

# KRF-V7020D/V8020D

## VR-307/309/357

### SERVICE MANUAL

KENWOOD

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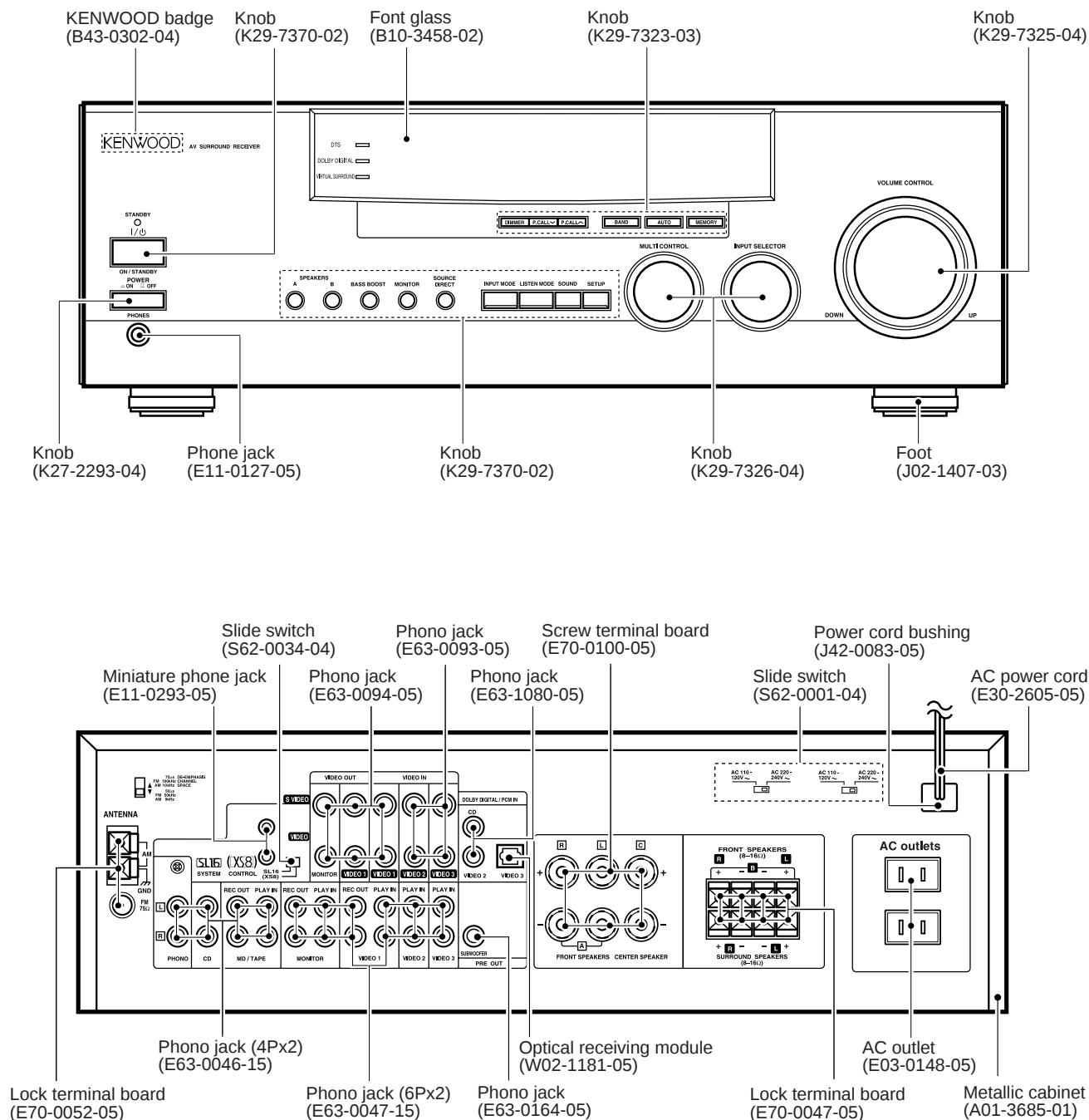


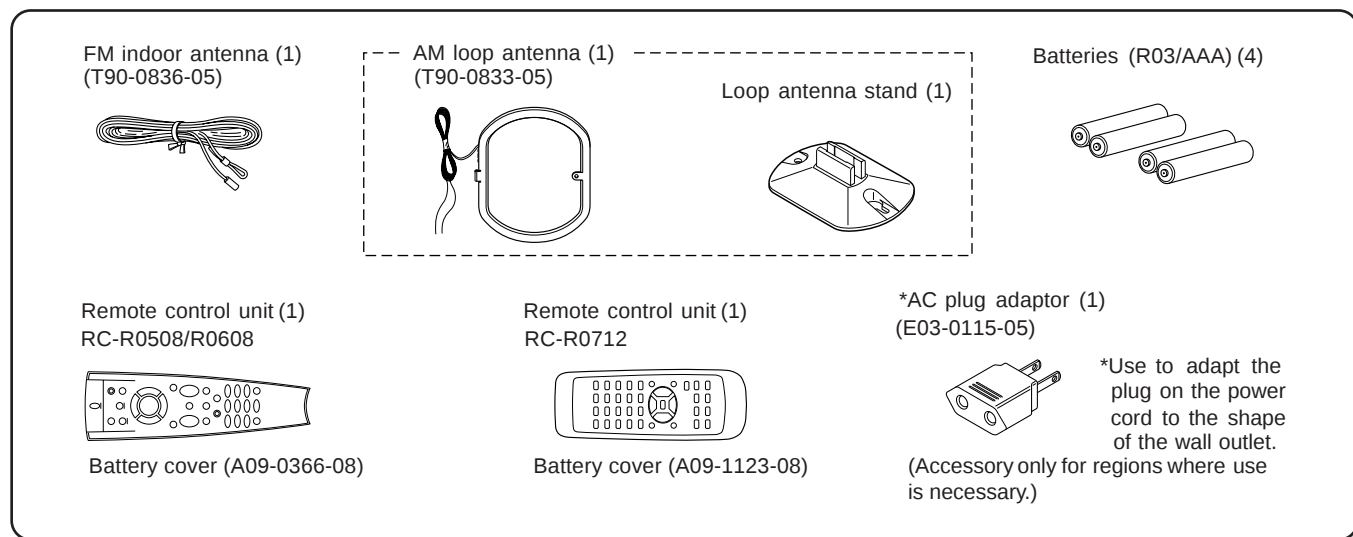
Illustration is KRF-V7020D(Y).

## CONTENTS / ACCESSORIES / CAUTIONS

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### Accessories



### Model name vs remote controller

|                   |                | Remote Controller |            |               |
|-------------------|----------------|-------------------|------------|---------------|
| Model             | Destinations   | Parts number      | Model name | Battery Cover |
| <b>KRF-V7020D</b> | X7,C7,Y7,V7,M7 | A70-1268-05       | RC-R0712   | A09-1123-08   |
| <b>KRF-V8020D</b> | X8             | A70-1275-05       | RC-R0508   | A09-0366-08   |
| <b>KRF-V8020D</b> | C8,I8,Y8,M8    | A70-1277-05       | RC-R0608   | A09-0366-08   |
| <b>VR-307</b>     | K6,P6          | A70-1268-05       | RC-R0712   | A09-1123-08   |
| <b>VR-309</b>     | K8,P8          | A70-1277-05       | RC-R0608   | A09-0366-08   |
| <b>VR-357</b>     | K7,P7          | A70-1277-05       | RC-R0608   | A09-0366-08   |

### Cautions

#### Resetting the Microcomputer

If the microcomputer may malfunction (unit cannot be operated, or shows an erroneous display) if the power cord is unplugged while the power is ON, or due to some other external factor. If this happens, execute the following procedure to reset the microcomputer and return the unit to its normal operating condition.

#### For U.S.A. and Canada

Unplug the power cord from the wall outlet, then plug it back in while holding down the **POWER** key.

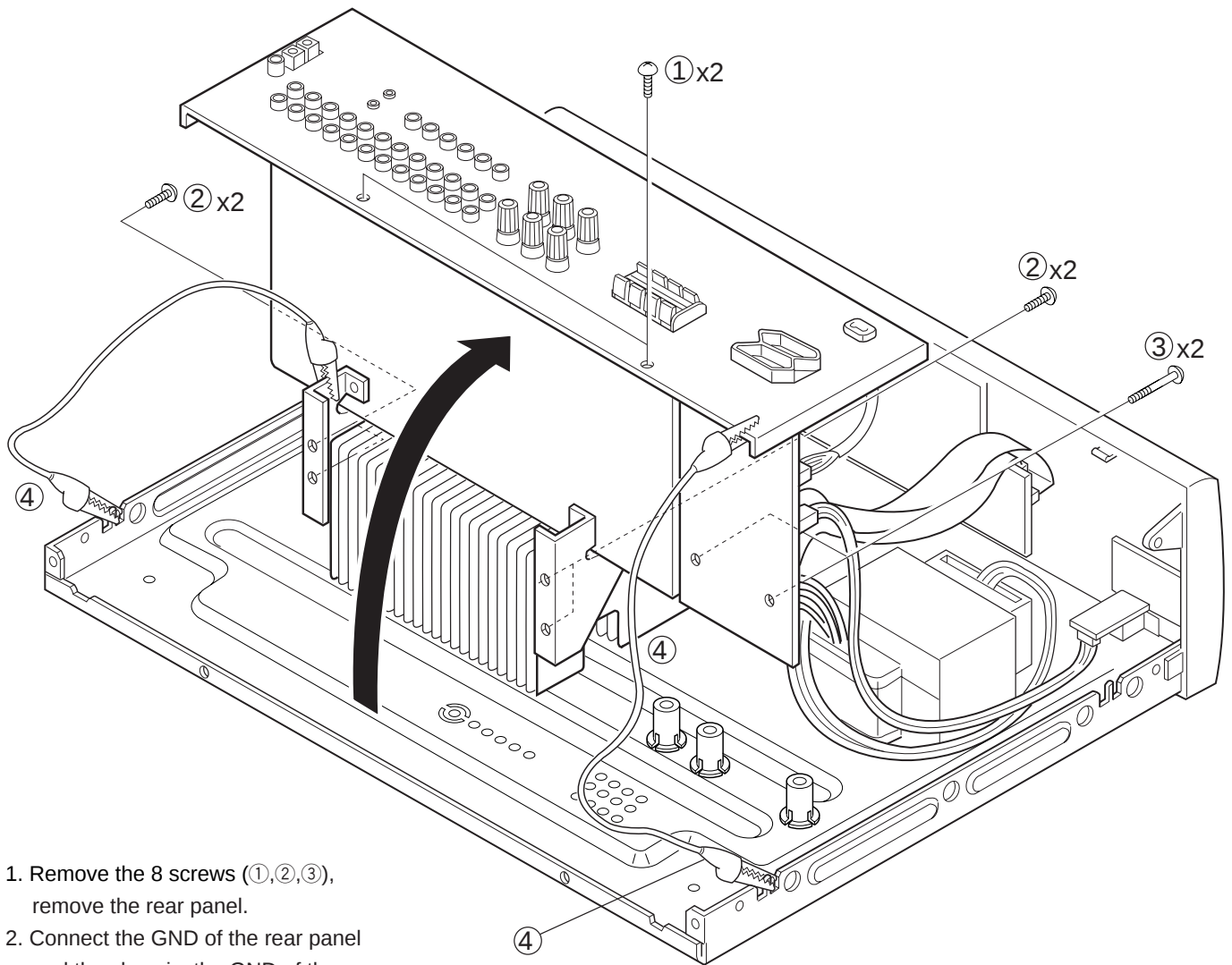
#### For other countries

With the power cord plugged in, turn the **POWER** key OFF. Then, while holding down the **ON/STANDBY** key, press **POWER**.

- Please note that resetting the microcomputer will clear the contents of the memory and returns the unit to the state it was in when it left the factory.

# KRF-V7020D/V8020D/VR-307/309/357

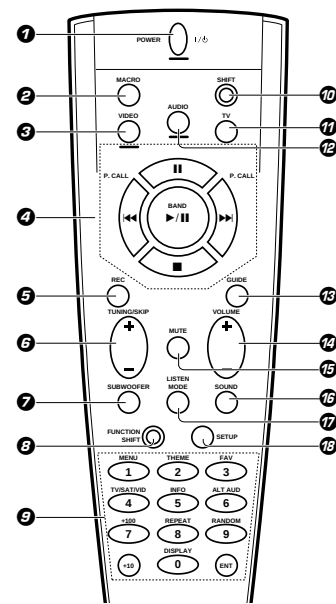
## DISASSEMBLY FOR REPAIR



1. Remove the 8 screws (①,②,③), remove the rear panel.
2. Connect the GND of the rear panel and the chassis, the GND of the mounting hardware and the chassis with 2 alligators clip (④)

# CONTROLS

## Remote control unit (RC-R0608 / R0508)



There are some cases in which keys (or knobs) that have the same function on the receiver and on the remote control have different names. In the instructions of this manual, if the names of corresponding keys (or knobs) on the receiver and remote control are different, the name of the remote control key is indicated in parentheses.

- ❶ **POWER key**  
(For U.S.A. and Canada)  
Use to turn the power ON/OFF.
- STANDBY indicator**
- ❶ **ON/STANDBY (1/⏻) key**  
(Except for U.S.A. and Canada)  
Use to switch the power ON/STANDBY when the POWER is turned ON.
- STANDBY indicator**
- ❷ **POWER key**  
(Except for U.S.A. and Canada)  
Use to turn the main power ON/OFF.
- ❸ **Surround indicators**
  - **DTS indicator**  
Lights when the receiver is in the DTS mode.  
(For VR-309, KRF-V8020D)
  - **DOLBY DIGITAL indicator**  
Lights when the receiver is in the Dolby Digital mode.
  - **VIRTUAL SURROUND indicator**  
Lights when the receiver is in the Virtual Surround mode.

- ❹ **DIMMER key**  
Use to adjust the brightness of the display.
- ❺ **P.CALL keys**  
Use to call up previously registered radio stations.
- ❻ **BAND key**  
Use to select the broadcast band.
- ❼ **AUTO key**  
Use to select the auto tuning mode.
- ❽ **MEMORY key**  
Use to store radio stations in the preset memory.
- ❾ **VOLUME CONTROL knob**
- ❿ **PHONES jack**  
Use for headphone listening.
- ⓫ **SPEAKERS A/B keys**  
Use to turn the speakers ON/OFF.
- ⓬ **BASS BOOST key**  
Use to select the maximum adjustment setting for the low frequency range.

- ⓭ **MONITOR key**
- ⓮ **SOURCE DIRECT key**
- ⓯ **INPUT MODE key**  
Use to switch between the digital and analog inputs.
- ⓰ **LISTEN MODE key**  
Use to select the listening mode.
- ⓱ **SOUND key**  
Use to adjust the sound quality and ambience effects.
- ⓲ **SETUP key**  
Use to select the surround sound settings.
- ⓳ **MULTI CONTROL knob**  
Used to make a variety of settings.
- ⓴ **INPUT SELECTOR knob**  
Use to select the input sources.

- ❶ **POWER key**  
Use to turn the receiver on and off.  
Use in combination with the input selector (AUDIO, VIDEO, or TV) keys and SHIFT key to turn various components on and off.
- ❷ **MACRO key**  
Use in combination with the AUDIO, VIDEO, or TV keys to execute a series of commands automatically (MACRO PLAY).
- ❸ **VIDEO selector key**  
Selects the video inputs and sets the remote control to operate the component registered at the respective input.
- ❹ **Multi control keys**  
Use to operate the selected component.
- ❺ **REC key**  
Use to operate the selected component.
- ❻ **TUNING/SKIP key**  
Use during the setup procedure to specify various settings. Use to operate the tuner or selected component.
- ❼ **SUBWOOFER key**  
Use in combination with the VOLUME +/- keys to adjust the volume of the subwoofer.

- ❶ **FUNCTION SHIFT key**  
Use in combination with the numeric keys to execute alternate commands.
- ❷ **Numeric keys**  
Provide functions identical to those of the original remote control supplied with the component you are controlling.  
To access the functions printed above the keys, press within 3 seconds of pressing the FUNCTION SHIFT key. Function availability varies for each component.
- ❸ **SHIFT key**  
Use in combination with the AUDIO and VIDEO keys to change the remote control mode without changing the input selector or in combination with the POWER key to turn on and off components programmed into the remote control.
- ❹ **TV selector key**  
Sets the remote control to operate a TV or cable box. This key does not change the input selector on the receiver.

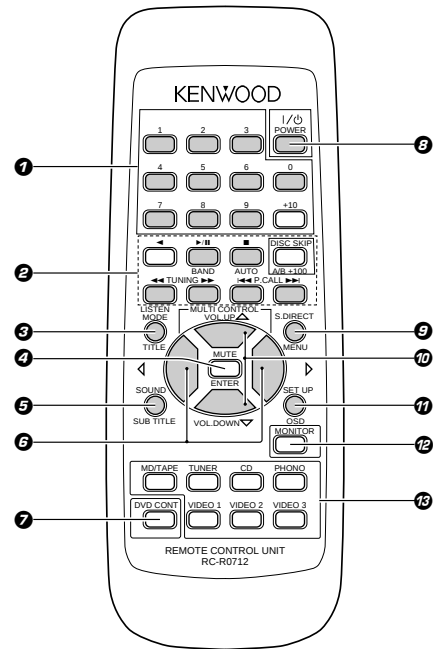
- ❶ **AUDIO selector key**  
Selects the audio inputs and sets the remote control to operate the respective KENWOOD audio component.  
If you connect audio components from KENWOOD and other makers to the MD/TAPE or CD jacks, you can set the remote control to operate these components by registering the appropriate setup code at the respective input.
- ❷ **GUIDE key**  
Use to activate the OSD menu functions of registered components.
- ❸ **VOLUME key**  
Use to adjust the receiver volume.
- ❹ **MUTE key**  
Use to temporarily mute the sound.
- ❺ **SOUND key**  
Use to adjust the sound quality and ambience effects.
- ❻ **LISTEN MODE key**  
Use to select the listening mode.
- ❼ **SETUP key**  
Use to select the surround sound settings.

### About the STANDBY indicator

This unit has a STANDBY indicator. When the STANDBY indicator is lit, the unit consumes a small amount of power to preserve the memory. This is called STANDBY mode. This mode also lets you turn the power ON using the remote control.

## CONTROLS

### Remote control unit (RC-R0712)



#### 1 Numeric keys

If CD or MD is selected as the input source, these keys function as numeric keys. If tuner is selected as the input source, these keys are used to call up station presets.

#### 2 Component operation keys

Use these keys to operate other components with system control connections to the receiver.

##### ◀ key

If tape is selected as the input source, this key functions as the play key for side B of the cassette (the side facing away from the front of the deck).

##### BAND (▶/◀) key

If tuner is selected as the input source, this key functions as the band selector key.

If CD is selected as the input source, this key functions as the play/pause key.

If MD is selected as the input source, this key functions as the play key.

##### DISC SKIP, A/B, +100 key

If CD is selected as the input source, this key functions as the multi-CD player disc skip key.

If TAPE is selected as the input source, this (A and B) of a double cassette deck.

#### AUTO (■) key

If tuner is selected as the input source, this key functions as the AUTO key.

If CD or MD is selected as the input source, this key functions as the stop key.

#### TUNING (◀◀ ▶▶) keys

If tuner is selected as the input source, these keys function as tuning keys.

If CD or MD is selected as the input source, these keys function as search keys.

#### P.CALL (◀◀ ▶▶) keys

If tuner is selected as the input source, these keys function as P.CALL keys.

If CD or MD is selected as the input source, these keys function as skip keys.

#### 5 LISTEN MODE key

Use to select the listening mode.

#### 4 MUTE key

Use to temporarily mute the sound.

#### 5 SOUND key

Use to adjust the sound quality and ambience effects.

#### 6 MULTI CONTROL key

Used to make a variety of settings.

#### 7 DVD CONT key

Used to operate DVD player.

While holding this key depressed, press any of the keys masked in gray in the above illustration to operate the corresponding function of a DVD player from KENWOOD.

Keys 9, 10, 11, 12 and 13 are given the following functions during the DVD player control operation.

9 :TITLE

10 :ENTER

11 :SUB TITLE

12 :MENU

13 :OSD

For details, refer to the instruction manual of your DVD player.

#### 8 POWER key

Use to switch the power ON/STANDBY when the POWER is turned ON.

#### 9 SOURCE DIRECT key

Use to select the surround sound settings.

#### 10 SETUP key

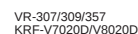
Use to select the surround sound settings.

#### 11 MONITOR key

Use to select the receiver's input source.

#### 12 Input selector keys

Use to select the receiver's input source.



## CIRCUIT DESCRIPTION

### 1. The back up item and initialization condition

#### 1-1 Back up

|                        |                        |                           |                           |
|------------------------|------------------------|---------------------------|---------------------------|
| • POWER                | : POWER OFF            | • FRONT (L,R) LEVEL       | : 0dB                     |
| • VOLUME LEVEL         | : -66dB                | • CENTER LEVEL            | : 0dB                     |
| • AUDIO INPUT SELECTOR | : TUNER                | • REAR (LS,RS) LEVEL      | : 0dB                     |
| • VIDEO INPUT SELECTOR | : VIDEO 1              | • SUB WOOFER LEVEL        | : 0dB                     |
| • SPEAKER A            | : ON                   | • MIDNIGHT                | : OFF                     |
| • SPEAKER B            | : OFF                  | • BAND                    | : FM                      |
| • BASS                 | : 0dB                  | • FM FREQUENCY            | : 87.50MHz                |
| • TREBLE               | : 0dB                  | • AM FREQUENCY            | : 531kHz(CH.SPAC 9kHz)    |
| • INPUT LEVEL          | : 0dB                  |                           | : 530kHz(CH.SPAC 10kHz)   |
| • SOURCE DIRECT        | : OFF                  | • PRESET CH.              | : [ --ch ]                |
| • MONITOR              | : OFF                  | • PRESET MEMORY FREQUENCY | : PRESET MEMORY FREQUENCY |
| • DIMMER               | : DIMMER 1 (LIGHTTEST) |                           |                           |
| • LISTEN MODE          | : STEREO               | • TUNING MODE             | : AUTO                    |
| • VIRTUAL SURROUND     | : OFF                  |                           |                           |
| • INPUT MODE           | : DIGITAL AUTO         |                           |                           |
| • SUB WOOFER           | : YES(ON)              |                           |                           |
| • FRONT SP. SIZE       | : NORMAL               |                           |                           |
| • CENTER SP. SIZE      | : NORMAL               |                           |                           |
| • SURROUND SP. SIZE    | : NORMAL               |                           |                           |
| • DISTANCE             | : Fch 10ft/3m          |                           |                           |
|                        | : Cch 10ft/3m          |                           |                           |
|                        | : Sch 10ft/3m          |                           |                           |

#### 1-2 The initial setting

While pressing POWER key, plug the AC power cord into an AC outlet (K,P type) or turn on the AC POWER switch.

