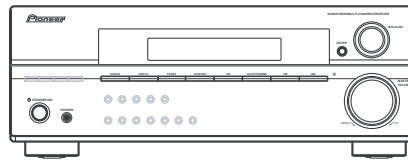


Service Manual



VSX-515-K



ORDER NO.
RRV3092

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-515-K VSX-515-S

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

| Model | Type | Power Requirement | Remarks |
|-----------|-------|-------------------|---------|
| VSX-515-K | KUCXJ | AC 120V | |
| VSX-515-S | KUCXJ | AC 120V | |

For details, refer to "Important Check Points for Good Servicing".



This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

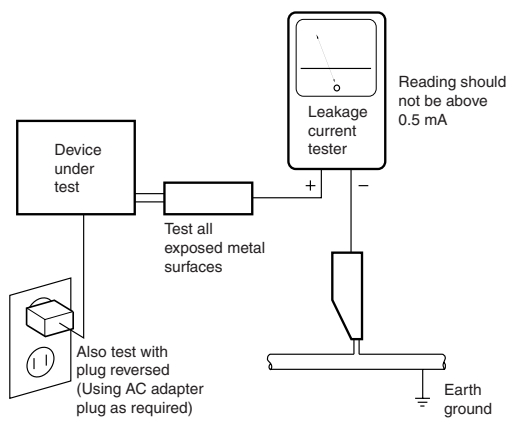
2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

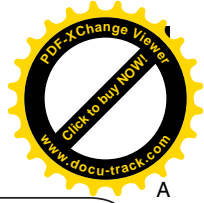
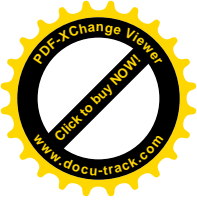
Electrical components having such features are identified by marking with a triangle on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.



AC Leakage Test



[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol. Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris. Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs. In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages. If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries. Please pay attention to your surroundings and repair safely.

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification. Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance. Make sure the proper amount is applied.

4. Cleaning

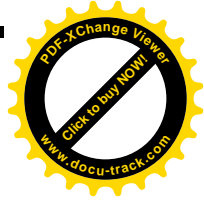


For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

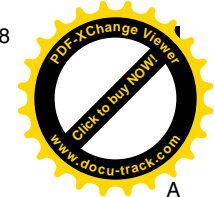
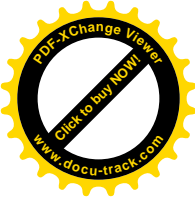


CONTENTS

| | | |
|----|---|----|
| | SAFETY INFORMATION | 2 |
| | 1. SPECIFICATIONS | 5 |
| A | EXPLODED VIEWS AND PARTS LIST | 7 |
| | 2.1 PACKING | 7 |
| | 2.2 EXTERIOR SECTION..... | 8 |
| | 2.3 FRONT PANEL SECTION | 10 |
| 3. | BLOCK DIAGRAM AND SCHEMATIC DIAGRAM | 12 |
| | 3.1 BLOCK DIAGRAM | 12 |
| | 3.2 OVERALL WIRING CONNECTION DIAGRAM..... | 14 |
| | 3.3 MAIN ASSY (1/3)..... | 16 |
| | 3.4 MAIN ASSY (2/3)..... | 18 |
| | 3.5 MAIN ASSY (3/3)..... | 20 |
| | 3.6 DSP ASSY (1/2)..... | 22 |
| | 3.7 DSP ASSY (2/2)..... | 24 |
| B | 3.8 AMP & PRIMARY (1/2), TRANS2 and TRANS3 ASSYS | 26 |
| | 3.9 AMP&PRIMARY(2/2), REGULATOR, AMP INPUT and TRANS1 ASSYS..... | 28 |
| | 3.10 VIDEO and 5.1CH ASSYS..... | 30 |
| | 3.11 FRONT DISPLAY, R. ENCODER, P. SW&FUNC KEY and F. KEY ASSYS | 32 |
| | 3.12 TRANS4, H.P, D. IN and COMPONENT ASSYS | 34 |
| 4. | PCB CONNECTION DIAGRAM | 36 |
| | 4.1 REGULATOR ASSY..... | 36 |
| | 4.2 TRANS2, TRANS3, TRANS1 and TRANS4 ASSYS..... | 37 |
| | 4.3 MAIN ASSY | 38 |
| | 4.4 DSP ASSY | 42 |
| | 4.5 AMP & PRIMARY and AMP INPUT ASSYS..... | 44 |
| | 4.6 F. DISPLAY, R. ENCODER, P. SW & KEY, H. P. and F. KEY ASSYS | 46 |
| C | 4.7 DIGITAL IN, VIDEO and 5.1CH ASSYS..... | 50 |
| | 4.8 COMPONENT ASSY | 52 |
| 5. | ELECTRICAL PARTS LIST | 53 |
| 6. | ADJUSTMENT | 57 |
| 7. | GENERAL INFORMATION | 58 |
| | 7.1 DIAGNOSIS | 58 |
| | 7.1.1 DISASSEMBLY..... | 58 |
| | 7.2 PARTS..... | 60 |
| | 7.2.1 IC | 60 |
| | 7.3 EXPLANATION | 66 |
| | 7.3.1 POWER ON AND OFF INITIAL TIMING CHART | 66 |
| | 7.3.2 IC DATA TRANSMISSION TIMING CHART..... | 68 |
| D | 7.3.3 DETECTION CIRCUIT | 71 |
| | 7.3.4 AMPLIFIER SYSTEM PROTECTION OPERATION SPECIFICATION..... | 72 |
| | 7.3.5 AMPLIFIER FAILURE DIAGNOSIS FLOW CHART | 74 |
| | 7.4 CLEANING..... | 74 |
| 8. | PANEL FACILITIES | 75 |

E

F



1. SPECIFICATIONS

Amplifier section

- **Continuous power output (stereo)**
Front . . . 110 W (20–20,000 Hz, THD 0.7%, 8 Ω) ¹
- **Continuous power output (surround)**
Front110 W per channel (1kHz, 1.0%, 8 Ω)
Center110 W (1kHz, 1.0%, 8 Ω)
Surround 110 W per channel
(1kHz, 1.0%, 8 Ω)
Surround Back110 W (1kHz, 1.0%, 8 Ω)

Audio section

- **Input (Sensitivity/Impedance)**
CD, DVR/VCR, CD-R/TAPE/MD,
DVD/LD, TV/SAT 200 mV/47 kΩ
- **Frequency response**
CD, DVR/VCR, CD-R/TAPE/MD, DVD/LD,
TV/SAT 5 Hz to 100,000 Hz ± 0.5 dB
- **Output (Level/Impedance)**
DVR/VCR REC, CD-R/TAPE/
MD REC. 200 mV/2.2 kΩ
- **Tone control**
Bass. ± 6 dB (100 Hz)
Treble. ± 6 dB (10 kHz)
Loudness. +10 dB/+5 dB (100 Hz/10 kHz)
(at volume level –50 dB)

- **Signal-to-Noise Ratio (IHF, short circuited, A network)**
CD, DVR/VCR, CD-R/TAPE/MD,
DVD/LD, TV/SAT.96 dB
- **Signal to Noise Ratio [EIA, at 1 W (1 kHz)]**
CD, DVR/VCR, CD-R/TAPE/MD,
DVD/LD, TV/SAT.79 dB

Video Section

- **Input (Sensitivity/Impedance)**
DVR/VCR, DVD/LD, TV/SAT.1 Vp-p/75 Ω
- **Output (Level/Impedance)**
DVR/VCR, MONITOR OUT.1 Vp-p/75 Ω
- **Frequency response**
DVR/VCR, DVD/LD,
TV/SAT ⇒ MONITOR.5 Hz to 7 MHz ± 0.5 dB
Signal-to-Noise Ratio.55 dB
Crosstalk. 50dB

Component video section

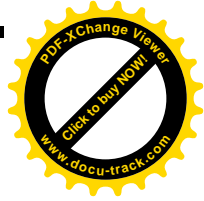
- **Input (Sensitivity)**
DVD/LD, TV/SAT.1 Vp-p/75 Ω
- **Output (Level/Impedance)**
MONITOR OUT.1 Vp-p/75 Ω
- **Frequency response**
DVD/LD,
TV/SAT ⇒ MONITOR.5 Hz to 40 MHz ± 0.5 dB
Signal-to-Noise Ratio.60 dB

Note

¹ Continuous average power output of 110 watts* per channel, min., at 8ohms, from 20 Hz to 20,000 Hz with no more than 0.7%** total harmonic distortion (front).

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.

** Measured by Audio Spectrum Analyzer.



FM Tuner Section

- Frequency Range. 87.5 MHz to 108 MHz
- Cable Sensitivity Mono: 13.2 dBf, IHF
(1.3 μ V/ 75 Ω)
- 50 dB Quieting Sensitivity. Mono: 20.2 dB
Stereo: 38.6 dBf
- Signal-to-Noise Ratio. . . Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
- Distortion Stereo: 0.5 % (1 kHz)
- Alternate Channel Selectivity.60 dB
(400 kHz)
- Stereo Separation 40 dB (1 kHz)
- Frequency Response.30 Hz to 15 kHz
(\pm 1 dB)
- Antenna Input (DIN) 75 Ω unbalanced

AM Tuner Section

- Frequency Range. 530 kHz to 1,700 kHz
- Sensitivity (IHF, Loop antenna).350 μ V/m
- Signal-to-Noise Ratio.50 dB
- Antenna Loop antenna

Miscellaneous

- Power requirements AC 120V / 60Hz
- Power consumption300 W / 420 VA
In standby 0.5 W
- Dimensions 16^{9/16} (W) x 6^{1/4} (H) x 15^{7/8} (D) in.
420 (W) x 158 (H) x 402.5 (D) mm
- Weight (without package) 21.1 lb (9.9 kg)

Furnished Parts

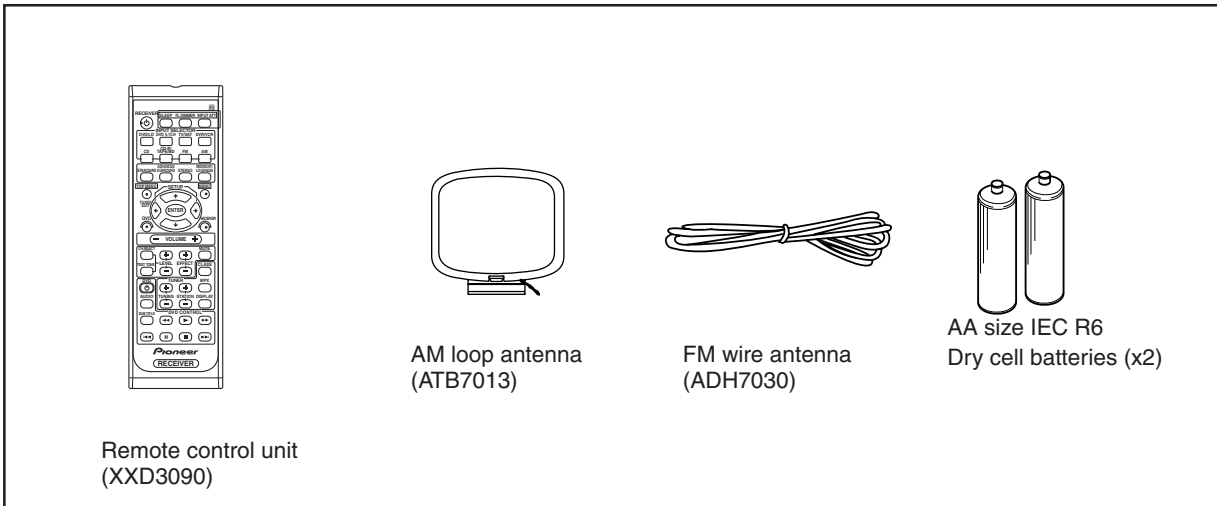
- AM loop antenna 1
- FM wire antenna 1
- Dry cell batteries (AA size IEC R6) 2
- Remote control 1
- Warranty Card 1
- Operating instructions. 1

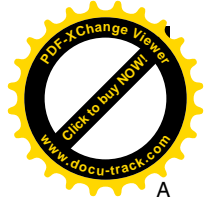
Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic", "Surround EX", and the double-D symbol are trademarks of Dolby Laboratories.

"DTS", "DTS-ES Extended Surround" and "Neo:6" are trademarks of Digital Theater Systems, Inc.

Microsoft, Windows Media®, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

Accessories

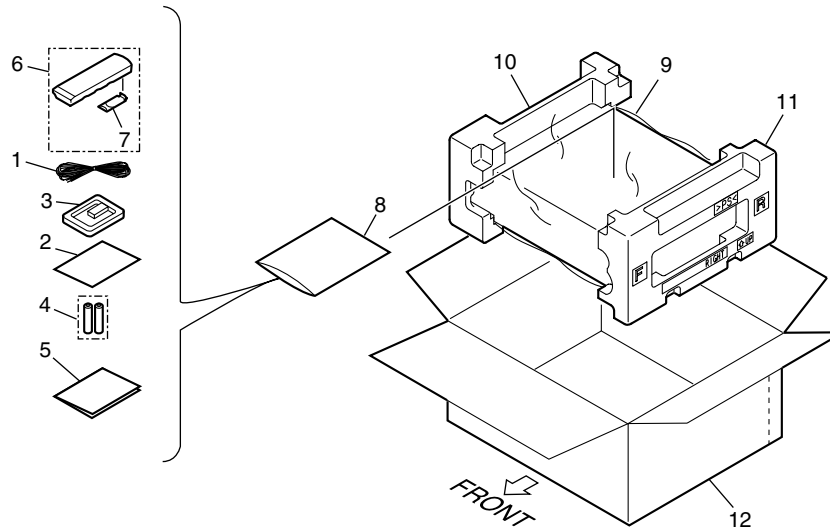




2. EXPLODED VIEWS AND PARTS LIST

- NOTES:**
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
 - The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - Screws adjacent to ∇ mark on product are used for disassembly.
 - For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)

2.1 PACKING



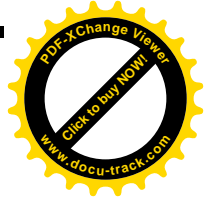
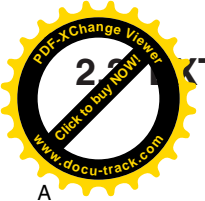
PACKING PARTS LIST

| Mark No. | Description | Part No. | Mark No. | Description | Part No. |
|----------|--------------------------------------|----------|----------|--------------|-----------------------|
| 1 | FM wire antenna | ADH7030 | 10 | Left Pad V2 | XHA3149 |
| NSP 2 | Warranty Card | ARY7045 | 11 | Right Pad V2 | XHA3150 |
| 3 | AM loop antenna | ATB7013 | 12 | Packing Case | See Contrast table(2) |
| NSP 4 | Alkaline Dry cell batteries (AA/LR6) | VEM1031 | | | |
| 5 | Operating instructions (English) | XRE3090 | | | |
| 6 | Remote Control Unit | XXD3090 | | | |
| 7 | Battery Cover | XZN3139 | | | |
| NSP 8 | Literature Bag | AHG1180 | | | |
| 9 | Packing Sheet | AHG7069 | | | |

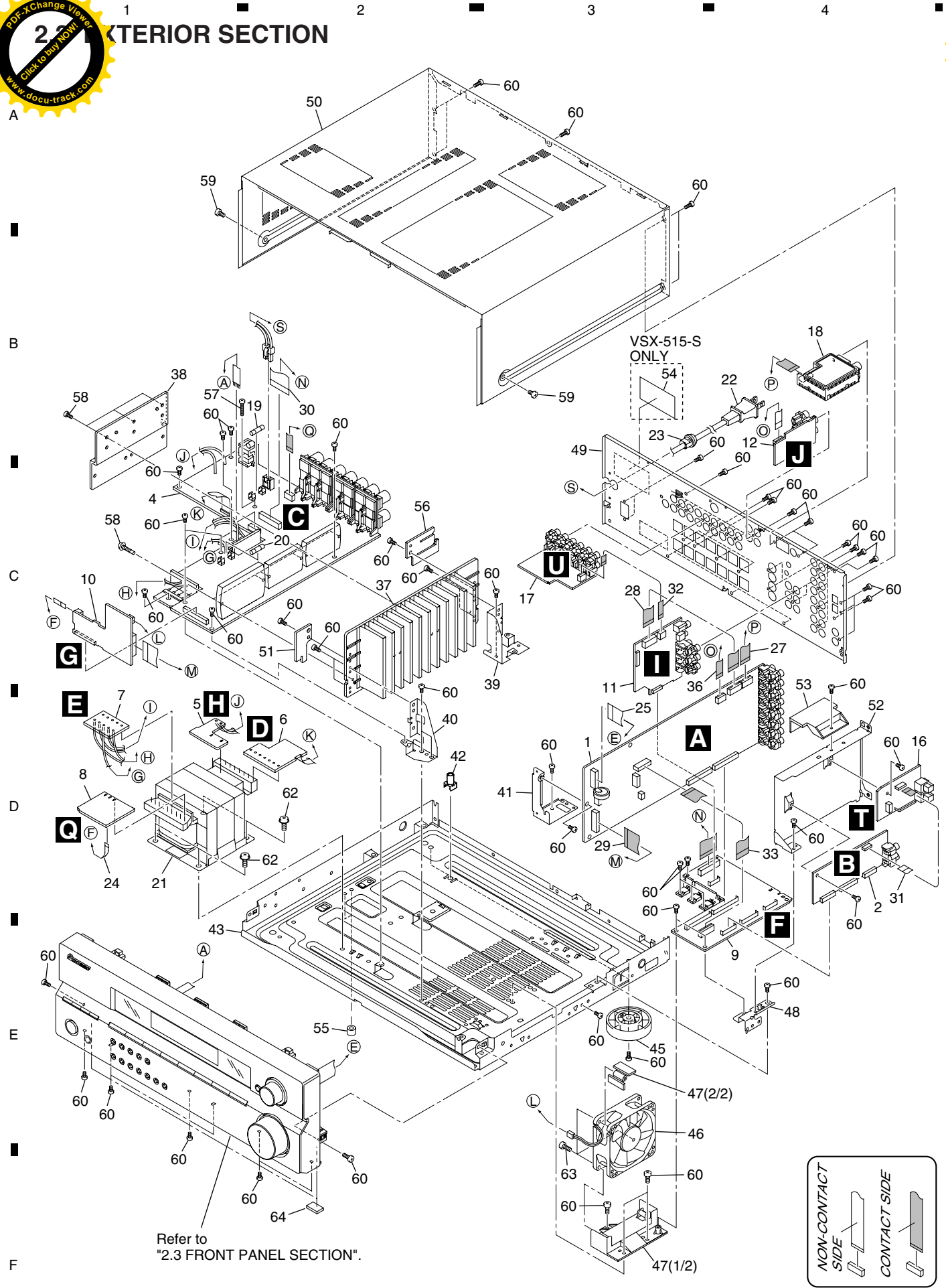
(2) CONTRAST TABLE

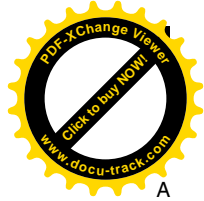
VSX-515-K/KUCXJ and VSX-515-S/KUCXJ are constructed the same except for the following:

| Mark | NO | Description | VSX-515-K /KUCXJ | VSX-515-S /KUCXJ |
|------|----|--------------|------------------|------------------|
| | 12 | Packing Case | XHD3474 | XHD3475 |



INTERIOR SECTION





5
EXTERIOR SECTION parts List

| Mark No. | Description | Part No. |
|----------|----------------------|----------|
| 1 | MAIN Assy | XWK3154 |
| 2 | DSP Assy | AWX8573 |
| 3 | ••••• | |
| 4 | AMP & PRIMARY Assy | XWZ3941 |
| 5 | TRANS1 Assy | XWZ3958 |
| 6 | TRANS2 Assy | XWZ3959 |
| 7 | TRANS3 Assy | XWZ3961 |
| 8 | TRANS4 Assy | XWZ3936 |
| 9 | REGULATOR Assy | XWZ3952 |
| 10 | AMP INPUT Assy | XWZ3955 |
| 11 | VIDEO Assy | XWZ3904 |
| 12 | 5.1CH INPUT Assy | XWZ3915 |
| 13 | ••••• | |
| 14 | ••••• | |
| 15 | ••••• | |
| 16 | DIGITAL INPUT Assy | XWZ3927 |
| 17 | COMPONENT VIDEO Assy | XWZ3934 |
| 18 | FM/AM TUNER UNIT | AXX7172 |
| ⚠ | FU1 Fuse (10A) | REK1087 |
| ⚠ | FU701 Fuse (10A) | REK1087 |
| ⚠ | Transformer 815KU | XTS3087 |
| ⚠ | AC Power Cord | ADG7024 |
| 23 | Cord Stopper | CM-22C |
| 24 | J22 3P F.F.C/30V | XDD3107 |
| 25 | J31 17P F.F.C/30V | XDD3118 |
| 26 | ••••• | |
| 27 | J33 13P F.F.C/30V | XDD3164 |
| 28 | J34 11P F.F.C/30V | XDD3163 |
| 29 | J35 21P F.F.C/30V | XDD3160 |
| 30 | J36 23P F.F.C/60V | XDD3167 |
| 31 | J37 10P F.F.C/30V | XDD3178 |
| 32 | J38 5P F.F.C/60V | XDD3166 |
| 33 | J43 15P F.F.C/60V | XDD3162 |

6

| Mark No. | Description | Part No. |
|----------|---------------------|-----------------------|
| 34 | ••••• | |
| 35 | ••••• | |
| 36 | J48 8P F.F.C/60V | XDD3165 |
| NSP 37 | Heatsink V2B39 CORR | XNH3034 |
| NSP 38 | Sub Heatsink | XNH3039 |
| 39 | H/S Angle Rear V2 | XNG3133 |
| 40 | H/S Angle Front V2 | XNG3132 |
| 41 | PCB Angle R5 | XNG3073 |
| 42 | PCB Mold | AMR2533 |
| NSP 43 | Under Base V2 | XNA3023 |
| 44 | ••••• | |
| 45 | Insulator | AMR7198 |
| ⚠ 46 | DC Fan Motor | XXM3007 |
| 47 | Fan Holder R6 | XMR3066 |
| 48 | REG Support R6 | XNG3093 |
| 49 | Rear Panel 515S/KU | XNC3326 |
| 50 | Bonnet | See Contrast table(2) |
| 51 | HOLDER Assy | XWZ3964 |
| 52 | Shield V2 | XNG3134 |
| 53 | FFC Cover V2 | XMR3091 |
| NSP 54 | N Label | See Contrast table(2) |
| NSP 55 | Spacer | AEB7092 |
| 56 | BINDER Assy | XWZ3963 |
| 57 | Screw | BBZ30P200FTC |
| 58 | Screw 3x23 | XBA3012 |
| 59 | Screw | See Contrast table(2) |
| 60 | Screw | BBZ30P080FTC |
| 61 | ••••• | |
| 62 | Screw | FBT40P080FNI |
| 63 | Screw | BPZ30P120FTC |
| 64 | Rubber Sheet | AEB1111 |

