

harman/kardon

FESTIVAL 60/80

Component Audio System

TECHNICAL MANUAL

**PRELIMINARY
RELEASE**



Harman Consumer Group
250 Crossways Park Drive
Woodbury, N.Y. 11797
1-800 422-8026 in the USA

H A Harman International Company

Rev A 9/00 - PRELIMINARY RELEASE

TABLE OF CONTENTS

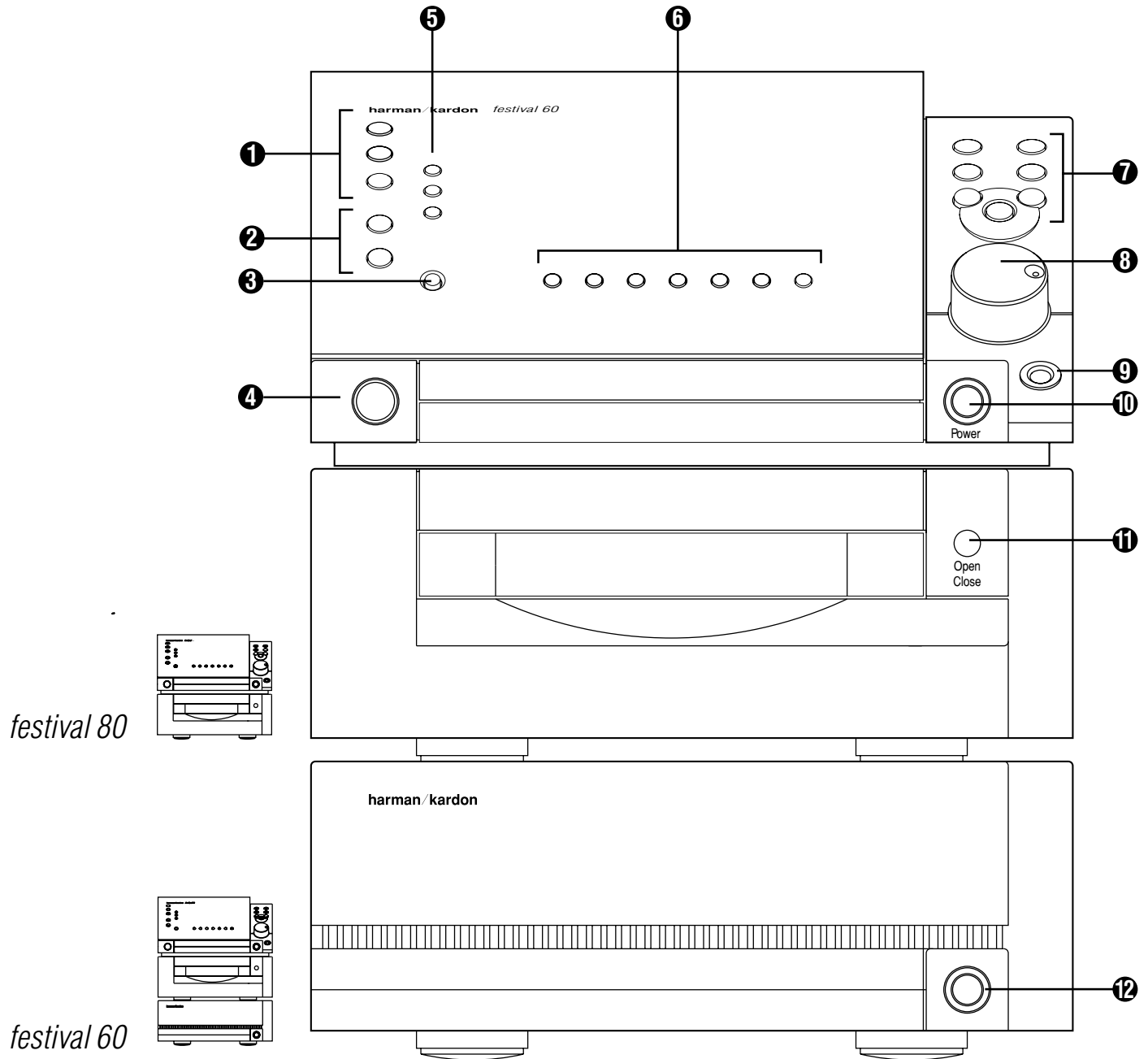
Festival 60/80 SPECIFICATIONS	3	European LW (AM) ADJUSTMENT Festival 60/80 (TUNER UNIT)	39
Festival 60/80 CONTROLS & FUNCTION.....	4	European FM ADJUSTMENT Festival 60/80 (TUNER UNIT)	40
FESTIVAL 60/80 CONNECTIONS	6	European RDS ADJUSTMENT Festival 60/80 (TUNER UNIT)	41
FESTIVAL 60/80 CONTROLS TUNER	8	Festival-60/80-US/EU (2BAND) (RDS) ALIGNMENT PROCEDURE Figures 1-4	42
FESTIVAL 60/80 CONTROLS CD CHANGER.....	10	Festival-60/80-US/EU(2BAND) (RDS) ALIGNMENT PROCEDURE Figures 5 & 6	43
FESTIVAL 60/80 CONTROLS AUX.....	12	Festival-60/80-US/EU(2BAND) (RDS) ALIGNMENT PROCEDURE Figures 7 & 8	44
FESTIVAL 60/80 BALANCE, BASS & TREBLE	13	Festival-60/80-EU (RDS) ALIGNMENT PROCEDURE LOCATIONS.....	45
FESTIVAL 60/80 CONTROLS CLOCK.....	14	Festival-60/80-US (RDS) ALIGNMENT PROCEDURE LOCATIONS.....	46
FESTIVAL 60/80 CONTROLS SURROUND SETUP	15	DISASSEMBLY DRAWING	47
FESTIVAL 60/80 CONTROLS SURROUND OPERATION	16	Festival 60/80 PACKING	61
FESTIVAL 60/80 TROUBLESHOOTING	17	Festival 60 SPEAKER WIRING.....	62
Festival 60 ASSEMBLY PARTS LIST.....	18	Festival 80 SPEAKER WIRING.....	63
Festival 80 ASSEMBLY PARTS LIST.....	24	Festival 60 SPEAKER MECHANICAL ASSEMBLY.....	64
Festival 80 SUBWOOFER ASSEMBLY PARTS LIST...29		Festival 80 SPEAKER MECHANICAL ASSEMBLY.....	65
MECHANICAL ASSEMBLY FESTIVAL-60-US TOP-UNIT-201-01	32	FUSE MATRIX.....	66
MECHANICAL ASSEMBLY FESTIVAL-60-US TOP-UNIT-201-02	33	PCB MATRIX	67
MECHANICAL ASSEMBLY FESTIVAL-60-US TOP-UNIT-201-03	34	FESTIVAL 60 DISPLAY BOARD	68
MECHANICAL ASSEMBLY FESTIVAL-60-US TOP-UNIT-201-04	35	FESTIVAL 60/80 IR SENSOR, POWER INDICATOR, VOLUME CONTROL, VIDEO & FUNCTION BOARDS	68
ADJUSTMENT Festival 60/80 US (AMP UNIT).....	36	FESTIVAL 60/80 TUNER BOARD	69
US AM ADJUSTMENT Festival 60/80 (TUNER UNIT).....	37	FESTIVAL 60/80 CD MAIN BOARD	69
US FM ADJUSTMENT Festival 60/80 (TUNER UNIT).....	37	FESTIVAL 60/80 CD INDICATOR BOARD	70
US RDS ADJUSTMENT Festival 60/80 (TUNER UNIT).....	38	FESTIVAL 60/80 CD CONNECTOR BOARD	70
European MW (AM) ADJUSTMENT Festival 60/80 (TUNER UNIT).....	39		

FESTIVAL 60 MAIN AMP, AMP INDICATOR, PRIMARY AMP & SECONDARY AMP BOARDS	71	Festival TOP UNIT SCHEMATIC DIAGRAM (60 US & European)	113
FESTIVAL 80 FILTER/TERMINAL & BASS AMP BOARDS	72	Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)	114
FESTIVAL 80 SubLR AMP & SubCS AMP BOARDS ..	73	Festival TOP UNIT SCHEMATIC DIAGRAM (60 US & European)	115
FESTIVAL 60/80 PRE-AMP BOARD	74	Festival TOP UNIT SCHEMATIC DIAGRAM (60 US)	116
FESTIVAL 60/80 HEADPHONE BOARD.....	74	Festival TOP UNIT SCHEMATIC DIAGRAM (60 European)	117
FESTIVAL 60/80 ELECTRICAL PARTS LISTS.....	75	Festival TOP UNIT BLOCK DIAGRAM (80 European)	118
INTEGRATED CIRCUIT DIAGRAMS 1	98	Festival TOP UNIT SCHEMATIC DIAGRAM (80 US & European)	119
Festival BLOCK DIAGRAM (60/80 European 3 Band)	99	Festival TOP UNIT SCHEMATIC DIAGRAM (80 US & European)	120
Festival BLOCK DIAGRAM (60/80 US, 60/80 European 2 Band)	100	Festival TOP UNIT SCHEMATIC DIAGRAM (80 European)	121
Festival CD SCHEMATIC DIAGRAM (60/80 US & Europe)	101	Festival TOP UNIT BLOCK DIAGRAM (80 US).....	122
Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)	102	Festival SUBWOOFER UNIT BLOCK DIAGRAM (80 US & European)	123
Festival CD Unit TUNER SCHEMATIC DIAGRAM (60/80 European)(2BAND)(RDS).....	103	Festival SUBWOOFER SCHEMATIC DIAGRAM (80 US)	124
Festival CD Unit TUNER SCHEMATIC DIAGRAM (60/80 European)(RDS)	104	Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)	125
Festival CD Unit TUNER IC VOLTAGE CHART (60/80 European)(RDS)	105	Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)	126
Festival CD Unit TUNER SCHEMATIC DIAGRAM (60/80 US)(RDS).....	106	Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)	127
Festival CD Unit TUNER IC VOLTAGE CHART (60/80 US)(RDS).....	107	Festival SUBWOOFER SCHEMATIC DIAGRAM (80 US)	128
Festival CD Unit TUNER IC VOLTAGE CHART (60/80 European 2 BAND)(RDS)	108	Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)	129
Festival MAIN AMP PCB SCHEMATIC DIAGRAM (60 US & European)	109	Festival SUBWOOFER SCHEMATIC DIAGRAM (80 US)	130
Festival AMP UNIT BLOCK DIAGRAM (60 US & European)	110	Festival TOP UNIT SCHEMATIC DIAGRAM (80 US).....	131
Festival TOP UNIT BLOCK DIAGRAM (60 European)	111		
Festival TOP UNIT BLOCK DIAGRAM (60 US).....	112		

Festival 60/80 SPECIFICATIONS

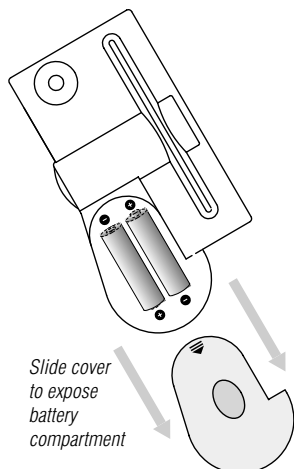
	Festival 60	Festival 80
Power Amplifier		
Power Output: Stereo: 8 ohms (20 – 20kHz, <0.09%THD)	35 watts	35 watts
Surround: Left/Right/Center @ 8 ohms (20 – 20kHz, <0.09%THD)	N/A	35 watts
Surround: Rear Channels: 4 ohms (20 – 20kHz, <0.09%THD)	N/A	20 watts
High-Current Capability: Stereo & Main Channel Amps	+/-35 amps	+/-35 amps
Power Bandwidth @ 8 Ohms	10Hz – 60kHz	10Hz – 60kHz
Frequency Response (1W +0/-3dB)	0.2Hz – 140kHz	0.2Hz – 140kHz
Rise Time	0.8µSec	0.8µSec
Slew Rate	105V/µSec	105V/µSec
S/N Ratio (Reference, Rated Power, A-Wtd.)	112dB	112dB
Subwoofer Output	850mV	N/A
Subwoofer Amplifier Power @ 4 ohms (20 – 120Hz, <0.09%THD)	N/A	95 watts
Subwoofer Amplifier High-Current Capability	N/A	+/-60 amps
Dimensions (H x W x D)	4 x 10-1/4 x 11-3/16"/102 x 260 x 284mm	N/A
Weight	11.9lbs/5.4kg	N/A
FM Tuner		
Tuning Range (100kHz – step)	87.5MHz – 108MHz	87.5MHz – 108MHz
Usable Sensitivity, Stereo, A-Wtd. (S/N 30dB)	18dBf	18dBf
50dB Quieting Sensitive, Stereo, A-Wtd. (97.9MHz)	42dBf	42dBf
S/N Ratio 65dBf, Mono/Stereo, A-Wtd. (97.9MHz)	70dB/65dB	70dB/65dB
Capture Ratio	1.6dB	1.6dB
Selectivity, Adjacent Channel, +/-400kHz (97.9MHz)	55dB	55dB
IF Rejection (97.9MHz)	120dB	120dB
THD 1kHz, 65dBf	0.30%	0.30%
AM Tuner		
Tuning Range (10kHz – step)	530kHz – 1710kHz	530kHz – 1710kHz
Sensitivity (S/N 20dB) 600kHz/1000kHz, 1400kHz	900µV/m / 630µV/m	900µV/m / 630µV/m
Alternate Channel Selectivity (6dB S/N Sensitivity), +/-10kHz	45dB	45dB
Image Rejection (6dB S/N Sensitivity)	40dB	40dB
IF Rejection (6dB S/N Sensitivity)	60dB	60dB
7-Disc CD Changer		
System	Compact Disc Digital Audio	
D/A Converter	4X oversampling filter, 3D Bitstream™, Secondary delta sigma noise shaper	
Error Correction	CIRC System	
Frequency Response	20Hz – 20kHz, +/-3dB	20Hz – 20kHz, +/-3dB
THD	0.03%	0.03%
Dynamic Range	90dB	90dB
S/N Ratio	82dB	82dB
Channel Separation	70dB	70dB
Dimensions (H x W x D)	4 x 10-1/4 x 11-3/16"/102 x 260 x 284mm	4 x 10-1/4 x 11-3/16"/102 x 260 x 284mm
Weight	7.1lbs/3.2kg	7.1lbs/3.2kg
Controller		
Input Sensitivity/Impedance	150mV/100kohm	150mV/100kohm
Frequency Response (1W +1/-3dB)	7Hz – 100kHz	7Hz – 100kHz
S/N Ratio (Reference, Rated Power, A-Wtd.)	100dB	100dB
Tone Control Range (+/-)Bass 50Hz/Treble 10kHz	+/-10dB	+/-10dB
Surround Modes	N/A	Pro Logic®, Movie, Music, Hall
Dimensions (H x W x D)	5-7/16 x 10-1/4 x 11-3/16"/138 x 260 x 284mm	5-7/16 x 10-1/4 x 11-3/16"/138 x 260 x 284mm
Weight	7.3lbs/3.3kg	7.3lbs/3.3kg
Subwoofer/Amplifier		
Driver	N/A	Dual 8"
Frequency Response +/-3dB	N/A	32Hz – 150Hz
Sensitivity 2.83VRMS @ 1m	N/A	87dB
Impedance	N/A	4 ohms nominal
Dimensions (H x W x D)	N/A	15-3/4 x 18 x 15-5/8"/400 x 457 x 397mm
Weight	N/A	56lbs/25.5kg
Speakers		
High-Frequency Driver	1" Flare-Dome Tweeter	1" Flare-Dome Tweeter
Midrange/Bass Driver	6" Co-polymer	3-1/2" Laminated Fiber
Crossover	4kHz	150Hz, 4kHz
Frequency Response +/-3dB	50Hz – 20kHz	150Hz – 20kHz
Sensitivity 2.83VRMS @ 1m	87dB	87dB
Impedance	8 ohms nominal	8 ohms nominal
Dimensions (H x W x D)	10-1/8 x 6-7/8 x 13-1/2"/257 x 175 x 343mm	3-3/4 x 4-1/8 x 6"/95 x 105 x 152mm
Weight	11lbs/5kg	0.5lbs/0.23kg

Festival 60/80 CONTROLS & FUNCTION



Product Over view Front

- 1 Source Buttons**
Press desired source button to select input source.
- 2 Sound Keys**
Press to access sound quality and tone control functions for all sources.
- 3 Clock**
Press to access the clock, sleep and wake functions.
- 4 Remote Control Receiver**
Point remote control at this area for optimum remote operation. (Remote range is 15 feet.)
- 5 Option Buttons**
These buttons change function based on the source being used. Press to select functions specific to each source. Some functions require more than one press for adjustment or selection.
- 6 Selection Buttons**
In the Tuner mode these buttons store or recall preset stations, in the CD mode they select discs, and in the Aux mode they select Aux inputs. In the Clock mode they adjust the time and the wake time setting.
- 7 Play Controls**
Press to select, adjust and operate functions specific to each source. Some functions require more than one press for adjustment or selection.
- 8 Volume Knob**
Rotate to adjust volume level.
- 9 Headphone Jack**
Accepts 1/8" headphone connector.
- 10 Power**
Press lightly to put the system into Standby (which saves all settings). Press firmly to turn unit completely Off. The power light is green when the system is On and orange when the system is in Standby.
- 11 Open/Close**
Press to open and close the CD drawer.
- 12 Power Indicator (Festival 60 only)**
This indicator is green when the system is On and orange when the system is in Standby.



Remote

Place batteries (included) in the remote as shown below. Most of the buttons and controls on the remote have functions identical to the buttons and controls on the control unit. The remote control requires two AA batteries. The range is 15 feet.

Power

Press to put the unit in Standby.

Sleep

Press to put the system into the Sleep mode. (See clock section on page 13 for more information).

Source Buttons

Press desired source button to select an input source.

Selection Buttons

Press to scroll through and select functions specific to each source.

Volume Controls

Press Volume to adjust sound level.

Press Mute to temporarily silence speaker output.

Play Controls

Press to select, adjust and operate functions specific to each source.

Festival 80 only

Surround

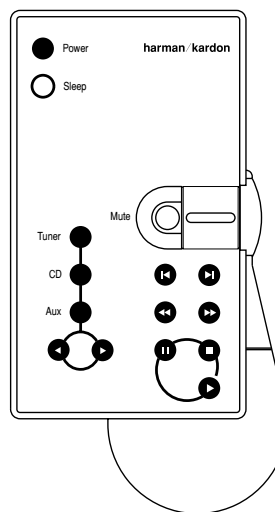
Press to access surround sound control functions.

Center

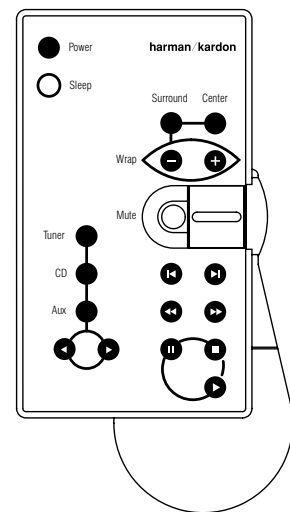
Press to access center speaker control functions.

Wrap

Press to adjust surround sound effects.



festival 60 remote



festival 80 remote

FESTIVAL 60/80 CONNECTIONS

Connections

Electronics

1 Connect the Ribbon Wire

Push the plugs on the ribbon wire **A** firmly into corresponding connectors on the Controller until they "click" into place. Slip the wire edges beneath cable management clips.

2 Connect the Antenna

FM

Connect the included antenna or an external FM antenna to the FM (75 ohm) connector. The included 300 ohm to 75 ohm adapter is required for connections from twin lead or inside dipole antennas.

AM

Assemble the included AM Loop Antenna and connect it to the AM and GND connectors. If an external AM antenna is used, follow the instructions supplied with the antenna.

3 Connect the Power Cord

Plug the female end of the power cord **E** (provided) into the AC power jack on the rear of the unit. Do not plug the male end into an AC outlet until all other connections have been made. In addition to the power connection to the controller, Festival 60 has a power connection to the Amplifier and Festival 80 has a power connection to the Powered Subwoofer.

Speakers

Festival 80

4 Position the Speakers

Festival 80 includes five 2-way satellite speakers and one powered subwoofer. The satellite speakers all connect to the subwoofer. The subwoofer connects directly to the controller.

5 Connect the Speakers

The five speakers each have a pair of spring-loaded wire clips. The subwoofer has five pairs of corresponding connectors. Run a length of the provided wire from each speaker to the subwoofer. Cut the wire and strip the two leads at each end. Attach the leads at the speaker to the red and black clips. To ensure proper polarity, attach the leads at the subwoofer to the corresponding colored spring clips. Repeat for all four remaining speakers.

6 Connect the Subwoofer

Connect the round multi-pin connector of the subwoofer cable **I** to the subwoofer jack on the Controller. Connect the other end to the jack on the back of the subwoofer as shown.

Festival 60

7 Position the Speakers

Festival 60 includes two 2-way "bookshelf" speakers that can be placed almost anywhere in a room and still provide superior sound quality. Both speakers connect directly to the controller.

8 Connect the Speakers

Both speakers have a pair of screw-type wire connectors. The amplifier has two pairs of similar connectors. Run a length of the provided wire from each speaker to the amplifier. Cut the wire and strip the two leads at each end. Unscrew the knobs on the back of the speaker to reveal a hole in each post. Insert one lead in the red post hole and the other in the black, then tighten. To ensure proper polarity, attach the leads at the amplifier to the two corresponding colored connectors.

9 Connect the Subwoofer (optional)

If you are adding an optional powered subwoofer to this system, connect the subwoofer to the jacks on the back of the amplifier.

Optional Connections

10 Aux 1, 2 & 3 Inputs

Connect the audio and video outputs of up to three external sources (DVD, VCR, cassette, etc.) to these jacks. Connect computers and portable audio products to the R/L jack linked to Aux 2. If the R/L jack is used, the Aux 2 input is disabled.

11 Aux 1 Output

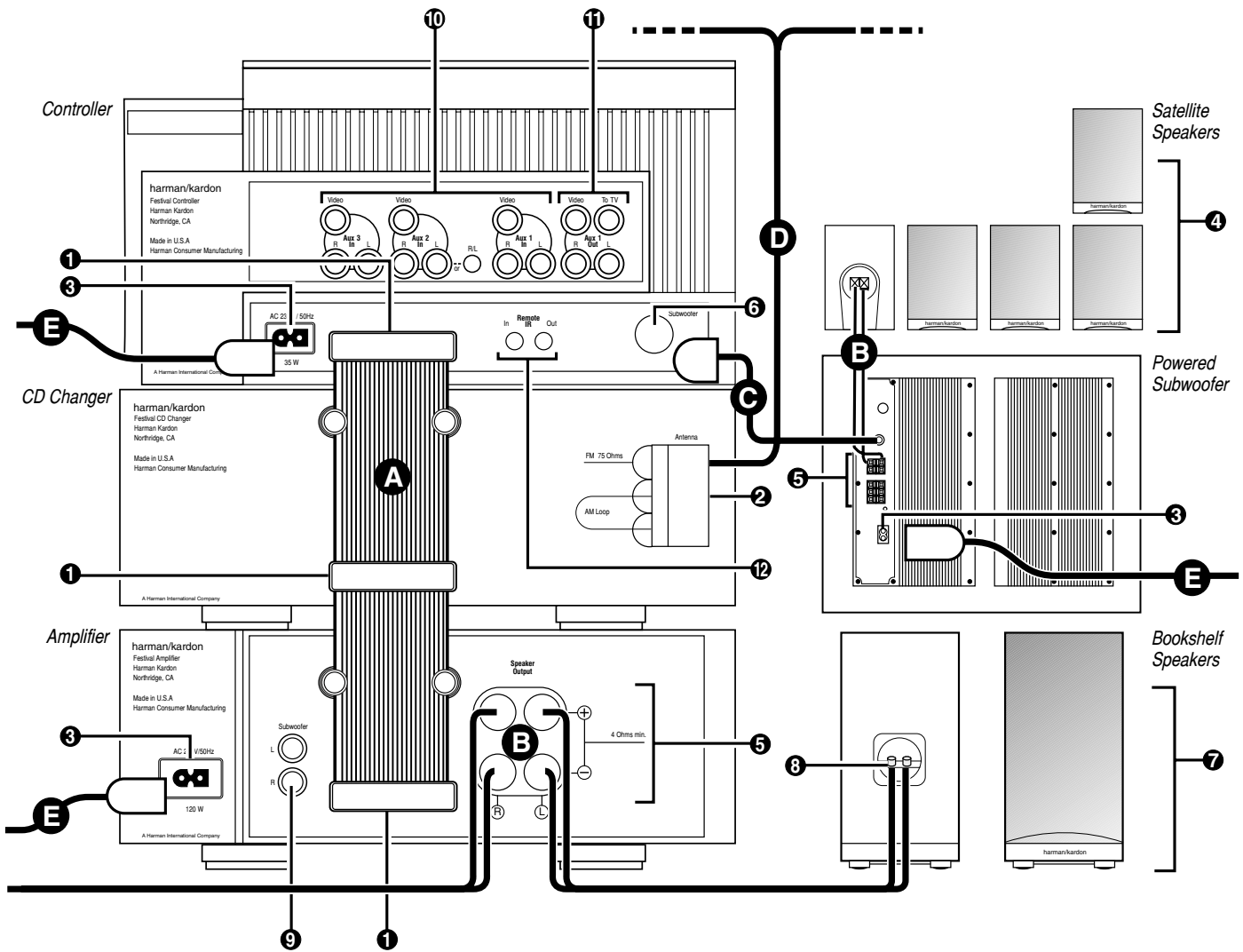
Connect these jacks to the audio and video inputs of a VCR or cassette deck to record Festival's output. Connect the "To TV" output jack to the video input of your TV, projector or video monitor to view the video source selected by Festival.

12 Remote IR Extension

If the Festival's front panel remote control receiver is blocked, connect an external IR (InfraRed) sensor to this jack and place sensor in an unobstructed area.

Connectors

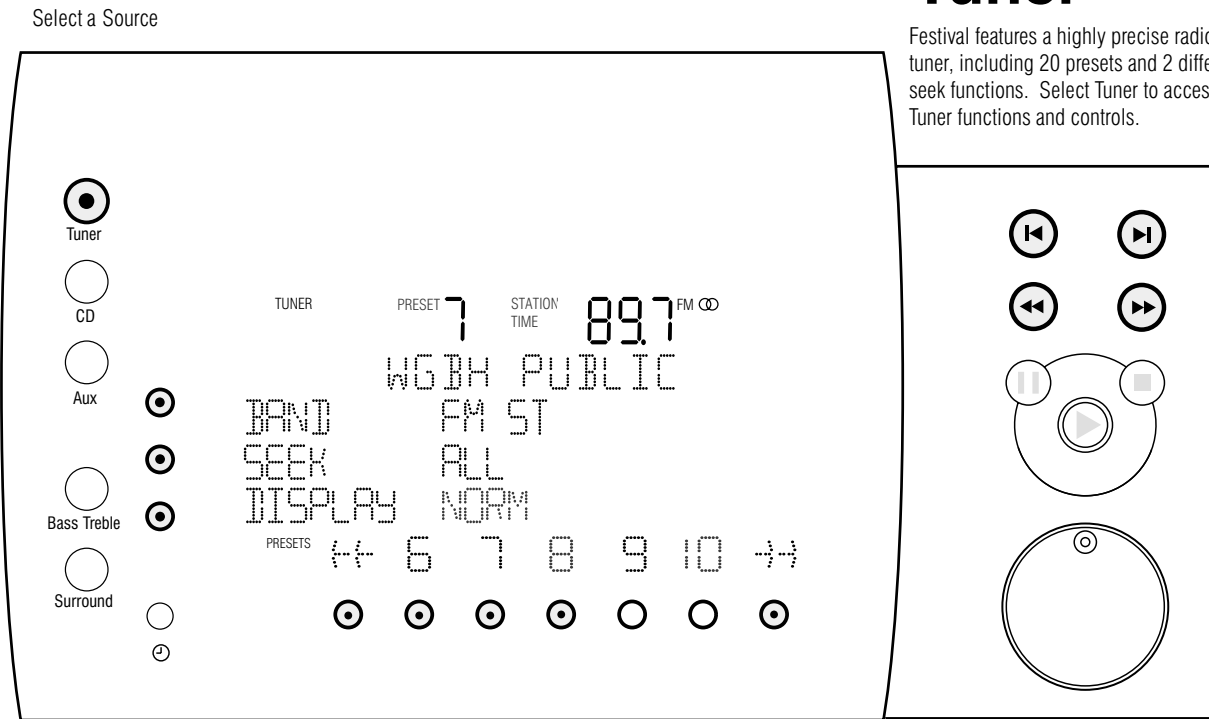
- A** Ribbon wire
- B** Speaker wire
- C** Subwoofer cable (*Festival80 only*)
- D** Antenna
- E** Power cord



FESTIVAL 60/80 CONTROLS TUNER

Tuner

Festival features a highly precise radio tuner, including 20 presets and 2 different seek functions. Select Tuner to access all Tuner functions and controls.



Option Buttons

- Selecting the frequency band**

 - BAND**
Press repeatedly for desired frequency band, AM or FM.
 - FM ST** Tunes all FM stations.
 - FM MO** Tunes all FM stations and plays them in mono.
 - AM** Tunes all AM stations.
- Selecting the Seek mode**

 - SEEK**
Press repeatedly for desired Seek mode. (See Seek under Play Controls on opposite page.)
 - ALL** Seeks all active stations in selected band.
 - RDS** Seeks only selected RDS type (FM only). See RDS on page 9 for more information.
- Displaying RDS messages (FM only)**

 - DISPLAY**
Press repeatedly for desired RDS display mode.
 - NORM** Displays station identification and RDS program type in message bar.
 - TEXT** Displays additional RDS information in message bar.

Selector Buttons

In Tuner mode, the Selector Buttons become station "presets." They instantly store or recall stations, including the band and mono/stereo mode selections.

Storing Presets
Tune to the station you want to store, then press and hold the unlit numbered button until **PRESET DONE** appears in the display. The selected button will light, indicating a stored preset. The system stores up to 20 presets.

Storing a preset in a lit button automatically overrides the previously stored preset.

Recalling Presets
Press a lit numbered button.

Press **←** or **→** to access more available presets.

To clear all Presets
Turn the system completely off by firmly pressing the Power switch on the Control Unit so that no lights are illuminated. Then turn the system back on and immediately press the Stop button **■** in the Play controls (see below). The message bar in the Tuner screen should now read **PRESET CLEARED**.

Note: Depending upon the previous mode selected, the Stop button may not be illuminated.

Play Controls

Seek

◀ Seek ▶
Press to skip back or forward to the next station depending on **SEEK** mode selected. (See **SEEK** in the Options section on this page)

Normal Mode
Seek will search for all stations.

RDS Mode
Seek will search for selected RDS type stations. (See **RDS** explanation on the following page).

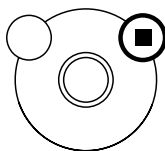
Tune

◀ Tune ▶
The **SEEK** mode, selected with the Options button affects the operation of the **Tune** buttons. You cannot tune in Seek RDS. If you want to tune, select **SEEK ALL**.

Tuning Stations
When the Seek mode **ALL** is, press and release the **Tune** buttons to tune one frequency step at a time. Press and hold **Tune** buttons for a quick scroll through all frequencies.

Selecting RDS type for Seek (FM only)
When the Seek mode **RDS** is, the **Tune** buttons become **Select** buttons. Press and release them to scroll through and select RDS types.

Press and hold **Select** buttons for a quick scroll through RDS types.



RDS

Festival displays text messages, including station identification and program type, from FM stations broadcasting RDS (Radio Data System) information.

When available, additional information may be displayed by selecting **TEXT** with the **DISPLAY** button.

Seek RDS

Seeks only stations of the selected RDS type. However, only stations broadcasting RDS information will be tuned.

Seeking for specific RDS signals

Select RDS with the **SEEK** Option Button.

Press **Select** repeatedly to select RDS type (displayed in message bar).

Press **Seek** to automatically find the next station of the selected RDS type.

Remote

Tuner functions

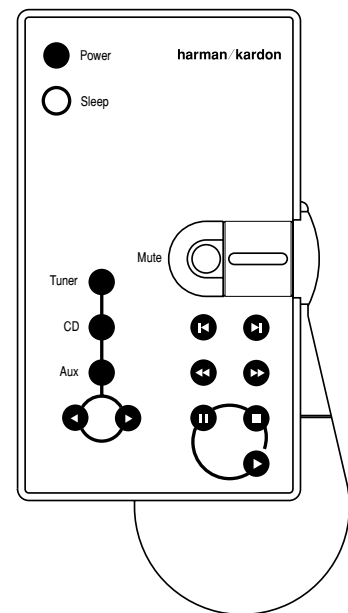
Many of the buttons and functions of the remote mimic the buttons and functions of the control unit in Tuner mode.

The Play Control buttons on the remote function identically to Play Controls on the control unit.

Selecting Presets using the remote

Press and release the Select buttons **Select** to choose programmed presets one at a time.

Press and hold Select buttons **Select** for a fast scroll through programmed presets.

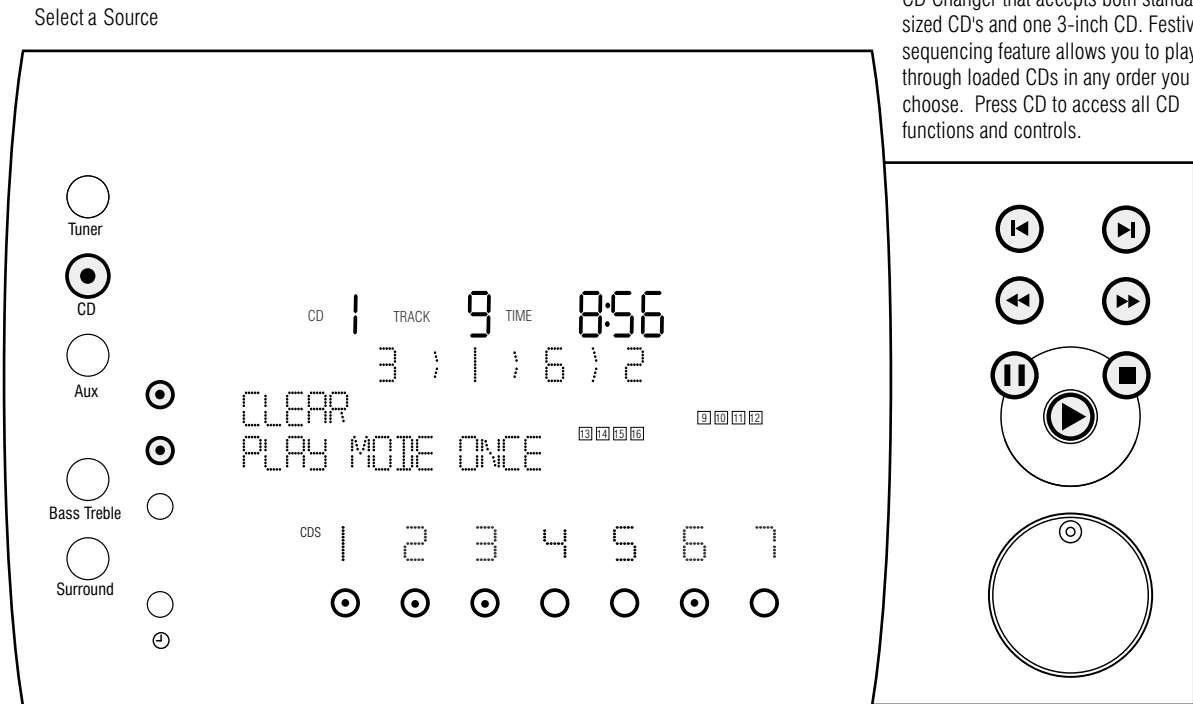


festival 60 remote

FESTIVAL 60/80 CONTROLS CD CHANGER

CD Changer

Festival features a programmable 7-disc CD Changer that accepts both standard-sized CD's and one 3-inch CD. Festival's sequencing feature allows you to play through loaded CDs in any order you choose. Press CD to access all CD functions and controls.



Option Buttons

- Clearing a CD sequence**

CLEAR
 Press to erase the current sequence. Then select a new sequence or push Play to build and play a sequence of loaded disks. (The sequence is shown in the message area of the display)
- Selecting the play mode**

PLAY MODE
 Press repeatedly to select play option.

ONCE Plays all sequenced CDs once.

REPEAT Plays all sequenced CDs, then repeats sequence.

RANDOM Randomly plays all songs from selected CDs.

Selector Buttons

- In CD mode, the Selector Buttons allow you to load, select and sequence CDs.
- To load CDs into empty "slots"**
 Press any unlit CD button (unlit = empty "slot"). The CD drawer will open automatically. Place a CD in the CD drawer.
Note: Place 3-inch discs in slot 1 only. Placing 3-inch discs in any other slot will damage Festival and the disc.
- Press OPEN/CLOSE or the button beneath the blinking disc number to close drawer.
- Selecting a single CD to play**
 Press a lit CD button (lit = loaded CD).
 Press to play CD.
- Creating a sequence**
 Press CLEAR to erase previous sequence.
 Press lit CD buttons in the order that you wish to listen.
 Press to start playing sequence.
- To eject a specific CD**
 Press lit button of CD you wish to unload.
 Press OPEN/CLOSE to eject CD.
 Remove CD.
 Press OPEN/CLOSE to close drawer.

Play Controls

- Skip**
- ◀ ▶**
 Press to skip back to the previous track or forward to the next track on the disk.
 Press and release to skip one track at a time.
 Press and hold to scroll quickly through the tracks.
- Search**
- ◀ ▶**
 Press to audibly search back or forward through a track.
 Press and release to search a few seconds at a time.
 Press and hold for a continuous audible search through a track.
- Pause**
- ⏸**
 Press to pause current CD at the point of play.
 Press to resume play from point of pause.
- Stop**
- Press to stop play of current CD.
- Play**
- ▶**
 Press to begin play of selected CD or sequence.
Note: It may take a few moments for Festival to load CD before play begins.

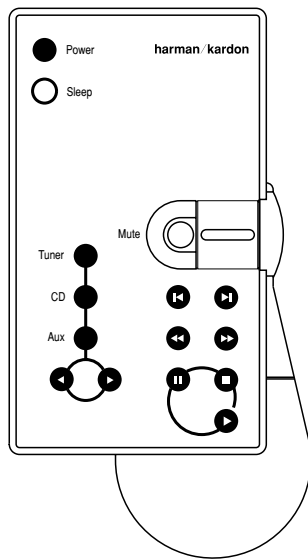
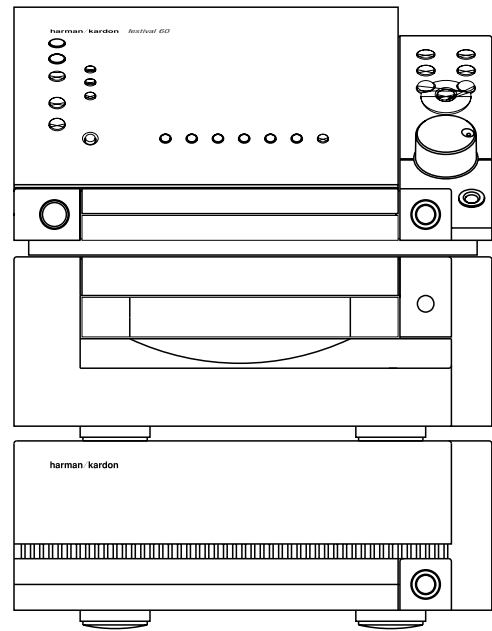
Open/Close

Press to open or close CD drawer. The CD drawer can also be closed by gently pushing the drawer toward Festival.

Festival will eject the currently selected CD, which is displayed in the upper left corner of Display.

When closing, the CD drawer may appear to “stutter” or hesitate. This action actually ensures proper alignment of the discs and is part of Festival’s normal operation.

Note: Place 3-inch discs in slot 1 only. Placing 3-inch discs in any other slot will damage Festival and the disc.




festival 60 remote

Remote CD Functions

Many of the buttons and functions of the remote mimic the buttons and functions of the control unit in CD mode.

Play Control buttons function identically to Play Controls on the control unit.

Selecting CDs using the remote

Press and release the Select buttons  to choose previous or next CD in sequence.

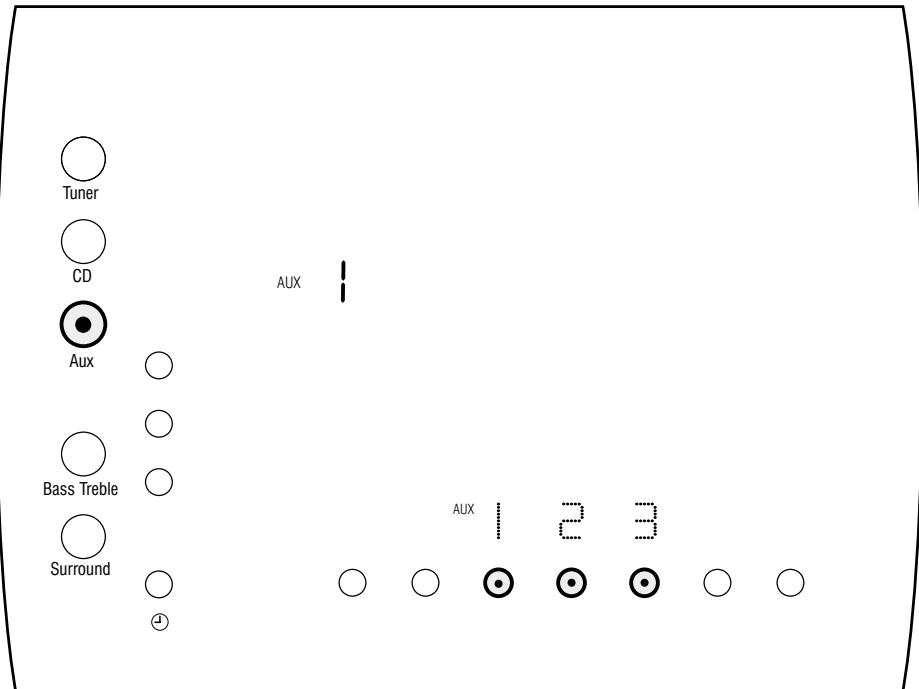
Press and hold the Select buttons  for a fast scroll through CDs in sequence.

FESTIVAL 60/80 CONTROLS AUX

Aux

Festival allows you to connect up to 3 external audio/video sources (DVD, VCR, cassette deck, etc.). Two of the sources (Aux 2 and Aux 3) can be recorded when they are in use. When video sources are connected, Festival also functions as a video switcher. For both audio and video, Festival does not control the external sources, but provides the ability to choose between them. Press Aux to select an external source.

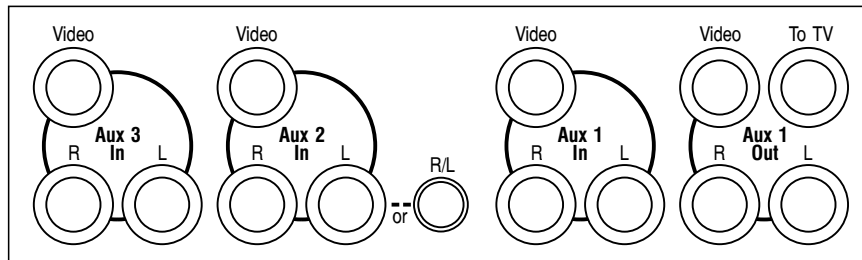
Select a Source



Selector Buttons

Aux 1, 2 & 3

Press to select an auxiliary input.



Aux Inputs & Outputs

Aux 1, 2 & 3 In

R in L

Connect these jacks to the audio PLAY/OUT jacks of an external audio source.

Video

Connect this jack to the composite video PLAY/OUT jack of your VCR.

R/L (Aux 2 Only)

Note: The small 3.5 mm (1/8") stereo jack (R/L, above) may be used for computers or portable audio products. When this jack is used, it automatically overrides the product connected to the main Aux 2 audio inputs.

Use this jack when the external audio is delivered through a single cable or an adapter that combines separate stereo cables in one plug. With this jack, the source may be stereo or mono, but the plug must be a 3.5 mm (1/8") stereo mini-plug.

Aux 1 Out

R Out L

Connect these jacks to the RECORD/IN jacks of an external recorder (cassette recorder, VCR, etc.).

Video

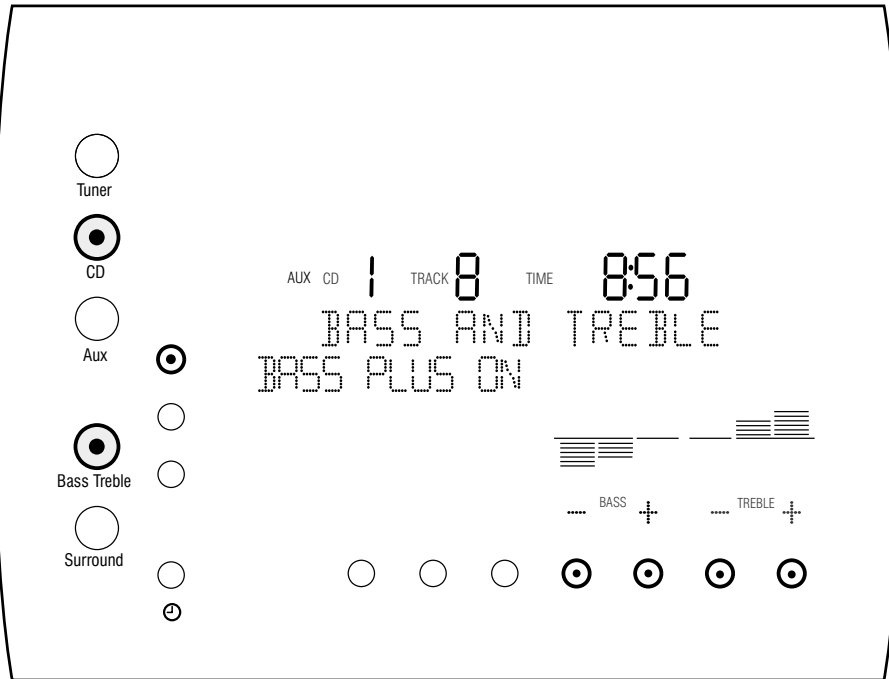
Connect this jack to the composite video RECORD/IN jack of your VCR.

To TV

Connect this jack to the composite VIDEO/IN jack of your TV.

FESTIVAL 60/80 BALANCE, BASS & TREBLE

Customizing the Sound



Bass Treble

Festival allows you to manipulate the quality and tone of the sound to match your individual preferences. The bass and treble controls affect the entire system, not just the current music source.

Press the Bass Treble button to access sound equalization functions and controls.

Option Buttons

Increasing the bass output



BASS PLUS

Bass Plus “Boosts” the amount of bass, regardless of the current bass/treble setting. The effect is most noticeable at low volumes. Press to turn Bass Plus feature on or off.

ON More bass.

OFF Less bass.

Selector Buttons

Adjusting the Bass

Press + to increase or press - to decrease the amount of Bass.

Adjusting the Treble

Press + to increase or press - to decrease the amount of Treble.

Balance

Festival 60 Only

Press the Balance button to access speaker output controls.

Balance allows you to “Move” the sound right or left until the volume level appears to sound the same from each speaker.

Selector Buttons

To move the sound to the left

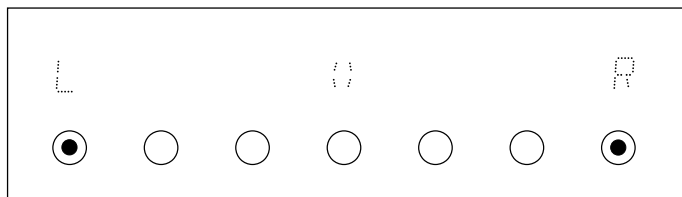
Press the L button repeatedly until the desired effect is achieved.

To move the sound to the right

Press the R button repeatedly until the desired effect is achieved.

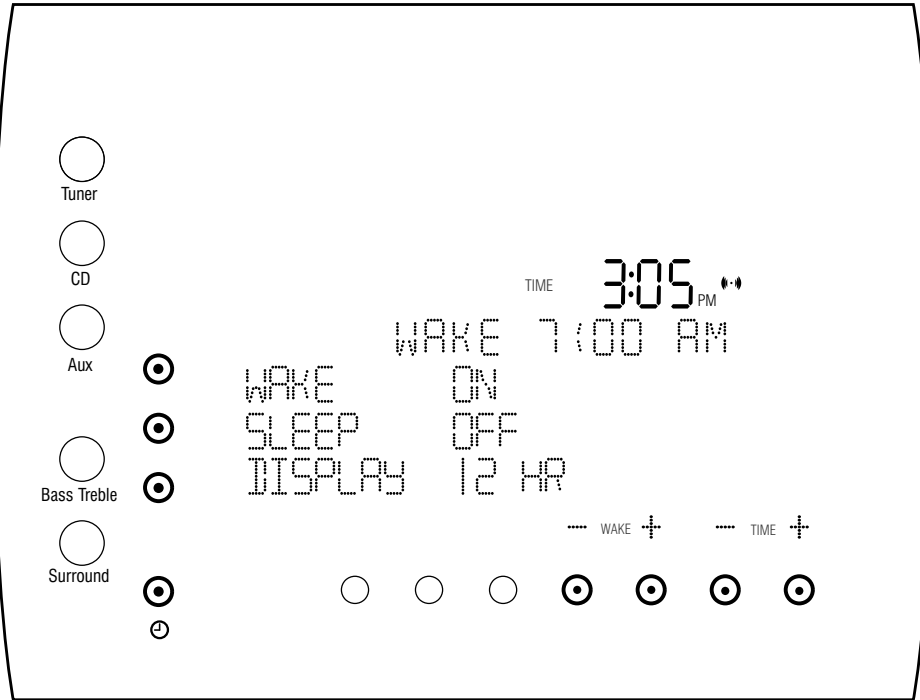
To return the sound to the center

Press the lit center selector button. It illuminates when the balance is shifted left or right.




FESTIVAL 60/80 CONTROLS CLOCK

Set The Time



Clock

Festival features a multi-function, programmable clock. Before you can use any of festival's clock functions, you must first set the correct time.

Press the  button to access all clock functions and controls.

Option Buttons

Note: Time of day must be set first using Selector buttons before setting wake times.

To wake up to music

- **WAKE**
The Wake mode automatically turns Festival on and begins playing music at any time you choose. Press **WAKE** button to **ON** mode.
Press the **-** or **+** wake/button until desired wake time is displayed in the message bar.
Select the music source you wish to wake to. If waking to the CD, make sure CDs are loaded and sequenced as desired.
Lightly press **POWER** on the unit or the remote to place Festival in Standby mode.
Festival automatically turns itself on and begins playing the selected source at the set time each day until the wake function is turned off.
Press **WAKE** button to **OFF** mode.

To set Sleep timer

- **SLEEP**
In Sleep mode, Festival dims its screen and plays music from the selected source for a designated amount of time, then turns itself off.
Press **SLEEP** button repeatedly until desired play time is displayed 60, (30, or 10 minutes).
When time has expired, Festival places itself in Standby, allowing Wake and Sleep functions to not interfere with each other.

To turn off Sleep function

Press **SLEEP** button repeatedly until **OFF** appears in the display.

To select a time standard

- **DISPLAY**
Press repeatedly until desired time display appears.
12 HR Shows time in 12 hour time. (with a.m. or p.m.)
24 HR Shows time in 24 hour ("military") time. (no a.m. and p.m.)
OFF Turns Clock display off.

Selector Buttons

Setting the time of day

Press and release the **-** or **+** Time button to adjust by one minute at a time.

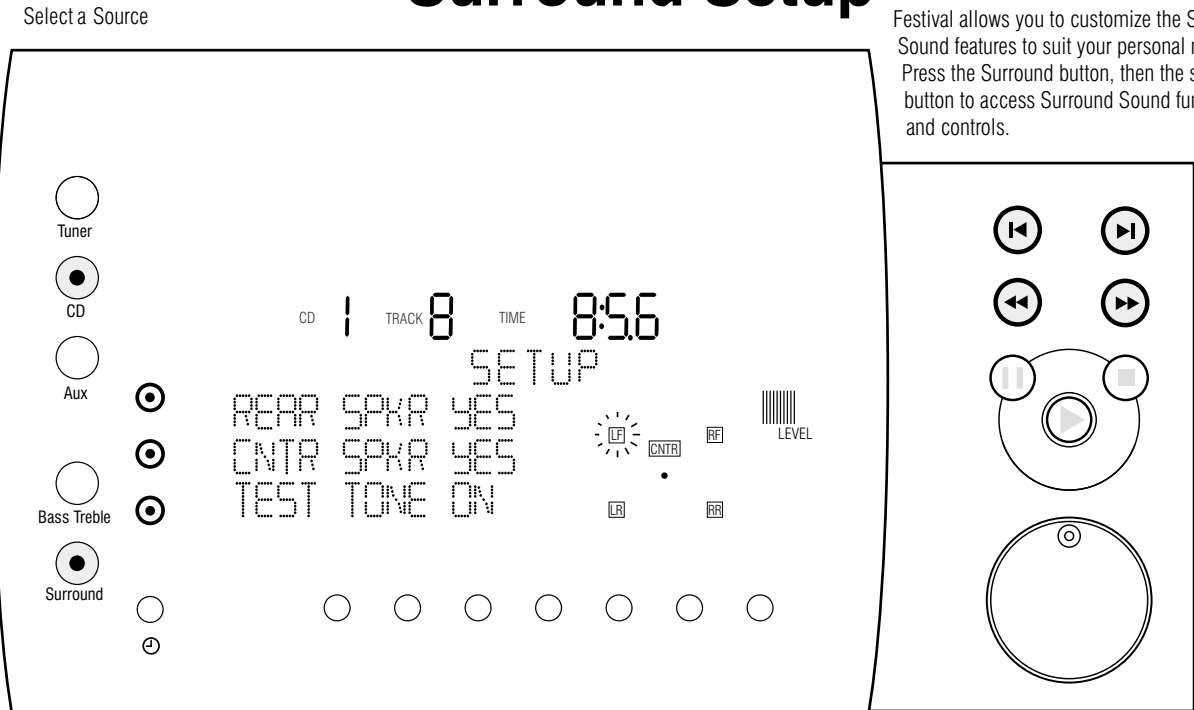
Press and hold the **-** or **+** Time button for a fast scroll through time.

FESTIVAL 60/80 CONTROLS SURROUND SETUP

Surround Setup

Festival 80 Only

Festival allows you to customize the Surround Sound features to suit your personal needs. Press the Surround button, then the setup button to access Surround Sound functions and controls.



Option Buttons

To turn rear speakers on or off

- **REAR SPKR**
Press to activate surround speakers (display says YES) or deactivate (display says NO).
Note: If no surround speakers are connected, this setting should be NO. When they are connected, do not use this feature to mute their output.

To turn center speaker on or off

- **CNTR SPKR**
Press to activate YES or deactivate NO center speaker. When the center speaker is turned off, Festival automatically generates a "phantom center" from the right and left front speakers.
Note: If no center speaker is connected, this setting should be NO. When a center speaker is connected, do not use this feature to mute its output.

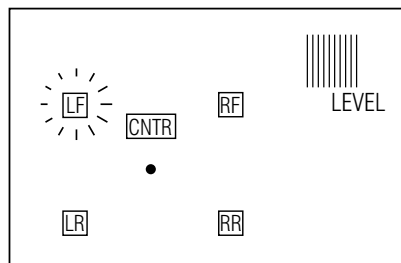
To turn test tone on or off

- **TEST TONE**
Press to turn test tone ON or OFF.
Use the Play Control buttons to select and adjust the output of the speakers until the volume is equal from all speakers.
To adjust the output level of individual speakers in surround mode, press TEST TONE to ON.
Press Select to select speaker to adjust.
Press Level to adjust speaker output.
Repeat until all output levels are equal from all speakers.

Play Controls

Adjusting the reference speaker level

When test tone is ON, you should hear a static-like hiss from the left front speaker and the LF light on the display will blink. This is the reference speaker and can only be adjusted from the main volume control on the amplifier.

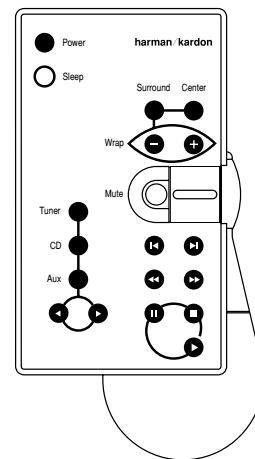


Selecting other speakers for level adjustment

- ◀ Select ▶
Press and release to select individual speakers for test tone adjustment. Press and hold to move continuously between speakers for easy comparison.

Adjusting other speaker levels

- ◀ Level ▶
Press and release to incrementally adjust the test tone level for the selected speaker. Press and hold for continuous adjustment.



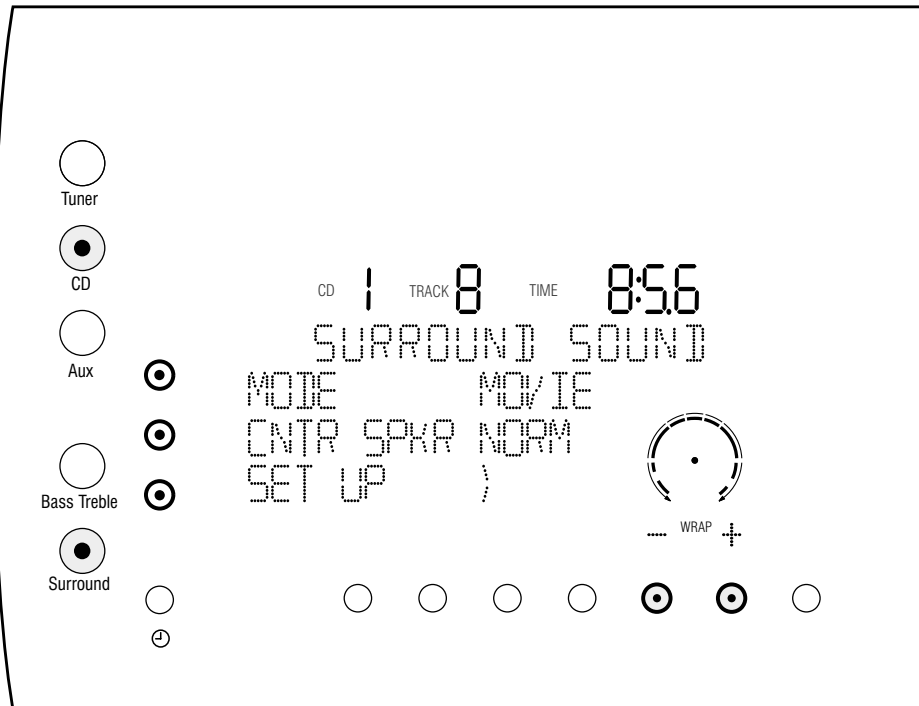
festival 80 remote

Remote Surround Sound Functions

The remote duplicates some of the Surround Sound buttons on the control unit. Use the remote to select and adjust some Surround Setup features while you are seated in the listening area for perfect customization.

FESTIVAL 60/80 CONTROLS SURROUND OPERATION

Customizing the Sound



Surround Operation

Festival 80

Festival 80 is equipped to deliver superior home theater sound for movies and music. Festival 80 uses a 5-speaker system and a subwoofer to create a realistic effects and surround imaging.

Press Surround to access all surround functions and controls.

Option Buttons

- Choosing a Surround mode**

 - MODE**
Press repeatedly for desired Surround mode.

 - MOVIE** Duplicates the acoustics of a movie theater. This mode activates Festival's Dolby®Pro Logic™ feature which reads the surround sound effects in movies.
 - MUSIC** Creates optimal surround for music sources.
 - HALL** Hall simulator.
 - OFF** Surround sound turned off.
 - Adjusting the output of your center speaker**

 - CNTR SPKR**
Press repeatedly for desired center speaker mode.

 - NORM** Center speaker loudness is equal to other speakers.
 - BOOST** Increases center speaker loudness without affecting other speakers. This is a convenient way to selectively increase the center channel volume of movies or other video or Dolby Pro Logic sources.
 - Configuring your system for surround sound**

 - SET UP**
Press to access surround speaker setup functions. Pressing setup will change the function of some buttons and activate functions of others.

Selector Buttons

An innovative Festival feature called Wrap allows you to control the feeling of spaciousness in a listening area by creating the illusion of distance between the front and surround speakers.

Movie and Music surround modes begin with a factory default setting for the Wrap effect. The Movie and Music settings may be adjusted by using the selector buttons on the console. Press to decrease or to increase how far the sound "wraps" around the listening area. Dots on the Wrap indicator will light to show changes to the Wrap setting.

The Movie mode is based on Dolby Pro Logic, a surround sound process that uses information encoded in two-channel stereo recordings to produce four distinct channels (left, center, right and surround). Dolby Pro Logic is used in movies, television programs and some music recordings. When the word REFERENCE appears in the Wrap Indicator, the Wrap circuits are turned off for standard Pro Logic operation. Increase or decrease the amounts of Wrap as shown above to suit your listening taste.



FESTIVAL 60/80 TROUBLESHOOTING

If the problem is...	Make sure that the...
No lights on when POWER button pressed:	Unit is plugged into a live outlet. Power switch was pressed all the way in and released.
No sound is heard:	Speakers are connected. Unit has not been muted. Correct input function selector button is pressed.
No sound is heard: (Festival 60 only)	Amplifier is plugged in. Ribbon cable is attached to amplifier.
No sound is heard: (Festival 80 only)	Subwoofer is plugged in. Subwoofer is connected to the Controller.
Dolby Surround does not work on center and surround channels: (Festival 80 only)	Correct surround mode is selected. Center and/or surround speakers are selected. Surround and center levels are turned up. You are using a surround encoded source.
Selecting a Video source produces sound but no picture:	"T o TV" output is connected to the video input on your TVs.
The TV picture does not match the sound:	Video sources are properly connected to receiver. Video/antenna Switch on TV is set to Video.
No output from the left or right channels: (Festival 60 only)	Wires to that speaker are not disconnected/damaged. Balance is centered.
No output from one or more channels: (Festival 80 only)	Wires to that speaker are not disconnected/damaged. Test tone levels for that speaker are audible.
No center channel output:	Center channel speaker is selected. Phantom mode is not active. Unit is in the Pro Logic mode. Center channel level is properly adjusted. Center speaker is connected.
Tuner sound has a large amount of interference, or the "Stereo" display is not illuminated, or Tuner sound distorts and/or volume level is too low:	The antenna is properly connected. The antenna is properly located. The antenna is set in the proper direction. The antenna is adequate to receive the desired station.
Tuner is intermittent or continuously buzzing or hissing:	The unit is away from fluorescent lights, motors and other electrical appliances.
Festival does not respond to remote control:	Remote sensor on front of Festival is unobstructed. Remote is pointed directly at the remote sensor. Remote batteries are still good.