### 2. Condition by the destination or model

(0 : Pull down, 1 : Pull up)

| TYPE            | BAND                                                                                               | Reception frequency | Channel space | IF       | PLL standard frequency | Diode sw |         |         |         |
|-----------------|----------------------------------------------------------------------------------------------------|---------------------|---------------|----------|------------------------|----------|---------|---------|---------|
|                 |                                                                                                    |                     |               |          |                        | ⑦⑦ DSW3  | ⑦⑥ DSW2 | ⑦⑤ DSW1 | ⑦④ DSW0 |
| K1<br>1700      | FM                                                                                                 | 87.5MHz~108.0MHz    | 100kHz        | +10.7MHz | 25kHz                  | 0        | 0       | 0       | 0       |
|                 | AM                                                                                                 | 530kHz~1700kHz      | 10kHz         | +450kHz  | 10kHz                  |          |         |         |         |
| K2<br>1610      | FM                                                                                                 | 87.5MHz~108.0MHz    | 100kHz        | +10.7MHz | 25kHz                  | 0        | 0       | 0       | 1       |
|                 | AM                                                                                                 | 530kHz~1610kHz      | 10kHz         | +450kHz  | 10kHz                  |          |         |         |         |
| K4<br>1700 RBDS | FM                                                                                                 | 87.5MHz~108.0MHz    | 100kHz        | +10.7MHz | 25kHz                  | 1        | 0       | 1       | 0       |
|                 | AM                                                                                                 | 530kHz~1700kHz      | 10kHz         | +450kHz  | 10kHz                  |          |         |         |         |
| E1              | FM                                                                                                 | 87.5MHz~108.0MHz    | 50kHz         | +10.7MHz | 25kHz                  | 0        | 0       | 1       | 1       |
|                 | AM                                                                                                 | 531kHz~1602kHz      | 9kHz          | +450kHz  | 9kHz                   |          |         |         |         |
| E3<br>RDS       | FM                                                                                                 | 87.5MHz~108.0MHz    | 50kHz         | +10.7MHz | 25kHz                  | 0        | 1       | 0       | 1       |
|                 | AM                                                                                                 | 531kHz~1602kHz      | 9kHz          | +450kHz  | 9kHz                   |          |         |         |         |
| Q1<br>RDS       | FM L                                                                                               | 65.0MHz~74.0MHz     | 10kHz         | +10.7MHz | 5kHz                   | 1        | 0       | 1       | 1       |
|                 | FM H                                                                                               | 87.5MHz~108.0MHz    | 50kHz         | +10.7MHz | 5kHz                   |          |         |         |         |
|                 | AM                                                                                                 | 531kHz~1602kHz      | 9kHz          | +450kHz  | 9kHz                   |          |         |         |         |
| M               | K2/E1 is switched with only the setting of DSW1 (X11 : S601).<br>(DSW1 = 0 : K2 type, 1 : E1 type) |                     |               |          |                        | 0        | 0       | X       | 1       |

### 3. TEST MODE

#### [setting method]

While pressing INPUT SELECTOR key, plug the AC power cord into an AC outlet (K, P type) or turn on the AC POWER switch. When a set is set up in test mode condition a set becomes the following condition. Automatic POWER ON. All indicator tube (FL) and CLIP INDICATOR LED are lighted. The other LED are flashed.

A backup at the thing except ON/OFF of POWER is initialized.

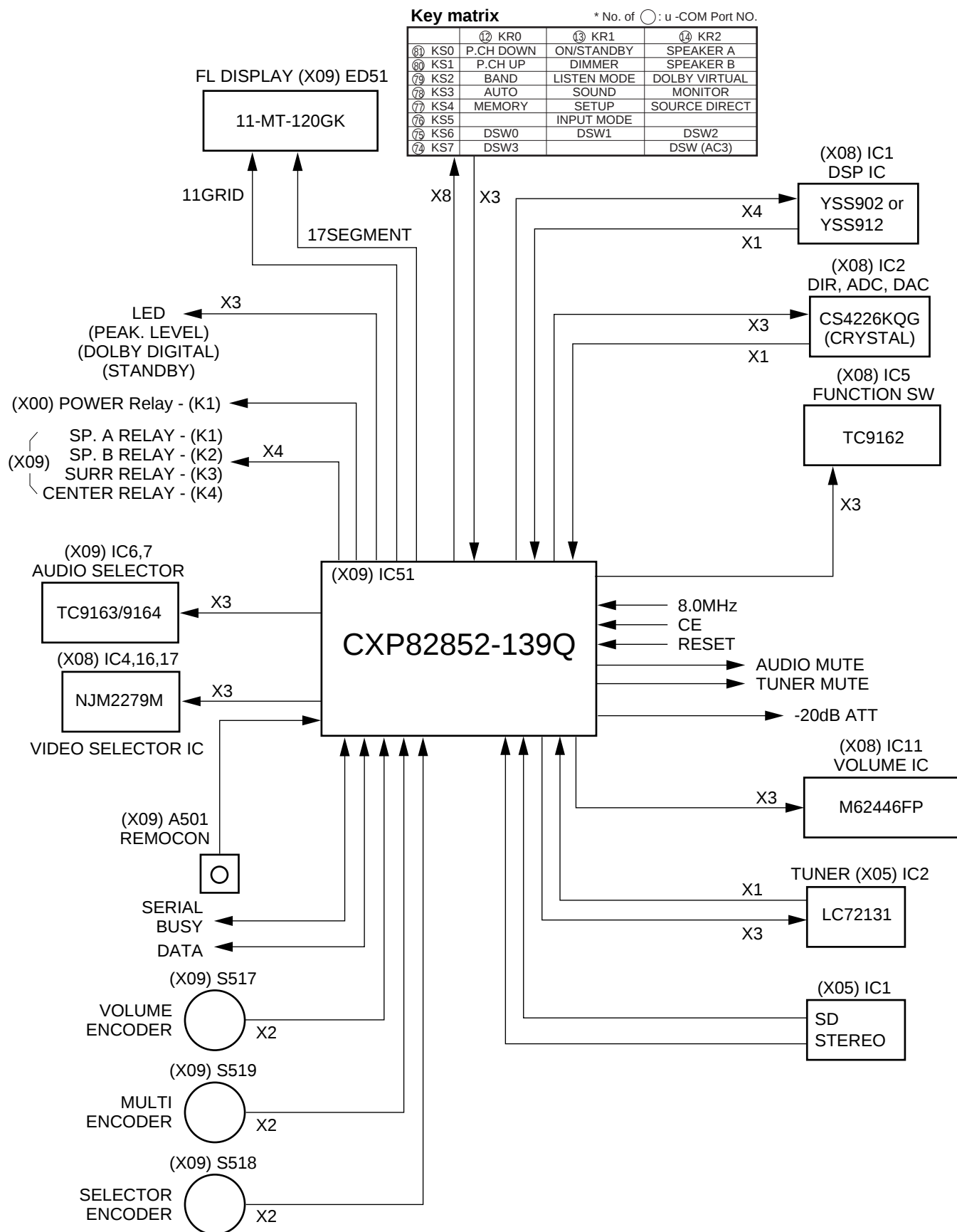
#### [cancel method]

The power supply is turned off.

## CIRCUIT DESCRIPTION

### 4. Microprocessor CXP82852-139Q(X09 : IC51)

#### 4-1 Microprocessor periphery block diagram



## CIRCUIT DESCRIPTION

## 4-2 Pin description

| Pin No. | Pin Name    | I/O | Description                                   |
|---------|-------------|-----|-----------------------------------------------|
| 1,2     | G10,11      | O   | Display grids 10,11                           |
| 3       | None        | -   | Ic test mode port.                            |
| 4,5     | None        | I   | No connect                                    |
| 6       | AUDIO       | I   | Audio signal detection port. L=AUDIO.         |
| 7       | VOL.ENC.A   | I   | Volume encoder A(clockwise) input.            |
| 8       | REMOCON     | I   | Remote control signal input.                  |
| 9       | VOL.ENC.B   | I   | Volume encoder B(counterclockwise) input.     |
| 10,11   | None        | O   | Ic test mode port.                            |
| 12-14   | KR0-2       | I   | Key return 0-2.                               |
| 15      | PROTECT     | I   | Protection signal detection port. H=PROTECT.  |
| 16      | S.DATA      | I/O | Serial DATA signal.                           |
| 17      | S.BUSY      | I/O | Serial BUSY signal.                           |
| 18      | SP.A+B      | O   | Speaker on both A sp. and B sp.               |
| 19      | SW.6dB.ATT  | O   | Sub woofer 6dB attenuation                    |
| 20      | SEL.ENC.A   | I   | Selector encoder A(clockwise) input.          |
| 21      | SEL.ENC.B   | I   | Selector encoder B(counterclockwise) input.   |
| 22      | MULTI.ENC.A | I   | Multi encoder A(clockwise) input.             |
| 23      | MULTI.ENC.B | I   | Multi encoder B(counterclockwise) input.      |
| 24      | SL16/XS8    | I   | SL16/XS8 selector. H=16bit.                   |
| 25      | DSP.SCK     | O   | DSP(YSS902/912) CLOCK output.                 |
| 26      | DSP.SI      | I   | DSP(YSS902/912) DATA input.                   |
| 27      | DSP.SO      | O   | DSP(YSS902/912) DATA output.                  |
| 28      | Vdd         | -   | Analog power supply(+5V)                      |
| 29      | None        | I   | No connect                                    |
| 30      | CH.SPACE    | O   | Channel space chengeover H=E1 type            |
| 31      | DSP.CS      | O   | DSP(YSS902/912) CS output.                    |
| 32      | CODEC.CS    | O   | CS4226 CS output.                             |
| 33      | PLL.DO      | I   | PLL ic DO signal input .                      |
| 34      | PLL.ST      | I   | Tuner STEREO signal detection port. L=STEREO. |
| 35      | PLL.SD      | I   | Tuner SD signal detection port. L=TUNED.      |
| 36      | RCV.CE      | I   | Receiver CHIP ENABLE signal port. L=ENABLE.   |
| 37      | Avss        | -   | Analog GND.                                   |
| 38      | RESET       | I   | Microprocessor RESET signal.                  |
| 39,40   | 8MHz        | I   | Main clock generation(8MHz).                  |
| 41      | Vss         | -   | Microprocessor GND.                           |
| 42      | None        | I   | No connect                                    |
| 43      | TEX         | -   | GND.                                          |
| 44      | Vdd         | -   | Power supply(+5V).                            |
| 45      | Vfdp        | -   | Power supply(-33V).                           |
| 46      | SEL.ST1     | O   | TC9162AF/63AF/64AF ST1 output. H=LATCH.       |
| 47      | PLL.DT      | O   | PLL ic DATA signal output .                   |
| 48      | PLL.CK      | O   | PLL ic CLOCK signal output .                  |
| 49      | PLL.CE      | O   | PLL ic CE signal output .                     |
| 50      | T.TUNE      | O   | Tuner mute control. L=MUTE ON                 |
| 51      | A.MUTE      | O   | Audio mute control. L=MUTE ON                 |
| 52      | SEL.ST2     | O   | TC9163/9164 ST2 output                        |
| 53      | 20dB.ATT    | O   | Volume 20dB attenuation control. H=ATT. OFF   |
| 54      | VOL.DT      | O   | Volume ic (M62446SP) DATA control.            |
| 55      | VOL.CK      | O   | Volume ic (M62447SP) CLOCK control. H=ACTIVE  |
| 56      | VOL.ST      | O   | Volume ic (M62448SP) ST control. H=ACTIVE     |
| 57      | DSP.SCB     | O   | DSP(YSS902/912) chip selector                 |
| 58      | VCR.A       | O   | Video ic (NJM2279M) cont1 control. H/L=STATIC |
| 59      | VCR.B       | O   | Video ic (NJM2279M) cont3 control. H/L=STATIC |
| 60      | FA.RLY      | O   | Front A speaker relay control. H=RELAY ON     |

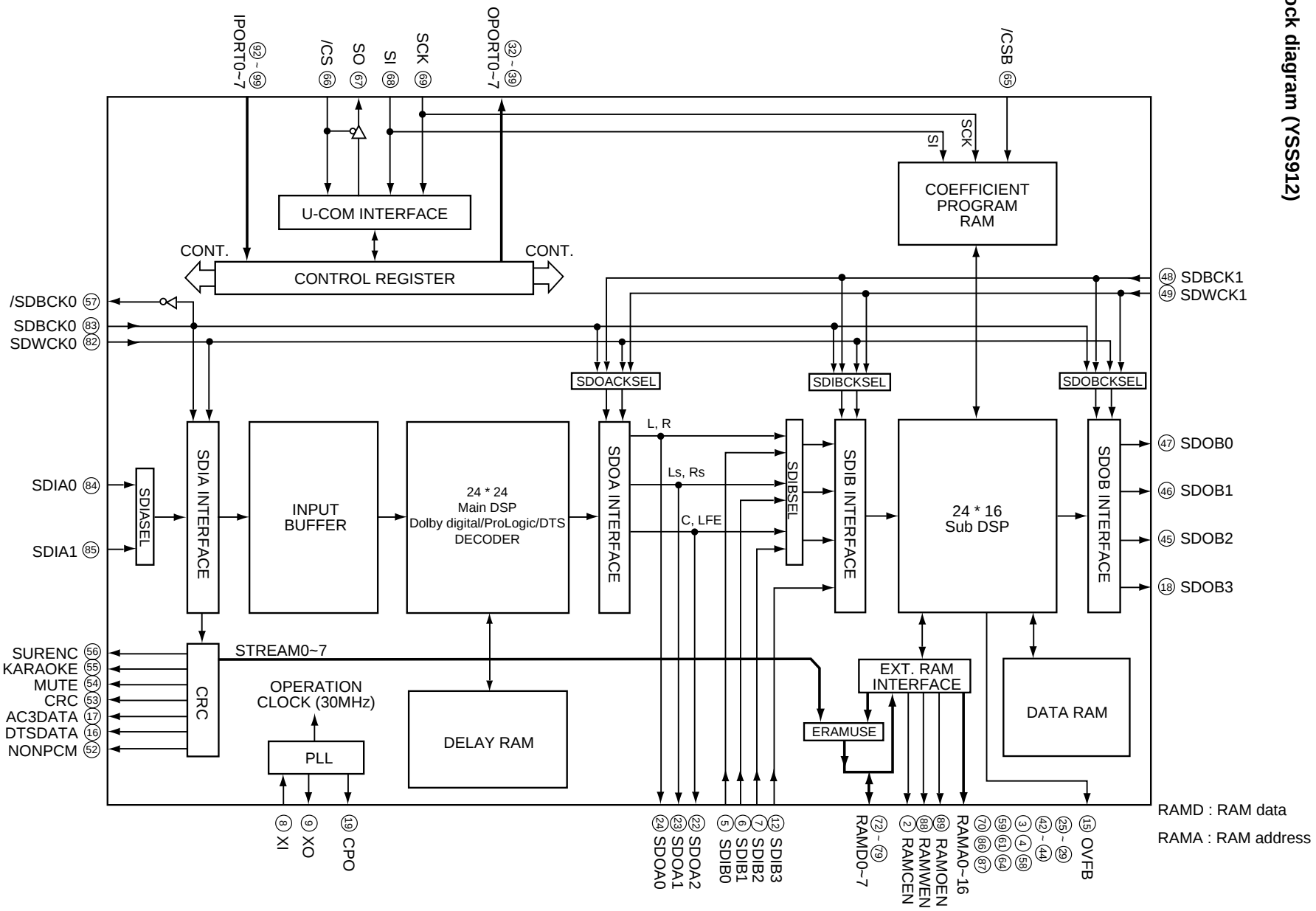
**CIRCUIT DESCRIPTION**

| Pin No. | Pin Name    | I/O | Description                                                       |
|---------|-------------|-----|-------------------------------------------------------------------|
| 61      | FB.RLY      | O   | Front B speaker relay control. H=RELAY ON.                        |
| 62      | C.RLY       | O   | Center speaker relay control. H=RELAY ON                          |
| 63      | S.RLY       | O   | Rear speaker relay control. H=RELAY ON                            |
| 64      | POWER.RLY   | O   | Power relay control. H=RERAY ON                                   |
| 65      | STANDBY.LED | O   | Standby LED control.H=LED ON                                      |
| 66      | DOL.DIG.LED | O   | Dolby digital LED control.H=LED ON                                |
| 67      | DOL.VIR.LED | O   | Dolby virtual LDE control.H=LED ON                                |
| 68      | DTS LED     | O   | DTS LED control. H=LED ON                                         |
| 69,70   | None        | O   | No connect                                                        |
| 71      | PACK CTL    | O   | Non oscillation of power pack ic at power off. L=STOP OSCILLATION |
| 72      | DSP.IC      | O   | DSP(YSS902/912)/CS4226 initial clear .                            |
| 73      | None        | O   | No connect                                                        |
| 74-81   | P1-8/KS7-0  | O   | Display segments 1-8 & key scan 7-0.                              |
| 82-88   | P9-15       | O   | Display segments 9-15.                                            |
| 89      | Vdd         | O   | Microprocessor power supply(+5V)                                  |
| 90,91   | P16,17      | O   | Display segments 16,17                                            |
| 92-100  | G1-9        | O   | Display grids 1-9.                                                |

# CIRCUIT DESCRIPTION

## 5. Dolby digital/DTS IC: YSS902/YSS912 (X08: IC1)

### 5-1 Block diagram (YSS912)



## CIRCUIT DESCRIPTION

## 5-2 Pin description

| Pin No. | Pin Name | I/O | Descriptions                                              |
|---------|----------|-----|-----------------------------------------------------------|
| 1       | Vdd1     | -   | Power supply(+5V)                                         |
| 2~4     | -        | -   | No connect                                                |
| 5~7     | SDIB0~2  | O   | PCM output port for sub DSP                               |
| 8       | XI       | I   | Crystal oscillation port.(902:6.25~50.0MHz,912:12.288MHz) |
| 9       | XO       | O   | Crystal oscillation port.                                 |
| 10      | Vss      | -   | GND                                                       |
| 11      | AVdd     | -   | Power supply(+3.3V) for PLL                               |
| 12~18   | -        | -   | No connect                                                |
| 19      | CPO      | O   | PLL output port.                                          |
| 20      | AVss     | I   | GND                                                       |
| 21      | Vdd2     | -   | Power supply(+3.3V)                                       |
| 22      | SDOA2    | O   | PCM output port from main DSP                             |
| 23      | -        | -   | No connect                                                |
| 24      | SDOA0    | O   | PCM output port from main DSP                             |
| 25~29   | -        | -   | No connect                                                |
| 30      | Vss      | -   | GND                                                       |
| 31      | Vdd1     | -   | Power supply(+5V)                                         |
| 32      | -        | -   | No connect                                                |
| 33      | OPORT1   | O   | -                                                         |
| 34~39   | -        | -   | No connect                                                |
| 40      | Vss      | -   | GND                                                       |
| 41      | Vdd2     | -   | Power supply(+3.3V)                                       |
| 42~44   | -        | -   | No connect                                                |
| 45      | SDO2     | O   | PCM output port from sub DSP(C,LFE/SWch)                  |
| 46      | SDO1     | O   | PCM output port from sub DSP(LS,RSch)                     |
| 47      | SDO0     | O   | PCM output port from sub DSP(FL,FRch)                     |
| 48,49   | -        | -   | No connect                                                |
| 50      | Vss      | -   | GND                                                       |
| 51      | Vdd2     | -   | Power supply(+3.3V)                                       |
| 52~59   | -        | -   | No connect                                                |
| 60      | Vss      | -   | GND                                                       |
| 61      | -        | -   | No connect                                                |
| 62      | /IC      | I   | Initial clear port.                                       |
| 63,64   | -        | -   | No connect                                                |
| 66      | /CS      | I   | Microprocessor interface chip selector input port.        |
| 67      | SO       | O   | Microprocessor interface serial data output port.         |
| 68      | SI       | I   | Microprocessor interface serial data input port.          |
| 69      | SCK      | I   | Microprocessor interface clock input port.                |
| 70      | -        | -   | No connect                                                |
| 71      | Vdd1     | -   | Power supply(+5V)                                         |
| 72~79   | -        | -   | No connect                                                |
| 80      | Vss      | -   | GND                                                       |
| 81      | Vdd2     | -   | Power supply(+3.3V)                                       |
| 82      | SDIWCK 0 | I   | Word clock for SD input ports.                            |
| 83      | SDIBCK 0 | I   | Bit clock for SD input ports.                             |
| 84      | SDIA     | I   | AC3 bit stream data input port.                           |
| 85~89   | -        | -   | No connect                                                |
| 90      | Vss      | -   | GND                                                       |
| 91      | Vdd2     | -   | Power supply(+3.3V)                                       |
| 92,93   | -        | -   | No connect                                                |
| 94      | IPORT5   | I   | Input port register                                       |
| 95      | -        | -   | No connect                                                |
| 96~99   | IPORT3~0 | I   | Input port register                                       |
| 100     | Vss      | -   | GND                                                       |

# KRF-V7020D/V8020D/VR-307/309/357

## CIRCUIT DESCRIPTION

### 6. SURROUND FUNCTION IC : TC9162AF(X08:IC5)

[○ : ON, X: OFF]

| INPUT         | (PIN NO.) | (2,27) | (3,26)  | (5,24) | (6,23) | (8,21) | (9,20) | (11,-)    | (18,-)    |
|---------------|-----------|--------|---------|--------|--------|--------|--------|-----------|-----------|
|               | SW NO.    | R1,L1  | R2,L2   | R3,L3  | R4,L4  | R5,L5  | R6,L6  | R7        | L7        |
|               | OUTPUT    | ANALOG | DIGITAL | RS/L5  | R/L    | SUB W. | VIDEO3 | NO SUB W. | NO SUB W. |
| TEST TONE     |           | X      | ○       | ○      | X      |        | ○      |           |           |
| INPUT DIGITAL |           | X      | ○       |        |        |        | ○      |           |           |
| INPUT ANALOG  |           | ○      | X       |        |        |        | ○      |           |           |
| FRONT LARGE   |           | X      | X       |        |        |        | ○      |           |           |
| STEREO        |           | X      | X       |        |        |        | ○      |           |           |
| S. DIRECT     |           | ○      | X       |        |        |        | ○      |           |           |
| SP. A,B ON    |           |        |         | ○      | X      |        | ○      |           |           |
| SP. A ON      |           |        |         | X      | ○      |        | ○      |           |           |
| SP. B ON      |           |        |         | X      | ○      |        | ○      |           |           |
| SP. A,B OFF   |           |        |         | ○      | X      | X      | ○      | ○         | X         |
| SUB W. ON     |           |        |         |        |        | X      | ○      | ○         | X         |
| SUB W. OFF    |           |        |         |        |        | ○      | ○      | X         | ○         |

### 7. AUDIO INPUT SELECTOR IC : TC9164AF (X09:IC6)

[○ : ON, X: OFF]

| INPUT                       | (PIN NO.) | (2,27) | (3,26) | (4,25) | (5,24)  | (7,22)      | (9,21)      | (10,19)    | (11,18)     |
|-----------------------------|-----------|--------|--------|--------|---------|-------------|-------------|------------|-------------|
|                             | SW NO.    | R1,L1  | R2,L2  | R3,L3  | R4,L4   | R5,L5       | R6,L6       | R7,L7      | R8,L8       |
|                             | OUTPUT    | TUNER  | PHONO  | CD     | MD/TAPE | MD/TAPE REC | VIDEO 1 REC | ANALOG L/R | DIGITAL L/R |
| TUNER                       |           | ○      | X      | X      | X       | ○           | ○           |            |             |
| PHONO                       |           | X      | ○      | X      | X       | ○           | ○           |            |             |
| CD                          |           | X      | X      | ○      | X       | *1          | *1          |            |             |
| MD/TAPE                     |           | X      | X      | X      | ○       | X           | ○           |            |             |
| VIDEO1                      |           | X      | X      | X      | X       | ○           | X           |            |             |
| VIDEO2                      |           | X      | X      | X      | X       | *1          | *1          |            |             |
| VIDEO3                      |           | X      | X      | X      | X       | *1          | *1          |            |             |
| MONITOR                     |           | *2     | *2     | *2     | *2      | *3          | *3          |            |             |
| ANALOG                      |           |        |        |        |         |             |             | ○          | X           |
| INPUT DIGITAL STEREO        |           |        |        |        |         |             |             | X          | ○           |
| INPUT DIGITAL except STEREO |           |        |        |        |         |             |             | ○          | X           |

\*1: It's open except STEREO/VIRTUAL on DTS.

