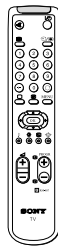
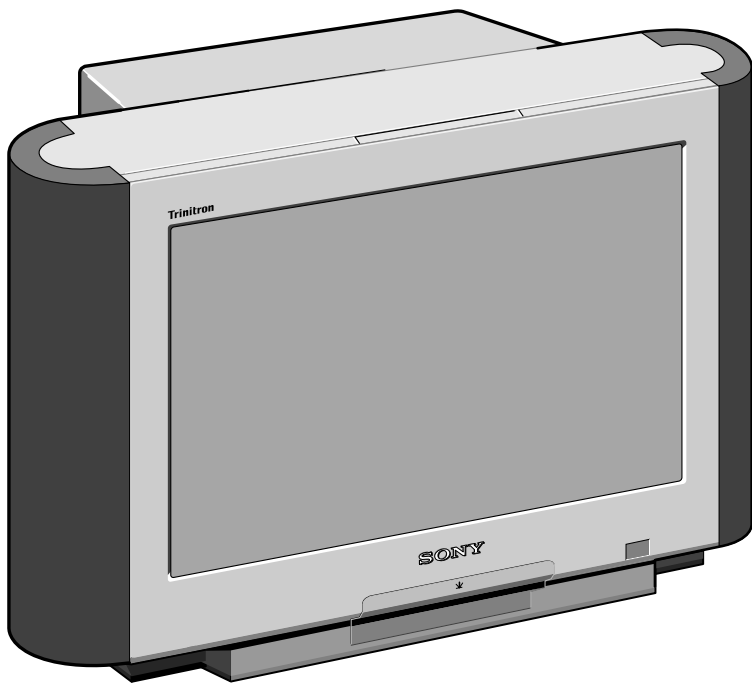


# SERVICE MANUAL

# FE-1A CHASSIS

| MODEL             | COMMANDER | DEST    | CHASSIS NO. | MODEL             | COMMANDER | DEST    | CHASSIS NO. |
|-------------------|-----------|---------|-------------|-------------------|-----------|---------|-------------|
| <b>KV-29FC20A</b> | RM-887    | Italian | SCC-Q32C-A  | <b>KV-29FC20D</b> | RM-887    | AEP     | SCC-Q31C-A  |
| <b>KV-29FC20B</b> | RM-887    | French  | SCC-Q33C-A  | <b>KV-29FC20E</b> | RM-887    | Spanish | SCC-Q34C-A  |



TRINITRON® COLOR TV  
**SONY®**



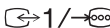
| ITEM MODEL | Television System | Stereo System       | Channel Coverage                                                                                                                                                                                            | Color System                                   |
|------------|-------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Italian    | B/G/H             | GERMAN Stereo       | ITALIA VHF : A-H2 (C) UHF : 21-69 PAL<br>B/G/H VHF : E2-E12 UHF : E21-E69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, M1-M10, U1-U10                                                                | PAL, SECAM<br>NTSC4.43, NTSC3.58<br>(VIDEO IN) |
| French     | B/G/H, D/K, L, I  | GERMAN/NICAM Stereo | L VHF : F02-F10 UHF : F21-F60<br>CABLE : B-Q B/G/H VHF : E2-E12<br>UHF : E21-E69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, M1-M10, U1-U10<br>ITALIA VHF : A-H2 (C) UHF : 21-69<br>I UHF : B21-B69 | PAL, SECAM<br>NTSC4.43, NTSC3.58<br>(VIDEO IN) |
| AEP        | B/G/H             | GERMAN Stereo       | PAL B/G/H VHF : E2-E12 UHF : E21-E69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, M1-M10, U1-U10<br>ITALIA VHF : A-H2 (C) UHF : 21-69                                                                | PAL, SECAM<br>NTSC4.43, NTSC3.58<br>(VIDEO IN) |
| Spanish    | B/G/H             | GERMAN/NICAM Stereo | PAL B/G VHF : E2-E12 UHF : E21-E69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, M1-M10, U1-U10<br>ITALIA VHF : A-H2 (C) UHF : 21-69                                                                  | PAL, SECAM<br>NTSC4.43, NTSC3.58<br>(VIDEO IN) |

| MODEL             | 29FC20A | 29FC20B | 29FC20D | 29FC20E |
|-------------------|---------|---------|---------|---------|
| Power Consumption | 120W    | 120W    | 120W    | 120W    |

**[PICTURE TUBE]** FD Trinitron  
Approx. 72cm (29 inches)  
(Approx. 68cm picture measured diagonally)  
110 degree deflection

### Input/Output Terminals

#### [REAR]

 21-pin Euro connector (CENELEC standard).

- Inputs for Audio and Video signals.
- Inputs for RGB.
- Outputs of TV Video and Audio signals.

 21-pin Euro connector.

- inputs for Audio and Video signals.
- inputs for S Video.
- outputs for Audio and Video signals (selectable).

 Phono Jack

- Outputs for Audio Signals

#### [FRONT]

 3 Video input - phono jack

 3 Audio inputs - phono jacks

 3 S Video input - 4 pin din

 Headphone jacks : stereo minijack

|                      |                                                              |
|----------------------|--------------------------------------------------------------|
| Sound output         | 2 x 14W (Music Power)                                        |
| Subwoofer            | 30W (Music Power)                                            |
| Power requirements   | 220 - 240V                                                   |
| Dimensions           | Approx 800x581x496mm (w/h/d)                                 |
| Weight               | Approx 48.5kg                                                |
| Supplied accessories | RM-887 Remote Commander (1)<br>IEC designated R6 battery (2) |
| Other features       | NICAM*, FASTEXT, TOPTXT<br>*(KV-29FC20B/29FC20E only)        |

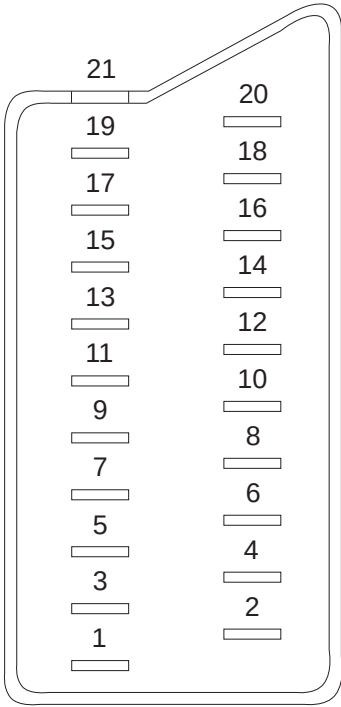
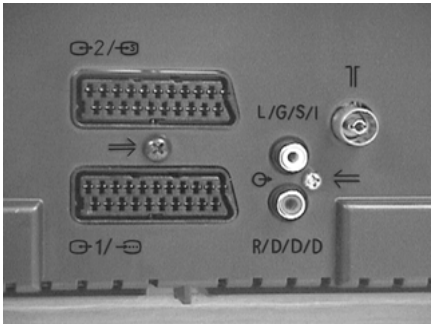
#### [RM-887]

|                       |                                                      |
|-----------------------|------------------------------------------------------|
| Remote control system | Infrared control                                     |
| Power requirements    | 3V dc<br>2 batteries IEC designation<br>R6 (size AA) |
| Dimensions            | Approx 44x209x23mm (w/h/d)                           |
| Weight                | Approx 89g (Not including battery)                   |

**Design and specifications are subject to change without notice.**

| Model Name<br>Item | KV-29FC20A | KV-29FC20B | KV-29FC20D | KV-29FC20E |
|--------------------|------------|------------|------------|------------|
| Pal Comb           | OFF        | OFF        | OFF        | OFF        |
| PIP                | OFF        | OFF        | OFF        | OFF        |
| RGB Priority       | OFF        | ON         | ON         | ON         |
| Woofer Box         | ON         | ON         | ON         | ON         |
| Scart 1            | ON         | ON         | ON         | ON         |
| Scart 2            | ON         | ON         | ON         | ON         |
| Front in (3)       | ON         | ON         | ON         | ON         |
| Scart 4            | OFF        | OFF        | OFF        | OFF        |
| Projector          | OFF        | OFF        | OFF        | OFF        |
| AKB in 16:9 mode   | ON         | ON         | ON         | ON         |
| Norm B/G           | ON         | ON         | ON         | ON         |
| Norm I             | OFF        | ON         | OFF        | OFF        |
| Norm D/K           | OFF        | ON         | OFF        | OFF        |
| Norm AUS           | OFF        | OFF        | OFF        | OFF        |
| Norm L             | OFF        | ON         | OFF        | OFF        |
| Norm SAT           | OFF        | OFF        | OFF        | OFF        |
| Norm M             | OFF        | OFF        | OFF        | OFF        |
| Teletext           | ON         | ON         | ON         | ON         |
| Nicam Stereo       | OFF        | ON         | OFF        | ON         |
| Language Preset    | Italian    | French     | German     | Spanish    |

21 pin connector ( ↔ 1/ → , ↔ 2/ → )



| Pin No | 1 | 2 | 4 | Signal                       | Signal level                                                                                                                                |
|--------|---|---|---|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | ○ | ○ | ○ | Audio output B (right)       | Standard level : 0.5V rms<br>Output impedance : Less than 1kohm*                                                                            |
| 2      | ○ | ○ | ○ | Audio output B (right)       | Standard level : 0.5V rms<br>Output impedance : More than 10kohm*                                                                           |
| 3      | ○ | ○ | ○ | Audio output A (left)        | Standard level : 0.5V rms<br>Output impedance : Less than 1kohm*                                                                            |
| 4      | ○ | ○ | ○ | Ground (audio)               |                                                                                                                                             |
| 5      | ○ | ○ | ○ | Ground (blue)                |                                                                                                                                             |
| 6      | ○ | ○ | ○ | Audio input A (left)         | Standard level : 0.5V rms<br>Output impedance : More than 10kohm*                                                                           |
| 7      | ○ | ● | ● | Blue input                   | 0.7 +/- 3dB, 75 ohms positive                                                                                                               |
| 8      | ○ | ○ | ○ | Function select (AV control) | High state (9.5-12V) : Part mode<br>Low state (0-2V) : TV mode<br>Input impedance : More than 10K ohms<br>Input capacitance : Less than 2nF |
| 9      | ○ | ○ | ○ | Ground (green)               |                                                                                                                                             |
| 10     | ○ | ○ | ○ | Open                         |                                                                                                                                             |
| 11     | ○ | ● | ● | Green                        | Green signal : 0.7 +/- 3dB, 75 ohms, positive                                                                                               |
| 12     | ○ | ○ | ○ | Open                         |                                                                                                                                             |
| 13     | ○ | ○ | ○ | Ground (red)                 |                                                                                                                                             |
| 14     | ○ | ○ | ○ | Ground (blanking)            |                                                                                                                                             |
| 15     | ○ | - | - | Red input                    | 0.7 +/- 3dB, 75 ohms, positive                                                                                                              |
|        | - | ○ | ○ | (S signal Chroma input)      | 0.3 +/- 3dB, 75 ohms, positive                                                                                                              |
| 16     | ○ | ● | ● | Blanking input (Ys signal)   | High state (1-3V) Low state (0-0.4V)<br>Input impedance : 75 ohms                                                                           |
| 17     | ○ | ○ | ○ | Ground (video output)        |                                                                                                                                             |
| 18     | ○ | ○ | ○ | Ground (video input)         |                                                                                                                                             |
| 19     | ○ | ○ | ○ | Video output                 | 1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)                                                                                            |
| 20     | ○ | - | - | Video input                  | 1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)                                                                                            |
|        | - | ○ | ○ | Video input Y (S signal)     | 1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)                                                                                            |
| 21     | ○ | ○ | ○ | Common ground (plug, shield) |                                                                                                                                             |

○ Connected      ● Not Connected (open)    \* at 20Hz - 20kHz



| Pin No. | Signal             | Signal Level                                   |
|---------|--------------------|------------------------------------------------|
| 1       | Ground             |                                                |
| 2       | Ground             |                                                |
| 3       | Y (S signal) input | 1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB |
| 4       | C (S signal) input | 0.3V ± 3dB 75 ohm, positive Sync.              |

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## CAUTION

**SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR THE CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP**

## WARNING !!

AN ISOLATING TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD DUE TO LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE POWER LINE.

## SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## ATTENTION

**APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.**

## ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENTION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

## ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ !!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

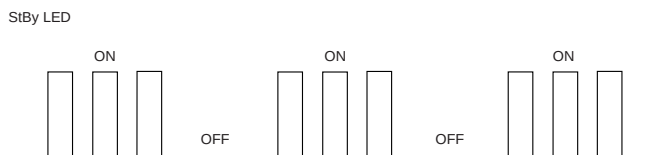
## FE-1A SELF DIAGNOSTIC SOFTWARE

The identification of errors within the FE-1A chassis is triggered in one of two ways :- 1: Busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED (Series of flashes which must be counted) See Table 1., non fatal errors are reported using this method. Each time the software detects an error it is stored within the NVM. See Table 2.

**Table 1**

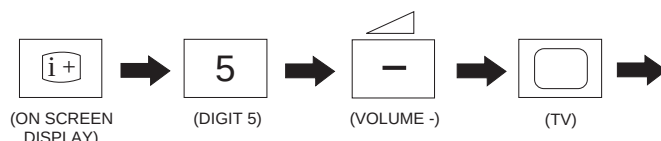
| ERROR                                                    | LED ERROR COUNT |
|----------------------------------------------------------|-----------------|
| No error                                                 | 00              |
| Not allowed (may be confused with Sircs response flash!) | 01              |
| Protection circuit trip < ANY TIME >                     | 02              |
| Reserved                                                 | 03              |
| No vertical sync                                         | 04              |
| AKB                                                      | 05              |
| IIC bus clock and/or data lines low at Power ON          | 06              |
| NVM no IIC bus acknowledge at Power ON                   | 07              |
| Jungle controller no IIC acknowledge at Power ON         | 08              |
| Tuner no acknowledge at Power ON                         | 09              |
| Sound processor no acknowledge at Power ON               | 10              |

### Flash Timing Example : e.g. error number 3



### How to enter into Table 2

1. Turn on the main power switch of the TV set and enter into the 'Standby Mode'.
2. Press the following sequence of buttons on the Remote Commander.



3. The following table will be displayed indicating the error count.

**Table 2**

| Error | Times |
|-------|-------|
| 2     | -     |
| 3     | -     |
| 4     | -     |
| 5     | -     |
| 6     | -     |
| 7     | -     |
| 8     | -     |
| 9     | -     |
| 10    | -     |

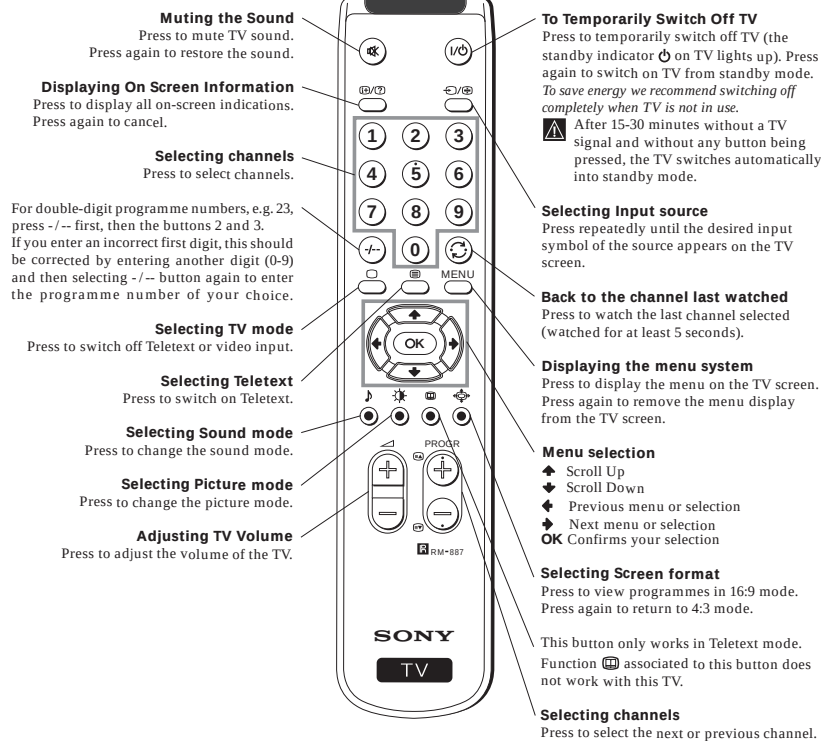
**Note:** To clear the error count data press '80' on the Remote commander.

## SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

### Getting Started - Overview

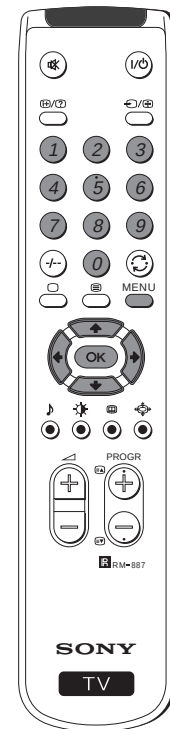
#### Overview of Remote Control Buttons



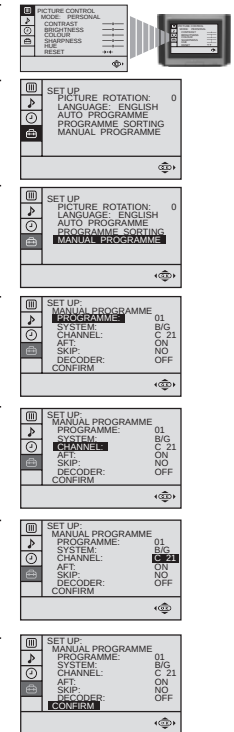
### Advanced Operation - Advanced Presetting

#### Manually Tuning the TV

Use this function to preset channels or a video input source one by one to the programme order of your choice.



- 1 Press the **MENU** button on the remote control to display the menu on the TV screen.
- 2 Press the button to select the symbol, then press the button to enter to the **SET UP** menu.
- 3 Press the button to select **MANUAL PROGRAMME**, then press the button.
- 4 With the cursor highlighting **PROGRAMME**, press the button and then, press the or button to select on which programme number you want to preset a channel. Press the button.
- 5 Press the button to select **CHANNEL**, then press the button. Press or button to select the channel tuning, "C" for terrestrial channels or "S" for cable channels. Press the button.
- 6 Press the number buttons to enter the channel number of the TV Broadcast or press the or button to search for the next available channel. If you do not wish to store this channel, press the or button to continue searching for the desired channel.
- 7 If this is the desired channel you wish to store, press the **OK** button and then, with the cursor highlighting **CONFIRM**, press the **OK** button again.
- 8 Repeat steps 4 to 7 if you wish to store more channels.
- 9 Press the **MENU** button to exit and return to the normal TV screen.



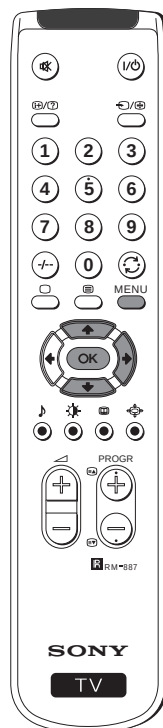
Your TV is now ready for use.

Besides TV functions, all coloured buttons as well as green symbols are also used for Teletext operation. For more details, please refer to the "Teletext" section of this instruction manual.

## Advanced Operation - Advanced Presetting

### Fine Tuning Channels

- ① Normally, the automatic fine tuning (AFT) function is operating. If the picture is distorted, however, you can manually fine tune the TV to obtain a better picture reception.



- 1 Select the channel (TV Broadcast) you wish to fine tune, then press the **MENU** button on the remote control to display the menu on the TV screen.

- 2 Press the **▼** button to select the **SET UP** symbol, then press the **▶** button to enter to the **SET UP** menu.

- 3 Press the **▼** button to select **MANUAL PROGRAMME**, then press the **▶** button.

- 4 Press the **▼** button to select **AFT**, then press the **▶** button.

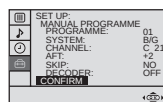
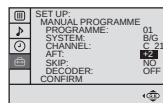
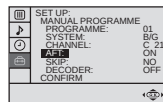
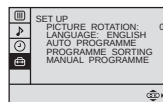
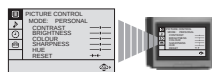
- 5 Press the **▲** or **▼** button to adjust the fine tuning (-15 to +15), then press the **OK** button.

- 6 With the cursor highlighting **CONFIRM**, press the **OK** button to store.

- 7 Press the **MENU** button to exit and return to the normal TV screen.

- 8 Repeat steps 1 to 7 to fine tune other channels.

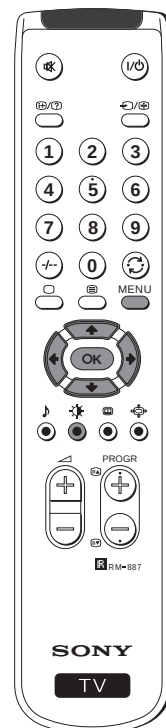
👉 Your TV is now ready for use.



## Advanced Operation - Advanced TV Operation

### Adjusting the Picture

- ① Although the picture is adjusted at the factory, you can modify it to suit your own taste.



- 1 Press the **MENU** button on the remote control to display the menu on the TV screen.

- 2 Press the **▶** button to enter to the **PICTURE CONTROL** menu.

- 3 Press the **▼** or **▲** button to select the item you wish to change.

- 4 With the cursor highlighting the item you wish to change, press the **▶** button. (Refer to the table below for the effect of each control).

| PICTURE CONTROL | OPERATION / EFFECT                                                                                                                                                  |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MODE            | <ul style="list-style-type: none"> <li>▼ PERSONAL (for individual settings)</li> <li>▼ LIVE (for live broadcast programmes)</li> <li>▼ MOVIE (for films)</li> </ul> |
| CONTRAST        | Less ◀ ▶ More                                                                                                                                                       |
| BRIGHTNESS*     | Darker ◀ ▶ Brighter                                                                                                                                                 |
| COLOUR*         | Less ◀ ▶ More                                                                                                                                                       |
| SHARPNESS*      | Softer ◀ ▶ Sharper                                                                                                                                                  |
| HUE**           | Greenish ◀ ▶ Reddish                                                                                                                                                |
| RESET           | ⏮ Resets picture to the factory preset levels.                                                                                                                      |

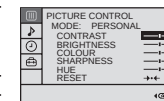
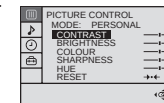
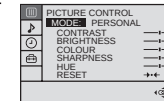
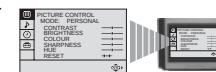
\* Can be only altered if PERSONAL MODE is selected.

\*\* Only available for NTSC colour signal (e.g. US video tapes).

- 5 Press the **▼/▲** or **◀/▶** button to alter the selected item, then press the **OK** button to store the new adjustment.

- 6 Repeat steps 3 to 5 to alter the other items.

- 7 Press the **MENU** button to exit and return to the normal TV screen.



### Changing Picture Mode Quickly

- 1 Press the **PICTURE MODE** button on the remote control to directly access the **PICTURE MODE**.

- 2 Press the **▼** button to select your desired picture mode (**PERSONAL**, **LIVE** or **MOVIE**).

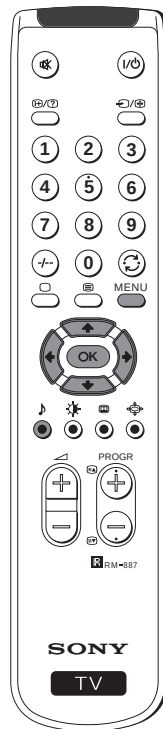




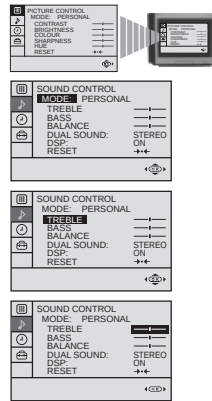
## Advanced Operation - Advanced TV Operation

### Adjusting the Sound

Although the sound is adjusted at the factory, you can modify it to suit your own taste.

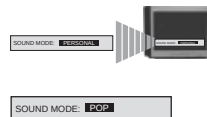


- Press the **MENU** button on the remote control to display the menu on the TV screen.
  - Press the **▼** button to select the **♪** symbol, then press the **▶** button to enter to the **SOUND CONTROL** menu.
  - Press the **▼** or **▲** button to select the item you wish to change.
  - With the cursor highlighting the item you wish to change, press the **▶** button. (Refer to the table below for the effect of each control).
- | SOUND CONTROL                 | OPERATION / EFFECT                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MODE                          | <ul style="list-style-type: none"> <li>▼ PERSONAL (for individual settings)</li> <li>▼ JAZZ</li> <li>▼ POP</li> <li>▼ ROCK</li> </ul>                                                                                                                                                                                                                     |
| TREBLE*                       | Less ◀ ▶ More                                                                                                                                                                                                                                                                                                                                             |
| BASS*                         | Less ◀ ▶ More                                                                                                                                                                                                                                                                                                                                             |
| BALANCE                       | Left ◀ ▶ Right                                                                                                                                                                                                                                                                                                                                            |
| DUAL SOUND                    | <ul style="list-style-type: none"> <li>• For a stereo broadcast:                             <ul style="list-style-type: none"> <li>▼ MONO</li> <li>▲ STEREO</li> </ul> </li> <li>• For a bilingual broadcast:                             <ul style="list-style-type: none"> <li>▼ A (for channel 1)</li> <li>▼ B (for channel 2)</li> </ul> </li> </ul> |
| DSP (Digital sound Processor) | ON ◀ ▶ OFF                                                                                                                                                                                                                                                                                                                                                |
| RESET                         | <b>[X]</b> Resets sound to the factory preset levels.                                                                                                                                                                                                                                                                                                     |
- \* Can be only altered if PERSONAL MODE is selected.
- Press the **▼/▲** or **◀/▶** button to alter the selected item, then press the **OK** button to store the new adjustment.
  - Repeat steps 3 to 5 to alter the other items.
  - Press the **MENU** button to exit and return to the normal TV screen.



### Changing Sound Mode Quickly

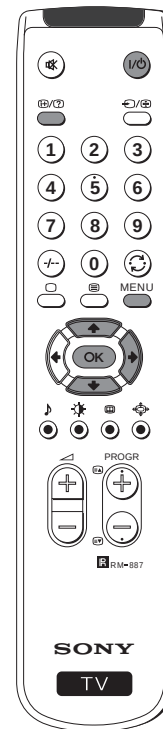
- Press the **♪** button on the remote control to access directly to the **SOUND MODE**.
- Press the **▼** button to select your desired sound mode (**PERSONAL**, **JAZZ**, **POP** or **ROCK**).



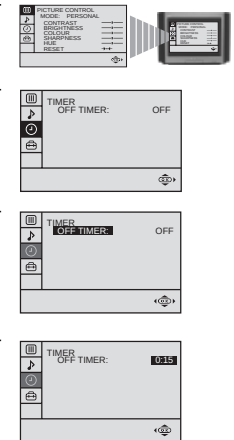
## Advanced Operation - Advanced TV Operation

### Using the Sleep Timer

You can select a time period for the TV to switch itself automatically into the standby mode.



- Press the **MENU** button on the remote control to display the menu on the TV screen.
- Press the **▼** button to select the **⌚** symbol, then press the **▶** button to enter to the **TIMER** menu.
- With the cursor highlighting **OFF TIMER**, press the **▶** button.
- Press the **▼** or **▲** button to set the time period delay
  - ▲ OFF
  - 0:15 min.
  - 0:30 min.
  - ...
  - ▼ 4:00 hours
- Press the **OK** button.
- Press the **MENU** button to exit and return to the normal TV screen.



One minute before the TV switches into standby mode, the time remaining is displayed on the TV screen automatically.

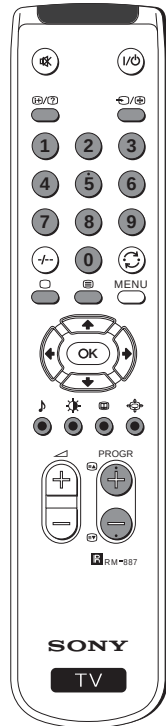
**Notes:**

- When watching the TV, press the **[P]** button to display the time remaining.
- To return to normal operation from standby mode, press the **[I/O]** button.

## Teletext

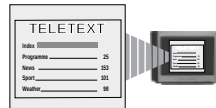
### Viewing Teletext

-  Teletext is an information service transmitted by most TV stations.
-  Make sure to use a TV channel with a strong signal, otherwise teletext errors may occur.



### Selecting Teletext

- 1** Select the TV channel which carries the teletext service you wish to view.
- 2** Press the  button on the remote control to switch on the teletext.
- 3** Input three digits for the page number, using the numbered buttons on the remote control. (if you have made a mistake, type in any three digits and then, re-enter the correct page number).
- 4** Press the  button to switch off teletext.



### Using other Teletext functions

| TO                                                   | PRESS THE BUTTON                                                                                                                                                                                            |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Access the next or preceding page                    |  for next page or  for the preceding page |
| Superimpose teletext on to the TV                    | <br>Press  again to cancel teletext mode. |
| Freeze a teletext page                               | <br>Press  again to cancel the freeze. |
| Reveal concealed information (e.g. answer to a quiz) | <br>Press  again to cancel.           |



### Using Fastext

-  Fastext lets you access pages with one button stroke.

When Fastext is broadcast, a colour coded menu appears at the bottom of the teletext page. Press the colour button (red, green, yellow or blue) on the remote control to access the corresponding page.

## Optional Connections

### Using Optional Equipment

-  You can connect optional audio or video equipment to your TV, such as a VCR, a camcorder or a video game as shown below.

### Select and View the Input Signal

- 1** Connect your equipment to the designated TV socket.
- 2** Press the  button repeatedly on your remote control until the correct input symbol appears on the TV screen.

#### Symbol Input signals

-  **1**
  - Audio/video input signal through the Euro AV connector **F**
  - RGB input signal through the Euro AV connector **F**
-  **2**
  - Audio/video input signal through the Euro AV connector **E**
  - S video input signal through the Euro AV connector **E**
-  **3**
  - Video input signal through the phono socket **C** and Audio input signal through **D**
-  **3**
  - S video input signal through the socket **B** and Audio input signal through **D**

- 3** Switch on the connected equipment.
- 4** To return to normal TV picture, press the  button on the remote control.

**Note:** To avoid picture distortion, do not connect equipment to the **B** and **E** connectors at the same time.

### Additional Information

#### Connecting a VCR

Plug in VCR to the socket **F** on the rear of the TV set. We recommend you tune in the VCR signal to TV programme number '0' using the section "Manually Tuning the TV" of this instruction manual.

#### Connecting Headphones

Plug in your headphones to the socket **A** on the front of the TV set.

#### Connecting Decoders

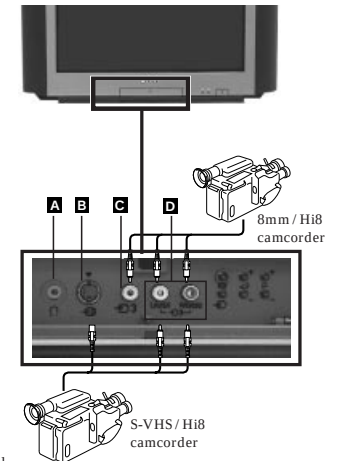
Plug in decoders to the socket **F** on the rear of the TV.

#### Connecting to External Audio Equipment

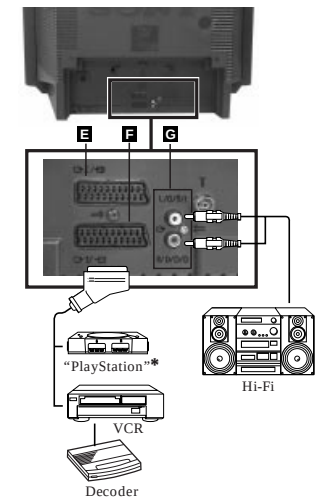
Plug in your Hi-Fi equipment to the **G** sockets on the rear of the TV if you wish to amplify the audio output from the TV.

- \* "PlayStation" is a product of Sony Computer Entertainment, Inc.
- \* "PlayStation" is a trademark of Sony Computer Entertainment, Inc.

Front of TV



Rear of TV



Additional Information

Troubleshooting

Here are some simple solutions to the problems which may affect the picture and sound.

| Problem                                                                                                                      | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No picture (screen is dark), no sound                                                                                        | <ul style="list-style-type: none"><li>• Plug the TV in.</li><li>• Press the  button on the front of TV.</li><li>• If the  indicator is on, press  button or a programme number button on the remote control.</li><li>• Check the aerial connection.</li><li>• Check that the selected video source is on.</li><li>• Turn the TV off for 3 or 4 seconds and then turn it on again using the  button on the front of the TV.</li></ul> |
| Poor or no picture (screen is dark), but good sound                                                                          | <ul style="list-style-type: none"><li>• Using the MENU system, select the Picture Adjustment display. Adjust the brightness, picture and colour balance levels.</li><li>• From the Picture Adjustment display select RESET to return to the factory settings.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Poor picture quality when watching a RGB video source.                                                                       | <ul style="list-style-type: none"><li>• Press the  button repeatedly on the remote control until the RGB symbol  is displayed on the screen.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Good picture, no sound                                                                                                       | <ul style="list-style-type: none"><li>• Press the  +/- button on the remote control.</li><li>• If  is displayed on the screen, press the  button on the remote control.</li></ul>                                                                                                                                                                                                                                                                                                                                     |
| No colour on colour programmes                                                                                               | <ul style="list-style-type: none"><li>• Using the MENU system, select the Picture Adjustment display. Adjust the colour balance.</li><li>• From the Picture Adjustment display select RESET to return to the factory settings.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Distorted picture when changing programmes or selecting teletext                                                             | <ul style="list-style-type: none"><li>• Turn off any equipment connected to the 21 pin Euro connector on the rear of the TV.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Noisy picture when viewing TV channel                                                                                        | <ul style="list-style-type: none"><li>• Adjust Fine Tuning to obtain better picture reception.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remote control does not function                                                                                             | <ul style="list-style-type: none"><li>• Replace the batteries.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| The standby indicator  on the TV flashes. | <ul style="list-style-type: none"><li>• Contact to your nearest Sony service centre.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

-  If you continue to have these problems, have your TV serviced by qualified personnel.
- NEVER open the casing yourself.

