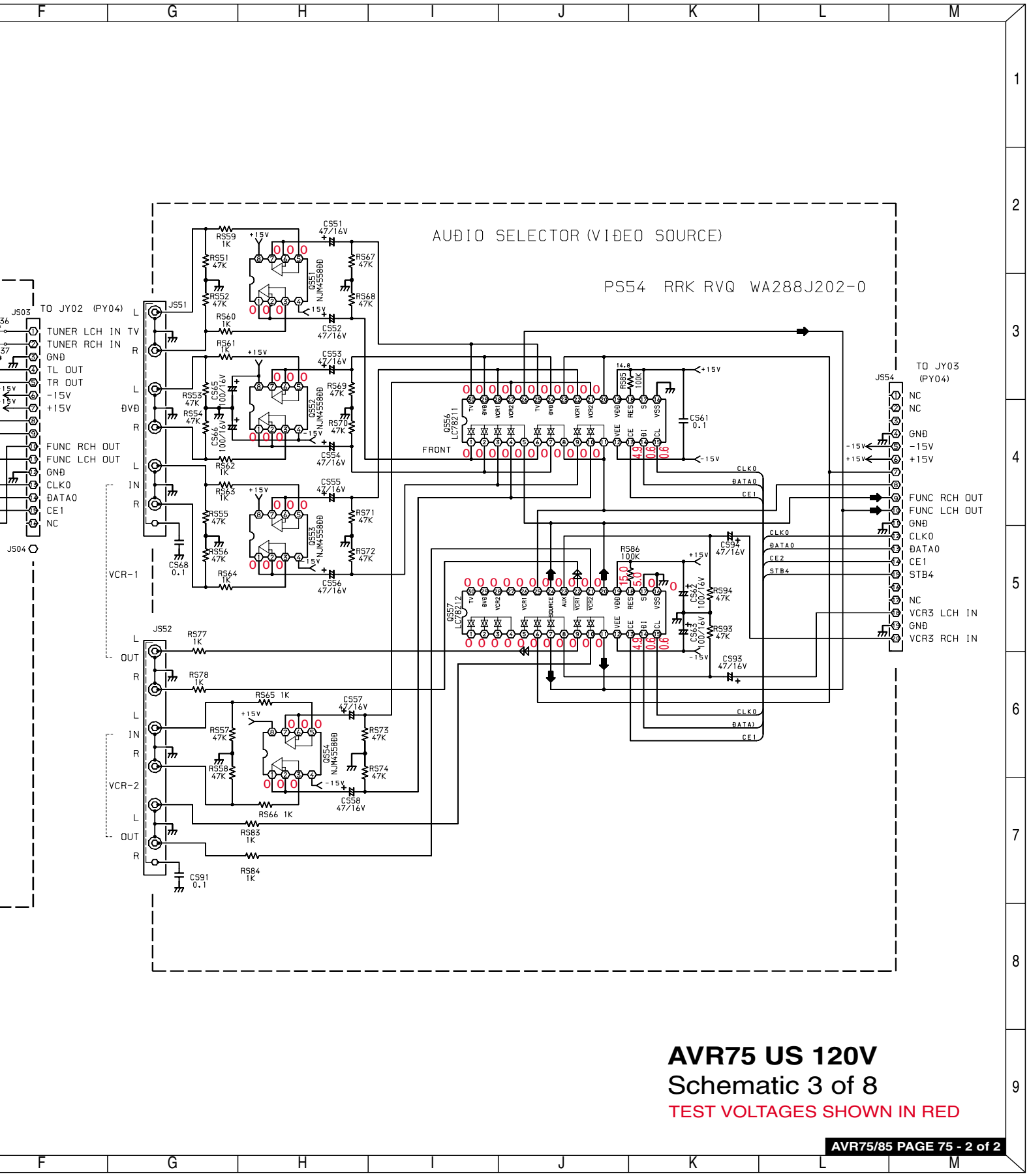


AVR75 US 120V
Schematic 3 of 8
TEST VOLTAGES SHOWN IN RED

AVR75 (120V) SCHEMATIC DIAGRAM 3 of 8 (AUDIO SELECTOR P



AM 3 of 8 (AUDIO SELECTOR PCB PS04, AUDIO/VIDEO PCB PS54)



AVR75 US 120V
Schematic 3 of 8
TEST VOLTAGES SHOWN IN RED

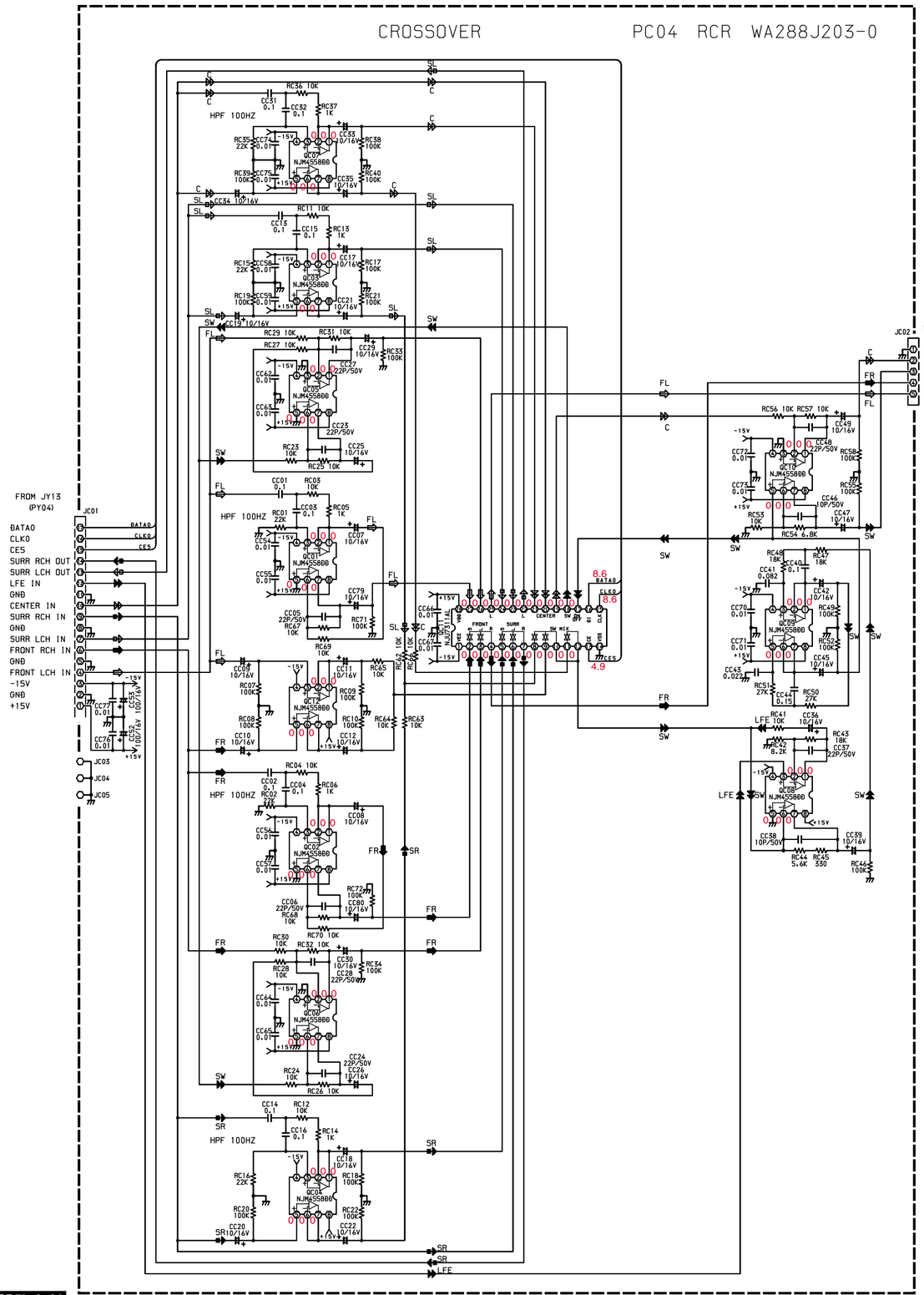
AVR75/85 PAGE 76 - 1 of 4

AVR75 US 120V

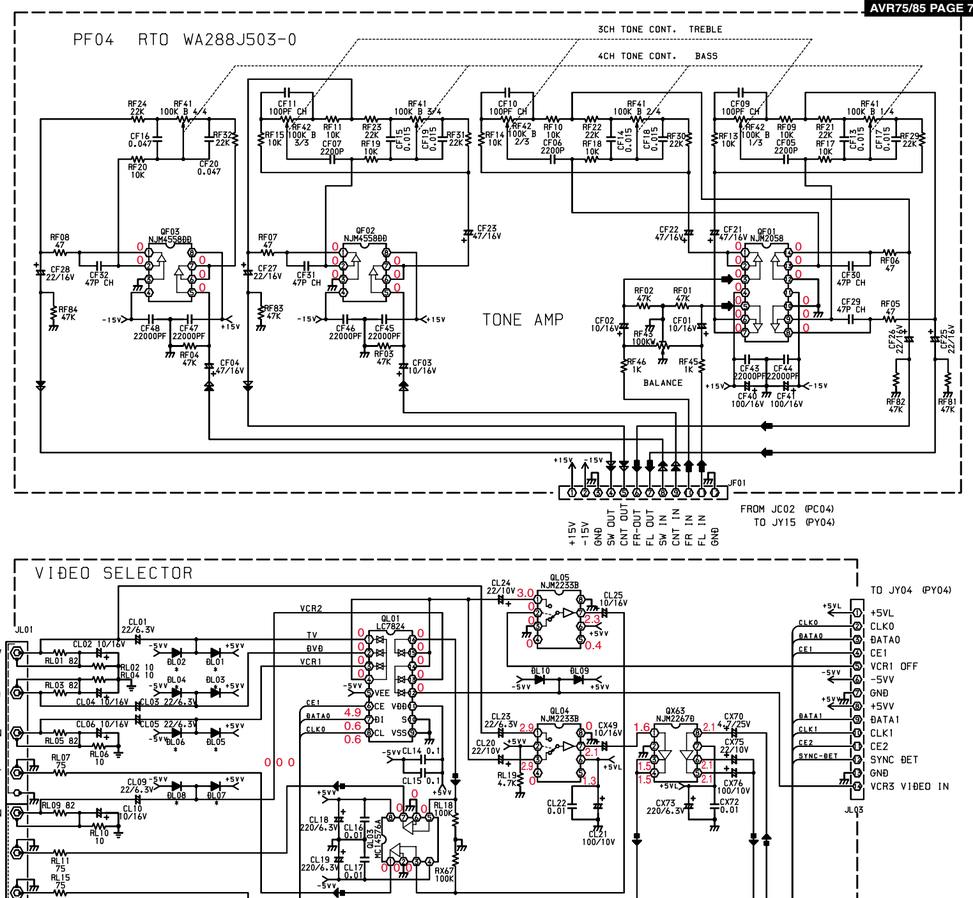
Schematic 4 of 8

TEST VOLTAGES SHOWN IN RED

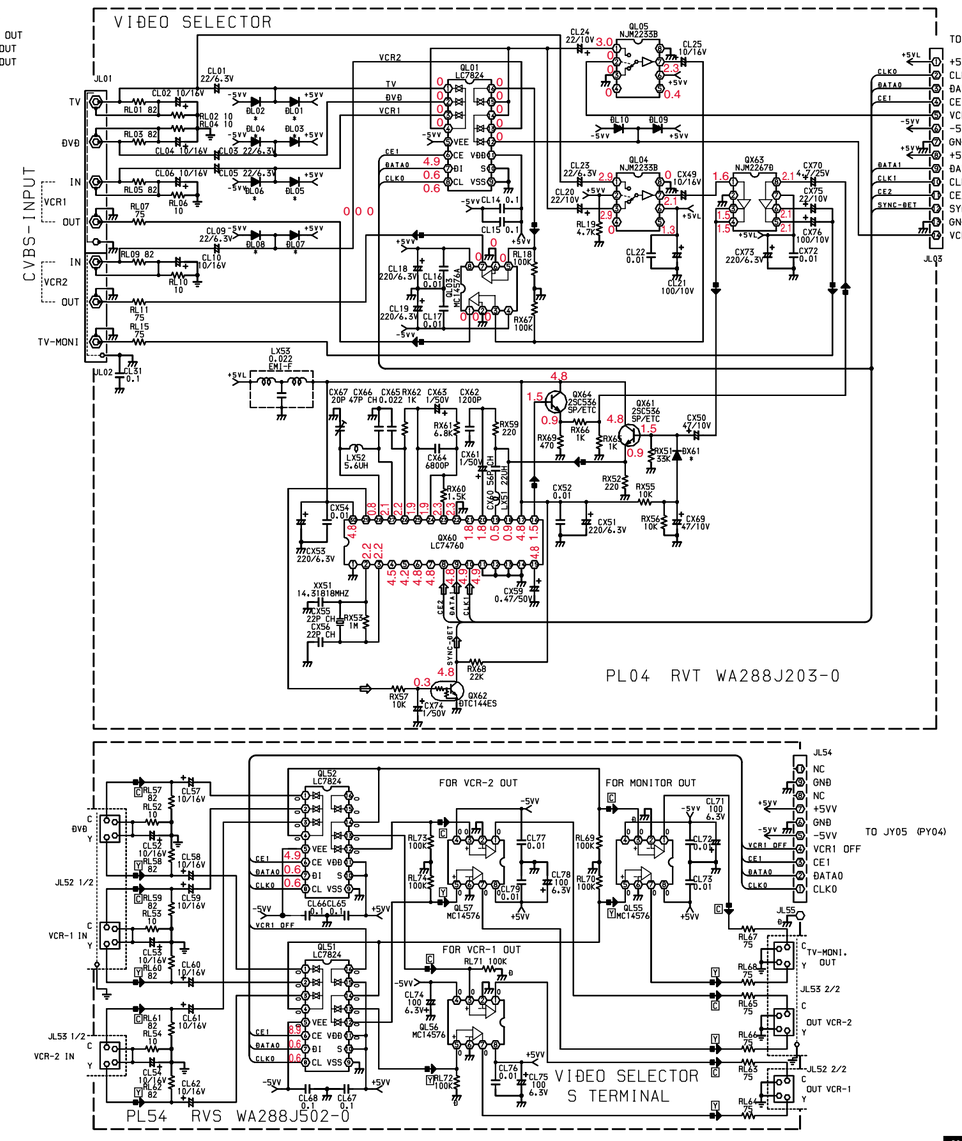
CROSSOVER PC04 RCR WA288J203-0



PF04 RTO WA288J503-0



VIÐEO SELECTOR



AVR75/85 PAGE 76 - 2 of 4
AVR75/85 PAGE 76 - 3 of 4
AVR75/85 PAGE 76 - 4 of 4

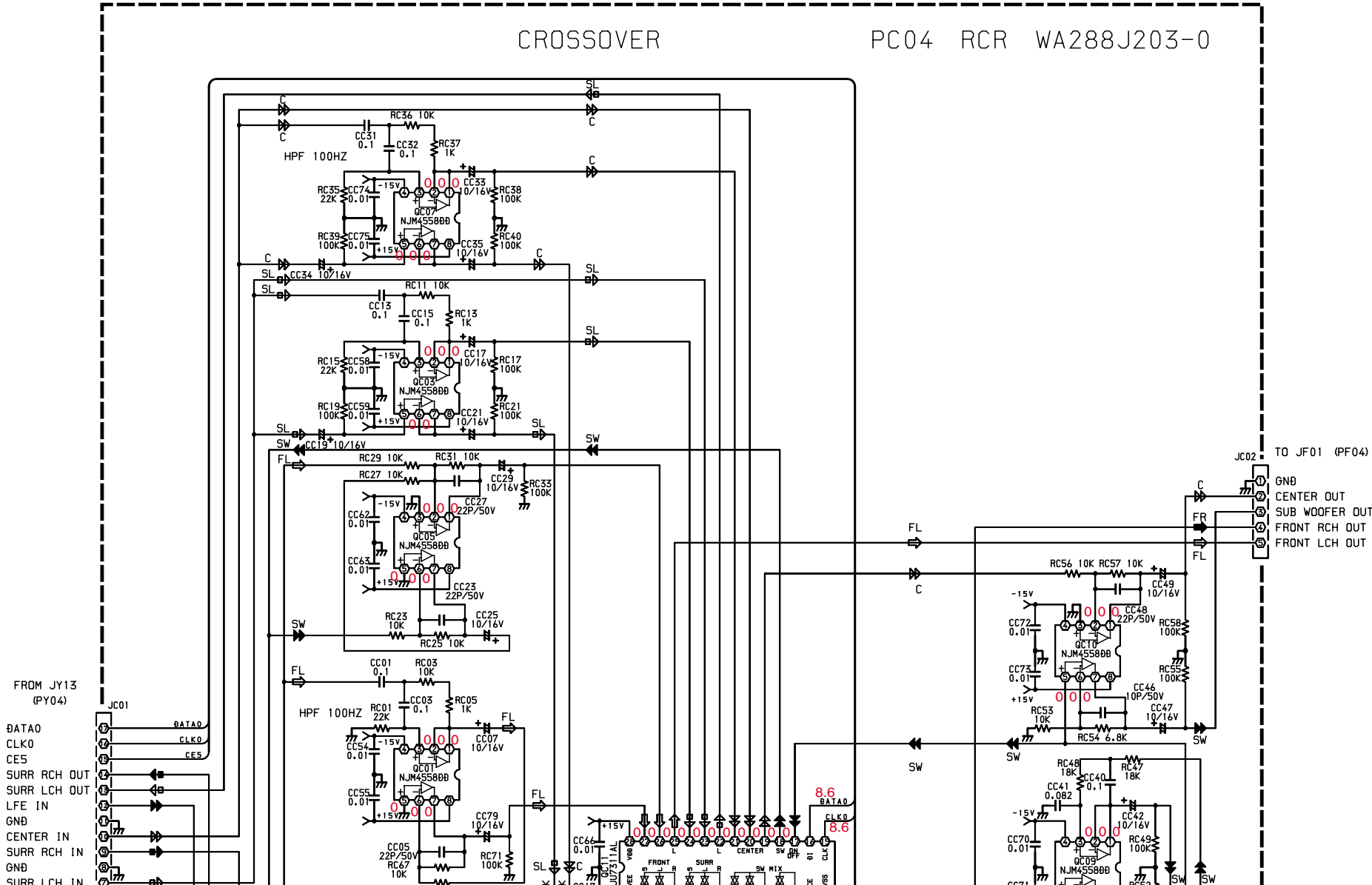
AVR75 (120V) SCHEMATIC DIAGRAM 4 of 8 (AC-3 CROSSOVER PCB PC04, TONE CON

AVR75/85 PAGE 76 - 1 of 4

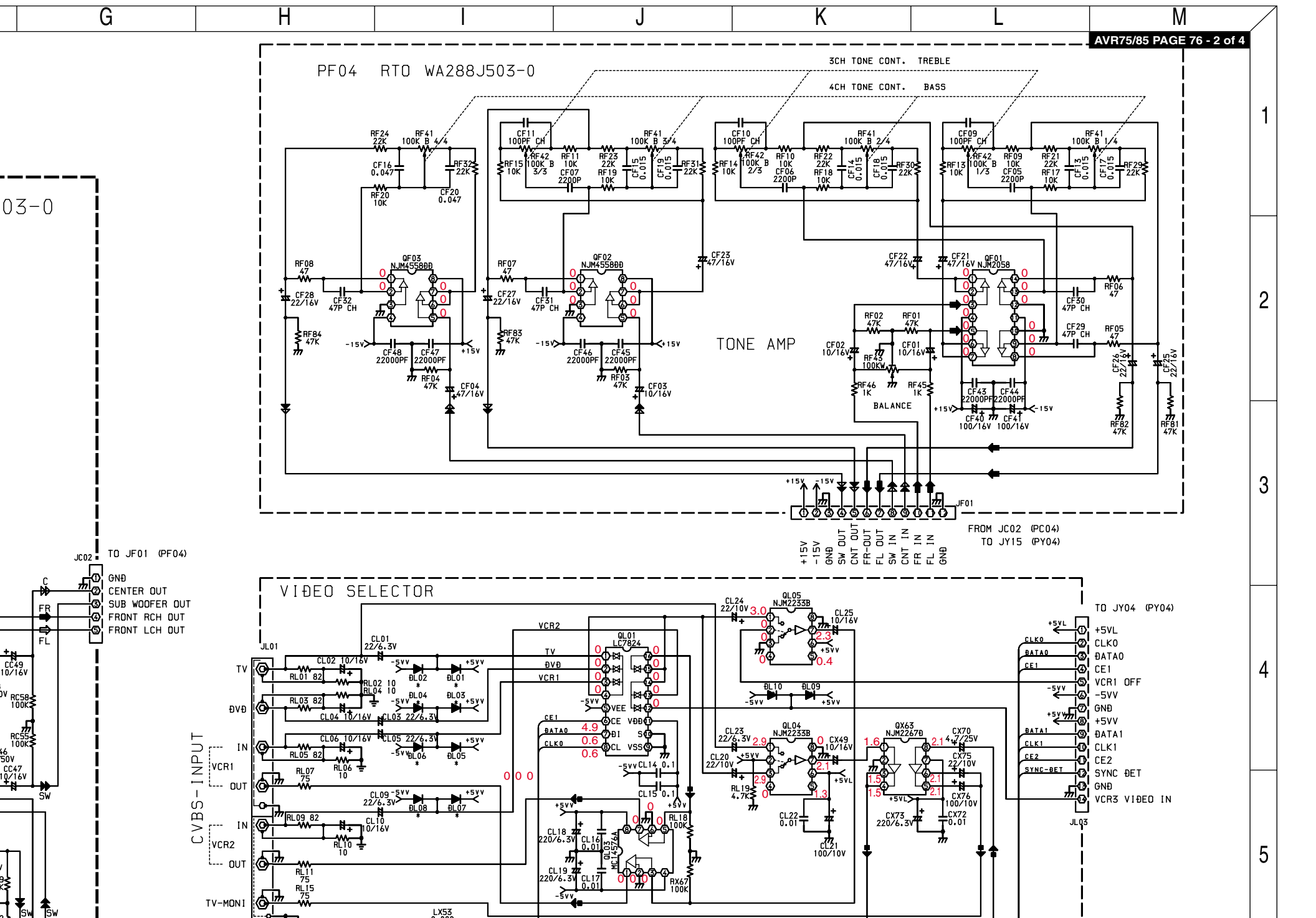
AVR75 US 120V

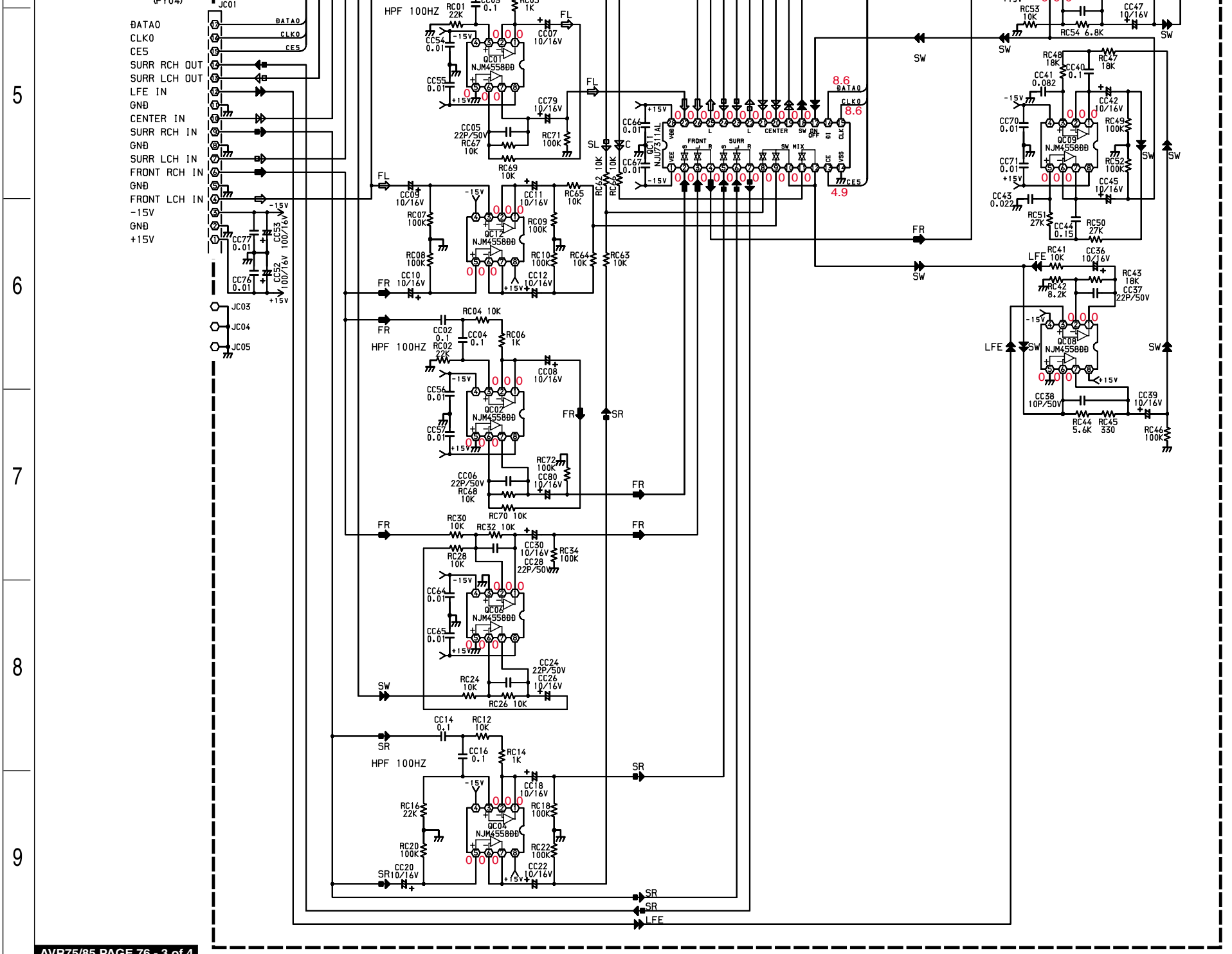
Schematic 4 of 8

TEST VOLTAGES SHOWN IN RED

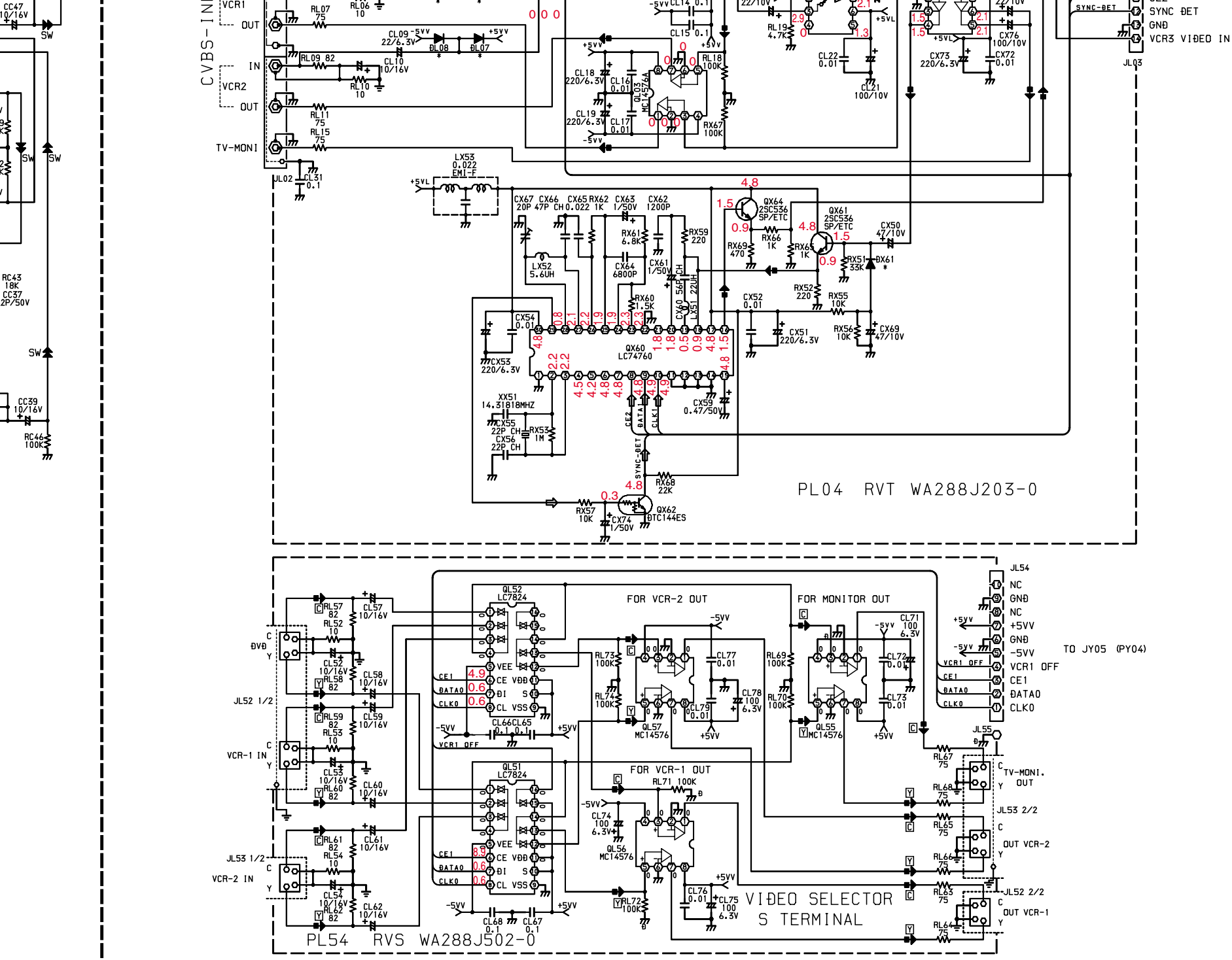


B PC04, TONE CONTROL PCB PF04, VIDEO SELECTOR PCB PL04, S-VIDEO PCB PL54)





AVR75/85 PAGE 76 - 3 of 4


CVBS-IN
VCR1
OUT
IN
VCR2
OUT
TV-MONI
JL02
JL03
SYNC ÐET
GNÐ
VCR3 VIÐEO IN
PL04 RVT WA288J203-0
JL54
NC
GNÐ
NC
+5VV
GNÐ
-5VV
VCR1 OFF
CE1
ÐATA0
CLK0
TO JY05 (PY04)
FOR VCR-2 OUT
FOR MONITOR OUT
FOR VCR-1 OUT
JL52 1/2
JL53 1/2
VCR-1 IN
VCR-2 IN
TV-MONI. OUT
OUT VCR-2
OUT VCR-1
VIÐEO SELECTOR
S TERMINAL
PL54 RVS WA288J502-0

AVR75 (120V) SCHEMATIC DIAGRAM 5 of 8 (CONNECT PCB PY04)

AVR75 US 120V
Schematic 5 of 8
TEST VOLTAGES ARE SHOWN IN RED

BACKUP SUPPLY FROM JB09 (PB04)
FRONT/U-COM/DISPLAY FROM JU01 (PU04)
CROSS OVER TO JC01 (PC04)
DSP FROM J601 (P604)

PY04 RRK RTG WG288J201-0

MUTE BUFFER

PORT EXP.

FROM J301 (P104): TUNER S-METER, +15V, CE1, PLL DATA, DATA0, CLK0, SD, TUNER RCH IN, GND, TUNER LCH IN, RDS START, RDS DATA, RDS CLK, RDS RST

AUDIO SELECTOR: TUNER LCH OUT, TUNER RCH OUT, GND, TL IN, TR IN, -15V, +15V

FROM JS03 (PS04): FUNC RCH OUT, FUNC LCH OUT, GND, CLK0, DATA0, CE1

FROM JL92 (PL94) VCR3 INPUT: +15V, GND, -15V, GND, VCR3-CVBS, VCR3 VIDEO IN, VCR3-L, VCR3 LCH IN, GND, VCR3-R, VCR3 RCH IN

FROM JF01 (PF04) TONE AMP: +15V, -15V, GND, FRONT-L, FRONT LCH IN, SW, SW IN, FRONT-R, FRONT RCH IN, CENTER, CENTER IN

FROM J804 (P704) POWER AMP/SUPPLY: +15V, GND, -15V, GND, +5VV, -5VV, +5VD, -15V, +15V, CENTER OUT, GND, FRONT RCH OUT, GND, FRONT LCH OUT

TO J701 (P714) VOLTAGE AMP

FROM JS54 (PS54) AUDIO SELECTOR (VIDEO SOURCE): NC, NC, GND, -15V, +15V, FUNC RCH IN, FUNC LCH IN, GND, CLK0, DATA0, CE1, STB4, NC, VCR3 LCH OUT, GND, VCR3 RCH OUT

TO JL03 (PL04) VIDEO SELECTOR: +5VL, CLK0, DATA0, CE1, VCR1 OFF, -5VV, GND, +5VV, DATA1, CLK1, CE2, SYNC DET, GND, VCR3 VIDEO OUT

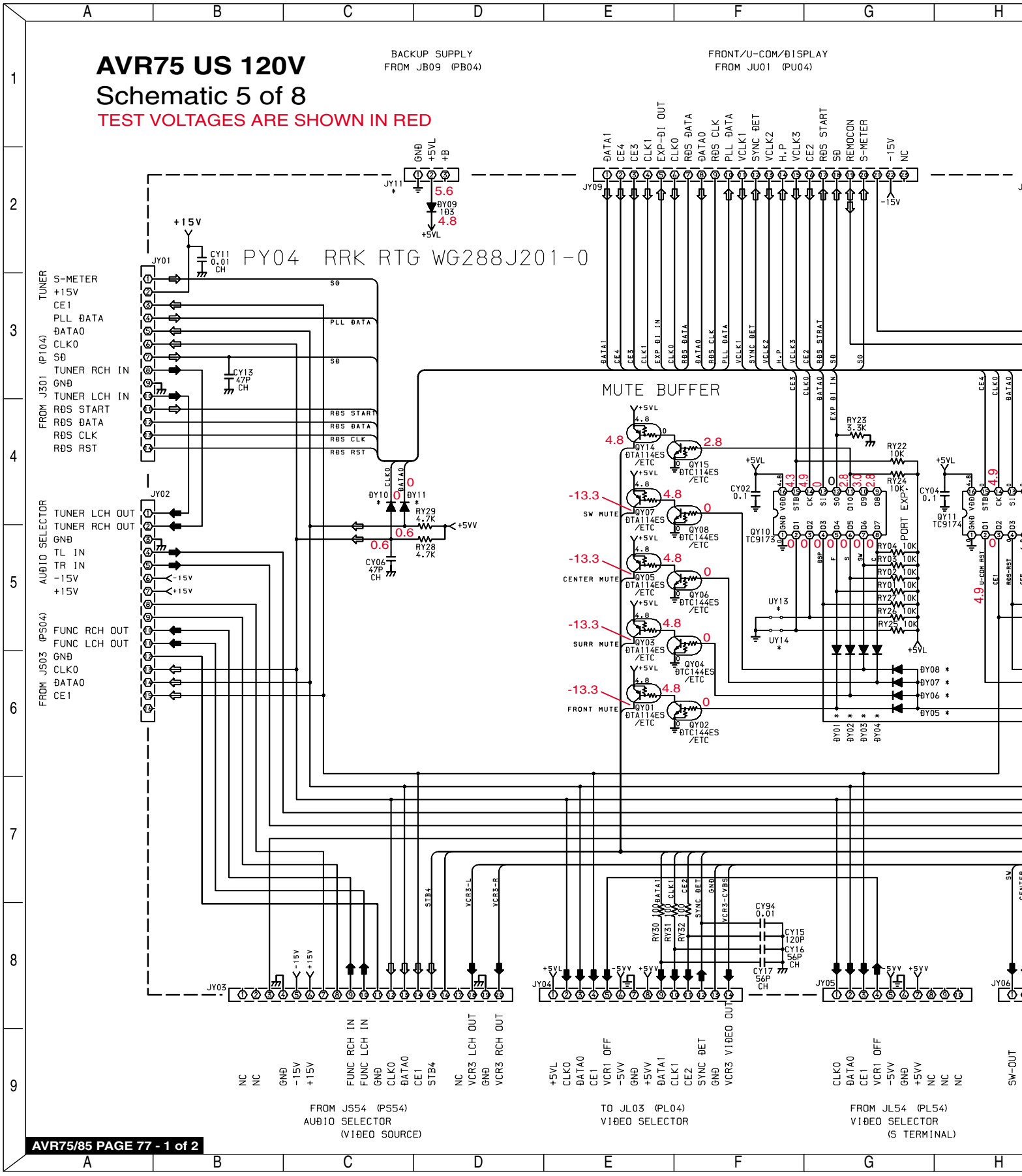
FROM JL54 (PL54) VIDEO SELECTOR (S TERMINAL): CLK0, DATA0, CE1, VCR1 OFF, -5VV, GND, +5VV, NC, NC, NC

TO JV54 (PE04) ELECTRIC VOLUME: SW-OUT, CENTER OUT, SURR RCH OUT, SURR LCH OUT, FRONT RCH OUT, FRONT LCH OUT, GND, GND, -15V, +15V, STB3, VCLK3, STB2, VCLK2, DATA0, STB1, VCLK1, RELAY, FRONT MUTE, SURR MUTE, CENTER MUTE, SW MUTE, +5VL, +5VL, CENTER IN, FRONT RCH IN, FRONT LCH IN, REMOCON, NC

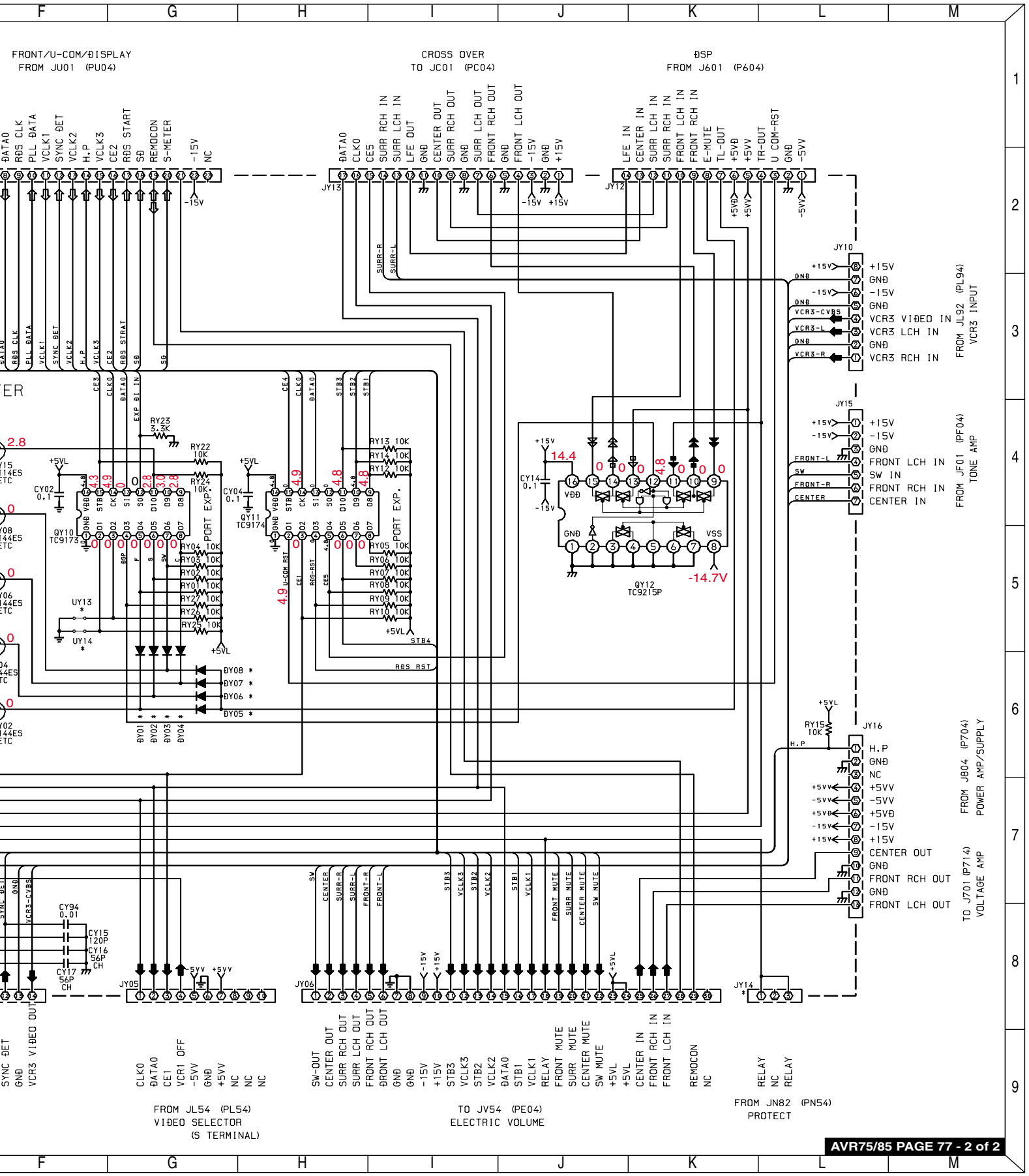
FROM JN82 (PN54) PROTECT: RELAY, NC, RELAY

AVR75/85 PAGE 77 - 1 of 2
AVR75/85 PAGE 77 - 2 of 2

AVR75 (120V) SCHEMATIC DIAGRAM 5 of 8 (CO



HEMATIC DIAGRAM 5 of 8 (CONNECT PCB PY04)



AVR75 (120V) SCHEMATIC DIAGRAM 6 of 8 (VOLTAGE AMP PCB - P714, MAIN PCB - P704, SURROUND AMP PCB - PP04, SPEAKER TERMINAL PCB - P754, HEADPHONE PCB - PW04, SPEAKER PROTECT PCB - PN54, STANDBY PCB - PB04, POWER SWITCH PCB - PU94)

AVR75/85 PAGE 78 - 1 of 4

AVR75/85 PAGE 78 - 2 of 4

P714 RMA WA288J601-0
RHP VOLTAGE AMP

HEAD PHONE AMP

FRONT-L POWER AMP

FRONT-R POWER AMP

CENTER POWER AMP

P704 RMA WA288J101-0
RPS MAIN POWER AMP / SUPPLY
RMC

TEST POINT
IDLING

FRONT
CENTER
SURROUND

PP04 RMB
WA288J302-0

POWER AMP

SURROUND POWER AMP

FROM JV57 (PE04)
SURR LCH-IN
GND
SURR RCH-IN

TO J802 (P704)
SURR-L
SURR-R
PROTEC. +44.3V
GND
-44.1V

P754 WG288J202-0
RSP SPK TERMINAL

FRONT
SURROUND
CENTER

FROM TRANS-

16.2V
8.0V
0V
8.0V
16.2V
TO J803 (P704)

PW04 RHP
WA288J508-0

HEADPHONE JACK

TO JU92 (PU94) POWER SW.