\*2: It's the same with MONITOR output.

\*3: It's the same MONITOR OFF.

### 8. AUDIO INPUT SELECTOR IC : TC9162AF (X09:IC7)

[○ : ON, X: OFF]

| INPUT      | (PIN NO.) | (2,27)  | (3,26) | (4,25) | (6,23) | (7,22) | (8,21) | (10,19) | (11,18) |
|------------|-----------|---------|--------|--------|--------|--------|--------|---------|---------|
|            | SW NO.    | R1,L1   | R2,L2  | R3,L3  | R4,L4  | R5,L5  | R6,L6  | R7,L7   | R8,L8   |
|            | OUTPUT    | ATT OFF | ATT1   | ATT2   | VIDEO1 | VIDEO2 | VIDEO3 | COM     | MONITOR |
| TUNER      |           |         |        |        | X      | X      | X      | ○       | X       |
| PHONO      |           |         |        |        | X      | X      | X      | ○       | X       |
| CD         |           |         |        |        | X      | X      | X      | ○       | X       |
| MD/TAPE    |           |         |        |        | X      | X      | X      | ○       | X       |
| VIDEO1     |           |         |        |        | ○      | X      | X      | X       | ○       |
| VIDEO2     |           |         |        |        | X      | ○      | X      | ○       | X       |
| VIDEO3     |           |         |        |        | X      | X      | ○      | ○       | X       |
| MONITOR    |           |         |        |        | *1     | *1     | *1     | ○       | X       |
| INPUT 0dB  |           | ○       | X      | X      |        |        |        |         |         |
| INPUT -3dB |           | X       | ○      | X      |        |        |        |         |         |
| INPUT -6dB |           | X       | X      | ○      |        |        |        |         |         |

\*1: ,it's the same with display input selector on MONITOR output.

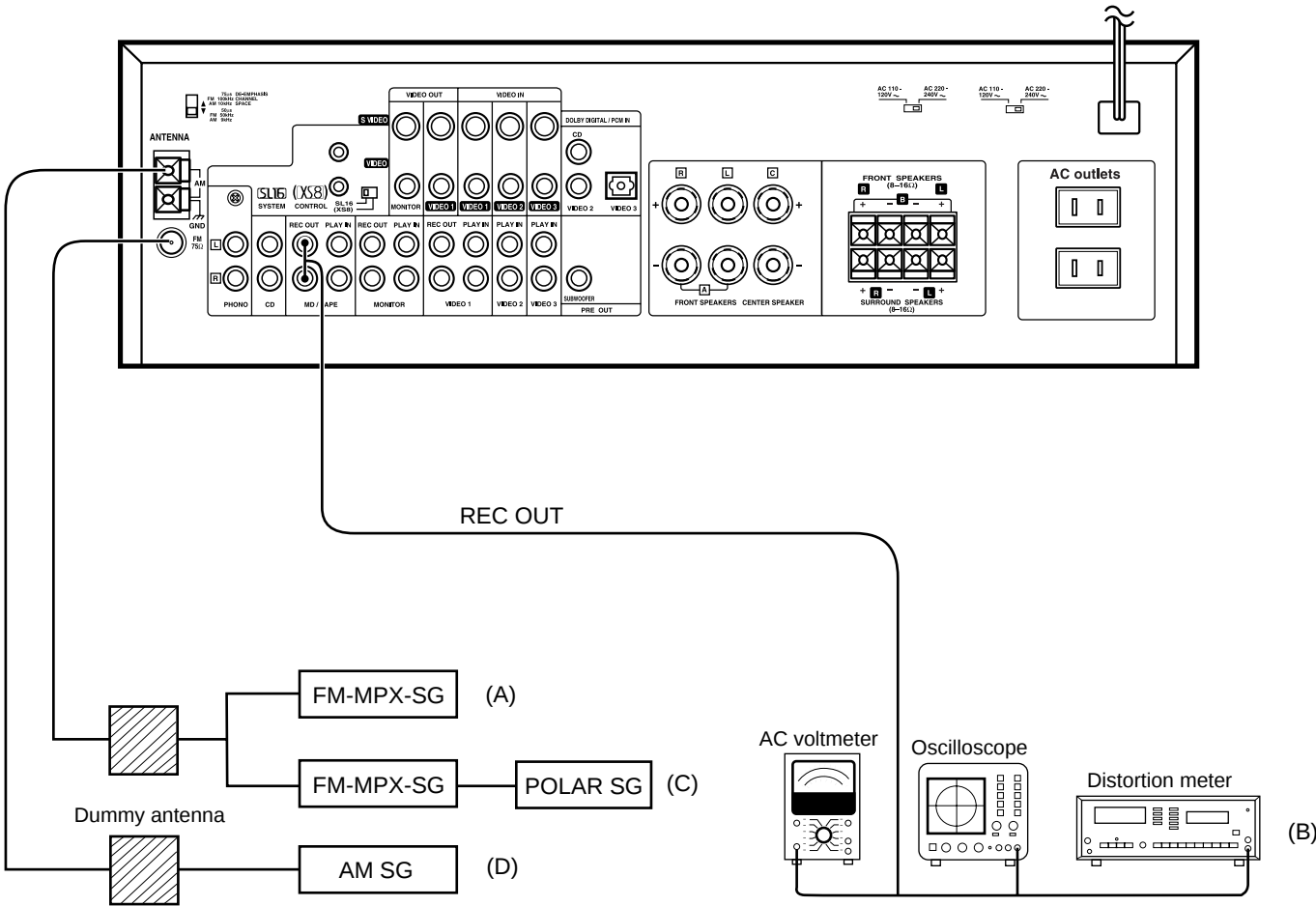
### 9. SPEAKER SETUP

| SUB WOOFER              | YES         |    |             |    | YES or NO |        |        |             |    |             |    |
|-------------------------|-------------|----|-------------|----|-----------|--------|--------|-------------|----|-------------|----|
| FRONT SP.               | NORMAL      |    |             |    | LARGE     |        |        |             |    |             |    |
| CENTER SP.              | NORMAL(YES) |    | NO          |    | LARGE     |        | NORMAL |             | NO |             |    |
| SURROUND SP.            | NORMAL(YES) | NO | NORMAL(YES) | NO | LARGE     | NORMAL | NO     | NORMAL(YES) | NO | NORMAL(YES) | NO |
| CENTER MODE (PRO LOGIC) | NORMAL      | -  | PHANTOM     | -  | WIDE      | WIDE   | -      | NORMAL      | -  | PHANTOM     | -  |

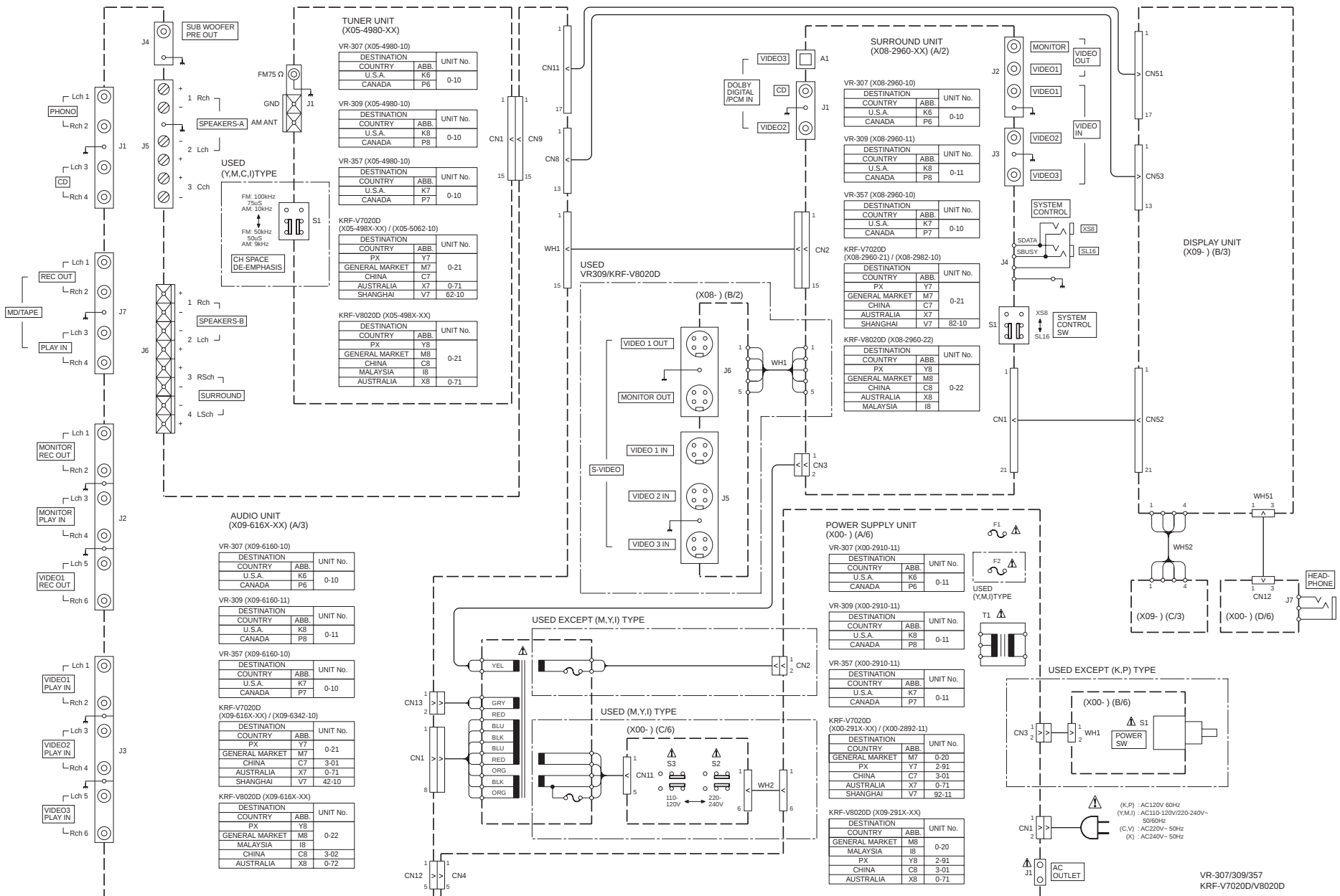
# KRF-V7020D/V8020D/VR-307/309/357

## ADJUSTMENT

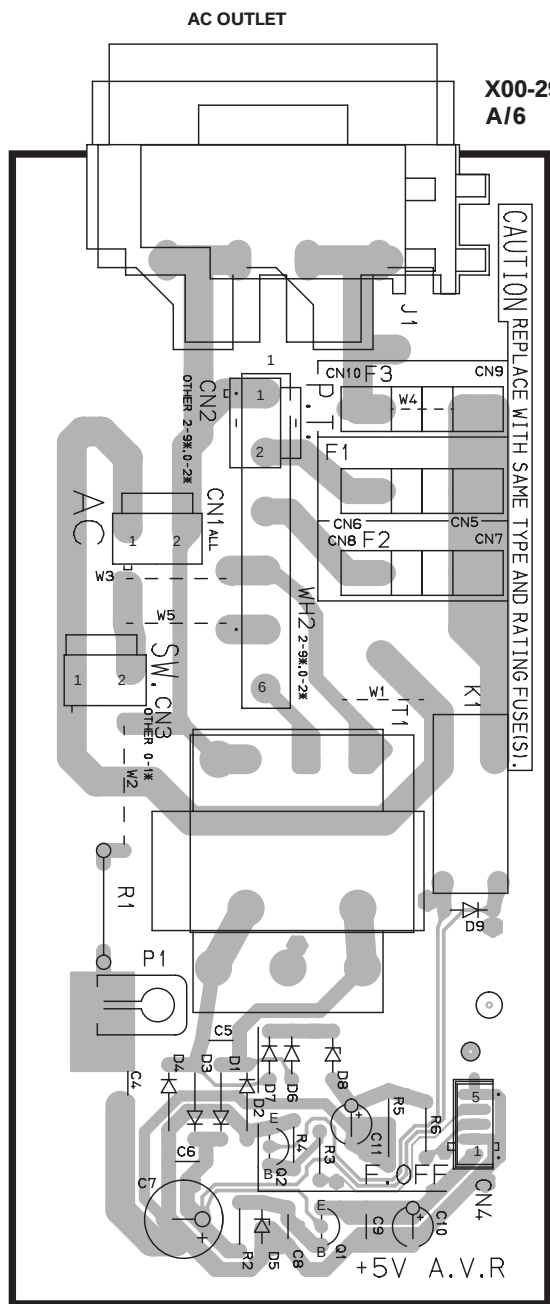
| No.        | ITEM                | INPUT SETTINGS                                                                                           | OUTPUT SETTINGS | RECEIVER SETTINGS | ALIGNMENT POINTS    | ALIGN FOR                                                    | FIG. |
|------------|---------------------|----------------------------------------------------------------------------------------------------------|-----------------|-------------------|---------------------|--------------------------------------------------------------|------|
| FM SECTION |                     | SELECTOR : FM                                                                                            |                 |                   |                     |                                                              |      |
| 1          | DISTORTION (STEREO) | (A)<br>98.0MHz<br>1kHz,±68.25kHz dev.<br>Selector : L or R<br>Pilot : ±6.75kHz dev.<br>70dBf(ANT. input) | (B)             | 98.0 MHz          | IFT<br>(TUNER A1)   | Minimum distortion<br>(L or R)                               |      |
| 2          | TUNING LEVER        | (A)<br>98.0MHz<br>MONO<br>1kHz,±75kHz dev.<br>25dBf(ANT. input)                                          | (B)             | MONO<br>98.0 MHz  | VR1<br>(TUNER UNIT) | Adjust VR1 and stop at the point where ED51 (TUNED) goes on. |      |



## WIRING DIAGRAM



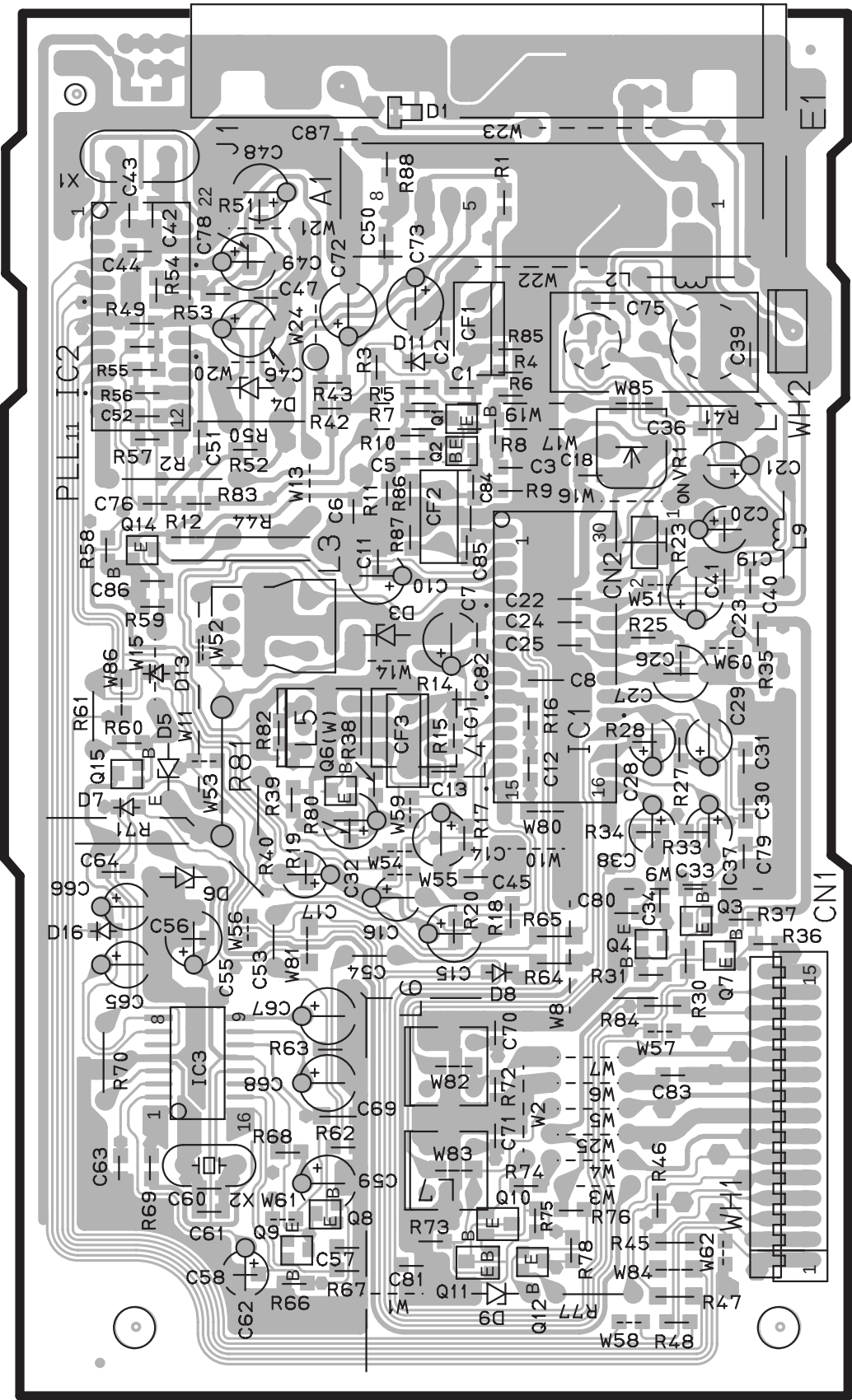
# PC BOARD(Component side view) POWER SUPPLY UNIT



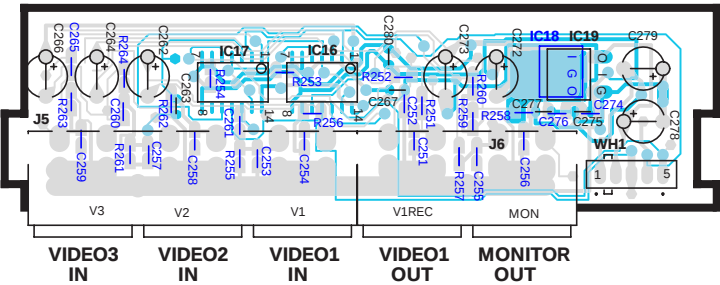
PC BOARD(Component side view)

TUNER UNIT  
X05-498X-XX

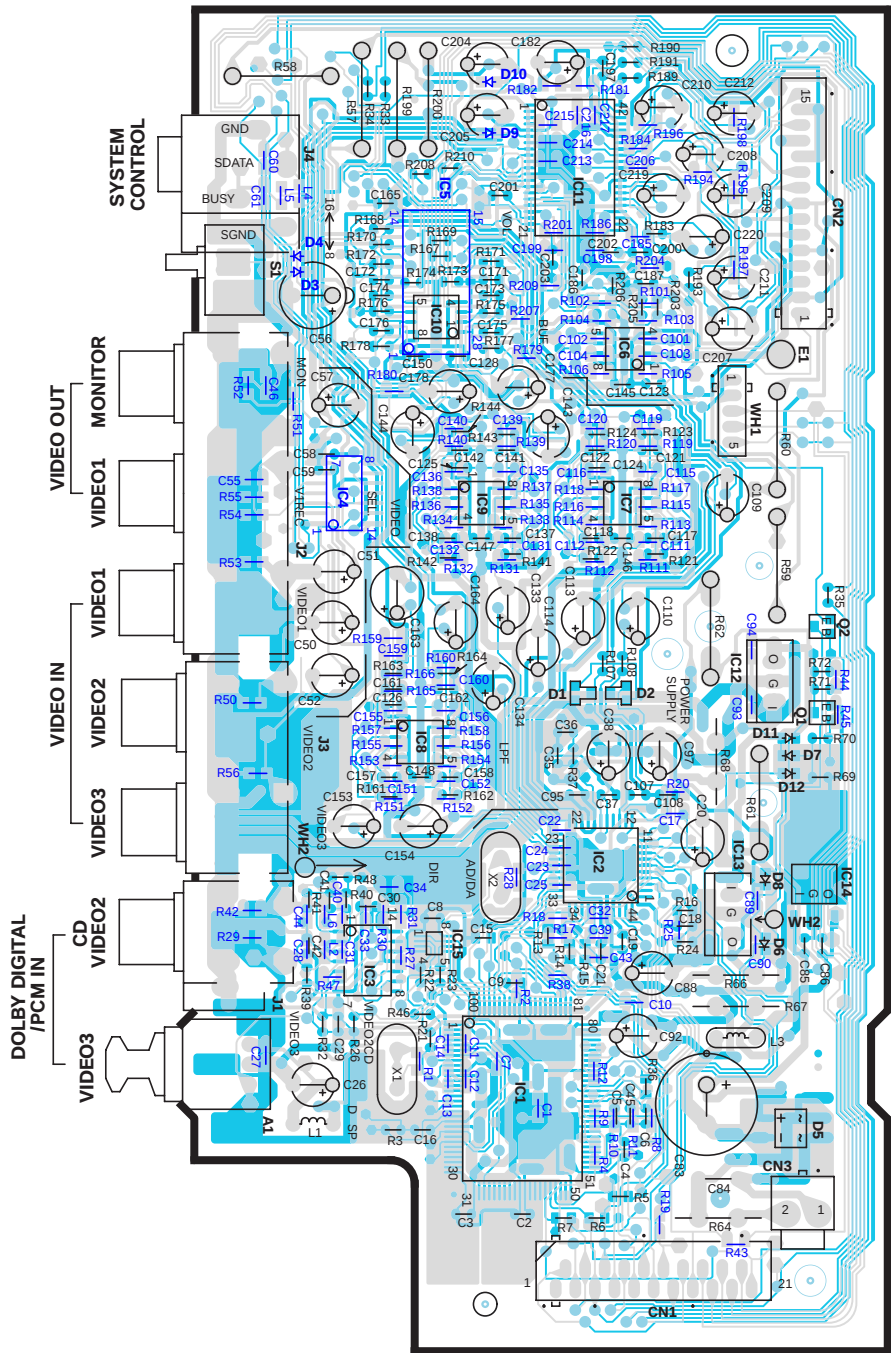
ANTENNA



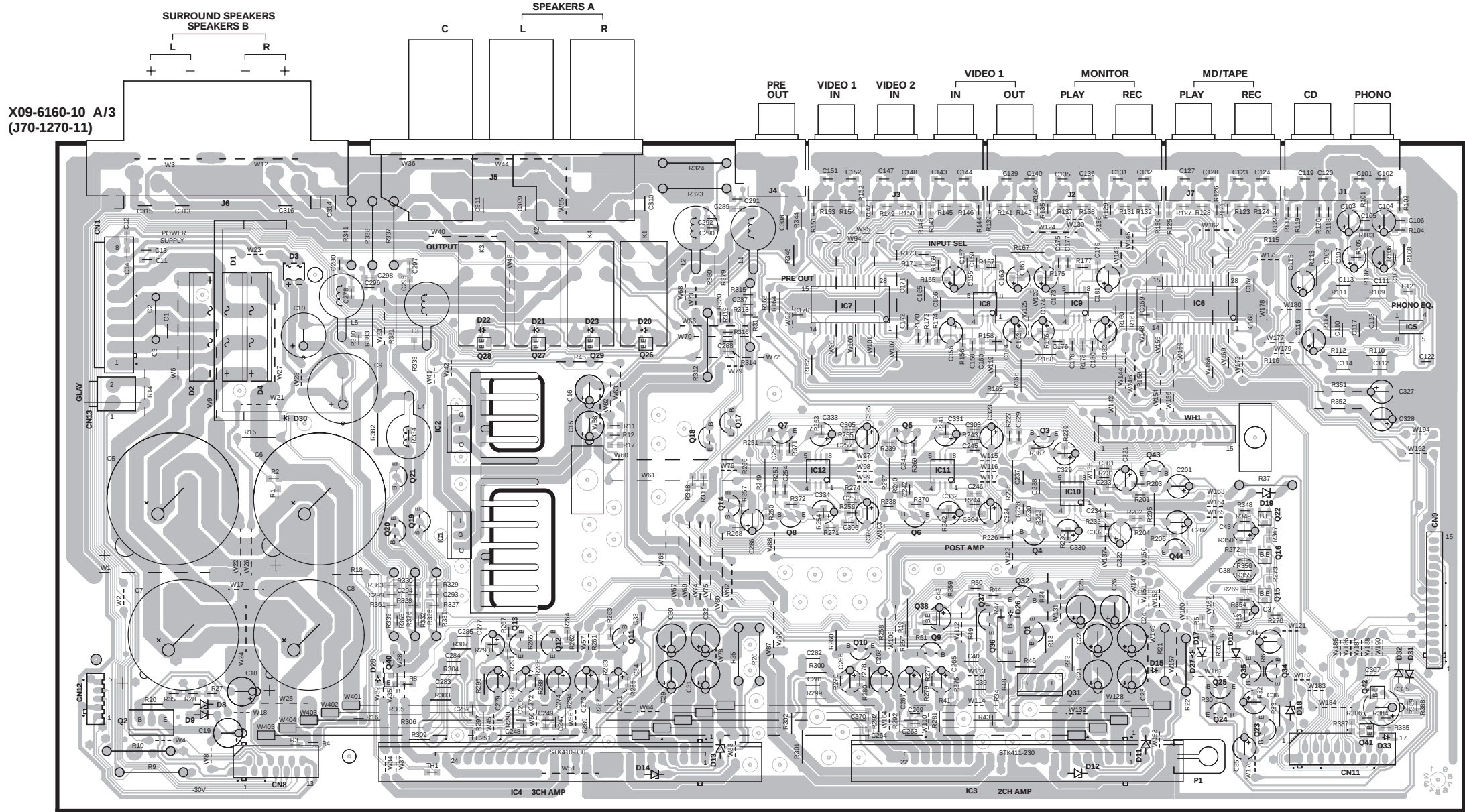
SURROUND UNIT  
X08 B/2



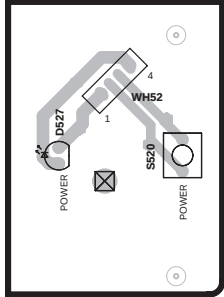
X08-2960-10 A/2 (J70-1268-11)