7

8

(2) CONTRAST TABLE

VSX-515-K/KUCXJ and VSX-515-S/KUCXJ are constructed the same except for the following:

| Mark | NO | Description | VSX-515-K /KUCXJ | VSX-515-S /KUCXJ |
|------|----|-----------------|------------------|------------------|
| NSP | 50 | Bonnet K V1 | XZN3148 | Not used |
| | 50 | Bonnet S V1 | Not used | XZN3149 |
| | 54 | N Label 515S/KU | Not used | XAL3214 |
| | 59 | Screw | FBT40P080FTB | FBT40P080FNI |

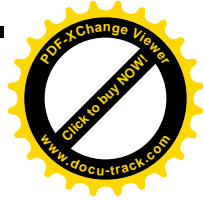
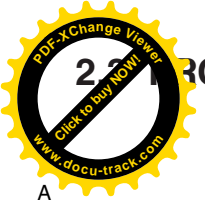
5

6

7

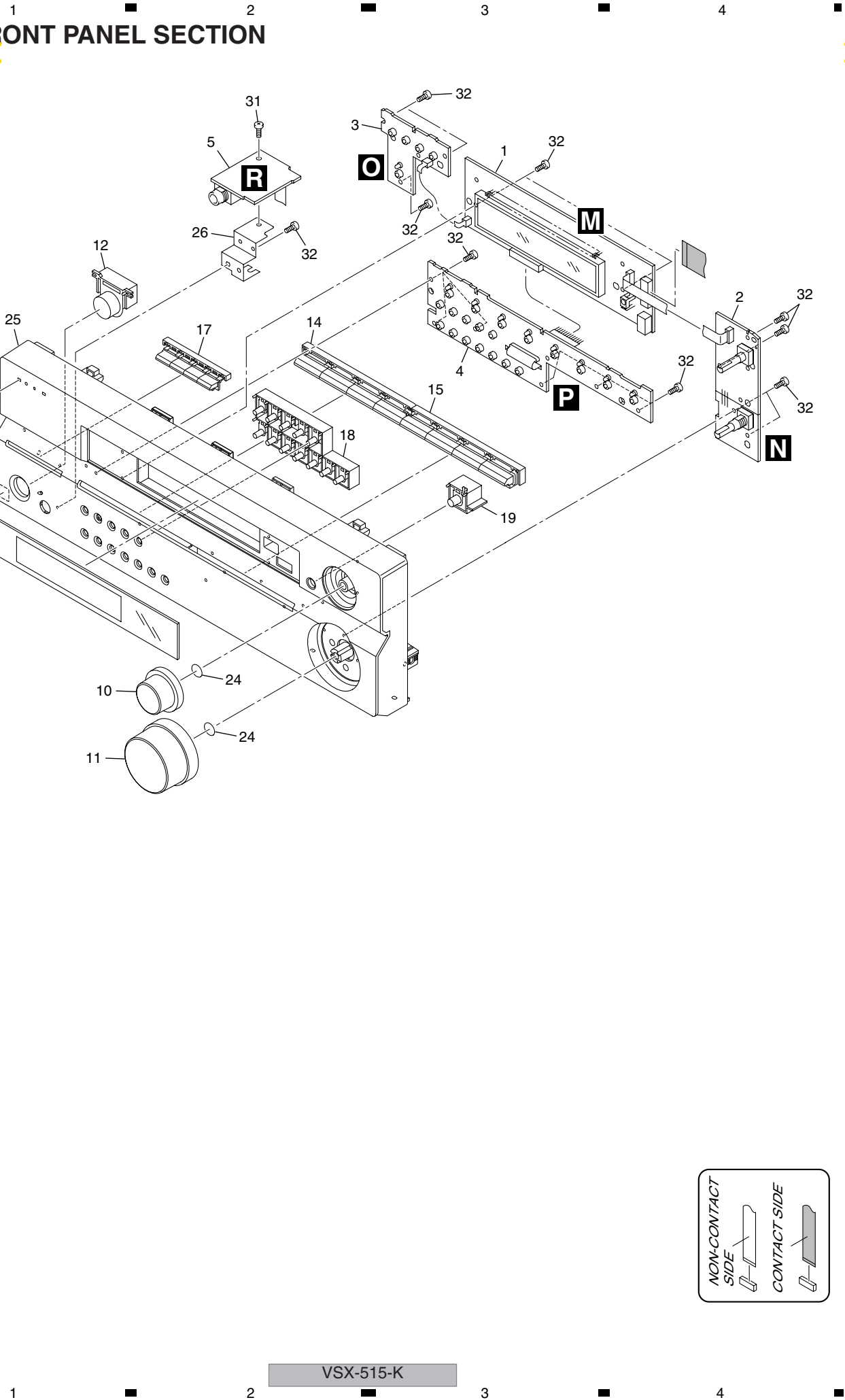
8

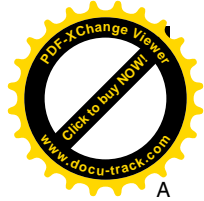
9



FRONT PANEL SECTION

A
B
C
D
E
F





5 **FRONT PANEL SECTION parts List**

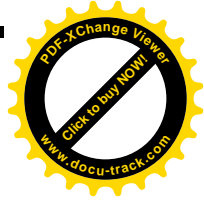
| Mark No. | Description | Part No. |
|----------|--------------------|-----------------------|
| 1 | FRONT DISPLAY ASSY | XWZ3909 |
| 2 | R. ENCODER Assy | XWZ3921 |
| 3 | POWER SW Assy | XWZ3918 |
| 4 | FRONT KEY Assy | XWZ3913 |
| 5 | H.P. Assy | XWZ3924 |
| 6 | ..... |  |
| 7 | ..... |  |
| 8 | ..... |  |
| 9 | ..... |  |
| 10 | JOG Knob | See Contrast table(2) |
| 11 | VOL Knob | See Contrast table(2) |
| 12 | Standby BTN 515K | See Contrast table(2) |
| 13 | ..... |  |
| 14 | FUNC BTN L | See Contrast table(2) |
| 15 | FUNC BTN R | See Contrast table(2) |
| 16 | ..... |  |
| 17 | TUNER BTN | See Contrast table(2) |
| 18 | Sub BTN | See Contrast table(2) |
| 19 | JOG BUTTON | See Contrast table(2) |

| Mark No. | Description | Part No. |
|----------|-------------------|-----------------------|
| 20 | ..... |  |
| 21 | D Panel 415 B | XAK3480 |
| 22 | ..... |  |
| 23 | Pioneer Badge B | See Contrast table(2) |
| NSP 24 | C Ring DIM 8.1 | XBH3016 |
| 25 | FRT Panel | See Contrast table(2) |
| 26 | Earth Plate HP V2 | XNG3131 |
| 27 | ..... |  |
| 28 | ..... |  |
| 29 | ..... |  |
| 30 | ..... |  |
| 31 | Screw | BBZ30P080FTC |
| 32 | Screw | BPZ30P100FTC |
| NSP 33 | Energy Star label | AAX8022 |

(2) CONTRAST TABLE

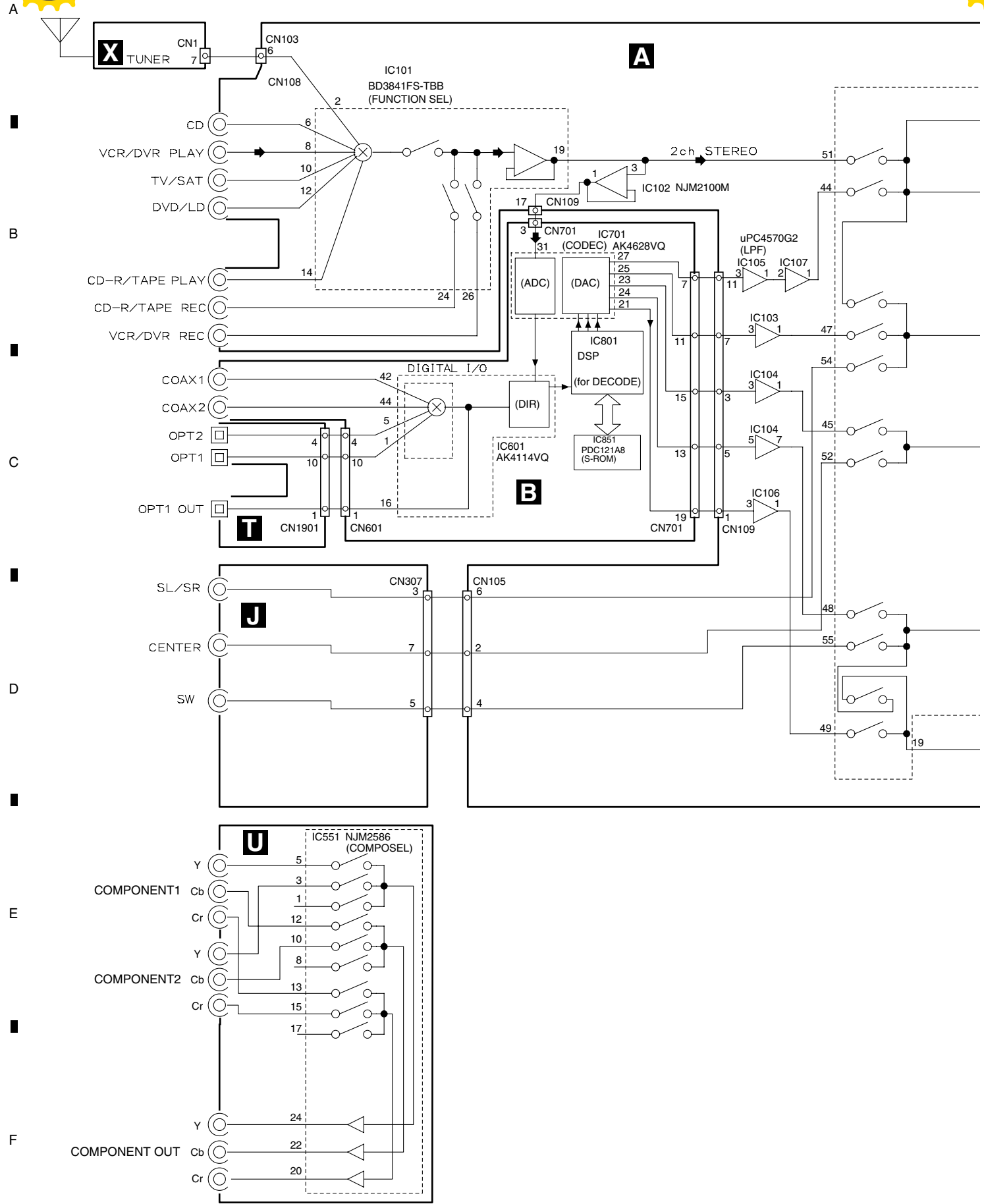
VSX-515-K/KUCXJ and VSX-515-S/KUCXJ are constructed the same except for the following:

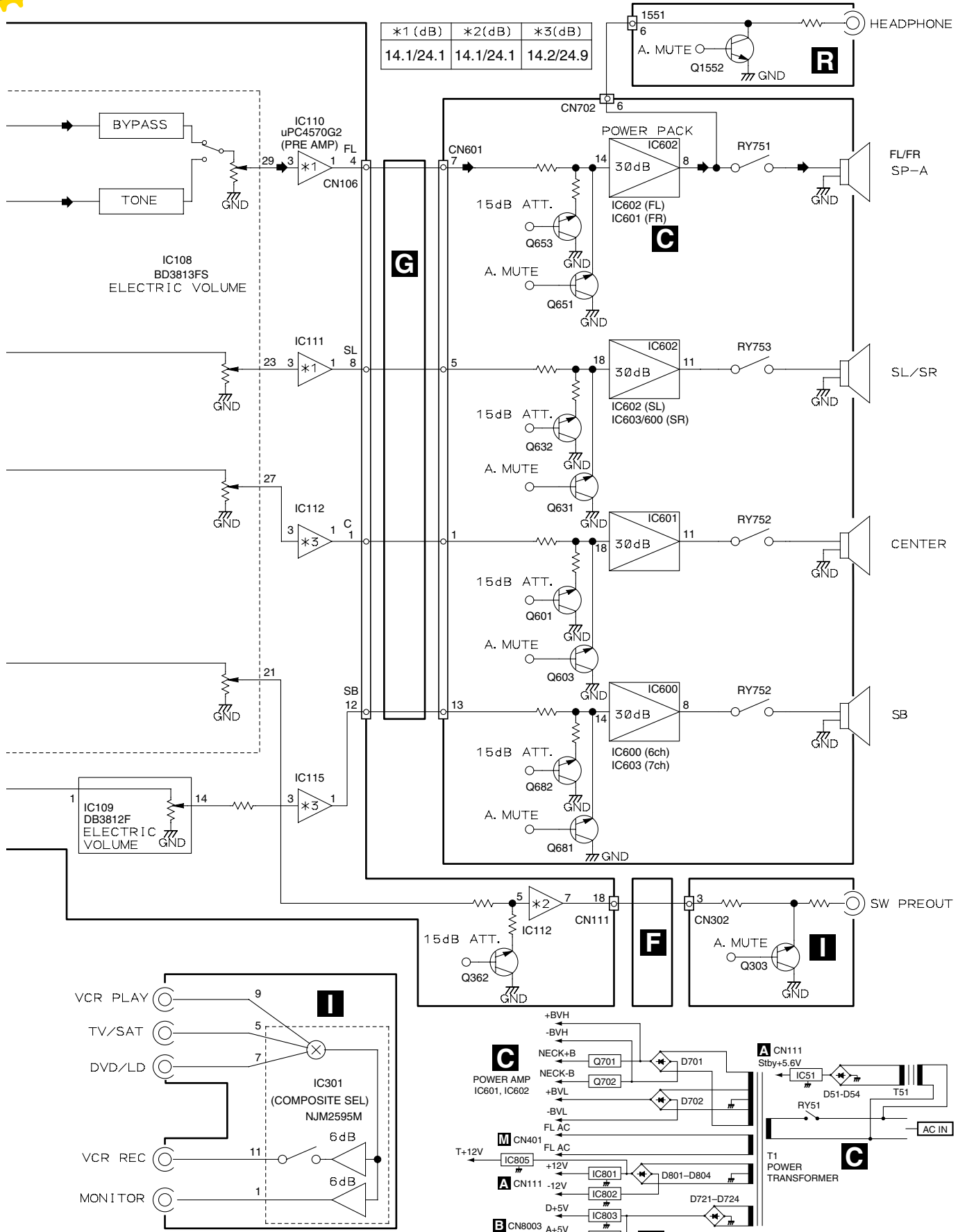
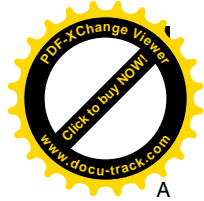
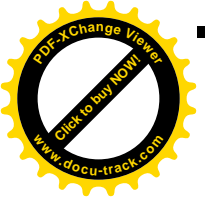
| Mark | NO | Description | VSX-515-K /KUCXJ | VSX-515-S /KUCXJ |
|------|----|-------------------|------------------|------------------|
| | 10 | JOG Knob V1K | XAB3038 | Not used |
| | 10 | JOG Knob V1S | Not used | XAB3042 |
| | 11 | VOL Knob V1K | XAB3039 | Not used |
| | 11 | VOL Knob V1S | Not used | XAB3043 |
| | 12 | Standby BTN 515K | XAD3202 | Not used |
| | 12 | Standby BTN 515S | Not used | XAD3203 |
| | 14 | FUNC BTN 515K L | XAD3206 | Not used |
| | 14 | FUNC BTN 515S L | Not used | XAD3210 |
| | 15 | FUNC BTN 515K R | XAD3207 | Not used |
| | 15 | FUNC BTN 515S R | Not used | XAD3211 |
| | 17 | TUNER BTN V2K | XAD3192 | Not used |
| | 17 | TUNER BTN V2S | Not used | XAD3193 |
| | 18 | Sub BTN V2K | XAD3198 | Not used |
| | 18 | Sub BTN V2S | Not used | XAD3199 |
| | 19 | JOG BTN V2K | XAD3204 | Not used |
| | 19 | JOG BTN V2S | Not used | XAD3205 |
| | 23 | Pioneer Badge B | XAM3006 | VAM1129 |
| | 25 | FRT Panel 515K/KU | XMB3177 | Not used |
| | 25 | FRT Panel 515S/KU | Not used | XMB3178 |



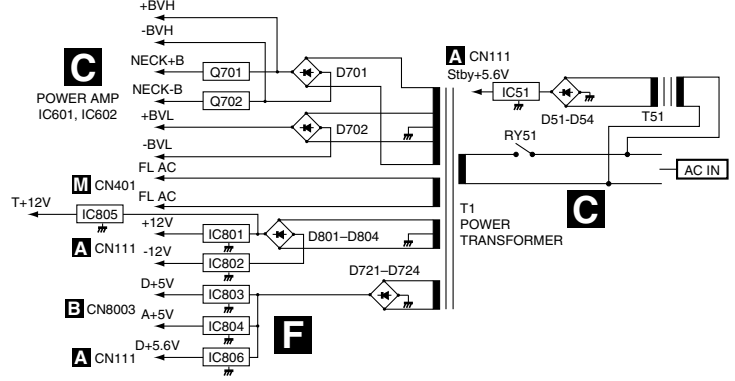
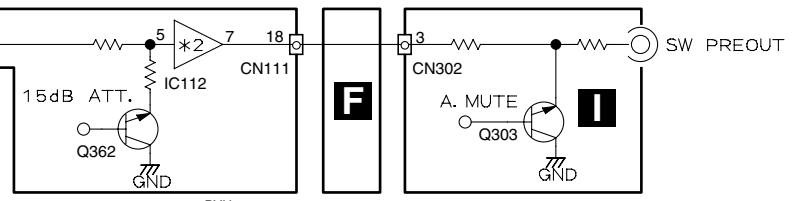
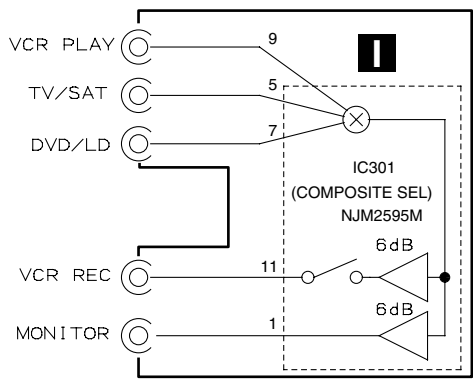
BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

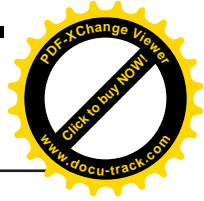
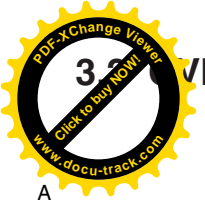
BLOCK DIAGRAM





| *1 (dB) | *2 (dB) | *3 (dB) |
|-----------|-----------|-----------|
| 14.1/24.1 | 14.1/24.1 | 14.2/24.9 |





OVERALL WIRING CONNECTION DIAGRAM

| *8 | Others |
|-------|-----------------|
| 404 | 51063-0705 |
| 511 | 51063-0705 |
| CN511 | None |
| J42 | D15A07-075-2651 |

R.ENCODER ASSY (XWZ3921)

M FRONT DISPLAY ASSY (XWZ3909)

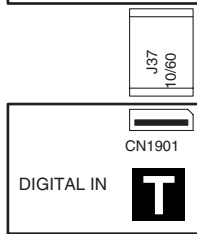
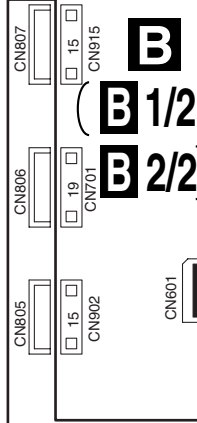
P FRONT KEY ASSY (XWZ3913)

G AMP INPUT ASSY (XWZ3955)

DSP ASSY (AWX8573)

MAIN ASSY (XWK3154)

REGULATOR ASSY (XWZ3952)



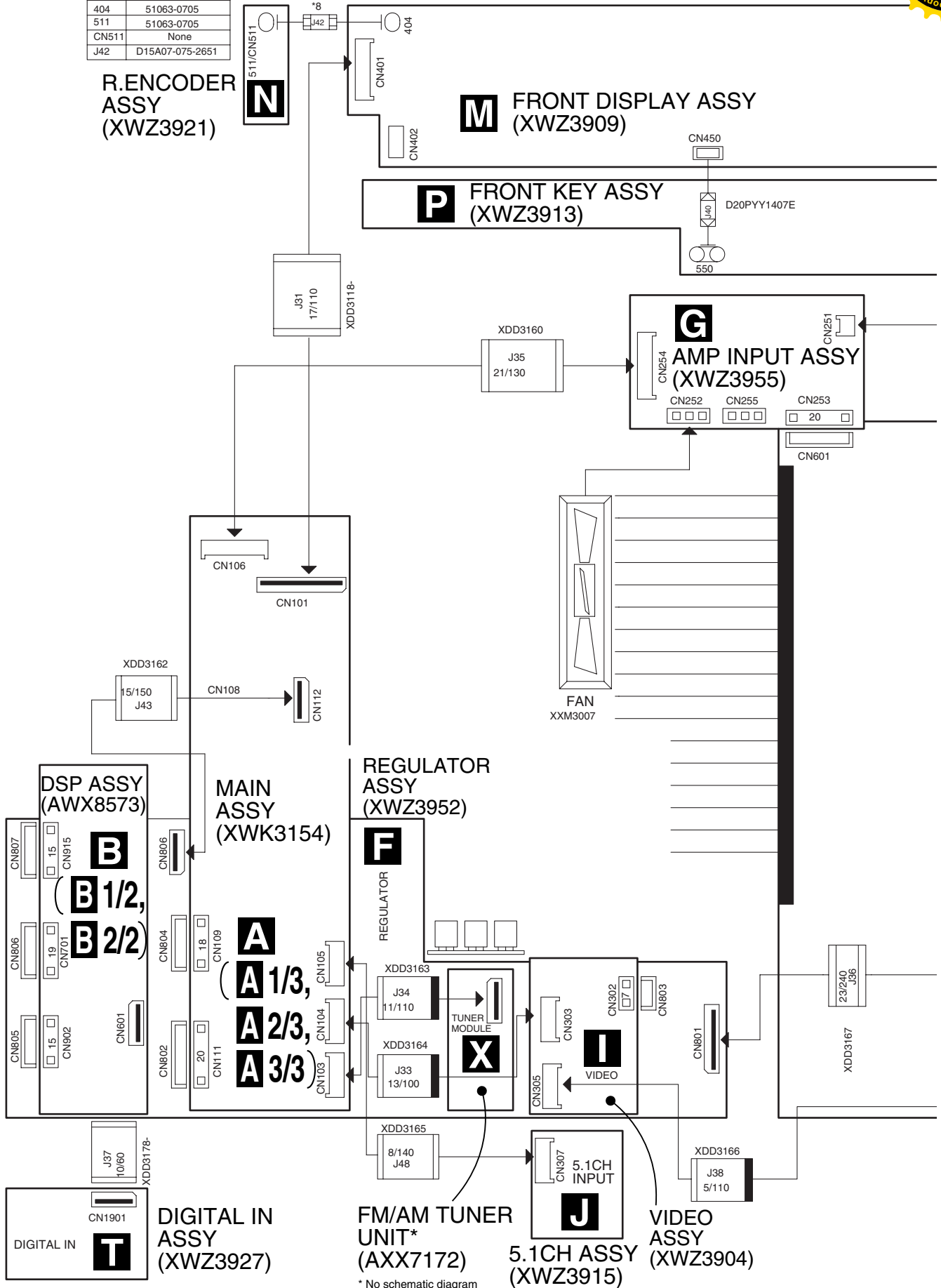
DIGITAL IN ASSY (XWZ3927)