PN54 RMC WA288J506-0

RELAY DRIVER

PROTECTOR

FROM JY16 (PY04)
FL-IN
GND
FR-IN
GND
CENT-IN

FOR U VERSION

PB04 RBU WA288J304-0

(PU04) TO JU02
F -25.0
F -25.0
POWER
P-DOWN
+SVL
GND
VKK -33.8

TO JN82 (PN54)

PU94 RPP
WA288J507-0
POWER SW

TO JU06 (PU04)

AC120V 60HZ
UNSWITCHED
SWITCHED
AC.OUTLET

BACK UP SUPPLY

+B 19.9

TO JY11 (PY04)
GND
+SVL

TO J801
TO J760

AC 17.0
AC 8.1
0.0
AC 8.1
AC 18.0
FROM J761 (P754)

H.P.ON/OFF
GND
+5V
+5V
-5V
-5V
-15V
+15V

TO JY16 (PY04)

AC 34.0V
AC 33.1V
0V
AC 33.1V
AC 34.0V
FROM TRANSF

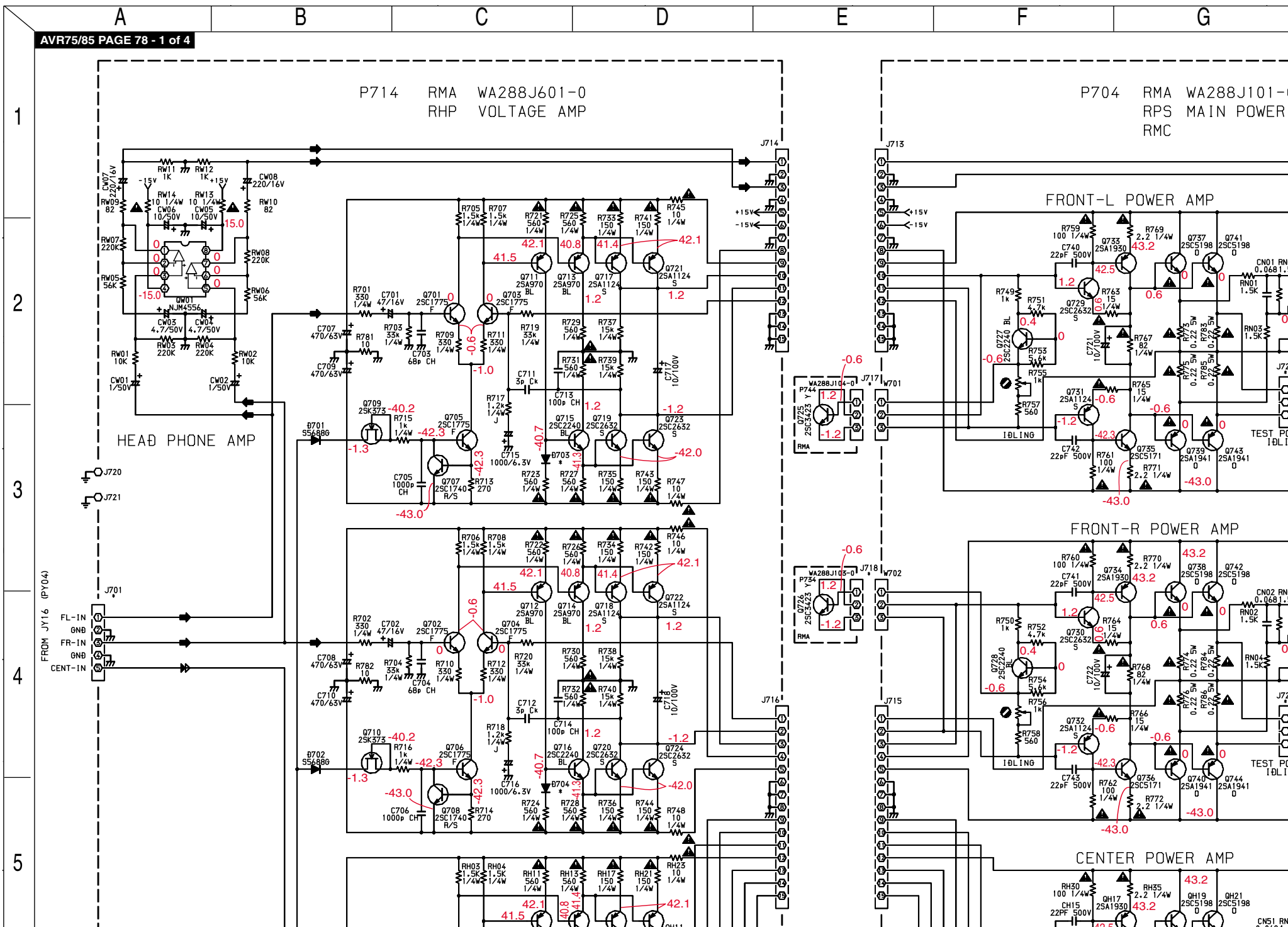
SURR-L
SURR-R
PROTEC.
+44.3V
GND
-44.1V
FROM WP02 (PP04)

AVR75 US 120V
Schematic 6 of 8
TEST VOLTAGES SHOWN IN RED

AVR75/85 PAGE 78 - 3 of 4

AVR75/85 PAGE 78 - 4 of 4

AVR75 (120V) SCHEMATIC DIAGRAM 6 of 8 (VOLTAGE AMP PCB - P714
SPEAKER TERMINAL PCB - P754, HEADPHONE PCB - PW04, SPEAKER PROTECT PC



TAGE AMP PCB - P714, MAIN PCB - P704, SURROUND AMP PCB - PP04, SPEAKER PROTECT PCB - PN54, STANDBY PCB - PB04, POWER SWITCH PCB - PU94)

704 RMA WA288J101-0
RPS MAIN POWER AMP / SUPPLY
RMC

-L POWER AMP

ONT-R POWER AMP

NTER POWER AMP

FRONT
CENTER
SURROUND

PP04 RMB
WA288J302-0

POWER AMP

FROM JV57 (PE04)
SURR LCH-IN
GND
SURR RCH-IN

SURROUND POWER AMP

TO J802 (P704)
SURR-L
SURR-R
PROTEC.
+44.3V
GND
-44.1V

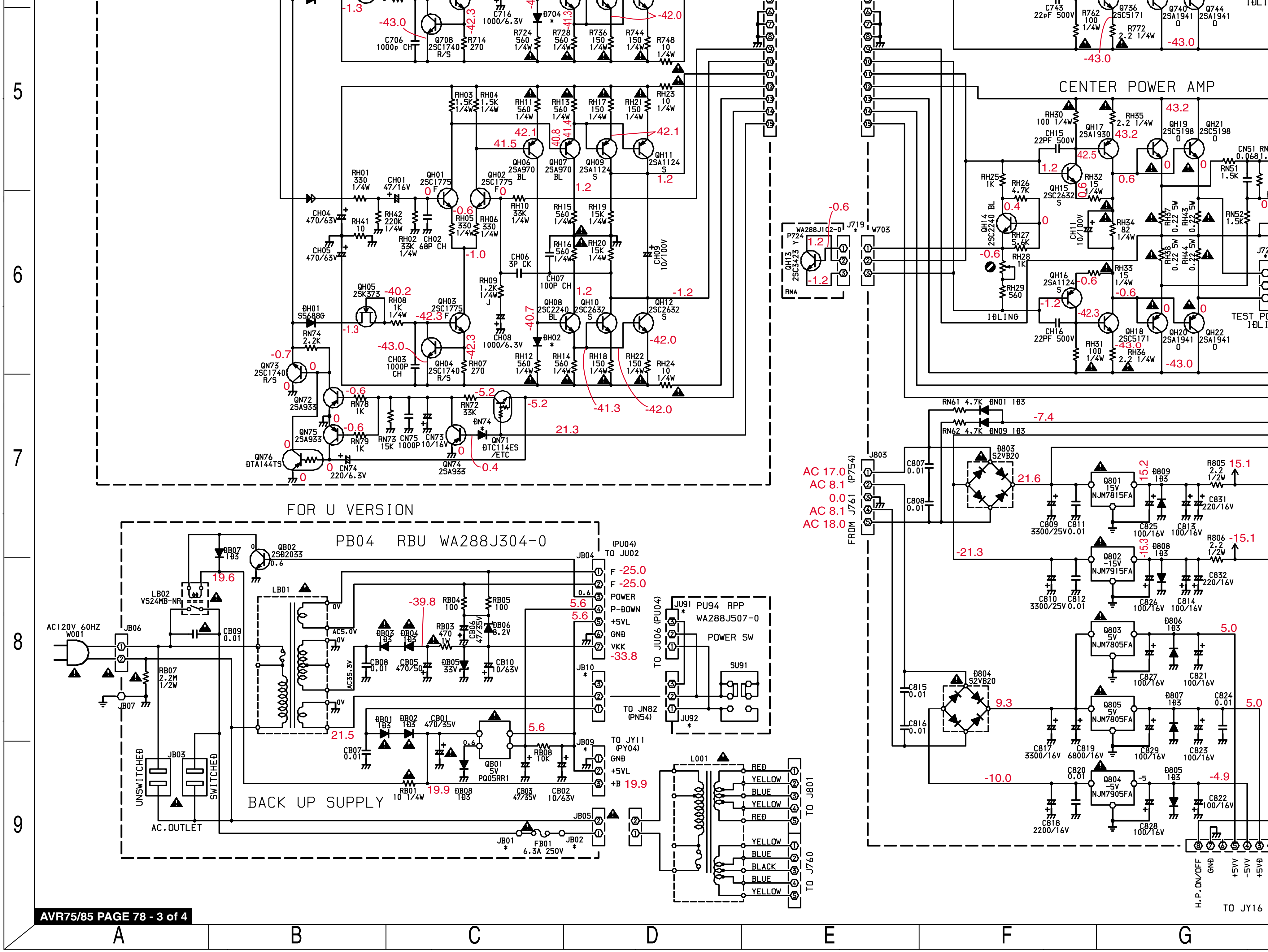
TEST POINT IDLING

P754 WG288J202-0
RSP SPK TERMINAL

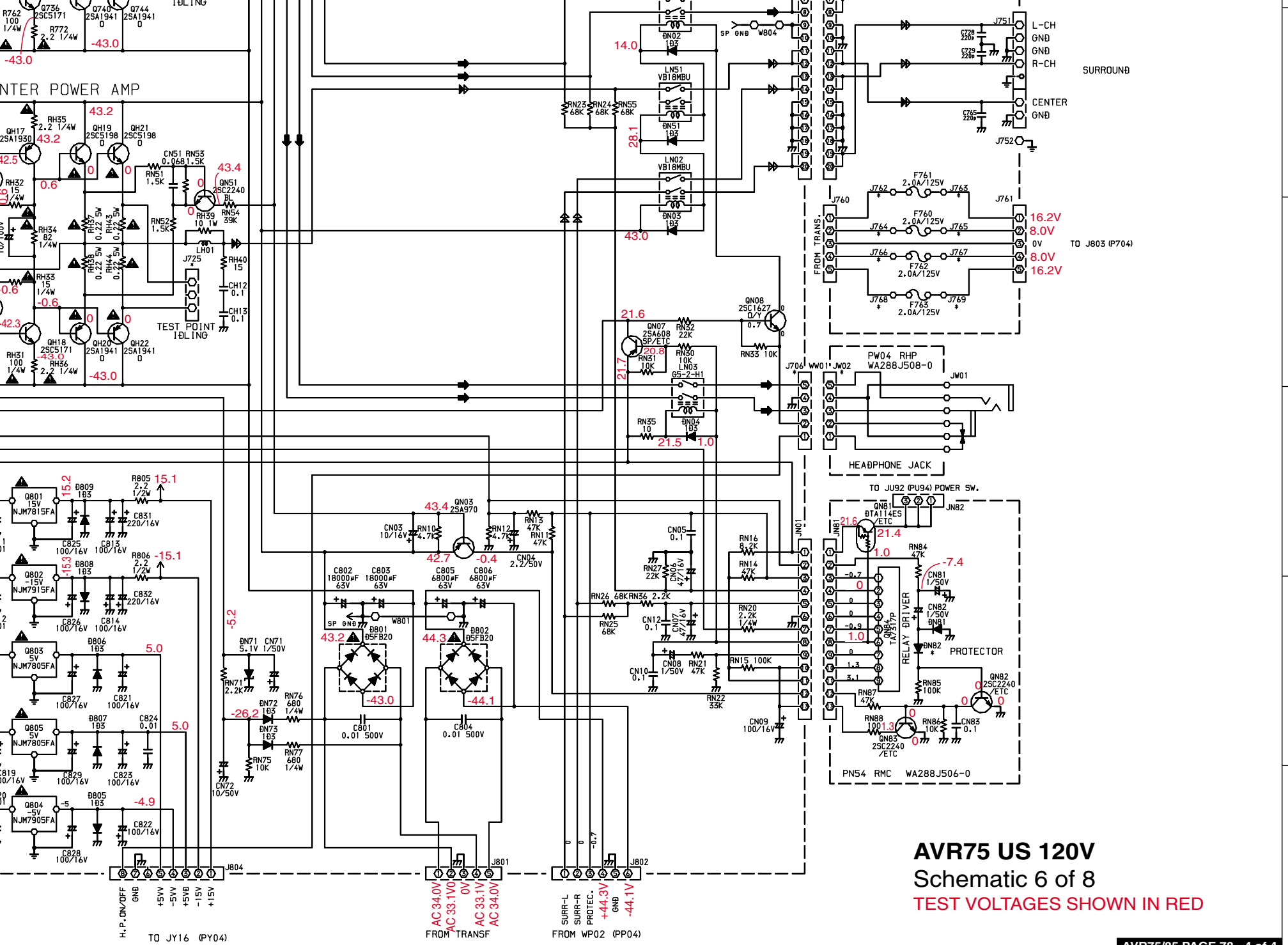
FRONT
L-CH
GND
GND
R-CH

SURROUND
L-CH
GND
GND
R-CH

CENTER
GND



CENTER POWER AMP
FOR U VERSION
PB04 RBU WA288J304-0
PU94 RPP
WA288J507-0
POWER SW
BACK UP SUPPLY
AC.OUTLET
UNSWITCHED
SWITCHED
AC120V 60HZ
TEST POINT
IDLING
TO JY16
TO J801
TO J760
TO JN82 (PN54)
TO JY11 (PY04)
TO JU02
FROM J761 (P754)

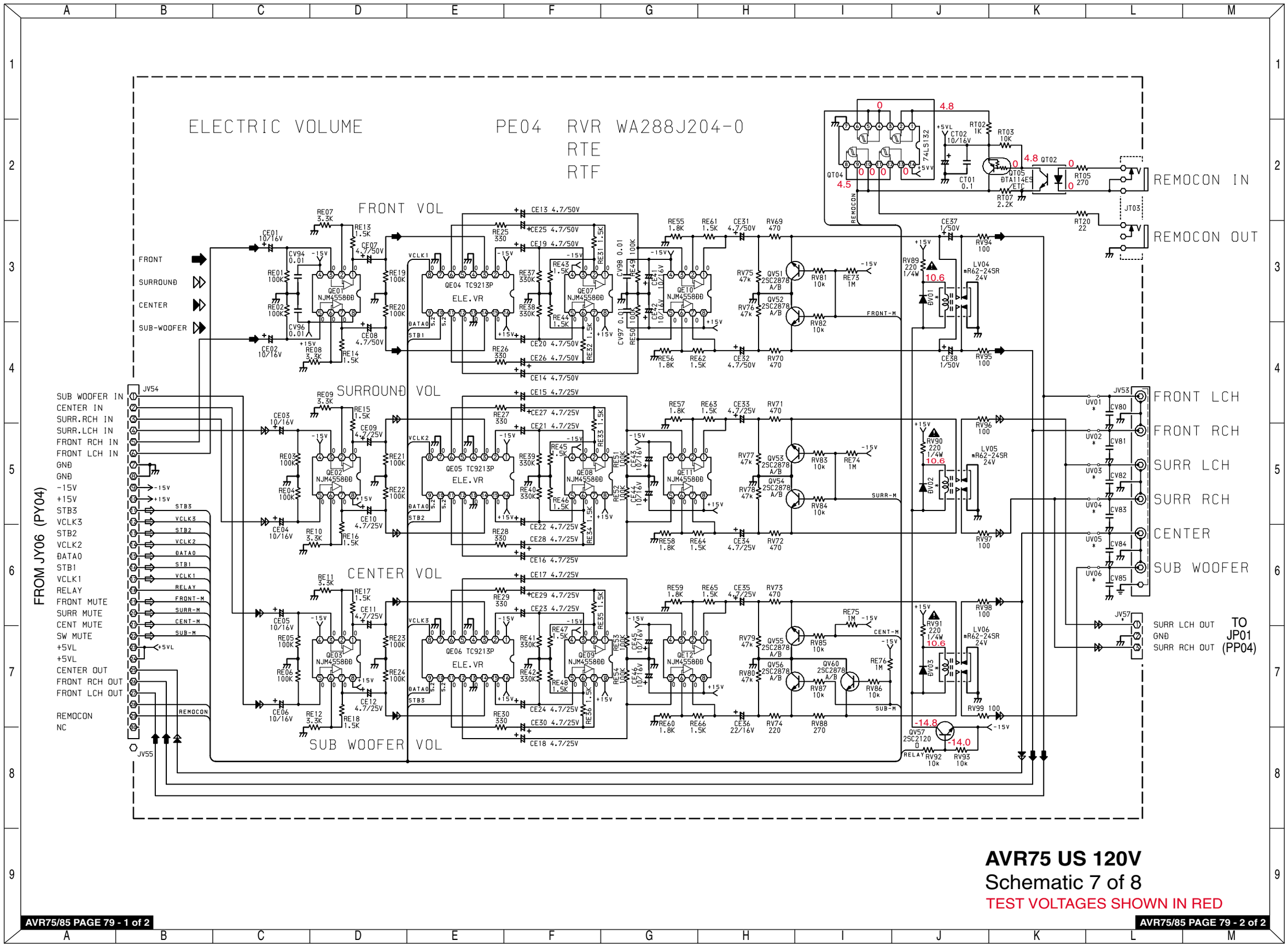


AVR75 US 120V

Schematic 6 of 8

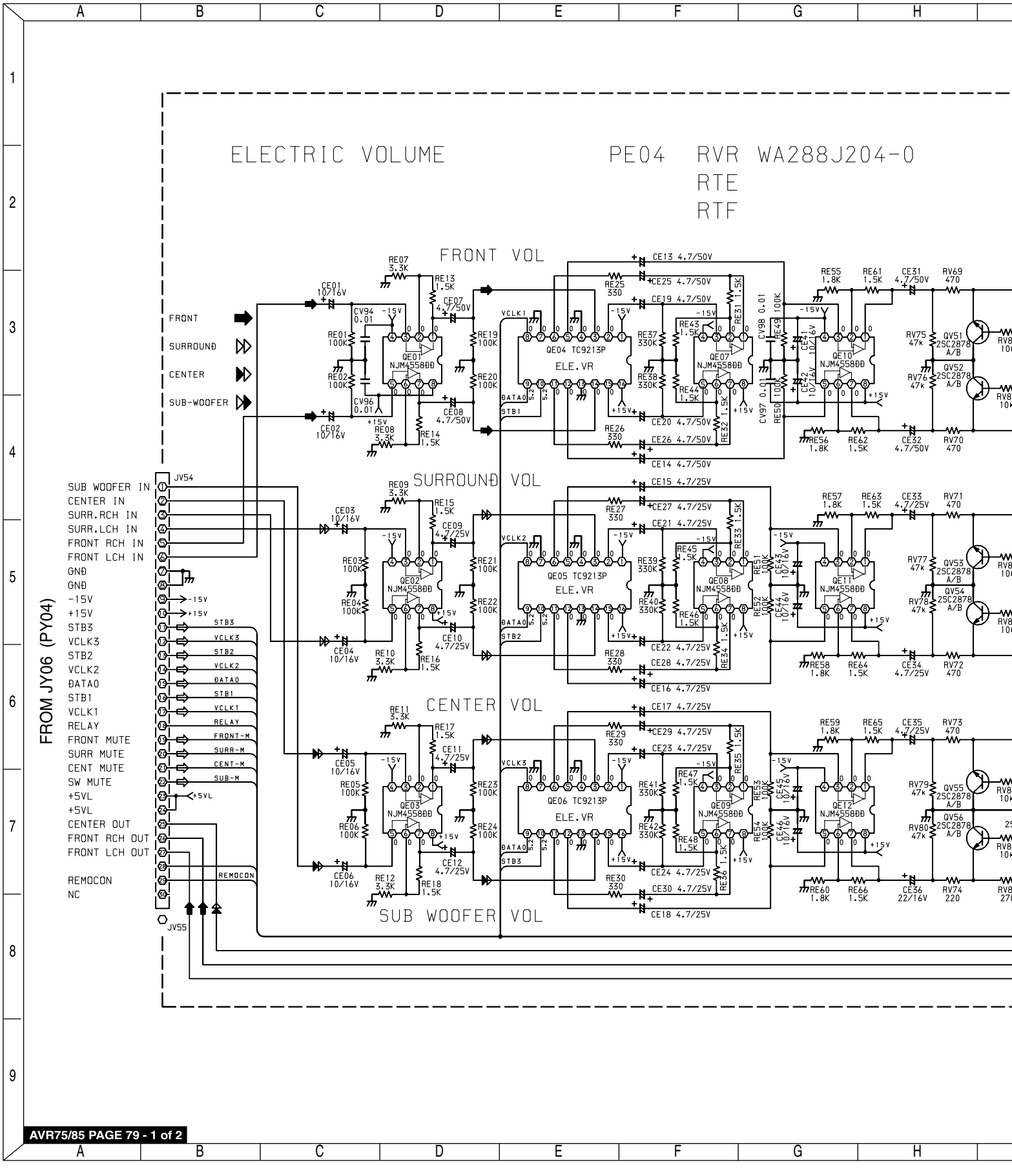
TEST VOLTAGES SHOWN IN RED

AVR75 (120V) SCHEMATIC DIAGRAM 7 of 8 (ELECTRONIC VOLUME PCB - PE04)

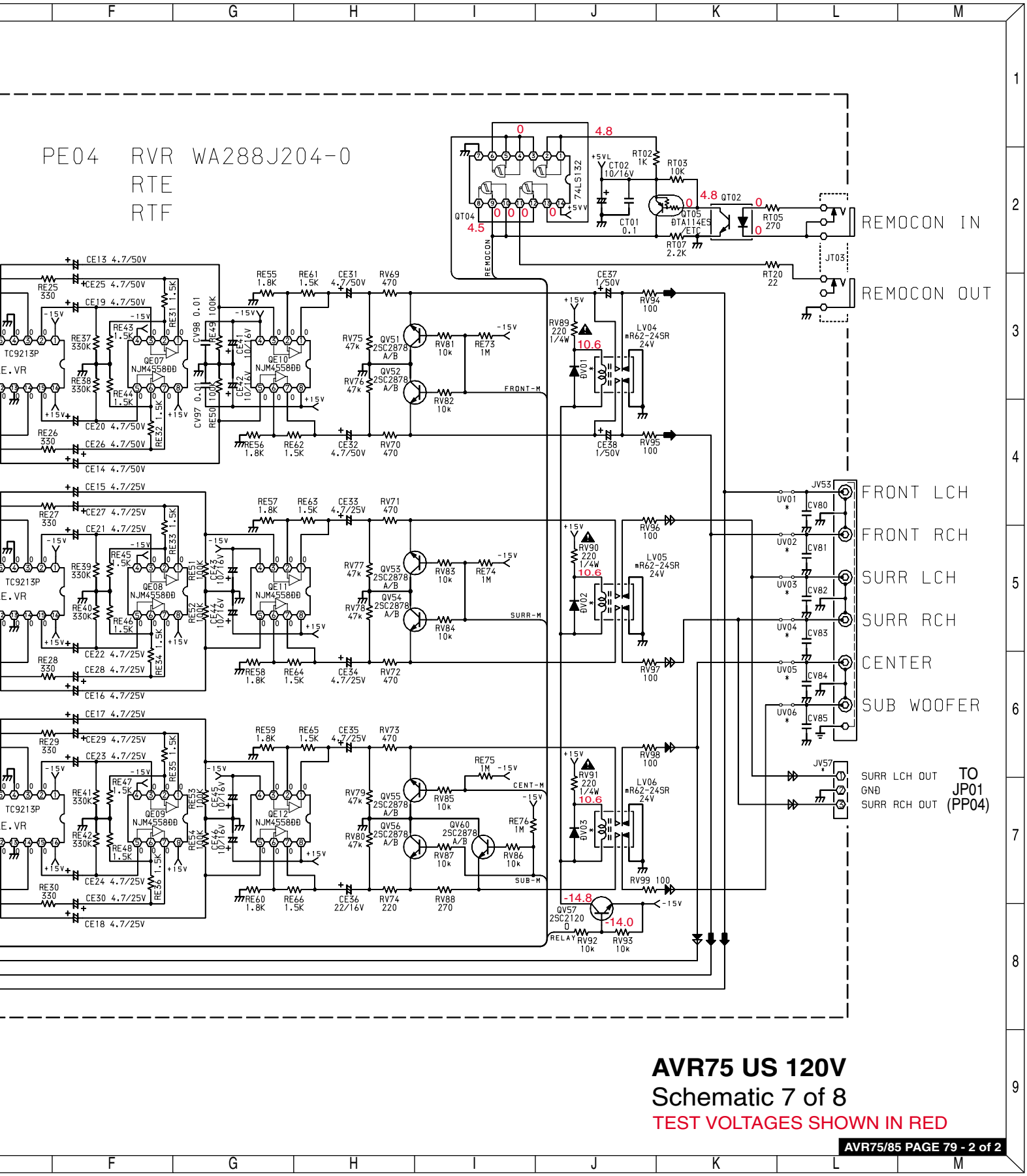


AVR75 US 120V
Schematic 7 of 8
TEST VOLTAGES SHOWN IN RED

AVR75 (120V) SCHEMATIC DIAGRAM 7 of 8 (ELECTRONIC VO



EMATIC DIAGRAM 7 of 8 (ELECTRONIC VOLUME PCB - PE04)

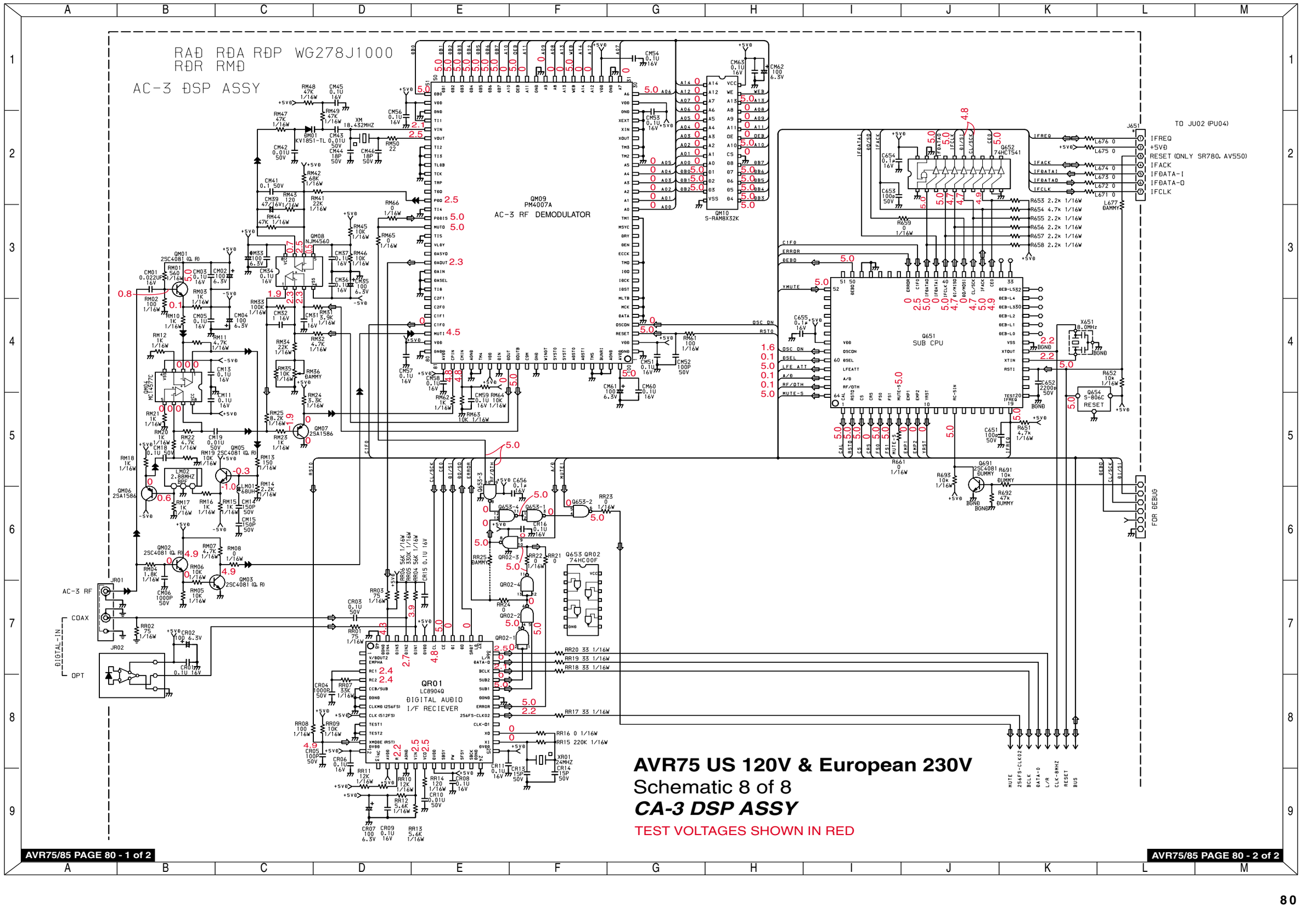


AVR75 US 120V

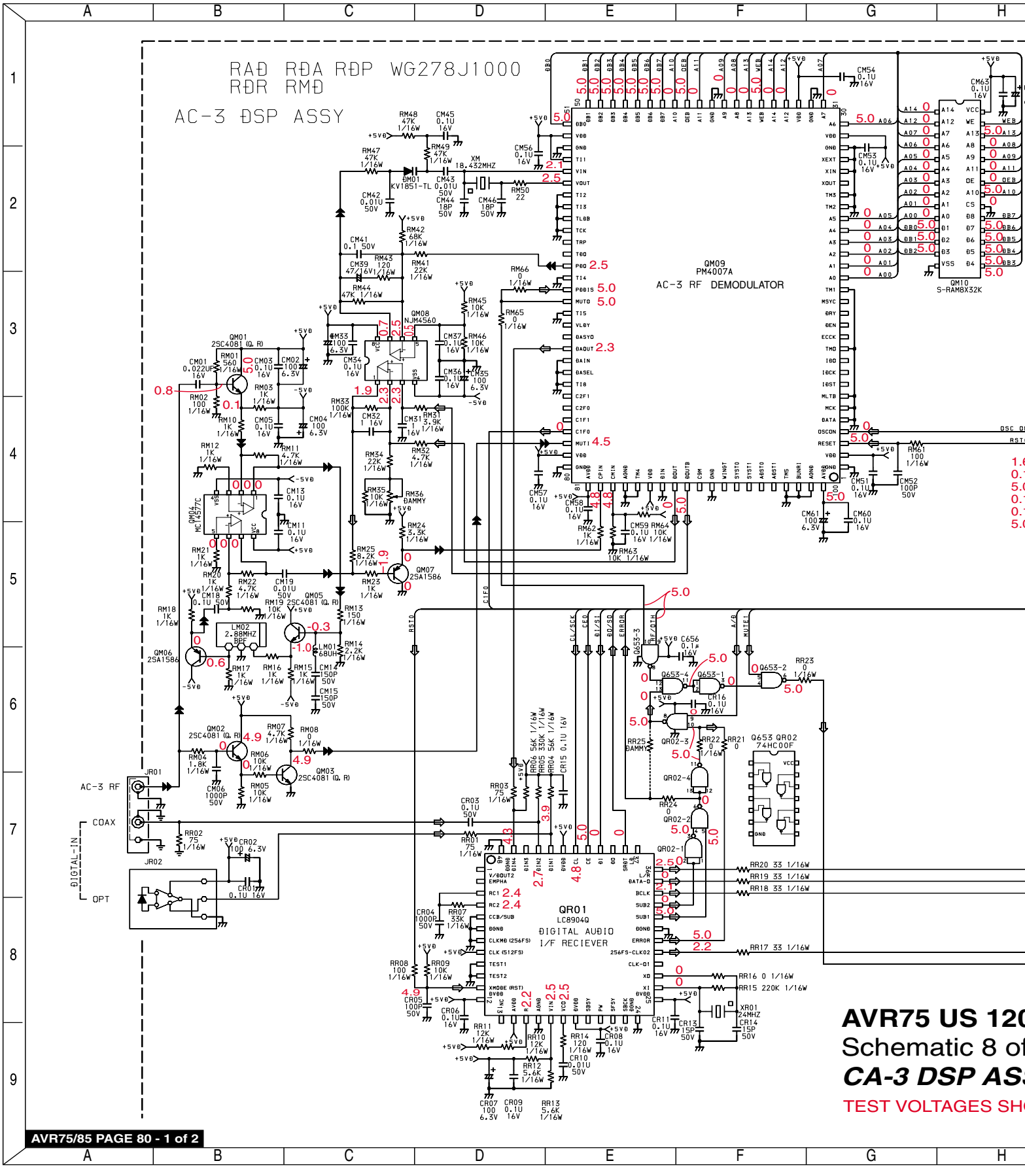
Schematic 7 of 8

TEST VOLTAGES SHOWN IN RED

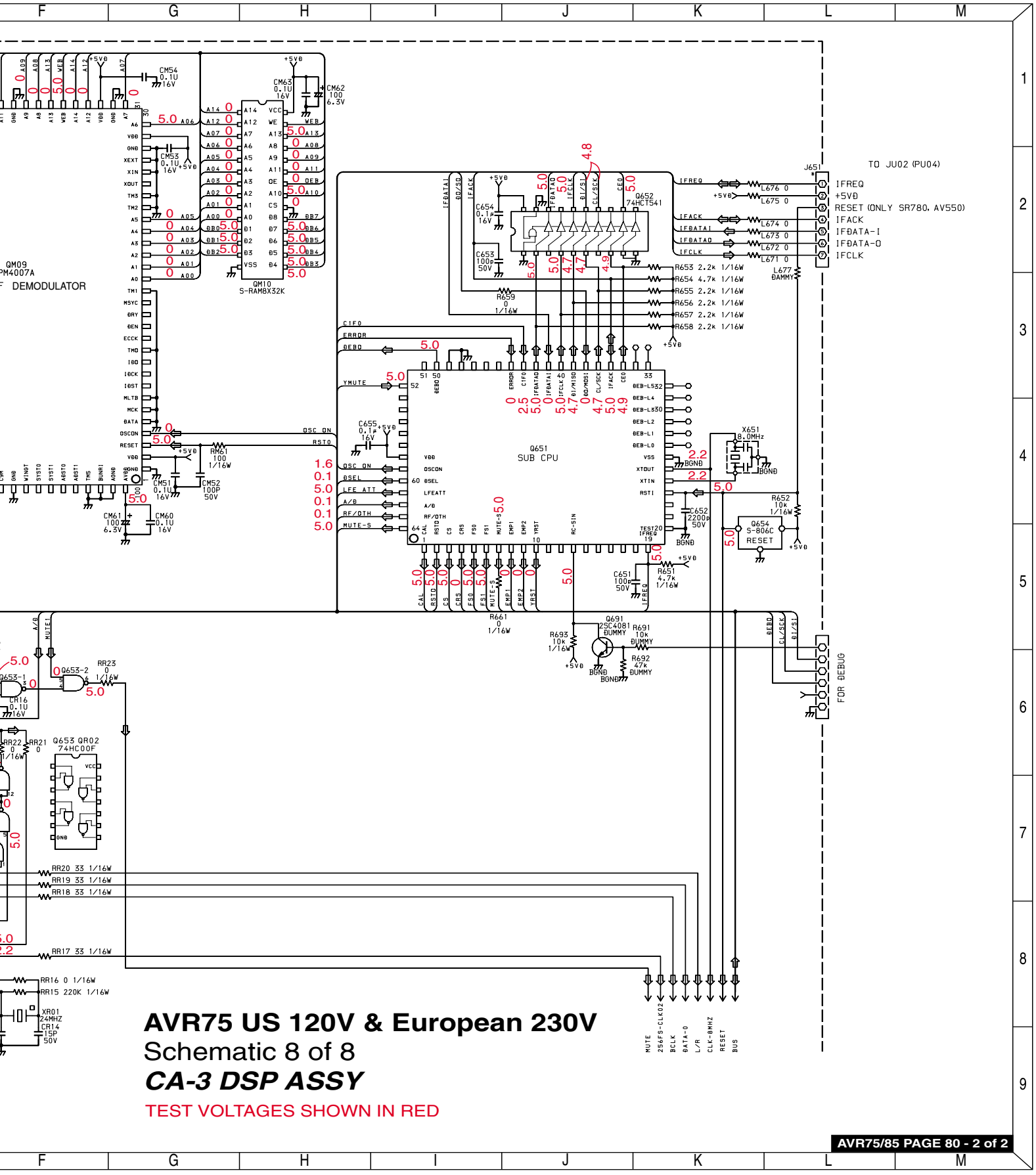
AVR75 (120V/230V) SCHEMATIC DIAGRAM 8 of 8 (AC-3/DSP PCB - P604)



AVR75 (120V/230V) SCHEMATIC DIAGRAM 8 of 8 (A



SCHEMATIC DIAGRAM 8 of 8 (AC-3/DSP PCB - P604)



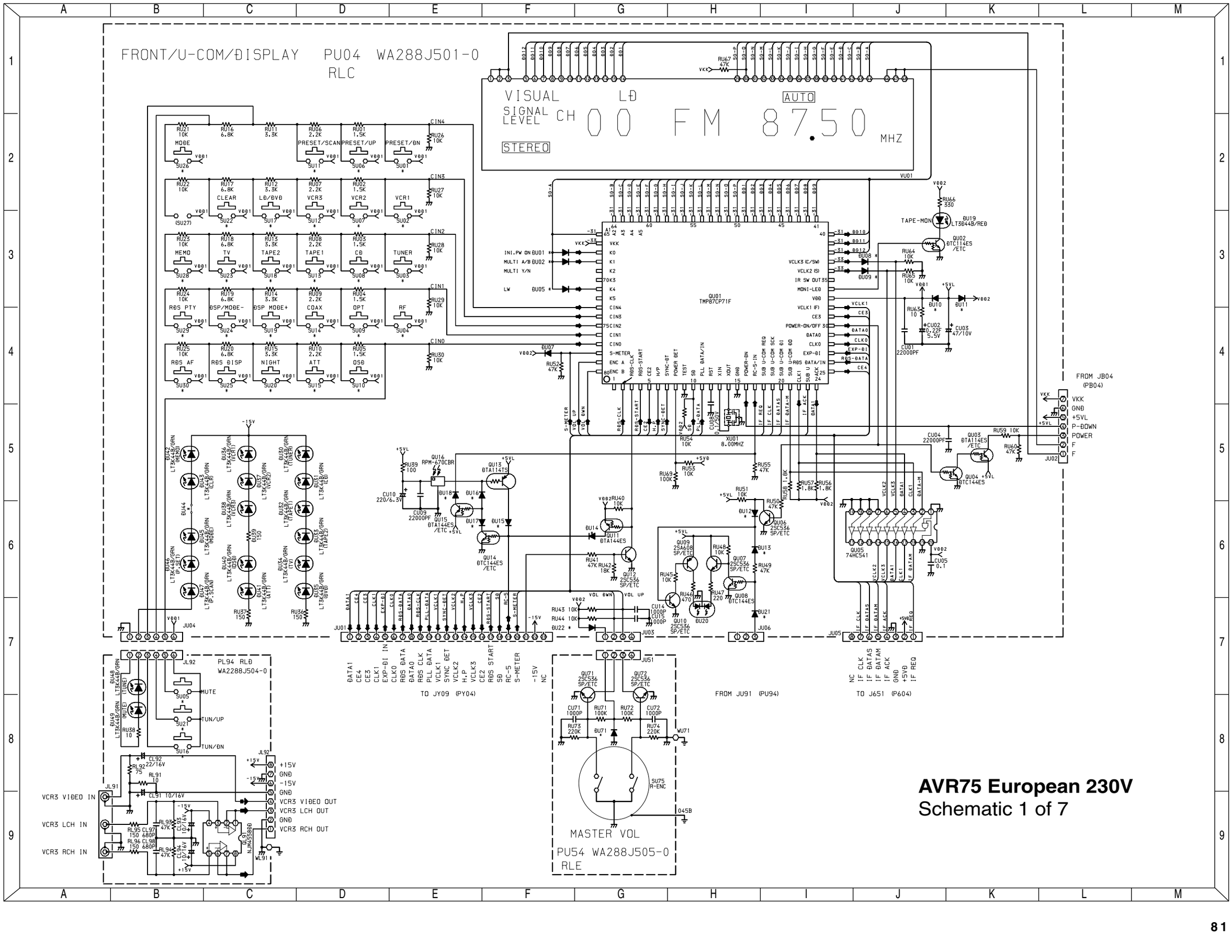
AVR75 US 120V & European 230V

Schematic 8 of 8

CA-3 DSP ASSY

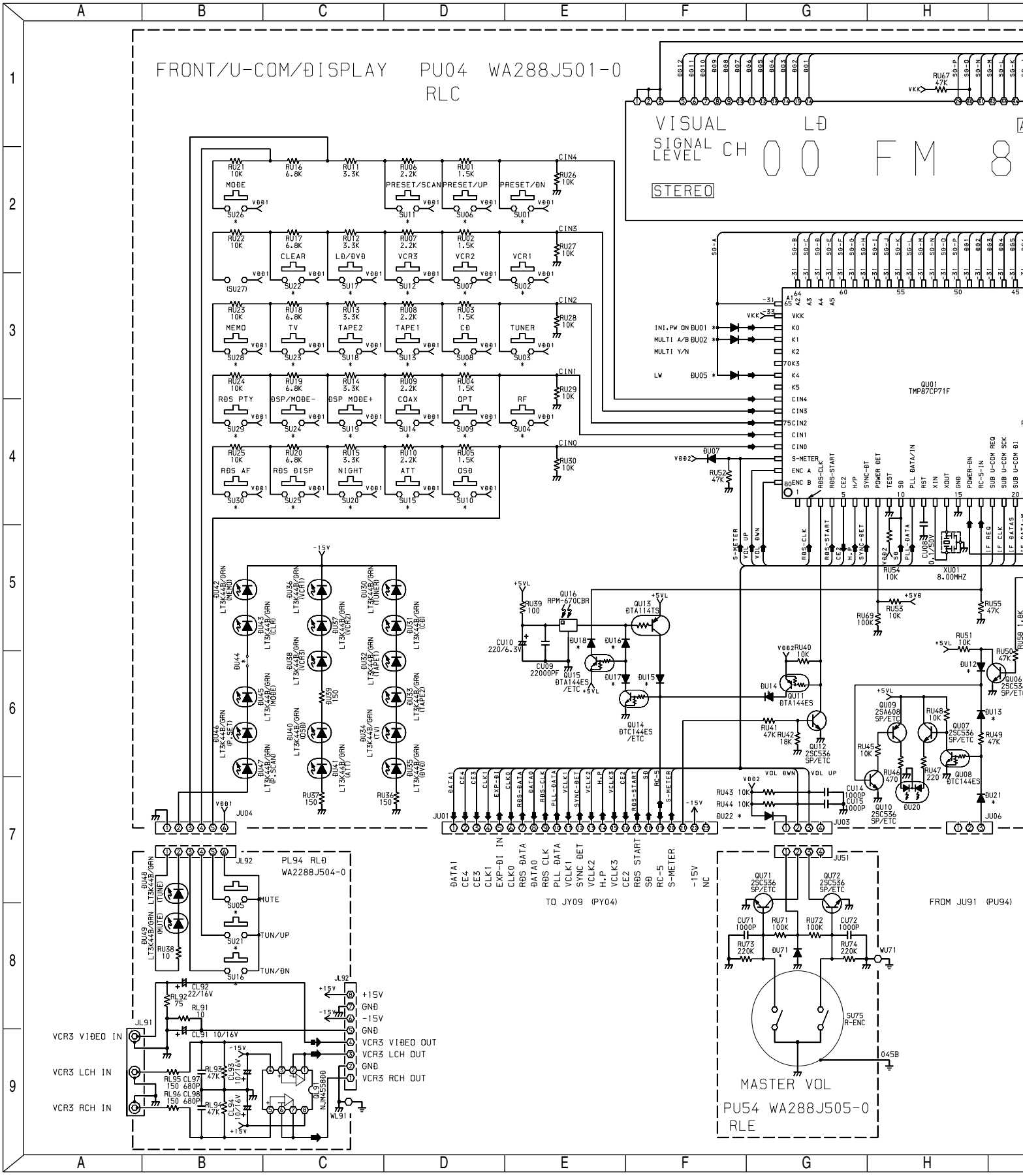
TEST VOLTAGES SHOWN IN RED

AVR75 (230V) SCHEMATIC DIAGRAM 1 of 7 (FRONT PCB - PU04, MASTER VOLUME PCB - PU54, AUX IN - PL94)

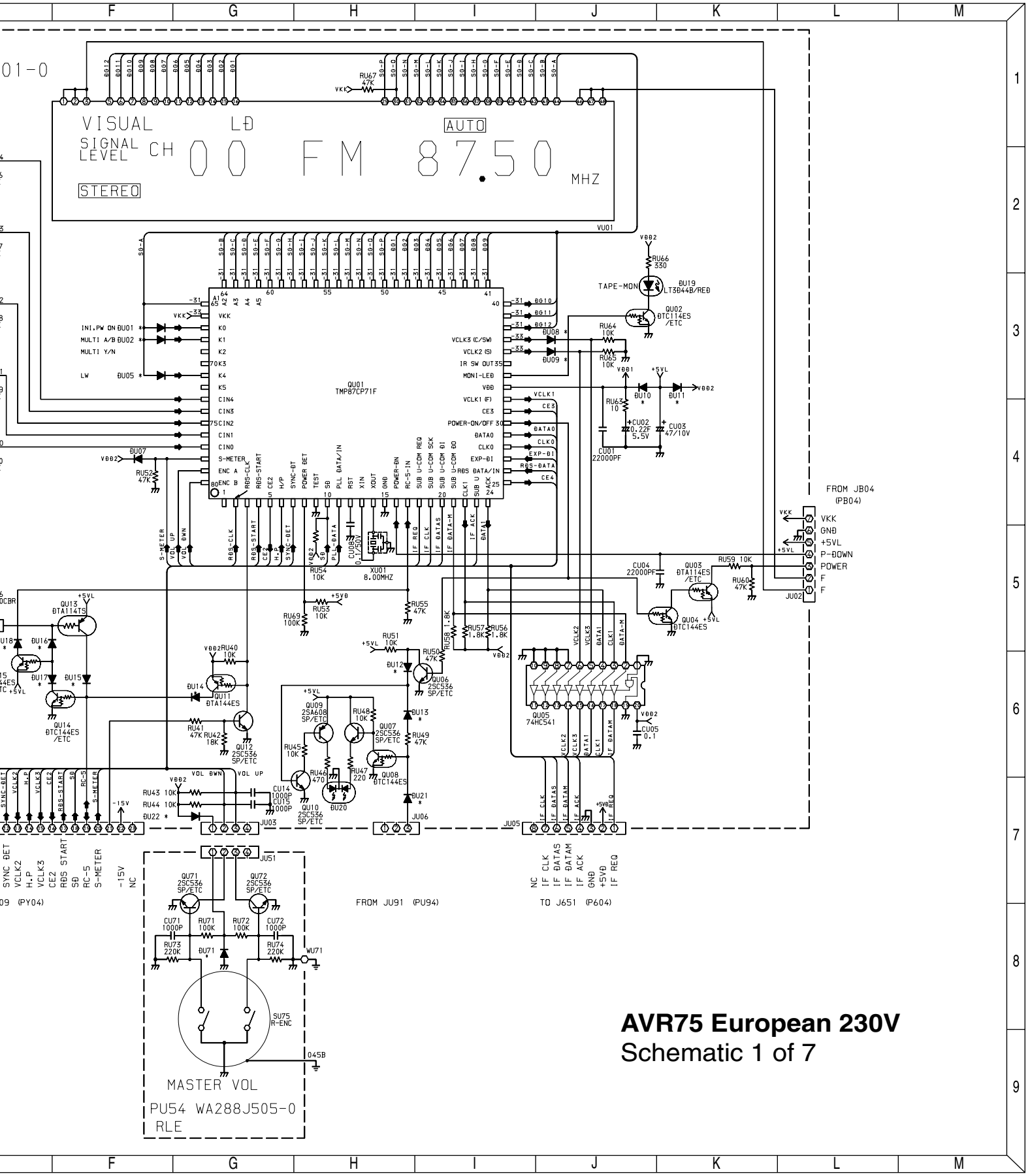


AVR75 European 230V
Schematic 1 of 7

AVR75 (230V) SCHEMATIC DIAGRAM 1 of 7 (FRONT PCB - PU04, MASTER VO



AM 1 of 7 (FRONT PCB - PU04, MASTER VOLUME PCB - PU54, AUX IN - PL94)



AVR75 (230V) SCHEMATIC DIAGRAM 2 of 7 (TUNER PCB - P104)