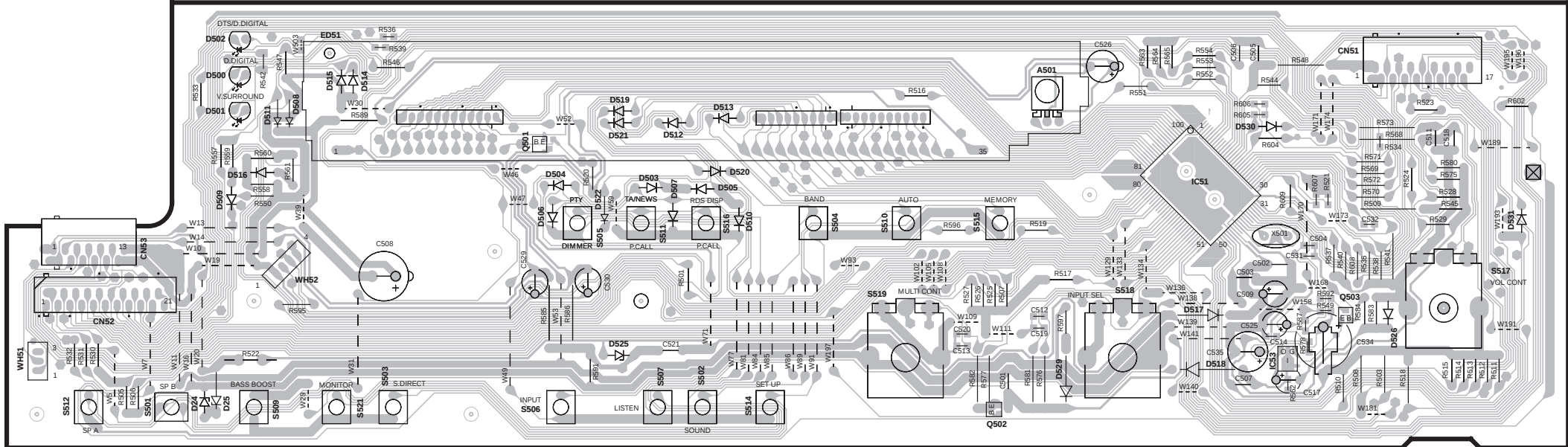
PC BOARD(Component side view) AUDIO UNIT



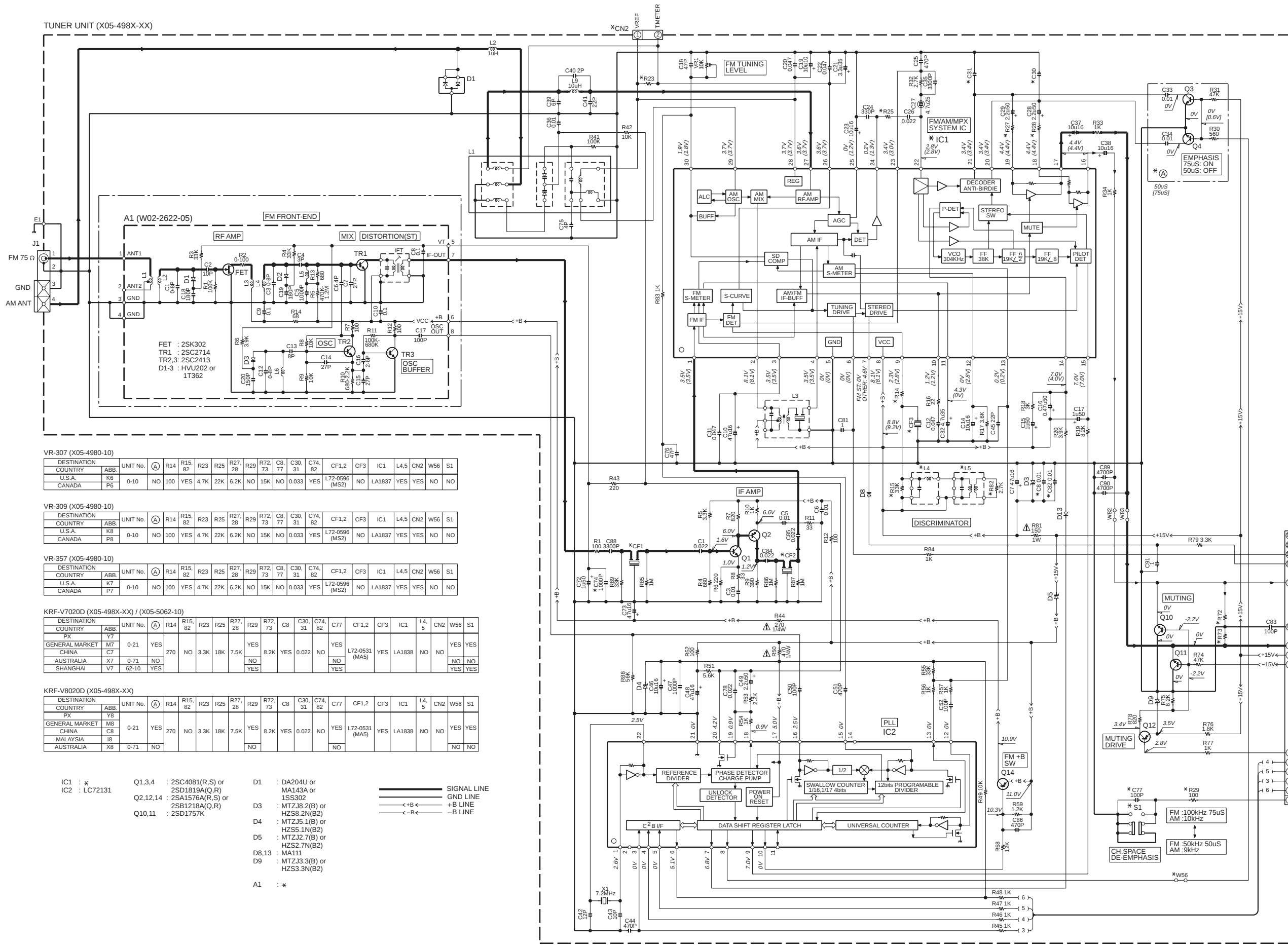
X09 C/3



X09 B/3



TUNER UNIT (X05-498X-XX)



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

The DC voltage is an actual reading measured with a high impedance type voltmeter as the AM/FM signal generator is specified to the conditions as shown in the list below. The measurement value may vary depending on the measuring instruments used or on the product. The value shown in ( ) is actual reading measured in the AM mode.

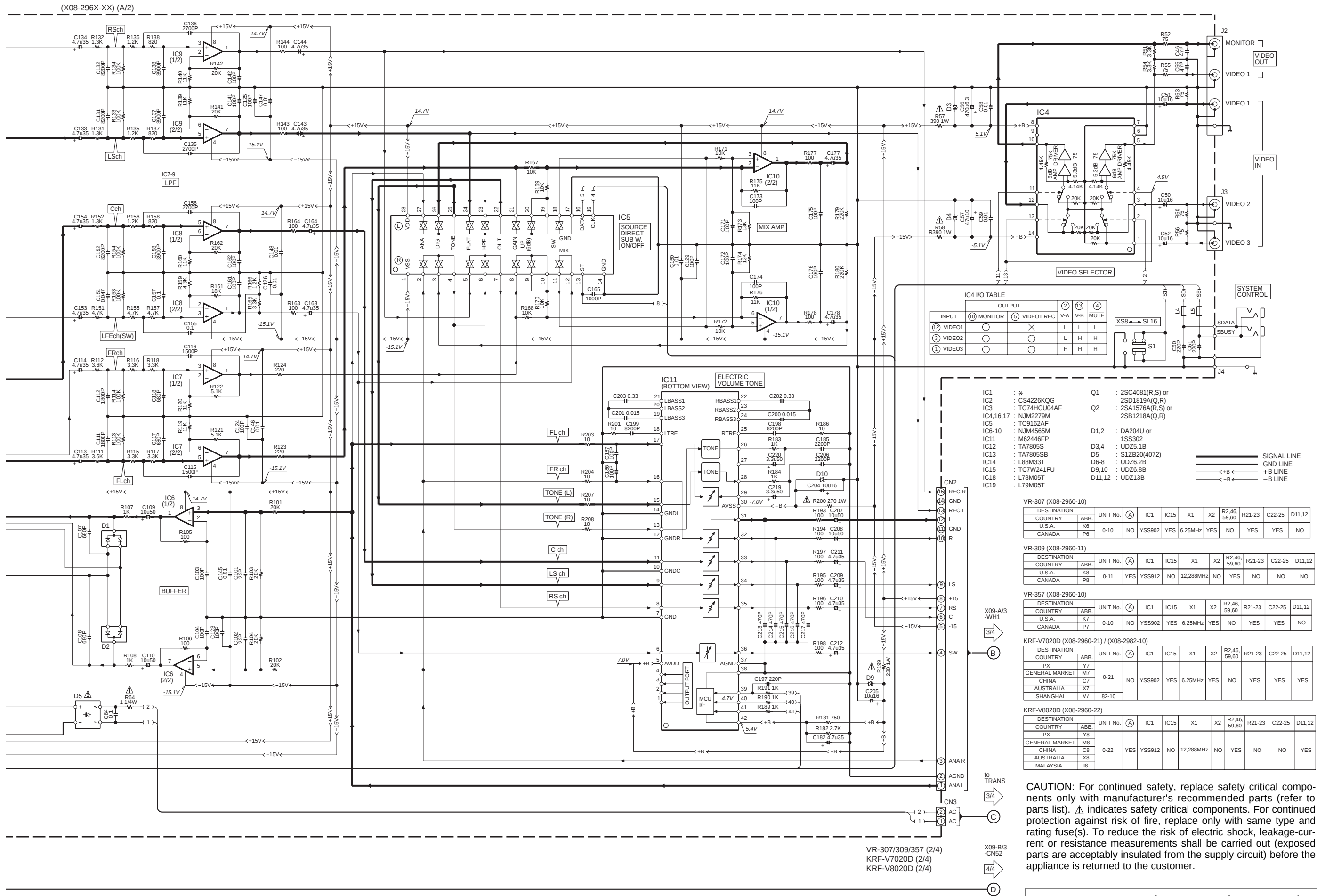
| MODE | CARRIER      | MODULATION |                              | ANT INPUT |
|------|--------------|------------|------------------------------|-----------|
|      |              | FREQUENCY  | DEVIATION                    |           |
| FM   | 98MHz        | 1kHz       | STEREO 67.5kHz 7.5kHz(Pilot) | 60dB      |
| AM   | 1000(999)kHz | 400Hz      | MONO 30% MOD                 | 60dB      |

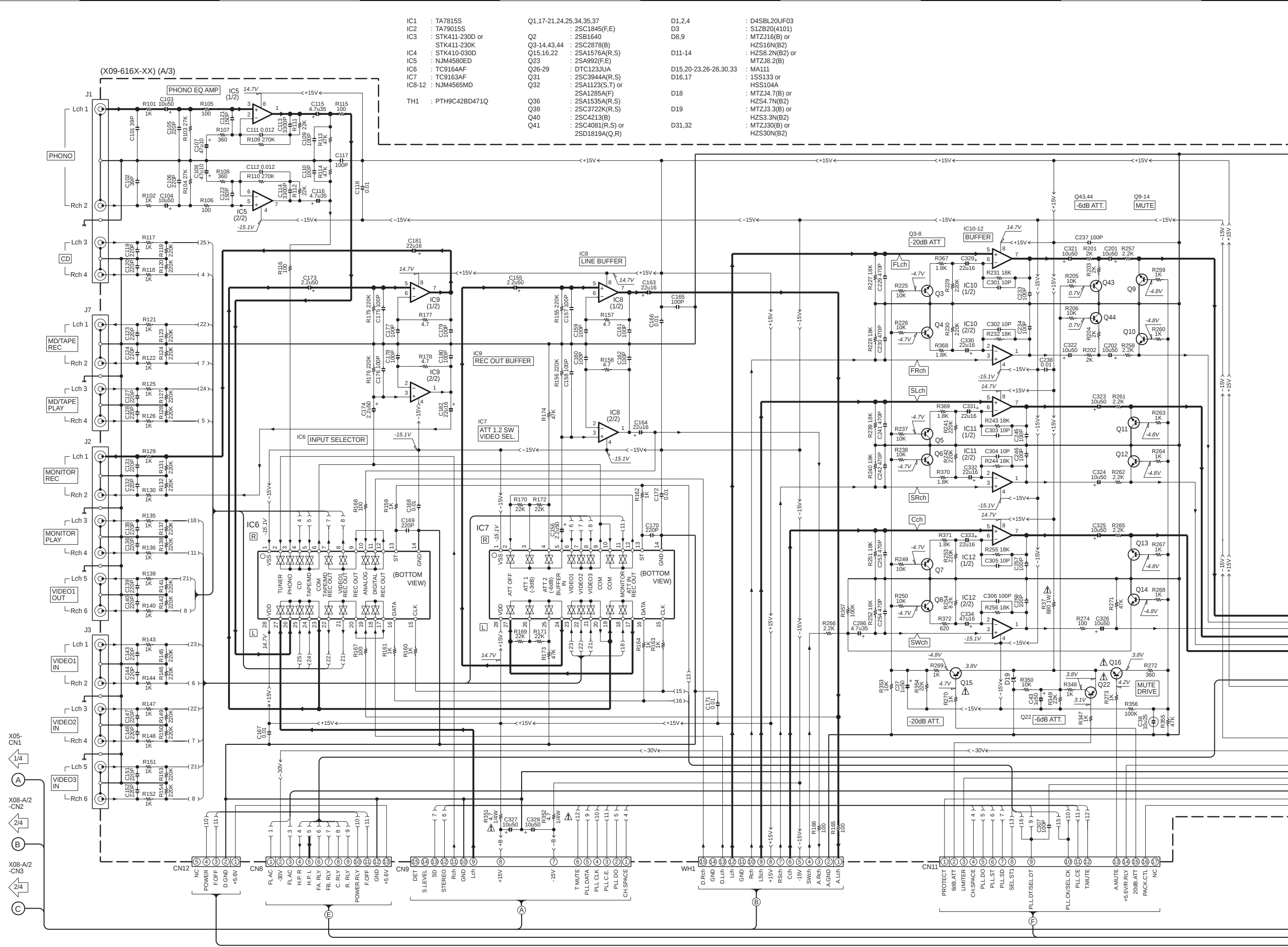
Y05-3760-10

KRF-V7020D/V8020D/VR-307/309/357

KENWOOD





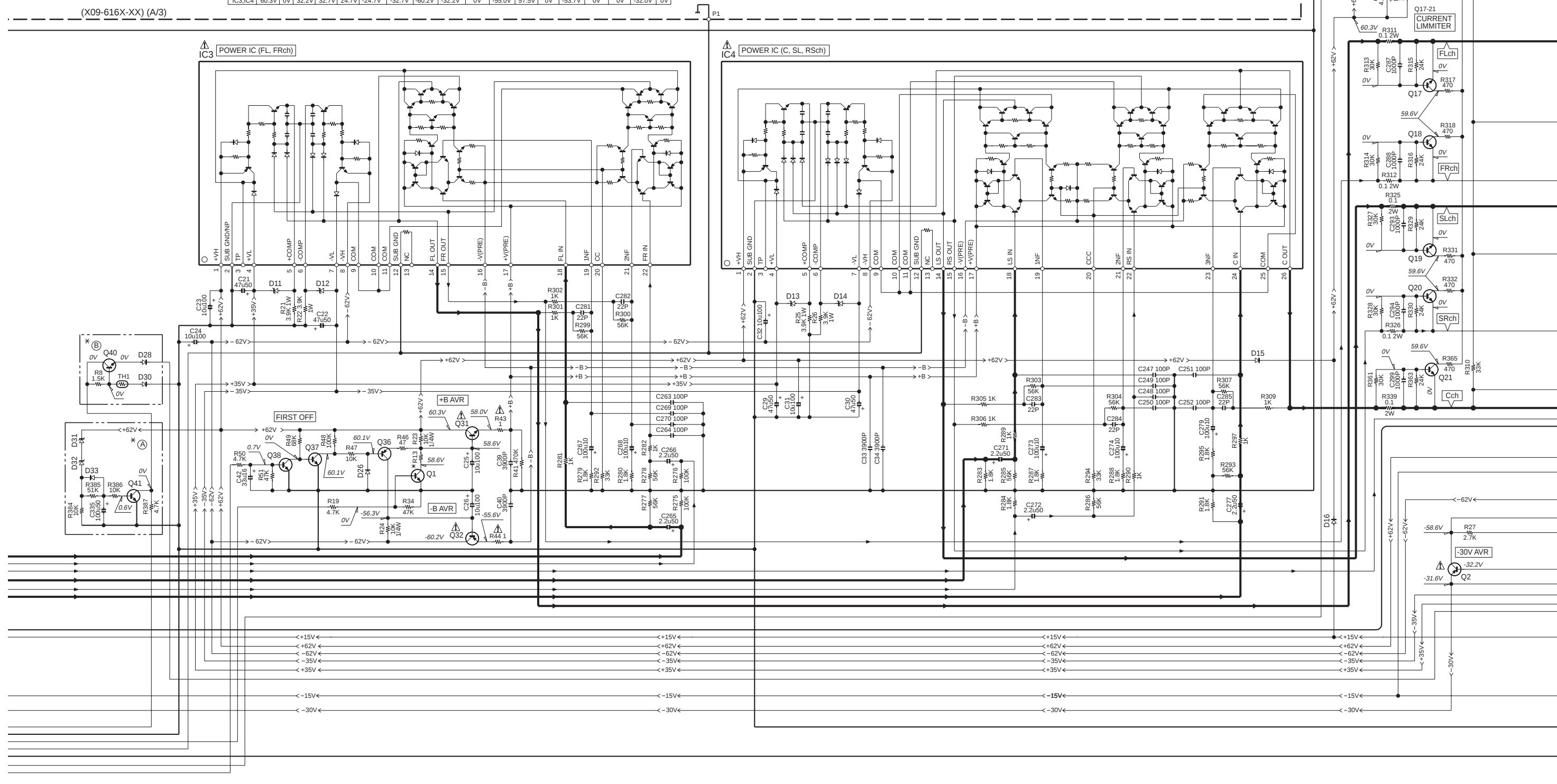


**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

The DC voltage is an actual reading measured with a high impedance type voltmeter with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.

| POWER IC(IC3,4) DC VOLTAGE |       |    |       |       |       |        |        |        |        |       |        |       |       |        |       | IC4 ONLY |        |    |
|----------------------------|-------|----|-------|-------|-------|--------|--------|--------|--------|-------|--------|-------|-------|--------|-------|----------|--------|----|
| PIN No.                    | 1     | 2  | 3     | 4     | 5     | 6      | 7      | 8      | 9-11   | 12-15 | 16     | 17    | 18,19 | 20     | 21,22 | 23,24    | 25     | 26 |
| IC3,IC4                    | 60.3V | 0V | 32.2V | 32.7V | 24.7V | -24.7V | -32.7V | -60.2V | -32.2V | 0V    | -55.0V | 57.5V | 0V    | -53.7V | 0V    | 0V       | -32.0V | 0V |

(X09-616X-XX) (A/3)



VR-307 (X09-6160-10)

| DESTINATION |      | UNIT No. | (A) (B) | R13 | C1,2 | C3 | D1 | D4  |
|-------------|------|----------|---------|-----|------|----|----|-----|
| COUNTRY     | ABB. |          |         |     |      |    |    |     |
| U.S.A.      | K6   | 0-10     | NO      | 47K | YES  | NO | NO | YES |
| CANADA      | P6   |          |         |     |      |    |    |     |

VR-309 (X09-6160-11)

| DESTINATION |      | UNIT No. | (A) (B) | R13 | C1,2 | C3 | D1 | D4  |
|-------------|------|----------|---------|-----|------|----|----|-----|
| COUNTRY     | ABB. |          |         |     |      |    |    |     |
| U.S.A.      | K8   | 0-11     | NO      | 47K | YES  | NO | NO | YES |
| CANADA      | P8   |          |         |     |      |    |    |     |

VR-357 (X09-6160-10)