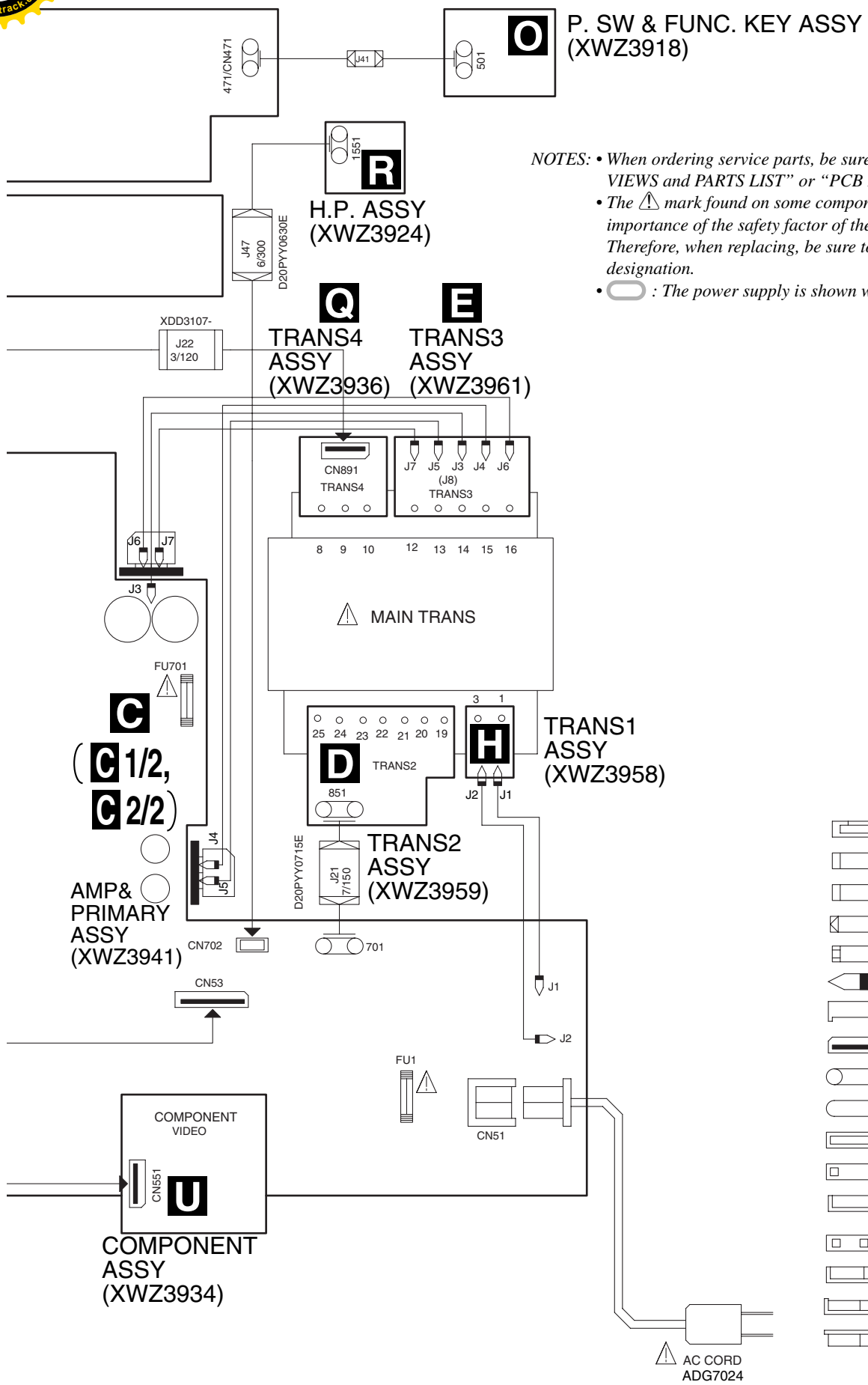
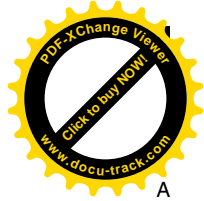
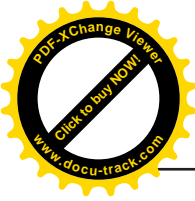
FM/AM TUNER UNIT* (AXX7172)

* No schematic diagram

5.1CH ASSY (XWZ3915)

VIDEO ASSY (XWZ3904)





P. SW & FUNC. KEY ASSY (XWZ3918)

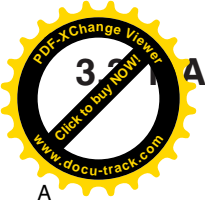
- NOTES:**
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
 - The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - : The power supply is shown with the marked box.

C
(**C1/2**,
C2/2)

AMP & PRIMARY ASSY (XWZ3941)

COMPONENT ASSY (XWZ3934)

- B*B-PH-K-S PH CONNECTOR
- 1.25mm FFC
- 1.25mm REVERSE FFC
- 2.0mm FLAT CABLE
- 1.5mm FLAT CABLE
- BOARD IN
- 1.25mm FFC CONNECTOR(L)
- 1.25mm FFC CONNECTOR
- 2.0mm CABLE HOLDER
- 1.5mm CABLE HOLDER
- 2.0mm WIRE TRAP
- KP200TA**L 2.0mm BOARD to BOARD
- KM200TA** 2.0mm BOARD to BOARD
- AKP7070, AKP7073 1.25mm BOARD to BOARD
- AKP7059, AKP7062 1.25mm BOARD to BOARD
- AC CODE SOCKET
- AC CODE CONNECTOR



MAIN ASSY (1/3)

A

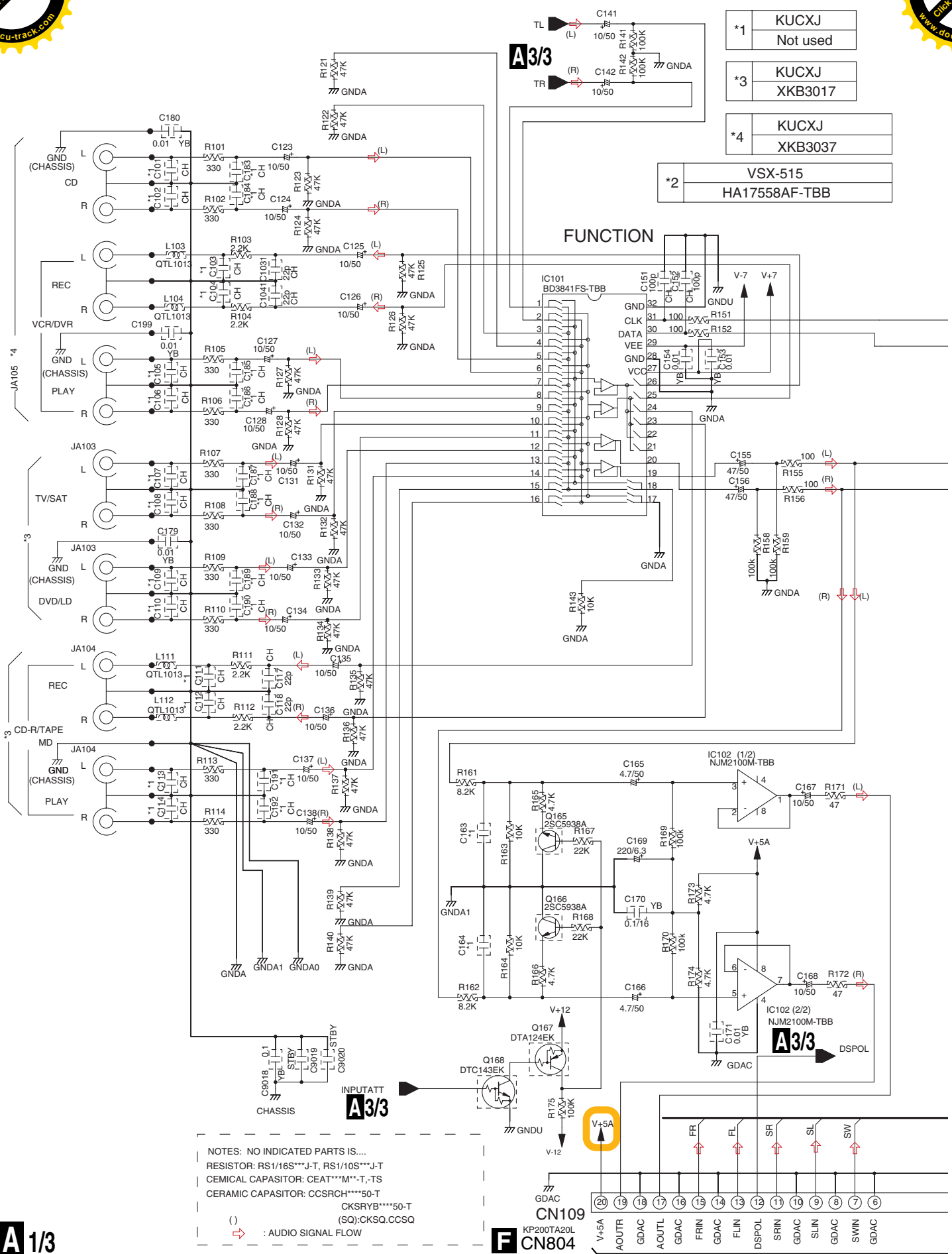
B

C

D

E

F



| | |
|----|---------------|
| *1 | KUCXJ |
| | Not used |
| *3 | KUCXJ |
| | XKB3017 |
| *4 | KUCXJ |
| | XKB3037 |
| *2 | VSX-515 |
| | HA17558AF-TBB |

A3/3

FUNCTION

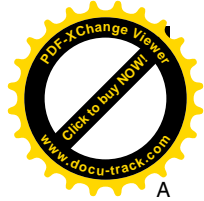
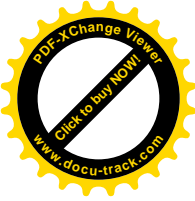
A3/3

F KP200TA20L CN804

NOTES: NO INDICATED PARTS IS...
 RESISTOR: RS1/16S***J-T, RS1/10S***J-T
 CERAMIC CAPASITOR: CEAT***M**T-,TS
 CERAMIC CAPASITOR: CCSRCH****50-T
 CKSRYB*****50-T (SQ):CKSQ.CCSQ

() : AUDIO SIGNAL FLOW

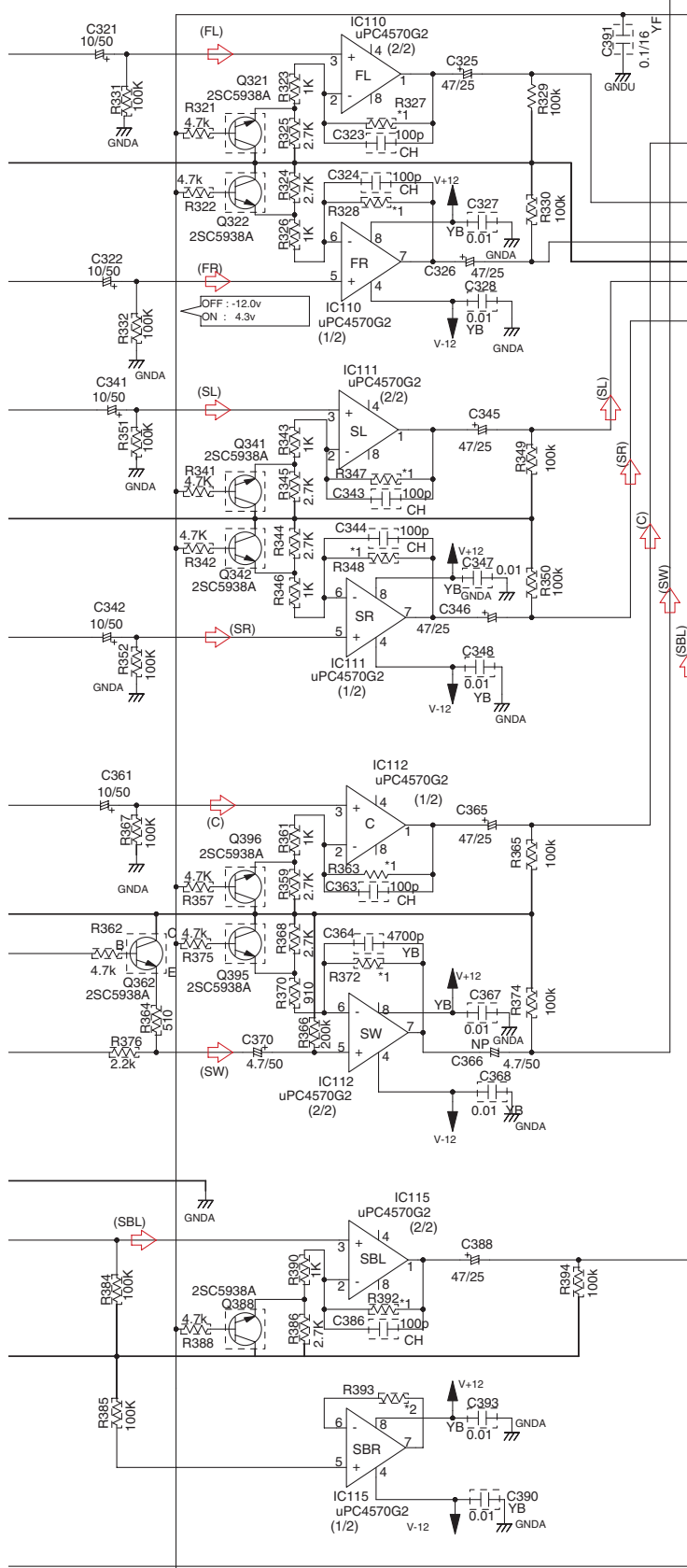
A 1/3



A/3 SWPR

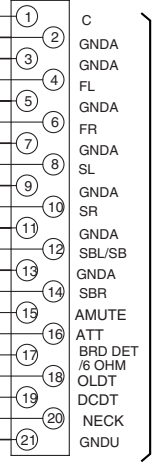
A

PRE-AMP



TO AMP INPUT ASSY

CN106
52045-2145



B

C

D

E

F

A/3

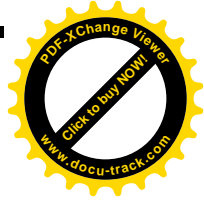
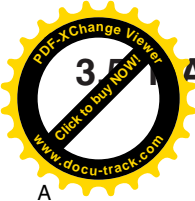
A/3
BOARD_DET/6_OHM

CN254

| | FRONT, REAR | | Center,SB | | SW | |
|-------------|---------------------------------------|-----------|-----------------------|-----------------|---------------|-----------|
| *1 | R327 R328 R348 R348 (Ohm) | GAIN(dB) | R363 R392 (Ohm) | GAIN(dB) 915 | R372 (Ohm) | GAIN(dB) |
| KUXJ /CA | 15k | 14.1/24.1 | 15k | 14.1/24.1 | 15k | 14.2/24.9 |

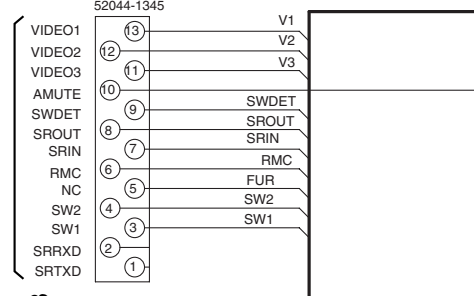
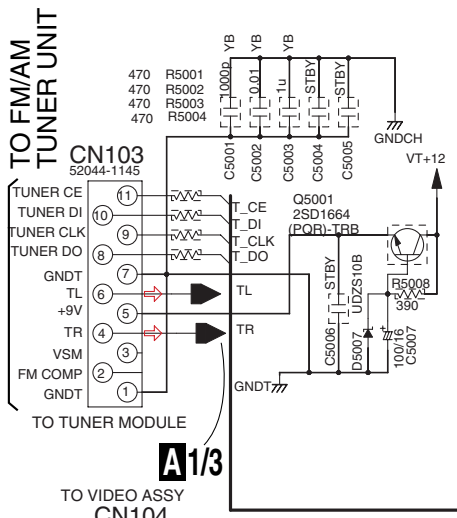
| | |
|----|---------|
| *2 | R393 |
| | VSX-515 |
| | 0 |

A/3



3 MAIN ASSY (3/3)

A
B
C
D
E
F



| *1 | ASSY | R9023 | R9024 | R9025 | R9026 |
|------------|---------|-------|-------|-------|-------|
| VSX-515/KU | XWK3154 | - | - | 0 | 0 |

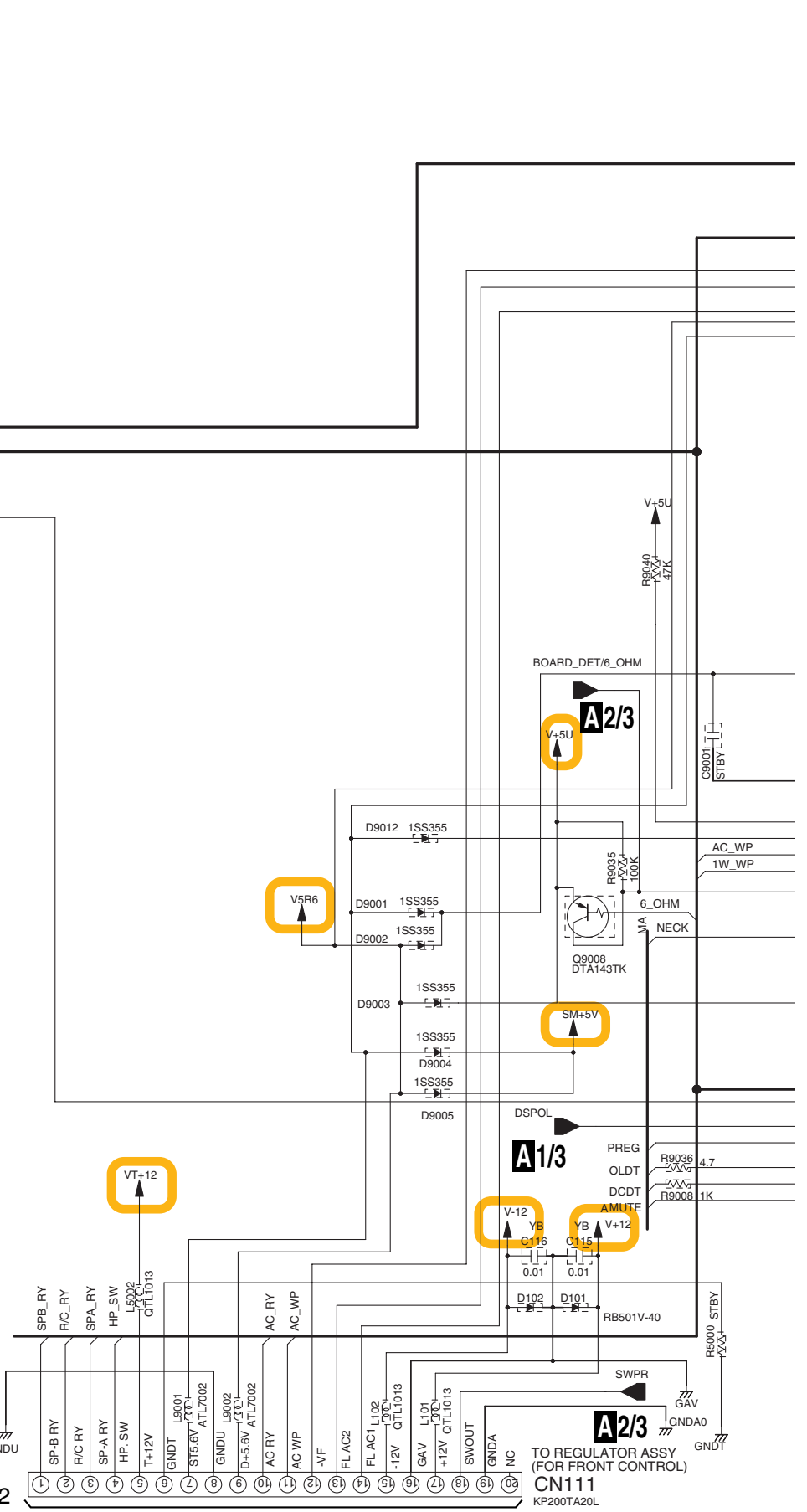
- *3 R9042, R9043, R9044 : 10k
- *4 : ALL MODEL : PCH1132
STBY : ACH7144
- *5 R9068 : 0

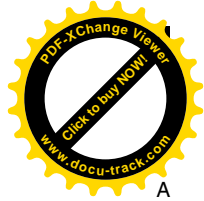
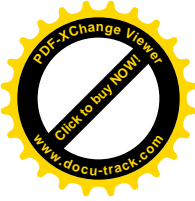
NOTE

1.RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J) ± 5% unless otherwise noted.

2.CAPACITORS
Unit: p-pF or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capacitors.