AVR75 European 230V
Schematic 2 of 7

RDS DECORDER

RDS DEMODULATOR

RDS ERROR CORRECTION

FM AM IF/MPX

PLL BLOCK

PRE AMP

ANT TERMINAL

TUNING VOLTAGE

FM	87.5MHZ	108MHZ
	1.6V	7.8V
AM 520/531KHZ		1710/1602KHZ
	1.3V	7.1V

FREQ.
FM 87.5MHZ
MW 531KHZ
LW 152KHZ

FM-AM TUNER P104 RDS RTU RSY WA288J401-0

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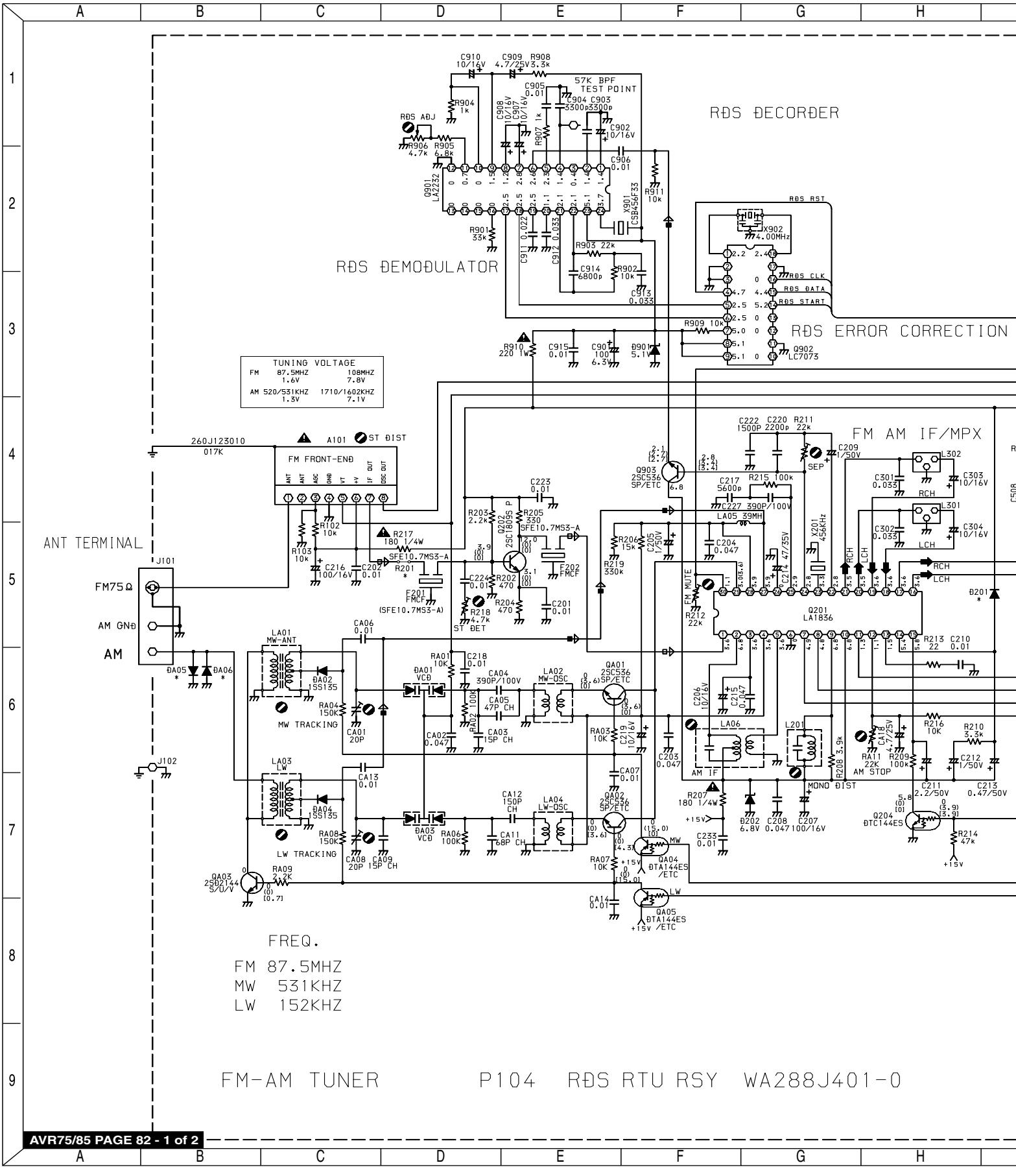
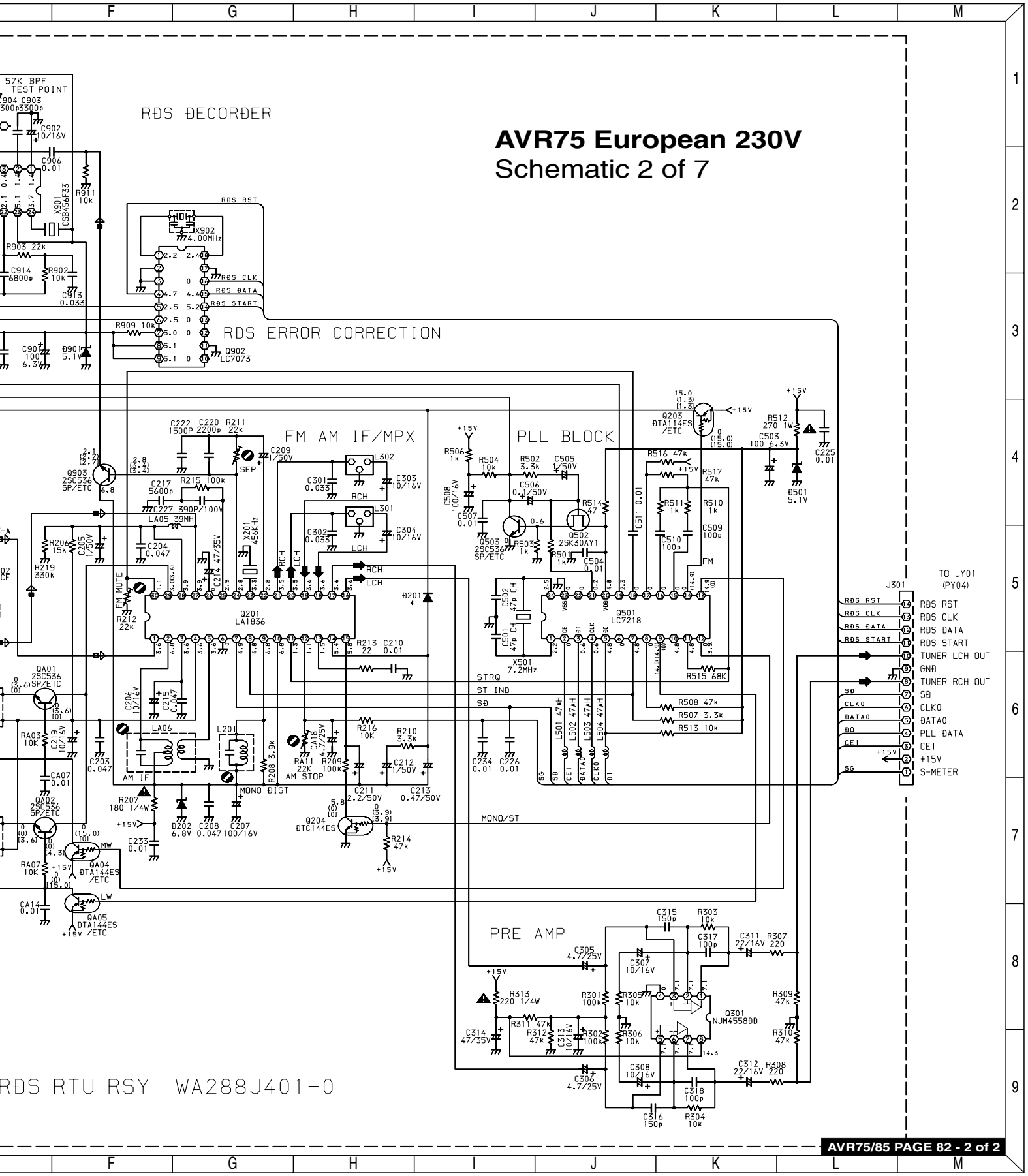
AVR75/85 PAGE 82 - 2 of 2

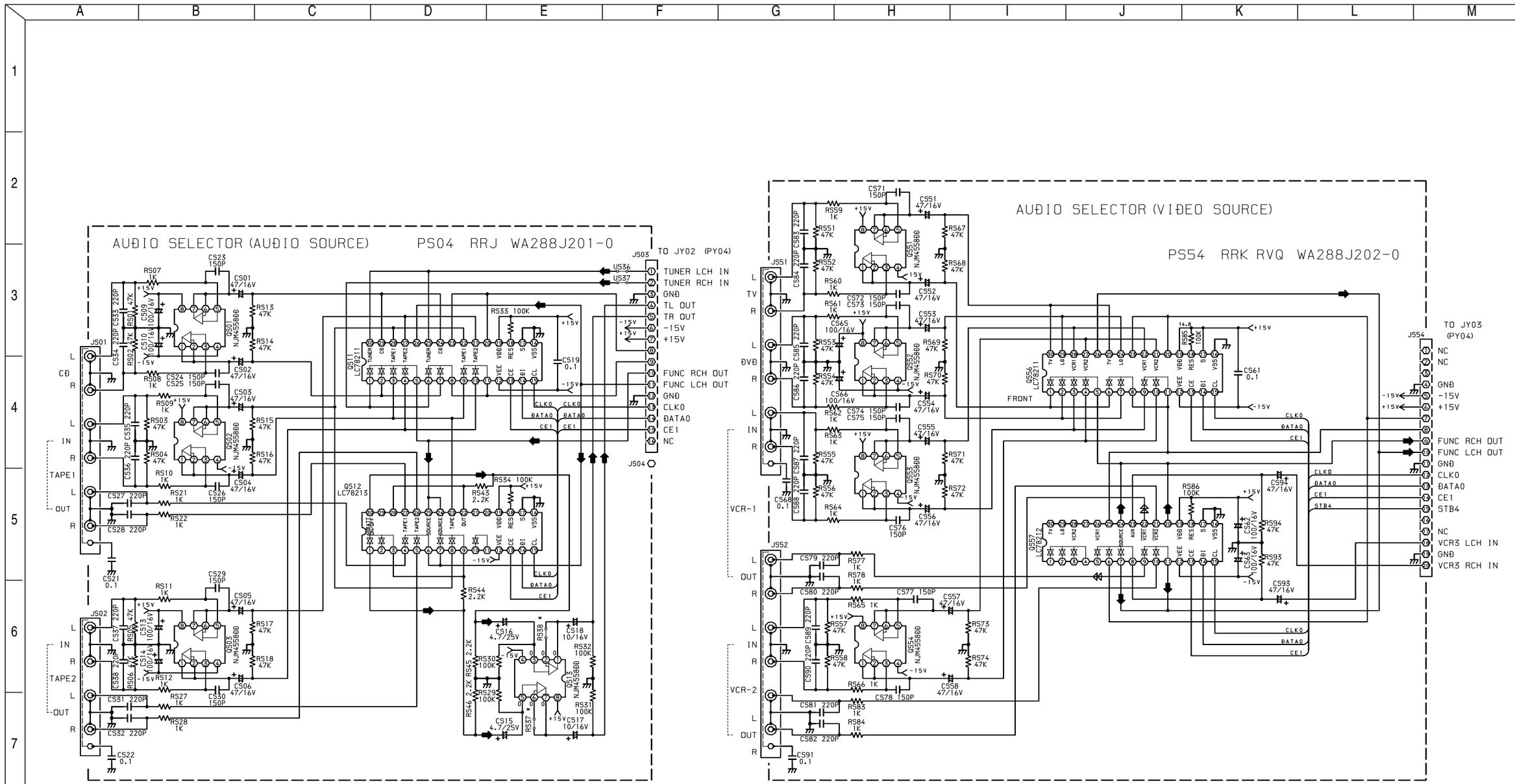
AVR75 (230V) SCHEMATIC DIAGRAM 2 of 7 (TUNER P



0V) SCHEMATIC DIAGRAM 2 of 7 (TUNER PCB - P104)

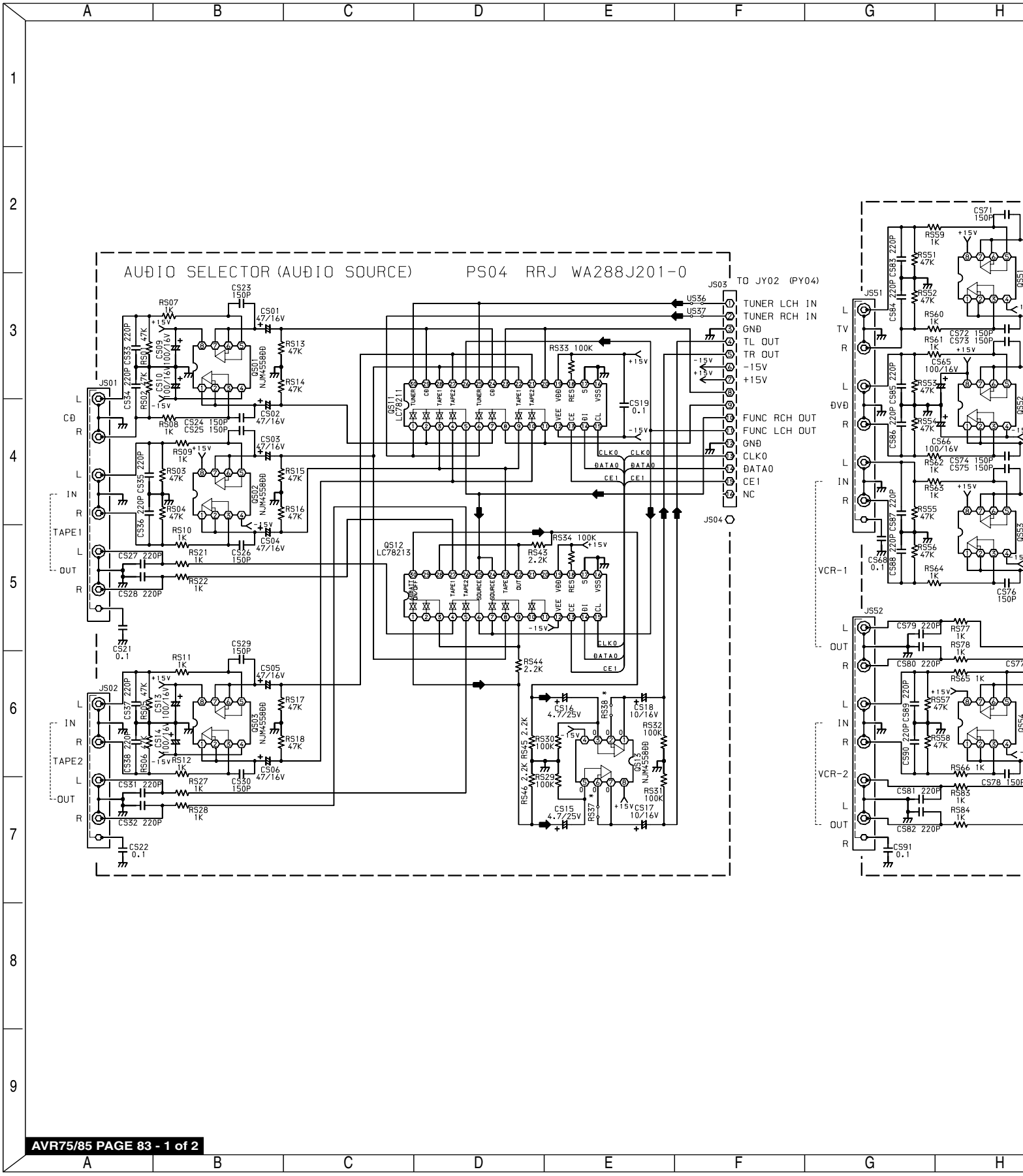


AVR75 (230V) SCHEMATIC DIAGRAM 3 of 7 (AUDIO SELECTOR PCB - PS04, AUDIO/VIDEO PCB - PS54)

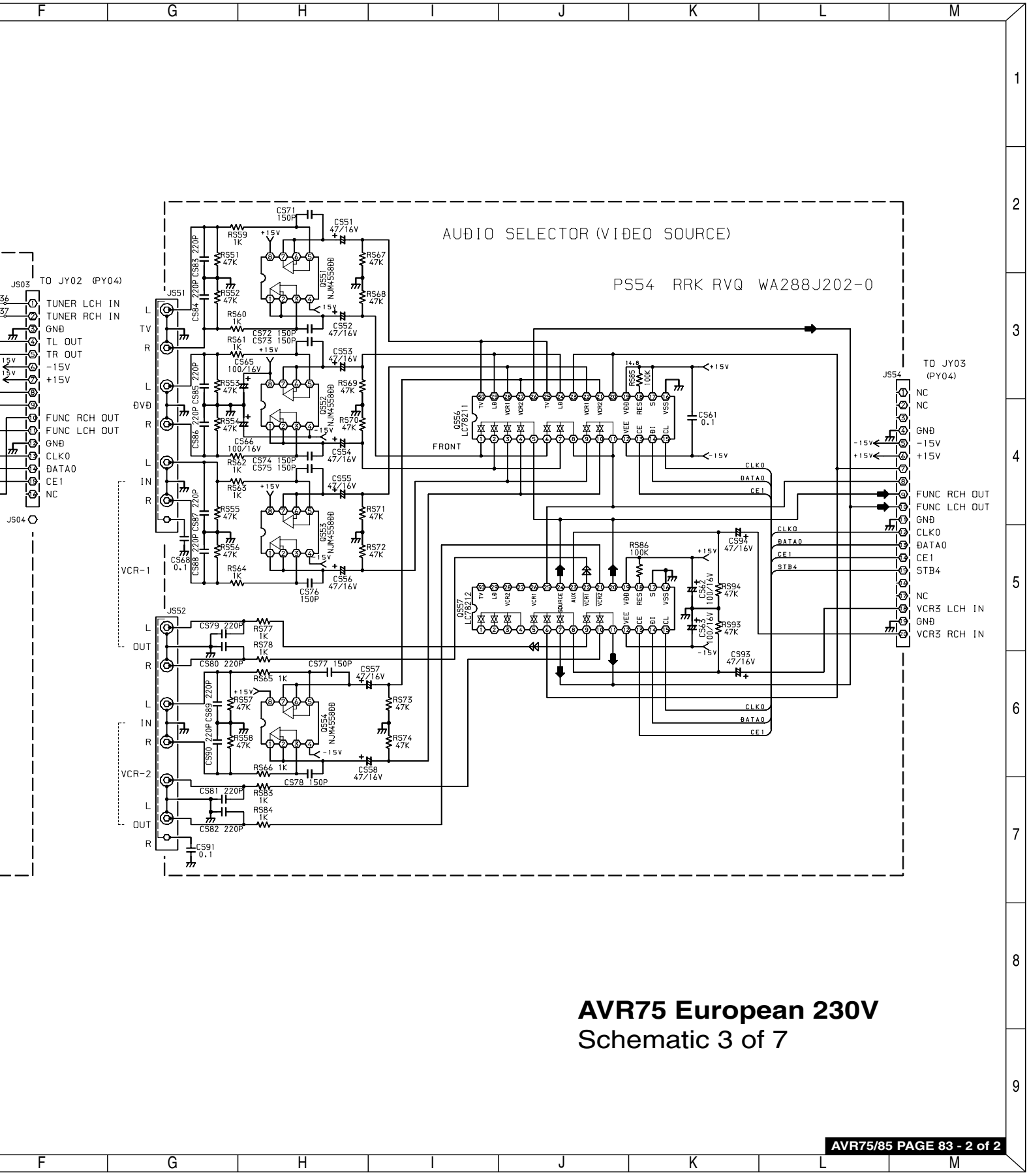


AVR75 European 230V
Schematic 3 of 7

AVR75 (230V) SCHEMATIC DIAGRAM 3 of 7 (AUDIO SELECTOR PC



M 3 of 7 (AUDIO SELECTOR PCB - PS04, AUDIO/VIDEO PCB - PS54)

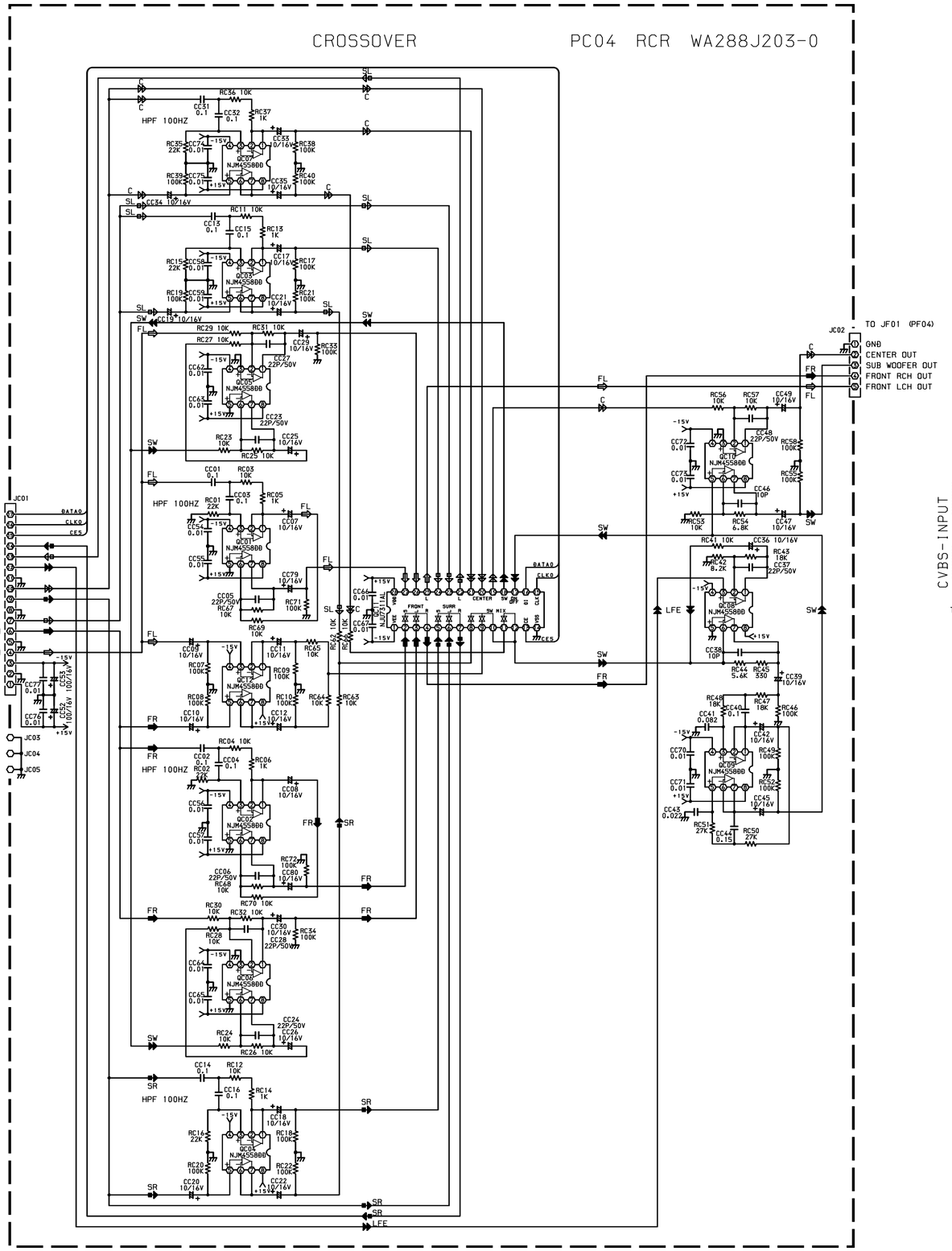


AVR75 European 230V
Schematic 3 of 7

AVR75/85 PAGE 84 - 1 of 4

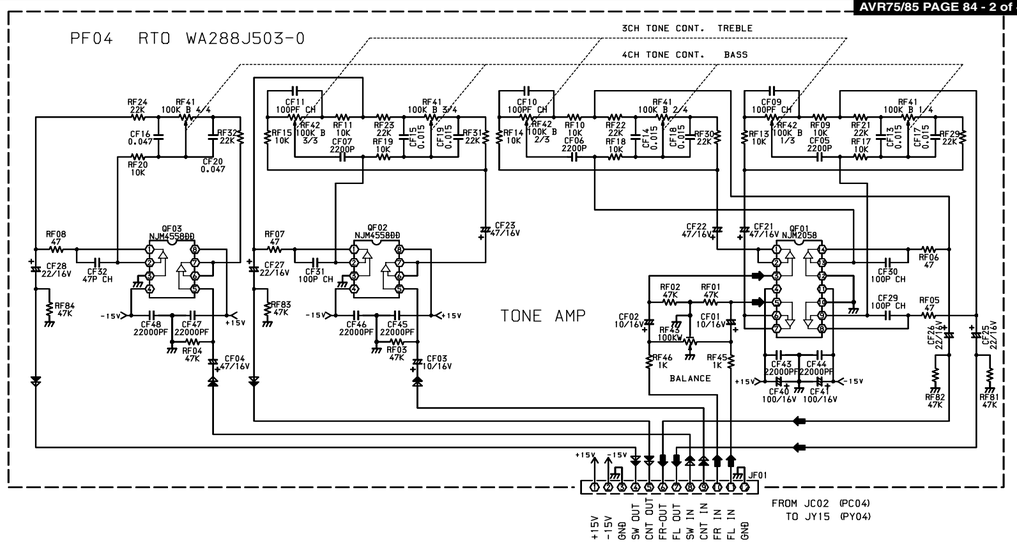
AVR75 European 230V
Schematic 4 of 7

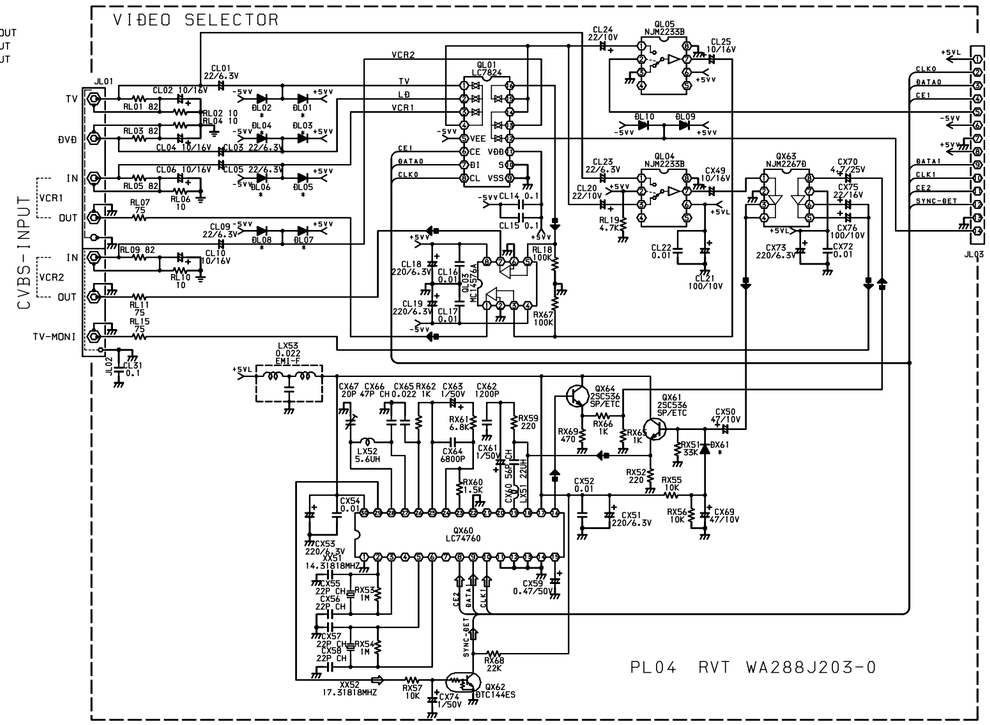
CROSSOVER PC04 RCR WA288J203-0

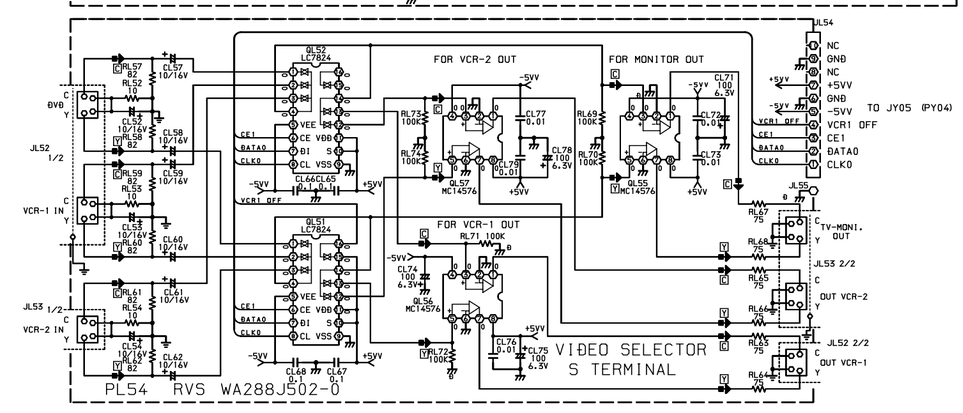


AVR75/85 PAGE 84 - 2 of 4

PF04 RTO WA288J503-0







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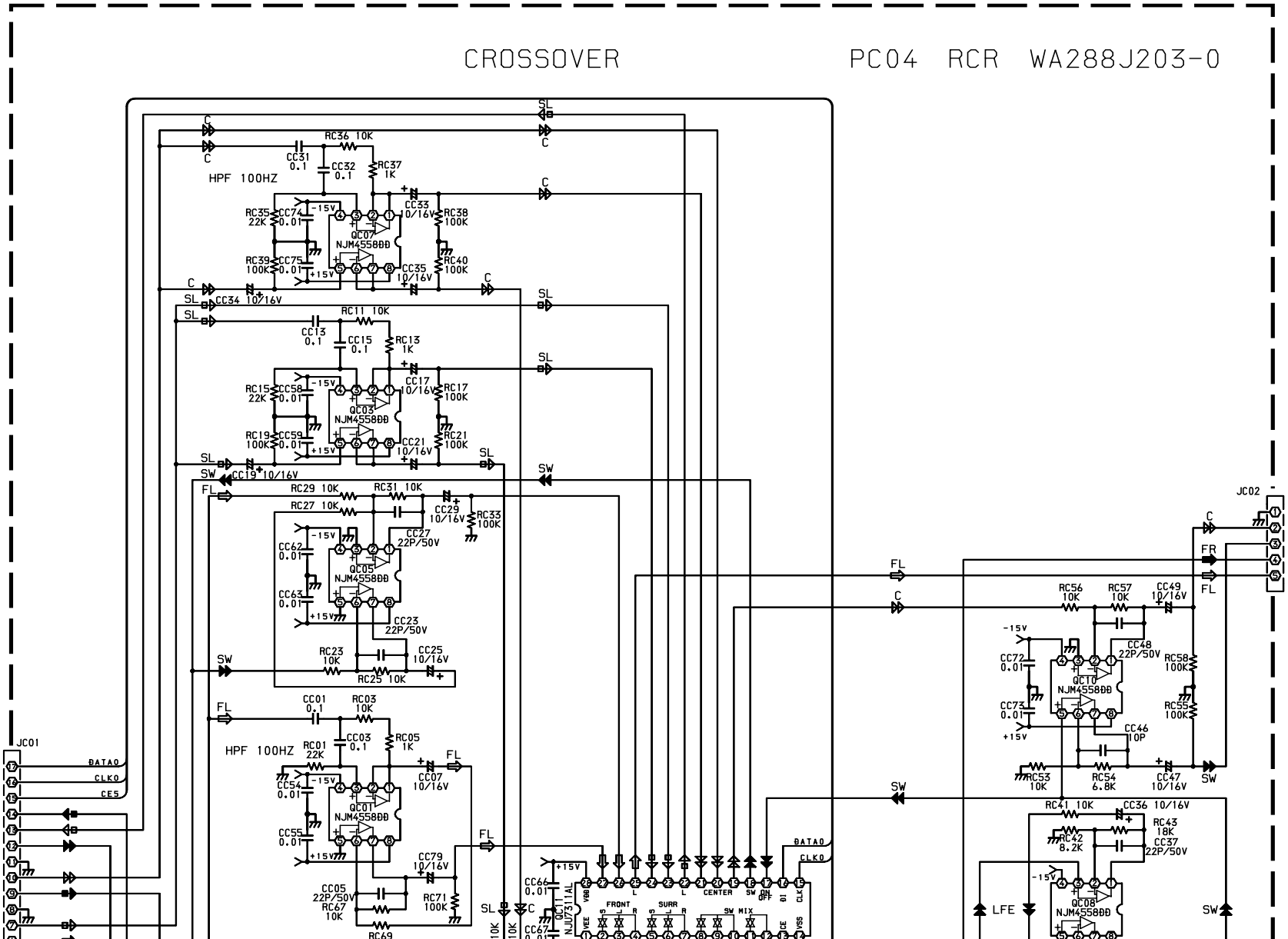
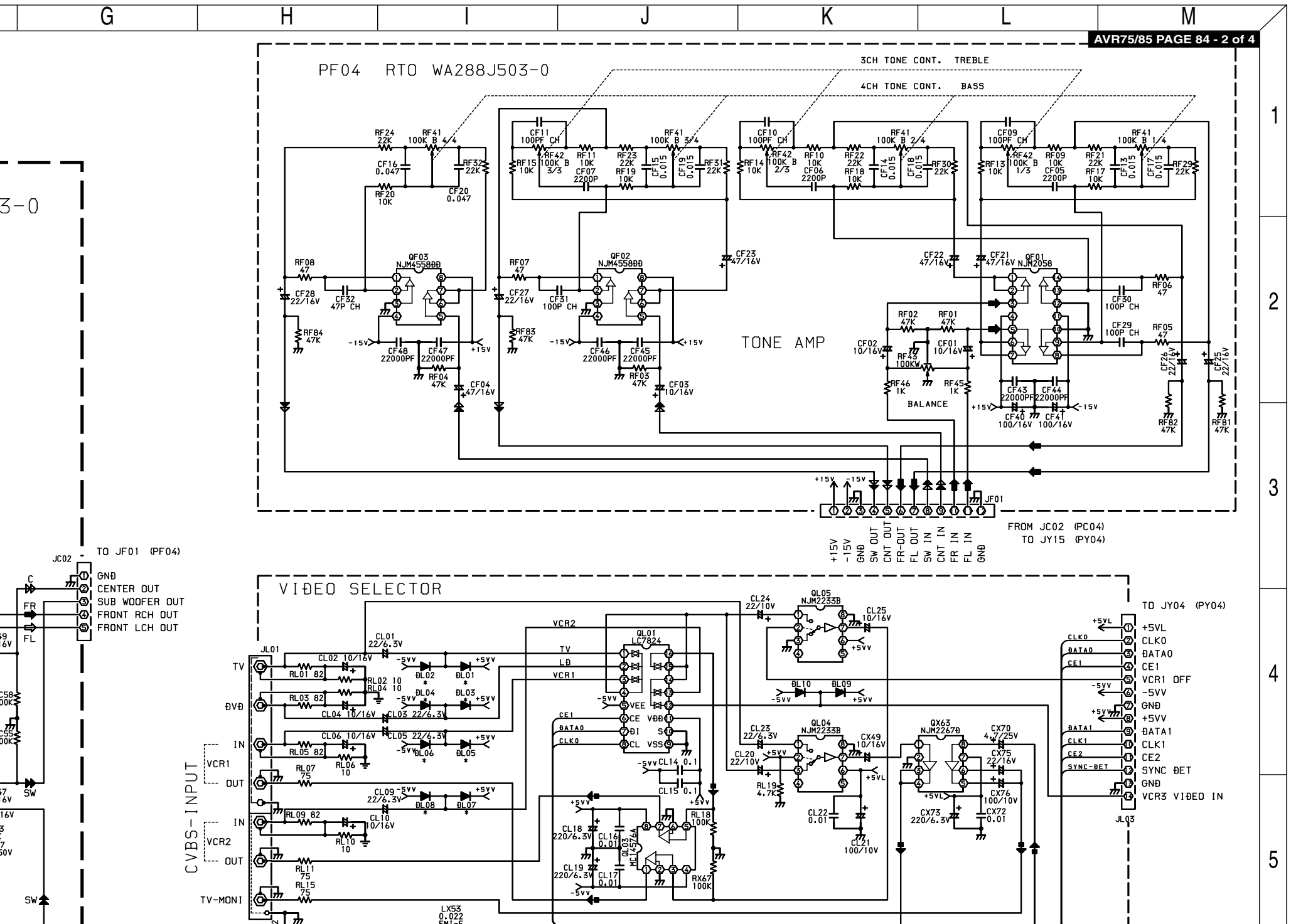
AVR75/85 PAGE 84 - 1 of 4

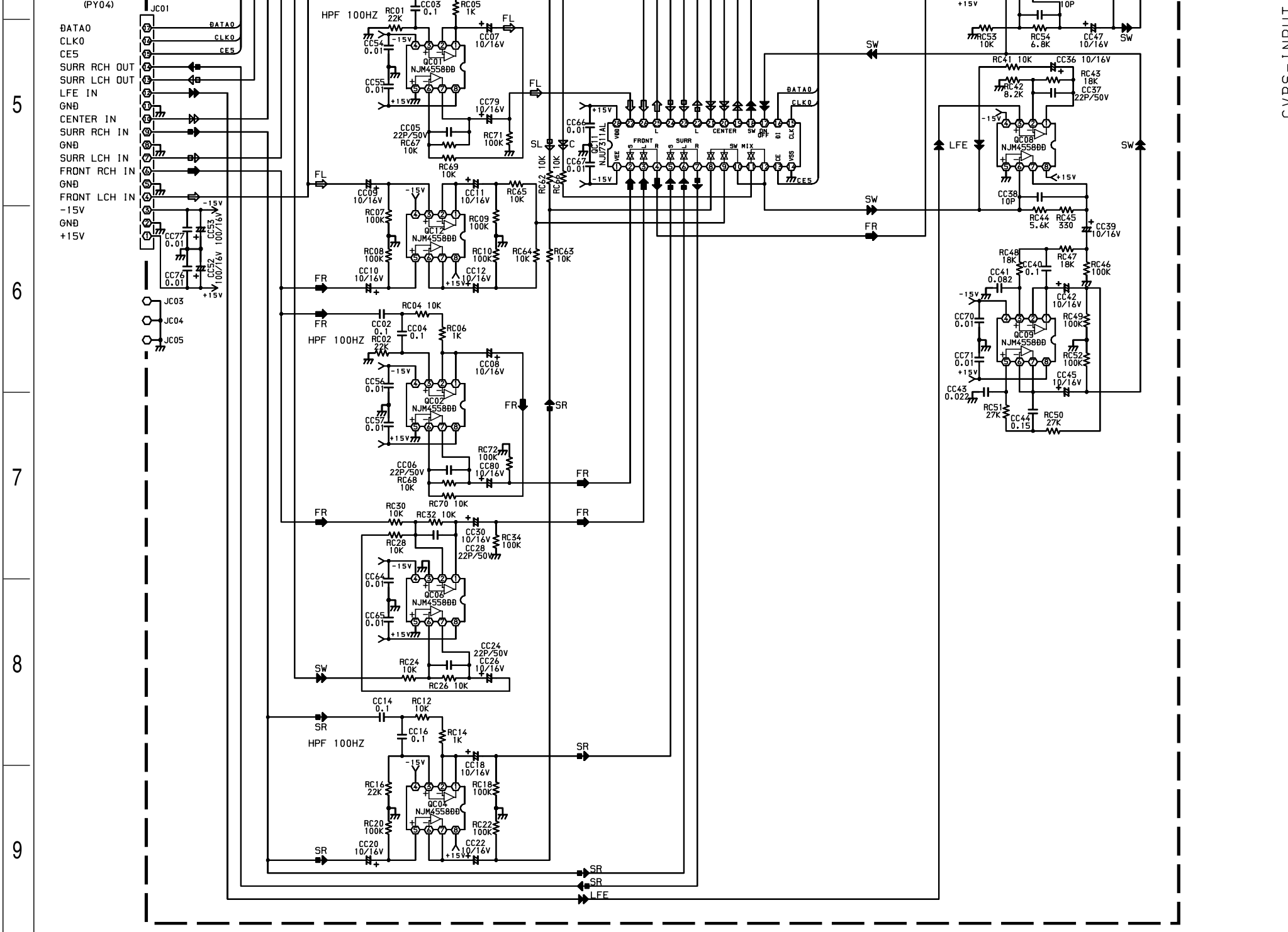
AVR75 European 230V

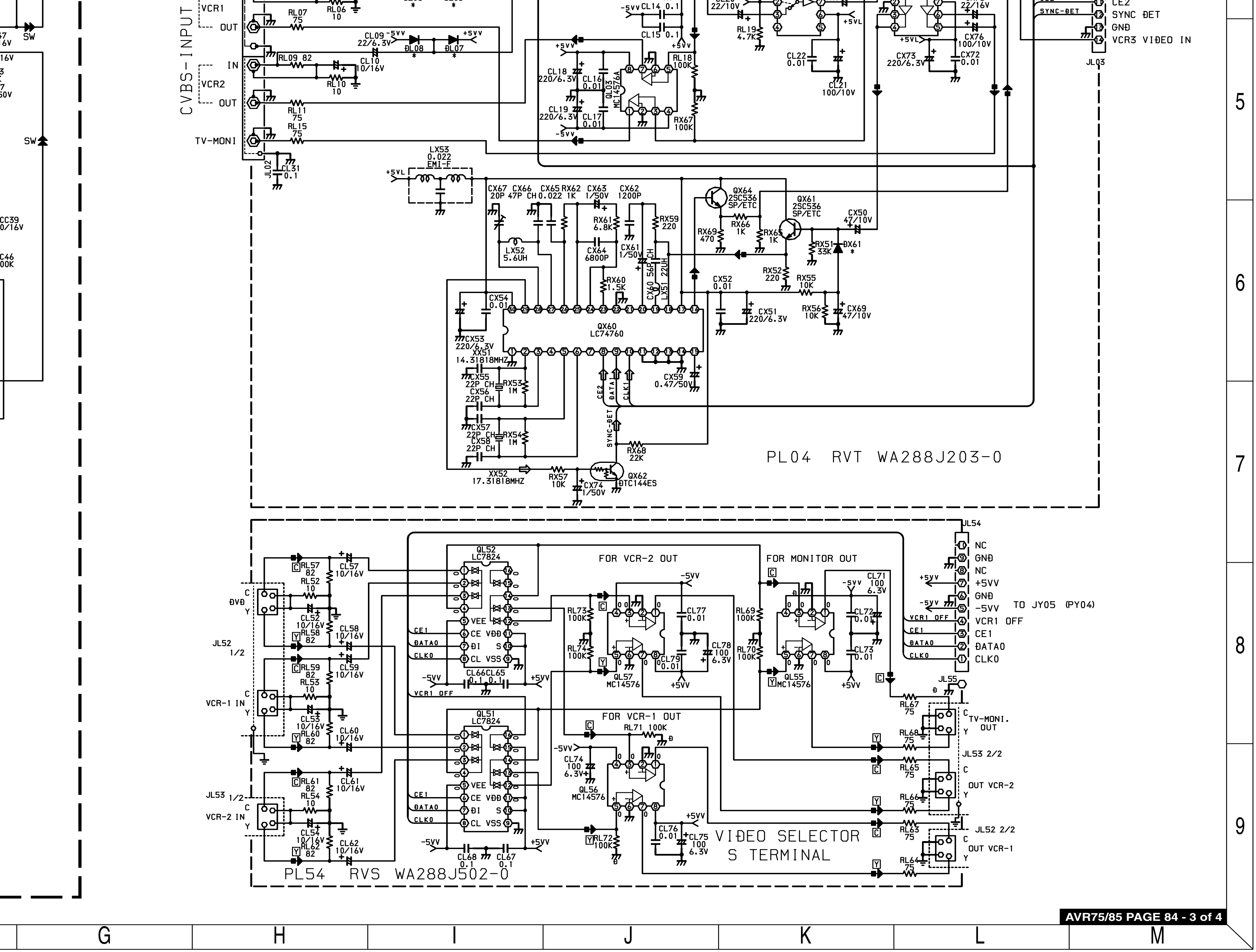
Schematic 4 of 7



PC04, TONE CONTROL PCB - PF04, VIDEO SELECTOR PCB - PL04, S-VIDEO PCB - PL54)




(PY04)
JC01
ĐATAO
CLKO
CE5
SURR RCH OUT
SURR LCH OUT
LFE IN
GNĐ
CENTER IN
SURR RCH IN
GNĐ
SURR LCH IN
FRONT RCH IN
GNĐ
FRONT LCH IN
-15V
GNĐ
+15V
JC03
JC04
JC05
HPF 100HZ
HPF 100HZ
HPF 100HZ
QC01 NJM4558ĐĐ
QC02 NJM4558ĐĐ
QC03 NJM4558ĐĐ
QC04 NJM4558ĐĐ
QC07 NJM4558ĐĐ
QC08 NJM4558ĐĐ
QC09 NJM4558ĐĐ
QC11 NJU3711AL
FRONT
SURR
SW MIX
CENTER
FL
FR
SL
SR
SW
LFE
C
CVBS_INPUT


PL04 RVT WA288J203-0
PL54 RVS WA288J502-0
VIDEO SELECTOR
S TERMINAL
CVBS-INPUT
FOR VCR-2 OUT
FOR MONITOR OUT
FOR VCR-1 OUT
TO JY05 (PY04)
QX60
LC74760
QL52
LC7824
QL51
LC7824
SYNC DET
VCR3 VIDEO IN
TV-MONI. OUT
OUT VCR-2
OUT VCR-1

AVR75 (230V) SCHEMATIC DIAGRAM 5 of 7 (CONNECT PCB PY04)

AVR75
European 230V
Schematic 5 of 7

PY04 RRK RTG WG288J201-0

BACKUP SUPPLY
FROM JB09 (PB04)

FRONT/U-COM/DISPLAY
FROM JU01 (PU04)

CROSS OVER
TO JC01 (PC04)

DSP
FROM J601 (P604)

MUTE BUFFER

JY01 S-METER, +15V, CE1, PLL DATA, DATA0, CLK0, SD, TUNER RCH IN, GND, TUNER LCH IN, RDS START, RDS DATA, RDS CLK, RDS RST

JY02 TUNER LCH OUT, TUNER RCH OUT, GND, TL IN, TR IN, -15V, +15V, FUNC RCH OUT, FUNC LCH OUT, GND, CLK0, DATA0, CE1

JY03 NC, NC, GND, -15V, +15V, FUNC RCH IN, FUNC LCH IN, GND, CLK0, DATA0, CE1, STB4, NC, VCR3 LCH OUT, GND, VCR3 RCH OUT
FROM JS54 (PS54) AUDIO SELECTOR (VIDEO SOURCE)

JY04 +5VL, CLK0, DATA0, CE1, VCR1 OFF, -5VV, GND, +5VV, DATA1, CLK1, CE2, SYNC DET, GND, VCR3 VIDEO OUT
TO JL03 (PL04) VIDEO SELECTOR

JY05 CLK0, DATA0, CE1, VCR1 OFF, -5VV, GND, +5VV, NC, NC, NC
FROM JL54 (PL54) VIDEO SELECTOR (S TERMINAL)

JY06 SW-OUT, CENTER OUT, SURR RCH OUT, SURR LCH OUT, FRONT RCH OUT, FRONT LCH OUT, GND, GND, -15V, +15V, STB3, VCLK3, STB2, VCLK2, DATA0, STB1, VCLK1, RELAY, FRONT MUTE, SURR MUTE, CENTER MUTE, SW MUTE, +5VL, +5VL, CENTER IN, FRONT RCH IN, FRONT LCH IN, RC-5, NC
TO JV54 (PE04) ELECTRIC VOLUME

JY09 DATA1, CE4, CE3, CLK1, EXP-DI OUT, CLK0, RDS DATA, DATA0, RDS CLK, PLL DATA, VCLK1, SYNC DET, VCLK2, H.P, VCLK3, CE2, RDS START, SD, RC-5, S-METER, -15V, NC

JY10 (FROM JL92 (PL94) VCR3 INPUT)
+15V, GND, -15V, GND, VCR3-CVBS, VCR3-L, GND, VCR3-R
VCR3 VIDEO IN, VCR3 LCH IN, VCR3 RCH IN

JY11 GND, +5VL, +B

JY12 LFE IN, CENTER IN, SURR LCH IN, SURR RCH IN, FRONT LCH IN, FRONT RCH IN, E-MUTE, TL-OUT, +5VD, +5VV, TR-OUT, U COM-RST, GND, -5VV

JY13 DATA0, CLK0, CE5, SURR RCH IN, SURR LCH IN, LFE OUT, GND, CENTER OUT, SURR RCH OUT, GND, SURR LCH OUT, FRONT RCH OUT, GND, FRONT LCH OUT, -15V, GND, +15V

JY14 RELAY, NC, RELAY
FROM JN82 (PN54) PROTECT

JY15 (FROM JF01 (PF04) TONE AMP)
+15V, -15V, GND, FRONT-L, SW, FRONT-R, CENTER
FRONT LCH IN, FRONT RCH IN, CENTER IN

JY16 (TO J701 (P714) VOLTAGE AMP FROM J804 (P704) POWER AMP/SUPPLY)
H.P, GND, NC, +5VV, -5VV, +5VD, -15V, +15V, CENTER OUT, GND, FRONT RCH OUT, GND, FRONT LCH OUT

