



# TEAC

## SERVICE MANUAL

# DV-20D

## DVD/DVD-A/SA-CD Player



SUPER AUDIO CD



AUDIO / VIDEO



COMPACT  
disc  
DIGITAL AUDIO



DOLBY  
DIGITAL



DIGITAL  
dts  
SURROUND

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Preliminary  
暫定版

### NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.  
[E]:EUROPE [UK]:U.K. [HK]:HONG KONG

# 1 SPECIFICATIONS

## DVD Player

|                               |   |
|-------------------------------|---|
| Signal system:                | PAL/NTSC  |
| Laser:                        | Semiconductor laser, wavelength 650/790 nm  |
| Frequency range:              | DVD: 2 Hz to 22 kHz (fs: 48 kHz)<br>2 Hz to 44 kHz (fs: 96 kHz)<br>CD: 2 Hz to 20 kHz<br>SACD: 2 Hz to 80 kHz |
| Signal-to-noise rating (DVD): | 105 dB  |
| Audio dynamic range (DVD):    | 100 dB  |
| Harmonic distortion (DVD):    | 0.005%  |
| Wow and flutter:              | Below measurable level<br>(less than ±0.001% (W.PEAK))  |
| Operating conditions:         | Temperature: 5° C to 35° C<br>Operation status: Horizontal  |

## Outputs

Video output: ..... RCA jack x 1  
1.0 V (p-p), 75  $\Omega$ , negative sync.

S-video output: ..... S-video jack x 1  
(Y) 1.0 V (p-p), 75  $\Omega$ , negative sync.  
(C) 0.3 V (p-p) 75  $\Omega$

Component output: ..... RCA jack x 1  
(Y) 1.0 V (p-p), 75  $\Omega$ , negative sync.  
PB, PR) 0.7 V (p-p), 75  $\Omega$

AV connector output: ..... SCART x 1

Audio output (digital audio): ..... RCA jack x 1  
1.15 V (p-p), 75  $\Omega$   
OPTICAL digital jack x 1

Audio output (analog audio): ..... RCA jack x 1 (2 CH),  
2.1 Vrms (1 kHz, 0 dB)  
RCA jack x 1 (6 CH)

## General

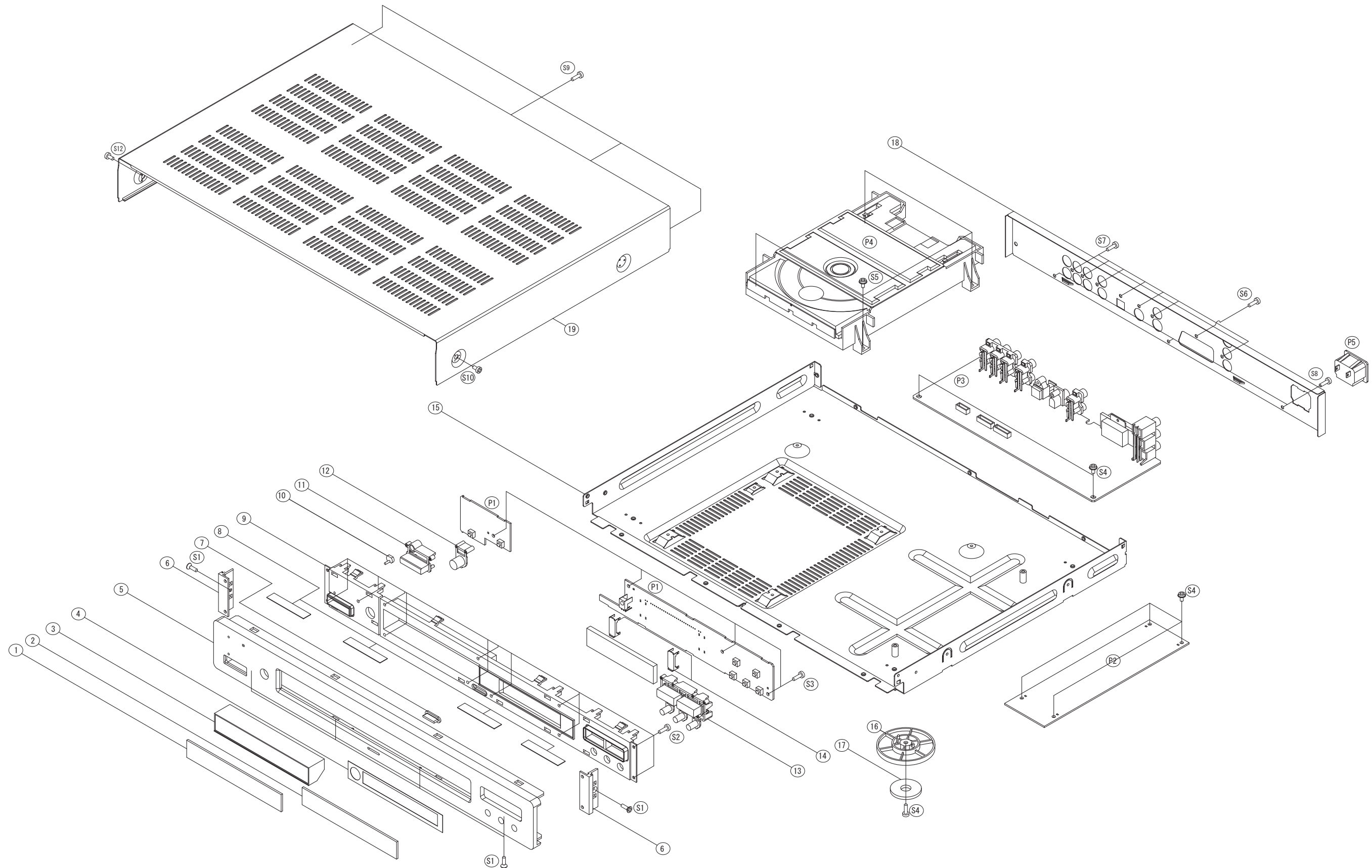
Power supply: ..... AC 230 V, 50 Hz  
Power consumption: ..... 17 W (STANDBY: 0.9 W)  
Weight: ..... 3.3 kg  
External dimensions (W x H x D): ..... 435 x 62 x 327.5 mm

## Accessories

Audio cable (RCA) x 1  
Video cable (RCA) x 1  
Optical cable x 1  
Owner 's manual x 1  
Remote control x 1  
Battery (AAA, R03, UM-4) x 2  
AC cord x 1

- Design and specifications are subject to change without notice.
- Weight and dimensions are approximate.
- Illustrations may differ slightly from production models.