Additional Information

Specifications

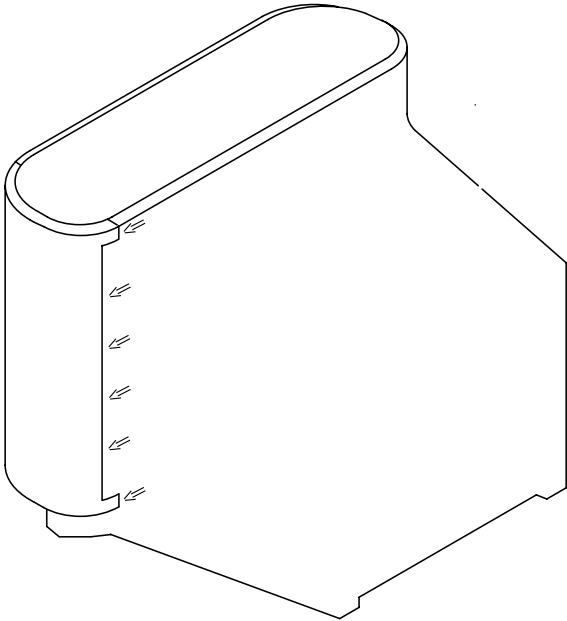
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TV system</b><br>B/G/H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Sound output</b><br>2x7 W + 1x15 W (RMS)                                                                                                                                 |
| <b>Colour system</b><br>PAL, SECAM<br>NTSC 3.58, 4.43 (only Video In)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Power consumption</b><br>120 W                                                                                                                                           |
| <b>Channel coverage</b><br>VHF: E2-E12<br>UHF: E21-E69<br>CATV: S1-S20<br>HYPER: S21-S41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Standby Power consumption</b><br>0.5 W                                                                                                                                   |
| <b>Picture tube</b><br>Flat Display Trinitron<br>Approx. 72 cm (29 inches) (Approx. 68 cm picture measured diagonally), 104° deflection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Dimensions (w x h x d)</b><br>Approx. 800 x 581 x 496 mm                                                                                                                 |
| <b>Rear Terminals</b><br> 1/  21-pin Euro connector (CENELEC standard) including audio / video input, RGB input, TV audio / video output<br> 2/  21-pin Euro connector (CENELEC standard) including audio / video input, S-video input, monitor audio / video output<br> Audio outputs - phono jacks | <b>Weight</b><br>Approx. 48.5 kg                                                                                                                                            |
| <b>Front Terminals</b><br> 3 video input - phono jack<br> 3 audio inputs - phono jacks<br> S video input - 4 pin DIN<br> Headphones jack - minijack stereo                                                                                                                                                                                                                              | <b>Accessories supplied</b><br>1 Remote Control (RM-887)<br>2 Batteries (IEC designated)<br><b>Other features</b><br>TELETEXT, Fastext, TOPtext<br>Sleep Timer<br>Smartlink |

Design and specifications are subject to change without notice.

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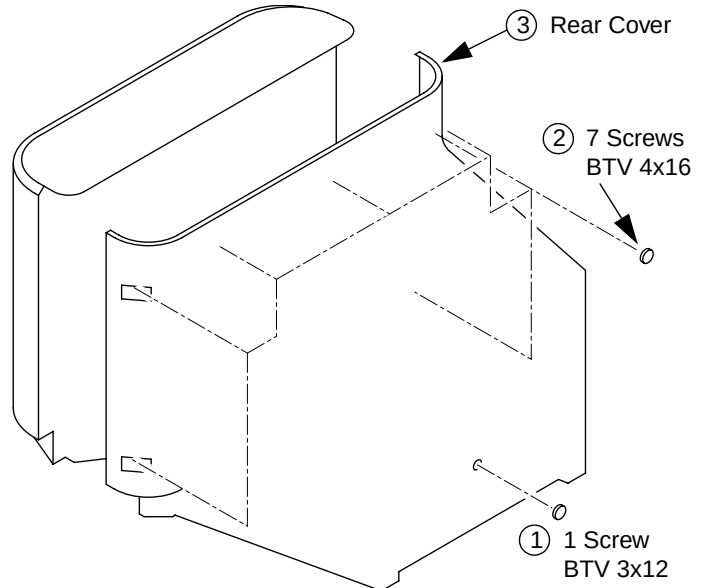
## SECTION 2 DISASSEMBLY

### 2-1. SPEAKER GRILLE REMOVAL



Remove the speaker grille by pressing the buttons marked . While pressing the top button press the remaining five buttons in turn to release the grille.

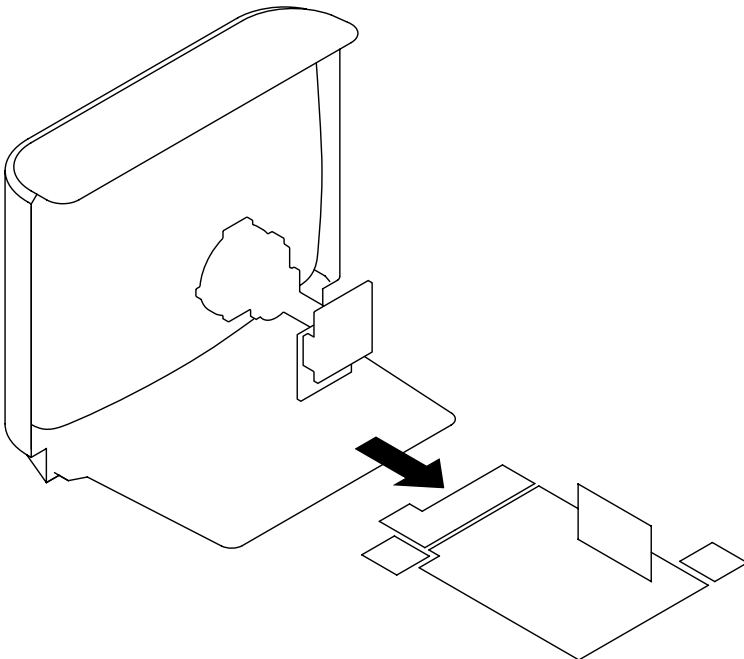
### 2-2. REAR COVER REMOVAL



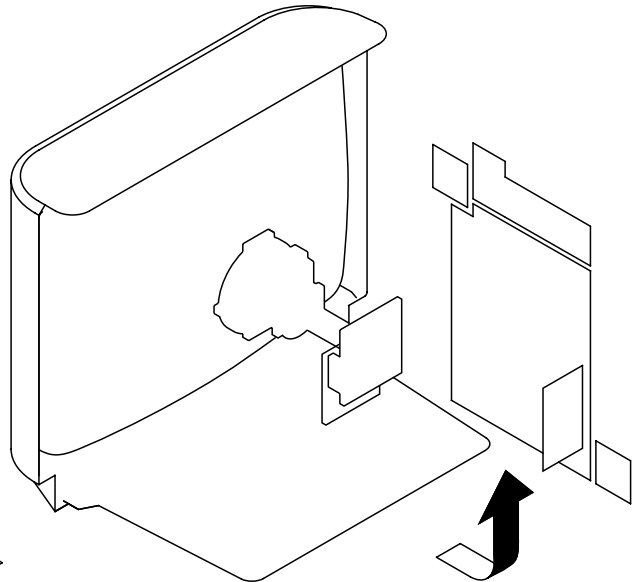
#### CAUTION:

Take care not to damage the C Board when removing or refitting the rear cover.

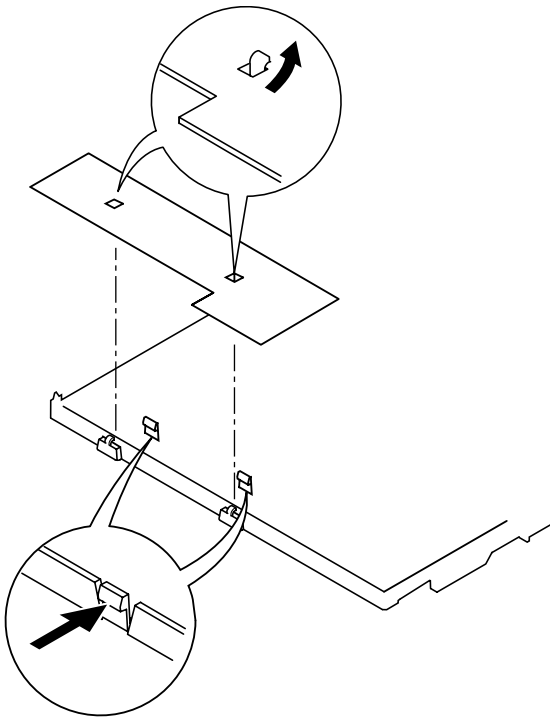
### 2-3. CHASSIS ASSY REMOVAL



### 2-4. SERVICE POSITION

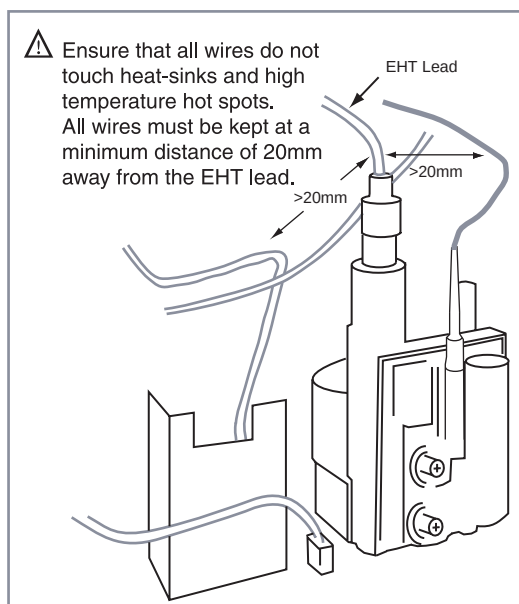
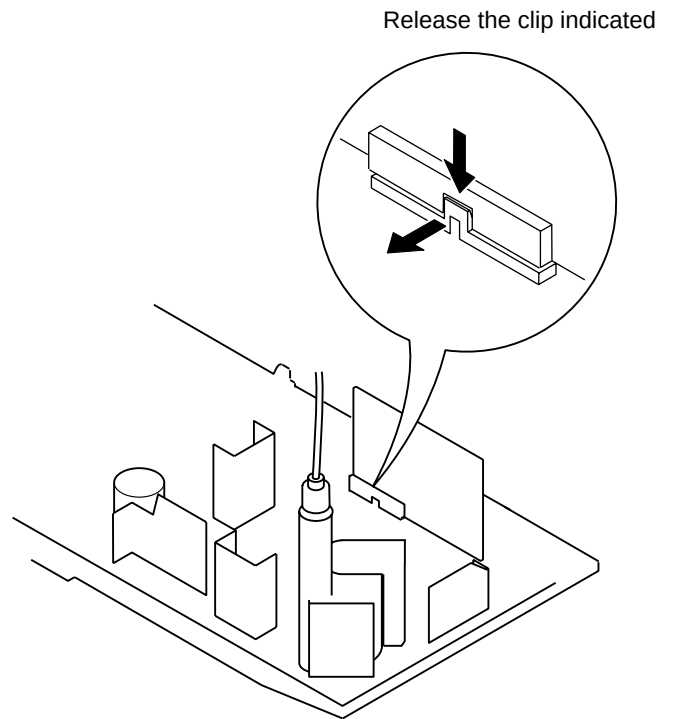


## 2-5. H BOARD REMOVAL

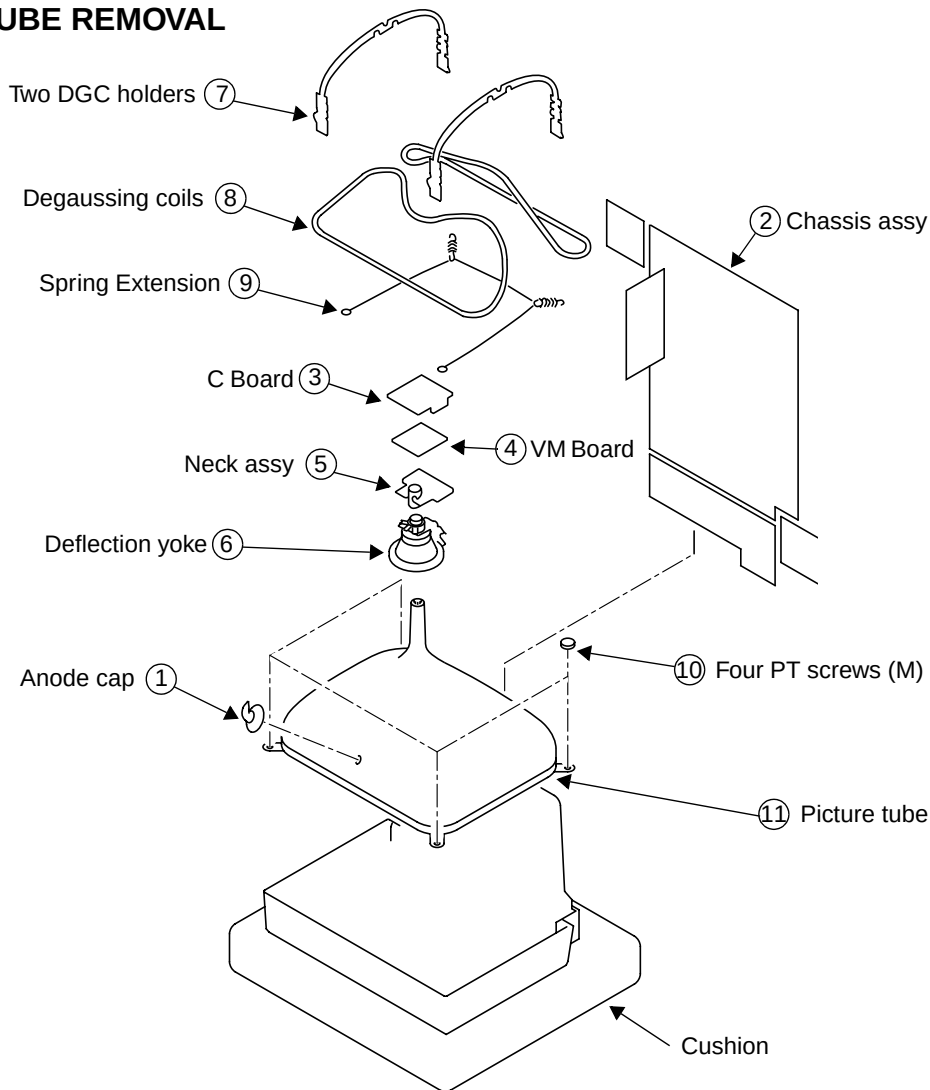


To release, push the claws in the direction of the arrow as indicated.

## 2-6. S1 BOARD REMOVAL



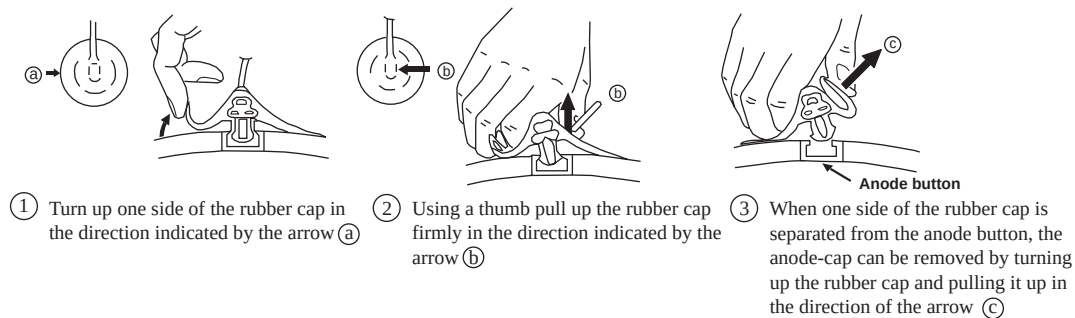
## 2-7. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

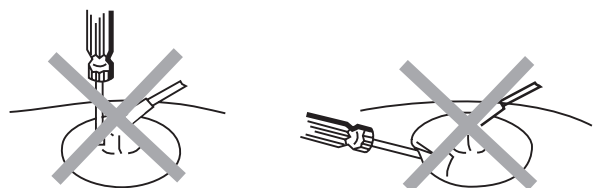
**Note :** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

#### \* REMOVING PROCEDURES.



### • HOW TO HANDLE THE ANODE-CAP

- To prevent damaging the surface of the anode-cap do not use sharp materials.
- Do not apply too great a pressure on the rubber, as this may cause damage to the anode connector.
- A metal fitting called a shatter hook terminal is fitted inside the rubber cap. Do not turn the rubber foot over excessively this may cause damage if the shatter hook sticks out.

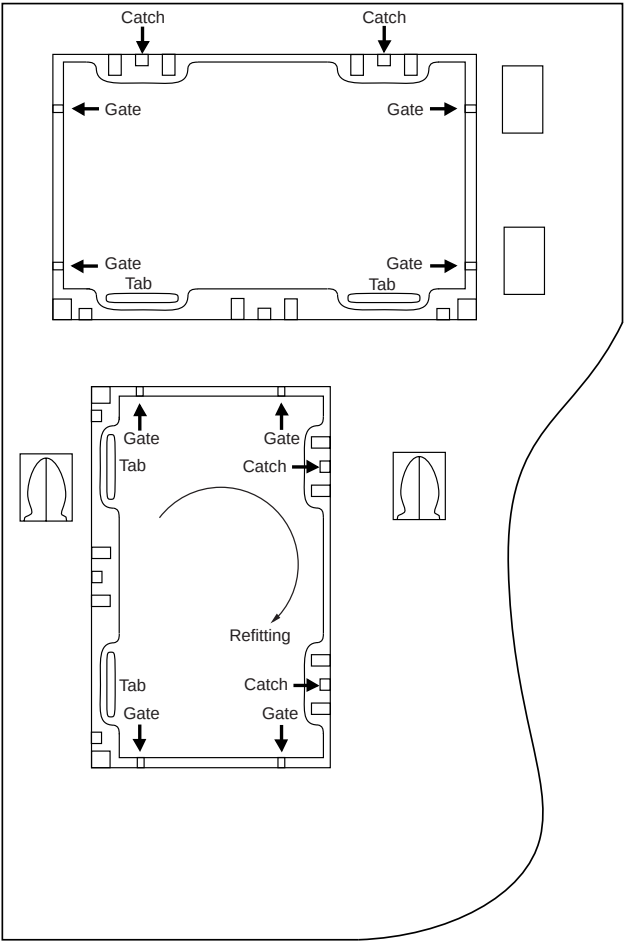


REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET  
BOTTOM PLATES.

(1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the A Board printed wiring board, the bottom plates fitted to the main chassis bracket require to be removed.  
This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

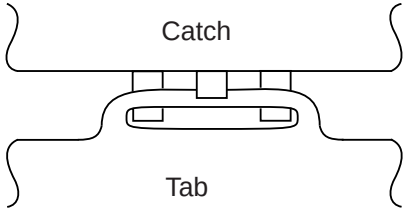
**Note :**There are 2 plates fitted to the main bracket and secured by 4 gates.  
Only remove the necessary plate to gain access to the printed wiring board.



For safety reasons, on no account should the plates be removed and not refitted after servicing.

(2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.  
Please note that the plates need to be rotated 180 degrees from the cut position to allow the tabs to be fitted in the catch positions.



## SECTION 3 SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to the following settings :

Contrast ..... 80% [or remote control normal]  
 Brightness ..... 50%

Carry out the following adjustments in this order :

- 3-1. Beam Landing
- 3-2. Convergence
- 3-3. Focus
- 3-4. White Balance

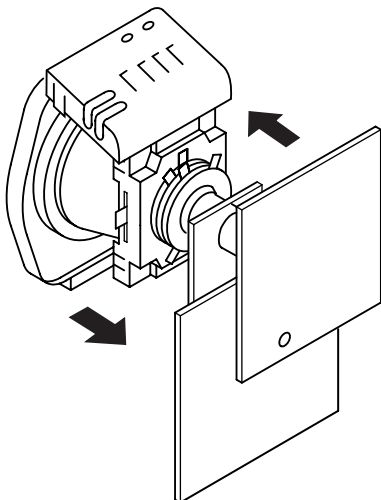
- Note :** Test equipment required
1. Color bar/pattern generator.
  2. Degausser.
  3. Oscilloscope.
  4. Digital multimeter.
  5. DC Power supply.

### Preparation:

1. In order to reduce the influence of geomagnetism on the set's picture tube, face it in an easterly or westerly direction.
2. Switch on the set's power and degauss with the degausser.

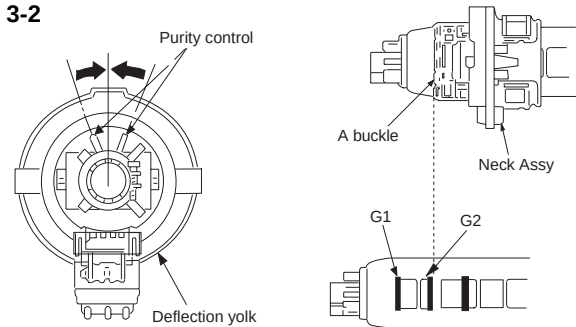
### 3-1. BEAM LANDING

1. Input an all white signal from the pattern generator. Set the Contrast and Brightness to normal.
2. Set the pattern generator raster signal to Red.
3. Move the deflection yoke forward and adjust with the purity control so that the Red is at the centre and the Blue and Green take up equally sized areas on each side of the screen. [See Fig.3-1 - 3-3].
4. Move the deflection yoke forward and adjust so that the entire screen becomes Red. [See Fig.3-1]
5. Switch the raster signal to Blue, then to Green and verify the condition.
6. When the position of the deflection yoke has been determined, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to correct it. [See Fig.3-4]

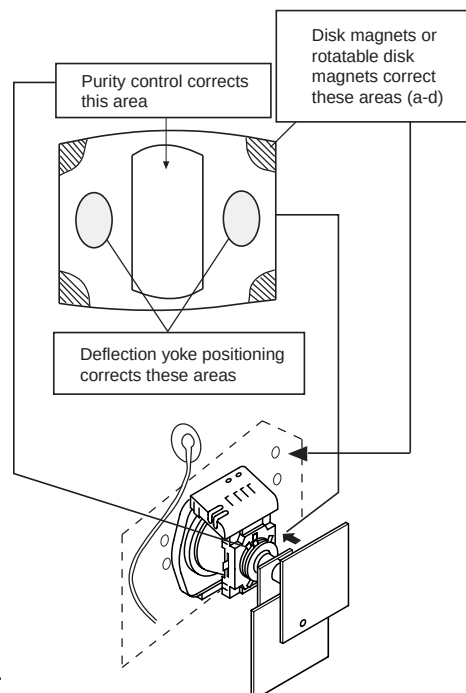
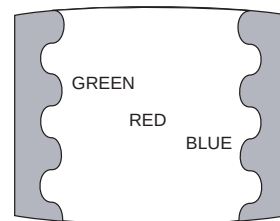


**Fig. 3-1**

**Fig. 3-2**



**Fig. 3-3**



**Fig. 3-4**

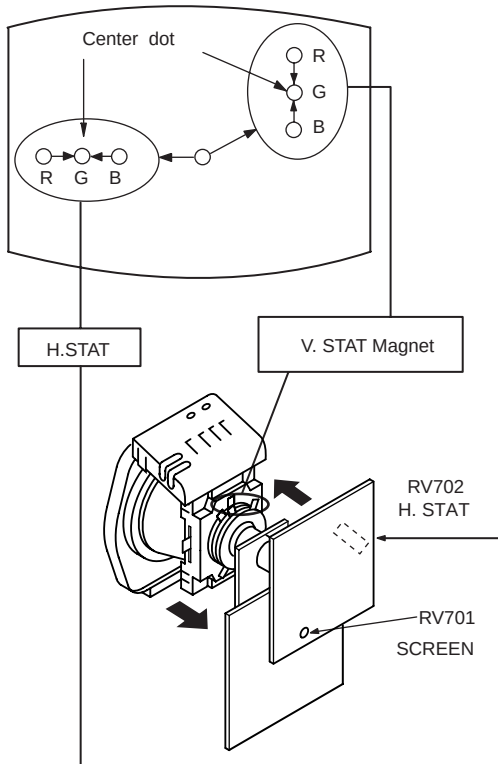


## 3-2. CONVERGENCE

### Preparation:

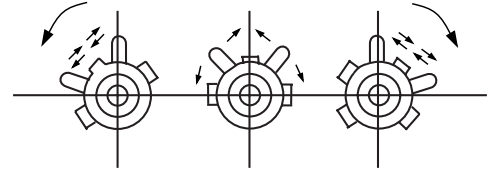
- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Minimize the Brightness setting.
- Input a dot pattern from the pattern generator.

### (1) Horizontal and vertical static convergence

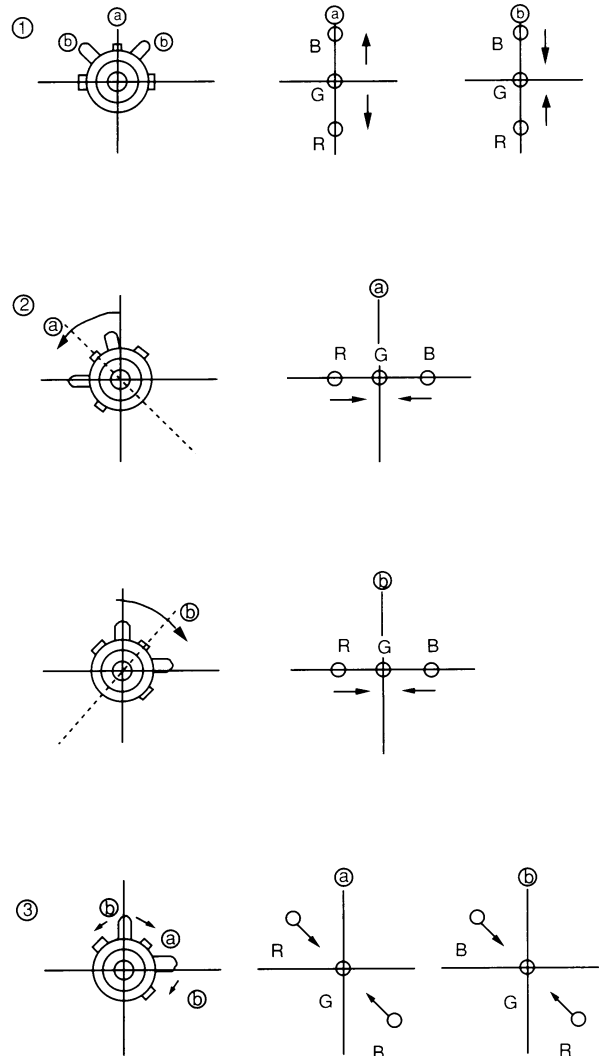


1. [Moving horizontally], adjust the H.STAT control so that the Red, Green and Blue points are on top of each other at the centre of the screen.
2. [Moving vertically], adjust the V.STAT magnet so that the Red, Green and Blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor is unable to bring the Red, Green and Blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner indicated below. [In this case, the H.STAT variable resistor and the V.STAT magnet influence each other].

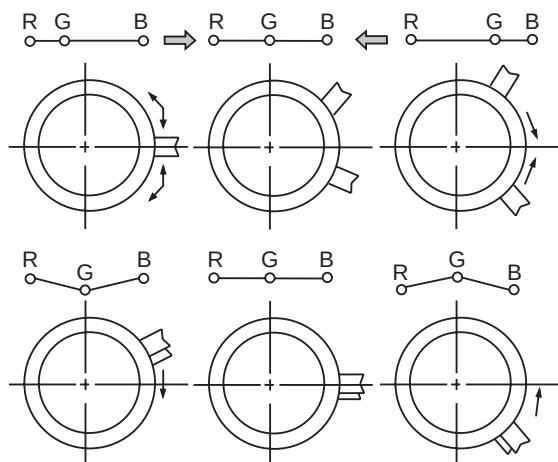
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



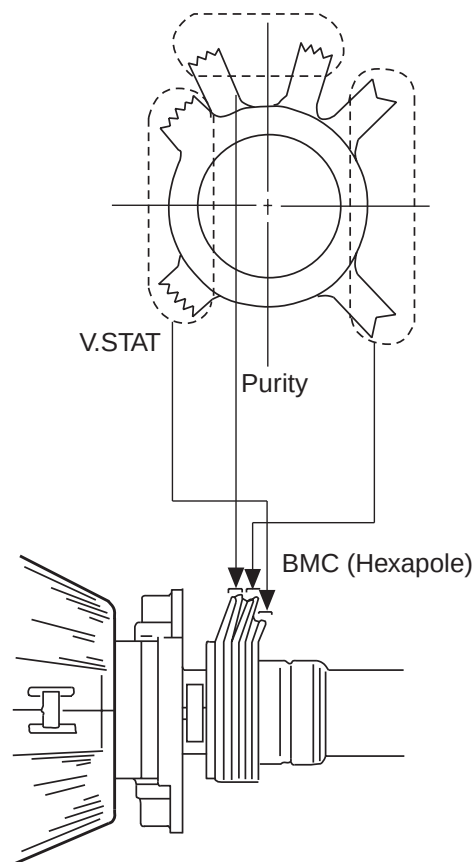
4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the Red, Green and Blue points move as indicated below.



- **Operation of the BMC (Hexapole) magnet.**



- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment whilst tracking.  
Use the H.STAT VR to adjust the Red, Green and Blue dots so that they coincide at the centre of the screen (by moving the dots in the horizontal direction).



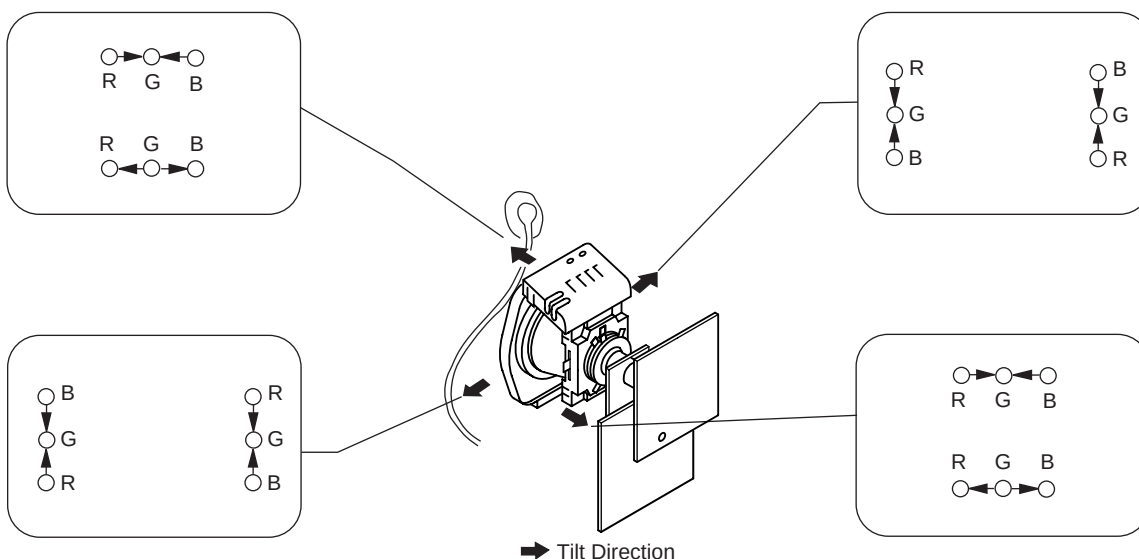
## (2) Dynamic convergence adjustment.

### Preparation:

- Before starting this adjustment, adjust the horizontal and vertical static convergence.
1. Remove the deflection yoke spacer.

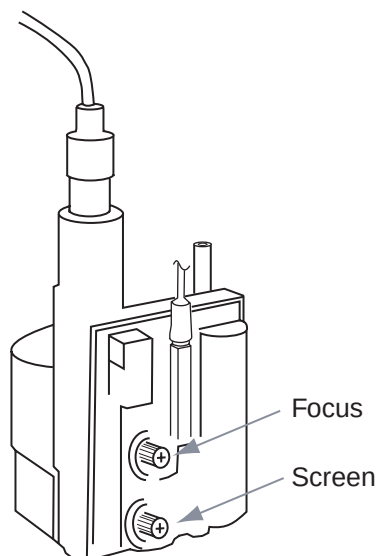
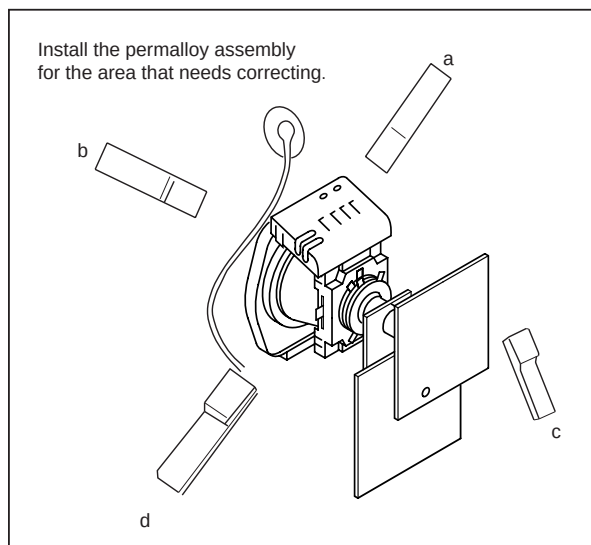
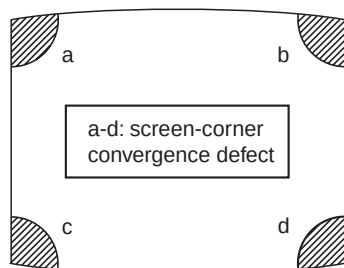
2. Tilt the deflection yoke as indicated in the figure below and optimize the convergence.
3. Re-install the deflection yoke spacer.