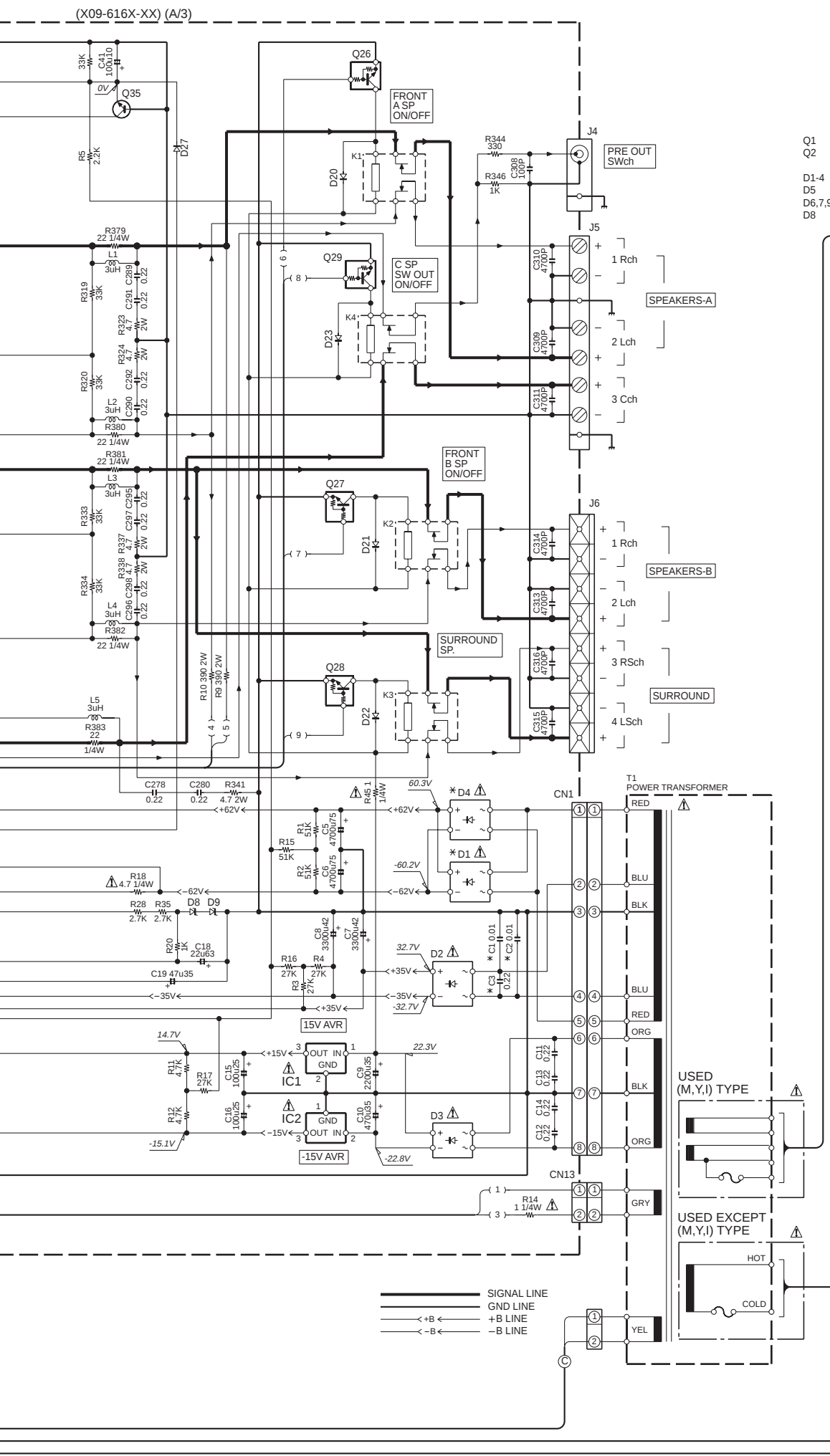
| DESTINATION |      | UNIT No. | (A) (B) | R13 | C1,2 | C3 | D1 | D4  |
|-------------|------|----------|---------|-----|------|----|----|-----|
| COUNTRY     | ABB. |          |         |     |      |    |    |     |
| U.S.A.      | K7   | 0-10     | NO      | 47K | YES  | NO | NO | YES |
| CANADA      | P7   |          |         |     |      |    |    |     |

KRF-V7020D (X09-616X-XX) / (X09-6342-10)

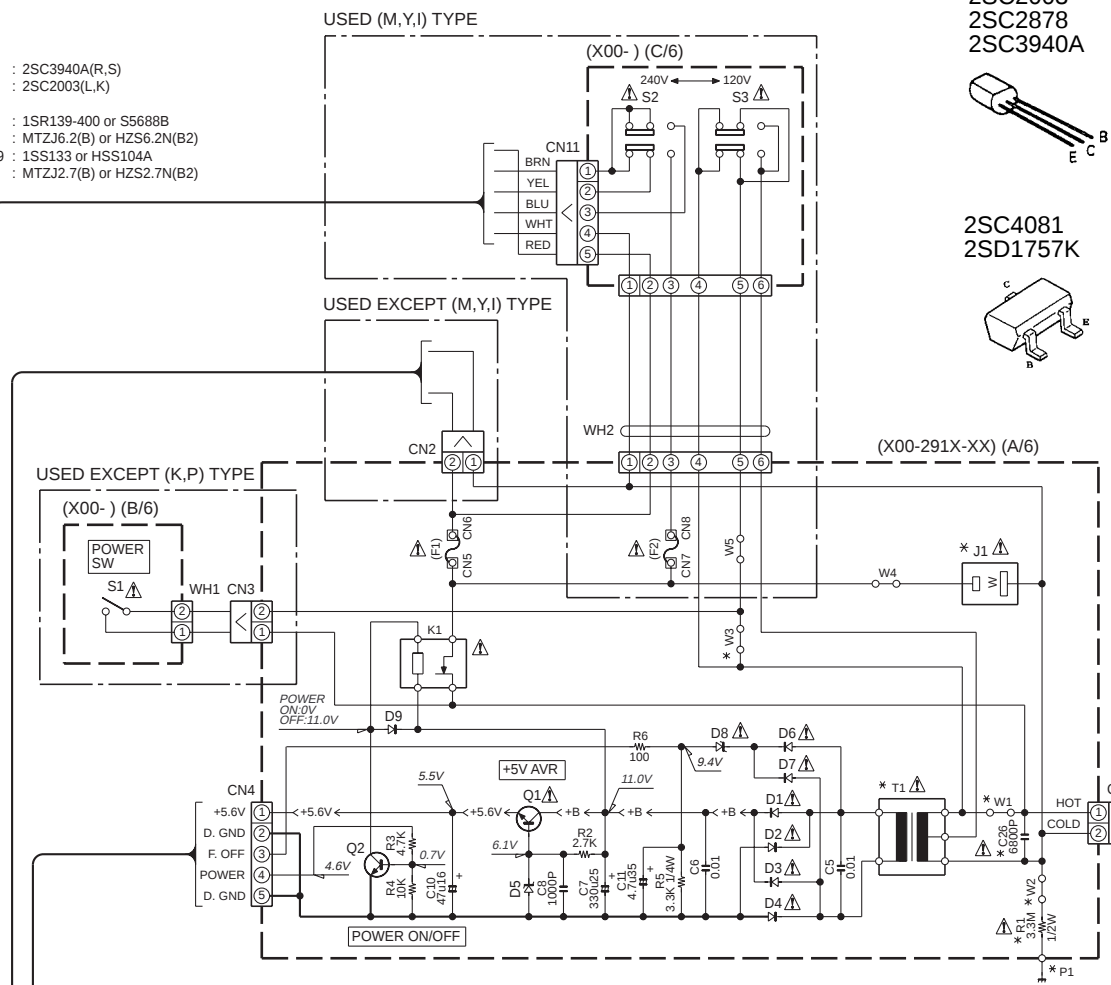
| DESTINATION    |      | UNIT No. | (A) | (B) | R13 | C1,2 | C3  | D1  | D2 |
|----------------|------|----------|-----|-----|-----|------|-----|-----|----|
| COUNTRY        | ABB. |          |     |     |     |      |     |     |    |
| PX             | Y7   | 0-21     | YES |     | 20K | NO   | YES |     |    |
| GENERAL MARKET | M7   |          |     |     |     |      |     |     |    |
| CHINA          | C7   | 3-01     | NO  |     | 47K | YES  | NO  | YES | N  |
| AUSTRALIA      | X7   | 0-71     | YES |     |     |      |     |     |    |
| SHANGHAI       | V7   | 42-10    | NO  |     |     | NO   | NO  |     |    |

KRF-V8020D (X09-616X-XX)

| DESTINATION    |      | UNIT No. | (A) (B) | R13 | C1,2 | C3  | D1  | D4 |
|----------------|------|----------|---------|-----|------|-----|-----|----|
| COUNTRY        | ABB. |          |         |     |      |     |     |    |
| PX             | Y8   | 0-22     | YES     | 20K | NO   | YES | YES | NO |
| GENERAL MARKET | M8   |          |         |     |      |     |     |    |
| MALAYSIA       | I8   |          |         |     |      |     |     |    |
| CHINA          | C8   |          |         |     |      |     |     |    |
| 3-02           | NO   | 47K      | YES     | YES | NO   | YES | NO  |    |
| ALUSTRAI IA    | XR   |          |         |     |      |     |     |    |
|                | 0-77 | YES      |         |     |      |     |     |    |



- Q1 : 2SC3940A(R,S)  
Q2 : 2SC2003(L,K)  
  
D1-4 : 1SR139-400 or S5688B  
D5 : MTZJ6.2(B) or HZS6.2N(B2)  
D6,7,9 : 1SS133 or HSS104A  
D8 : MTZJ2.7(B) or HZS2.7N(B2)



| VR-307 (X00-2910-11) |          |      |             |             |     |       |     |    |     |
|----------------------|----------|------|-------------|-------------|-----|-------|-----|----|-----|
| DESTINATION          | UNIT No. | T1   | J1          | C26         | R1  | W1, 2 | W3  | P1 |     |
| COUNTRY              | ABB.     |      |             |             |     |       |     |    |     |
| U.S.A.               | K6       | 0-11 | L07-2567-05 | E03-0148-05 | YES | YES   | YES | NO | YES |
| CANADA               | P6       |      |             |             |     |       |     |    |     |

| VR-309 (X00-2910-11) |          |      |             |             |     |       |     |    |     |
|----------------------|----------|------|-------------|-------------|-----|-------|-----|----|-----|
| DESTINATION          | UNIT No. | T1   | J1          | C26         | R1  | W1, 2 | W3  | P1 |     |
| COUNTRY              | ABB.     |      |             |             |     |       |     |    |     |
| U.S.A.               | K8       | 0-11 | L07-2567-05 | E03-0148-05 | YES | YES   | YES | NO | YES |
| CANADA               | P8       |      |             |             |     |       |     |    |     |

| VR-357 (X00-2910-11) |          |      |             |             |     |       |     |    |     |
|----------------------|----------|------|-------------|-------------|-----|-------|-----|----|-----|
| DESTINATION          | UNIT No. | T1   | J1          | C26         | R1  | W1, 2 | W3  | P1 |     |
| COUNTRY              | ABB.     |      |             |             |     |       |     |    |     |
| U.S.A.               | K7       | 0-11 | L07-2567-05 | E03-0148-05 | YES | YES   | YES | NO | YES |
| CANADA               | P7       |      |             |             |     |       |     |    |     |

| KRF-V7020D (X00-291X-XX) / (X00-2892-11) |          |       |             |             |    |       |     |    |    |
|------------------------------------------|----------|-------|-------------|-------------|----|-------|-----|----|----|
| DESTINATION                              | UNIT No. | T1    | J1          | C26         | R1 | W1, 2 | W3  | P1 |    |
| COUNTRY                                  | ABB.     |       |             |             |    |       |     |    |    |
| GENERAL MARKET                           | M7       | 0-20  | L07-2568-05 | E03-0149-05 |    |       |     |    |    |
| PX                                       | Y7       | 2-91  | L07-2568-05 | E03-0148-05 |    |       |     | NO |    |
| CHINA                                    | C7       | 3-01  | L07-2569-05 | E03-0361-05 | NO | NO    | NO  |    | NO |
| AUSTRALIA                                | X7       | 0-71  | L07-2569-05 | E03-0325-05 |    |       | YES |    |    |
| SHANGHAI                                 | V7       | 92-11 | L07-2129-05 | E03-0361-05 |    |       |     |    |    |

| KRF-V8020D (X09-291X-XX) |          |      |             |             |    |       |     |    |    |
|--------------------------|----------|------|-------------|-------------|----|-------|-----|----|----|
| DESTINATION              | UNIT No. | T1   | J1          | C26         | R1 | W1, 2 | W3  | P1 |    |
| COUNTRY                  | ABB.     |      |             |             |    |       |     |    |    |
| GENERAL MARKET           | M8       | 0-20 | L07-2568-05 | E03-0149-05 |    |       |     |    |    |
| MALAYSIA                 | I8       |      |             |             |    |       |     | NO |    |
| PX                       | Y8       | 2-91 | L07-2568-05 | E03-0148-05 | NO | NO    | NO  |    | NO |
| CHINA                    | C8       | 3-01 | L07-2569-05 | E03-0361-05 |    |       | YES |    |    |
| AUSTRALIA                | X8       | 0-71 | L07-2569-05 | E03-0325-05 |    |       |     |    |    |

- 2SA1123  
2SA992  
2SC1845  
2SC2003  
2SC2878  
2SC3940A
- 2SB1218A  
2SC3722K  
2SD1819A
- 2SA1535A  
2SC3944A
- 2SA1285A

- 2SC4081  
2SD1757K
- DTC123JUA
- NJM4565M  
NJM4565MD  
NJM4580ED
- TA7805SB

- DA204U
- TC9162AF  
TC9163AF  
TC9164AF
- TC74HCU04AF

- NJM2279M
- LC72131

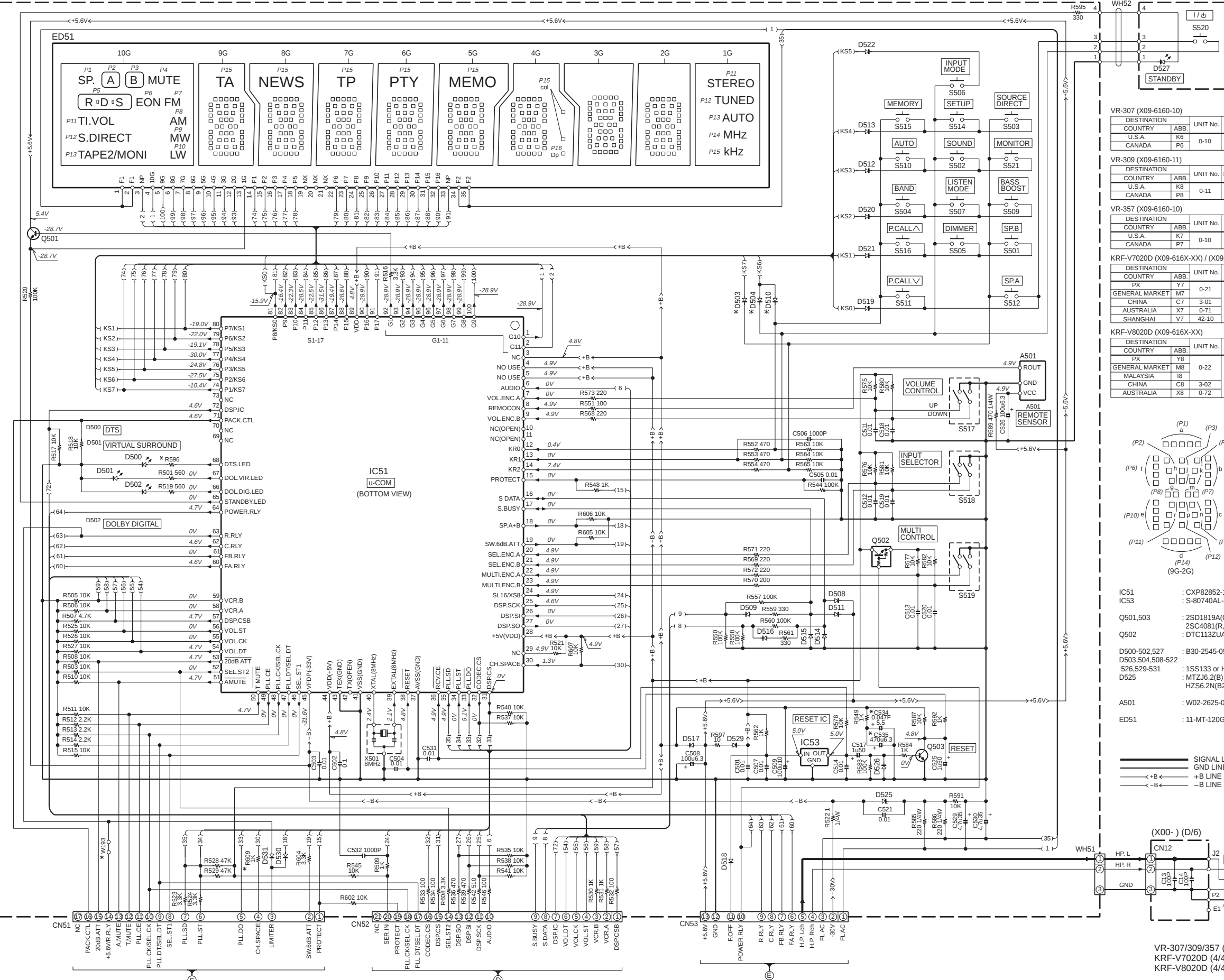
- TA7805S  
TA7815S
- L78M05T
- TA79015S
- S-80740AL-A4

- CS4226KQG
- YSS902  
YSS912
- LA1837  
LA1838
- TC7W241FU

- M62446FP
- L88M33T

VR-307/309/357 (3/4)  
KRF-V7020D (3/4)  
KRF-V8020D (3/4)

Y05-3760-10



**VR-307 (X09-6160-10)**

| DESTINATION | COUNTRY | ABB. | UNIT No. | R596 | R609 | C534 | C535 | W193 | D500, 503, 504, 510 |
|-------------|---------|------|----------|------|------|------|------|------|---------------------|
| U.S.A.      | K6      | P6   | 0-10     | NO   | NO   | YES  | NO   | NO   | NO                  |
| CANADA      | P6      | P6   | 0-10     | NO   | NO   | YES  | NO   | NO   | NO                  |

**VR-309 (X09-6160-11)**

| DESTINATION | COUNTRY | ABB. | UNIT No. | R596 | R609 | C534 | C535 | W193 | D500, 503, 504, 510 |
|-------------|---------|------|----------|------|------|------|------|------|---------------------|
| U.S.A.      | K8      | P8   | 0-11     | YES  | NO   | NO   | YES  | NO   | YES                 |
| CANADA      | P8      | P8   | 0-11     | YES  | NO   | NO   | YES  | NO   | YES                 |

**VR-357 (X09-6160-10)**

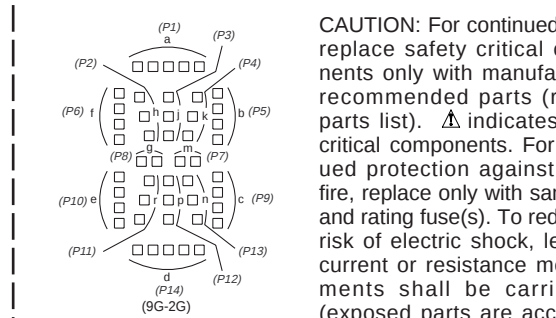
| DESTINATION | COUNTRY | ABB. | UNIT No. | R596 | R609 | C534 | C535 | W193 | D500, 503, 504, 510 |
|-------------|---------|------|----------|------|------|------|------|------|---------------------|
| U.S.A.      | K7      | P7   | 0-10     | NO   | NO   | YES  | NO   | NO   | NO                  |
| CANADA      | P7      | P7   | 0-10     | NO   | NO   | YES  | NO   | NO   | NO                  |

**KRF-V7020D (X09-616X-XX) / (X09-6342-10)**

| DESTINATION    | COUNTRY | ABB. | UNIT No. | R596 | R609 | C534 | C535 | W193 | D500, 503, 504, 510 |
|----------------|---------|------|----------|------|------|------|------|------|---------------------|
| PX             | Y7      | Y7   | 0-21     | NO   | YES  | YES  | NO   | YES  | NO                  |
| GENERAL MARKET | M7      | M7   | 3-01     | NO   | YES  | YES  | NO   | YES  | YES                 |
| CHINA          | C7      | C7   | 0-71     | NO   | YES  | YES  | NO   | YES  | YES                 |
| AUSTRALIA      | X7      | X7   | 42-10    | YES  | YES  | YES  | NO   | YES  | YES                 |
| SHANGHAI       | V7      | V7   | 42-10    | YES  | YES  | YES  | NO   | YES  | YES                 |

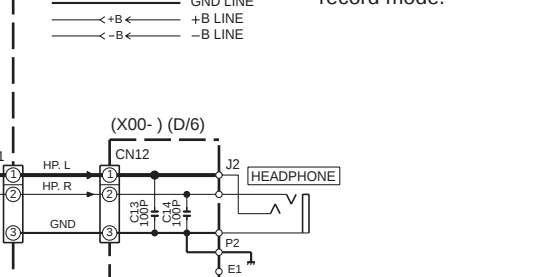
**KRF-V8020D (X09-616X-XX)**

| DESTINATION    | COUNTRY | ABB. | UNIT No. | R596 | R609 | C534 | C535 | W193 | D500, 503, 504, 510 |
|----------------|---------|------|----------|------|------|------|------|------|---------------------|
| PX             | Y8      | Y8   | 0-22     | YES  | YES  | YES  | NO   | YES  | YES                 |
| GENERAL MARKET | M8      | M8   | 3-02     | YES  | YES  | YES  | NO   | YES  | YES                 |
| CHINA          | C8      | C8   | 0-72     | YES  | YES  | YES  | NO   | YES  | YES                 |
| AUSTRALIA      | X8      | X8   | 42-10    | YES  | YES  | YES  | NO   | YES  | YES                 |



**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

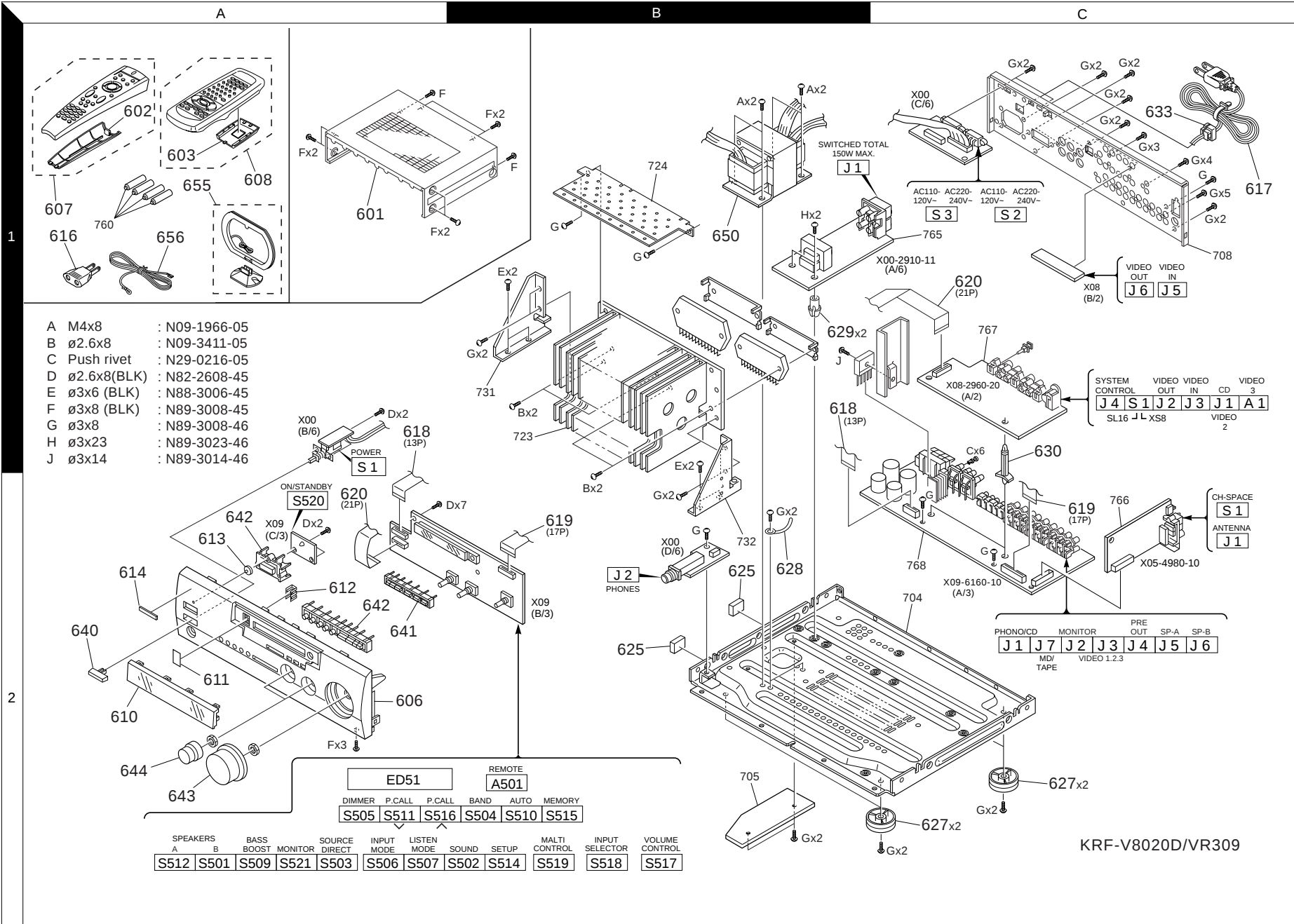
The DC voltage is an actual reading measured with a high impedance type voltmeter with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.