## 2 EXPLODED VIEWS AND PARTS LIST



## EXPLODED VIEW LIST

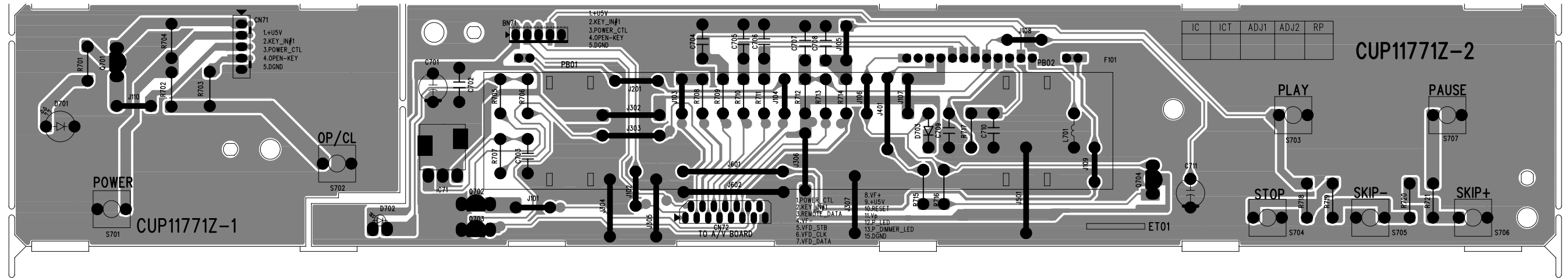
| REF. NO. | PARTS NO.     | DESCRIPTION         | REMARKS |
|----------|---------------|---------------------|---------|
| 1        | CGU1A315Z     | WINDOW, DOOR        |         |
| 2        | CGU1A315V     | WINDOW, FIP         |         |
| 3        | CGR1A304K122  | BASE, DOOR          |         |
| 4        | CHP1A062      | TAPE, BOTH SIDE     |         |
| 5        | CKM1A137WC35  | PANEL, FRONT (AL)   |         |
| 6        | CKM1A138C35   | BAR, SIDE           |         |
| 7        | CGL1A218      | INDICATER, POWER    |         |
| 8        | CHG1A218      | INDICATER, POWER    |         |
| 9        | CGW1A365M7G5  | PANEL, SUB          |         |
| 10       | CGL1A219      | INDICATER, STAND-BY |         |
| 11       | CBT1A900M7G5  | KNOB, POWER         |         |
| 12       | CBT1A902M7ZG5 | KNOB, OPEN          |         |
| 13       | CBT1A901M7ZG5 | KNOB, PLAY          |         |
| 14       | CMD1A496      | BRACKET, FIP        |         |
| 15       | CUA2A235      | CHASSIS, BOTTOM     |         |
| 16       | CKL1A081H30   | FOOT                |         |
| 17       | KHG1A039Z     | CUSHION, FOOT       |         |
| 18       | CKF1A267W     | PANEL, REAR         |         |
| 19       | CKC1A146S35   | CABINET, TOP        |         |
| S1       | CTS3+8JFC     | SCREW               |         |
| S2       | CTB3+10G      | SCREW               |         |
| S3       | CTW3+8J       | SCREW               |         |
| S4       | CTB3+8J       | SCREW               |         |
| S5       | CTB3+8J       | SCREW               |         |
| S6       | CHD1A055      | SCREW, SCART        |         |
| S7       | CTB3+8GFZ     | SCREW               |         |
| S8       | CTB3+6JFZ     | SCREW               |         |
| S9       | CTB3+8JFC     | SCREW               |         |
| S10      | CTB4+6FFC     | SCREW               |         |
| P1       | COP11771B     | FRONT PCB ASS'Y     |         |
| P2       | COP11794B     | SMPS PCB ASS'Y      |         |
| P3       | COP11772B     | AV PCB ASS'Y        |         |
| P4       | CJDRL-S880T   | MECHANISM ASS'Y     |         |
| P5       |               | AC INLET            |         |