**Note :** This adjustment will affect the geometry of the display, therefore adjust to obtain the optimum setting.



### (3) Screen corner convergence.

- If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.



### 3-3. FOCUS

1. Receive a television broadcast signal.
2. Normalise the picture setting.
3. Adjust the focus control on the flyback transformer for the best focus at the centre of the screen.  
Bring only the centre area of the screen into focus, the magenta ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.

### 3-4. WHITE BALANCE

#### G2 Screen Adjustment

1. Switch the TV set into AV mode [apply a cross-hatch signal].
2. Enter into the 'Service mode' and select 'Picture Control'.
3. Enter 'Picture Control' and select 'Personal' press OK.
4. Return to 'Picture Control' menu and select 'Reset'.
5. Measure the voltages on the 3 cathodes of the CRT, Kr, Kg and Kb using an oscilloscope with a 100:1 probe.
6. Connect the oscilloscope to the CRT cathode which recorded the highest voltage and adjust [RV702 SCREEN] located on the C Board to obtain a reading of 175V.

#### White Balance Adjustment

1. Input an all white signal from the pattern generator.
2. Enter into the Service Mode.
3. Enter into the 'Picture Adjustment' service menu.
4. Select 'Sub contrast' and adjust to 7.
5. Select the 'Green drive' and adjust so that the white balance becomes optimum.
6. Select the 'Blue drive' and adjust so that the white balance becomes optimum.
7. Press the 'TV' button on the remote commander to return to TV operation.

#### PICTURE ADJUSTMENT

|                 |     |
|-----------------|-----|
| AFC mode        | 1   |
| REF position    | 2   |
| SCP BGR         | 1   |
| SCP BGF         | 1   |
| Trap fo         | 0   |
| Sub contrast    | Adj |
| Sub colour      | Adj |
| Sub brightness  | Adj |
| Sub hue         | Adj |
| Green drive     | Adj |
| Blue drive      | Adj |
| Green cutoff    | Adj |
| Blue cutoff     | Adj |
| Gamma           | 0   |
| Pre / overshoot | 0   |
| Y delay         | 3   |

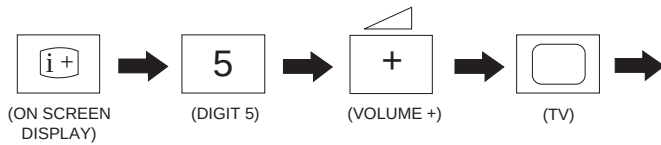
## SECTION 4 CIRCUIT ADJUSTMENTS

### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustments to this model can be performed using the supplied Remote Commander RM-887.

#### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch and enter into the stand-by mode.
2. Press the following sequence of buttons on the Remote Commander.



- 'TT--' will appear in the upper right corner of the screen. Other status information will also be displayed.
3. Press 'MENU' on the remote commander to obtain the following menu on the screen.

| TEST MENU |            |
|-----------|------------|
| >         | Picture    |
|           | Geometry   |
|           | Sound      |
|           | TV Status  |
|           | AGC Adjust |
|           | Technical  |

4. Move to the corresponding adjustment item using the 'Green' [up] or 'Blue' [down] buttons on the Remote Commander.
5. Press the 'Yellow' button to enter into the required menu item.
6. Press the 'Menu' button on the Remote Commander to quit the Service Mode when all adjustments have been completed.

**Note :** The data shown in the 'TV STATUS' table is dependant on destination and country.

#### PICTURE

|                |     |
|----------------|-----|
| R - Drive      | Adj |
| G - Drive      | Adj |
| B - Drive      | Adj |
| R - cut - off  | Adj |
| G - cut - off  | Adj |
| B - cut - off  | Adj |
| ID - start     | 02  |
| ID - stop      | 01  |
| ID - level     | 01  |
| Bell-f0        | Adj |
| Sub Colour     | Adj |
| Sub Brightness | Adj |

#### GEOMETRY

|              |     |
|--------------|-----|
| V centre     | Adj |
| V size       | Adj |
| V Lin        | Adj |
| S Corr       | Adj |
| H Cent       | Adj |
| H Size       | Adj |
| Pin Amp      | Adj |
| Upper Pin    | Adj |
| Lower Pin    | Adj |
| Upper V lin  | Adj |
| Lower V lin  | Adj |
| Pin Phase    | Adj |
| V Bow        | Adj |
| V Angle      | Adj |
| Upper V Lin  | Adj |
| Lower V Lin  | Adj |
| Left HBLK    | 07  |
| Right HBLK   | 07  |
| CD Mode (AV) | 01  |
| EHT-comp     | 12  |

#### SOUND

|                   |                  |
|-------------------|------------------|
| Nicam Error Lower | 20               |
| Nicam Error Upper | 80               |
| Nicam Error Rate  | xx [Status only] |
| AGC Gain Level    | xx [Status only] |

#### TV STATUS

|               |                 |
|---------------|-----------------|
| Destination   | A/L/E/U/D/B/K/R |
| Text Language | East/West       |

## TECHNICAL

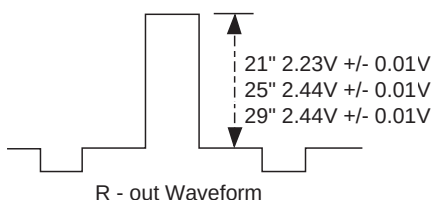
|                |    |
|----------------|----|
| GD - Secam     | 31 |
| BD - Secam     | 31 |
| RC - Secam     | 15 |
| GC - Secam     | 15 |
| BC - Secam     | 14 |
| GD - Sports    | 32 |
| BD - Sports    | 34 |
| RC - Sports    | 14 |
| GC - Sports    | 15 |
| BC - Sports    | 16 |
| Y - Delay (AV) | 07 |

## SUB BRIGHTNESS ADJUSTMENT

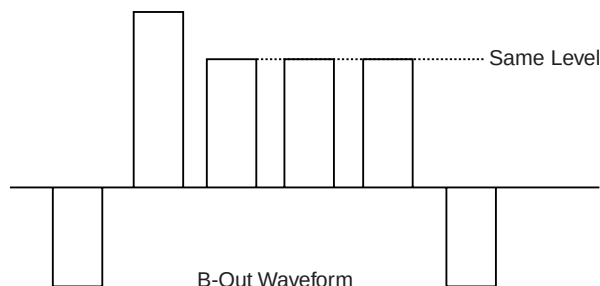
1. Input a Phillips colour pattern.
2. Press 'TEST' 'TEST' 13 on the Remote Commander.
3. Adjust the 'Sub-Brightness' data so that there is barely a difference between the 0 IRE and 10 IRE signal levels.

## SUB CONTRAST ADJUSTMENT

1. Input a video signal that contains a small 100% white area on a black background
2. Set the picture control to maximum. ['TT01']
3. Connect an oscilloscope to Pin 1 of CN504 [A Board].



4. Enter into the 'Picture' service menu.
5. Adjust the 'R - Drive' data to obtain the following waveform.



## SUB COLOUR ADJUSTMENT

1. Receive a PAL colour bar signal.
2. Connect an oscilloscope to Pin 3 of CN504 [A Board].
3. Enter into the 'Picture' service menu.
4. Adjust the 'Sub Colour' data so that the Cyan, Magenta and Blue colour bars are of equal levels as indicated below.

**Note:** Ensure that no signal is applied to the Antenna socket while carrying out the following IF adjustments.

## SYSTEM B/G, D/K, I & L I.F ADJUSTMENT

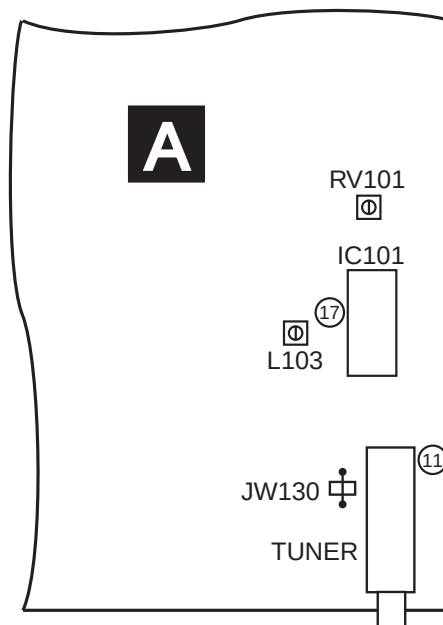
1. Input a 38.9Mhz carrier signal at 100dBuV to Pin 11 [IF output] of the tuner [TU101].
2. Measure the voltage at Pin 17 of [IC101].
3. Adjust L103 [A Board] to obtain a voltage of 1.4V +/- 0.3V.

## SYSTEM L BAND 1 I.F ADJUSTMENT

1. Input a 33.9MHz carrier signal at 100dBuV to Pin 11 [IF output] of the tuner [TU101].
2. Select 'system L' + C00 [channel 00].
3. Measure the voltage at Pin 17 [IC101].
4. Adjust RV101 [A Board] to obtain a voltage of 1.4V +/- 0.3V.

## TUNER AGC ADJUSTMENT

1. Receive a signal of 62dBuV / 75 ohm terminated, via the tuner antenna socket.
2. Connect a voltmeter to JW130 [A Board].
3. Enter into the 'Test Menu'.
4. Select the 'AGC Adjust' menu item.
5. Adjust the data using the Yellow and Green buttons on the Remote Commander to obtain a voltage of 3.5V +/- 0.3V.

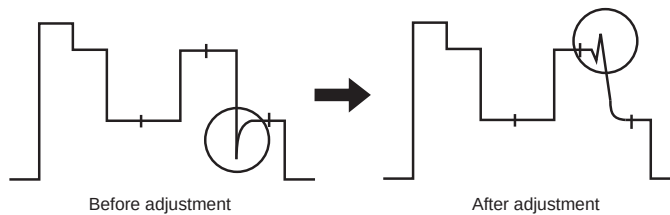


A Board component side

## BELL FILTER ADJUSTMENT (Secam models only)

**Note :** Ensure that the TV set has been powered up for at least 1 minute to allow for drift before carrying out the following adjustment.

1. Input a video SECAM Colour Bar signal via AV1.
2. Connect an oscilloscope to pin 1 of CN504 [R-OUT] on the A board.
3. Enter into the 'Picture' menu and select 'Bell-f0'.
4. Decrease the register of 'Bell-f0' until the following waveform change between RED and BLUE is obtained.



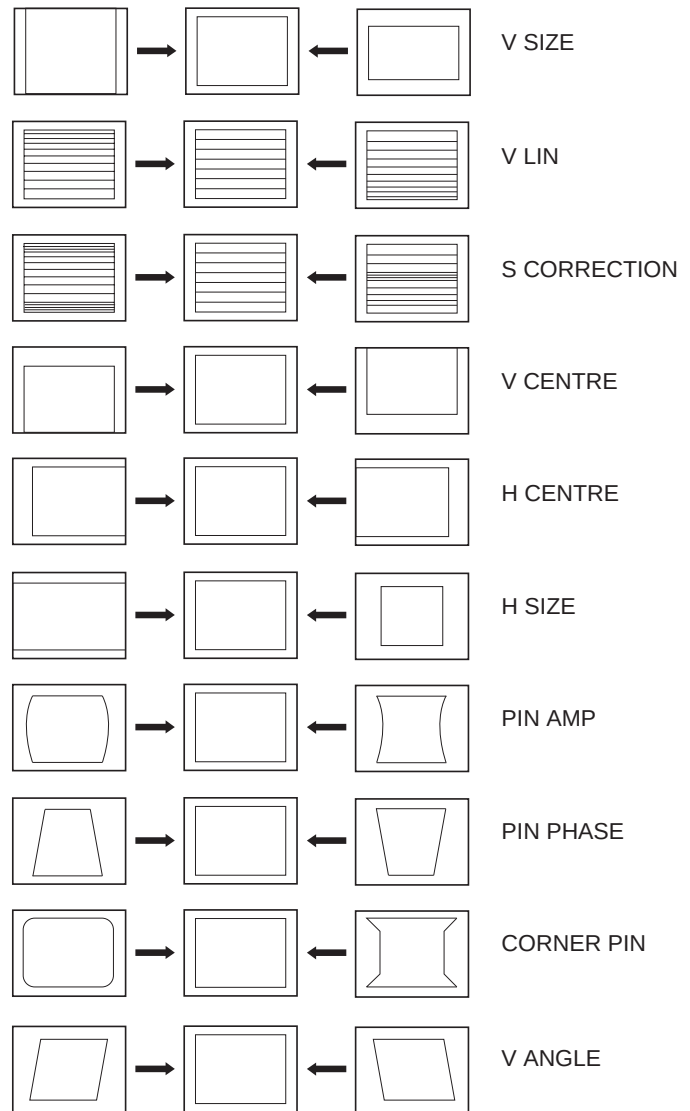
5. When the correct waveform has been obtained add an additional 7 steps to the register.

## DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the 'Geometry' service menu.
2. Select and adjust each item in order to obtain the optimum image.

### GEOMETRY

|              |     |
|--------------|-----|
| V centre     | Adj |
| V size       | Adj |
| V Lin        | Adj |
| S Corr       | Adj |
| H Cent       | Adj |
| H Size       | Adj |
| Pin Amp      | Adj |
| Upper Pin    | Adj |
| Lower Pin    | Adj |
| Upper V lin  | Adj |
| Lower V lin  | Adj |
| Pin Phase    | Adj |
| V Bow        | Adj |
| V Angle      | Adj |
| Upper V Lin  | Adj |
| Lower V Lin  | Adj |
| Left HBLK    | 07  |
| Right HBLK   | 07  |
| CD Mode (AV) | 01  |
| EHT-comp     | 12  |



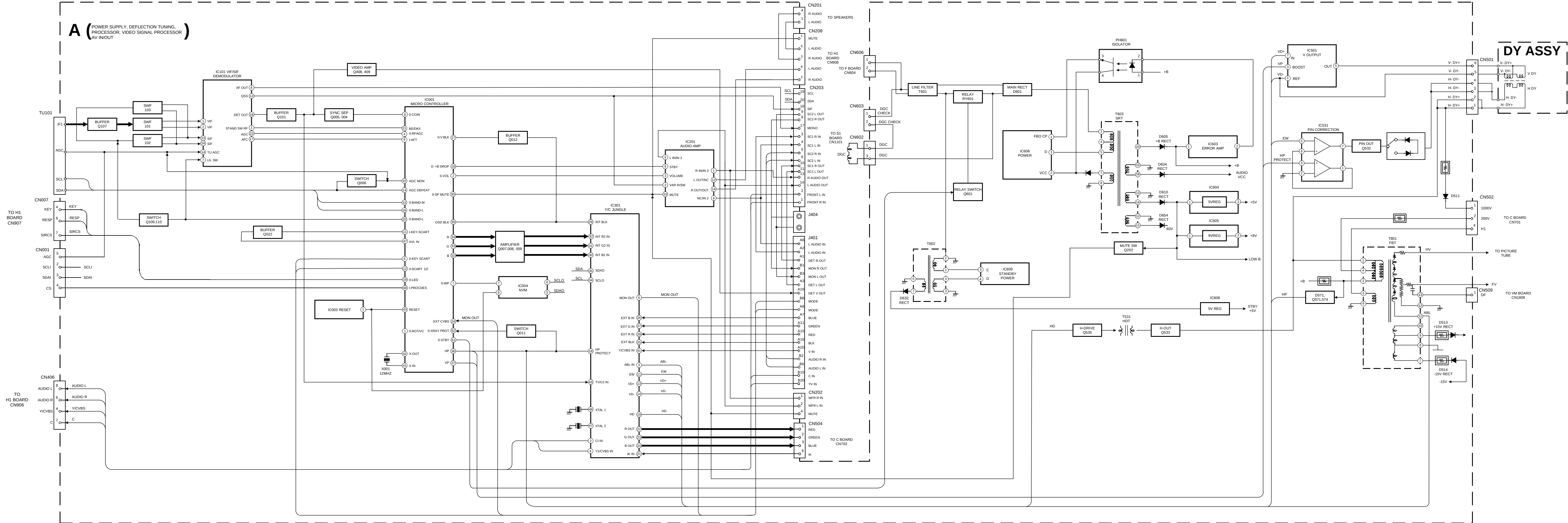
## 4-2. TEST MODE 2:

Is available by pressing 'TEST' button twice, OSD 'TT' appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0 twice, or switch the TV into stand-by mode, or press the ☐ TV button on the remote commander.

|    |                                           |
|----|-------------------------------------------|
| 00 | Cancel Test mode                          |
| 01 | Picture maximum                           |
| 02 | Picture minimum                           |
| 03 | Volume 35%                                |
| 04 | Volume 50%                                |
| 05 | Volume 65%                                |
| 06 | Volume 80%                                |
| 07 | Ageing mode On/Off                        |
| 08 | Set shipping conditions                   |
| 09 | Display TV Status                         |
| 10 | No function                               |
| 11 | Sub Picture Adjustment                    |
| 12 | Sub Colour Adjustment                     |
| 13 | Sub Brightness Adjustment                 |
| 14 | Text H position Adjustment                |
| 15 | Rotation test                             |
| 16 | Picture level 50%                         |
| 17 | Audio mute ON                             |
| 18 | Disable Blanking                          |
| 19 | No function                               |
| 20 | No function                               |
| 21 | Destination A                             |
| 22 | Destination L                             |
| 23 | Destination E                             |
| 24 | Destination U                             |
| 25 | Destination D                             |
| 26 | Destination B                             |
| 27 | Destination K                             |
| 28 | Destination R                             |
| 29 | No function                               |
| 30 | No function                               |
| 31 | Auto shutoff Disable/Enable               |
| 32 | RGB priority Disable/Enable               |
| 33 | Rotation On/OFF                           |
| 34 | Text language East/West                   |
| 35 | Wide CRT/4:3 CRT                          |
| 36 | VM ON/OFF test                            |
| 37 | No function                               |
| 38 | No function                               |
| 39 | No function                               |
| 40 | No function                               |
| 41 | Re-initialize the NVM [Only when Prog=59] |

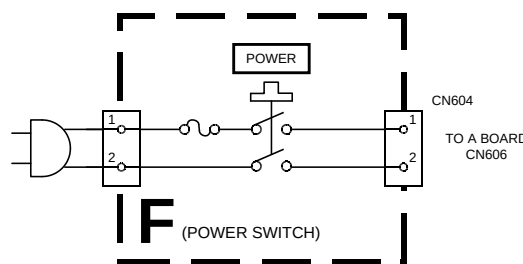
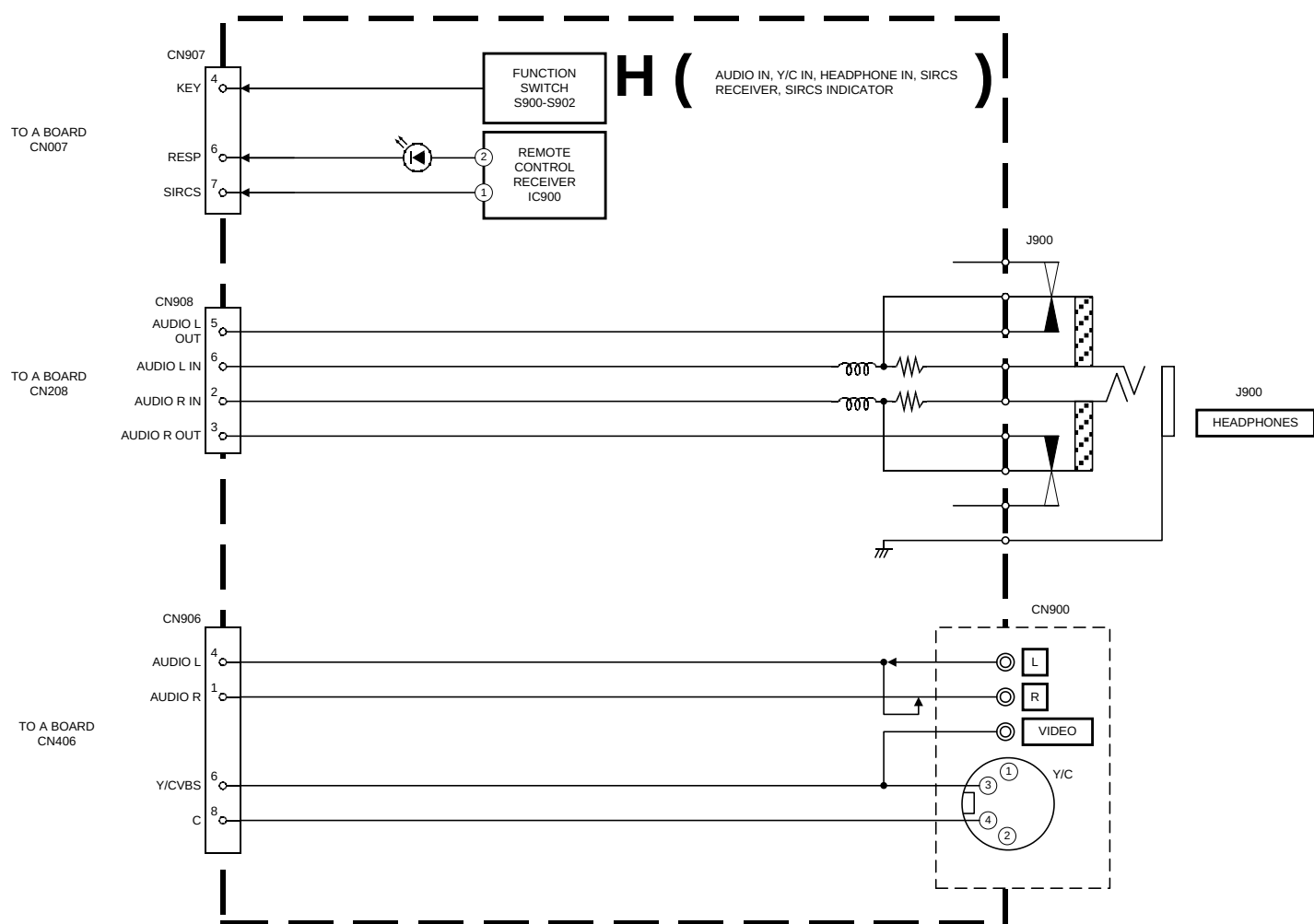
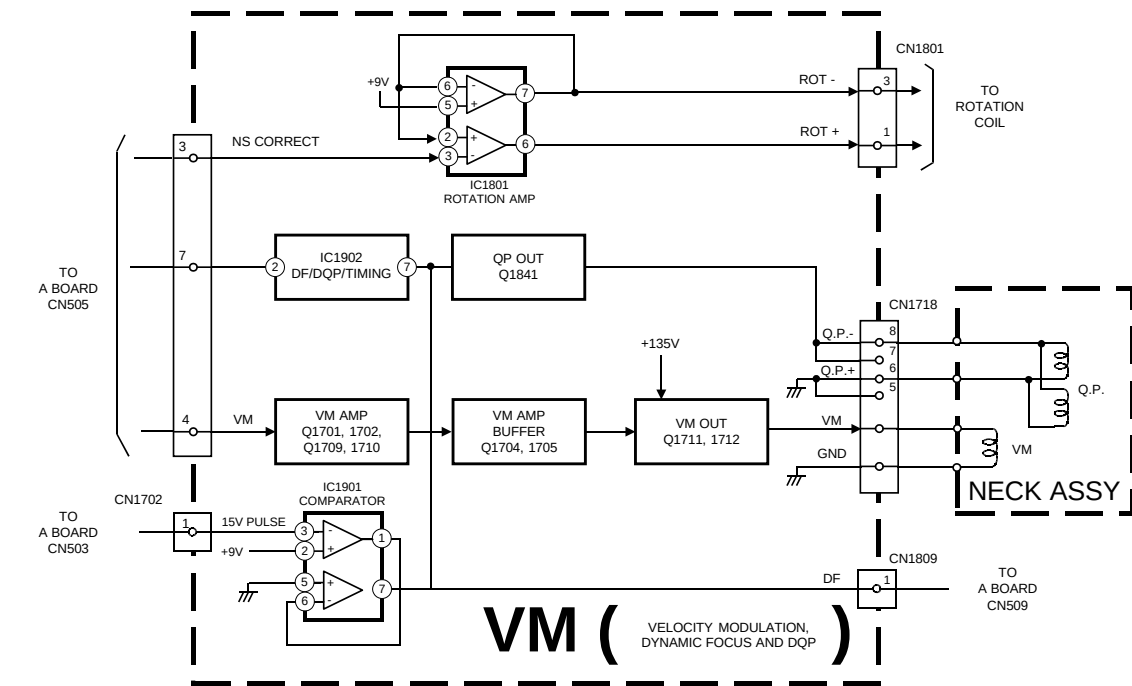
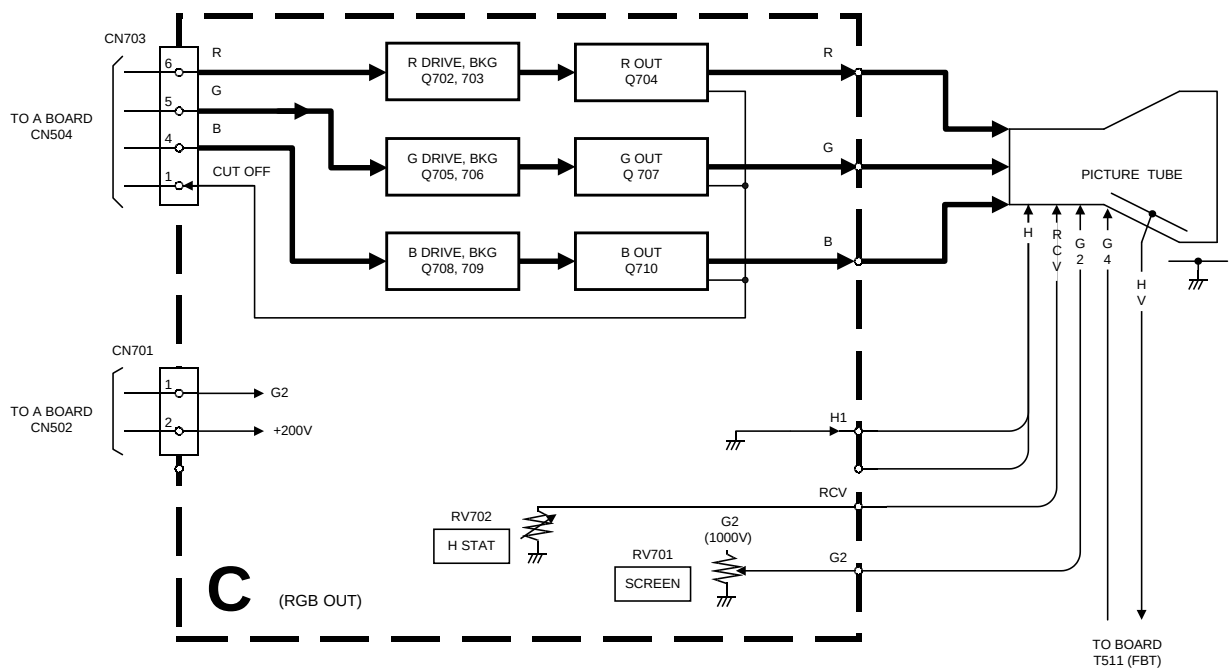
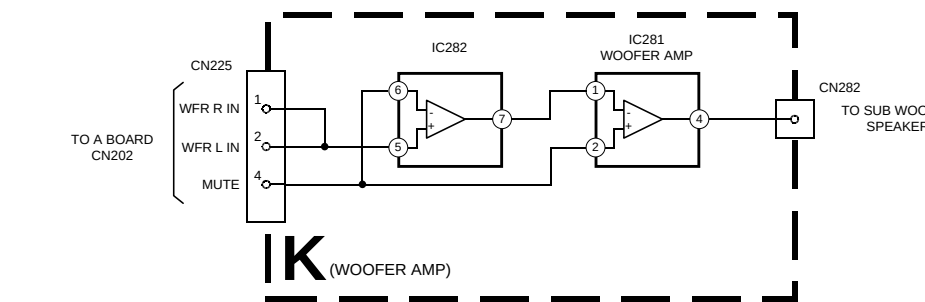
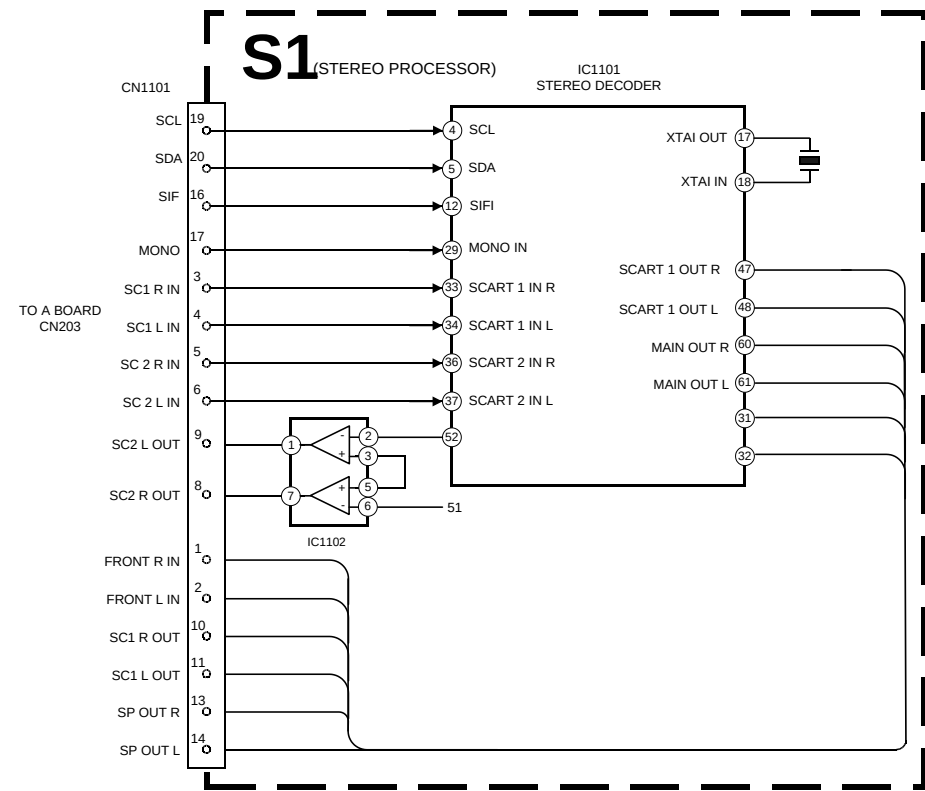
|         |                                                     |
|---------|-----------------------------------------------------|
| 42      | Re-initialise geometry settings [Only when Prog=59] |
| 43      | No function                                         |
| 44      | No function                                         |
| 45      | No function                                         |
| 46      | No function                                         |
| 47      | No function                                         |
| 48      | Set NVM as NON Virgin [Only when Prog=59]           |
| 49      | Set NVM as Virgin [Only when Prog=59]               |
| 50      | No function                                         |
| 51      | No function                                         |
| 52      | No function                                         |
| 53      | No function                                         |
| 54      | No function                                         |
| 55      | No function                                         |
| 56      | No function                                         |
| 57      | No function                                         |
| 58      | No function                                         |
| 59      | No function                                         |
| 60      | No function                                         |
| 61      | Auto AGC Adjust                                     |
| 62      | Alternative Dest B Autotuning                       |
| 63      | Enable/Disable Y/C input                            |
| 64      | Signal Quality Check for Auto Tune                  |
| 65      | Signal Quality NOT Checked for Auto Tune            |
| 66      | No function                                         |
| 67      | Manual AGC Adjust                                   |
| 68 -100 | No function                                         |

5-1 BLOCK DIAGRAMS (1)

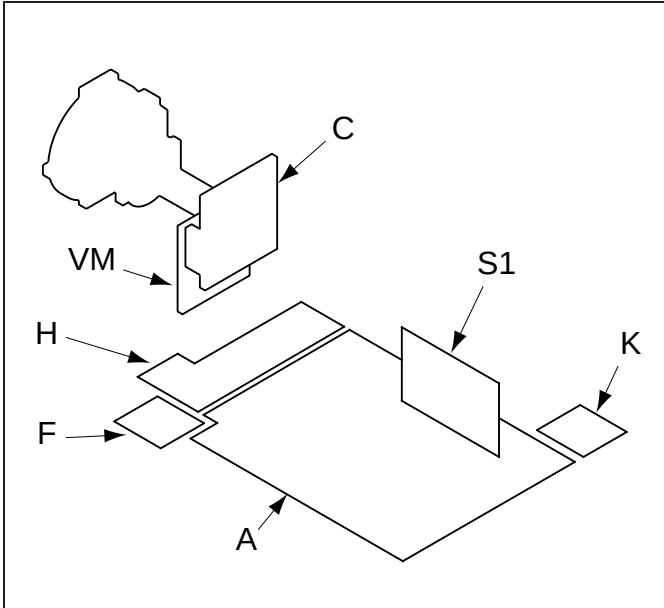




5-1 BLOCK DIAGRAMS (2)



5-2. CIRCUIT BOARD LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

- Note :**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.
  - $\text{pF}$  :  $\mu\text{F}$  50WV or less are not indicated except for electrolytic types.
  - Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm  
Electrical power rating : 1/4W

- Chip resistors are 1/10W
- All resistors are in ohms.  
 $k = 1000 \text{ ohms}$ ,  $M = 1000,000 \text{ ohms}$

- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation or adjustment for repair.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in Volts.
- Readings are taken with a 10Mohm digital mutimeter.
- Readings are taken with a color bar input signal.
- Voltage variations may be noted due to normal production tolerances.