**VR-307/309/357 (4/4)**

**KRF-V7020D (4/4)**

**KRF-V8020D (4/4)**



EXPLODED VIEW (UNIT)

KRF-V7020D/V8020D/VR-307/309/357

\* New Parts

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①

| Ref. No                                 | Add-ress | New Parts | Parts No.   | Description                  | Desti-nation | Re-marks |
|-----------------------------------------|----------|-----------|-------------|------------------------------|--------------|----------|
| <b>KRF-V7020D/V8020D/VR-307/309/357</b> |          |           |             |                              |              |          |
| 601                                     | 1A       |           | A01-3533-01 | METALLIC CABINET             | V            |          |
| 601                                     | 1A       |           | A01-3685-01 | METALLIC CABINET             | KP           |          |
| 601                                     | 1A       | *         | A01-3685-01 | METALLIC CABINET             | YMCXI        |          |
| 602                                     | 1A       |           | A09-0366-08 | BATTERY COVER                | K7P7         |          |
| 602                                     | 1A       |           | A09-0366-08 | BATTERY COVER                | 8            |          |
| 603                                     | 1A       |           | A09-1123-08 | BATTERY COVER                | K6P6Y7       |          |
| 603                                     | 1A       |           | A09-1123-08 | BATTERY COVER                | M7C7X7       |          |
| 603                                     | 1A       |           | A09-1123-08 | BATTERY COVER                | V7           |          |
| 606                                     | 2A       | *         | A60-1587-01 | PANEL                        | K6P6         |          |
| 606                                     | 2A       | *         | A60-1588-01 | PANEL                        | Y8           |          |
| 606                                     | 2A       | *         | A60-1589-01 | PANEL                        | M8X8I8       |          |
| 606                                     | 2A       | *         | A60-1590-01 | PANEL                        | C8           |          |
| 606                                     | 2A       | *         | A60-1591-01 | PANEL                        | K6P6         |          |
| 606                                     | 2A       | *         | A60-1592-01 | PANEL                        | Y7           |          |
| 606                                     | 2A       | *         | A60-1593-01 | PANEL                        | M7X7         |          |
| 606                                     | 2A       | *         | A60-1594-01 | PANEL                        | C7           |          |
| 606                                     | 2A       | *         | A60-1595-01 | PANEL                        | K6P6         |          |
| 606                                     | 2A       | *         | A60-1662-01 | PANEL                        | V7           |          |
| 607                                     | 1A       | *         | A70-1275-05 | REMOTE CONTROLLER (RC-R0508) | X8           |          |
| 607                                     | 1A       | *         | A70-1277-05 | REMOTE CONTROLLER (RC-R0608) | K7P7         |          |
| 607                                     | 1A       | *         | A70-1277-05 | REMOTE CONTROLLER (RC-R0608) | K8P8M8       |          |
| 607                                     | 1A       | *         | A70-1277-05 | REMOTE CONTROLLER (RC-R0608) | Y8C8I8       |          |
| 608                                     | 1A       | *         | A70-1268-05 | REMOTE CONTROLLER (RC-R0712) | K6P6Y7       |          |
| 608                                     | 1A       | *         | A70-1268-05 | REMOTE CONTROLLER (RC-R0712) | M7C7X7       |          |
| 608                                     | 1A       | *         | A70-1268-05 | REMOTE CONTROLLER (RC-R0712) | V7           |          |
| 610                                     | 2A       | *         | B10-3457-02 | FRONT GLASS                  | 8            |          |
| 610                                     | 2A       | *         | B10-3458-02 | FRONT GLASS                  | M7           |          |
| 610                                     | 2A       | *         | B10-3458-02 | FRONT GLASS                  | X7C7Y7       |          |
| 610                                     | 2A       | *         | B10-3504-02 | FRONT GLASS                  | V7           |          |
| 611                                     | 2A       | *         | B11-0361-04 | SMOKED FILTER                | V            |          |
| 611                                     | 2A       |           | B11-0367-04 | SMOKED FILTER                | KP           |          |
| 611                                     | 2A       |           | B11-0367-04 | SMOKED FILTER                | YMCXI        |          |
| 612                                     | 2A       |           | B11-0362-04 | SMOKED FILTER                | V            |          |
| 612                                     | 2A       |           | B11-0375-04 | SMOKED FILTER                | KP           |          |
| 612                                     | 2A       |           | B11-0375-04 | SMOKED FILTER                | YMCXI        |          |
| 613                                     | 2A       |           | B12-0334-14 | INDICATOR                    | V            |          |
| 613                                     | 2A       |           | B12-0341-04 | INDICATOR                    | KP           |          |
| 613                                     | 2A       |           | B12-0341-04 | INDICATOR                    | YMCXI        |          |
| 614                                     | 2A       |           | B43-0302-04 | KENWOOD BADGE                |              |          |
| -                                       |          |           | B46-0096-53 | WARRANTY CARD                | X            |          |
| -                                       |          |           | B46-0197-00 | QUESTIONNAIRE CARD           | K            |          |
| -                                       |          |           | B46-0330-03 | WARRANTY CARD                | KY           |          |
| -                                       |          |           | B46-0336-03 | WARRANTY CARD                | P            |          |
| -                                       |          |           | B46-0343-03 | WARRANTY CARD                | C            |          |
| -                                       |          |           | B46-0344-03 | WARRANTY CARD                | V7           |          |
| -                                       |          |           | B58-0513-04 | CAUTION CARD (PRESET220-240) | Y            |          |
| -                                       |          |           | B58-0964-13 | CAUTION CARD (UL)            | KY           |          |
| -                                       |          |           | B58-0965-13 | CAUTION CARD (PL)            | X            |          |
| -                                       |          |           | B58-0966-13 | CAUTION CARD (ELM/PL)        | MI           |          |
| -                                       |          |           | B58-0967-03 | CAUTION CARD (P/PL)          | P            |          |
| -                                       |          |           | B58-1546-03 | CAUTION CARD                 | CV           |          |
| -                                       |          |           | B59-1104-00 | SERVICE DIRECTORY            | Y            |          |
| -                                       |          | *         | B60-4133-00 | INSTRUCTION MANUAL(TC,AC-3)  | M8I8         |          |

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②

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|---------|----------|-----------|-------------|--------------------------------|--------------|----------|
| -       |          | *         | B60-4134-00 | INSTRUCTION MANUAL(TC,RC-)     | M8I8         |          |
| -       |          | *         | B60-4139-00 | INSTRUCTION MANUAL(EN,AC-3)    | KPYMXI       |          |
| -       |          | *         | B60-4140-00 | INSTRUCTION MANUAL(FR,AC-3)    | P            |          |
| -       |          | *         | B60-4141-00 | INSTRUCTION MANUAL(ES/TC,AC-3) | M7           |          |
| -       |          | *         | B60-4142-00 | INSTRUCTION MANUAL(SC,AC-3)    | CV           |          |
| -       |          | *         | B60-4144-00 | INSTRUCTION MANUAL(EN,RC-)     | K7P7         |          |
| -       |          | *         | B60-4144-00 | INSTRUCTION MANUAL(EN,RC-)     | K8P8         |          |
| -       |          | *         | B60-4144-00 | INSTRUCTION MANUAL(EN,RC-)     | Y8M8I8       |          |
| -       |          | *         | B60-4145-00 | INSTRUCTION MANUAL(FR,RC-)     | P7P8         |          |
| -       |          | *         | B60-4147-00 | INSTRUCTION MANUAL(SC,RC-)     | C8           |          |
| -       |          | *         | B60-4148-00 | INSTRUCTION MANUAL(EN,RC-)     | X8           |          |
| △ 616   | 1A       |           | E03-0115-05 | AC PLUG ADAPTER                | MI           |          |
| △ 617   | 1C       |           | E30-2592-15 | AC POWER CORD                  | MI           |          |
| △ 617   | 1C       |           | E30-2605-05 | AC POWER CORD                  | Y            |          |
| △ 617   | 1C       |           | E30-2717-05 | AC POWER CORD                  | X            |          |
| △ 617   | 1C       |           | E30-2824-15 | AC POWER CORD                  | V            |          |
| △ 617   | 1C       |           | E30-2870-05 | AC POWER CORD                  | C            |          |
| △ 617   | 1C       |           | E30-2884-05 | AC POWER CORD                  | KP           |          |
| 618     | 1A, 1B   |           | E35-2017-05 | FLAT CABLE 13P                 |              |          |
| 619     | 2B, 2C   | *         | E35-2260-05 | FLAT CABLE 17P                 |              |          |
| 620     | 2A, 1C   | *         | E35-2261-05 | FLAT CABLE 21P                 |              |          |
| △ F1    |          |           | F05-3121-05 | FUSE (SEMKO) (250V T3.15AL)    | CX           |          |
| △ F1    |          |           | F50-0077-05 | FUSE(5X20) (125V 8A)           | KP           |          |
| △ F1    |          |           | F50-0101-05 | FUSE(5X20) (250V T3.15AL)      | V            |          |
| △ F1, 2 |          |           | F05-3121-05 | FUSE (SEMKO) (250V T3.15AL)    | YMI          |          |
| 625     | 2B       |           | G11-2415-04 | CUSHION                        | V            |          |
| -       |          | *         | H10-7552-02 | POLYSTYRENE FOAMED FIXTURE     | KP           |          |
| -       |          | *         | H10-7552-02 | POLYSTYRENE FOAMED FIXTURE     | YMCXI        |          |
| -       |          | *         | H10-7553-02 | POLYSTYRENE FOAMED FIXTURE     | KP           |          |
| -       |          | *         | H10-7553-02 | POLYSTYRENE FOAMED FIXTURE     | YMCXI        |          |
| -       |          | *         | H10-7554-02 | POLYSTYRENE FOAMED FIXTURE     | V            |          |
| -       |          |           | H10-7555-02 | POLYSTYRENE FOAMED FIXTURE     | V            |          |
| -       |          |           | H25-0232-04 | PROTECTION BAG (235X350X0.03)  |              |          |
| -       |          |           | H25-0391-04 | PROTECTION BAG                 |              |          |
| -       |          | *         | H50-3223-04 | ITEM CARTON CASE               | K8P8         |          |
| -       |          | *         | H50-3224-04 | ITEM CARTON CASE               | Y8X8         |          |
| -       |          | *         | H50-3225-04 | ITEM CARTON CASE               | M8I8         |          |
| -       |          | *         | H50-3226-04 | ITEM CARTON CASE               | C8           |          |
| -       |          | *         | H50-3227-04 | ITEM CARTON CASE               | K6P6         |          |
| -       |          | *         | H50-3228-04 | ITEM CARTON CASE               | Y7X7         |          |
| -       |          | *         | H50-3229-04 | ITEM CARTON CASE               | M7           |          |
| -       |          | *         | H50-3230-04 | ITEM CARTON CASE               | C7           |          |
| -       |          | *         | H50-3231-04 | ITEM CARTON CASE               | K7P7         |          |
| -       |          | *         | H50-3258-04 | ITEM CARTON CASE               | V7           |          |
| 627     | 2C       |           | J02-1167-03 | FOOT                           | V            |          |
| 627     | 2C       |           | J02-1168-03 | FOOT                           | MCXI         |          |
| 627     | 2C       |           | J02-1407-03 | FOOT (D=46,H=14.5,T)           | KPY          |          |
| 628     | 2B       |           | J19-2808-05 | HOLDER                         |              |          |
| 629     | 1B       |           | J19-3752-14 | UNIT HOLDER                    | YMCXI        |          |
| 629     | 1B       |           | J19-5787-04 | UNIT HOLDER                    | V            |          |
| 630     | 1C       |           | J19-5919-05 | UNIT HOLDER                    |              |          |
| △ 633   | 1C       |           | J42-0083-05 | POWER CORD BUSHING             |              |          |
| -       |          |           | J61-0307-05 | WIRE BAND                      |              |          |

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## PARTS LIST

KRF-V7020D/V8020D/VR-307/309/357

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3

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|----------------------------------|----------|-----------|---------------|----------------------|--------------|----------|
| 640                              | 2A       |           | K27-2185-04   | KNOB (BUTTON) POWER  | V            |          |
| 640                              | 2A       |           | K27-2275-04   | KNOB (BUTTON) POWER  | MCXI         |          |
| 640                              | 2A       |           | K27-2293-04   | KNOB (BUTTON) POWER  | Y            |          |
| 641                              | 2A       |           | K29-7310-03   | KNOB TUNER,BLK       | MCXI         |          |
| 641                              | 2A       |           | K29-7323-03   | KNOB TUNER,GOLD      | KPY          |          |
| 641                              | 2A       |           | K29-7366-03   | KNOB TUNER,BLK       | V            |          |
| 642                              | 2A       | *         | K29-7364-12   | KNOB SPEAKER,BLK     | V            |          |
| 642                              | 2A       |           | K29-7370-02   | KNOB SPEAKER,GOLD    | KPY          |          |
| 642                              | 2A       |           | K29-7371-02   | KNOB SPEAKER,BLK     | MCXI         |          |
| 643                              | 2A       |           | K29-7306-14   | KNOB D54,BLK         | V            |          |
| 643                              | 2A       |           | K29-7312-04   | KNOB D54,BLK         | MCZI         |          |
| 643                              | 2A       |           | K29-7325-04   | KNOB D54,GOLD        | KPY          |          |
| 644                              | 2A       |           | K29-7307-14   | KNOB D33,BLK         | V            |          |
| 644                              | 2A       |           | K29-7313-04   | KNOB D33,BLK         | MCXI         |          |
| 644                              | 2A       |           | K29-7326-04   | KNOB D33,GOLD        | KPY          |          |
| Δ 650                            | 1B       | *         | L07-2693-05   | POWER TRANSFORMER    | KP           |          |
| Δ 650                            | 1B       | *         | L07-2694-05   | POWER TRANSFORMER    | YMI          |          |
| Δ 650                            | 1B       | *         | L07-2695-05   | POWER TRANSFORMER    | C            |          |
| Δ 650                            | 1B       | *         | L07-2696-05   | POWER TRANSFORMER    | X            |          |
| Δ 650                            | 1B       | *         | L07-2708-05   | POWER TRANSFORMER    | V            |          |
| 655                              | 1A       |           | T90-0833-05   | LOOP ANTENNA         |              |          |
| 656                              | 1A       |           | T90-0836-05   | LEAD WIRE ANTENNA    |              |          |
| POWER SUPPLY (X00-2910/X00-2892) |          |           |               |                      |              |          |
| C5, 6                            |          |           | CK45FF1H103Z  | CERAMIC 0.010UF Z    |              |          |
| C7                               |          |           | CE04DW1E331M  | ELECTRO 330UF 25WV   |              |          |
| C8                               |          |           | CK45FB1H102K  | CERAMIC 1000PF K     |              |          |
| C10                              |          |           | CE04KW1C470M  | ELECTRO 47UF 16WV    |              |          |
| C11                              |          |           | CE04KW1V4R7M  | ELECTRO 4.7UF 35WV   |              |          |
| Δ C13, 14                        |          |           | CC45FSL1H101J | CERAMIC 100PF J      |              |          |
| Δ C26                            |          |           | C91-1448-05   | FILM 0.0068uF 250VAC | KP           |          |
| CN1                              |          |           | E40-4245-05   | PIN ASSY             |              |          |
| CN2                              |          |           | E40-4245-05   | PIN ASSY             | KPCXV        |          |
| CN3                              |          |           | E40-4245-05   | PIN ASSY             | YMICXV       |          |
| CN4                              |          |           | E40-8197-05   | SOCKET FOR PIN ASSY  |              |          |
| CN11                             |          |           | E40-4281-05   | PIN ASSY             | YMI          |          |
| Δ CN12                           |          |           | E40-3247-05   | PIN ASSY             |              |          |
| Δ J1                             | 1B       |           | E03-0148-05   | AC OUTLET            | KPY          |          |
| Δ J1                             | 1B       |           | E03-0149-05   | AC OUTLET            | MI           |          |
| Δ J1                             | 1B       |           | E03-0325-05   | AC OUTLET            | X            |          |
| Δ J1                             | 1B       |           | E03-0361-05   | AC OUTLET            | CV           |          |
| J2                               | 2B       |           | E11-0127-05   | PHONE JACK (3P)      |              |          |
| CN5, 6                           |          |           | J13-0075-05   | FUSE CLIP            |              |          |
| CN7, 8                           |          |           | J13-0075-05   | FUSE CLIP            | YMI          |          |
| E1                               |          |           | J11-0808-05   | WIRE CLAMPER         |              |          |
| Δ T1                             |          | *         | L07-2129-05   | POWER TRANSFORMER    | V            |          |
| Δ T1                             |          |           | L07-2567-05   | POWER TRANSFORMER    | KP           |          |
| Δ T1                             |          |           | L07-2568-05   | POWER TRANSFORMER    | YMI          |          |
| Δ T1                             |          |           | L07-2569-05   | POWER TRANSFORMER    | CX           |          |
| Δ R1                             |          |           | R92-1844-05   | CARBON 3.3M J 1/2W   | KP           |          |
| Δ K1                             |          |           | S76-0070-05   | MAGNETIC RELAY       |              |          |
| Δ S1                             |          |           | S68-0088-05   | PUSH SWITCH          | V            |          |
| Δ S1                             |          |           | S68-0100-05   | PUSH SWITCH          | YMCXI        |          |
| Δ S2, 3                          |          |           | S62-0001-05   | SLIDE SWITCH         | YMI          |          |

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|---------------------------|----------|-----------|---------------|---------------------|--------------|----------|
| Δ D1~4                    |          |           | S5688B        | DIODE               |              |          |
| Δ D1~4                    |          |           | 1SR139-400    | DIODE               |              |          |
| D5                        |          |           | HZS6.2N(B2)   | ZENER DIODE         |              |          |
| D5                        |          |           | MTZJ6.2(B)    | ZENER DIODE         |              |          |
| Δ D6, 7                   |          |           | HSS104A       | DIODE               |              |          |
| Δ D6, 7                   |          |           | 1SS133        | DIODE               |              |          |
| Δ D8                      |          |           | HZS2.7N(B2)   | ZENER DIODE         |              |          |
| Δ D8                      |          |           | MTZJ2.7(B)    | ZENER DIODE         |              |          |
| D9                        |          |           | HSS104A       | DIODE               |              |          |
| D9                        |          |           | 1SS133        | DIODE               |              |          |
| Δ Q1                      |          |           | 2SC3940A(R,S) | TRANSISTOR          |              |          |
| Q2                        |          |           | 2SC2003(L,K)  | TRANSISTOR          |              |          |
| TUNER (X05-4980/X05-5062) |          |           |               |                     |              |          |
| C1                        |          |           | CK73FB1H223K  | CHIP C 0.022UF K    |              |          |
| C3                        |          |           | CK73FB1H103K  | CHIP C 0.010UF K    |              |          |
| C5, 6                     |          |           | CK73FB1H103K  | CHIP C 0.010UF K    |              |          |
| C7                        |          |           | CE04LW1C470M  | ELECTRO 47UF 16WV   |              |          |
| C8                        |          |           | CK73EB1H103K  | CHIP C 0.010UF K    | YMCXIV       |          |
| C10                       |          |           | CE04LW1C470M  | ELECTRO 47UF 16WV   |              |          |
| C11, 12                   |          |           | CK73FB1H473K  | CHIP C 0.047UF K    |              |          |
| C14                       |          |           | CE04LW1C100M  | ELECTRO 10UF 16WV   |              |          |
| C15                       |          |           | CE04LW1H010M  | ELECTRO 1.0UF 50WV  |              |          |
| C16                       |          |           | C90-3251-05   | ELECTRO 0.47UF 50WV |              |          |
| C17                       |          |           | CE04LW1H010M  | ELECTRO 1.0UF 50WV  |              |          |
| C18                       |          |           | CC73FCH1H470J | CHIP C 47PF J       |              |          |
| C19                       |          |           | C90-3217-05   | ELECTRO 10UF 10WV   |              |          |
| C20                       |          |           | CK73FB1H473K  | CHIP C 0.047UF K    |              |          |
| C21                       |          |           | C90-3241-05   | ELECTRO 3.3UF 35WV  |              |          |
| C22                       |          |           | CK73FB1H473K  | CHIP C 0.047UF K    |              |          |
| C23                       |          |           | CE04LW1C100M  | ELECTRO 10UF 16WV   |              |          |
| C24                       |          |           | CK73FB1H331K  | CHIP C 330PF K      |              |          |
| C25                       |          |           | CC73FCH1H471J | CHIP C 470PF J      |              |          |
| C26                       |          |           | CK73FB1H223K  | CHIP C 0.022UF K    |              |          |
| C27                       |          |           | CE04HW1E4R7M  | NP-ELEC 4.7UF 25WV  |              |          |
| C28, 29                   |          |           | CE04LW1H2R2M  | ELECTRO 2.2UF 50WV  |              |          |
| C30, 31                   |          |           | CK73FB1H223K  | CHIP C 0.022UF K    | YMCXIV       |          |
| C30, 31                   |          |           | CK73FB1H333K  | CHIP C 0.033UF K    | KP           |          |
| C32                       |          |           | CE04LW1V4R7M  | ELECTRO 4.7UF 35WV  |              |          |
| C33, 34                   |          |           | CK73FB1H103K  | CHIP C 0.010UF K    | YMCIV        |          |
| C35                       |          |           | CK73FB1H332K  | CHIP C 3300PF K     |              |          |
| C36                       |          |           | CK73FB1H103K  | CHIP C 0.010UF K    |              |          |
| C37, 38                   |          |           | CE04LW1C100M  | ELECTRO 10UF 16WV   |              |          |
| C39                       |          |           | CC73FCH1H060D | CHIP C 6.0PF D      |              |          |
| C40                       |          |           | CC73FCH1H020C | CHIP C 2.0PF C      |              |          |
| C41                       |          |           | CC73FCH1H220J | CHIP C 22PF J       |              |          |
| C42                       |          |           | CC73FCH1H120J | CHIP C 12PF J       |              |          |
| C42                       |          |           | CC73FCH1H120J | CHIP C 12PF J       | KP           |          |
| C42                       |          |           | CC73FCH1H270J | CHIP C 27PF J       | YMCXI        |          |
| C43                       |          |           | CC73FCH1H100D | CHIP C 10PF D       | KP           |          |
| C43                       |          |           | CC73FCH1H100D | CHIP C 10PF D       | YMCXI        |          |
| C43                       |          |           | CC73FCH1H220J | CHIP C 22PF J       | V            |          |
| C44                       |          |           | CK73FB1H471K  | CHIP C 470PF K      |              |          |
| C45                       |          |           | CC73FCH1H220J | CHIP C 22PF J       |              |          |
| C46                       |          |           | CE04LW1C100M  | ELECTRO 10UF 16WV   |              |          |