Festival 60 ASSEMBLY PARTS LIST

PART NUMBER	DESCRIPTION	QTY			
			332496-001	"ORNAMENT, TOP UNIT"	1
			332498-001	ORNAMENT	1
CIS1001	FESTIVAL 60 COMPACT IMS	1	332489-001	ROTARY KNOB	1
SA1717	"PACKED UNIT,FESTIVAL60 US"	1	SA1810	CLUSTER ASSY FUNCTION/	1
PM1397	"Master Carton, Festival60"	1	CL1188	"CLUSTER, TOP UNIT, FEST."	1
SA1722	TOP UNIT CVR ASSY (60-US)	1	SA1087	FUNCTION PCB	1
XX1312	Bushing PA BLACK	1	CO1363	Connector 11P 2mm 2A 100V	1
XX1296	LEG (RUBBER PAD)	4	CO1365	CONNECTOR 13P 2MM 2A100V	1
SA1711	INTERCONNECT ASSY.	1	CO1374	Miniture Jack LR-SW	1
SA1712	FUNCTION/VIDEO PCB ASSY.	1	CO1377	RCA Pin Jack 2P	4
SA1713	PUSHBUTTON ASSY.	1	CP1697	"CAP, ELECT. 100uF, 16V"	2
SA1714	CABINET SUB-ASSY.	1	CP1701	Electrolytic Cap. 47uF 16	4
SA1715	PLASTIC CAB ASSY.	1	IC1226	IC	1
332502-001	FITTING	1	IC1238	IC	1
SC1278	Screw BND T+	2	RS2225	RES C/F MINI 100Kohm 5%	4
SC1288	"SCREW, 10mm x 3mm,"	3	RS2239	RES C/F MINI 330 ohm 5%	4
332497-001	BUTTON IR	1	CP1733	Pol. Prop. Flm Cap 220pF	2
332503-001	"HOLDER,SLIDER-POWERSWITCH"	1	RS2223	RES C/F MINI 1Kohm 5%	8
BR1546	SHIELD PLATE	1	WI1702	JUMPER WIRE 24 AWG BARE	29
BR1547	SHIELD PLATE	1	SA1089	VIDEO PCB	1
TP1123	TAPE DRY-ADHESIVE	0.8333	CO1376	RCA Pin Jack 1P	5
BR1548	SHIELD PLATE	1	CP1697	"CAP, ELECT. 100uF, 16V"	2
TP1118	Electrical Tape Therm-X 1	0.1667	CP1708	Electrolytic Cap. 22uF 50	3
332486-001	"BASE,CONTROL PANEL"	1	IC1225	IC Prime-Time	1
332499-001	SHIELD PLATE	1	RS2257	RES C/F MINI 75 ohm 5%	5
SC1260	Screw CSKT+	4	CP1750	Ceramic Cap. 68pF 50V	2
332500-001	SHIELD PLATE	1	WI1702	JUMPER WIRE 24 AWG BARE	9
332505-001	"HOLDER,SHIELD PLATE,LEFT"	1	HA1213	HARNESS ASY 7-COND 200mm	1
332532-001	"HOLDER,SHIELD PLATE,RIGHT"	1	HA1197	HARNESS ASSY	1
SC1268	"Screw, BND T+(3x12)"	2	CC1064	"FERRITE CORE, TOROIDAL,"	1
SC1268	"Screw, BND T+(3x12)"	1	IM1155	INSULATION SHRINK SLEEVE	0.06
332507-001	SPACER	1	SA1090	VOLUME CONTROL PCB	1
332506-001	"SLIDER,POWER SWITCH"	1	CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	1
332484-001	"HOUSING, DISPLAY, PAINTED"	1	HA1130	CONNECTORIZES WIRE	1
332484-XXX	"HOUSING, PLASTIC, MOLDED"	1	RS2399	POTENTIOMETER W/GREEN LED	1
LS1065	RESIN POLYSTYRENE BLACK	0.25	SA1091	IR SENSOR PCB	1
332491-001	PUSHBUTTON	1	HA1068	"HARNESS, WIRE 3P"	1
332490-001	PUSHBUTTON	1	IC1255	IR Sensor	1
332495-001	"INDICATOR, TOP UNIT"	1	CP1697	"CAP, ELECT. 100uF, 16V"	1
SC1293	SCREW BND T+	4	SA1093	POWER INDICATOR PCB	1
XX1337	INSULATOR PVC	1	HA1115	"HARNESS, WIRE 4P"	1
BR1539	STEEL SHIELD PLATE	1	LE1037	LED 3mm 5mcd	4
332487-001	"PLATE, PVC"	1	WI1702	JUMPER WIRE 24 AWG BARE	1
SP1096	SPACER PLASTIC LOCKING	4	LB1265	Bar Code Traceability Lab	2
332483-001	"BASE, PLASTIC, PAINTED"	1	SA1086	"PRE-AMP PCB, FEST-60 US"	1
332483-XXX	"BASE, PLASTIC, MOLDED"	1	CP1811	Super Capacitor 1F	1
LS1065	RESIN POLYSTYRENE BLACK	0.525	CO1369	Connector 5P 2mm 2A 100V	1
BR1496	Spring	1	CO1370	Connectors 6P 2mm 2A 100V	1
332485-001	"PANEL, FESTIVAL-60"	1	CO1375	Jack 1P	2
332485-XXX	"ASY, DISPLAY COVER, FEST."	1	CO1382	CONNECTOR 4P 2MM 2A 100V	1
333256-001	"COVER, DISPLAY, CONTROL"	1	CO1383	CONNECTOR HEADER 7-PIN	1
LS1068	RESIN DENKA ABS	0.033	CO1389	CONNECTOR 14P 2mm 2A 100V	1
333257-001	"COVER, CONTROL PANEL, TOP"	1	CP1700	Electrolytic Cap. 2200uF	3
LS1065	RESIN POLYSTYRENE BLACK	0.0661	CP1702	Electrolytic Cap. 470uF 1	2
SC1288	"SCREW, 10mm x 3mm,"	1	CP1719	Metalized Flm Cap 0.039uF	6
SC1269	"Screw,BND T+"	6	CP1732	Pol. Prop. Flm Cap. 1500p	2
XX1338	INSULATOR PVC	1	CP1733	Pol. Prop. Flm Cap 220pF	9
BR1540	STEEL SHIELD PLATE	1	DI1192	"Zener Diode 0.4W (T/R,2")"	1
332504-001	HOLDER	1	DI1204	Zener Diode 0.4W	2
332492-001	PUSHBUTTON	1	FH1007	Fuse Holder	2
332494-001	PUSH BUTTON	1	HA1112	CONNECTORIZES WIRE 13P	1

Component Audio System

Harman Kardon

IC1226	IC	3	FI1017	EMI FILTER 4-CIRCUIT	3
IC1232	IC Voltage Regulator +6VD	1	FI1014	FILTER EMI	6
IC1234	IC Voltage Regulator -6VD	1	FI1013	FILTER EMI	1
IC1236	IC	1	FI1018	"FILTER, EMI"	7
IC1245	IC ELECTRICAL VOLUME	1	IC1219	IC Prime-Time	1
IC1248	IC	1	MI1206	TRANSFORMER TOP UNIT (US)	1
IC1254	IC SMD OCTAL-D-TYPE LATCH	1	BR1542	STEEL SHIELD PLATE	1
IC1259	IC SMD 32KBYTE CMOS STAT.	1	HS1155	"HEATSINK, AMPLIFIER"	3
IC1262	IC	1	SC1262	"SCREW, BND + (M3x10)"	3
IC1265	IC LOW PWR CLOCK/CALENDAR	1	RS2225	RES C/F MINI 100Kohm 5%	20
IC1269	IC	2	RS2415	RES C/F 3.3Mohm 10% 1/2W	1
IC1270	IC SMD DUAL 2-to-4 LINE	1	DI1205	Switching Diode 90V 0.3W	9
IC1277	"IC, EEPROM, 256x8, CMOS"	1	DI1206	Switching Diode 40V 0.3W	4
IC1283	IC SMD DUAL 2-INPUT AND	1	RS2212	SMD RES 4.7Kohm 5% 1/10W	2
RS2226	RES C/F MIN 1Mohm 5% 1/4W	3	IC1313	IC QUAD LOW-PWR LINE	1
RS2231	RES C/F MINI 18Kohm 5%	2	CP1878	CAPACITOR 10pF 50V	1
RS2233	RES C/F MINI 22 ohm 5%	3	FI1020	EMI FILTER	1
RS2240	RES C/F MINI 3.3Kohm 5%	2	RS2431	RES C/F MINI 30Kohm 5%	2
RS2247	RES C/F MINI 47 ohm 5%	2	RS2242	RES C/F MINI 330Kohm 5%	6
RS2260	RES C/F MINI 8.2Kohm 5%	2	RS2432	RES C/F MINI 200Kohm 5%	2
RS2261	RES C/F 1Kohm 5% 1/3W	1	FI1011	FILTER EMI	16
SW1078	Push Switch 1P TV3 Prime-	1	CO1411	CONNECTOR IC SOCKET DIP28	1
TR1272	PNP XSTR 50V/100mA 300mW	1	CO1359	Connector 2.5A250V	1
TR1281	PNP XSTR 60V/3A 25W	1	CO1374	Miniture Jack LR-SW	1
TR1304	NPN XSTR 60V/3A 25W	1	CL1192	"CLUSTER, PRE-AMP/HDPH"	1
XT1006	"XTAL, 32.768KHz"	1	CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	2
XT1011	"XTAL, 15MHZ"	1	CP1911	SMD CAP 0.1uF 10% 25V	16
CP1706	Electrolytic Cap. 1uF 50V	3	RS2244	RES C/F MINI 3.9Kohm 5%	1
IC1241	Photocoupler	1	CP1843	"CAP.CERAM, 4700pF, 250V"	2
RS2389	RES C/F 4.7Kohm 5% 1/3W	1	TR1341	NPN XSTR 30V/800mA 600mW	1
RS2238	RES C/F MINI 2.7Kohm 5%	8	CP1887	SMD CAP 15pF 5% 50V	2
RS2237	RES C/F MINI 270 ohm 5%	1	RS2211	SMD RES 470 ohm 5% 1/10W	2
TR1290	PNP XSTR 50V/200mA 300mW	1	SC1271	Screw Fpt+	4
RS2290	RES C/F 180 ohm 5% 1/3W	2	332501-001	"BRACKET, MTG,XFORMER"	1
RS2341	RES C/F 100 ohm 5% 1/3W	2	SP1102	INSULATOR RUBBER	1
CO1402	CONNECTOR 34-POS	1	CC1065	FERRITE CHIP BEAD	26
CO1367	Connector 4P 2mm 2A 100V	2	HA1210	HARNESS ASY 5-COND 200mm	1
CO1388	CONNECTOR 10P 2mm 2A 100V	1	HA1120	CONNECTORIZES WIRE	1
CO1363	Connector 11P 2mm 2A 100V	1	CC1064	"FERRITE CORE, TOROIDAL,"	1
CP1697	"CAP, ELECT. 100uF, 16V"	3	IM1155	INSULATION SHRINK SLEEVE	0.06
CP1701	Electrolytic Cap. 47uF 16	18	HA1166	HARNESS ASSY	1
CP1815	Cap Poly Film 15nF 5% 50V	2	HA1214	HARNESS ASY 11-COND 160mm	1
CP1817	Cap Poly Film 68nF 5% 50V	2	HA1166	HARNESS ASSY	1
CP1777	CAPACITOR CERAMIC 22pF 50	2	CC1064	"FERRITE CORE, TOROIDAL,"	1
CP1725	Metallized Flm Cap. 0.22u	2	IM1155	INSULATION SHRINK SLEEVE	0.06
DI1201	Diode Rectifier 1 A 400V	10	LB1265	Bar Code Traceability Lab	2
IC1307	IC VOLTAGE REGULATOR +5V	1	CP1891	CAPACITOR 680pF 10% 50V	2
RS2250	RES C/F MINI 47Kohm 5%	4	RS2249	RES C/F MINI 4.7Kohm 5%	3
RS2315	RES FUSE 4.7 ohm 2% 1/4W	1	RS2235	RES C/F MINI 22Kohm 5%	6
TR1268	NPN XSTR 50V/30mA 300mW	2	RS2239	RES C/F MINI 330 ohm 5%	9
TR1283	NPN XSTR 20V/300mA 400mW	10	CP1757	CERAMIC CAP 0.01uF 50V	1
TR1291	NPN XSTR 50V/200mA 300mW	2	RS1711	SMD RES 220 ohm 5% 1/8W	1
FS1089	FUSE SLO BLO 0.5A 250V	1	IC1320	IC EPROM 128K x 8 DIP32	1
CP1863	ELECTROLYTIC CAP.	2	332488-001	"DISPLAY WINDOW, FEST'60"	1
CP1707	Electrolytic Cap. 10uF 50	2	332482-001	"HOUSING, TOP UNIT"	1
CP1722	Metallized Flm Cap. 0.01u	16	LB1331	"LABEL ""MASK"" , FESTIVAL"	1
DI1196	Zener Diode 0.4W	3	PM1399	"Foam Pad, Top Unit, Right"	1
RS2223	RES C/F MINI 1Kohm 5%	24	PM1421	Top Unit Sleeve	1
RS2224	RES C/F MIN 10Kohm 5%	13	PM1224	"Plastic Bag 14""Lx20""Wx0.0"	1
TR1269	PNP XSTR 50V/30mA 300mW	3	PM1400	"Foam Pad, Top Unit, Left"	1
CP1731	Pol. Prop. Flm Cap. 1000p	2	LB1317	LABEL JULIAN DATE CODE	1
CP1711	Electrolytic Cap. 4.7uF 5	1	LB1318	"LABEL BARCODE, FESTIVAL"	1
RS2222	RES C/F MINI 100 ohm 5%	1	LB1314	LABEL FESTIVAL-60 TOP	1

Component Audio System

Harman Kardon

SA1825	"DISPLAY PCB ASSY, U.S."	1	SA1732	CD PCB-CHASSIS ASSY	1
CP1799	"CAP, Chip 100 pF 50V"	3	SA1730	CD FRONT PANEL ASSY	1
CP1812	"Cap, Chip 12pF 50V"	2	332472-001	PANEL	1
CP1822	CAP. CHIP 0.33uF 50V	28	332476-001	LID	1
DS1001	Display VFD Prime-Time	1	XX1296	LEG (RUBBER PAD)	4
IC1250	IC 32-BIT LED DRIVER	1	SC1260	Screw CSKT+	4
IC1252	IC 40-BIT VFD GRID ANODE	3	SA1731	CD UNIT CHASSIS ASSY	1
IC1253	IC SMD 20-BIT VFD ANODE/	1	332475-001	CHASSIS	1
IC1254	IC SMD OCTAL-D-TYPE LATCH	1	SP1088	Spacer/Rubber	3
IC1276	IC SMD INVERTER HIGH	1	ME1001	CD Mechanism and Screws	1
PC1236	"PC,DISPLAY BD, 68PIN-PLCC"	1	SC1288	"SCREW, 10mm x 3mm,"	1
RS2193	SMD RES 100Kohm 5% 1/10W	8	332481-001	"SPRING CLIP,CHASSIS"	2
RS2219	SMD RES 8.2Kohm 5% 1/10W	1	WA1088	"WASHER, FLAT, .300-OD;"	1
TH1018	TRIAC 400V 3A	1	SC1288	"SCREW, 10mm x 3mm,"	5
TR1302	SMD NPN XSTR 50V/1A 500mW	6	332477-001	PUSHBUTTON	1
XT1008	"Xtal, Osc 24MHz"	1	332478-001	INDICATOR	1
TR1310	SMD NPN XSTR 50V/30mA	1	332469-001	PLASTIC FOOT	4
TR1311	SMD PNP XSTR 50V/30mA	1	WA1032	Washer Plain #6 Zinc Fini	1
IC1259	IC SMD 32KBYTE CMOS STAT.	1	332530-001	"BRACKET,SMALL PCB"	1
IC1263	SMD IC 5V VOLTAGE REG.	6	XX1314	BAND PA	2
CP1707	Electrolytic Cap. 10uF 50	1	332529-001	"INSULATOR, PVC"	1
CP1849	"CAP.ELECT. 33uF, 50V"	2	LB1320	"OVERLAY, ADHESIVE"	1
IC1314	IC MICOM OTP 16MHz 0-70C	1	TP1118	Electrical Tape Therm-X 1	0.1667
SW1085	SWITCH	23	SC1261	"SCREW,BND T+ (3x8)"	2
LE1040	LED GREEN	15	SC1292	SCREW BND T+	1
CP1821	"CAP., CHIP 0.1uF 50V"	10	332530-001	"BRACKET,SMALL PCB"	1
RS2213	SMD RES 47Kohm 5% 1/10W	1	XX1314	BAND PA	1
RS1292	SMD RES 10Kohm 5% 1/10W	8	SC1261	"SCREW,BND T+ (3x8)"	2
LE1041	LED GREEN	16	SC1292	SCREW BND T+	1
RS2430	SMD RES 82 ohm 5% 1/10W	6	SC1288	"SCREW, 10mm x 3mm,"	4
RS2211	SMD RES 470 ohm 5% 1/10W	7	SC1261	"SCREW,BND T+ (3x8)"	2
CC1065	FERRITE CHIP BEAD	20	SA1812	CD INDICATOR/CONNECTOR	1
MI1220	INDUCTOR	1	SA1085	CD INDICATOR PCB	1
HA1211	HARNESS ASY 14-COND 160mm	1	SW1079	Tact Switch	1
HA1113	"HARNESS, WIRE 14P"	1	HA1180	"HARNESS, WIRE 5P"	1
CC1064	"FERRITE CORE, TOROIDAL,"	1	CL1193	CLUSTER CD INDICATOR BD	0.2
IM1155	INSULATION SHRINK SLEEVE	0.06	LB1265	Bar Code Traceability Lab	1
HA1212	HARNESS ASY 10-COND 160mm	1	SA1083	CD CONNECTOR PCB	1
HA1110	HARNESS ASY	1	CO1404	CONNECTOR 2mm 2A 100V	1
CC1064	"FERRITE CORE, TOROIDAL,"	1	CO1405	CONNECTOR	1
IM1155	INSULATION SHRINK SLEEVE	0.06	CO1403	CONNECTOR 34-POS	1
LB1265	Bar Code Traceability Lab	2	FI1015	EMI FILTER	4
RS2206	SMD RES 270 ohm 5% 1/10W	22	FI1016	EMI FILTER	3
RS2408	SMD RES 560 ohm 5% 1/10W	4	CL1194	CLUSTER CD CONNECTOR BD	0.2
SA1718	ACCESSORIES BAG	1	CP1821	"CAP., CHIP 0.1uF 50V"	1
XX1292	Power Supply Cord 7A AC 1	2	TE1197	Terminal Prime-Time	1
AN1002	"ANTENNA, T-FEEDER, FM"	1	LB1265	Bar Code Traceability Lab	2
AN1003	"ANTENNA, AM, LOOP"	1	SA1084	TUNER PCB	1
XX1293	Remote Control Festiv 60	1	CP1693	"CAP, ELEC; 0.22uF 50V"	1
CO1385	Plug(Matching Adap)	1	CP1697	"CAP, ELECT. 100uF, 16V"	2
BA1001	"Battery, Dry AA Alkaline"	2	CP1699	"CAP, ELEC; 220uF 16V"	1
PM1431	"CTN, ACCESS KIT, FEST-60"	1	CP1701	Electrolytic Cap. 47uF 16	3
SH1110	"MANUAL, OWNER'S, FESTIVAL"	1	CP1711	Electrolytic Cap. 4.7uF 5	2
XX1335	BUNDLE SPKR WIRE #18 20FT	2	CP1741	Ceramic Cap. 0.022uF 50V	9
HA1164	HARNESS RIBBON CABLE	1	CP1743	Ceramic Cap. 330pF 50V	2
PM1224	"Plastic Bag 14"Lx20"Wx0.0"	1	CP1744	Ceramic Cap. 560pF 50V	1
SH1119	WARRANTY CARD FESTIVAL	1	CP1749	Ceramic Cap. 100pF 50V	2
SH1111	"SAFETY SHEET , FESTIVAL"	1	CP1778	Cap. Ceramic 4700pF 50V 1	1
SH1120	ADDENDUM SHEET CD CAUTION	1	CP1795	"CAP, ELEC; 0.1uF 50V"	1
SA1728	CD UNIT COVER ASSY	1	CR1001	Ceralock 4MHz Prime-Time	1
332474-001	"BACK PANEL, CD"	1	CR1004	Ceramic Resonator 450KHz	1
332473-001	"COVER, CD UNIT"	1	CR1005	Ceramic Osc	1
SA1729	CD INTERCONNECT ASSY	1	FI1008	"FILTER,AUDIO LC, VARIABLE"	2

Component Audio System

Harman Kardon

FI1009	Ceramic Filter 10.7MHz 18	3	IC1230	"IC, RADIO DATA SYSTEM"	1
FI1005	"LC COMPOSITE, VARIABLE"	1	WI1702	JUMPER WIRE 24 AWG BARE	54
IC1233	IC	1	BR1543	STEEL SHIELD PLATE	1
IC1237	IC	1	LB1265	Bar Code Traceability Lab	2
IC1267	IC	1	PM1224	"Plastic Bag 14"X20"X0.0"	1
IC1268	IC	1	PM1422	"End Pad, CD/Amp, Left"	1
IF1001	"IF BLOCK 450KHZ, CERAMIC"	1	PM1423	"End Pad, CD/Amp, Right"	1
MI1178	Discri(Type KM)10.7MHz	1	PM1402	"Sleeve, CD/Amp"	1
MI1177	Discri(Type 7KM) 10.7MHz	1	LB1307	"Label, CD Unit (Bottom)"	1
RF1002	RF Block	1	LB1319	LABEL LASER WARNING	1
RS2189	"POT, TRIMMER, 50K OHM"	1	LB1322	LABEL CD/AMP SERIAL NUMB.	4
RS2222	RES C/F MINI 100 ohm 5%	3	LB1317	LABEL JULIAN DATE CODE	2
RS2225	RES C/F MINI 100Kohm 5%	4	SA1898	CD MAIN PCB ASSY	1
RS2226	RES C/F MIN 1Mohm 5% 1/4W	1	CO1365	CONNECTOR 13P 2MM 2A100V	1
RS2230	RES C/F MINI 15Kohm 5%	1	CO1369	Connector 5P 2mm 2A 100V	2
RS2233	RES C/F MINI 22 ohm 5%	1	CP1740	Pol. Prop. Flm Cap. 8200p	2
RS2234	RES C/F MINI 2.2Kohm 5%	5	CP1759	Ceramic Cap. 1500pF 50V	1
RS2239	RES C/F MINI 330 ohm 5%	2	CP1762	Ceramic Cap. 0.033uF 50V	2
RS2249	RES C/F MINI 4.7Kohm 5%	2	CR1002	Ceralock 8MHz Prime-Time	1
RS2253	RES C/F MINI 5.6Kohm 5%	1	IC1222	IC Prime-Time	1
RS2275	RES C/F MINI 180 ohm 5%	1	IC1223	IC Prime-Time	1
RS2277	RES C/F MINI 270Kohm 5%	1	IC1235	IC SMD REVERSIBLE MOTOR	2
RS2280	RES C/F MINI 82 ohm 5%	1	IC1286	"IC,SMD HEX INVERTER"	1
RS2291	RES C/F MINI 27Kohm 5%	2	PC1181	PCB CD 250x100 DBL-SIDED	1
RS2332	RES C/F MINI 390 ohm 5%	4	RS2220	SMD RES 82Kohm 5% 1/10W	2
TE1204	Terminal	1	RS2187	"POT, TRIMMER, 10K-OHM"	1
TR1276	NPN XSTR 25V/50mA 300MHz	2	RS2196	SMD RES 12Kohm 5% 1/10W	3
TR1277	NPN XSTR 20V/500mA 500mW	2	RS2197	SMD RES 120Kohm 5% 1/10W	2
TR1278	PNP XSTR 50V/150mA 300mW	1	RS2214	SMD RES 470Kohm 5% 1/10W	1
TR1279	N-CH FET 50V/6.5mA 300mW	1	RS2216	SMD RES 510Kohm 5% 1/10W	1
TU1001	FM Tuner Prime-Time	1	RS2218	SMD RES 680Kohm 5% 1/10W	1
XT1002	Xtal.OSC 4332KHz Prm-time	1	RS2272	RES NETWORK 47Kohm (10x)	1
XT1003	XTAL.OSC 4500KHz	1	XT1005	"Xtal, Osc 16.9344MHz"	1
TR1268	NPN XSTR 50V/30mA 300mW	1	RS2194	SMD RES 1Mohm 5% 1/10W	2
TR1269	PNP XSTR 50V/30mA 300mW	1	CP1866	ELECTROLYTIC CAP. 4700uF	2
CP1742	Ceramic Cap. 220pF 50V	3	CP1711	Electrolytic Cap. 4.7uF 5	1
DI1205	Switching Diode 90V 0.3W	4	CP1710	"CAP, ELEC; 3.3uF 50V"	1
RS2374	RES C/F MINI 12Kohm 5%	1	CP1868	POLYPROPYLENE FILM CAP.	4
CP1769	Semiconductor Cap. 0.047u	6	CP1869	POLYPROPYLENE FILM CAP.	4
CP1707	Electrolytic Cap. 10uF 50	7	CP1758	CERAMIC CAP. 0.1uF 25V	4
CP1710	"CAP, ELEC; 3.3uF 50V"	1	RS2391	SMD RES 27Kohm 5% 1/10W	1
HA1173	"HARNESS, WIRE 13P"	1	RS2395	SMD RES 180 ohm 5% 1/10W	2
TR1272	PNP XSTR 50V/100mA 300mW	3	CP1873	CERAMIC CAPACITOR	1
CP1706	Electrolytic Cap. 1uF 50V	4	HA1168	HARNESS FESTIVAL	1
CP1709	Electrolytic Cap. 2.2uF 5	2	HA1167	HARNESS FESTIVAL	1
CP1824	Ceramic Cap. 470pF 50V	2	HA1171	HARNESS FESTIVAL	1
RS2240	RES C/F MINI 3.3Kohm 5%	4	HA1169	HARNESS FESTIVAL	1
RS2229	RES C/F MINI 1.5Kohm 5%	2	HA1170	HARNESS FESTIVAL	1
RS2231	RES C/F MINI 18Kohm 5%	2	IC1284	IC SMD QUAD 2-CH MUX	1
RS2236	RES C/F MINI 220Kohm 5%	2	IC1300	IC	1
RS2329	RES C/F MINI 150Kohm 5%	2	IC1301	IC SMD 5V TRACKING REG.	2
RS2318	RES C/F MINI 6.8Kohm 5%	3	IC1302	PHOTOCOUPLER	2
RS2248	RES C/F MINI 470 ohm 5%	1	CP1870	CERAMIC CAPACITOR	4
TR1273	NPN XSTR 50V/100mA 300mW	1	CO1370	Connectors 6P 2mm 2A 100V	2
RS2420	TRIM-POT 200Kohm	1	CO1371	Connectors 8P 2mm 2A 100V	1
RS2223	RES C/F MINI 1Kohm 5%	10	CO1382	CONNECTOR 4P 2MM 2A 100V	1
CP1776	Capacitor Ceramic 15pF 50	1	CO1384	Connector	1
PC1180	PCB CD Tuner	1	RS2200	SMD RES 1.8Kohm 5% 1/10W	1
RS2224	RES C/F MIN 10Kohm 5%	9	RS2191	SMD RES 1Kohm 5% 1/10W	4
CP1745	Ceramic Cap. 15pF 50V	5	RS2211	SMD RES 470 ohm 5% 1/10W	8
RS2250	RES C/F MINI 47Kohm 5%	1	CP1757	CERAMIC CAP 0.01uF 50V	9
HA1193	HARNESS ASSY	1	TR1283	NPN XSTR 20V/300mA 400mW	4
RS2256	RES C/F MINI 68Kohm 5%	1	TR1310	SMD NPN XSTR 50V/30mA	5

Component Audio System

Harman Kardon

RS2394	SMD RES 6.8Kohm 5% 1/10W	1	HA1111	"HARNES, WIRE 11P"	1
RS2207	SMD RES 3.3Kohm 5% 1/10W	4	CC1064	"FERRITE CORE, TOROIDAL,"	1
RS2208	SMD RES 33Kohm 5% 1/10W	1	IM1155	INSULATION SHRINK SLEEVE	0.06
IC1141	SMD IC OP AMP Dual Plasti	4	RS2462	RES C/F ZERO ohm 5% 1/8W	1
CP1706	Electrolytic Cap. 1uF 50V	8	RS2195	SMD RES 10 ohm 5% 1/10W	4
CP1814	Cap Alum El 47uF 20% 35V	12	TR1281	PNP XSTR 60V/3A 25W	1
CP1708	Electrolytic Cap. 22uF 50	2	LB1265	Bar Code Traceability Lab	2
CP1697	"CAP, ELECT. 100uF, 16V"	6	TR1338	TRANSISTOR	6
CP1735	Pol. Prop. Flm Cap 390pF	4	IC1328	IC 8-BIT MICROCOMPUTER	1
CP1713	Electrolytic Cap. 0.47uF	2	CO1303	Connector Header 3-Pos 0.	1
IC1305	IC	1	CP1849	"CAP.ELECT. 33uF, 50V"	1
TR1335	PNP XSTR 30V/800mA 600mW	3	FESTIVAL60	"SPEAKER SET, FESTIVAL60"	1
TE1212	TERMINAL	5	SA1723	AMP COVER ASSY	1
CP1885	SMD CAP 470pF 10% 50V	3	332466-001	"BACK PANEL, AMP"	1
CP1886	CAL ALUM EL 1000uF 20%	1	332524-001	COVER	1
IC1310	IC VOLTAGE REGULATOR +5V	1	SA1724	AMP FRONT PANEL ASSY	1
HA1172	HARNES FESTIVAL	1	332465-001	FRONT PANEL	1
TR1337	SMD NPN XSTR 50V/70mA	1	SA1725	AMP TRANSFORMER ASSY	1
RS2407	SMD RES ZERO ohm 5% 1/10W	1	332521-001	"BACK STIFFENER, CHASSIS"	1
RS2408	SMD RES 560 ohm 5% 1/10W	2	SC1263	"SCREW, BND + (M4x6)"	4
RS2404	SMD RES 43 ohm 5% 1/10W	2	XX1314	BAND PA	2
TE1210	TERMINAL	1	SA1726	AMP PCB-CHASSIS ASSY	1
CP1888	SMD CAP 220pF 10% 50V	1	332523-001	"CLAMP, HEAT SINK"	1
CP1887	SMD CAP 15pF 5% 50V	2	SP1090	SILPAD TO-218 K-10 W/ Adh	4
RS2190	SMD RES 100 ohm 5% 1/10W	49	SC1261	"SCREW,BND T+ (3x8)"	6
TR1311	SMD PNP XSTR 50V/30mA	2	WA1083	"WASHER, OT"	1
DI1213	"DIODE, ZENER, SMD"	2	SA1727	AMP CHASSIS ASSY	1
RS2204	SMD RES 22Kohm 5% 1/10W	16	332520-001	"HOLDER, HEAT SINK"	1
CO1364	Connector 12P 2mm 2A 100V	1	SC1260	Screw CSKT+	4
RS2209	SMD RES 330Kohm 5% 1/10W	2	XX1296	LEG (RUBBER PAD)	4
RS2199	SMD RES 150Kohm 5% 1/10W	2	332469-001	PLASTIC FOOT	4
RS2198	SMD RES 15Kohm 5% 1/10W	6	BR1514	"CABIBACK ASSEMBLY, AMP"	1
CP1891	CAPACITOR 680pF 10% 50V	1	332522-001	"HEAT SINK, AMP"	1
RS2393	SMD RES 680 ohm 5% 1/10W	1	SC1292	SCREW BND T+	2
RS2411	SMD RES 390 ohm 5% 1/10W	3	SC1261	"SCREW,BND T+ (3x8)"	2
CP1880	"CAP, 3pF, 50V"	3	SC1262	"SCREW, BND + (M3x10)"	2
RS2193	SMD RES 100Kohm 5% 1/10W	9	WA1089	"WASHER, SPLIT, 250-OD;"	3
RS2213	SMD RES 47Kohm 5% 1/10W	10	SP1093	INSULATOR	1
RS2405	SMD RES 1.5Kohm 5% 1/10W	2	SC1260	Screw CSKT+	7
CP1889	SMD CAP 100pF 5% 50V	1	332468-001	"LIGHT RING, BUTTON"	1
CP1890	CAPACITOR 47pF 5% 50V SMD	1	332471-001	ORNAMENT	1
RS2203	SMD RES 220 ohm 5% 1/10W	3	332467-001	LIGHT BAR	1
IC1285	IC SMD DIFFERENTIAL 4-CH	1	SC1261	"SCREW,BND T+ (3x8)"	2
RS2219	SMD RES 8.2Kohm 5% 1/10W	1	SC1288	"SCREW, 10mm x 3mm,"	6
CP1853	"CAP ALUM EL 2,200uF 20%"	2	332481-001	"SPRING CLIP,CHASSIS"	2
IC1313	IC QUAD LOW-PWR LINE	1	SC1288	"SCREW, 10mm x 3mm,"	4
RS2212	SMD RES 4.7Kohm 5% 1/10W	11	SA1806	CLUSTER ASSY AMP	1
CP1821	"CAP., CHIP 0.1uF 50V"	21	CL1184	"CLUSTER, AMP, FEST60/70"	1
CP1699	"CAP, ELEC; 220uF 16V"	2	SA1078	AMP MAIN PCB ASSY	1
RS2192	SMD RES 10Kohm 5% 1/10W	20	CP1843	"CAP.CERAM, 4700pF, 250V"	1
DI1206	Switching Diode 40V 0.3W	5	CP1697	"CAP, ELECT. 100uF, 16V"	1
MI1219	INDUCTOR	1	CP1701	Electrolytic Cap. 47uF 16	2
CP1763	Ceramic Cap. 0.047uF 50V	3	CP1750	Ceramic Cap. 68pF 50V	2
RS2245	RES C/F MINI 39Kohm 5%	1	CP1731	Pol. Prop. Flm Cap. 1000p	2
CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	4	CP1695	"CAP, ELECT, 470uF, 6.3V"	2
TR1341	NPN XSTR 30V/800mA 600mW	6	CP1749	Ceramic Cap. 100pF 50V	2
DI1201	Diode Rectifier 1 A 400V	10	CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	8
TR1334	SMD PNP XSTR 50V/50mA	1	CO1366	Connector 2P 7.92mm 7A 25	1
HA1215	HARNES ASY 6-COND 100mm	1	CO1384	Connector	1
HA1126	CONNECTORIZES WIRE	1	CO1368	Connector 3P 3.96mm 7A 25	1
CC1064	"FERRITE CORE, TOROIDAL,"	1	CO1367	Connector 4P 2mm 2A 100V	1
IM1155	INSULATION SHRINK SLEEVE	0.06	DI1189	Bridge Diode 200V 4A	1
HA1216	HARNES ASY 11-COND 100mm	1	DI1192	"Zener Diode 0.4W (T/R,2")"	1

Component Audio System

Harman Kardon

CO1386	Pin Jack	1	RS2410	RES C/F 82Kohm 5% 1/3W	1
TR1290	PNP XSTR 50V/200mA 300mW	2	RE1022	Relay	1
TR1284	NPN XSTR 120V/100mA 300mW	3	WI1702	JUMPER WIRE 24 AWG BARE	62
TR1280	PNP XSTR 120V/100mA 300mW	6	CP1817	Cap Poly Film 68nF 5% 50V	2
TR1286	NPN XSTR 90V/50mA 300mW	8	CP1707	Electrolytic Cap. 10uF 50	6
TR1326	NPN XSTR 140V/10A 100W	2	RS2229	RES C/F MINI 1.5Kohm 5%	4
TR1279	N-CH FET 50V/6.5mA 300mW	2	RS2401	RES C/F MINI 1.2Kohm 5%	3
RS2225	RES C/F MINI 100Kohm 5%	1	RS2223	RES C/F MINI 1Kohm 5%	1
RS2241	RES C/F MINI 33Kohm 5%	1	RS2428	RES FUSE 330 ohm 5% 1/6W	2
RS2287	RES C/F 6.8Kohm 5% 1/3W	2	RS2312	RES C/F 33Kohm 5% 1/3W	4
RS2235	RES C/F MINI 22Kohm 5%	1	RS2256	RES C/F MINI 68Kohm 5%	1
RS2243	RES C/F MINI 3.3Mohm 5%	1	SA1079	AMP INDICATOR PCB ASSY	1
RS2262	RES C/F 1.5Kohm 5% 1/3W	4	LE1037	LED 3mm 5mcd	4
RS2237	RES C/F MINI 270 ohm 5%	2	HA1160	HARNESS 300mm 3P-SA	1
RS2171	RES FUSE 10 ohm 5% 1/4W	4	RS2238	RES C/F MINI 2.7Kohm 5%	4
RS2264	RES C/F 1.6Kohm 5% 1/3W	2	RS2229	RES C/F MINI 1.5Kohm 5%	4
RS2172	RES FUSE 100 ohm 5% 1/4W	4	WI1702	JUMPER WIRE 24 AWG BARE	2
RS2263	RES C/F 15Kohm 5% 1/3W	4	SA1080	AMP PRIMARY PCB	1
RS2169	RES FUSE 2.2 ohm 5% 1/4W	4	FH1007	Fuse Holder	2
RS2271	RES M/O F/R 0.22ohm 5% 3W	4	HA1119	Connect. Wire 300mm VAR-2	1
TE1197	Terminal Prime-Time	1	FS1084	Fuse 2.5A AC 125V	1
RS2289	POT. TRIM. 1K-OHM	2	SA1081	AMP SECONDARY PCB	1
SC1262	"SCREW, BND + (M3x10)"	1	CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	2
HS1156	Heatsink Festival	1	DI1201	Diode Rectifier 1 A 400V	4
CP1706	Electrolytic Cap. 1uF 50V	1	CP1699	"CAP, ELEC; 220uF 16V"	2
TR1287	PNP XSTR 100V/1A 900mW	4	HA1159	HARNESS 120mm 2P-SA	1
TR1319	PNP XSTR 140V/10A 100W	2	RS2384	RES FUSE 2.2 ohm 5% 1/4W	2
RS2234	RES C/F MINI 2.2Kohm 5%	4	HA1191	HARNESS ASSY	1
RS2252	RES C/F MINI 560 ohm 5%	2	LB1265	Bar Code Traceability Lab	2
RS2326	RES C/F 220 ohm 5% 1/3W	4	MI1204	"TRANSFORMER, AMP (US)"	1
RS2265	RES C/F 2.2Kohm 5% 1/3W	2	PM1224	"Plastic Bag 14"Lx20"Wx0.0"	1
RS2383	RES C/F 560 ohm 5% 1/6W	2	PM1422	"End Pad, CD/Amp, Left"	1
RS2390	RES FUSE 560 ohm 2% 1/4W	2	PM1423	"End Pad, CD/Amp, Right"	1
CP1810	"CAP. ELECT. 10,000uF, 50V"	2	PM1402	"Sleeve, CD/Amp"	1
DI1197	Switching Diode	2	LB1317	LABEL JULIAN DATE CODE	1
DI1205	Switching Diode 90V 0.3W	6	LB1321	LABEL FESTIVAL-60 AMP	1
TR1291	NPN XSTR 50V/200mA 300mW	8	LB1309	"Label, Top/Amp (Bottom)"	1
TR1289	NPN XSTR 100V/1A 900mW	4	LB1322	LABEL CD/AMP SERIAL NUMB.	4
TR1228	"TRANSISTOR, 150V, 1W"	2	BR1569	METAL FITTING	1
IC1240	Photocoupler 70V 0.15W	1	XX1357	CLIP FESTIVAL	1
RS2238	RES C/F MINI 2.7Kohm 5%	2	SC1261	"SCREW,BND T+ (3x8)"	4
RS2382	RES C/F MINI 1.8Kohm 5%	1	PM1472	"PAD FOR PALLET 40"Lx48"W"	0.1667
RS2176	RES FUSE 560 ohm 5% 1/4W	8			
TR1227	PNP XSTR 150V/100mA 900mW	2			
CO1402	CONNECTOR 34-POS	1			
CP1698	Electrolytic Cap. 22uF 16	1			
CP1695	"CAP, ELECT, 470uF, 6.3V"	2			
TR1324	NPN XSTR 25V/1.5A 900mW	1			
TR1330	PNP XSTR 120V/800mA 900mW	1			
RS2253	RES C/F MINI 5.6Kohm 5%	2			
RS2236	RES C/F MINI 220Kohm 5%	2			
RS2224	RES C/F MIN 10Kohm 5%	3			
CO1373	Connector 2.5A 250V	1			
TE1195	Terminal 4P	1			
RS2261	RES C/F 1Kohm 5% 1/3W	2			
RS2397	RES M/O F/R 10 ohm 5% 2W	2			
RS2280	RES C/F MINI 82 ohm 5%	4			
RS2167	RES FUSE 100 ohm 2% 1/4W	6			
RS2168	RES FUSE 15 ohm 2% 1/4W	4			
CP1878	CAPACITOR 10pF 50V	4			
DI1214	DIODE ZENER	1			
RS2249	RES C/F MINI 4.7Kohm 5%	5			
RS2239	RES C/F MINI 330 ohm 5%	1			

Festival 80 ASSEMBLY PARTS LIST

PART NUMBER	DESCRIPTION	QTY	FI1016	EMI FILTER	3
CIS1005	FESTIVAL 80 EUROPE	1	CL1194	CLUSTER CD CONNECTOR BD	0.2
SA1776	PACKED UNIT FESTIVAL 80	1	CP1821	"CAP., CHIP 0.1uF 50V"	1
SA1786	ACCESSORY PACK	1	TE1197	Terminal Prime-Time	1
XX1294	Power Cord W/Plug (EU)	2	LB1265	Bar Code Traceability Lab	2
XX1334	7-PIN DIN CABLE ASSY	1	332474-002	"BACK PANEL, CD"	1
XX1341	REMOTE CONTROL FEST 70/80	1	PM1422	"End Pad, CD/Amp, Left"	1
HA1165	HARNESS RIBBON CABLE	1	PM1423	"End Pad, CD/Amp, Right"	1
BA1001	"Battery, Dry AA Alkaline"	2	PM1402	"Sleeve, CD/Amp"	1
AN1002	"ANTENNA, T-FEEDER, FM"	1	PM1224	"Plastic Bag 14""Lx20""Wx0.0"	1
AN1003	"ANTENNA, AM, LOOP"	1	LB1319	LABEL LASER WARNING	1
XX1335	BUNDLE SPKR WIRE #18 20FT	3	LB1324	LABEL MODEL NUMBER	1
XX1336	BUNDLE SPRK WIRE #18 40FT	2	LB1322	LABEL CD/AMP SERIAL NUMB.	4
CO1385	Plug(Matching Adap)	1	PM1473	TOP/BOTTOM COVER EUROPE	0.037
PM1295	"PLASTIC BAG 10""Lx12""Wx0.0"	1	PM1475	PALLET SLEEVE AMP/CD UNIT	0.0185
333320-001	FESTIVAL-80 SAT SPKRS	1	SA1898	CD MAIN PCB ASSY	1
SA1791	CD UNIT COVER ASY (EU)	1	CO1365	CONNECTOR 13P 2MM 2A100V	1
332473-001	"COVER, CD UNIT"	1	CO1369	Connector 5P 2mm 2A 100V	2
SA1729	CD INTERCONNECT ASSY	1	CP1740	Pol. Prop. Flm Cap. 8200p	2
SA1732	CD PCB-CHASSIS ASSY	1	CP1759	Ceramic Cap. 1500pF 50V	1
SA1730	CD FRONT PANEL ASSY	1	CP1762	Ceramic Cap. 0.033uF 50V	2
332472-001	PANEL	1	CR1002	Ceralock 8MHz Prime-Time	1
332476-001	LID	1	IC1222	IC Prime-Time	1
XX1296	LEG (RUBBER PAD)	4	IC1223	IC Prime-Time	1
SC1260	Screw CSKT+	4	IC1235	IC SMD REVERSIBLE MOTOR	2
SA1731	CD UNIT CHASSIS ASSY	1	IC1286	"IC,SMD HEX INVERTER"	1
332475-001	CHASSIS	1	PC1181	PCB CD 250x100 DBL-SIDED	1
SP1088	Spacer/Rubber	3	RS2220	SMD RES 82Kohm 5% 1/10W	2
ME1001	CD Mechanism and Screws	1	RS2187	"POT, TRIMMER, 10K-OHM"	1
SC1288	"SCREW, 10mm x 3mm,"	1	RS2196	SMD RES 12Kohm 5% 1/10W	3
332481-001	"SPRING CLIP,CHASSIS"	2	RS2197	SMD RES 120Kohm 5% 1/10W	2
WA1088	"WASHER, FLAT, .300-OD;"	1	RS2214	SMD RES 470Kohm 5% 1/10W	1
SC1288	"SCREW, 10mm x 3mm,"	5	RS2216	SMD RES 510Kohm 5% 1/10W	1
332477-001	PUSHBUTTON	1	RS2218	SMD RES 680Kohm 5% 1/10W	1
332478-001	INDICATOR	1	RS2272	RES NETWORK 47Kohm (10x)	1
332469-001	PLASTIC FOOT	4	XT1005	"Xtal, Osc 16.9344MHz"	1
WA1032	Washer Plain #6 Zinc Fini	1	RS2194	SMD RES 1Mohm 5% 1/10W	2
332530-001	"BRACKET,SMALL PCB"	1	CP1866	ELECTROLYTIC CAP. 4700uF	2
XX1314	BAND PA	2	CP1711	Electrolytic Cap. 4.7uF 5	1
332529-001	"INSULATOR, PVC"	1	CP1710	"CAP, ELEC; 3.3uF 50V"	1
LB1320	"OVERLAY, ADHESIVE"	1	CP1868	POLYPROPYLENE FILM CAP.	4
TP1118	Electrical Tape Therm-X 1	0.1667	CP1869	POLYPROPYLENE FILM CAP.	4
SC1261	"SCREW,BND T+ (3x8)"	2	CP1758	CERAMIC CAP. 0.1uF 25V	4
SC1292	SCREW BND T+	1	RS2391	SMD RES 27Kohm 5% 1/10W	1
332530-001	"BRACKET,SMALL PCB"	1	RS2395	SMD RES 180 ohm 5% 1/10W	2
XX1314	BAND PA	1	CP1873	CERAMIC CAPACITOR	1
SC1261	"SCREW,BND T+ (3x8)"	2	HA1168	HARNESS FESTIVAL	1
SC1292	SCREW BND T+	1	HA1167	HARNESS FESTIVAL	1
SC1288	"SCREW, 10mm x 3mm,"	4	HA1171	HARNESS FESTIVAL	1
SC1261	"SCREW,BND T+ (3x8)"	2	HA1169	HARNESS FESTIVAL	1
SA1812	CD INDICATOR/CONNECTOR	1	HA1170	HARNESS FESTIVAL	1
SA1085	CD INDICATOR PCB	1	IC1284	IC SMD QUAD 2-CH MUX	1
SW1079	Tact Switch	1	IC1300	IC	1
HA1180	"HARNESS, WIRE 5P"	1	IC1301	IC SMD 5V TRACKING REG.	2
CL1193	CLUSTER CD INDICATOR BD	0.2	IC1302	PHOTOCOUPLER	2
LB1265	Bar Code Traceability Lab	1	CP1870	CERAMIC CAPACITOR	4
SA1083	CD CONNECTOR PCB	1	CO1370	Connectors 6P 2mm 2A 100V	2
CO1404	CONNECTOR 2mm 2A 100V	1	CO1371	Connectors 8P 2mm 2A 100V	1
CO1405	CONNECTOR	1	CO1382	CONNECTOR 4P 2MM 2A 100V	1
CO1403	CONNECTOR 34-POS	1	CO1384	Connector	1
FI1015	EMI FILTER	4	RS2200	SMD RES 1.8Kohm 5% 1/10W	1

Component Audio System

RS2191	SMD RES 1Kohm 5% 1/10W
RS2211	SMD RES 470 ohm 5% 1/10W
CP1757	CERAMIC CAP 0.01uF 50V
TR1283	NPN XSTR 20V/300mA 400mW
TR1310	SMD NPN XSTR 50V/30mA
RS2394	SMD RES 6.8Kohm 5% 1/10W
RS2207	SMD RES 3.3Kohm 5% 1/10W
RS2208	SMD RES 33Kohm 5% 1/10W
IC1141	SMD IC OP AMP Dual Plasti
CP1706	Electrolytic Cap. 1uF 50V
CP1814	Cap Alum El 47uF 20% 35V
CP1708	Electrolytic Cap. 22uF 50
CP1697	"CAP, ELECT. 100uF, 16V"
CP1735	Pol. Prop. Flm Cap 390pF
CP1713	Electrolytic Cap. 0.47uF
IC1305	IC
TR1335	PNP XSTR 30V/800mA 600mW
TE1212	TERMINAL
CP1885	SMD CAP 470pF 10% 50V
CP1886	CAL ALUM EL 1000uF 20%
IC1310	IC VOLTAGE REGULATOR +5V
HA1172	HARNESS FESTIVAL
TR1337	SMD NPN XSTR 50V/70mA
RS2407	SMD RES ZERO ohm 5% 1/10W
RS2408	SMD RES 560 ohm 5% 1/10W
RS2404	SMD RES 43 ohm 5% 1/10W
TE1210	TERMINAL
CP1888	SMD CAP 220pF 10% 50V
CP1887	SMD CAP 15pF 5% 50V
RS2190	SMD RES 100 ohm 5% 1/10W
TR1311	SMD PNP XSTR 50V/30mA
DI1213	"DIODE, ZENER, SMD"
RS2204	SMD RES 22Kohm 5% 1/10W
CO1364	Connector 12P 2mm 2A 100V
RS2209	SMD RES 330Kohm 5% 1/10W
RS2199	SMD RES 150Kohm 5% 1/10W
RS2198	SMD RES 15Kohm 5% 1/10W
CP1891	CAPACITOR 680pF 10% 50V
RS2393	SMD RES 680 ohm 5% 1/10W
RS2411	SMD RES 390 ohm 5% 1/10W
CP1880	"CAP, 3pF, 50V"
RS2193	SMD RES 100Kohm 5% 1/10W
RS2213	SMD RES 47Kohm 5% 1/10W
RS2405	SMD RES 1.5Kohm 5% 1/10W
CP1889	SMD CAP 100pF 5% 50V
CP1890	CAPACITOR 47pF 5% 50V SMD
RS2203	SMD RES 220 ohm 5% 1/10W
IC1285	IC SMD DIFFERENTIAL 4-CH
RS2219	SMD RES 8.2Kohm 5% 1/10W
CP1853	"CAP ALUM EL 2,200uF 20%"
IC1313	IC QUAD LOW-PWR LINE
RS2212	SMD RES 4.7Kohm 5% 1/10W
CP1821	"CAP., CHIP 0.1uF 50V"
CP1699	"CAP, ELEC; 220uF 16V"
RS2192	SMD RES 10Kohm 5% 1/10W
DI1206	Switching Diode 40V 0.3W
MI1219	INDUCTOR
CP1763	Ceramic Cap. 0.047uF 50V
RS2245	RES C/F MINI 39Kohm 5%
CP1717	"CAP, MTL.FILM, 0.1uF, 50V"
TR1341	NPN XSTR 30V/800mA 600mW
DI1201	Diode Rectifier 1 A 400V
TR1334	SMD PNP XSTR 50V/50mA

Harman Kardon

4	HA1215
8	HA1126
9	CC1064
4	IM1155
5	HA1216
1	HA1111
4	CC1064
1	IM1155
4	RS2462
8	RS2195
12	TR1281
2	LB1265
6	TR1338
4	IC1328
2	CO1303
1	CP1849
3	SA1800
5	CP1693
3	CP1699
1	CP1701
1	CP1711
1	CP1741
1	CP1743
1	CP1744
2	CP1749
2	CP1778
1	CP1795
1	CR1001
2	CR1004
49	CR1005
2	FI1008
2	FI1009
16	FI1005
1	IC1233
2	IC1237
2	IC1267
6	IC1268
1	IF1001
1	MI1178
3	MI1177
3	PC1180
9	RS2189
10	RS2222
2	RS2225
1	RS2226
1	RS2230
3	RS2233
1	RS2239
1	RS2253
2	RS2275
1	RS2277
11	RS2280
21	RS2291
2	RS2332
20	TR1276
5	TR1278
1	TR1279
3	XT1002
1	XT1003
4	TR1268
6	TR1269
10	RS2374
1	CP1769

HARNESS ASY 6-COND 100mm	1
CONNECTORIZES WIRE	1
"FERRITE CORE, TOROIDAL,"	1
INSULATION SHRINK SLEEVE	0.06
HARNESS ASY 11-COND 100mm	1
"HARNESS, WIRE 11P"	1
"FERRITE CORE, TOROIDAL,"	1
INSULATION SHRINK SLEEVE	0.06
RES C/F ZERO ohm 5% 1/8W	1
SMD RES 10 ohm 5% 1/10W	4
PNP XSTR 60V/3A 25W	1
Bar Code Traceability Lab	2
TRANSISTOR	6
IC 8-BIT MICROCOMPUTER	1
Connector Header 3-Pos 0.	1
"CAP.ELECT. 33uF, 50V"	1
TUNER BOARD ASY (EU)	1
"CAP, ELEC; 0.22uF 50V"	1
"CAP, ELEC; 220uF 16V"	1
Electrolytic Cap. 47uF 16	3
Electrolytic Cap. 4.7uF 5	2
Ceramic Cap. 0.022uF 50V	9
Ceramic Cap. 330pF 50V	2
Ceramic Cap. 560pF 50V	1
Ceramic Cap. 100pF 50V	2
Cap. Ceramic 4700pF 50V 1	1
"CAP, ELEC; 0.1uF 50V"	1
Ceralock 4MHz Prime-Time	1
Ceramic Resonator 450KHz	1
Ceramic Osc	1
"FILTER,AUDIO LC, VARIABLE"	2
Ceramic Filter 10.7MHz 18	3
"LC COMPOSITE, VARIABLE"	1
IC	1
IC	1
IC	1
IC	1
"IF BLOCK 450KHZ, CERAMIC"	1
Discri(Type KM)10.7MHz	1
Discri(Type 7KM) 10.7MHz	1
PCB CD Tuner	1
"POT, TRIMMER, 50K OHM"	1
RES C/F MINI 100 ohm 5%	3
RES C/F MINI 100Kohm 5%	4
RES C/F MIN 1Mohm 5% 1/4W	1
RES C/F MINI 15Kohm 5%	1
RES C/F MINI 22 ohm 5%	1
RES C/F MINI 330 ohm 5%	2
RES C/F MINI 5.6Kohm 5%	1
RES C/F MINI 180 ohm 5%	1
RES C/F MINI 270Kohm 5%	1
RES C/F MINI 82 ohm 5%	1
RES C/F MINI 27Kohm 5%	2
RES C/F MINI 390 ohm 5%	4
NPN XSTR 25V/50mA 300MHz	2
PNP XSTR 50V/150mA 300mW	1
N-CH FET 50V/6.5mA 300mW	1
Xtal.OSC 4332KHz Prm-time	1
XTAL.OSC 4500KHz	1
NPN XSTR 50V/30mA 300mW	1
PNP XSTR 50V/30mA 300mW	1
RES C/F MINI 12Kohm 5%	1
Semiconductor Cap. 0.047u	6

Component Audio System

Harman Kardon

CP1707	Electrolytic Cap. 10uF 50	7	BR1546	SHIELD PLATE	1
CP1710	"CAP, ELEC; 3.3uF 50V"	1	BR1547	SHIELD PLATE	1
HA1173	"HARNESS, WIRE 13P"	1	TP1123	TAPE DRY-ADHESIVE	0.8333
RS2229	RES C/F MINI 1.5Kohm 5%	2	332484-001	"HOUSING, DISPLAY, PAINTED"	1
RS2318	RES C/F MINI 6.8Kohm 5%	3	332484-XXX	"HOUSING, PLASTIC, MOLDED"	1
RS2248	RES C/F MINI 470 ohm 5%	1	LS1065	RESIN POLYSTYRENE BLACK	0.25
TR1273	NPN XSTR 50V/100mA 300mW	1	332487-001	"PLATE, PVC"	1
RS2420	TRIM-POT 200Kohm	1	BR1548	SHIELD PLATE	1
RS2223	RES C/F MINI 1Kohm 5%	10	TP1118	Electrical Tape Therm-X 1	0.1667
RF1001	RF Block Prime-Time	1	332486-001	"BASE,CONTROL PANEL"	1
TE1203	Terminal	1	332485-002	"PANEL, FESTIVAL-80"	1
CP1747	Ceramic Cap. 5pF 50V	1	332485-XXX	"ASY, DISPLAY COVER, FEST."	1
CP1751	Ceramic Cap. 82pF 50V	1	333256-001	"COVER, DISPLAY, CONTROL"	1
CP1709	Electrolytic Cap. 2.2uF 5	1	LS1068	RESIN DENKA ABS	0.033
RS2240	RES C/F MINI 3.3Kohm 5%	2	333257-001	"COVER, CONTROL PANEL, TOP"	1
RS2231	RES C/F MINI 18Kohm 5%	1	LS1065	RESIN POLYSTYRENE BLACK	0.0661
RS2241	RES C/F MINI 33Kohm 5%	1	332504-001	HOLDER	1
RS2236	RES C/F MINI 220Kohm 5%	4	332494-001	PUSH BUTTON	1
DI1205	Switching Diode 90V 0.3W	5	332496-001	"ORNAMENT, TOP UNIT"	1
TR1272	PNP XSTR 50V/100mA 300mW	4	332498-001	ORNAMENT	1
CP1706	Electrolytic Cap. 1uF 50V	5	332489-001	ROTARY KNOB	1
TU1002	TUNER FM	1	332488-002	"DISPLAY WINDOW, FEST'80"	1
HA1193	HARNESS ASSY	1	332495-001	"INDICATOR, TOP UNIT"	1
RS2249	RES C/F MINI 4.7Kohm 5%	5	BR1496	Spring	1
IC1230	"IC, RADIO DATA SYSTEM"	1	332532-001	"HOLDER,SHIELD PLATE,RIGHT"	1
RS2224	RES C/F MIN 10Kohm 5%	9	332505-001	"HOLDER,SHIELD PLATE,LEFT"	1
RS2250	RES C/F MINI 47Kohm 5%	1	BR1539	STEEL SHIELD PLATE	1
CP1748	Ceramic Cap. 7pF 50V	1	XX1337	INSULATOR PVC	1
BR1543	STEEL SHIELD PLATE	1	SP1096	SPACER PLASTIC LOCKING	4
LB1265	Bar Code Traceability Lab	2	332483-001	"BASE, PLASTIC, PAINTED"	1
CP1745	Ceramic Cap. 15pF 50V	5	332483-XXX	"BASE, PLASTIC, MOLDED"	1
CP1697	"CAP, ELECT. 100uF, 16V"	1	LS1065	RESIN POLYSTYRENE BLACK	0.525
CP1698	Electrolytic Cap. 22uF 16	1	332507-001	SPACER	1
CP1742	Ceramic Cap. 220pF 50V	5	332506-001	"SLIDER,POWER SWITCH"	1
TR1277	NPN XSTR 20V/500mA 500mW	5	BR1540	STEEL SHIELD PLATE	1
RS2234	RES C/F MINI 2.2Kohm 5%	8	XX1338	INSULATOR PVC	1
WI1702	JUMPER WIRE 24 AWG BARE	48	SA1811	CLUSTER ASSY FUNCTION/	1
RS2256	RES C/F MINI 68Kohm 5%	1	CL1188	"CLUSTER, TOP UNIT, FEST."	1
LB1317	LABEL JULIAN DATE CODE	2	SA1089	VIDEO PCB	1
SA1804	TOP UNIT ASY ('80-EU)	1	CO1376	RCA Pin Jack 1P	5
XX1296	LEG (RUBBER PAD)	4	CP1697	"CAP, ELECT. 100uF, 16V"	2
SC1268	"Screw, BND T+(3x12)"	6	CP1708	Electrolytic Cap. 22uF 50	3
SA1745	INTERCONNECT ASY	1	IC1225	IC Prime-Time	1
XX1314	BAND PA	1	RS2257	RES C/F MINI 75 ohm 5%	5
SC1278	Screw BND T+	1	CP1750	Ceramic Cap. 68pF 50V	2
SA1747	FUNCTION/VIDEO ASY	1	WI1702	JUMPER WIRE 24 AWG BARE	9
332499-001	SHIELD PLATE	1	HA1213	HARNESS ASY 7-COND 200mm	1
SC1260	Screw CSKT+	4	HA1197	HARNESS ASSY	1
332500-001	SHIELD PLATE	1	CC1064	"FERRITE CORE, TOROIDAL,"	1
SC1268	"Screw, BND T+(3x12)"	2	IM1155	INSULATION SHRINK SLEEVE	0.06
SA1755	PUSH BUTTOM ASSY FOR	1	SA1090	VOLUME CONTROL PCB	1
SC1269	"Screw,BND T+"	1	CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	1
332492-001	PUSHBUTTON	1	HA1130	CONNECTORIZES WIRE	1
SA1749	CABINET SUB-ASY	1	RS2399	POTENTIOMETER W/GREEN LED	1
332491-001	PUSHBUTTON	1	SA1091	IR SENSOR PCB	1
332490-001	PUSHBUTTON	1	HA1068	"HARNESS, WIRE 3P"	1
SC1261	"SCREW,BND T+ (3x8)"	4	IC1255	IR Sensor	1
SA1751	PLASTIC CAB ASY	1	CP1697	"CAP, ELECT. 100uF, 16V"	1
SC1261	"SCREW,BND T+ (3x8)"	3	SA1093	POWER INDICATOR PCB	1
332502-001	FITTING	1	HA1115	"HARNESS, WIRE 4P"	1
SC1278	Screw BND T+	2	LE1037	LED 3mm 5mcd	4
332497-001	BUTTON IR	1	WI1702	JUMPER WIRE 24 AWG BARE	1
332503-001	"HOLDER,SLIDER-POWERSWITCH"	1	SA1748	FUNCTION PCB ASY	1

Component Audio System

CO1363	Connector 11P 2mm 2A 100V
CO1365	CONNECTOR 13P 2MM 2A100V
CO1371	Connectors 8P 2mm 2A 100V
CO1374	Miniature Jack LR-SW
CO1377	RCA Pin Jack 2P
IC1239	IC
CP1697	"CAP, ELECT. 100uF, 16V"
CP1701	Electrolytic Cap. 47uF 16
IC1226	IC
IC1238	IC
RS2225	RES C/F MINI 100Kohm 5%
RS2239	RES C/F MINI 330 ohm 5%
CP1702	Electrolytic Cap. 470uF 1
CP1707	Electrolytic Cap. 10uF 50
CP1708	Electrolytic Cap. 22uF 50
CP1711	Electrolytic Cap. 4.7uF 5
CP1724	Metallized Flm Cap 0.022u
CP1725	Metallized Flm Cap. 0.22u
CP1726	Metallized Flm Cap 0.033u
CP1727	Metallized Flm Cap 0.047u
CP1728	Metallized Flm Cap. 0.68u
CP1729	Metallized Flm Cap 0.082u
CP1731	Pol. Prop. Flm Cap. 1000p
CP1736	Pol. Prop. Flm Cap. 4700p
CP1738	Pol. Prop. Flm Cap. 5600p
CP1739	Pol. Prop. Flm Cap. 680pF
IC1246	IC
RS2241	RES C/F MINI 33Kohm 5%
RS2242	RES C/F MINI 330Kohm 5%
RS2245	RES C/F MINI 39Kohm 5%
CP1882	POLYPROPELENE FILM
RS2226	RES C/F MIN 1Mohm 5% 1/4W
RS2230	RES C/F MINI 15Kohm 5%
RS2231	RES C/F MINI 18Kohm 5%
RS2232	RES C/F MINI 20Kohm 5%
RS2233	RES C/F MINI 22 ohm 5%
RS2235	RES C/F MINI 22Kohm 5%
RS2249	RES C/F MINI 4.7Kohm 5%
RS2251	RES C/F MINI 4.7Mohm 5%
RS2256	RES C/F MINI 68Kohm 5%
RS2259	RES C/F MINI 7.5Kohm 5%
IC1229	IC Prime-Time
IC1228	IC Prime-Time
XT1009	Xtal
CP1717	"CAP, MTL.FILM, 0.1uF, 50V"
CP1737	Pol. Prop. Flm Cap. 560pF
CP1733	Pol. Prop. Flm Cap 220pF
RS2224	RES C/F MIN 10Kohm 5%
RS2223	RES C/F MINI 1Kohm 5%
WI1702	JUMPER WIRE 24 AWG BARE
RS2250	RES C/F MINI 47Kohm 5%
RS2246	RES C/F MINI 43Kohm 5%
LB1265	Bar Code Traceability Lab
SA1805	"PRE-AMP BD, FEST-80 EU"
CP1811	Super Capacitor 1F
CO1369	Connector 5P 2mm 2A 100V
CO1370	Connectors 6P 2mm 2A 100V
CO1375	Jack 1P
CO1382	CONNECTOR 4P 2MM 2A 100V
CO1383	CONNECTOR HEADER 7-PIN
CO1389	CONNECTOR 14P 2mm 2A 100V
CO1390	CONNECTOR 8P
CP1700	Electrolytic Cap. 2200uF

Harman Kardon

1	CP1702	Electrolytic Cap. 470uF 1	2
1	CP1732	Pol. Prop. Flm Cap. 1500p	2
1	CP1733	Pol. Prop. Flm Cap 220pF	9
1	DI1192	"Zener Diode 0.4W (T/R,2")"	1
4	DI1204	Zener Diode 0.4W	2
1	FH1007	Fuse Holder	2
3	HA1109	CONNECTORIZES WIRE 8P	1
13	HA1112	CONNECTORIZES WIRE 13P	1
4	IC1232	IC Voltage Regulator +6VD	1
2	IC1234	IC Voltage Regulator -6VD	1
11	IC1236	IC	1
8	IC1245	IC ELECTRICAL VOLUME	1
2	IC1248	IC	1
4	IC1254	IC SMD OCTAL-D-TYPE LATCH	1
2	IC1259	IC SMD 32KBYTE CMOS STAT.	1
3	IC1262	IC	1
2	IC1265	IC LOW PWR CLOCK/CALENDAR	1
4	IC1269	IC	2
2	IC1270	IC SMD DUAL 2-to-4 LINE	1
5	IC1277	"IC, EEPROM, 256x8, CMOS"	1
1	IC1283	IC SMD DUAL 2-INPUT AND	1
2	RS2226	RES C/F MIN 1Mohm 5% 1/4W	3
1	RS2233	RES C/F MINI 22 ohm 5%	3
1	RS2247	RES C/F MINI 47 ohm 5%	2
2	RS2260	RES C/F MINI 8.2Kohm 5%	2
2	RS2261	RES C/F 1Kohm 5% 1/3W	1
1	SW1078	Push Switch 1P TV3 Prime-	1
2	TR1272	PNP XSTR 50V/100mA 300mW	1
1	TR1281	PNP XSTR 60V/3A 25W	1
2	TR1304	NPN XSTR 60V/3A 25W	1
1	XT1006	"XTAL, 32.768KHz"	1
1	XT1011	"XTAL, 15MHZ"	1
9	CO1402	CONNECTOR 34-POS	1
2	CO1367	Connector 4P 2mm 2A 100V	2
2	CO1388	CONNECTOR 10P 2mm 2A 100V	1
2	CO1363	Connector 11P 2mm 2A 100V	1
5	CP1697	"CAP, ELECT. 100uF, 16V"	3
5	CP1863	ELECTROLYTIC CAP.	2
1	CP1701	Electrolytic Cap. 47uF 16	22
2	CP1706	Electrolytic Cap. 1uF 50V	3
2	CP1707	Electrolytic Cap. 10uF 50	2
1	CP1722	Metallized Flm Cap. 0.01u	20
1	CP1815	Cap Poly Film 15nF 5% 50V	2
1	CP1817	Cap Poly Film 68nF 5% 50V	2
14	CP1777	CAPACITOR CERAMIC 22pF 50	2
3	DI1196	Zener Diode 0.4W	3
2	DI1201	Diode Rectifier 1 A 400V	10
14	HA1166	HARNESS ASSY	1
9	IC1226	IC	4
72	IC1241	Photocoupler	1
2	IC1307	IC VOLTAGE REGULATOR +5V	1
1	RS2237	RES C/F MINI 270 ohm 5%	1
2	RS2238	RES C/F MINI 2.7Kohm 5%	8
1	RS2242	RES C/F MINI 330Kohm 5%	6
1	RS2315	RES FUSE 4.7 ohm 2% 1/4W	1
1	RS2244	RES C/F MINI 3.9Kohm 5%	1
1	RS2341	RES C/F 100 ohm 5% 1/3W	2
2	TR1268	NPN XSTR 50V/30mA 300mW	3
1	TR1269	PNP XSTR 50V/30mA 300mW	3
1	TR1283	NPN XSTR 20V/300mA 400mW	12
1	TR1290	PNP XSTR 50V/200mA 300mW	1
1	RS2290	RES C/F 180 ohm 5% 1/3W	2
3	CP1731	Pol. Prop. Flm Cap. 1000p	3

Component Audio System

Harman Kardon

IC1244	IC	1	332482-004	"HOUSING, TOP UNIT"	1
RS2389	RES C/F 4.7Kohm 5% 1/3W	1	LB1331	"LABEL ""MASK"", FESTIVAL"	1
RS2222	RES C/F MINI 100 ohm 5%	1	PM1400	"Foam Pad, Top Unit, Left"	1
FI1013	FILTER EMI	1	PM1399	"Foam Pad, Top Unit, Right"	1
FI1014	FILTER EMI	6	PM1421	Top Unit Sleeve	1
FI1017	EMI FILTER 4-CIRCUIT	3	LB1317	LABEL JULIAN DATE CODE	1
FI1018	"FILTER, EMI"	7	LB1318	"LABEL BARCODE, FESTIVAL"	1
MI1209	TRANSFORMER TOP UNIT (EU)	1	LB1326	LABEL MODEL No./ DOLBY	1
BR1542	STEEL SHIELD PLATE	1	SA1826	"DISPLAY PCB ASSY, EU"	1
IC1313	IC QUAD LOW-PWR LINE	1	CP1799	"CAP, Chip 100 pF 50V"	3
FS1090	FUSE SLOW BLOW 500mA 250V	1	CP1812	"Cap, Chip 12pF 50V"	2
IC1219	IC Prime-Time	1	CP1822	CAP. CHIP 0.33uF 50V	28
CP1878	CAPACITOR 10pF 50V	1	DS1001	Display VFD Prime-Time	1
FI1011	FILTER EMI	19	IC1250	IC 32-BIT LED DRIVER	1
CO1358	Connector 2.5A250V	1	IC1252	IC 40-BIT VFD GRID ANODE	3
CO1374	Miniature Jack LR-SW	1	IC1253	IC SMD 20-BIT VFD ANODE/	1
CP1711	Electrolytic Cap. 4.7uF 5	1	IC1254	IC SMD OCTAL-D-TYPE LATCH	1
CP1843	"CAP.CERAM, 4700pF, 250V"	2	IC1276	IC SMD INVERTER HIGH	1
DI1205	Switching Diode 90V 0.3W	9	PC1236	"PC,DISPLAY BD, 68PIN-PLCC"	1
DI1206	Switching Diode 40V 0.3W	4	RS2193	SMD RES 100Kohm 5% 1/10W	8
RS2212	SMD RES 4.7Kohm 5% 1/10W	2	RS2219	SMD RES 8.2Kohm 5% 1/10W	1
TR1341	NPN XSTR 30V/800mA 600mW	1	TH1018	TRIAC 400V 3A	1
TR1291	NPN XSTR 50V/200mA 300mW	2	TR1302	SMD NPN XSTR 50V/1A 500mW	6
CP1887	SMD CAP 15pF 5% 50V	2	XT1008	"Xtal, Osc 24MHz"	1
FI1020	EMI FILTER	1	TR1310	SMD NPN XSTR 50V/30mA	1
CP1911	SMD CAP 0.1uF 10% 25V	16	TR1311	SMD PNP XSTR 50V/30mA	1
HS1155	"HEATSINK, AMPLIFIER"	3	IC1259	IC SMD 32KBYTE CMOS STAT.	1
SC1262	"SCREW, BND + (M3x10)"	3	IC1263	SMD IC 5V VOLTAGE REG.	6
RS2211	SMD RES 470 ohm 5% 1/10W	2	CP1707	Electrolytic Cap. 10uF 50	1
SC1271	Screw Fpt+	4	CP1849	"CAP.ELECT. 33uF, 50V"	2
332501-001	"BRACKET, MTG,XFORMER"	1	IC1314	IC MICOM OTP 16MHz 0-70C	1
IC1320	IC EPROM 128K x 8 DIP32	1	SW1085	SWITCH	23
CO1418	CONNECTOR IC SOCKET DIP32	1	LE1040	LED GREEN	15
CL1236	CLUSTER BD FEST. 60/70/80	1	CP1821	"CAP., CHIP 0.1uF 50V"	10
SP1102	INSULATOR RUBBER	1	RS2213	SMD RES 47Kohm 5% 1/10W	1
CC1065	FERRITE CHIP BEAD	26	RS1292	SMD RES 10Kohm 5% 1/10W	8
RS2250	RES C/F MINI 47Kohm 5%	4	LE1041	LED GREEN	16
RS2225	RES C/F MINI 100Kohm 5%	22	RS2430	SMD RES 82 ohm 5% 1/10W	6
RS2239	RES C/F MINI 330 ohm 5%	13	RS2211	SMD RES 470 ohm 5% 1/10W	7
CP1725	Metallized Flm Cap. 0.22u	2	CC1065	FERRITE CHIP BEAD	20
HA1210	HARNESS ASY 5-COND 200mm	1	MI1220	INDUCTOR	1
HA1120	CONNECTORIZES WIRE	1	HA1211	HARNESS ASY 14-COND 160mm	1
CC1064	"FERRITE CORE, TOROIDAL,"	1	HA1113	"HARNESS, WIRE 14P"	1
IM1155	INSULATION SHRINK SLEEVE	0.06	CC1064	"FERRITE CORE, TOROIDAL,"	1
HA1214	HARNESS ASY 11-COND 160mm	1	IM1155	INSULATION SHRINK SLEEVE	0.06
HA1166	HARNESS ASSY	1	HA1212	HARNESS ASY 10-COND 160mm	1
CC1064	"FERRITE CORE, TOROIDAL,"	1	HA1110	HARNESS ASY	1
IM1155	INSULATION SHRINK SLEEVE	0.06	CC1064	"FERRITE CORE, TOROIDAL,"	1
RS2231	RES C/F MINI 18Kohm 5%	2	IM1155	INSULATION SHRINK SLEEVE	0.06
RS2224	RES C/F MIN 10Kohm 5%	15	LB1265	Bar Code Traceability Lab	2
RS2291	RES C/F MINI 27Kohm 5%	3	RS2206	SMD RES 270 ohm 5% 1/10W	22
CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	2	RS2408	SMD RES 560 ohm 5% 1/10W	4
CP1719	Metallized Flm Cap 0.039uF	3	PM1473	TOP/BOTTOM COVER EUROPE	0.0444
LB1265	Bar Code Traceability Lab	2	PM1474	PALLET SLEEVE TOP UNIT	0.0222
CP1891	CAPACITOR 680pF 10% 50V	2	333321-002	SUBWOOFER SPEAKER SYSTEM	1
RS2223	RES C/F MINI 1Kohm 5%	25			
RS2240	RES C/F MINI 3.3Kohm 5%	2			
RS2476	RES C/F MINI 3Kohm 5%	1			
RS2249	RES C/F MINI 4.7Kohm 5%	3			
RS2235	RES C/F MINI 22Kohm 5%	6			
RS1711	SMD RES 220 ohm 5% 1/8W	1			
CP1757	CERAMIC CAP 0.01uF 50V	1			
RS1376	RES C/F MINI 910 ohm 5%	1			