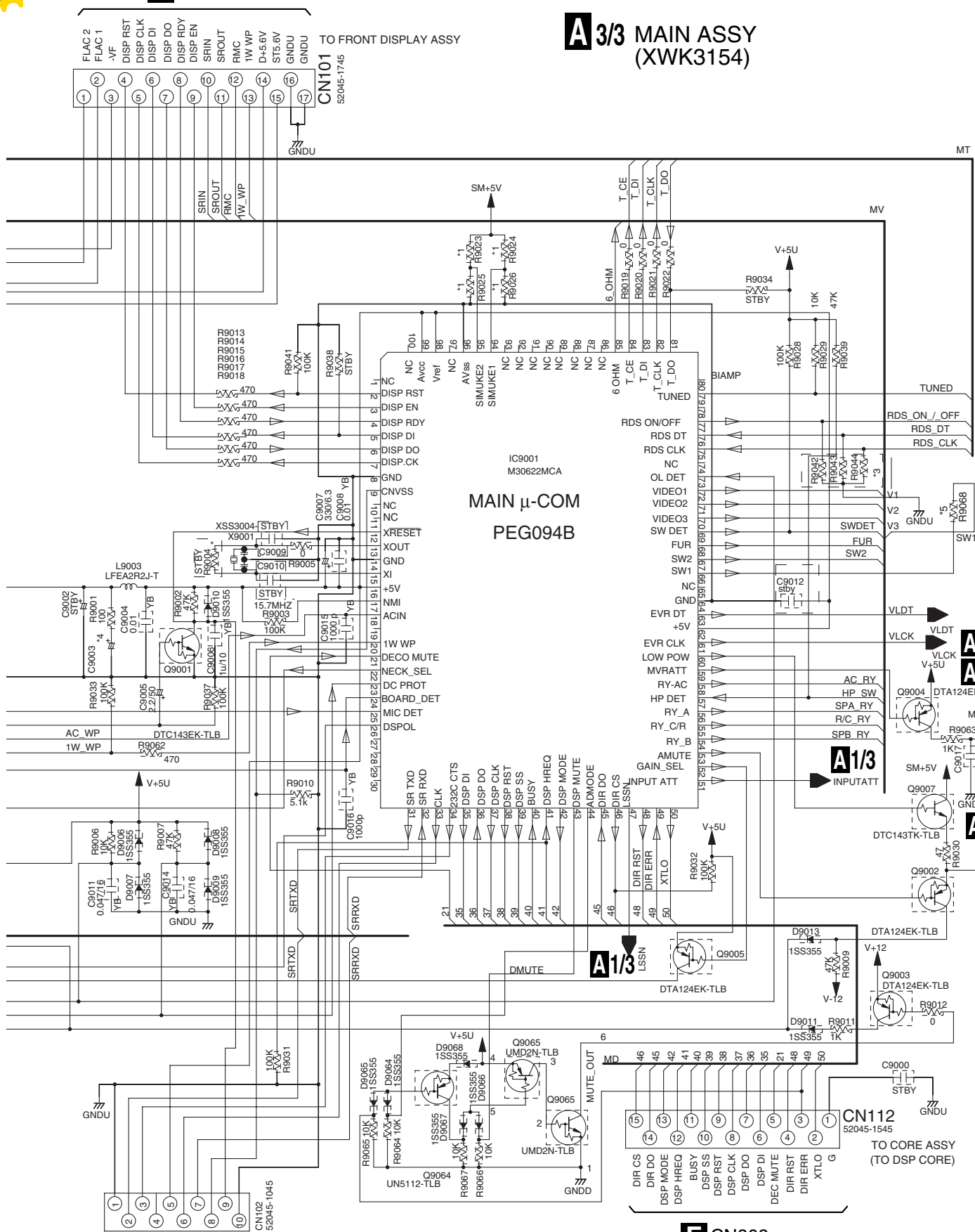
⇒ : AUDIO SIGNAL FLOW





M CN401

A 3/3 MAIN ASSY (XWK3154)

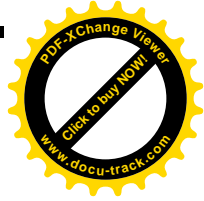


FOR FLASH U-COM (for Prototype & TP only)

F CN808

A 3/3

VSX-515-K



SP ASSY (1/2)

A

B

C

D

E

F

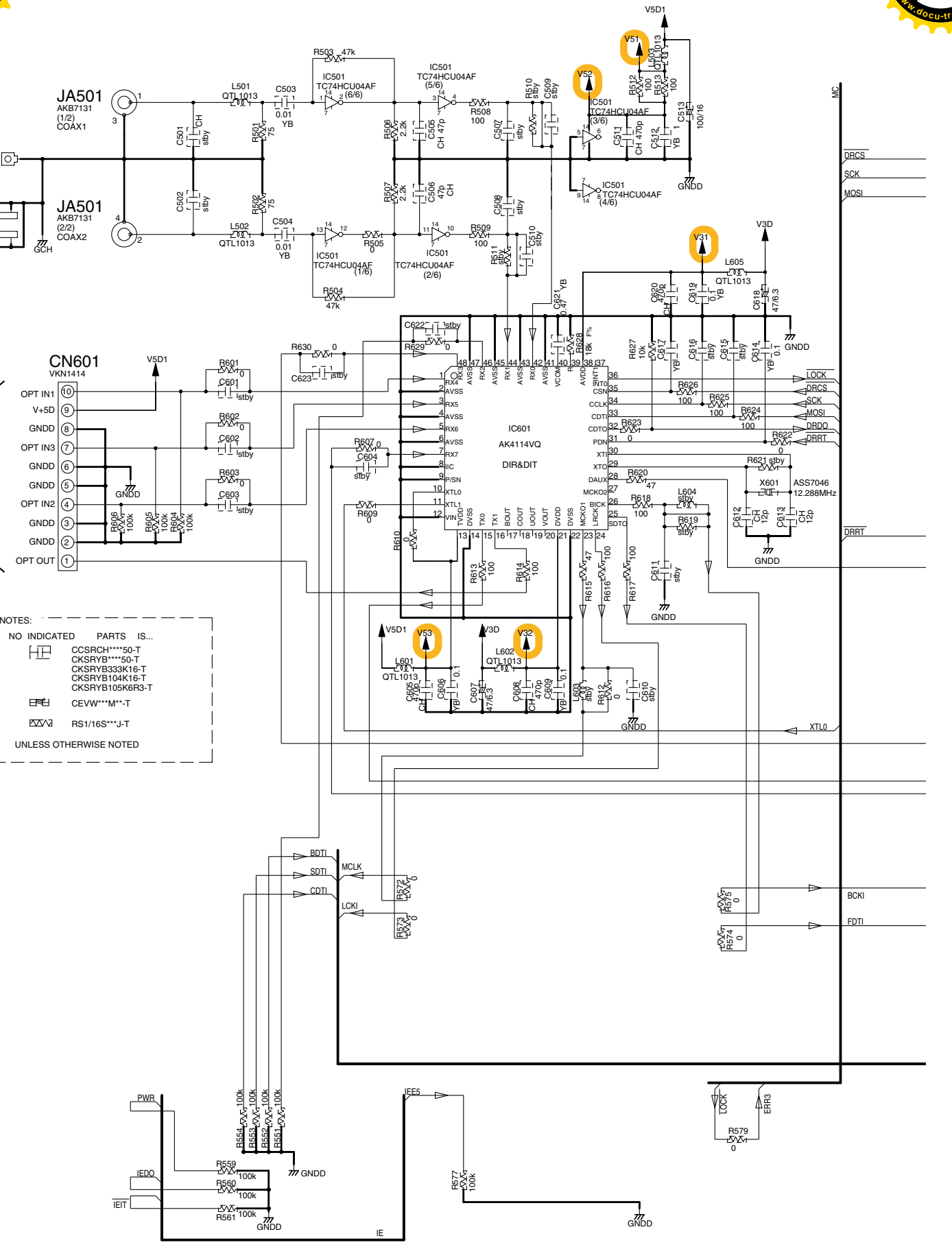
B 1/2

3

2

3

4



NOTES:

NO INDICATED PARTS IS...

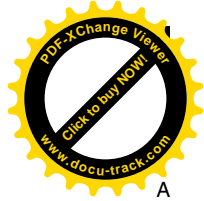
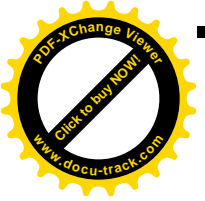
CCSRCH****50-T
 CKSRFB****50-T
 CKSRFB333K16-T
 CKSRFB104K16-T
 CKSRFB105K6R3-T
 CEVW****-T
 RS1/16S***J-T
 UNLESS OTHERWISE NOTED

1

2

3

4

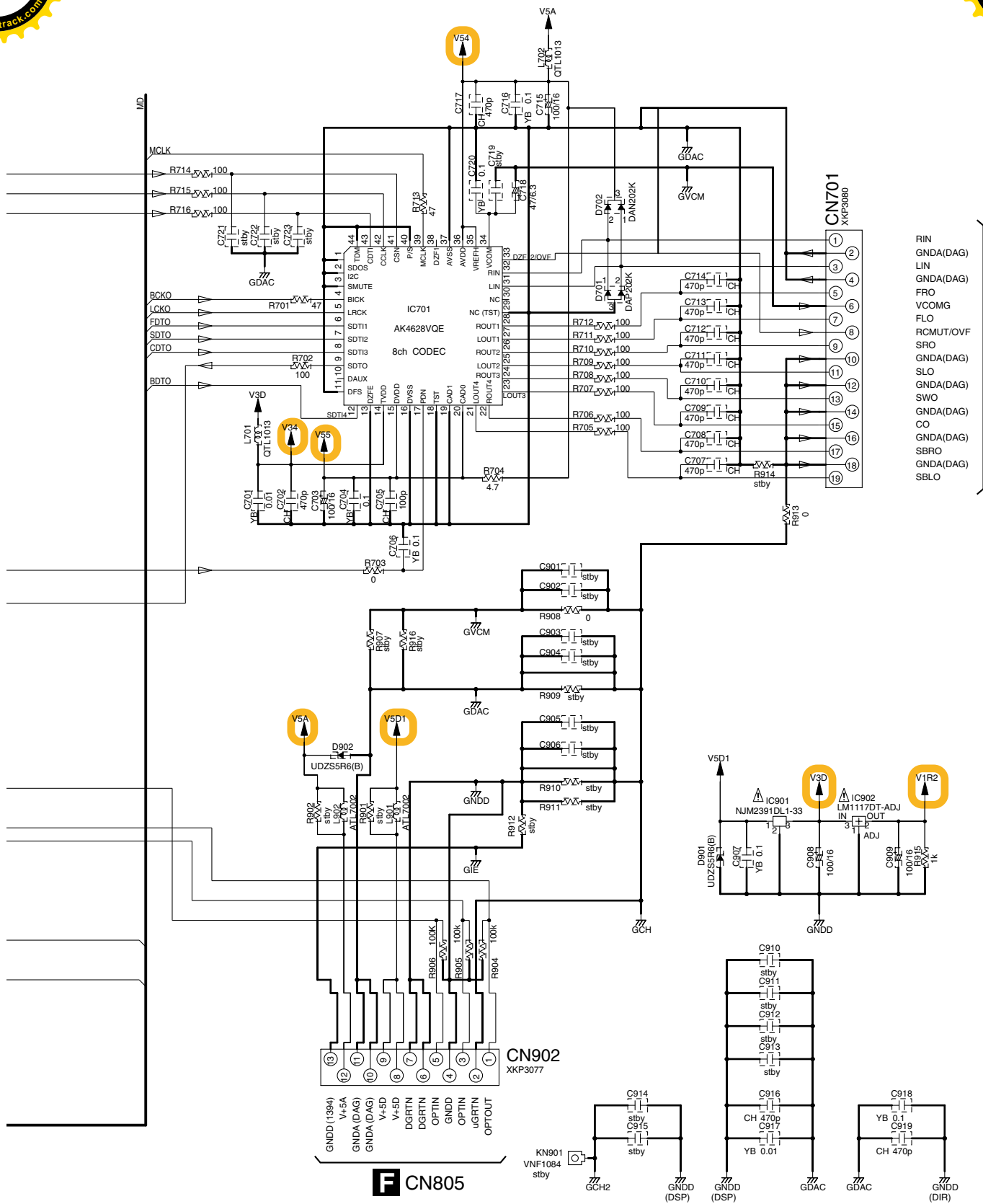


5

6

7

8



F CN806

F CN805

B 1/2 DSP ASSY (AWX8573)

B 1/2

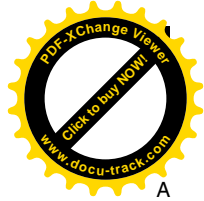
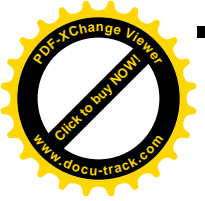
VSX-515-K

5

6

7

8

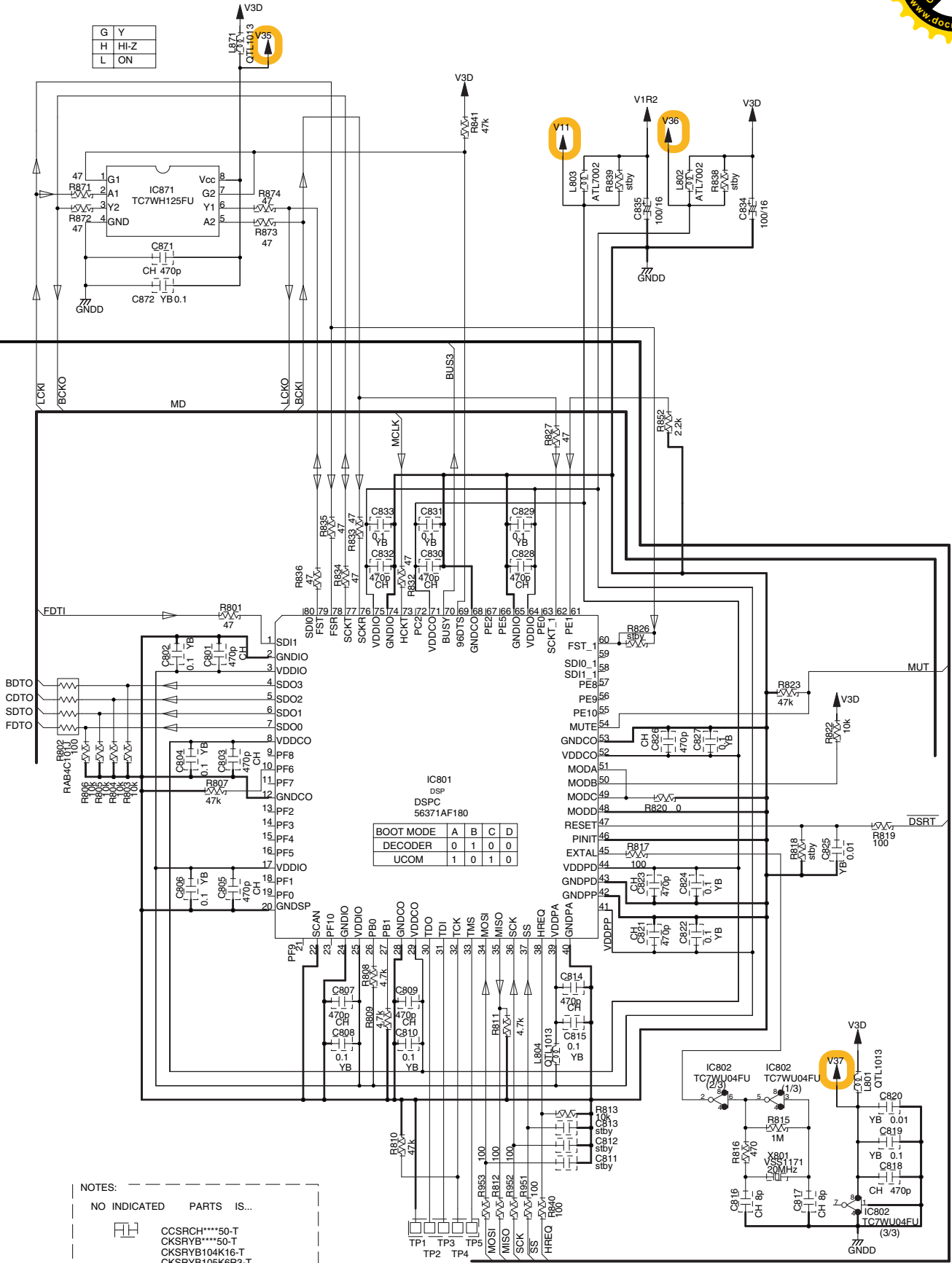


5

6

7

8



| | |
|---|------|
| G | Y |
| H | HI-Z |
| L | ON |

| | | | | |
|-----------|---|---|---|---|
| BOOT MODE | | | | |
| A | B | C | D | |
| DECODER | 0 | 1 | 0 | 0 |
| UCOM | 1 | 0 | 1 | 0 |

NOTES:
 NO INDICATED PARTS IS...
 CCSRCH****50-T
 CKSRFB****50-T
 CKSRFB104K16-T
 CKSRFB105K6R3-T
 CEVW****M**-T
 RS1/16S****J-T
 UNLESS OTHERWISE NOTED

B 2/2 DSP ASSY (AWX8573)

B 2/2

VSX-515-K

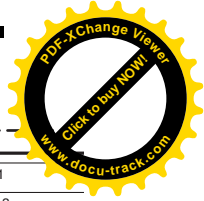
5

6

7

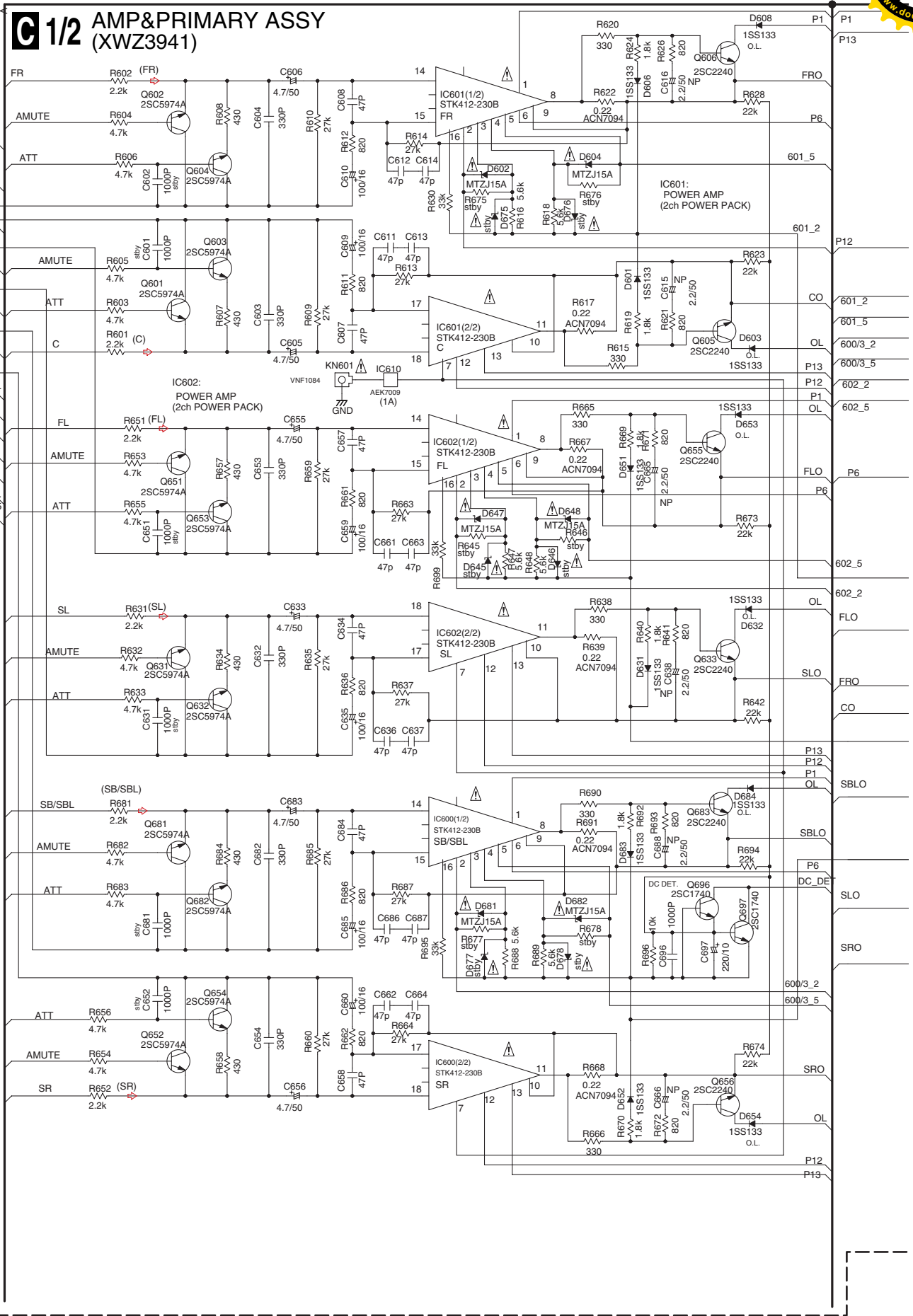
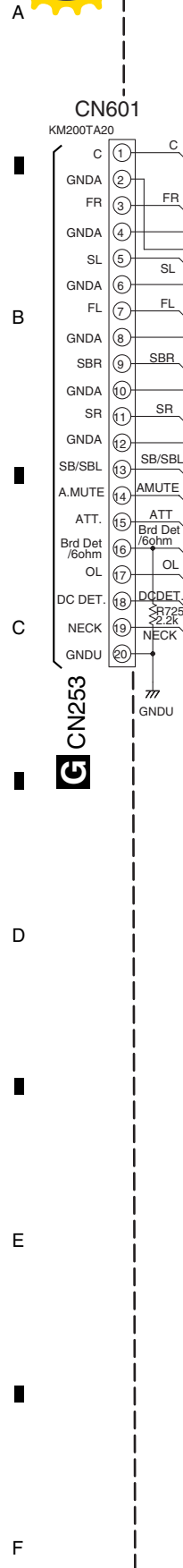
8

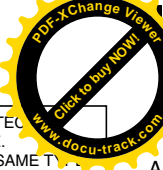
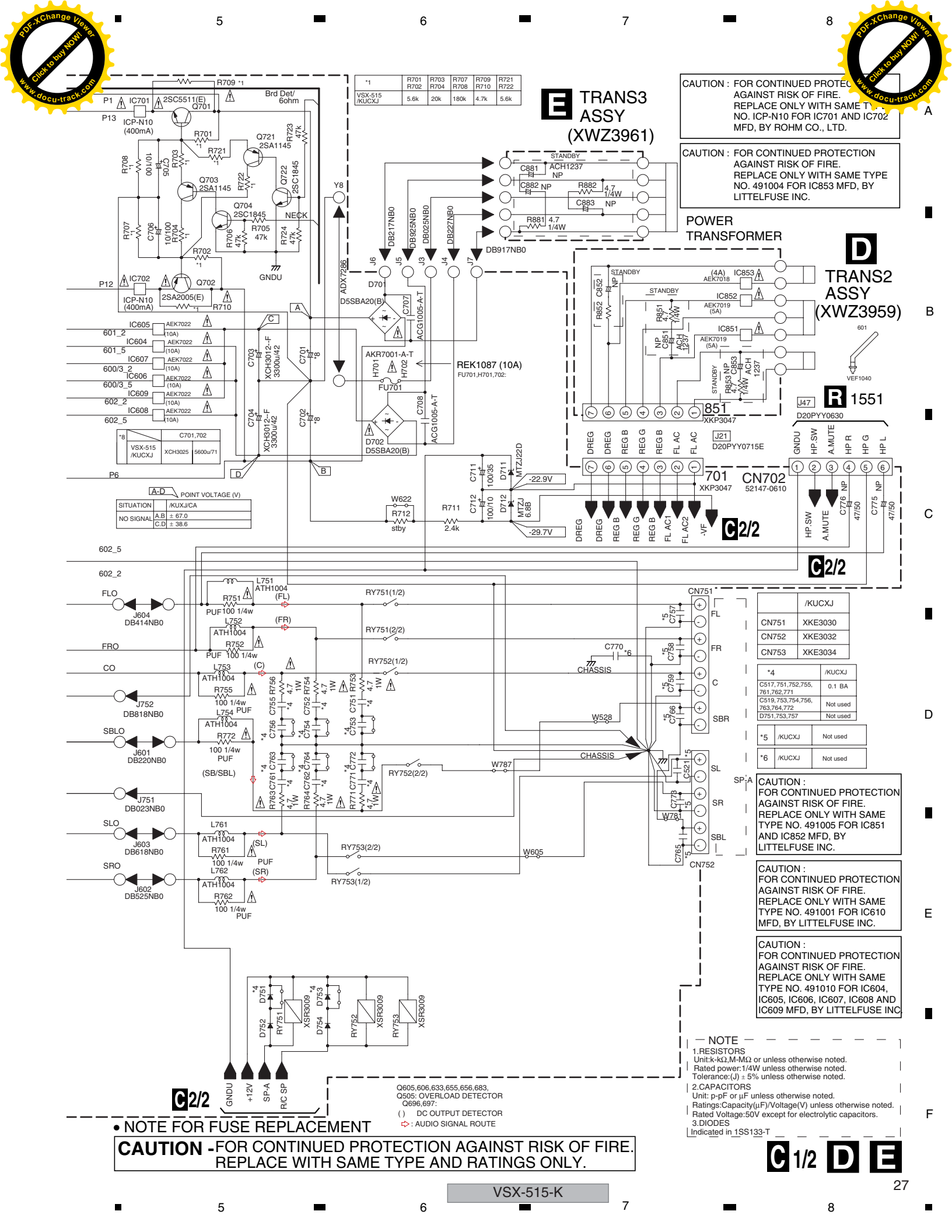
25



AMP & PRIMARY (1/2), TRANS2 and TRANS3 ASSYS

1/2 AMP&PRIMARY ASSY (XWZ3941)





| | | | | | | |
|----|------------------|------|------|--------------|--------------|--------------|
| *1 | R701 R702 | R703 | R704 | R707 R708 | R709 R710 | R721 R722 |
| | VSX-515 KUCXJ | 5.6k | 20k | 180k | 4.7k | 5.6k |

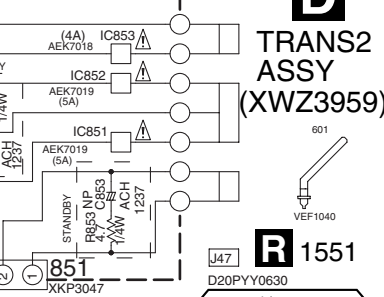
TRANS3 ASSY (XWZ3961)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. ICP-N10 FOR IC701 AND IC702 MFD, BY ROHM CO., LTD.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491004 FOR IC853 MFD, BY LITTELFUSE INC.