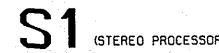
- : B + bus.
- : B - bus.
- : RF signal path.
- : earth - ground.
- : earth - chassis.

Reference Information

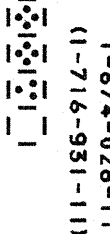
| RESISTOR  | RN    | : METAL FILM                |
|-----------|-------|-----------------------------|
|           | RC    | : SOLID                     |
|           | FPRD  | : NON FLAMMABLE CARBON      |
|           | FUSE  | : NON FLAMMABLE FUSIBLE     |
|           | RS    | : NON FLAMMABLE METAL OXIDE |
|           | RB    | : NON FLAMMABLE CEMENT      |
|           | RW    | : NON FLAMMABLE WIREWOUND   |
|           |       | : ADJUSTMENT RESISTOR       |
| COIL      | LF-8L | : MICRO INDUCTOR            |
| CAPACITOR | TA    | : TANTALUM                  |
|           | PS    | : STYROL                    |
|           | PP    | : POLYPROPYLENE             |
|           | PT    | : MYLAR                     |
|           | MPS   | : METALIZED POLYESTER       |
|           | MPP   | : METALIZED POLYPROPYLENE   |
|           | ALB   | : BIPOLAR                   |
|           | ALT   | : HIGH TEMPERATURE          |
|           | ALR   | : HIGH RIPPLE               |

**Note :** The components identified by shading and marked are critical for safety. Replace only with the part numbers specified in the parts list.

**Note :** Les composants identifiés par une trame et par une marque sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

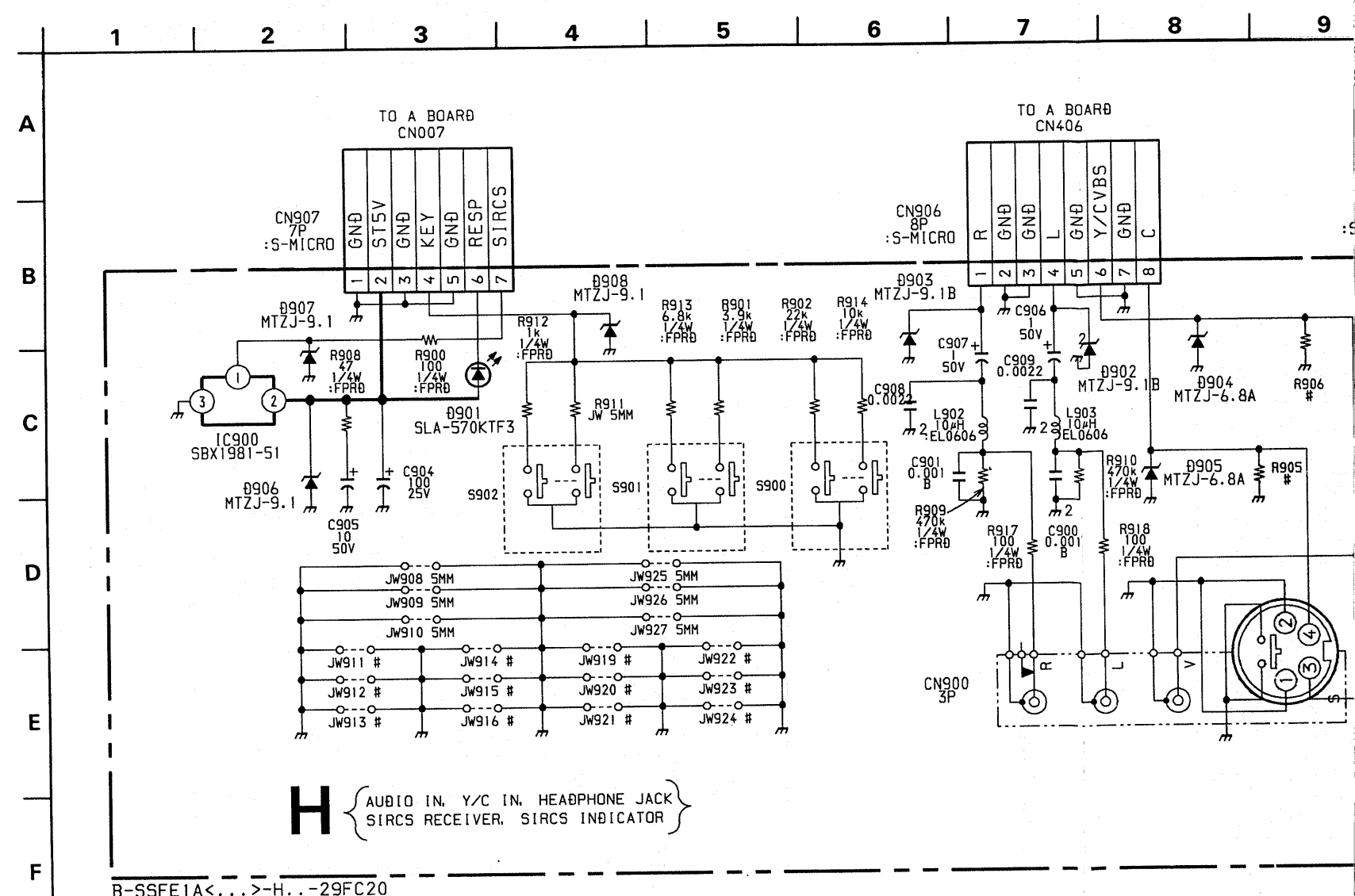
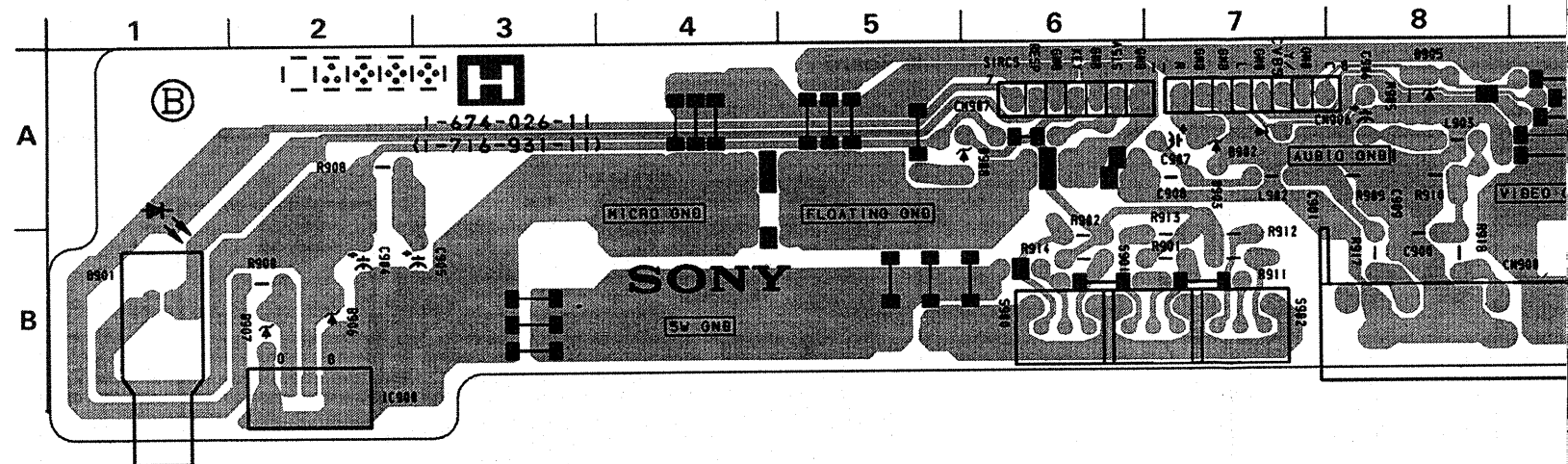


| Ref    | 29FC20A  | 29FC20B                | 29FC20D  | 29FC20E  |
|--------|----------|------------------------|----------|----------|
| C1131  | -        | 0.47MF                 | -        | -        |
| C1135  | -        | 100PF                  | -        | -        |
| C1137  | -        | 47MF                   | -        | -        |
| C1138  | -        | 100PF                  | -        | -        |
| CF1101 | -        | TRAP CERAMIC<br>6.5MHZ | -        | -        |
| FB1113 | -        | 4.7UH                  | -        | -        |
| IC1101 | TDA9870A | TDA9875A               | TDA9870A | TDA9875A |
| L1113  | -        | 5.6UH                  | -        | -        |
| L1117  | -        | 47UH                   | -        | -        |
| Q1112  | -        | 2SC1623-L5L6           | -        | -        |
| Q1113  | -        | 2SC1623-L5L6           | -        | -        |
| Q1114  | -        | 2SA1037K               | -        | -        |
| Q1115  | -        | 2SC1623-L5L6           | -        | -        |
| R1108  | -        | 15K                    | -        | -        |
| R1152  | -        | 270                    | -        | -        |
| R1153  | -        | 100                    | -        | -        |
| R1154  | -        | 5.6K                   | -        | -        |
| R1160  | -        | 22K                    | -        | -        |
| R1161  | -        | 470                    | -        | -        |
| R1162  | -        | 3.3K                   | -        | -        |
| R1163  | -        | 22K                    | -        | -        |
| R1164  | -        | 10K                    | -        | 10K      |
| R1165  | SHORT 0  | -                      | SHORT 0  | -        |
| R1167  | -        | 100                    | -        | -        |
| R1168  | -        | 220                    | -        | -        |
| R1169  | -        | 1K                     | -        | -        |
| R1170  | -        | 10                     | -        | -        |
| R1171  | -        | 680                    | -        | -        |
| R1172  | -        | 470                    | -        | -        |
| R1173  | -        | 1K                     | -        | -        |



**H** [AUDIO IN, Y/C IN, HEADPHONE JACK, SIRCS RECEIVER,  
SIRCS INDICATOR]

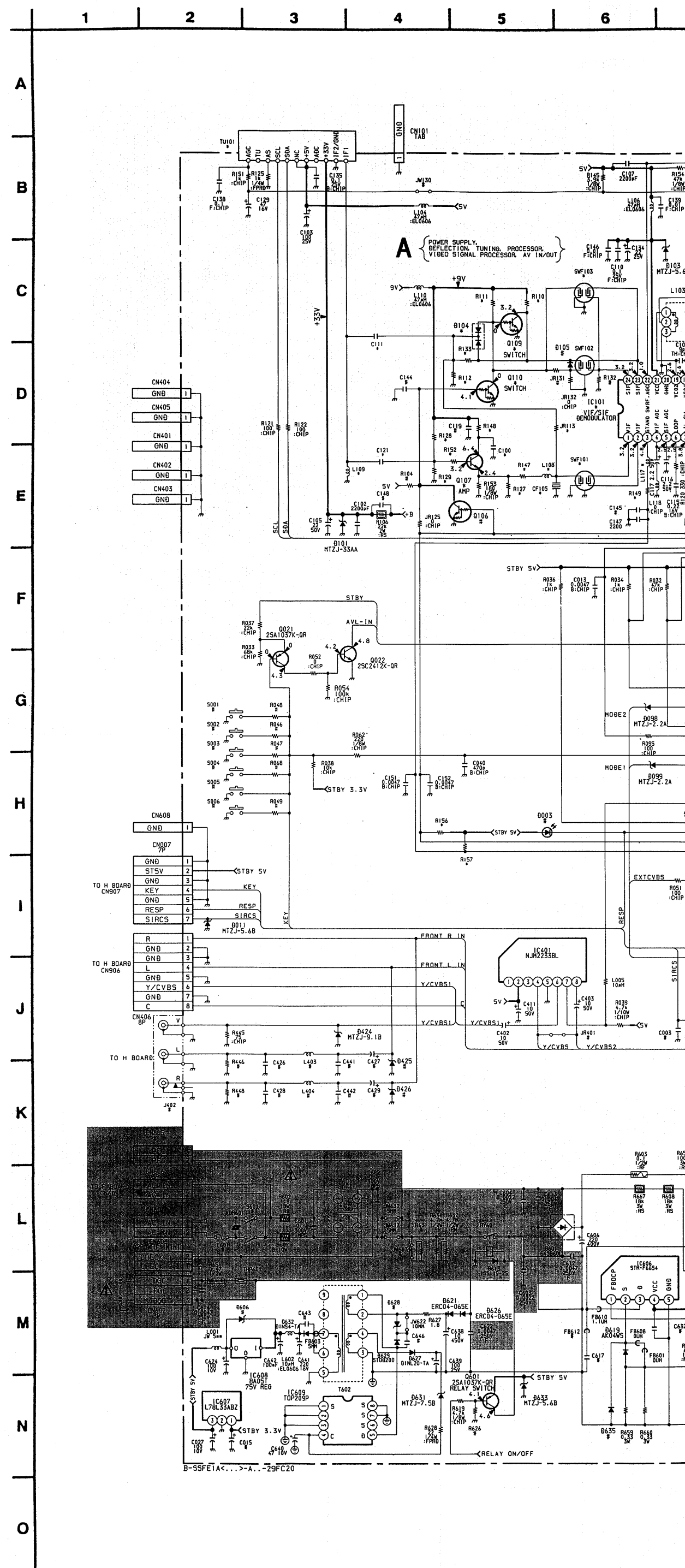
H Board

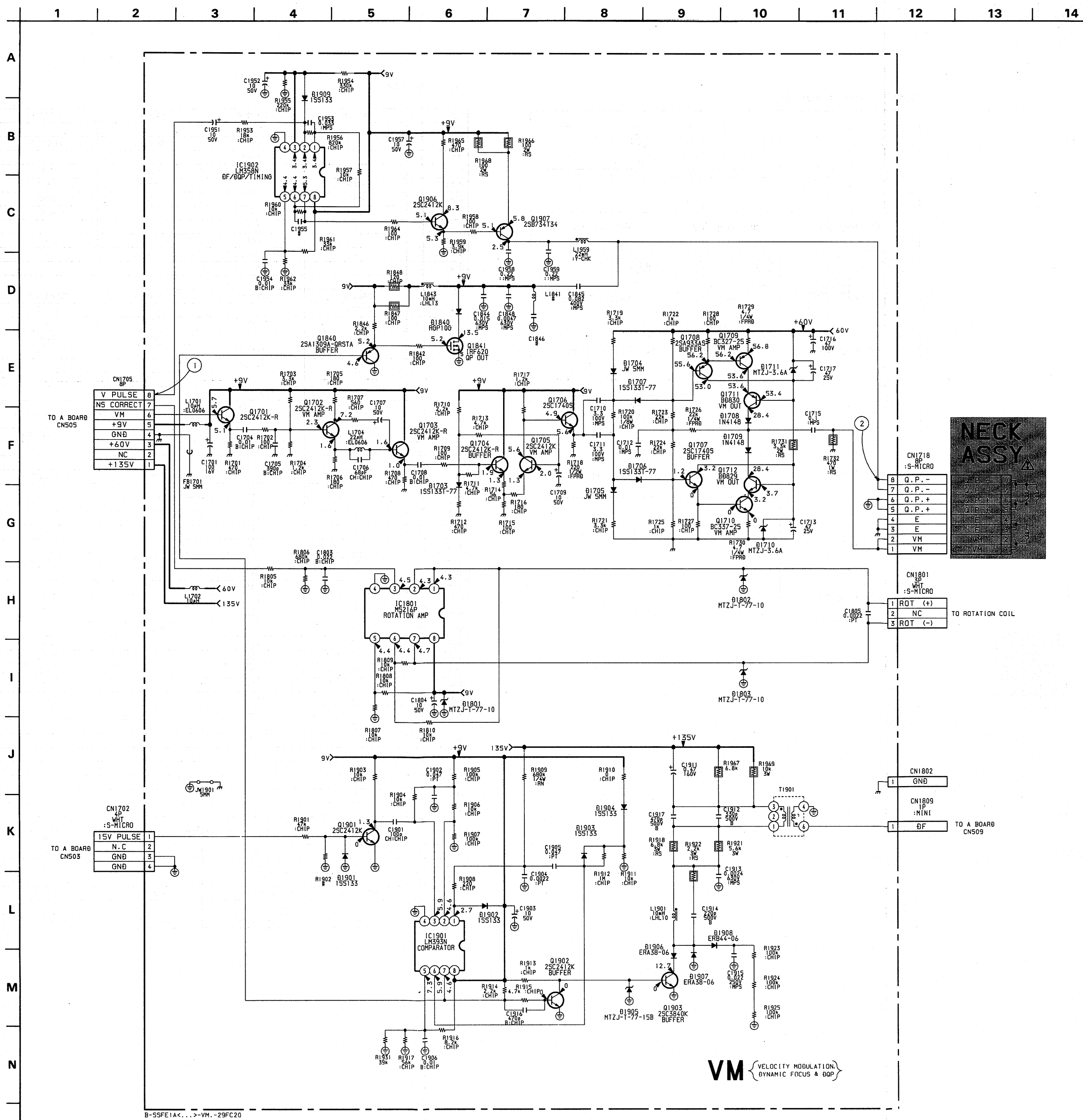


**H** {AUDIO IN, Y/C IN, HEADPHONE JACK  
SIRCS RECEIVER, SIRCS INDICATOR}

B-SSFE1A<...>-H...-29FC20

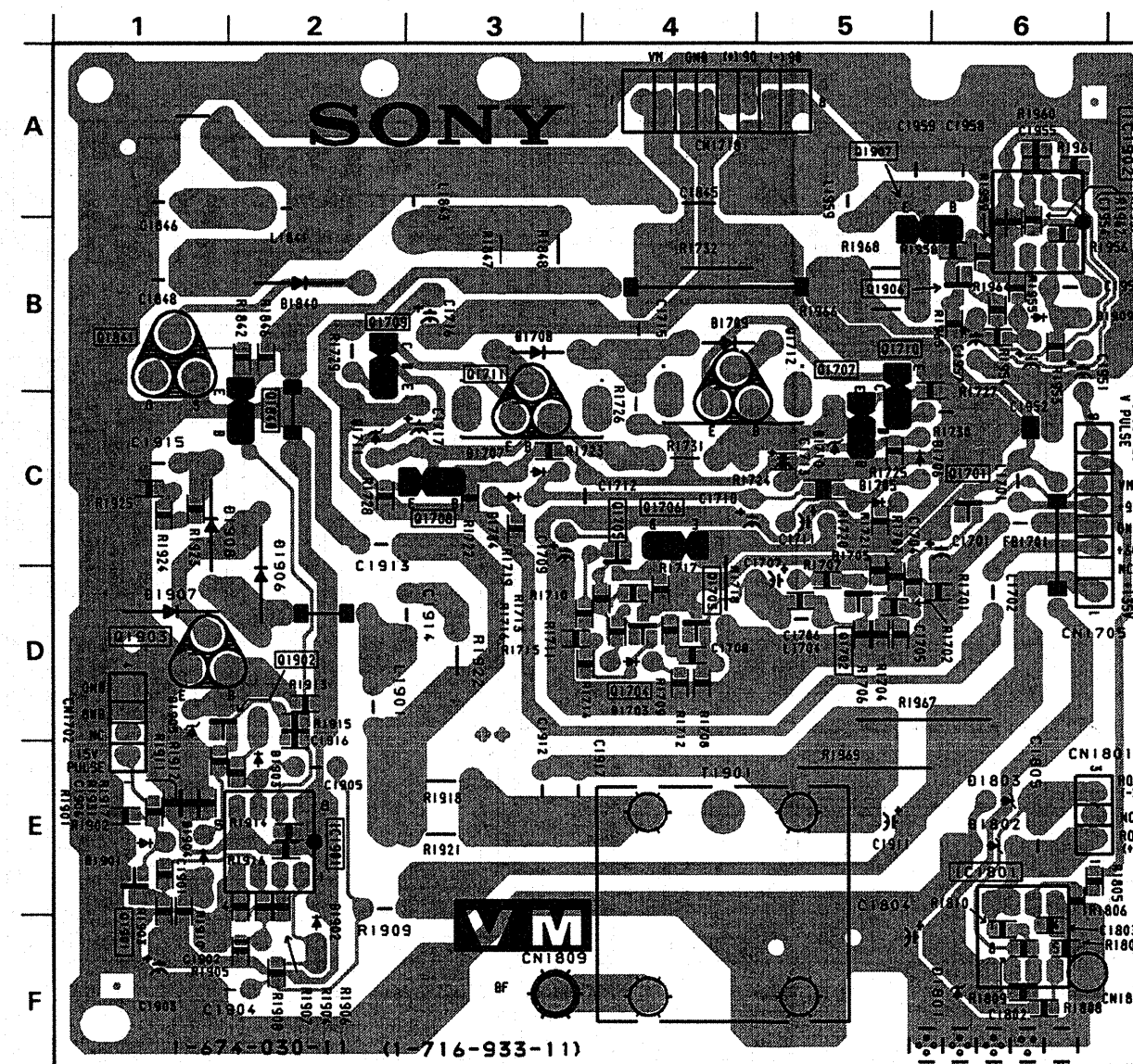




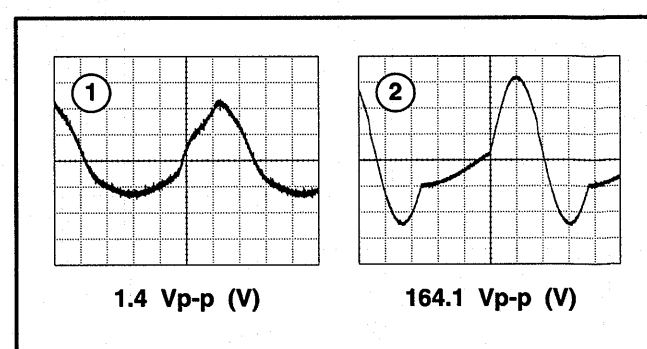


VM VELOCITY MODULATION, DYNAMIC FOCUS & DQP

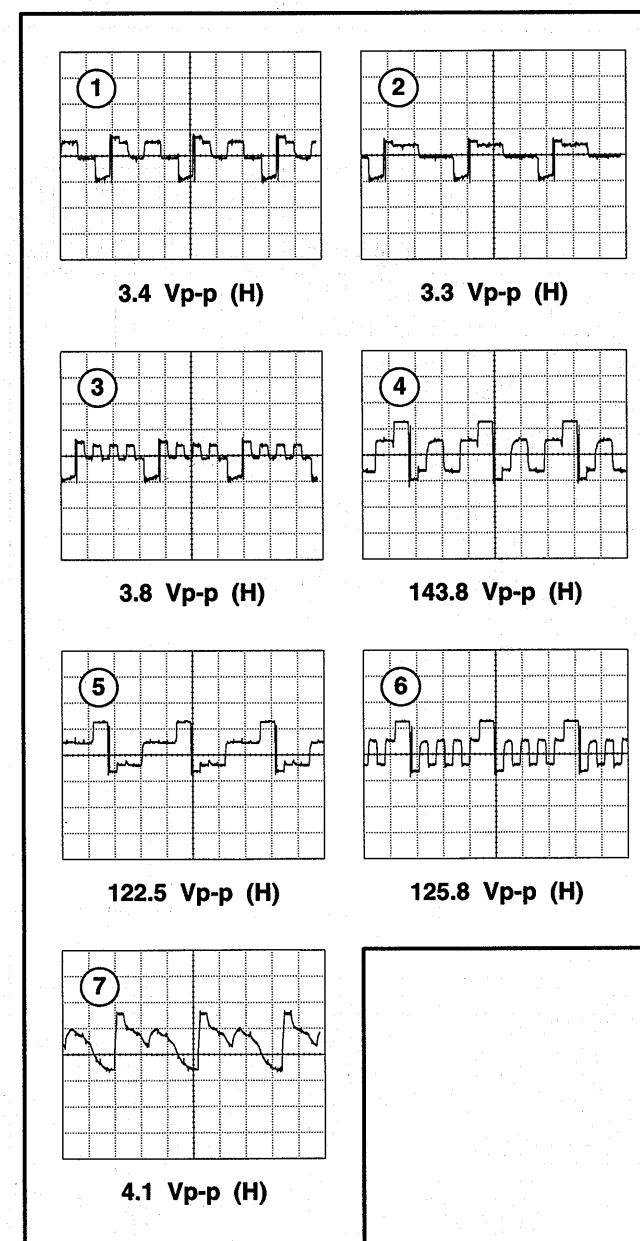
VM Board



WAVEFORMS VM BOARD

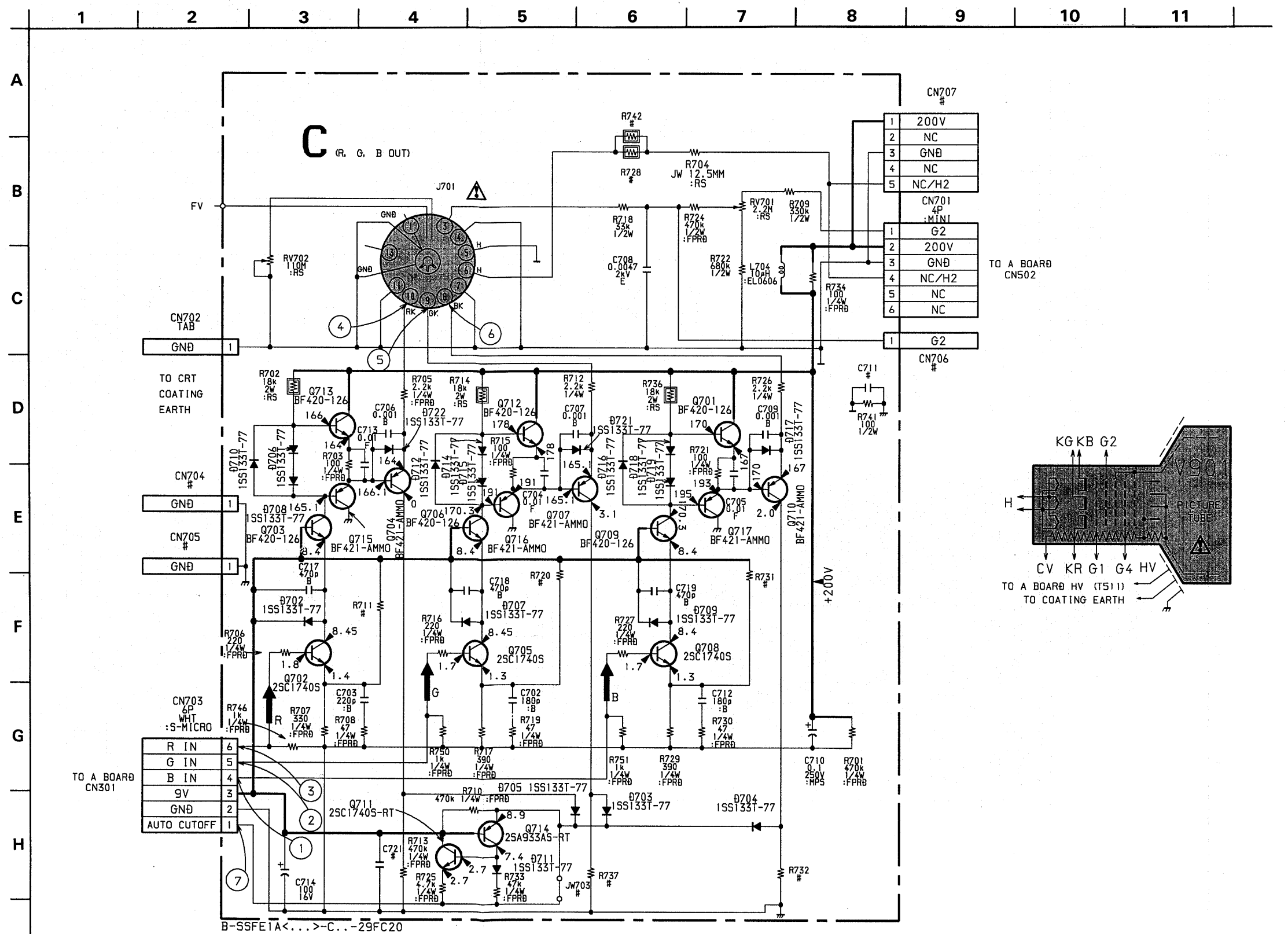
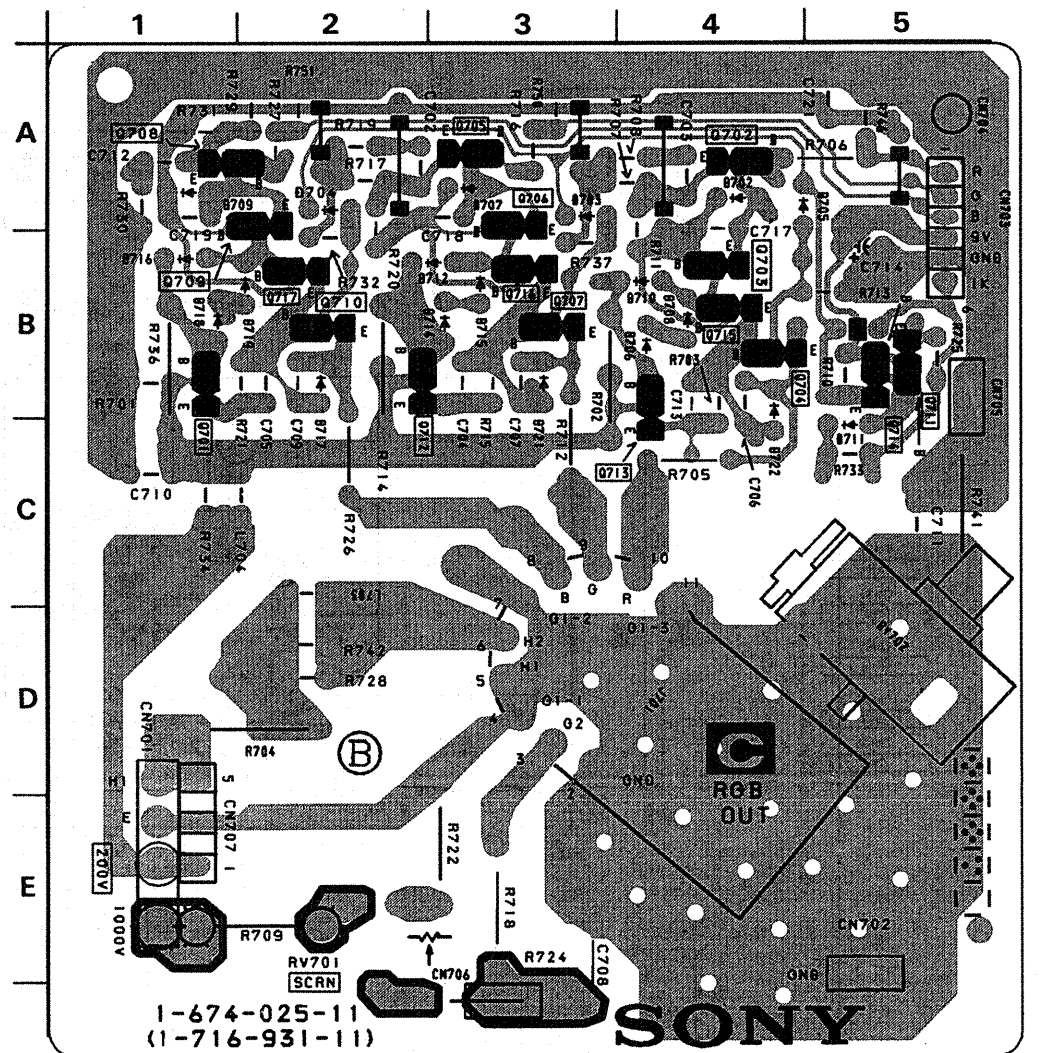


WAVEFORMS C BOARD



C [R, G, B OUT]

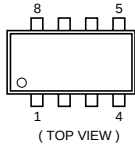
C Board



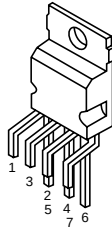


## 5-4. SEMICONDUCTORS (1)

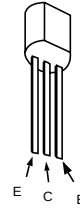
LM358DR-EZ  
NJM2233BL  
NJM4558M-TE2  
NJM2903D



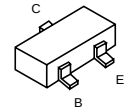
STV9379



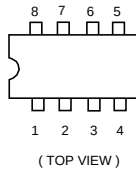
BF421-AMMO  
2SA1091-O



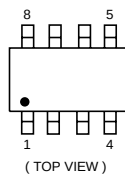
DTA144ESA  
DTA144ESA-TP  
DTC114EKA  
DTC114EKA-T146  
DTC143TKA-T146  
DTC144EKA-T-146R  
2SA1037K-T-146-R  
R2SA1162-G  
2SA1037K-T-146-QR  
2SD601A-QTX  
2SC1623-L5-L6  
2SC2412K-QR  
2SC2412K-T-146-R