QY12 TC9215P

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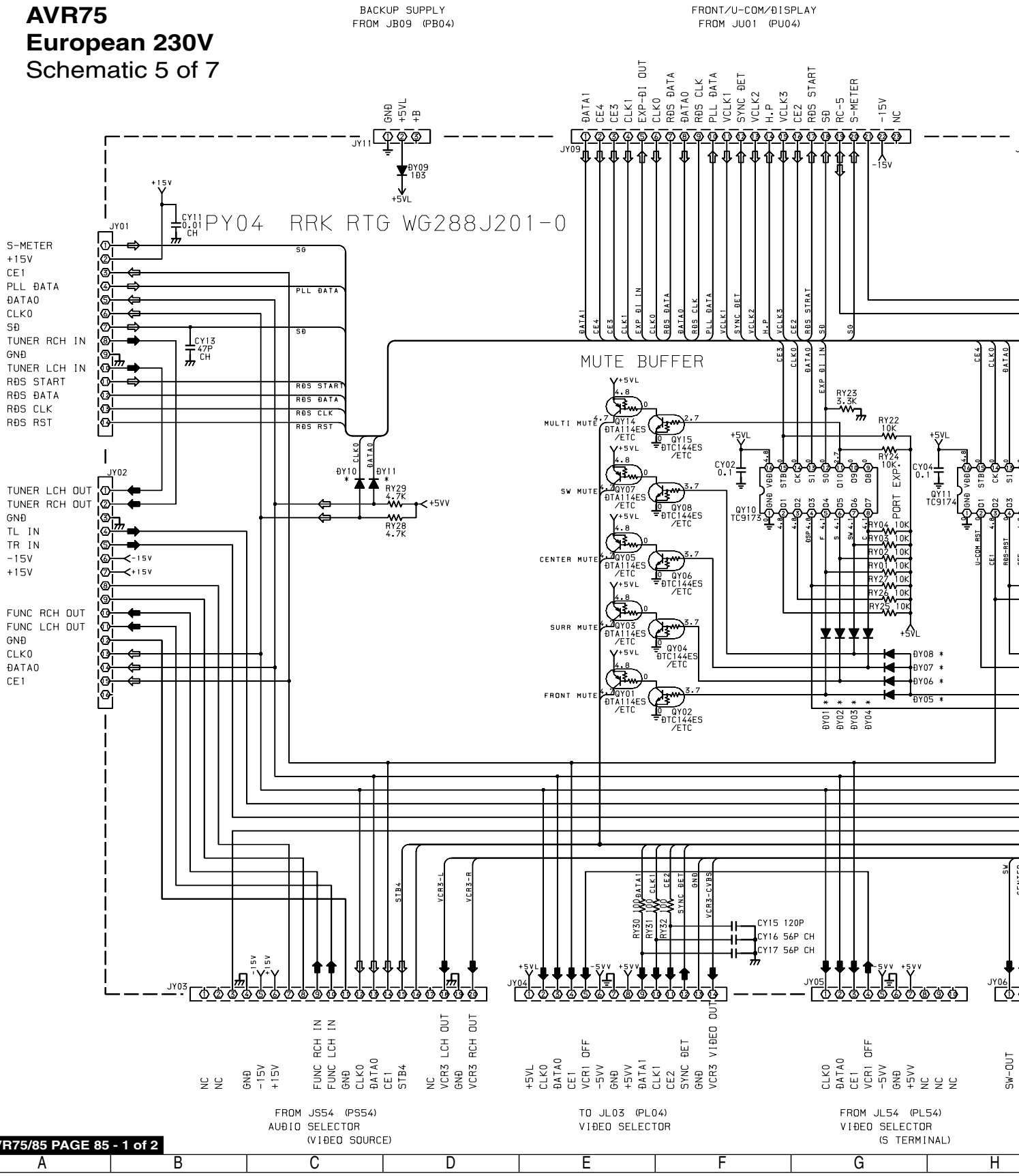
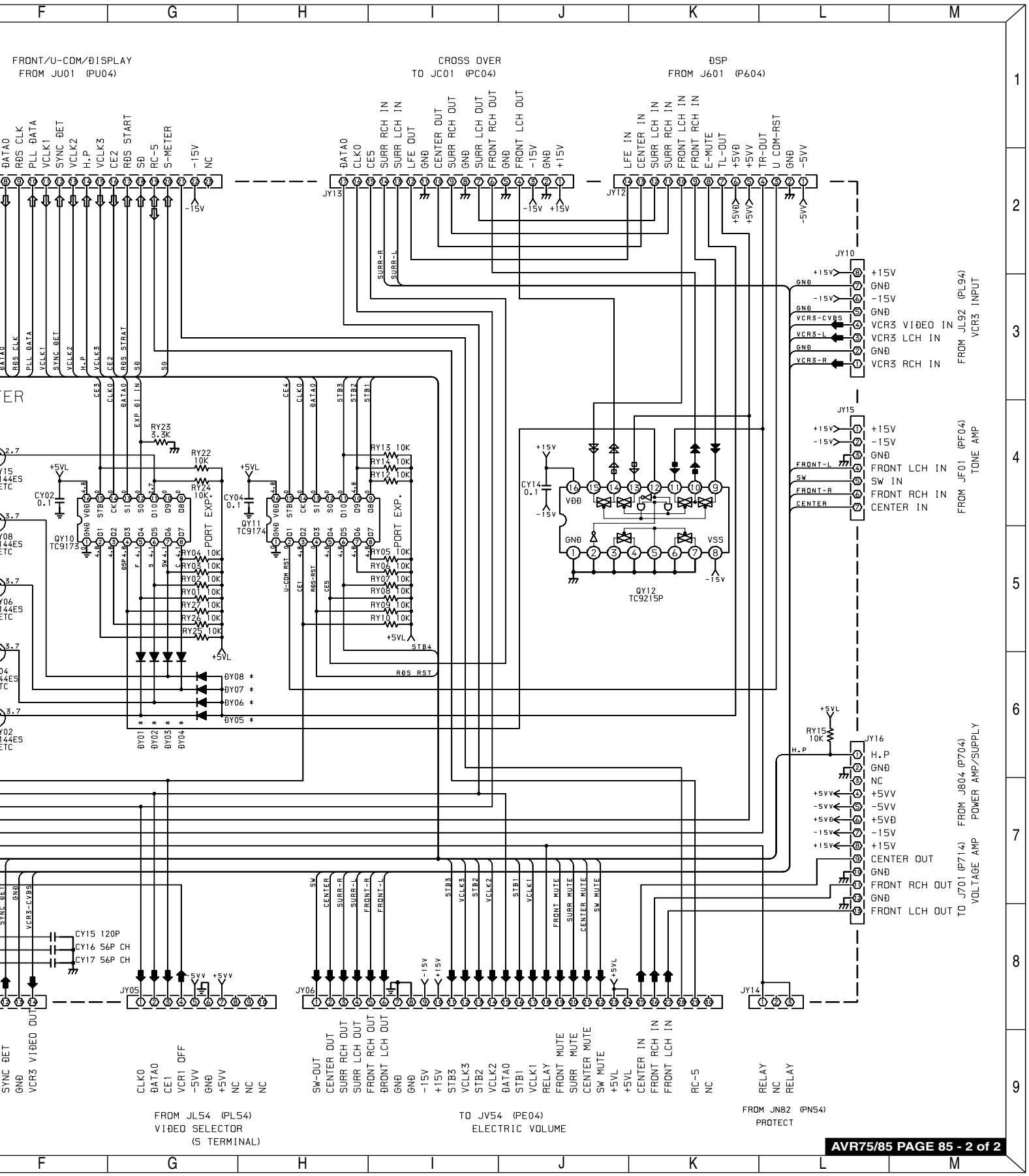
AVR75/85 PAGE 85 - 2 of 2

AVR75
European 230V
Schematic 5 of 7



HEMATIC DIAGRAM 5 of 7 (CONNECT PCB PY04)



AVR75 (230V) SCHEMATIC DIAGRAM 6 of 7 (VOLTAGE AMP PCB - P714, MAIN PCB - P704, SURROUND AMP PCB - PP04, SPEAKER TERMINAL - P754, HEADPHONE PCB - PW04, SPEAKER PROTECT PCB - PN54, STANDBY PCB - PB04, POWER SWITCH PCB - PU94)

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AVR75/85 PAGE 86 - 2 of 4

P714 RMA WA288J601-0
RHP VOLTAGE AMP

HEAD PHONE AMP

P704 RMA WA288J101-0
RPS MAIN POWER AMP / SUPPLY
RMC

FRONT-L POWER AMP

FRONT-R POWER AMP

CENTER POWER AMP

PP04 WA288J402-0
RMB

POWER AMP

SURROUND POWER AMP

FRONT
CENTER
SURROUND

P754 WG288J202-0
RSP

PB04 RBU WA288J404-0

BACK UP SUPPLY

PU94 RPP WA288J507-0
POWER SW

PW04 RHP WA288J508-0

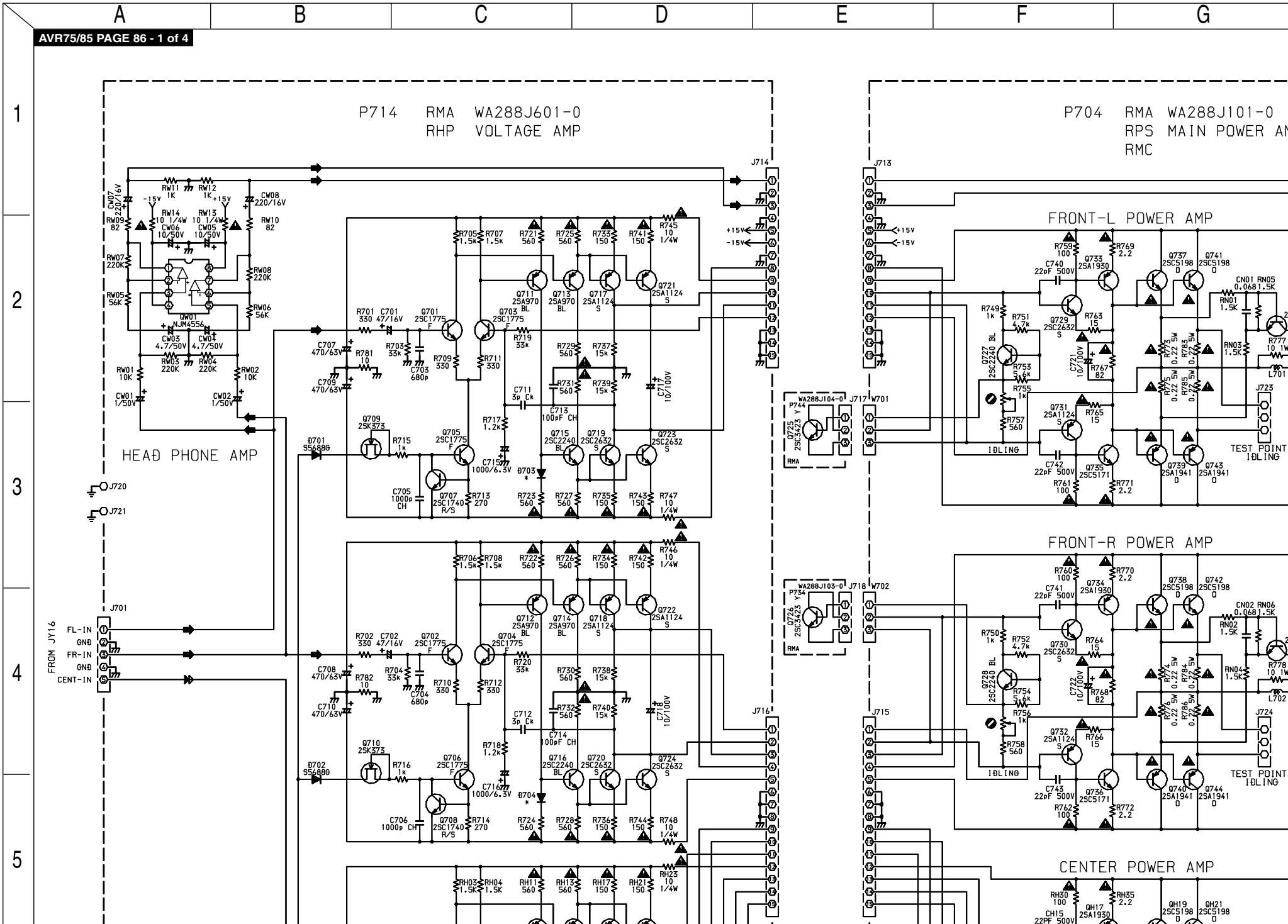
PN54 RMC WA288J506-0

AVR75 European 230V
Schematic 6 of 7

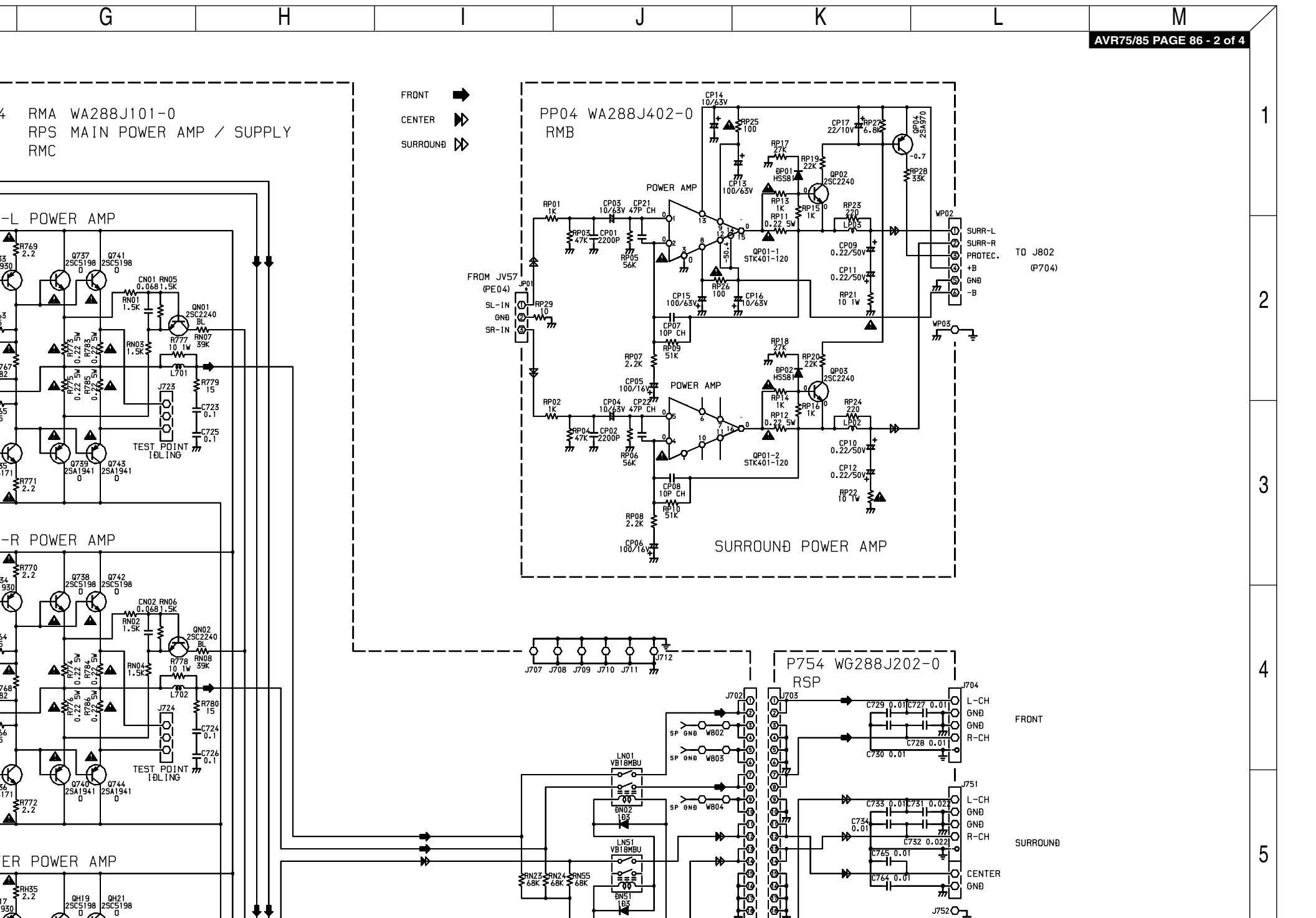
AVR75/85 PAGE 86 - 3 of 4

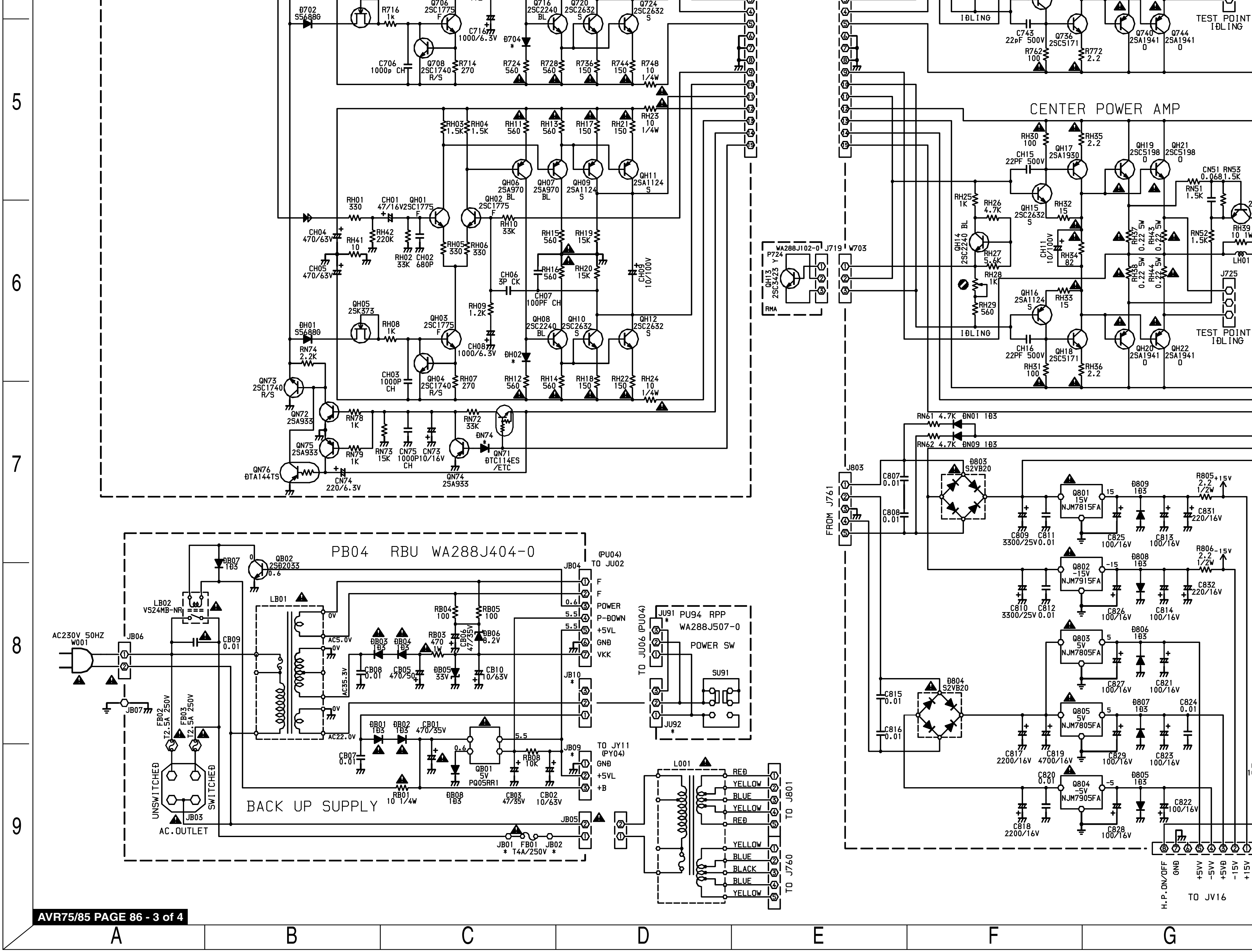
AVR75/85 PAGE 86 - 4 of 4

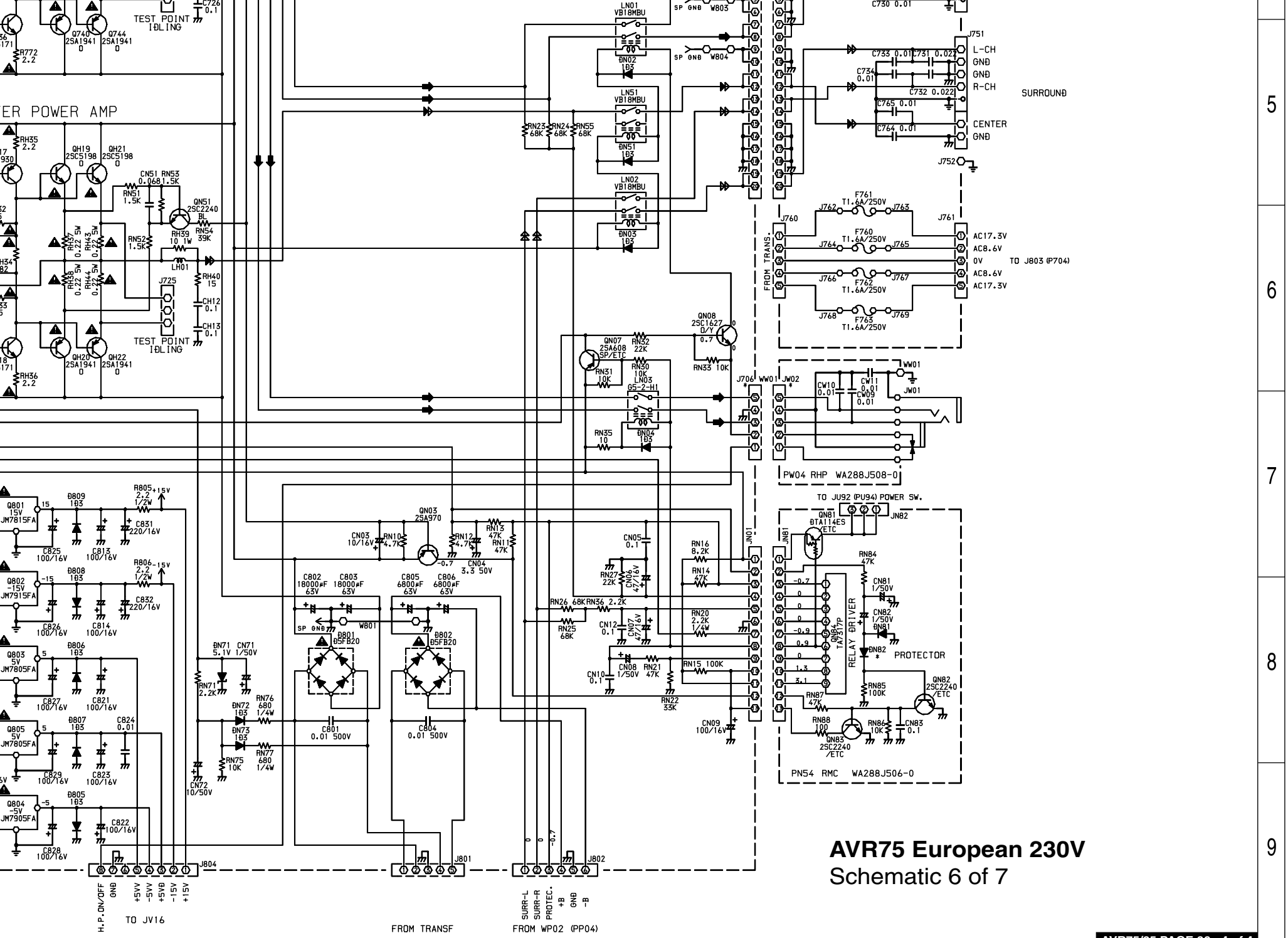
AVR75 (230V) SCHEMATIC DIAGRAM 6 of 7 (VOLTAGE AMP PCB - P714, MAIN PCB - P704, SURROUND AMP PCB - PP04, SPEAKER TERMINAL -



SPEAKER TERMINAL - P754, HEADPHONE PCB - PW04, SPEAKER PROTECT PCB - PN54, STANDBY PCB - PB04, POWER SWITCH PCB - PU94)

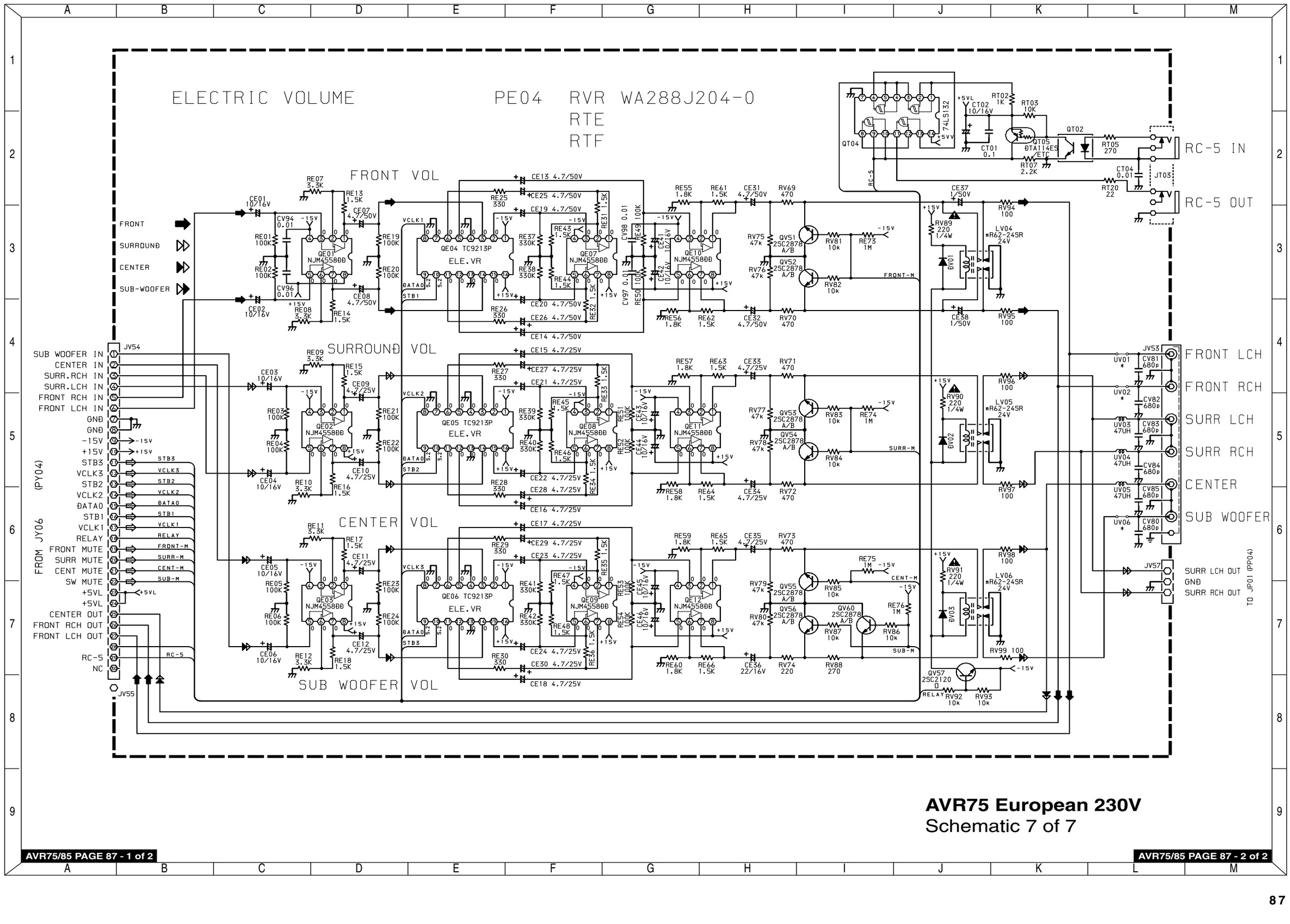



CENTER POWER AMP
PB04 RBU WA288J404-0
BACK UP SUPPLY
PU94 RPP
WA288J507-0
POWER SW
AC230V 50HZ
W001
AC.OUTLET
UNSWITCHED
SWITCHED
TO JU02
TO JY11
TO JU06 (PU04)
TO J801
TO J760
FROM J761
TO JV16
TEST POINT
IDLING
F
POWER
P-DOWN
+5VL
GND
VKK
+B
RED
YELLOW
BLUE
BLACK
H.P.ON/OFF
+5VV
-5VV
+5VD
-15V
+15V
A
B
C
D
E
F
G
5
6
7
8
9



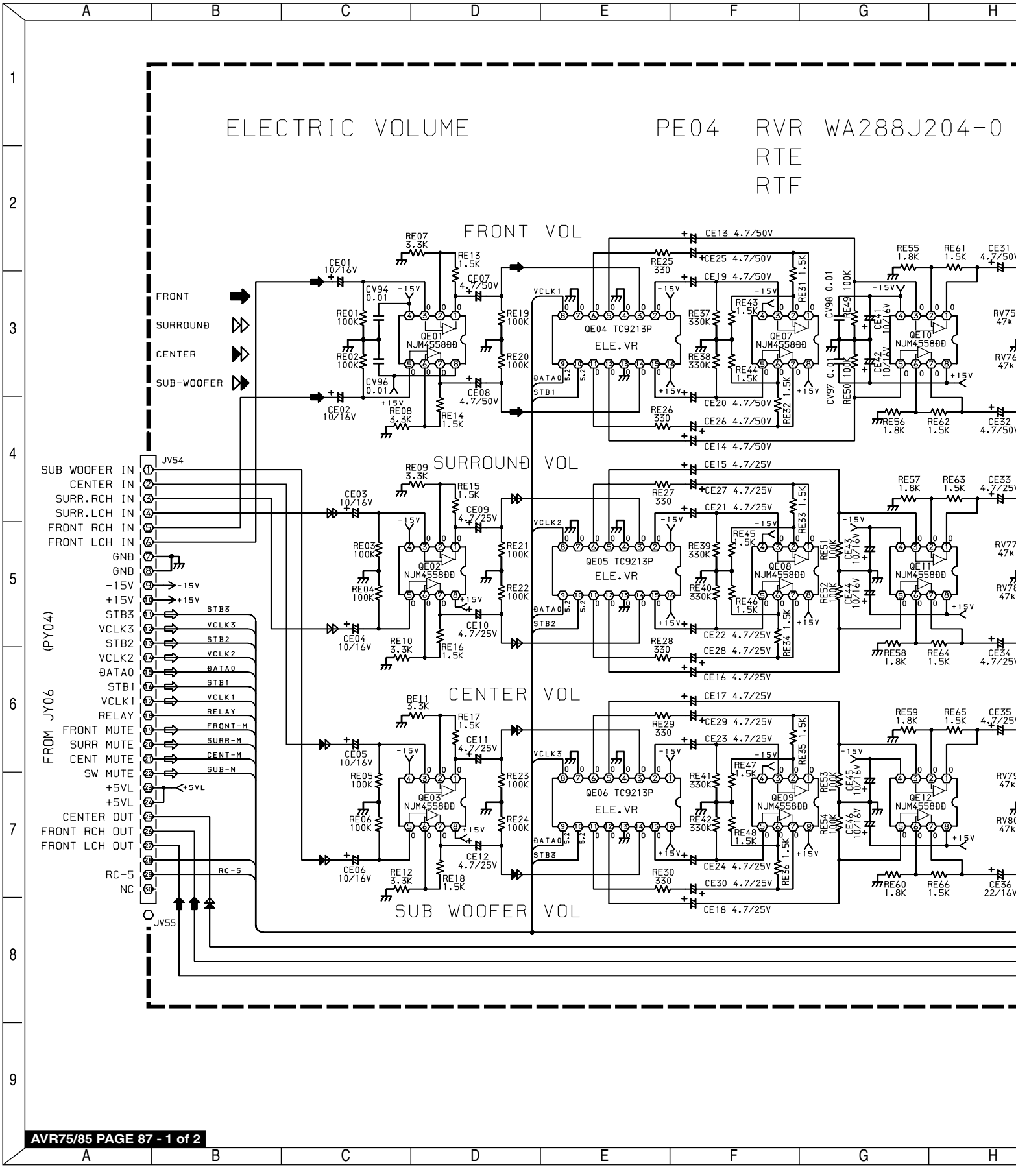
AVR75 European 230V
Schematic 6 of 7

AVR75 (230V) SCHEMATIC DIAGRAM 7 of 7 ELECTRONIC VOLUME CONTROL PCB, PE04

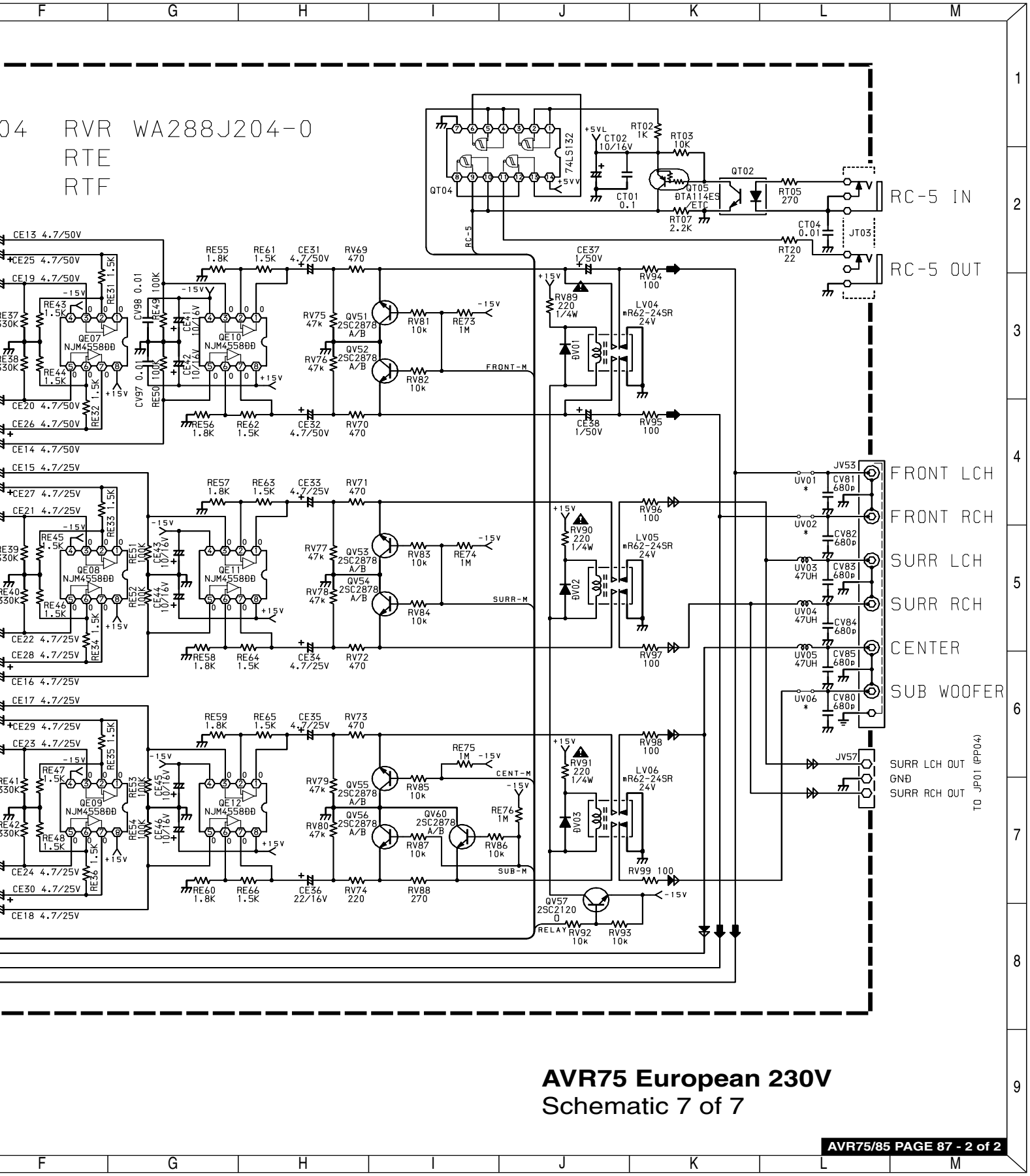


AVR75 European 230V
Schematic 7 of 7

AVR75 (230V) SCHEMATIC DIAGRAM 7 of 7 ELECTRONIC V



AGRAM 7 of 7 ELECTRONIC VOLUME CONTROL PCB, PE04



AVR75 European 230V
Schematic 7 of 7

AVR85 (120V) SCHEMATIC DIAGRAM 1 of 8 (FRONT PCB - PU04, MASTER VOLUME PCB - PU54, AUX IN - PL94)

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FRONT/U-COM/DISPLAY PU04 WA288J501-0 RLC

VISUAL SIGNAL LEVEL CH 00 FM 87.50 MHZ AUTO STEREO

MODE PRESET/SCAN PRESET/UP PRESET/DN MULTI CLEAR LD/DVD VCR3 VCR2 VCR1 MEMO TV TAPE2 TAPE1 CD TUNER DSP/MODE- DSP MODE+ COAX OPT RF NIGHT ATT OSD

QU01 TMP87CP71F

TAPE-MON DU19 LT3044B/RED QU02 DTC114ES /ETC

QU03 DTA114ES /ETC QU04 DTC144ES

QU05 74HC541 QU06 2SC536 SP/ETC QU07 2SC536 SP/ETC QU08 DTC144ES QU09 2SA608 SP/ETC QU10 2SC536 SP/ETC QU11 DTA144ES QU12 2SC536 SP/ETC QU13 DTA114TS QU14 DTC144ES /ETC QU15 DTA144ES /ETC QU16 RPM-670CBR

XU01 8.00MHZ

FROM JB04 (PB04) VKK GND +5VL P-DOWN POWER F F JU02

TO JY09 (PY04) DATA1 CE4 CE3 CLK1 EXP-DI IN CLKO RDS DATA DATAO RDS CLK PLL DATA VCLK1 SYNC DET VCLK2 H.P VCLK3 CE2 RDS START SD RC-5 S-METER MULTI -15V NC

FROM JU91 (PU94)

TO J651 (P604) NC CLK IF DATAS IF DATAM IF ACK GND +5VD IF REQ

PL94 RLD WA2288J504-0 WL92 MUTE TUN/UP TUN/DN

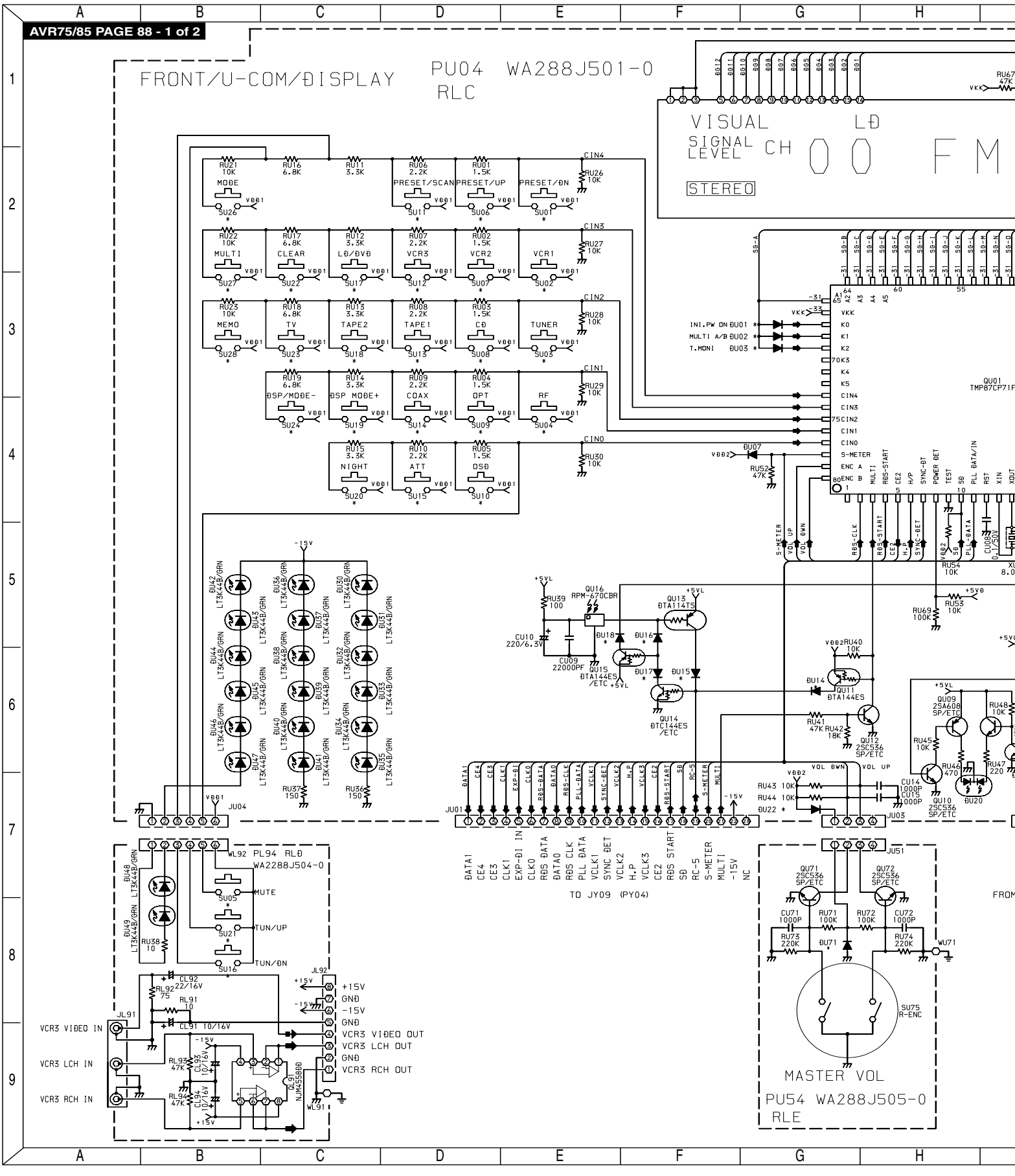
VCR3 VIDEO IN VCR3 LCH IN VCR3 RCH IN VCR3 VIDEO OUT VCR3 LCH OUT GND VCR3 RCH OUT

MASTER VOL PU54 WA288J505-0 RLE SU75 R-ENC

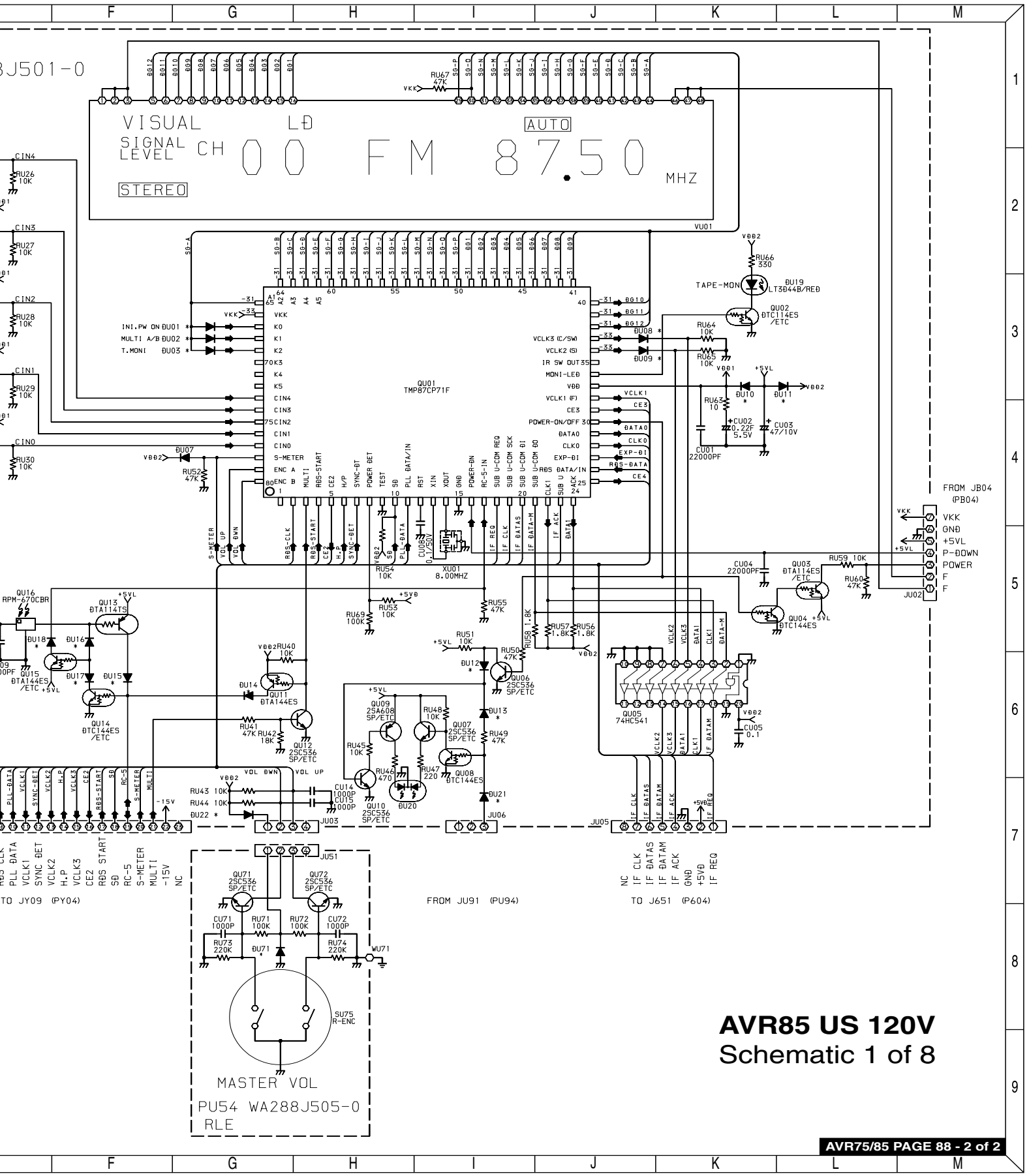
AVR85 US 120V
Schematic 1 of 8

AVR75/85 PAGE 88 - 2 of 2

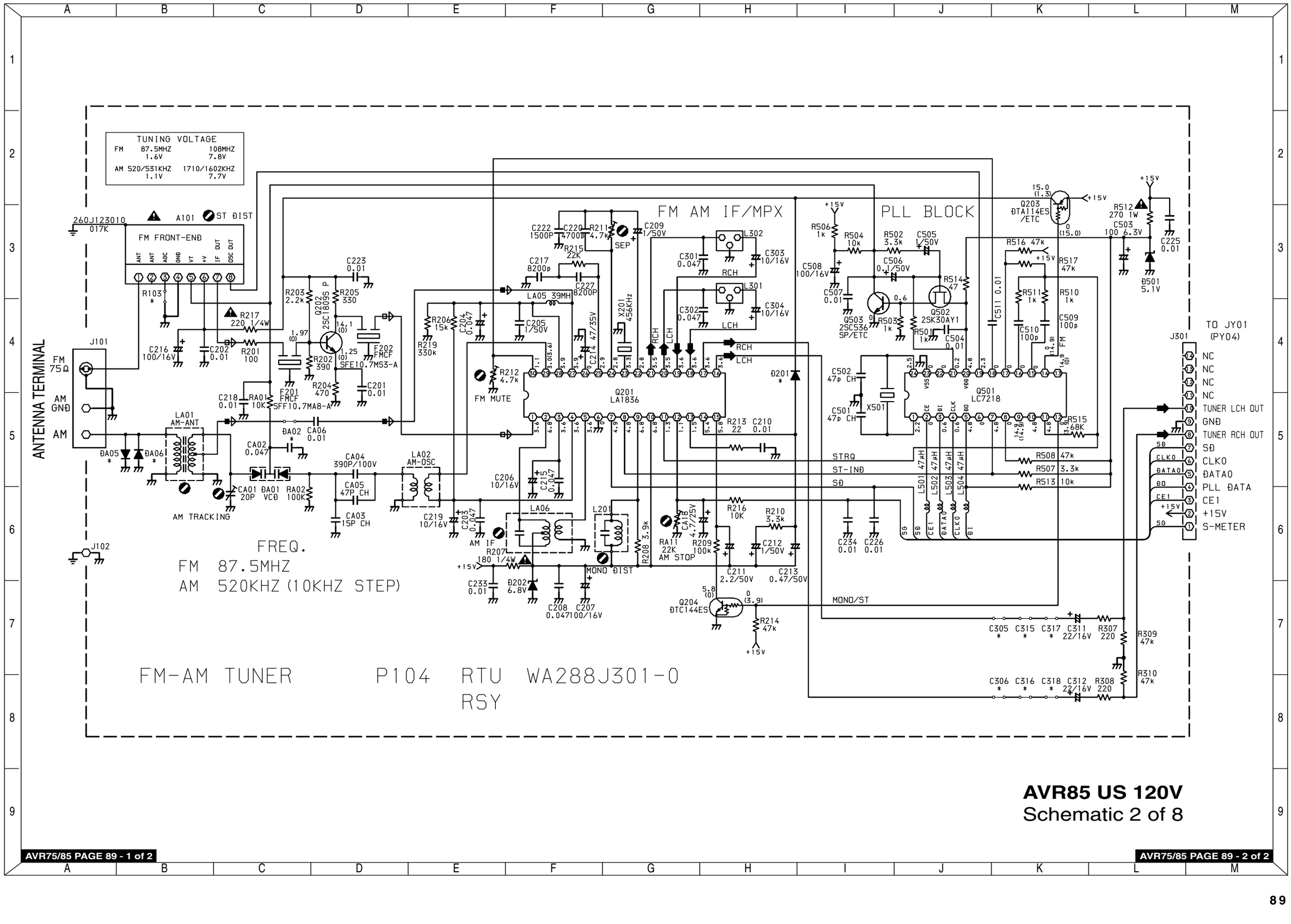
AVR85 (120V) SCHEMATIC DIAGRAM 1 of 8 (FRONT PCB - PU04, MASTER VO