POWER TRANSFORMER

TRANS2 ASSY (XWZ3959)



A-D POINT VOLTAGE (V)

| | |
|-----------|--------------------------|
| SITUATION | /KUCJCA |
| NO SIGNAL | A.B ± 67.0 C.D ± 38.6 |

NOTE FOR FUSE REPLACEMENT

CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

| | |
|-------|---------|
| | /KUCXJ |
| CN751 | XKE3030 |
| CN752 | XKE3032 |
| CN753 | XKE3034 |

| | | |
|-------------------------------|--------|----------|
| *4 | /KUCXJ | |
| C517,751,752,755, 761,762,771 | | |
| C519,753,754,756, 763,764,772 | | |
| *5 | /KUCXJ | Not used |
| D751,753,757 | | |
| *6 | /KUCXJ | Not used |

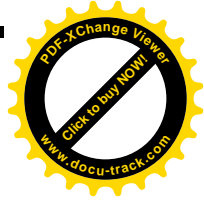
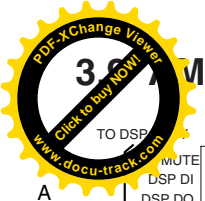
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491005 FOR IC851 AND IC852 MFD, BY LITTELFUSE INC.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491001 FOR IC610 MFD, BY LITTELFUSE INC.

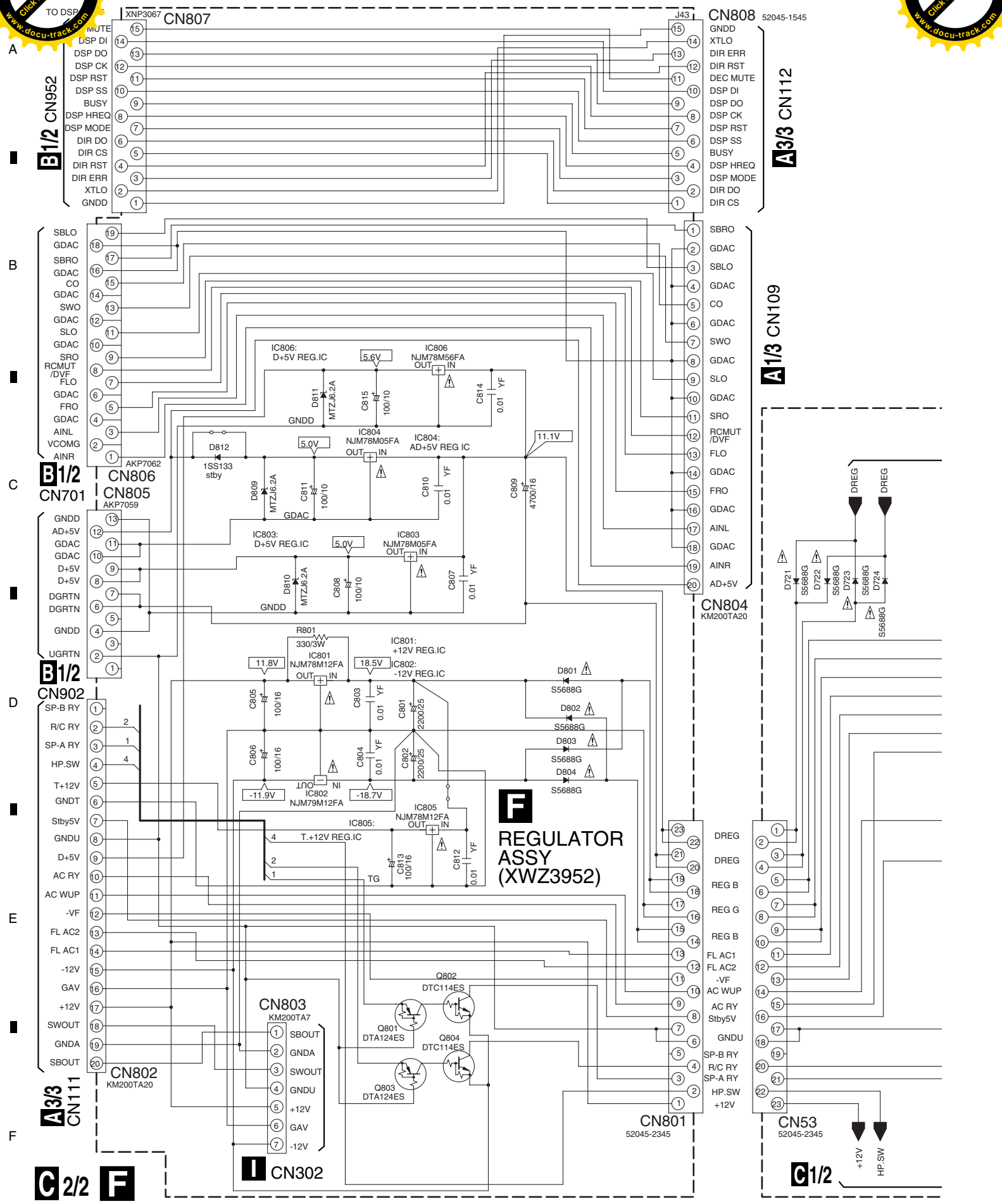
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491010 FOR IC604, IC605, IC606, IC607, IC608 AND IC609 MFD, BY LITTELFUSE INC.

- NOTE**
- RESISTORS**
Unit:k- Ω ,M-M Ω or unless otherwise noted.
Rated power:1/4W unless otherwise noted.
Tolerance:(J) \pm 5% unless otherwise noted.
 - CAPACITORS**
Unit: p-pF or μ F unless otherwise noted.
Ratings:Capacity(μ F)/Voltage(V) unless otherwise noted.
Rated Voltage:50V except for electrolytic capacitors.
 - DIODES**
Indicated in 1SS133-T

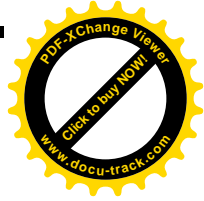
Q605,606,633,655,656,683,
Q505: OVERLOAD DETECTOR
Q696,697:
() DC OUTPUT DETECTOR
⦿: AUDIO SIGNAL ROUTE



AMP&PRIMARY(2/2), REGULATOR, AMP INPUT and TRANS1 ASSYS



F
REGULATOR
ASSY
(XWZ3952)



VIDEO and 5.1CH ASSYS

A

B

C

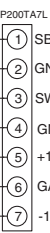
D

E

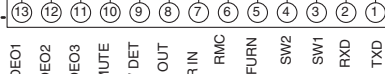
F

F CN803

CN302



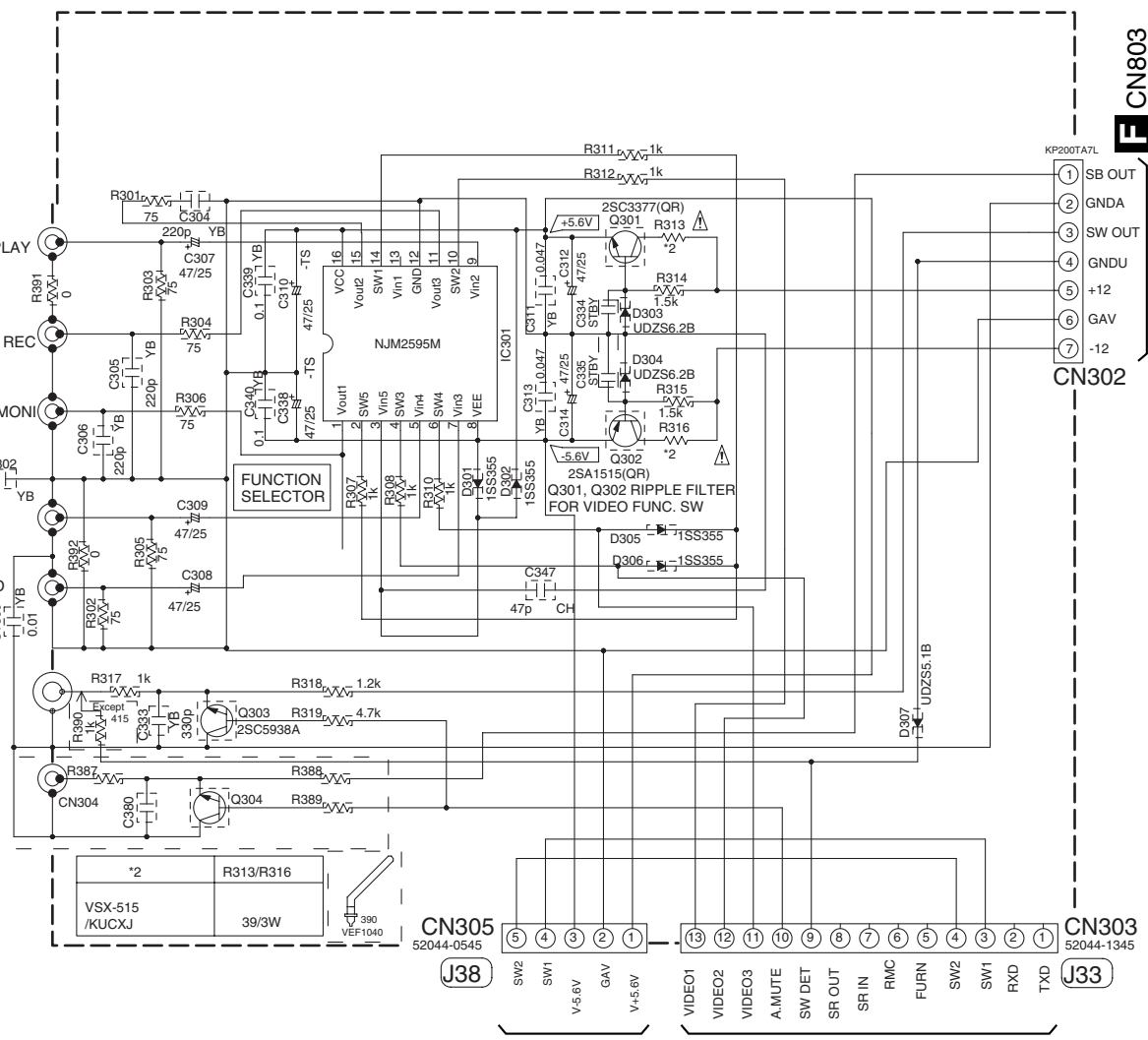
CN303 52044-1345



U CN551

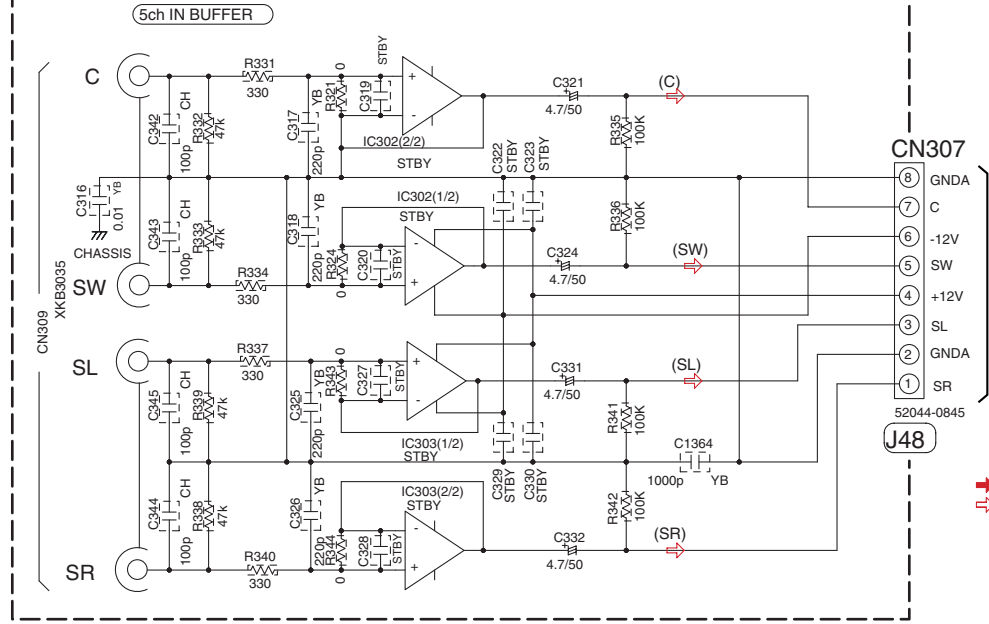
A3/3 CN104

VIDEO ASSY (XWZ3904)



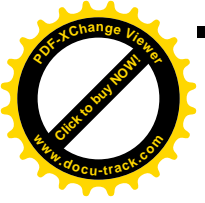
J 5.1CH ASSY (XWZ3915)

5ch IN BUFFER



A2/3 CN105

VIDEO SIGNAL FLOW
AUDIO SIGNAL FLOW

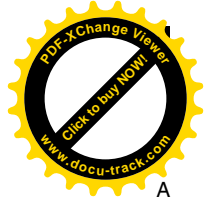


5

6

7

8



A

■

B

■

C

■

D

■

E

■

F

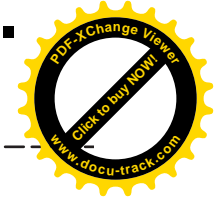
5

6

VSX-515-K

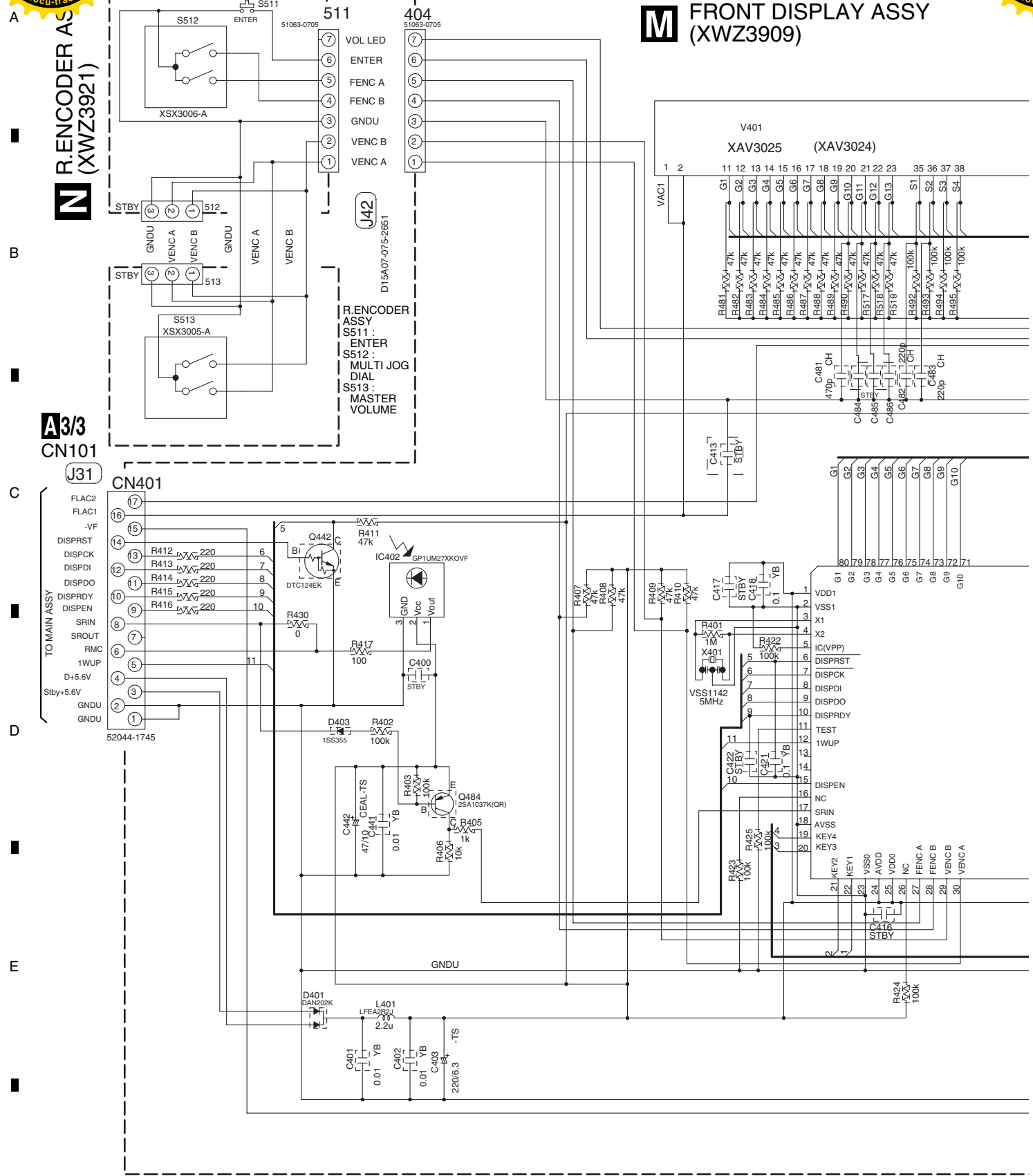
7

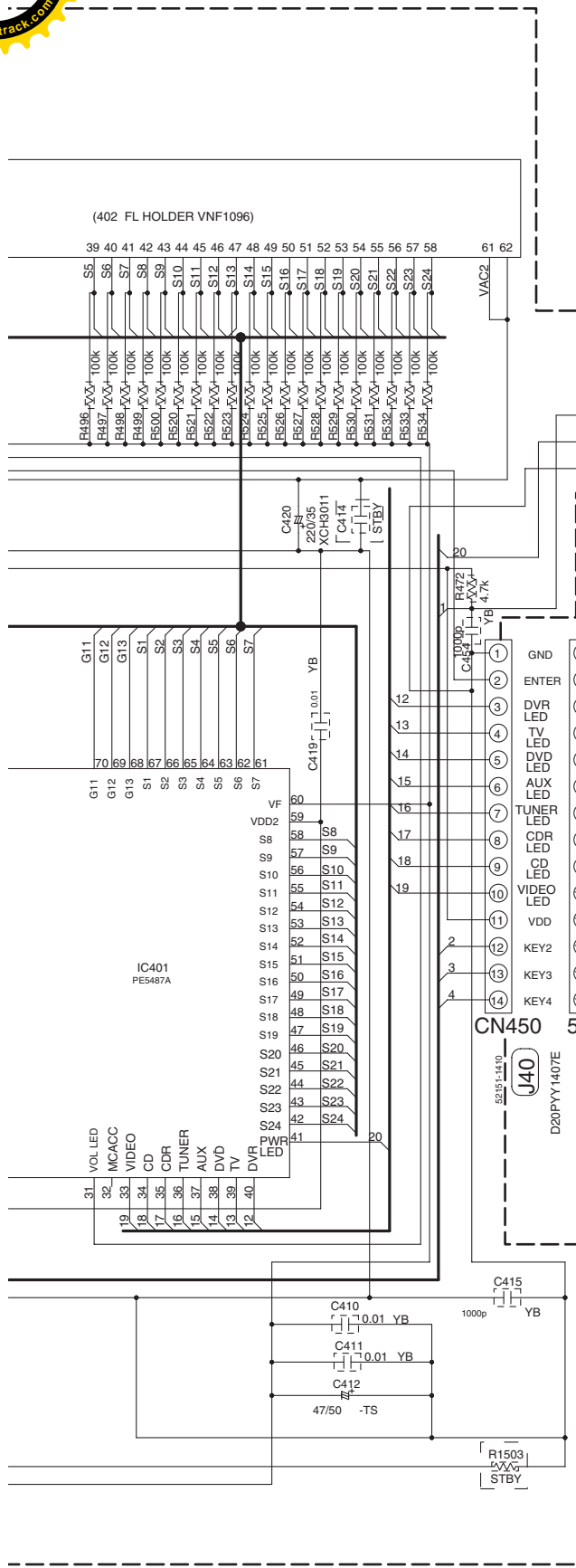
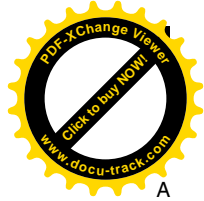
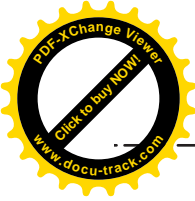
8



FRONT DISPLAY, R. ENCODER, P. SW&FUNC KEY and F. KEY ASSYS

M FRONT DISPLAY ASSY (XWZ3909)





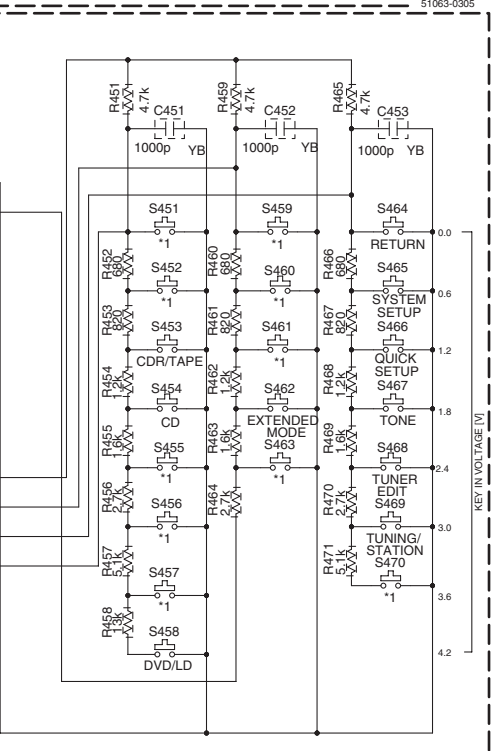
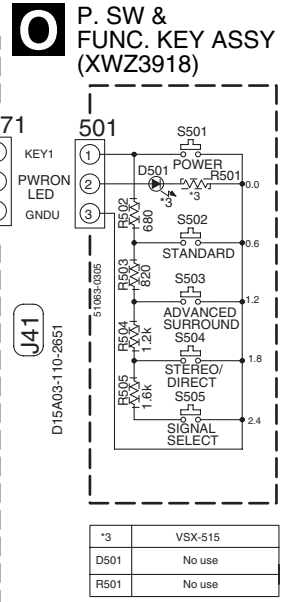
NOTE

1.RESISTORS
Unit: k-Ω, M-Ω or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J) ±5% unless otherwise noted.