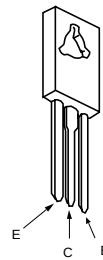
LM393PN  
TDA2822M  
TEA2124



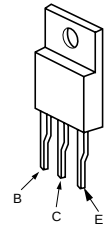
ST24W08FM6TR



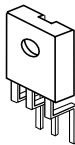
2SC688-LK



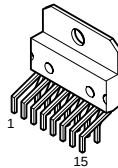
IRF614



SBX1981-51



TDA7495

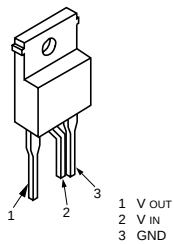


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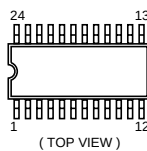


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2SAG33ASQT  
2SA933AS-RT  
2SC1740S-RT

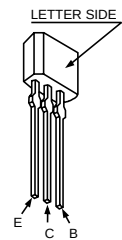
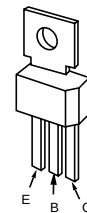
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SE135N-LF12



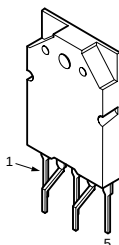
TDA9818-V1  
TDA9817-V1



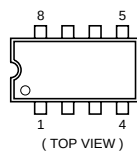
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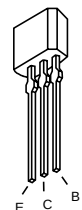
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TOP209P

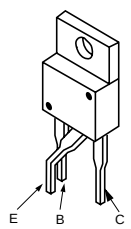


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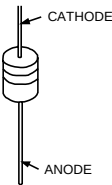
5-4. SEMICONDUCTORS (2)

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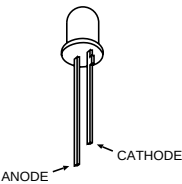


- |                |               |
|----------------|---------------|
| ERA81-004TP1   | MTZJ-T-77-33A |
| ERA83-006      | MTZJ-33C      |
| MTZJ-3.6A      | MTZJ-7.5B     |
| MTZJ-T-77-2.2A | RD3.9ES-B2    |
| HZS9.INBZ      | RD5.6ESB2     |
| MTZJ-T-77-3.9B | RD6.8ES-B2    |
| MTZJ-T-77-5.6B | RD7.5ESB2     |
| MTZJ-T-77-5.6C | RD9.1ES-B3    |
| MTZJ-T-77-6.8A | RD10ESB2      |
| MTZJ-T-77-6.8C | RD15ESB2      |
| MTZJ-T-77-7.5C | 1SS119-25     |
| MTZJ-T-77-9.1A | 1SS133T-77    |
| MTZJ-T-77-10   |               |

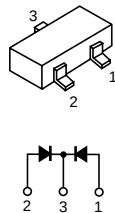
- |             |             |
|-------------|-------------|
| AK04-V1     | ERD28-08S   |
| AU-01Z-V1   | ERC06-15SL  |
| BYD33G      | FMN-G12S    |
| BYD33G-AMMO | GP08D       |
| DINL20-TR   | RG1CLF-B1   |
| ERB44-06TP1 | RGP10GPKG23 |
| EGP20G      | RU-3AM      |
| EG-1Z-V1    | RU3YX-LF-C4 |
| EL1Z        | RU3YX-V1    |
| ERD28-06S   | RU-4AM-T3   |
|             | 1SS292T-77  |



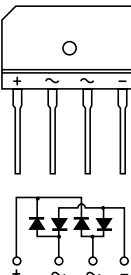
SLA-570KT3F



DAN202K  
DAN202K-T146

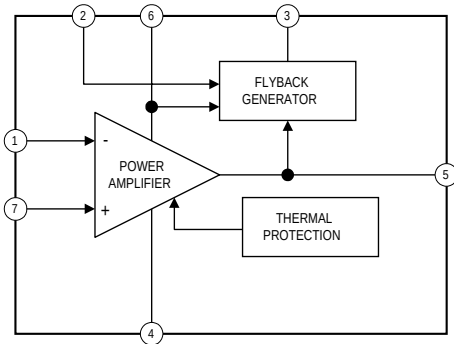


D4SB60L

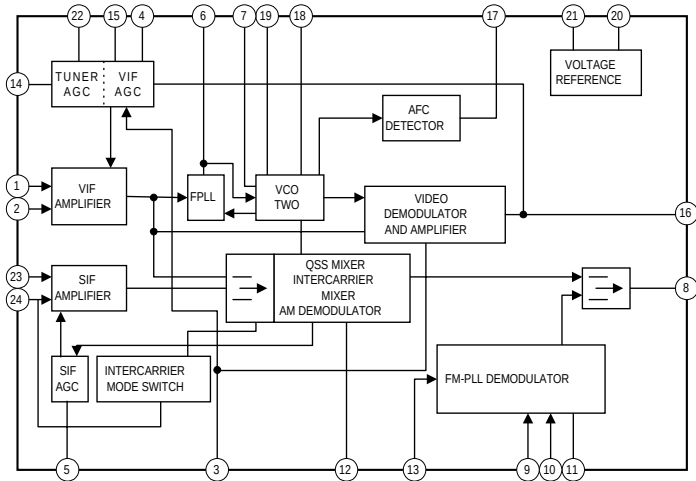


## 5-5. IC BLOCK DIAGRAMS

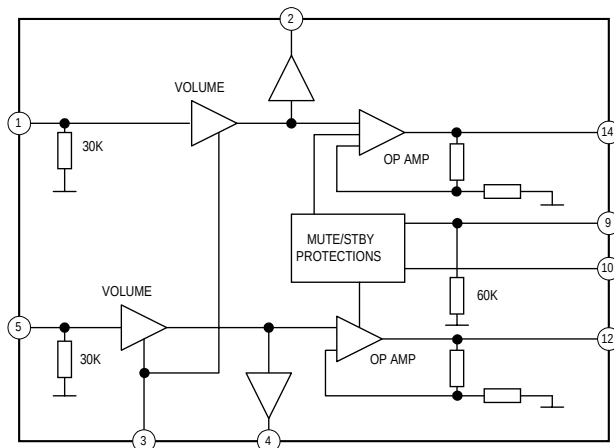
## A BOARD IC501 STV 9379



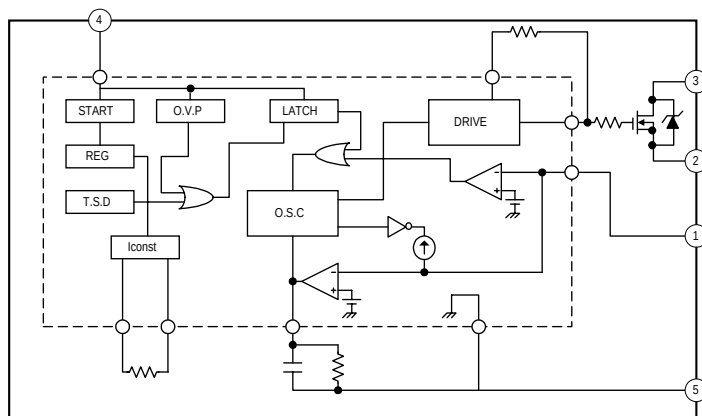
**A BOARD IC101 TDA9817/V1**



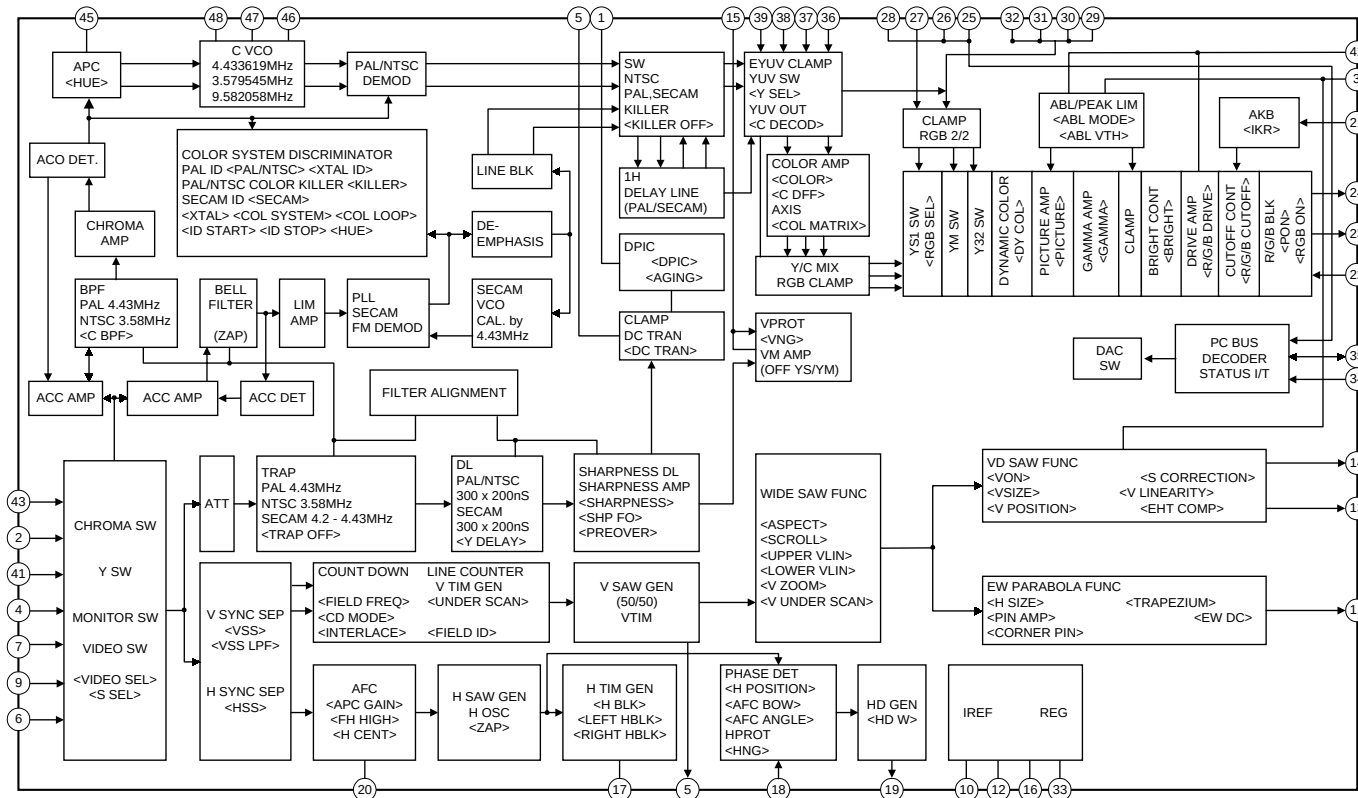
## A BOARD IC201 TDA7495



**A BOARD IC606 STR-F6654**



## A BOARD IC301 CXA2140S





## SECTION 6 EXPLODED VIEWS

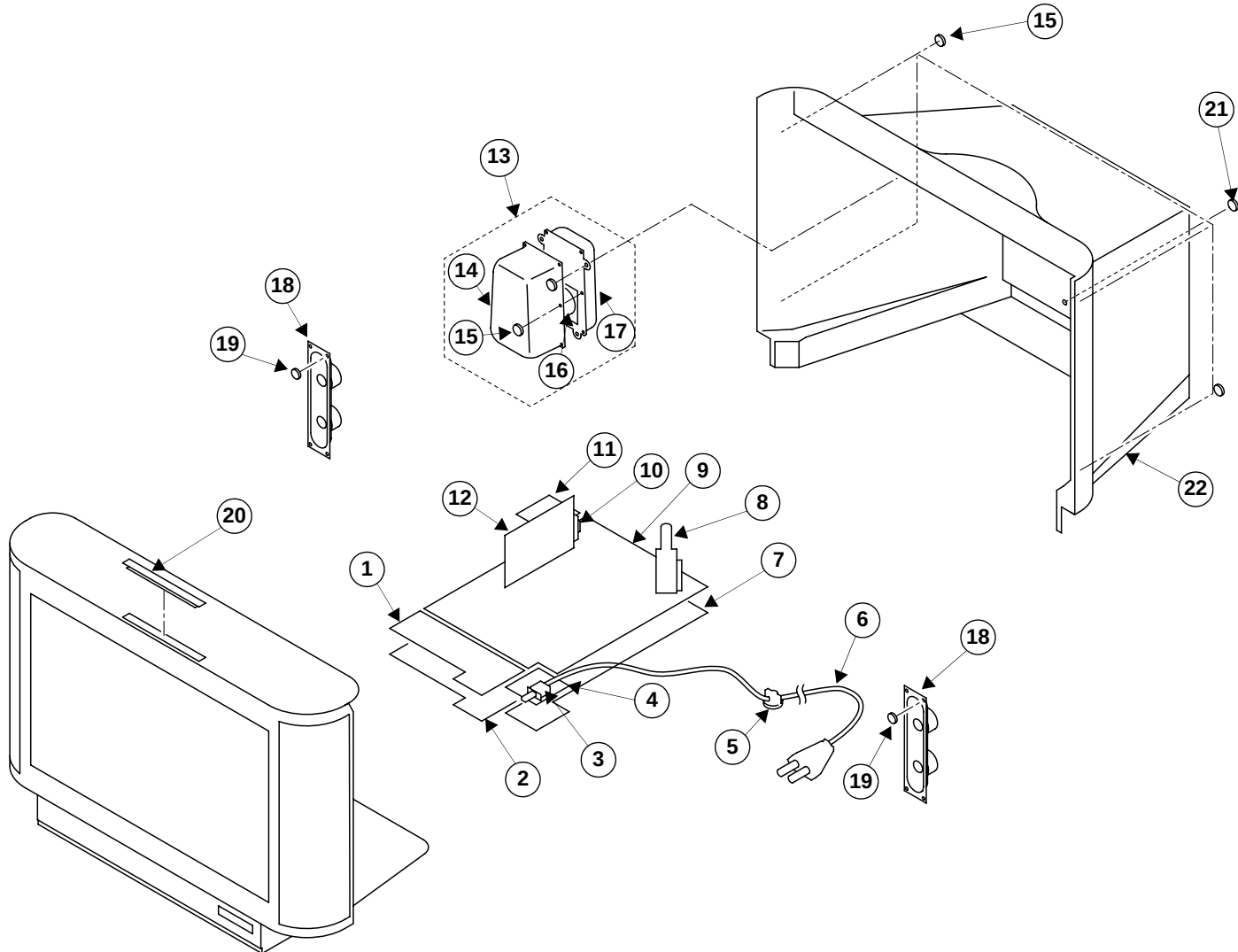
### NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

**Note :** Les composants identifiés par une trame et par une marque  $\Delta$  sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces du numéro spécifié.

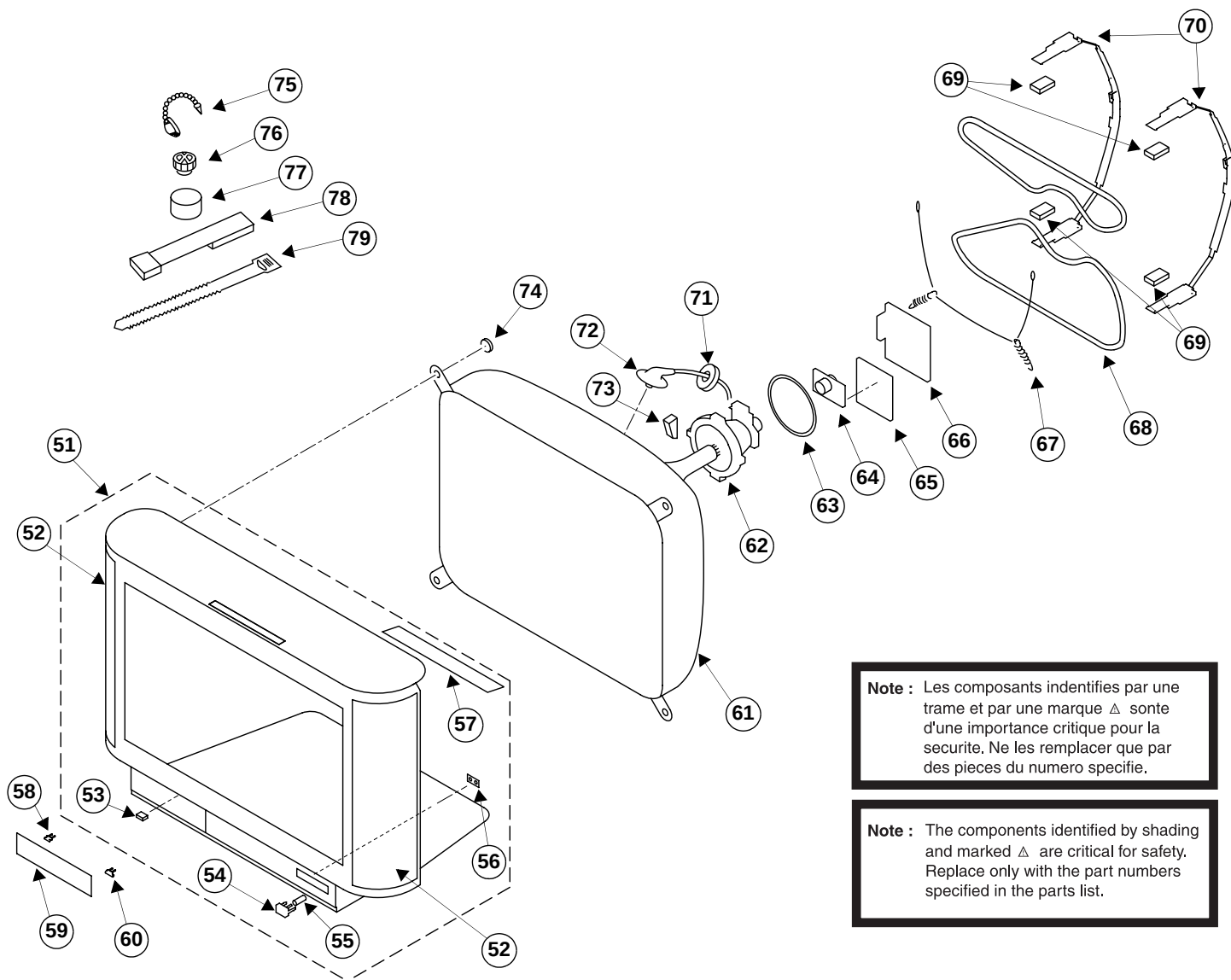
**Note :** The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part numbers specified in the parts list.

### 6-1. CHASSIS



| REF.NO. | PART.NO               | DESCRIPTION                              | REMARK | REF.NO. | PART.NO       | DESCRIPTION                     | REMARK |
|---------|-----------------------|------------------------------------------|--------|---------|---------------|---------------------------------|--------|
| 1       | *A-1646-184-A         | H BOARD, COMPLETE                        |        | 11      | *A-1649-023-A | K BOARD, COMPLETE               |        |
| 2       | *4-204-744-01         | BRACKET, H                               |        | 12      | *A-1654-041-A | S1 BOARD, COMPLETE              |        |
| 3       | $\Delta$ 1-571-433-21 | SWITCH, PUSH (AC POWER)                  |        |         |               | (KV-29FC20A/29FC20D)            |        |
| 4       | *A-1624-080-A         | F BOARD, COMPLETE                        |        |         | *A-1654-039-A | S1 BOARD, COMPLETE (KV-29FC20B) |        |
| 5       | *4-202-531-01         | AC CORD LOCK (SC)                        |        |         | *A-1654-040-A | S1 BOARD, COMPLETE (KV-29FC20E) |        |
| 6       | $\Delta$ 1-765-286-11 | CORD POWER                               |        | 13      | *A-1678-172-A | BLOCK ASSY, SP                  | 14-17  |
| 7       | *4-202-773-01         | BRACKET, MAIN                            |        | 14      | *4-204-776-11 | BOX, WOOFER                     |        |
| 8       | $\Delta$ 1-453-308-11 | TRANSFORMER ASSY, FLYBACK (NX-4521/U2B4) |        | 15      | 4-039-358-01  | SCREW (4x16), (+) BV TAPPING    |        |
| 9       | *A-1632-833-A         | A BOARD, COMPLETE (KV-29FC20A)           |        | 16      | 1-529-417-11  | SPEAKER (8CM)                   |        |
|         | *A-1632-832-A         | A BOARD, COMPLETE (KV-29FC20B)           |        | 17      | *4-204-775-21 | BAFFLE, WOOFER                  |        |
|         | *A-1632-831-A         | A BOARD, COMPLETE (KV-29FC20D)           |        | 18      | 1-529-408-11  | LOUD SPEAKER (4.2x24CM)         |        |
|         | *A-1632-830-A         | A BOARD, COMPLETE (KV-29FC20E)           |        | 19      | 4-384-096-01  | SCREW (4x16), TAPPING, +P       |        |
| 10      | 8-598-432-10          | TUNER (BTP-AC411)                        |        | 20      | 4-204-399-01  | PLATE, TOP                      |        |
|         |                       | (KV-29FC20A/29FC20D/29FC20E)             |        | 21      | 4-039-356-01  | SCREW (3x12), (+) BV TAPPING    |        |
|         | 1-693-418-11          | TUNER (TELE9-001A) (KV-29FC20B)          |        | 22      | 4-204-404-11  | COVER, REAR                     |        |

## 6-2. PICTURE TUBE



| REF. NO. | PART.NO               | DESCRIPTION                 | REMARK | REF. NO. | PART.NO               | DESCRIPTION                  | REMARK |
|----------|-----------------------|-----------------------------|--------|----------|-----------------------|------------------------------|--------|
| 51       | X-4200-489-1          | BEZNET ASSY                 | 53-57  | 66       | *A-1638-127-A         | C BOARD, COMPLETE            |        |
| 52       | X-4200-419-3          | GRILLE ASSY, SPEAKER        |        | 67       | 4-200-433-01          | SPRING, EXTENSION            |        |
| 53       | 4-042-192-11          | CATCHER, PUSH               |        | 68       | $\Delta$ 1-416-654-11 | COIL, DEMAGNETIC             |        |
| 54       | 4-204-718-01          | BUTTON, POWER               |        | 69       | *4-203-390-21         | CUSHION, DGC                 |        |
| 55       | 4-202-964-01          | SPRING                      |        | 70       | *4-204-786-01         | HOLDER, DGC                  |        |
| 56       | 4-204-716-01          | GUIDE, LIGHT                |        | 71       | 3-704-372-01          | HOLDER, HV CABLE             |        |
| 57       | 4-204-058-21          | SHEET, BLOTTING             |        | 72       | $\Delta$ 1-251-528-21 | CAP ASSY, HIGH-VOLTAGE       |        |
| 58       | 4-202-555-01          | SHAFT, DOOR                 |        | 73       | 3-704-495-01          | SPACER, DY                   |        |
| 59       | 4-204-717-01          | DOOR, CONTROL               |        | 74       | 4-036-188-02          | SCREW, SELF TAPPING          |        |
| 60       | 4-045-250-01          | DAMPER                      |        | 75       | 4-308-870-00          | CLIP, LEAD WIRE              |        |
| 61       | $\Delta$ 8-735-053-05 | PICTURE TUBE (M68LNH060X)   |        | 76       | 1-452-094-00          | MAGNET, ROTATABLE DISK; 15MM |        |
| 62       | $\Delta$ 8-451-494-21 | DEFLECTION YOKE (Y29RSA-M2) |        | 77       | 1-425-032-00          | MAGNET, DISK; 10MM           |        |
| 63       | 1-452-896-11          | COIL, NA ROTATION, (RT200)  |        | 78       | X-4387-214-1          | PERMALLOY ASSY, CORRECTION   |        |
| 64       | $\Delta$ 8-453-011-11 | NECK ASSY, NA299-M          |        | 79       | 3-701-007-00          | BAND, BINDING                |        |
| 65       | *A-1674-140-A         | VM BOARD, COMPLETE          |        |          |                       |                              |        |

## SECTION 7 ELECTRICAL PARTS LIST

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**Note :** Refer to the designated variant parts list when seeking a part indicated by an asterisk (\*)

Parts indicated (#) on the Schematic Diagram are not used in this model and therefore do not appear in the Parts List.

The components identified by shading and marked  $\Delta$  are critical for safety  
Replace only with the part number specified.

**F**

**A**

| REF.NO.                                             | PART.NO                  | DESCRIPTION                  | REMARK  | REF.NO. | PART.NO      | DESCRIPTION           | REMARK     |
|-----------------------------------------------------|--------------------------|------------------------------|---------|---------|--------------|-----------------------|------------|
| <b>*A-1624-080-A F Board, Complete</b>              |                          |                              |         | C103    | 1-104-665-11 | ELECT 100MF           | 20% 25V    |
| < CONNECTOR >                                       |                          |                              |         | C105    | 1-126-965-11 | ELECT 22MF            | 20% 50V    |
| CN603                                               | $\Delta$ *1-580-844-11   | PIN, CONNECTOR (POWER)       |         | C107    | 1-163-013-91 | CERAMIC CHIP 2200PF   | 10% 50V    |
| CN604                                               | $\Delta$ *1-691-292-11   | PIN, CONNECTOR (PC BOARD) 3P |         | C108    | 1-163-465-11 | CERAMIC CHIP 9PF      | 0.25PF 50V |
| < FUSE >                                            |                          |                              |         | C109    | 1-164-004-11 | CERAMIC CHIP 0.1MF    | 10% 25V    |
| F601                                                | $\Delta$ 1-532-350-00    | FUSE 4A/250V                 |         | C110    | 1-163-038-91 | CERAMIC CHIP 0.1MF    | 25V        |
|                                                     | $\Delta$ *1-533-725-11   | HOLDER, FUSE (F601)          |         | C112    | 1-163-031-11 | CERAMIC CHIP 0.01MF   | 50V        |
| < SWITCH >                                          |                          |                              |         | C115    | 1-164-489-11 | CERAMIC CHIP 0.22MF   | 10% 16V    |
| S601                                                | $\Delta$ 1-571-433-21    | SWITCH, PUSH (AC POWER)      |         | C116    | 1-126-961-11 | ELECT 2.2MF           | 20% 50V    |
| <b>*A-1632-833-A A Board, Complete (KV-29FC20A)</b> |                          |                              |         | C117    | 1-126-961-11 | ELECT 2.2MF           | 20% 50V    |
| <b>*A-1632-832-A A Board, Complete (KV-29FC20B)</b> |                          |                              |         | C118    | 1-163-038-91 | CERAMIC CHIP 0.1MF    | 25V        |
| <b>*A-1632-831-A A Board, Complete (KV-29FC20D)</b> |                          |                              |         | C120    | 1-163-031-11 | CERAMIC CHIP 0.01MF   | 50V        |
| <b>*A-1632-830-A A Board, Complete (KV-29FC20E)</b> |                          |                              |         | C122    | 1-163-013-91 | CERAMIC CHIP 2200PF   | 10% 50V    |
| <b>A Board Common Parts</b>                         |                          |                              |         | C129    | 1-104-664-11 | ELECT 47MF            | 20% 16V    |
| 4-382-854-11                                        | SCREW (M3X10), P, SW (+) |                              |         | C130    | 1-163-013-91 | CERAMIC CHIP 2200PF   | 10% 50V    |
| < CAPACITOR >                                       |                          |                              |         | C134    | 1-128-551-11 | ELECT 22MF            | 20% 25V    |
| C002                                                | 1-115-339-11             | CERAMIC CHIP 0.1MF           | 10% 50V | C135    | 1-164-004-11 | CERAMIC CHIP 0.1MF    | 10% 25V    |
| C005                                                | 1-163-105-00             | CERAMIC CHIP 33PF            | 5% 50V  | C138    | 1-165-319-11 | CERAMIC CHIP 0.1MF    | 50V        |
| C006                                                | 1-163-105-00             | CERAMIC CHIP 33PF            | 5% 50V  | C139    | 1-163-031-11 | CERAMIC CHIP 0.01MF   | 50V        |
| C009                                                | 1-128-551-11             | ELECT 22MF                   | 20% 25V | C143    | 1-104-664-11 | ELECT 47MF            | 20% 25V    |
| C010                                                | 1-126-960-11             | ELECT 1MF                    | 20% 50V | C146    | 1-163-031-11 | CERAMIC CHIP 0.01MF   | 50V        |
| C011                                                | 1-126-965-11             | ELECT 22MF                   | 20% 50V | C147    | 1-163-013-91 | CERAMIC CHIP 2200PF   | 10% 50V    |
| C012                                                | 1-126-963-11             | ELECT 4.7MF                  | 20% 50V | C149    | 1-126-959-11 | ELECT 0.47MF          | 20% 50V    |
| C013                                                | 1-163-017-00             | CERAMIC CHIP 0.0047MF        | 10% 50V | C150    | 1-163-038-91 | CERAMIC CHIP 0.1MF    | 25V        |
| C014                                                | 1-163-009-11             | CERAMIC CHIP 0.001MF         | 10% 50V | C151    | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% 50V    |
| C016                                                | 1-164-004-11             | CERAMIC CHIP 0.1MF           | 10% 25V | C152    | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% 50V    |
| C017                                                | 1-163-009-11             | CERAMIC CHIP 0.001MF         | 10% 50V | C160    | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% 50V    |
| C018                                                | 1-164-004-11             | CERAMIC CHIP 0.1MF           | 10% 25V | C201    | 1-104-666-11 | ELECT 220MF           | 20% 25V    |
| C022                                                | 1-126-925-11             | ELECT 470MF                  | 20% 10V | C202    | 1-163-013-91 | CERAMIC CHIP 2200PF   | 10% 50V    |
| C023                                                | 1-164-004-11             | CERAMIC CHIP 0.1MF           | 10% 25V | C203    | 1-126-942-61 | ELECT 1000MF          | 20% 25V    |
| C024                                                | 1-104-665-11             | ELECT 100MF                  | 20% 10V | C204    | 1-126-942-61 | ELECT 1000MF          | 20% 25V    |
| C025                                                | 1-104-664-11             | ELECT 47MF                   | 20% 10V | C205    | 1-163-033-91 | CERAMIC CHIP 0.022MF  | 50V        |
| C027                                                | 1-104-665-11             | ELECT 100MF                  | 20% 10V | C206    | 1-126-960-11 | ELECT 1MF             | 20% 50V    |
| C033                                                | 1-164-004-11             | CERAMIC CHIP 0.1MF           | 10% 25V | C207    | 1-126-972-11 | ELECT 1000MF          | 20% 50V    |
| C035                                                | 1-163-021-91             | CERAMIC CHIP 0.01MF          | 10% 50V | C209    | 1-163-033-91 | CERAMIC CHIP 0.022MF  | 50V        |
| C038                                                | 1-126-964-11             | ELECT 10MF                   | 20% 50V | C213    | 1-163-019-00 | CERAMIC CHIP 0.0068MF | 10% 50V    |
| C040                                                | 1-163-005-11             | CERAMIC CHIP 470PF           | 10% 50V | C214    | 1-163-019-00 | CERAMIC CHIP 0.0068MF | 10% 50V    |
| C041                                                | 1-163-009-91             | CERAMIC CHIP 1000PF          | 10% 50V | C215    | 1-115-339-91 | CERAMIC CHIP 0.1MF    | 10% 50V    |
| C050                                                | 1-126-925-11             | ELECT 470MF                  | 20% 10V | C216    | 1-115-339-91 | CERAMIC CHIP 0.1MF    | 10% 50V    |
| C051                                                | 1-115-339-11             | CERAMIC CHIP 0.1MF           | 10% 50V | C217    | 1-164-005-91 | CERAMIC CHIP 470000PF | 25V        |
| C102                                                | 1-163-031-91             | CERAMIC 2200PF               | 10% 50V | C240    | 1-163-031-11 | CERAMIC CHIP 0.01MF   | 50V        |
|                                                     |                          |                              |         | C301    | 1-164-346-91 | CERAMIC CHIP 1MF      | 16V        |
|                                                     |                          |                              |         | C302    | 1-104-664-11 | ELECT 47MF            | 20% 16V    |
|                                                     |                          |                              |         | C303    | 1-163-021-91 | CERAMIC CHIP 0.01MF   | 10% 50V    |
|                                                     |                          |                              |         | C304    | 1-126-964-11 | ELECT 10MF            | 20% 50V    |
|                                                     |                          |                              |         | C306    | 1-163-013-91 | CERAMIC CHIP 2200PF   | 10% 50V    |
|                                                     |                          |                              |         | C308    | 1-164-004-11 | CERAMIC CHIP 0.1MF    | 10% 25V    |