### 3 PC BOARDS AND PARTS LIST

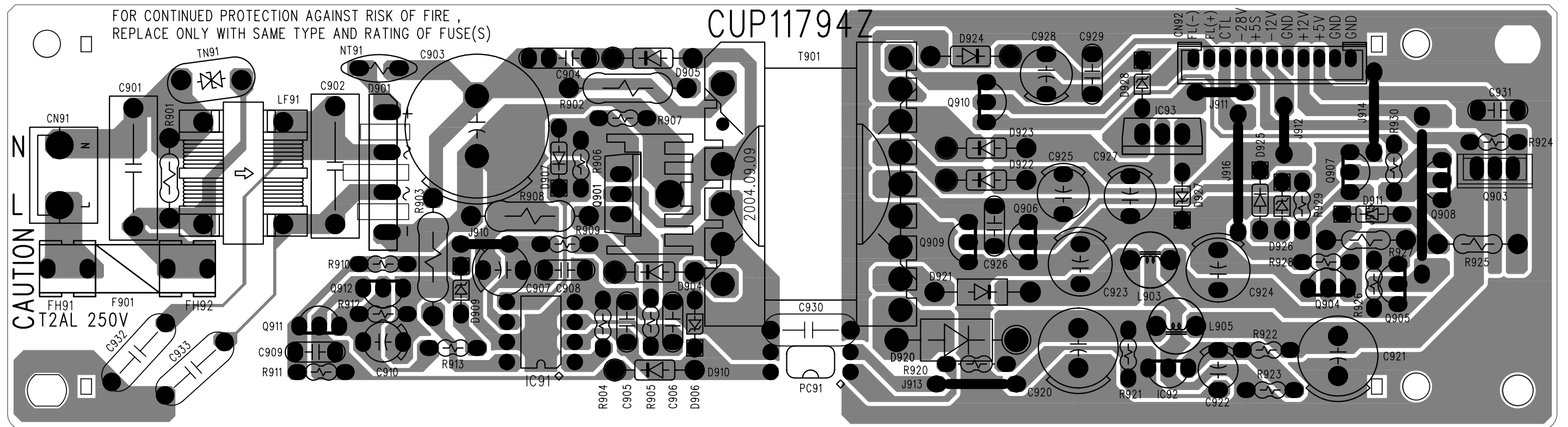
## FRONT BOARD

TOP VIEW

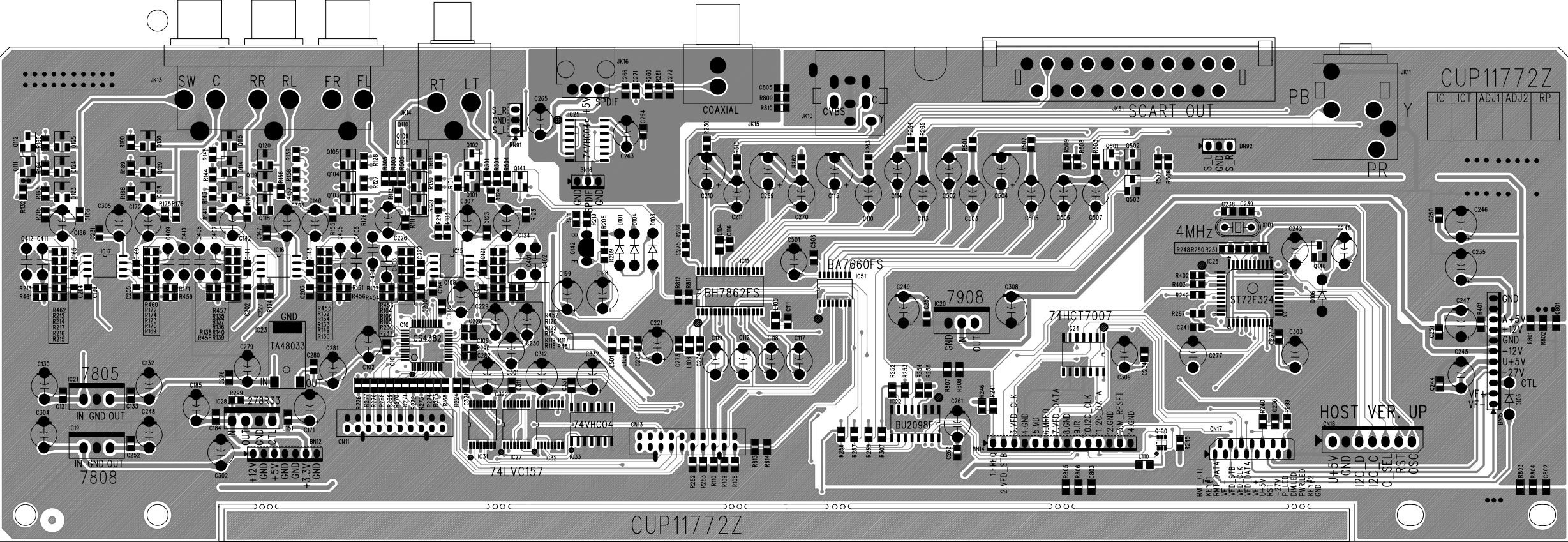


## SMPS BOARD

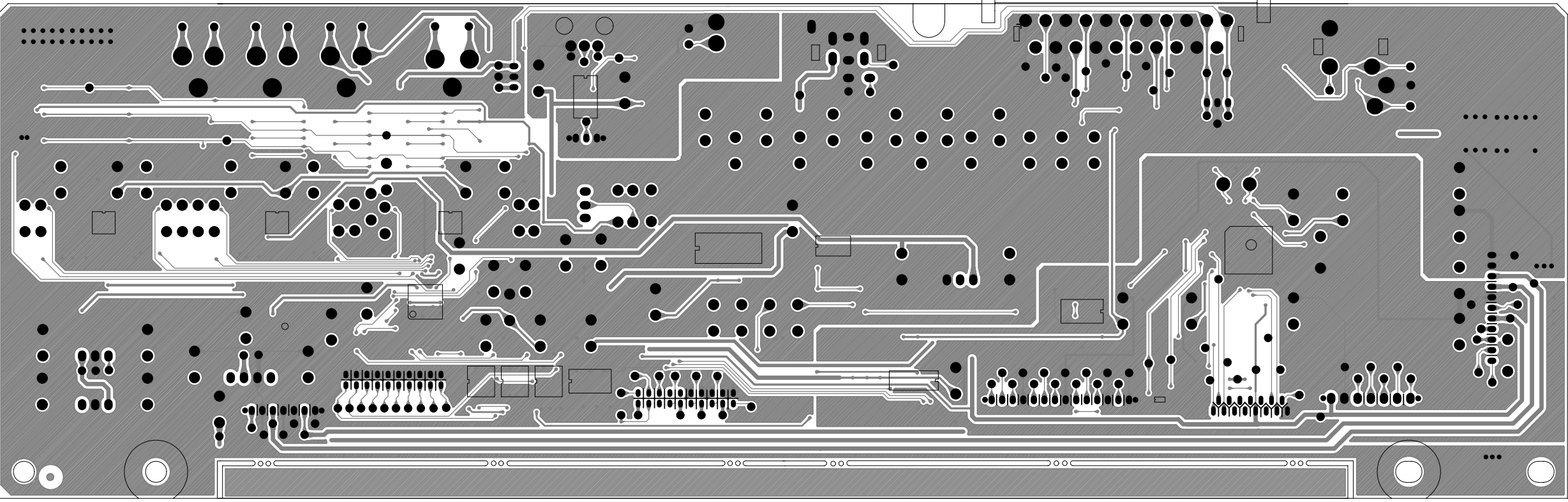
TOP VIEW



AV BOARD (TOP VIEW)