2.CAPACITORS
Unit: p-pF or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capacitors.

3.TACT SWITCHES
Indicated in VSG1024

POWER SW ASSY
S501 : POWER STANDBY/ON
S502 : STANDARD
S503 : ADVANCED SURROUND
S504 : STEREO/DIRECT
S505 : SIGNAL SELECT



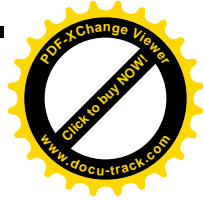
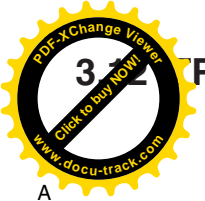
| *1 | VSX-515 /KUCXJ |
|------|-------------------|
| S451 | AM |
| S452 | FM |
| S453 | CDR/TAPE |
| S454 | CD |
| S455 | VCR/DVR |
| S456 | TV/SAT |
| S457 | DVD 5.1ch |
| S458 | DVD/LD |
| S459 | FL DIMMER |
| S460 | INPUT ATT |
| S461 | SPEAKER IMPEDANCE |
| S462 | MUTE |
| S463 | MUTE |
| S464 | RETURN |
| S465 | SYSTEM SETUP |
| S466 | QUICK SETUP |
| S467 | TONE |
| S468 | TUNER EDIT |
| S469 | TUNER STATION |
| S470 | CLASS |

FRONT KEY ASSY

S451 : AM
S452 : FM
S453 : CDR/TAPE
S454 : CD
S455 : VCR/DVR
S456 : TV/SAT
S457 : DVD 5.1ch
S458 : DVD/LD
S459 : FL DIMMER
S460 : INPUT ATT
S461 : SPEAKER INPEDANCE
S462 : EXTENDED MODE
S463 : MUTE
S464 : RETURN
S465 : SYSTEM SETUP
S466 : QUICK SETUP
S467 : TONE
S468 : TUNER EDIT
S469 : TUNER STATION
S470 : CLASS

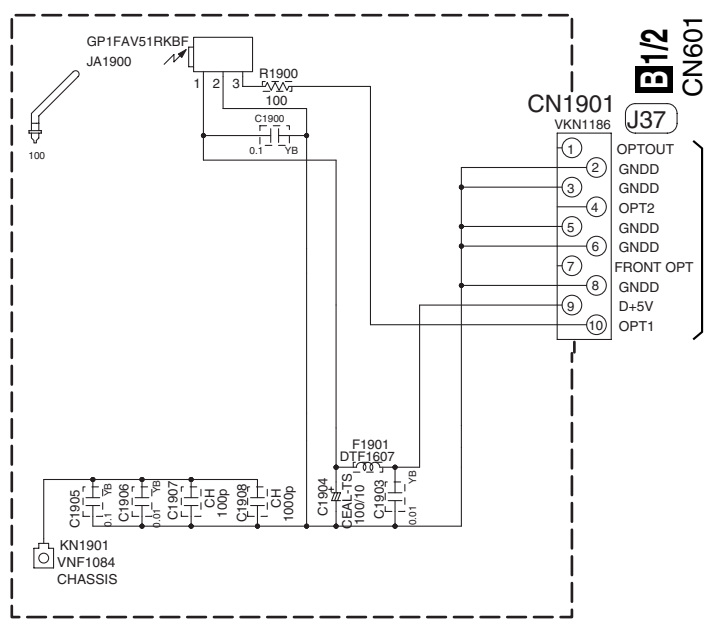
S461 : SPEAKER INPEDANCE
S462 : EXTENDED MODE
S463 : MUTE
S464 : RETURN
S465 : SYSTEM SETUP
S466 : QUICK SETUP
S467 : TONE
S468 : TUNER EDIT
S469 : TUNER STATION
S470 : CLASS



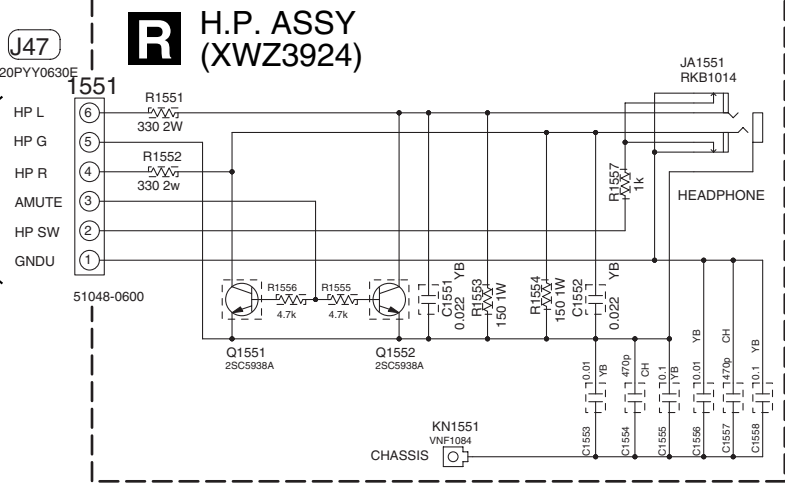
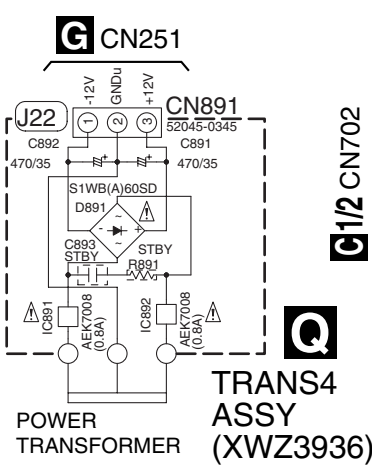
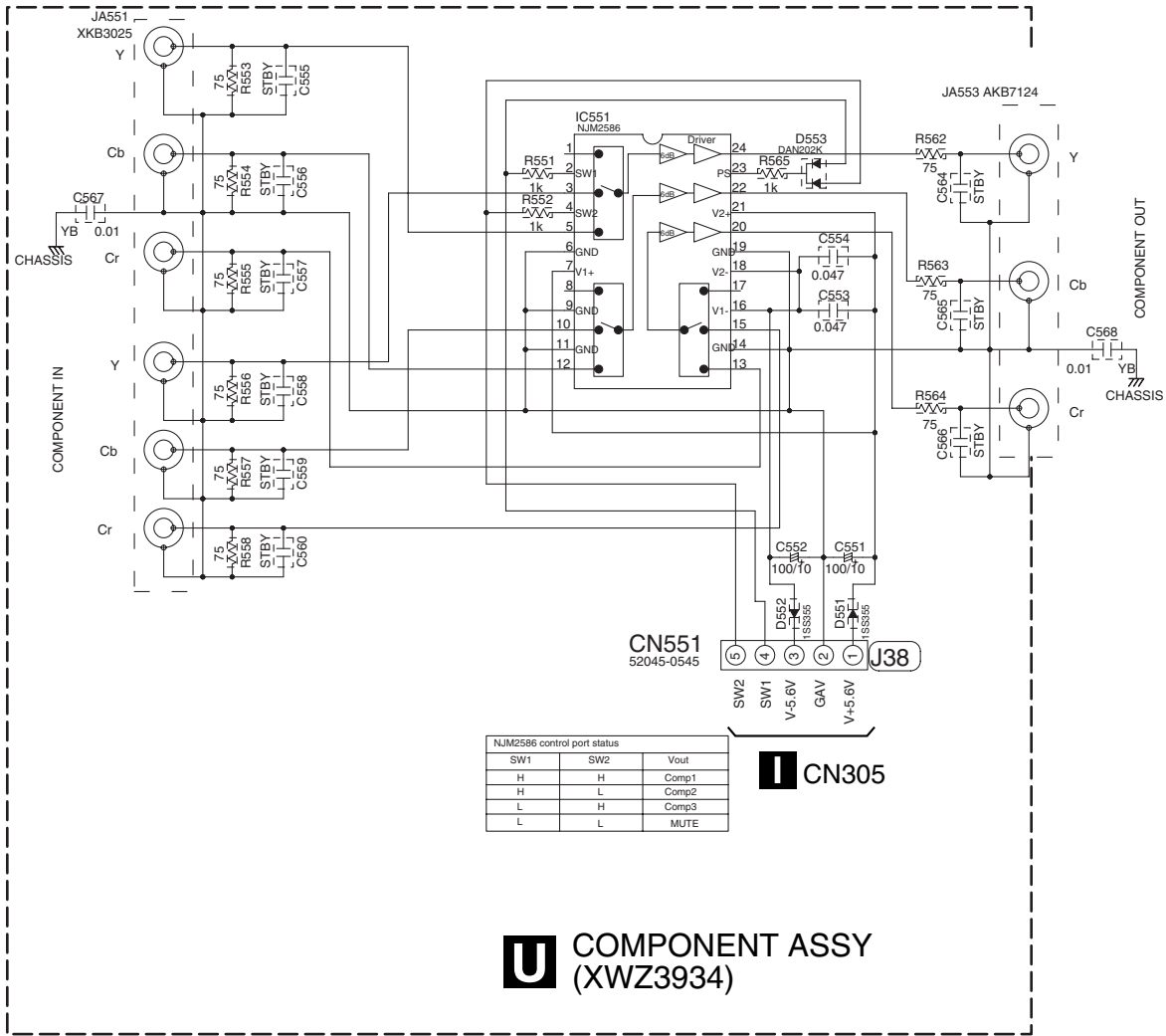
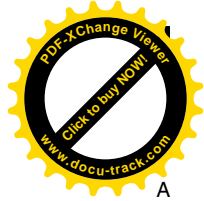
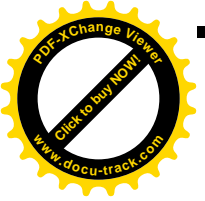


RANS4, H.P., D. IN and COMPONENT ASSYS

A
B
C
D
E
F



T DIGITAL IN ASSY (XWZ3927)



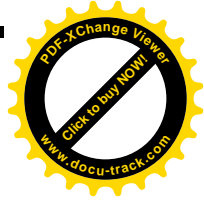
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.800 FOR IC891 AND IC892 MFD, BY LITTELFUSE INC.

NOTE

1.RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: (J) 5% unless otherwise noted.

2.CAPACITORS
Unit: p-pF or μF unless otherwise noted.
Ratings: Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage: 50V expect for electrolytic capacitors.

Q R U



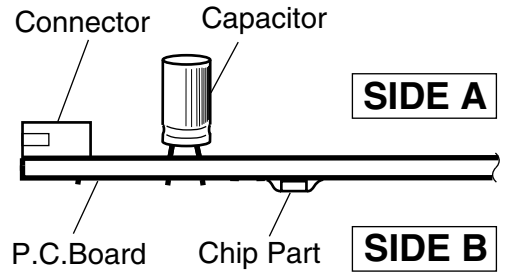
4 PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

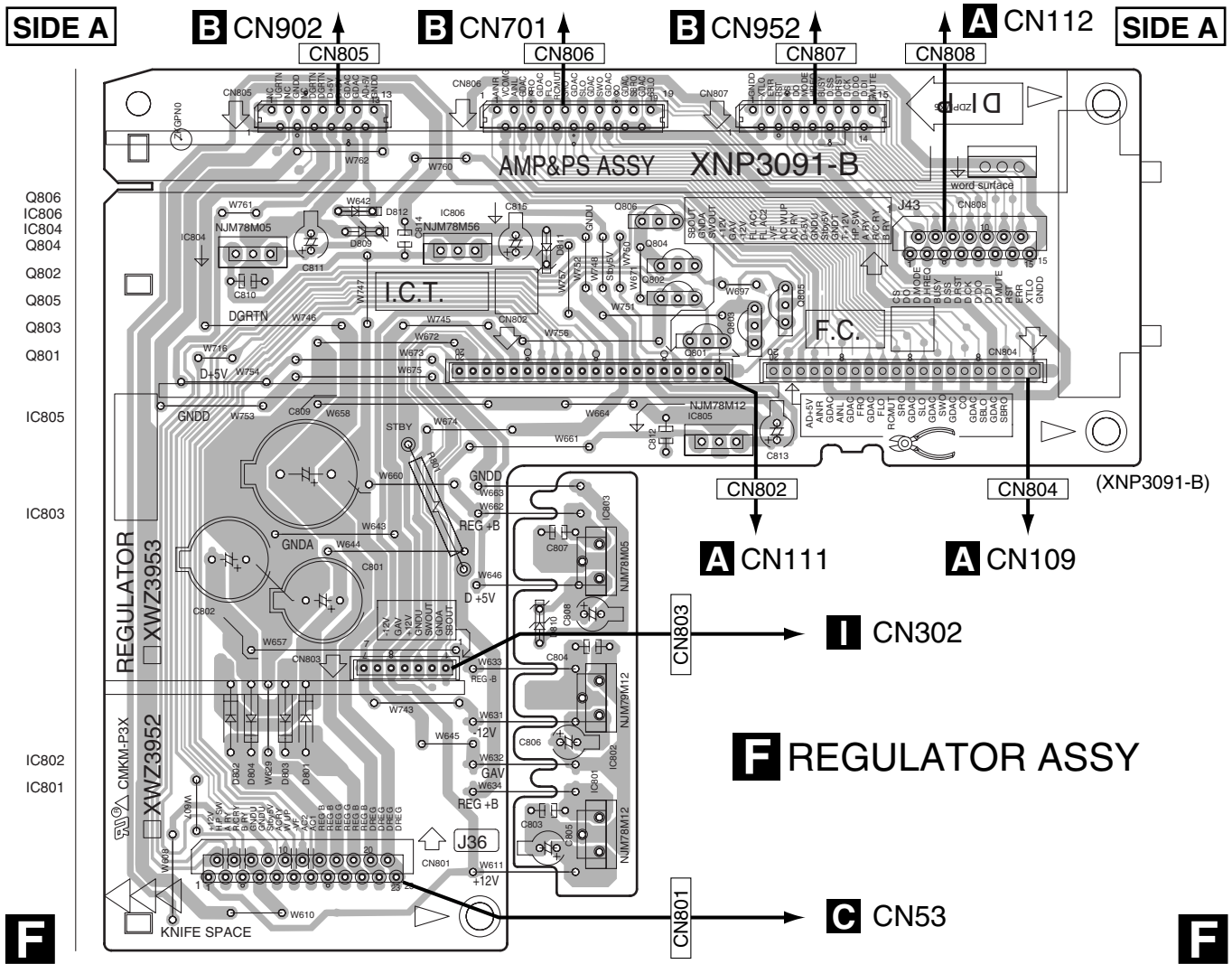
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

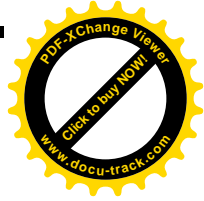
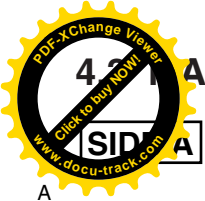
| Symbol In PCB Diagrams | Symbol In Schematic Diagrams | Part Name |
|------------------------|------------------------------|--------------------------|
| | | Transistor |
| | | Transistor with resistor |
| | | Field effect transistor |
| | | Resistor array |
| | | 3-terminal regulator |

3. The parts mounted on this PCB include all necessary parts for several destinations.
- For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 REGULATOR ASSY





1

2

3

4

MAIN ASSY

A

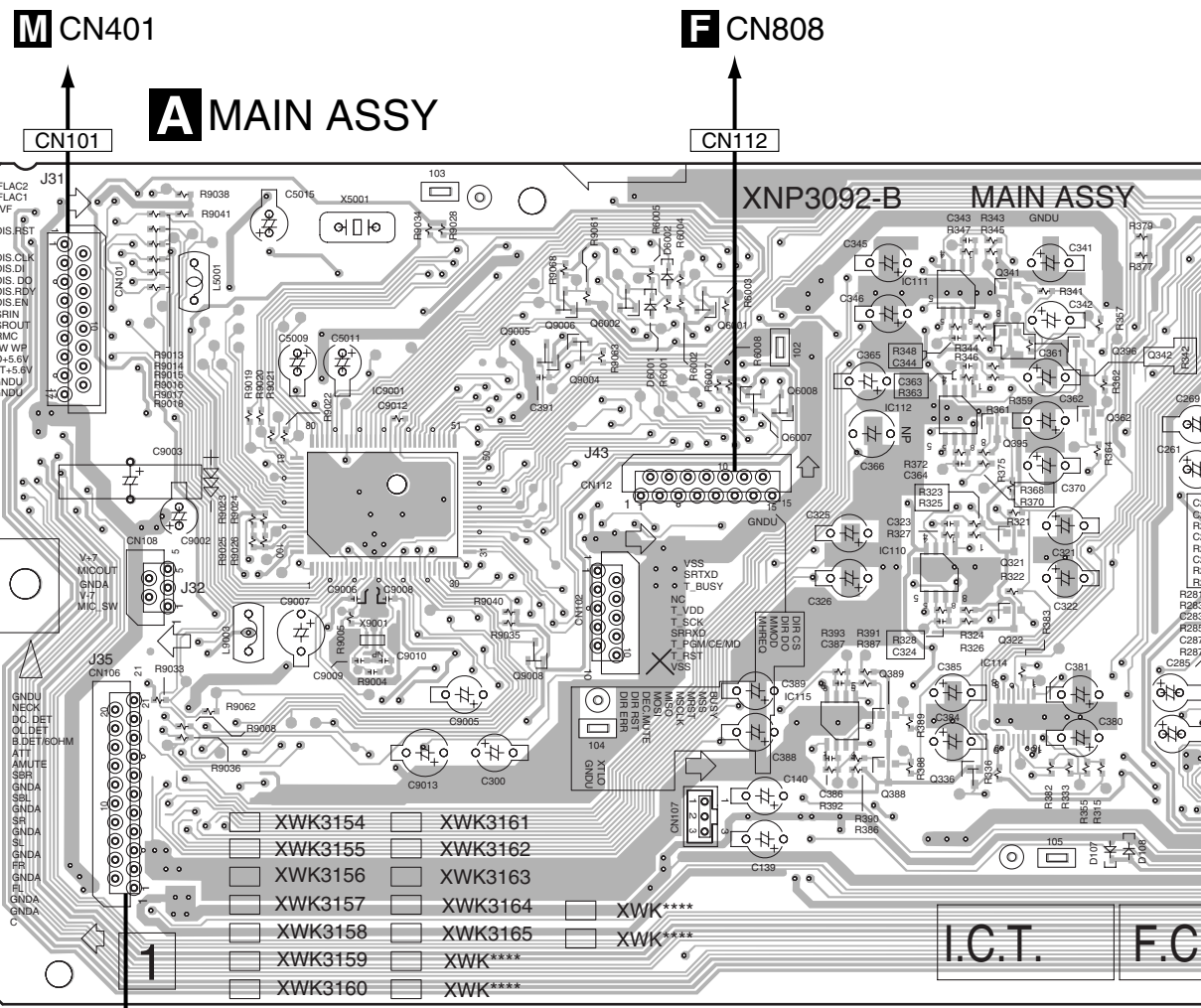
B

C

D

E

F



M CN401

F CN808

A MAIN ASSY

CN101

CN112

XNP3092-B MAIN ASSY

- IC111 Q5001
- Q341
- Q6001
- Q6002
- Q9006
- Q9005
- Q396
- Q342
- Q9004
- Q6008
- IC104 Q362
- IC112 Q6007
- IC103 Q395
- IC108
- IC110 Q321
- IC105 Q322
- IC114 Q389
- IC106 Q9008
- IC115 Q166
- IC102 Q165
- Q336
- Q388

- XWK3154
- XWK3155
- XWK3156
- XWK3157
- XWK3158
- XWK3159
- XWK3160
- XWK3161
- XWK3162
- XWK3163
- XWK3164
- XWK3165
- XWK****
- XWK****
- XWK****
- XWK****

I.C.T. F.C

CN106

G CN254

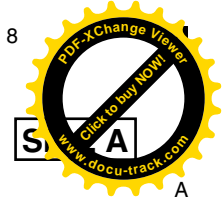
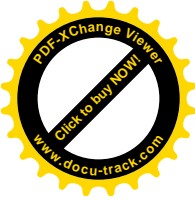
A