| REF. NO. | PART.NO      | DESCRIPTION           | REMARK   | REF. NO.      | PART.NO      | DESCRIPTION          | REMARK   |
|----------|--------------|-----------------------|----------|---------------|--------------|----------------------|----------|
| C309     | 1-164-506-11 | CERAMIC CHIP 4.7MF    | 16V      | C515          | 1-104-666-11 | ELECT 220MF          | 20% 25V  |
| C312     | 1-163-233-11 | CERAMIC CHIP 18PF     | 5% 50V   | C517          | 1-104-666-11 | ELECT 220MF          | 20% 25V  |
| C313     | 1-163-233-11 | CERAMIC CHIP 18PF     | 5% 50V   | C518          | 1-106-375-12 | MYLAR 0.022MF        | 10% 250V |
| C314     | 1-164-222-11 | CERAMIC CHIP 0.22MF   | 25V      | C519          | 1-163-275-11 | CERAMIC CHIP 0.001MF | 5% 50V   |
| C316     | 1-163-259-91 | CERAMIC CHIP 220PF    | 5% 50V   | C520          | 1-163-038-91 | CERAMIC CHIP 0.1MF   | 25V      |
| C317     | 1-164-222-11 | CERAMIC CHIP 0.22MF   | 25V      | C522          | 1-130-495-00 | FILM 0.1MF           | 5% 50V   |
| C319     | 1-126-964-11 | ELECT 10MF            | 20% 50V  | C531          | 1-126-964-11 | ELECT 10MF           | 20% 50V  |
| C321     | 1-126-963-11 | ELECT 4.7MF           | 20% 50V  | C532          | 1-163-037-11 | CERAMIC CHIP 0.022MF | 10% 50V  |
| C322     | 1-164-004-11 | CERAMIC CHIP 0.1MF    | 10% 25V  | C536          | 1-115-521-11 | FILM 0.82MF          | 5% 250V  |
| C328     | 1-104-664-11 | ELECT 47MF            | 20% 25V  | C537          | 1-137-417-11 | MYLAR 0.0047MF       | 10% 200V |
| C329     | 1-163-021-91 | CERAMIC CHIP 0.01MF   | 10% 50V  | C538          | 1-165-319-11 | CERAMIC CHIP 0.1MF   | 50V      |
| C330     | 1-163-038-91 | CERAMIC CHIP 0.1MF    | 25V      | C539          | 1-111-230-11 | ELECT 1MF            | 20% 160V |
| C331     | 1-163-021-91 | CERAMIC CHIP 0.01MF   | 10% 50V  | C540          | 1-136-206-11 | FILM 0.033MF         | 10% 400V |
| C332     | 1-163-021-91 | CERAMIC CHIP 0.01MF   | 10% 50V  | C541          | 1-106-383-00 | MYLAR 0.047MF        | 10% 200V |
| C333     | 1-126-960-11 | ELECT 1MF             | 20% 50V  | C542          | 1-161-754-00 | CERAMIC 0.001MF      | 10% 2KV  |
| C334     | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% 50V  | C543          | 1-162-134-11 | CERAMIC 470PF        | 10% 2KV  |
| C335     | 1-163-021-91 | CERAMIC CHIP 0.01MF   | 10% 50V  | C545          | 1-126-960-11 | ELECT 1MF            | 20% 50V  |
| C336     | 1-163-021-91 | CERAMIC CHIP 0.01MF   | 10% 50V  | C546          | 1-130-118-00 | FILM 0.051MF         | 5% 400V  |
| C337     | 1-163-021-91 | CERAMIC CHIP 0.01MF   | 10% 50V  | C547          | 1-115-521-11 | FILM 0.82MF          | 5% 250V  |
| C338     | 1-126-967-11 | ELECT 47MF            | 20% 50V  | C548          | 1-162-134-11 | CERAMIC 470PF        | 10% 2KV  |
| C339     | 1-164-346-91 | CERAMIC CHIP 1MF      | 16V      | C550          | 1-107-638-11 | ELECT 33MF           | 20% 160V |
| C350     | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% 50V  | C552          | 1-102-212-00 | CERAMIC 820PF        | 10% 500V |
| C351     | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% 50V  | C553          | 1-108-417-91 | CAPACITOR 0.0047MF   | 10% 200V |
| C401     | 1-163-009-11 | CERAMIC CHIP 0.001MF  | 10% 50V  | C555          | 1-128-935-11 | CAPACITOR 19000PF    | 3% 1200V |
| C402     | 1-126-964-11 | ELECT 10MF            | 20% 50V  | C571          | 1-123-024-21 | ELECT 33MF           | 160V     |
| C403     | 1-126-964-11 | ELECT 10MF            | 20% 50V  | C572          | 1-107-882-91 | ELECT 100MF          | 20% 16V  |
| C405     | 1-163-009-11 | CERAMIC CHIP 0.001MF  | 10% 50V  | C580          | 1-163-021-91 | CERAMIC CHIP 0.01MF  | 10% 50V  |
| C408     | 1-126-964-11 | ELECT 10MF            | 20% 50V  | C582          | 1-163-259-91 | CERAMIC CHIP 220PF   | 5% 50V   |
| C409     | 1-126-960-11 | ELECT 1MF             | 20% 50V  | C584          | 1-126-963-11 | ELECT 4.7MF          | 20% 50V  |
| C411     | 1-126-964-11 | ELECT 10MF            | 20% 50V  | C601 $\Delta$ | 1-107-563-11 | FILM 0.1MF           | 20% 300V |
| C413     | 1-163-009-11 | CERAMIC CHIP 0.001MF  | 10% 50V  | C602 $\Delta$ | 1-107-563-11 | FILM 0.1MF           | 20% 300V |
| C417     | 1-163-009-11 | CERAMIC CHIP 0.001MF  | 10% 50V  | C603 $\Delta$ | 1-119-888-51 | CERAMIC 2200PF       | 20% 250V |
| C430     | 1-104-664-11 | ELECT 47MF            | 20% 25V  | C604 $\Delta$ | 1-119-888-51 | CERAMIC 2200PF       | 20% 250V |
| C432     | 1-163-141-00 | CERAMIC CHIP 0.001MF  | 5% 50V   | C605          | 1-104-665-11 | ELECT 100MF          | 20% 10V  |
| C433     | 1-163-141-00 | CERAMIC CHIP 0.001MF  | 5% 50V   | C606          | 1-125-318-00 | ELECT (BLOCK) 220MF  | 20% 400V |
| C434     | 1-126-935-11 | ELECT 470MF           | 20% 16V  | C607          | 1-161-754-00 | CERAMIC 0.001MF      | 10% 2KV  |
| C501     | 1-126-968-11 | ELECT 100MF           | 20% 50V  | C609          | 1-128-550-11 | ELECT 2200MF         | 20% 50V  |
| C502     | 1-163-038-91 | CERAMIC CHIP 0.1MF    | 25V      | C610          | 1-104-665-11 | ELECT 100MF          | 20% 25V  |
| C503     | 1-126-968-11 | ELECT 100MF           | 20% 50V  | C611          | 1-165-127-11 | CERAMIC 470PF        | 10% 500V |
| C504     | 1-106-220-00 | MYLAR 0.1MF           | 10% 100V | C612 $\Delta$ | 1-161-964-51 | CERAMIC 0.0047MF     | 250V     |
| C505     | 1-137-194-81 | FILM 0.47MF           | 5% 50V   | C613 $\Delta$ | 1-161-964-51 | CERAMIC 0.0047MF     | 250V     |
| C506     | 1-163-021-91 | CERAMIC CHIP 0.01MF   | 10% 50V  | C614 $\Delta$ | 1-161-964-51 | CERAMIC 0.0047MF     | 250V     |
| C507     | 1-126-933-11 | ELECT 100MF           | 20% 16V  | C615          | 1-130-202-00 | FILM 0.022MF         | 10% 400V |
| C508     | 1-126-960-11 | ELECT 1MF             | 20% 50V  | C616          | 1-162-318-11 | CERAMIC 0.001MF      | 10% 500V |
| C509     | 1-107-364-11 | MYLAR 0.01MF          | 10% 400V | C618          | 1-107-890-11 | ELECT 2200MF         | 20% 25V  |
| C512     | 1-162-114-00 | CERAMIC 0.0047MF      | 2KV      | C621          | 1-163-005-11 | CERAMIC CHIP 470PF   | 10% 50V  |
| C513     | 1-107-662-11 | ELECT 22MF            | 20% 250V | C622 $\Delta$ | 1-161-964-51 | CERAMIC 0.0047MF     | 250V     |

The components identified by shading and marked  $\Delta$  are critical for safety  
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| REF. NO.      | PART.NO                | DESCRIPTION                   | REMARK   | REF. NO. | PART.NO      | DESCRIPTION          | REMARK |
|---------------|------------------------|-------------------------------|----------|----------|--------------|----------------------|--------|
| C623          | 1-107-364-11           | MYLAR 0.01MF                  | 10% 400V | D004     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| C624          | 1-104-665-11           | ELECT 100MF                   | 20% 10V  | D005     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| C625          | 1-104-665-11           | ELECT 100MF                   | 20% 25V  | D007     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| C628          | 1-124-347-00           | ELECT 100MF                   | 20% 160V | D008     | 8-719-991-33 | DIODE 1SS133T-77     |        |
| C630          | 1-165-127-11           | CERAMIC 470PF                 | 10% 500V | D009     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| C633          | 1-104-332-11           | CERAMIC 470PF                 | 10% 2KV  | D010     | 8-719-923-36 | DIODE MTZJ-77-5.6    |        |
| C638          | 1-107-679-41           | ELECT 10MF                    | 20% 450V | D011     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| C639          | 1-104-665-11           | ELECT 100MF                   | 20% 25V  | D014     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| C640          | 1-104-664-11           | ELECT 47MF                    | 20% 10V  | D015     | 8-719-914-43 | DIODE DAN202K        |        |
| C641          | 1-111-034-11           | ELECT 220MF                   | 20% 16V  | D017     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| C642          | 1-104-658-91           | ELECT 100MF                   | 20% 10V  | D018     | 8-719-991-33 | DIODE 1SS133T-77     |        |
| C654          | 1-107-932-11           | ELECT 47MF                    | 20% 100V | D019     | 8-719-914-43 | DIODE DAN202K        |        |
| < FILTER >    |                        |                               |          | D023     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| CF101         | 1-404-134-00           | TRAP, CERAMIC (5.5MHZ)        |          | D024     | 8-719-923-38 | DIODE MTZJ-T-77-5.6B |        |
| SWF102        | 1-767-873-11           | FILTER, SURFACE WAVE          |          | D098     | 8-719-982-96 | DIODE MTZJ-T-77-2.2A |        |
| < CONNECTOR > |                        |                               |          | D099     | 8-719-982-96 | DIODE MTZJ-T-77-2.2A |        |
| CN001         | *1-564-508-51          | PIN, CONNECTOR 5P             |          | D101     | 8-719-982-24 | DIODE MTZJ-33A       |        |
| CN007         | *1-568-882-51          | PIN, CONNECTOR 7P             |          | D103     | 8-719-923-36 | DIODE MTZJ-77-5.6    |        |
| CN101         | 1-695-915-21           | TAB (CONTACT)                 |          | D106     | 8-719-982-96 | DIODE MTZJ-T-77-2.2A |        |
| CN201         | *1-564-507-11          | PLUG, CONNECTOR 4P            |          | D200     | 8-719-923-36 | DIODE MTZJ-77-5.6    |        |
| CN202         | *1-564-508-11          | PLUG, CONNECTOR 5P            |          | D201     | 8-719-929-15 | DIODE HZS9.1NB2      |        |
| CN203         | *1-766-957-11          | CONNECTOR, BOARD TO BOARD 20P |          | D202     | 8-719-914-43 | DIODE DAN202K        |        |
| CN208         | *1-564-509-11          | PLUG, CONNECTOR 6P            |          | D203     | 8-719-914-43 | DIODE DAN202K        |        |
| CN301         | *1-564-509-11          | PLUG, CONNECTOR 6P            |          | D204     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| CN401         | 4-352-844-01           | PIN, LEAD COATING             |          | D205     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| CN402         | 4-352-844-01           | PIN, LEAD COATING             |          | D206     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| CN403         | 4-352-844-01           | PIN, LEAD COATING             |          | D207     | 8-719-914-47 | DIODE DAN202K        |        |
| CN404         | 4-352-844-01           | PIN, LEAD COATING             |          | D208     | 8-719-921-20 | DIODE ISS119-25TD    |        |
| CN405         | 4-352-844-01           | PIN, LEAD COATING             |          | D209     | 8-719-921-20 | DIODE ISS119-25TD    |        |
| CN406         | *1-564-511-11          | PLUG, CONNECTOR 8P            |          | D210     | 8-719-921-20 | DIODE ISS119-25TD    |        |
| CN501         | *1-580-798-11          | CONNECTOR PIN (DY)            |          | D306     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| CN502         | 1-784-633-11           | PIN, CONNECTOR 4P             |          | D307     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| CN503         | *1-564-507-11          | PLUG, CONNECTOR 4P            |          | D320     | 8-719-929-15 | DIODE HZS9.1NB2      |        |
| CN505         | *1-564-511-11          | PLUG, CONNECTOR 8P            |          | D401     | 8-719-923-67 | DIODE MTZJ-77-9.1B   |        |
| CN506         | 1-695-915-11           | TAB (CONTACT)                 |          | D402     | 8-719-421-59 | DIODE MA3130WA-TX    |        |
| CN509         | 1-695-915-11           | TAB (CONTACT)                 |          | D403     | 8-719-421-59 | DIODE MA3130WA-TX    |        |
| CN602         | $\Delta$ 1-508-765-00  | PIN, CONNECTOR (5MM PITCH) 3P |          | D404     | 8-719-421-59 | DIODE MA3130WA-TX    |        |
| CN603         | $\Delta$ *1-508-786-00 | PIN, CONNECTOR (5MM PITCH) 2P |          | D405     | 8-719-109-89 | DIODE RD5.6ESB2      |        |
| CN606         | $\Delta$ *1-691-292-11 | PIN, CONNECTOR (PC BOARD) 3P  |          | D406     | 8-719-109-97 | DIODE RD6.8ESB2      |        |
| CN608         | 1-695-915-21           | TAB (CONTACT)                 |          | D407     | 8-719-109-97 | DIODE RD6.8ESB2      |        |
| < DIODE >     |                        |                               |          | D408     | 8-719-929-15 | DIODE HZS9.1NB2      |        |
| D001          | 8-719-109-89           | DIODE RD5.6ESB2               |          | D409     | 8-719-421-59 | DIODE MA3130WA-TX    |        |
| D002          | 8-719-109-89           | DIODE RD5.6ESB2               |          | D410     | 8-719-421-59 | DIODE MA3130WA-TX    |        |
|               |                        |                               |          | D411     | 8-719-421-59 | DIODE MA3130WA-TX    |        |
|               |                        |                               |          | D414     | 8-719-921-88 | DIODE MTZJ-13B       |        |
|               |                        |                               |          | D415     | 8-719-982-96 | DIODE MTZJ-T-77-2.2A |        |
|               |                        |                               |          | D416     | 8-719-421-59 | DIODE MA3130WA-TX    |        |

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The components identified by shading and marked  $\Delta$  are critical for safety  
Replace only with the part number specified.

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| REF. NO.          | PART.NO               | DESCRIPTION             | REMARK | REF. NO.     | PART.NO      | DESCRIPTION               | REMARK        |
|-------------------|-----------------------|-------------------------|--------|--------------|--------------|---------------------------|---------------|
| L401              | 1-414-187-11          | INDUCTOR                | 47UH   | Q418         | 8-729-422-33 | TRANSISTOR 2SD601A-Q-TX   |               |
| L402              | 1-408-611-31          | INDUCTOR                | 47UH   | Q501         | 8-729-422-33 | TRANSISTOR 2SD601A-Q-TX   |               |
| L405              | 1-412-002-31          | INDUCTOR CHIP           | 4.7UH  | Q532         | 8-729-038-83 | TRANSISTOR 2SK2251-01-F19 |               |
| L406              | 1-412-002-31          | INDUCTOR CHIP           | 4.7UH  | Q533         | 8-729-049-08 | TRANSISTOR BU2515DX-127   |               |
| L407              | 1-412-002-31          | INDUCTOR CHIP           | 4.7UH  | Q535         | 8-729-119-80 | TRANSISTOR 2SC2688-LK     |               |
| L408              | 1-412-002-31          | INDUCTOR CHIP           | 4.7UH  | Q571         | 8-729-105-08 | TRANSISTOR 2SA1330-06     |               |
| L427              | 1-535-143-61          | LEAD, JUMPER (5.0MM)    |        | Q574         | 8-729-422-33 | TRANSISTOR 2SD601A-Q-TX   |               |
| L434              | 1-414-181-11          | INDUCTOR                | 4.7UH  | Q575         | 1-801-806-11 | TRANSISTOR DTC144EKA      |               |
| L435              | 1-414-181-11          | INDUCTOR                | 4.7UH  | Q576         | 8-729-031-00 | TRANSISTOR 2PD601AR-115   |               |
| L447              | 1-410-993-42          | INDUCTOR CHIP           | 1UH    | Q601         | 8-729-026-50 | TRANSISTOR 2SA1037AK      |               |
| L501              | 1-414-187-11          | INDUCTOR                | 47UH   | < RESISTOR > |              |                           |               |
| L502              | 1-412-529-11          | INDUCTOR                | 22UH   | JR023        | 1-216-296-91 | SHORT                     | 0             |
| L503              | 1-412-521-31          | INDUCTOR                | 4.7UH  | JR124        | 1-216-295-91 | SHORT                     | 0             |
| L504              | 1-535-303-00          | LEAD, JUMPER (5.0MM)    |        | JR125        | 1-216-295-91 | SHORT                     | 0             |
| L532              | 1-412-553-11          | INDUCTOR                | 3.3MMH | JR132        | 1-216-295-91 | SHORT                     | 0             |
| L533              | 1-406-989-21          | INDUCTOR                | 10MMH  | R001         | 1-216-025-91 | RES,CHIP                  | 100 5% 1/10W  |
| L535              | 1-459-111-00          | INDUCTOR                | 10MMH  | R002         | 1-216-025-91 | RES,CHIP                  | 100 5% 1/10W  |
| L571              | 1-412-533-21          | INDUCTOR                | 47UH   | R003         | 1-216-065-91 | RES,CHIP                  | 4.7K 5% 1/10W |
| L602              | 1-408-603-21          | INDUCTOR                | 10UH   | R004         | 1-216-065-91 | RES,CHIP                  | 4.7K 5% 1/10W |
| < PHOTO COUPLER > |                       |                         |        | R005         | 1-216-214-00 | RES,CHIP                  | 4.7K 5% 1/8W  |
| PH601             | $\Delta$ 8-749-016-21 | IC TCET1103G            |        | R009         | 1-216-025-91 | RES,CHIP                  | 100 5% 1/10W  |
| < TRANSISTOR >    |                       |                         |        | R010         | 1-216-025-91 | RES,CHIP                  | 100 5% 1/10W  |
| Q001              | 1-801-806-11          | TRANSISTOR DTC144EKA    |        | R011         | 1-216-025-91 | RES,CHIP                  | 100 5% 1/10W  |
| Q010              | 8-729-120-28          | TRANSISTOR 2SC1623-L5L6 |        | R012         | 1-247-807-31 | CARBON                    | 100 5% 1/4W   |
| Q011              | 1-801-806-11          | TRANSISTOR DTC144EKA    |        | R013         | 1-216-065-91 | RES,CHIP                  | 4.7K 5% 1/10W |
| Q012              | 8-729-422-33          | TRANSISTOR 2SD601A-Q-TX |        | R014         | 1-216-295-91 | SHORT                     | 0             |
| Q013              | 8-729-120-28          | TRANSISTOR 2SC1623-L5L6 |        | R015         | 1-216-045-00 | RES,CHIP                  | 680 5% 1/10W  |
| Q016              | 8-729-026-50          | TRANSISTOR 2SA1037AK    |        | R016         | 1-216-055-00 | RES,CHIP                  | 1.8K 5% 1/10W |
| Q017              | 8-729-026-50          | TRANSISTOR 2SA1037AK    |        | R017         | 1-249-429-11 | CARBON                    | 10K 5% 1/4W   |
| Q018              | 8-729-120-28          | TRANSISTOR 2SC1623-L5L6 |        | R018         | 1-216-065-91 | RES,CHIP                  | 4.7K 5% 1/10W |
| Q019              | 8-729-120-28          | TRANSISTOR 2SC1623-L5L6 |        | R019         | 1-216-295-91 | SHORT                     | 0             |
| Q020              | 8-729-120-28          | TRANSISTOR 2SC1623-L5L6 |        | R020         | 1-216-049-91 | RES,CHIP                  | 1K 5% 1/10W   |
| Q021              | 8-729-026-50          | TRANSISTOR 2SA1037AK    |        | R021         | 1-216-065-91 | RES,CHIP                  | 4.7K 5% 1/10W |
| Q022              | 8-729-120-28          | TRANSISTOR 2SC1623-L5L6 |        | R022         | 1-216-049-91 | RES,CHIP                  | 1K 5% 1/10W   |
| Q101              | 8-729-026-50          | TRANSISTOR 2SA1037AK    |        | R023         | 1-216-049-91 | RES,CHIP                  | 1K 5% 1/10W   |
| Q111              | 1-801-806-11          | TRANSISTOR DTC144EKA    |        | R024         | 1-216-073-00 | RES,CHIP                  | 10K 5% 1/10W  |
| Q112              | 8-729-026-50          | TRANSISTOR 2SA1037AK    |        | R025         | 1-216-073-00 | RES,CHIP                  | 10K 5% 1/10W  |
| Q201              | 8-729-120-28          | TRANSISTOR 2SC1623-L5L6 |        | R026         | 1-216-073-00 | RES,CHIP                  | 10K 5% 1/10W  |
| Q202              | 8-729-422-33          | TRANSISTOR 2SD601A-Q-TX |        | R027         | 1-216-083-00 | RES,CHIP                  | 27K 5% 1/10W  |
| Q203              | 8-729-920-75          | TRANSISTOR 2SC2412K     |        | R028         | 1-216-049-91 | RES,CHIP                  | 1K 5% 1/10W   |
| Q204              | 8-729-920-75          | TRANSISTOR 2SC2412K     |        | R029         | 1-216-073-00 | RES,CHIP                  | 10K 5% 1/10W  |
| Q328              | 8-729-120-28          | TRANSISTOR 2SC1623-L5L6 |        | R030         | 1-216-073-00 | RES,CHIP                  | 10K 5% 1/10W  |
| Q329              | 8-729-026-50          | TRANSISTOR 2SA1037AK    |        | R031         | 1-216-073-00 | RES,CHIP                  | 10K 5% 1/10W  |
| Q405              | 8-729-120-28          | TRANSISTOR 2SC1623-L5L6 |        | R032         | 1-216-089-91 | RES,CHIP                  | 47K 5% 1/10W  |
| Q417              | 8-729-026-50          | TRANSISTOR 2SA1037AK    |        | R033         | 1-216-093-91 | RES,CHIP                  | 68K 5% 1/10W  |
|                   |                       |                         |        | R034         | 1-216-049-91 | RES,CHIP                  | 1K 5% 1/10W   |



| REF. NO. | PART.NO      | DESCRIPTION | REMARK |    |       | REF. NO. | PART.NO      | DESCRIPTION   | REMARK |       |       |
|----------|--------------|-------------|--------|----|-------|----------|--------------|---------------|--------|-------|-------|
| R035     | 1-216-198-91 | RES,CHIP    | 1K     | 5% | 1/8W  | R125     | 1-249-417-11 | CARBON        | 1K     | 5%    | 1/4W  |
| R036     | 1-216-049-91 | RES,CHIP    | 1K     | 5% | 1/10W | R126     | 1-216-081-00 | RES,CHIP      | 22K    | 5%    | 1/10W |
| R037     | 1-216-081-00 | RES,CHIP    | 22K    | 5% | 1/10W | R130     | 1-216-085-00 | RES,CHIP      | 33K    | 5%    | 1/10W |
| R038     | 1-216-222-00 | RES,CHIP    | 10K    | 5% | 1/8W  | R134     | 1-216-075-00 | RES,CHIP      | 12K    | 5%    | 1/10W |
| R039     | 1-216-065-91 | RES,CHIP    | 4.7K   | 5% | 1/10W | R144     | 1-216-222-00 | RES,CHIP      | 10K    | 5%    | 1/8W  |
| R040     | 1-216-025-91 | RES,CHIP    | 100    | 5% | 1/10W | R145     | 1-216-212-00 | RES,CHIP      | 3.9K   | 5%    | 1/8W  |
| R050     | 1-216-049-91 | RES,CHIP    | 1K     | 5% | 1/10W | R146     | 1-216-105-91 | RES,CHIP      | 220K   | 5%    | 1/10W |
| R051     | 1-216-174-00 | RES,CHIP    | 100    | 5% | 1/8W  | R151     | 1-216-049-91 | RES,CHIP      | 1K     | 5%    | 1/10W |
| R052     | 1-216-295-91 | SHORT       | 0      |    |       | R153     | 1-216-180-00 | RES,CHIP      | 180    | 5%    | 1/8W  |
| R053     | 1-216-065-91 | RES,CHIP    | 4.7K   | 5% | 1/10W | R154     | 1-216-238-91 | RES,CHIP      | 47K    | 5%    | 1/8W  |
| R054     | 1-216-097-91 | RES,CHIP    | 100K   | 5% | 1/10W | R155     | 1-216-079-00 | RES,CHIP      | 18K    | 5%    | 1/10W |
| R060     | 1-216-025-91 | RES,CHIP    | 100    | 5% | 1/10W | R202     | 1-216-113-00 | RES,CHIP      | 470K   | 5%    | 1/10W |
| R061     | 1-216-025-91 | RES,CHIP    | 100    | 5% | 1/10W | R203     | 1-216-081-00 | RES,CHIP      | 22K    | 5%    | 1/10W |
| R062     | 1-216-182-00 | RES,CHIP    | 220    | 5% | 1/8W  | R204     | 1-247-863-91 | CARBON        | 22K    | 5%    | 1/4W  |
| R063     | 1-216-089-91 | RES,CHIP    | 47K    | 5% | 1/10W | R206     | 1-216-085-00 | RES,CHIP      | 33K    | 5%    | 1/10W |
| R064     | 1-216-089-91 | RES,CHIP    | 47K    | 5% | 1/10W | R208     | 1-216-055-00 | RES,CHIP      | 1.8K   | 5%    | 1/10W |
| R065     | 1-216-025-91 | RES,CHIP    | 100    | 5% | 1/10W | R209     | 1-216-049-91 | RES,CHIP      | 1K     | 5%    | 1/10W |
| R066     | 1-216-057-00 | RES,CHIP    | 2.2K   | 5% | 1/10W | R211     | 1-215-873-00 | METAL OXIDE   | 4.7K   | 5%    | 1W F  |
| R067     | 1-216-065-91 | RES,CHIP    | 4.7K   | 5% | 1/10W | R213     | 1-216-093-91 | RES,CHIP      | 68K    | 5%    | 1/10W |
| R069     | 1-216-041-00 | RES,CHIP    | 470    | 5% | 1/10W | R214     | 1-216-061-91 | RES,CHIP      | 3.3K   | 5%    | 1/10W |
| R071     | 1-216-200-11 | RES,CHIP    | 1.2K   | 5% | 1/8W  | R215     | 1-216-061-91 | RES,CHIP      | 3.3K   | 5%    | 1/10W |
| R075     | 1-216-214-00 | RES,CHIP    | 4.7K   | 5% | 1/8W  | R301     | 1-216-025-91 | RES,CHIP      | 100    | 5%    | 1/10W |
| R077     | 1-216-082-00 | RES,CHIP    | 24K    | 5% | 1/10W | R302     | 1-216-081-00 | RES,CHIP      | 22K    | 5%    | 1/10W |
| R082     | 1-216-013-91 | RES,CHIP    | 33     | 5% | 1/10W | R303     | 1-216-073-00 | RES,CHIP      | 10K    | 5%    | 1/10W |
| R083     | 1-216-176-91 | RES,CHIP    | 120    | 5% | 1/8W  | R304     | 1-216-065-91 | RES,CHIP      | 4.7K   | 5%    | 1/10W |
| R084     | 1-216-162-91 | RES,CHIP    | 33     | 5% | 1/8W  | R305     | 1-412-002-31 | INDUCTOR CHIP | 4.7UH  |       |       |
| R085     | 1-216-176-91 | RES,CHIP    | 120    | 5% | 1/8W  | R306     | 1-216-057-00 | RES,CHIP      | 2.2K   | 5%    | 1/10W |
| R086     | 1-216-162-91 | RES,CHIP    | 33     | 5% | 1/8W  | R307     | 1-216-041-00 | RES,CHIP      | 470    | 5%    | 1/10W |
| R087     | 1-216-027-91 | RES,CHIP    | 120    | 5% | 1/10W | R308     | 1-216-049-91 | RES,CHIP      | 1K     | 5%    | 1/10W |
| R088     | 1-216-214-91 | RES,CHIP    | 4.7K   | 5% | 1/8W  | R309     | 1-216-675-11 | METAL CHIP    | 10K    | 0.50% | 1/10W |
| R089     | 1-216-081-00 | RES,CHIP    | 22K    | 5% | 1/10W | R310     | 1-216-022-00 | RES,CHIP      | 75     | 5%    | 1/10W |
| R090     | 1-216-206-00 | RES,CHIP    | 2.2K   | 5% | 1/8W  | R312     | 1-216-061-00 | RES,CHIP      | 3.3K   | 5%    | 1/10W |
| R091     | 1-216-081-00 | RES,CHIP    | 22K    | 5% | 1/10W | R313     | 1-216-025-91 | RES,CHIP      | 100    | 5%    | 1/10W |
| R092     | 1-216-073-00 | RES,CHIP    | 10K    | 5% | 1/10W | R314     | 1-216-025-91 | RES,CHIP      | 100    | 5%    | 1/10W |
| R094     | 1-216-025-91 | RES,CHIP    | 100    | 5% | 1/10W | R315     | 1-216-075-00 | RES,CHIP      | 12K    | 5%    | 1/10W |
| R095     | 1-216-025-91 | RES,CHIP    | 100    | 5% | 1/10W | R316     | 1-216-025-91 | RES,CHIP      | 100    | 5%    | 1/10W |
| R096     | 1-247-807-31 | CARBON      | 100    | 5% | 1/4W  | R317     | 1-216-097-91 | RES,CHIP      | 100K   | 5%    | 1/10W |
| R097     | 1-247-807-31 | CARBON      | 100    | 5% | 1/4W  | R318     | 1-412-002-41 | INDUCTOR      | 4.7UH  |       |       |
| R098     | 1-216-097-91 | RES,CHIP    | 100K   | 5% | 1/10W | R319     | 1-412-002-41 | INDUCTOR      | 4.7UH  |       |       |
| R099     | 1-216-246-00 | RES,CHIP    | 100K   | 5% | 1/8W  | R320     | 1-412-002-41 | INDUCTOR      | 4.7UH  |       |       |
| R101     | 1-216-049-91 | RES,CHIP    | 1K     | 5% | 1/10W | R321     | 1-216-025-91 | RES,CHIP      | 100    | 5%    | 1/10W |
| R103     | 1-216-041-00 | RES,CHIP    | 470    | 5% | 1/10W | R322     | 1-216-047-91 | RES,CHIP      | 820    | 5%    | 1/10W |
| R105     | 1-216-071-91 | RES,CHIP    | 8.2K   | 5% | 1/10W | R323     | 1-216-025-91 | RES,CHIP      | 100    | 5%    | 1/10W |
| R106     | 1-215-900-11 | METAL OXIDE | 22K    | 5% | 2W F  | R324     | 1-412-002-31 | INDUCTOR CHIP | 4.7UH  |       |       |
| R120     | 1-216-037-00 | RES,CHIP    | 330    | 5% | 1/10W | R325     | 1-412-002-31 | INDUCTOR CHIP | 4.7UH  |       |       |
| R121     | 1-216-025-91 | RES,CHIP    | 100    | 5% | 1/10W | R326     | 1-216-113-00 | RES,CHIP      | 470K   | 5%    | 1/10W |
| R122     | 1-216-025-91 | RES,CHIP    | 100    | 5% | 1/10W | R327     | 1-216-295-91 | SHORT         | 0      |       |       |