Festival 80 SUBWOOFER ASSEMBLY PARTS LIST

PART NUMBER	DESCRIPTION	QTY	RS2241	RES C/F MINI 33Kohm 5%	1
AM0000120	"AMP,SUBWFR,FESTIVAL80 US"	1	TE1197	Terminal Prime-Time	1
SA1766	"SUBWFR, PACKED UNIT,"	1	RS2289	POT. TRIM. 1K-OHM	2
SA1736	CENTER & FRONT SUB-ASSY	1	TR1319	PNP XSTR 140V/10A 100W	2
SA1780	CLUSTER ASSY FRONT/REAR	1	CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	7
SA1738	REAR (CENTER) PCB	1	RS2268	RES C/F 33Kohm 5% 1/3W	4
CP1814	Cap Alum El 47uF 20% 35V	2	FS1074	Fuse Slow Blow 6.3A 250V	2
CP1750	Ceramic Cap. 68pF 50V	2	RS2252	RES C/F MINI 560 ohm 5%	4
CP1731	Pol. Prop. Flm Cap. 1000p	2	CP1707	Electrolytic Cap. 10uF 50	6
CP1861	CAP CERAMIC 6pF 50V	4	WI1702	JUMPER WIRE 24 AWG BARE	77
CP1695	"CAP, ELECT, 470uF, 6.3V"	2	RS2418	RES FUSE 330 ohm 2% 1/4W	2
CP1749	Ceramic Cap. 100pF 50V	2	RS2264	RES C/F 1.6Kohm 5% 1/3W	1
CP1892	CAP AL EL 470uF 20% 50V	4	RS2477	RES C/F 1.1Kohm 5% 1/3W	1
CP1817	Cap Poly Film 68nF 5% 50V	2	SA1739	FRONT (L/R) PCB ASSEMBLY	1
CP1706	Electrolytic Cap. 1uF 50V	2	CP1814	Cap Alum El 47uF 20% 35V	2
CP1697	"CAP, ELECT. 100uF, 16V"	1	CP1750	Ceramic Cap. 68pF 50V	2
CP1810	"CAP. ELECT. 10,000uF, 50V"	2	CP1731	Pol. Prop. Flm Cap. 1000p	2
CO1368	Connector 3P 3.96mm 7A 25	1	CP1861	CAP CERAMIC 6pF 50V	4
HA1182	HARNESS	1	CP1695	"CAP, ELECT, 470uF, 6.3V"	2
HA1183	HARNESS	1	CP1749	Ceramic Cap. 100pF 50V	2
DI1205	Switching Diode 90V 0.3W	4	CP1892	CAP AL EL 470uF 20% 50V	4
DI1189	Bridge Diode 200V 4A	1	CP1817	Cap Poly Film 68nF 5% 50V	2
DI1192	"Zener Diode 0.4W (T/R,2")"	1	CP1706	Electrolytic Cap. 1uF 50V	2
FH1007	Fuse Holder	4	CP1697	"CAP, ELECT. 100uF, 16V"	1
TR1286	NPN XSTR 90V/50mA 300mW	8	CP1810	"CAP. ELECT. 10,000uF, 50V"	2
TR1291	NPN XSTR 50V/200mA 300mW	4	CO1368	Connector 3P 3.96mm 7A 25	1
TR1279	N-CH FET 50V/6.5mA 300mW	2	HA1182	HARNESS	1
TR1280	PNP XSTR 120V/100mA 300mW	6	HA1183	HARNESS	1
TR1288	PNP XSTR 100V/50mA 900mW	2	DI1205	Switching Diode 90V 0.3W	4
TR1285	NPN XSTR 100V/50mA 900mW	2	DI1192	"Zener Diode 0.4W (T/R,2")"	1
TR1284	NPN XSTR 120V/100mA 300mW	3	DI1189	Bridge Diode 200V 4A	1
TR1289	NPN XSTR 100V/1A 900mW	4	FH1007	Fuse Holder	4
TR1287	PNP XSTR 100V/1A 900mW	4	TR1286	NPN XSTR 90V/50mA 300mW	8
TR1326	NPN XSTR 140V/10A 100W	2	TR1291	NPN XSTR 50V/200mA 300mW	4
TR1290	PNP XSTR 50V/200mA 300mW	2	TR1279	N-CH FET 50V/6.5mA 300mW	2
RS2267	RES C/F 330 ohm 5% 1/3W	2	TR1280	PNP XSTR 120V/100mA 300mW	6
RS2326	RES C/F 220 ohm 5% 1/3W	4	TR1288	PNP XSTR 100V/50mA 900mW	2
RS2262	RES C/F 1.5Kohm 5% 1/3W	4	TR1285	NPN XSTR 100V/50mA 900mW	2
RS2379	RES C/F 5.6Kohm 5% 1/3W	2	TR1284	NPN XSTR 120V/100mA 300mW	3
RS2237	RES C/F MINI 270 ohm 5%	2	TR1289	NPN XSTR 100V/1A 900mW	4
RS2176	RES FUSE 560 ohm 5% 1/4W	8	TR1287	PNP XSTR 100V/1A 900mW	4
RS2390	RES FUSE 560 ohm 2% 1/4W	2	TR1326	NPN XSTR 140V/10A 100W	2
RS2172	RES FUSE 100 ohm 5% 1/4W	4	TR1319	PNP XSTR 140V/10A 100W	2
RS2263	RES C/F 15Kohm 5% 1/3W	4	TR1290	PNP XSTR 50V/200mA 300mW	2
RS2171	RES FUSE 10 ohm 5% 1/4W	6	RS2267	RES C/F 330 ohm 5% 1/3W	2
RS2234	RES C/F MINI 2.2Kohm 5%	7	RS2326	RES C/F 220 ohm 5% 1/3W	4
RS2376	RES C/F 47 ohm 5% 1/3W	4	RS2262	RES C/F 1.5Kohm 5% 1/3W	4
RS2167	RES FUSE 100 ohm 2% 1/4W	6	RS2379	RES C/F 5.6Kohm 5% 1/3W	2
RS2238	RES C/F MINI 2.7Kohm 5%	2	RS2176	RES FUSE 560 ohm 5% 1/4W	8
RS2229	RES C/F MINI 1.5Kohm 5%	6	RS2264	RES C/F 1.6Kohm 5% 1/3W	2
RS2168	RES FUSE 15 ohm 2% 1/4W	4	RS2390	RES FUSE 560 ohm 2% 1/4W	2
RS2169	RES FUSE 2.2 ohm 5% 1/4W	4	RS2172	RES FUSE 100 ohm 5% 1/4W	4
RS2271	RES M/O F/R 0.22ohm 5% 3W	4	RS2263	RES C/F 15Kohm 5% 1/3W	4
RS2240	RES C/F MINI 3.3Kohm 5%	4	RS2171	RES FUSE 10 ohm 5% 1/4W	6
RS2328	RES M/O F/R 15 ohm 5% 2W	2	RS2234	RES C/F MINI 2.2Kohm 5%	7
RS2235	RES C/F MINI 22Kohm 5%	1	RS2238	RES C/F MINI 2.7Kohm 5%	2
RS2249	RES C/F MINI 4.7Kohm 5%	4	RS2229	RES C/F MINI 1.5Kohm 5%	6
RS2224	RES C/F MIN 10Kohm 5%	1	RS2376	RES C/F 47 ohm 5% 1/3W	4
RS2225	RES C/F MINI 100Kohm 5%	1	RS2167	RES FUSE 100 ohm 2% 1/4W	6
RS2243	RES C/F MINI 3.3Mohm 5%	1	RS2168	RES FUSE 15 ohm 2% 1/4W	4
RS2256	RES C/F MINI 68Kohm 5%	1	RS2169	RES FUSE 2.2 ohm 5% 1/4W	4

Component Audio System

Harman Kardon

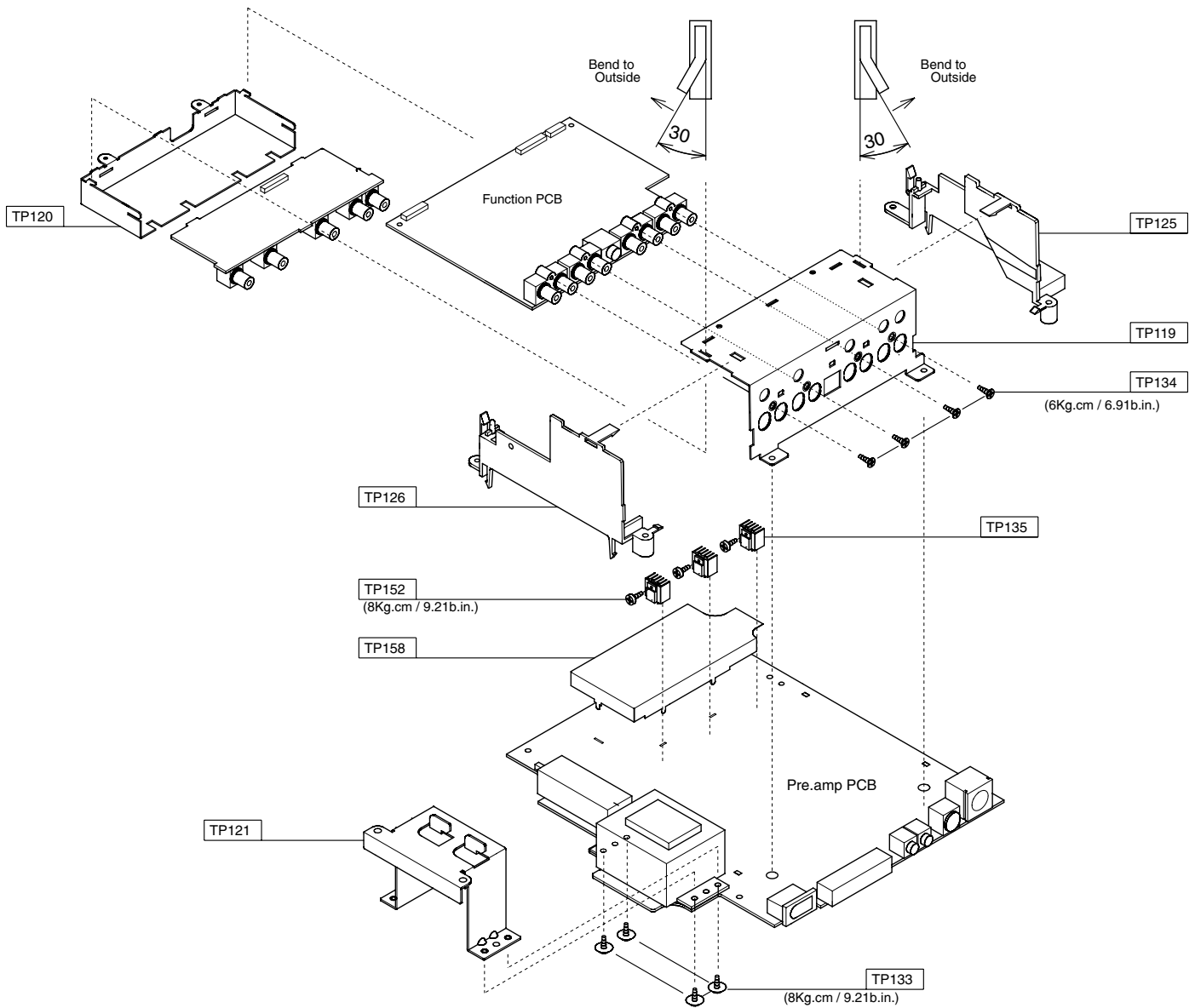
RS2271	RES M/O F/R 0.22ohm 5% 3W	4	TR1280	PNP XSTR 120V/100mA 300mW	3
RS2240	RES C/F MINI 3.3Kohm 5%	4	TR1288	PNP XSTR 100V/50mA 900mW	1
RS2328	RES M/O F/R 15 ohm 5% 2W	2	TR1285	NPN XSTR 100V/50mA 900mW	1
RS2235	RES C/F MINI 22Kohm 5%	1	TR1284	NPN XSTR 120V/100mA 300mW	2
RS2249	RES C/F MINI 4.7Kohm 5%	4	TR1289	NPN XSTR 100V/1A 900mW	1
RS2243	RES C/F MINI 3.3Mohm 5%	1	TR1287	PNP XSTR 100V/1A 900mW	1
RS2256	RES C/F MINI 68Kohm 5%	1	TR1320	PNP Xstr 180V 20W	1
RS2241	RES C/F MINI 33Kohm 5%	1	TR1321	NPN Xstr 180V 20W	1
RS2224	RES C/F MIN 10Kohm 5%	1	TR1326	NPN XSTR 140V/10A 100W	2
RS2225	RES C/F MINI 100Kohm 5%	1	TR1319	PNP XSTR 140V/10A 100W	2
TE1197	Terminal Prime-Time	1	TR1290	PNP XSTR 50V/200mA 300mW	2
RS2289	POT. TRIM. 1K-OHM	2	RS2267	RES C/F 330 ohm 5% 1/3W	1
CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	7	RS2326	RES C/F 220 ohm 5% 1/3W	2
RS2268	RES C/F 33Kohm 5% 1/3W	4	RS2414	RES C/F 1.2Kohm 5% 1/3W	1
FS1074	Fuse Slow Blow 6.3A 250V	2	RS2172	RES FUSE 100 ohm 5% 1/4W	2
CP1707	Electrolytic Cap. 10uF 50	6	RS2263	RES C/F 15Kohm 5% 1/3W	2
RS2418	RES FUSE 330 ohm 2% 1/4W	2	RS2171	RES FUSE 10 ohm 5% 1/4W	4
RS2252	RES C/F MINI 560 ohm 5%	2	RS2234	RES C/F MINI 2.2Kohm 5%	5
RS2417	RES C/F 560 OHM 5% 1/3W	2	RS2238	RES C/F MINI 2.7Kohm 5%	1
WI1702	JUMPER WIRE 24 AWG BARE	69	RS2376	RES C/F 47 ohm 5% 1/3W	2
RS2237	RES C/F MINI 270 ohm 5%	2	RS2167	RES FUSE 100 ohm 2% 1/4W	3
CL1228	"CLUSTER, SUB-C & L/R FEST"	1	RS2168	RES FUSE 15 ohm 2% 1/4W	2
TP1124	"ELECT TAPE 0.250"" WIDE"	0.345	RS2169	RES FUSE 2.2 ohm 5% 1/4W	2
TP1125	"ELECT TAPE 0.250"" WIDE"	0.22	RS2321	RES FUSE 4.7 ohm 5% 1/4W	4
TP1126	"ELECT TAPE 0.250"" WIDE"	0.345	RS2271	RES M/O F/R 0.22ohm 5% 3W	4
TP1127	"ELECT TAPE 0.250"" WIDE"	0.22	RS2240	RES C/F MINI 3.3Kohm 5%	2
LB1265	Bar Code Traceability Lab	2	RS2249	RES C/F MINI 4.7Kohm 5%	4
XX1328	BUSHING	1	RS2235	RES C/F MINI 22Kohm 5%	1
HS1161	HEATSINK FOR FESTIVAL	1	RS2328	RES M/O F/R 15 ohm 5% 2W	1
HS1162	HEATSINK FOR FESTIVAL	2	RS2224	RES C/F MIN 10Kohm 5%	1
BR1521	METAL FITTING	2	RS2225	RES C/F MINI 100Kohm 5%	1
SC1294	"SCREW, RND, W+"	12	RS2243	RES C/F MINI 3.3Mohm 5%	1
SC1295	"SCREW, BND+ (M4x20)"	6	RS2256	RES C/F MINI 68Kohm 5%	1
SC1261	"SCREW,BND T+ (3x8)"	20	RS2241	RES C/F MINI 33Kohm 5%	1
PM1366	Gasket for BASS20/16	1	RS2236	RES C/F MINI 220Kohm 5%	1
LB1336	LABEL FUSE REPL (FRENCH)	2	TE1197	Terminal Prime-Time	1
WA1075	Washer Hel.Spring Lck #8 N	6	RS2289	POT. TRIM. 1K-OHM	1
PM1331	Plastic Bag Pink Antistat	1	CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	6
SP1090	SILPAD TO-218 K-10 W/ Adh	9	RS2268	RES C/F 33Kohm 5% 1/3W	2
SA1737	SUBWOOFER & FILTER	1	FS1074	Fuse Slow Blow 6.3A 250V	2
SA1781	CLUSTER ASSY SUBWFR/TERM	1	CP1707	Electrolytic Cap. 10uF 50	4
SA1740	SUBWOOFER PCB ASSEMBLY	1	RS2390	RES FUSE 560 ohm 2% 1/4W	2
CP1814	Cap Alum El 47uF 20% 35V	1	RS2229	RES C/F MINI 1.5Kohm 5%	4
CP1750	Ceramic Cap. 68pF 50V	1	RS2176	RES FUSE 560 ohm 5% 1/4W	4
CP1731	Pol. Prop. Flm Cap. 1000p	1	RS2262	RES C/F 1.5Kohm 5% 1/3W	2
CP1861	CAP CERAMIC 6pF 50V	2	RS2416	RES C/F 680 ohm 5% 1/3W	2
CP1695	"CAP, ELECT, 470uF, 6.3V"	1	WI1702	JUMPER WIRE 24 AWG BARE	49
CP1749	Ceramic Cap. 100pF 50V	2	RS2237	RES C/F MINI 270 ohm 5%	1
CP1892	CAP AL EL 470uF 20% 50V	2	SA1741	FILTER-TERMINAL PCB	1
CP1817	Cap Poly Film 68nF 5% 50V	1	CP1814	Cap Alum El 47uF 20% 35V	14
CP1706	Electrolytic Cap. 1uF 50V	2	CP1750	Ceramic Cap. 68pF 50V	9
CP1697	"CAP, ELECT. 100uF, 16V"	1	CP1717	"CAP, MTL.FILM, 0.1uF, 50V"	13
CP1810	"CAP. ELECT. 10,000uF, 50V"	2	CP1893	CAP POLYPROP 1800pF 5%	4
CO1368	Connector 3P 3.96mm 7A 25	1	CP1894	CAP POLY 0.39uF 5% 50V	1
HA1184	HARNESS	1	CP1895	CAP POLY 0.47uF 5% 50V	1
HA1185	HARNESS	1	CP1896	CAP AL EL 2200uF 20% 35V	2
DI1205	Switching Diode 90V 0.3W	3	CP1722	Metallized Flm Cap. 0.01u	10
DI1192	"Zener Diode 0.4W (T/R,2"")"	1	CP1731	Pol. Prop. Flm Cap. 1000p	4
DI1189	Bridge Diode 200V 4A	1	CP1843	"CAP.CERAM, 4700pF, 250V"	2
FH1007	Fuse Holder	4	CP1706	Electrolytic Cap. 1uF 50V	4
TR1286	NPN XSTR 90V/50mA 300mW	4	CP1882	POLYPROPELENE FILM	4
TR1291	NPN XSTR 50V/200mA 300mW	3	CO1367	Connector 4P 2mm 2A 100V	3
TR1279	N-CH FET 50V/6.5mA 300mW	1	CO1401	CONNECTOR 4-POS	2

Component Audio System

Harman Kardon

CO1392	Connector DIN 8-Pos	1	SC1295	"SCREW, BND+ (M4x20)"	3
CO1366	Connector 2P 7.92mm 7A 25	1	SC1261	"SCREW,BND T+ (3x8)"	12
CO1373	Connector 2.5A 250V	1	SC1296	"SCREW, BND T+"	7
CO1368	Connector 3P 3.96mm 7A 25	1	LB1333	LABEL FESTIVAL 80 (US)	1
DI1205	Switching Diode 90V 0.3W	4	PM1366	Gasket for BASS20/16	1
DI1192	"Zener Diode 0.4W (T/R,2")"	1	SP1098	"SPONGE, POLYURETHANE"	1
DI1201	Diode Rectifier 1 A 400V	5	LB1336	LABEL FUSE REPL (FRENCH)	2
LE1032	Led Bicolor Red/Green 5mm	1	WA1075	Washer Hel.Sprng Lck #8 N	3
FH1007	Fuse Holder	6	PM1331	Plastic Bag Pink Antistat	1
IC1226	IC	10	SP1090	SILPAD TO-218 K-10 W/ Adh	5
IC1291	IC	1	MS1065	"Nylon Cable Tie 3"L Nat."	5
IC1311	IC VOLTAGE REGULATOR	1	SC1297	"SCREW, RND,W+ (4.1x16)"	4
TR1287	PNP XSTR 100V/1A 900mW	2	SC1298	"SCREW, BND+ (M4x12)"	4
TR1291	NPN XSTR 50V/200mA 300mW	4	PM1476	STYROFOAM TRAY FESTI. 80	2
TR1290	PNP XSTR 50V/200mA 300mW	1	PM1367	Pallet Cover	0.0667
RS2239	RES C/F MINI 330 ohm 5%	9	WA1075	Washer Hel.Sprng Lck #8 N	4
RS2241	RES C/F MINI 33Kohm 5%	7	SA1940	XMER FESTIVAL-80US ASSY	1
RS2291	RES C/F MINI 27Kohm 5%	4	MI1207	TRANSFORMER SUBWFR (US)	1
RS2223	RES C/F MINI 1Kohm 5%	8	TP1124	"ELECT TAPE 0.250" WIDE"	0.22
RS2230	RES C/F MINI 15Kohm 5%	4	TP1126	"ELECT TAPE 0.250" WIDE"	0.22
RS2240	RES C/F MINI 3.3Kohm 5%	5	TP1127	"ELECT TAPE 0.250" WIDE"	0.22
RS2260	RES C/F MINI 8.2Kohm 5%	8	TP1128	"ELECT TAPE 0.250" WIDE"	0.22
RS2225	RES C/F MINI 100Kohm 5%	5	TP1129	"ELECT TAPE 0.250" WIDE"	0.22
RS2374	RES C/F MINI 12Kohm 5%	1			
RS2249	RES C/F MINI 4.7Kohm 5%	3			
RS2378	RES C/F MINI 27 ohm 5%	1			
RS2250	RES C/F MINI 47Kohm 5%	1			
RS2375	RES C/F MINI 68 ohm 5%	1			
RS2276	RES C/F MINI 220 ohm 5%	2			
RS2236	RES C/F MINI 220Kohm 5%	4			
RS2229	RES C/F MINI 1.5Kohm 5%	2			
FS1092	FUSE 8A 125V	1			
RE1022	Relay	1			
TE1208	TERMINAL PUSH	1			
TE1209	"TERMINAL, PUSH"	1			
RS1794	POTENTIOMETER 50Kohm 20%	1			
RS2318	RES C/F MINI 6.8Kohm 5%	4			
TE1197	Terminal Prime-Time	1			
FS1090	FUSE SLOW BLOW 500mA 250V	2			
CP1697	"CAP, ELECT. 100uF, 16V"	1			
RS2224	RES C/F MIN 10Kohm 5%	5			
RS2234	RES C/F MINI 2.2Kohm 5%	6			
RS2253	RES C/F MINI 5.6Kohm 5%	1			
WI1702	JUMPER WIRE 24 AWG BARE	72			
RS2256	RES C/F MINI 68Kohm 5%	2			
CL1230	"CLUSTER, SUBWFR, FEST-80"	1			
SP1097	INSULATOR PVC	1			
IM1079	"Tubing Shrinkable 1/2" 10"	0.1667			
TP1124	"ELECT TAPE 0.250" WIDE"	0.021			
TP1125	"ELECT TAPE 0.250" WIDE"	0.021			
TP1126	"ELECT TAPE 0.250" WIDE"	0.021			
TP1127	"ELECT TAPE 0.250" WIDE"	0.131			
TP1128	"ELECT TAPE 0.250" WIDE"	0.152			
TP1129	"ELECT TAPE 0.250" WIDE"	0.021			
LB1265	Bar Code Traceability Lab	2			
HS1160	HEATSINK FOR FESTIVAL	1			
XX1327	CLOSE UP MOLD FOR	1			
BR1522	METAL FITTING	1			
BR1523	METAL FITTING	1			
XX1259	Knob Black Custom	1			
BR1533	"ORNAMENT, PVC"	1			
HS1162	HEATSINK FOR FESTIVAL	1			
SC1294	"SCREW, RND, W+"	12			

MECHANICAL ASSEMBLY FESTIVAL-60-US TOP-UNIT-201-01



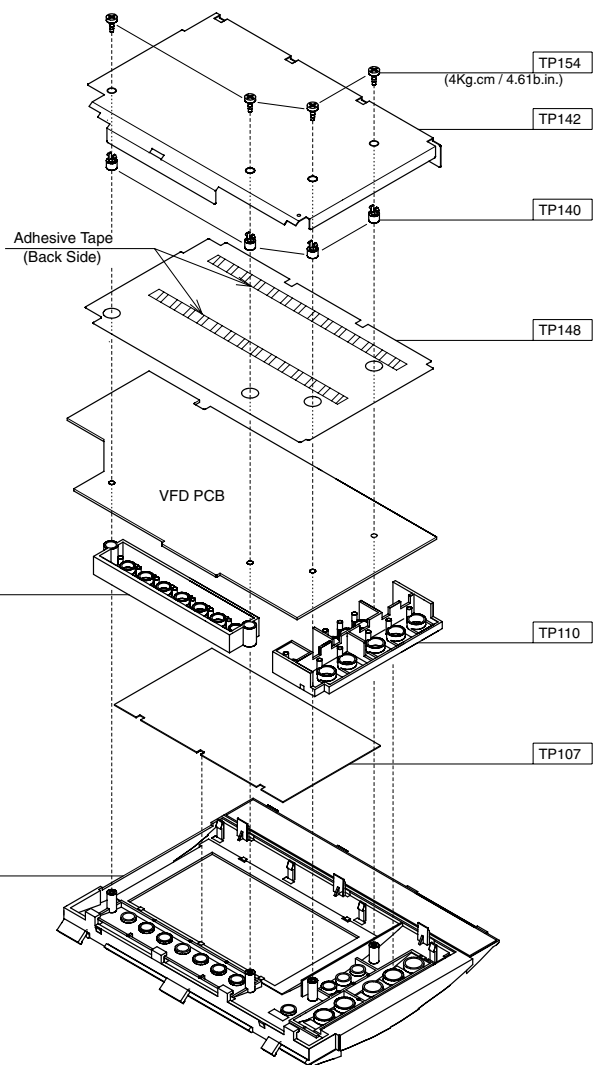
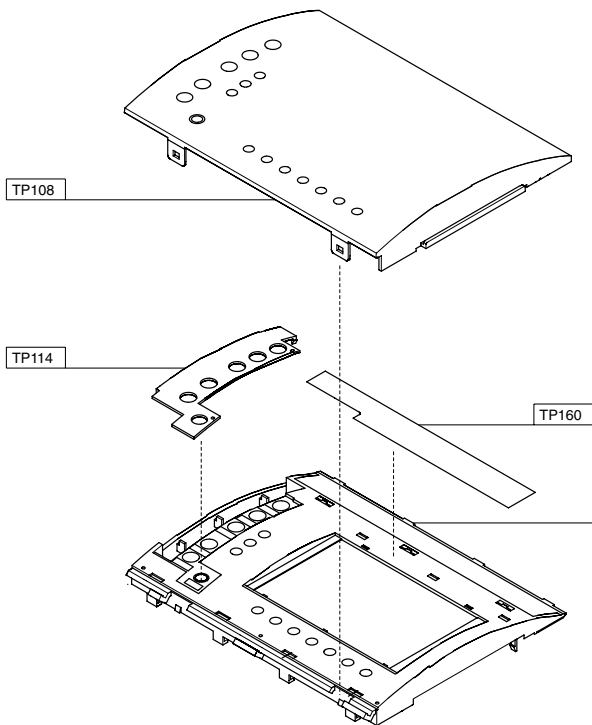
REf.No.	Parts No.	Description	Qty
TP 119	2216H001	SHIELD PLATE	1
TP 120	2216H002	SHIELD PLATE	1
TP 121	2219H010	METAL FITTNG	1
TP 125	2224H003	HOLDER	1
TP 126	2224H004	HOLDER	1
TP 133	(2592H30082)	(SCREW,FPT+)	4
TP 134	2343H300826	SCREW,CSKT+	4
TP 135	2222H005	HEAT SINK	3
TP 152	2327H301029	SCREW,BND+	3
TP 158	2216HSO13	SHIELD PLATE	1

**FESTIVAL-60-US
MECHANICAL ASSEMBLY
TOP-UNIT-201-01**

MECHANICAL ASSEMBLY FESTIVAL-60-US TOP-UNIT-201-02

**FESTIVAL-60-US
MECHANICAL ASSEMBLY
TOP-UNIT-201-02**

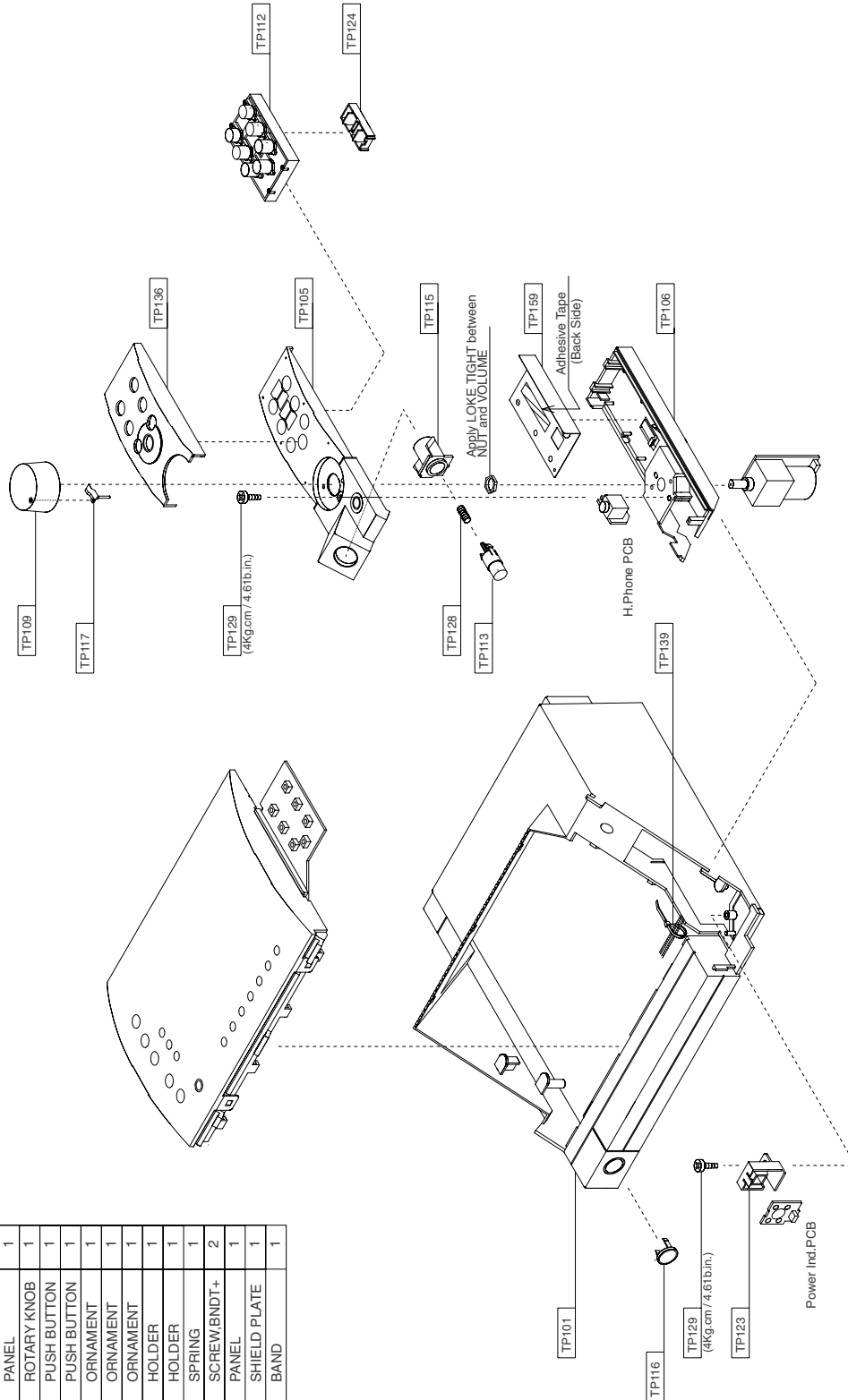
REF.No.	Parts No.	Description	Qty
TP 104	1442H00201	PANEL	1
TP 107	1512H00101	PLATE	1
TP 108	1532H00301	WINDOW	1
TP 110	1662H00801	PUSH BUTTON	1
TP 111	1662H00901	PUSH BUTTON	1
TP 114	1722H00101	INDICA PLATE	1
TP 140	2132H006	SPACER	4
TP 142	2216HS008	SHIELD PLATE	1
TP 148	2224HS004	INSULATOR	1
TP 154	2347H301626	SCREW,BNDT+	4
TP 160	2134HS002	ADHESI SHEET	1



MECHANICAL ASSEMBLY FESTIVAL-60-US TOP-UNIT-201-03

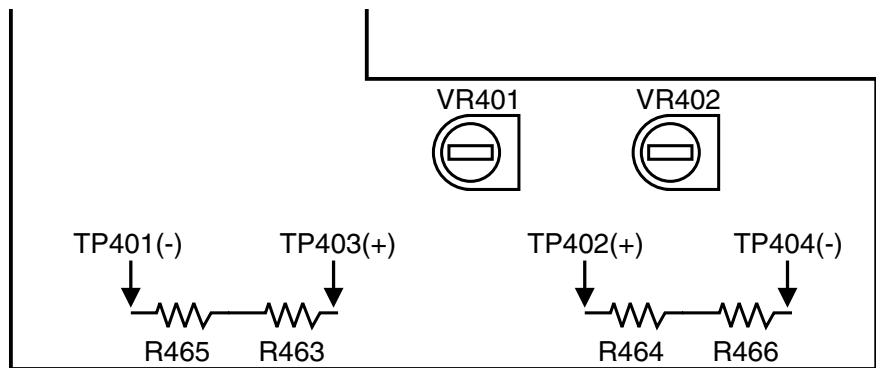
FESTIVAL-60-US
MECHANICAL ASSEMBLY
TOP-UNIT-201-03

REF. No.	Parts No.	Description	Qty
TP 101	1412H00101	CABINET	1
TP 105	1442H00301	PANEL	1
TP 106	1442H00401	PANEL	1
TP 109	1632H00301	ROTARY KNOB	1
TP 112	1662H01001	PUSH BUTTON	1
TP 113	1662H01201	PUSH BUTTON	1
TP 115	1742H00101	ORNAMENT	1
TP 116	1742H00201	ORNAMENT	1
TP 117	1742H00301	ORNAMENT	1
TP 123	2240H001	HOLDER	1
TP 124	2240H002	HOLDER	1
TP 128	2651H001	SPRING	1
TP 129	2347H301026	SCREW/BNDT+	2
TP 136	1442H00701	PANEL	1
TP 159	2216HSO14	SHIELD PLATE	1
TP 139	2144H001	BAND	1



ADJUSTMENT Festival 60/80 US (AMP UNIT)

Adjustment Item	Idling Current Adjustment
Condition	Set the Function selector to the "CD" position Set the Volume control to minimum Make the adjustment at a room temperature of 77 F(25 C)
Equipment	DC DIGITAL VOLT METER
Connection	Connect the Digital Volt Meter to TP401(-), TP403(+) Connect the Digital Volt Meter to TP404(-), TP402(+)



Adjustment Point	VR401(L channel) VR402(R channel)
Adjustment Method	Adjust the VR401 so that the Digital Volt Meter read $33 \pm 0.5\text{mV}$. Adjust the VR402 so that the Digital Volt Meter read $33 \pm 0.5\text{mV}$. After the above adjustment, leave the unit with its power on for longer than 3 minutes and then repeat the same adjustment.

US AM ADJUSTMENT Festival 60/80 (TUNER UNIT)

Adjustment Item	AM Adjustment
Condition	Set the Function selector to the "AM" position.
Equipment	DIGITAL VOLT METER AM SIGNAL GENERATOR and LOOP ANTENNA 2 CH VOLT METER OSCILLOSCOPE AM ANTENNA COIL See Fig.1 and Fig.4 on page XX
Connection and Set Up	INPUT: AM ANTENNA TERMINAL Input 600kHz(400Hz, 30% modulation), 282uV/m(49dBuV/m) of the Loop Antenna of a Unit. OUTPUT: P203(-) and JP204(+) for Frequency Range adjustment. See Fig.1 and Fig.4 on page XX
Adjustment Point	1. MW OSC of RF215 (Orange core) for Frequency Range. 2. T231 for IF(Inter Frequency). 3. MW ANT. Coil of RF215 (Black core) for Tracking.
Adjustment Method	1. Frequency Range - Set the tuning frequency of UNIT to 600kHz. Adjust RF215 (Orange core) so that leading of DC VOLT METER reads 1.8 0. 2. IF - Adjust T231 so that output level reads maximum. 3. Tracking - Adjust RF215 (Black core) so that output level reads maximum.

US FM ADJUSTMENT Festival 60/80 (TUNER UNIT)

Adjustment Item	FM Adjustment
Equipment	DIGITAL VOLT METER FM SIGNAL GENERATOR and DUMMY ANTENNA (Fig.3) FM STEREO SIGNAL GENERATOR 2CH VOLT METER OSCILLOSCOPE 2ch DISTORTION METER See Fig.2 and Fig.5 on page XX
Connection and Set Up	INPUT: FM ANTENNA TERMINAL Input 97.9MHz, 65.2dBf, 1kHz, 75kHz deviation for Discriminator adjustment. Input 1kHz, L+R=46%, R-L=46%, Pilot 9% from STEREO SIGNAL GENERATOR through FM S.S.G with 97.9MHz, 65.2dBf, 75kHz deviation. OUTPUT: JP226(-) and JP225(+) for Discriminator adjustment. Lch/Rch output (LCN251) Multiplex adjustment. See Fig.5 on page XX
(A)	Load Type SSG (W/75ohms Dummy): 60dBuV (SG)+65.2dBf (ANTENNA) Open Type SSG (W/75ohms Dummy): 66dBuV EMF (SG)+65.2dBf (ANTENNA)

...US FM ADJUSTMENT Festival 60/80 (TUNER UNIT) CONTINUED

Adjustment Point	<ol style="list-style-type: none"> 1. Discriminator (Fig.2) 2. VR251 for Multiplex adjustment. 3. VR231 for Signal Indicator Sensitivity adjustment.
Adjustment Method	<ol style="list-style-type: none"> 1. Discriminator (Fig.2) Adjust T232 so that leading of DIGITAL VOLT METER reads 0V 30mV. Adjust T233 and TU201 so that distortion level reads minimum. Adjust above both adjustment several times. 2. Multiplex (Fig.5) Adjust VR251 so that Separation Ratio "Lch to Rch" and "Rch to Lch" reads maximum and even level. 3. Signal Indicator Sensitivity (Fig.2)
(A)	<p>Input signal 97.9kHz, 35.2dBf, 1kHz, 75kHz Deviation. Adjust VR231 so that Signal (TUN.) Indicator just barely turns on.</p> <p>Input signal 97.9kHz, 34.2dBf, 1kHz, 75kHz Deviation. Confirm Signal (TUN.) Indicator turns off.</p>

US RDS ADJUSTMENT Festival 60/80 (TUNER UNIT)

Adjustment Item	RDS Adjustment
Condition	Set the Function selector to the "FM" position.
Equipment	<p>DIGITAL VOLT METER FM SIGNAL GENERATOR and DUMMY ANTENNA (Fig.3) RDS MODULATOR 2 CHANNEL VOLT METER OSCILLOSCOPE 2 CHANNEL DISTORTION METER See Fig.6 on page XX</p>
Connection and Set Up	<p>INPUT: FM ANTENNA TERMINAL Input 97.9MHz, 35.2dBf, 1kHz, 75kHz deviation and set PS, AF or PTY.</p>
(A)	<p>Load Type SSG (W/75ohms Dummy): 60dBuV (SG)=65.2dBf (ANTENNA), Open Type SSG (W/75ohms Dummy): 66dBuV EMF (SG)+65.2dBf (ANTENNA)</p>
Confirmation Method	<ol style="list-style-type: none"> 1. PS: A Program Service Name. AF: A List of Alternative Frequency. PTY: A Program Type.

European MW (AM) ADJUSTMENT Festival 60/80 (TUNER UNIT)

Adjustment Item	MW (AM) Adjustment
Condition	Set the Function selector to the "MW" position.
Equipment	DIGITAL VOLT METER AM SIGNAL GENERATOR and LOOP ANTENNA 2 CHANNEL VOLT METER OSCILLOSCOPE AM ANTENNA COIL See Fig.1 and Fig.4 on page XX
Connection and Set Up	INPUT: AM ANTENNA TERMINAL For OSC and IF: Input 603kHz(400Hz, 30% modulation), 282uV/m(49dBuV/m) to the Loop Antenna of a Unit. For Tracking: Input 999kHz(400Hz, 30% modulation), 159uv/m(44dBuV/m) to the Loop Antenna of a Unit. OUTPUT: JP203(-) and JP204(+) for Frequency Range adjustment. Lch/Rch output(LCN251) Inter Frequency and Tracking adjustment. See Fig.1 and Fig.4 on page XX
Adjustment Point	<ol style="list-style-type: none"> 1. MW OSC of RF215 (Black core) for Frequency Range. 2. T231 for IF(Inter Frequency). 3. MW ANT. Coil of RF215 (Yellow core) for Tracking.
Adjustment Method	<ol style="list-style-type: none"> 1. Frequency Range Set the tuning frequency of unit to 603Hz. Adjust RF215 (Black core) so that leading of DC VOLT METER reads 1.9 0.1V 2. IF Set the tuning frequency of unit to 999kHz. Adjust T231 so that output level reads maximum. 3. Trackng Adjust RF215 (Yellow core) so that output level reads maximum.

European LW (AM) ADJUSTMENT Festival 60/80 (TUNER UNIT)

Adjustment Item	LW (AM) Adjustment
Condition	Set the Function selector to the "LW" position.
Equipment	DIGITAL VOLT METER AM SIGNAL GENERATOR and LOOP ANTENNA 2 CHANNEL VOLT METER OSCILLOSCOPE AM ANTENNA COIL See Fig.1 and Fig.4 on page XX

...European LW (AM) ADJUSTMENT Festival 60/80 (TUNER UNIT) CONTINUED

Connection and Set Up	INPUT: AM ANTENNA TERMINAL For OSC: Input 150kHz(400Hz, 30% modulation), 501uV/m(54dBuV/m) to the Loop Antenna of a Unit. For Tracking: Input 210kHz(400Hz, 30% modulation), 501uv/m(54dBuV/m) to the Loop Antenna of a Unit.
Connection and Set Up	OUTPUT: JP203(-) and JP204(+) for Frequency Range adjustment. See Fig.1 and Fig.4 on page XX
Adjustment Point	<ol style="list-style-type: none"> 1. LW OSC of RF215 (Black core) for Frequency Range. 2. LW ANT. Coil of RF215 (Red core) for Tracking.
Adjustment Method	<ol style="list-style-type: none"> 1. Frequency Range Set the tuning frequency of UNIT to 150kHz. Adjust RF215 (Orange core) so that leading of DC VOLT METER reads 2.3 0.1V 2. Tracking Set the tuning frequency of UNIT to 210kHz. Adjust RF215 (Red core) so that output level reads maximum.

European FM ADJUSTMENT Festival 60/80 (TUNER UNIT)

Adjustment	FM Adjustment
Condition	Set the Function selector to the "FM" position.
Equipment	DIGITAL VOLT METER FM SIGNAL GENERATOR and DUMMY ANTENNA (Fig.3) FM STEREO SIGNAL GENERATOR 2 CHANNEL VOLT METER OSCILLOSCOPE 2 CHANNEL DISTORTION METER See Fig.2 and Fig.5 on page XX
Connction and Set Up	INPUT: FM ANTENNA TERMINAL Input 97.9MHz, 65.2dBf, 1kHz, 75kHz deviation for Discriminator adjustment. Input 1kHz, L+R=46%, R-L=46%, Pirot 9% from STEREO SIGNAL GENERATOR Through FM S.S.G with 97.9MHz, 65.2dBf, 75kHz deviation. OUTPUT JP226(-) and JP225(+) for Discriminator adjustment. Lch/Rch output (LCN251) Multiplex adjustment. See Fig.5 on page XX Load Type SSG (W/75ohms Dummy): 60duV (SG)=65.2dBf (ANTENNA) Open Type SSG (W/75ohms Dummy): 60duV EMF (SG)=65.2dBf (ANTENNA)
Adjustment Point	<ol style="list-style-type: none"> 1. Discriminator T232, T233 and IFT TU201 for Discriminator adjustment. 2. VR251 for Multiplex adjustment. 3. VR231 for Signal Indicator Sensitivity Adjustment.

...European FM ADJUSTMENT Festival 60/80 (TUNER UNIT) CONTINUED

Adjustment Method	<ol style="list-style-type: none"> 1. Discriminator (Fig.2) Adjust T232 so that leading of DIGITAL VOLT METER reads 0V 30mV. Adjust T233 and TU201 so that distortion level reads minimum. Adjust above both adjustment several times. 2. Multiplex (Fig.5) Adjust VR251 so that Separation Ratio "Lch to Rch" and "Rch to Lch" reads maximum and even level. 3. Signal Indicator Sensitivity (Fig.2) Input signal 97.9kHz, 35.2dBf, 1kHz, 75kHz Deviation. Adjust VR231 so that Signal (TUN.) Indicator just barely turns on. Input signal 97.9kHz, 34.2dBf, 1kHz, 75kHz Deviation. Confirm Signal (TUN.) Indicator turns off.
-------------------	--

European RDS ADJUSTMENT Festival 60/80 (TUNER UNIT)

Adjustment Item	RDS Adjustment
Condition	Set the Function selector to the "FM" position.
Equipment	DIGITAL VOLT METER FM SIGNAL GENERATOR and DUMMY ANTENNA (Fig.3) RDS MODULATOR 2 CHANNEL VOLT METER OSCILLOSCOPE 2 CHANNEL DISTORTION METER See Fig.6 see page XX
Connection and Set Up	INPUT: FM ANTENNA TERMINAL Input 97.9MHz, 37.2dBf, 1kHz, 75kHz deviation and set PS, AF or PTY. Load Type SSG (W/75ohms Dummy): 60dBuV (SG)=65.2dBf (ANTENNA), Open Type SSG (W/75ohms Dummy): 66dBuV EMF (SG)+65.2dBf (ANTENNA)
Confirmation Method	<ol style="list-style-type: none"> 1. PS: A Program Service Name. AF: A List of Alternative Frequency. PTY: A Program Type.

Festival-60/80-US/EU (2BAND) (RDS) ALIGNMENT PROCEDURE Figures 1-4

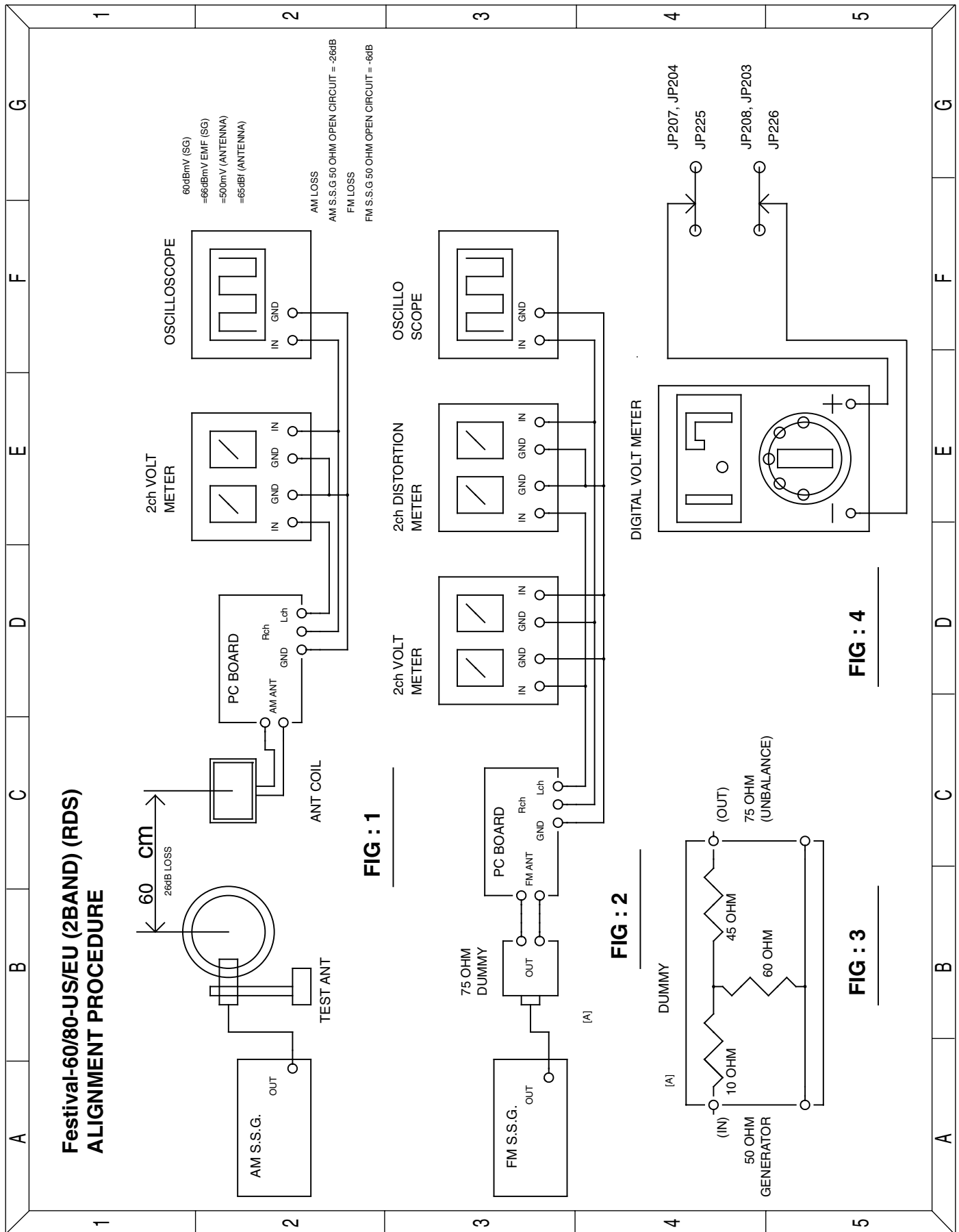


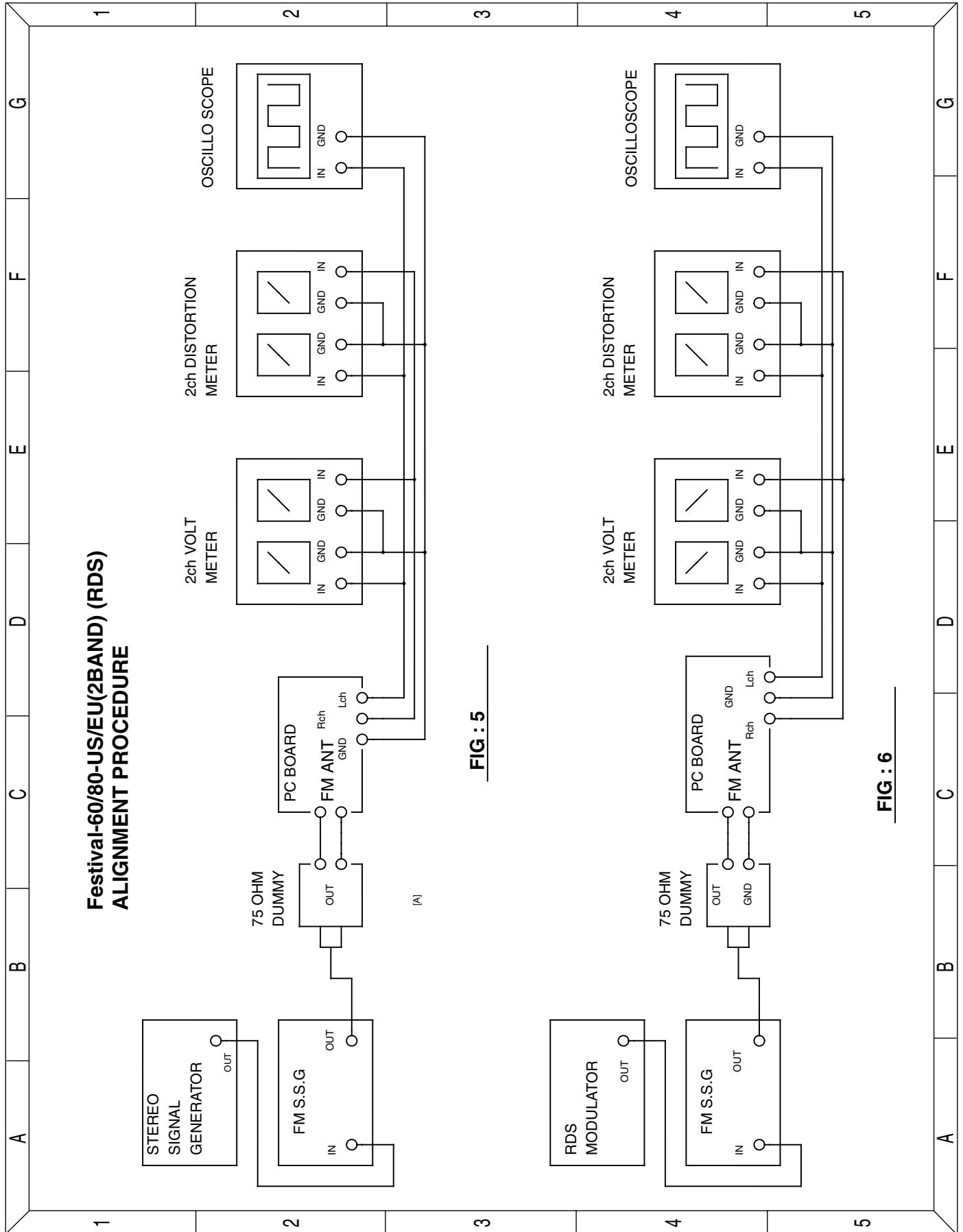
FIG : 1

FIG : 2

FIG : 3

FIG : 4

Festival-60/80-US/EU(2BAND) (RDS) ALIGNMENT PROCEDURE Figures 5 & 6



Festival-60/80-US/EU(2BAND) (RDS) ALIGNMENT PROCEDURE Figures 7 & 8

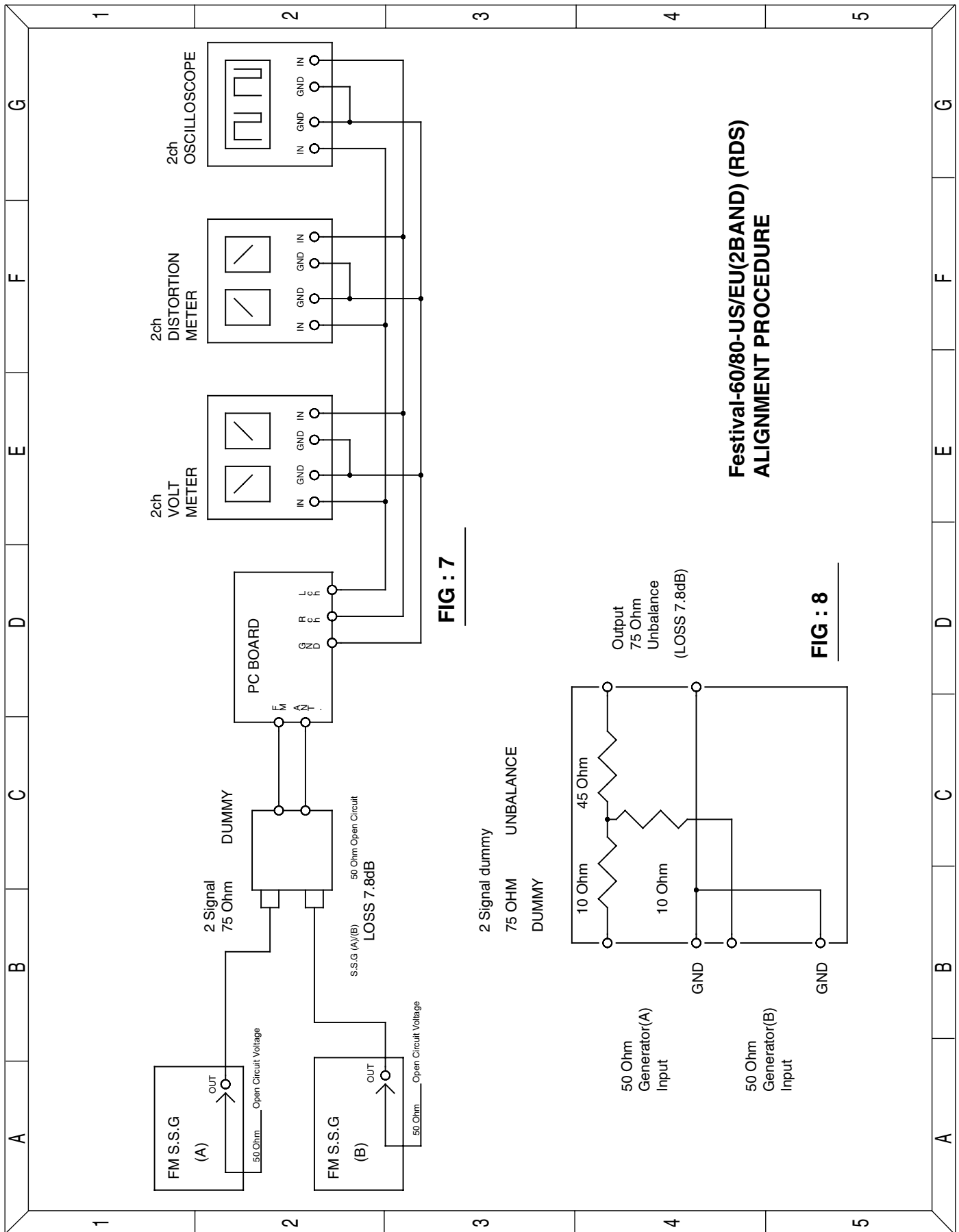
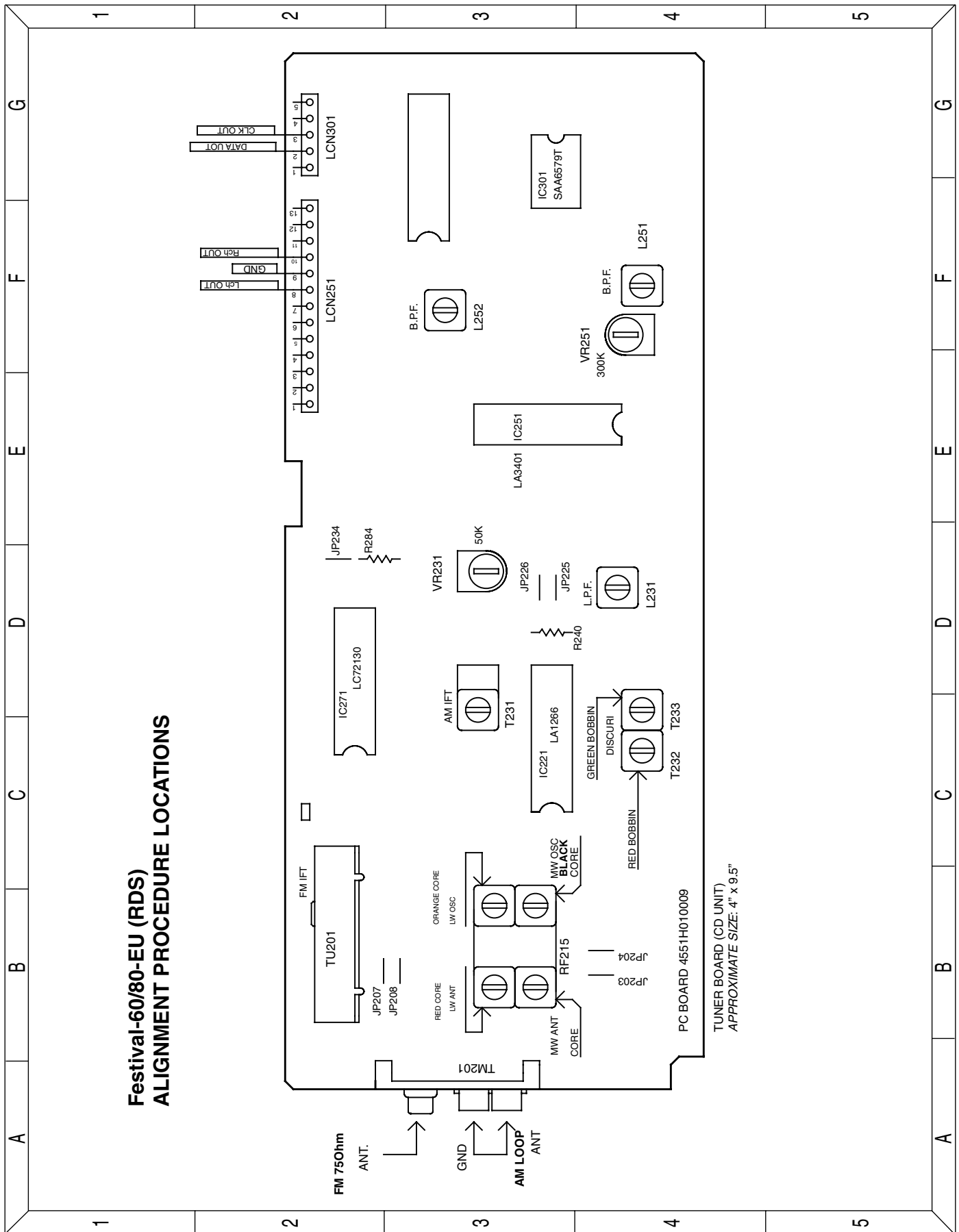


FIG : 7

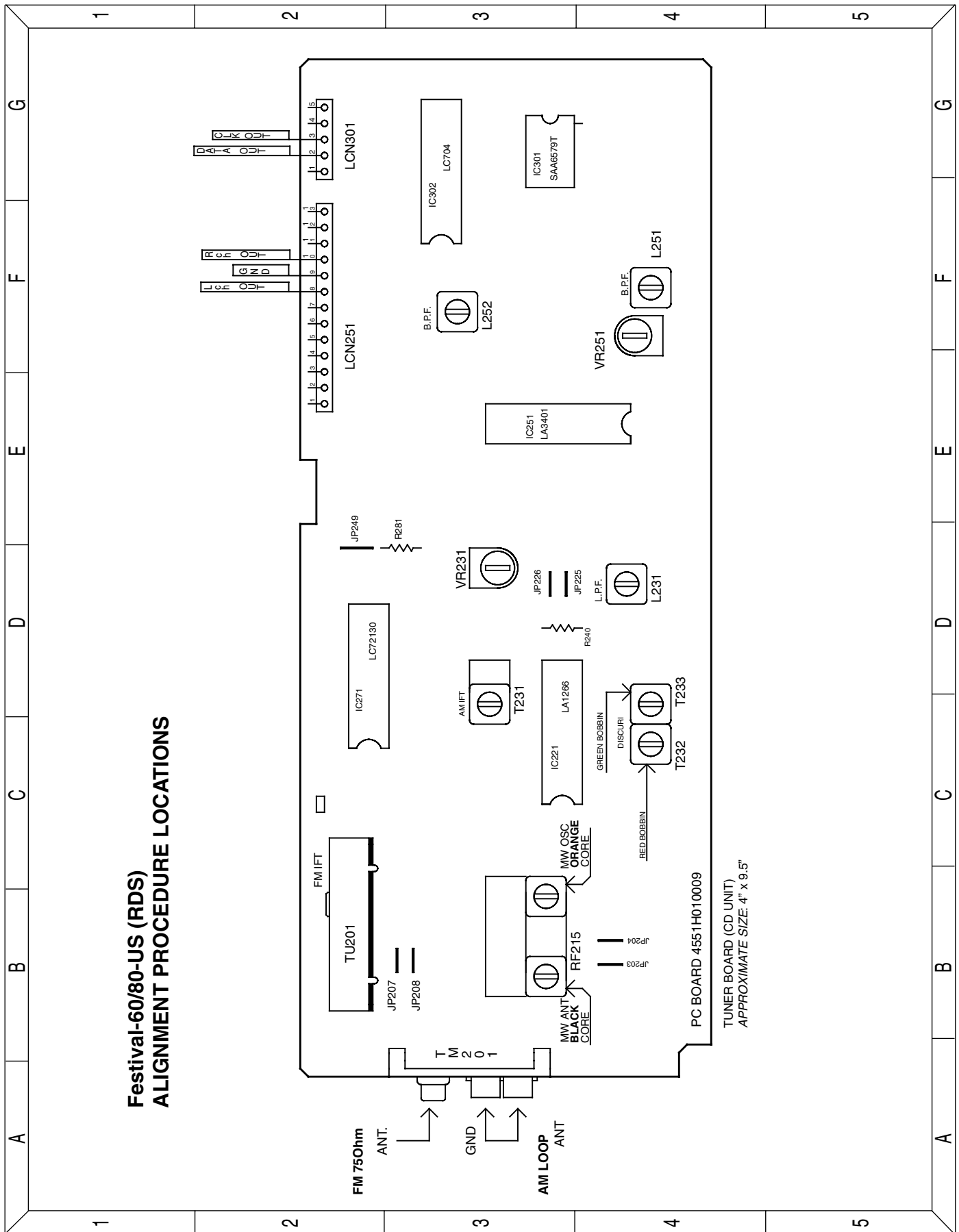
FIG : 8

Festival-60/80-US/EU(2BAND) (RDS)
ALIGNMENT PROCEDURE

Festival-60/80-EU (RDS) ALIGNMENT PROCEDURE LOCATIONS

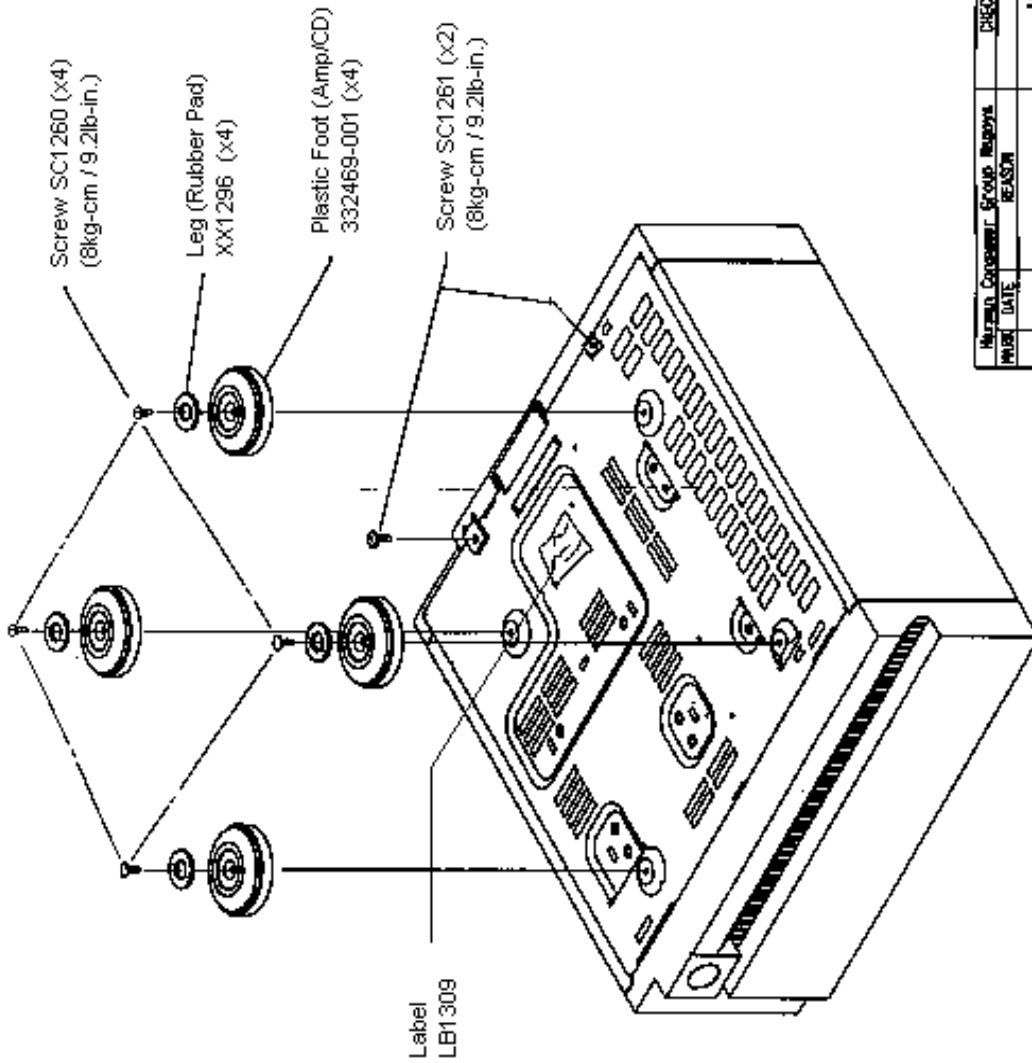


Festival-60/80-US (RDS) ALIGNMENT PROCEDURE LOCATIONS



Festival-60/80-US (RDS)
ALIGNMENT PROCEDURE LOCATIONS

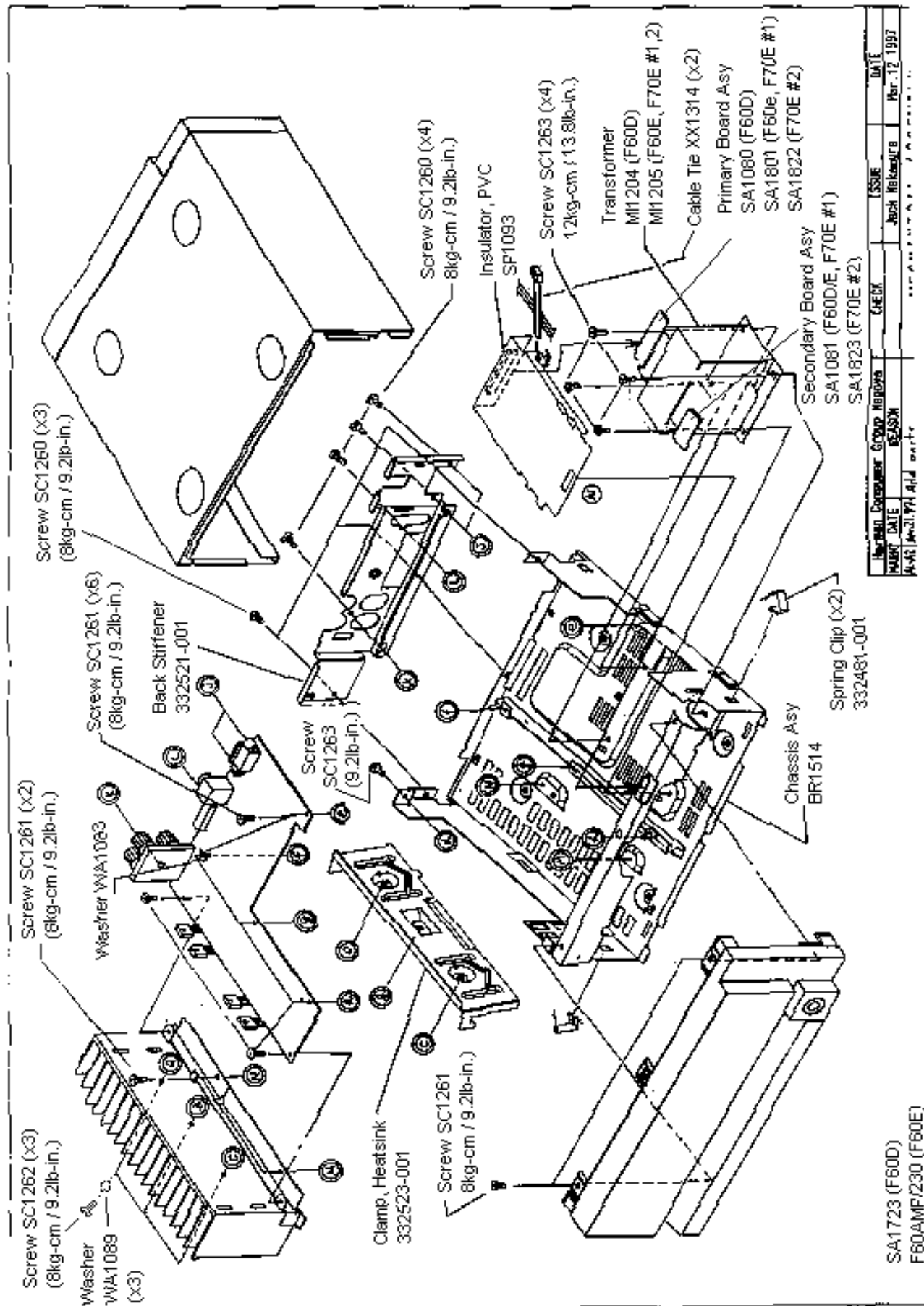
DISASSEMBLY DRAWING



Harman Component Group	ISSUE	DATE
REASON	Jack Mounts	Mar. 12, 1987
MECHANICAL ASSEMBLY		
TITLE	FESTIVAL-60-US	
DOCUMENT NUMBER	AMP-UNIT-201-03	