1

2

3

4



5

6

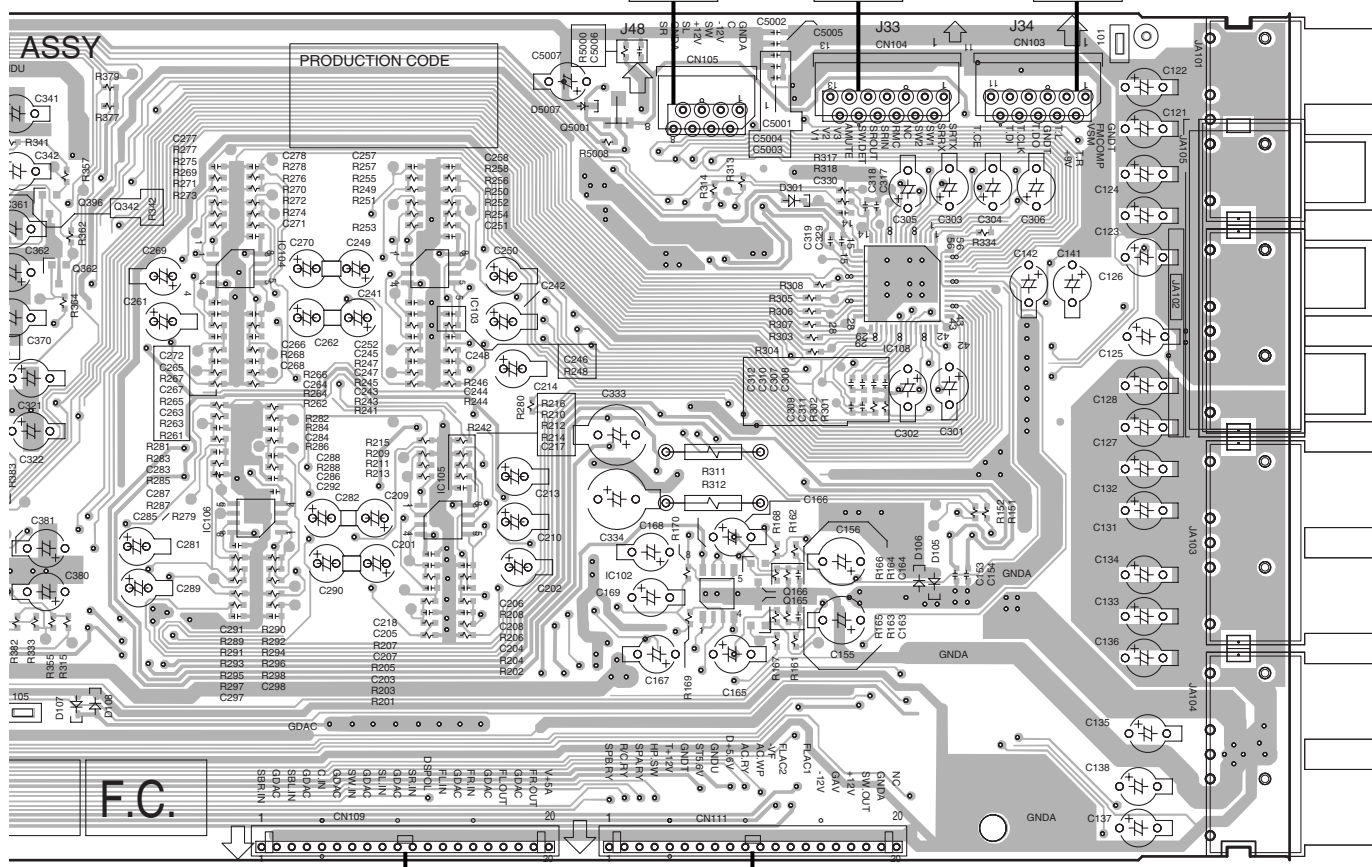
7

8

FM/AM
TUNER
UNIT

J CN307 **I** CN303

↑ CN105 ↑ CN104 ↑ CN103



(XNP3092-B)

F CN804

F CN802

VSX-515-K

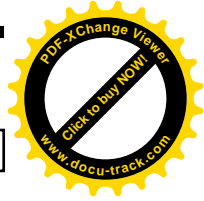
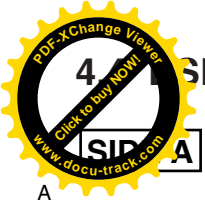
5

6

7

8

A



4 DSP ASSY

B DSP ASSY

SIDE A

T CN1901

CN601

CN902

F CN805

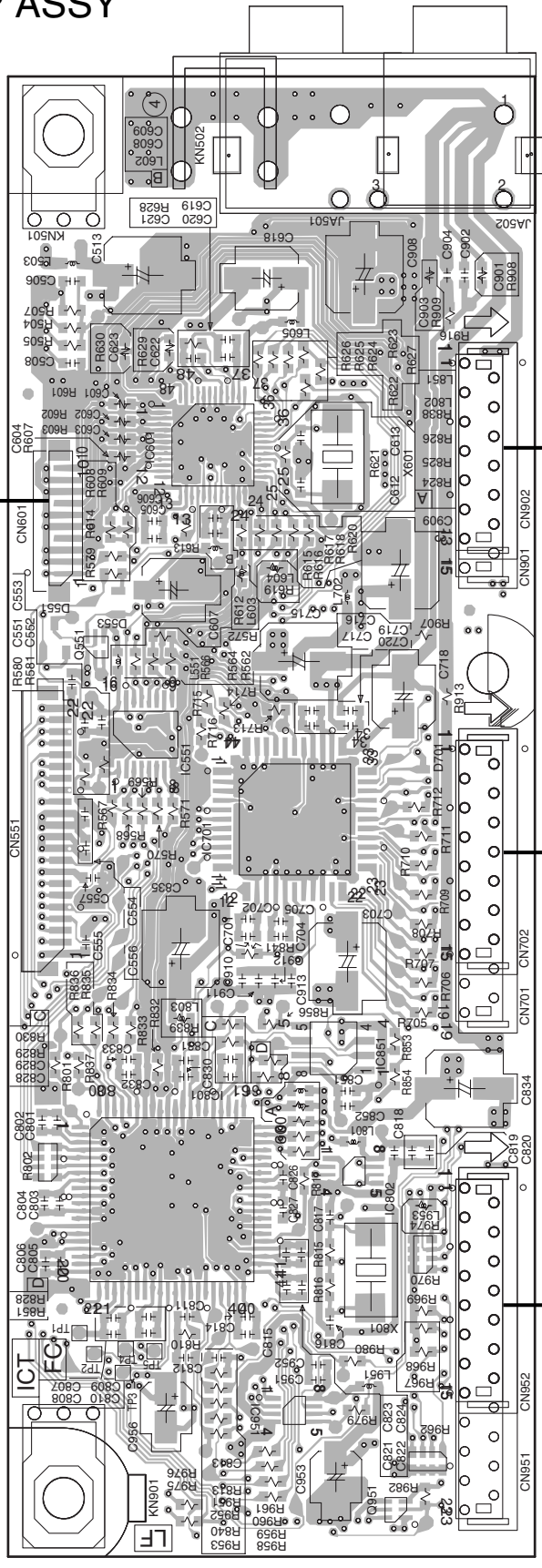
CN701

F CN806

CN952

F CN807

(ANP7525-A)



A
B
C
D
E
F

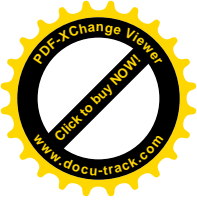
1
2
3
4

B

B

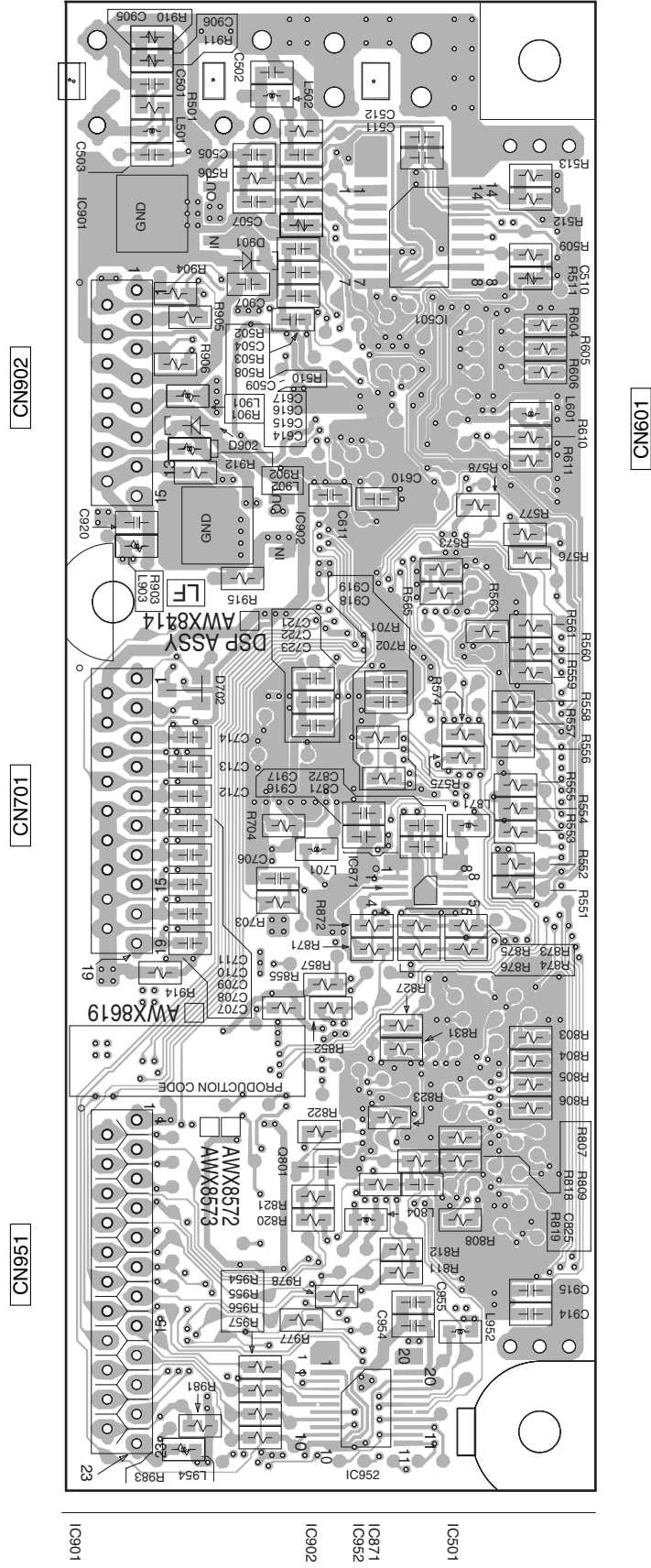
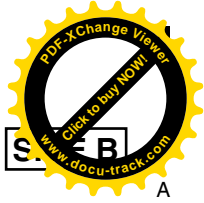
IC601
IC701
IC551
IC801
IC951
IC802
IC851

VSX-515-K



SIDE B

B DSP ASSY

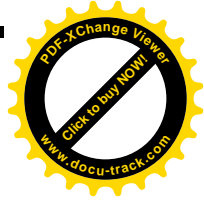
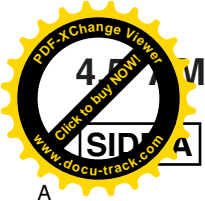


(ANP7525-A)

B

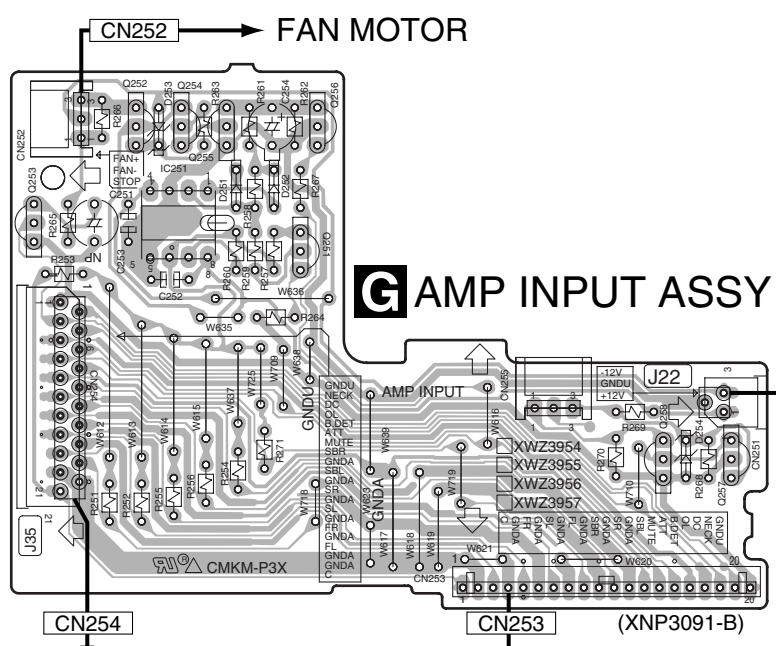
B

VSX-515-K



4 AMP & PRIMARY and AMP INPUT ASSYS

A
B
C
D
E
F



- Q252
- Q254
- Q256

- Q255 IC251
- Q253
- Q251

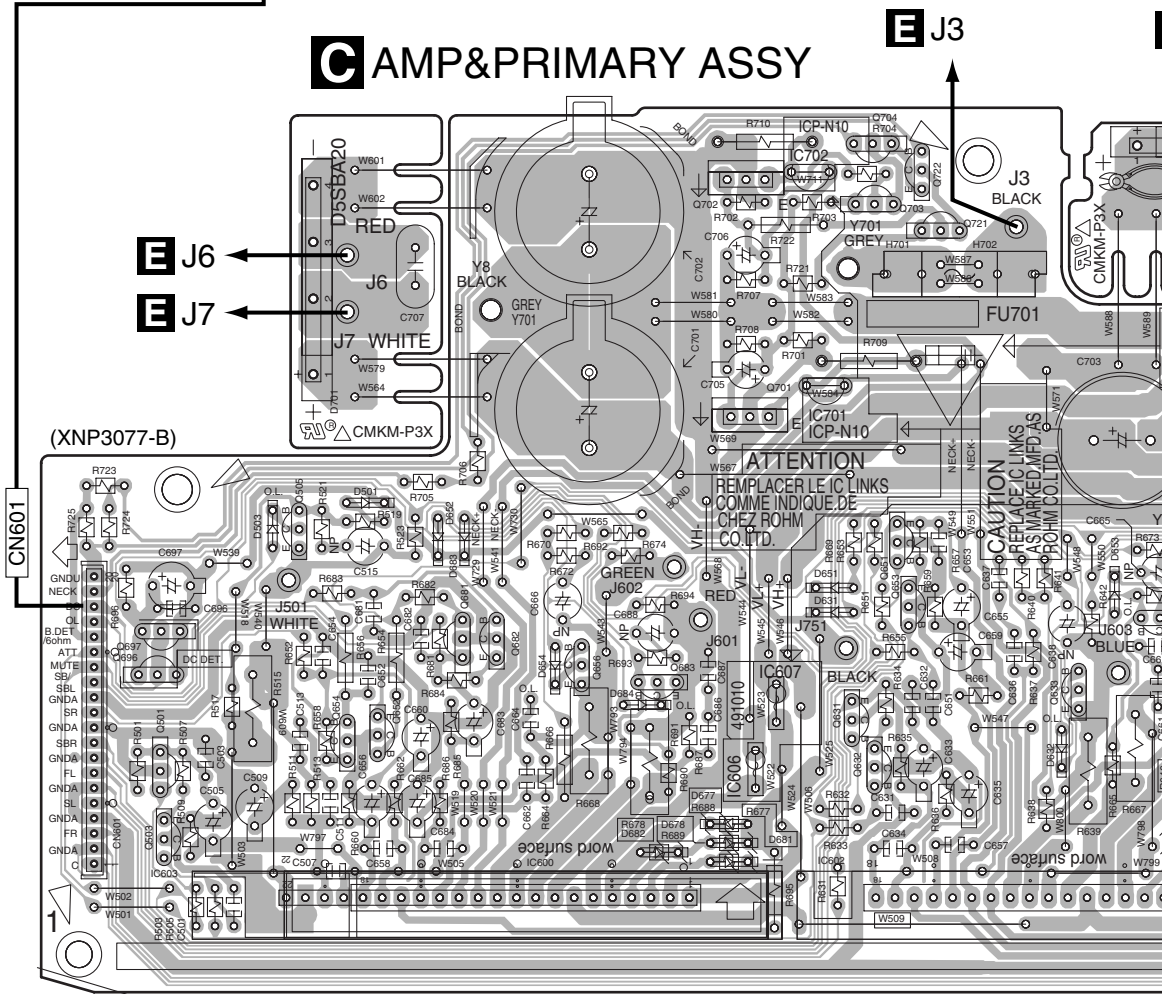
- Q258
- Q257
- Q CN891

A CN106

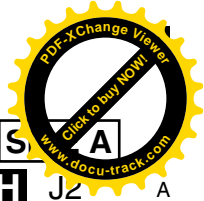
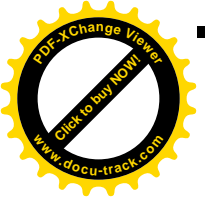
- Q704
- IC702
- Q722
- Q702 Q703
- Q721

- Q701
- IC701
- Q505
- Q651
- Q653 Q602
- Q681 Q604
- Q655
- Q697 Q682 Q606
- Q696 Q683 Q601
- Q656 Q605
- Q632
- Q654
- Q501 Q652 Q631
- Q603
- Q608
- Q604
- Q606
- Q503
- IC600 IC602
- IC603 IC601
- IC610

C AMP&PRIMARY ASSY



1 2 3 4

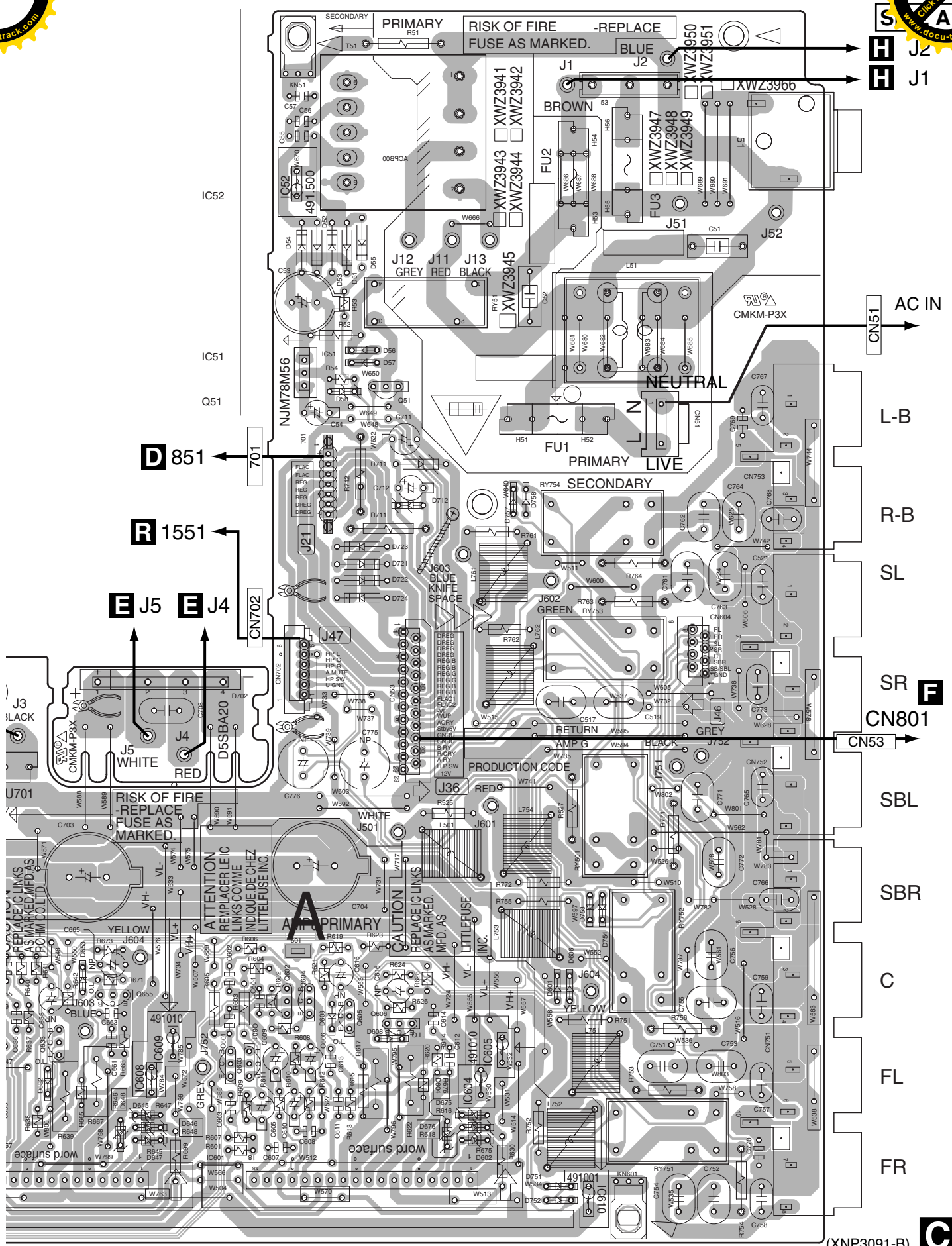


5

6

7

8



D 851

R 1551

E J5

E J4

S
H
H
A
J2
J1

AC IN

L-B

R-B

SL

SR F

CN801

SBL

SBR

C

FL

FR

C

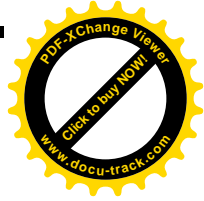
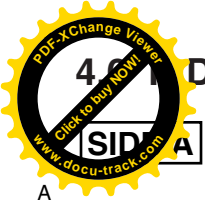
VSX-515-K