| REF. NO. | PART.NO      | DESCRIPTION           | REMARK        | REF. NO. | PART.NO      | DESCRIPTION          | REMARK           |
|----------|--------------|-----------------------|---------------|----------|--------------|----------------------|------------------|
| R328     | 1-216-049-91 | RES,CHIP              | 1K 5% 1/10W   | R457     | 1-216-174-00 | RES,CHIP             | 100 5% 1/8W      |
| R329     | 1-216-031-00 | RES,CHIP              | 180 5% 1/10W  | R459     | 1-247-807-31 | CARBON               | 100 5% 1/4W      |
| R330     | 1-216-089-91 | RES,CHIP              | 47K 5% 1/10W  | R460     | 1-249-403-11 | CARBON               | 68 5% 1/4W       |
| R331     | 1-216-206-91 | RES,CHIP              | 2.2K 5% 1/8W  | R461     | 1-216-033-00 | RES,CHIP             | 220 5% 1/10W     |
| R332     | 1-216-206-00 | RES,CHIP              | 2.2K 5% 1/8W  | R501     | 1-216-081-00 | RES,CHIP             | 22K 5% 1/10W     |
| R333     | 1-216-206-00 | RES,CHIP              | 2.2K 5% 1/8W  | R502     | 1-216-097-91 | RES,CHIP             | 100K 5% 1/10W    |
| R334     | 1-216-025-91 | RES,CHIP              | 100 5% 1/10W  | R503     | 1-215-888-00 | METAL OXIDE          | 220 5% 2W F      |
| R335     | 1-216-025-91 | RES,CHIP              | 100 5% 1/10W  | R504     | 1-249-385-11 | CARBON               | 2.2 5% 1/4W F    |
| R336     | 1-216-077-00 | RES,CHIP              | 15K 5% 1/10W  | R505     | 1-216-667-11 | METAL CHIP           | 4.7K 0.50% 1/10W |
| R338     | 1-216-049-91 | RES,CHIP              | 1K 5% 1/10W   | R506     | 1-216-663-11 | METAL CHIP           | 3.3K 0.50% 1/10W |
| R339     | 1-216-081-00 | RES,CHIP              | 22K 5% 1/10W  | R507     | 1-216-349-00 | METAL OXIDE          | 1 5% 1W F        |
| R340     | 1-535-143-11 | LEAD, JUMPER (10.0MM) |               | R508     | 1-216-667-11 | METAL CHIP           | 4.7K 0.50% 1/10W |
| R341     | 1-535-143-11 | LEAD, JUMPER (10.0MM) |               | R509     | 1-216-663-11 | METAL CHIP           | 3.3K 0.50% 1/10W |
| R342     | 1-216-103-00 | RES,CHIP              | 180K 5% 1/10W | R510     | 1-216-081-00 | RES,CHIP             | 22K 5% 1/10W     |
| R401     | 1-216-113-00 | RES,CHIP              | 470K 5% 1/10W | R511     | 1-215-869-11 | METAL OXIDE          | 1K 5% 1W F       |
| R402     | 1-216-295-91 | SHORT                 | 0             | R512     | 1-249-382-11 | CARBON               | 1.2 5% 1/4W F    |
| R403     | 1-216-041-00 | RES,CHIP              | 470 5% 1/10W  | R513     | 1-216-097-91 | RES,CHIP             | 100K 5% 1/10W    |
| R404     | 1-216-113-00 | RES,CHIP              | 470K 5% 1/10W | R514     | 1-249-377-11 | CARBON               | 0.47 5% 1/4W F   |
| R406     | 1-216-113-00 | RES,CHIP              | 470K 5% 1/10W | R515     | 1-249-377-11 | CARBON               | 0.47 5% 1/4W F   |
| R407     | 1-216-295-91 | SHORT                 | 0             | R516     | 1-249-493-11 | CARBON               | 56K 5% 1/2W      |
| R408     | 1-216-022-00 | RES,CHIP              | 75 5% 1/10W   | R517     | 1-247-855-91 | CARBON               | 10K 5% 1/4W      |
| R409     | 1-216-174-00 | RES,CHIP              | 100 5% 1/8W   | R518     | 1-216-661-91 | FILM                 | 2.7K 0.50% 1/10W |
| R410     | 1-216-174-00 | RES,CHIP              | 100 5% 1/8W   | R520     | 1-215-884-11 | METAL OXIDE          | 47 5% 2W F       |
| R411     | 1-216-022-00 | RES,CHIP              | 75 5% 1/10W   | R521     | 1-216-121-91 | RES,CHIP             | 1M 5% 1/10W      |
| R412     | 1-216-174-00 | RES,CHIP              | 100 5% 1/8W   | R522     | 1-216-097-91 | RES,CHIP             | 100K 5% 1/10W    |
| R413     | 1-216-295-91 | SHORT                 | 0             | R523     | 1-216-121-91 | RES,CHIP             | 1M 5% 1/10W      |
| R414     | 1-216-022-00 | RES,CHIP              | 75 5% 1/10W   | R524     | 1-216-083-00 | RES,CHIP             | 27K 5% 1/10W     |
| R415     | 1-216-022-00 | RES,CHIP              | 75 5% 1/10W   | R525     | 1-216-057-00 | RES,CHIP             | 2.2K 5% 1/10W    |
| R417     | 1-249-403-11 | CARBON                | 68 5% 1/4W    | R526     | 1-216-089-91 | RES,CHIP             | 47K 5% 1/10W     |
| R418     | 1-249-413-11 | CARBON                | 470 5% 1/4W   | R527     | 1-216-077-00 | RES,CHIP             | 15K 5% 1/10W     |
| R419     | 1-216-022-00 | RES,CHIP              | 75 5% 1/10W   | R528     | 1-216-097-91 | RES,CHIP             | 100K 5% 1/10W    |
| R420     | 1-216-041-00 | RES,CHIP              | 470 5% 1/10W  | R529     | 1-216-073-00 | RES,CHIP             | 10K 5% 1/10W     |
| R421     | 1-216-113-00 | RES,CHIP              | 470K 5% 1/10W | R530     | 1-216-085-00 | RES,CHIP             | 33K 5% 1/10W     |
| R425     | 1-216-222-91 | RES,CHIP              | 10K 5% 1/8W   | R531     | 1-216-057-00 | RES,CHIP             | 2.2K 5% 1/10W    |
| R427     | 1-216-113-00 | RES,CHIP              | 470K 5% 1/10W | R532     | 1-216-065-91 | RES,CHIP             | 4.7K 5% 1/10W    |
| R429     | 1-216-041-00 | RES,CHIP              | 470 5% 1/10W  | R533     | 1-216-073-00 | RES,CHIP             | 10K 5% 1/10W     |
| R430     | 1-216-113-00 | RES,CHIP              | 470K 5% 1/10W | R534     | 1-216-105-91 | RES,CHIP             | 220K 5% 1/10W    |
| R431     | 1-216-022-00 | RES,CHIP              | 75 5% 1/10W   | R535     | 1-216-101-00 | RES,CHIP             | 150K 5% 1/10W    |
| R432     | 1-216-113-00 | RES,CHIP              | 470K 5% 1/10W | R539     | 1-216-049-91 | RES,CHIP             | 1K 5% 1/10W      |
| R435     | 1-216-022-00 | RES,CHIP              | 75 5% 1/10W   | R540     | 1-215-861-00 | METAL OXIDE          | 47 5% 1W F       |
| R437     | 1-216-022-00 | RES,CHIP              | 75 5% 1/10W   | R541     | 1-216-097-91 | RES,CHIP             | 100K 5% 1/10W    |
| R439     | 1-216-041-00 | RES,CHIP              | 470 5% 1/10W  | R542     | 1-216-089-91 | RES,CHIP             | 47K 5% 1/10W     |
| R440     | 1-216-113-00 | RES,CHIP              | 470K 5% 1/10W | R543     | 1-216-089-91 | RES,CHIP             | 47K 5% 1/10W     |
| R442     | 1-216-073-00 | RES,CHIP              | 10K 5% 1/10W  | R546     | 1-249-401-11 | CARBON               | 47 5% 1/4W F     |
| R445     | 1-216-171-00 | RES,CHIP              | 75 5% 1/8W    | R547     | 1-535-303-00 | LEAD, JUMPER (5.0MM) |                  |
| R450     | 1-216-041-00 | RES,CHIP              | 470 5% 1/10W  | R548     | 1-202-973-91 | FUSIBLE              | 3.3 5% 1/4W      |
| R454     | 1-216-041-00 | RES,CHIP              | 470 5% 1/10W  | R549     | 1-216-363-00 | METAL OXIDE          | 0.33 5% 2W F     |

| REF.NO. | PART.NO               | DESCRIPTION          | REMARK          |
|---------|-----------------------|----------------------|-----------------|
| R551    | 1-215-873-00          | METAL OXIDE          | 4.7K 5% 1W F    |
| R552    | 1-216-061-00          | RES,CHIP             | 3.3K 5% 1/10W   |
| R553    | 1-249-381-11          | CARBON               | 1 5% 1/4W F     |
| R555    | 1-216-208-91          | RES, CHIP            | 2.7K 5% 1/8W    |
| R571    | 1-249-417-11          | CARBON               | 1K 5% 1/4W F    |
| R572    | 1-216-369-00          | METAL OXIDE          | 1 5% 2W F       |
| R573    | 1-216-097-91          | RES,CHIP             | 100K 5% 1/10W   |
| R574    | 1-216-065-91          | RES,CHIP             | 4.7K 5% 1/10W   |
| R575    | 1-216-097-91          | RES,CHIP             | 100K 5% 1/10W   |
| R581    | 1-216-089-91          | RES,CHIP             | 47K 5% 1/10W    |
| R582    | 1-216-089-91          | RES,CHIP             | 47K 5% 1/10W    |
| R583    | 1-216-081-00          | RES,CHIP             | 22K 5% 1/10W    |
| R588    | 1-216-065-91          | RES,CHIP             | 4.7K 5% 1/10W   |
| R589    | 1-216-097-91          | RES,CHIP             | 100K 5% 1/10W   |
| R590    | 1-216-230-00          | RES,CHIP             | 22K 5% 1/8W     |
| R591    | 1-215-892-11          | METAL OXIDE          | 1K 5% 2W F      |
| R593    | 1-249-439-11          | CARBON               | 68K 5% 1/4W     |
| R594    | 1-216-057-00          | RES,CHIP             | 2.2K 5% 1/10W   |
| R595    | 1-249-377-11          | CARBON               | 0.47 5% 1/4W F  |
| R602    | $\Delta$ 1-202-961-11 | CEMENTED             | 1.8 5% 10W      |
| R603    | 1-202-933-61          | FUSIBLE              | 0.1 10% 1/2W F  |
| R604    | 1-249-421-11          | CARBON               | 2.2K 5% 1/4W    |
| R607    | $\Delta$ 1-202-961-11 | CEMENTED             | 1.8 5% 10W      |
| R608    | 1-216-488-11          | METAL OXIDE          | 18K 5% 3W F     |
| R611    | 1-249-415-11          | CARBON               | 680 5% 1/4W     |
| R616    | 1-216-393-00          | METAL OXIDE          | 2.2 5% 3W F     |
| R617    | 1-249-405-11          | CARBON               | 100 5% 1/4W F   |
| R619    | 1-216-214-00          | RES,CHIP             | 4.7K 5% 1/8W    |
| R620    | 1-216-055-00          | RES,CHIP             | 1.8K 5% 1/10W   |
| R622    | 1-249-401-11          | CARBON               | 47 5% 1/4W      |
| R627    | 1-249-384-91          | CARBON               | 1.8 5% 1/4W     |
| R628    | 1-247-791-91          | CARBON               | 22 5% 1/4W      |
| R632    | $\Delta$ 1-240-030-91 | METAL                | 4.7M 5% 1/2W    |
| R634    | $\Delta$ 1-240-030-91 | METAL                | 4.7M 5% 1/2W    |
| R651    | $\Delta$ 1-220-926-11 | FUSIBLE              | 0.47 10% 1/2W F |
| R652    | 1-216-393-00          | METAL OXIDE          | 2.2 5% 3W F     |
| R653    | 1-216-393-00          | METAL OXIDE          | 2.2 5% 3W F     |
| R654    | 1-249-389-11          | CARBON               | 4.7 5% 1/4W F   |
| R658    | 1-215-929-11          | METAL OXIDE          | 100K 5% 3W F    |
| R659    | 1-216-383-11          | METAL OXIDE          | 0.33 5% 3W F    |
| R660    | 1-216-383-11          | METAL OXIDE          | 0.33 5% 3W F    |
| R661    | 1-247-843-11          | CARBON               | 3.3K 5% 1/4W    |
| R662    | 1-215-929-11          | METAL OXIDE          | 100K 5% 3W F    |
| R665    | 1-215-902-11          | METAL OXIDE          | 47K 5% 2W F     |
| R666    | 1-535-143-71          | LEAD, JUMPER (7.5MM) |                 |
| R667    | 1-216-488-11          | METAL OXIDE          | 18K 5% 3W F     |

| REF.NO.                                                 | PART.NO               | DESCRIPTION                               | REMARK        |
|---------------------------------------------------------|-----------------------|-------------------------------------------|---------------|
|                                                         |                       | < RELAY >                                 |               |
| RY601                                                   | $\Delta$ 1-755-266-11 | RELAY, AC POWER                           |               |
|                                                         |                       | < SWITCH >                                |               |
| SW532                                                   | 1-572-707-11          | SWITCH, LEVER                             |               |
|                                                         |                       | < TRANSFORMER >                           |               |
| T511                                                    | $\Delta$ 1-453-308-11 | TRANSFORMER ASSY, FLYBACK (NX-4521//U2B4) |               |
| T531                                                    | 1-437-195-11          | TRANSFORMER, HORIZONTAL DRIVE             |               |
| T532                                                    | 1-426-981-11          | TRANSFORMER, FERRITE (PMT)                |               |
| T533                                                    | 1-433-906-11          | TRANSFORMER, HORIZONTAL LINEAR            |               |
| T601                                                    | $\Delta$ 1-427-962-11 | TRANSFORMER, LINE FILTER                  |               |
| T602                                                    | 1-431-732-21          | TRANSFORMER, CONVERTER (SRT)              |               |
| T603                                                    | $\Delta$ 1-433-933-11 | TRANSFORMER, CONVERTER (SRT)              |               |
|                                                         |                       | < THERMISTOR >                            |               |
| THP601                                                  | $\Delta$ 1-810-961-11 | THERMISTOR, POSITIVE                      |               |
|                                                         |                       | < VARISTOR >                              |               |
| VDR601                                                  | $\Delta$ 4-374-846-01 | VARISTOR                                  |               |
|                                                         |                       | < CRYSTAL >                               |               |
| X001                                                    | 1-578-774-11          | VIBRATOR, CRYSTAL                         |               |
| X302                                                    | 1-567-505-11          | OSCILLATOR, CRYSTAL                       |               |
| X303                                                    | 1-567-504-11          | OSCILLATOR, CRYSTAL                       |               |
| <b>A Board Variant Parts KV-29FC20A/29FC20D/29FC20E</b> |                       |                                           |               |
|                                                         |                       | < CAPACITOR >                             |               |
| C111                                                    | 1-216-296-91          | SHORT                                     | 0             |
| C123                                                    | 1-102-108-00          | CERAMIC                                   | 150PF 10% 50V |
| C124                                                    | 1-104-644-11          | ELECT                                     | 47MF 20% 25V  |
| C125                                                    | 1-101-880-00          | CERAMIC                                   | 47PF 5% 50V   |
| C132                                                    | 1-102-525-11          | CERAMIC                                   | 68PF 5% 50V   |
|                                                         |                       | < FILTER >                                |               |
| SWF101                                                  | 1-767-874-11          | FILTER, SURFACE WAVE                      |               |
|                                                         |                       | < IC >                                    |               |
| IC101                                                   | 8-759-466-49          | IC TDA9817/VI                             |               |
|                                                         |                       | < COIL >                                  |               |
| L105                                                    | 1-408-603-31          | INDUCTOR                                  | 10UH          |

| REF.NO.                                 | PART.NO      | DESCRIPTION             | REMARK        | REF.NO.        | PART.NO      | DESCRIPTION              | REMARK        |
|-----------------------------------------|--------------|-------------------------|---------------|----------------|--------------|--------------------------|---------------|
| < TRANSISTOR >                          |              |                         |               | < COIL >       |              |                          |               |
| Q108                                    | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |               | L108           | 1-410-985-42 | INDUCTOR CHIP 0.22UH     |               |
| Q160                                    | 8-729-422-33 | TRANSISTOR 2SD601A-Q-TX |               | L109           | 1-410-789-11 | INDUCTOR 0.47UH          |               |
| < RESISTOR >                            |              |                         |               | L117           | 1-412-002-41 | INDUCTOR CHIP 4.7UH      |               |
| JR113                                   | 1-216-295-91 | SHORT                   | 0             | < TRANSISTOR > |              |                          |               |
| R114                                    | 1-216-295-91 | SHORT                   | 0             | Q102           | 8-729-026-50 | TRANSISTOR 2SA1037AK     |               |
| R133                                    | 1-216-295-91 | SHORT                   | 0             | Q104           | 1-801-806-11 | TRANSISTOR DTC144EKA     |               |
| R137                                    | 1-216-035-00 | RES,CHIP                | 270 5% 1/10W  | Q107           | 8-729-022-54 | TRANSISTOR 2SC3779C,D-AA |               |
| R138                                    | 1-216-097-91 | RES,CHIP                | 100K 5% 1/10W | Q109           | 1-801-806-11 | TRANSISTOR DTC144EKA     |               |
| R139                                    | 1-216-093-91 | RES,CHIP                | 68K 5% 1/10W  | Q110           | 1-801-806-11 | TRANSISTOR DTC144EKA     |               |
| R140                                    | 1-216-035-00 | RES,CHIP                | 270 5% 1/10W  | < RESISTOR >   |              |                          |               |
| R141                                    | 1-216-043-91 | RES,CHIP                | 560 5% 1/10W  | JR130          | 1-216-296-91 | SHORT                    | 0             |
| R143                                    | 1-249-406-11 | CARBON                  | 120 5% 1/4W   | R109           | 1-216-061-00 | RES,CHIP                 | 3.3K 5% 1/10W |
| R159                                    | 1-247-843-11 | CARBON                  | 3.3K 5% 1/4W  | R110           | 1-216-200-11 | RES,CHIP                 | 1.2K 5% 1/8W  |
| R160                                    | 1-216-049-91 | RES,CHIP                | 1K 5% 1/10W   | R111           | 1-216-053-00 | RES,CHIP                 | 1.5K 5% 1/10W |
| R161                                    | 1-216-021-00 | RES,CHIP                | 68 5% 1/10W   | R112           | 1-216-053-00 | RES,CHIP                 | 1.5K 5% 1/10W |
| < TUNER >                               |              |                         |               | R113           | 1-216-027-00 | RES,CHIP                 | 120 5% 1/10W  |
| TU101                                   | 8-598-432-10 | TUNER (BTP-AC411)       |               | R114           | 1-216-041-91 | RES,CHIP                 | 470 5% 1/10W  |
| <b>A Board Variant Parts KV-29FC20B</b> |              |                         |               | R123           | 1-216-037-00 | RES,CHIP                 | 330 5% 1/10W  |
| < CAPACITOR >                           |              |                         |               | R127           | 1-216-031-00 | RES,CHIP                 | 180 5% 1/10W  |
| C100                                    | 1-163-038-91 | CERAMIC CHIP 0.1MF      | 25V           | R128           | 1-216-065-91 | RES,CHIP                 | 4.7K 5% 1/10W |
| C111                                    | 1-163-059-00 | CERAMIC CHIP 0.01MF     | 50V           | R129           | 1-216-063-91 | RES,CHIP                 | 3.9K 5% 1/10W |
| C121                                    | 1-163-031-11 | CERAMIC CHIP 0.01MF     | 50V           | R137           | 1-216-057-00 | RES,CHIP                 | 2.2K 5% 1/10W |
| C133                                    | 1-162-638-11 | CERAMIC CHIP 1MF        | 16V           | R138           | 1-216-689-11 | RES,CHIP                 | 39K 5% 1/10W  |
| C140                                    | 1-104-664-11 | ELECT 47MF              | 20% 16V       | R139           | 1-216-075-00 | RES,CHIP                 | 12K 5% 1/10W  |
| < FILTER >                              |              |                         |               | R140           | 1-216-073-00 | RES,CHIP                 | 10K 5% 1/10W  |
| CF105                                   | 1-760-154-11 | TRAP, CERAMIC           |               | R141           | 1-216-295-91 | SHORT                    | 0             |
| SWF101                                  | 1-579-273-11 | FILTER, SURFACE WAVE    |               | R142           | 1-216-043-91 | RES,CHIP                 | 560 5% 1/10W  |
| SWF103                                  | 1-767-083-11 | FILTER, SURFACE WAVE    |               | R147           | 1-216-017-91 | RES,CHIP                 | 47 5% 1/10W   |
| < DIODE >                               |              |                         |               | R148           | 1-216-174-00 | RES,CHIP                 | 100 5% 1/8W   |
| D102                                    | 8-719-050-59 | DIODE BA592-GEG         |               | R149           | 1-216-049-91 | RES,CHIP                 | 1K 5% 1/10W   |
| D104                                    | 8-719-914-43 | DIODE DAN202K           |               | R152           | 1-216-025-91 | RES,CHIP                 | 100 5% 1/10W  |
| < IC >                                  |              |                         |               | R156           | 1-216-065-91 | RES,CHIP                 | 4.7K 5% 1/10W |
| IC101                                   | 8-759-466-47 | IC TDA9818/V1           |               | R157           | 1-216-065-91 | RES,CHIP                 | 4.7K 5% 1/10W |
| < VARIABLE RESISTOR >                   |              |                         |               | R158           | 1-216-025-91 | RES,CHIP                 | 100 5% 1/10W  |
|                                         |              |                         |               | R159           | 1-249-419-11 | CARBON                   | 1.5K 5% 1/4W  |
|                                         |              |                         |               | R160           | 1-216-295-91 | SHORT                    | 0             |
|                                         |              |                         |               | R161           | 1-216-295-91 | SHORT                    | 0             |
|                                         |              |                         |               | RV101          | 1-241-765-11 | RES, ADJ, CARBON 22K     |               |



The components identified by shading and marked  $\Delta$  are critical for safety  
Replace only with the part number specified.

REF.NO. PART.NO DESCRIPTION REMARK

< TUNER >

TU101 1-693-418-11 TUNER (TELE9-001A)

**\*A-1638-127-A C Board, Complete**

< CAPACITOR >

|      |              |         |          |     |      |
|------|--------------|---------|----------|-----|------|
| C702 | 1-102-109-00 | CERAMIC | 180PF    | 10% | 50V  |
| C703 | 1-102-110-91 | CERAMIC | 220PF    | 10% | 50V  |
| C704 | 1-101-004-00 | CERAMIC | 0.01MF   |     | 50V  |
| C705 | 1-101-004-00 | CERAMIC | 0.01MF   |     | 50V  |
| C706 | 1-102-074-00 | CERAMIC | 0.001MF  | 10% | 50V  |
| C707 | 1-102-074-00 | CERAMIC | 0.001MF  | 10% | 50V  |
| C708 | 1-162-114-00 | CERAMIC | 0.0047MF |     | 2KV  |
| C709 | 1-102-074-00 | CERAMIC | 0.001MF  | 10% | 50V  |
| C710 | 1-136-189-00 | FILM    | 0.1MF    | 10% | 250V |
| C712 | 1-102-109-00 | CERAMIC | 180PF    | 10% | 50V  |
| C713 | 1-101-004-00 | CERAMIC | 0.01MF   |     | 50V  |
| C714 | 1-104-665-11 | ELECT   | 100MF    | 20% | 16V  |
| C717 | 1-102-114-00 | CERAMIC | 470PF    | 10% | 50V  |
| C718 | 1-102-114-00 | CERAMIC | 470PF    | 10% | 50V  |
| C719 | 1-102-114-00 | CERAMIC | 470PF    | 10% | 50V  |

< CONNECTOR >

|       |               |                    |
|-------|---------------|--------------------|
| CN701 | 1-784-633-11  | PIN, CONNECTOR 4P  |
| CN702 | 1-695-915-11  | TAB (CONTACT)      |
| CN703 | *1-564-509-11 | PLUG, CONNECTOR 6P |

< DIODE >

|      |              |                  |
|------|--------------|------------------|
| D702 | 8-719-991-33 | DIODE 1SS133T-77 |
| D703 | 8-719-991-33 | DIODE 1SS133T-77 |
| D704 | 8-719-991-33 | DIODE 1SS133T-77 |
| D705 | 8-719-991-33 | DIODE 1SS133T-77 |
| D706 | 8-719-991-33 | DIODE 1SS133T-77 |
| D707 | 8-719-991-33 | DIODE 1SS133T-77 |
| D708 | 8-719-991-33 | DIODE 1SS133T-77 |
| D709 | 8-719-991-33 | DIODE 1SS133T-77 |
| D710 | 8-719-991-33 | DIODE 1SS133T-77 |
| D711 | 8-719-991-33 | DIODE 1SS133T-77 |
| D712 | 8-719-991-33 | DIODE 1SS133T-77 |
| D714 | 8-719-991-33 | DIODE 1SS133T-77 |
| D715 | 8-719-991-33 | DIODE 1SS133T-77 |
| D716 | 8-719-991-33 | DIODE 1SS133T-77 |
| D717 | 8-719-991-33 | DIODE 1SS133T-77 |
| D718 | 8-719-991-33 | DIODE 1SS133T-77 |
| D719 | 8-719-991-33 | DIODE 1SS133T-77 |
| D721 | 8-719-991-33 | DIODE 1SS133T-77 |
| D722 | 8-719-991-33 | DIODE 1SS133T-77 |

REF.NO. PART.NO DESCRIPTION REMARK

< CRT SOCKET >

J701  $\Delta$  1-251-732-11 SOCKET, CRT

< COIL >

L704 1-414-183-41 INDUCTOR 10UH

< TRANSISTOR >

|      |              |                        |
|------|--------------|------------------------|
| Q701 | 8-729-046-28 | TRANSISTOR BF420-126   |
| Q702 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q703 | 8-729-046-28 | TRANSISTOR BF420-126   |
| Q704 | 8-729-200-17 | TRANSISTOR 2SA1091-O   |
| Q705 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q706 | 8-729-046-28 | TRANSISTOR BF420-126   |
| Q707 | 8-729-200-17 | TRANSISTOR 2SA1091-O   |
| Q708 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q709 | 8-729-046-28 | TRANSISTOR BF420-126   |
| Q710 | 8-729-200-17 | TRANSISTOR 2SA1091-O   |
| Q711 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q712 | 8-729-046-28 | TRANSISTOR BF420-126   |
| Q713 | 8-729-046-28 | TRANSISTOR BF420-126   |
| Q714 | 8-729-026-39 | TRANSISTOR 2SA933AS-QT |
| Q715 | 8-729-200-17 | TRANSISTOR 2SA1091-O   |
| Q716 | 8-729-200-17 | TRANSISTOR 2SA1091-O   |
| Q717 | 8-729-200-17 | TRANSISTOR 2SA1091-O   |

< RESISTOR >

|      |              |                       |      |     |        |
|------|--------------|-----------------------|------|-----|--------|
| R701 | 1-247-895-91 | CARBON                | 470K | 5%  | 1/4W   |
| R702 | 1-216-464-11 | METAL OXIDE           | 18K  | 5%  | 2W F   |
| R703 | 1-249-405-11 | CARBON                | 100  | 5%  | 1/4W F |
| R704 | 1-535-143-21 | LEAD, JUMPER (12.5MM) |      |     |        |
| R705 | 1-249-931-11 | CARBON                | 2.2K | 5%  | 1/4W F |
| R706 | 1-247-815-91 | CARBON                | 220  | 5%  | 1/4W   |
| R707 | 1-247-819-91 | CARBON                | 330  | 5%  | 1/4W   |
| R708 | 1-249-401-11 | CARBON                | 47   | 5%  | 1/4W   |
| R709 | 1-202-844-00 | SOLID                 | 330K | 10% | 1/2W   |
| R710 | 1-247-895-91 | CARBON                | 470K | 5%  | 1/4W   |
| R712 | 1-249-931-11 | CARBON                | 2.2K | 5%  | 1/4W F |
| R713 | 1-247-895-91 | CARBON                | 470K | 5%  | 1/4W   |
| R714 | 1-216-464-11 | METAL OXIDE           | 18K  | 5%  | 2W F   |
| R715 | 1-249-405-11 | CARBON                | 100  | 5%  | 1/4W F |
| R716 | 1-247-815-91 | CARBON                | 220  | 5%  | 1/4W   |
| R717 | 1-249-412-11 | CARBON                | 390  | 5%  | 1/4W   |
| R718 | 1-202-814-11 | SOLID                 | 33K  | 10% | 1/2W   |
| R719 | 1-249-401-11 | CARBON                | 47   | 5%  | 1/4W   |
| R721 | 1-249-405-11 | CARBON                | 100  | 5%  | 1/4W F |
| R722 | 1-202-848-00 | SOLID                 | 680K | 10% | 1/2W   |

| REF.NO.                                 | PART.NO          | DESCRIPTION                | REMARK         | REF.NO.       | PART.NO       | DESCRIPTION                  | REMARK   |
|-----------------------------------------|------------------|----------------------------|----------------|---------------|---------------|------------------------------|----------|
| R724                                    | 1-260-131-11     | CARBON                     | 470K 5% 1/2W   | C1906         | 1-163-021-91  | CERAMIC CHIP 0.01MF          | 10% 50V  |
| R725                                    | 1-249-425-11     | CARBON                     | 4.7K 5% 1/4W   | C1911         | 1-109-954-11  | ELECT 0.47MF                 | 20% 160V |
| R726                                    | 1-249-931-11     | CARBON                     | 2.2K 5% 1/4W F | C1912         | 1-102-030-00  | CERAMIC 330PF                | 10% 500V |
| R727                                    | 1-247-815-91     | CARBON                     | 220 5% 1/4W    | C1913         | 1-129-992-00  | FILM 0.0024MF                | 5% 630V  |
| R729                                    | 1-249-412-11     | CARBON                     | 390 5% 1/4W    | C1914         | 1-102-244-00  | CERAMIC 220PF                | 10% 500V |
| R730                                    | 1-249-401-11     | CARBON                     | 47 5% 1/4W     | C1915         | 1-136-205-11  | FILM 0.022MF                 | 10% 250V |
| R733                                    | 1-249-437-11     | CARBON                     | 47K 5% 1/4W    | C1916         | 1-163-005-11  | CERAMIC CHIP 470PF           | 10% 50V  |
| R734                                    | 1-247-807-31     | CARBON                     | 100 5% 1/4W    | C1917         | 1-102-228-00  | CERAMIC 470PF                | 10% 500V |
| R736                                    | 1-216-464-11     | METAL OXIDE                | 18K 5% 2W F    | C1951         | 1-126-964-11  | ELECT 10MF                   | 20% 50V  |
| R741                                    | 1-202-549-00     | SOLID                      | 100 20% 1/2W   | C1952         | 1-126-964-11  | ELECT 10MF                   | 20% 50V  |
| R746                                    | 1-249-417-11     | CARBON                     | 1K 5% 1/4W     | C1953         | 1-136-159-00  | FILM 0.033MF                 | 5% 50V   |
| R750                                    | 1-249-417-11     | CARBON                     | 1K 5% 1/4W     | C1954         | 1-163-021-91  | CERAMIC CHIP 0.01MF          | 10% 50V  |
| R751                                    | 1-249-417-11     | CARBON                     | 1K 5% 1/4W     | C1957         | 1-126-964-11  | ELECT 10MF                   | 20% 50V  |
| < VARIABLE RESISTOR >                   |                  |                            |                | C1958         | 1-136-169-00  | FILM 0.22MF                  | 5% 50V   |
| RV701                                   | 1-230-641-11     | RES, ADJ, METAL GLAZE 2.2M |                | C1959         | 1-136-169-00  | FILM 0.22MF                  | 5% 50V   |
| RV702                                   | 1-241-656-21     | RES, ADJ, METAL FILM 110M  |                | < CONNECTOR > |               |                              |          |
| <b>*A-1674-140-A VM Board, Complete</b> |                  |                            |                | CN1702        | *1-564-507-11 | PLUG, CONNECTOR 4P           |          |
| 1-900-903-72                            | LEAD ASSY, FOCUS |                            |                | CN1705        | *1-564-511-11 | PLUG, CONNECTOR 8P           |          |
| < CAPACITOR >                           |                  |                            |                | CN1718        | *1-770-723-11 | CONNECTOR, BOARD TO BOARD 8P |          |
| C1701                                   | 1-104-665-11     | ELECT 100MF                | 20% 16V        | CN1801        | *1-564-506-11 | PLUG, CONNECTOR 3P           |          |
| C1704                                   | 1-163-021-91     | CERAMIC CHIP 0.01MF        | 10% 50V        | CN1802        | 4-352-844-01  | PIN, LEAD COATING            |          |
| C1705                                   | 1-163-131-00     | CERAMIC CHIP 390PF         | 5% 50V         | < DIODE >     |               |                              |          |
| C1706                                   | 1-163-113-00     | CERAMIC CHIP 68PF          | 5% 50V         | D1703         | 8-719-991-33  | DIODE 1SS133T-77             |          |
| C1707                                   | 1-126-964-11     | ELECT 10MF                 | 20% 50V        | D1704         | 1-535-303-00  | LEAD, JUMPER (5.0MM)         |          |
| C1708                                   | 1-163-021-91     | CERAMIC CHIP 0.01MF        | 10% 50V        | D1705         | 1-535-303-00  | LEAD, JUMPER (5.0MM)         |          |
| C1709                                   | 1-126-964-11     | ELECT 10MF                 | 20% 50V        | D1706         | 8-719-991-33  | DIODE 1SS133T-77             |          |
| C1710                                   | 1-107-927-11     | ELECT 3.3MF                | 20% 100V       | D1707         | 8-719-991-33  | DIODE 1SS133T-77             |          |
| C1711                                   | 1-107-927-11     | ELECT 3.3MF                | 20% 100V       | D1708         | 8-719-055-76  | DIODE 1N4148                 |          |
| C1712                                   | 1-136-153-00     | FILM 0.01MF                | 5% 50V         | D1709         | 8-719-055-76  | DIODE 1N4148                 |          |
| C1713                                   | 1-104-664-11     | ELECT 47MF                 | 20% 25V        | D1710         | 8-719-982-03  | DIODE MTZJ-3.6A              |          |
| C1715                                   | 1-136-165-00     | FILM 0.1MF                 | 5% 50V         | D1711         | 8-719-982-03  | DIODE MTZJ-3.6A              |          |
| C1716                                   | 1-107-932-11     | ELECT 47MF                 | 20% 100V       | D1801         | 8-719-110-17  | DIODE RD10ESB2               |          |
| C1717                                   | 1-104-664-11     | ELECT 47MF                 | 20% 25V        | D1802         | 8-719-110-17  | DIODE RD10ESB2               |          |
| C1803                                   | 1-163-037-11     | CERAMIC CHIP 0.022MF       | 10% 50V        | D1803         | 8-719-110-17  | DIODE RD10ESB2               |          |
| C1804                                   | 1-126-964-11     | ELECT 10MF                 | 20% 50V        | D1840         | 8-719-302-43  | DIODE EL1Z                   |          |
| C1805                                   | 1-137-366-11     | FILM 0.0022MF              | 5% 50V         | D1901         | 8-719-991-33  | DIODE 1SS133T-77             |          |
| C1844                                   | 1-129-716-00     | FILM 0.015MF               | 5% 630V        | D1902         | 8-719-991-33  | DIODE 1SS133T-77             |          |
| C1845                                   | 1-129-725-00     | FILM 0.082MF               | 5% 400V        | D1903         | 8-719-991-33  | DIODE 1SS133T-77             |          |
| C1848                                   | 1-136-347-11     | FILM 0.0047MF              | 5% 630V        | D1904         | 8-719-991-33  | DIODE 1SS133T-77             |          |
| C1901                                   | 1-163-251-11     | CERAMIC CHIP 100PF         | 5% 50V         | D1905         | 8-719-110-41  | DIODE RD15ESB2               |          |
| C1902                                   | 1-137-374-11     | FILM 0.047MF               | 5% 50V         | D1906         | 8-719-970-87  | DIODE ERA38-06               |          |
| C1903                                   | 1-126-964-11     | ELECT 10MF                 | 20% 50V        | D1907         | 8-719-970-87  | DIODE ERA38-06               |          |
| C1904                                   | 1-137-366-11     | FILM 0.0022MF              | 5% 50V         | D1908         | 8-719-300-33  | DIODE RU-3AM                 |          |
| C1905                                   | 1-137-374-11     | FILM 0.047MF               | 5% 50V         | D1909         | 8-719-991-33  | DIODE 1SS133T-77             |          |