AM 1 of 8 (FRONT PCB - PU04, MASTER VOLUME PCB - PU54, AUX IN - PL94)

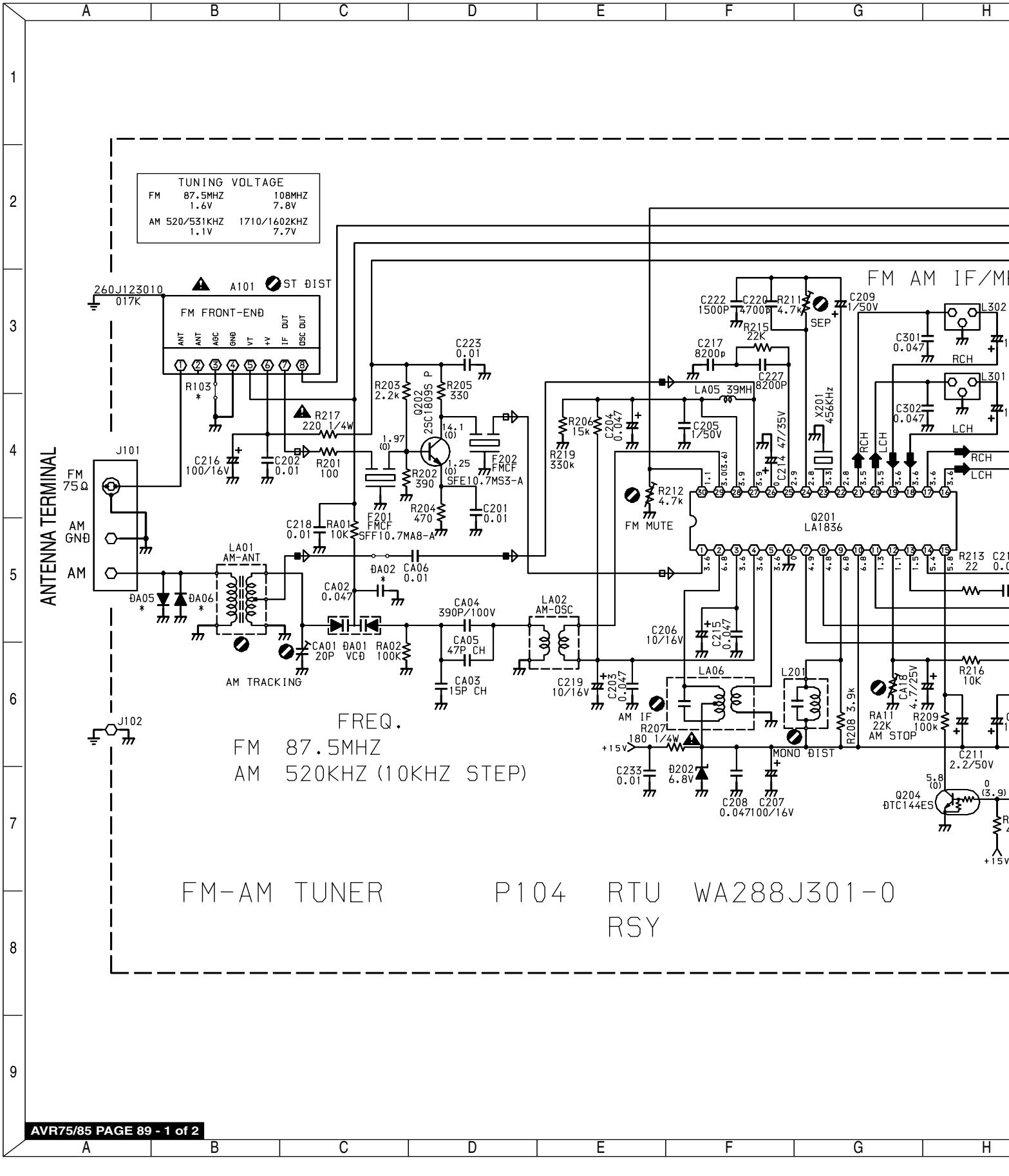


AVR85 (120V) SCHEMATIC DIAGRAM 2 of 8 (TUNER PCB - P104)

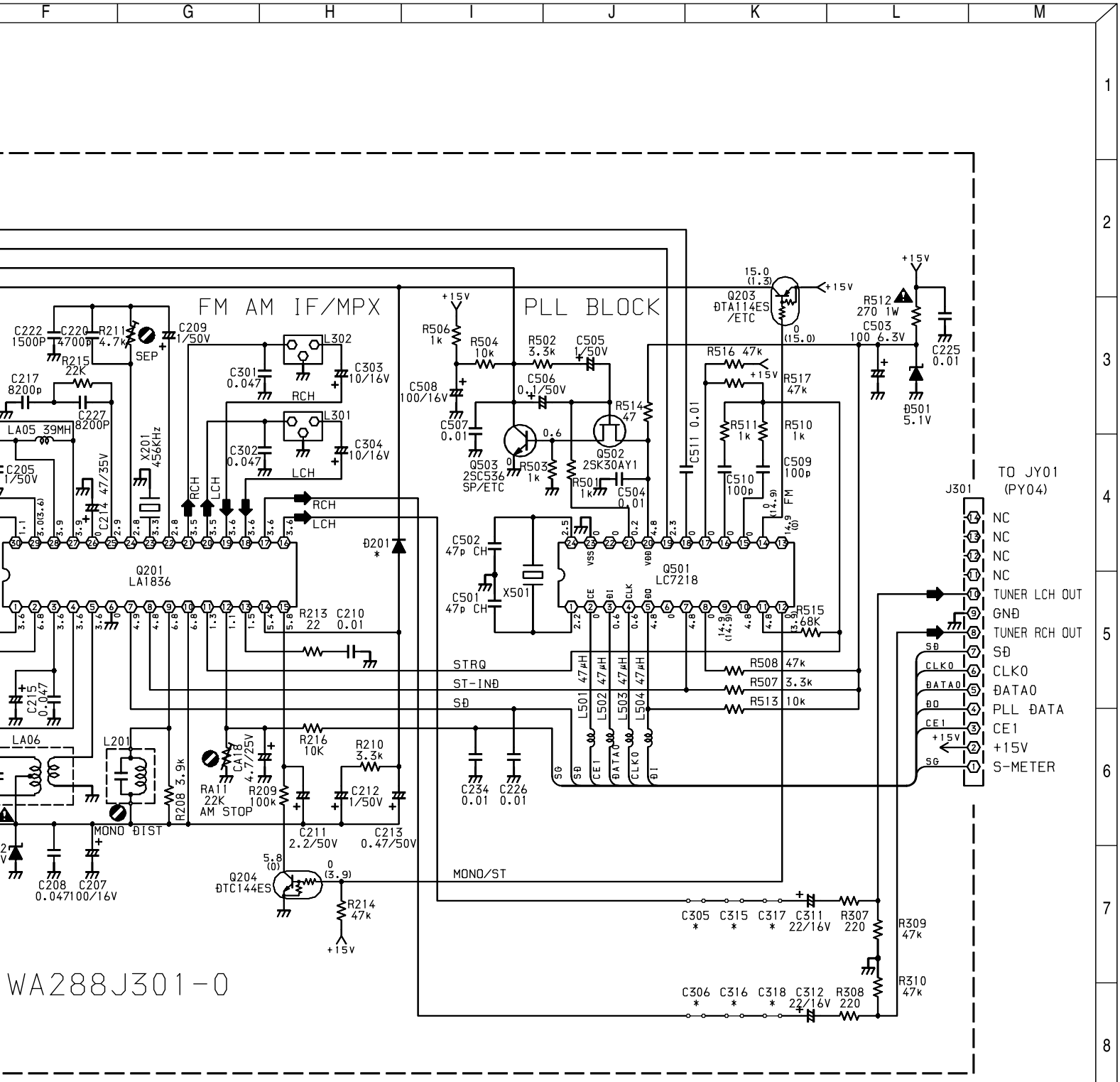


AVR85 US 120V
Schematic 2 of 8

AVR85 (120V) SCHEMATIC DIAGRAM 2 of 8 (TU

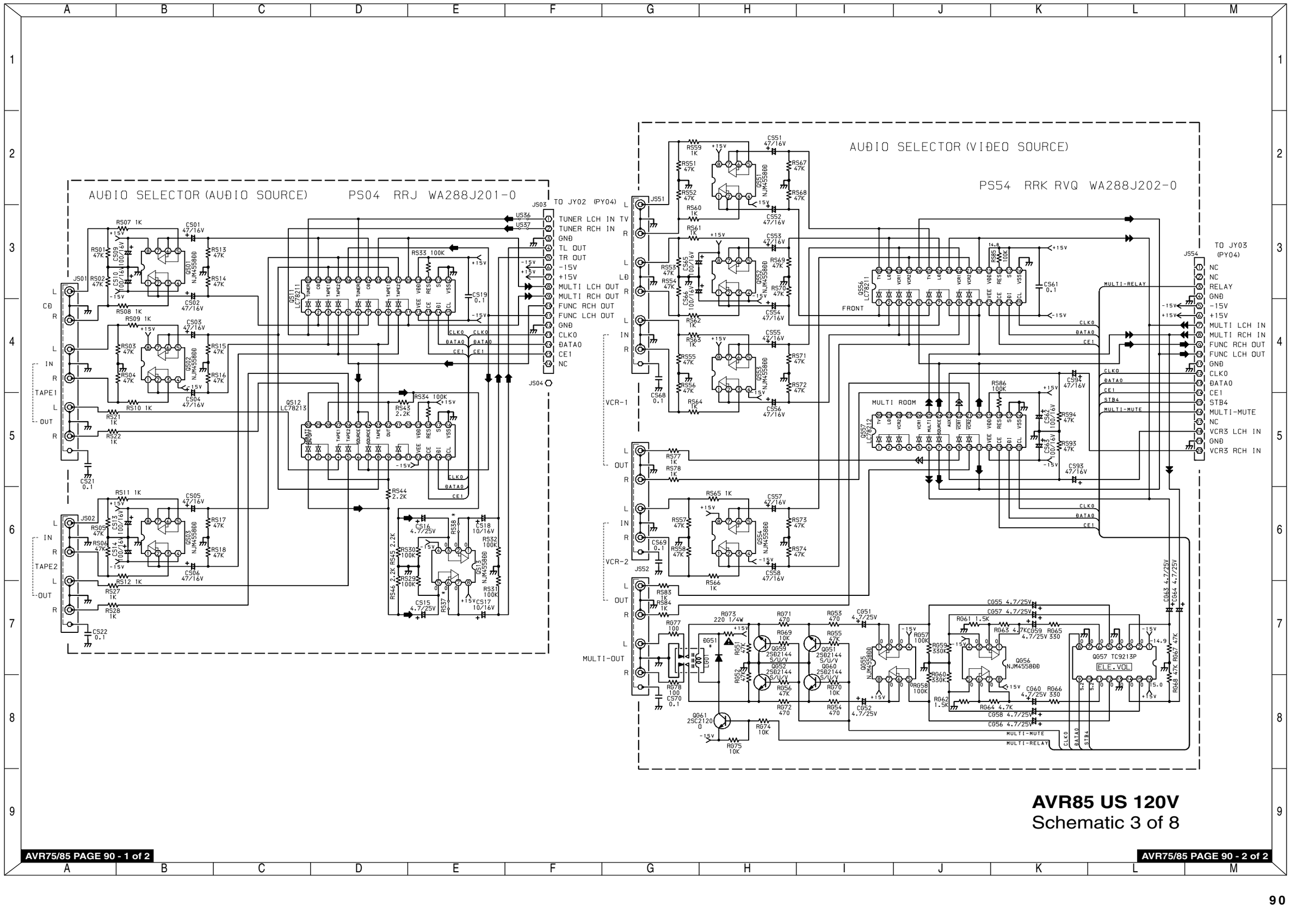


CHEMATIC DIAGRAM 2 of 8 (TUNER PCB - P104)

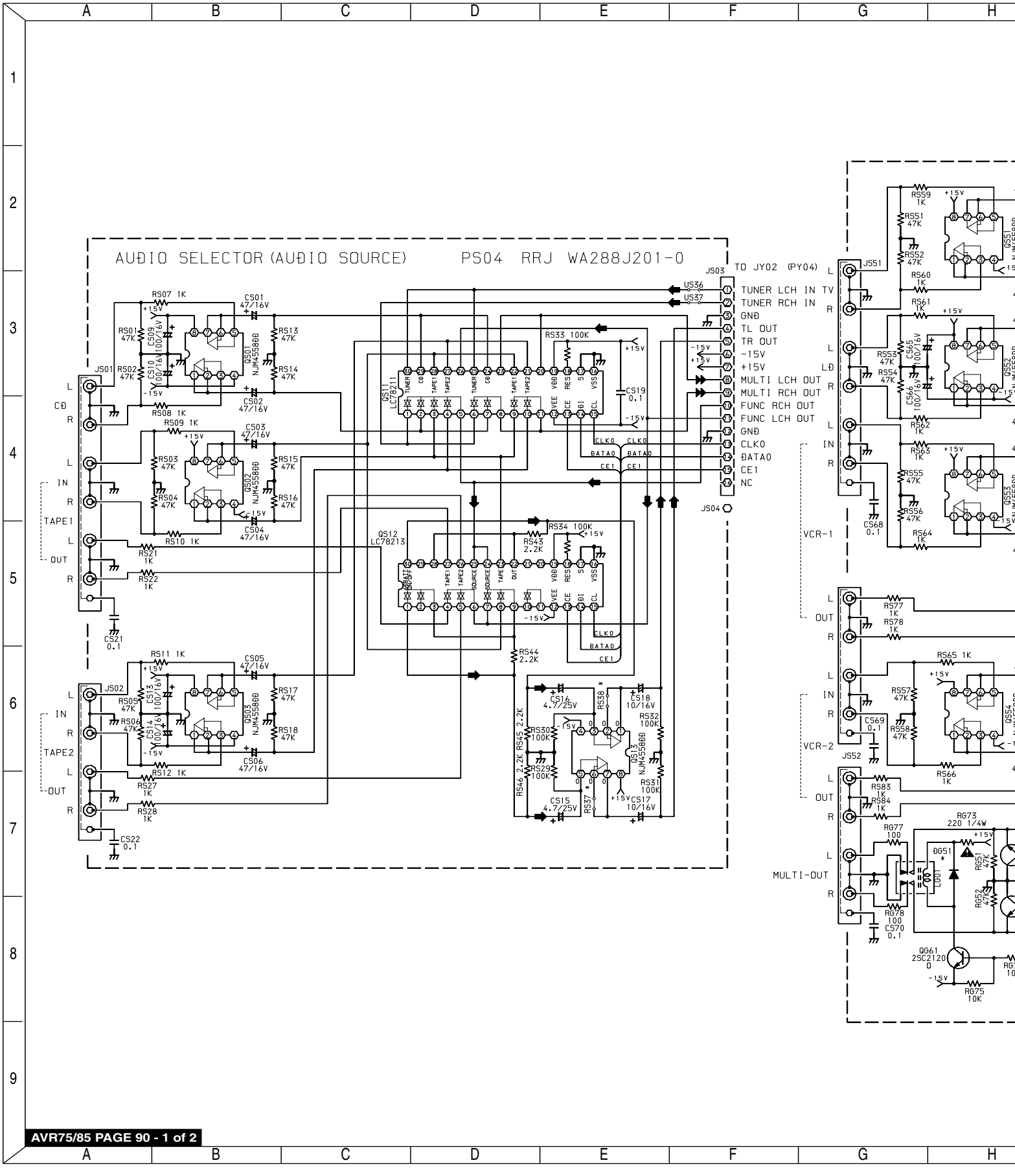


AVR85 US 120V
Schematic 2 of 8

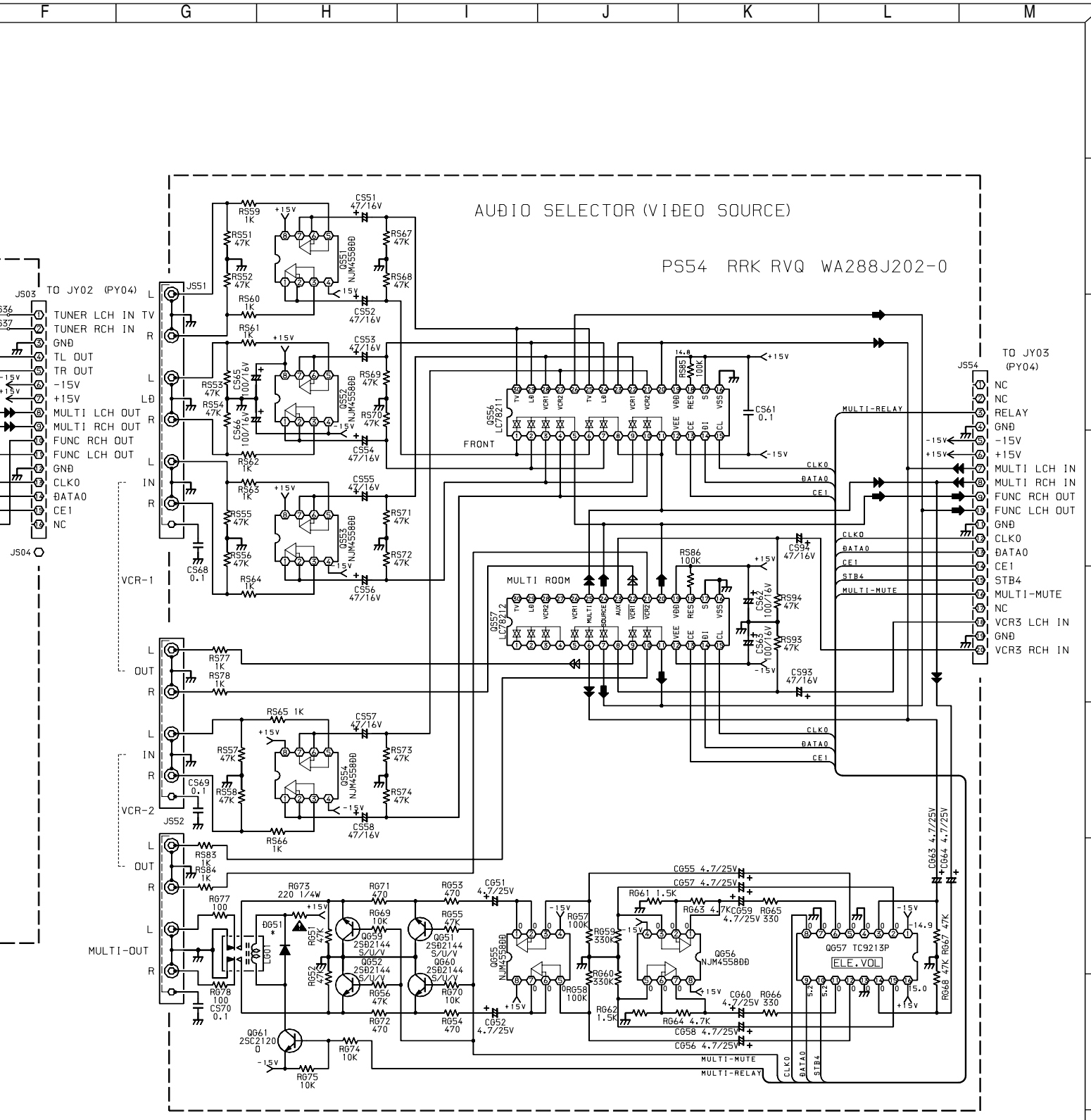
AVR85 (120V) SCHEMATIC DIAGRAM 3 of 8 (AUDIO SELECTOR PCB - PS04, AUDIO/VIDEO PCB - PS54)



AVR85 (120V) SCHEMATIC DIAGRAM 3 of 8 (AUDIO SELECTOR PC



M 3 of 8 (AUDIO SELECTOR PCB - PS04, AUDIO/VIDEO PCB - PS54)



AVR85 US 120V
Schematic 3 of 8

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AVR85 US 120V
Schematic 4 of 8

CROSSOVER PC04 RCR WA288J203-0

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PF04 RTO WA288J503-0

3CH TONE CONT. TREBLE
4CH TONE CONT. BASS

TONE AMP

BALANCE

FROM JX02 (PX04)
TO JY15 (PY04)

VIDEO SELECTOR

TO JY04 (PY04)

CVBS-INPUT

PL04 RVT WA288J203-0

FOR VCR-2 OUT
FOR MONITOR OUT
FOR VCR-1 OUT

TO JY05 (PY04)

VIDEO SELECTOR
S TERMINAL

PL54 RVS WA288J502-0

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AVR75/85 PAGE 91 - 4 of 4

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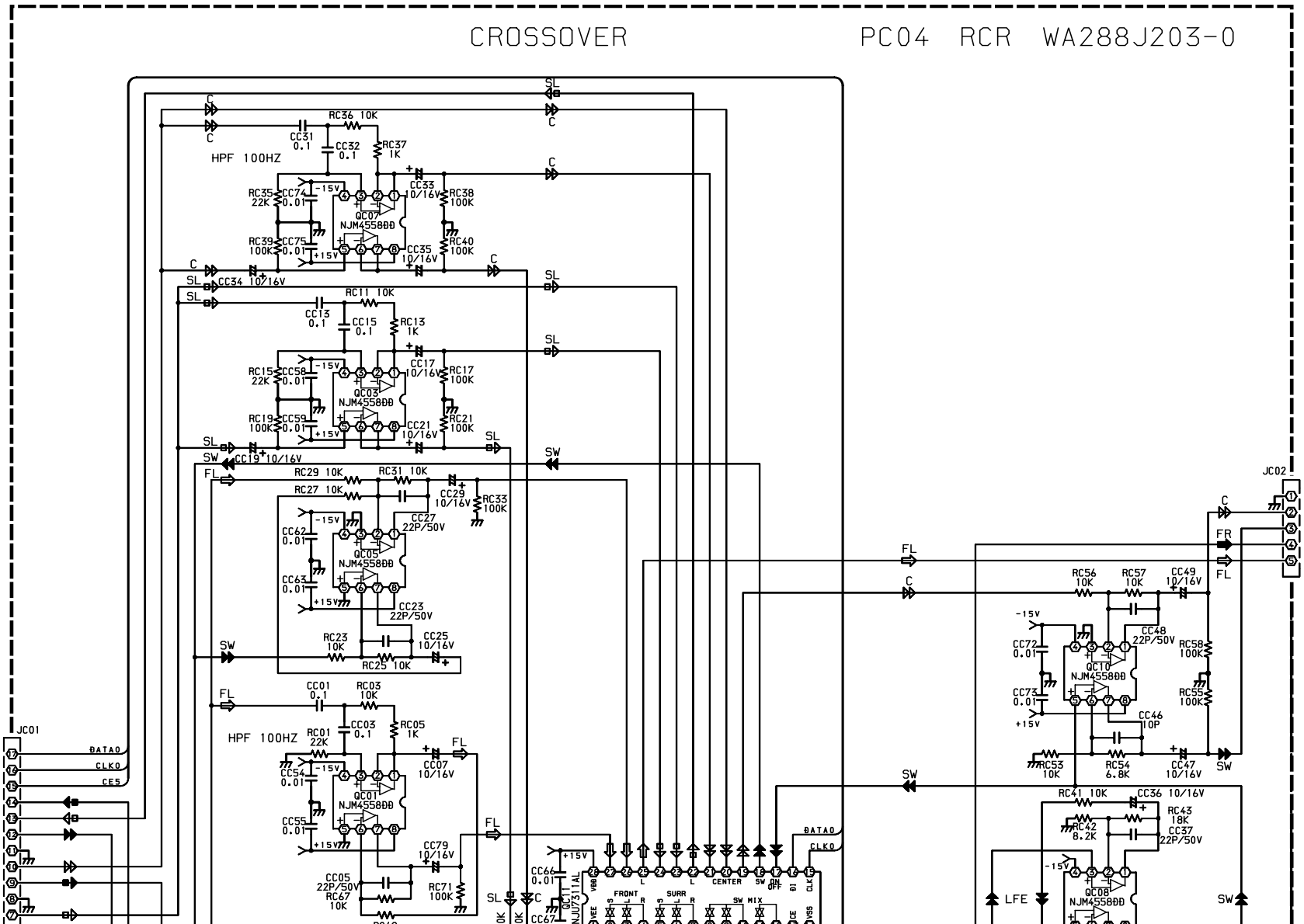
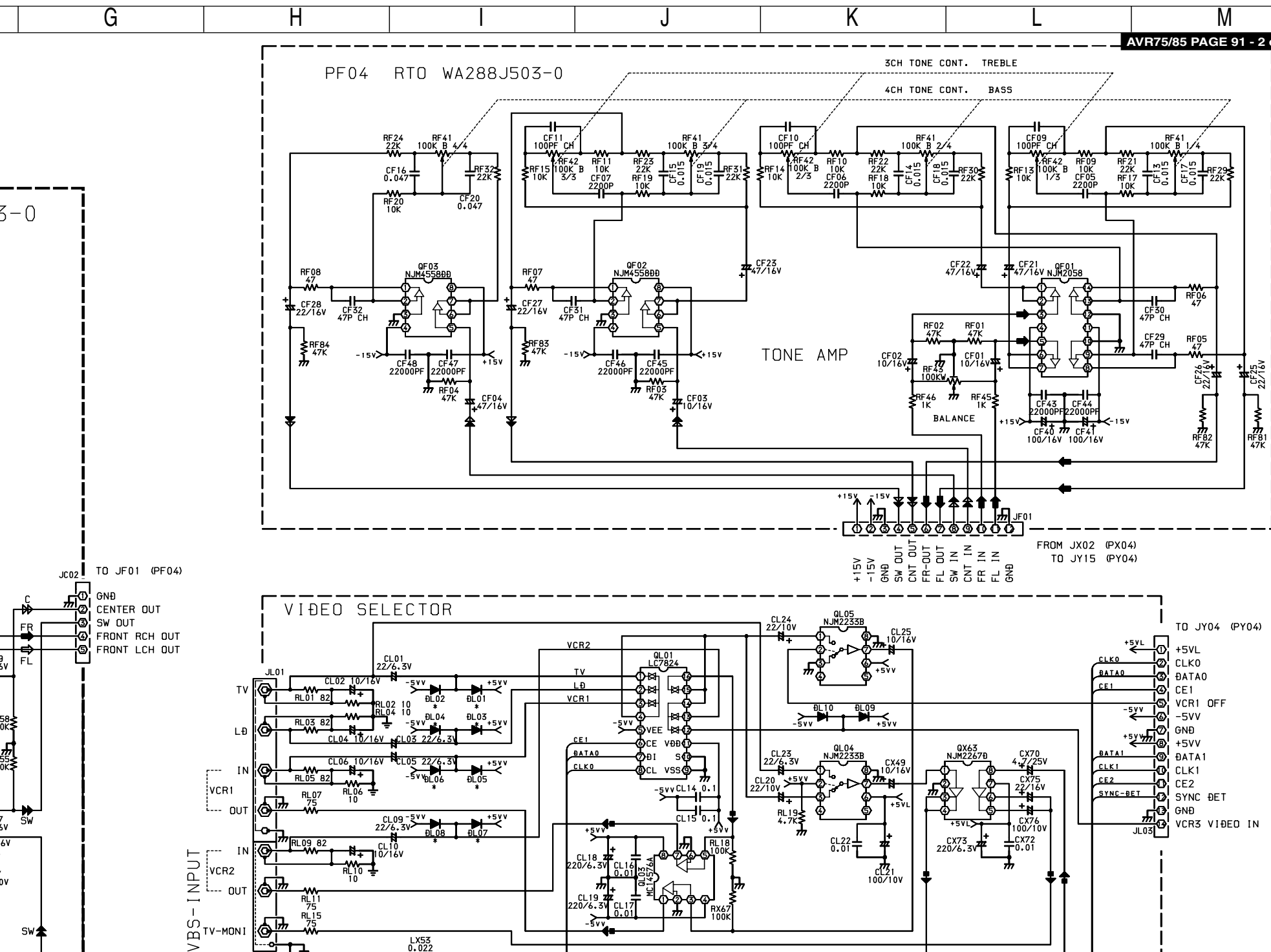
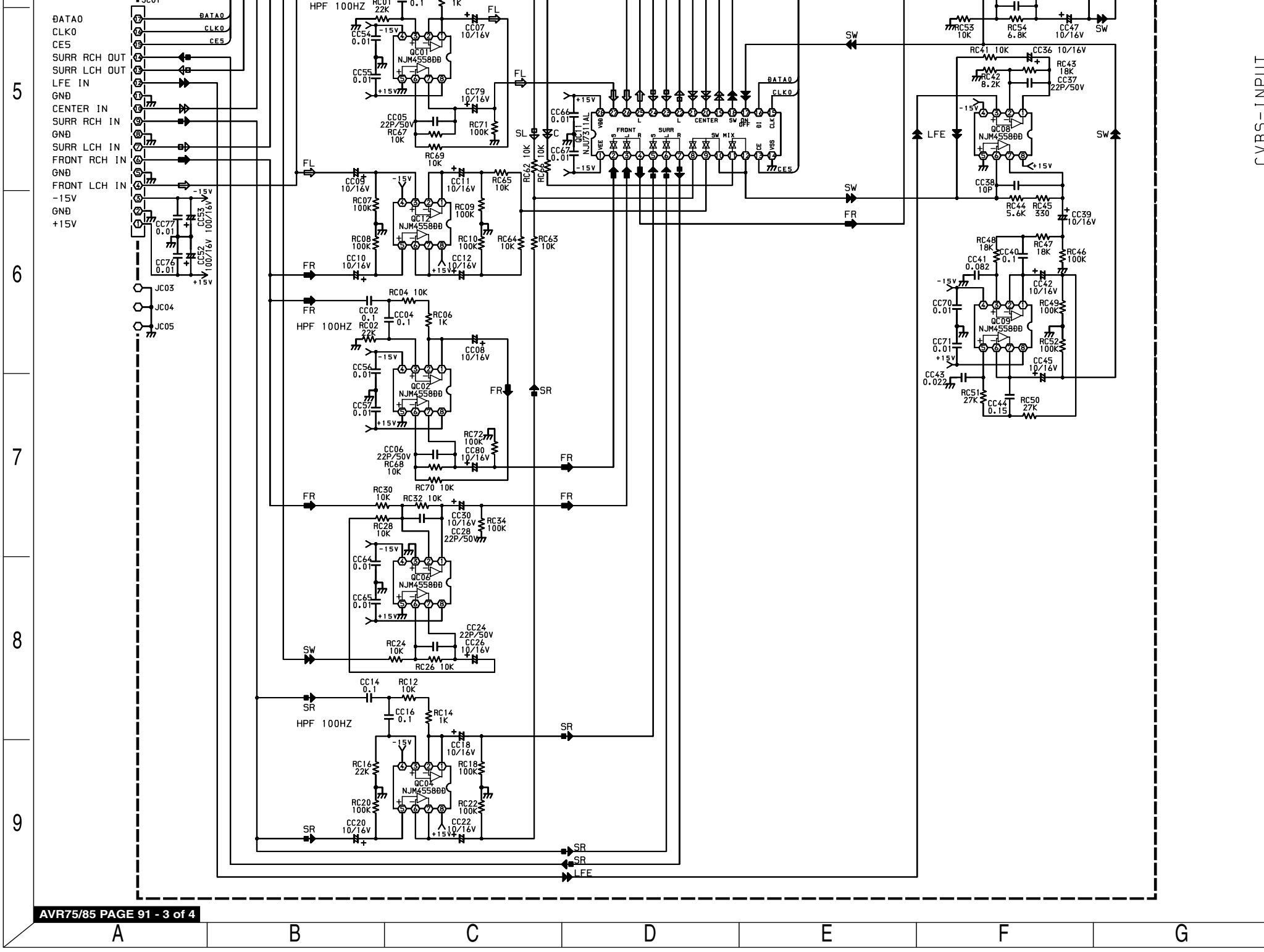
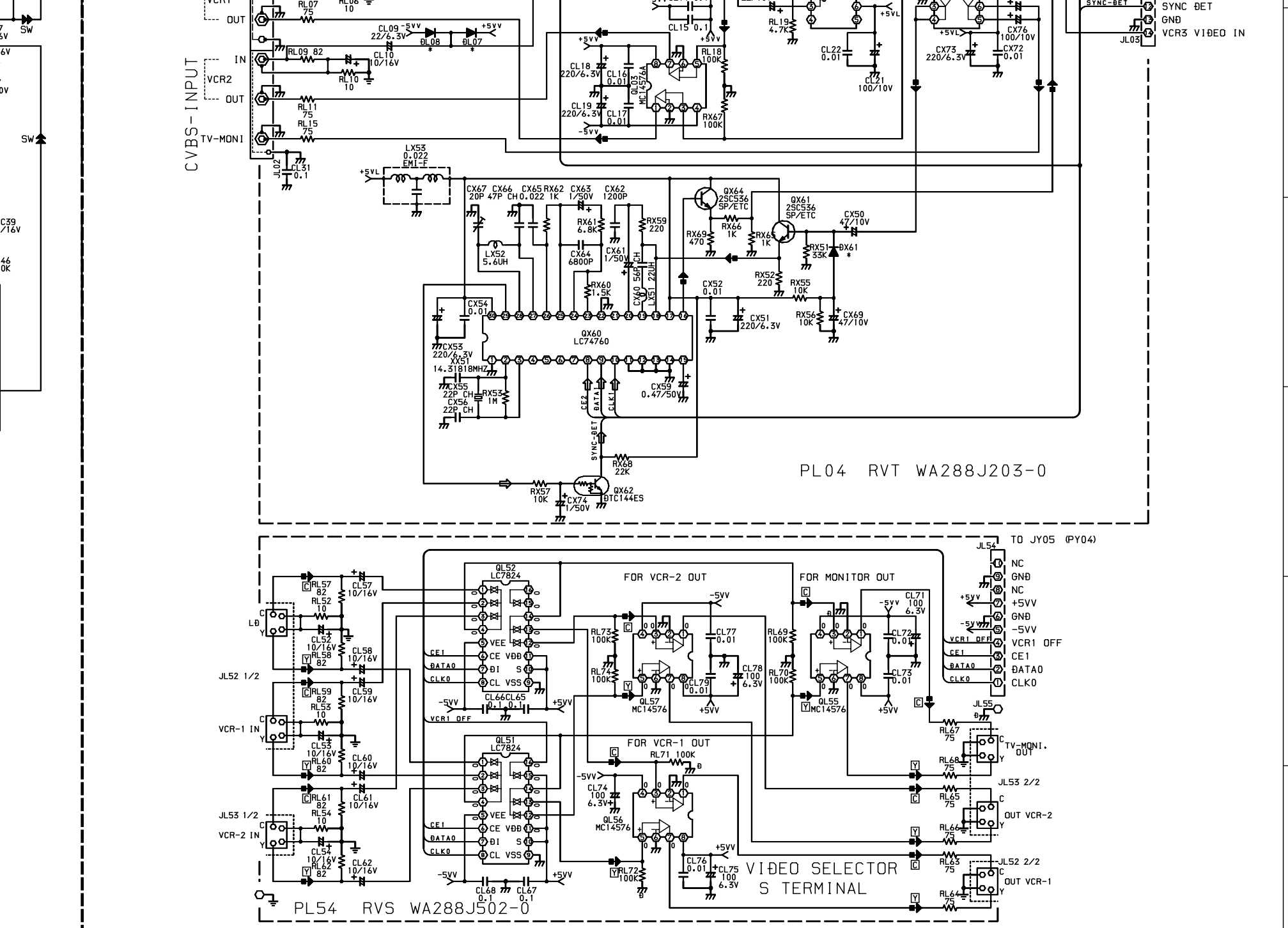
AVR85 US 120V
Schematic 4 of 8



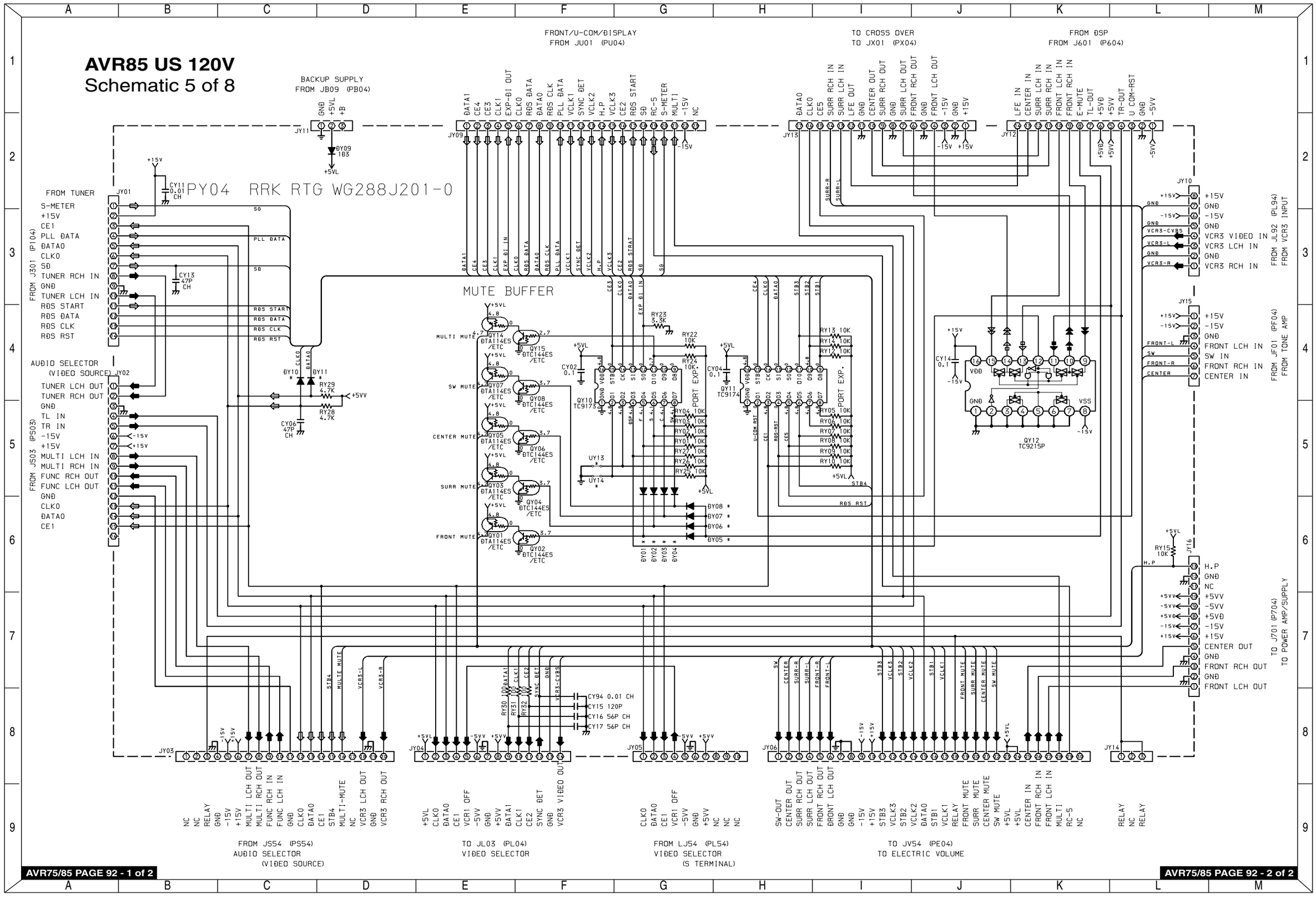
PC04, TONE CONTROL PCB - PF04, VIDEO SELECTOR PCB - PL04, S-VIDEO PCB - PL54)



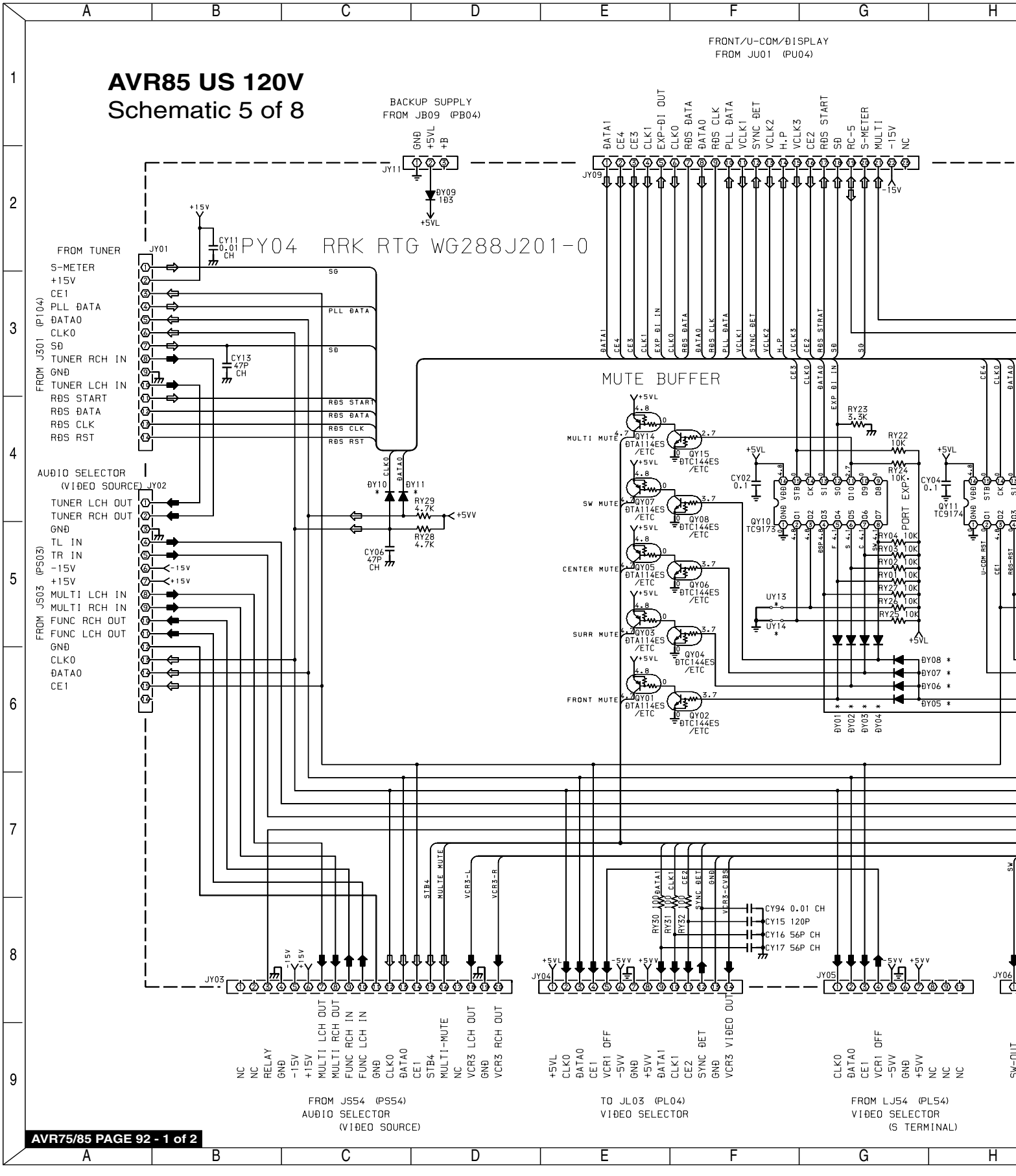

ÐATAO
CLKO
CE5
SURR RCH OUT
SURR LCH OUT
LFE IN
GNÐ
CENTER IN
SURR RCH IN
GNÐ
SURR LCH IN
FRONT RCH IN
GNÐ
FRONT LCH IN
-15V
GNÐ
+15V
JC03
JC04
JC05
HPF 100HZ
NJM4558ÐÐ
NJU7311AL
FRONT
SURR
CENTER
SW MIX
FL
FR
SL
SR
SW
LFE
C
HPF 100HZ
HPF 100HZ


CVBS-INPUT
OUT
IN
VCR2
OUT
TV-MONI
SYNC ÐET
GNÐ
VCR3 VIÐEO IN
PL04 RVT WA288J203-0
QX60
LC74760
QX62
DTC144ES
TO JY05 (PY04)
NC
GNÐ
NC
+5VV
GNÐ
-5VV
VCR1 OFF
CE1
ÐATAO
CLKO
FOR VCR-2 OUT
FOR MONITOR OUT
FOR VCR-1 OUT
JL52 1/2
VCR-1 IN
JL53 1/2
VCR-2 IN
TV-MONI. OUT
JL53 2/2
OUT VCR-2
JL52 2/2
OUT VCR-1
VIÐEO SELECTOR
S TERMINAL
PL54 RVS WA288J502-0