5

6

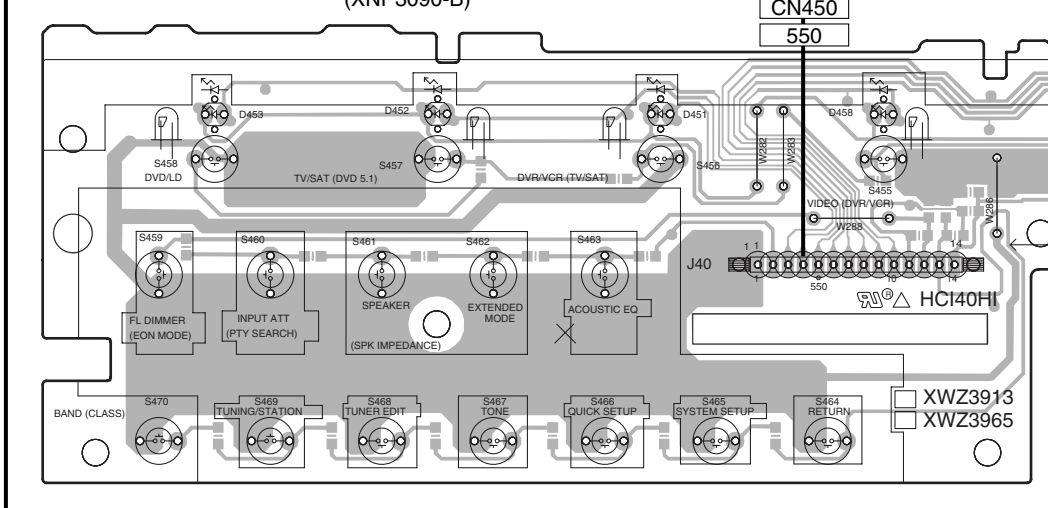
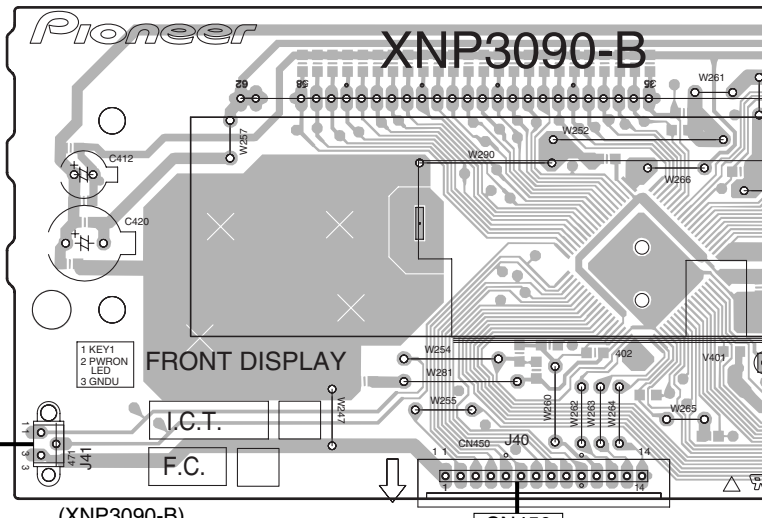
7

8

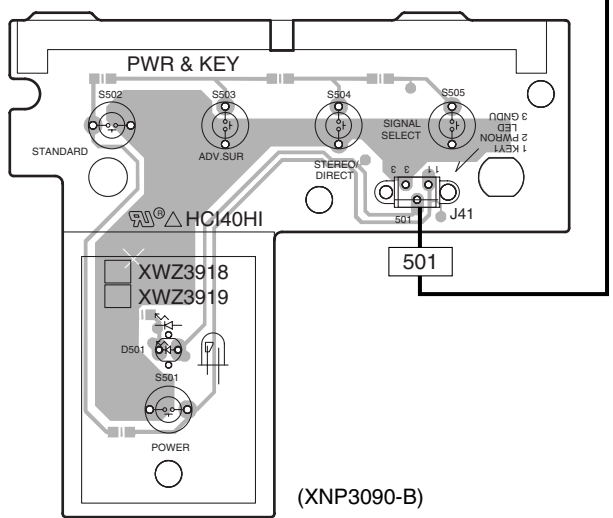


1 2 3 4 DISPLAY, R. ENCODER, P. SW & KEY, H. P. and F. KEY ASSYS

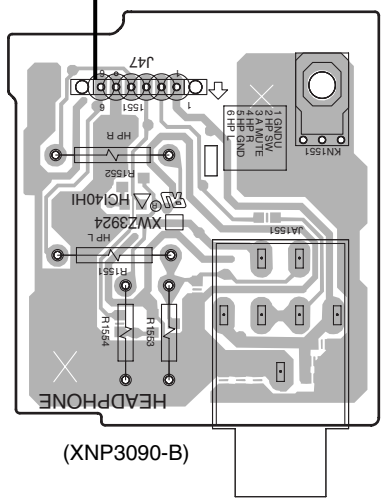
A M FRONT DISPLAY ASSY



O POWER SW & KEY ASSY

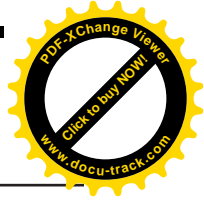
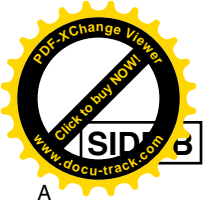


C R H.P ASSY



M O P R

VSX-515-K



1

2

3

4

A

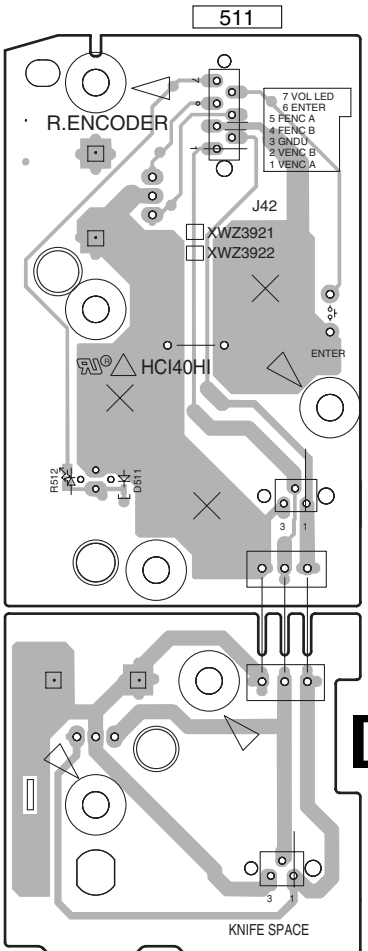
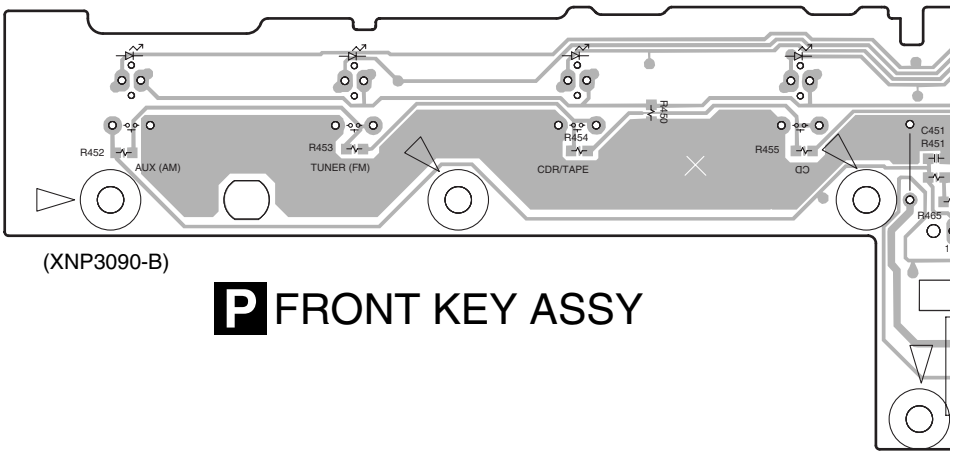
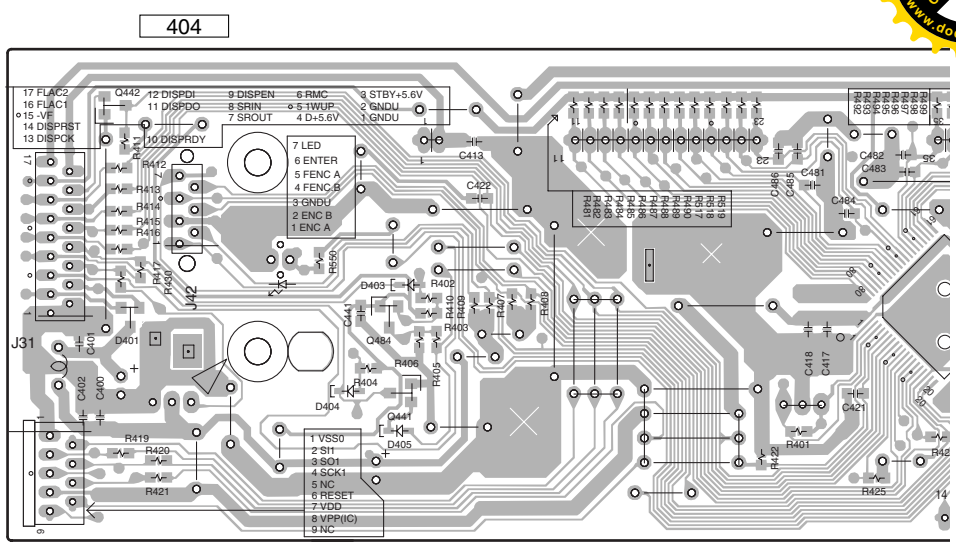
B

C

D

E

F



N R.ENCODER ASSY

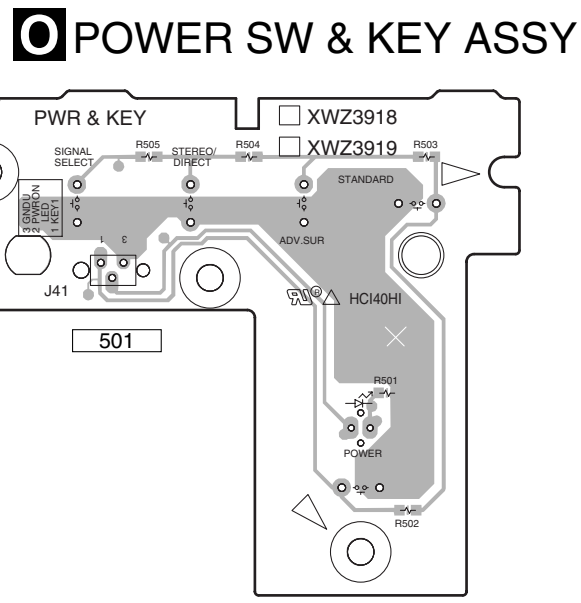
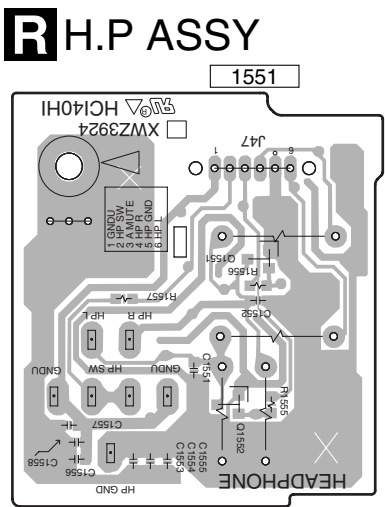
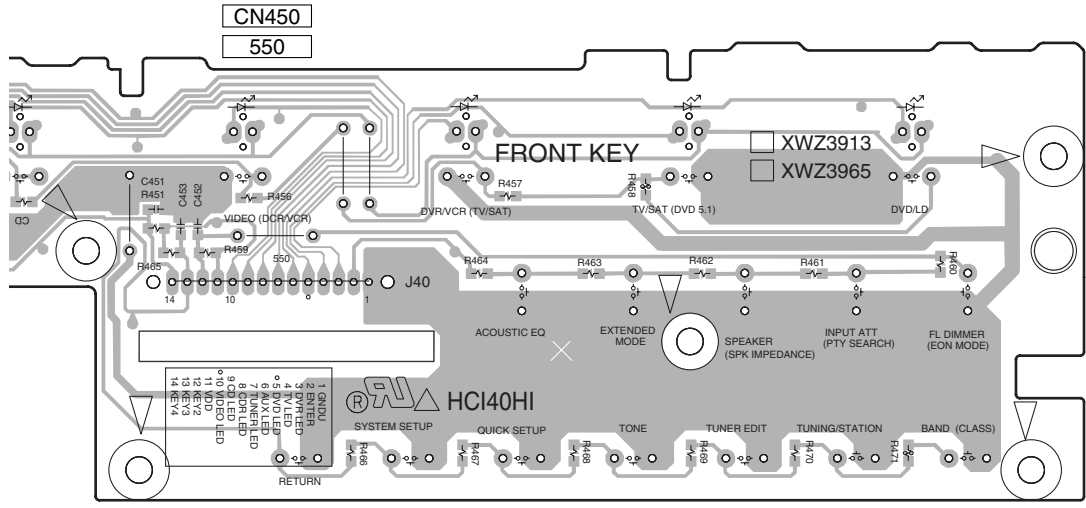
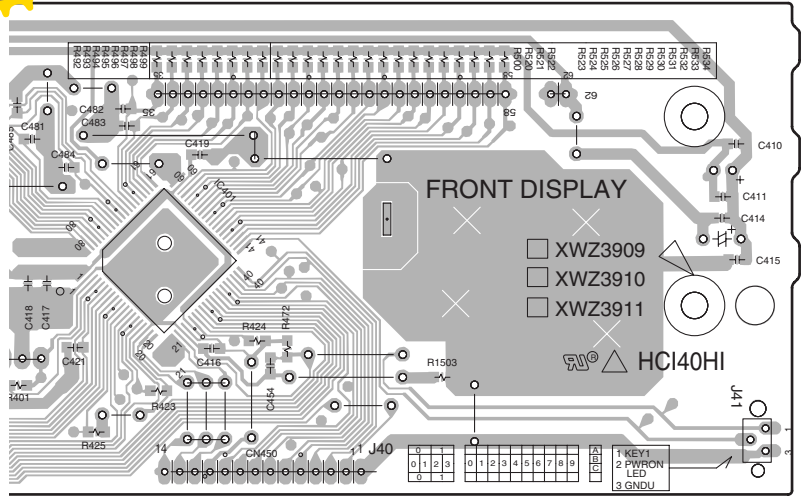
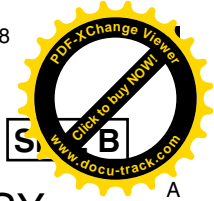
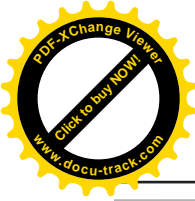
M N P

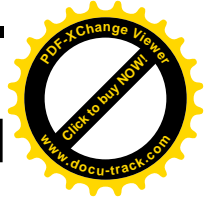
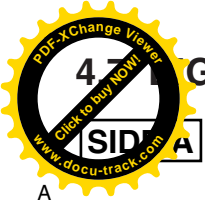
1

2

3

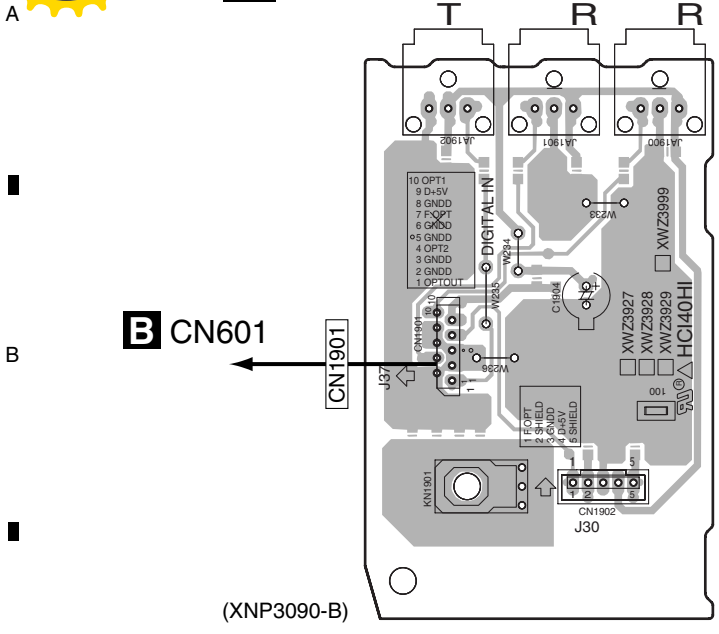
4





DIGITAL IN, VIDEO and 5.1CH ASSYS

T DIGITAL IN ASSY

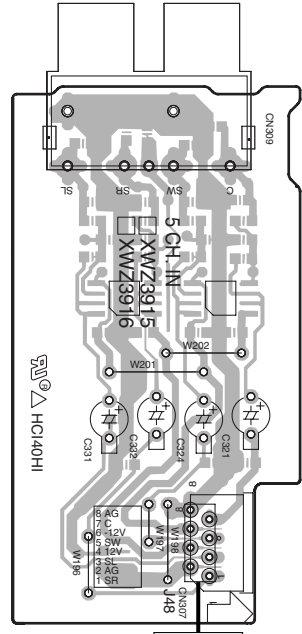


B CN601

CN1901

(XNP3090-B)

J 5.1CH ASSY

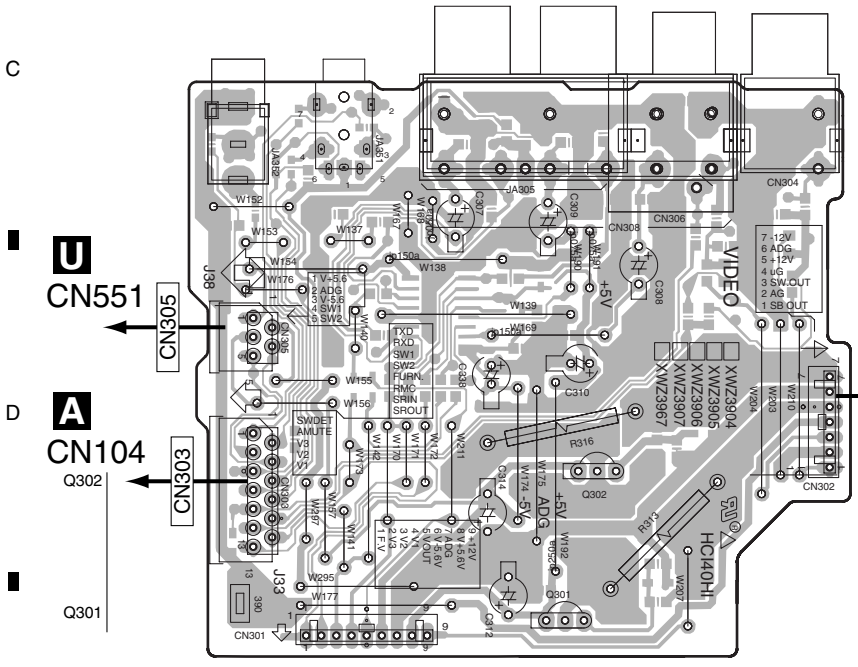


(XNP3090-B)

CN307

A CN105

I VIDEO ASSY



(XNP3090-B)

F CN803

CN302

U CN551

CN305

A CN104

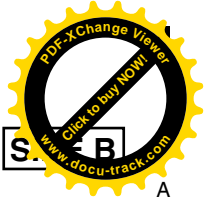
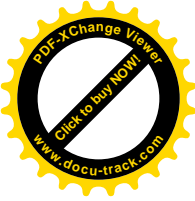
CN303

Q302
Q301

SIDE A

I J T

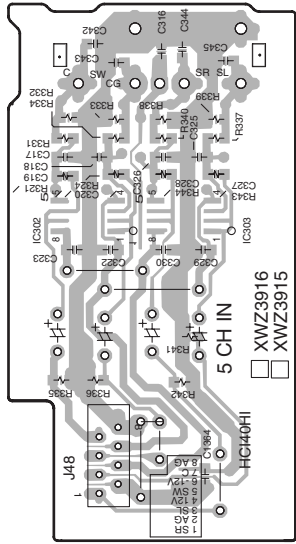
I J T



SIDE B

SIDE B

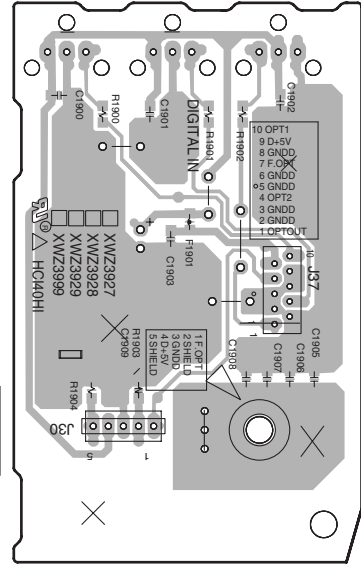
J 5.1CH ASSY



CN307 (XNP3090-B)

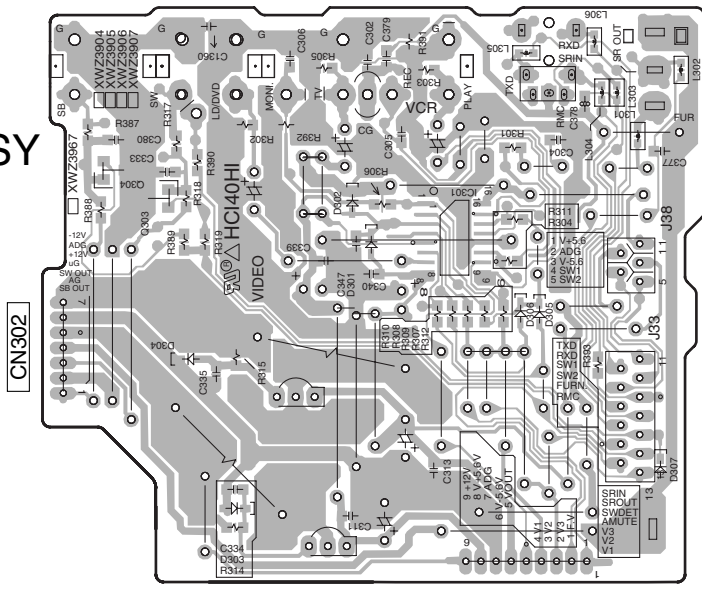
IC302
IC303

T DIGITAL IN ASSY



(XNP3090-B)

I VIDEO ASSY

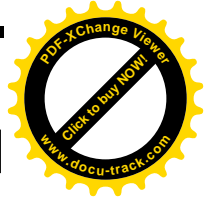
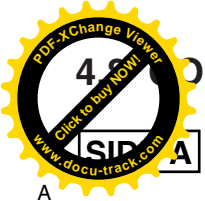


(XNP3090-B)

Q304
Q303
IC301

I J T

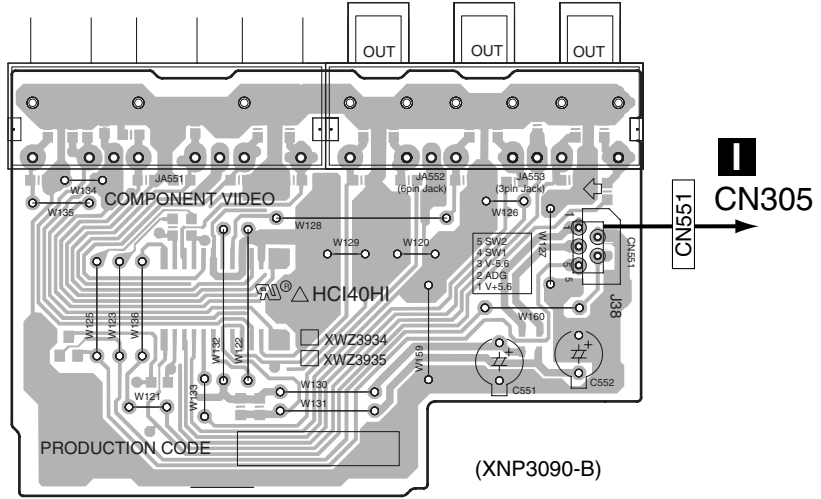
I J T



COMPONENT ASSY

U COMPONENT ASSY

SIDE A



SIDE B

SIDE B

U COMPONENT ASSY