AV BOARD (VIEW FROM TOP SIDE)



# AV PCB ASSY

| REF.NO. | PARTS NO.       | DESCRIPTION                |
|---------|-----------------|----------------------------|
|         | COP11772B       | PCB ASS'Y (A/V)            |
|         | CUP11772Z       | A/V PCB                    |
| IC10    | HVICS4382-KQ    | I.C D/A CONVERTER          |
| IC11    | BVIBH7862FS     | I.C , 6CH VIDEO DRIVER     |
| IC15    | HVINJM2068MDTE1 | I.C , OP AMP               |
| IC16    | HVINJM2068MDTE1 | I.C , OP AMP               |
| IC17    | HVINJM2068MDTE1 | I.C , OP AMP               |
| IC22    | HVIBU2098F      | I.C , I2C BUS              |
| IC23    | HVITA48033FTE16 | I.C , REGULATOR            |
| IC24    | HVITC74HCT7007F | I.C                        |
| IC25    | HV174VHC04MX    | I.C , INVERTER             |
| IC26    | HV1ST72F324J4T6 | FLASH U-COM (ST)           |
| IC27    | HV174LVC157ADBR | I.C , MULTIPLEXER          |
| IC31    | HV174LVC157ADBR | I.C , MULTIPLEXER          |
| IC32    | HV174LVC157ADBR | I.C , MULTIPLEXER          |
| IC33    | HV174VHC04MX    | I.C , INVERTER             |
| IC51    | HV1BA7660FS     | I.C , R.G.B DRIVER         |
| L104    | HLQ08ER68KRZ    | CHIP FERRITE INDUCTOR      |
| L105    | HLQ08ER39KRZ    | CHIP FERRITE INDUCTOR      |
| L108    | HLQ08ER68KRZ    | CHIP FERRITE INDUCTOR      |
| L110    | HLZ9R001Z       | FB, 2012 (0805) 600E, 1.5A |
| Q100    | HVTHN1K05FU     | MOS FET                    |
| Q101    | HVTKRC102S      | T.R , CHIP                 |
| Q102    | HVTKRA102S      | T.R , CHIP                 |
| Q103    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q104    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q105    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q108    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q109    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q110    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q111    | HVTKRC102S      | T.R , CHIP                 |
| Q112    | HVTKRA102S      | T.R , CHIP                 |
| Q113    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q114    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q115    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q118    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q119    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q120    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q123    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q124    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q125    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q128    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q129    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q130    | HVTKTD1304T     | T.R , CHIP (MUTE)          |
| Q141    | HVTKRA102S      | T.R , CHIP                 |
| Q146    | HVTKRC102S      | T.R , CHIP                 |
| Q501    | HVTKTA1504SYRTK | T.R , CHIP                 |
| Q502    | HVTKRC102S      | T.R , CHIP                 |
| Q503    | HVTKRC102S      | T.R , CHIP                 |

# FRONT PCB ASSY

| REF.NO. | PARTS NO.       | DESCRIPTION           |
|---------|-----------------|-----------------------|
|         | COP11771B       | PCB ASS'Y (FRONT)     |
|         | CUP11771Z       | PCB. FRONT            |
| D701    | HVD342YCTB7T089 | L.E.D , YELLOW        |
| D703    | HVD1SS133MT     | DIODE                 |
| Q701    | HVTKRA107MT     | T.R                   |
| Q702    | HVTKRC107MT     | T.R                   |
| Q703    | HVTKRC107MT     | T.R                   |
| Q704    | HVTKSC945CYT    | T.R                   |
| S701    | CST1A012ZT      | SW , TACT             |
| S702    | CST1A012ZT      | SW , TACT             |
| S703    | CST1A012ZT      | SW , TACT             |
| S704    | CST1A012ZT      | SW , TACT             |
| S705    | CST1A012ZT      | SW , TACT             |
| S706    | CST1A012ZT      | SW , TACT             |
| S707    | CST1A012ZT      | SW , TACT             |
| BN71    | CWB1A905210EN   | WIRE ASS'Y (BOARD-IN) |
| CN71    | KJP05GA19ZM     | WAFER                 |
| CN72    | KJP15GA117ZG    | CARD CABLE , WAFER    |
| D702    | CVD52CSBBCEAB2  | BLUE L.E.D            |
| ET01    | CMC1A111        | PLATE , EARTH         |
| F101    | HFLHCA14SM12    | F.L.D                 |
| IC71    | HRVKSM603TH2    | REMOCON SENSER CN     |
| PB01    | CMD1A496        | BRACKET , FIP         |
| PB02    | CMD1A496        | BRACKET , FIP         |