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## PARTS LIST

KRF-V7020DN/8020DNR-307/309/357

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|---------|----------|-----------|---------------|------------------------------|--------------|----------|
| C47     |          |           | CK73FB1H102K  | CHIP C 1000PF K              |              |          |
| C48     |          |           | CE04LW1C470M  | ELECTRO 47UF 16WV            |              |          |
| C49     |          |           | CE04LW1H2R2M  | ELECTRO 2.2UF 50WV           |              |          |
| C50     |          |           | CC73FSL1H101J | CHIP C 100PF J               |              |          |
| C51     |          |           | CK73FB1H471K  | CHIP C 470PF K               |              |          |
| C52     |          |           | CC73FSL1H101J | CHIP C 100PF J               |              |          |
| C72     |          |           | CE04LW1H010M  | ELECTRO 1.0UF 50WV           |              |          |
| C73     |          |           | CE04LW1C470M  | ELECTRO 47UF 16WV            |              |          |
| C74     |          |           | CK73FB1H102K  | CHIP C 1000PF K              | KP           |          |
| C75     |          |           | CC73FCH1H040C | CHIP C 4.0PF C               |              |          |
| C76     |          |           | CC73FCH1H470J | CHIP C 47PF J                |              |          |
| C77     |          |           | CC73FSL1H101J | CHIP C 100PF J               | YMCIV        |          |
| C78     |          |           | CK73FB1H223K  | CHIP C 0.022UF K             |              |          |
| C81     |          |           | CK73FF1C105Z  | CHIP C 1.0UF Z               |              |          |
| C82     |          |           | CK73FB1H103K  | CHIP C 0.010UF K             | KP           |          |
| C83     |          |           | CC73FSL1H101J | CHIP C 100PF J               |              |          |
| C84, 85 |          |           | CK73FB1H223K  | CHIP C 0.022UF K             |              |          |
| C86     |          |           | CK73FB1H471K  | CHIP C 470PF K               |              |          |
| C88     |          |           | CK73FB1H332K  | CHIP C 3300PF K              |              |          |
| C89, 90 |          |           | CK73FB1H472K  | CHIP C 4700PF K              |              |          |
| C91     |          |           | CK73FF1C105Z  | CHIP C 1.0UF Z               |              |          |
| CN1     |          |           | E40-9831-05   | SOCKET FOR PIN ASSY          |              |          |
| CN2     |          |           | E40-4871-05   | PIN ASSY                     | KP           |          |
| J1      | 2C       |           | E20-0321-05   | LOCK TERMINAL BOARD(2P,F)    | KP           |          |
| J1      | 2C       |           | E20-0321-05   | LOCK TERMINAL BOARD(2P,F)    | YMCXI        |          |
| J1      | 2C       |           | E70-0052-05   | LOCK TERMINAL BOARD          | KP           |          |
| J1      | 2C       |           | E70-0052-05   | LOCK TERMINAL BOARD          | YMCXI        |          |
| J1      | 2C       |           | E70-0080-05   | LOCK TERMINAL BOARD          | V            |          |
| CF1, 2  |          |           | L72-0531-05   | CERAMIC FILTER               | YMCXIV       |          |
| CF1, 2  |          |           | L72-0596-05   | CERAMIC FILTER               | KP           |          |
| CF3     |          |           | L72-0607-05   | CERAMIC FILTER               | YMCXIV       |          |
| L1      |          |           | L39-1366-05   | COMBINATION COIL             |              |          |
| L2      |          |           | L40-1091-17   | SMALL FIXED INDUCTOR(1UH)    |              |          |
| L3      |          |           | L30-0911-05   | AM IFT                       |              |          |
| L4      |          |           | L30-0950-05   | FM IFT                       | KP           |          |
| L5      |          |           | L30-0951-05   | FM IFT                       | KP           |          |
| L9      |          |           | L40-1001-17   | SMALL FIXED INDUCTOR(10UH,K) |              |          |
| X1      |          |           | L77-2187-05   | CRYSTAL RESONATOR            | V            |          |
| X1      |          |           | L77-2232-05   | CRYSTAL RESONATOR            | KP           |          |
| X1      |          |           | L77-2232-05   | CRYSTAL RESONATOR            | YMCXI        |          |
| R1      |          |           | RK73FB2A101J  | CHIP R 100 J 1/10W           |              |          |
| R4      |          |           | RK73FB2A681J  | CHIP R 680 J 1/10W           |              |          |
| R5      |          |           | RK73FB2A332J  | CHIP R 3.3K J 1/10W          |              |          |
| R6      |          |           | RK73FB2A221J  | CHIP R 220 J 1/10W           |              |          |
| R7      |          |           | RK73FB2A821J  | CHIP R 820 J 1/10W           |              |          |
| R8      |          |           | RK73FB2A330J  | CHIP R 33 J 1/10W            |              |          |
| R9      |          |           | RK73FB2A391J  | CHIP R 390 J 1/10W           |              |          |
| R10     |          |           | RK73FB2A102J  | CHIP R 1.0K J 1/10W          |              |          |
| R11     |          |           | RK73FB2A330J  | CHIP R 33 J 1/10W            |              |          |
| R12     |          |           | RK73FB2A101J  | CHIP R 100 J 1/10W           |              |          |
| R14     |          |           | RK73FB2A101J  | CHIP R 100 J 1/10W           | KP           |          |
| R14     |          |           | RK73FB2A271J  | CHIP R 270 J 1/10W           | YMCXIV       |          |
| R15     |          |           | RK73FB2A333J  | CHIP R 33K J 1/10W           | KP           |          |

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|---------|----------|-----------|--------------|------------------------------|--------------|----------|
| R16     |          |           | RK73FB2A220J | CHIP R 22 J 1/10W            |              |          |
| R17     |          |           | RK73FB2A362J | CHIP R 3.6K J 1/10W          |              |          |
| R18     |          |           | RK73FB2A302J | CHIP R 3.0K J 1/10W          |              |          |
| R19     |          |           | RK73FB2A822J | CHIP R 8.2K J 1/10W          |              |          |
| R20     |          |           | RK73FB2A392J | CHIP R 3.9K J 1/10W          |              |          |
| R23     |          |           | RK73FB2A332J | CHIP R 3.3K J 1/10W          | YMCXIV       |          |
| R23     |          |           | RK73FB2A472J | CHIP R 4.7K J 1/10W          | KP           |          |
| R25     |          |           | RK73FB2A183J | CHIP R 18K J 1/10W           | YMCXIV       |          |
| R25     |          |           | RK73FB2A223J | CHIP R 22K J 1/10W           | KP           |          |
| R27, 28 |          |           | RK73FB2A512J | CHIP R 5.1K J 1/10W          | KP           |          |
| R27, 28 |          |           | RK73FB2A622J | CHIP R 6.2K J 1/10W          | YMCXI        |          |
| R27, 28 |          |           | RK73FB2A752J | CHIP R 7.5K J 1/10W          | V            |          |
| R29     |          |           | RK73FB2A101J | CHIP R 100 J 1/10W           | YMCIV        |          |
| R30     |          |           | RK73FB2A561J | CHIP R 560 J 1/10W           | YMCIV        |          |
| R31     |          |           | RK73FB2A473J | CHIP R 47K J 1/10W           | YMCIV        |          |
| R32     |          |           | RK73FB2A272J | CHIP R 2.7K J 1/10W          |              |          |
| R33, 34 |          |           | RK73FB2A102J | CHIP R 1.0K J 1/10W          |              |          |
| R42     |          |           | RK73FB2A103J | CHIP R 10K J 1/10W           |              |          |
| R43     |          |           | RK73FB2A221J | CHIP R 220 J 1/10W           |              |          |
| R44     |          |           | RD14NB2E271J | RD 270 J 1/4W                |              |          |
| R45     |          |           | RK73EB2B102J | CHIP R 1.0K J 1/8W           |              |          |
| R46     |          |           | RK73FB2A102J | CHIP R 1.0K J 1/10W          |              |          |
| R47     |          |           | RK73EB2B102J | CHIP R 1.0K J 1/8W           |              |          |
| R48     |          |           | RK73FB2A102J | CHIP R 1.0K J 1/10W          |              |          |
| R49     |          |           | RK73FB2A103J | CHIP R 10K J 1/10W           |              |          |
| R50     |          |           | RD14NB2E471J | RD 470 J 1/4W                |              |          |
| R51     |          |           | RK73FB2A562J | CHIP R 5.6K J 1/10W          |              |          |
| R52     |          |           | RK73FB2A101J | CHIP R 100 J 1/10W           |              |          |
| R53     |          |           | RK73FB2A222J | CHIP R 2.2K J 1/10W          |              |          |
| R54     |          |           | RK73FB2A102J | CHIP R 1.0K J 1/10W          |              |          |
| R55     |          |           | RK73FB2A333J | CHIP R 33K J 1/10W           |              |          |
| R56, 57 |          |           | RK73FB2A102J | CHIP R 1.0K J 1/10W          |              |          |
| R58     |          |           | RK73FB2A123J | CHIP R 12K J 1/10W           |              |          |
| R59     |          |           | RK73FB2A122J | CHIP R 1.2K J 1/10W          |              |          |
| R72, 73 |          |           | RK73FB2A153J | CHIP R 15K J 1/10W           | KP           |          |
| R72, 73 |          |           | RK73FB2A822J | CHIP R 8.2K J 1/10W          | YMCXIV       |          |
| R74     |          |           | RK73FB2A473J | CHIP R 47K J 1/10W           |              |          |
| R75     |          |           | RK73FB2A822J | CHIP R 8.2K J 1/10W          |              |          |
| R76     |          |           | RK73FB2A182J | CHIP R 1.8K J 1/10W          |              |          |
| R78     |          |           | RK73FB2A821J | CHIP R 820 J 1/10W           |              |          |
| R79     |          |           | RK73FB2A332J | CHIP R 3.3K J 1/10W          |              |          |
| R81     |          |           | RS14KB3A151J | FL-PROOF RS 150 J 1W         |              |          |
| R82     |          |           | RK73FB2A272J | CHIP R 2.7K J 1/10W          | KP           |          |
| R83     |          |           | RK73FB2A102J | CHIP R 1.0K J 1/10W          |              |          |
| R84     |          |           | RK73EB2B102J | CHIP R 1.0K J 1/8W           |              |          |
| R85-87  |          |           | RK73FB2A105J | CHIP R 1.0M J 1/10W          |              |          |
| R88     |          |           | RK73FB2A563J | CHIP R 56K J 1/10W           |              |          |
| R89     |          |           | RK73FB2A333J | CHIP R 33K J 1/10W           |              |          |
| VR1     |          |           | R32-0037-05  | SEMI FIXED VARIABLE RESISTOR |              |          |
| W51, 52 |          |           | R92-0670-05  | CHIP R 0 OHM                 |              |          |
| W54-56  |          |           | R92-0670-05  | CHIP R 0 OHM                 | YMCIV        |          |
| W54, 55 |          |           | R92-0670-05  | CHIP R 0 OHM                 | KPX          |          |
| W59     |          |           | R92-0670-05  | CHIP R 0 OHM                 |              |          |
| W62     |          |           | R92-0670-05  | CHIP R 0 OHM                 |              |          |
| W80     |          |           | R92-0679-05  | CHIP R 0 OHM                 |              |          |

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|-------------------------------------|----------|-----------|---------------|--------------------|--------------|----------|
| W82-85                              |          |           | R92-0679-05   | CHIP R 0 OHM       |              |          |
| S1                                  | 2C       |           | S62-0034-05   | SLIDE SWITCH       | YMCIV        |          |
| D1                                  |          |           | DA204U        | DIODE              |              |          |
| D1                                  |          |           | MA143A        | DIODE              |              |          |
| D1                                  |          |           | 1SS302        | DIODE              |              |          |
| D3                                  |          |           | HZS8.2N(B2)   | ZENER DIODE        |              |          |
| D3                                  |          |           | MTZJ8.2(B)    | ZENER DIODE        |              |          |
| D4                                  |          |           | HZS5.1N(B2)   | ZENER DIODE        |              |          |
| D4                                  |          |           | MTZJ5.1(B)    | ZENER DIODE        |              |          |
| D5                                  |          |           | HZS2.7N(B2)   | ZENER DIODE        |              |          |
| D5                                  |          |           | MTZJ2.7(B)    | ZENER DIODE        |              |          |
| D8                                  |          |           | MA111         | DIODE              |              |          |
| D9                                  |          |           | HZS3.3N(B2)   | ZENER DIODE        |              |          |
| D9                                  |          |           | MTZJ3.3(B)    | ZENER DIODE        |              |          |
| D13                                 |          |           | MA111         | DIODE              |              |          |
| IC1                                 |          |           | LA1837        | ANALOGUE IC        | KP           |          |
| IC1                                 |          |           | LA1838        | ANALOGUE IC        | YMCXIV       |          |
| IC2                                 |          |           | LC72131       | MOS-IC             |              |          |
| Q1                                  |          |           | 2SC4081(R,S)  | TRANSISTOR         |              |          |
| Q1                                  |          |           | 2SD1819A(Q,R) | TRANSISTOR         |              |          |
| Q2                                  |          |           | 2SA1576A(R,S) | TRANSISTOR         |              |          |
| Q2                                  |          |           | 2SB1218A(Q,R) | TRANSISTOR         |              |          |
| Q3, 4                               |          |           | 2SC4081(R,S)  | TRANSISTOR         | YMCIV        |          |
| Q3, 4                               |          |           | 2SD1819A(Q,R) | TRANSISTOR         | YMCIV        |          |
| Q10, 11                             |          |           | 2SD1757K      | TRANSISTOR         |              |          |
| Q12                                 |          |           | 2SA1576A(R,S) | TRANSISTOR         |              |          |
| Q12                                 |          |           | 2SB1218A(Q,R) | TRANSISTOR         |              |          |
| Q14                                 |          |           | 2SA1576A(R,S) | TRANSISTOR         |              |          |
| Q14                                 |          |           | 2SB1218A(Q,R) | TRANSISTOR         |              |          |
| A1                                  |          |           | W02-2622-05   | FM FRONT-END ASSY  |              |          |
| <b>SURROUND (X08-2960/X08-2982)</b> |          |           |               |                    |              |          |
| C1-4                                |          |           | CK73FB1E104K  | CHIP C 0.10UF K    |              |          |
| C5, 6                               |          |           | CC73FSL1H102J | CHIP C 1000PF J    |              |          |
| C7-9                                |          |           | CK73FB1E104K  | CHIP C 0.10UF K    |              |          |
| C10                                 |          |           | CC73FSL1H331J | CHIP C 330PF J     |              |          |
| C11, 12                             |          |           | CC73FCH1H150J | CHIP C 15PF J      |              |          |
| C13, 14                             |          |           | CC73FCH1H180J | CHIP C 18PF J      |              |          |
| C15                                 |          |           | CC73FSL1H101J | CHIP C 100PF J     |              |          |
| C16                                 |          |           | CC73FSL1H471J | CHIP C 470PF J     |              |          |
| C17                                 |          |           | CK73FB1H103K  | CHIP C 0.010UF K   |              |          |
| C18                                 |          |           | CC73FSL1H102J | CHIP C 1000PF J    |              |          |
| C19                                 |          |           | CK73FB1E104K  | CHIP C 0.10UF K    |              |          |
| C20                                 |          |           | CE04KW1V4R7M  | ELECTRO 4.7UF 35WV |              |          |
| C21                                 |          |           | CC73FCH1H330J | CHIP C 33PF J      |              |          |
| C22, 23                             |          |           | CC73FCH1H120J | CHIP C 12PF J      | YMCXIV       |          |
| C24, 25                             |          |           | CC73FCH1H150J | CHIP C 15PF J      | YMCXIV       |          |
| C26                                 |          |           | CE04KW1E470M  | ELECTRO 47UF 25WV  |              |          |
| C27                                 |          |           | CK73FB1E104K  | CHIP C 0.10UF K    |              |          |
| C28                                 |          |           | CC73FSL1H470J | CHIP C 47PF J      |              |          |
| C29                                 |          |           | CC73FCH1H220J | CHIP C 22PF J      |              |          |
| C30-32                              |          |           | CK73FB1E104K  | CHIP C 0.10UF K    |              |          |
| C33, 34                             |          |           | CC73FCH1H220J | CHIP C 22PF J      |              |          |

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| Ref. No   | Add-ress | New Parts | Parts No.      | Description         | Desti-nation | Re-marks |
|-----------|----------|-----------|----------------|---------------------|--------------|----------|
| C35       |          |           | CK73FB1H223KTA | CHIP C 0.022UF K    |              |          |
| C36       |          |           | CK73FF1C224Z   | CHIP C 0.22UF Z     |              |          |
| C37       |          |           | CK73FB1H103K   | CHIP C 0.010UF K    |              |          |
| C38       |          |           | CE04KW1H2R2M   | ELECTRO 2.2UF 50WV  |              |          |
| C39, 40   |          |           | CK73FB1E104K   | CHIP C 0.10UF K     |              |          |
| C41, 42   |          |           | CC73FCH1H220J  | CHIP C 22PF J       |              |          |
| C43       |          |           | CK73FB1E104K   | CHIP C 0.10UF K     |              |          |
| C44       |          |           | CC73FSL1H470J  | CHIP C 47PF J       |              |          |
| C45       |          |           | CC73FSL1H221J  | CHIP C 220PF J      |              |          |
| C46       |          |           | CC73FSL1H470J  | CHIP C 47PF J       |              |          |
| C50-52    |          |           | CE04KW1C100M   | ELECTRO 10UF 16WV   |              |          |
| C55       |          |           | CC73FSL1H470J  | CHIP C 47PF J       |              |          |
| C56       |          |           | CE04KW0J471M   | ELECTRO 470UF 6.3WV |              |          |
| C57       |          |           | CE04KW1A470M   | ELECTRO 47UF 10WV   |              |          |
| C58, 59   |          |           | CK73FB1H103K   | CHIP C 0.010UF K    |              |          |
| C60, 61   |          |           | CC73FSL1H221J  | CHIP C 220PF J      |              |          |
| C83       |          |           | CE04KW1C222M   | ELECTRO 2200UF 16WV |              |          |
| C84       |          |           | CQ93FMG1H104J  | MYLAR 0.10UF J      |              |          |
| C85, 86   |          |           | CK73FB1E104K   | CHIP C 0.10UF K     |              |          |
| C88       |          |           | CE04KW1A101M   | ELECTRO 100UF 10WV  |              |          |
| C89, 90   |          |           | CK73FB1E104K   | CHIP C 0.10UF K     |              |          |
| C92       |          |           | CE04KW1A101M   | ELECTRO 100UF 10WV  |              |          |
| C93-95    |          |           | CK73FB1E104K   | CHIP C 0.10UF K     |              |          |
| C101, 102 |          |           | CC73FCH1H220J  | CHIP C 22PF J       |              |          |
| C103, 104 |          |           | CC73FSL1H101J  | CHIP C 100PF J      |              |          |
| C107, 108 |          |           | CC73FSL1H681J  | CHIP C 680PF J      |              |          |
| C109, 110 |          |           | CE04KW1H100M   | ELECTRO 10UF 50WV   |              |          |
| C111, 112 |          |           | CC73FSL1H182J  | CHIP C 1800PF J     |              |          |
| C113, 114 |          |           | CE04KW1V4R7M   | ELECTRO 4.7UF 35WV  |              |          |
| C115, 116 |          |           | CK73FB1H152K   | CHIP C 1500PF K     |              |          |
| C117, 118 |          |           | CC73FSL1H681J  | CHIP C 680PF J      |              |          |
| C123-126  |          |           | CC73FSL1H101J  | CHIP C 100PF J      |              |          |
| C128      |          |           | CC73FSL1H101J  | CHIP C 100PF J      |              |          |
| C131, 132 |          |           | CK73FB1H822K   | CHIP C 8200PF K     |              |          |
| C133, 134 |          |           | CE04KW1V4R7M   | ELECTRO 4.7UF 35WV  |              |          |
| C135, 136 |          |           | CK73FB1H272K   | CHIP C 2700PF K     |              |          |
| C137, 138 |          |           | CK73FB1H392K   | CHIP C 3900PF K     |              |          |
| C141, 142 |          |           | CC73FSL1H101J  | CHIP C 100PF J      |              |          |
| C143, 144 |          |           | CE04KW1V4R7M   | ELECTRO 4.7UF 35WV  |              |          |
| C145-148  |          |           | CK73FB1H103K   | CHIP C 0.010UF K    |              |          |
| C150      |          |           | CK73FB1H103K   | CHIP C 0.010UF K    |              |          |
| C151      |          |           | CK73FB1E473KTA | CHIP C 0.047UF K    |              |          |
| C152      |          |           | CK73FB1H822K   | CHIP C 8200PF K     |              |          |
| C153, 154 |          |           | CE04KW1V4R7M   | ELECTRO 4.7UF 35WV  |              |          |
| C155      |          |           | CK73FB1E104K   | CHIP C 0.10UF K     |              |          |
| C156      |          |           | CK73FB1H272K   | CHIP C 2700PF K     |              |          |
| C157      |          |           | CK73FB1E104K   | CHIP C 0.10UF K     |              |          |
| C158      |          |           | CK73FB1H392K   | CHIP C 3900PF K     |              |          |
| C161, 162 |          |           | CC73FSL1H101J  | CHIP C 100PF J      |              |          |
| C163, 164 |          |           | CE04KW1V4R7M   | ELECTRO 4.7UF 35WV  |              |          |
| C165      |          |           | CC73FSL1H102J  | CHIP C 1000PF J     |              |          |
| C171-176  |          |           | CC73FSL1H101J  | CHIP C 100PF J      |              |          |
| C177, 178 |          |           | CE04KW1V4R7M   | ELECTRO 4.7UF 35WV  |              |          |
| C182      |          |           | CE04KW1V4R7M   | ELECTRO 4.7UF 35WV  |              |          |
| C185      |          |           | CK73FB1H222K   | CHIP C 2200PF K     |              |          |

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KRF-V7020DN/8020DNR-307/309/357