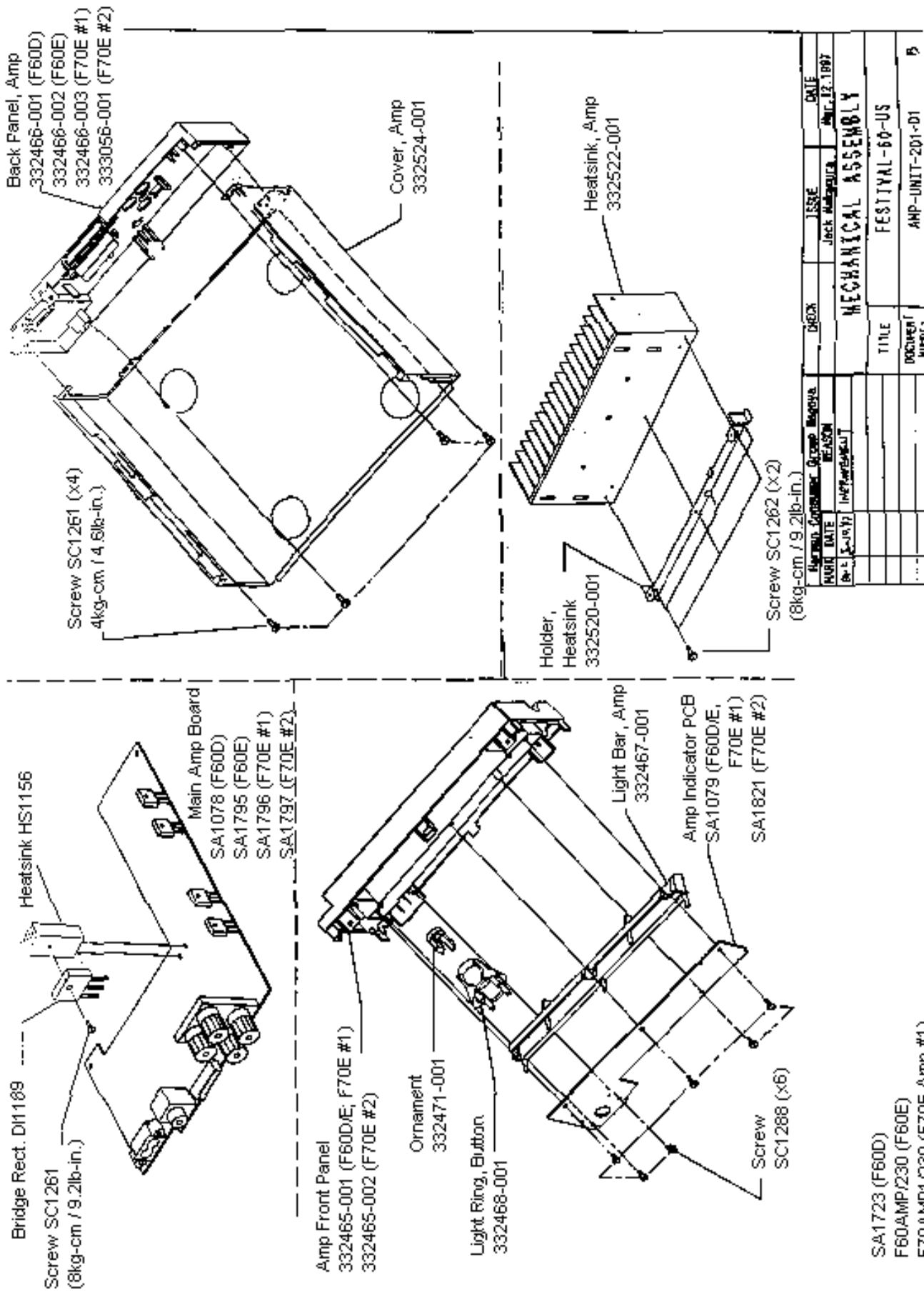
SA1723 (F60D)
 F60AMP/230 (F60E)
 F70AMP1/230 (F70E Amp #1)
 F70AMP2/230 (F70E Amp #2)

AMP01

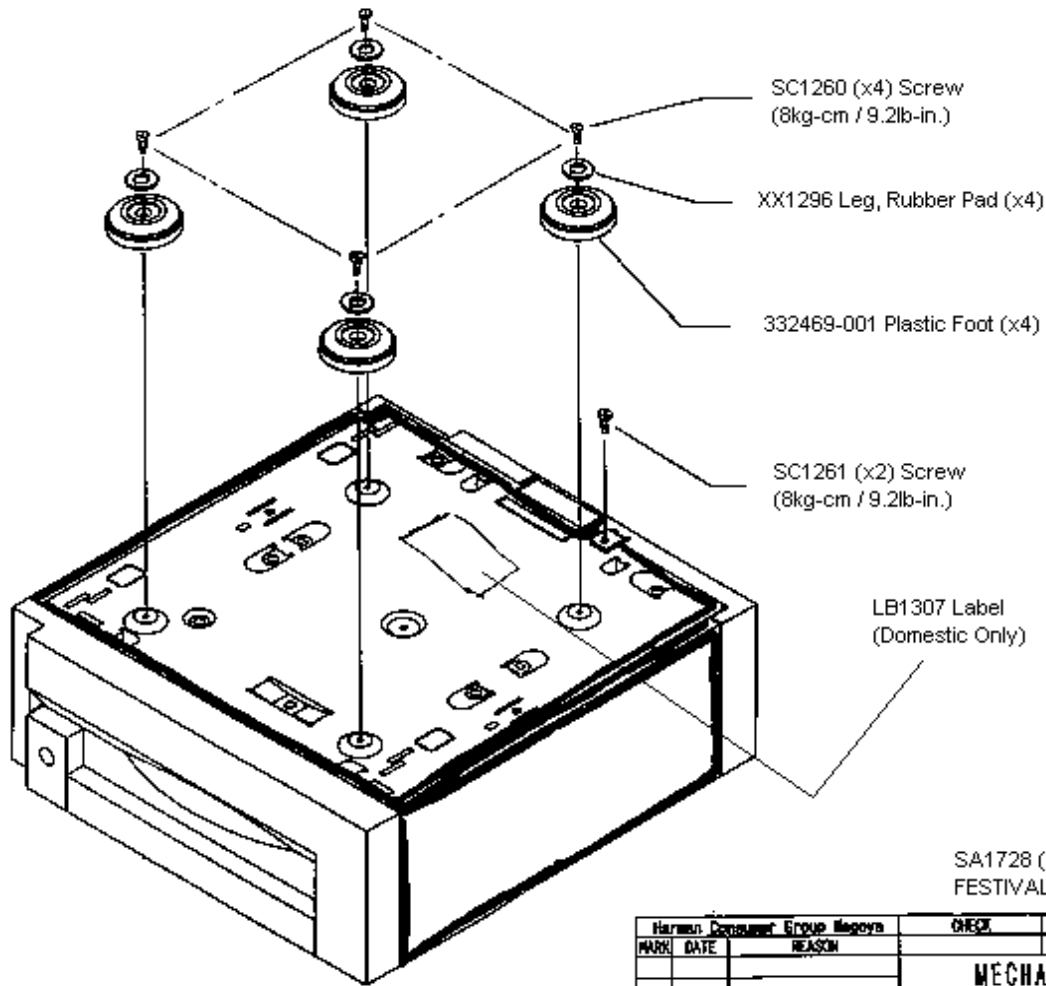


REVISION	DATE	ISSUE	DATE
1	10/12/97	Jack Rekasick	10/12/97
2	11/12/97	Jack Rekasick	11/12/97

- SA1723 (F60D)
- F60AMP1230 (F60E)
- F70AMP1230 (F70E Amp #1)
- F70AMP2230 (F70E Amp #2)

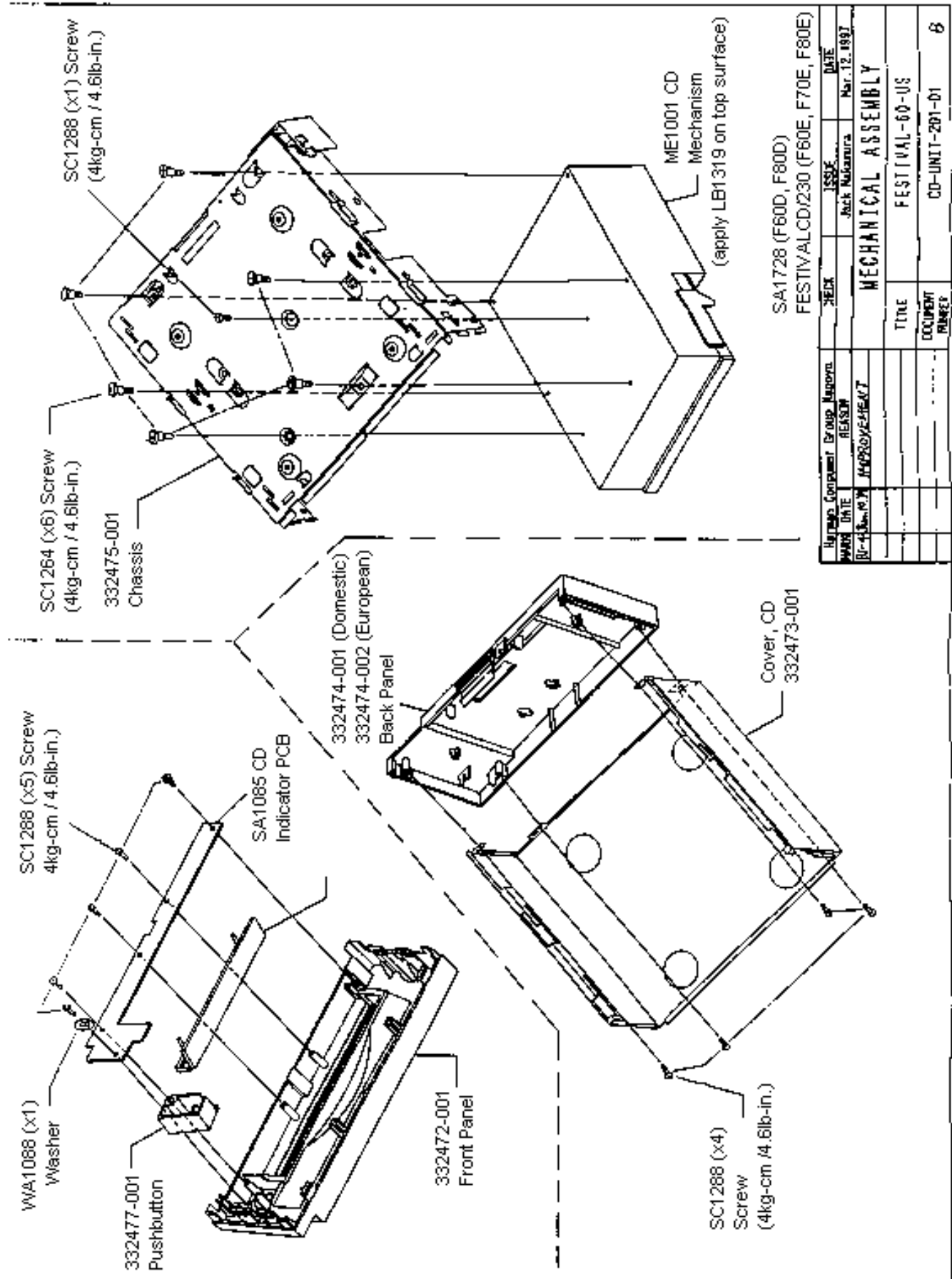


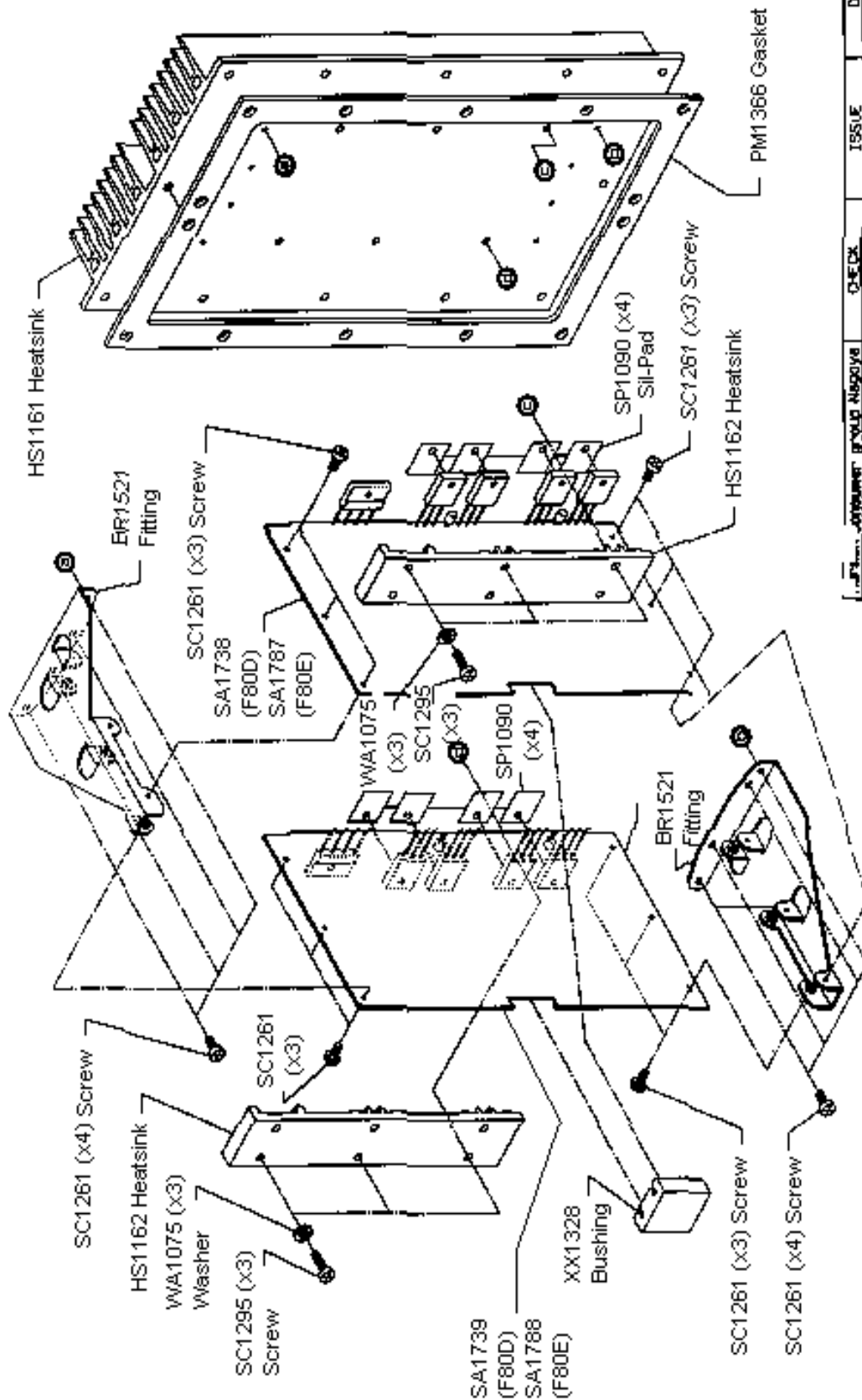
DATE	ISSUE	DATE
MAR 12 1987	Jack Magyara	MAR 12 1987
REASON	MECHANICAL ASSEMBLY	
REVISION		
TITLE	FESTIVAL-60-US	
DOCUMENT NUMBER	AMP-UNIT-201-01	5



SA1728 (F60D, F80D)
 FESTIVALCD/230 (F60E, F70E, F80E)

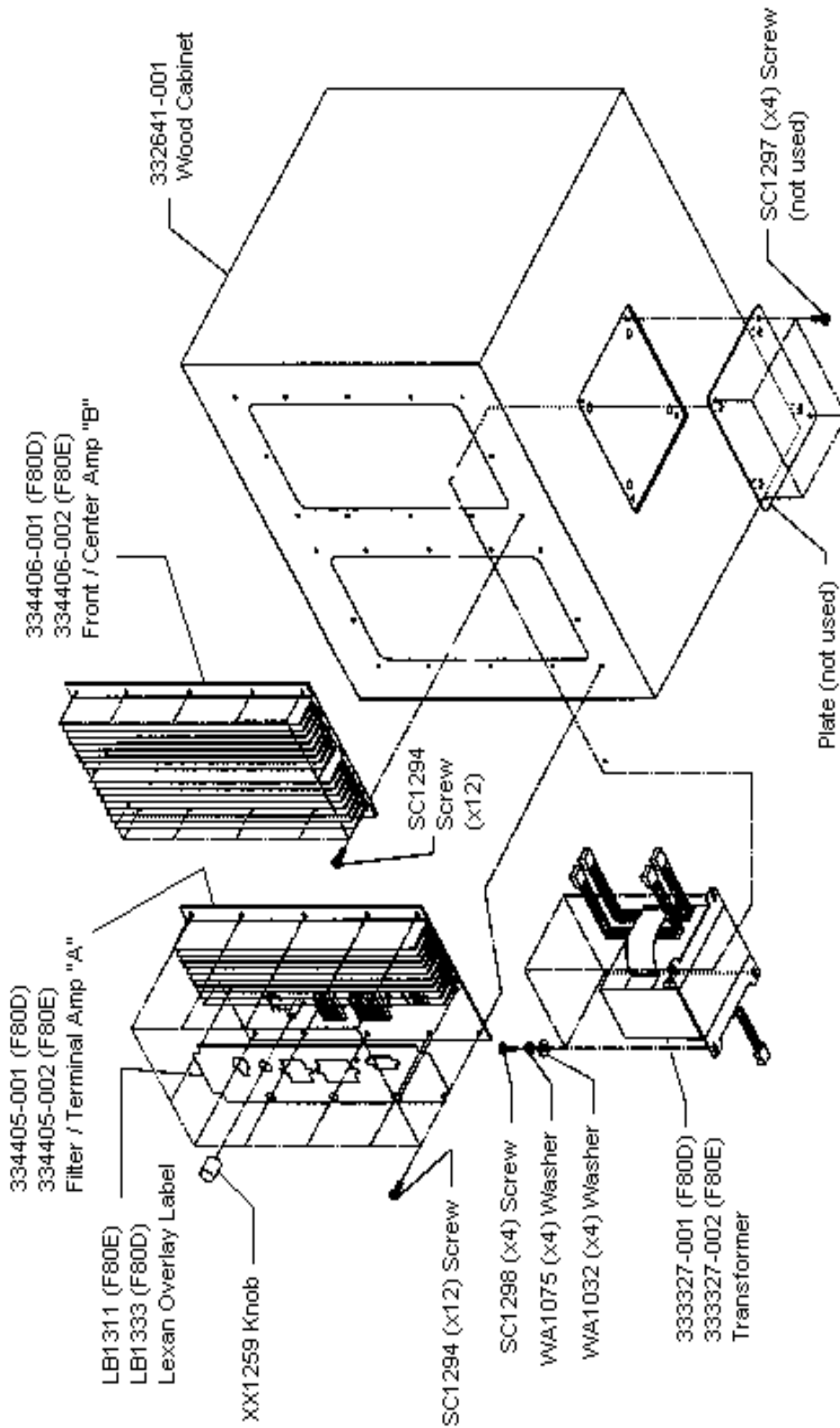
Harman Consumer Group Memoirs		ORIGIN	ISSUE	DATE
MARK	DATE	REASON	Jack Mahoney	Mar. 12, 1987
MECHANICAL ASSEMBLY				
			TITLE	FESTIVAL-60-US
			DOCUMENT NUMBER	CD-UNIT-201-03





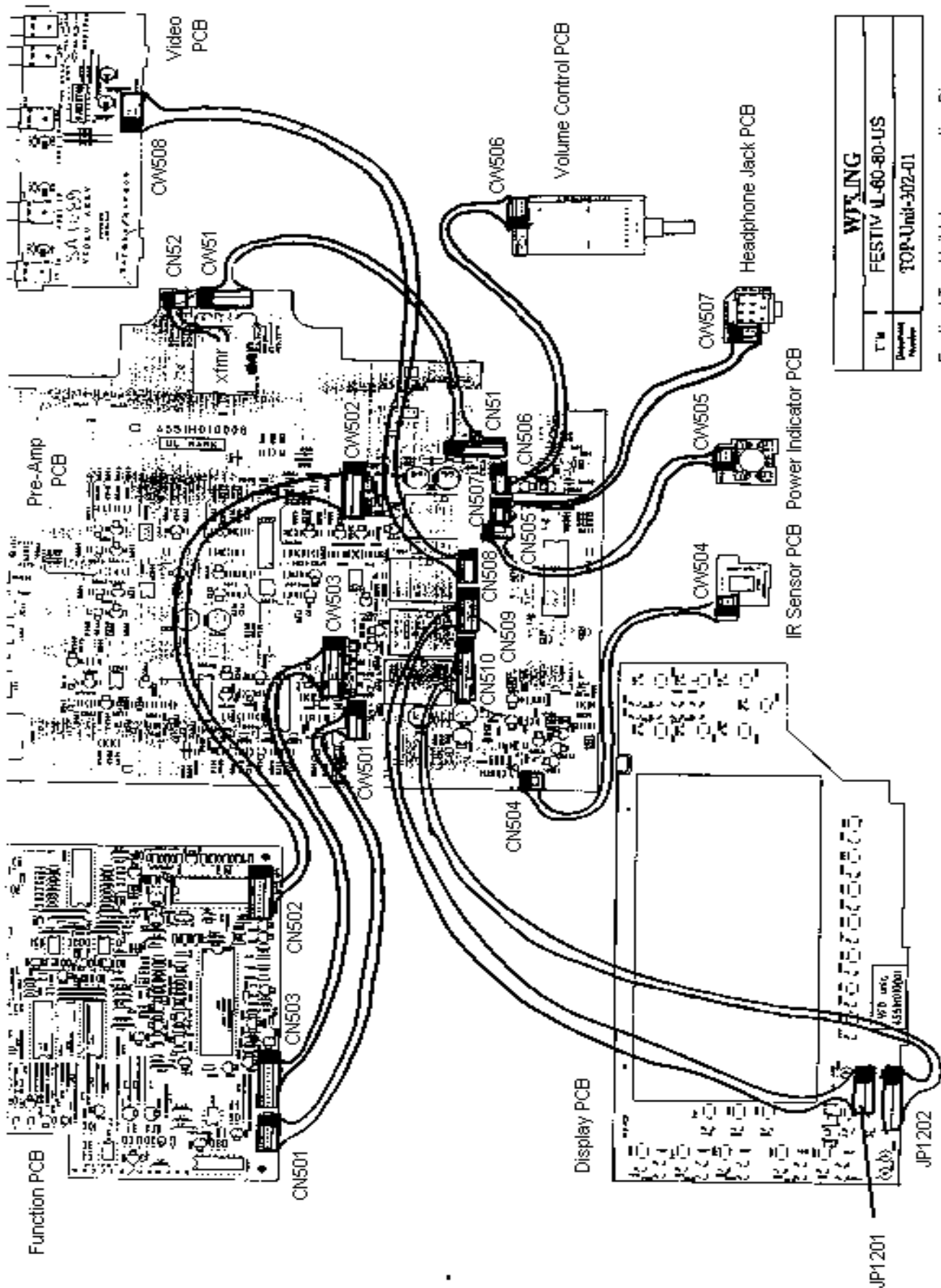
DATE	APPROVED BY	DESIGNED BY	ISSUE	DATE
MAR 1987	EJH	JUN 25 1987
MECHANICAL ASSEMBLY				
TITLE			FESTIVAL -80-US	
NUMBER			SUBWOOFER-201-01	

334406-001 (Domestic)
 334406-002 (European)
 Festival-80 Subwoofer Amplifier
 Front / Center Amp "B"

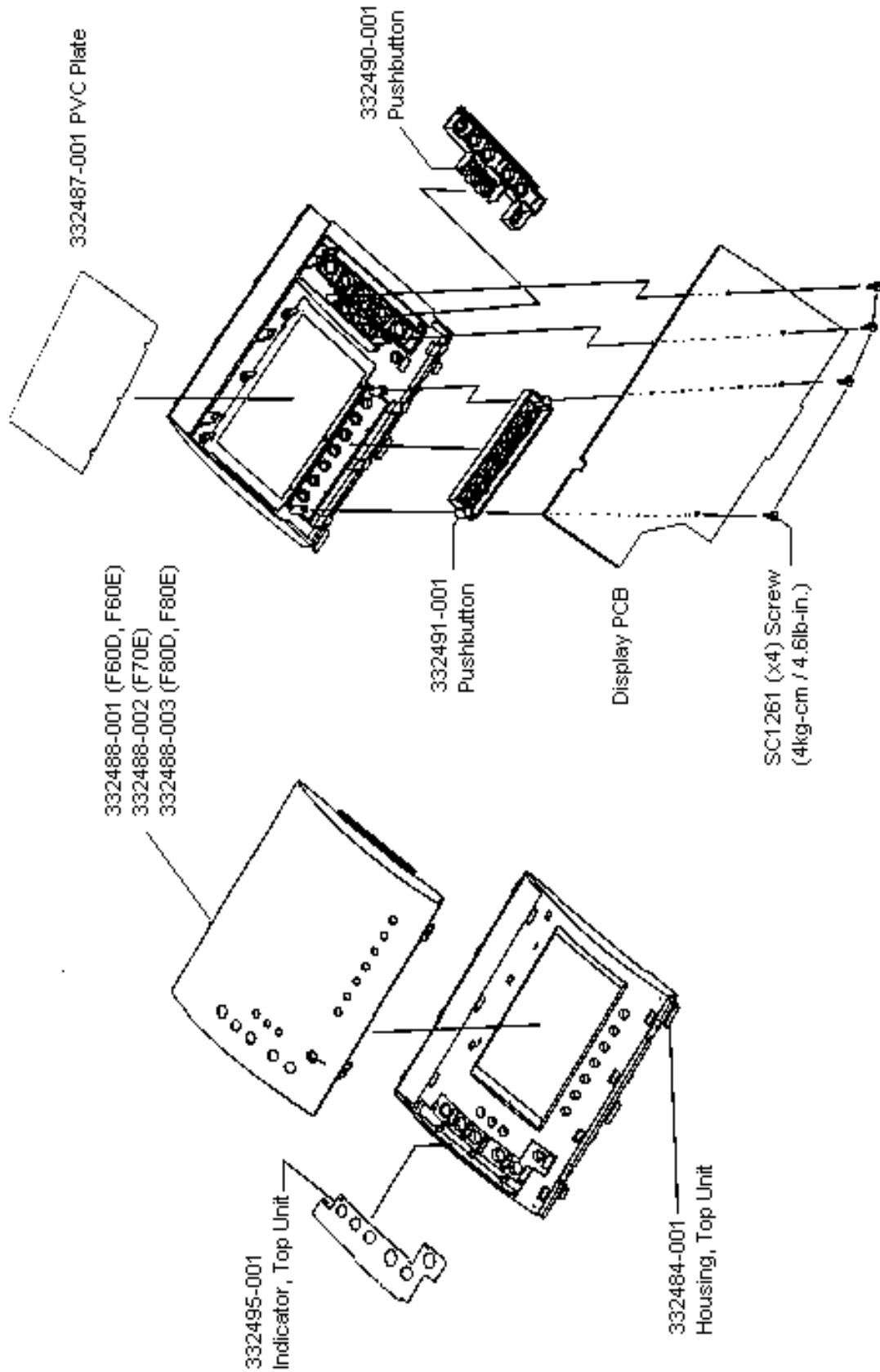


Harman Consumer Group Approval	DATE	REASON	DATE	ISSUE	DATE
				EJH Nakagabe	June 20, 1987
MECHANICAL ASSEMBLY					
TITLE			FESTIVAL-80-US		
DOCUMENT NUMBER			SUBWOOFER-201-03		

333321-001 (Domestic)
 333321-002 (European)
 Festival-80 Subwoofer Amplifier
 (Final Assembly)

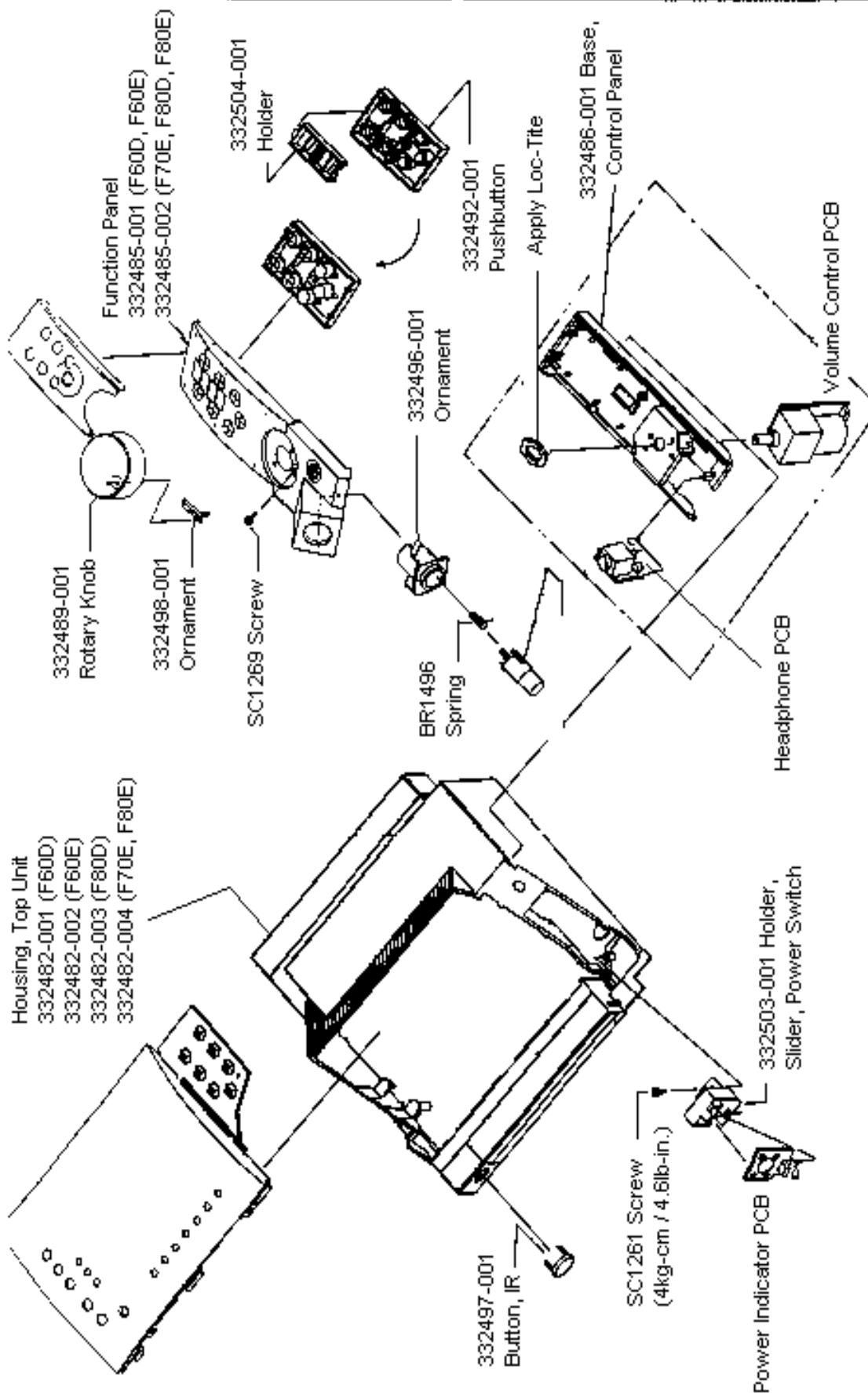


Festival Top Unit Interconnection Diagram



Revised Component Group Number	DATE	ISSUE	DATE
PERSON		Jack McArthur	MAR.17.1997
MECHANICAL ASSEMBLY			
		TITLE	FESTIVAL-60-US
		DOCUMENT NUMBER	TOP-UNIT-201-02

Festival Top Unit Mechanical Assembly



Harman Consumer Group Product	DATE	ISSUE	DATE
REASON		Jack Reburning	Apr. 12, 1987
MECHANICAL ASSEMBLY			
TITLE		FESTIVAL-60-05	
DOCUMENT NUMBER		TOP-UNIT-201-03	

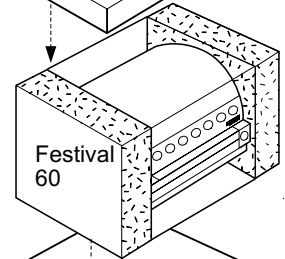
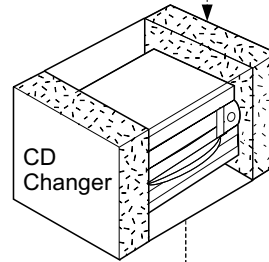
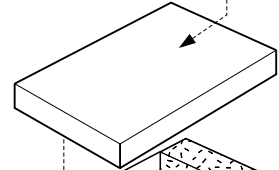
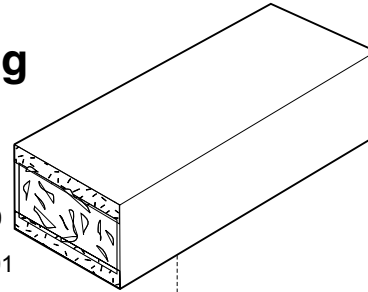
Festival Top Unit Mechanical Assembly

Festival 60/80 PACKING

Festival 80 Packing

Festival 60
Speakers
334563-001

Accessories
Owner's Manual
SH1110
Warranty card
SH1119



Festival 60
Subwoofer

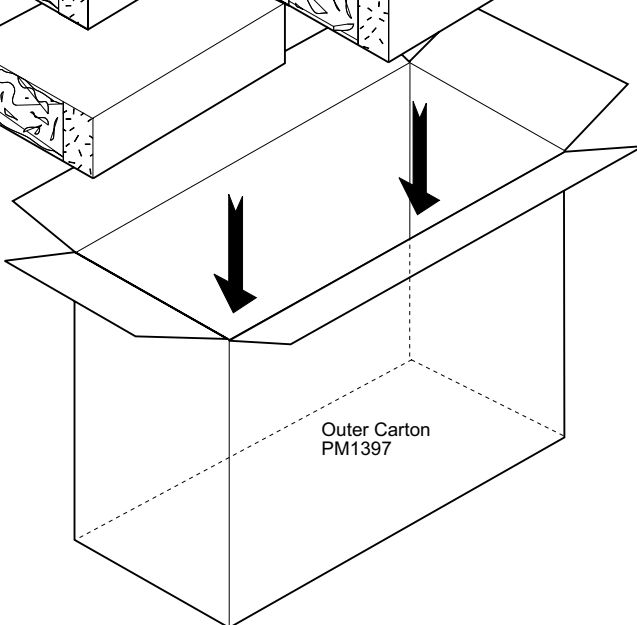
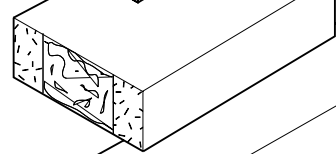
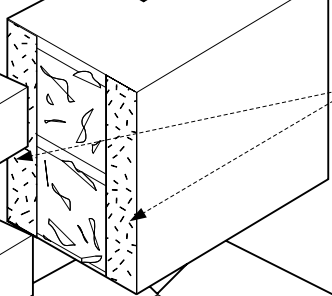
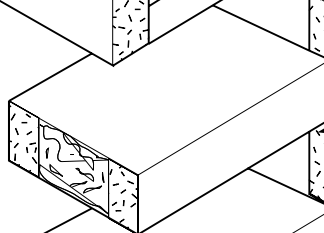
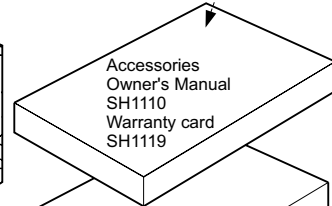
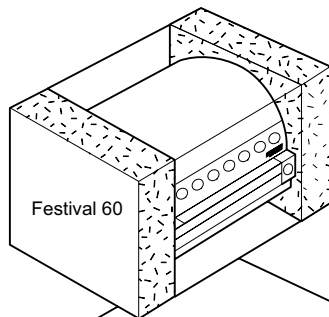
Festival 60 Packing



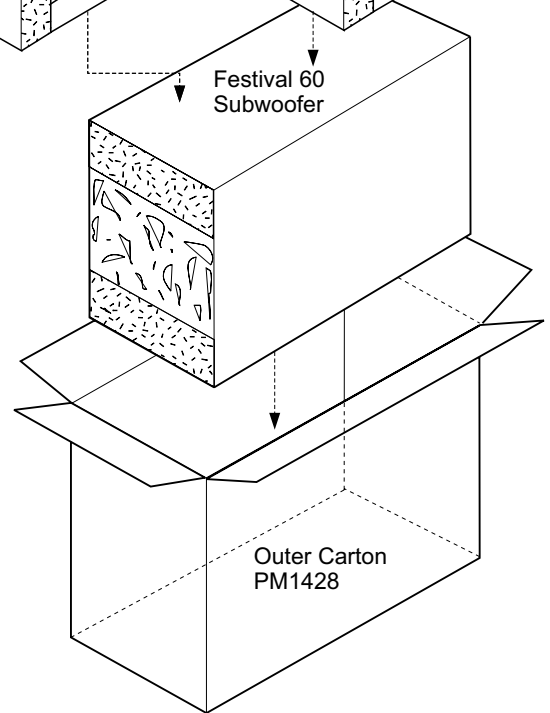
Accessories
Owner's Manual
SH1110
Warranty card
SH1119

Top and
Bottom Foam
333066-001

Festival 60
Speakers
334559-001

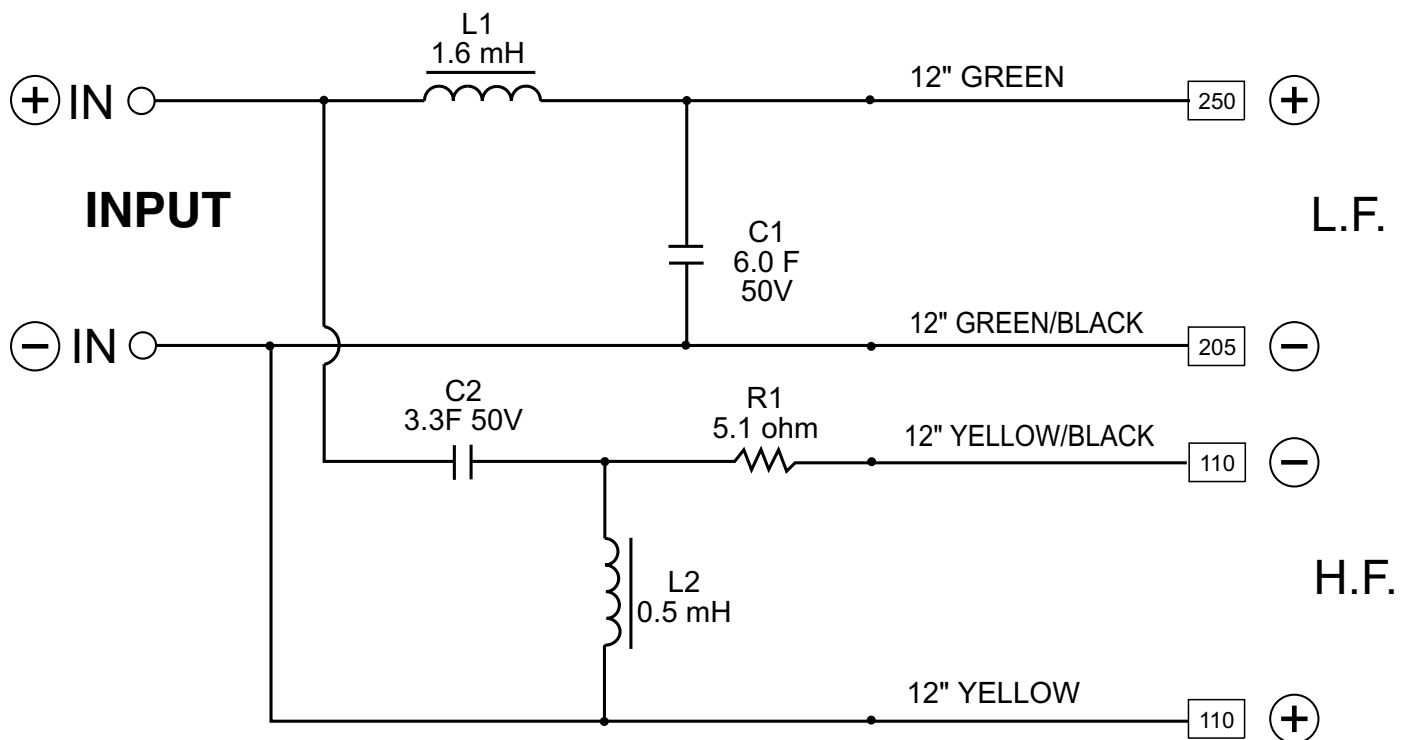
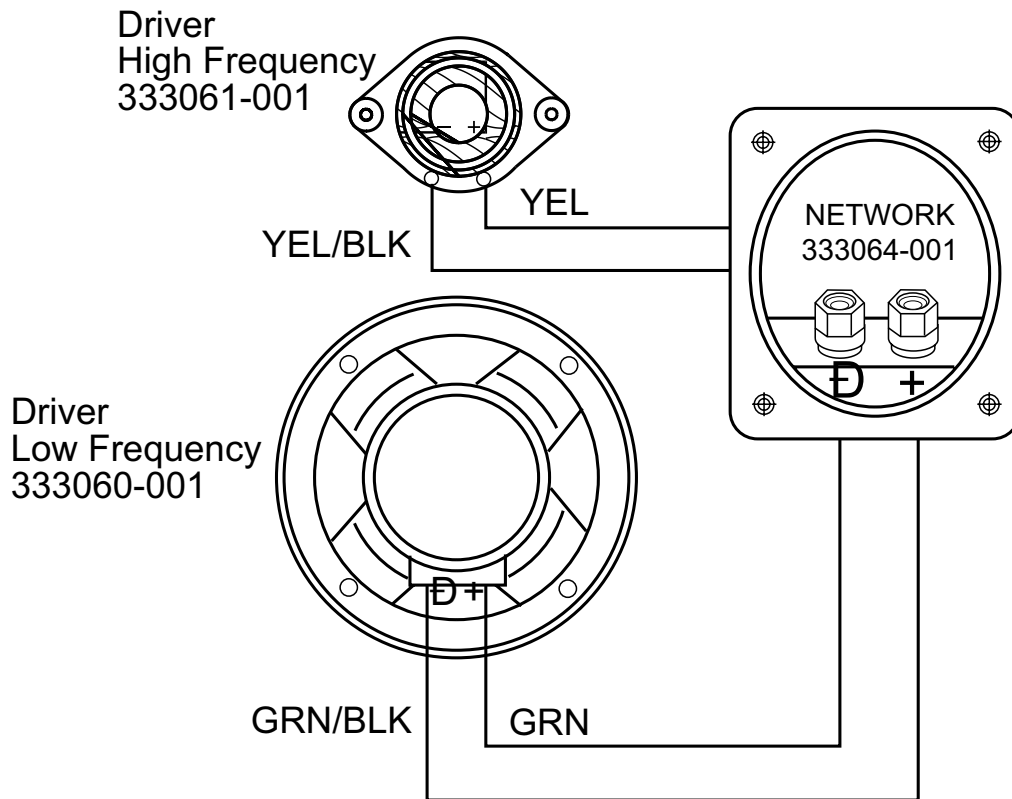


Outer Carton
PM1397

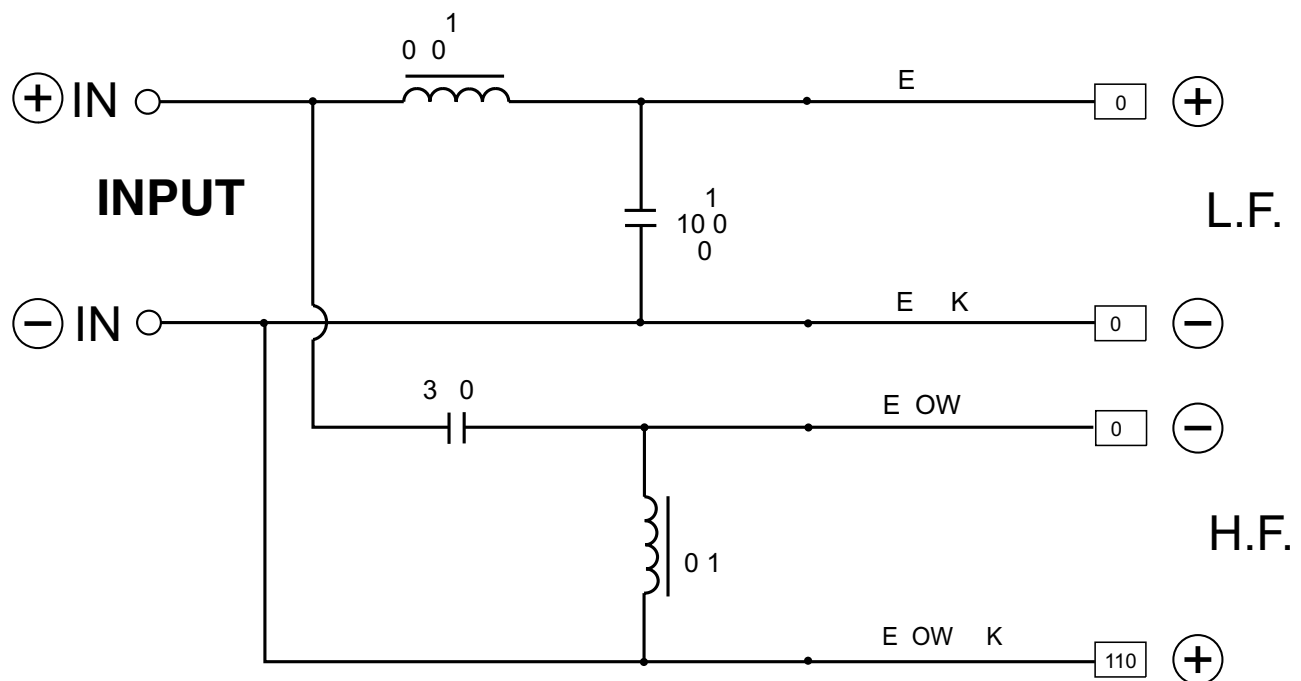
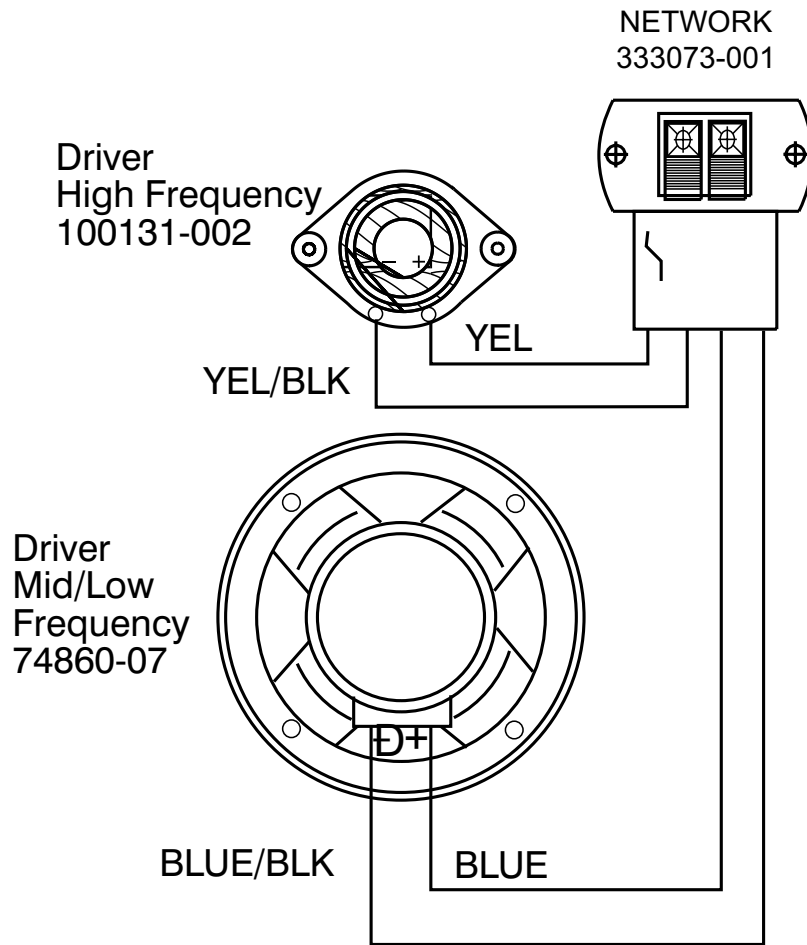


Outer Carton
PM1428

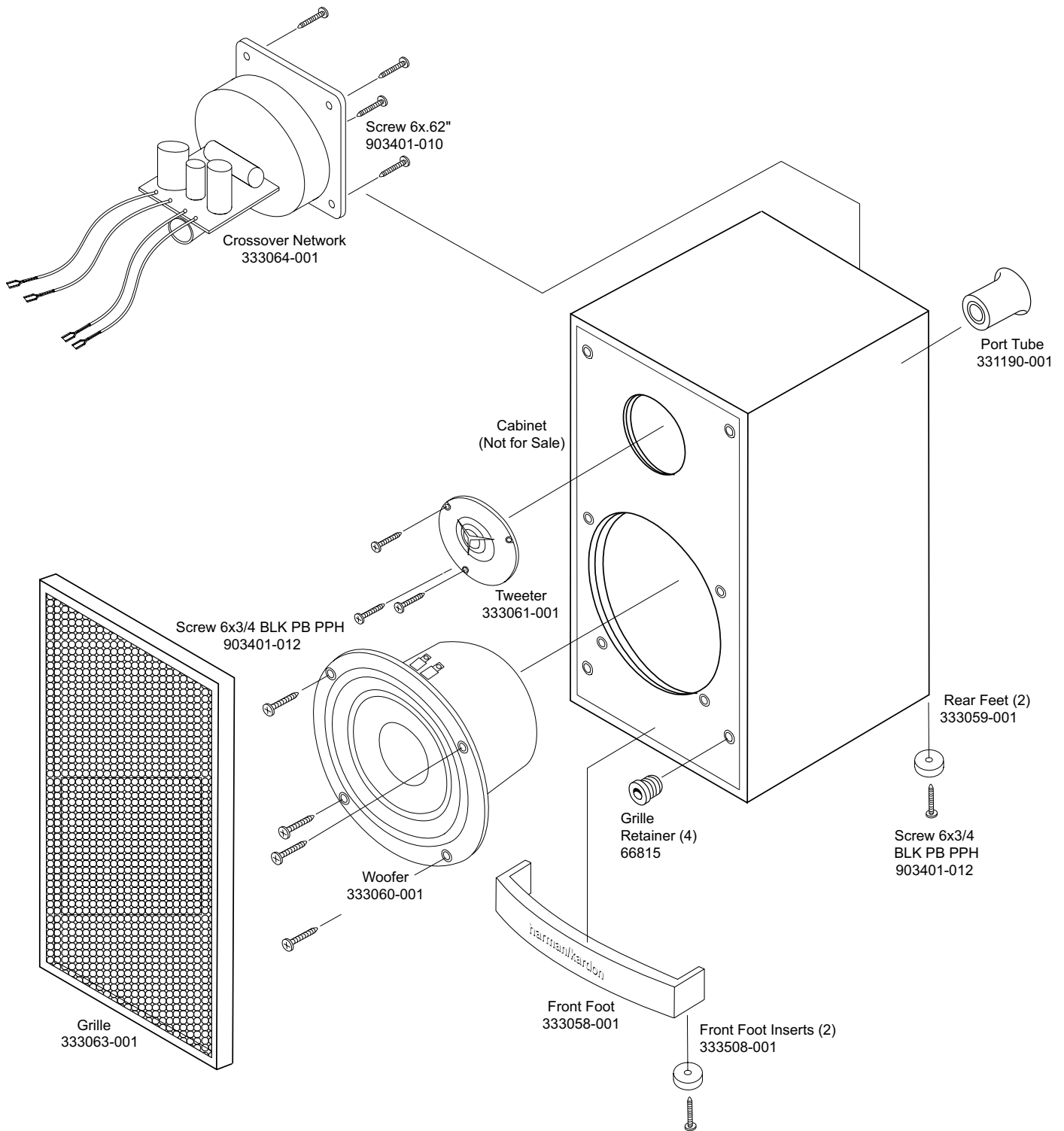
Festival 60 SPEAKER WIRING



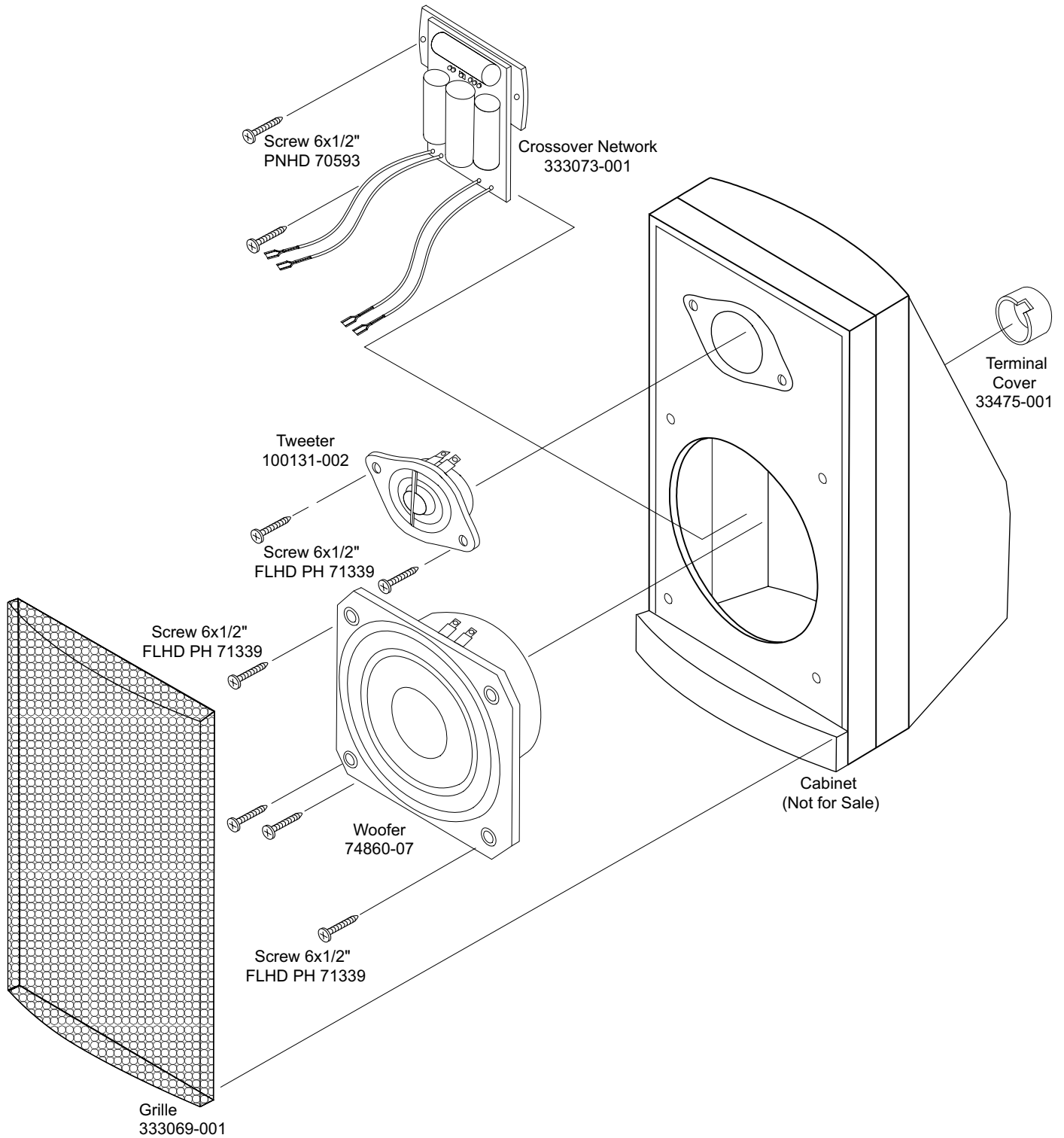
Festival 80 SPEAKER WIRING



Festival 60 SPEAKER MECHANICAL ASSEMBLY



Festival 80 SPEAKER MECHANICAL ASSEMBLY



FUSE MATRIX

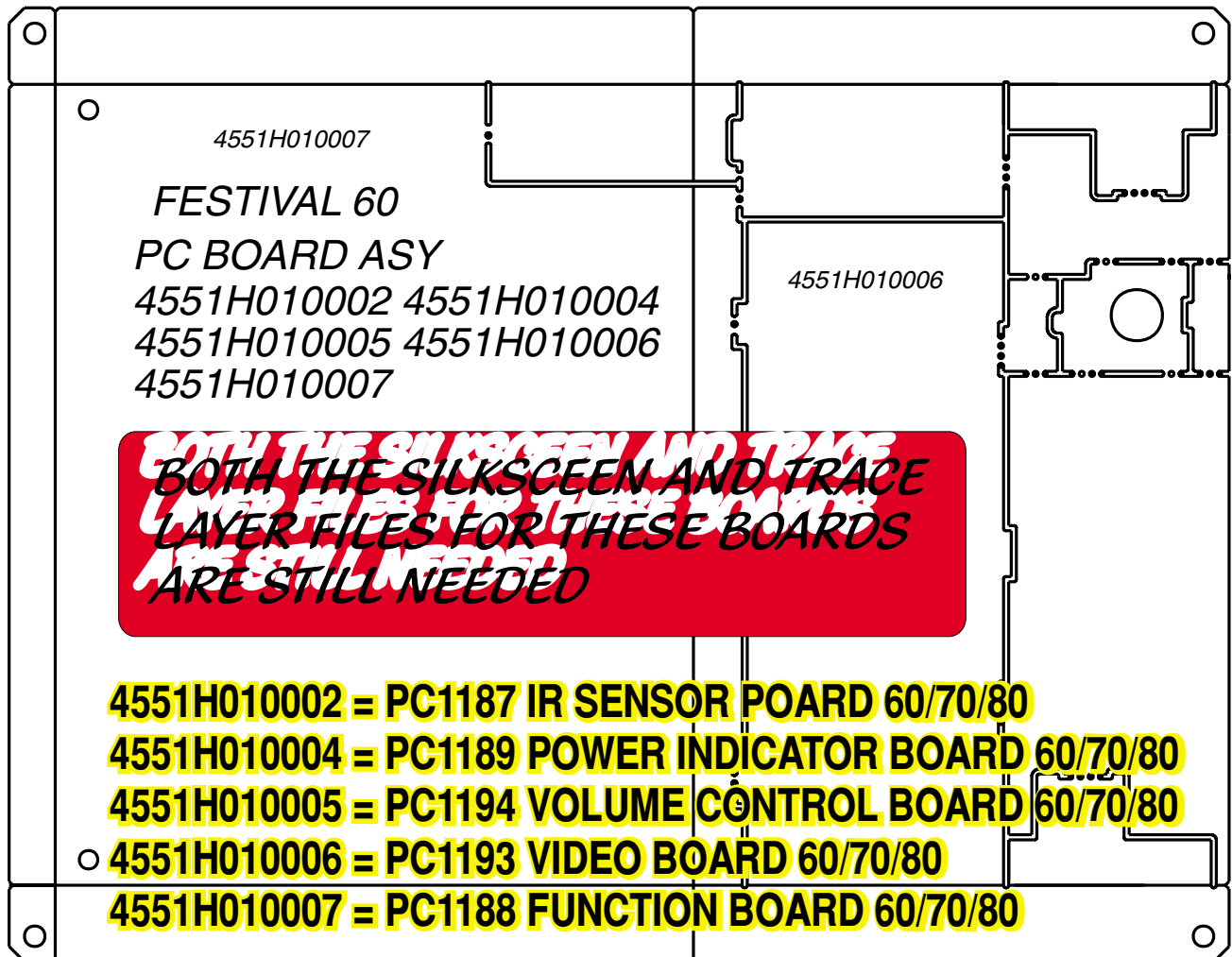
	Assembly	Ref Des	Description	HCM Part No.	Used on Board ("SA" BOM)	PC Board Part No.
CIS1001 Festival-60 (US) (120V 60Hz)	Amp Primary Board	F1	2.5A, 125V	FS1084	SA1080	CL1184
	Top Unit	F51	0.5A, 250V	FS1089	SA1086	CL1236
CIS1003 Festival-60 (EU) (230V 50Hz)	Amp Primary Board	F1	T1.6A, 250V	FS1072	SA1801	CL1184
	Top Unit	F51	T0.5A, 250V	FS1090	SA1798	CL1236
CIS1004 Festival-70 (EU) (230V 50Hz)	Amp #1 Primary Bd.	F1	T1.6A, 250V	FS1072	SA1801	CL1184
	Amp #2 Primary Bd.	F1001	T1.6A, 250V	FS1072	SA1822	CL1235
	Top Unit	F51	T0.5A, 250V	FS1090	SA1799	CL1236
CIS1002 Festival-80 (US) (120V 60Hz)	Bass Amp Board	F401	T6.3A, 250V	FS1074	SA1740	CL1230
		F402	T6.3A, 250V	FS1074	SA1740	CL1230
	Sub CS Board	F701	T6.3A, 250V	FS1074	SA1739	CL1228
		F702	T6.3A, 250V	FS1074	SA1739	CL1228
	Sub L/R Board	F501	T6.3A, 250V	FS1074	SA1738	CL1228
		F502	T6.3A, 250V	FS1074	SA1738	CL1228
	Filter/Terminal Bd.	F201	8A, 125V	FS1092	SA1741	CL1230
		F301	T0.5A, 250V	FS1090	SA1741	CL1230
		F302	T0.5A, 250V	FS1090	SA1741	CL1230
Top Unit	F51	0.5A, 250V	FS1089	SA1746	CL1236	
CIS1005 Festival-80 (EU) (230V 50Hz)	Bass Amp Board	F401	T6.3A, 250V	FS1074	SA1789	CL1230
		F402	T6.3A, 250V	FS1074	SA1789	CL1230
	Sub CS Board	F701	T6.3A, 250V	FS1074	SA1788	CL1228
		F702	T6.3A, 250V	FS1074	SA1788	CL1228
	Sub L/R Board	F501	T6.3A, 250V	FS1074	SA1787	CL1228
		F502	T6.3A, 250V	FS1074	SA1787	CL1228
	Filter/Terminal Bd.	F201	T4A, 250V	FS1093	SA1790	CL1230
		F301	T0.5A, 250V	FS1090	SA1790	CL1230
		F302	T0.5A, 250V	FS1090	SA1790	CL1230
Top Unit	F51	T0.5A, 250V	FS1090	SA1805	CL1236	

Description	HCM Board #	WHERE USED				
		F60-US	F60-EU	F70-EU	F80-US	F80-EU
Festival-60 Amp Main Board	PC1184	SA1806	SA1807	SA1808	n/a	n/a
Festival-60 Amp Indicator Board	PC1185				n/a	n/a
Festival-60 Amp Primary Board	PC1186				n/a	n/a
Festival-60 Amp Secondary Board	PC1196				n/a	n/a
Filter / Terminal Board (Fest-80)	PC1230	n/a	n/a	n/a	SA1781	SA1783
Bass Amp (Festival-80)	PC1231	n/a	n/a	n/a		
SubLR Amp (Festival-80)	PC1228	n/a	n/a	n/a	SA1780	SA1782
SubCS Amp (Festival-80)	PC1229	n/a	n/a	n/a		
CD Indicator Board (CD Unit)	PC1182	not used	not used	not used	not used	not used
CD Connector Board (CD Unit)	PC1183					
CD Main Board (CD Unit)	PC1181	SA1898	SA1898	SA1898	SA1898	SA1898
		was SA1082			was SA1082	
Display Board (Top Unit) 80-pin QFP	PC1187	not used	not used	not used	not used	not used
IR Sensor Board (Top Unit)	PC1190	SA1810	SA1810	SA1811	SA1811	SA1811
Power Indicator Board (Top Unit)	PC1189					
Volume Control Board (Top Unit)	PC1194					
Video Board (Top Unit)	PC1193					
Function Board (Top Unit)	PC1188					
Pre-Amp Board, Festival-60	PC1192	not used	not used	not used	not used	not used
Headphone Jack Board	PC1191					
Tuner Board (CD Unit)	PC1180	SA1084	SA1800	SA1800	SA1084	SA1800
			was SA1897	was SA1897		was SA1897
Amp #2 Main Board (Fest-70)	n/a	n/a	n/a	SA1809	n/a	n/a
Amp #2 Primary Board (Fest-70)	n/a					
Amp #2 Secondary Bd (Fest-70)	n/a					
Amp #2 Indicator Board (Fest-70)	n/a					
Amp #2 Sub-Amp Bd (Fest'70)	n/a					
Display Board (Top Unit) 68-pin PLCC	PC1236	SA1825	SA1826	SA1826	SA1825	SA1826
Pre-Amp Board, Festival-60/70/80	n/a	SA1086	SA1798	SA1799	SA1746	SA1805
Headphone Board	n/a					
CD Indicator Cluster (5 boards)	n/a	SA1085	SA1085	SA1085	SA1085	SA1085
CD Connector Cluster (5 boards)	n/a	SA1083	SA1083	SA1083	SA1083	SA1083

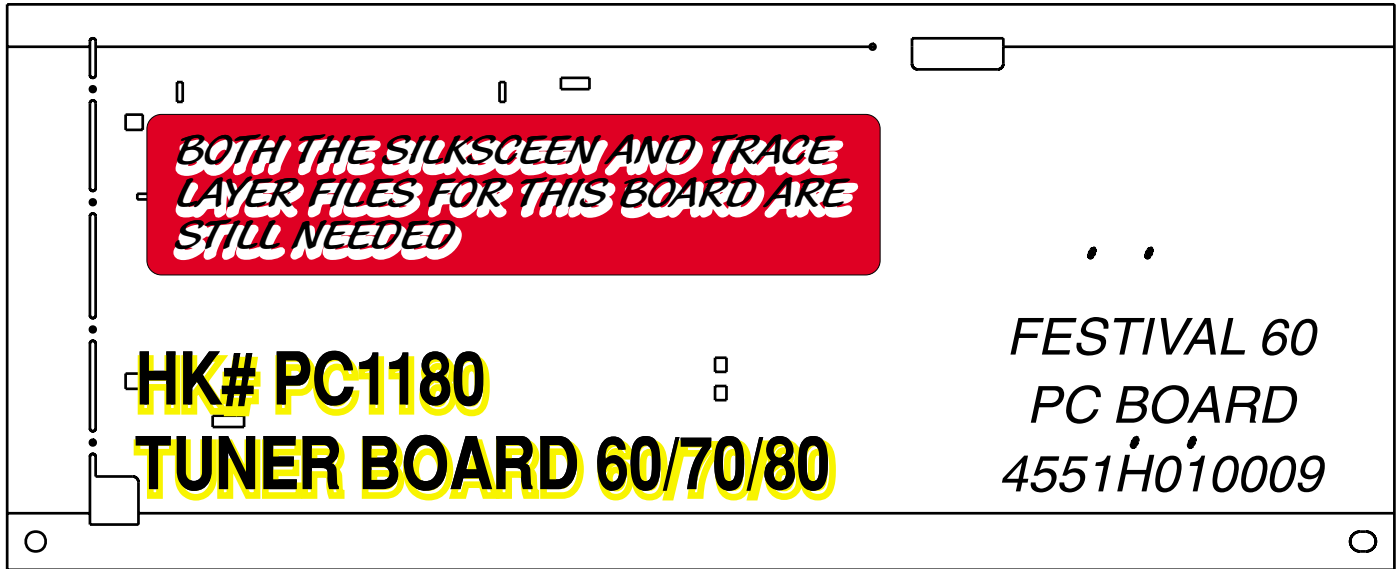
FESTIVAL 60 DISPLAY BOARD



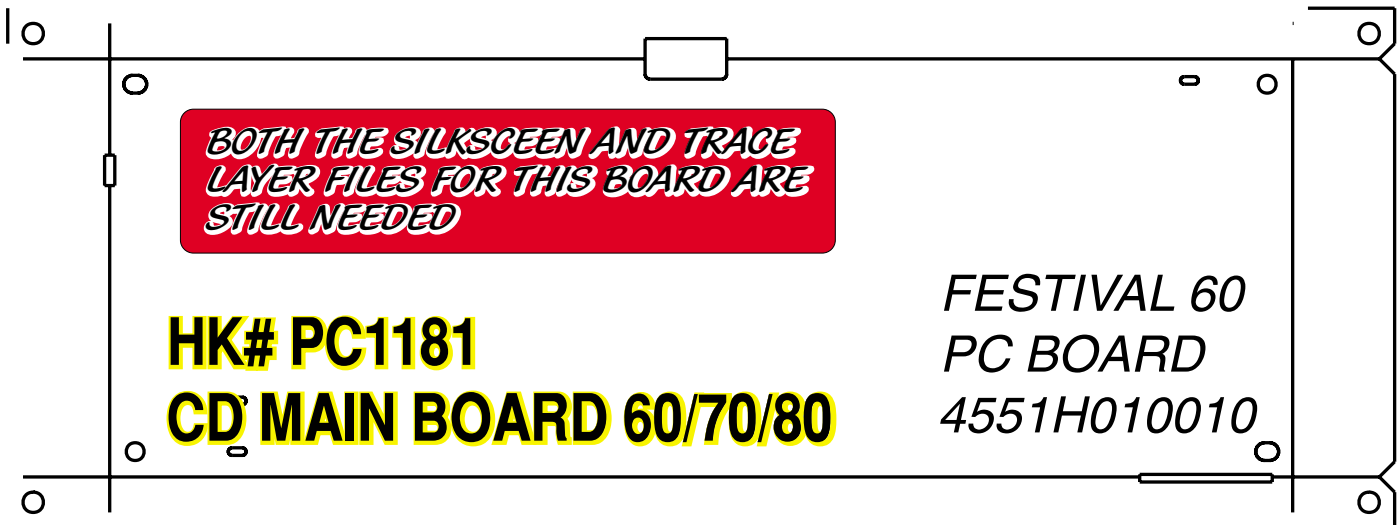
FESTIVAL 60/80 IR SENSOR, POWER INDICATOR, VOLUME CONTROL, VIDEO & FUNCTION BOARDS