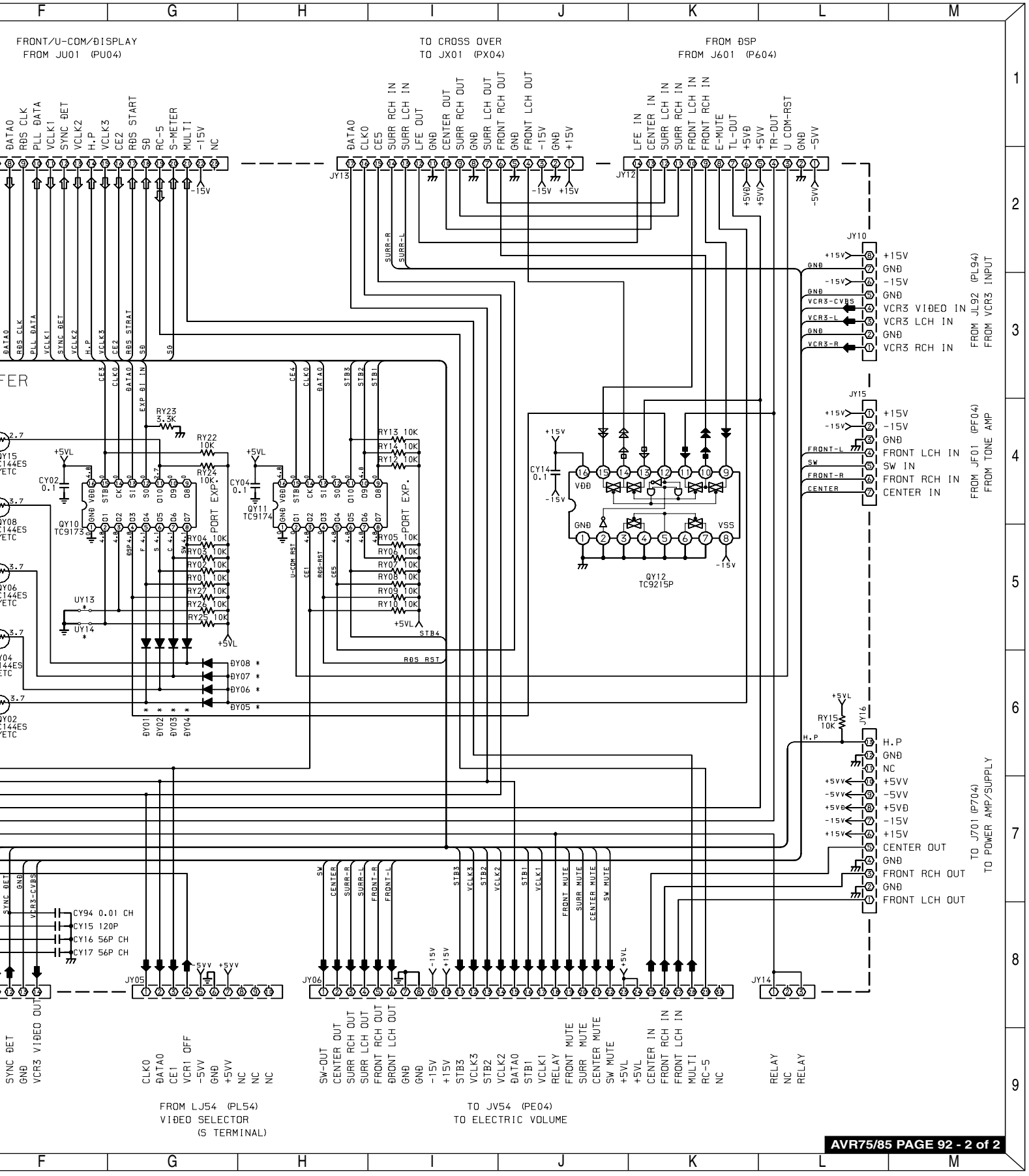
AVR85 (120V) SCHEMATIC DIAGRAM 5 of 8 (CONNECT PCB - PY04)



AVR85 (120V) SCHEMATIC DIAGRAM 5 of 8 (CON



EMATIC DIAGRAM 5 of 8 (CONNECT PCB - PY04)



AVR85 (120V) SCHEMATIC DIAGRAM 6 of 8 (VOLTAGE AMP PCB - P714, MAIN PCB - P704, SURROUND AMP PCB - PP04, SPEAKER TERMINAL - P754, HEADPHONE PCB - PW04, SPEAKER PROTECT PCB - PN54, STANDBY PCB - PB04, POWER SWITCH PCB - PU94)

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P714 RMA WA288J601-0
RHP

HEAD PHONE AMP

P704 RMA WA288J101-0
RPS

FRONT-L POWER AMP

FRONT-R POWER AMP

CENTER POWER AMP

TEST POINT
IDLING

PP04 WA288J302-0
RMB

POWER AMP

CENT./SURR. POWER AMP

P754 WG288J202-0
RSP

PB04 RBU WA288J304-0

BACK UP SUPPLY

PU94 RPP
WA288J507-0
POWER SW

PW04 RHP WA288J508-0

PN54 RMC WA288J506-0

PROTECTOR

RELAY DRIVER

AVR85 US 120V
Schematic 6 of 8

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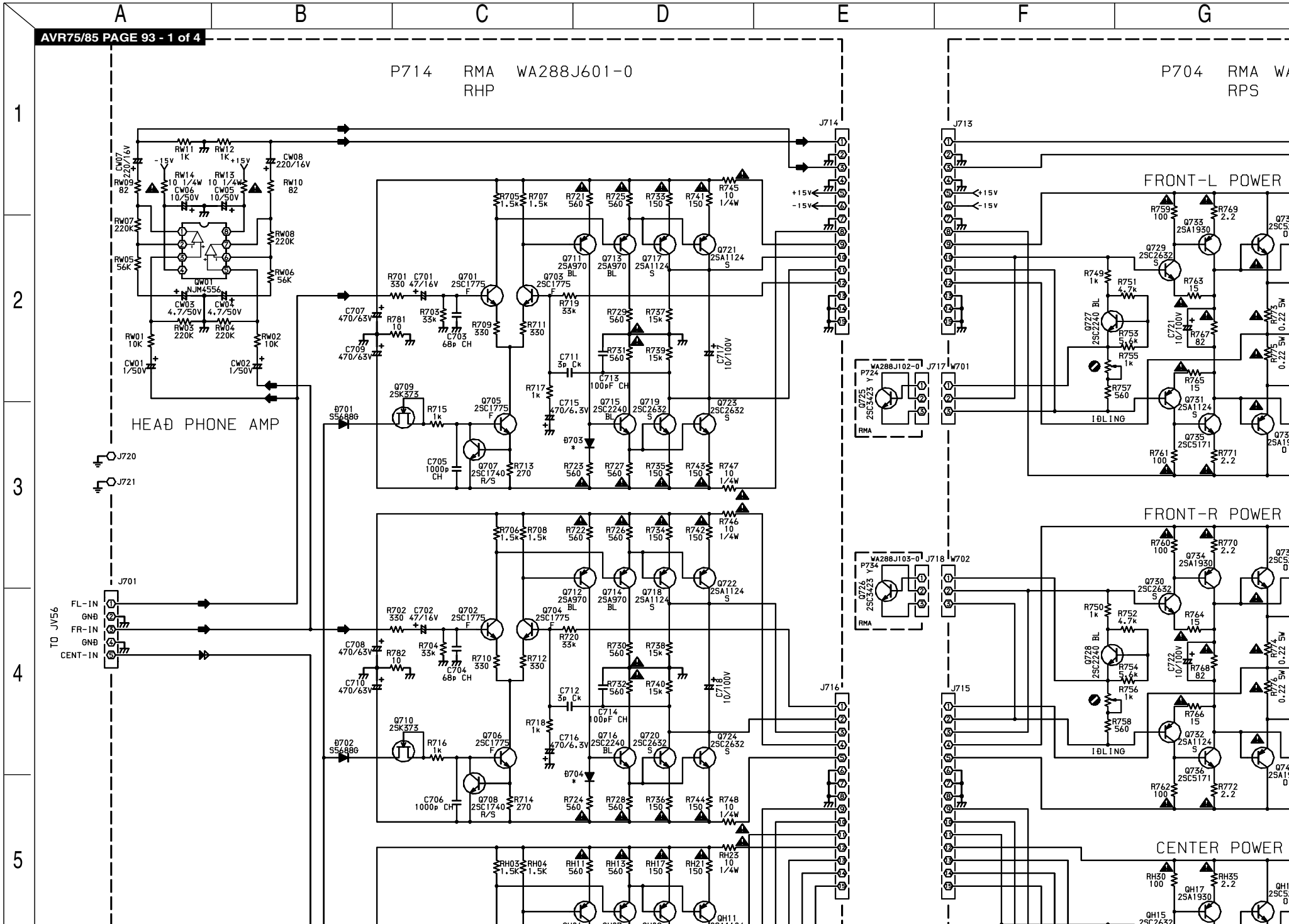
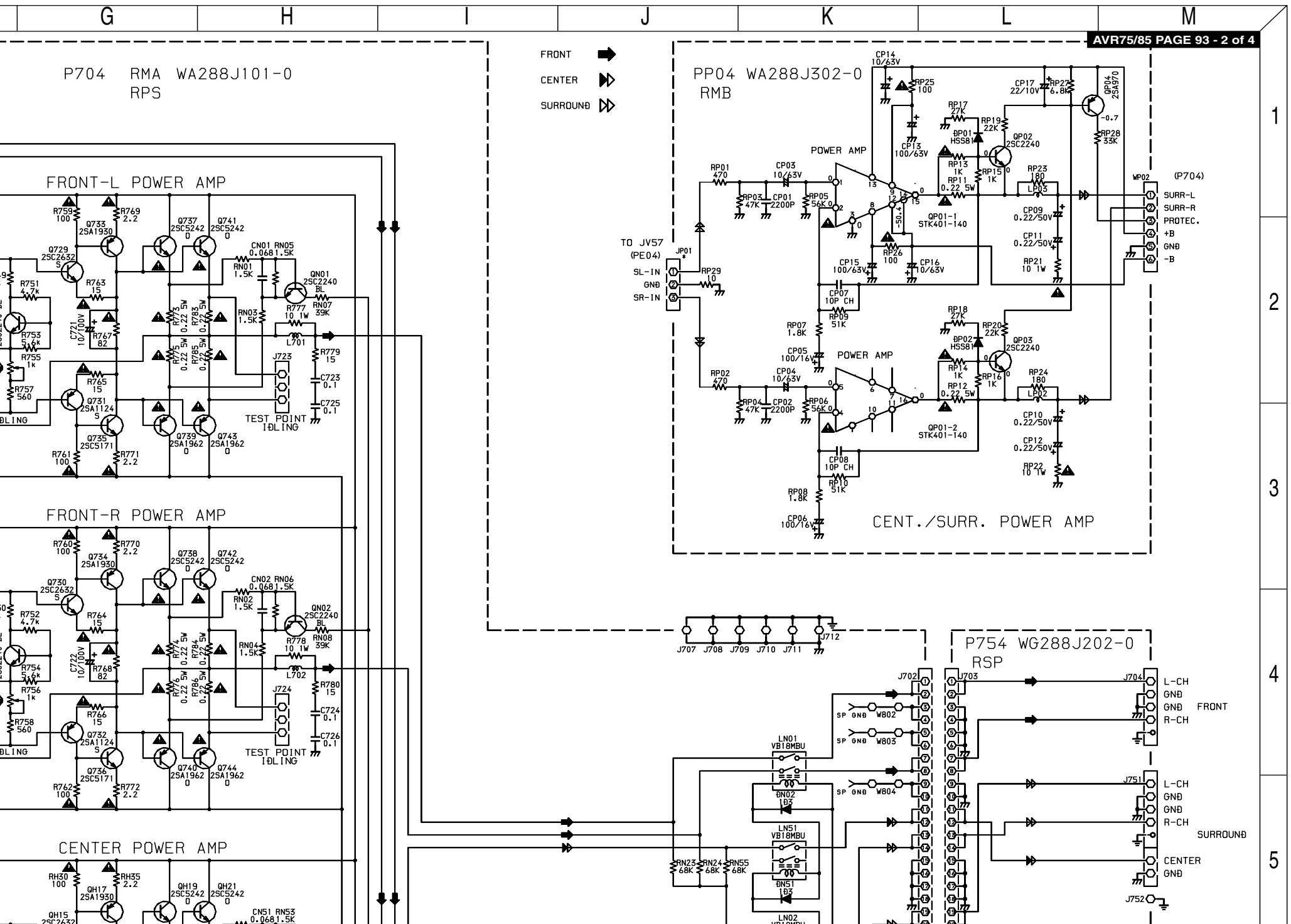
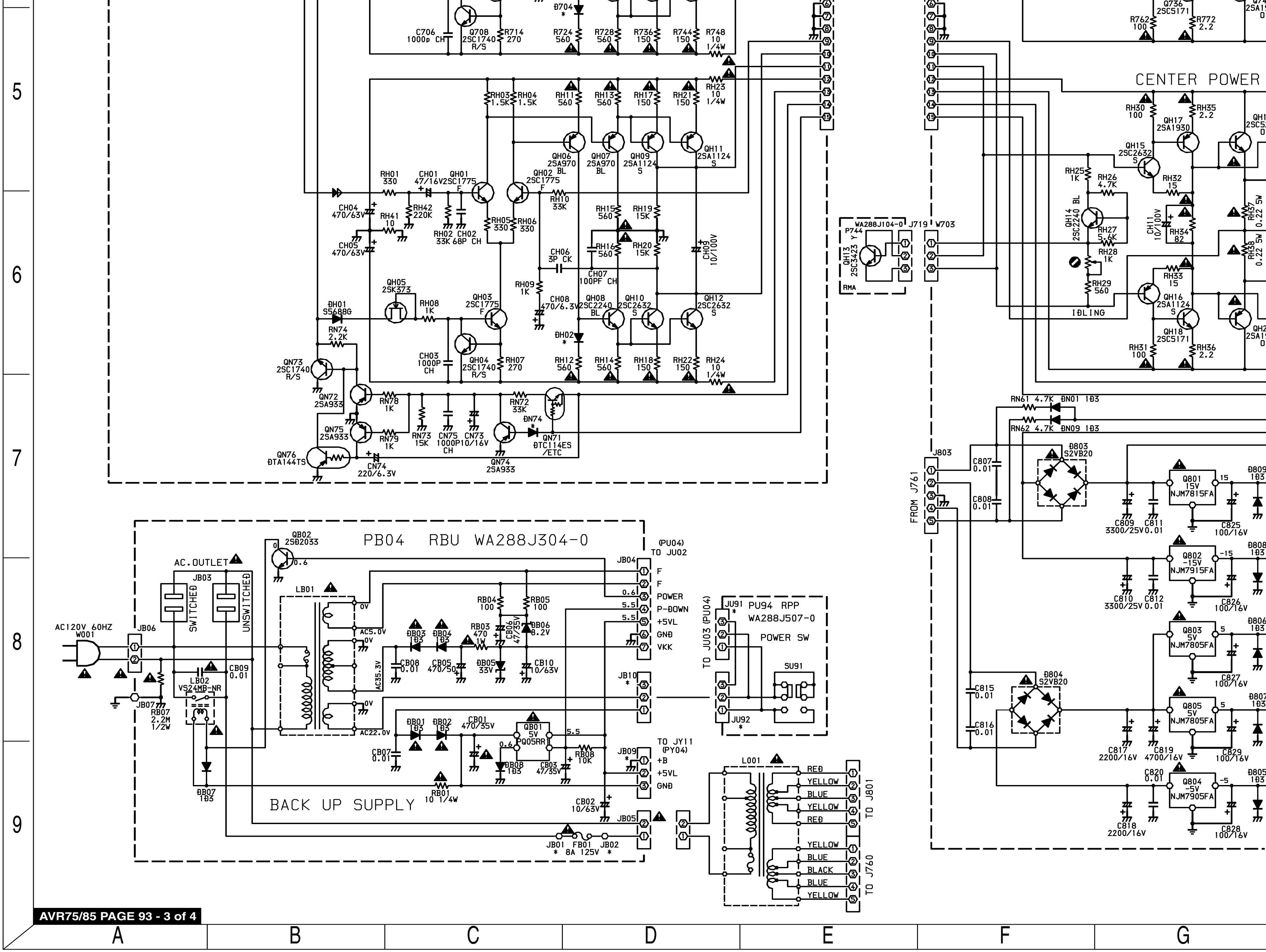
AVR75/85 PAGE 93 - 4 of 4

AVR85 (120V) SCHEMATIC DIAGRAM 6 of 8 (VOLTAGE AMP PCB - P714, MAIN PCB - HEADPHONE PCB - PW04, SPEAKER PROTECT PCB - PN54, STAN



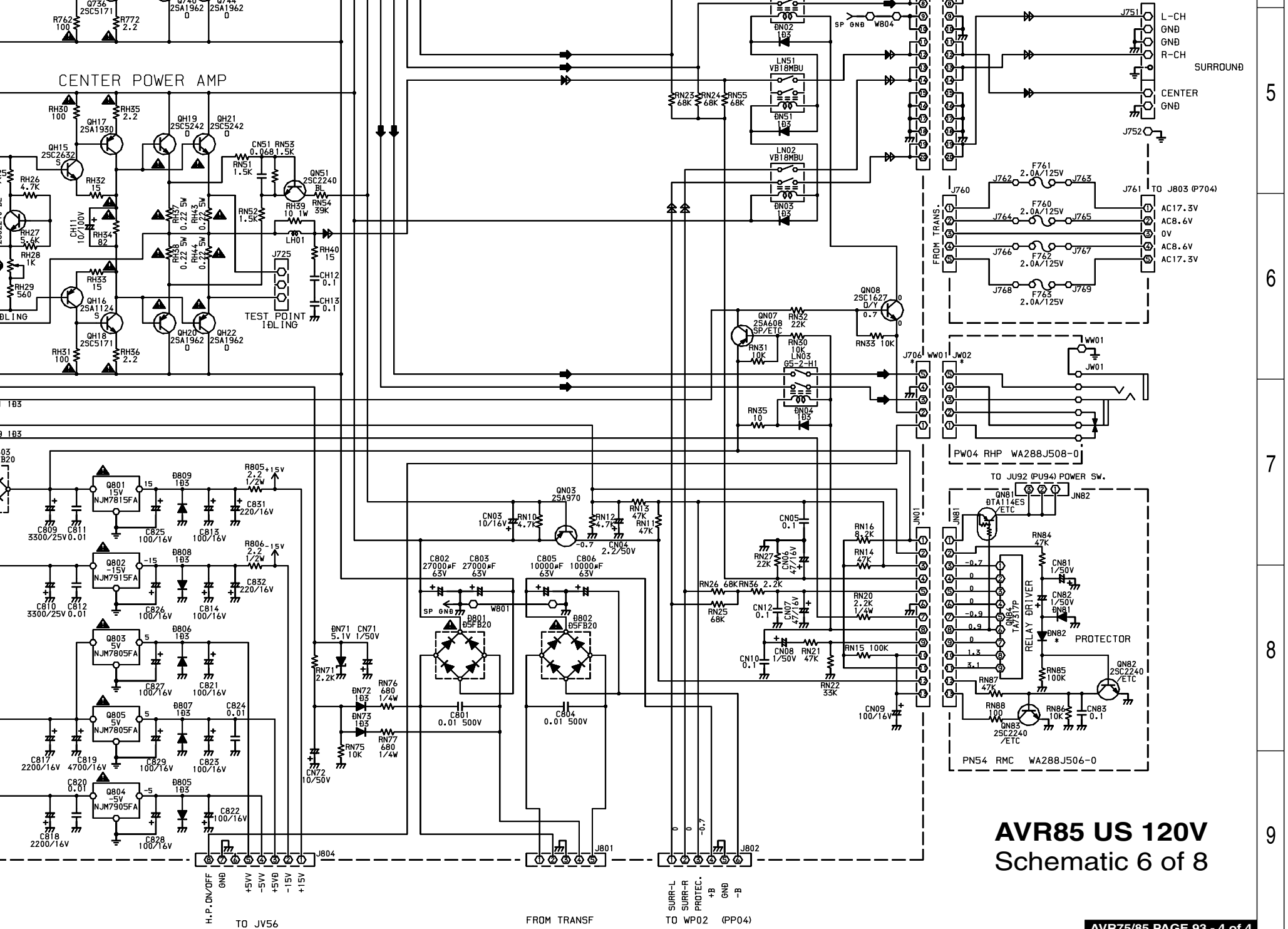
- P714, MAIN PCB - P704, SURROUND AMP PCB - PP04, SPEAKER TERMINAL - P754, PCB - PN54, STANDBY PCB - PB04, POWER SWITCH PCB - PU94)





CENTER POWER
PB04 RBU WA288J304-0
AC.OUTLET
SWITCHED
UNSWITCHED
AC120V 60HZ
W001
BACK UP SUPPLY
PU94 RPP
WA288J507-0
POWER SW
TO JU02
TO JY11
TO J801
TO J760
FROM J761
WA288J104-0
IDLING
F
F
POWER
P-DOWN
+5VL
GND
VKK
+B
+5VL
GND
RED
YELLOW
BLUE
YELLOW
RED
YELLOW
BLUE
BLACK
BLUE
YELLOW

A	B	C	D	E	F	G



AVR85 US 120V
Schematic 6 of 8

AVR85 (120V) SCHEMATIC DIAGRAM 7 of 8 (ELECTRONIC VOLUME PCB - PE04)

AVR85 US 120V
Schematic 7 of 8

ELECTRIC VOLUME PE04 RVR WA288J204-0
RTE

FRONT VOL

SURROUND VOL

CENTER VOL

SUB-W VOL

FROM JY06 (PY04)

JV54 SW IN, CENTER IN, SURR.RCH IN, SURR.LCH IN, FRONT RCH IN, FRONT LCH IN, GND, GND, -15V, +15V, STB3, VCLK3, STB2, VCLK2, DATA0, STB1, VCLK1, RELAY, FRONT MUTE, SURR MUTE, CENT MUTE, SW MUTE, +5VL, +5VL, CENTER OUT, FRONT RCH OUT, FRONT LCH OUT, MULTI, RC-5, NC

JV55

FRONT, SURROUND, CENTER, SUB-WOOFER

QE01 NJM4558DD, QE02 NJM4558DD, QE03 NJM4558DD, QE04 TC9213P ELE.VR, QE05 TC9213P ELE.VR, QE06 TC9213P ELE.VR, QE07 NJM4558DD, QE08 NJM4558DD, QE09 NJM4558DD, QE10 NJM4558DD, QE11 NJM4558DD, QE12 NJM4558DD

QT01, QT02, QT04 74LS132, QT05 DTA114ES/ETC

JT02 MULTIROOM CONTROL, RC-5 IN, JT03 RC-5 OUT

QV51 2SC2878 A/B, QV52 2SC2878 A/B, QV53 2SC2878 A/B, QV54 2SC2878 A/B, QV55 2SC2878 A/B, QV56 2SC2878 A/B, QV60 2SC2878 A/B, QV57 2SC2120 O

BV01, BV02, BV03

LV04 R62-24SR 24V, LV05 R62-24SR 24V, LV06 R62-24SR 24V

JV53 FRONT LCH, FRONT RCH, SURR LCH, SURR RCH, CENTER, SUB-W

JV57 SURR LCH OUT, GND, SURR RCH OUT

TO JP01 (PP04)

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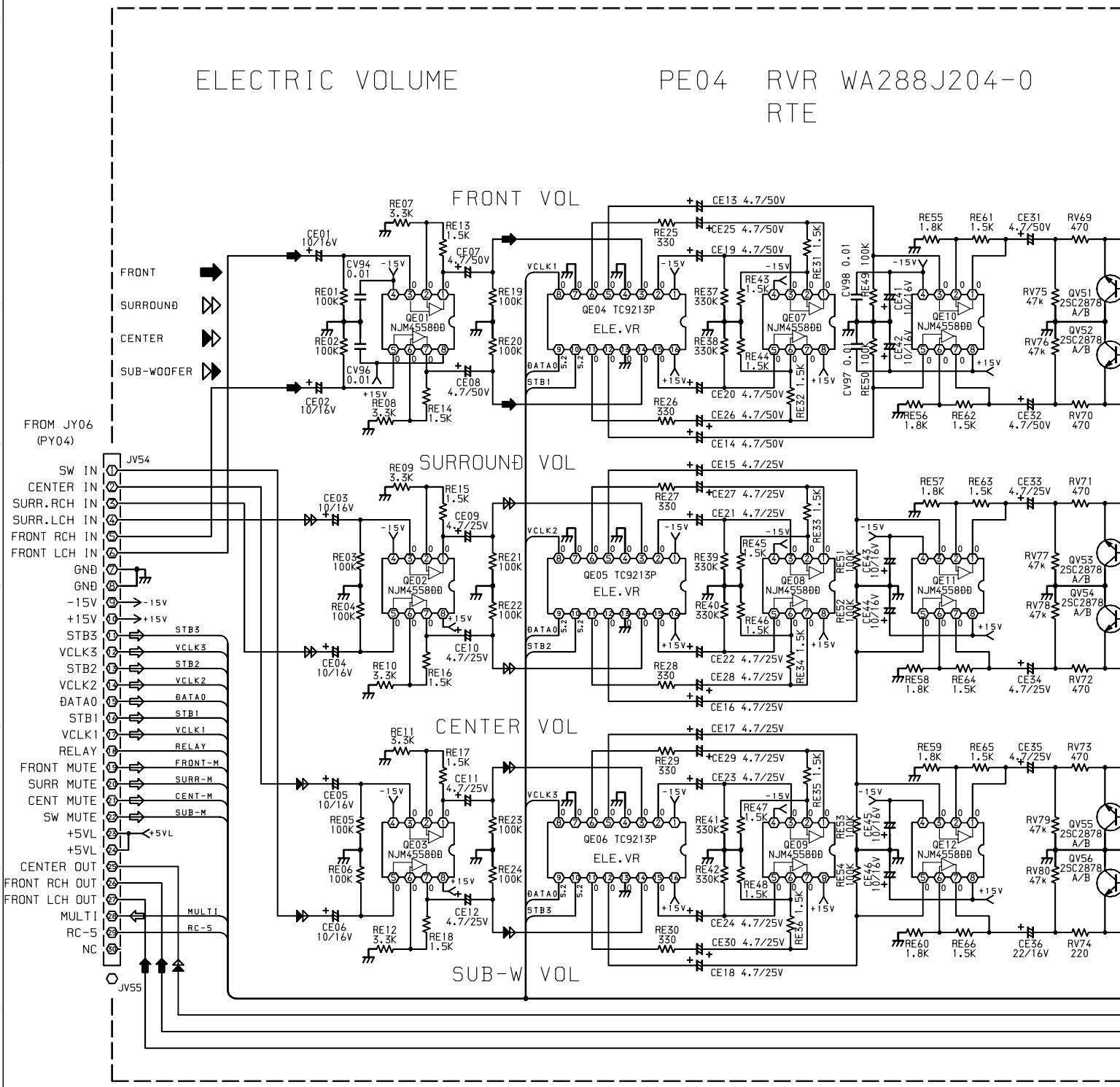
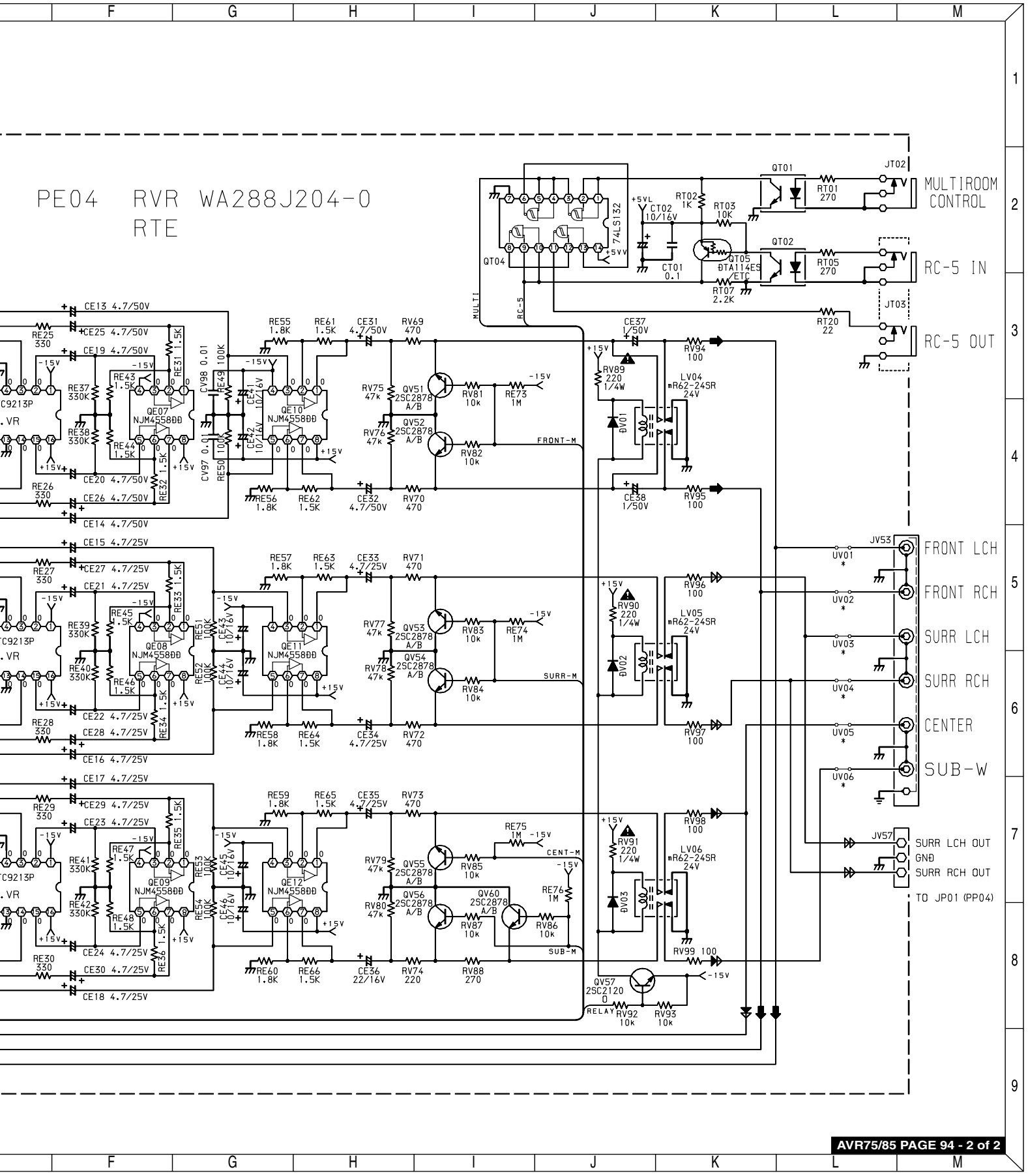
AVR85 (120V) SCHEMATIC DIAGRAM 7 of 8 (ELECTRONIC VO

AVR85 US 120V
Schematic 7 of 8



EMATIC DIAGRAM 7 of 8 (ELECTRONIC VOLUME PCB - PE04)



AVR85 (120V & 230v) SCHEMATIC DIAGRAM 8 of 8 (AVR85 DSP BOARD - P604)

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RAĐ RĐA RĐP WG278J1000
RĐR RMĐ

AC-3 ĐSP ASSY

AVR85 US 120V
Schematic 8 of 8

QM09
PM4007A
AC-3 RF DEMODULATOR

Q651
SUB CPU

Q601
YSS243
AC-3 ĐECORĐER

Q602
YSS241F
PRO LOGIC ĐECORĐER

QR01
LC8904Q
ĐIGITAL AUDIO
I/F RECIEVER

QK01
AKS340
A/Đ

QM10
S-RAM8X32K

Q603
S-RAM8X32K
8BIT*32K-SRAM-HSB

Q604
TC74HC157A

Q605
74HC74F

Q606
TC7W04F

Q607
74HC164

Q608
74HC164

Q652
74HCT541

Q653 QR02
74HC00F

QM05
2SC4081 Ω R

QM06
2SA1586

QM07
2SA1586

QM08
NJM4560

QM04
MC14577C

QM01
2SC4081 Ω R

QM02
2SC4081 Ω R

QM03
2SC4081 Ω R

Q691
2SC4081

QR02
NJM4560

QK02
NJM2115M

QK03
NJM2115M

QD01
TDA1305T

QD31
TDA1305T

QD51
TDA1305T

QD02
NJM2115M

QD32
NJM2115M

QD52
NJM4560

QD54
BTA114ES
/ETC

QD53
2SC2878
A/B

Q654
S-804C
RESET

X651
18.0MHz

X601
18.432MHZ

XR01
24MHZ

QM02
2.88MHZ
BPF

LM01
680uH

J651
TO JU02 (PU04)
IFREQ
+5VĐ
RESET (ONLY SR780, AV550)
IFACK
IFĐATA-I
IFĐATA-O
IFCLK

J601
-5V
GND
RESET
RT
+5V
+5V
LT
MUTE
R
L
RS
LS
C
LFE
TO JY12 (PY04)

JR01
AC-3 RF
COAX
OPT
DIGITAL-IN

JR02

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AVR75/85 PAGE 95 - 4 of 4

AVR85 (120V & 230v) SCHEMATIC DIAGRAM 8 of

AVR75/85 PAGE 95 - 1 of 4

RAÐ RÐA RÐP WG278J1000
RÐR RMÐ

AC-3 ÐSP ASSY

QM09
PM4007A
AC-3 RF DEMODULATOR

QM08 NJM4560

QM05 2SC4081 (Q, R)

QM06 2SA1586

QM07 2SA1586

QM04 MCT4577C

QM10 S-RAM8X32K

Q603 S-RAM8X32K
8BIT*32K-SRAM-HSP

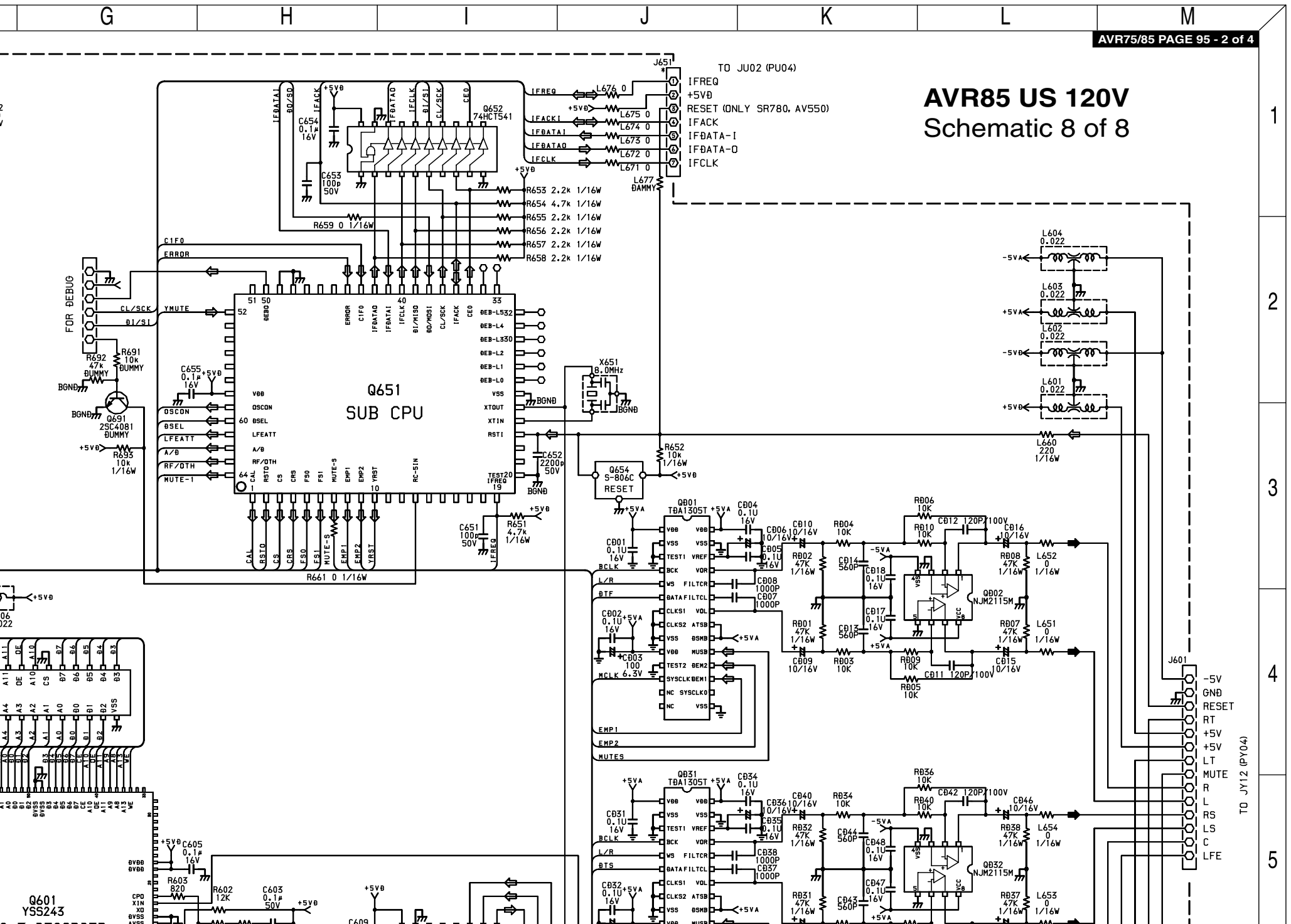
Q601
YSS243

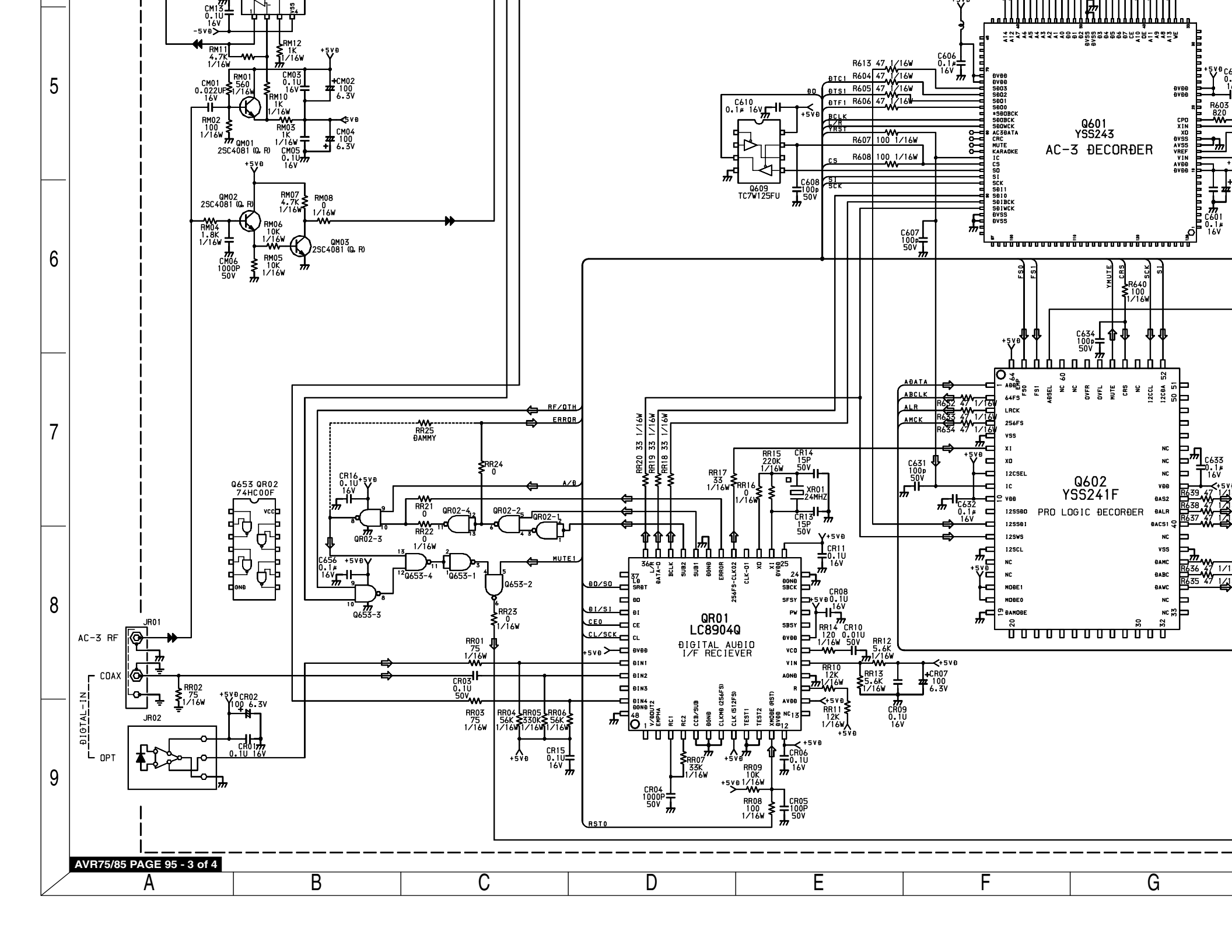
Q691
2SC4081
ÐUMMY

FOR ÐEBUG

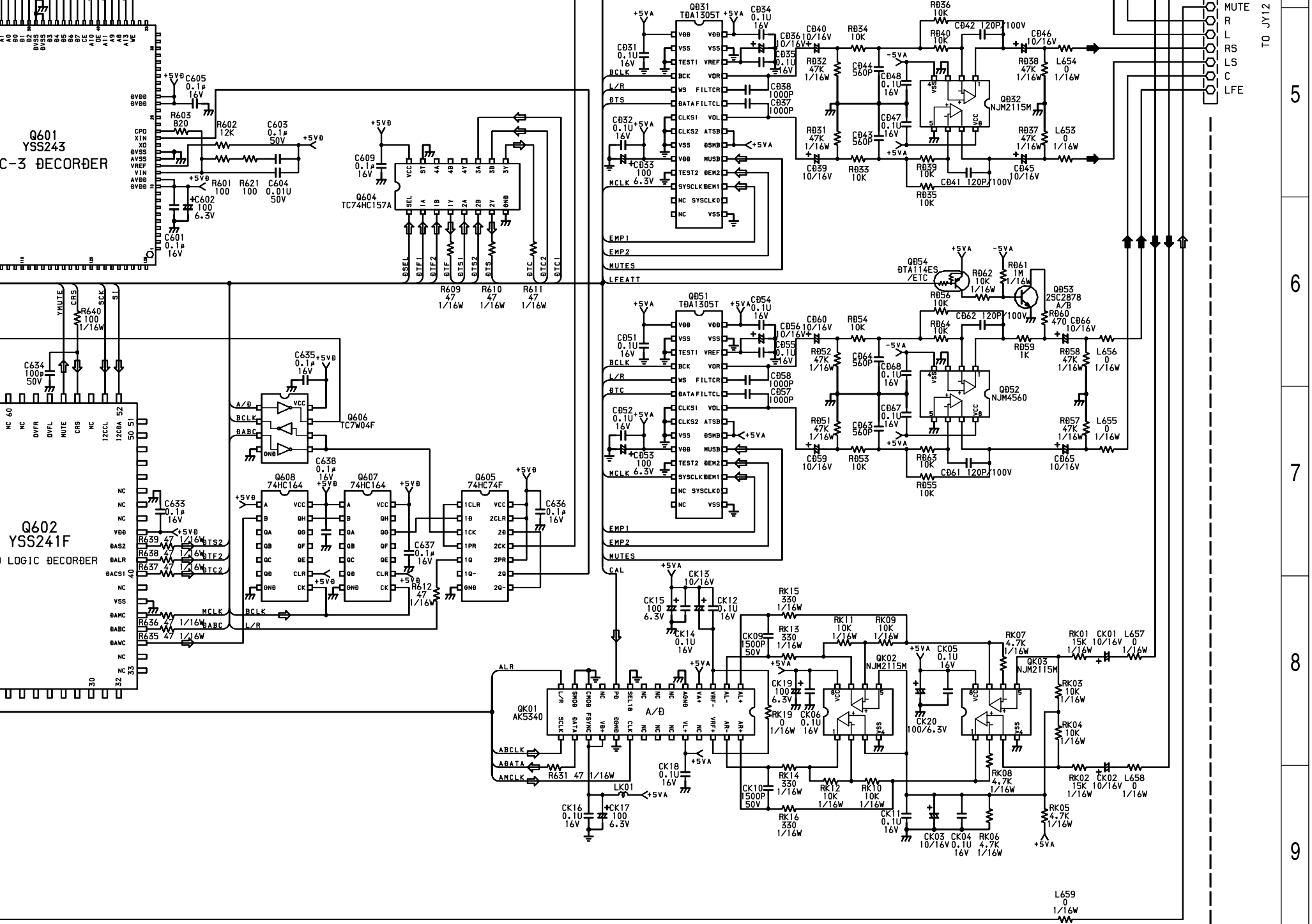
ATIC DIAGRAM 8 of 8 (AVR85 DSP BOARD - P604)