## SMPS PCB ASSY

| REF.NO. | PARTS NO.        | DESCRIPTION                     |
|---------|------------------|---------------------------------|
|         | COP11794C        | SMPS PCB ASS'Y                  |
|         | CUP11794Z        | P. C. B. SMPS                   |
| C905    | HCQ11H102JZT     | CAP , MYLAR                     |
| C906    | HCQ11H102JZT     | CAP , MYLAR                     |
| C907    | CCEA1HH470T      | CAP , ELECT                     |
| C908    | CCKT1H104ZF      | CAP , CERAMIC                   |
| C909    | CCKT1H104ZF      | CAP , CERAMIC                   |
| C910    | HCEA1HH1R0T      | CAP , ELECT                     |
| C922    | CCEA1HH1R0T      | CAP , ELECT                     |
| C923    | CCEA1EH331T      | CAP , ELECT                     |
| C924    | CCEA1EH331T      | CAP , ELECT                     |
| C925    | HCEA1VH101T      | CAP , ELECT                     |
| C926    | HCQ11H102JZT     | CAP , MYLAR                     |
| C927    | CCEA1HH470T      | CAP , ELECT                     |
| C928    | CCEA1HH470T      | CAP , ELECT                     |
| C929    | CCKT1H104ZF      | CAP , CERAMIC                   |
| C931    | CCKT1H104ZF      | CAP , CERAMIC                   |
| D906    | HVDMTZJ30BT      | DIODE , ZENER                   |
| D907    | HVD1N4148T       | DIODE                           |
| D909    | HVDMTZJ16BT      | DIODE , ZENER                   |
| D911    | HVD1N4148T       | DIODE                           |
| D925    | HVD1N4148T       | DIODE                           |
| D926    | HVDMTZJ12BT      | DIODE , ZENER                   |
| D927    | HVDMTZJ16BT      | DIODE , ZENER                   |
| D928    | HVDMTZJ5.1BT     | DIODE , ZENER                   |
| FH91    | △ KJCF5C5        | HOLDER , FUSE                   |
| FH92    | △ KJCF5C5        | HOLDER , FUSE                   |
| IC92    | HVIFAN431A       | I. C , REGULATOR                |
| J910    | C3A206           | WIRE , COPPER                   |
| J911    | C3A206           | WIRE , COPPER                   |
| J912    | C3A206           | WIRE , COPPER                   |
| J913    | C3A206           | WIRE , COPPER                   |
| J914    | C3A206           | WIRE , COPPER                   |
| J915    | C3A206           | WIRE , COPPER                   |
| J916    | C3A206           | WIRE , COPPER                   |
| L903    | CLZ9Z021Z        | COIL , PEAKING (10UH)           |
| L905    | CLZ9Z021Z        | COIL , PEAKING (10UH)           |
| NT91    | KRT10D9MSFT      | THERMISTOR                      |
| Q904    | HVTKTC3198YT     | T. R                            |
| Q905    | HVTKTA1273YT     | TR NORMAL KTA1273/PNP/TO-92L    |
| Q906    | HVTKSC1008YT     | T. R                            |
| Q907    | HVTKRC102MT      | T. R                            |
| Q908    | HVTKRA102MT      | T. R                            |
| Q910    | HVTKTC3198YT     | T. R                            |
| Q911    | HVTKSA708YT      | T. R                            |
| Q912    | HVTKSC1008YT     | T. R                            |
| R901    | KROS1TJ105V      | RES , METAL FILM (1/2W, 1M OHM) |
| CN91    | KJP02KA060ZY     | WAFER                           |
| CN92    | KJP11GA47ZG      | WAFER                           |
| C901    | △ HCQF2E104KZE   | CAP , POLYPROPYLENE FILM        |
| C902    | HCQF2E104KZE     | CAP , POLYPROPYLENE FILM        |
| C903    | △ HCET400VRM680D | ELECTROLYTIC CAPACITOR RM TYPE  |
| C904    | CCKT3A222KBL     | CAP , CERAMIC                   |
| C920    | HCEA1EH102E      | CAP , ELECT                     |
| C921    | HCEA1EH102E      | CAP , ELECT                     |

## SMPS PCB ASSY

| REF.NO. | PARTS NO.        | DESCRIPTION                |
|---------|------------------|----------------------------|
| C930    | △ CCKDHS222ME    | CAP , CERAMIC (400V Y-CAP) |
| C932    | △ CCKDHS102ME    | CAP , CERAMIC (400V Y-CAP) |
| C933    | △ CCKDHS102ME    | CAP , CERAMIC (400V Y-CAP) |
| D901    | △ BVDD2SBA60     | DIODE , BRIDGE             |
| D904    | HVD1N4007T       | DIODE                      |
| D905    | HVDUF4007T       | DIODE , SCHOTTKY           |
| D910    | HVD1N5819T       | DIODE , SCHOTTKY           |
| D920    | HVD1N5822        | DIODE                      |
| D921    | HVD21DQ10T       | DIODE , SCHOTTKY           |
| D922    | HVDUF4004T       | DIODE , SCHOTTKY           |
| D923    | HVDUF4004T       | DIODE , SCHOTTKY           |
| D924    | HVD1N5819T       | DIODE , SCHOTTKY           |
| IC91    | △ HVINCP1200AP60 | I. C PWM                   |
| IC93    | HVIL7912CP       | I. C , REGULATOR           |
| LF91    | △ CLZ9Z059Z      | LINE FILTER                |
| PC91    | HV1PC17L1CB      | I. C , PHOTO COUPLER       |
| Q901    | CVICEF04N6YA     | FET. HEAT SINK ASS'Y       |
|         | BV1CEFO4N6       | FET , CEF04N6              |
|         | CMY2A223         | HEAT SINK                  |
| Q901    | BV1CEFO4N6       | FET , CEF04N6              |

## 4 INCLUDED ACCESSORIES

### INCLUDED ACCESSORIES

| REF. NO. | PARTS NO.   | DESCRIPTION                             | REMARKS    |
|----------|-------------|---|------------|
|          | CQXD20DEUR  | MANUAL, INSTRUCTION G/I/N [EUR]         | 9A10078501 |
|          | CQX1A981Z   | MANUAL, INSTRUCTION E/F/S [UK, HK, EUR] | 9A10078401 |
|          | CARTDV10D   | REMOCON ASS'Y                           |            |
| ⚠        | CJA2B054Z   | CORD, POWER (DETACHABLE/EUR) [EUR]      |            |
| ⚠        | HJA2E069Z   | CORD, POWER (PLUG+SOCKET) UK [UK, HK]   |            |
|          | CJS4M023Z   | CORD, PIN (1P), YELLOW                  |            |
|          | CJS4N014Z   | CORD, PIN                               |            |
|          | CJS8H003Z   | OPTICL. CABLE                           |            |
|          | HABAAAM1.5V | BATTERY                                 |            |
|          | CQX1A645Z   | CARD, WARRANTY                          |            |