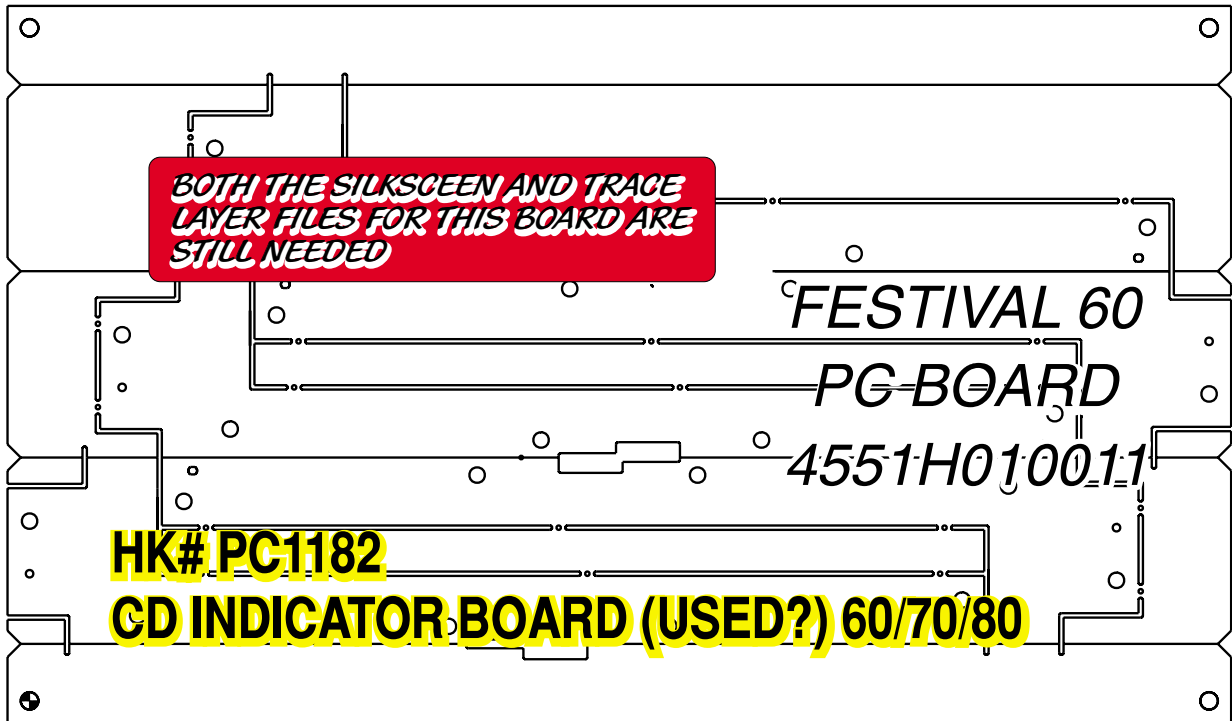
FESTIVAL 60/80 TUNER BOARD



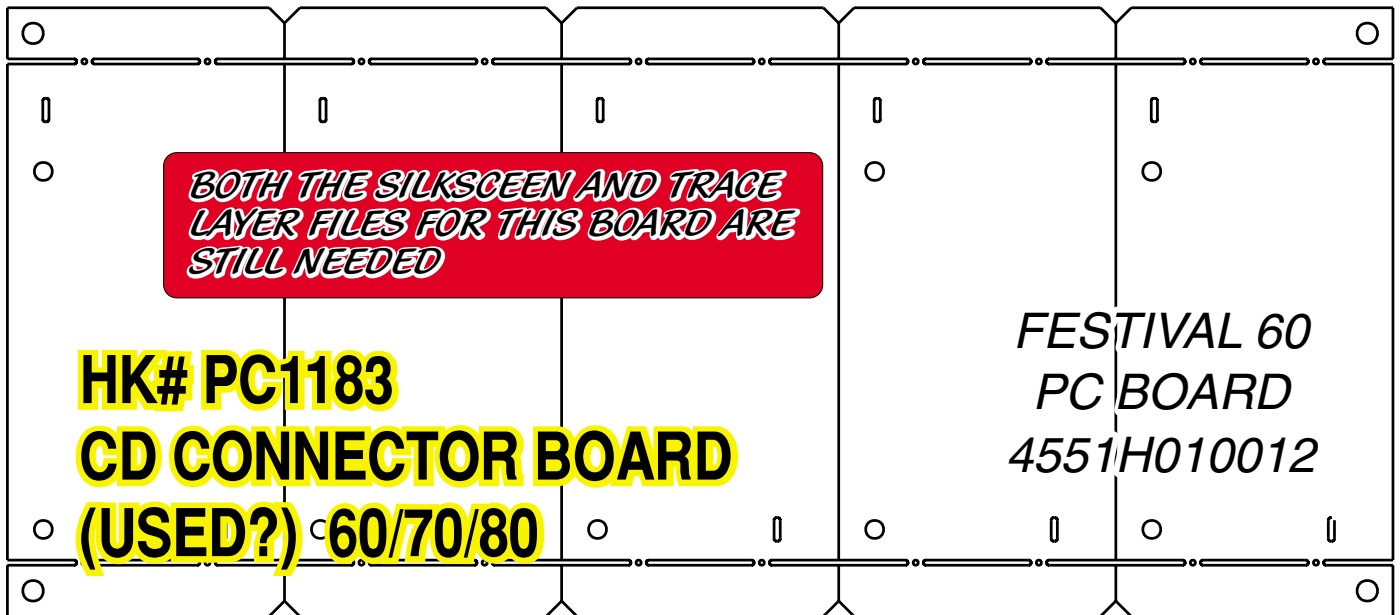
FESTIVAL 60/80 CD MAIN BOARD



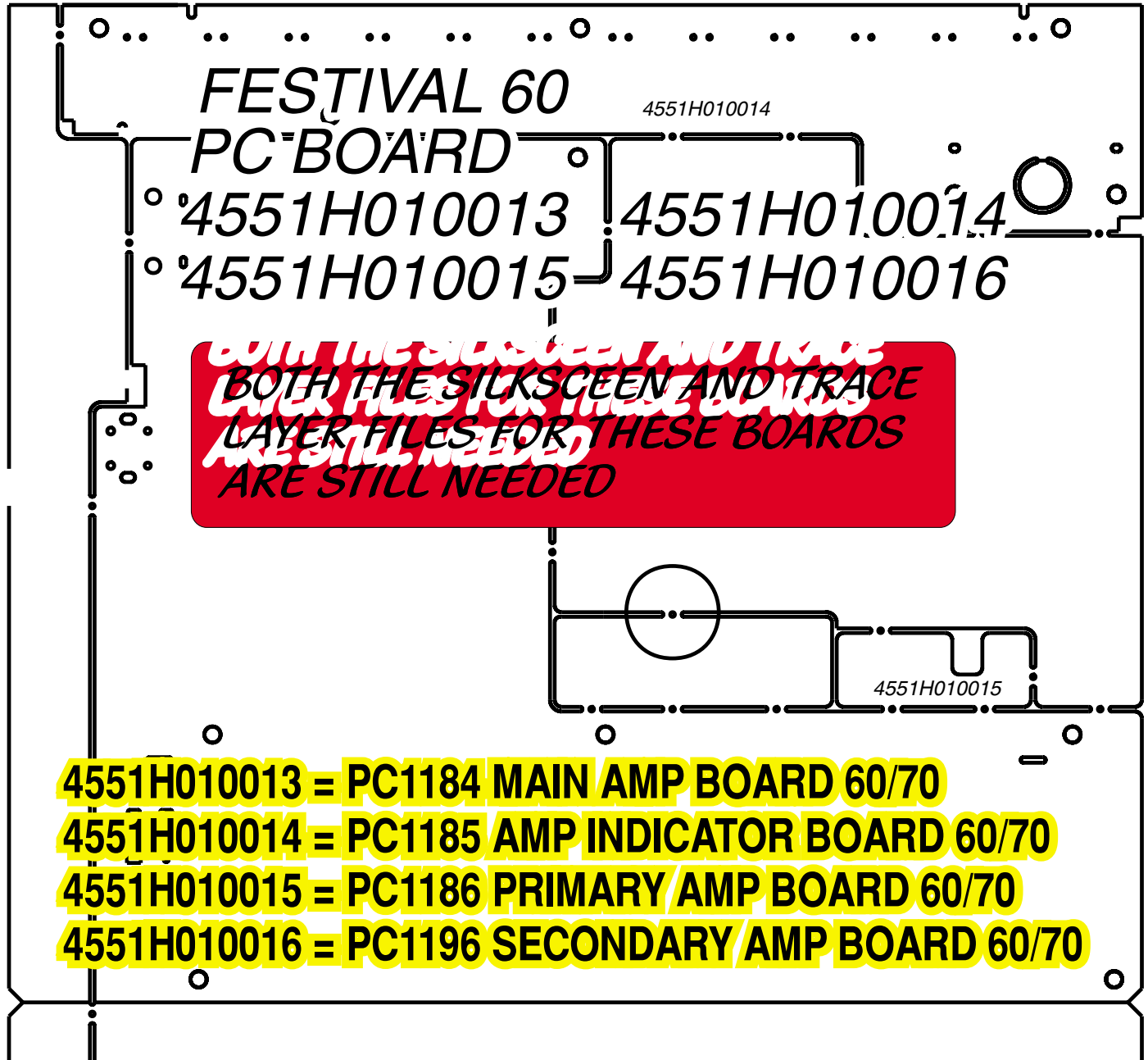
FESTIVAL 60/80 CD INDICATOR BOARD



FESTIVAL 60/80 CD CONNECTOR BOARD



FESTIVAL 60 MAIN AMP, AMP INDICATOR, PRIMARY AMP & SECONDARY AMP BOARDS



FESTIVAL 80 FILTER/TERMINAL & BASS AMP BOARDS

*FESTIVAL 80
PC BOARD
4551H010021
4551H010022*

4551H010021 = PC1230 FILTER TERMINAL BOARD 80
4551H010022 = PC1231 BASS AMP BOARD 80

***BOTH THE SILKSCREEN AND TRACE
LAYER FILES FOR THESE BOARDS
ARE STILL NEEDED***

FESTIVAL 80 SubLR AMP & SubCS AMP BOARDS

*FESTIVAL 80
PC BOARD
4551H010023
4551H010024*

*BOTH THE SILKSCEEN AND TRACE
LAYER FILES FOR THESE BOARDS
ARE STILL NEEDED*

4551H010023 = PC1228 SUBLR AMP BOARD 80
4551H010024 = PC1229 SUBCS AMP BOARD 80

FESTIVAL 60/80 PRE-AMP BOARD

FESTIVAL 60/80 HEADPHONE BOARD

FESTIVAL 60/80 ELECTRICAL PARTS LISTS

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
SA1078 AMP MAIN PCB ASSY				R403, 404, 419, 420	RS2312	RES C/F 33Kohm 5% 1/3W	4
C1	CP1843	CAP.CERAM, 4700pF, 250V	1	R405, 406, 407, 408	RS2326	RES C/F 220 ohm 5% 1/3W	4
C4, 5	CP1810	CAP. ELECT. 10.000uF, 50V	1	R409, 410, 411, 412	RS2262	RES C/F 1.5Kohm 5% 1/3W	4
C7	CP1697	CAP, ELECT. 100uF, 16V	1	R413, 414	RS2237	RES C/F MINI 270 ohm 5%, 1/4W	2
C8	CP1706	Electrolytic Cap. 1uF 50V	1	R415, 416, 417, 418	RS2171	RES FUSE 10 ohm 5% 1/4W	4
C9, 10	CP1817	Cap Poly Film 68nF 5% 50V	2	R421, 422	RS2264	RES C/F 1.6Kohm 5% 1/3W	2
C11, 12, 413, 414, 423, 424	CP1707	Electrolytic Cap. 10uF 50V	6	R427, 428	RS2390	RES FUSE 560 ohm 2% 1/4W	2
C15	CP1698	Electrolytic Cap. 22uF 16V	1	R429, 430	RS2383	RES C/F 560 ohm 5% 1/6W	2
C401, 402	CP1701	Electrolytic Cap. 47uF 16V	2	R433, 434, 435, 436	RS2172	RES FUSE 100 ohm 5% 1/4W	4
C403, 404	CP1750	Ceramic Cap. 68pF 50V	2	R437, 438, 439, 440	RS2263	RES C/F 15Kohm 5% 1/3W	4
C405, 406	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V	2	R441, 442	RS2265	RES C/F 2.2Kohm 5% 1/3W	2
C407, 408	CP1695	CAP, ELECT, 470uF, 6.3V	2	R447, 448	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	2
C409, 410, 425, 426	CP1878	CAPACITOR 10pF 50V	4	R449, 450, 451, 452, 461, 462	RS2167	RES FUSE 100 ohm 2% 1/4W	6
C411, 412	CP1749	Ceramic Cap. 100pF 50V	2	R453, 454, 455, 456	RS2168	RES FUSE 15 ohm 2% 1/4W	4
C415, 416, 417, 418, 419, 420, 421, 422	CP1717	CAP, MTL.FILM, 0.1uF, 50V	8	R457, 458, 459, 460	RS2169	RES FUSE 2.2 ohm 5% 1/4W	4
C427, 428	CP1695	CAP, ELECT, 470uF, 6.3V	2	R463, 464, 465, 466	RS2271	RES M/O F/R 0.22ohm 5% 3W	4
Diodes				R467, 468	RS2397	RES M/O F/R 10 ohm 5% 2W	2
D1	DI1189	Bridge Diode 200V 4A	1	R469, 470	RS2428	RES FUSE 330 ohm 5% 1/6W	2
D10	DI1192	Zener Diode 0.4W (T/R,2")	1	R471, 472	RS2253	RES C/F MINI 5.6Kohm 5%, 1/4W	2
D13	DI1214	DIODE ZENER	1	R473, 474, 475, 476	RS2280	RES C/F MINI 82 ohm 5%, 1/4W	4
D2, 3	DI1197	Switching Diode	2	R477, 478	RS2236	RES C/F MINI 220Kohm 5%, 1/4W	2
D8, 9, 11, 12, 401, 402	DI1205	Switching Diode 90V 0.3W	6	Transistors			
R19, 20	RS2252	RES C/F MINI 560 ohm 5%, 1/4W	2	Q1, 3, 8, 10, 11, 13, 407, 408	TR1291	NPN XSTR 50V/200mA 300mW 250500 TO-92	8
Resistors				Q2, 7	TR1290	PNP XSTR 50V/200mA 300mW 250500 TO-92MICRO AMMO	2
R2, 3, 423, 424, 425, 426, 431, 432	RS2176	RES FUSE 560 ohm 5% 1/4W	8	Q4, 417, 418	TR1284	NPN XSTR 120V/100mA 300mW 350700 TO-92 AMMO PACK	3
R4, 46, 479	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	3	Q5, 6, 409, 410, 411, 412	TR1280	PNP XSTR 120V/100mA 300mW 350700 TO-92 AMMO PACK	8
R5, 10, 445, 446	RS2234	RES C/F MINI 2.2Kohm 5%, 1/4W	4	Q401, 402, 403, 404, 405, 406, 419, 420	TR1286	NPN XSTR 90V/50mA 300mW 6001200 TO-92 AMMO PAC	2
R6	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	1	Q429, 430	TR1326	NPN XSTR 140V/10A 100W 80160 2-16C1A BULK	2
R7, 13, 22, 23, 31	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	5	Q433, 434	TR1279	N-CH FET 50V/6.5mA 300mW TO-92 AMMO PACK	2
R8	RS2256	RES C/F MINI 68Kohm 5%, 1/4W	1	Q423, 424, 425, 426	TR1287	PNP XSTR 100V/1A 900mW 100200 TO-92M AMMO PAC	4
R9	RS2241	RES C/F MINI 33Kohm 5%, 1/4W	1	Q431, 432	TR1319	PNP XSTR 140V/10A 100W 80160 2-16C1A BULK	2
R11, 12	RS2287	RES C/F 6.8Kohm 5% 1/3W	2	Q421, 422, 427,	TR1289	NPN XSTR 100V/1A 900mW 100200 TO-92	3
R14	RS2235	RES C/F MINI 22Kohm 5%, 1/4W	1	Q415, 416	TR1228	TRANSISTOR, 150V, 1W	2
R15, 16, 17, 18	RS2229	RES C/F MINI 1.5Kohm 5%, 1/4W	4	Q413, 414	TR1227	PNP XSTR 150V/100mA 900mW	2
R21	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	1				
R24	RS2243	RES C/F MINI 3.3Mohm 5%, 1/4W	1				
R34	RS2382	RES C/F MINI 1.8Kohm 5%, 1/4W	1				
R35	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	1				
R33	RS2410	RES C/F 82Kohm 5% 1/3W	1				
R48, 443, 444	RS2401	RES C/F MINI 1.2Kohm 5%, 1/4W	3				
R401, 402	RS2261	RES C/F 1Kohm 5% 1/3W	3				

Ref.#	Part #	Description	Qty
Q9	TR1324	NPN XSTR 25V/1.5A 900mW 6001200 TO-92	1
Q12	TR1330	PNP XSTR 120V/800mA 900mW 80160 TO-92	1

Connectors

CN401	CO1366	Connector 2P 7.92mm 7A 250V	1
CN403	CO1384	Connector	1
CN404	CO1368	Connector 3P 3.96mm 7A 250V	1
CN405	CO1367	Connector 3P 2mm 2A 100V	1
CN406	CO1402	CONNECTOR 34-POS	1
CN407	CO1373	Connector 2.5A 250V	1

Miscellaneous

JP1-8, 10, 11, 13-25, 27-29, 3, 49-60, 69, 71-73, (ADJ Q40), (ADJ J401), (ADJ D9), (ADJ RL1)	WI1702	JUMPER WIRE 24 AWG BARE	62
PH1	IC1240	Photocoupler 70V 0.15W	1
PJ401	CO1386	Pin Jack	1
RL1	RE1022	Relay	1
TM401	TE1195	Terminal 4P	1
TM402	TE1197	Terminal Prime-Time	1
VR401, 402	RS2289	POT. TRIM. 1K-OHM	2
	SC1262	(MOUNT D1 TO HEATSINK) SCREW, BND + (M3x10)	1
	HS1156	(USE WITH D1) Heatsink Festival	1

SA1079 AMP INDICATOR PCB ASSY

CW405	HA1160	HARNESS 300mm 3P-SA	1
D21, 22, 23, 24	LE1037	LED	4
JP9, 12	WI1702	JUMPER WIRE 24 AWG BARE	2
R25, 26, 27, 28	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	4
R29, 30, 39, 40	RS2229	RES C/F MINI 1.5Kohm 5%, 1/4W	4

SA1080 AMP PRIMARY PCB

CW401	HA1119	Connect. Wire 300mm	1
F1	FS1084	Fuse 2.5A AC 125V	1
HL1, 2	FH1007	Fuse Holder	2

SA1081 AMP SECONDARY PCB

C2, 3	CP1717	CAP, MTL.FILM, 0.1uF, 50V	2
C13, 14	CP1699	CAP, ELEC; 220uF 16V	2
CW403	HA1159	HARNESS 120mm 2P-SA	1
CW404	HA1191	HARNESS ASSY	1
D4, D5, D6, D7	DI1201	Diode Rectifier 1 A 400V	4
R43, 44	RS2384	RES FUSE 2.2 ohm 5% 1/4W	2

SA1083 CD CONNECTOR PCB

Ref.#	Part #	Description	Qty
C601	CP1821	CAP., CHIP 0.1uF 50V	1
CN601_2	CO1404	CONNECTOR 2mm 2A 100V	1
CN602_2	CO1405	CONNECTOR	1
CN603	CO1403	CONNECTOR 34-POS	1
EF601, 602, 603, 604	FI1015	EMI FILTER	4
FB601, 602, 603	FI1016	EMI FILTER	3
PCB601	CL1194	CLUSTER CD CONNECTOR BD	1
TM601	TE1197	Terminal Prime-Time	1

SA1084 TUNER PCB

Capacitors

C201, 207, 217, 235, 237, 252	CP1769	Semiconductor Cap. 0.047uF, 25V	6
C202, 305, 310	CP1701	Electrolytic Cap. 47uF 16V	3
C204, 205, 206, 215, 231, 238, 239, 273, 306	CP1741	Ceramic Cap. 0.022uF 50V	9
C216, 240, 242, 258, 261, 262, 263	CP1707	Electrolytic Cap. 10uF 50V	7
C220	CP1776	Capacitor Ceramic 15pF 50V, 5%	1
C232, 234	CP1711	Electrolytic Cap. 4.7uF 50V	2
C233, 253, 255, 256	CP1706	Electrolytic Cap. 1uF 50V	4
C236	CP1778	Cap. Ceramic 4700pF 50V 10%	1
C241	CP1710	CAP, ELEC; 3.3uF 50V	1
C243, 246, 277	CP1742	Ceramic Cap. 220pF 50V	1
C245, 278, 279, 303, 304	CP1745	Ceramic Cap. 15pF 50V	5
C251, 274	CP1697	CAP, ELECT. 100uF, 16V	2
C254	CP1693	CAP, ELEC; 0.22uF 50V	1
C259, 260	CP1824	Ceramic Cap. 470pF 50V	2
C271, 307	CP1709	Electrolytic Cap. 2.2uF 50V	2
C272	CP1699	CAP, ELEC; 220uF 16V	1
C275, 276	CP1749	Ceramic Cap. 100pF 50V	1
C301, 302	CP1743	Ceramic Cap. 330pF 50V	2
C308	CP1795	CAP, ELEC; 0.1uF 50V	1
C309	CP1744	Ceramic Cap. 560pF 50V	1

Diodes

D231, 251, 271, 273	DI1205	Switching Diode 90V 0.3W	3
------------------------	--------	--------------------------	---

Filters

CF201, 202, 203	FI1009	Ceramic Filter 10.7MHz 180KHZ	3
L231	FI1005	LC COMPOSITE, VARIABLE COIL	1
L251, 252	FI1008	FILTER,AUDIO LC, VARIABLE	2

Component Audio System

Harman Kardon

Ref.#	Part #	Description	Qty
RF215	RF1002	RF Block	1
T231	IF1001	IF BLOCK 450KHZ, CERAMIC FILTER W/ MATCHING COIL	1
T232	MI1178	Discri(Type KM)10.7MHz	1
T233	MI1177	Discri(Type 7KM) 107MHz	1

Integrated Circuits

IC231	IC1267	IC	1
IC251	IC1268	IC	1
IC271	IC1233	IC	1
IC301	IC1230	IC, RADIO DATA SYSTEM DEMODULATOR	1
IC302	IC1237	IC	1

Resistors

R201, 204, 205, 210, 237, 272, 274, 276, 277, 278	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	10
R202, 203, 211, 213	RS2332	RES C/F MINI 390 ohm 5%, 1/4W	4
R206, 212	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	2
R207, 208, 214	RS2222	RES C/F MINI 100 ohm 5%, 1/4W	3
R209	RS2248	RES C/F MINI 470 ohm 5%, 1/4W	1
R217	RS2230	RES C/F MINI 15Kohm 5%, 1/4W	1
R220, 304, 305, 306	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	4
R231	RS2256	RES C/F MINI 68Kohm 5%, 1/4W	1
R232	RS2277	RES C/F MINI 270Kohm 5%, 1/4W	1
R233	RS2275	RES C/F MINI 180 ohm 5%, 1/4W	1
R234	RS2253	RES C/F MINI 5.6Kohm 5%, 1/4W	1
R235, 240	RS2231	RES C/F MINI 18Kohm 5%, 1/4W 1/4W AMMO PACK	2
R236	RS2280	RES C/F MINI 82 ohm 5%, 1/4W	1
R238	RS2374	RES C/F MINI 12Kohm 5%, 1/4W	1
R239, 282	RS2291	RES C/F MINI 27Kohm 5%, 1/4W	2
R241, 252, 263, 264	RS2240	RES C/F MINI 3.3Kohm 5%	4
R242, 243, 246, 253, 260, 281, 283, 302, 303	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	9
R245	RS2233	RES C/F MINI 22 ohm 5%, 1/4W	1
R247, 251, 256	RS2318	RES C/F MINI 6.8Kohm 5%, 1/4W	3
R254, 255	RS2329	RES C/F MINI 150Kohm 5%, 1/4W	2
R258, 259	RS2236	RES C/F MINI 220Kohm 5%, 1/4W	2
R261, 262	RS2229	RES C/F MINI 1.5Kohm 5%, 1/4W	2
R265, 266, 267, 268, 307	RS2234	RES C/F MINI 2.2Kohm 5%, 1/4W	5
R271, 273	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	2
R280	RS2250	RES C/F MINI 47Kohm 5%, 1/4W	1
R301	RS2226	RES C/F MIN 1Mohm 5% 1/4W	1

Transistors

Q201, 202	TR1276	NPN XSTR 25V/50mA 300MHz 82180 SPT	2
-----------	--------	------------------------------------	---

Ref.#	Part #	Description	Qty
Q251, 252	TR1277	NPN XSTR 20V/500mA 500mW 8201800	2
Q253	TR1268	NPN XSTR 50V/30mA 300mW 22K/22K SPT	1
Q254	TR1269	PNP XSTR 50V/30mA 300mW 22K/22K SPT	1
Q271, 272, 274	TR1272	PNP XSTR 50V/100mA 300mW 4.7K/4.7K SPT AMMO PACK	3
Q301	TR1279	N-CH FET 50V/6.5mA 300mW	1
Q302	TR1278	PNP XSTR 50V/150mA 300mW 180390 SPT	1
Q303	TR1273	NPN XSTR 50V/100mA 300mW 4.7K/4.7K SPT	3

Miscellaneous

CF231	CR1004	Ceramic Resonator 450KHz	1
CF251	CR1005	Ceramic Osc	1
JP201-JP226, JP228-JP25	WI1702	JUMPER WIRE 24 AWG BARE JP209A 54 SELECTS DOMESTIC VERSION DO NOT INSTALL JP209B	54
LCN251	HA1173	HARNESS, WIRE 13P	1
LCN301	HA1193	HARNESS ASSY	1
PCB201	PC1180	PCB CD Tuner	1
TM201	TE1204	Terminal	1
TU201	TU1001	FM Tuner Prime-Time	1
VR231	RS2189	POT, TRIMMER, 50K OHM	1
VR251	RS2420	TRIM-POT 200Kohm	1
X271	XT1003	XTAL.OSC 4500KHz	1
X301	XT1002	Xtal.OSC 4332KHz Prm-time	1
X302	CR1001	Ceralock 4MHz Prime-Time	1
	BR1543	STEEL SHIELD PLATE	1
	LB1265	Bar Code Traceability Label	1

SA1086 "PRE-AMP PCB, FEST-60 US"

Capacitors

C51, 52, 57	CP1700	Electrolytic Cap. 2200uF, 16V	3
C55, 56, 58	CP1706	Electrolytic Cap. 1uF 50V	3
C59, 61	CP1863	ELECTROLYTIC CAP. 220uF, 63V	2
C64, 573, 608	CP1697	CAP, ELECT. 100uF, 16V	3
C67, 574, 575, 576, 577, 578, 579, 590, 591, 595, 596, 597, 598, 599, 600, 607	CP1911	SMD CAP 0.1uF 10% 25V	16
C68, 588	CP1725	Metallized Flm Cap. 0.22uF, 50V	2
C70, 71	CP1843	CAP.CERAM, 4700pF, 250V	2
C72, 73, 74, 75, 76, 77, 78, 507, 508, 523, 524, 605, 606, 632, 641, 642	CP1722	Metallized Flm Cap. 0.01uF, 50V	16
C501, 502, 511, 512, 515, 516, 517, 518, 541,	CP1701	Electrolytic Cap. 47uF 16V	18

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
542, 543, 544, 547, 548, 581, 601, 602, 634				IC582	IC1320	IC EPROM 128K x 8 DIP32	1
C503, 504	CP1732	Pol. Prop. Flm Cap. 1500pF, 50V	2	IC583	IC1259	IC SMD 32KBYTE CMOS STAT. RAM	1
C505, 506	CP1717	CAP, MTL.FILM, 0.1uF, 50V	2	IC584	IC1265	IC LOW PWR CLOCK/CALENDAR	1
C513, 514	CP1777	CAPACITOR CERAMIC 22pF 50V 5%	2	IC585	IC1277	IC, EEPROM, 256x8, CMOS SERIAL BUS	1
C519, 520	CP1815	Cap Poly Film 15nF 5% 50V	2	IC586	IC1254	IC SMD OCTAL-D-TYPE LATCH	1
C521, 522	CP1817	Cap Poly Film 68nF 5% 50V	2	IC587	IC1270	IC SMD DUAL 2-to-4 LINE DECODER	1
C525, 526, 549, 550, 551, 552	CP1719	Metalized Flm Cap 0.039uF, 50V	6	IC589, 590	IC1269	IC	2
C535, 536	CP1702	Electrolytic Cap. 470uF 16V	2	IC592	IC1283	IC SMD DUAL 2-INPUT AND GATE	1
C537, 538	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V	2	IC595	IC1236	IC	1
C568, 569, 570, 582, 583, 584, 585, 586	CP1733	Pol. Prop. Flm Cap 220pF, 50V	9	IC601	IC1262	IC	1
C571, 589	CP1707	Electrolytic Cap. 10uF 50V	2	PH591	IC1241	Photocoupler	1
C592, 593	CP1887	SMD CAP 15pF 5% 50V	2	Resistors			
C594	CP1878	CAPACITOR 10pF 50V	1	R50	RS2415	RES C/F 3.3Mohm 10% 1/2W	1
C609	CP1757	CERAMIC CAP 0.01uF 50V	1	R51	RS2261	RES C/F 1Kohm 5% 1/3W	1
C636	CP1711	Electrolytic Cap. 4.7uF 50V	1	R52, 640	RS2341	RES C/F 100 ohm 5% 1/3W	2
C651, 652	CP1891	(on Headphone Board) CAPACITOR 680pF 10% 50V	2	R53	RS2389	RES C/F 4.7Kohm 5% 1/3W	1
Diodes				R55	RS2315	RES FUSE 4.7 ohm 2% 1/4W	1
D51, 52, 53, 54, 55, 56, 57, 58, 63, 64	DI1201	Diode Rectifier 1 A 400V	10	R61, 63, 527, 528, 543, 544, 551, 552, 557, 558, 576, 577, 578, 590, 596, 621, 628, 631, 651, 661	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	20
D60, 61	DI1204	Zener Diode 0.4W	2	R62, 64, 507, 508, 601,602, 623, 653, 663, 664, 665, 666, 672	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	13
D62	DI1192	Zener Diode 0.4W (T/R,2")	1	R501, 502	RS2260	RES C/F MINI 8.2Kohm 5%, 1/4W	2
D65, 66, 581, 582, 585, 586, 587, 588, 589	DI1205	Switching Diode 90V 0.3W	9	R503, 504, 515, 516, 525, 526	RS2242	RES C/F MINI 330Kohm 5%, 1/4W	6
D67, 584, 631	DI1196	Zener Diode 0.4W	3	R505, 506, 574, 575, 582, 583, 584, 585, 586, 587, 597, 598, 603, 604, 611, 612, 622, 624, 627, 633, 634, 637, 652, 662	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	24
D591, 592, 593, 594	DI1206	Switching Diode 40V 0.3W	4	R513, 514, 533, 534, 549, 550, 555, 556, 581	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	9
Filters				R517, 518, 629	RS2226	RES C/F MIN 1Mohm 5% 1/4W	3
EF501, 502, 503, 504, 508, 509, 510	FI1018	FILTER, EMI	7	R523, 524	RS2231	RES C/F MINI 18Kohm 5%, 1/4W	2
EF505, 506, 507	FI1017	EMI FILTER 4-CIRCUIT	3	R529, 530	RS2240	RES C/F MINI 3.3Kohm 5%, 1/4W	2
EF511, 512, 601, 602, 603, 604	FI1014	FILTER EMI	6	R531, 532, 541, 542, 553, 554, 559, 560	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	8
L51	FI1020	EMI FILTER	1	R535, 536, 593 671	RS2250	RES C/F MINI 47Kohm 5%, 1/4W	4
L52	FI1013	FILTER EMI	1	R537, 538	RS2431	RES C/F MINI 30Kohm 5%, 1/4W	2
Integrated Circuits				R539, 540	RS2432	RES C/F MINI 200Kohm 5%, 1/4W	2
IC51	IC1232	IC Voltage Regulator +6VDC	1	R588, 607, 608	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	3
IC52	IC1234	IC Voltage Regulator -6VDC	1	R589, 605, 606, 625, 626, 630	RS2235	RES C/F MINI 22Kohm 5%, 1/4W	6
IC53	IC1307	IC VOLTAGE REGULATOR +5V, TO-220	1	R591	RS2237	RES C/F MINI 270 ohm 5%, 1/4W	1
IC591	IC1313	IC QUAD LOW-PWR LINE DRIVER	1	R592, 595	RS2247	RES C/F MINI 47 ohm 5%, 1/4W	2
IC501	IC1245	IC ELECTRICAL VOLUME	1				
IC503	IC1248	IC	1				
IC504, 505, 506	IC1226	IC	3				
IC581	IC1219	IC Prime-Time	1				

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
R594	RS2244	RES C/F MINI 3.9Kohm 5%, 1/4W	1	FB601-616	FI1011	FILTER EMI	1
R599, 600	RS2212	SMD RES 4.7Kohm 5% 1/10W	1	FB623-643, 651-655	CC1065	FERRITE CHIP BEAD On Headphone Board	26
R609, 610, 632	RS2233	RES C/F MINI 22 ohm 5%, 1/4W	3	HL51, 52	FH1007	Fuse Holder	2
R635, R641	RS2290	RES C/F 180 ohm 5% 1/3W	2	S51	SW1078	Push Switch 1P TV3	1
R654	RS2222	RES C/F MINI 100 ohm 5%, 1/4W	1	T51	MI1206	TRANSFORMER TOP UNIT (US)	1
R681, 682	RS2211	SMD RES 470 ohm 5% 1/10W	2	X592	XT1006	Xtal 10pF	1
	RS1711	REWORK PER INSTRUCTION SMD RES 220 ohm 5% 1/8W	1	X591	XT1011	XTAL, 15MHZ	1

Transistors

Q51	TR1304	NPN XSTR 60V/3A 25W, TO-220	1
Q52	TR1281	PNP XSTR 60V/3A 25W	1
Q501, 502, 541, 542, 543, 544, 547, 548, 601, 602	TR1283	NPN XSTR 20V/300mA 400mW 3501200 TO-92	10
Q581, 586, 588	TR1269	PNP XSTR 50V/30mA 300mW 22K/22K SPT	3
Q582, 587	TR1268	NPN XSTR 50V/30mA 300mW 22K/22K SPT	2
Q589, 592	TR1291	NPN XSTR 50V/200mA 300mW 250500 TO-92	2
Q591	TR1272	PNP XSTR 50V/100mA 300mW 4.7K/4.7K SPT	1
Q593	TR1290	PNP XSTR 50V/200mA 300mW 250500 TO-92	1
Q631	TR1341	NPN XSTR 30V/800mA 600mW 100200 TO-92	1

Connectors

B501	CP1811	Super Capacitor 1F	1
CN51	CO1363	Connector 11P 2mm 2A 100V	1
CN52, 504	CO1367	Connector 3P 2mm 2A 100V	2
CN505	CO1382	CONNECTOR 4P 2MM 2A 100V	1
CN506	CO1370	Connectors 6P 2mm 2A 100V	1
CN507	CO1369	Connector 5P 2mm 2A 100V	1
CN508	CO1383	CONNECTOR HEADER 7-PIN	1
CN509	CO1388	CONNECTOR 10P 2mm 2A 100V	1
CN510	CO1389	CONNECTOR 14P 2mm 2A 100V	1
CW51	HA1166	HARNESS ASSY	1
CW502	HA1214	HARNESS ASY 11-COND 160mm	1
CW503	HA1112	CONNECTORIZES WIRE 13P	1
CW507	HA1210	(on Headphone Board) HARNESS ASY 5-COND 200mm	1
J501	CO1359	Connector 2.5A250V	1
J502	CO1402	CONNECTOR 34-POS	1
J503, 504	CO1375	Jack 1P	1
J601	CO1374	(on Headphone Board) Miniture Jack LR-SW	1
	CO1411	(USE WITH IC582) CONNECTOR IC SOCKET DIP28	1

Miscellaneous

F51	FS1089	FUSE SLO BLO 0.5A 250V	1
-----	--------	------------------------	---

	SC1271	(use with Transformer Bracket) Screw Fpt+	4
	332501-001	(use with Transformer T51) BRACKET, MTG,XFORMER	1
	SP1102	(locate on bottom of board) INSULATOR RUBBER	1
	BR1542	STEEL SHIELD PLATE	1
	HS1155	HEATSINK, AMPLIFIER	1
	SC1262	(USE WITH HS1155) SCREW, BND + (M3x10)	3
	LB1265	Bar Code Traceability Label	1
	CL1192	CLUSTER, PRE-AMP/HDPH	1

SA1087 FUNCTION PCB

Capacitors

C901, 902	CP1697	CAP, ELECT. 100uF, 16V	2
C903, 904, 905, 906	CP1701	Electrolytic Cap. 47uF 16V	4
C917, 918	CP1733	Pol. Prop. Flm Cap 220pF, 50V	2

Integrated Circuits

IC902	IC1226	IC	1
IC901	IC1238	IC	1

Resistors

RS2225	02	4.0000 "R911,912,919,920" "RES C/F MINI 100Kohm 5%, 1/4W"	
RS2239	02	4.0000 "R909,910,917,918" "RES C/F MINI 330 ohm 5%, 1/4W"	
RS2223	02	8.0000 "R901,902,903,904,905,906,907,908" "RES C/F MINI 1Kohm 5%, 1/4W"	
W11702	00	29.0000 "INSTALL IN AXIAL: JP2,16,23-25,2" JUMPER WIRE 24 AWG BARE "JP44,53-57,60,61,65-67,77,80-82" "JP85,86,91,92" "INSTALL IN MANUAL: JP71,73,78,79"	

Connectors

CN502	CO1363	Connector 11P 2mm 2A 100V	1
CN503	CO1365	CONNECTOR 13P 2MM 2A100V	1
J901, 902, 903, 905	CO1377	RCA Pin Jack 2P	4
J904	CO1374	Miniture Jack LR-SW	1

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
SA1089 VIDEO PCB				539, 572, 605, 606, 632, 641, 642, 643, 644			
C101, 102, 103	CP1708	Electrolytic Cap. 22uF 50V	3	C501, 502, 509, 510, 511, 512, 515, 516, 517, 518, 541, 542, 547, 548, 561, 564, 565, 566, 581, 601, 602, 634	CP1701	Electrolytic Cap. 47uF 16V	22
C104, 105	CP1750	Ceramic Cap. 68pF 50V	2	C503, 504	CP1732	Pol. Prop. Flm Cap. 1500pF, 50V	2
C106, 107	CP1697	CAP, ELECT. 100uF, 16V	2	C505, 506	CP1717	CAP, MTL.FILM, 0.1uF, 50V	2
CW508	HA1213	HARNESS ASY 7-COND 200mm	1	C513, 514	CP1777	CAPACITOR CERAMIC 22pF 50V, 5%	2
IC101	IC1225	IC Prime-Time	1	C519, 520	CP1815	Cap Poly Film 15nF 5% 50V	2
J101, 102, 103, 104, 105	CO1376	RCA Pin Jack 1P	5	C521, 522	CP1817	Cap Poly Film 68nF 5% 50V	2
JP101-109	WI1702	JUMPER WIRE 24 AWG BARE	9	C525, 526, 562	CP1719	Metalized Flm Cap 0.039uF, 50V	3
R101, 102, 103, 104, 105	RS2257	RES C/F MINI 75 ohm 5%, 1/4W	5	C535, 536	CP1702	Electrolytic Cap. 470uF 16V	2

SA1090 VOLUME CONTROL PCB

C631	CP1717	CAP, MTL.FILM, 0.1uF, 50V	1	C537, 538, 540	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V	3
CW506	HA1130	CONNECTORIZES WIRE	1	C568, 569, 570, 582, 583, 584, 585, 586, 587	CP1733	Pol. Prop. Flm Cap 220pF, 50V	9
VR631	RS2399	POTENTIOMETER W/GREEN LED	1	C571, 589	CP1707	Electrolytic Cap. 10uF 50V	2

SA1091 IR SENSOR PCB

C621	CP1697	CAP, ELECT. 100uF, 16V	1	C592, 593	CP1879	CAP CERAMIC 12pF 5% 50V	2
CW504	HA1068	HARNESS, WIRE 3P	1	C594	CP1878	CAPACITOR 10pF 50V	1
IC621	IC1255	IR Sensor	1	C609	CP1757	CERAMIC CAP 0.01uF 50V	1

SA1093 POWER INDICATOR PCB

CW505	HA1115	HARNESS, WIRE 4P	1	C636	CP1711	Electrolytic Cap. 4.7uF 50V	1
D641, 642, 643, 644	LE1037	LED	4	C651,652	CP1891	(on Headphone Board) CAPACITOR 680pF 10% 50V	2
JP641	WI1702	JUMPER WIRE 24 AWG BARE	1				

SA1746 "PRE-AMP PCB, FEST-80 US"**Capacitors**

B501	CP1811	Super Capacitor 1F	1				
C51, 52, 57	CP1700	Electrolytic Cap. 2200uF, 16V	3				
C55, 56, 58	CP1706	Electrolytic Cap. 1uF 50V	3				
C59, 61	CP1863	ELECTROLYTIC CAP. 220UF, 63V	2				
C64, 573, 608	CP1697	CAP, ELECT. 100uF, 16V	3				
C67, 574, 575, 576, 577, 578, 579, 590, 591, 595, 596, 597, 598, 599, 600, 607	CP1911	SMD CAP 0.1uF 10% 25V	16				
C68, 588	CP1725	Metallized Flm Cap. 0.22uF, 50V	2				
C70, 71	CP1843	CAP.CERAM, 4700pF, 250V	1				
C72, 73, 74, 75, 76, 77, 78, 507, 508, 523, 524,	CP1722	Metallized Flm Cap. 0.01uF, 50V	22				

Diodes

D51, 52, 53, 54, 55, 56, 57, 58, 63, 64	DI1201	Diode Rectifier 1 A 400V	10				
D60, 61	DI1204	Zener Diode 0.4W	1				
D62	DI1192	Zener Diode 0.4W	1				
D65, 66, 581, 582, 585, 586, 587, 588, 589	DI1205	Switching Diode 90V 0.3W	9				
D67, 584, 631	DI1196	Zener Diode 0.4W	3				
D591, 592, 593, 594	DI1206	Switching Diode 40V 0.3W	4				

Filters

FB601-616 620, 621, 622	FI1011	FILTER EMI	19				
EF501, 502, 503, 504, 508, 509, 510	FI1018	FILTER, EMI	7				
EF505, 506, 507	FI1017	EMI FILTER 4-CIRCUIT CAP 100pF 50V SMD	3				
EF511, 512, 601, 602, 603, 604	FI1014	FILTER EMI	6				
L51	FI1020	EMI FILTER	1				
L52	FI1013	FILTER EMI	1				

Integrated Circuits

IC51	IC1232	IC Voltage Regulator +6VDC	1				
------	--------	----------------------------	---	--	--	--	--

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
IC52	IC1234	IC Voltage Regulator -6VDC	1	R523, 524	RS2231	RES C/F MINI 18Kohm 5%, 1/4W	2
IC53	IC1307	IC VOLTAGE REGULATOR +5V, TO-220	1	R529, 530	RS2240	RES C/F MINI 3.3Kohm 5%, 1/4W	2
IC501	IC1245	IC ELECTRICAL VOLUME	1	R531, 532, 541, 542, 559, 560, 568, 573	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	8
IC502	IC1244	IC	1				
IC503	IC1248	IC	1	R535, 536, 593, 671	RS2250	RES C/F MINI 47Kohm 5%, 1/4W	3
IC504, 505, 506, 507	IC1226	IC	4	R563, 564, 579	RS2291	RES C/F MINI 27Kohm 5%, 1/4W	3
IC591	IC1313	IC QUAD LOW-PWR LINE DRIVER	1	R565	RS1376	RES C/F MINI 910 ohm 5%, 1/4W	1
IC595	IC1236	IC	1		RS1711	REWORK PER INSTRUCTION SMD RES 220 ohm 5% 1/8W	1
IC581	IC1219	IC	1	R580	RS2476	RES C/F MINI 3Kohm 5%, 1/4W	1
IC582	IC1320	IC EPROM 128K x 8 DIP32	1	R588, 607, 608	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	3
IC583	IC1259	IC SMD 32KBYTE CMOS STAT. RAM	1	R589, 605, 606, 625, 626, 630	RS2235	RES C/F MINI 22Kohm 5%, 1/4W	6
IC584	IC1265	IC LOW PWR CLOCK/CALENDAR	1	R591	RS2237	RES C/F MINI 270 ohm 5%, 1/4W	1
IC585	IC1277	IC, EEPROM, 256x8, CMOS SERIAL BUS	1	R592, 595	RS2247	RES C/F MINI 47 ohm 5%, 1/4W	2
IC586	IC1254	IC SMD OCTAL-D-TYPE LATCH	1	R594	RS2244	RES C/F MINI 3.9Kohm 5%, 1/4W	1
IC587	IC1270	IC SMD DUAL 2-to-4 LINE DECODER	1	R599, 600	RS2212	SMD RES 4.7Kohm 5% 1/10W	2
IC589, 590	IC1269	IC	2	R609, 610, 632	RS2233	RES C/F MINI 22 ohm 5%, 1/4W	3
IC592	IC1283	IC SMD DUAL 2-INPUT AND GATE	1	R635, R641	RS2290	RES C/F 180 ohm 5% 1/3W	2
IC601	IC1262	IC	1	R654	RS2222	RES C/F MINI 100 ohm 5%, 1/4W	1
PH591	IC1241	Photocoupler	1	R681, 682	RS2211	SMD RES 470 ohm 5% 1/10W	2

Resistors

R50	RS2415	RES C/F 3.3Mohm 10% 1/2W	1
R51	RS2261	RES C/F 1Kohm 5% 1/3W	1
R52, 640	RS2341	RES C/F 100 ohm 5% 1/3W	2
R53	RS2389	RES C/F 4.7Kohm 5% 1/3W	1
R55	RS2315	RES FUSE 4.7 ohm 2% 1/4W	1
R61, 63, 527, 528, 543, 544, 557, 558, 561, 567, 569, 572, 576, 577, 578, 590, 596, 621, 628, 631, 651, 661	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	22
R62, 64, 507, 508, 511, 512, 601, 602, 623, 653, 663, 664, 665, 666, 672	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	15
R501, 502	RS2260	RES C/F MINI 8.2Kohm 5%, 1/4W	2
R503, 504, 515, 516, 525, 526	RS2242	RES C/F MINI 330Kohm 5%, 1/4W	6
R505, 506, 509, 510, 574, 575, 582, 583, 584, 585, 586, 587, 598, 603, 604, 611, 612, 622, 624, 627, 633, 634, 637, 652, 662	RS2223	RES C/F MINI 1Kohm 5%	25
R513, 514, 519, 520, 533, 534, 555, 556, 562, 566, 570, 571, 581	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	13
R517, 518, 629	RS2226	RES C/F MIN 1Mohm 5% 1/4W	3

Transistors

Q51	TR1304	NPN XSTR 60V/3A 25W, TO-220	1
Q52	TR1281	PNP XSTR 60V/3A 25W 2-10R1A	1
Q501, 502, 503, 504, 543, 544, 545, 546, 547, 548, 601, 602	TR1283	NPN XSTR 20V/300mA 400mW 3501200 TO-92	12
Q581, 586, 588	TR1269	PNP XSTR 50V/30mA 300mW 22K/22K SPT	3
Q582, 584, 587	TR1268	NPN XSTR 50V/30mA 300mW 22K/22K SPT	3
Q589, 592	TR1291	NPN XSTR 50V/200mA 300mW 250500 TO-92	2
Q591	TR1272	PNP XSTR 50V/100mA 300mW 4.7K/4.7K SPT	1
Q593	TR1290	PNP XSTR 50V/200mA 300mW 250500 TO-92	1
Q631	TR1341	NPN XSTR 30V/800mA 600mW 100200 TO-92	1

Connectors

J501	CO1359	Connector 2.5A250V	1
J503, 504	CO1375	Jack 1P	2
J502	CO1402	CONNECTOR 34-POS	1
J506	CO1390	CONNECTOR 8P	1
CN505	CO1382	CONNECTOR 4P 2MM 2A 100V	1
CN506	CO1370	Connectors 6P 2mm 2A 100V	1
CN507	CO1369	Connector 5P 2mm 2A 100V	1
CN508	CO1383	CONNECTOR HEADER 7-PIN	1
CN509	CO1388	CONNECTOR 10P 2mm 2A 100V	1
CN510	CO1389	CONNECTOR 14P 2mm 2A 100V	1

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
CN51	CO1363	Connector 11P 2mm 2A 100V	1	909, 910, 911, 912			
CN52, 504	CO1367	Connector 3P 2mm 2A 100V	1	C818	CP1736	Pol. Prop. Flm Cap. 4700pF, 50V	1
CW51	HA1166	HARNESS ASSY	1	C820, 821, 836, 837	CP1707	Electrolytic Cap. 10uF 50V	4
CW502	HA1214	HARNESS ASY 11-COND 160mm	1	C824, 828, 829	CP1711	Electrolytic Cap. 4.7uF 50V	3
CW507	HA1210	(on Headphone Board) HARNESS ASY 5-COND 200mm	1	C826, 827, 830, 831	CP1725	Metallized Flm Cap. 0.22uF, 50V	3

Miscellaneous

CW501	HA1109	CONNECTORIZES WIRE 8P	1	C833, 840	CP1738	Pol. Prop. Flm Cap. 5600pF, 50V	2
CW503	HA1112	CONNECTORIZES WIRE 13P	1	C834	CP1728	Metallized Flm Cap. 0.68uF, 50V	1
FB623-643, 651, 652, 653, 654, 655	CC1065	FERRITE CHIP BEAD On Headphone Board	26	C835, 839, 847	CP1737	Pol. Prop. Flm Cap. 560pF, 50V	3
F51	FS1089	FUSE SLO BLO 0.5A 250V	1	C838	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V	1
HL51, 52	FH1007	Fuse Holder	2	C846	CP1882	POLYPROPELENE FILM CAPACITOR 2200uF 50V	1
J601	CO1374	(on Headphone Board) Miniture Jack LR-SW	1	C853, 901, 902	CP1697	CAP, ELECT. 100uF, 16V	3
S51	SW1078	Push Switch 1P TV3	1	C913, 914	CP1729	Metallized Flm Cap 0.082uF, 50V	2
T51	MI1206	TRANSFORMER TOP UNIT (US)	1	C915, 916	CP1726	Metallized Flm Cap 0.033uF, 50V	2
X592	XT1006	Xtal 10pF	1	C917, 918	CP1733	Pol. Prop. Flm Cap 220pF, 50V	2
X591	XT1011	XTAL, 15MHZ	1				
	BR1542	STEEL SHIELD PLATE	1				
	SC1262	(use with HS1155) SCREW, BND + (M3x10)	1				
	HS1155	(use with IC51,52,53) HEATSINK, AMPLIFIER"	1				
	LB1265	Bar Code Traceability Label	1				
	SP1102	(locate on bottom of board) INSULATOR RUBBER	1				
	CO1418	(USE WITH IC582) CONNECTOR IC SOCKET DIP32	1				
	SC1271	(use with Transformer Bracket) Screw Fpt+	4				
	332501-001	(use with Transformer T51) BRACKET, MTG,XFORMER	1				
	CL1236	CLUSTER BD FEST. 60/70/80 PRE-AMP & HEADPHONE	1				

Integrated Circuits

IC801	IC1229	IC	1
IC802	IC1228	IC	1
IC901, 905	IC1238	IC	2
IC902, 903, 904, 908	IC1226	IC	4
IC906	IC1239	IC	1
IC907	IC1246	IC	1

Resistors

R801, 804, 812, 814, 817, 820, 822, 945, 946	RS2230	RES C/F MINI 15Kohm 5%, 1/4W	9
R802, 805	RS2250	RES C/F MINI 47Kohm 5%, 1/4W	2
R803, 806	RS2259	RES C/F MINI 7.5Kohm 5%, 1/4W	2
R807, 808, 813, 941, 942	RS2235	RES C/F MINI 22Kohm 5%, 1/4W	5
R809	RS2251	RES C/F MINI 4.7Mohm 5%, 1/4W	1
R810, 815, 829, 911, 912, 919, 920, 952, 956, 957, 958	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	11
R811	RS2242	RES C/F MINI 330Kohm 5%, 1/4W	1
R816	RS2246	RES C/F MINI 43Kohm 5%, 1/4W	1
R818, 823, 826, 828, 923, 924, 927, 928, 929, 930, 933, 934, 953, 954	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	14
R819, 821	RS2233	RES C/F MINI 22 ohm 5%, 1/4W	2
R824	RS2226	RES C/F MIN 1Mohm 5% 1/4W	1
R825, 901, 902, 903, 904, 905, 906, 907, 908	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	9
R827, 925, 926, 931, 932	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	5
R909, 910, 917, 918, 935, 936, 951, 955	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	8

SA1748 FUNCTION PCB ASY

Capacitors

C801, 802	CP1702	Electrolytic Cap. 470uF 16V	2
C803, 804, 832, 842, 843	CP1727	Metallized Flm Cap 0.047uF, 50V	5
C805, 806, 810, 811, 812, 814, 815, 822, 825, 841, 845, 852, 854, 920	CP1717	CAP, MTL.FILM, 0.1uF, 50V	14
C807, 808	CP1724	Metallized Flm Cap 0.022uF,50V	2
C809, 813	CP1739	Pol. Prop. Flm Cap. 680pF, 50V	2
C816, 819	CP1708	Electrolytic Cap. 22uF 50V	2
C817, 823, 844, 903, 904, 905, 906, 907, 908,	CP1701	Electrolytic Cap. 47uF 16V	13

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
R937, 938	RS2256	RES C/F MINI 68Kohm 5%, 1/4W	2	D10	DI1192	Zener Diode 0.4W (T/R,2 [™])	1
R939, 940	RS2241	RES C/F MINI 33Kohm 5%, 1/4W	2	D13	DI1214	DIODE ZENER	1
R943, 944	RS2231	RES C/F MINI 18Kohm 5%, 1/4W	2				
R947, 948	RS2245	RES C/F MINI 39Kohm 5%, 1/4W	2				
R949, 950	RS2232	RES C/F MINI 20Kohm 5%, 1/4W	2				

Connectors

CN501	CO1371	Connectors 8P 2mm 2A 100V	1
CN502	CO1363	Connector 11P 2mm 2A 100V	1
CN503	CO1365	CONNECTOR 13P 2MM 2A100V	1

Miscellaneous

J901, 902, 903, 905	CO1377	RCA Pin Jack 2P	4
J904	CO1374	Miniture Jack LR-SW	1
JP2-7, 11-14, 16, 18-40, 44, 46, 48, 49, 51-67, 69, 70, 77, 80-88	WI1702	INSTALL IN AXIAL: JUMPER WIRE 24 AWG BARE	72
X801	XT1009	Xtal	1
		INSTALL IN MANUAL: JP71-73,78,79	

SA1795 AMP MAIN BOARD ASY

Capacitors

C1	CP1843	CAP.CERAM, 4700pF, 250V	1
C4, 5	CP1810	CAP. ELECT. 10,000uF, 50V	2
C7	CP1697	CAP, ELECT. 100uF, 16V	1
C8	CP1706	Electrolytic Cap. 1uF 50V	1
C9, 10	CP1817	Cap Poly Film 68nF 5% 50V	2
C11, 12, 413, 414, 423, 424	CP1707	Electrolytic Cap. 10uF 50V	6
C15	CP1698	Electrolytic Cap. 22uF 16V	1
C401, 402	CP1701	Electrolytic Cap. 47uF 16V	2
C403, 404	CP1750	Ceramic Cap. 68pF 50V	2
C405, 406, 435, 436	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V4	
C407, 408	CP1695	CAP, ELECT, 470uF, 6.3V	2
C409, 410, 425, 426	CP1878	CAPACITOR 10pF 50V	4
C411, 412	CP1749	Ceramic Cap. 100pF 50V	2
C415, 416, 417, 418, 419, 420, 421, 422	CP1717	CAP, MTL.FILM, 0.1uF, 50V	8
C427, 428	CP1695	CAP, ELECT, 470uF, 6.3V	2
C429, 430, 431, 432	CP1730	Polypropylen Flm Cap 100pF, 50V	4

Diodes

D1	DI1189	Bridge Diode 200V 4A	1
D2, 3	DI1197	Switching Diode	2
D8, 9, 11, 12, 401, 402	DI1205	Switching Diode 90V 0.3W	6

Integrated Circuits

PH1	IC1240	Photocoupler 70V 0.15W	1
-----	--------	------------------------	---

Resistors

R1	RS2269	RES C/F 3.3Mohm 5% 1/2W	1
R2, 3, 423, 424, 425, 426, 431, 432	RS2176	RES FUSE 560 ohm 5% 1/4W	8
R4, 46, 479	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	3
R5, 10, 445, 446	RS2234	RES C/F MINI 2.2Kohm 5%, 1/4W	4
R6	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	1
R7, 13, 22, 23, 31	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	5
R8	RS2256	RES C/F MINI 68Kohm 5%, 1/4W	1
R9	RS2241	RES C/F MINI 33Kohm 5%, 1/4W	1
R11, 12	RS2287	RES C/F 6.8Kohm 5% 1/3W	2
R14	RS2235	RES C/F MINI 22Kohm 5%, 1/4W	1
R15, 16, 17, 18	RS2229	RES C/F MINI 1.5Kohm 5%, 1/4W	4
R19, 20	RS2252	RES C/F MINI 560 ohm 5%, 1/4W	2
R21	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	2
R24	RS2243	RES C/F MINI 3.3Mohm 5%, 1/4W	1
R33	RS2410	RES C/F 82Kohm 5% 1/3W	1
R34	RS2382	RES C/F MINI 1.8Kohm 5%, 1/4W	2
R35	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	1
R48, 443, 444	RS2401	RES C/F MINI 1.2Kohm 5%, 1/4W	3
R401, 402	RS2261	RES C/F 1Kohm 5% 1/3W	2
R403, 404, 419, 420	RS2340	RES C/F 33Kohm 5% 1/3W	4
R405, 406, 407, 408	RS2326	RES C/F 220 ohm 5% 1/3W	4
R409, 410, 411, 412	RS2262	RES C/F 1.5Kohm 5% 1/3W	4
R413, 414	RS2237	RES C/F MINI 270 ohm 5%, 1/4W	2
R415, 416, 417, 418	RS2171	RES FUSE 10 ohm 5% 1/4W	4
R421, 422	RS2264	RES C/F 1.6Kohm 5% 1/3W	2
R427, 428	RS2390	RES FUSE 560 ohm 2% 1/4W	2
R429, 430	RS2383	RES C/F 560 ohm 5% 1/6W	2
R433, 434, 435, 436	RS2172	RES FUSE 100 ohm 5% 1/4W	4
R437, 438, 439, 440	RS2263	RES C/F 15Kohm 5% 1/3W	4
R441, 442	RS2265	RES C/F 2.2Kohm 5% 1/3W	2
R447, 448	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	2
R449, 450, 451, 452, 461, 462	RS2167	RES FUSE 100 ohm 2% 1/4W	6
R453, 454, 455, 456	RS2168	RES FUSE 15 ohm 2% 1/4W	4
R457, 458, 459, 460	RS2169	RES FUSE 2.2 ohm 5% 1/4W	4
R463, 464, 465, 466	RS2271	RES M/O F/R 0.22ohm 5% 3W	4
R467, 468	RS2397	RES M/O F/R 10 ohm 5% 2W	2

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
R469, 470	RS2428	RES FUSE 330 ohm 5% 1/6W	2		HS1156	(USE WITH D1) Heatsink	1
R471, 472	RS2253	RES C/F MINI 5.6Kohm 5%, 1/4W	2				
R473, 474, 475, 476	RS2280	RES C/F MINI 82 ohm 5%, 1/4W	4				
R477, 478	RS2236	RES C/F MINI 220Kohm 5%, 1/4W	2				

Transistors

Q1, 3, 8, 10, 11, 13, 407, 408	TR1291	NPN XSTR 50V/200mA 300mW 250500 TO-92	8
Q2, 7	TR1290	PNP XSTR 50V/200mA 300mW, 250500 TO-92	2
Q4, 417, 418"	TR1284	NPN XSTR 120V/100mA 300mW 350700 TO-92	3
Q5, 6, 409, 410, 411,412	TR1280	PNP XSTR 120V/100mA 300mW 350700 TO-92	6
Q9	TR1324	NPN XSTR 25V/1.5A 900mW 6001200 TO-92L AMMO PA	1
Q12	TR1330	PNP XSTR 120V/800mA 900mW 80160 TO-92	1
Q401, 402, 403, 404, 405, 406, 419, 420	TR1286	NPN XSTR 90V/50mA 300mW 6001200 TO-92	8
Q413, 414	TR1288	PNP XSTR 100V/50mA 900mW 100200 TO-92	2
Q415, 416	TR1285	NPN XSTR 100V/50mA 900mW 100200 TO-92	2
Q421, 422, 427, 428	TR1289	NPN XSTR 100V/1A 900mW 100200 TO-92	4
Q423, 424, 425, 426	TR1287	PNP XSTR 100V/1A 900mW 100200 TO-92	4
Q429, 430	TR1326	NPN XSTR 140V/10A 100W 80160 2-16C1A	2
Q431, 432	TR1319	PNP XSTR 140V/10A 100W 80160 2-16C1A	2
Q433, 434	TR1279	N-CH FET 50V/6.5mA 300mW, TO-92	2

Connectors

CN401	CO1366	CONNECTOR 2P 7.92mm 7A 250V	1
CN403	CO1384	CONNECTOR	1
CN404	CO1368	CONNECTOR 3P 3.96mm 7A 250V	1
CN405	CO1367	CONNECTOR 3P 2mm 2A 100V	1
CN406	CO1402	CONNECTOR 34-POS	1
CN407	CO1372	CONNECTOR 2.5A 250V	1

Miscellaneous

JP1-8, 10, 11, 13-23, 25-29, 31-46, 49-53, 60, 68-75, 77-94, JP54-59	WI1702	MACHINE INSERT THE FOLLOWING JUMPER WIRE 24 AWG BARE	74
		HAND INSERT TO FOLLOWING: JP54-59	
PJ401	CO1386	Pin Jack	1
RL1	RE1022	Relay	1
TM401	TE1195	Terminal 4P	1
TM402	TE1197	Terminal Prime-Time	1
VR401, 402	RS2289	POT. TRIM. 1K-OHM	2
	SC1262	(MOUNT D1 TO HEATSINK) SCREW, BND + (M3x10)	1

SA1796 AMP #1 MAIN BOARD ASY**Capacitors**

C1	CP1843	CAP.CERAM, 4700pF, 250V	1
C4, 5	CP1810	CAP. ELECT. 10,000uF, 50V	2
C7	CP1697	CAP, ELECT. 100uF, 16V	1
C8	CP1706	Electrolytic Cap. 1uF 50V	1
C9, 10	CP1817	Cap Poly Film 68nF 5% 50V	2
C11, 12, 413, 414, 423, 424	CP1707	Electrolytic Cap. 10uF 50V	6
C15	CP1698	Electrolytic Cap. 22uF 16V	1
C401, 402	CP1701	Electrolytic Cap. 47uF 16V	2
C403, 404	CP1750	Ceramic Cap. 68pF 50V	2
C405, 406	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V	2
C407, 408	CP1695	ELECT, 470uF, 6.3V	2
C409, 410, 425 426	CP1878	CAPACITOR 10pF 50V	4
C411, 412	CP1749	Ceramic Cap. 100pF 50V	2
C415, 416, 417, 418 419, 420, 421, 422	CP1717	CAP, MTL.FILM, 0.1uF, 50V	8
C427, 428	CP1695	CAP, ELECT, 470uF, 6.3V	2
C429, 430, 431, 432	CP1730	Polypropylen Flm Cap 100pF, 50V	4
C433, 434	CP1899	CAP CER DISC 0.01uF 10%, 50V	2

Diodes

D1	DI1189	Bridge Diode 200V 4A	1
D10	DI1192	Zener Diode 0.4W	1
D2, 3	DI1197	Switching Diode	2
D8, 9, 11, 12, 401, 402	DI1205	Switching Diode 90V 0.3W	6
D13	DI1214	DIODE ZENER	1

Integrated Circuit

PH1	IC1240	Photocoupler 70V 0.15W	1
-----	--------	------------------------	---

Resistors

R1	RS2269	RES C/F 3.3Mohm 5% 1/2W	1
R2 ,3, 423, 424, 425, 426, 431, 432	RS2176	RES FUSE 560 ohm 5% 1/4W	8
R4, 46, 479	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	3
R5, 10, 445, 446	RS2234	RES C/F MINI 2.2Kohm 5%, 1/4W	4
R6	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	1
R7, 13, 22, 23, 31	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	5
R8	RS2256	RES C/F MINI 68Kohm 5%, 1/4W	1
R9	RS2241	RES C/F MINI 33Kohm 5%, 1/4W	1
R11, 12	RS2287	RES C/F 6.8Kohm 5% 1/3W	2
R14	RS2235	RES C/F MINI 22Kohm 5%, 1/4W	1

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
R15, 16, 17, 18	RS2229	RES C/F MINI 1.5Kohm 5%, 1/4W	4	Q413, 414	TR1288	PNP XSTR 100V/50mA 900mW 100200 TO-92	2
R19, 20	RS2252	RES C/F MINI 560 ohm 5%, 1/4W	2	Q415, 416	TR1285	NPN XSTR 100V/50mA 900mW 100200 TO-92	2
R21	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	1	Q421, 422, 427, 428	TR1289	NPN XSTR 100V/1A 900mW 100200 TO-92	4
R24	RS2243	RES C/F MINI 3.3Mohm 5%, 1/4W	1	Q423, 424, 425, 426	TR1287	PNP XSTR 100V/1A 900mW 100200 TO-92	4
R34	RS2382	RES C/F MINI 1.8Kohm 5%, 1/4W	1	Q429, 430	TR1326	NPN XSTR 140V/10A 100W 80160 2-16C1A	2
R35	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	1	Q431, 432	TR1319	PNP XSTR 140V/10A 100W 80160 2-16C1A	2
R33	RS2410	RES C/F 82Kohm 5% 1/3W	1	Q433, 434	TR1279	N-CH FET 50V/6.5mA 300mW, TO-92	2
R48, 443, 444	RS2401	RES C/F MINI 1.2Kohm 5%, 1/4W	3	Connectors			
R469, 470	RS2428	RES FUSE 330 ohm 5% 1/6W	2	CN401	CO1366	Connector 2P 7.92mm 7A 250V	1
R401, 402	RS2261	RES C/F 1Kohm 5% 1/3W	2	CN403	CO1384	Connector	1
R403, 404, 419, 420	RS2340	RES C/F 33Kohm 5% 1/3W	4	CN404	CO1368	Connector 3P 3.96mm 7A 250V	1
R405, 406, 407, 408	RS2326	RES C/F 220 ohm 5% 1/3W	4	CN405	CO1367	Connector 3P 2mm 2A 100V	1
R409, 410, 411, 412	RS2262	RES C/F 1.5Kohm 5% 1/3W	4	CN406	CO1402	CONNECTOR 34-POS	1
R413, 414	RS2237	RES C/F MINI 270 ohm 5%, 1/4W	2	CN407	CO1372	Connector 2.5A 250V	1
R415, 416, 417, 418	RS2171	RES FUSE 10 ohm 5% 1/4W	4	Miscellaneous			
R421, 422	RS2264	RES C/F 1.6Kohm 5% 1/3W	2	JP1-8, 10, 11, 13-25, 27-29, 31-46, 49-60, 69, 71-73, (ADJ Q409/413) (ADJ J401), (ADJ D9), (ADJ RL1)	WI1702	JUMPER WIRE 24 AWG BARE	62
R427, 428	RS2390	RES FUSE 560 ohm 2% 1/4W	2	RL1	RE1022	Relay	1
R429, 430	RS2383	RES C/F 560 ohm 5% 1/6W	2	TM401	TE1195	Terminal 4P	1
R433, 434, 435, 436	RS2172	RES FUSE 100 ohm 5% 1/4W	4	TM402	TE1197	Terminal Prime-Time	1
R437, 438, 439, 440	RS2263	RES C/F 15Kohm 5% 1/3W	4	VR401, 402	RS2289	POT. TRIM. 1K-OHM	2
R441, 442	RS2265	RES C/F 2.2Kohm 5% 1/3W	2	SC1262	(MOUNT D1 TO HEATSINK) SCREW, BND + (M3x10)		1
R447, 448	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	2	HS1156	(USE WITH D1) Heatsink		1
R449, 450, 451, 452, 461, 462	RS2167	RES FUSE 100 ohm 2% 1/4W	6	SA1797 AMP #2 MAIN BOARD ASY			
R453, 454, 455, 456	RS2168	RES FUSE 15 ohm 2% 1/4W	4	Capacitors			
R457, 458, 459, 460	RS2169	RES FUSE 2.2 ohm 5% 1/4W	4	C1001	CP1843	CAP.CERAM, 4700pF, 250V	1
R463, 464, 465, 466	RS2271	RES M/O F/R 0.22ohm 5% 3W	4	C1004,1005	CP1810	CAP. ELECT. 10,000uF, 50V	2
R467, 468	RS2397	RES M/O F/R 10 ohm 5% 2W	2	C1007	CP1697	CAP, ELECT. 100uF, 16V	1
R471, 472	RS2253	RES C/F MINI 5.6Kohm 5%, 1/4W	2	C1008	CP1706	Electrolytic Cap. 1uF 50V	1
R473, 474, 475, 476	RS2280	RES C/F MINI 82 ohm 5%, 1/4W	4	C1009, 1010	CP1817	Cap Poly Film 68nF 5% 50V	2
R477, 478	RS2236	RES C/F MINI 220Kohm 5%, 1/4W	2	C1011, 1012, 1413, 1414, 1423, 1424	CP1707	Electrolytic Cap. 10uF 50V	6