AVR85 US 120V
Schematic 8 of 8

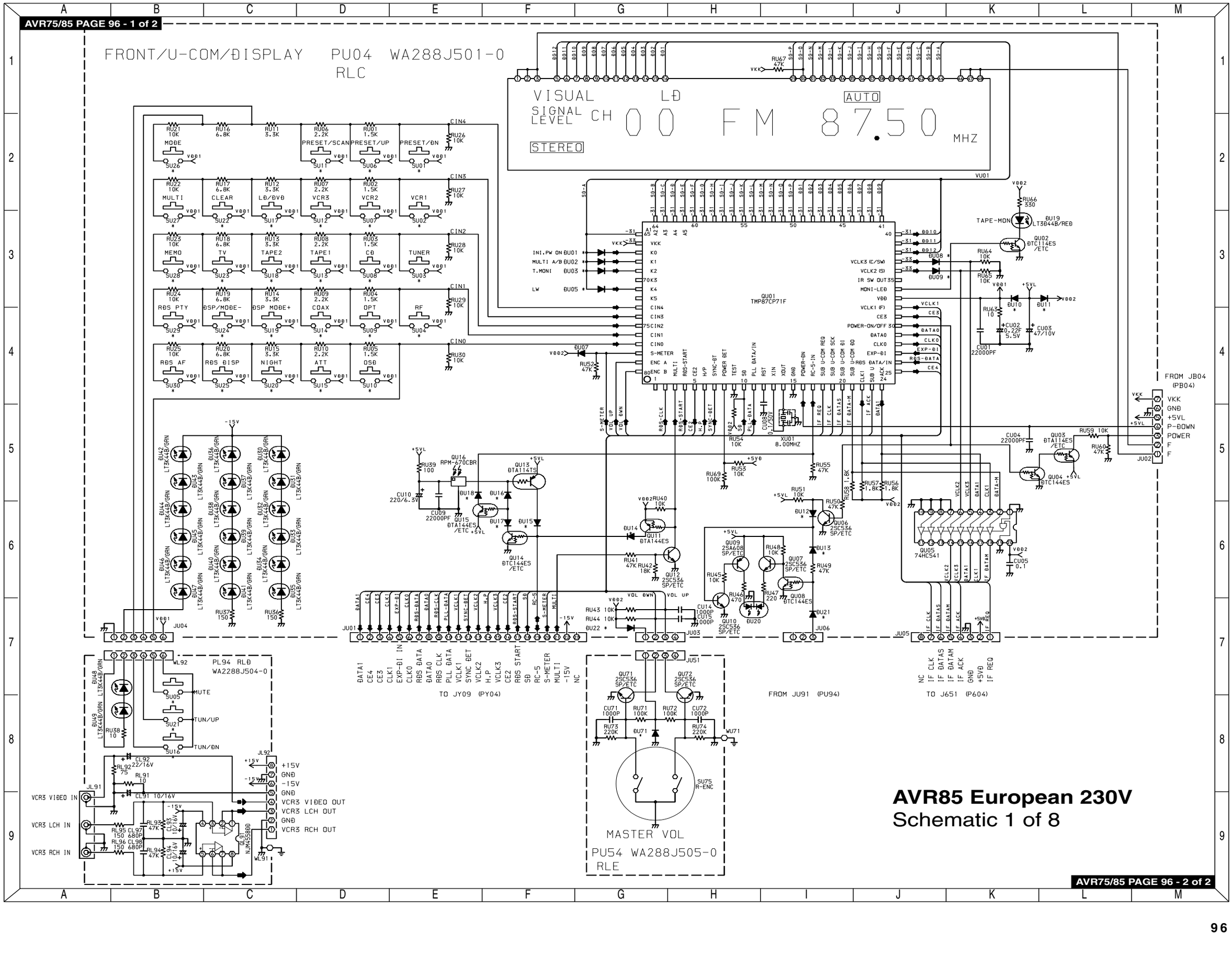




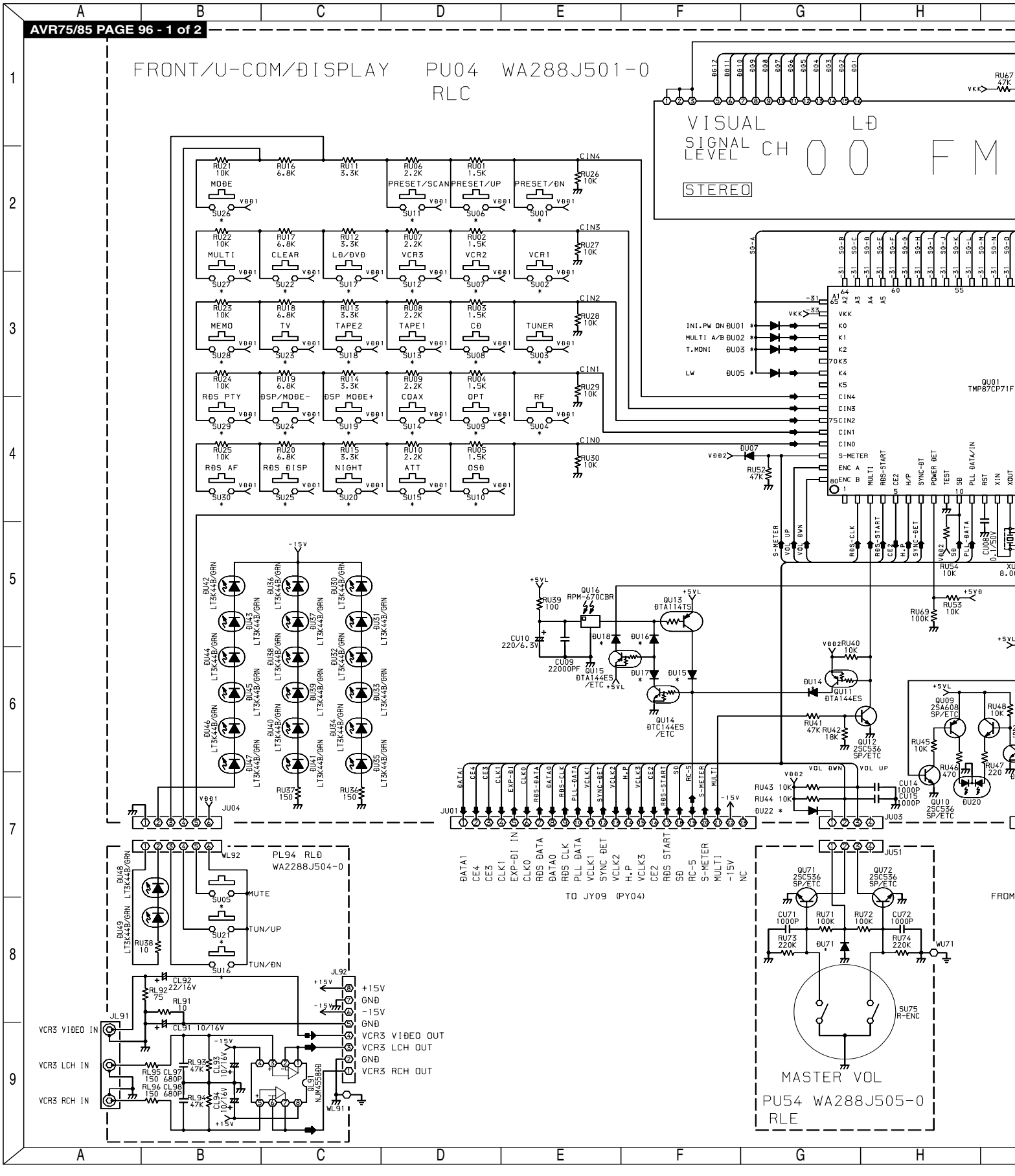
AVR75/85 PAGE 95 - 3 of 4


Q601
YSS243
C-3 ĐECORĐER
Q602
YSS241F
LOGIC ĐECORĐER
Q604
TC74HC157A
Q605
74HC74F
Q606
TC7W04F
Q607
74HC164
Q608
74HC164
QĐ31
TĐA1305T
QĐ51
TĐA1305T
QĐ52
NJM4560
QĐ53
2SC2878
A/B
QĐ54
ĐTA114ES
/ETC
QK01
AK5340
A/Đ
QK02
NJM2115M
QK03
NJM2115M
QĐ32
NJM2115M
TO JY12
MUTE
R
L
RS
LS
C
LFE
EMP1
EMP2
MUTES
LFEATT
CAL
MCLK
BCLK
L/R
BTS
ALR
ABCLK
ADATA
AMCLK

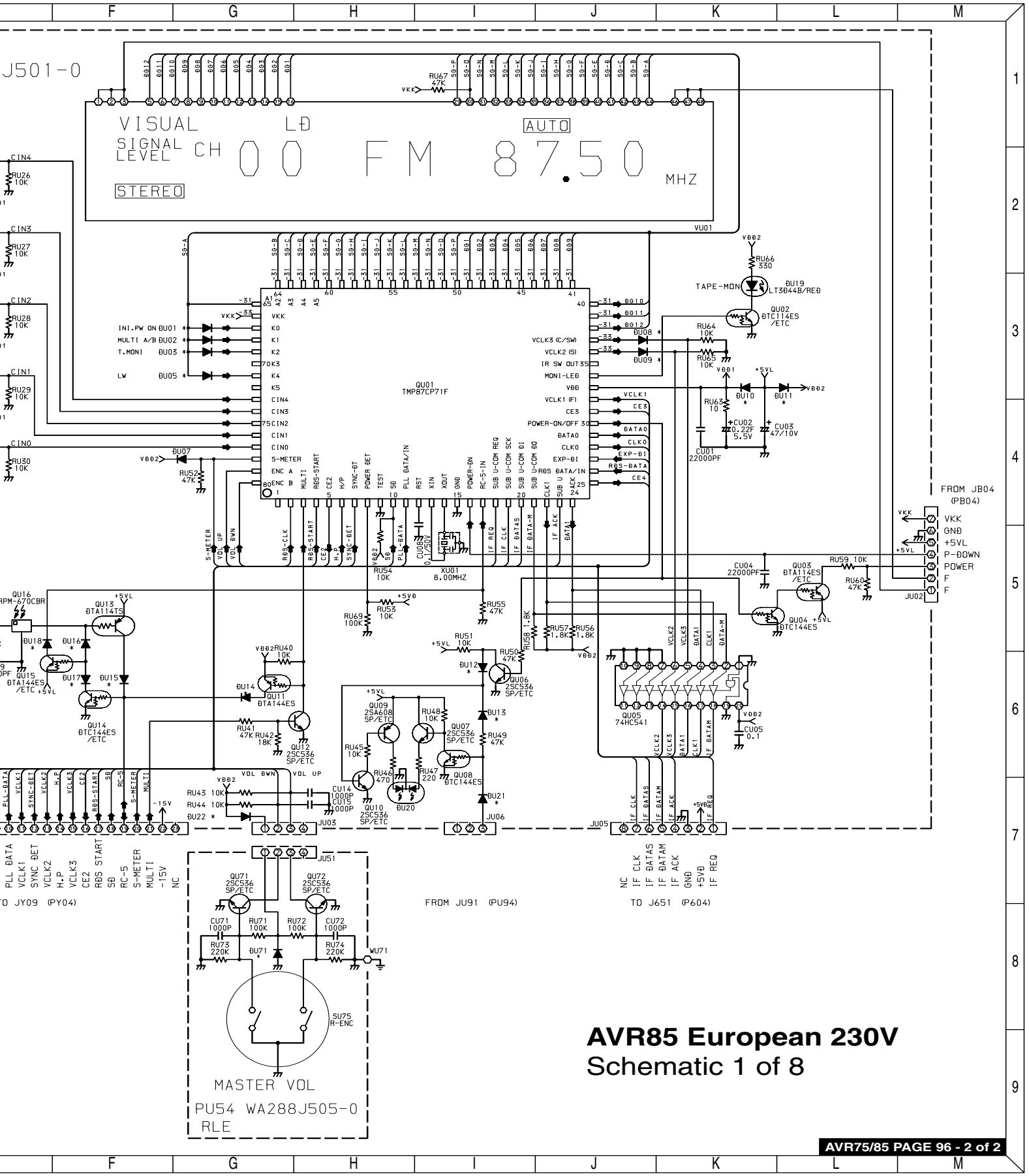
AVR85 (230V) SCHEMATIC DIAGRAM 1 of 8 (FRONT PCB - PU04, MASTER VOLUME PCB - PU54, AUX IN - PL94)



AVR85 (230V) SCHEMATIC DIAGRAM 1 of 8 (FRONT PCB - PU04, MASTER VO

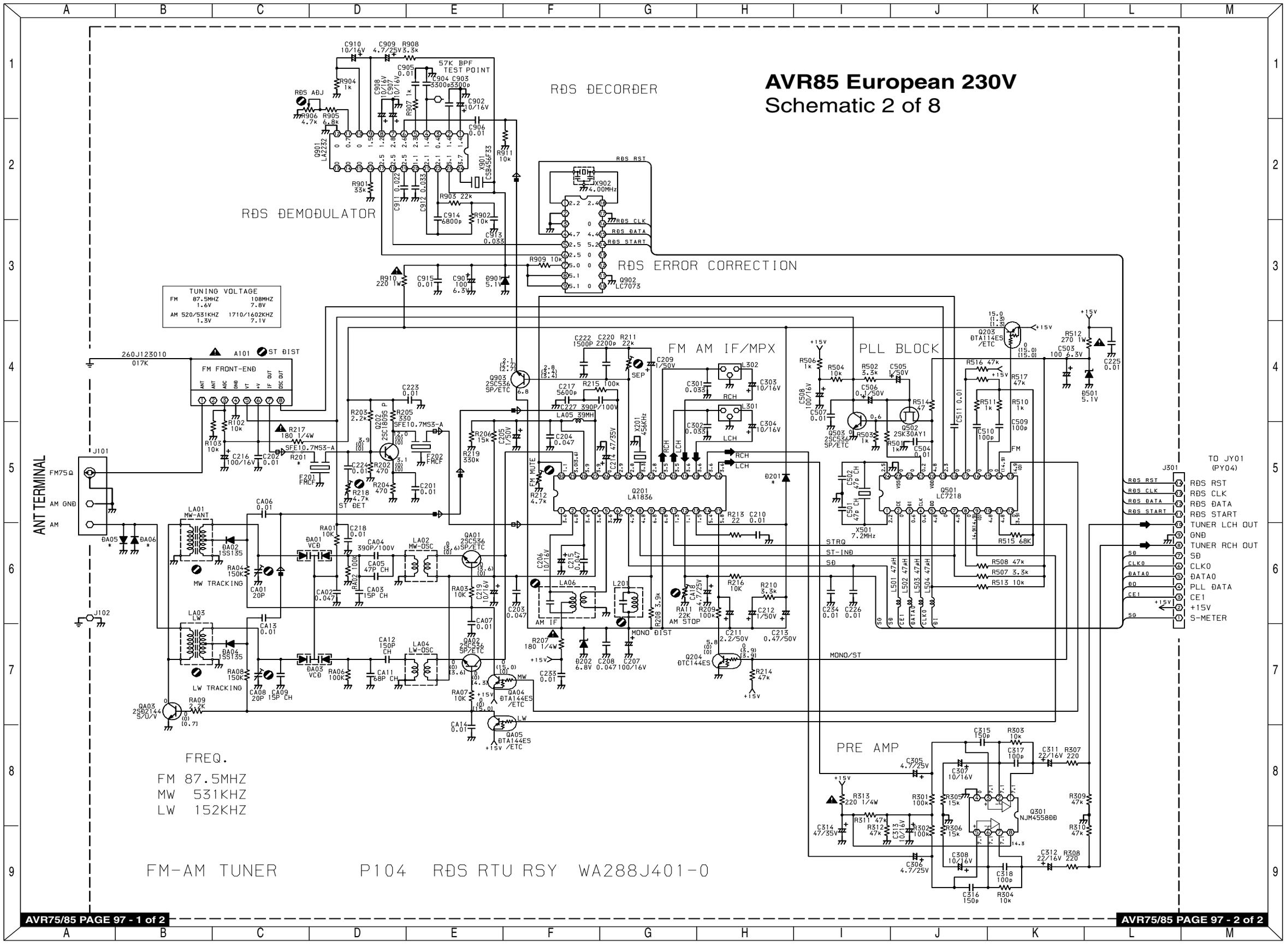


AM 1 of 8 (FRONT PCB - PU04, MASTER VOLUME PCB - PU54, AUX IN - PL94)

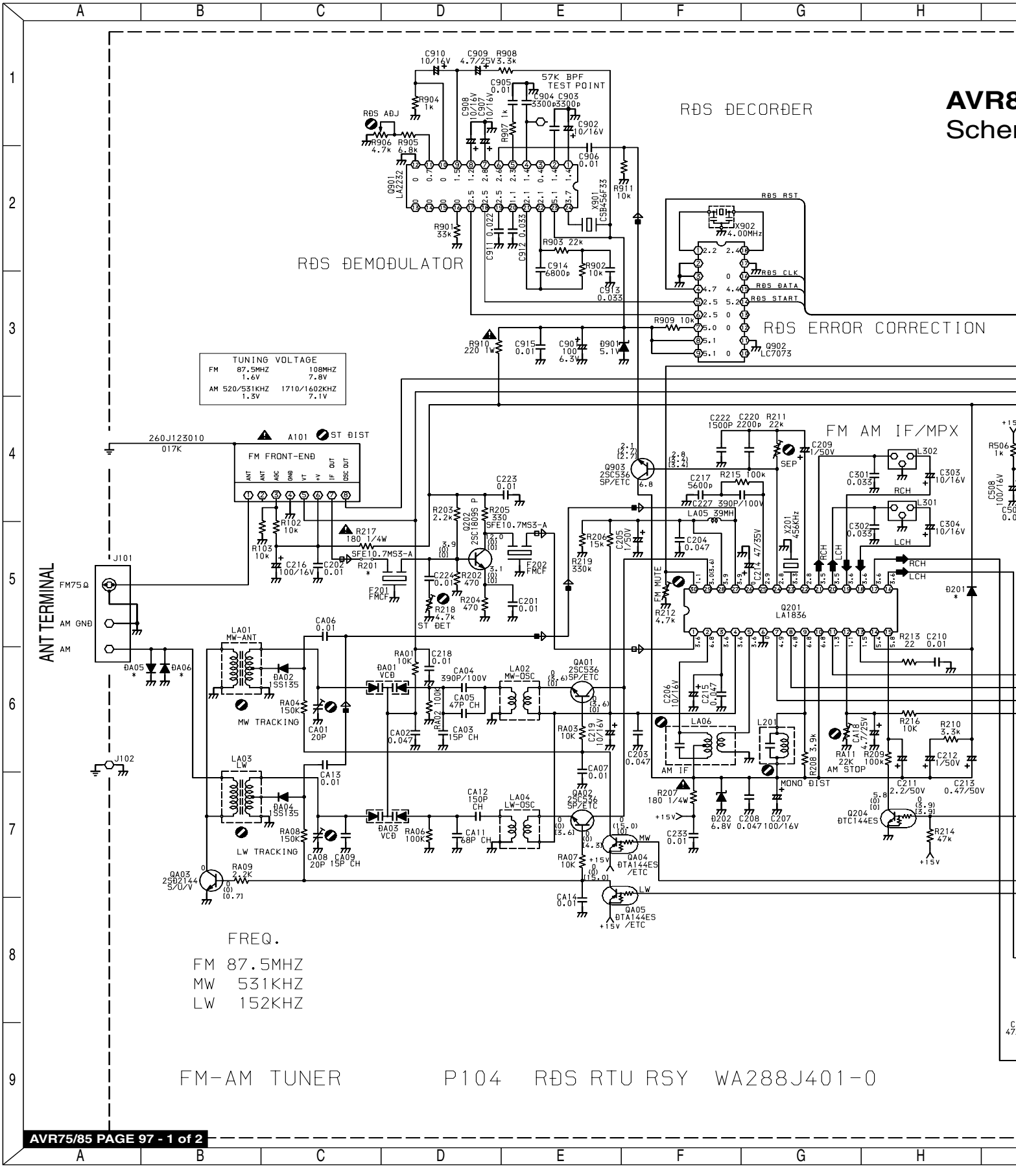


AVR85 European 230V
Schematic 1 of 8

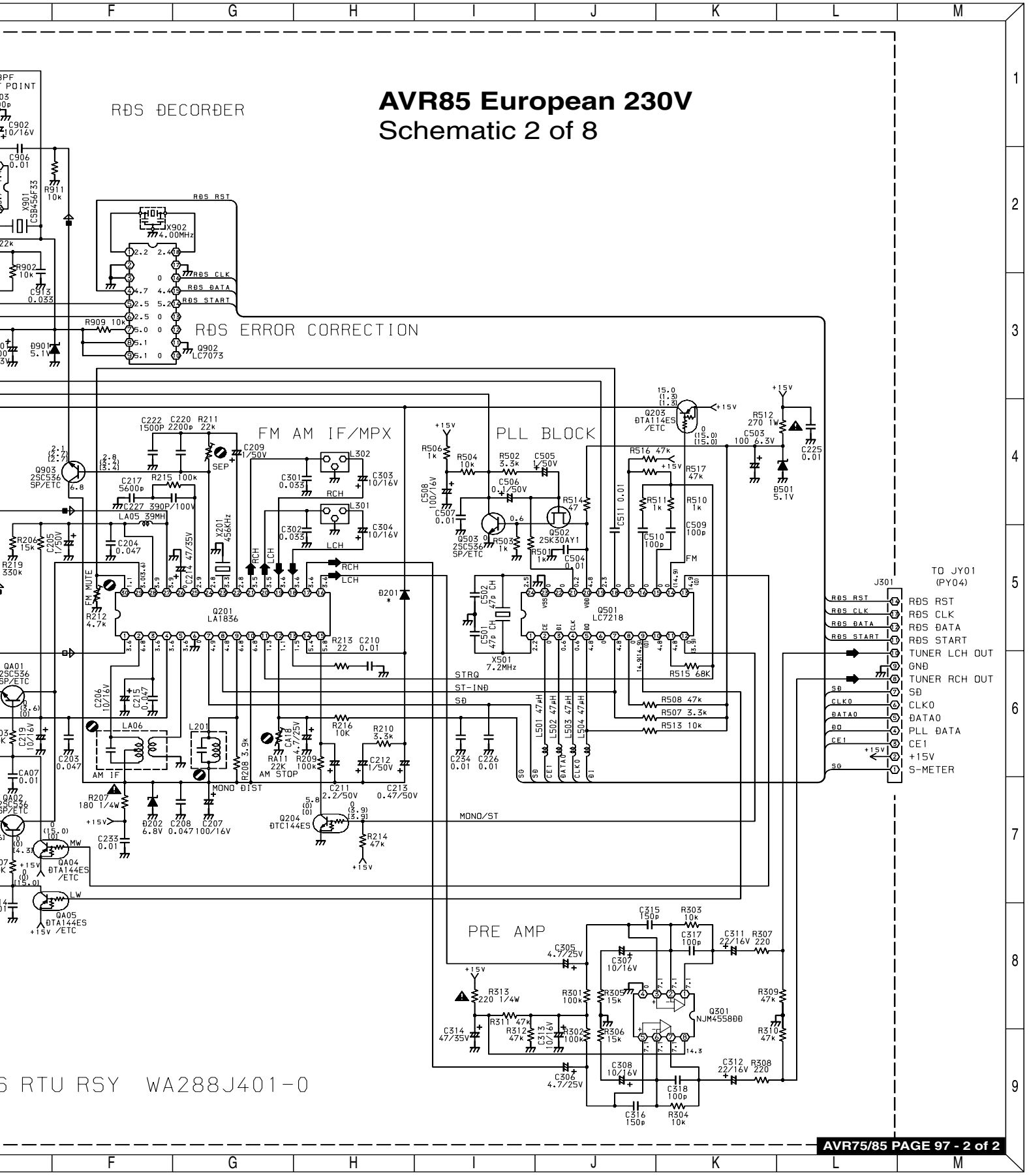
AVR85 (230V) SCHEMATIC DIAGRAM 2 of 8 (TUNER PCB - P104)



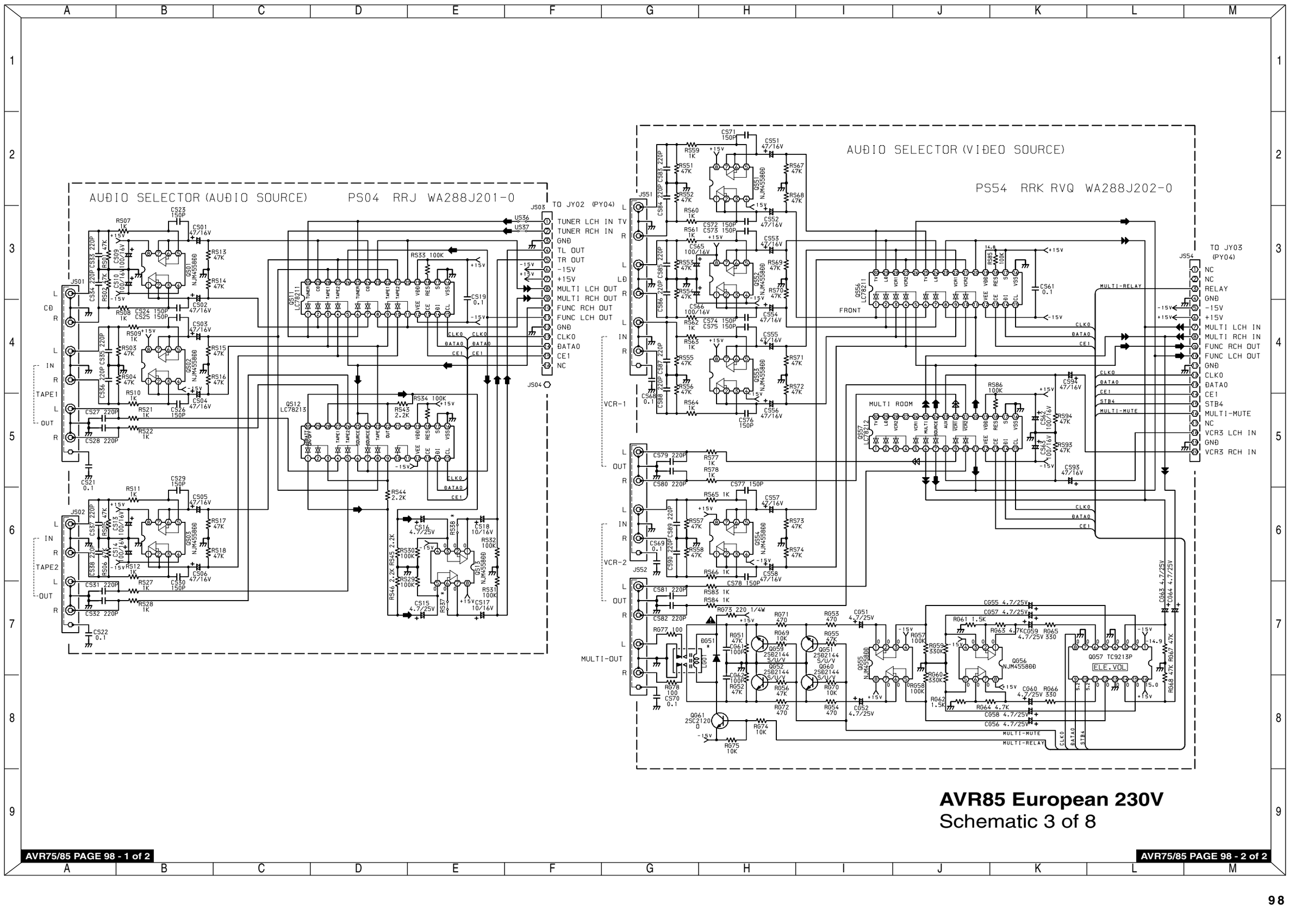
AVR85 (230V) SCHEMATIC DIAGRAM 2 of 8 (TUNER P



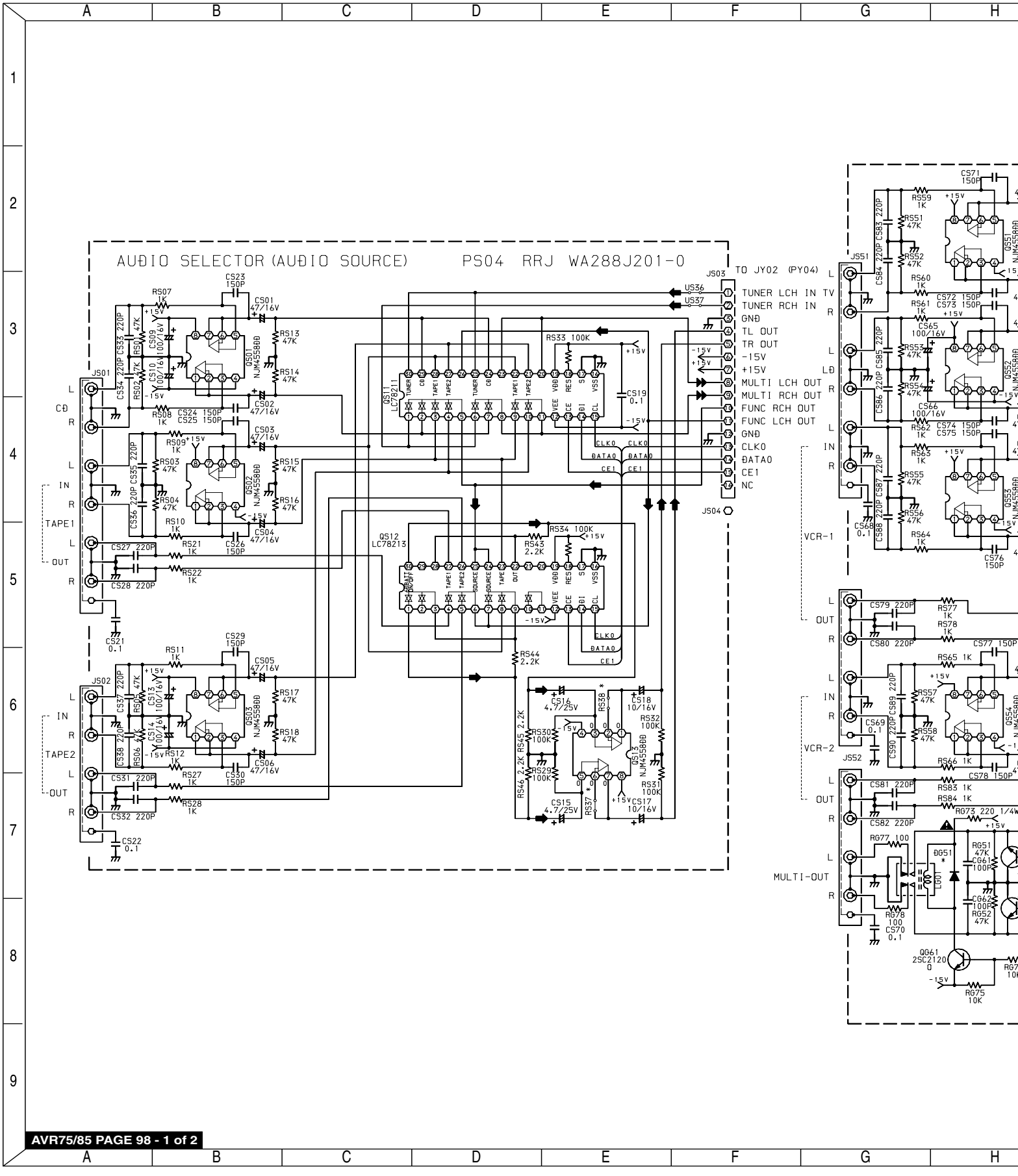
0V) SCHEMATIC DIAGRAM 2 of 8 (TUNER PCB - P104)



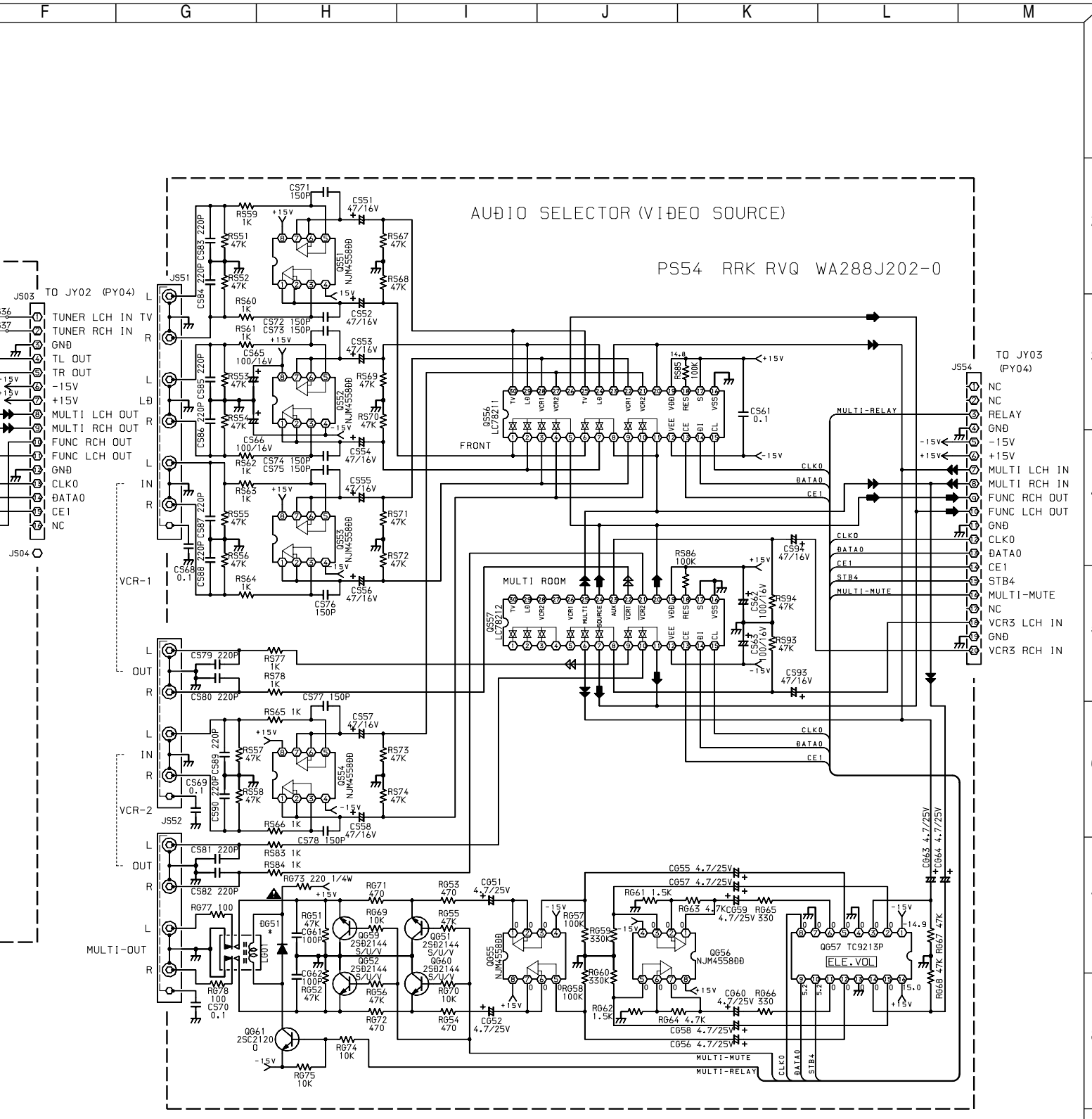
AVR85 (230V) SCHEMATIC DIAGRAM 3 of 8 (AUDIO SELECTOR PCB - PS04, AUDIO/VIDEO PCB PS54)



AVR85 (230V) SCHEMATIC DIAGRAM 3 of 8 (AUDIO SELECTOR PC



M 3 of 8 (AUDIO SELECTOR PCB - PS04, AUDIO/VIDEO PCB PS54)



AVR85 European 230V
Schematic 3 of 8

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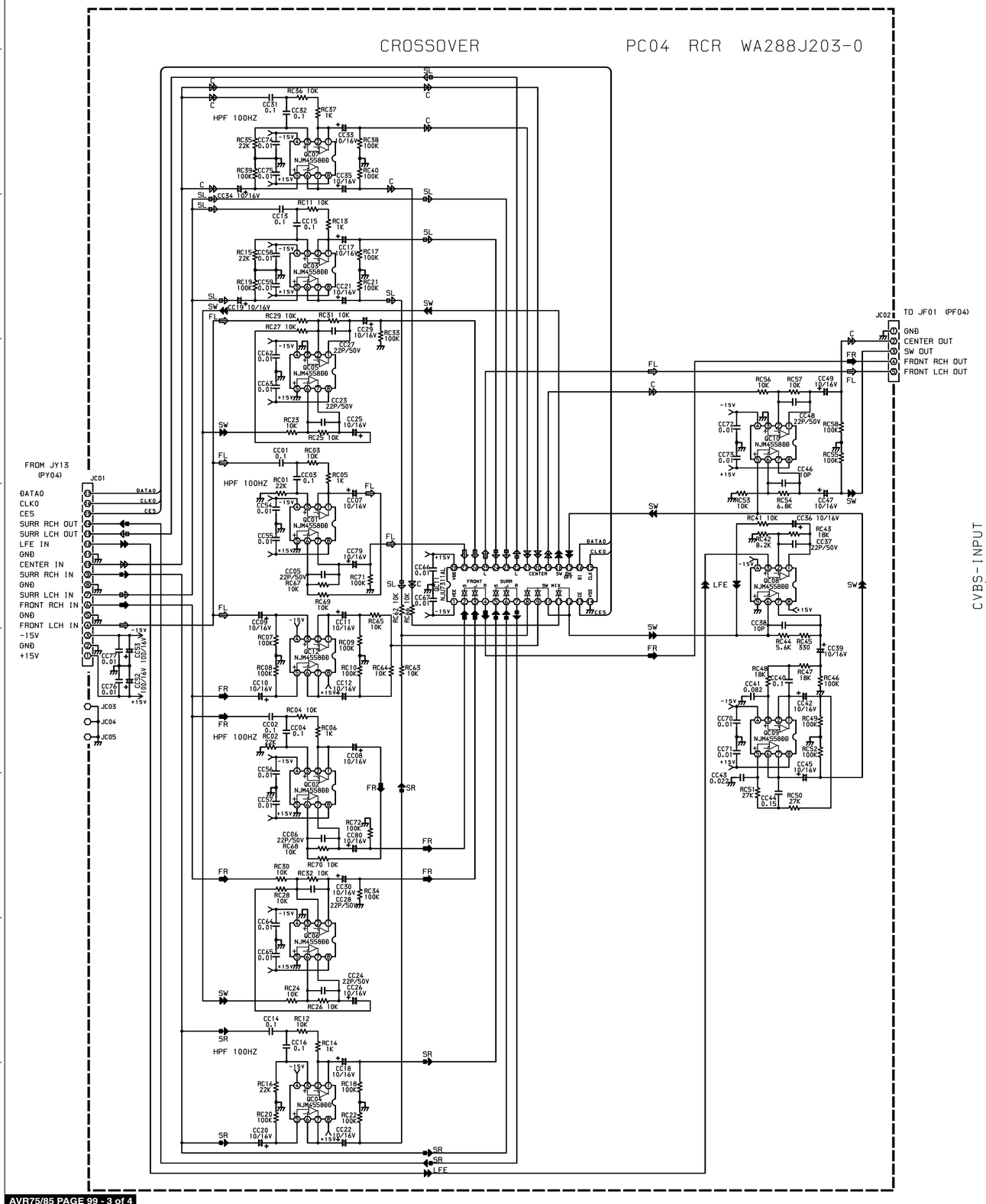
AVR85 European 230V

Schematic 4 of 8

CROSSOVER PC04 RCR WA288J203-0



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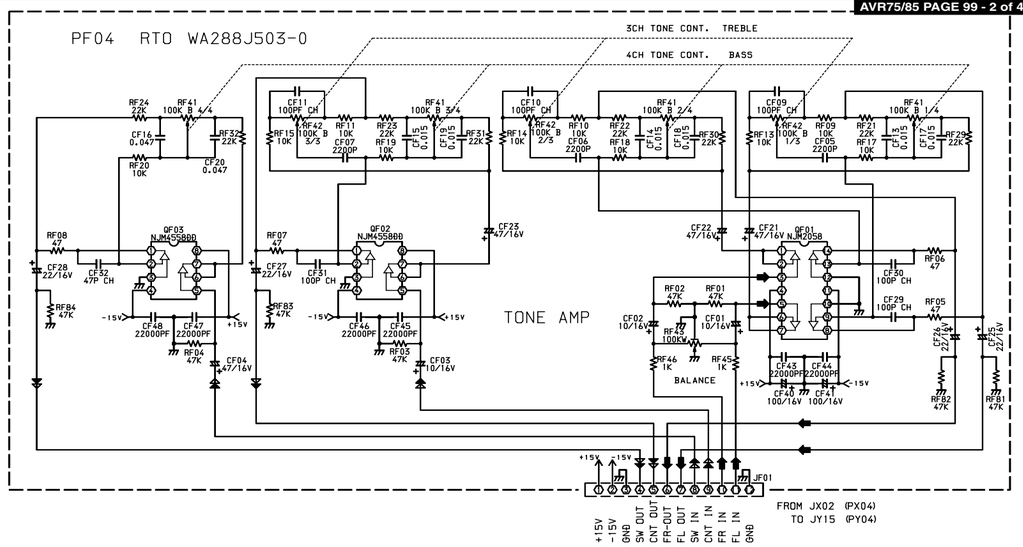
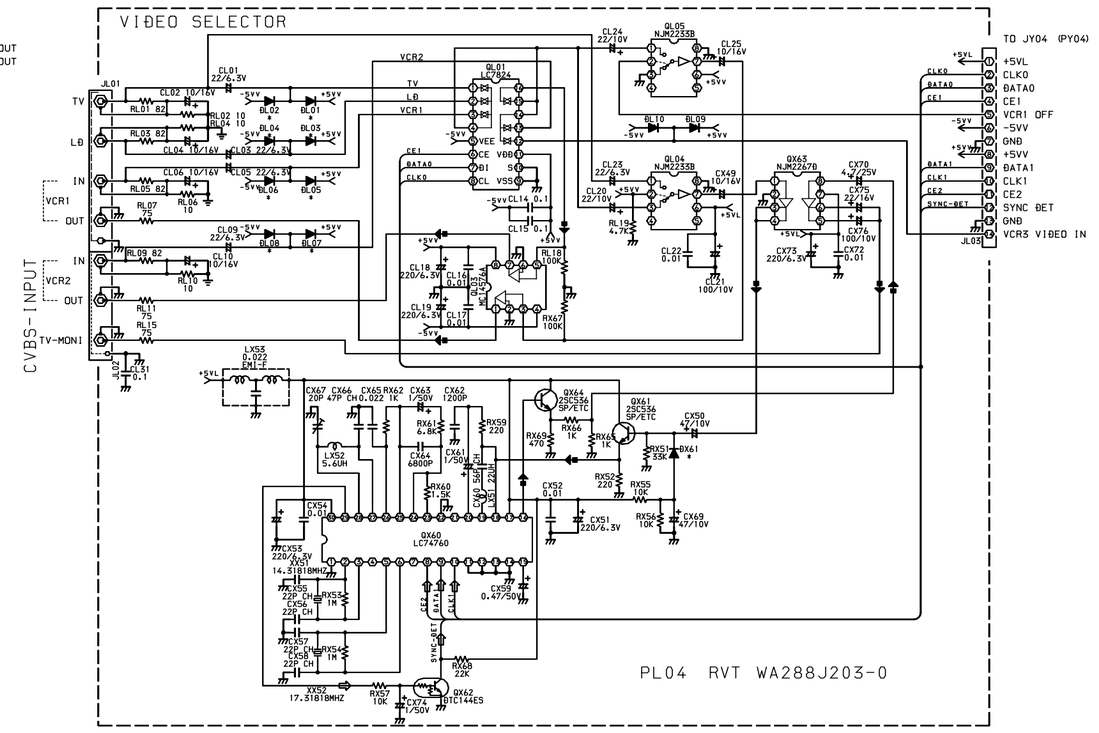
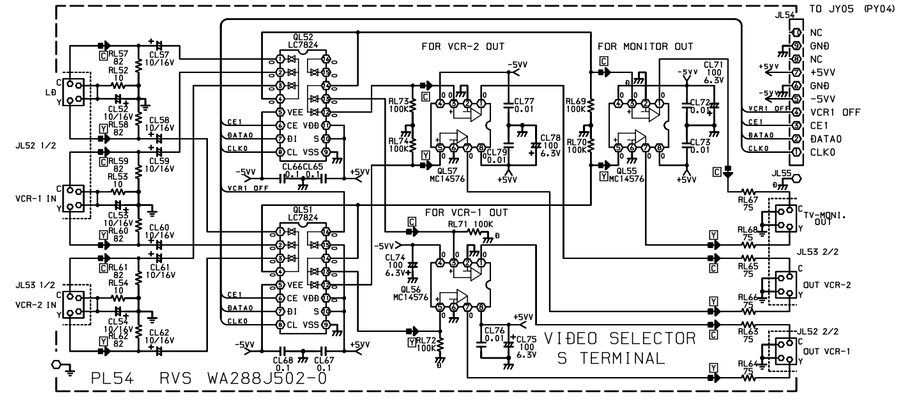
PF04 RTO WA288J503-0