| REF.NO.          | PART.NO      | DESCRIPTION             | REMARK        | REF.NO. | PART.NO      | DESCRIPTION | REMARK        |
|------------------|--------------|-------------------------|---------------|---------|--------------|-------------|---------------|
| < FERRITE BEAD > |              |                         |               | R1709   | 1-216-025-91 | RES,CHIP    | 100 5% 1/10W  |
| FB1701           | 1-535-143-61 | LEAD, JUMPER (5.0MM)    |               | R1710   | 1-216-057-00 | RES,CHIP    | 2.2K 5% 1/10W |
| < IC >           |              |                         |               | R1711   | 1-216-065-91 | RES,CHIP    | 4.7K 5% 1/10W |
| IC1801           | 8-759-603-37 | IC M5216P               |               | R1712   | 1-216-041-00 | RES,CHIP    | 470 5% 1/10W  |
| IC1901           | 8-759-450-95 | IC LM393N               |               | R1713   | 1-216-065-91 | RES,CHIP    | 4.7K 5% 1/10W |
| IC1902           | 8-759-008-70 | IC LM358N               |               | R1714   | 1-216-019-00 | RES,CHIP    | 56 5% 1/10W   |
| < COIL >         |              |                         |               | R1715   | 1-216-025-91 | RES,CHIP    | 100 5% 1/10W  |
| L1701            | 1-414-183-41 | INDUCTOR                | 10UH          | R1716   | 1-216-031-00 | RES,CHIP    | 180 5% 1/10W  |
| L1702            | 1-414-183-41 | INDUCTOR                | 10UH          | R1717   | 1-216-051-00 | RES,CHIP    | 1.2K 5% 1/10W |
| L1704            | 1-414-185-41 | INDUCTOR                | 22UH          | R1718   | 1-260-091-11 | CARBON      | 220 5% 1/2W   |
| L1843            | 1-406-989-21 | INDUCTOR                | 10MMH         | R1719   | 1-216-061-00 | RES,CHIP    | 3.3K 5% 1/10W |
| L1901            | 1-406-677-11 | INDUCTOR                | 10MMH         | R1720   | 1-216-246-00 | RES,CHIP    | 100K 5% 1/8W  |
| L1959            | 1-406-679-11 | INDUCTOR                | 22MMH         | R1721   | 1-216-061-00 | RES,CHIP    | 3.3K 5% 1/10W |
| < TRANSISTOR >   |              |                         |               | R1722   | 1-216-049-91 | RES,CHIP    | 1K 5% 1/10W   |
| Q1701            | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |               | R1723   | 1-216-081-00 | RES,CHIP    | 22K 5% 1/10W  |
| Q1702            | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |               | R1724   | 1-216-081-00 | RES,CHIP    | 22K 5% 1/10W  |
| Q1703            | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |               | R1725   | 1-216-049-91 | RES,CHIP    | 1K 5% 1/10W   |
| Q1704            | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |               | R1726   | 1-247-863-91 | CARBON      | 22K 5% 1/4W   |
| Q1705            | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |               | R1727   | 1-216-025-91 | RES,CHIP    | 100 5% 1/10W  |
| Q1706            | 8-729-119-78 | TRANSISTOR 2SC2785-HFE  |               | R1728   | 1-216-025-91 | RES,CHIP    | 100 5% 1/10W  |
| Q1707            | 8-729-119-78 | TRANSISTOR 2SC2785-HFE  |               | R1729   | 1-249-389-11 | CARBON      | 4.7 5% 1/4W   |
| Q1708            | 8-729-026-39 | TRANSISTOR 2SA933AS-QT  |               | R1730   | 1-249-389-11 | CARBON      | 4.7 5% 1/4W   |
| Q1709            | 8-729-049-09 | TRANSISTOR BC327-25     |               | R1731   | 1-215-895-11 | METAL OXIDE | 3.3K 5% 2W F  |
| Q1710            | 8-729-049-10 | TRANSISTOR BC337-25     |               | R1732   | 1-215-867-00 | METAL OXIDE | 470 5% 1W F   |
| Q1711            | 8-729-049-30 | TRANSISTOR BD830        |               | R1805   | 1-216-073-00 | RES,CHIP    | 10K 5% 1/10W  |
| Q1712            | 8-729-049-29 | TRANSISTOR BD829        |               | R1806   | 1-216-117-00 | RES,CHIP    | 680K 5% 1/10W |
| Q1840            | 8-729-119-76 | TRANSISTOR 2SA1175-HFE  |               | R1807   | 1-216-073-00 | RES,CHIP    | 10K 5% 1/10W  |
| Q1841            | 8-729-039-68 | TRANSISTOR IRF620       |               | R1808   | 1-216-073-00 | RES,CHIP    | 10K 5% 1/10W  |
| Q1901            | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |               | R1809   | 1-216-073-00 | RES,CHIP    | 10K 5% 1/10W  |
| Q1902            | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |               | R1810   | 1-216-073-00 | RES,CHIP    | 10K 5% 1/10W  |
| Q1903            | 8-729-043-95 | TRANSISTOR 2SC3840(3)   |               | R1842   | 1-216-025-91 | RES,CHIP    | 100 5% 1/10W  |
| Q1906            | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |               | R1846   | 1-216-057-00 | RES,CHIP    | 2.2K 5% 1/10W |
| Q1907            | 8-729-140-97 | TRANSISTOR 2SB734-34    |               | R1847   | 1-215-911-11 | METAL OXIDE | 100 5% 3W F   |
| < RESISTOR >     |              |                         |               | R1848   | 1-216-475-11 | METAL OXIDE | 120 5% 3W F   |
| R1701            | 1-216-041-00 | RES,CHIP                | 470 5% 1/10W  | R1901   | 1-216-089-91 | RES,CHIP    | 47K 5% 1/10W  |
| R1702            | 1-216-025-91 | RES,CHIP                | 100 5% 1/10W  | R1903   | 1-216-073-00 | RES,CHIP    | 10K 5% 1/10W  |
| R1703            | 1-216-061-00 | RES,CHIP                | 3.3K 5% 1/10W | R1904   | 1-216-073-00 | RES,CHIP    | 10K 5% 1/10W  |
| R1704            | 1-216-051-00 | RES,CHIP                | 1.2K 5% 1/10W | R1905   | 1-216-097-91 | RES,CHIP    | 100K 5% 1/10W |
| R1705            | 1-216-031-00 | RES,CHIP                | 180 5% 1/10W  | R1906   | 1-216-073-00 | RES,CHIP    | 10K 5% 1/10W  |
| R1706            | 1-216-031-00 | RES,CHIP                | 180 5% 1/10W  | R1907   | 1-216-097-91 | RES,CHIP    | 100K 5% 1/10W |
| R1707            | 1-216-043-91 | RES,CHIP                | 560 5% 1/10W  | R1908   | 1-216-033-00 | RES,CHIP    | 220 5% 1/10W  |
| R1708            | 1-216-041-00 | RES,CHIP                | 470 5% 1/10W  | R1909   | 1-215-489-00 | METAL       | 680K 1% 1/4W  |
|                  |              |                         |               | R1910   | 1-216-295-91 | SHORT       | 0             |
|                  |              |                         |               | R1911   | 1-216-073-00 | RES,CHIP    | 10K 5% 1/10W  |
|                  |              |                         |               | R1912   | 1-216-121-91 | RES,CHIP    | 1M 5% 1/10W   |
|                  |              |                         |               | R1913   | 1-216-049-91 | RES,CHIP    | 1K 5% 1/10W   |
|                  |              |                         |               | R1914   | 1-216-057-00 | RES,CHIP    | 2.2K 5% 1/10W |

| REF.NO.                         | PART.NO      | DESCRIPTION                | REMARK   |       |       | REF.NO.         | PART.NO       | DESCRIPTION          | REMARK |    |      |
|---------------------------------|--------------|----------------------------|----------|-------|-------|-----------------|---------------|----------------------|--------|----|------|
| R1915                           | 1-216-065-91 | RES,CHIP                   | 4.7K     | 5%    | 1/10W | < CONNECTOR >   |               |                      |        |    |      |
| R1916                           | 1-216-673-11 | METAL CHIP                 | 8.2K     | 0.50% | 1/10W | CN900           | 1-779-947-11  | TERMINAL BLOCK, S    |        |    |      |
| R1917                           | 1-216-693-11 | METAL CHIP                 | 56K      | 0.50% | 1/10W | CN906           | *1-564-511-11 | PLUG, CONNECTOR 8P   |        |    |      |
| R1918                           | 1-215-922-11 | METAL OXIDE                | 6.8K     | 5%    | 3W F  | CN907           | *1-564-510-51 | PIN, CONNECTOR 7P    |        |    |      |
| R1921                           | 1-216-485-11 | METAL OXIDE                | 5.6K     | 5%    | 3W F  | CN908           | *1-564-509-11 | PLUG, CONNECTOR 6P   |        |    |      |
| R1922                           | 1-215-919-11 | METAL OXIDE                | 2.2K     | 5%    | 3W F  | < DIODE >       |               |                      |        |    |      |
| R1923                           | 1-216-097-91 | RES,CHIP                   | 100K     | 5%    | 1/10W | D901            | 8-719-030-11  | DIODE SLA-570KT3F    |        |    |      |
| R1924                           | 1-216-097-91 | RES,CHIP                   | 100K     | 5%    | 1/10W |                 | 4-203-258-01  | HOLDER, LED (D901)   |        |    |      |
| R1925                           | 1-216-097-91 | RES,CHIP                   | 100K     | 5%    | 1/10W | D902            | 8-719-929-15  | DIODE HZS9.1NB2      |        |    |      |
| R1931                           | 1-216-689-91 | FILM                       | 39K      | 0.50% | 1/10W | D903            | 8-719-929-15  | DIODE HZS9.1NB2      |        |    |      |
| R1953                           | 1-216-079-00 | RES,CHIP                   | 18K      | 5%    | 1/10W | D904            | 8-719-109-97  | DIODE RD6.8ESB2      |        |    |      |
| R1954                           | 1-216-109-00 | RES,CHIP                   | 330K     | 5%    | 1/10W | D905            | 8-719-109-97  | DIODE RD6.8ESB2      |        |    |      |
| R1955                           | 1-216-105-91 | RES,CHIP                   | 220K     | 5%    | 1/10W | D906            | 8-719-923-60  | DIODE MTZJ-T-77-9.1A |        |    |      |
| R1956                           | 1-216-119-00 | RES,CHIP                   | 820K     | 5%    | 1/10W | D907            | 8-719-923-60  | DIODE MTZJ-T-77-9.1A |        |    |      |
| R1957                           | 1-216-073-00 | RES,CHIP                   | 10K      | 5%    | 1/10W | D908            | 8-719-923-60  | DIODE MTZJ-T-77-9.1A |        |    |      |
| R1958                           | 1-216-025-91 | RES,CHIP                   | 100      | 5%    | 1/10W | < IC >          |               |                      |        |    |      |
| R1959                           | 1-216-063-91 | RES,CHIP                   | 3.9K     | 5%    | 1/10W | IC900           | 8-742-014-11  | HYB IC SBX1981-51    |        |    |      |
| R1960                           | 1-216-073-00 | RES,CHIP                   | 10K      | 5%    | 1/10W | < JACK SOCKET > |               |                      |        |    |      |
| R1961                           | 1-216-687-11 | METAL CHIP                 | 33K      | 0.50% | 1/10W | J900            | 1-750-264-11  | JACK                 |        |    |      |
| R1962                           | 1-216-687-11 | METAL CHIP                 | 33K      | 0.50% | 1/10W | < COIL >        |               |                      |        |    |      |
| R1964                           | 1-216-025-91 | RES,CHIP                   | 100      | 5%    | 1/10W | L900            | 1-412-521-41  | INDUCTOR             | 4.7UH  |    |      |
| R1965                           | 1-216-041-00 | RES,CHIP                   | 470      | 5%    | 1/10W | L901            | 1-412-521-41  | INDUCTOR             | 4.7UH  |    |      |
| R1966                           | 1-215-886-11 | METAL OXIDE                | 100      | 5%    | 2W F  | L902            | 1-408-603-31  | INDUCTOR             | 10UH   |    |      |
| R1967                           | 1-215-922-21 | FILM                       | 6.8K     | 5%    | 3W    | L903            | 1-408-603-31  | INDUCTOR             | 10UH   |    |      |
| R1968                           | 1-215-886-11 | METAL OXIDE                | 100      | 5%    | 2W F  | < RESISTOR >    |               |                      |        |    |      |
| R1969                           | 1-215-923-00 | METAL OXIDE                | 10K      | 5%    | 3W F  | R900            | 1-247-807-31  | CARBON               | 100    | 5% | 1/4W |
| < TRANSFORMER >                 |              |                            |          |       |       | R901            | 1-249-424-11  | CARBON               | 3.9K   | 5% | 1/4W |
| T1901                           | 1-424-584-11 | TRANSFORMER, DYNAMIC FOCUS |          |       |       | R902            | 1-247-863-91  | CARBON               | 22K    | 5% | 1/4W |
| *A-1646-184-A H Board, Complete |              |                            |          |       |       | R903            | 1-247-701-11  | CARBON               | 120    | 5% | 1/4W |
|                                 |              |                            |          |       |       | R904            | 1-247-701-11  | CARBON               | 120    | 5% | 1/4W |
| < CAPACITOR >                   |              |                            |          |       |       | R908            | 1-249-401-11  | CARBON               | 47     | 5% | 1/4W |
| C900                            | 1-102-074-00 | CERAMIC                    | 0.001MF  | 10%   | 50V   | R909            | 1-247-895-91  | CARBON               | 470K   | 5% | 1/4W |
| C901                            | 1-102-074-00 | CERAMIC                    | 0.001MF  | 10%   | 50V   | R910            | 1-247-895-91  | CARBON               | 470K   | 5% | 1/4W |
| C902                            | 1-137-372-11 | FILM                       | 0.022MF  | 5%    | 50V   | R911            | 1-535-303-00  | LEAD, JUMPER (5.0MM) |        |    |      |
| C903                            | 1-137-372-11 | FILM                       | 0.022MF  | 5%    | 50V   | R912            | 1-249-417-11  | CARBON               | 1K     | 5% | 1/4W |
| C904                            | 1-104-665-11 | ELECT                      | 100MF    | 20%   | 25V   | R913            | 1-249-427-11  | CARBON               | 6.8K   | 5% | 1/4W |
| C905                            | 1-126-964-11 | ELECT                      | 10MF     | 20%   | 50V   | R914            | 1-249-429-11  | CARBON               | 10K    | 5% | 1/4W |
| C906                            | 1-126-960-11 | ELECT                      | 1MF      | 20%   | 50V   | R915            | 1-247-701-11  | CARBON               | 120    | 5% | 1/4W |
| C907                            | 1-126-960-11 | ELECT                      | 1MF      | 20%   | 50V   | R916            | 1-247-701-11  | CARBON               | 120    | 5% | 1/4W |
| C908                            | 1-137-366-91 | FILM                       | 0.0022MF | 5%    | 50V   | R917            | 1-247-807-31  | CARBON               | 100    | 5% | 1/4W |
| C909                            | 1-137-366-91 | FILM                       | 0.0022MF | 5%    | 50V   | R918            | 1-247-807-31  | CARBON               | 100    | 5% | 1/4W |
| C911                            | 1-102-074-00 | CERAMIC                    | 0.001MF  | 10%   | 50V   |                 |               |                      |        |    |      |
| C912                            | 1-102-074-00 | CERAMIC                    | 0.001MF  | 10%   | 50V   |                 |               |                      |        |    |      |



REF.NO. PART.NO DESCRIPTION REMARK

## &lt; SWITCH &gt;

S900 1-692-979-21 SWITCH, TACTILE  
S901 1-692-979-21 SWITCH, TACTILE  
S902 1-692-979-21 SWITCH, TACTILE

**\*A-1649-023-A K Board, Complete**

7-682-148-01 SCREW +P 3X8

## &lt; CAPACITOR &gt;

C201 1-126-965-91 ELECT 22MF 20% 50V  
C281 1-126-960-11 ELECT 1MF 20% 50V  
C282 1-126-943-11 ELECT 2200MF 20% 25V  
C284 1-128-550-11 ELECT 2200MF 20% 50V  
C285 1-126-943-11 ELECT 2200MF 20% 25V

C286 1-136-493-81 FILM 0.047MF 5% 50V  
C287 1-137-194-81 FILM 0.47MF 5% 50V  
C288 1-136-165-00 FILM 0.1MF 5% 50V  
C289 1-104-666-11 ELECT 220MF 20% 25V  
C290 1-136-161-00 FILM 0.047MF 5% 50V

## &lt; CONNECTOR &gt;

CN225 \*1-564-508-11 PLUG, CONNECTOR 5P  
CN282 \*1-564-506-51 PIN, CONNECTOR 3P

## &lt; DIODE &gt;

D201 8-719-911-19 DIODE 1SS119-25

## &lt; IC &gt;

IC281 8-759-988-94 IC TDA2050

## &lt; COIL &gt;

L281 1-406-973-41 INDUCTOR 22UH

## &lt; TRANSISTOR &gt;

Q204 8-729-119-78 TRANSISTOR 2SC2785-HFE

## &lt; RESISTOR &gt;

R201 1-249-434-11 CARBON 27K 5% 1/4W  
R202 1-249-434-11 CARBON 27K 5% 1/4W  
R203 1-247-895-91 CARBON 470K 5% 1/4W  
R204 1-249-431-11 CARBON 15K 5% 1/4W  
R205 1-249-431-11 CARBON 15K 5% 1/4W

R209 1-247-839-91 CARBON 2.2K 5% 1/4W  
R284 1-247-863-91 CARBON 22K 5% 1/4W  
R285 1-247-863-91 CARBON 22K 5% 1/4W

REF.NO. PART.NO DESCRIPTION REMARK

R287 1-249-417-11 CARBON 1K 5% 1/4W  
R288 1-216-353-00 METAL OXIDE 2.2 5% 1W F  
R290 1-247-843-11 CARBON 3.3K 5% 1/4W  
R292 1-247-843-11 CARBON 3.3K 5% 1/4W  
R293 1-247-863-91 CARBON 22K 5% 1/4W

R294 1-249-416-11 CARBON 820 5% 1/4W

**\*A-1654-041-A S1 Board, Complete (KV-29FC20A/29FC20D)**
**\*A-1654-039-A S1 Board, Complete (KV-29FC20B)**
**\*A-1654-040-A S1 Board, Complete (KV-29FC20E)**
**S1 Board Common Parts**

## &lt; CAPACITOR &gt;

C1103 1-115-185-91 CERAMIC CHIP 33000PF 10% 50V  
C1106 1-115-185-91 CERAMIC CHIP 33000PF 10% 50V  
C1107 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V  
C1108 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V  
C1109 1-104-664-11 ELECT 47MF 20% 25V

C1110 1-126-960-11 ELECT 1MF 20% 50V  
C1111 1-126-960-11 ELECT 1MF 20% 50V  
C1113 1-104-664-11 ELECT 47MF 20% 25V  
C1115 1-104-664-11 ELECT 47MF 20% 25V  
C1116 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V

C1117 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V  
C1118 1-164-005-11 CERAMIC CHIP 0.47MF 25V  
C1119 1-126-960-11 ELECT 1MF 20% 50V  
C1120 1-164-005-11 CERAMIC CHIP 0.47MF 25V  
C1122 1-104-664-11 ELECT 47MF 20% 25V

C1123 1-163-038-91 CERAMIC CHIP 0.1MF 25V  
C1124 1-163-251-11 CERAMIC CHIP 100PF 5% 50V  
C1127 1-126-960-11 ELECT 1MF 20% 50V  
C1128 1-126-960-11 ELECT 1MF 20% 50V  
C1129 1-126-960-11 ELECT 1MF 20% 50V

C1130 1-126-964-11 ELECT 10MF 20% 50V  
C1132 1-104-664-11 ELECT 47MF 20% 25V  
C1133 1-163-038-91 CERAMIC CHIP 0.1MF 25V  
C1134 1-126-964-11 ELECT 10MF 20% 50V  
C1136 1-126-964-11 ELECT 10MF 20% 50V

C1139 1-126-964-11 ELECT 10MF 20% 50V  
C1143 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V  
C1144 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V  
C1145 1-163-038-91 CERAMIC CHIP 0.1MF 25V  
C1146 1-164-005-11 CERAMIC CHIP 0.47MF 25V

C1147 1-164-005-11 CERAMIC CHIP 0.47MF 25V

| REF.NO.          | PART.NO       | DESCRIPTION                   | REMARK  | REF.NO.                                  | PART.NO      | DESCRIPTION             | REMARK  |
|------------------|---------------|-------------------------------|---------|------------------------------------------|--------------|-------------------------|---------|
| C1148            | 1-164-005-11  | CERAMIC CHIP 0.47MF           | 25V     | R1155                                    | 1-216-085-00 | RES,CHIP 33K 5%         | 1/10W   |
| C1149            | 1-126-964-91  | ELECT 10MF                    | 20% 50V | R1156                                    | 1-216-085-00 | RES,CHIP 33K 5%         | 1/10W   |
| C1150            | 1-126-964-11  | ELECT 10MF                    | 20% 50V | R1174                                    | 1-216-085-00 | RES,CHIP 33K 5%         | 1/10W   |
| C1151            | 1-126-960-91  | ELECT 1MF                     | 20% 25V | R1175                                    | 1-216-085-00 | RES,CHIP 33K 5%         | 1/10W   |
| C1152            | 1-163-038-91  | CERAMIC CHIP 0.1MF            | 25V     | R1176                                    | 1-216-085-00 | RES,CHIP 33K 5%         | 1/10W   |
| < CONNECTOR >    |               |                               |         | R1177                                    | 1-216-085-00 | RES,CHIP 33K 5%         | 1/10W   |
| CN1101           | *1-766-954-11 | CONNECTOR, BOARD TO BOARD 20P |         | R1178                                    | 1-216-073-00 | RES,CHIP 10K 5%         | 1/10W   |
| < DIODE >        |               |                               |         | < CRYSTAL >                              |              |                         |         |
| D1101            | 8-719-923-38  | DIODE MTZJ-T-77-5.6B          |         | X1101                                    | 1-767-813-21 | VIBRATOR, CRYSTAL       |         |
| D1102            | 8-719-923-38  | DIODE MTZJ-T-77-5.6B          |         | <b>S1 Board Variant Parts</b>            |              |                         |         |
| D1105            | 8-719-923-67  | DIODE MTZJ-T-77-9.1B          |         | <b>KV-29FC20A/29FC20D</b>                |              |                         |         |
| D1106            | 8-719-923-67  | DIODE MTZJ-T-77-9.1B          |         | < IC >                                   |              |                         |         |
| < FERRITE BEAD > |               |                               |         | IC1101                                   | 8-759-574-74 | IC TDA9870A             |         |
| FB1101           | 1-410-396-41  | FERRITE 0.45UH                |         | < RESISTOR >                             |              |                         |         |
| FB1102           | 1-410-396-41  | FERRITE 0.45UH                |         | R1165                                    | 1-216-295-91 | SHORT 0                 |         |
| FB1104           | 1-410-396-41  | FERRITE 0.45UH                |         | <b>S1 Board Variant Parts KV-29FC20B</b> |              |                         |         |
| FB1110           | 1-412-002-31  | INDUCTOR CHIP 4.7UH           |         | < CAPACITOR >                            |              |                         |         |
| FB1111           | 1-412-002-31  | INDUCTOR CHIP 4.7UH           |         | C1131                                    | 1-164-005-11 | CERAMIC CHIP 0.47MF     | 25V     |
| FB1112           | 1-412-002-31  | INDUCTOR CHIP 4.7UH           |         | C1135                                    | 1-163-251-11 | CERAMIC CHIP 100PF      | 5% 50V  |
| < IC >           |               |                               |         | C1137                                    | 1-104-664-11 | ELECT 47MF              | 20% 25V |
| IC1102           | 8-759-100-96  | IC UPC4558G2                  |         | C1138                                    | 1-163-251-11 | CERAMIC CHIP 100PF      | 5% 50V  |
| IC1103           | 8-759-394-57  | IC PST593C-MMP-4P             |         | < FILTER >                               |              |                         |         |
| < COIL >         |               |                               |         | CF1101                                   | 1-409-327-00 | TRAP, CERAMIC (6.5MHZ)  |         |
| L1114            | 1-410-671-31  | INDUCTOR 47UH                 |         | < FERRITE BEAD >                         |              |                         |         |
| L1115            | 1-408-599-31  | INDUCTOR 4.7UH                |         | FB1113                                   | 1-412-002-31 | INDUCTOR CHIP 4.7UH     |         |
| L1116            | 1-408-599-31  | INDUCTOR 4.7UH                |         | < IC >                                   |              |                         |         |
| < RESISTOR >     |               |                               |         | IC1101                                   | 8-759-574-73 | IC TDA9875A             |         |
| R1101            | 1-216-073-00  | RES,CHIP 10K 5%               | 1/10W   | < COIL >                                 |              |                         |         |
| R1102            | 1-216-073-00  | RES,CHIP 10K 5%               | 1/10W   | L1113                                    | 1-408-600-31 | INDUCTOR 5.6UH          |         |
| R1103            | 1-126-025-91  | RES,CHIP 100 5%               | 1/10W   | L1117                                    | 1-410-671-31 | INDUCTOR 47UH           |         |
| R1104            | 1-126-025-91  | RES,CHIP 100 5%               | 1/10W   | < TRANSISTOR >                           |              |                         |         |
| R1105            | 1-216-035-00  | RES,CHIP 270 5%               | 1/10W   | Q1112                                    | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |         |
| R1110            | 1-216-025-91  | RES,CHIP 100 5%               | 1/10W   | Q1113                                    | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |         |
| R1111            | 1-216-025-91  | RES,CHIP 100 5%               | 1/10W   | Q1114                                    | 8-729-026-49 | TRANSISTOR 2SA1037AK    |         |
| R1113            | 1-216-073-00  | RES,CHIP 10K 5%               | 1/10W   | Q1115                                    | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 |         |
| R1121            | 1-216-065-91  | RES,CHIP 4.7K 5%              | 1/10W   |                                          |              |                         |         |
| R1122            | 1-216-065-91  | RES,CHIP 4.7K 5%              | 1/10W   |                                          |              |                         |         |
| R1123            | 1-216-218-00  | RES,CHIP 6.8K 5%              | 1/8W    |                                          |              |                         |         |
| R1124            | 1-216-073-00  | RES,CHIP 10K 5%               | 1/10W   |                                          |              |                         |         |
| R1125            | 1-216-069-00  | RES,CHIP 6.8K 5%              | 1/10W   |                                          |              |                         |         |
| R1126            | 1-216-073-00  | RES,CHIP 10K 5%               | 1/10W   |                                          |              |                         |         |

**S1**

The components identified by shading and marked  $\Delta$  are critical for safety  
Replace only with the part number specified.

| REF. NO. | PART. NO | DESCRIPTION | REMARK |
|----------|----------|-------------|--------|
|----------|----------|-------------|--------|

## &lt; RESISTOR &gt;

|       |              |          |               |
|-------|--------------|----------|---------------|
| R1108 | 1-216-077-00 | RES,CHIP | 15K 5% 1/10W  |
| R1152 | 1-216-035-00 | RES,CHIP | 270 5% 1/10W  |
| R1153 | 1-216-025-91 | RES,CHIP | 100 5% 1/10W  |
| R1154 | 1-216-067-00 | RES,CHIP | 5.6K 5% 1/10W |
| R1160 | 1-216-081-00 | RES,CHIP | 22K 5% 1/10W  |

|       |              |          |               |
|-------|--------------|----------|---------------|
| R1161 | 1-216-041-00 | RES,CHIP | 470 5% 1/10W  |
| R1162 | 1-216-061-00 | RES,CHIP | 3.3K 5% 1/10W |
| R1163 | 1-216-081-00 | RES,CHIP | 22K 5% 1/10W  |
| R1164 | 1-216-073-00 | RES,CHIP | 10K 5% 1/10W  |
| R1167 | 1-216-025-91 | RES,CHIP | 100 5% 1/10W  |

|       |              |          |              |
|-------|--------------|----------|--------------|
| R1168 | 1-216-033-00 | RES,CHIP | 220 5% 1/10W |
| R1169 | 1-216-049-91 | RES,CHIP | 1K 5% 1/10W  |
| R1170 | 1-216-001-00 | RES,CHIP | 10 5% 1/10W  |
| R1171 | 1-216-045-00 | RES,CHIP | 680 5% 1/10W |
| R1172 | 1-216-041-00 | RES,CHIP | 470 5% 1/10W |

|       |              |          |             |
|-------|--------------|----------|-------------|
| R1173 | 1-216-049-91 | RES,CHIP | 1K 5% 1/10W |
|-------|--------------|----------|-------------|

**S1 Board Variant Parts KV-29FC20E**

## &lt; IC &gt;

|        |              |             |
|--------|--------------|-------------|
| IC1101 | 8-759-574-73 | IC TDA9875A |
|--------|--------------|-------------|

## &lt; RESISTOR &gt;

|       |              |          |              |
|-------|--------------|----------|--------------|
| R1164 | 1-216-073-00 | RES,CHIP | 10K 5% 1/10W |
|-------|--------------|----------|--------------|

| REF. NO. | PART. NO | DESCRIPTION | REMARK |
|----------|----------|-------------|--------|
|----------|----------|-------------|--------|

**MISCELLANEOUS**

|                       |                              |
|-----------------------|------------------------------|
| $\Delta$ 1-416-654-11 | COIL, DEMAGNETIC             |
| 1-452-032-00          | MAGNET, DISC; 10MM           |
| 1-452-094-00          | MAGNET, ROTATABLE DISK; 15MM |
| 1-452-896-11          | COIL, NA ROTATION, (RT200)   |

|                       |                    |
|-----------------------|--------------------|
| $\Delta$ 8-453-011-11 | NECK ASSY, NA299-M |
|-----------------------|--------------------|

|                       |                                           |
|-----------------------|-------------------------------------------|
| $\Delta$ 1-453-308-11 | TRANSFORMER ASSY, FLYBACK (NX-4521//U2B4) |
|-----------------------|-------------------------------------------|

|              |                       |
|--------------|-----------------------|
| 1-529-417-11 | SPEAKER 8CM           |
| 1-529-408-11 | LOUD SPEAKER 4.2x24CM |

|                       |                         |
|-----------------------|-------------------------|
| $\Delta$ 1-251-528-21 | CAP ASSY, HIGH-VOLTAGE  |
| $\Delta$ 1-571-433-21 | SWITCH, PUSH (AC POWER) |

|                       |             |
|-----------------------|-------------|
| $\Delta$ 1-765-286-11 | CORD, POWER |
|-----------------------|-------------|

|              |                              |
|--------------|------------------------------|
| 8-598-432-10 | TUNER (BTP-AC411)            |
|              | (KV-29FC20A/29FC20D/29FC20E) |

|              |                                 |
|--------------|---------------------------------|
| 1-693-418-11 | TUNER (TELE9-001A) (KV-29FC20B) |
|--------------|---------------------------------|

|                       |                           |
|-----------------------|---------------------------|
| $\Delta$ 8-735-053-05 | PICTURE TUBE (M68LNH060X) |
|-----------------------|---------------------------|

|                       |                             |
|-----------------------|-----------------------------|
| $\Delta$ 8-451-494-21 | DEFLECTION YOKE (Y29RSA-M2) |
|-----------------------|-----------------------------|

**ACCESSORIES AND PACKAGING MATERIALS**

|               |                                           |
|---------------|-------------------------------------------|
| *4-029-168-01 | BAG, PROTECTION                           |
| *4-204-407-01 | INDIVIDUAL CARTON                         |
| *4-204-405-01 | CUSHION (UPPER) (ASSY)                    |
| *4-204-406-01 | CUSHION (LOWER) (ASSY)                    |
| *4-204-866-41 | MANUAL INSTRUCTION (KV-29FC20A) (ITALIAN) |

|              |                                                               |
|--------------|---------------------------------------------------------------|
| 4-204-866-51 | MANUAL INSTRUCTION (KV-29FC20B) (FRENCH/ITALIAN/GERMAN/DUTCH) |
|--------------|---------------------------------------------------------------|

|              |                                                                |
|--------------|----------------------------------------------------------------|
| 4-204-866-11 | MANUAL INSTRUCTION (KV-29FC20D) (ENGLISH/GERMAN/GREEK/TURKISH) |
|--------------|----------------------------------------------------------------|

|              |                                           |
|--------------|-------------------------------------------|
| 4-204-866-71 | MANUAL INSTRUCTION (KV-29FC20E) (SPANISH) |
|--------------|-------------------------------------------|

|              |                                                                                         |
|--------------|-----------------------------------------------------------------------------------------|
| 4-204-866-81 | MANUAL INSTRUCTION (KV-29FC20E) (FINNISH/NORWEGIAN/HUNGARIAN/PORTUGUESE/DANISH/SWEDISH) |
|--------------|-----------------------------------------------------------------------------------------|

**REMOTE COMMANDER**

|              |                           |
|--------------|---------------------------|
| 1-418-476-11 | REMOTE COMMANDER (RM-887) |
|--------------|---------------------------|