Transistors

Q1, 3, 8, 10, 11, 13, 407, 408	TR1291	NPN XSTR 50V/200mA 300mW 250500 TO-92	8
Q2, 7	TR1290	PNP XSTR 50V/200mA 300mW 250500 TO-92	2
Q4, 417, 418	TR1284	NPN XSTR 120V/100mA 300mW 350700 TO-92	3
Q5, 6, 409, 410, 411, 412	TR1280	PNP XSTR 120V/100mA 300mW 350700 TO-92	6
Q9	TR1324	NPN XSTR 25V/1.5A 900mW 6001200 TO-92L AMMO PA	1
Q12	TR1330	PNP XSTR 120V/800mA 900mW 80160 TO-92	1
Q401, 402, 403, 404, 405, 406, 419, 420	TR1286	NPN XSTR 90V/50mA 300mW 6001200 TO-92	8

Capacitors

C1001	CP1843	CAP.CERAM, 4700pF, 250V	1
C1004,1005	CP1810	CAP. ELECT. 10,000uF, 50V	2
C1007	CP1697	CAP, ELECT. 100uF, 16V	1
C1008	CP1706	Electrolytic Cap. 1uF 50V	1
C1009, 1010	CP1817	Cap Poly Film 68nF 5% 50V	2
C1011, 1012, 1413, 1414, 1423, 1424	CP1707	Electrolytic Cap. 10uF 50V	6
C1015	CP1698	Electrolytic Cap. 22uF 16V	1
C1401, 1402	CP1701	Electrolytic Cap. 47uF 16V	2
C1403, 1404	CP1750	Ceramic Cap. 68pF 50V	2
C1405, 1406	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V	2

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
C1407, 1408, 1427, 1428	CP1695	CAP, ELECT, 470uF, 6.3V	4	R1427, 1428	RS2390	RES FUSE 560 ohm 2% 1/4W	2
C1409, 1410, 1425, 1426	CP1878	CAPACITOR 10pF 50V	1	R1429, 1430	RS2383	RES C/F 560 ohm 5% 1/6W	2
C1411, 1412	CP1749	Ceramic Cap. 100pF 50V	2	R1433, 1434, 1435, 1436	RS2172	RES FUSE 100 ohm 5% 1/4W	4
C1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422	CP1717	CAP, MTL.FILM, 0.1uF, 50V	8	R1437, 1438, 1439, 1440	RS2263	RES C/F 15Kohm 5% 1/3W	4
C1429, 1430, 1431, 1432	CP1730	Polypropylen Flm Cap 100pF, 50V	4	R1441, 1442	RS2265	RES C/F 2.2Kohm 5% 1/3W	2
Diodes				R1443, 1444	RS2401	RES C/F MINI 1.2Kohm 5%, 1/4W	2
D1001	DI1189	Bridge Diode 200V 4A	1	R1447, 1448	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	2
D1002, 1003, 1008, 1011, 1012, 1401, 1402	DI1205	Switching Diode 90V 0.3W	7	R1449, 1450, 1451, 1452, 1461, 1462	RS2167	RES FUSE 100 ohm 2% 1/4W	6
D1010	DI1192	Zener Diode 0.4W	1	R1453, 1454, 1455, 1456	RS2168	RES FUSE 15 ohm 2% 1/4W	4
Integrated Circuit				R1457, 1458, 1459, 1460	RS2169	RES FUSE 2.2 ohm 5% 1/4W	4
PH1001	IC1240	Photocoupler 70V 0.15W	1	R1463, 1464, 1465, 1466	RS2271	RES M/O F/R 0.22ohm 5% 3W	4
Resistors				R1467, 1468	RS2397	RES M/O F/R 10 ohm 5% 2W	2
R1005, 1010, 1445, 1446	RS2234	RES C/F MINI 2.2Kohm 5%, 1/4W	4	R1469, 1470	RS2428	RES FUSE 330 ohm 5% 1/6W	2
R1019, 1020	RS2252	RES C/F MINI 560 ohm 5%, 1/4W	2	R1471, 1472	RS2253	RES C/F MINI 5.6Kohm 5%, 1/4W	2
R1001	RS2269	RES C/F 3.3Mohm 5% 1/2W	1	R1473, 1474, 1475, 1476	RS2280	RES C/F MINI 82 ohm 5%, 1/4W	4
R1002, 1003, 1423, 1424, 1425, 1426, 1431, 1432	RS2176	RES FUSE 560 ohm 5% 1/4W	8	R1477, 1478	RS2236	RES C/F MINI 220Kohm 5%, 1/4W	2
R1004, 1046, 1479	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	3	R1480	RS2260	RES C/F MINI 8.2Kohm 5%, 1/4W	1
R1006	RS2439	RES C/F MINI 82Kohm 5%, 1/4W	1	Transistors			
R1007, 1013, 1022, 1023, 1031, 1481	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	6	Q1001, 1003, 1008, 1010, 1011, 1013, 1407, 1408	TR1291	NPN XSTR 50V/200mA 300mW 250500 TO-92	8
R1008	RS2256	RES C/F MINI 68Kohm 5%, 1/4W	1	Q1002, 1007, 1014	TR1290	PNP XSTR 50V/200mA 300mW 250500 TO-92	3
R1009, 1403, 1404	RS2241	RES C/F MINI 33Kohm 5%, 1/4W	3	Q1004, 1417, 1418	TR1284	NPN XSTR 120V/100mA 300mW 350700 TO-92	3
R1011, 1012	RS2287	RES C/F 6.8Kohm 5% 1/3W	2	Q1005, 1006, 1409, 1410, 1411, 1412	TR1280	PNP XSTR 120V/100mA 300mW 350700 TO-92	6
R1014	RS2235	1RES C/F MINI 22Kohm 5%, 1/4W	1	Q1009	TR1324	NPN XSTR 25V/1.5A 900mW 6001200 TO-92	1
R1015, 1016, 1017, 1018	RS2229	RES C/F MINI 1.5Kohm 5%, 1/4W	4	Q1012	TR1330	PNP XSTR 120V/800mA 900mW 80160 TO-92	1
R1021, 1401, 1402	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	3	Q1401, 1402, 1403, 1404, 1405, 1406, Q1419, 1420	TR1286	NPN XSTR 90V/50mA 300mW 6001200 TO-92	8
R1024	RS2243	RES C/F MINI 3.3Mohm 5%, 1/4W	1	Q1413, 1414	TR1288	PNP XSTR 100V/50mA 900mW 100200 TO-92	2
R1033	RS2398	RES C/F 820Kohm 5% 1/3W	1	Q1415, 1416	TR1285	NPN XSTR 100V/50mA 900mW 100200 TO-92	2
R1034	RS2382	RES C/F MINI 1.8Kohm 5%, 1/4W	1	Q1421, 1422, 1427, 1428	TR1289	NPN XSTR 100V/1A 900mW 100200 TO-92	4
R1035	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	1	Q1423, 1424, 1425, 1426	TR1287	PNP XSTR 100V/1A 900mW 100200 TO-92	4
R1047	RS2429	RES C/F 120 ohm 5% 1/3W	1	Q1429, 1430	TR1326	NPN XSTR 140V/10A 100W 80160 2-16C1A	2
R1048	RS2414	RES C/F 1.2Kohm 5% 1/3W	1	Q1431, 1432	TR1319	PNP XSTR 140V/10A 100W 80160 2-16C1A	2
R1405, 1406, 1407, 1408	RS2326	RES C/F 220 ohm 5% 1/3W	4	Q1433, 1434	TR1279	N-CH FET 50V/6.5mA 300mW, TO-92	2
R1409, 1410, 1411, 1412	RS2262	RES C/F 1.5Kohm 5% 1/3W	4	Connectors			
R1413, 1414	RS2237	RES C/F MINI 270 ohm 5%, 1/4W	2	CN1401	CO1366	Connector 2P 7.92mm 7A 250V	1
R1415, 1416, 1417, 1418	RS2171	RES FUSE 10 ohm 5% 1/4W	4				
R1419, 1420	RS2340	RES C/F 33Kohm 5% 1/3W	2				
R1421	RS2264	RES C/F 1.6Kohm 5% 1/3W	1				
R1422	RS2477	RES C/F 1.1Kohm 5% 1/3W	1				

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
CN1403	CO1384	Connector	1	C535, 536	CP1702	Electrolytic Cap. 470uF 16V	2
CN1404	CO1368	Connector 3P 3.96mm 7A 250V	1	C537, 538	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V	1
CN1405	CO1367	Connector 3P 2mm 2A 100V	1	C568, 569, 570, 582, 583, 584, 585, 586, 587	CP1733	Pol. Prop. Flm Cap 220pF, 50V	9
CN1406	CO1392	Connector DIN 8-Pos	1	C571, 589	CP1707	Electrolytic Cap. 10uF 50V	2
CN1407	CO1372	Connector 2.5A 250V	1	C592, 593	CP1887	SMD CAP 15pF 5% 50V	2
CW1407	HA1189	HARNESS ASSY 7P 2mm	1	C594	CP1878	CAPACITOR 10pF 50V	1
CW1407	HA1202	HARNESS ASSY	1	C609	CP1757	CERAMIC CAP 0.01uF 50V	1
CW1409	HA1203	HARNESS ASSY	1	C636	CP1711	Electrolytic Cap. 4.7uF 50V	1
CW1408	HA1190	HARNESS ASSY 3P 2mm	1	C651, 652	CP1891	(on Headphone Board) CAPACITOR 680pF 10% 50V	2

Miscellaneous

JP1001-1008, 1010, 1011, 1013-1025, 1027-1046, 1049-1053, 1060, 1068	WI1702	JUMPER WIRE 24 AWG BARE JP1069-1075;1077;1080-1096	75
RL1001	RE1022	Relay	1
SW1401	SW1086	SWITCH POWER	1
TM1401	TE1215	TERMINAL, 6P	1
TM1402	TE1197	Terminal Prime-Time	1
VR1401, 1402	RS2289	POT. TRIM. 1K-OHM	2
	SC1262	(MOUNT D1001 TO HEATSINK) *SCREW, BND + (M3x10)	1
	HS1156	(USE WITH D1001) Heatsink	1

SA1798 PRE-AMP BOARD ASY (60-EU)

Capacitors

B501	CP1811	Super Capacitor 1F	1
C51, 52, 57	CP1700	Electrolytic Cap. 2200uF, 16V	3
C55, 56, 58	CP1706	Electrolytic Cap. 1uF 50V	3
C59, 61	CP1863	ELECTROLYTIC CAP. 220UF, 63V	2
C64, 573, 608	CP1697	CAP, ELECT. 100uF, 16V	3
C67, 574, 575, 576, 577, 578, 579, 590, 591, 595, 596, 597, 598, 599, 600, 607	CP1911	SMD CAP 0.1uF 10% 25V	16
C68, 588	CP1725	Metallized Flm Cap. 0.22uF, 50V	2
C70, 71	CP1843	CAP.CERAM, 4700pF, 250V	2
C72, 73, 74, 75, 76, 77, 78, 507, 508, 523, 524, 605, 606, 632, 641, 642	CP1722	Metallized Flm Cap. 0.01uF, 50V	16
C501, 502, 511, 512, 515, 516, 517, 518, 541, 542, 543, 544, 547, 548, 581, 601, 602, 634	CP1701	Electrolytic Cap. 47uF 16V	18
C503, 504	CP1732	Pol. Prop. Flm Cap. 1500pF, 50V	2
C505, 506	CP1717	CAP, MTL.FILM, 0.1uF, 50V	2
C513, 514	CP1777	CAPACITOR CERAMIC 22pF 50V, 5%	2
C519, 520	CP1815	Cap Poly Film 15nF 5% 50V	2
C521, 522	CP1817	Cap Poly Film 68nF 5% 50V	2
C525, 526	CP1719	Metalized Flm Cap 0.039uF, 50V	2

Diodes

D51, 52, 53, 54, 55, 56, 57, 58, 63, 64	DI1201	Diode Rectifier 1 A 400V	10
D60, 61	DI1204	Zener Diode 0.4W	2
D62	DI1192	Zener Diode 0.4W (T/R,2")	1
D65, 66, 581,582, 585, 586, 587, 588, 589	DI1205	Switching Diode 90V 0.3W	9
D67, 584, 631	DI1196	Zener Diode 0.4W	3
D591, 592, 593, 594	DI1206	Switching Diode 40V 0.3W	4

Integrated Circuits

IC51	IC1232	IC Voltage Regulator +6VDC	1
IC52	IC1234	IC Voltage Regulator -6VDC	1
IC53	IC1307	IC VOLTAGE REGULATOR +5V, TO-220	1
IC501	IC1245	IC ELECTRICAL VOLUME	1
IC503	IC1248	IC	1
IC504, 505, 506	IC1226	IC	1
IC581	IC1219	IC	1
IC582	IC1320	IC EPROM 128K x 8 DIP32	1
IC583	IC1259	IC SMD 32KBYTE CMOS STAT. RAM	1
IC584	IC1265	IC LOW PWR CLOCK/CALENDAR	1
IC585	IC1277	IC, EEPROM, 256x8, CMOS SERIAL BUS	1
IC586	IC1254	IC SMD OCTAL-D-TYPE LATCH	1
IC587	IC1270	IC SMD DUAL 2-to-4 LINE DECODER	1
IC589, 590	IC1269	IC	2
IC591	IC1313	IC QUAD LOW-PWR LINE DRIVER	1
IC592	IC1283	IC SMD DUAL 2-INPUT AND GATE	1
IC595	IC1236	IC	1
IC601	IC1262	IC	1
PH591	IC1241	Photocoupler	1

Resistors

R5, 13, 514, 519, 520, 533, 534, 549, 550, 555, 556, 581	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	11
R51	RS2261	RES C/F 1Kohm 5% 1/3W	1
R52, 640	RS2341	RES C/F 100 ohm 5% 1/3W	2
R53	RS2389	RES C/F 4.7Kohm 5% 1/3W	1

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
R55	RS2315	RES FUSE 4.7 ohm 2% 1/4W	1	Connectors			
R61, 63, 527, 528, 543, 544, 551, 552, 557, 558, 576, 577, 578, 590, 596, 621, 628, 631, 651, 661	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	20	CN51	CO1363	Connector 11P 2mm 2A 100V	1
R62, 64, 507, 508, 601, 602, 623, 653, 663, 664, 665, 666, 672	RS2224	RES C/F MIN 10Kohm 5%, 1/4W		CN52, 504	CO1367	Connector 3P 2mm 2A 100V	2
R517, 518, 629	RS2226	RES C/F MIN 1Mohm 5% 1/4W	3	CN505	CO1382	CONNECTOR 4P 2MM 2A 100V	1
R523, 524	RS2231	RES C/F MINI 18Kohm 5%, 1/4W	2	CN506	CO1370	Connectors 6P 2mm 2A 100V	1
R529, 530	RS2240	RES C/F MINI 3.3Kohm 5%, 1/4W	2	CN507	CO1369	Connector 5P 2mm 2A 100V	1
R592, 595	RS2247	RES C/F MINI 47 ohm 5%, 1/4W	2	CN508	CO1383	CONNECTOR HEADER 7-PIN	1
R501, 502	RS2260	RES C/F MINI 8.2Kohm 5%, 1/4W	2	CN509	CO1388	CONNECTOR 10P 2mm 2A 100V	1
R503, 504, 515, 516, 525, 526	RS2242	RES C/F MINI 330Kohm 5%, 1/4W	6	CN510	CO1389	CONNECTOR 14P 2mm 2A 100V	1
R505, 506, 574, 575, 582, 583, 584, 585, 586, 587, 597, 598, 603, 604, 611, 612, 622, 624, 627, 633, 634, 637, 652, 662	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	24	CW51	HA1166	HARNESS ASSY	1
R531, 532, 541, 542, 553, 554, 559, 560	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	8	CW502	HA1214	HARNESS ASY 11-COND 160mm	1
R535, 536, 593, 671	RS2250	RES C/F MINI 47Kohm 5%, 1/4W	4	CW507	HA1210	(on Headphone Board) HARNESS ASY 5-COND 200mm	1
R588, 607, 608	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	3	J501	CO1358	Connector 2.5A250V	1
R589, 605, 606, 625, 626, 630	RS2235	RES C/F MINI 22Kohm 5%, 1/4W	6	J502	CO1402	CONNECTOR 34-POS	1
R591	RS2237	RES C/F MINI 270 ohm 5%, 1/4W	8	J503, 504	CO1375	Jack 1P	2
R594	RS2339	RES C/F MINI 3.9Kohm 5%, 1/4W	1	Miscellaneous			
R599, 600	RS2212	SMD RES 4.7Kohm 5% 1/10W	2	CW503	HA1112	CONNECTORIZES WIRE 13P	1
R609, 610, 632	RS2233	RES C/F MINI 22 ohm 5%, 1/4W	3	FB601-FB616	FI1011	FILTER EMI	16
R635, R641	RS2290	RES C/F 180 ohm 5% 1/3W	2	FB623-FB643, 651, 652, 653, 654, 655	CC1065	FERRITE CHIP BEAD On Headphone Board	26
R654	RS2222	RES C/F MINI 100 ohm 5%, 1/4W	1	EF501, 502, 503, 504, 508, 509, 510	FI1018	FILTER, EMI	7
R681, 682	RS2211	SMD RES 470 ohm 5% 1/10W	2	EF505, 506, 507	FI1017	EMI FILTER 4-CIRCUIT CAP 100pF 50V SMD	3
Transistors				EF511, 512, 601, 602, 603, 604	FI1014	FILTER EMI	6
Q51	TR1304	NPN XSTR 60V/3A 25W, TO-220	1	F51	FS1090	FUSE SLOW BLOW 500mA 250V	1
Q52	TR1281	PNP XSTR 60V/3A 25W 2-10R1A	1	HL51, 52	FH1007	Fuse Holder	2
Q501, 502, 541, 542, 543, 544, 547, 548, 601, 602	TR1283	NPN XSTR 20V/300mA 400mW 3501200 TO-92	10	L51	FI1020	EMI FILTER	1
Q581, 586, 588	TR1269	PNP XSTR 50V/30mA 300mW 22K/22K SPT	3	L52	FI1013	FILTER EMI	1
Q582, 587	TR1268	NPN XSTR 50V/30mA 300mW 22K/22K SPT	2	LB1265	Bar Code	Traceability Label	2
Q589, 592	TR1291	NPN XSTR 50V/200mA 300mW 250500 TO-92	2	J601	CO1374	(on Headphone Board) Miniture Jack LR-SW	1
Q591	TR1272	PNP XSTR 50V/100mA 300mW 4.7K/4.7K SPT	1	S51	SW1078	Push Switch 1P TV3	1
Q593	TR1290	PNP XSTR 50V/200mA 300mW 250500 TO-92	1	T51	MI1209	TRANSFORMER TOP UNIT (EU)	1
Q631	TR1341	NPN XSTR 30V/800mA 600mW 100200 TO-92	1	X591	XT1011	"XTAL, 15MHZ"	1
				X592	XT1006	Xtal 10pF	1
					CO1418	(USE WITH IC582) CONNECTOR IC SOCKET DIP32	1
					BR1542	STEEL SHIELD PLATE	1
					HS1155	HEATSINK, AMPLIFIER	3
					SC1262	(USE WITH HS1155) "SCREW, BND + (M3x10)"	3
					CL1236	CLUSTER BD FEST. 60/70/80 PRE-AMP & HEADPHONE	1
					RS1711	REWORK PER INSTRUCTION SMD RES 220 ohm 5% 1/8W	1
					SC1271	(use with Transformer Bracket) Screw Fpt+	1
					332501-001	(use with Transformer T51) "BRACKET, MTG,XFORMER"	1
					SP1102	(locate on bottom of board) INSULATOR RUBBER	1

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
SA1799 "PRE-AMP PCB, FEST-70 EU"				IC53	IC1307	IC VOLTAGE REGULATOR +5V, TO-220	1
B501	CP1811	Super Capacitor 1F	1	IC501	IC1245	IC ELECTRICAL VOLUME	1
C51, 52, 57	CP1700	Electrolytic Cap. 2200uF, 16V	3	IC502	IC1244	IC	1
C55, 56, 58	CP1706	Electrolytic Cap. 1uF 50V	3	IC503	IC1248	IC	1
C59, 61	CP1863	ELECTROLYTIC CAP. 220UF, 63V	2	IC504, 505, 506, 507	IC1226	IC	4
C64, 573, 608	CP1697	CAP, ELECT. 100uF, 16V	3	IC581	IC1219	IC	1
C67, 574, 575, 576, 577, 578, 579, 590, 591, 595, 596, 597, 598, 599, 600, 607	CP1911	SMD CAP 0.1uF 10% 25V	16	IC582	IC1320	IC EPROM 128K x 8 DIP32	1
C68, 588	CP1725	Metallized Flm Cap. 0.22uF, 50V	2	IC583	IC1259	IC SMD 32KBYTE CMOS STAT. RAM	1
C70, 71	CP1843	CAP.CERAM, 4700pF, 250V	2	IC584	IC1265	IC LOW PWR CLOCK/CALENDAR	1
C72, 73, 74, 75, 76, 77, 78, 507, 508, 523, 524, 539, 572, 605, 606, 632, 641, 642, 643, 644	CP1722	Metallized Flm Cap. 0.01uF, 50V	20	IC585	IC1277	IC, EEPROM, 256x8, CMOS1 SERIAL BUS	1
C501, 502, 509, 510, 511, 512, 515, 516, 517, 518, 541, 542, 543, 544, 547, 548, 561, 564, 565, 566, 581, 601, 602, 634	CP1701	Electrolytic Cap. 47uF 16V	24	IC586	IC1254	IC SMD OCTAL-D-TYPE LATCH	1
C503, 504	CP1732	Pol. Prop. Flm Cap. 1500pF, 50V	2	IC587	IC1270	IC SMD DUAL 2-to-4 LINE DECODER	1
C505, 506	CP1717	CAP, MTL.FILM, 0.1uF, 50V	2	IC589, 590	IC1269	IC	1
C513, 514	CP1777	CAPACITOR CERAMIC 22pF 50V, 5%	2	IC591	IC1313	IC QUAD LOW-PWR LINE DRIVER	1
C519, 520	CP1815	Cap Poly Film 15nF 5% 50V	2	IC592	IC1283	IC SMD DUAL 2-INPUT AND GATE	1
C521, 522	CP1817	Cap Poly Film 68nF 5% 50V	2	IC595	IC1236	IC	1
C525, 526, 562	CP1719	Metalized Flm Cap 0.039uF, 50V	3	IC601	IC1262	IC	1
C535, 536	CP1702	Electrolytic Cap. 470uF 16V	2	PH591	IC1241	Photocoupler	1
C537, 538, 540	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V	3	Resistors			
C651, 652	CP1891	(on Headphone Board) CAPACITOR 680pF 10% 50V	2	R51	RS2261	RES C/F 1Kohm 5% 1/3W	1
C568, 569, 570, 582, 583, 584, 585, 586, 587	CP1733	Pol. Prop. Flm Cap 220pF, 50V	9	R52, 640	RS2341	RES C/F 100 ohm 5% 1/3W	2
C571, 589	CP1707	Electrolytic Cap. 10uF 50V	2	R53	RS2389	RES C/F 4.7Kohm 5% 1/3W	1
C592, 593	CP1887	SMD CAP 15pF 5% 50V	2	R55	RS2315	RES FUSE 4.7 ohm 2% 1/4W	1
C594	CP1878	CAPACITOR 10pF 50V	1	R61, 63, 527, 528, 543, 544, 551, 552, 557, 558, 561, 567, 569, 572, 576, 577, 578, 590, 596, 621, 628, 631, 651, 661	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	24
C609	CP1757	CERAMIC CAP 0.01uF 50V	1	R62, 64, 507, 508, 511, 512, 601, 602, 623, 653, 663, 664, 665, 666, 672	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	15
C636	CP1711	Electrolytic Cap. 4.7uF 50V	1	R501, 502	RS2260	RES C/F MINI 8.2Kohm 5%, 1/4W	2
Diodes				R503, 504, 515, 516, 525, 526	RS2242	RES C/F MINI 330Kohm 5%, 1/4W	6
D51, 52, 53, 54, 55, 56, 57, 58, 63, 64	DI1201	Diode Rectifier 1 A 400V	10	R505, 506, 509, 510, 574, 575, 582, 583, 584, 585, 586, 587, 598, 603, 604, 611, 612, 622, 624, 627, 633, 634, 637, 662	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	24
D60, 61	DI1204	Zener Diode 0.4W	2	R513, 514, 519, 520, 533, 534, 549, 550, 555, 556, 562, 566, 570, 571, 581	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	15
D62	DI1192	Zener Diode 0.4W (T/R,2"")	1	R517, 518, 629	RS2226	RES C/F MIN 1Mohm 5% 1/4W	3
D65, 66, 581, 582, 585, 586, 587, 588, 589	DI1205	Switching Diode 90V 0.3W	9	R523, 524	RS2231	RES C/F MINI 18Kohm 5%, 1/4W	1
D67, 584, 631	DI1196	Zener Diode 0.4W	3	R529, 530	RS2240	RES C/F MINI 3.3Kohm 5%, 1/4W	2
D591, 592, 593, 594	DI1206	Switching Diode 40V 0.3W	4	R531, 532, 541, 542, 553, 554, 559, 560, 568, 573	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	10
Integrated Circuits							
IC51	IC1232	IC Voltage Regulator +6VDC	1				
IC52	IC1234	IC Voltage Regulator -6VDC	1				

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
R535, 536, 593, 671	RS2250	RES C/F MINI 47Kohm 5%, 1/4W	4	J502	CO1402	CONNECTOR 34-POS	1
	RS1711	REWORK PER INSTRUCTION SMD RES 220 ohm 5% 1/8W	1	J503, 504	CO1375	Jack 1P	2
				J506	CO1390	CONNECTOR 8P	1
R563, 564, 579	RS2291	RES C/F MINI 27Kohm 5%, 1/4W	3	J601	CO1374	(on Headphone Board) Miniture Jack LR-SW	1
R565	RS1376	RES C/F MINI 910 ohm 5%, 1/4W	1				
R580	RS2476	RES C/F MINI 3Kohm 5%, 1/4W	1				
R588, 607, 608	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	3				
R589, 605, 606, 625, 626, 630	RS2235	RES C/F MINI 22Kohm 5%, 1/4W	6				
R591	RS2237	RES C/F MINI 270 ohm 5%, 1/4W	1				
R592, 595	RS2247	RES C/F MINI 47 ohm 5%, 1/4W	2				
R594	RS2244	RES C/F MINI 3.9Kohm 5%, 1/4W	1				
R599, 600	RS2212	SMD RES 4.7Kohm 5% 1/10W	2				
R609, 610, 632	RS2233	RES C/F MINI 22 ohm 5%, 1/4W	3				
R635, R641	RS2290	RES C/F 180 ohm 5% 1/3W	2				
R654	RS2222	RES C/F MINI 100 ohm 5%, 1/4W	2				
R681, 682	RS2211	SMD RES 470 ohm 5% 1/10W	2				

Transistors

Q51	TR1304	NPN XSTR 60V/3A 25W, TO-220	1				
Q52	TR1281	PNP XSTR 60V/3A 25W 2-10R1A	1				
Q501, 502, 503, 504, 541, 542, 543, 544, 545, 546, 547, 548, 601, 602,	TR1283	NPN XSTR 20V/300mA 400mW 350 1200 TO-92					
Q581, 586, 588	TR1269	PNP XSTR 50V/30mA 300mW 22K/22K SPT	3				
Q582, 584, 587	TR1268	NPN XSTR 50V/30mA 300mW 22K/22K SPT	3				
Q589, 592	TR1291	NPN XSTR 50V/200mA 300mW 250500 TO-92	2				
Q591	TR1272	PNP XSTR 50V/100mA 300mW 4.7K/4.7K SPT	1				
Q593	TR1290	PNP XSTR 50V/200mA 300mW 250500 TO-92	1				
Q631	TR1341	NPN XSTR 30V/800mA 600mW 100200 TO-92	1				

Connectors

CN51	CO1363	CONNECTOR 11P 2mm 2A 100V	1				
CN52, 504	CO1367	CONNECTOR 3P 2mm 2A 100V	2				
CN505	CO1382	CONNECTOR 4P 2MM 2A 100V	1				
CN506	CO1370	Connectors 6P 2mm 2A 100V	1				
CN507	CO1369	Connector 5P 2mm 2A 100V	1				
CN508	CO1383	CONNECTOR HEADER 7-PIN	1				
CN509	CO1388	CONNECTOR 10P 2mm 2A 100V	1				
CN510	CO1389	CONNECTOR 14P 2mm 2A 100V	1				
CW51	HA1166	HARNESS ASSY	1				
CW501	HA1109	CONNECTORIZES WIRE 8P	1				
CW502	HA1214	HARNESS ASY 11-COND 160mm	1				
CW503	HA1112	CONNECTORIZES WIRE 13P	1				
CW507	HA1210	(on Headphone Board) HARNESS AS Y 5-COND 200mm	1				
J501	CO1358	Connector 2.5A250V	1				

Miscellaneous

EF501, 502, 503, 504, FI1018 508, 509, 510		FILTER, EMI	6				
EF505, 506, 507	FI1017	EMI FILTER 4-CIRCUIT CAP 100pF 50V SMD	3				
EF511, 512, 601, 602, 603, 604	FI1014	FILTER EMI	6				
F51	FS1090	FUSE SLOW BLOW 500mA 250V	1				
FB623-FB643, 651, 652, 653, 654, 655	CC1065	INSTALL IN SMD MACHINE FERRITE CHIP BEAD On Headphone Board	26				
FB601-FB616 620,621,622	FI1011	FILTER EMI	19				
HL51, 52	FH1007	Fuse Holder	2				
L51	FI1020	EMI FILTER	1				
L52	FI1013	FILTER EMI	1				
S51	SW1078	Push Switch 1P TV3	1				
T51	MI1209	TRANSFORMER TOP UNIT (EU)	1				
X592	XT1006	Xtal 10pF	1				
X591	XT1011	XTAL, 15MHZ	1				
	HS1155	HEATSINK, AMPLIFIER	1				
	SC1262	(use with HS1155) SCREW, BND + (M3x10)"	3				
	SC1271	(use with Transformer Bracket) Screw Fpt+	4				
	CO1418	(USE WITH IC582) CONNECTOR IC SOCKET DIP32	1				
	CL1236	CLUSTER BD FEST. 60/70/80 PRE-AMP & HEADPHONE	1				
	SP1102	(locate on bottom of board) INSULATOR RUBBER	1				
	332501-001	(use with Transformer T51) BRACKET, MTG.XFORMER	1				
	BR1542	STEEL SHIELD PLATE	1				
	LB1265	Bar Code Traceability Label	2				

SA1800 TUNER BOARD ASY (EU)

Capacitors

C201, 207, 217, 235, 237, 252	CP1769	Semiconductor Cap. 0.047uF, 25V	6				
C202, 305, 310	CP1701	Electrolytic Cap. 47uF 16V	3				
C204, 205, 206, 215, 231, 238, 239, 273, 306	CP1741	Ceramic Cap. 0.022uF 50V	9				
C216, 240, 242, 258, 261, 262, 263	CP1707	Electrolytic Cap. 10uF 50V	7				
C218	CP1747	Ceramic Cap. 5pF 50V	1				
C219	CP1751	Ceramic Cap. 82pF 50V	1				
C220	CP1748	Ceramic Cap. 7pF 50V	1				

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
C232, 234	CP1711	Electrolytic Cap. 4.7uF 50V	2	R236	RS2280	RES C/F MINI 82 ohm 5%, 1/4W	1
C233, 253, 255, 256, 271	CP1706	Electrolytic Cap. 1uF 50V	5	R238	RS2374	RES C/F MINI 12Kohm 5%, 1/4W	1
C236	CP1778	Cap. Ceramic 4700pF 50V 10%	1	R239, 282	RS2291	RES C/F MINI 27Kohm 5%, 1/4W	2
C241	CP1710	CAP, ELEC; 3.3uF 50V	1	R240	RS2241	RES C/F MINI 33Kohm 5%, 1/4W	1
C243, 246, 259, 260, 277	CP1742	Ceramic Cap. 220pF 50V	5	R241, 252	RS2240	RES C/F MINI 3.3Kohm 5%, 1/4W	2
C245, 278, 279, 303, 304	CP1745	Ceramic Cap. 15pF 50V	5	R242, 243, 246, 253, 260, 283, 284, 302, 303	RS2224	RES C/F MIN 10Kohm 5%, 1/4W	8
C251	CP1697	CAP, ELECT. 100uF, 16V	1	R245	RS2233	RES C/F MINI 22 ohm 5%, 1/4W	1
C254	CP1693	CAP, ELEC; 0.22uF 50V	1	R247, 251, 256	RS2318	RES C/F MINI 6.8Kohm 5%, 1/4W	3
C272	CP1699	CAP, ELEC; 220uF 16V	1	R254, 255, 258, 259	RS2236	RES C/F MINI 220Kohm 5%, 1/4W	4
C274	CP1698	Electrolytic Cap. 22uF 16V	1	R261, 262	RS2229	RES C/F MINI 1.5Kohm 5%, 1/4W	2
C275, 276	CP1749	Ceramic Cap. 100pF 50V	2	R280	RS2250	RES C/F MINI 47Kohm 5%, 1/4W	1
C301, 302	CP1743	Ceramic Cap. 330pF 50V	2	R301	RS2226	RES C/F MIN 1Mohm 5% 1/4W	1
C307	CP1709	Electrolytic Cap. 2.2uF 50V	1	VR231	RS2189	POT, TRIMMER, 50K OHM	1
C308	CP1795	CAP, ELEC; 0.1uF 50V	1	VR251	RS2420	TRIM-POT 200Kohm	1
C309	CP1744	Ceramic Cap. 560pF 50V	1	Transistors			
CF201, 202, 203	FI1009	Ceramic Filter 10.7MHz 180KHZ	3	Q201, 202	TR1276	NPN XSTR 25V/50mA 300MHz 82180 SPT	2
CF231	CR1004	Ceramic Resonator 450KHZ	1	Q215, 216, 217, 251, 252	TR1277	NPN XSTR 20V/500mA 500mW 8201800 SPT	5
CF251	CR1005	Ceramic Osc	1	Q253	TR1268	NPN XSTR 50V/30mA 300mW 22K/22K SPT	1
L251, 252	FI1008	FILTER,AUDIO LC, VARIABLE	2	Q254	TR1269	PNP XSTR 50V/30mA 300mW 22K/22K SPT	1
Diodes				Q271, 272, 273, 274	TR1272	PNP XSTR 50V/100mA 300mW 4.7K/4.7K SPT	4
D231, 251, 271, 272, 273	DI1205	Switching Diode 90V 0.3W	5	Q301	TR1279	N-CH FET 50V/6.5mA 300mW, TO-92	1
Intergrated Circuits				Q302	TR1278	PNP XSTR 50V/150mA 300mW 180390 SPT	1
IC231	IC1267	IC	1	Q303	TR1273	NPN XSTR 50V/100mA 300mW 4.7K/4.7K SPT	1
IC251	IC1268	IC	1	Miscellaneous			
IC271	IC1233	IC	1	L231	FI1005	LC COMPOSITE, VARIABLE COIL	1
IC301	IC1230	IC, RADIO DATA SYSTEM DEMODULATOR	1	LCN301	HA1193	HARNESS ASSY	1
IC302	IC1237	IC	1	LCN251	HA1173	HARNESS, WIRE 13P	1
Resistors				JP201, 203, 204, 207-210, 212-226 JP228-235, 237-239 241-255	WI1702	JUMPER WIRE 24 AWG BARE	48
R201, 204, 205, 210, 237, 272, 274, 276, 277, 278	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	10	JP209B - SELECTS EUROPEAN VERSION, DO NOT INSTALL JP209A			
R202, 203, 211, 213	RS2332	RES C/F MINI 390 ohm 5%, 1/4W	4	RF215	RF1001	RF Block Prime-Time	1
R206, 212	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	2	T231	IF1001	IF BLOCK 450KHZ, CERAMIC FILTER W/ MATCHING COIL	1
R207, 208, 214	RS2222	RES C/F MINI 100 ohm 5%, 1/4"	3	T232	MI1178	Discri(Type KM)10.7MHz	1
R209	RS2248	RES C/F MINI 470 ohm 5%, 1/4W	1	T233	MI1177	Discri(Type 7KM) 107MHz	1
R215, 216, 219, 265, 266, 267, 268, 307	RS2234	RES C/F MINI 2.2Kohm 5%, 1/4W	8	TM201	TE1203	Terminal	1
R217	RS2230	RES C/F MINI 15Kohm 5%, 1/4W	1	TU201	TU1002	TUNER FM	1
R218, 263, 264, 271,273	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	5	PC1180	PCB CD Tuner	1	
R220, 304, 305, 306	RS2225	RES C/F MINI 100Kohm 5%, 1/4W"	4	X271	XT1003	XTAL.OSC 4500KHz	1
R231	RS2256	RES C/F MINI 68Kohm 5%, 1/4W	1	X301	XT1002	Xtal.OSC 4332KHz Prm-time	1
R232	RS2277	RES C/F MINI 270Kohm 5%, 1/4W	1	X302	CR1001	Ceralock 4MHz Prime-Time	1
R233	RS2275	RES C/F MINI 180 ohm 5%, 1/4W	1	BR1543	STEEL SHIELD PLATE	1	
R234	RS2253	RES C/F MINI 5.6Kohm 5%, 1/4W	1				
R235	RS2231	RES C/F MINI 18Kohm 5%, 1/4W	1				

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
	LB1265	Bar Code Traceability Label	2	C681, 682	RS2211	SMD RES 470 ohm 5% 1/10W	2
				EF501, 502, 503, 504, 508, 509, 510	FI1018	FILTER, EMI	7
				EF505, 506, 507"	FI1017	EMI FILTER 4-CIRCUIT CAP 100pF 50V SMD	3
				EF511, 512, 601, 602, 603, 604	FI1014	FILTER EMI	6
				FB601-FB616, 620, 621, 622	FI1011	FILTER EMI	19
				FB623-FB643, 651, 652, 653, 654, 655	CC1065	FERRITE CHIP BEAD On Headphone Board	26
				L52	FI1013	FILTER EMI	1

SA1801 AMP PRIMARY BOARD ASY

HL1, 2	FH1007	Fuse Holder	2
F1	FS1072	Fuse 1.6A AC 250V	1
CW401	HA1207	HARNESS DOUBLE INSULATED	1

SA1805 "PRE-AMP BD, FEST-80 EU"

Capacitors

B501	CP1811	Super Capacitor 1F	1
C51, 52, 57	CP1700	Electrolytic Cap. 2200uF, 16V	3
C55, 56, 58	CP1706	Electrolytic Cap. 1uF 50V	3
C59, 61	CP1863	ELECTROLYTIC CAP. 220UF, 63V	2
C67, 574, 575, 576, 577, 578, 579, 590, 591, 595, 596, 597, 598, 599, 600, 607	CP1911	SMD CAP 0.1uF 10% 25V	16
C68, 588	CP1725	Metallized Flm Cap. 0.22uF, 50V	2
C70, 71	CP1843	CAP.CERAM, 4700pF, 250V	2
C72, 73, 74, 75, 76, 77, 78, 507, 508, 523, 524, 539, 572, 605, 606, 632, 641, 642, 643, 644	CP1722	Metallized Flm Cap. 0.01uF, 50V	20
C64, 573, 608	CP1697	CAP, ELECT. 100uF, 16V	3
C501, 502, 509, 510, 511, 512, 515, 516, 517, 518, 541, 542, 547, 548, 561, 564, 565, 566, 581, 601, 602, 634	CP1701	Electrolytic Cap. 47uF 16V	22
C503, 504	CP1732	Pol. Prop. Flm Cap. 1500pF, 50V	2
C505, 506	CP1717	CAP, MTL.FILM, 0.1uF, 50V	2
C513, 514	CP1777	CAPACITOR CERAMIC 22pF 50V, 5%	2
C519, 520	CP1815	Cap Poly Film 15nF 5% 50V	2
C521, 522	CP1817	Cap Poly Film 68nF 5% 50V	2
C525, 526, 562	CP1719	Metalized Flm Cap 0.039uF, 50V	3
C535, 536	CP1702	Electrolytic Cap. 470uF 16V	2
C537, 538, 540	CP1731	Pol. Prop. Flm Cap. 1000pF, 50V	3
C568, 569, 570, 582, 583, 584, 585, 586, 587	CP1733	Pol. Prop. Flm Cap 220pF, 50V	9
C571, 589	CP1707	Electrolytic Cap. 10uF 50V	2
C592, 593	CP1887	SMD CAP 15pF 5% 50V	2
C594	CP1878	CAPACITOR 10pF 50V	1
C609	CP1757	CERAMIC CAP 0.01uF 50V	1
C636	CP1711	Electrolytic Cap. 4.7uF 50V	1
C651, 652	CP1891	(on Headphone Board) CAPACITOR 680pF 10% 50V	2

Diodes

D51, 52, 53, 54, 55, 56, 57, 58, 63, 64	DI1201	Diode Rectifier 1 A 400V	
D62	DI1192	Zener Diode 0.4W	1
D60, 61	DI1204	Zener Diode 0.4W	2
D65, 66, 581, 582, 585, 586, 587, 588, 589	DI1205	Switching Diode 90V 0.3W	9
D67, 584, 631	DI1196	Zener Diode 0.4W	3
D591, 592, 593, 594	DI1206	Switching Diode 40V 0.3W	4

Integrated Circuits

IC51	IC1232	IC Voltage Regulator +6VDC	1
IC52	IC1234	IC Voltage Regulator -6VDC	1
IC53	IC1307	IC VOLTAGE REGULATOR +5V, TO-220	1
IC501	IC1245	IC ELECTRICAL VOLUME	1
IC502	IC1244	IC	1
IC503	IC1248	IC	1
IC504, 505, 506, 507	IC1226	IC	4
IC581	IC1219	IC Prime-Time	1
IC582	IC1320	IC EPROM 128K x 8 DIP32	1
IC583	IC1259	IC SMD 32KBYTE CMOS STAT. RAM	1
IC584	IC1265	IC LOW PWR CLOCK/CALENDAR	1
IC585	IC1277	IC, EEPROM, 256x8, CMOS SERIAL BUS	1
IC586	IC1254	IC SMD OCTAL-D-TYPE LATCH	1
IC587	IC1270	IC SMD DUAL 2-to-4 LINE DECODER	1
IC589, 590	IC1269	IC	1
IC591	IC1313	IC QUAD LOW-PWR LINE DRIVER	1
IC592	IC1283	IC SMD DUAL 2-INPUT AND GATE	1
IC595	IC1236	IC	1
IC601	IC1262	IC	1
PH591	IC1241	Photocoupler	2

Resistors

R51	RS2261	RES C/F 1Kohm 5% 1/3W	1
R52, 640	RS2341	RES C/F 100 ohm 5% 1/3W	2
R53	RS2389	RES C/F 4.7Kohm 5% 1/3W	1
R55	RS2315	RES FUSE 4.7 ohm 2% 1/4W	1

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
R61, 63, 527, 528, 543, 544, 557, 558, 561, 567, 569, 572, 576, 577, 578, 590, 596, 621, 628, 631, 651, 661	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	22	Q589, 592	TR1291	NPN XSTR 50V/200mA 300mW 250500 TO-92	2
R62, 64, 507, 508, 511, 512, 601, 602, 623, 653, 663, 664, 665, 666, 672	RS2224	RES C/F MIN 10Kohm 5%, 1/4W		Q591	TR1272	PNP XSTR 50V/100mA 300mW 4.7K/4.7K SPT	1
R501, 502	RS2260	RES C/F MINI 8.2Kohm 5%, 1/4W	2	Q593	TR1290	PNP XSTR 50V/200mA 300mW 250500 TO-92	1
R503, 504, 515, 516, 525, 526	RS2242	RES C/F MINI 330Kohm 5%, 1/4W	6	Q631	TR1341	NPN XSTR 30V/800mA 600mW 100200 TO-92	1
R505, 506, 509, 510, 574, 575, 582, 583, 584, 585, 586, 587, 598, 603, 604, 611, 612, 622, 624, 627, 633, 634, 637, 652, 662	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	25	Connectors			
R513, 514, 519, 520, 533, 534, 555, 556, 562, 566, 570, 571, 581	RS2239	RES C/F MINI 330 ohm 5%, 1/4W	15	CN51	CO1363	CONNECTOR 11P 2mm 2A 100V	1
R517, 518, 629	RS2226	RES C/F MIN 1Mohm 5% 1/4W	3	CN52, 504	CO1367	CONNECTOR 3P 2mm 2A 100V	2
R523, 524	RS2231	RES C/F MINI 18Kohm 5%, 1/4W	2	CN505	CO1382	CONNECTOR 4P 2MM 2A 100V	1
R529, 530	RS2240	RES C/F MINI 3.3Kohm 5%, 1/4W	2	CN506	CO1370	Connectors 6P 2mm 2A 100V	1
R531, 532, 541, 542, 559, 560, 568, 573	RS2238	RES C/F MINI 2.7Kohm 5%, 1/4W	8	CN507	CO1369	Connector 5P 2mm 2A 100V	1
R535, 536, 593, 671	RS2250	RES C/F MINI 47Kohm 5%, 1/4W	4	CN508	CO1383	CONNECTOR HEADER 7-PIN	1
R563, 564, 579	RS2291	RES C/F MINI 27Kohm 5%, 1/4W	3	CN509	CO1388	CONNECTOR 10P 2mm 2A 100V	1
R565	RS1376	RES C/F MINI 910 ohm 5%, 1/4W	1	CN510	CO1389	CONNECTOR 14P 2mm 2A 100V	1
R580	RS2476	RES C/F MINI 3Kohm 5%, 1/4W	1	CW51	HA1166	HARNESS ASSY	1
R588, 607, 608	RS2249	RES C/F MINI 4.7Kohm 5%, 1/4W	3	CW501	HA1109	CONNECTOR WIRE 8P	1
R589, 605, 606, 625, 626, 630	RS2235	RES C/F MINI 22Kohm 5%, 1/4W	6	CW502	HA1214	HARNESS ASY 11-COND 160mm	1
R591	RS2237	RES C/F MINI 270 ohm 5%, 1/4W	1	CW503	HA1112	CONNECTORIZES WIRE 13P	1
R592, 595	RS2247	RES C/F MINI 47 ohm 5%, 1/4W	2	CW507	HA1210	(on Headphone Board) HARNESS ASY 5-COND 200mm	1
R594	RS2244	RES C/F MINI 3.9Kohm 5%, 1/4W	1	J501	CO1358	Connector 2.5A250V	1
R599, 600	RS2212	SMD RES 4.7Kohm 5% 1/10W	2	J502	CO1402	CONNECTOR 34-POS	1
R609, 610, 632	RS2233	RES C/F MINI 22 ohm 5%, 1/4W	3	J601	CO1374	(on Headphone Board) Miniture Jack LR-SW	1
R654	RS2222	RES C/F MINI 100 ohm 5%, 1/4W	1	J503, 504	CO1375	Jack 1P	2
R635, R641	RS2290	RES C/F 180 ohm 5% 1/3W	2	J506	CO1390	CONNECTOR 8P	1
	RS1711	REWORK PER INSTRUCTION SMD RES 220 ohm 5% 1/8W		Miscellaneous			
Transistors				F51	FS1090	FUSE SLOW BLOW 500mA 250V	1
Q51	TR1304	NPN XSTR 60V/3A 25W, TO-220	1	HL51, 52	FH1007	Fuse Holder	2
Q52	TR1281	PNP XSTR 60V/3A 25W 2-10R1A	1	L51	FI1020	EMI FILTER	1
Q501, 502, 503, 504, 543, 544, 545, 546, 547, 548, 601, 602	TR1283	NPN XSTR 20V/300mA 400mW 3501200 TO-92		S51	SW1078	Push Switch 1P TV3	1
Q581, 586, 588	TR1269	PNP XSTR 50V/30mA 300mW 22K/22K SPT	3	T51	MI1209	TRANSFORMER TOP UNIT (EU)	1
Q582, 584, 587	TR1268	NPN XSTR 50V/30mA 300mW 22K/22K SPT	3	X592	XT1006	Xtal 10pF	1
				X591	XT1011	XTAL, 15MHZ	1
					LB1265	Bar Code Traceability Label	2
					BR1542	STEEL SHIELD PLATE	1
					HS1155	HEATSINK, AMPLIFIER	1
					SC1262	(use with HS1155) SCREW, BND + (M3x10)	1
					SC1271	(use with Transformer Bracket) Screw Fpt+	4
					332501-001	(use with Transformer T51) BRACKET, MTG,XFORMER	1
					CO1418	(USE WITH IC582) CONNECTOR IC SOCKET DIP32	1
					CL1236	CLUSTER BD FEST. 60/70/80 PRE-AMP & HEADPHONE	1
					SP1102	(locate on bottom of board) INSULATOR RUBBER	1

Ref.#	Part #	Description	Qty
SA1818 SUB-WFR AMP PCB ASSY			

Capacitors

C1501, 1502, 1503, 1504, 1505	CP1814	Cap Alum El 47uF 20% 35V	5
C1508, 1509, 1510, 1511	CP1750	Ceramic Cap. 68pF 50V	4
C1512	CP1733	Pol. Prop. Flm Cap 220pF, 50V	1
C1514, 1515, 1516, 1517	CP1730	Polypropylen Flm Cap 100pF, 50V	1
C1551, 1552, 1553, 1554	CP1863	ELECTROLYTIC CAP. 220uF 63V	4

Integrated Circuit

IC1501, 1502, 1503	IC1226	IC	3
--------------------	--------	----	---

Resistors

R1501, 1502, 1503, 1504, 1505	RS2223	RES C/F MINI 1Kohm 5%, 1/4W	5
R1506, 1507, 1508, 1509, 1519	RS2225	RES C/F MINI 100Kohm 5%, 1/4W	5
R1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518	RS2234	RES C/F MINI 2.2Kohm 5%, 1/4W	9
R1551, 1552	RS2169	RES FUSE 2.2 ohm 5% 1/4W	2
R1553, 1554	RS2389	RES C/F 4.7Kohm 5% 1/3W	2

Transistors

Q1551	TR1344	NPN XSTR 120V/800mA 900mW 80160 TO-92	1
Q1552	TR1330	PNP XSTR 120V/800mA 900mW 80160 TO-92	1

Diode

D1551, 1552	DI1219	ZENER 12V	2
-------------	--------	-----------	---

Connectors

PJ1501	CO1408	CONNECTOR PIN JACK	1
CN1501, 1502, 1503	CO1410	CONNECTOR 3P 2mm	3

SA1821 SUB ASSY AMP#2 INDICATOR

D1021, 1022, 1023, 1024	LE1037	LED	4
JP9, 12	WI1702	JUMPER WIRE 24 AWG BARE	2
R1025, 1026, 1027, 1028	RS2234	RES C/F MINI 2.2Kohm 5%, 1/4W	4
R1029, 1030, 1039, 1040	RS2401	RES C/F MINI 1.2Kohm 5%, 1/4W	4
CW1405	HA1160	HARNESS 300mm 3P-SA	1

Ref.#	Part #	Description	Qty
SA1822 SUB ASSY AMP#2 PRIMARY			

HL1001,1002	FH1007	Fuse Holder	2
F1001	FS1072	Fuse 1.6A AC 250V	1
CW1401	HA1207	HARNESS DOUBLE INSULATED	1

SA1823 SUB ASSY AMP#2 SECONDARY

C1002, 1003	CP1717	CAP, MTL.FILM, 0.1uF, 50V	2
C1013	CP1699	CAP, ELEC; 220uF 16V	1
D1004, 1005, 1006, 1007	DI1201	Diode Rectifier 1 A 400V	4
R1043, 1044	RS2384	RES FUSE 2.2 ohm 5% 1/4W	2
CW1403	HA1159	HARNESS 120mm 2P-SA	1
CW1404	HA1191	HARNESS ASSY	1

SA1825 "DISPLAY PCB ASSY, U.S."**Capacitors**

C1201, 1203, 1205, 1207, 1209, 1238, 1243, 1244, 1245, 1246	CP1821	CAP., CHIP 0.1uF 50V	10
C1202, 1204, 1206, 1208, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1239, 1242	CP1822	CAP. CHIP 0.33uF 50V	28
C1232, 1233, 1234	CP1799	CAP, Chip 100 pF 50V	3
C1235, 1236	CP1812	Cap, Chip 12pF 50V	2
C1237	CP1707	Electrolytic Cap. 10uF 50V	1
C1240, 1241	CP1849	CAP.ELECT. 33uF, 50V	2

Integrated Circuits

IC1201	IC1314	IC MICOM OTP 16MHz 0-70C 68-PIN PLCC PKG	1
IC1202	IC1254	IC SMD OCTAL-D-TYPE LATCH	1
IC1203	IC1259	IC SMD 32KBYTE CMOS STAT. RAM	1
IC1204	IC1253	IC SMD 20-BIT VFD ANODE/ GRID DRIVER	1
IC1205, 1206, 1207	IC1252	IC 40-BIT VFD GRID ANODE DRIVER	3
IC1208	IC1250	IC 32-BIT LED DRIVER	1
IC1209, 1210, 1211, 1212,1213,1214	IC1263	SMD IC 5V VOLTAGE REG.	6
IC1215	IC1276	IC SMD INVERTER HIGH SPEED	1

Diodes

Component Audio System

Harman Kardon

Festival 60/80

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
D1201, 1202, 1203, 1204, 1205, 1206, 1207, 1219, 1222, 1225, 1228, 1229, 1230, 1231, 1234, 1237	LE1041	LED GREEN	16	1243, 1244, 1245, 1246			
D1208-D1218, 1238, 1239, 1240, 1241	LE1040	LED GREEN	15	C1202, 1204, 1206, 1208, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1226, 1227, 1227, 1228, 1229, 1230, 1231, 1239, 1242	CP1822	CAP. CHIP 0.33uF 50V	28

Resistors

R1201-R1210, 1215, 1217, 1219, 1221, 1222, 1223, 1224, 1226, 1228, 1253, 1254, 1255	RS2206	SMD RES 270 ohm 5% 1/10W	22
R1211, 1212, 1213, 1214, 1264, 1265	RS2430	SMD RES 82 ohm 5% 1/10W	6
R1229, 1231, 1233, 1235, 1237, 1239, 1285	RS2211	SMD RES 470 ohm 5% 1/10W	7
R1230, 1232, 1234, 1236, 1238, 1240, 1250, 1251	RS1292	SMD RES 10Kohm 5% 1/10W	8
R1241	RS2213	SMD RES 47Kohm 5% 1/10W	1
R1252	RS2219	SMD RES 8.2Kohm 5% 1/10W	1
R1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263	RS2193	SMD RES 100Kohm 5% 1/10W	8
R1266, 1268, 1269, 1270	RS2408	SMD RES 560 ohm 5% 1/10W	4

Transistors

Q1201, 1202, 1203, 1204, 1205, 1206	TR1302	SMD NPN XSTR 50V/1A 500mW 120270 MPT3	6
Q1207	TH1018	TRIAC	1
Q1208	TR1310	SMD NPN XSTR 50V/30mA 200mW 22K/22K SMT3	1
Q1209	TR1311	SMD PNP XSTR 50V/30mA 200mW 22K/22K SMT3	1

Miscellaneous

FB1201-FB1220	CC1065	FERRITE CHIP BEAD	20
FL1201	DS1001	Display VFD	1
L1203	MI1220	INDUCTOR	1
JP1202	HA1211	HARNESS ASY 14-COND 160mm	1
JP1201	HA1212	HARNESS ASY 10-COND 160mm	1
	LB1265	Bar Code Traceability Label	2
PCB1201	PC1236	PC,DISPLAY BD, 68PIN-PLCC	1
S1201-S1223	SW1085	SWITCH	23
X1201	XT1008	Xtal, Osc 24MHz	1

SA1826 "DISPLAY PCB ASSY, EU"

Capacitors

C1201, 1203, 1205, 1207, 1209, 1238,	CP1821	CAP., CHIP 0.1uF 50V	10
--------------------------------------	--------	----------------------	----

Integrated Circuits

IC1201	IC1314	IC MICOM OTP 16MHz 0-70C 68-PIN PLCC PKG	1
IC1202	IC1254	IC SMD OCTAL-D-TYPE LATCH	1
IC1203	IC1259	IC SMD 32KBYTE CMOS STAT. RAM	1
IC1204	IC1253	IC SMD 20-BIT VFD ANODE/ GRID DRIVER	1
IC1205, 1206, 1207	IC1252	IC 40-BIT VFD GRID ANODE DRIVER	3
IC1208	IC1250	IC 32-BIT LED DRIVER	1
IC1209, 1210, 1211, 1212, 1213, 1214	IC1263	SMD IC 5V VOLTAGE REG.	6
IC1215	IC1276	IC SMD INVERTER HIGH SPEED	1

Transistors

Q1201, 1202, 1203, 1204, 1205, 1206	TR1302	SMD NPN XSTR 50V/1A 500mW 120270 MPT3	6
Q1207	TH1018	TRIAC	1
Q1208	TR1310	SMD NPN XSTR 50V/30mA 200mW 22K/22K SMT3 T/R	1
Q1209	TR1311	SMD PNP XSTR 50V/30mA 200mW 22K/22K SMT3 T/R	1

Diodes

D1201-D1207, 1219, 1222, 1225, 1228, 1229, 1230, 1231, 1234, 1237	LE1041	LED GREEN	16
D1208 - D1218, 1238, 1239, 1240, 1241	LE1040	LED GREEN	15

Resistors

R1201-1210, 1215, 1217, 1219, 1221, 1222, 1223, 1224, 1226, 1228, 1253, 1254, 1255	RS2206	SMD RES 270 ohm 5% 1/10W	
R1211, 1212, 1213, 1214, 1264, 1265	RS2430	SMD RES 82 ohm 5% 1/10W	6
R1229, 1231, 1233, 1235, 1237, 1239, 1285	RS2211	SMD RES 470 ohm 5% 1/10W	7
R1230, 1232, 1234, 1236, 1238, 1240, 1250, 1251	RS1292	SMD RES 10Kohm 5% 1/10W	8

Ref.#	Part #	Description	Qty	Ref.#	Part #	Description	Qty
R1241	RS2213	SMD RES 47Kohm 5% 1/10W		C119	CP1889	SMD CAP 100pF 5% 50V	1
R1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263	RS2193	SMD RES 100Kohm 5% 1/10W	8	C120, 136	CP1708	Electrolytic Cap. 22uF 50V	2
R1252	RS2219	SMD RES 8.2Kohm 5% 1/10W	1	C121	CP1710	CAP, ELEC; 3.3uF 50V	1
R1266, 1268, 1269, 1270	RS2408	SMD RES 560 ohm 5% 1/10W	4	C124, 132, 505, 525	CP1870	CERAMIC CAPACITOR 0.022uF 50V	4
				C126	CP1890	CAPACITOR 47pF 5% 50V SMD	1
				C131	CP1873	CERAMIC CAPACITOR 4700pF 50V	1
				C134	CP1849	CAP.ELECT. 33uF, 50V	1
				C135, 518, 519	CP1880	CAP, 3pF, 50V	3
				C143, 144, 145	CP1885	SMD CAP 470pF 10% 50V	3
				C301, 308, 317, 318	CP1735	Pol. Prop. Flm Cap 390pF, 50V	4
				C302, 305, 310, 311	CP1869	POLYPROPYLENE FILM CAP. 180pF 50V	4
				C303, 304, 309, 312	CP1868	POLYPROPYLENE FILM CAP. 270pF 50V	4
FB1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220	CC1065	FERRITE CHIP BEAD	20	C306, 313	CP1740	Pol. Prop. Flm Cap. 8200pF, 50V	2
FL1201	DS1001	Display VFD	1	C509, 510	CP1699	CAP, ELEC; 220uF 16V	2
L1203	MI1220	INDUCTOR	1	C515	CP1886	CAL ALUM EL 1000uF 20%, 16V	3
JP1202	HA1211	HARNESS ASY 14-COND 160mm	1				
JP1201	HA1212	HARNESS ASY 10-COND 160mm	1				
	LB1265	Bar Code Traceability Label	2				
PCB1201	PC1236	PC,DISPLAY BD, 68PIN-PLCC	1				
S1201 - S1223,	SW1085	SWITCH	23				
X1201	XT1008	Xtal, Osc 24MHz	1				

Miscellaneous

Ref.#	Part #	Description	Qty
FB1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220	CC1065	FERRITE CHIP BEAD	20
FL1201	DS1001	Display VFD	1
L1203	MI1220	INDUCTOR	1
JP1202	HA1211	HARNESS ASY 14-COND 160mm	1
JP1201	HA1212	HARNESS ASY 10-COND 160mm	1
	LB1265	Bar Code Traceability Label	2
PCB1201	PC1236	PC,DISPLAY BD, 68PIN-PLCC	1
S1201 - S1223,	SW1085	SWITCH	23
X1201	XT1008	Xtal, Osc 24MHz	1

SA1898 CD MAIN PCB ASSY

Capasitors

Ref.#	Part #	Description	Qty
C1, 2	CP1866	ELECTROLYTIC CAP. 4700uF, 16V	2
C3, 4	CP1853	CAP ALUM EL 2,200uF 20%	2
C5, 7, 15, 18	CP1717	CAP, MTL.FILM, 0.1uF, 50V	4
C8, 9, 16, 19, 24, 27, 522, 526	CP1706	Electrolytic Cap. 1uF 50V	8
C14, 20, 22, 29, 307, 314, 507, 508, 511, 517, 520, 521	CP1814	Cap Alum El 47uF 20% 35V	12
C17, 25, 30, 108, 137, 138, 151, 152, 157, 158, 201, 202, 203, 204, 205, 206, 207, 208, 209, 523, 524	CP1821	CAP., CHIP 0.1uF 50V	21
C101, 156, 159	CP1763	Ceramic Cap. 0.047uF 50V	3
C102	CP1759	Ceramic Cap. 1500pF 50V	1
C103, 106, 118, 123, 125, 128, 129, 140, 212	CP1757	CERAMIC CAP 0.01uF 50V	9
C104	CP1888	SMD CAP 220pF 10% 50V	1
C105, 516	CP1713	Electrolytic Cap. 0.47uF, 50V	2
C107, 127, 141, 142, 210, 211	CP1697	CAP, ELECT. 100uF, 16V	6
C109, 110	CP1887	SMD CAP 15pF 5% 50V	2
C112	CP1891	CAPACITOR 680pF 10% 50V	1
C113, 114, 115, 133	CP1758	CERAMIC CAP. 0.1uF 25V	4
C116	CP1711	Electrolytic Cap. 4.7uF 50V	1
C117, 122	CP1762	Ceramic Cap. 0.033uF 50V	2

Integrated Circuits

Ref.#	Part #	Description	Qty
IC2	IC1300	IC	1
IC3, 4	IC1301	IC SMD 5V TRACKING REG.	2
IC101	IC1223	IC	1
IC102	IC1222	IC	1
IC103, 104, 105, 301	IC1141	SMD IC OP AMP Dual Plastic	4
IC201	IC1328	IC 8-BIT MICROCOMPUTER MASKED (HKD0001C)	1
C202, 203	IC1235	IC SMD REVERSIBLE MOTOR DRIVER	2
IC501	IC1284	IC SMD QUAD 2-CH MUX	1
IC502, 503	IC1302	PHOTOCOUPLER	2
IC504	IC1285	IC SMD DIFFERENTIAL 4-CH MUX/DEMUX	1
IC505	IC1313	IC QUAD LOW-PWR LINE DRIVER	1
IC506	IC1286	IC,SMD HEX INVERTER	1
IC507	IC1310	IC VOLTAGE REGULATOR +5V	1
IC508	IC1305	IC	1

Resistors

Ref.#	Part #	Description	Qty
JP207	RS2462	RES C/F ZERO ohm 5% 1/8W	1
R2, 4, 125, 153, 156, 207, 209, 210, 211, 251	RS2213	SMD RES 47Kohm 5% 1/10W	10
R3, 6, 9, 10, 13, 14, 201, 322, 323, 326, 327	RS2212	SMD RES 4.7Kohm 5% 1/10W	11
R7, 8, 11, 12, 208, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 252, 253, 254, 255, 331, 332	RS2190	SMD RES 100 ohm 5% 1/10W	49
R15, 522	RS2405	SMD RES 1.5Kohm 5% 1/10W	2

Component Audio System

Ref.#	Part #	Description	Qty
R17, 106, 108, 109, 121, 134, 203, 300, 301, 302, 303, 304, 305, 311, 312, 313, 314, 315, 316, 523	RS2192	SMD RES 10Kohm 5% 1/10W	20
R101, 103, 151, 157	RS2207	SMD RES 3.3Kohm 5% 1/10W	4
R102, 120	RS2197	SMD RES 120Kohm 5% 1/10W	2
R104, R107	RS2194	SMD RES 1Mohm 5% 1/10W	2
R105, 110, 115, 129, 308, 319, 510, 511, 517	RS2193	SMD RES 100Kohm 5% 1/10W	9
R111, 117, 306, 307, 317, 318	RS2198	SMD RES 15Kohm 5% 1/10W	6
R112	RS2218	SMD RES 680Kohm 5% 1/10W	1
R113, 128	RS2199	SMD RES 150Kohm 5% 1/10W	2
R114	RS2216	SMD RES 510Kohm 5% 1/10W	1
R116, 119	RS2220	SMD RES 82Kohm 5% 1/10W	2
R118	RS2219	SMD RES 8.2Kohm 5% 1/10W	1
R122, 126, 127	RS2196	SMD RES 12Kohm 5% 1/10W	3
R123, 124	RS2404	SMD RES 43 ohm 5% 1/10W	2
R130, 135, 226, 524	RS2191	SMD RES 1Kohm 5% 1/10W	4
R131	RS2214	SMD RES 470Kohm 5% 1/10W	1
R132, 152	RS2209	SMD RES 330Kohm 5% 1/10W	2
R133	RS2391	SMD RES 27Kohm 5% 1/10W	1
R136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 147, 158, 167, 328, 329, 330	RS2204	SMD RES 22Kohm 5% 1/10W	16
R146	RS2394	SMD RES 6.8Kohm 5% 1/10W	1
R148	RS2245	RES C/F MINI 39Kohm 5%, 1/4W	1
R166	RS2407	SMD RES ZERO ohm 5% 1/10W	1
R202	RS2200	SMD RES 1.8Kohm 5% 1/10W	1
R204, 206	RS2395	SMD RES 180 ohm 5% 1/10W	2
R256, 309, 320, 501, 502, 503, 504, 525	RS2211	SMD RES 470 ohm 5% 1/10W	8
R257	RS2208	SMD RES 33Kohm 5% 1/10W	1
R512	RS2393	SMD RES 680 ohm 5% 1/10W	1
R513, 521	RS2408	SMD RES 560 ohm 5% 1/10W	2
R514, 515, 516	RS2203	SMD RES 220 ohm 5% 1/10W	3
R518, 519, 520	RS2411	SMD RES 390 ohm 5% 1/10W	3
R154, 155, 505, 506	RS2195	SMD RES 10 ohm 5% 1/10W	4
RN202	RS2272	RES NETWORK 47Kohm (10x)	1

Transistors

Ref.#	Part #	Description	Qty
Q3, 7, 9	TR133	PNP XSTR 30V/800mA 600mW 100200 TO-92	3
Q4, 8, 302, 503, 507	TR1310	SMD NPN XSTR 50V/30mA 200mW 22K/22K	5
Q5	TR1281	PNP XSTR 60V/3A 25W 2-10R1A TUBE	1
Q6, 10, 141, 143, 145, 147	TR1341	NPN XSTR 30V/800mA 600mW 100200 TO-92	6
Q11	TR1334	SMD PNP XSTR 50V/50mA 200mW 10K/10K	1
Q12	TR1337	SMD NPN XSTR 50V/70mA 200mW 10K/47K	1
Q101, 102, 142, 144, 146, 148	TR1338	TRANSISTOR	6

Harman Kardon

Ref.#	Part #	Description	Qty
Q303, 504	TR1311	SMD PNP XSTR 50V/30mA 200mW 22K/22K	2
Q501, 502, 505, 506	TR1283	NPN XSTR 20V/300mA 400mW 3501200 TO-92	4

Diodes

Ref.#	Part #	Description	Qty
D1, 2, 3, 4, 5, 6, 11, 12, 203, 208	DI1201	Diode Rectifier 1 A 400V	10
D10, 101, 205, 206, 209	DI1206	Switching Diode 40V 0.3W	5
D201, 202	DI1213	DIODE, ZENER, SMD	2

Connectors

Ref.#	Part #	Description	Qty
CN101, 103	CO1370	Connectors 6P 2mm 2A 100V	2
CN102	CO1371	Connectors 8P 2mm 2A 100V	1
CN203	CO1382	CONNECTOR 4P 2MM 2A 100V	1
CN205	CO1384	Connector	1
CN204	CO1364	Connector 12P 2mm 2A 100V	1
CN251	CO1365	CONNECTOR 13P 2MM 2A100V	1
CN301, 701	CO1369	Connector 5P 2mm 2A 100V	2
LCN101	HA1170	HARNESS FESTIVAL	1
LCN102	HA1171	HARNESS FESTIVAL	1
LCN103	HA1167	HARNESS FESTIVAL	1
LCN203	HA1168	HARNESS FESTIVAL	1
LCN204	HA1169	HARNESS FESTIVAL	1
LCN205	HA1172	HARNESS FESTIVAL	1
LCN601	HA1216	HARNESS ASY 11-COND 100mm	1
LCN602	HA1215	HARNESS ASY 6-COND 100mm	1
J101	TE1210	TERMINAL	1
J201	CO1303	Connector Header 3-Pos 0.1	1
TP101, 102, 103, 107, 108	TE1212	TERMINAL	5