**TEAC CORPORATION** 3-7-3, Nakacho, Musashino-shi, Tokyo 180-8550, Japan Phone: (0422) 52-5081

TEAC AMERICA, INC. 7733 Telegraph Road, Montebello, California 90640 Phone: (323) 726-0303

TEAC CANADA LTD. 5939 Wallace Street, Mississauga, Ontario L4Z 1Z8, Canada Phone: (905) 890-8008

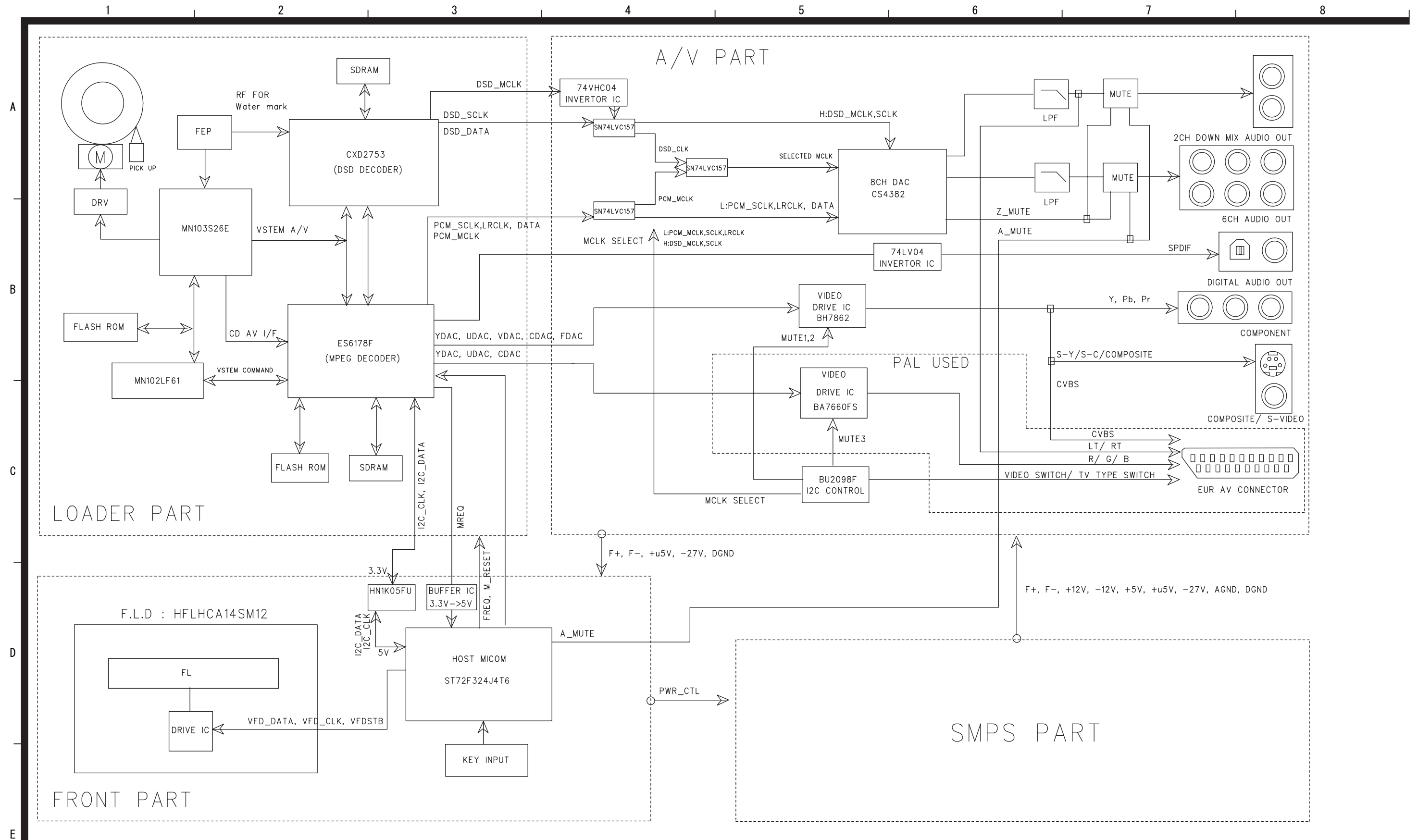
TEAC MEXICO, S.A. De C.V. Campesinos N° 184, Colonia Granjas Esmeralda, Delegacion Iztapalapa, CP 09810, México DF Phone: (525) 581-5500