VIÐEO SELECTOR



PL54 RVS WA288J502-0



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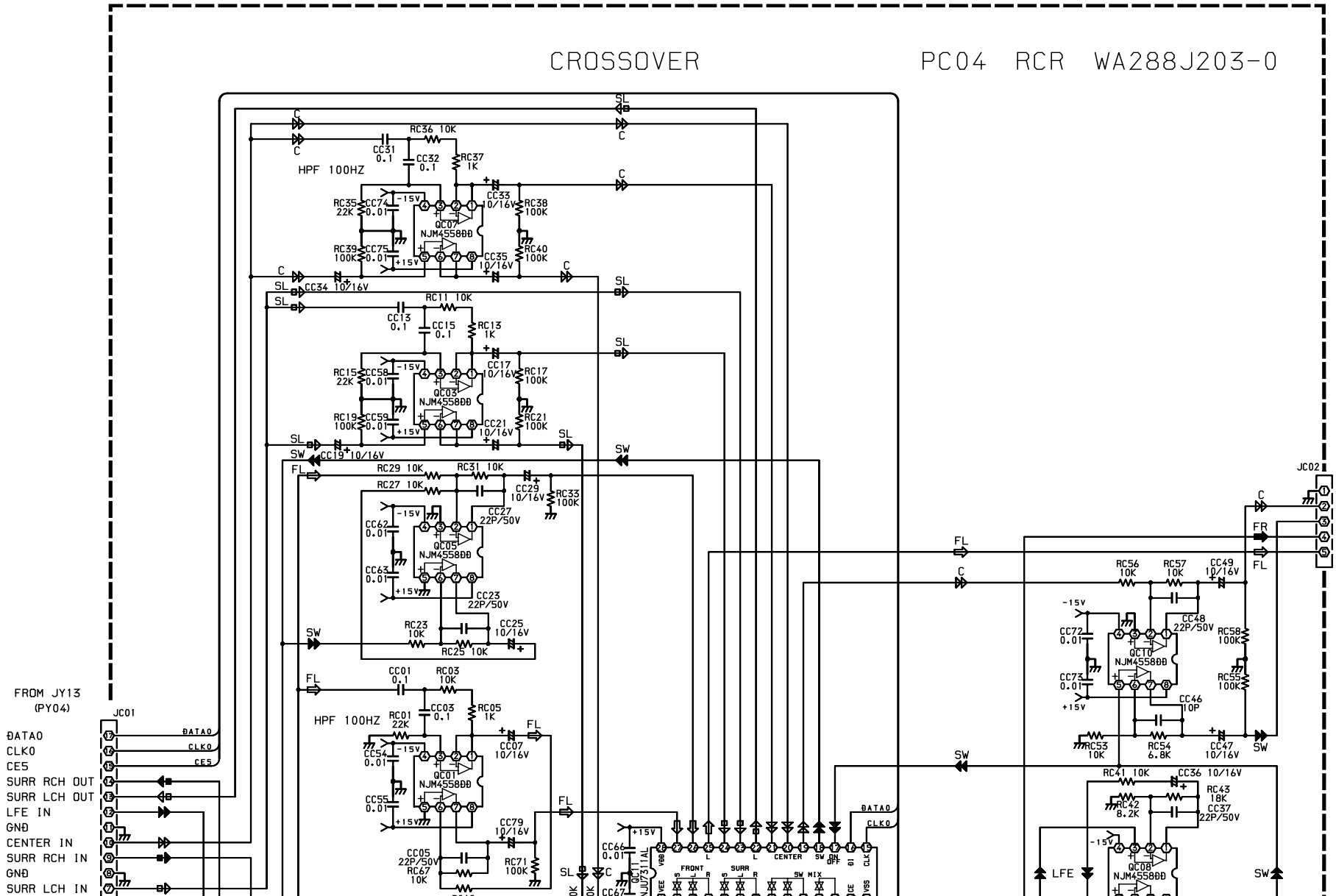
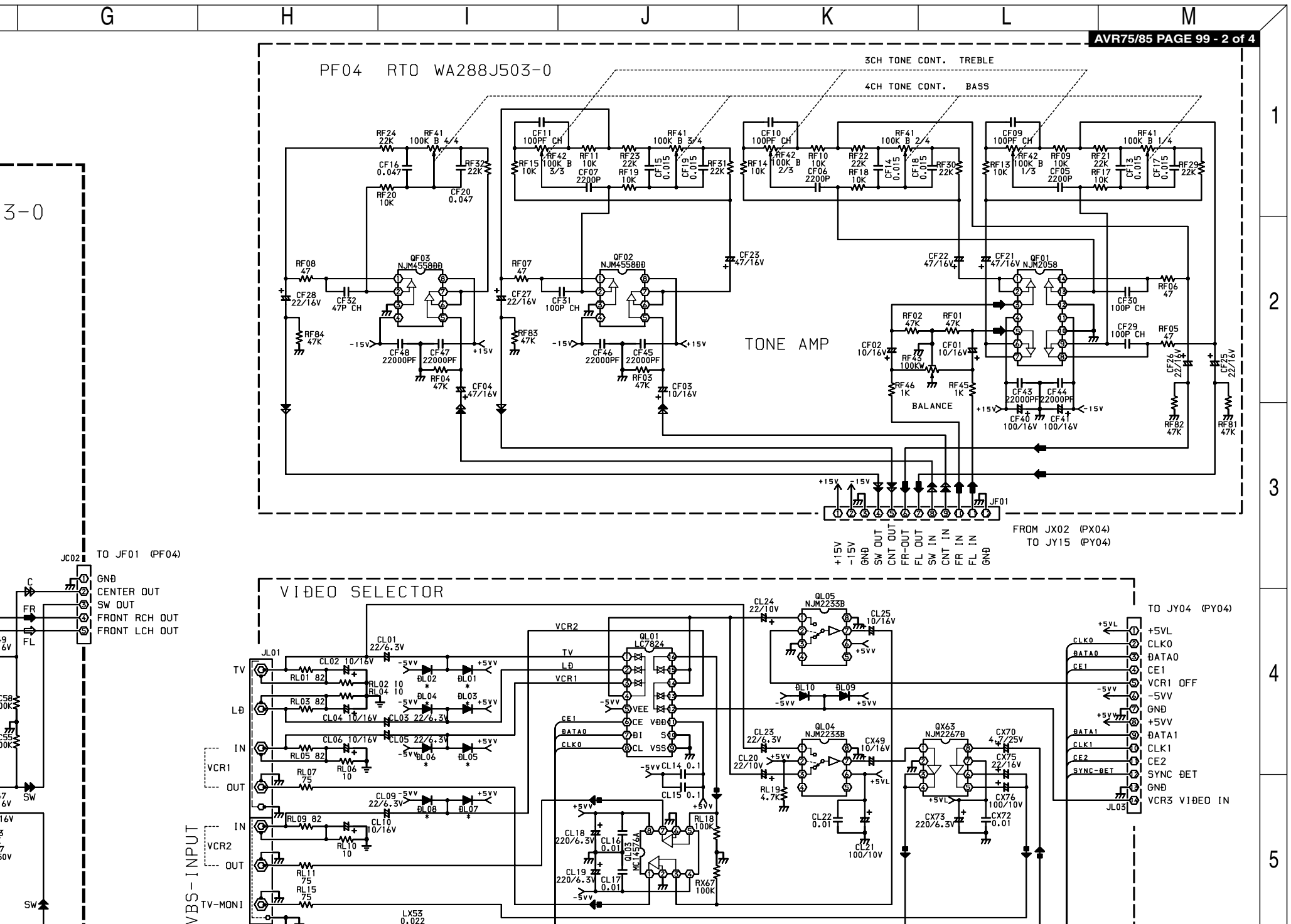
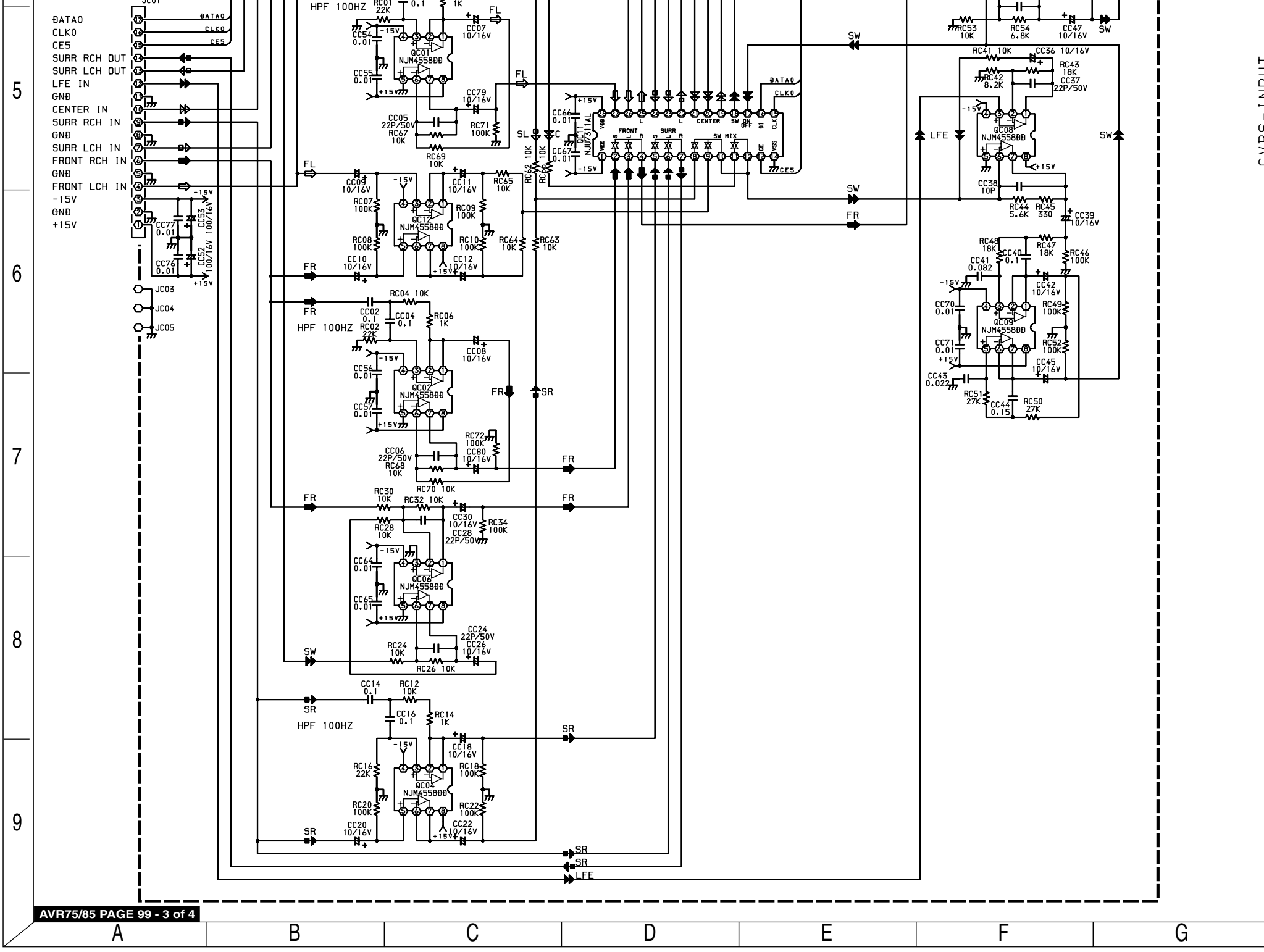
AVR85 European 230V

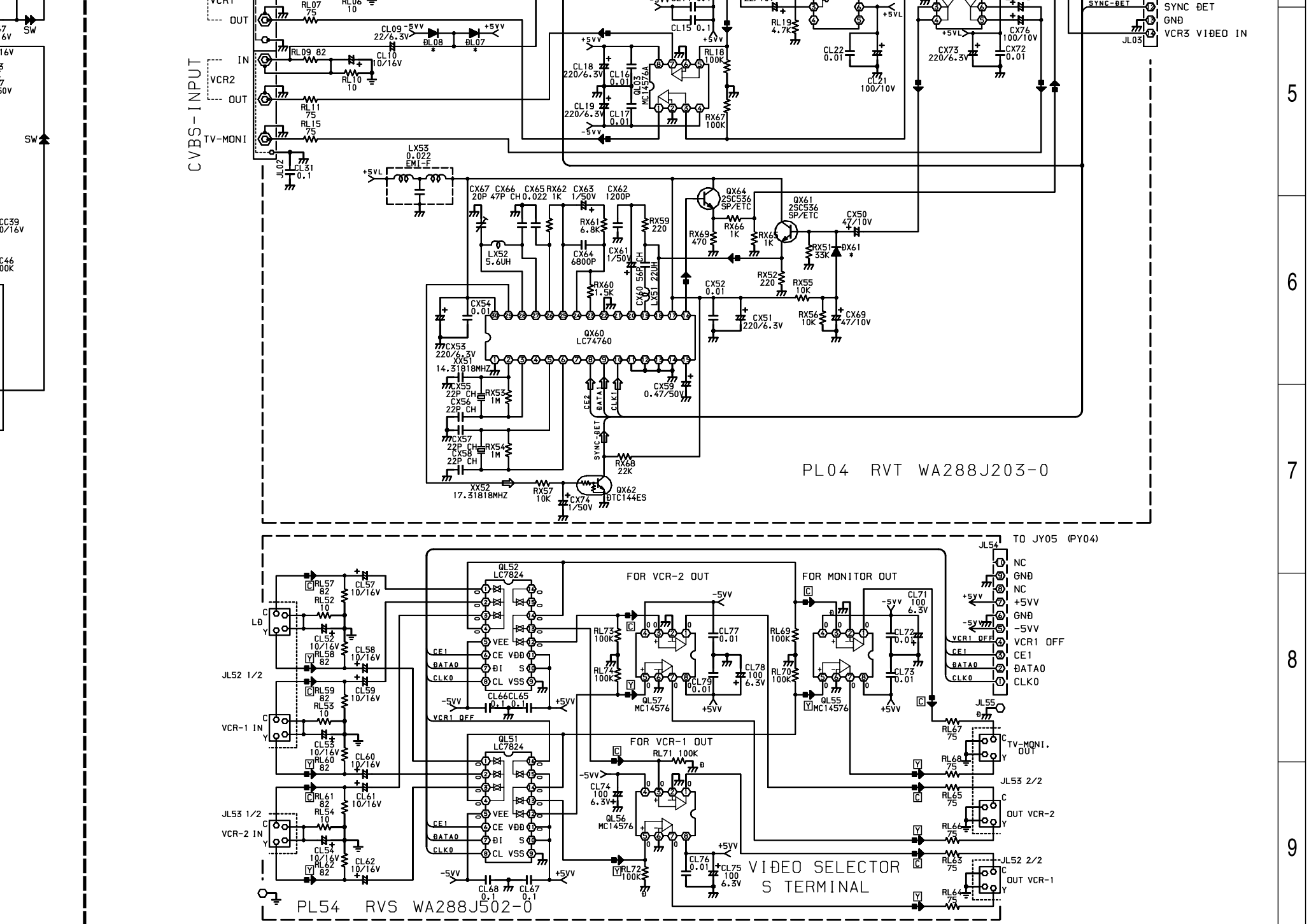
Schematic 4 of 8



- PC04, TONE CONTROL PCB - PF04, VIDEO SELECTOR PCB - PL04, S-VIDEO PCB PL54)




ĐATAO
CLKO
CE5
SURR RCH OUT
SURR LCH OUT
LFE IN
GNĐ
CENTER IN
SURR RCH IN
GNĐ
SURR LCH IN
FRONT RCH IN
GNĐ
FRONT LCH IN
-15V
GNĐ
+15V
JC03
JC04
JC05
HPF 100HZ
NJM4558ĐĐ
NJU7311AL
FRONT
SURR
CENTER
SW MIX
FL
FR
SL
SR
SW
LFE
C



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AVR85 (230V) SCHEMATIC DIAGRAM 5 of 8 (CONNECT PCB PY04)

AVR85 European 230V
Schematic 5 of 8

PY04 RRK RTG WG288J201-0

FRONT/U-COM/DISPLAY
FROM JU01 (PU04)

TO CROSS OVER
TO JX01 (PX04)

FROM DSP
FROM J601 (P604)

BACKUP SUPPLY
FROM JB09 (PB04)

FROM TUNER
FROM J301 (P104)

AUDIO SELECTOR
(VIDEO SOURCE) JY02

MUTE BUFFER

FROM JS03 (PS03)

FROM JS54 (PS54)
AUDIO SELECTOR
(VIDEO SOURCE)

TO JL03 (PL04)
VIDEO SELECTOR

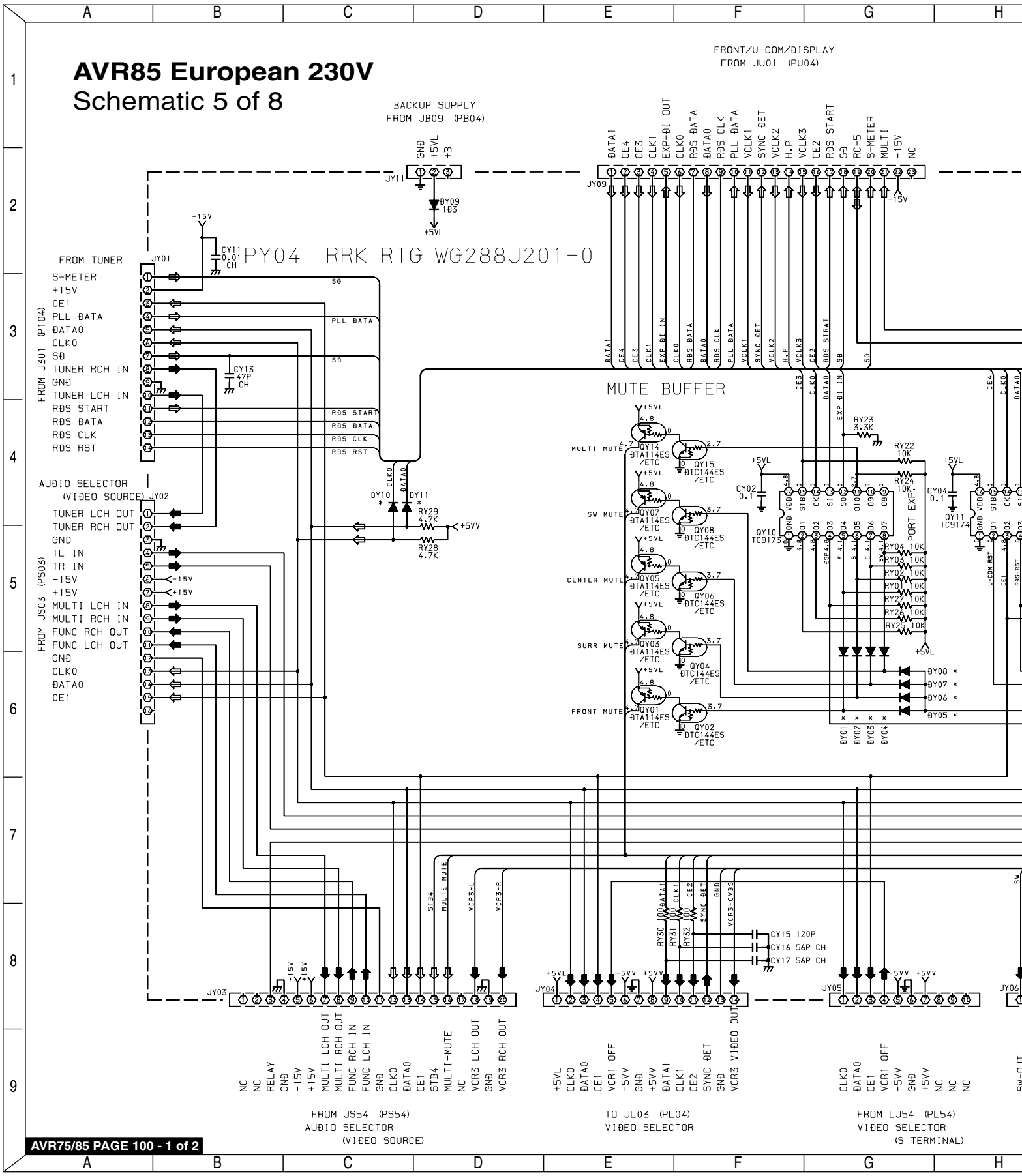
FROM LJ54 (PL54)
VIDEO SELECTOR
(S TERMINAL)

TO JV54 (PE04)
TO ELECTRIC VOLUME

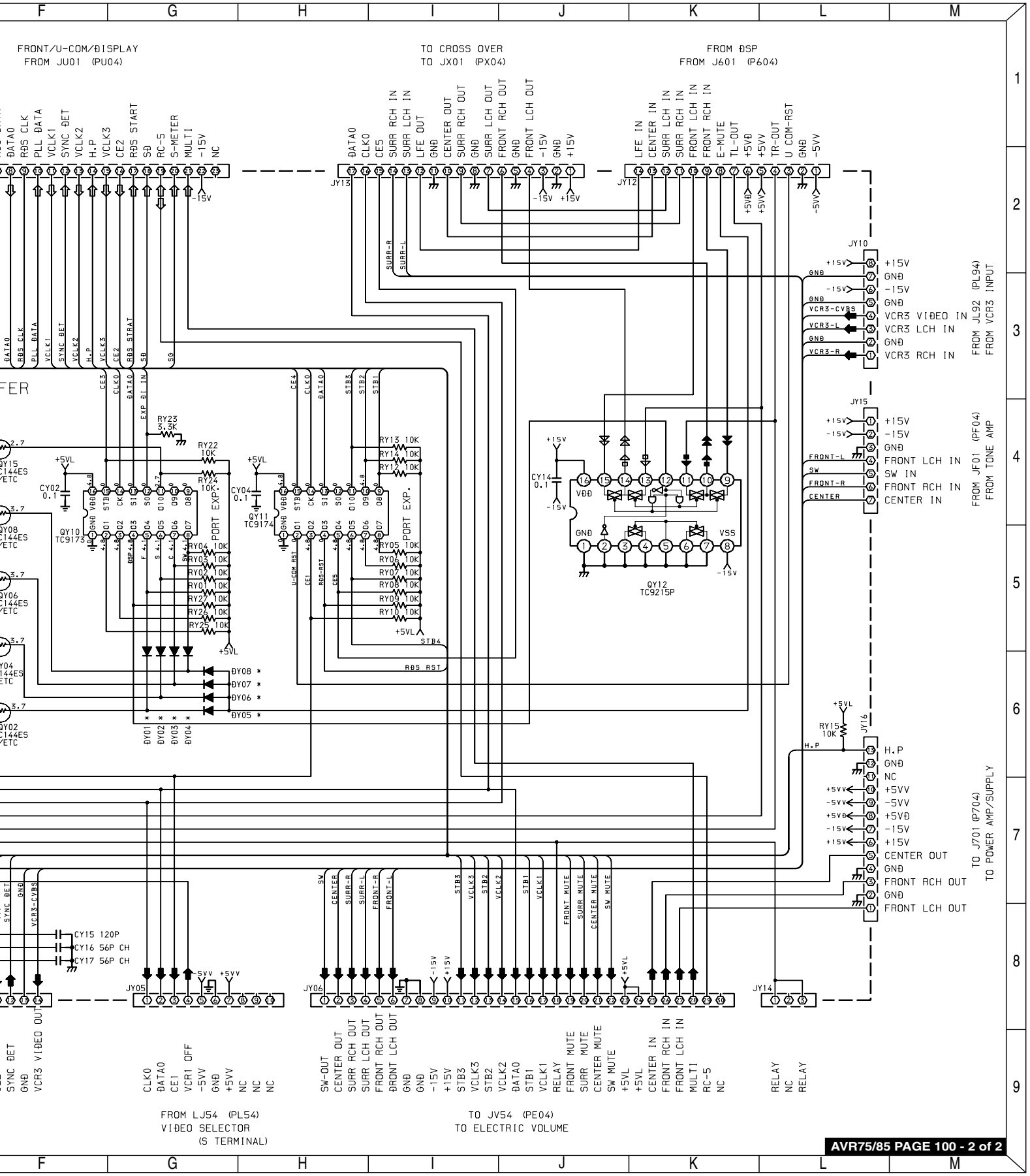
FROM JF01 (PF04)
FROM TONE AMP

TO J701 (P704)
TO POWER AMP/SUPPLY

AVR85 European 230V
Schematic 5 of 8



HEMATIC DIAGRAM 5 of 8 (CONNECT PCB PY04)



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AVR75/85 PAGE 101 - 4 of 4

P714 RMA WA288J601-0
RHP

P704 RMA WA288J101-0
RPS

PP04 WA288J402-0
RMB

P754 WG288J202-0
RSP

HEAD PHONE AMP

FRONT-L POWER AMP

FRONT-R POWER AMP

CENTER POWER AMP

CENT./SURR. POWER AMP

PB04 RBU WA288J404-0

BACK UP SUPPLY

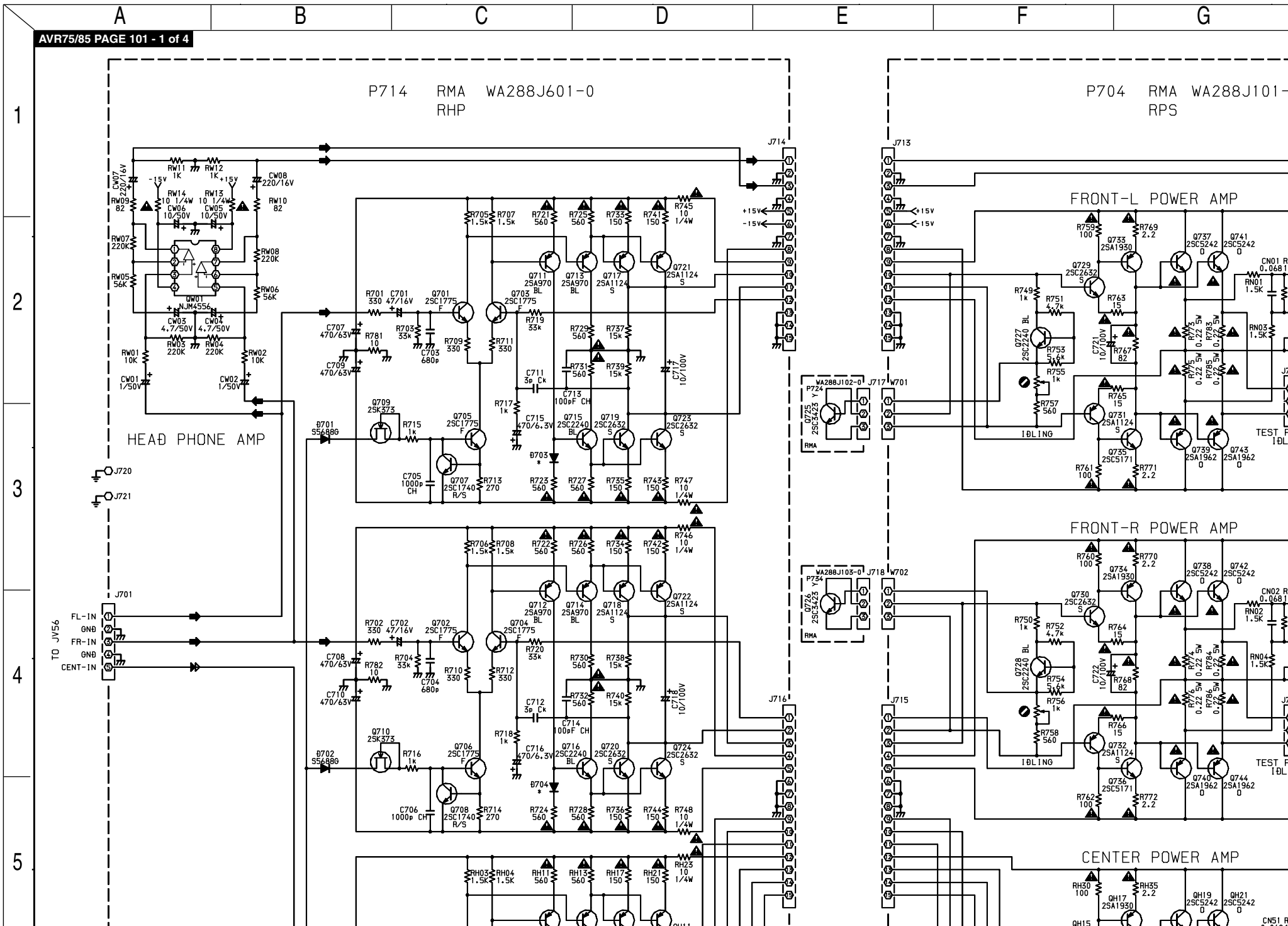
PU94 RPP WA288J507-0

PW04 RHP WA288J508-0

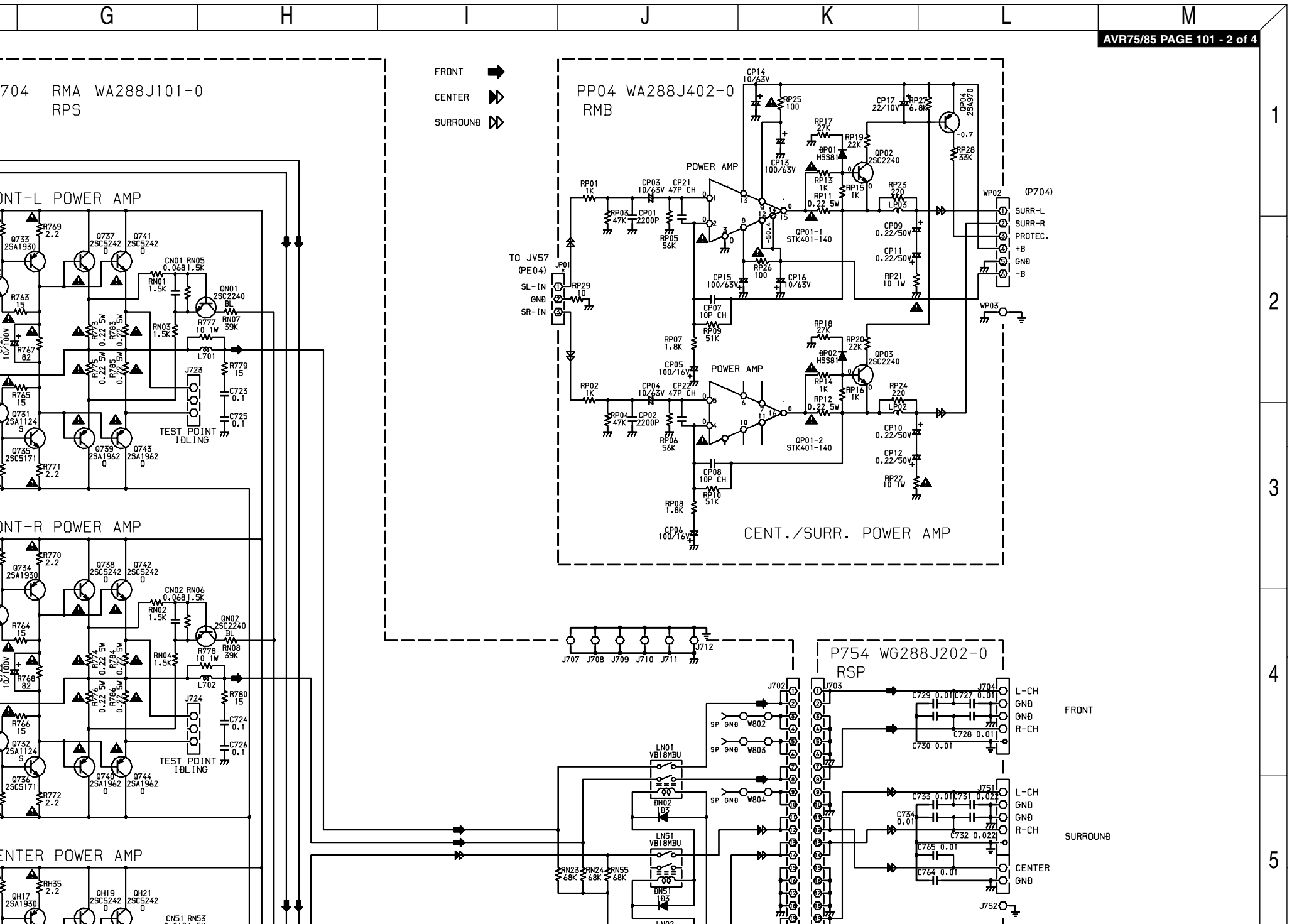
PN54 RMC WA288J506-0

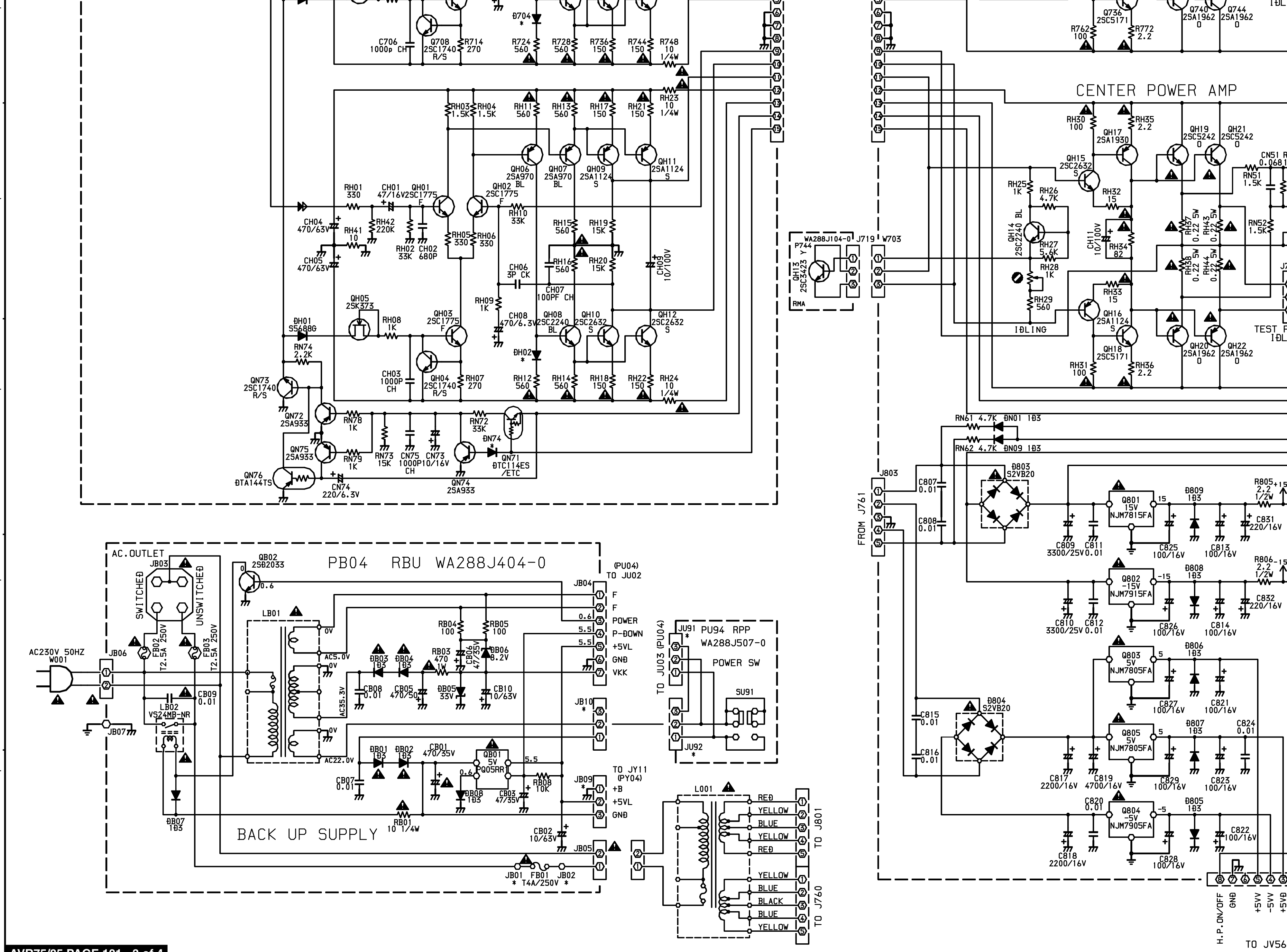
AVR85 European 230V
Schematic 6 of 8

AVR85 (230V) SCHEMATIC DIAGRAM 6 of 8 (VOLTAGE AMP PCB - P714, MAIN PCB - HEADPHONE PCB - PW04, SPEAKER PROTECT PCB - PN54, STAN



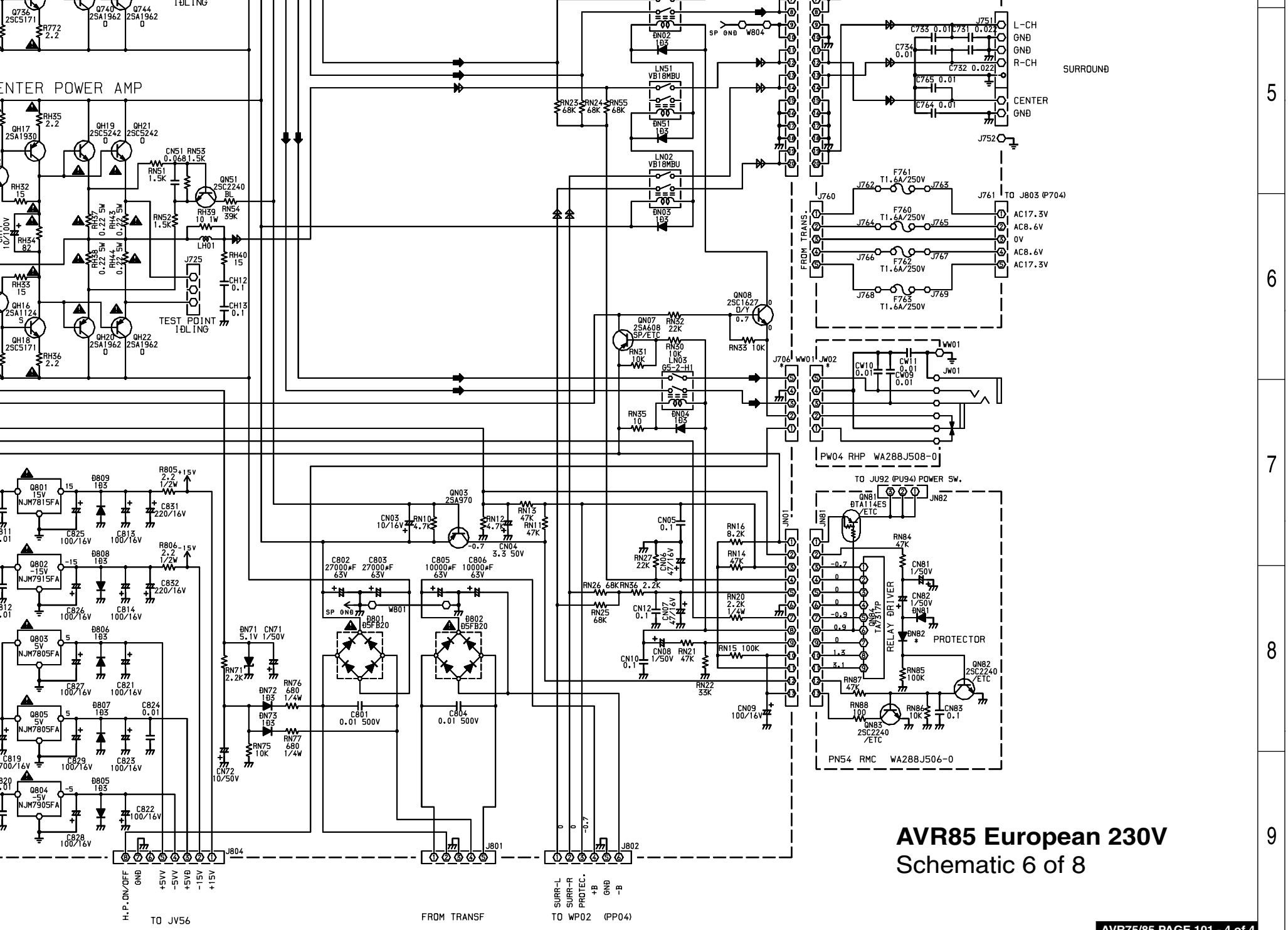
- P714, MAIN PCB - P704, SURROUND AMP PCB - PP04, SPEAKER TERMINAL - P754,
T PCB - PN54, STANDBY PCB - PB04, POWER SWITCH PCB - PU94)





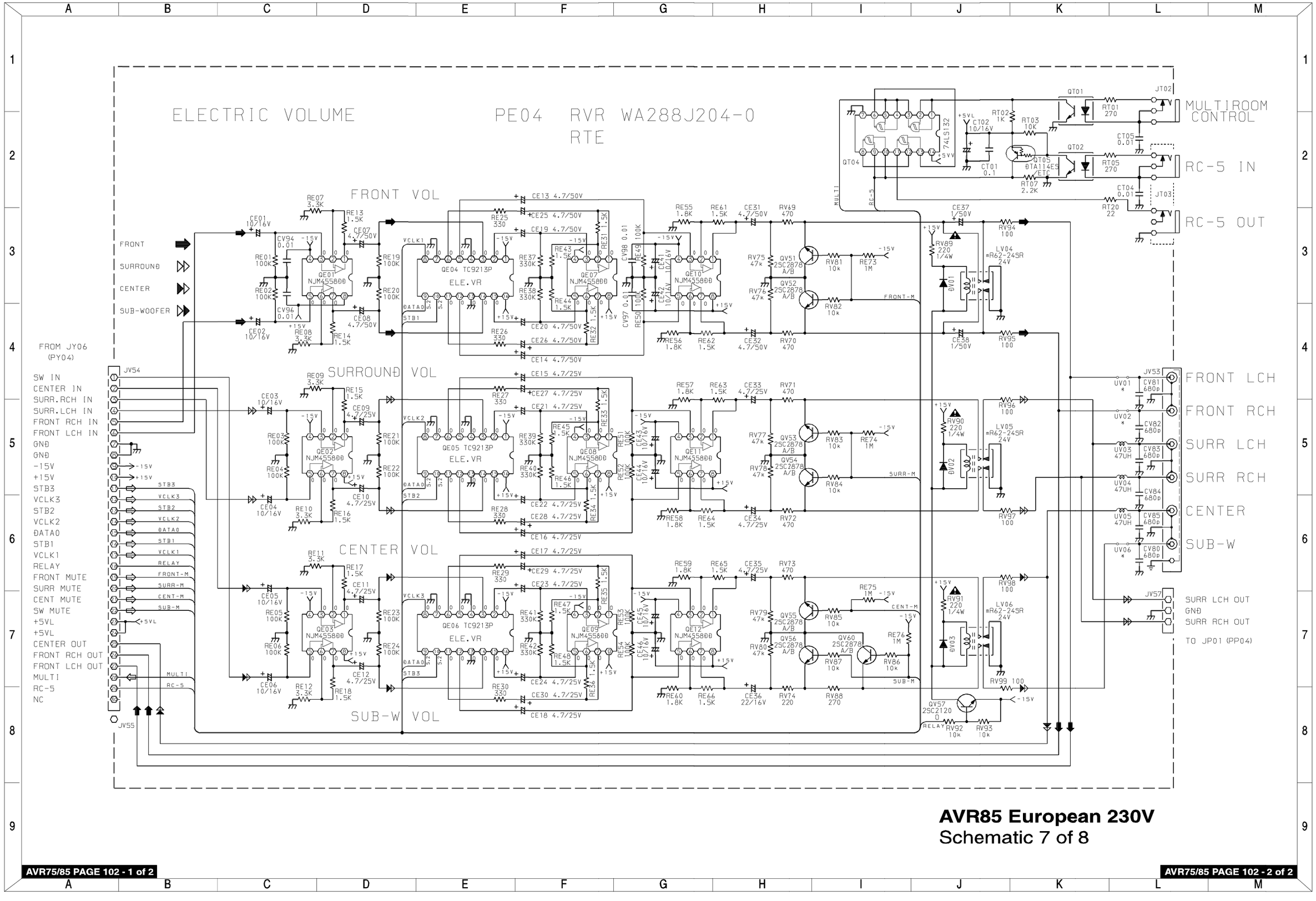
A	B	C	D	E	F	G

5 6 7 8 9



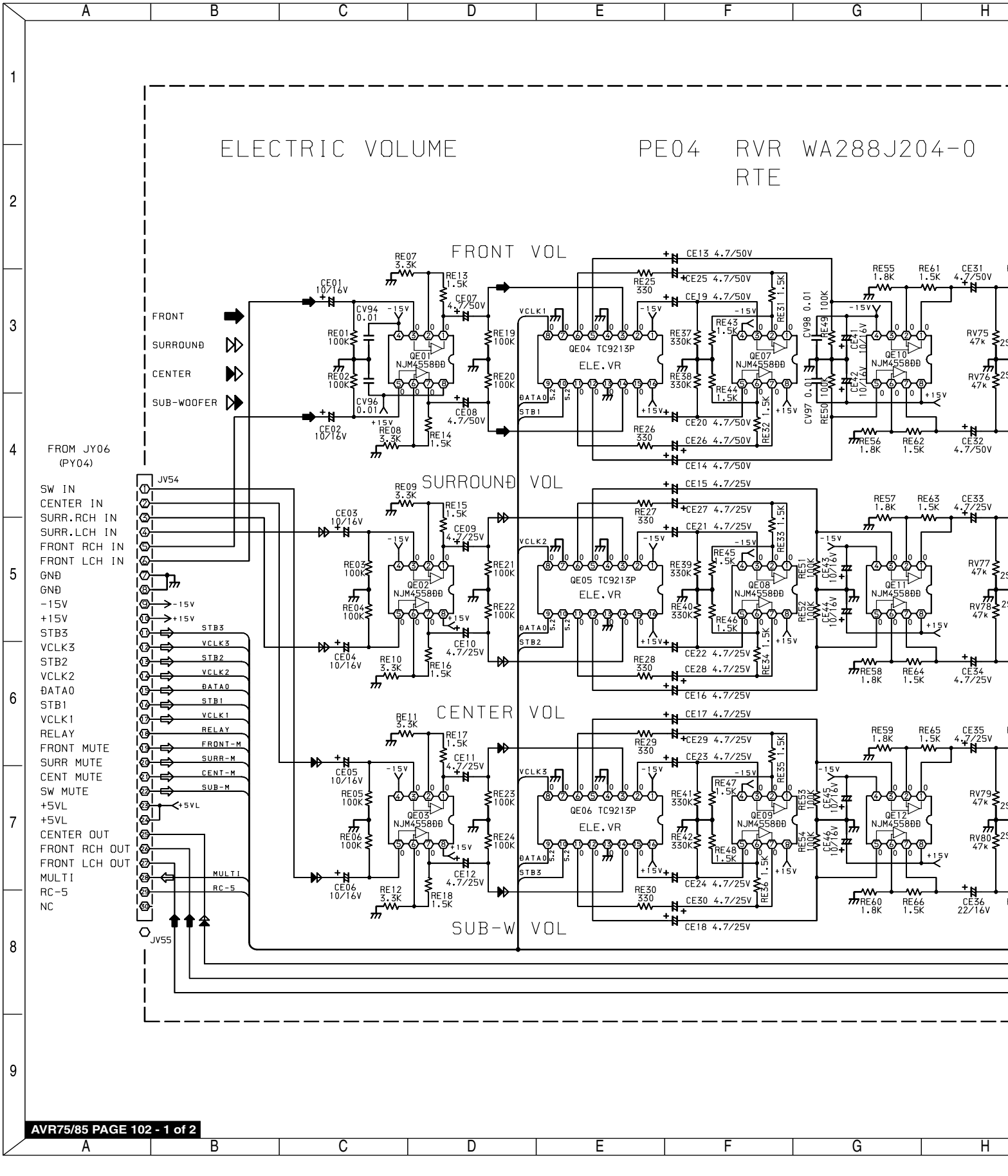
AVR85 European 230V
Schematic 6 of 8

AVR85 (230V) SCHEMATIC DIAGRAM 7 of 8 (ELECTRONIC VOLUME PCB PE04)

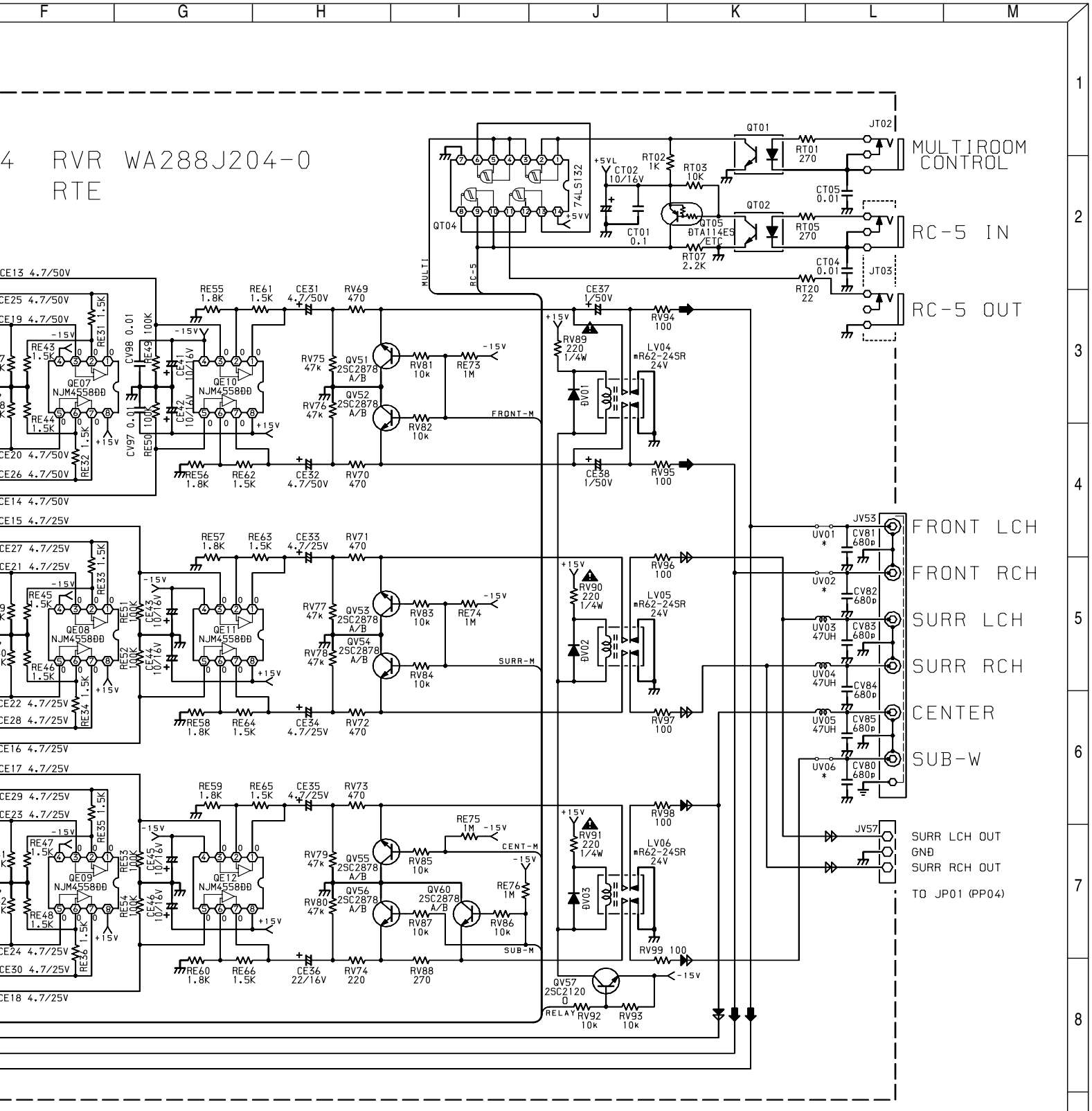


AVR85 European 230V
Schematic 7 of 8

AVR85 (230V) SCHEMATIC DIAGRAM 7 of 8 (ELECTRO



TIC DIAGRAM 7 of 8 (ELECTRONIC VOLUME PCB PE04)



AVR85 European 230V
Schematic 7 of 8