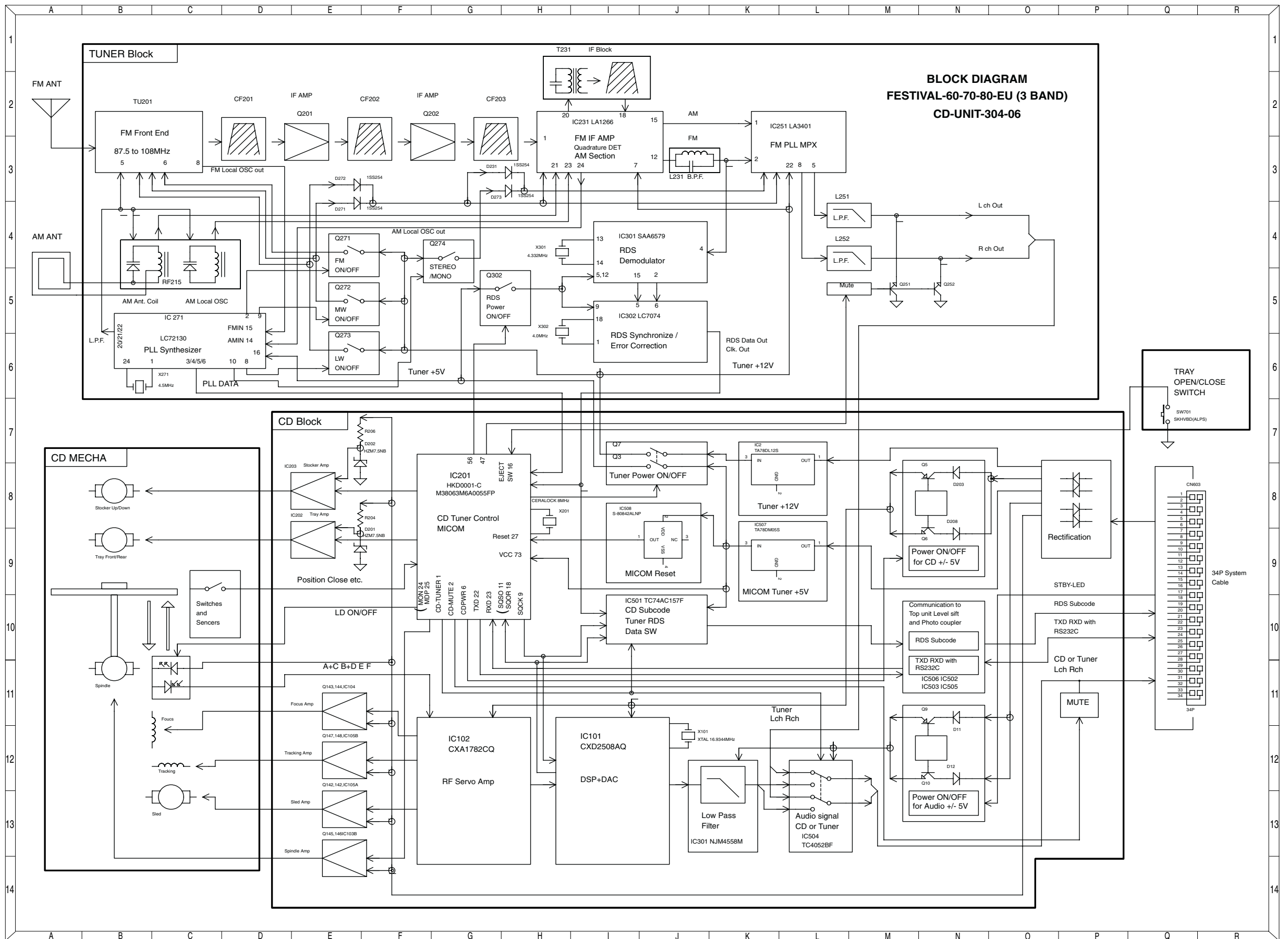
Miscellaneous

Ref.#	Part #	Description	Qty
PCB101	PC1181	PCB CD 250x100 DBL-SIDED	1
L201	MI1219	INDUCTOR	1
	LB1265	Bar Code Traceability Label	2
VR101	RS2187	POT, TRIMMER, 10K-OHM	1
X101	XT1005	Xtal, Osc 16.9344MHz	1
X201	CR1002	Ceralock 8MHz	1

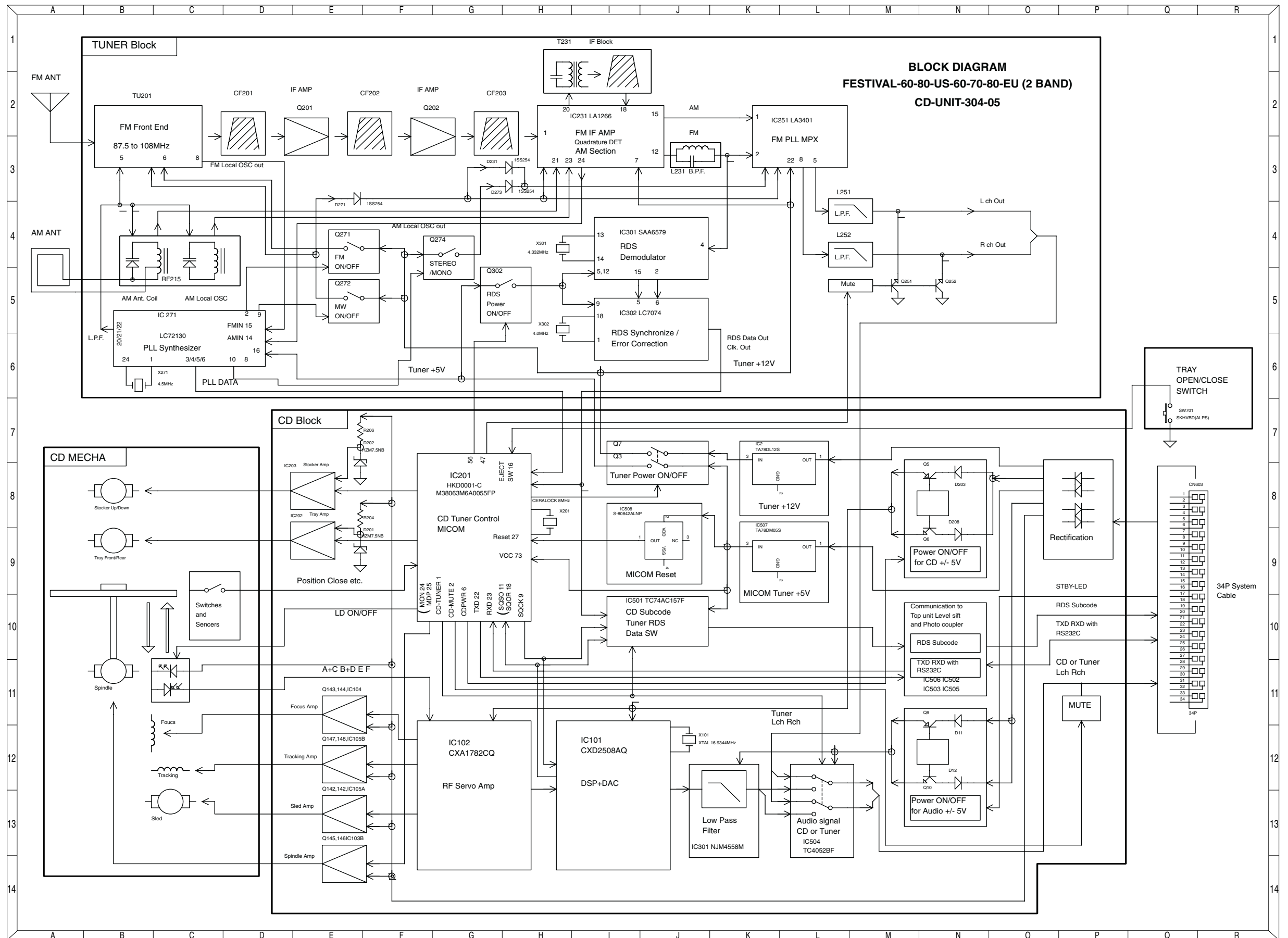
MISSING

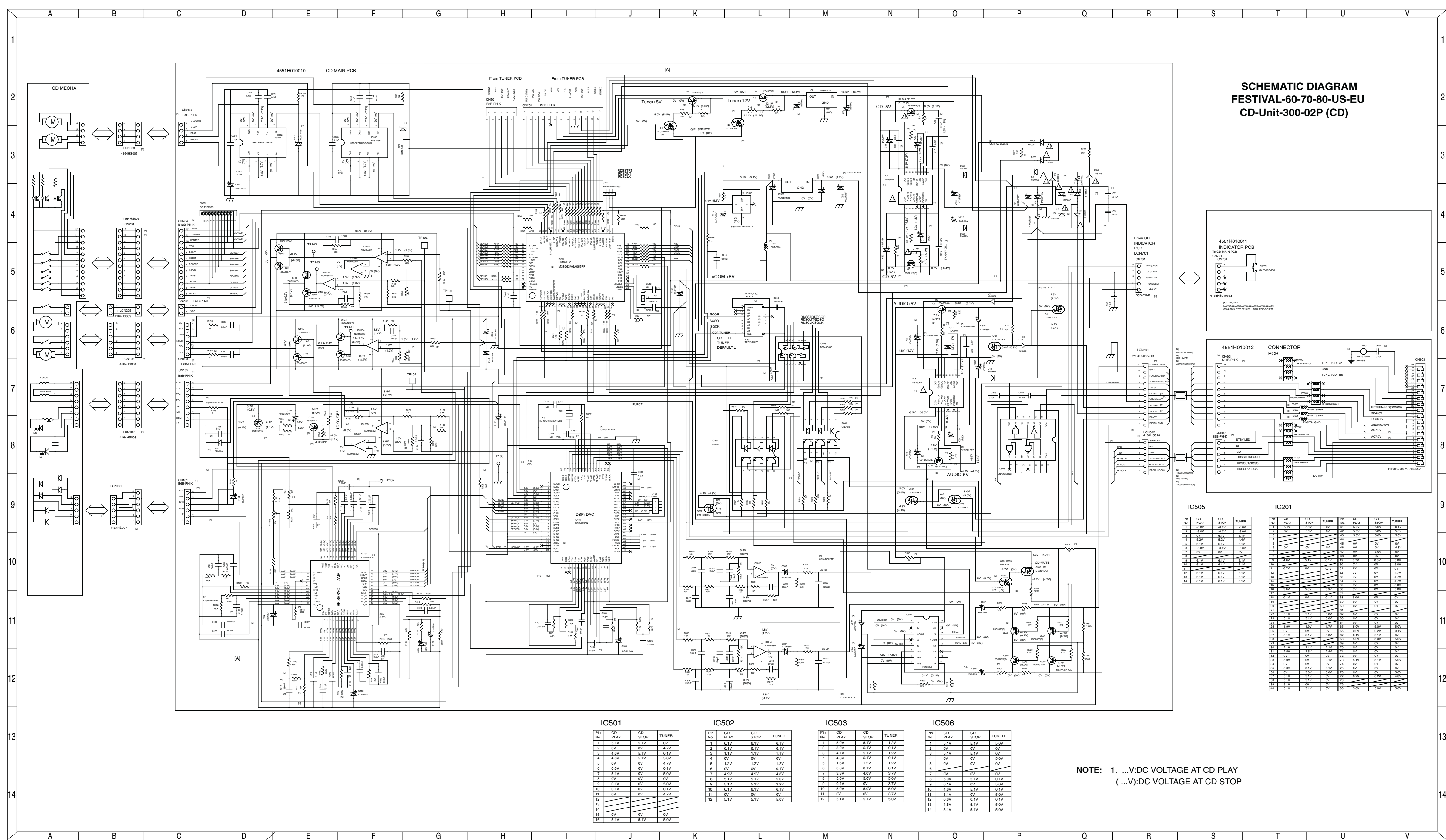
On Schematics where IC diagrams are
missing pin out information
STILL NEEDED

Festival BLOCK DIAGRAM (60/80 European 3 Band)

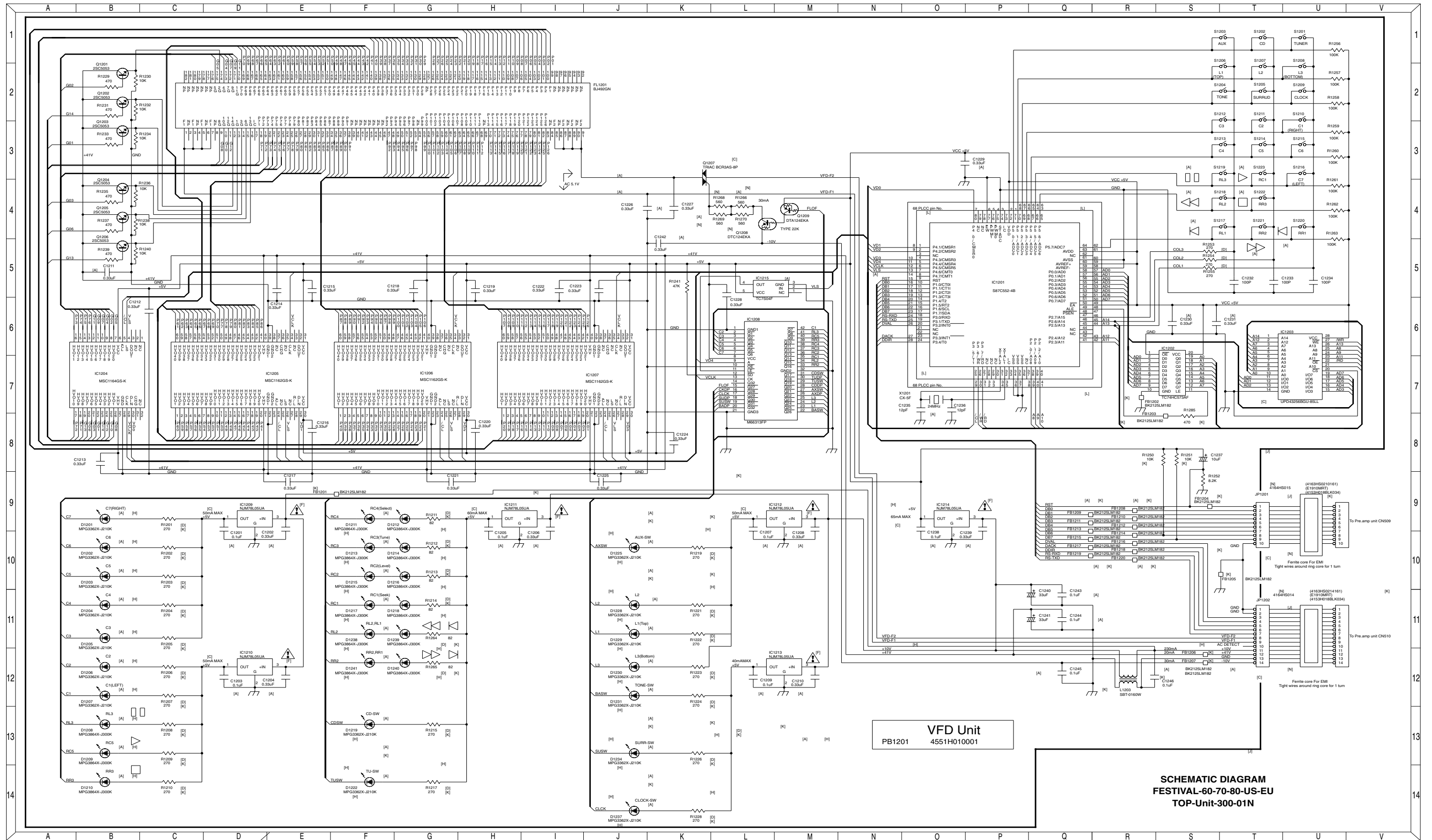


Festival BLOCK DIAGRAM (60/80 US, 60/80 European 2 Band)





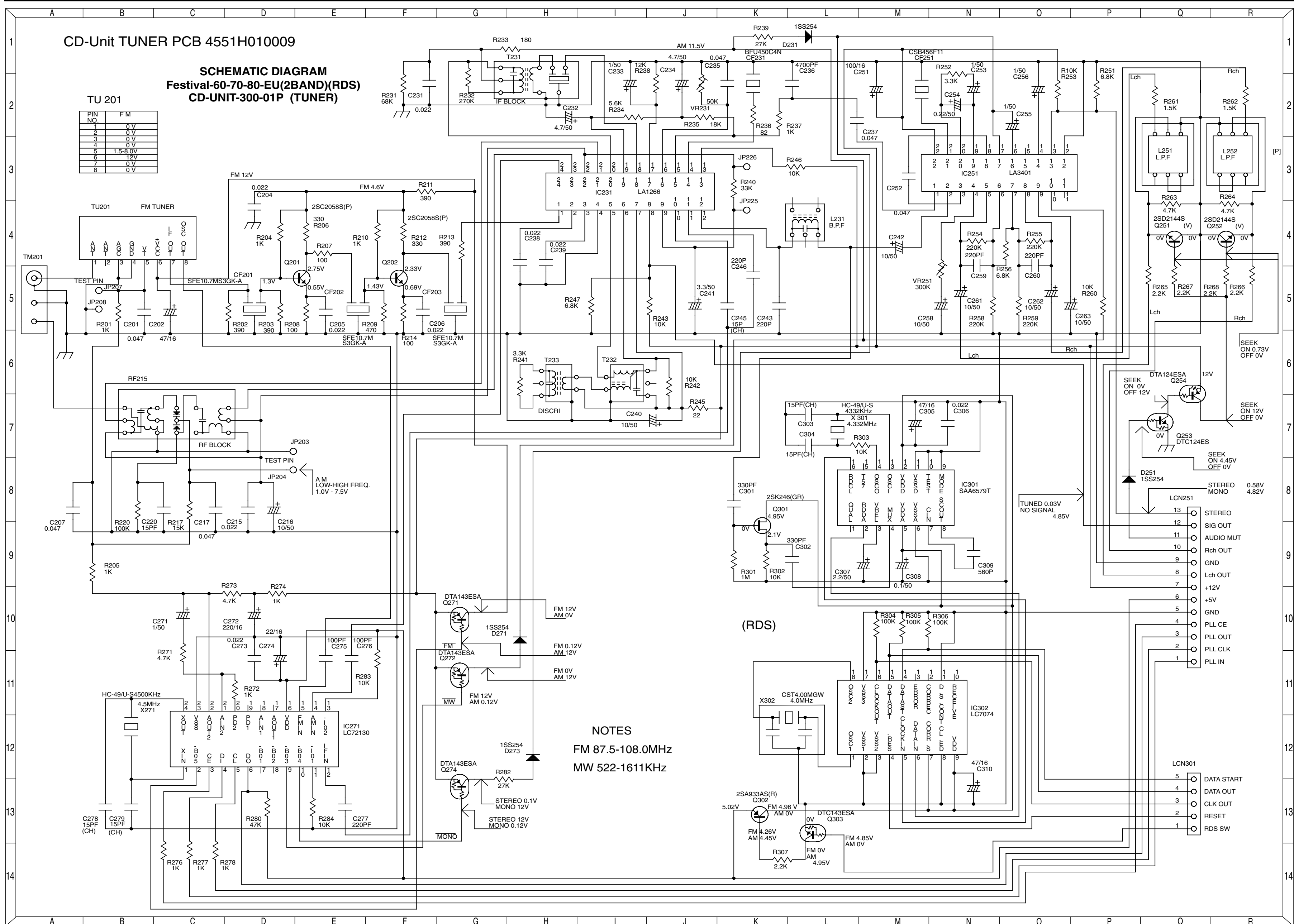
Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)



SCHEMATIC DIAGRAM
FESTIVAL-60-70-80-US-EU
TOP-Unit-300-01N

PRELIMINARY RELEASE

Festival CD Unit TUNER SCHEMATIC DIAGRAM (60/80 European)(2BAND)(RDS)

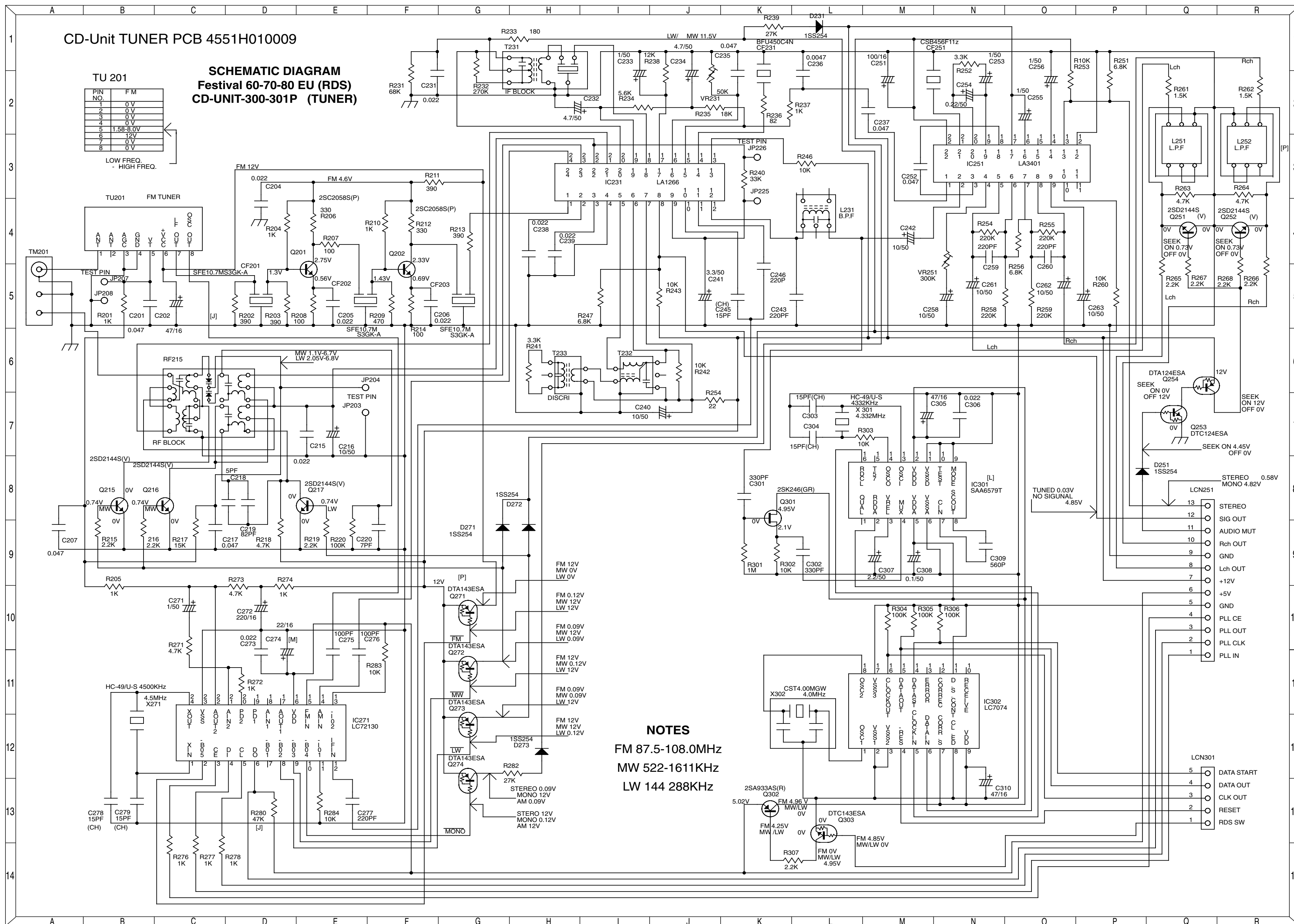


TU 201

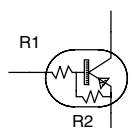
PIN NO	FM
1	0V
2	0V
3	0V
4	0V
5	1.5-6.0V
6	12V
7	0V
8	0V

NOTES
 FM 87.5-108.0MHz
 MW 522-1611KHz

Festival CD Unit TUNER SCHEMATIC DIAGRAM (60/80 European)(RDS)

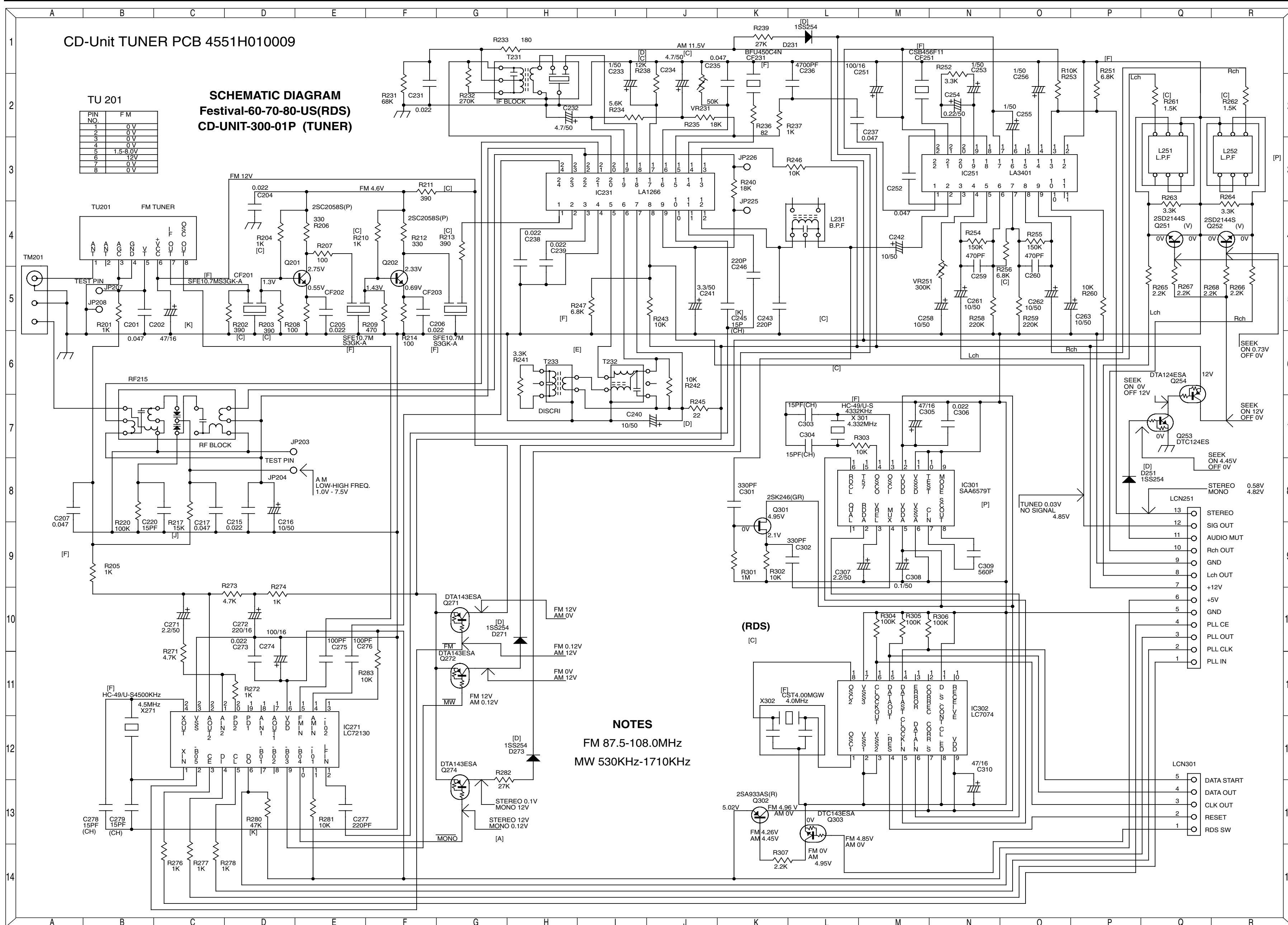


Festival CD Unit TUNER IC VOLTAGE CHART (60/80 European)(RDS)

	A	B	C	D	E																																																																																																																																																																																																																																																																																						
1	IC 251 <table border="1"> <thead> <tr> <th>PIN NO.</th> <th>FM</th> <th>MW LW</th> <th>FM STEREO</th> <th>FM MONO</th> </tr> </thead> <tbody> <tr><td>1</td><td>3.19V</td><td>3.19V</td><td></td><td></td></tr> <tr><td>2</td><td>3.19V</td><td>3.19V</td><td></td><td></td></tr> <tr><td>3</td><td>3.22V</td><td>3.22V</td><td></td><td></td></tr> <tr><td>4</td><td>3.21V</td><td>3.21V</td><td></td><td></td></tr> <tr><td>5</td><td>5.2V</td><td>5.2V</td><td></td><td></td></tr> <tr><td>6</td><td>3.2V</td><td>3.2V</td><td></td><td></td></tr> <tr><td>7</td><td>3.2V</td><td>3.2V</td><td></td><td></td></tr> <tr><td>8</td><td>5.2V</td><td>5.2V</td><td></td><td></td></tr> <tr><td>9</td><td>3.19V</td><td>3.19V</td><td></td><td></td></tr> <tr><td>10</td><td>0V</td><td>8.1V</td><td></td><td></td></tr> <tr><td>11</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>12</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>13</td><td>4.8V</td><td>4.8V</td><td></td><td></td></tr> <tr><td>14</td><td>5.0V</td><td>0.06V</td><td></td><td></td></tr> <tr><td>15</td><td>0.01V</td><td>0.01V</td><td></td><td></td></tr> <tr><td>16</td><td></td><td>2.87V</td><td>2.85V</td><td>2.85V</td></tr> <tr><td>17</td><td></td><td>9.8V</td><td>2.8V</td><td>7.54V</td></tr> <tr><td>18</td><td></td><td>5.8V</td><td>2.8V</td><td>4.5V</td></tr> <tr><td>19</td><td>2.83V</td><td>2.83V</td><td>2.8V</td><td>3.75V</td></tr> <tr><td>20</td><td></td><td>7.5V</td><td>2.8V</td><td>3.75V</td></tr> <tr><td>21</td><td></td><td>1.8V</td><td>3.4V</td><td>1.8V</td></tr> <tr><td>22</td><td>12.1V</td><td>12.1V</td><td></td><td></td></tr> </tbody> </table>			PIN NO.	FM	MW LW	FM STEREO	FM MONO	1	3.19V	3.19V			2	3.19V	3.19V			3	3.22V	3.22V			4	3.21V	3.21V			5	5.2V	5.2V			6	3.2V	3.2V			7	3.2V	3.2V			8	5.2V	5.2V			9	3.19V	3.19V			10	0V	8.1V			11	0V	0V			12	0V	0V			13	4.8V	4.8V			14	5.0V	0.06V			15	0.01V	0.01V			16		2.87V	2.85V	2.85V	17		9.8V	2.8V	7.54V	18		5.8V	2.8V	4.5V	19	2.83V	2.83V	2.8V	3.75V	20		7.5V	2.8V	3.75V	21		1.8V	3.4V	1.8V	22	12.1V	12.1V			IC 271 <table border="1"> <thead> <tr> <th>PIN NO.</th> <th>FM</th> <th>MW</th> <th>LW</th> <th>FM STEREO</th> <th>FM MONO</th> </tr> </thead> <tbody> <tr><td>1</td><td>2.5V</td><td>2.5V</td><td>2.5V</td><td></td><td></td></tr> <tr><td>2</td><td>0.1V</td><td>12V</td><td>12V</td><td></td><td></td></tr> <tr><td>3</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>4</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>5</td><td>5.0V</td><td>5.0V</td><td>5.0V</td><td></td><td></td></tr> <tr><td>6</td><td>5.0V</td><td>5.0V</td><td>5.0V</td><td></td><td></td></tr> <tr><td>7</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>8</td><td>12V</td><td>12V</td><td>0.1V</td><td></td><td></td></tr> <tr><td>9</td><td>12V</td><td>0.1V</td><td>12V</td><td></td><td></td></tr> <tr><td>10</td><td></td><td>12V</td><td>12V</td><td>2.8V</td><td>7.54V</td></tr> <tr><td>11</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>12</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>13</td><td>5.0V</td><td>5.0V</td><td>5.0V</td><td></td><td></td></tr> <tr><td>14</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>15</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>16</td><td>5.0V</td><td>5.0V</td><td>5.0V</td><td></td><td></td></tr> <tr><td>17</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>18</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>19</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>21</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>22</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>23</td><td>0V</td><td>0V</td><td>0V</td><td></td><td></td></tr> <tr><td>24</td><td>5.0V</td><td>5.0V</td><td>5.0V</td><td></td><td></td></tr> </tbody> </table>			PIN NO.	FM	MW	LW	FM STEREO	FM MONO	1	2.5V	2.5V	2.5V			2	0.1V	12V	12V			3	0V	0V	0V			4	0V	0V	0V			5	5.0V	5.0V	5.0V			6	5.0V	5.0V	5.0V			7	0V	0V	0V			8	12V	12V	0.1V			9	12V	0.1V	12V			10		12V	12V	2.8V	7.54V	11	0V	0V	0V			12	0V	0V	0V			13	5.0V	5.0V	5.0V			14	0V	0V	0V			15	0V	0V	0V			16	5.0V	5.0V	5.0V			17	0V	0V	0V			18	0V	0V	0V			19						20						21						22						23	0V	0V	0V			24	5.0V	5.0V	5.0V			<table border="1"> <thead> <tr> <th>PIN NO.</th> <th>LOE FREQ. - HIGH FREQ.</th> </tr> </thead> <tbody> <tr><td>19</td><td>FM 0.19V-0.16V MW 0.12V-0.09V LW 0.06V-0.08V</td></tr> <tr><td>20</td><td>FM 1.03V-0.83V MW 1.05V-0.83V LW 1.05V-0.89V</td></tr> <tr><td>21</td><td>FM 1.03V-0.83V AM 1.05V-0.83V LW 1.05V-0.89V</td></tr> <tr><td>22</td><td>FM 1.58V-8.1V MW 1.10V-6.7V LW 2.05V-6.8V</td></tr> </tbody> </table>		PIN NO.	LOE FREQ. - HIGH FREQ.	19	FM 0.19V-0.16V MW 0.12V-0.09V LW 0.06V-0.08V	20	FM 1.03V-0.83V MW 1.05V-0.83V LW 1.05V-0.89V	21	FM 1.03V-0.83V AM 1.05V-0.83V LW 1.05V-0.89V	22	FM 1.58V-8.1V MW 1.10V-6.7V LW 2.05V-6.8V
PIN NO.	FM	MW LW	FM STEREO	FM MONO																																																																																																																																																																																																																																																																																							
1	3.19V	3.19V																																																																																																																																																																																																																																																																																									
2	3.19V	3.19V																																																																																																																																																																																																																																																																																									
3	3.22V	3.22V																																																																																																																																																																																																																																																																																									
4	3.21V	3.21V																																																																																																																																																																																																																																																																																									
5	5.2V	5.2V																																																																																																																																																																																																																																																																																									
6	3.2V	3.2V																																																																																																																																																																																																																																																																																									
7	3.2V	3.2V																																																																																																																																																																																																																																																																																									
8	5.2V	5.2V																																																																																																																																																																																																																																																																																									
9	3.19V	3.19V																																																																																																																																																																																																																																																																																									
10	0V	8.1V																																																																																																																																																																																																																																																																																									
11	0V	0V																																																																																																																																																																																																																																																																																									
12	0V	0V																																																																																																																																																																																																																																																																																									
13	4.8V	4.8V																																																																																																																																																																																																																																																																																									
14	5.0V	0.06V																																																																																																																																																																																																																																																																																									
15	0.01V	0.01V																																																																																																																																																																																																																																																																																									
16		2.87V	2.85V	2.85V																																																																																																																																																																																																																																																																																							
17		9.8V	2.8V	7.54V																																																																																																																																																																																																																																																																																							
18		5.8V	2.8V	4.5V																																																																																																																																																																																																																																																																																							
19	2.83V	2.83V	2.8V	3.75V																																																																																																																																																																																																																																																																																							
20		7.5V	2.8V	3.75V																																																																																																																																																																																																																																																																																							
21		1.8V	3.4V	1.8V																																																																																																																																																																																																																																																																																							
22	12.1V	12.1V																																																																																																																																																																																																																																																																																									
PIN NO.	FM	MW	LW	FM STEREO	FM MONO																																																																																																																																																																																																																																																																																						
1	2.5V	2.5V	2.5V																																																																																																																																																																																																																																																																																								
2	0.1V	12V	12V																																																																																																																																																																																																																																																																																								
3	0V	0V	0V																																																																																																																																																																																																																																																																																								
4	0V	0V	0V																																																																																																																																																																																																																																																																																								
5	5.0V	5.0V	5.0V																																																																																																																																																																																																																																																																																								
6	5.0V	5.0V	5.0V																																																																																																																																																																																																																																																																																								
7	0V	0V	0V																																																																																																																																																																																																																																																																																								
8	12V	12V	0.1V																																																																																																																																																																																																																																																																																								
9	12V	0.1V	12V																																																																																																																																																																																																																																																																																								
10		12V	12V	2.8V	7.54V																																																																																																																																																																																																																																																																																						
11	0V	0V	0V																																																																																																																																																																																																																																																																																								
12	0V	0V	0V																																																																																																																																																																																																																																																																																								
13	5.0V	5.0V	5.0V																																																																																																																																																																																																																																																																																								
14	0V	0V	0V																																																																																																																																																																																																																																																																																								
15	0V	0V	0V																																																																																																																																																																																																																																																																																								
16	5.0V	5.0V	5.0V																																																																																																																																																																																																																																																																																								
17	0V	0V	0V																																																																																																																																																																																																																																																																																								
18	0V	0V	0V																																																																																																																																																																																																																																																																																								
19																																																																																																																																																																																																																																																																																											
20																																																																																																																																																																																																																																																																																											
21																																																																																																																																																																																																																																																																																											
22																																																																																																																																																																																																																																																																																											
23	0V	0V	0V																																																																																																																																																																																																																																																																																								
24	5.0V	5.0V	5.0V																																																																																																																																																																																																																																																																																								
PIN NO.	LOE FREQ. - HIGH FREQ.																																																																																																																																																																																																																																																																																										
19	FM 0.19V-0.16V MW 0.12V-0.09V LW 0.06V-0.08V																																																																																																																																																																																																																																																																																										
20	FM 1.03V-0.83V MW 1.05V-0.83V LW 1.05V-0.89V																																																																																																																																																																																																																																																																																										
21	FM 1.03V-0.83V AM 1.05V-0.83V LW 1.05V-0.89V																																																																																																																																																																																																																																																																																										
22	FM 1.58V-8.1V MW 1.10V-6.7V LW 2.05V-6.8V																																																																																																																																																																																																																																																																																										
2																																																																																																																																																																																																																																																																																											
3																																																																																																																																																																																																																																																																																											
4	IC 231 <table border="1"> <thead> <tr> <th>PIN NO.</th> <th>FM</th> <th>MW LW</th> </tr> </thead> <tbody> <tr><td>1</td><td>2.54V</td><td>1.02V</td></tr> <tr><td>2</td><td>2.54V</td><td>1.02V</td></tr> <tr><td>3</td><td>2.54V</td><td>1.02V</td></tr> <tr><td>4</td><td>0V</td><td>0V</td></tr> <tr><td>5</td><td>11.5V</td><td>11.6V</td></tr> <tr><td>6</td><td>11.5V</td><td>11.6V</td></tr> <tr><td>7</td><td>11.5V</td><td>11.6V</td></tr> <tr><td>8</td><td>4.86V</td><td>4.86V</td></tr> <tr><td>9</td><td>11.4V</td><td>3.85V</td></tr> <tr><td>10</td><td>2.1V</td><td>2.07V</td></tr> <tr><td>11</td><td>1.8V</td><td>1.3V</td></tr> <tr><td>12</td><td>3.0V</td><td>3.2V</td></tr> <tr><td>13</td><td>10.3V</td><td>10.3V</td></tr> <tr><td>14</td><td>1.5V</td><td>1.48V</td></tr> <tr><td>15</td><td>1.49V</td><td>1.49V</td></tr> <tr><td>16</td><td>0.5V</td><td>0V</td></tr> <tr><td>17</td><td>0V</td><td>0V</td></tr> <tr><td>18</td><td>2.5V</td><td>1.05V</td></tr> <tr><td>19</td><td>1.5V</td><td>1.4V</td></tr> <tr><td>20</td><td>0V</td><td>11.46V</td></tr> <tr><td>21</td><td>4.0V</td><td>3.7V</td></tr> <tr><td>22</td><td>4.0V</td><td>3.7V</td></tr> <tr><td>23</td><td>4.0V</td><td>3.7V</td></tr> <tr><td>24</td><td>3.2V</td><td>2.3V</td></tr> </tbody> </table>		PIN NO.	FM	MW LW	1	2.54V	1.02V	2	2.54V	1.02V	3	2.54V	1.02V	4	0V	0V	5	11.5V	11.6V	6	11.5V	11.6V	7	11.5V	11.6V	8	4.86V	4.86V	9	11.4V	3.85V	10	2.1V	2.07V	11	1.8V	1.3V	12	3.0V	3.2V	13	10.3V	10.3V	14	1.5V	1.48V	15	1.49V	1.49V	16	0.5V	0V	17	0V	0V	18	2.5V	1.05V	19	1.5V	1.4V	20	0V	11.46V	21	4.0V	3.7V	22	4.0V	3.7V	23	4.0V	3.7V	24	3.2V	2.3V	IC 302 <table border="1"> <thead> <tr> <th>PIN NO.</th> <th>FM</th> <th>FM RDS TUNED</th> </tr> </thead> <tbody> <tr><td>1</td><td>2.27V</td><td>2.27V</td></tr> <tr><td>2</td><td>0V</td><td>0V</td></tr> <tr><td>3</td><td>0V</td><td>0V</td></tr> <tr><td>4</td><td>4.49V</td><td>4.49V</td></tr> <tr><td>5</td><td>2.48V</td><td>2.48V</td></tr> <tr><td>6</td><td>2.4-2.6</td><td>1.85V</td></tr> <tr><td>7</td><td>4.96V</td><td>4.96V</td></tr> <tr><td>8</td><td>0V</td><td>0V</td></tr> <tr><td>9</td><td>4.96V</td><td>4.96V</td></tr> <tr><td>10</td><td>0V</td><td>0V</td></tr> <tr><td>11</td><td>0V</td><td>0V</td></tr> <tr><td>12</td><td>0V</td><td>0V</td></tr> <tr><td>13</td><td>0V</td><td>0V</td></tr> <tr><td>14</td><td>4.71V</td><td>3.6V</td></tr> <tr><td>15</td><td>4.71V</td><td>3.0V</td></tr> <tr><td>16</td><td>4.71V</td><td>4.63V</td></tr> <tr><td>17</td><td>0V</td><td>0V</td></tr> <tr><td>18</td><td>2.6V</td><td>2.6V</td></tr> </tbody> </table>		PIN NO.	FM	FM RDS TUNED	1	2.27V	2.27V	2	0V	0V	3	0V	0V	4	4.49V	4.49V	5	2.48V	2.48V	6	2.4-2.6	1.85V	7	4.96V	4.96V	8	0V	0V	9	4.96V	4.96V	10	0V	0V	11	0V	0V	12	0V	0V	13	0V	0V	14	4.71V	3.6V	15	4.71V	3.0V	16	4.71V	4.63V	17	0V	0V	18	2.6V	2.6V																																																																																																																																																			
PIN NO.	FM	MW LW																																																																																																																																																																																																																																																																																									
1	2.54V	1.02V																																																																																																																																																																																																																																																																																									
2	2.54V	1.02V																																																																																																																																																																																																																																																																																									
3	2.54V	1.02V																																																																																																																																																																																																																																																																																									
4	0V	0V																																																																																																																																																																																																																																																																																									
5	11.5V	11.6V																																																																																																																																																																																																																																																																																									
6	11.5V	11.6V																																																																																																																																																																																																																																																																																									
7	11.5V	11.6V																																																																																																																																																																																																																																																																																									
8	4.86V	4.86V																																																																																																																																																																																																																																																																																									
9	11.4V	3.85V																																																																																																																																																																																																																																																																																									
10	2.1V	2.07V																																																																																																																																																																																																																																																																																									
11	1.8V	1.3V																																																																																																																																																																																																																																																																																									
12	3.0V	3.2V																																																																																																																																																																																																																																																																																									
13	10.3V	10.3V																																																																																																																																																																																																																																																																																									
14	1.5V	1.48V																																																																																																																																																																																																																																																																																									
15	1.49V	1.49V																																																																																																																																																																																																																																																																																									
16	0.5V	0V																																																																																																																																																																																																																																																																																									
17	0V	0V																																																																																																																																																																																																																																																																																									
18	2.5V	1.05V																																																																																																																																																																																																																																																																																									
19	1.5V	1.4V																																																																																																																																																																																																																																																																																									
20	0V	11.46V																																																																																																																																																																																																																																																																																									
21	4.0V	3.7V																																																																																																																																																																																																																																																																																									
22	4.0V	3.7V																																																																																																																																																																																																																																																																																									
23	4.0V	3.7V																																																																																																																																																																																																																																																																																									
24	3.2V	2.3V																																																																																																																																																																																																																																																																																									
PIN NO.	FM	FM RDS TUNED																																																																																																																																																																																																																																																																																									
1	2.27V	2.27V																																																																																																																																																																																																																																																																																									
2	0V	0V																																																																																																																																																																																																																																																																																									
3	0V	0V																																																																																																																																																																																																																																																																																									
4	4.49V	4.49V																																																																																																																																																																																																																																																																																									
5	2.48V	2.48V																																																																																																																																																																																																																																																																																									
6	2.4-2.6	1.85V																																																																																																																																																																																																																																																																																									
7	4.96V	4.96V																																																																																																																																																																																																																																																																																									
8	0V	0V																																																																																																																																																																																																																																																																																									
9	4.96V	4.96V																																																																																																																																																																																																																																																																																									
10	0V	0V																																																																																																																																																																																																																																																																																									
11	0V	0V																																																																																																																																																																																																																																																																																									
12	0V	0V																																																																																																																																																																																																																																																																																									
13	0V	0V																																																																																																																																																																																																																																																																																									
14	4.71V	3.6V																																																																																																																																																																																																																																																																																									
15	4.71V	3.0V																																																																																																																																																																																																																																																																																									
16	4.71V	4.63V																																																																																																																																																																																																																																																																																									
17	0V	0V																																																																																																																																																																																																																																																																																									
18	2.6V	2.6V																																																																																																																																																																																																																																																																																									
5																																																																																																																																																																																																																																																																																											
6	IC 301 <table border="1"> <thead> <tr> <th>PIN NO.</th> <th>FM</th> <th>FM RDS TUNED</th> </tr> </thead> <tbody> <tr><td>1</td><td>1.2-1.5</td><td>4.96V</td></tr> <tr><td>2</td><td>2.1-2.5</td><td>1.86V</td></tr> <tr><td>3</td><td>2.48V</td><td>2.48V</td></tr> <tr><td>4</td><td>2.47V</td><td>2.47V</td></tr> <tr><td>5</td><td>4.96V</td><td>4.96V</td></tr> <tr><td>6</td><td>0V</td><td>0V</td></tr> <tr><td>7</td><td>2.46V</td><td>2.46V</td></tr> <tr><td>8</td><td>4.96V</td><td>4.96V</td></tr> <tr><td>9</td><td>0V</td><td>0V</td></tr> <tr><td>10</td><td>0V</td><td>0V</td></tr> <tr><td>11</td><td>0V</td><td>0V</td></tr> <tr><td>12</td><td>4.96V</td><td>4.96V</td></tr> <tr><td>13</td><td>2.45V</td><td>2.45V</td></tr> <tr><td>14</td><td>2.63V</td><td>2.63V</td></tr> <tr><td>15</td><td>2.48V</td><td>2.48V</td></tr> <tr><td>16</td><td>2.48V</td><td>2.48V</td></tr> </tbody> </table>		PIN NO.	FM	FM RDS TUNED	1	1.2-1.5	4.96V	2	2.1-2.5	1.86V	3	2.48V	2.48V	4	2.47V	2.47V	5	4.96V	4.96V	6	0V	0V	7	2.46V	2.46V	8	4.96V	4.96V	9	0V	0V	10	0V	0V	11	0V	0V	12	4.96V	4.96V	13	2.45V	2.45V	14	2.63V	2.63V	15	2.48V	2.48V	16	2.48V	2.48V	 <table border="1"> <thead> <tr> <th>Type</th> <th>R1</th> <th>R2</th> </tr> </thead> <tbody> <tr><td>DTA143ESA</td><td>4.7K</td><td>4.7K</td></tr> <tr><td>DTA124ESA</td><td>22K</td><td>22K</td></tr> </tbody> </table>		Type	R1	R2	DTA143ESA	4.7K	4.7K	DTA124ESA	22K	22K																																																																																																																																																																																																																											
PIN NO.	FM	FM RDS TUNED																																																																																																																																																																																																																																																																																									
1	1.2-1.5	4.96V																																																																																																																																																																																																																																																																																									
2	2.1-2.5	1.86V																																																																																																																																																																																																																																																																																									
3	2.48V	2.48V																																																																																																																																																																																																																																																																																									
4	2.47V	2.47V																																																																																																																																																																																																																																																																																									
5	4.96V	4.96V																																																																																																																																																																																																																																																																																									
6	0V	0V																																																																																																																																																																																																																																																																																									
7	2.46V	2.46V																																																																																																																																																																																																																																																																																									
8	4.96V	4.96V																																																																																																																																																																																																																																																																																									
9	0V	0V																																																																																																																																																																																																																																																																																									
10	0V	0V																																																																																																																																																																																																																																																																																									
11	0V	0V																																																																																																																																																																																																																																																																																									
12	4.96V	4.96V																																																																																																																																																																																																																																																																																									
13	2.45V	2.45V																																																																																																																																																																																																																																																																																									
14	2.63V	2.63V																																																																																																																																																																																																																																																																																									
15	2.48V	2.48V																																																																																																																																																																																																																																																																																									
16	2.48V	2.48V																																																																																																																																																																																																																																																																																									
Type	R1	R2																																																																																																																																																																																																																																																																																									
DTA143ESA	4.7K	4.7K																																																																																																																																																																																																																																																																																									
DTA124ESA	22K	22K																																																																																																																																																																																																																																																																																									
7																																																																																																																																																																																																																																																																																											

SCHEMATIC DIAGRAM
Festival-60-70-80-EU(RDS)
CD-UNIT-300-01P (TUNER)

Festival CD Unit TUNER SCHEMATIC DIAGRAM (60/80 US)(RDS)



Festival CD Unit TUNER IC VOLTAGE CHART (60/80 US)(RDS)

	A	B	C	D	E																																																																																																																		
1	IC 251		IC 271																																																																																																																				
	<table border="1"> <thead> <tr> <th>PIN NO.</th> <th>F M</th> <th>A M</th> <th>F M STEREO</th> <th>F M MONO</th> </tr> </thead> <tbody> <tr><td>1</td><td>3.19V</td><td>3.19V</td><td></td><td></td></tr> <tr><td>2</td><td>3.19V</td><td>3.19V</td><td></td><td></td></tr> <tr><td>3</td><td>3.22V</td><td>3.22V</td><td></td><td></td></tr> <tr><td>4</td><td>3.21V</td><td>3.21V</td><td></td><td></td></tr> <tr><td>5</td><td>5.2V</td><td>5.2V</td><td></td><td></td></tr> <tr><td>6</td><td>3.2V</td><td>3.2V</td><td></td><td></td></tr> <tr><td>7</td><td>3.2V</td><td>3.2V</td><td></td><td></td></tr> <tr><td>8</td><td>5.2V</td><td>5.2V</td><td></td><td></td></tr> <tr><td>9</td><td>3.19V</td><td>3.19V</td><td></td><td></td></tr> <tr><td>10</td><td>0 V</td><td>8.1V</td><td></td><td></td></tr> <tr><td>11</td><td>0 V</td><td>0 V</td><td></td><td></td></tr> <tr><td>12</td><td>0 V</td><td>0 V</td><td></td><td></td></tr> <tr><td>13</td><td>4.8V</td><td>4.8V</td><td></td><td></td></tr> <tr><td>14</td><td>5.0V</td><td>0.06V</td><td></td><td></td></tr> <tr><td>15</td><td>0.01V</td><td>0.1V</td><td></td><td></td></tr> <tr><td>16</td><td></td><td>2.87V</td><td>2.65V</td><td>2.85V</td></tr> <tr><td>17</td><td></td><td>9.8V</td><td>2.8V</td><td>7.54V</td></tr> <tr><td>18</td><td></td><td>5.3V</td><td>2.8V</td><td>4.5V</td></tr> <tr><td>19</td><td>2.83V</td><td>2.83V</td><td>2.8V</td><td>3.75V</td></tr> <tr><td>20</td><td></td><td>7.5V</td><td>2.8V</td><td>3.75V</td></tr> <tr><td>21</td><td></td><td>1.8V</td><td>3.4V</td><td>1.8V</td></tr> <tr><td>22</td><td>12.1V</td><td>12.1V</td><td></td><td></td></tr> </tbody> </table>	PIN NO.	F M	A M	F M STEREO	F M MONO	1	3.19V	3.19V			2	3.19V	3.19V			3	3.22V	3.22V			4	3.21V	3.21V			5	5.2V	5.2V			6	3.2V	3.2V			7	3.2V	3.2V			8	5.2V	5.2V			9	3.19V	3.19V			10	0 V	8.1V			11	0 V	0 V			12	0 V	0 V			13	4.8V	4.8V			14	5.0V	0.06V			15	0.01V	0.1V			16		2.87V	2.65V	2.85V	17		9.8V	2.8V	7.54V	18		5.3V	2.8V	4.5V	19	2.83V	2.83V	2.8V	3.75V	20		7.5V	2.8V	3.75V	21		1.8V	3.4V	1.8V	22	12.1V	12.1V					
PIN NO.	F M	A M	F M STEREO	F M MONO																																																																																																																			
1	3.19V	3.19V																																																																																																																					
2	3.19V	3.19V																																																																																																																					
3	3.22V	3.22V																																																																																																																					
4	3.21V	3.21V																																																																																																																					
5	5.2V	5.2V																																																																																																																					
6	3.2V	3.2V																																																																																																																					
7	3.2V	3.2V																																																																																																																					
8	5.2V	5.2V																																																																																																																					
9	3.19V	3.19V																																																																																																																					
10	0 V	8.1V																																																																																																																					
11	0 V	0 V																																																																																																																					
12	0 V	0 V																																																																																																																					
13	4.8V	4.8V																																																																																																																					
14	5.0V	0.06V																																																																																																																					
15	0.01V	0.1V																																																																																																																					
16		2.87V	2.65V	2.85V																																																																																																																			
17		9.8V	2.8V	7.54V																																																																																																																			
18		5.3V	2.8V	4.5V																																																																																																																			
19	2.83V	2.83V	2.8V	3.75V																																																																																																																			
20		7.5V	2.8V	3.75V																																																																																																																			
21		1.8V	3.4V	1.8V																																																																																																																			
22	12.1V	12.1V																																																																																																																					
2																																																																																																																							
3																																																																																																																							
4																																																																																																																							
5																																																																																																																							
6																																																																																																																							
7																																																																																																																							
8																																																																																																																							
9																																																																																																																							
10																																																																																																																							
11																																																																																																																							
12																																																																																																																							
13																																																																																																																							
14																																																																																																																							
15																																																																																																																							
16																																																																																																																							
17																																																																																																																							
18																																																																																																																							
19																																																																																																																							
20																																																																																																																							
21																																																																																																																							
22																																																																																																																							
23																																																																																																																							
24																																																																																																																							
25																																																																																																																							
26																																																																																																																							
27																																																																																																																							
28																																																																																																																							
29																																																																																																																							
30																																																																																																																							
31																																																																																																																							
32																																																																																																																							
33																																																																																																																							
34																																																																																																																							
35																																																																																																																							
36																																																																																																																							
37																																																																																																																							
38																																																																																																																							
39																																																																																																																							
40																																																																																																																							
41																																																																																																																							
42																																																																																																																							
43																																																																																																																							
44																																																																																																																							
45																																																																																																																							
46																																																																																																																							
47																																																																																																																							
48																																																																																																																							
49																																																																																																																							
50																																																																																																																							
51																																																																																																																							
52																																																																																																																							
53																																																																																																																							
54																																																																																																																							
55																																																																																																																							
56																																																																																																																							
57																																																																																																																							
58																																																																																																																							
59																																																																																																																							
60																																																																																																																							
61																																																																																																																							
62																																																																																																																							
63																																																																																																																							
64																																																																																																																							
65																																																																																																																							
66																																																																																																																							
67																																																																																																																							
68																																																																																																																							
69																																																																																																																							
70																																																																																																																							
71																																																																																																																							
72																																																																																																																							
73																																																																																																																							
74																																																																																																																							
75																																																																																																																							
76																																																																																																																							
77																																																																																																																							
78																																																																																																																							
79																																																																																																																							
80																																																																																																																							
81																																																																																																																							
82																																																																																																																							
83																																																																																																																							
84																																																																																																																							
85																																																																																																																							
86																																																																																																																							
87																																																																																																																							
88																																																																																																																							
89																																																																																																																							
90																																																																																																																							
91																																																																																																																							
92																																																																																																																							
93																																																																																																																							
94																																																																																																																							
95																																																																																																																							
96																																																																																																																							
97																																																																																																																							
98																																																																																																																							
99																																																																																																																							
100																																																																																																																							

PIN NO.	LOW FREQ. - HIGH FREQ.
19	FM 0.19V-0.16V AM 0.12V-0.09V
20	FM 1.03V-0.83V AM 1.05V-0.83V
21	FM 1.03V-0.81V AM 1.05V-0.83V
22	FM 1.58V-8.1V AM 1.0V-7.52V

IC 231

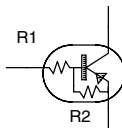
PIN NO.	F M	A M
1	2.54V	1.02V
2	2.54V	1.02V
3	2.54V	1.02V
4	0 V	0 V
5	11.5V	11.6V
6	11.5V	11.6V
7	11.5V	11.6V
8	4.86V	4.86V
9	11.4V	3.85V
10	2.1V	2.07V
11	1.8V	1.3V
12	3.0V	3.2V
13	10.3V	10.3V
14	1.5V	1.48V
15	1.49V	1.49V
16	0.5V	0 V
17	0 V	0 V
18	2.5V	1.05V
19	1.5V	1.4V
20	0 V	11.46V
21	4.0V	3.7V
22	4.0V	3.7V
23	4.0V	3.7V
24	3.2V	2.3V

IC 302

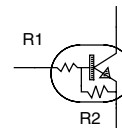
PIN NO.	F M	F M RDS TUNED
1	2.27V	2.27V
2	0 V	0 V
3	0 V	0 V
4	4.49V	4.49V
5	2.48V	2.48V
6	2.4-2.6	1.85V R1
7	4.96V	4.96V
8	0 V	0 V
9	4.96V	4.96V
10	0 V	0 V
11	0 V	0 V
12	0 V	0 V
13	0 V	0 V
14	4.71V	3.6V
15	4.71V	3.0V
16	4.71V	4.63V
17	0 V	0 V
18	2.6V	2.6V

IC 301

PIN NO.	F M	F M RDS TUNED
1	1.2-1.5	4.96V
2	2.1-2.5	1.85V
3	2.48V	2.48V
4	2.47V	2.47V
5	4.96V	4.96V
6	0 V	0 V
7	2.46V	2.46V
8	4.96V	4.96V
9	0 V	0 V
10	0 V	0 V
11	0 V	0 V
12	4.96V	4.96V
13	2.45V	2.45V
14	2.63V	2.63V
15	2.48V	2.48V
16	2.48V	2.48V



Type	R1	R2
DTA143ESA	4.7K	4.7K
DTA124ESA	22K	22K



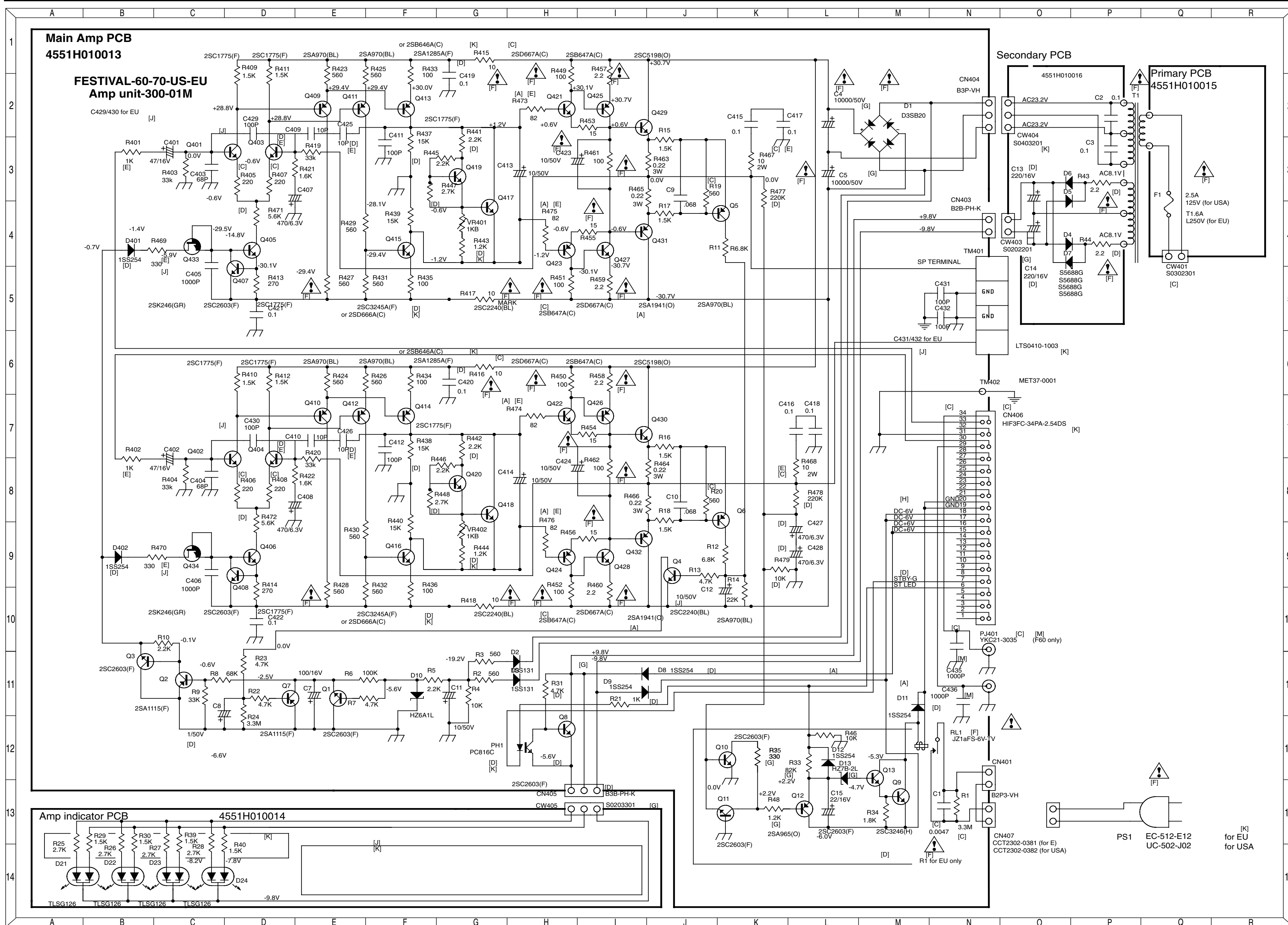
Type	R1	R2
DTC124ESA	22K	22K

SCHEMATIC DIAGRAM
Festival-60-70-80-US(RDS)
CD-UNIT-300-01P (TUNER)

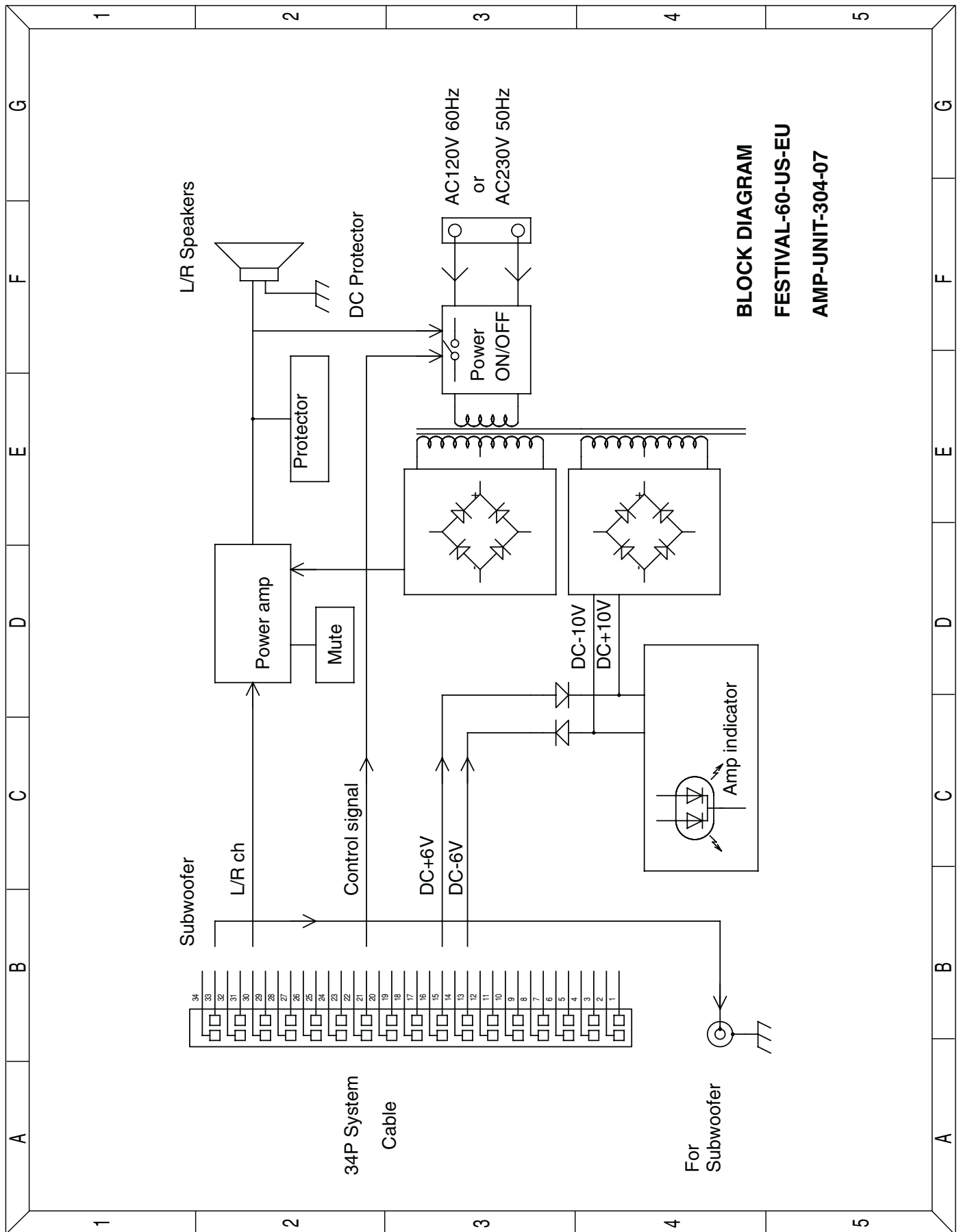
Festival CD Unit TUNER IC VOLTAGE CHART (60/80 European 2 BAND)(RDS)

	A	B	C	D	E
IC 251			IC 271		
1	PIN NO.	F M	A M	F M STEREO	F M MONO
	1	3.19V	3.19V		
	2	3.19V	3.19V		
	3	3.22V	3.22V		
	4	3.21V	3.21V		
	5	5.2V	5.2V		
	6	3.2V	3.2V		
	7	3.2V	3.2V		
	8	5.2V	5.2V		
	9	3.19V	3.19V		
	10	0 V	8.1V		
	11	0 V	0 V		
2	12	0 V	0 V		
	13	4.8V	4.8V		
	14	5.0V	0.06V		
	15	0.01V	0.1V		
	16		2.87V	2.65V	2.85V
	17		9.8V	2.8V	7.54V
	18		5.3V	2.8V	4.5V
	19	2.83V	2.83V	2.8V	3.75V
	20		7.5V	2.8V	3.75V
	21		1.8V	3.4V	1.8V
	22	12.1V	12.1V		
	1	2.5V	2.5V		
	2	0.1V	12.1V		
	3	0 V	0 V		
	4	0 V	0 V		
	5	5.0V	5.0V		
	6	5.0V	5.0V		
	7	0 V	0 V		
	8	0 V	0 V		
	9	12.1V	0.1V		
	10			12V	0.1V
	11	5.0V	5.0V		
	12	0 V	0 V		
	13	5.0V	5.0V		
	14	0 V	2.5V		
	15	0 V	0 V		
	16	5.0V	5.0V		
	17	0 V	0 V		
	18	0 V	0 V		
	19				
	20				
	21				
	22				
	23	0 V	0 V		
	24	5.0V	5.0V		
	PIN NO.	LOW FREQ. - HIGH FREQ.			
	19	FM 0.19V-0.16V AM 0.12V-0.09V			
	20	FM 1.03V-0.83V AM 1.05V-0.83V			
	21	FM 1.03V-0.81V AM 1.05V-0.83V			
	22	FM 1.58V-8.1V AM 1.0V-7.52V			
IC 231			IC 302		
4	PIN NO.	F M	A M		
	1	2.54V	1.02V		
	2	2.54V	1.02V		
	3	2.54V	1.02V		
	4	0 V	0 V		
	5	11.5V	11.6V		
	6	11.5V	11.6V		
	7	11.5V	11.6V		
	8	4.86V	4.86V		
	9	11.4V	3.85V		
	10	2.1V	2.07V		
	11	1.8V	1.3V		
	12	3.0V	3.2V		
	13	10.3V	10.3V		
	14	1.5V	1.48V		
	15	1.49V	1.49V		
	16	0.5V	0 V		
	17	0 V	0 V		
	18	2.5V	1.05V		
	19	1.5V	1.4V		
	20	0 V	11.46V		
	21	4.0V	3.7V		
	22	4.0V	3.7V		
	23	4.0V	3.7V		
	24	3.2V	2.3V		
	PIN NO.	F M	FM RDS TUNED		
	1	2.27V	2.27V		
	2	0 V	0 V		
	3	0 V	0 V		
	4	4.49V	4.49V		
	5	2.48V	2.48V		
	6	2.4-2.6	1.85V		
	7	4.96V	4.96V		
	8	0 V	0 V		
	9	4.96V	4.96V		
	10	0 V	0 V		
	11	0 V	0 V		
	12	0 V	0 V		
	13	0 V	0 V		
	14	4.71V	3.6V		
	15	4.71V	3.0V		
	16	4.71V	4.63V		
	17	0 V	0 V		
	18	2.6V	2.6V		
IC 301			IC 302		
6	PIN NO.	F M	FM RDS TUNED		
	1	1.2-1.5	4.96V		
	2	2.1-2.5	1.85V		
	3	2.48V	2.48V		
	4	2.47V	2.47V		
	5	4.96V	4.96V		
	6	0 V	0 V		
	7	2.46V	2.46V		
	8	4.96V	4.96V		
	9	0 V	0 V		
	10	0 V	0 V		
	11	0 V	0 V		
	12	4.96V	4.96V		
	13	2.45V	2.45V		
	14	2.63V	2.63V		
	15	2.48V	2.48V		
	16	2.48V	2.48V		
	Type	R1	R2		
	DTA143ESA	4.7K	4.7K		
	DTA124ESA	22K	22K		
	Type	R1	R2		
	DTC124ESA	22K	22K		
	DTC143ESA	4.7K	4.7K		
IC 301			IC 302		
7	SCHEMATIC DIAGRAM				
Festival-60-70-80-EU(2BAND)(RDS)					
CD-UNIT-300-01P (TUNER)					