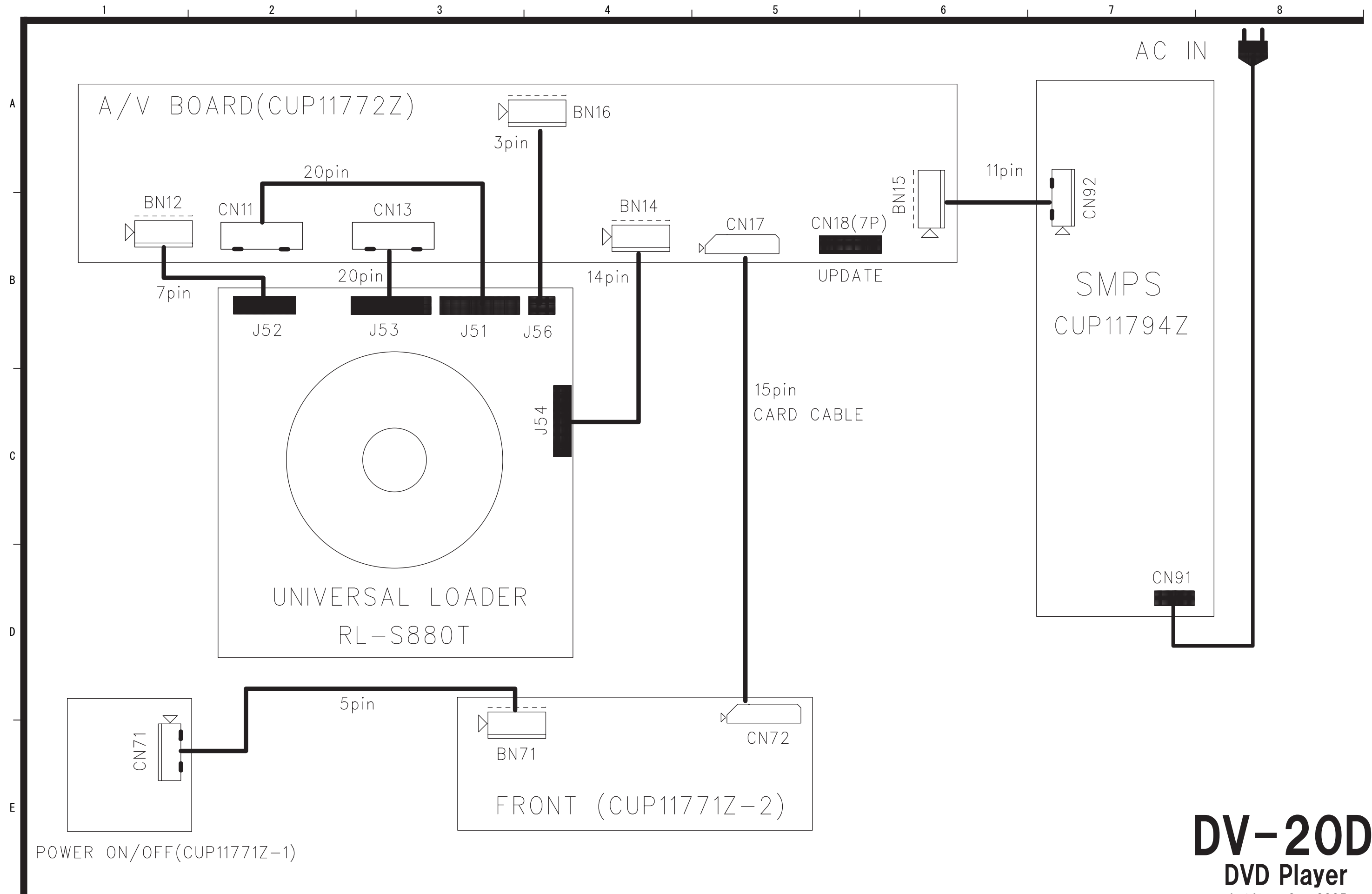
TEAC UK LIMITE Unit 19 & 20, The Courtyards, Hatters Lane, Watford, Hertfordshire, WD18 8TE, U.K. Phone: (0845) 130-2511

TEAC EUROPE GmbH Bahnstrasse 12, 65205 Wiesbaden-Erbenheim, Germany Phone: 0611-71580

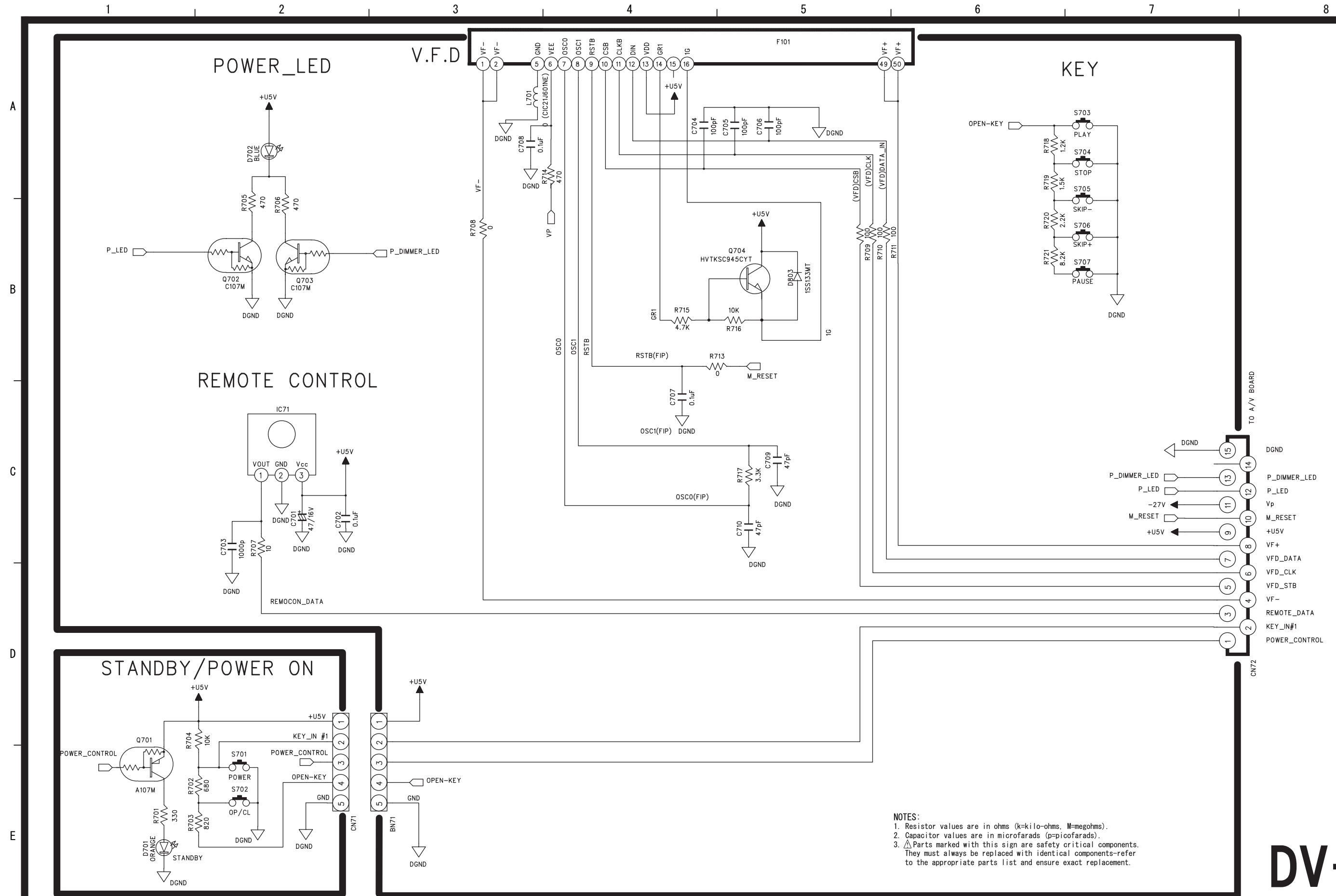
TEAC ITALIANA S.p.A. Via C. Cantù 9/A, 20092 Cinisello Balsamo, Milano, Italy Phone: 02-66010500