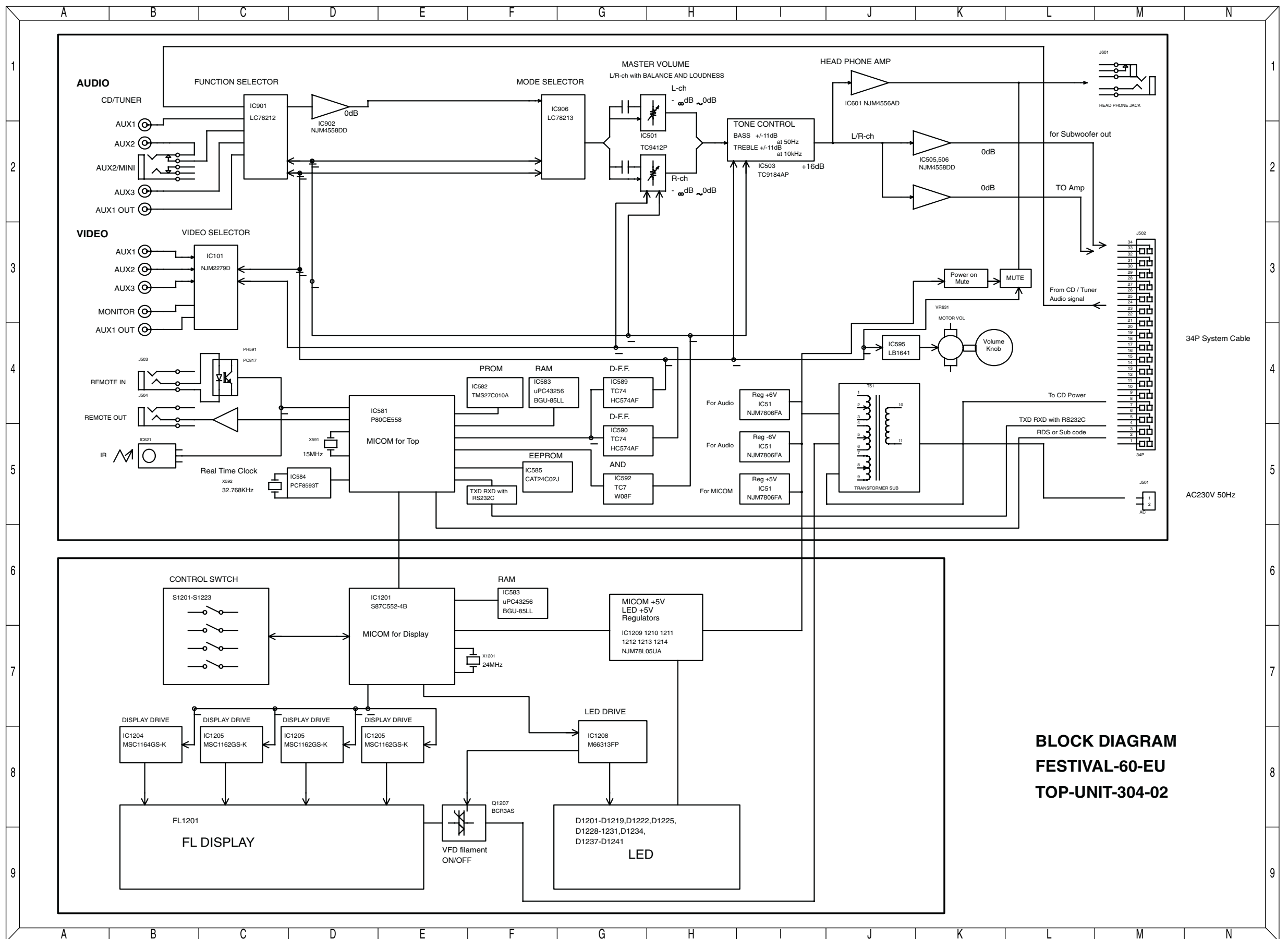
Festival MAIN AMP PCB SCHEMATIC DIAGRAM (60 US & European)



Festival AMP UNIT BLOCK DIAGRAM (60 US & European)

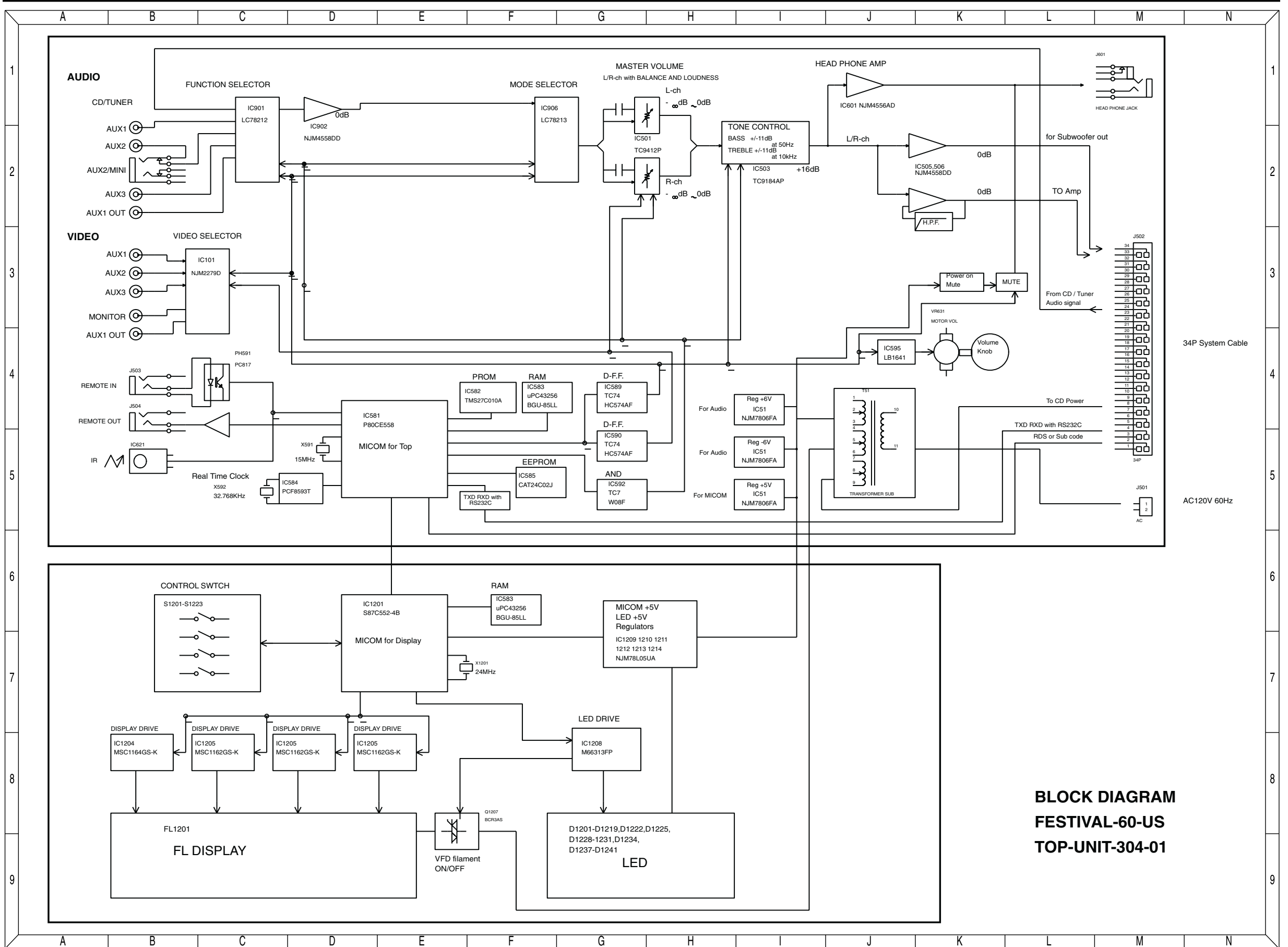


Festival TOP UNIT BLOCK DIAGRAM (60 European)



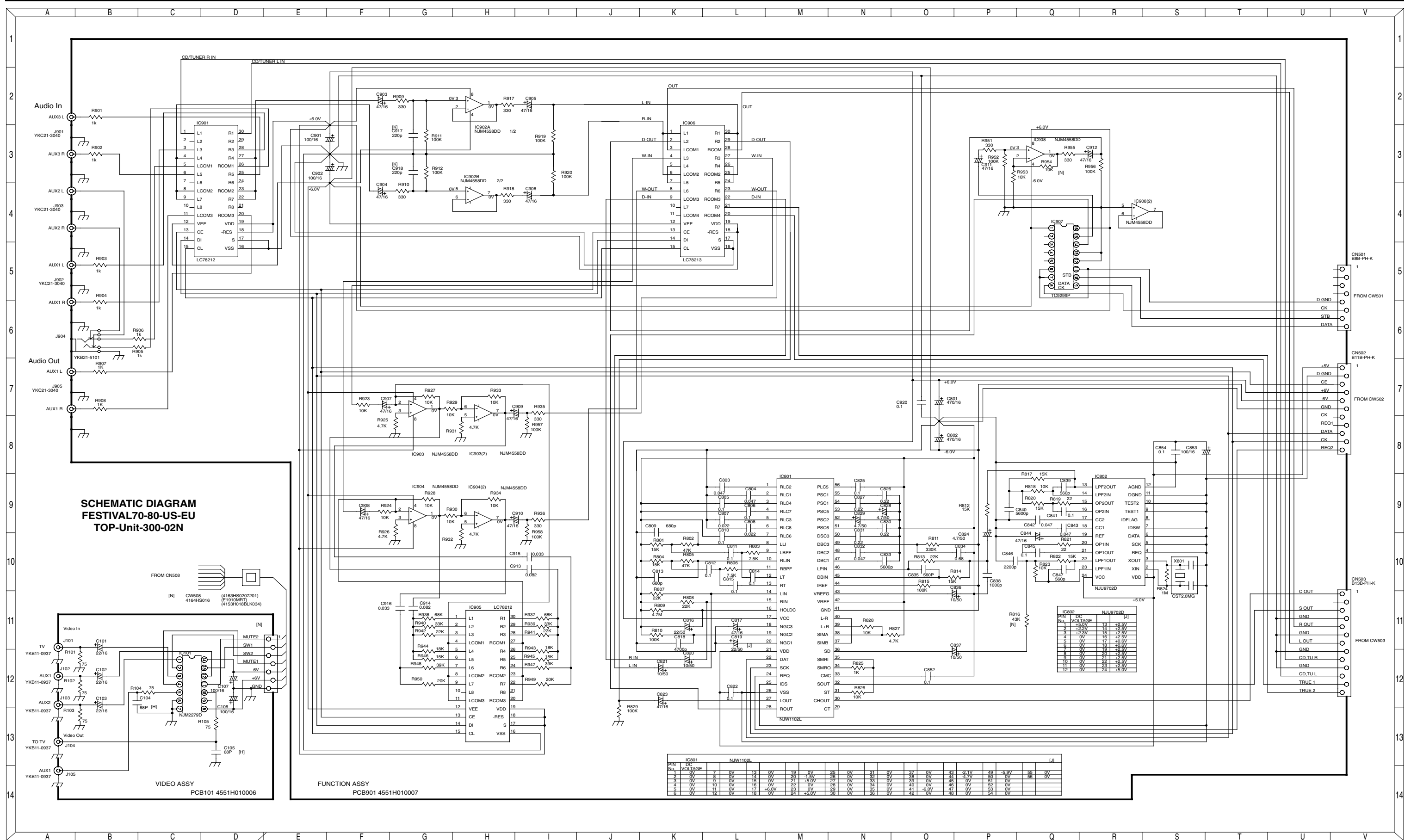
**BLOCK DIAGRAM
FESTIVAL-60-EU
TOP-UNIT-304-02**

Festival TOP UNIT BLOCK DIAGRAM (60 US)

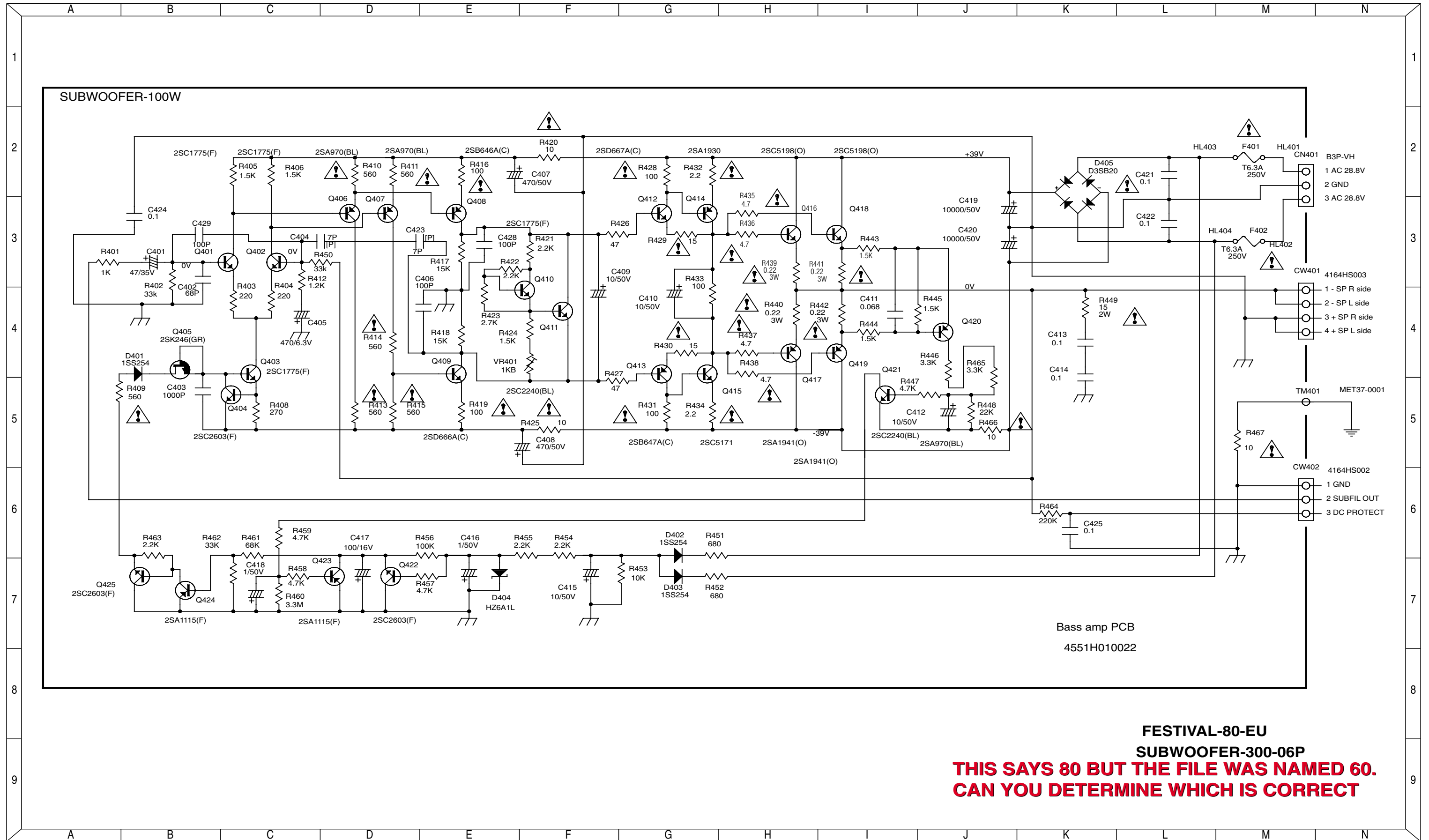


**BLOCK DIAGRAM
FESTIVAL-60-US
TOP-UNIT-304-01**

Festival TOP UNIT SCHEMATIC DIAGRAM (60 US & European)



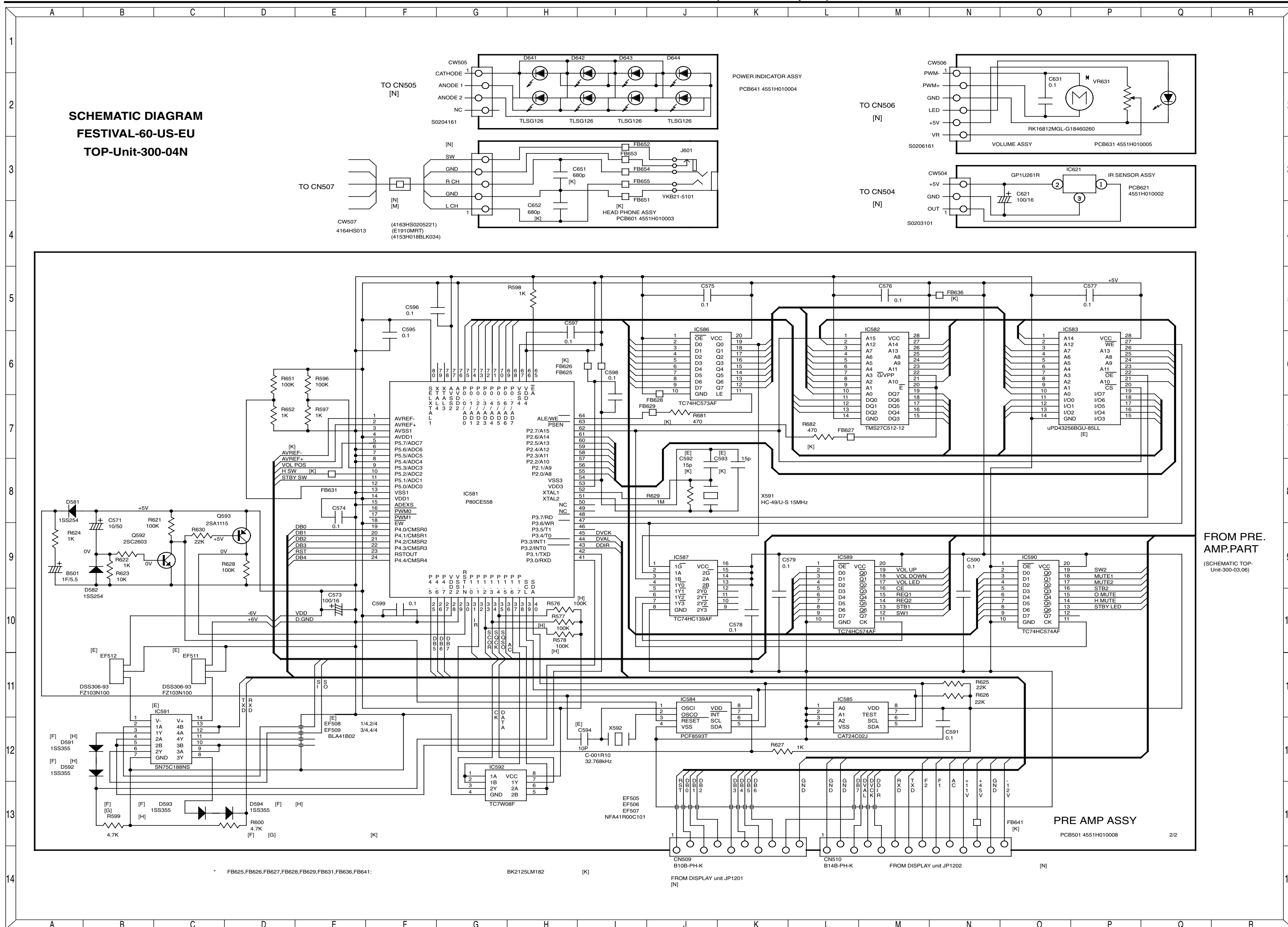
Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)



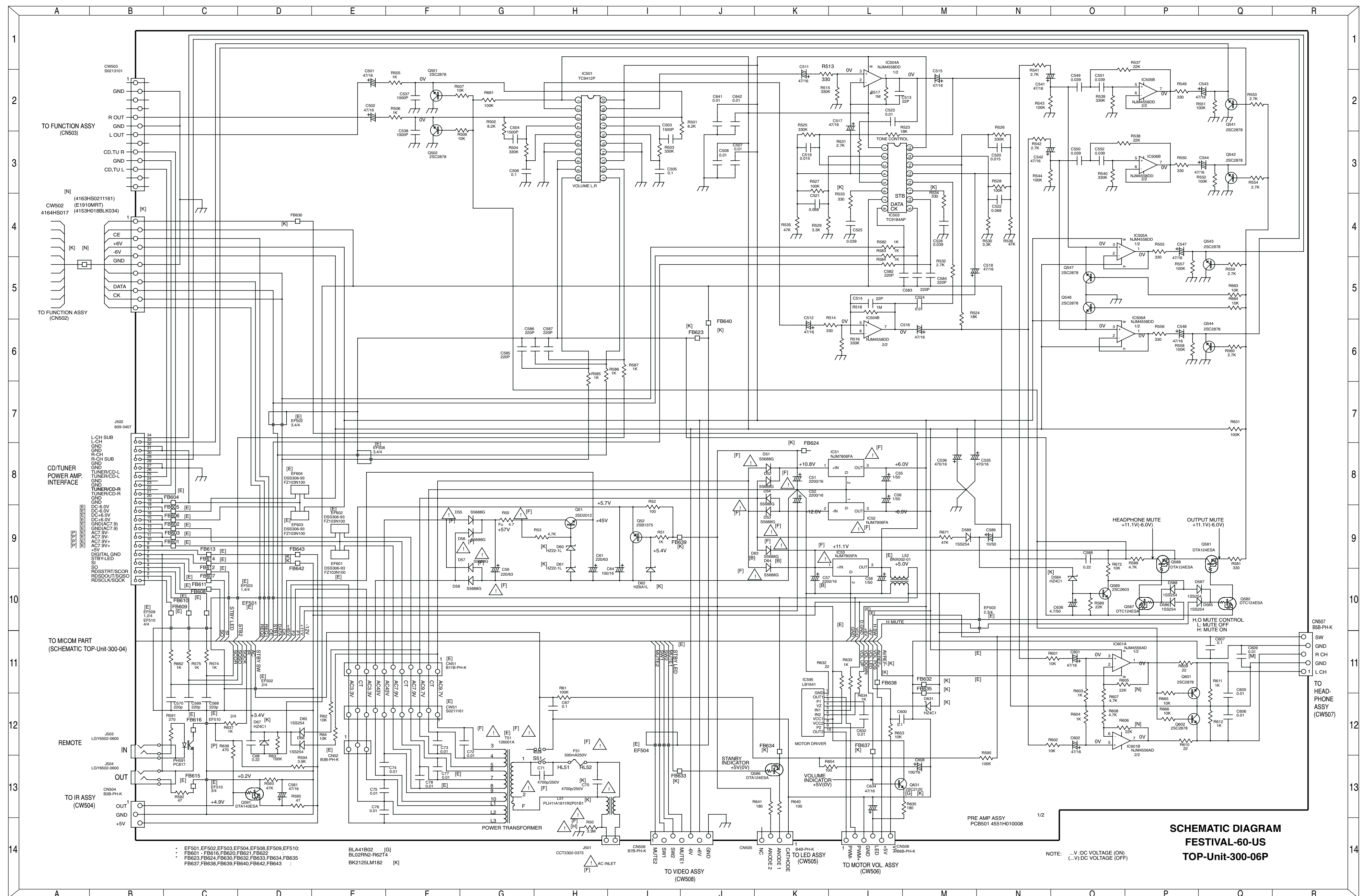
**FESTIVAL-80-EU
SUBWOOFER-300-06P
THIS SAYS 80 BUT THE FILE WAS NAMED 60.
CAN YOU DETERMINE WHICH IS CORRECT**

Festival TOP UNIT SCHEMATIC DIAGRAM (60 US & European)

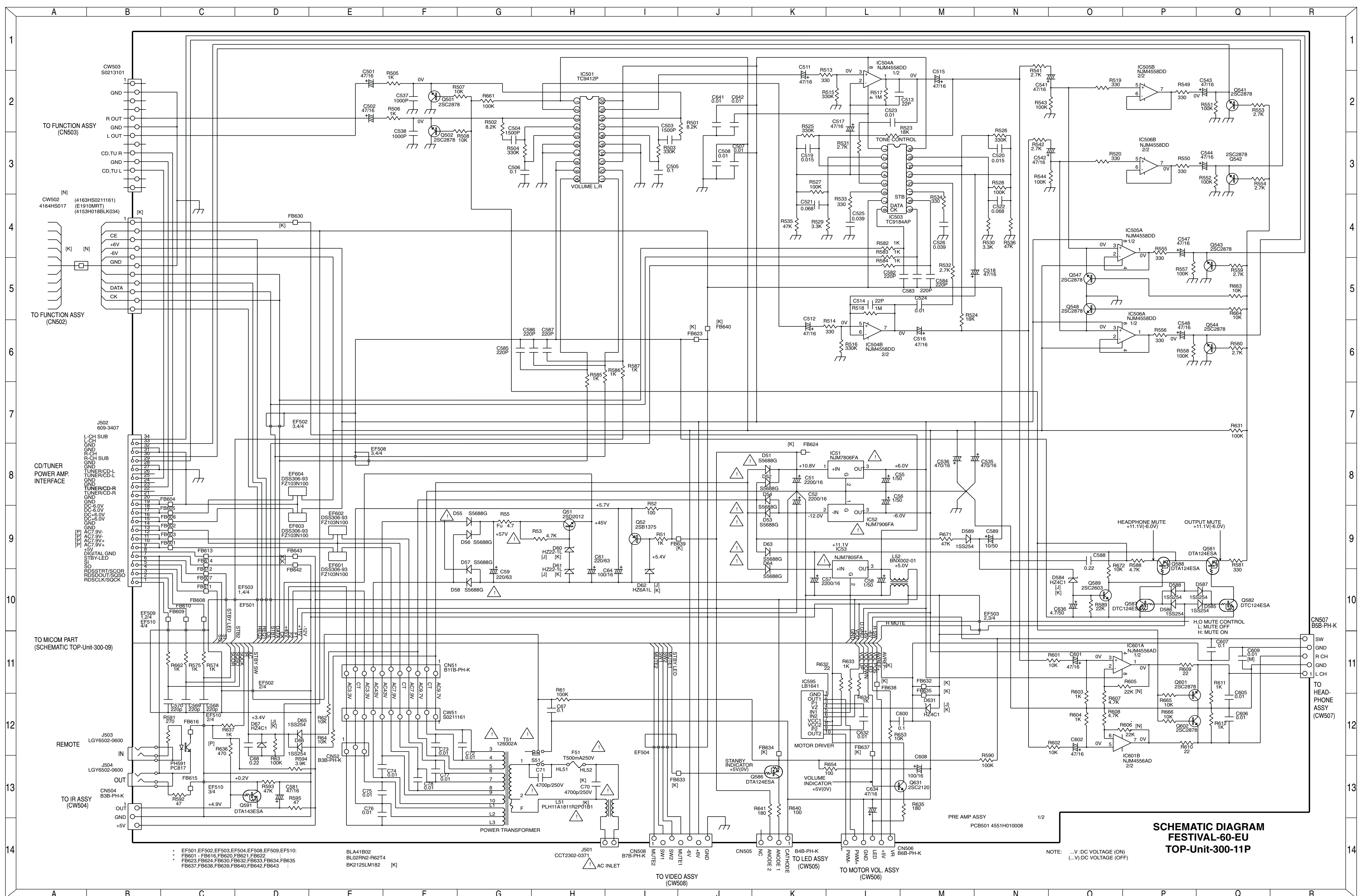
SCHEMATIC DIAGRAM
FESTIVAL-60-US-EU
TOP-Unit-300-04N

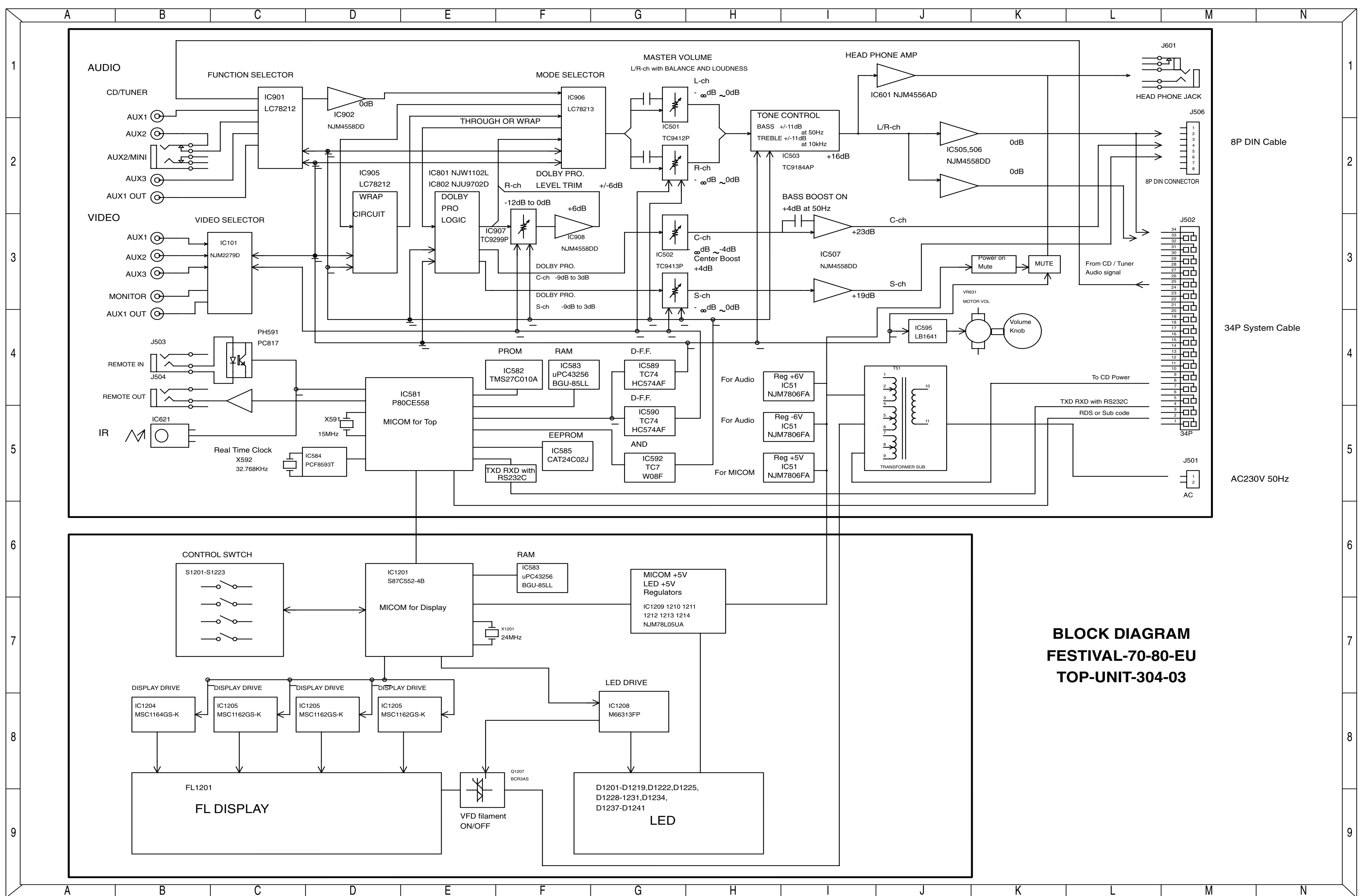


FROM PRE-AMP.PART
(SCHEMATIC TOP-Unit-300-03.06)



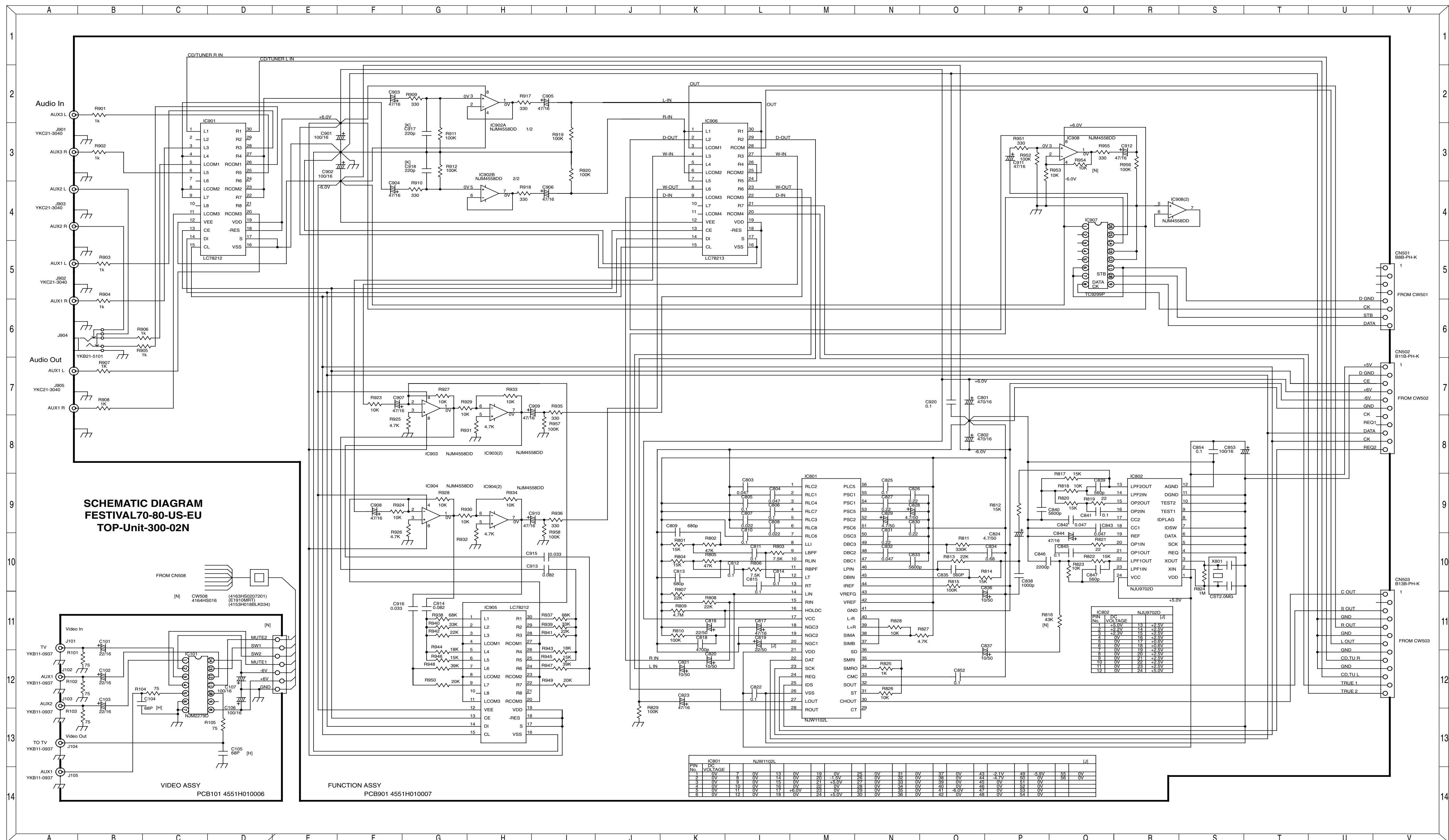
Festival TOP UNIT SCHEMATIC DIAGRAM (60 European)



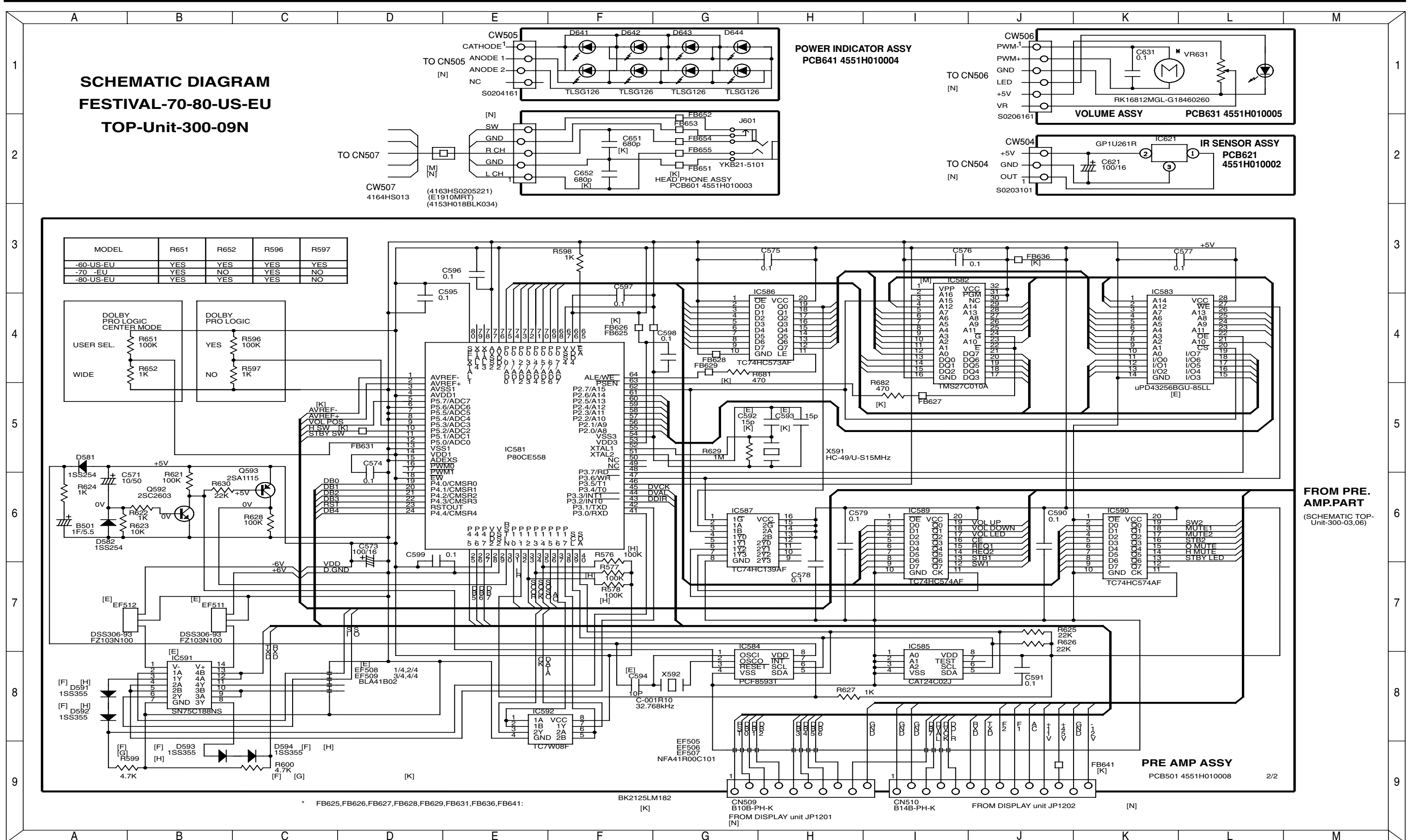


**BLOCK DIAGRAM
FESTIVAL-70-80-EU
TOP-UNIT-304-03**

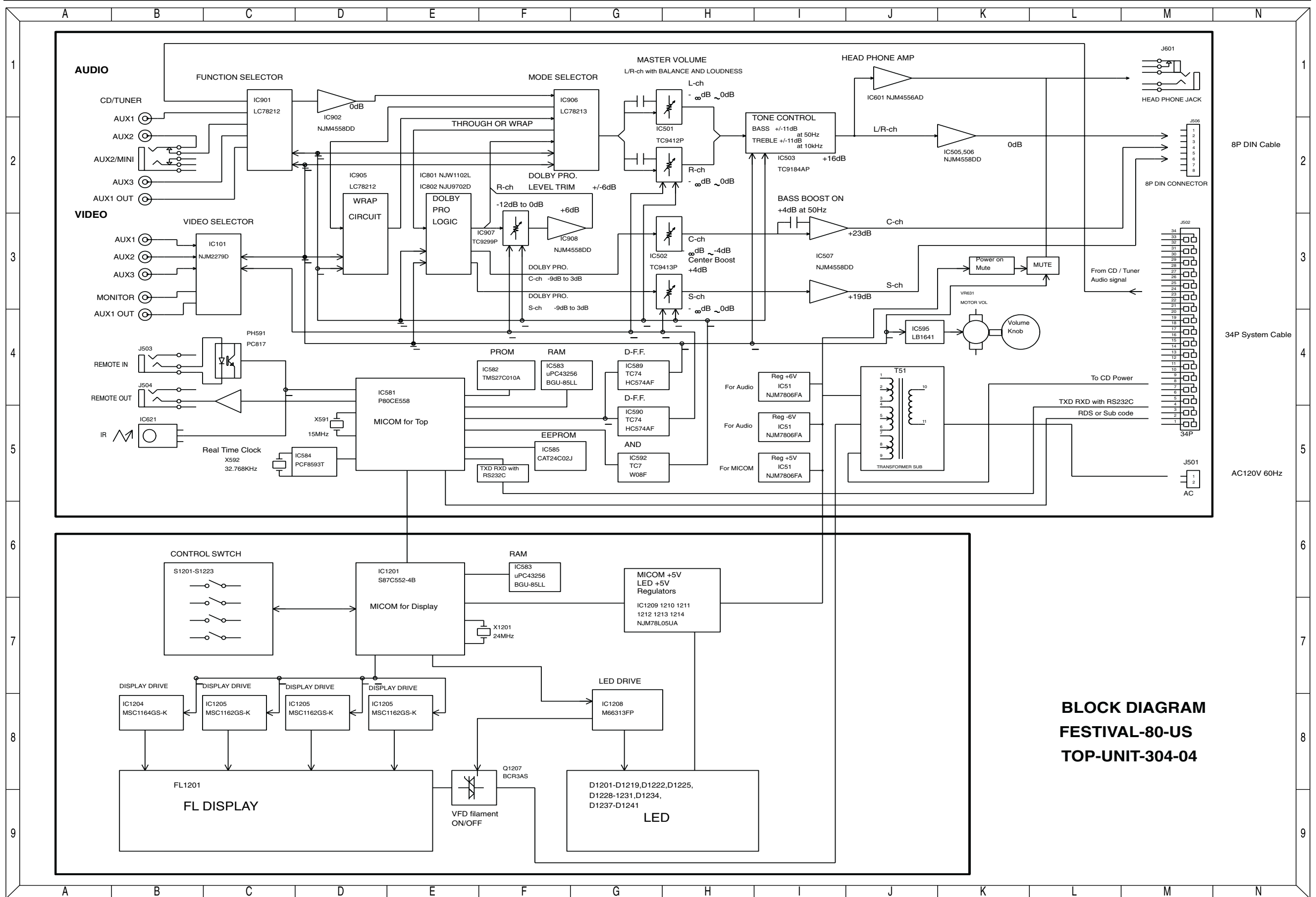
Festival TOP UNIT SCHEMATIC DIAGRAM (80 US & European)



Festival TOP UNIT SCHEMATIC DIAGRAM (80 US & European)

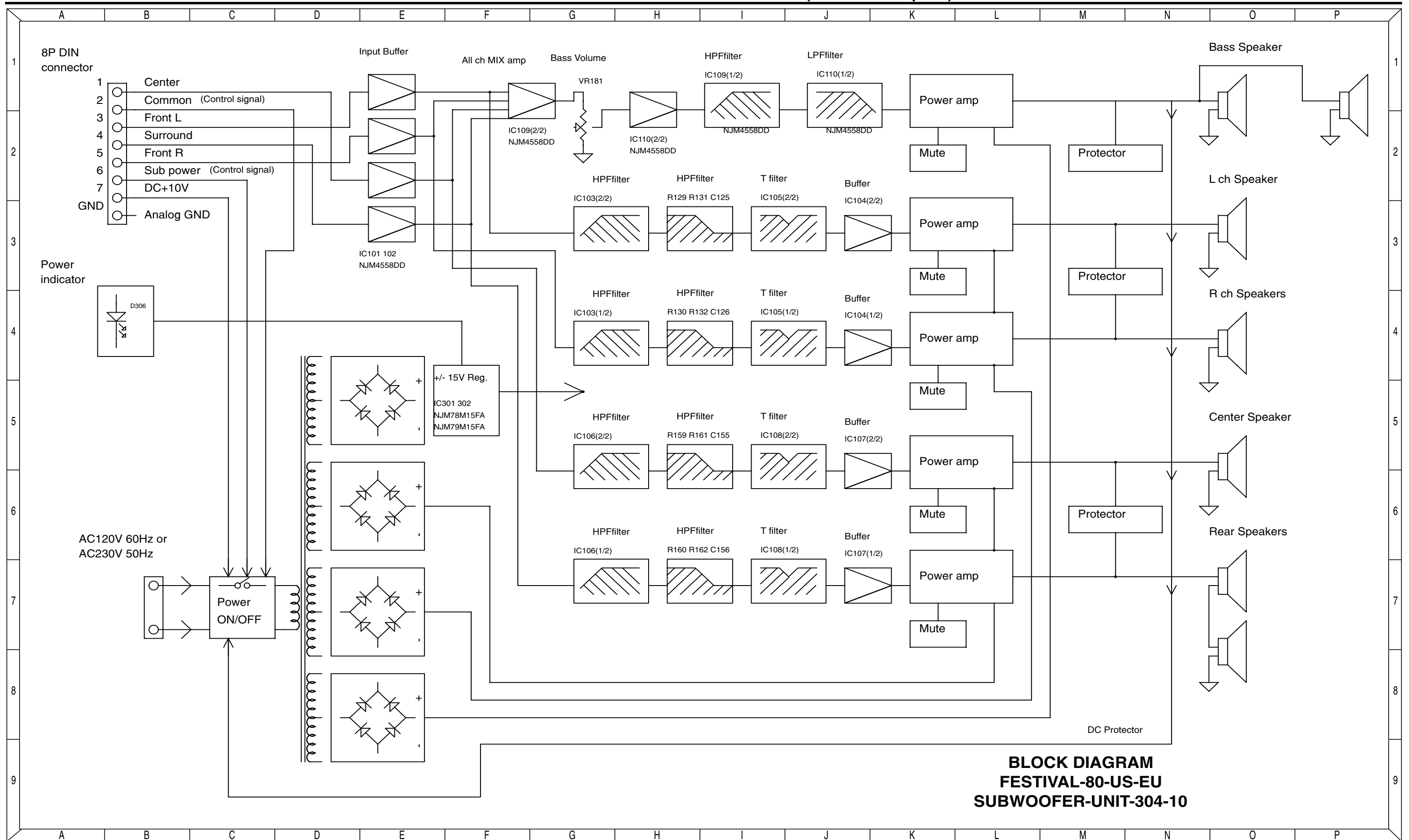


Festival TOP UNIT BLOCK DIAGRAM (80 US)



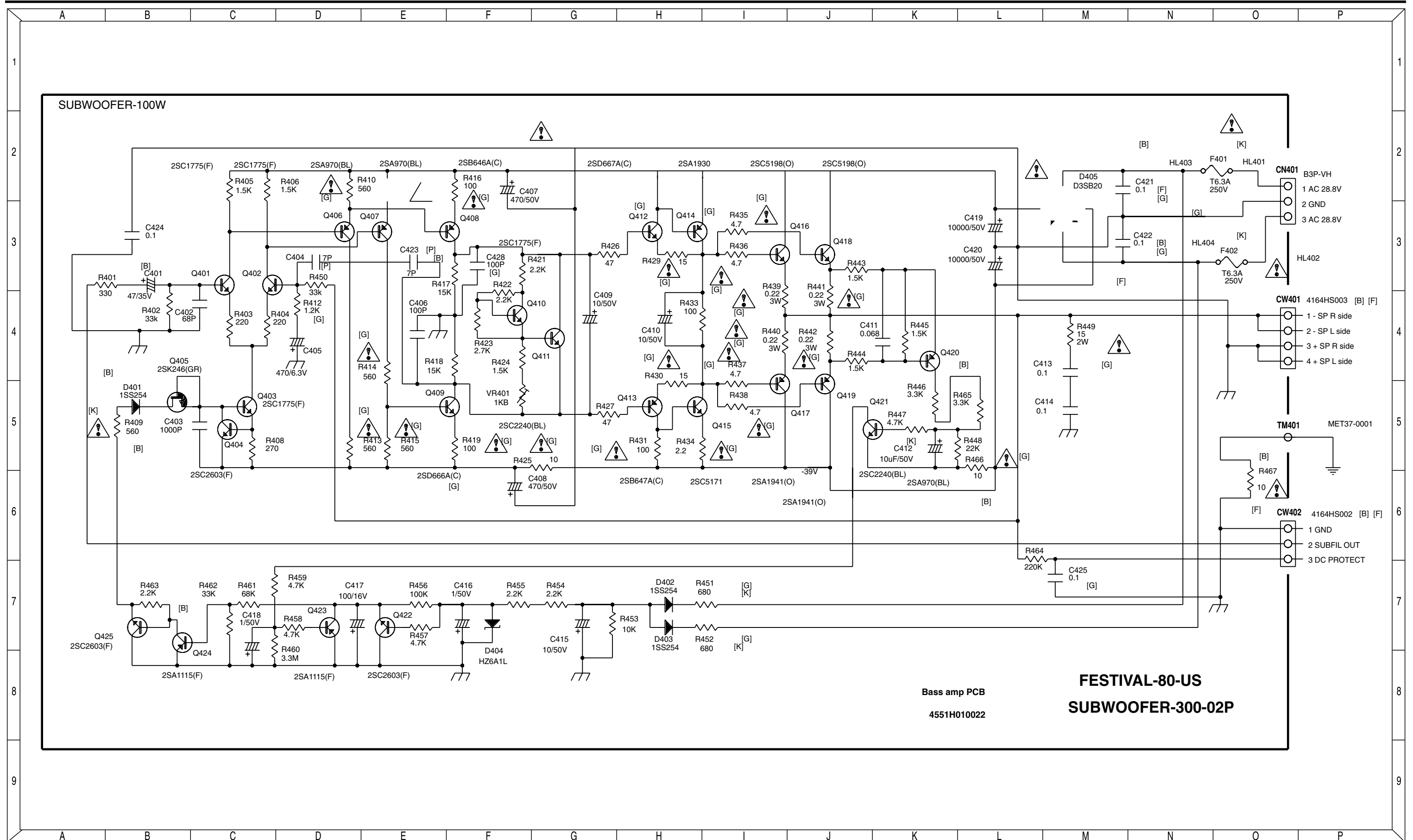
BLOCK DIAGRAM
FESTIVAL-80-US
TOP-UNIT-304-04

Festival SUBWOOFER UNIT BLOCK DIAGRAM (80 US & European)



BLOCK DIAGRAM
FESTIVAL-80-US-EU
SUBWOOFER-UNIT-304-10

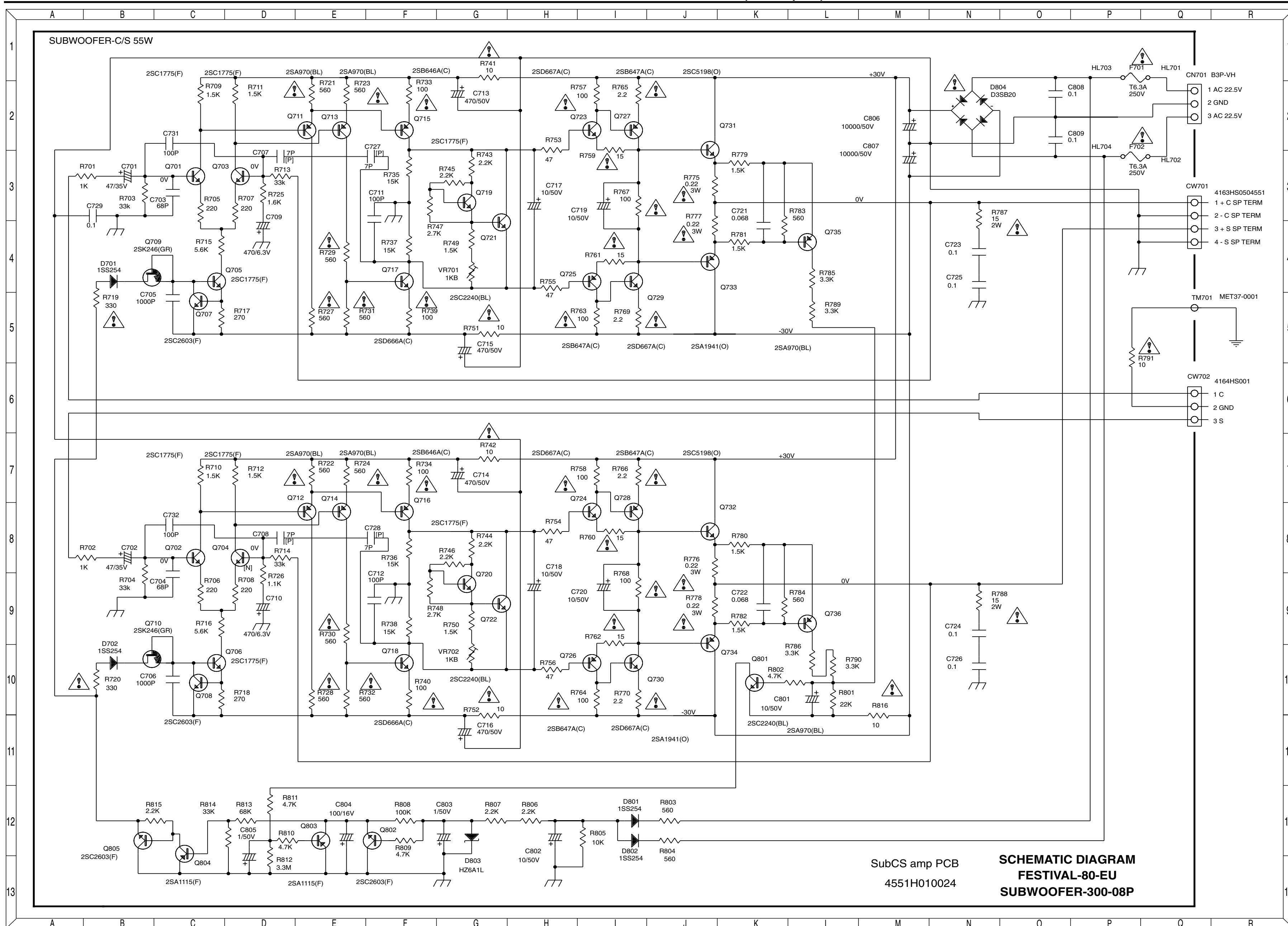
Festival SUBWOOFER SCHEMATIC DIAGRAM (80 US)



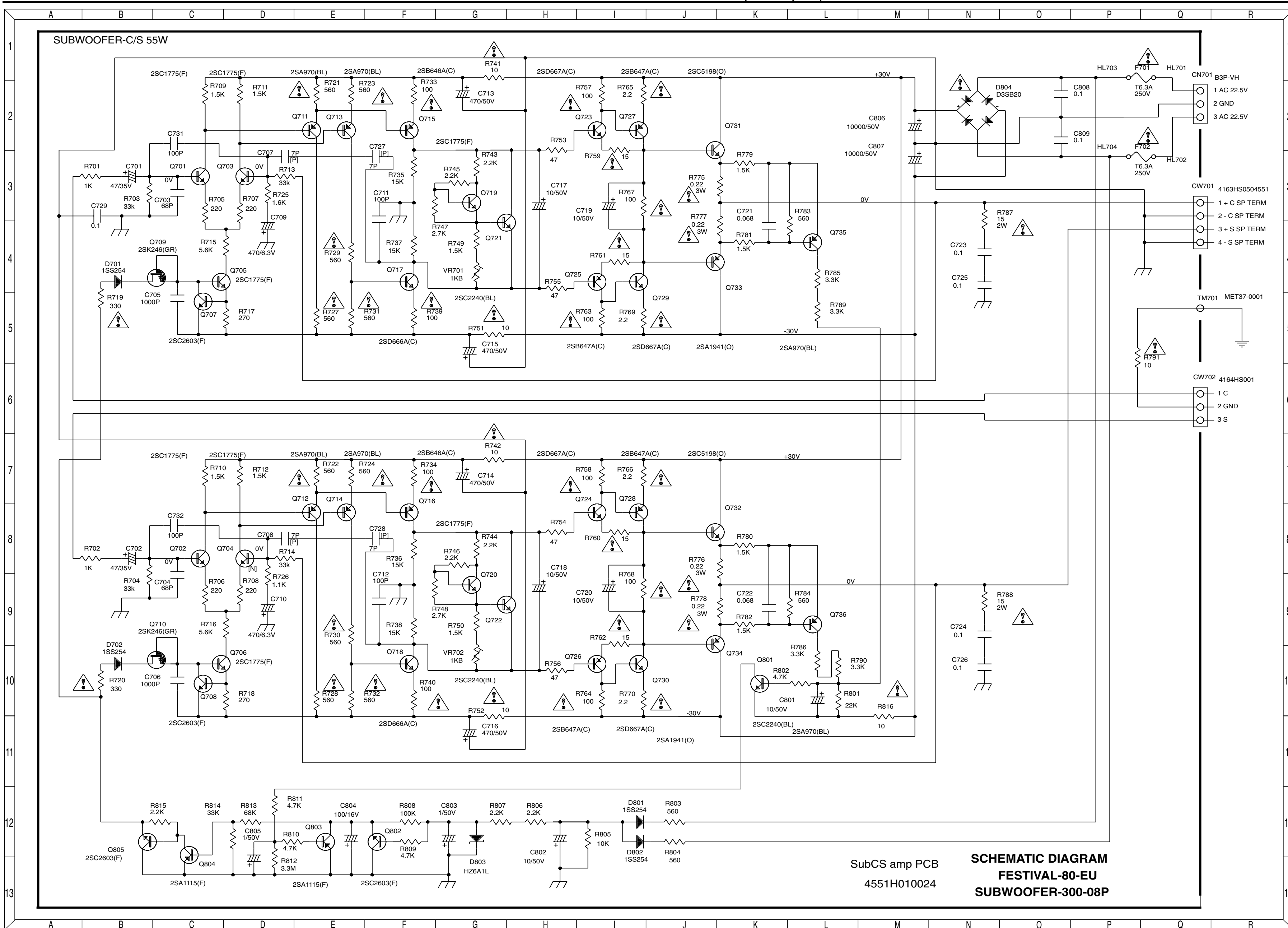
Bass amp PCB
4551H010022

FESTIVAL-80-US
SUBWOOFER-300-02P

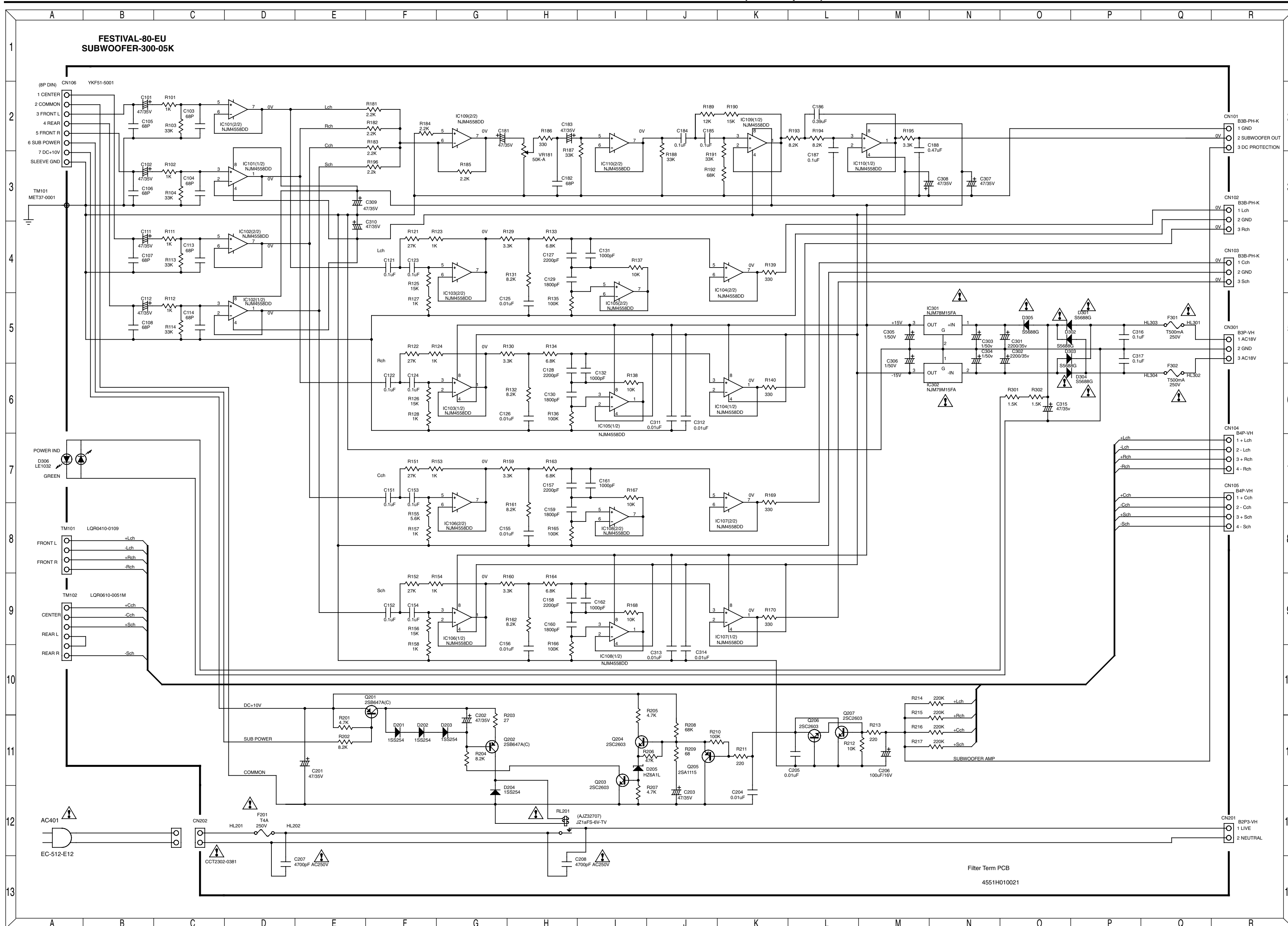
Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)



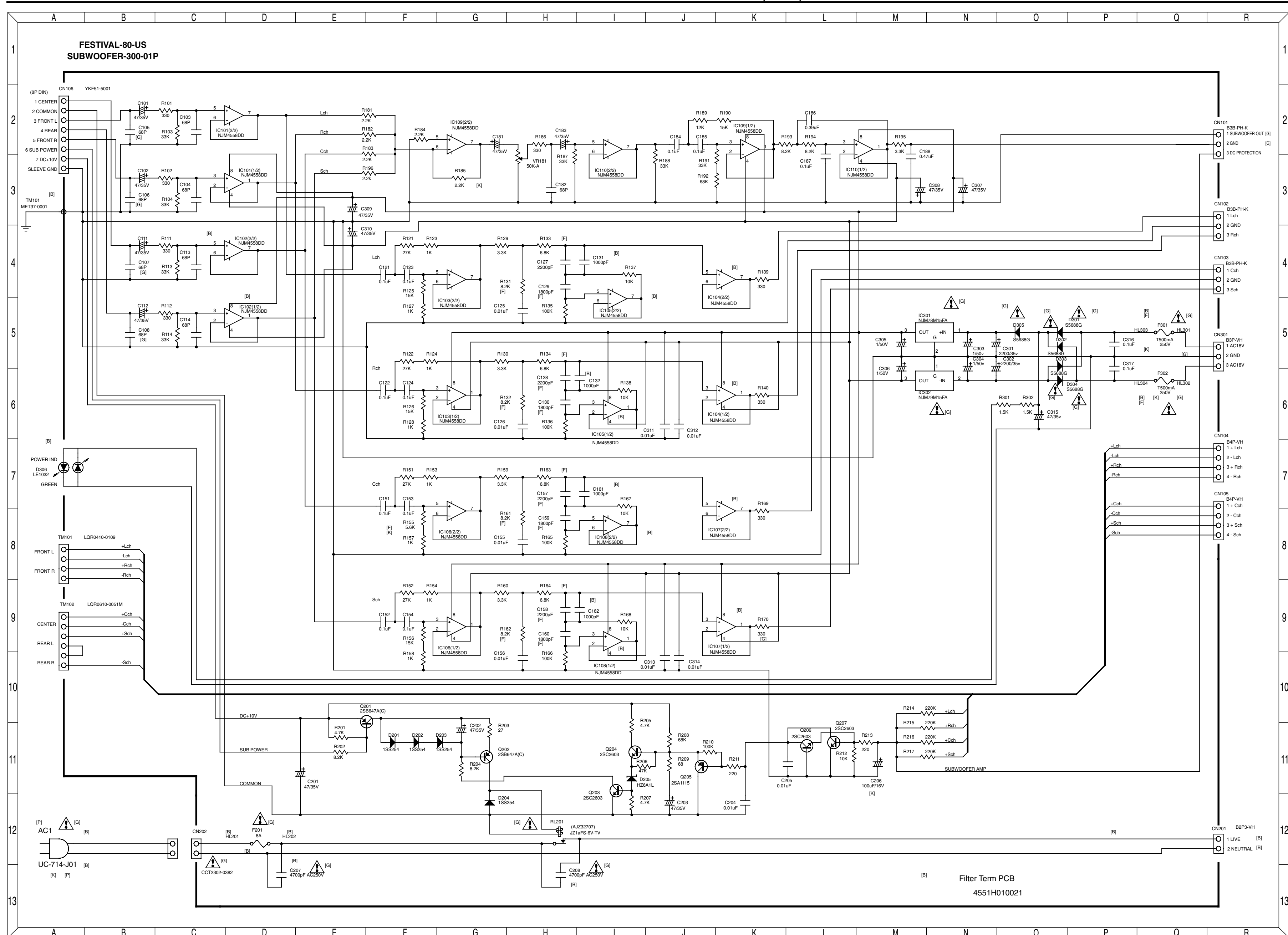
Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)



Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)

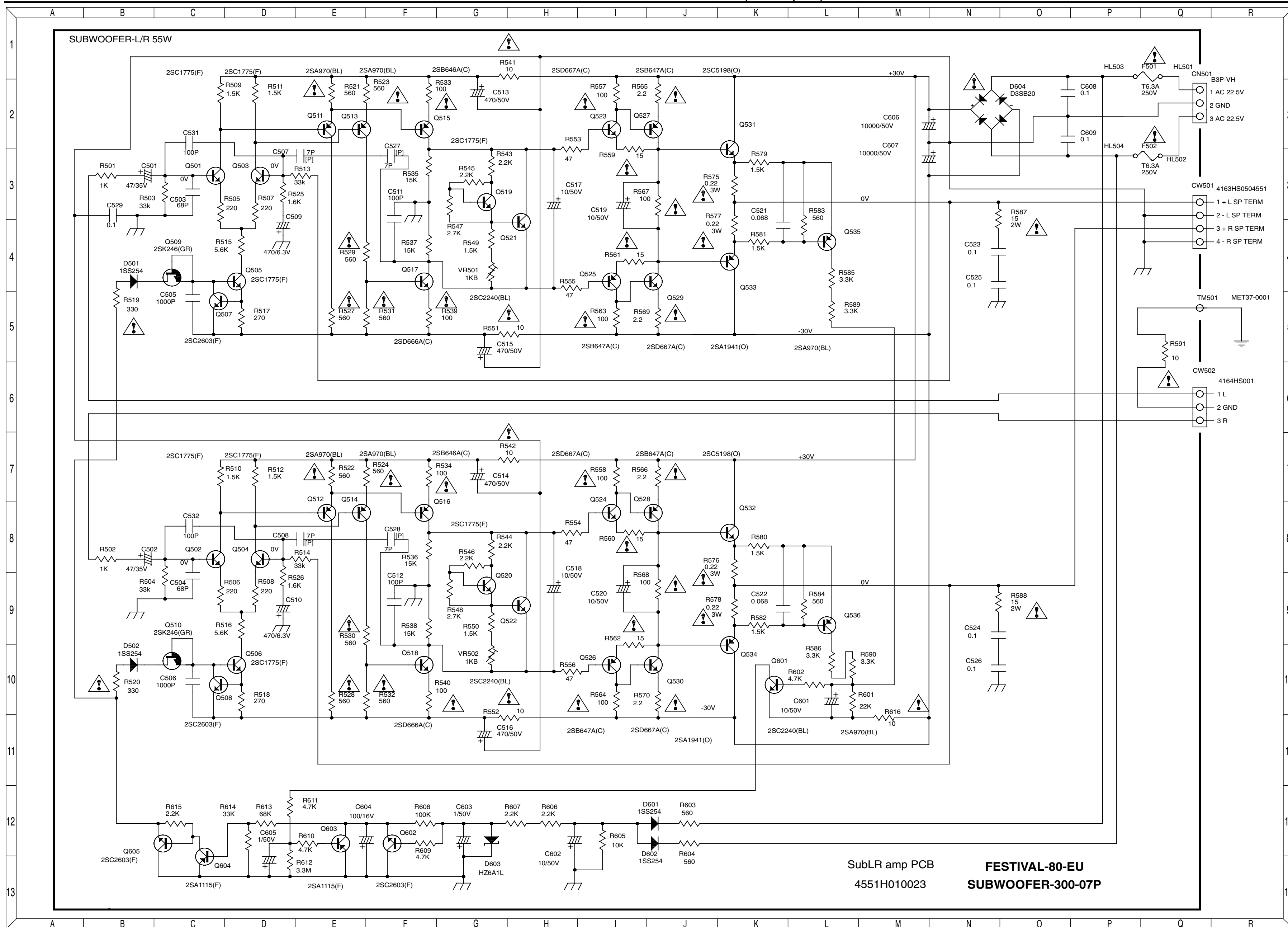


Festival SUBWOOFER SCHEMATIC DIAGRAM (80 US)



PRELIMINARY RELEASE

Festival SUBWOOFER SCHEMATIC DIAGRAM (80 European)



SubLR amp PCB
4551H010023

FESTIVAL-80-EU
SUBWOOFER-300-07P

Festival SUBWOOFER SCHEMATIC DIAGRAM (80 US)