TEAC AUSTRALIA PTY., LTD. 280 William Street, Melbourne VIC 3000, Australia Phone: (03) 9672-2400  
A.B.N. 80 005 408 462














**NOTES:**

1. Resistor values are in ohms (k=kilo-ohms, M=megohms).
2. Capacitor values are in microfarads (p=picofarads).
3.  Parts marked with this sign are safety critical components. They must always be replaced with identical components—refer to the appropriate parts list and ensure exact replacement.

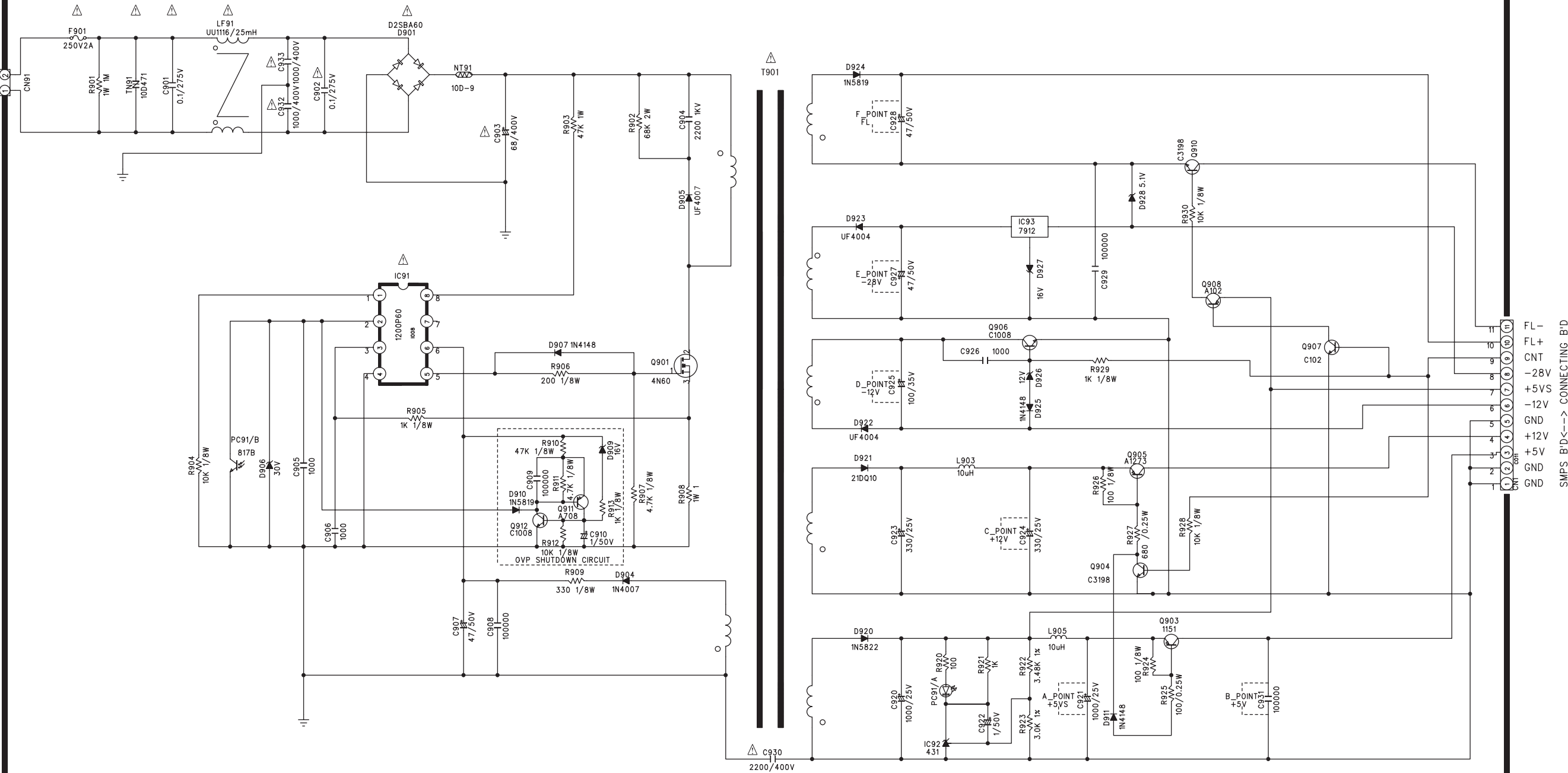
A

B

C

D

E



NOTES:

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DV-20D

DVD Player

1 st Issue: Sep. 2005