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|--------------------------------------------------------------|----------------------------|-----------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------|----------|
| C186, 187<br>C197<br>C198, 199<br>C200, 201<br>C202, 203     |                            | *         | CC73FSL1H101J<br>CC73FSL1H221J<br>CK73FB1H822K<br>CK73FB1H153KTA<br>CK73FB1C334K | CHIP C 100PF J<br>CHIP C 220PF J<br>CHIP C 8200PF K<br>CHIP C 0.015UF K<br>CHIP C 0.33UF K                    |                       |          |
| C204, 205<br>C206<br>C207, 208<br>C209-212<br>C213-217       |                            |           | CE04KW1C100M<br>CK73FB1H222K<br>CE04KW1H100M<br>CE04KW1V4R7M<br>CC73FSL1H471J    | ELECTRO 10UF 16WV<br>CHIP C 2200PF K<br>ELECTRO 10UF 50WV<br>ELECTRO 4.7UF 35WV<br>CHIP C 470PF J             |                       |          |
| C219, 220<br>C251, 252<br>C253, 254<br>C255, 256<br>C257-260 |                            |           | CE04KW1H3R3M<br>CC73FSL1H470J<br>CC73FSL1H101J<br>CC73FSL1H470J<br>CC73FSL1H101J | ELECTRO 3.3UF 50WV<br>CHIP C 47PF J<br>CHIP C 100PF J<br>CHIP C 47PF J<br>CHIP C 100PF J                      | 8<br>8<br>8<br>8<br>8 |          |
| C261<br>C262<br>C263<br>C264<br>C265                         |                            |           | CK73FB1H103K<br>CE04KW1HR33M<br>CK73FB1H103K<br>CE04KW1HR33M<br>CK73FB1H103K     | CHIP C 0.010UF K<br>ELECTRO 0.33UF 50WV<br>CHIP C 0.010UF K<br>ELECTRO 0.33UF 50WV<br>CHIP C 0.010UF K        | 8<br>8<br>8<br>8<br>8 |          |
| C266<br>C267<br>C272, 273<br>C274-277<br>C278, 279           |                            |           | CE04KW1HR33M<br>CK73FB1H103K<br>CE04KW1A101M<br>CK73FB1E104K<br>CE04KW1C470M     | ELECTRO 0.33UF 50WV<br>CHIP C 0.010UF K<br>ELECTRO 100UF 10WV<br>CHIP C 0.10UF K<br>ELECTRO 47UF 16WV         | 8<br>8<br>8<br>8<br>8 |          |
| C280                                                         |                            |           | CK73FB1H103K                                                                     | CHIP C 0.010UF K                                                                                              | 8                     |          |
| CN1<br>CN2<br>CN3<br>CN3<br>J1                               | 1C                         | *         | E40-4908-05<br>E40-3259-05<br>E40-4248-05<br>E40-8358-05<br>E63-1080-05          | FLAT CABLE CONNECTOR<br>PIN ASSY<br>PIN ASSY<br>PIN ASSY<br>PHONO JACK                                        |                       |          |
| J2<br>J3<br>J4<br>J5<br>J6                                   | 1C<br>1C<br>1C<br>1C<br>1C | *         | E63-0094-05<br>E63-0093-05<br>E11-0293-05<br>E56-0011-05<br>E56-0023-05          | PHONO JACK<br>PHONO JACK<br>MINIATURE PHONE JACK(2P)<br>CYLINDRICAL RECEPTACLE<br>CYLINDRICAL RECEPTACLE      | 8<br>8                |          |
| L1<br>L2<br>L3<br>L4-6<br>X1                                 |                            | *         | L40-4701-58<br>L79-1216-05<br>L92-0044-05<br>L79-1216-05<br>L77-2221-05          | SMALL FIXED INDUCTOR(47UH,K)<br>LINE FILTER<br>FERRITE CORE<br>LINE FILTER<br>CRYSTAL RESONATOR(12.288MHZ)    | 8                     |          |
| X1<br>X2                                                     |                            |           | L77-2241-05<br>L77-2221-05                                                       | CRYSTAL RESONATOR(6.25MHZ)<br>CRYSTAL RESONATOR(12.288MHZ)                                                    | 67<br>67              |          |
| R1<br>R2<br>R3<br>R4-15<br>R16                               |                            |           | RK73FB2A105J<br>RK73FB2A102J<br>RK73FB2A103J<br>RK73FB2A221J<br>RK73FB2A104J     | CHIP R 1.0M J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 10K J 1/10W<br>CHIP R 220 J 1/10W<br>CHIP R 100K J 1/10W | 8                     |          |
| R17, 18<br>R19<br>R20<br>R21<br>R22                          |                            |           | RK73FB2A102J<br>RK73FB2A221J<br>RK73FB2A104J<br>RK73FB2A221J<br>RK73FB2A102J     | CHIP R 1.0K J 1/10W<br>CHIP R 220 J 1/10W<br>CHIP R 100K J 1/10W<br>CHIP R 220 J 1/10W<br>CHIP R 1.0K J 1/10W | 67<br>67              |          |

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|---------------------------------------------------------------|----------|-----------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------|----------|
| R23<br>R24<br>R25-27<br>R28<br>R29                            |          |           | RK73FB2A221J<br>RK73FB2A221J<br>RK73FB2A222J<br>RK73FB2A105J<br>RK73FB2A750J | CHIP R 220 J 1/10W<br>CHIP R 220 J 1/10W<br>CHIP R 2.2K J 1/10W<br>CHIP R 1.0M J 1/10W<br>CHIP R 75 J 1/10W    | 67               |          |
| R30<br>R31<br>R32<br>R33-36<br>R37                            |          |           | RK73FB2A472J<br>RK73FB2A473J<br>RK73FB2A472J<br>RK73FB2A102J<br>RK73FB2A302J | CHIP R 4.7K J 1/10W<br>CHIP R 47K J 1/10W<br>CHIP R 4.7K J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 3.0K J 1/10W |                  |          |
| R38<br>R39<br>R40<br>R41<br>R42                               |          |           | RK73FB2A102J<br>RK73FB2A222J<br>RK73FB2A472J<br>RK73FB2A473J<br>RK73FB2A750J | CHIP R 1.0K J 1/10W<br>CHIP R 2.2K J 1/10W<br>CHIP R 4.7K J 1/10W<br>CHIP R 47K J 1/10W<br>CHIP R 75 J 1/10W   |                  |          |
| R43-45<br>R46<br>R47, 48<br>R47, 48<br>R50                    |          |           | RK73FB2A221J<br>RK73FB2A221J<br>RK73FB2A101J<br>RK73FB2A101J<br>RK73FB2A750J | CHIP R 220 J 1/10W<br>CHIP R 220 J 1/10W<br>CHIP R 100 J 1/10W<br>CHIP R 100 J 1/10W<br>CHIP R 75 J 1/10W      | 8<br>KP<br>YMCXI |          |
| R51<br>R52, 53<br>R54<br>R55, 56<br>R57, 58                   |          |           | RK73FB2A332J<br>RK73FB2A750J<br>RK73FB2A332J<br>RK73FB2A750J<br>RS14KB3A391J | CHIP R 3.3K J 1/10W<br>CHIP R 75 J 1/10W<br>CHIP R 3.3K J 1/10W<br>CHIP R 75 J 1/10W<br>FL-PROOF RS 390 J 1W   |                  |          |
| ▲ R59, 60<br>▲ R61<br>▲ R62<br>▲ R64<br>▲ R66                 |          |           | RS14KB3A101J<br>RS14KB3A390J<br>RS14KB3A271J<br>RD14NB2E1R0J<br>RD14NB2E2R2J | FL-PROOF RS 100 J 1W<br>FL-PROOF RS 39 J 1W<br>FL-PROOF RS 270 J 1W<br>RD 1 J 1/4W<br>RD 2.2 J 1/4W            | 8                |          |
| ▲ R67<br>▲ R68<br>▲ R69<br>R70<br>R71                         |          |           | RD14NB2E1R0J<br>RD14NB2E2R2J<br>RK73FB2A203J<br>RK73FB2A101J<br>RK73FB2A473J | RD 1 J 1/4W<br>RD 2.2 J 1/4W<br>CHIP R 20K J 1/10W<br>CHIP R 100 J 1/10W<br>CHIP R 47K J 1/10W                 |                  |          |
| R72<br>R101-104<br>R105, 106<br>R107, 108<br>R111, 112        |          |           | RK73FB2A472J<br>RK73FB2A203J<br>RK73FB2A101J<br>RK73FB2A102J<br>RK73FB2A362J | CHIP R 4.7K J 1/10W<br>CHIP R 20K J 1/10W<br>CHIP R 100 J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 3.6K J 1/10W  |                  |          |
| R113, 114<br>R115-118<br>R119, 120<br>R121, 122<br>R123, 124  |          |           | RK73FB2A104J<br>RK73FB2A332J<br>RK73FB2A113J<br>RK73FB2A512J<br>RK73FB2A221J | CHIP R 100K J 1/10W<br>CHIP R 3.3K J 1/10W<br>CHIP R 11K J 1/10W<br>CHIP R 5.1K J 1/10W<br>CHIP R 220 J 1/10W  |                  |          |
| R131, 132<br>R133, 134<br>R135, 136<br>R137, 138<br>R139, 140 |          |           | RK73FB2A132J<br>RK73FB2A104J<br>RK73FB2A122J<br>RK73FB2A821J<br>RK73FB2A113J | CHIP R 1.3K J 1/10W<br>CHIP R 100K J 1/10W<br>CHIP R 1.2K J 1/10W<br>CHIP R 820 J 1/10W<br>CHIP R 11K J 1/10W  |                  |          |
| R141, 142<br>R143, 144<br>R151<br>R152<br>R153, 154           |          |           | RK73FB2A203J<br>RK73FB2A101J<br>RK73FB2A472J<br>RK73FB2A132J<br>RK73FB2A104J | CHIP R 20K J 1/10W<br>CHIP R 100 J 1/10W<br>CHIP R 4.7K J 1/10W<br>CHIP R 1.3K J 1/10W<br>CHIP R 100K J 1/10W  |                  |          |

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|-----------|----------|-----------|--------------|----------------------|--------------|----------|
| R155      |          |           | RK73FB2A472J | CHIP R 4.7K J 1/10W  |              |          |
| R156      |          |           | RK73FB2A122J | CHIP R 1.2K J 1/10W  |              |          |
| R157      |          |           | RK73FB2A472J | CHIP R 4.7K J 1/10W  |              |          |
| R158      |          |           | RK73FB2A821J | CHIP R 820 J 1/10W   |              |          |
| R159      |          |           | RK73FB2A432J | CHIP R 4.3K J 1/10W  |              |          |
| R160      |          |           | RK73FB2A113J | CHIP R 11K J 1/10W   |              |          |
| R161      |          |           | RK73FB2A183J | CHIP R 18K J 1/10W   |              |          |
| R162      |          |           | RK73FB2A203J | CHIP R 20K J 1/10W   |              |          |
| R163, 164 |          |           | RK73FB2A101J | CHIP R 100 J 1/10W   |              |          |
| R165      |          |           | RK73FB2A332J | CHIP R 3.3K J 1/10W  |              |          |
| R166      |          |           | RK73FB2A122J | CHIP R 1.2K J 1/10W  |              |          |
| R167~172  |          |           | RK73FB2A103J | CHIP R 10K J 1/10W   |              |          |
| R173, 174 |          |           | RK73FB2A133J | CHIP R 13K J 1/10W   |              |          |
| R175, 176 |          |           | RK73FB2A113J | CHIP R 11K J 1/10W   |              |          |
| R177, 178 |          |           | RK73FB2A101J | CHIP R 100 J 1/10W   |              |          |
| R179, 180 |          |           | RK73FB2A224J | CHIP R 220K J 1/10W  |              |          |
| R181      |          |           | RK73FB2A751J | CHIP R 750 J 1/10W   |              |          |
| R182      |          |           | RK73FB2A272J | CHIP R 2.7K J 1/10W  |              |          |
| R183, 184 |          |           | RK73FB2A102J | CHIP R 1.0K J 1/10W  |              |          |
| R186      |          |           | RK73FB2A100J | CHIP R 10 J 1/10W    |              |          |
| R189~191  |          |           | RK73FB2A102J | CHIP R 1.0K J 1/10W  |              |          |
| R193~198  |          |           | RK73FB2A101J | CHIP R 100 J 1/10W   |              |          |
| R199      |          |           | RS14KB3A221J | FL-PROOF RS 220 J 1W |              |          |
| R200      |          |           | RS14KB3A271J | FL-PROOF RS 270 J 1W |              |          |
| R201      |          |           | RK73FB2A100J | CHIP R 10 J 1/10W    |              |          |
| R203, 204 |          |           | RK73FB2A100J | CHIP R 10 J 1/10W    |              |          |
| R207, 208 |          |           | RK73FB2A100J | CHIP R 10 J 1/10W    |              |          |
| R251, 252 |          |           | RK73FB2A750J | CHIP R 75 J 1/10W    |              |          |
| R253, 254 |          |           | RK73FB2A332J | CHIP R 3.3K J 1/10W  |              |          |
| R255~258  |          |           | RK73FB2A750J | CHIP R 75 J 1/10W    |              |          |
| R259, 260 |          |           | RK73FB2A332J | CHIP R 3.3K J 1/10W  |              |          |
| R261~264  |          |           | RK73FB2A750J | CHIP R 75 J 1/10W    |              |          |
| S1        | 1C       |           | S62-0034-05  | SLIDE SWITCH         |              |          |
| D1, 2     |          |           | DA204U       | DIODE                |              |          |
| D1, 2     |          |           | 1S5302       | DIODE                |              |          |
| D3, 4     |          |           | UD25.1B      | ZENER DIODE          |              |          |
| D5        |          | *         | S1ZB20(4072) | DIODE                |              |          |
| D6~8      |          |           | UD26.2B      | ZENER DIODE          |              |          |
| D9, 10    |          |           | UD26.8B      | ZENER DIODE          |              |          |
| D11, 12   |          |           | UDZ13B       | ZENER DIODE          |              |          |
| IC1       |          | *         | YSS902       | MOS-IC               |              |          |
| IC1       |          | *         | YSS912       | MOS-IC               |              |          |
| IC2       |          |           | CS4226KQG    | MOS-IC               |              |          |
| IC3       |          |           | TC74HCU04AF  | IC(HEX INVERTER SMD) |              |          |
| IC4       |          |           | NJM2279M     | ANALOGUE IC          |              |          |
| IC5       |          |           | TC9162AF     | MOS-IC               |              |          |
| IC6~10    |          |           | NJM4565M     | ANALOGUE IC          |              |          |
| IC11      |          |           | M62446FP     | ANALOGUE IC          |              |          |
| IC12      |          |           | TA7805S      | ANALOGUE IC          |              |          |
| IC13      |          |           | TA7805SB     | ANALOGUE IC          |              |          |
| IC14      |          |           | L88M33T      | ANALOGUE IC          |              |          |
| IC15      |          |           | TC7W241FU    | MOS-IC               |              |          |
| IC16, 17  |          |           | NJM2279M     | ANALOGUE IC          |              |          |

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| Ref. No                   | Add-ress | New Parts | Parts No.     | Description            | Desti-nation | Re-marks |
|---------------------------|----------|-----------|---------------|------------------------|--------------|----------|
| Δ IC18                    |          |           | L78M05T       | MOS-IC (5.0V 0.5A REG) | 8            |          |
| Δ IC19                    |          | *         | L79M05T       | MOS-IC                 | 8            |          |
| Q1                        |          |           | 2SC4081(R,S)  | TRANSISTOR             |              |          |
| Q2                        |          |           | 2SD1819A(Q,R) | TRANSISTOR             |              |          |
|                           |          |           | 2SA1576A(R,S) | TRANSISTOR             |              |          |
| Q2                        |          |           | 2SB1218A(Q,R) | TRANSISTOR             |              |          |
| A1                        | 1C       |           | W02-1181-05   | OPTIC RECEIVING MODULE |              |          |
| AUDIO (X09-6160/X09-6342) |          |           |               |                        |              |          |
| D500~502                  |          | *         | B30-2545-05   | LED(RED3(160))         |              |          |
| D527                      |          | *         | B30-2545-05   | LED(RED3(160))         |              |          |
| C1, 2                     |          |           | CK45FF1H103Z  | CERAMIC 0.010UF Z      | KPC          |          |
| C3                        |          |           | C91-1480-05   | MP 0.22UF 250WV        | YMXI         |          |
| C5, 6                     |          | *         | C90-3832-05   | ELECTRO 4700UF 75WV    |              |          |
| C7, 8                     |          | *         | C90-3834-05   | ELECTRO 3300UF 42WV    |              |          |
| C9                        |          | *         | CE04KW1V222M  | ELECTRO 2200UF 35WV    |              |          |
| C10                       |          |           | CE04KW1V471M  | ELECTRO 470UF 35WV     |              |          |
| C11~14                    |          |           | CK73FF1C224Z  | CHIP C 0.22UF Z        |              |          |
| C15, 16                   |          |           | CE04KW1E101M  | ELECTRO 100UF 25WV     |              |          |
| C18                       |          |           | CE04KW1J220M  | ELECTRO 22UF 63WV      |              |          |
| C19                       |          |           | CE04KW1V470M  | ELECTRO 47UF 35WV      |              |          |
| C21, 22                   |          |           | CE04KW1H470M  | ELECTRO 47UF 50WV      |              |          |
| C23~26                    |          |           | CE04KW2A100M  | ELECTRO 10UF 100WV     |              |          |
| C29, 30                   |          |           | CE04KW1H470M  | ELECTRO 47UF 50WV      |              |          |
| C31, 32                   |          |           | CE04KW2A100M  | ELECTRO 10UF 100WV     |              |          |
| C33, 34                   |          |           | CK45FB2H392K  | CERAMIC 3900PF K       |              |          |
| C35                       |          |           | CE04KW0J221M  | ELECTRO 220UF 6.3WV    |              |          |
| C36                       |          |           | CE04KW1V4R7M  | ELECTRO 4.7UF 35WV     |              |          |
| C37                       |          |           | CE04KW1H010M  | ELECTRO 1.0UF 50WV     |              |          |
| C38                       |          |           | CE04HW1E100M  | NP-ELEC 10UF 25WV      |              |          |
| C39, 40                   |          |           | CK45FB2H392K  | CERAMIC 3900PF K       |              |          |
| C41                       |          |           | CE04KW1A101M  | ELECTRO 100UF 10WV     |              |          |
| C42                       |          |           | CE04KW1C330M  | ELECTRO 33UF 16WV      |              |          |
| C43                       |          |           | CE04KW1H010M  | ELECTRO 1.0UF 50WV     |              |          |
| C101, 102                 |          |           | CC73FSL1H390J | CHIP C 39PF J          |              |          |
| C103, 104                 |          |           | CE04KW1H100M  | ELECTRO 10UF 50WV      |              |          |
| C105, 106                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |
| C107, 108                 |          |           | CE04KW1A470M  | ELECTRO 47UF 10WV      |              |          |
| C109, 110                 |          |           | CC45FSL1H101J | CERAMIC 100PF J        |              |          |
| C111, 112                 |          |           | CQ93FMG1H123J | MYLAR 0.012UF J        |              |          |
| C113, 114                 |          |           | CK45FB1H332K  | CERAMIC 3300PF K       |              |          |
| C115, 116                 |          |           | CE04KW1V4R7M  | ELECTRO 4.7UF 35WV     |              |          |
| C117                      |          |           | CC45FSL1H101J | CERAMIC 100PF J        |              |          |
| C118                      |          |           | CK45FF1H103Z  | CERAMIC 0.010UF Z      |              |          |
| C119, 120                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |
| C121, 122                 |          |           | CC73FSL1H151J | CHIP C 150PF J         |              |          |
| C123, 124                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |
| C127, 128                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |
| C131, 132                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |
| C135, 136                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |
| C139, 140                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |
| C143, 144                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |
| C147, 148                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |
| C151, 152                 |          |           | CC73FSL1H221J | CHIP C 220PF J         |              |          |

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KRF-V7020DN/8020DN/R-307/309/357

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|---------------------------------------------------------------|----------|-----------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------|----------|
| C155, 156<br>C157-162<br>C163, 164<br>C165<br>C166-168        |          |           | CE04KW1H2R2M<br>CC73FSL1H101J<br>CE04KW1C220M<br>CC45FSL1H101J<br>CK45FF1H103Z    | ELECTRO 2.2UF 50WV<br>CHIP C 100PF J<br>ELECTRO 22UF 16WV<br>CERAMIC 100PF J<br>CERAMIC 0.010UF Z        |              |          |
| C169, 170<br>C171, 172<br>C173, 174<br>C175-180<br>C181, 182  |          |           | CC73FSL1H221J<br>CK45FF1H103Z<br>CE04KW1H2R2M<br>CC73FSL1H101J<br>CE04KW1C220M    | CHIP C 220PF J<br>CERAMIC 0.010UF Z<br>ELECTRO 2.2UF 50WV<br>CHIP C 100PF J<br>ELECTRO 22UF 16WV         |              |          |
| C201, 202<br>C229, 230<br>C233, 234<br>C237<br>C238           |          |           | CE04KW1H100M<br>CC73FSL1H471J<br>CC73FSL1H101J<br>CC45FSL1H101J<br>CK45FF1H103Z   | ELECTRO 10UF 50WV<br>CHIP C 470PF J<br>CHIP C 100PF J<br>CERAMIC 100PF J<br>CERAMIC 0.010UF Z            |              |          |
| C241, 242<br>C245-252<br>C253, 254<br>C257, 258<br>C263, 264  |          |           | CC73FSL1H471J<br>CC73FSL1H101J<br>CC73FSL1H471J<br>CC73FSL1H101J<br>CC73FSL1H101J | CHIP C 470PF J<br>CHIP C 100PF J<br>CHIP C 470PF J<br>CHIP C 100PF J<br>CHIP C 100PF J                   |              |          |
| C265, 266<br>C267, 268<br>C269, 270<br>C271, 272<br>C273, 274 |          |           | CE04KW1H2R2M<br>CE04KW1A101M<br>CC73FSL1H101J<br>CE04KW1H2R2M<br>CE04KW1A101M     | ELECTRO 2.2UF 50WV<br>ELECTRO 100UF 10WV<br>CHIP C 100PF J<br>ELECTRO 2.2UF 50WV<br>ELECTRO 100UF 10WV   |              |          |
| C277<br>C278<br>C279<br>C280<br>C281-285                      |          |           | CE04KW1H2R2M<br>CK73FF1C224Z<br>CE04KW1A101M<br>CK73FF1C224Z<br>CC45FCH1H220J     | ELECTRO 2.2UF 50WV<br>CHIP C 0.22UF Z<br>ELECTRO 100UF 10WV<br>CHIP C 0.22UF Z<br>CERAMIC 22PF J         |              |          |
| C286<br>C287, 288<br>C289-292<br>C293, 294<br>C295-298        |          |           | CE04KW1V4R7M<br>CK73FB1H102K<br>CK73FF1C224Z<br>CK73FB1H102K<br>CK73FF1C224Z      | ELECTRO 4.7UF 35WV<br>CHIP C 1000PF K<br>CHIP C 0.22UF Z<br>CHIP C 1000PF K<br>CHIP C 0.22UF Z           |              |          |
| C299<br>C301-305<br>C306<br>C307, 308<br>C309-311             |          |           | CK73FB1H102K<br>CC73FSL1H100D<br>CC73FSL1H101J<br>CC45FSL1H101J<br>CK45FF1H472Z   | CHIP C 1000PF K<br>CHIP C 10PF D<br>CHIP C 100PF J<br>CERAMIC 100PF J<br>CERAMIC 4700PF Z                |              |          |
| C313-316<br>C321-328<br>C329-333<br>C334<br>C335              |          |           | CK45FF1H472Z<br>CE04KW1H100M<br>CE04KW1C220M<br>CE04KW1C470M<br>CE04KW1H101M      | CERAMIC 4700PF Z<br>ELECTRO 10UF 50WV<br>ELECTRO 22UF 16WV<br>ELECTRO 47UF 16WV<br>ELECTRO 100UF 50WV    | YMXI         |          |
| C501<br>C502<br>C503<br>C504<br>C505                          |          |           | CK45FF1H103Z<br>CQ93FMG1H104J<br>CK45FF1H103Z<br>CK73FB1H103K<br>CK45FF1H103Z     | CERAMIC 0.010UF Z<br>MYLAR 0.10UF J<br>CERAMIC 0.010UF Z<br>CHIP C 0.010UF K<br>CERAMIC 0.010UF Z        |              |          |
| C506<br>C507<br>C508<br>C509<br>C511                          |          |           | CK45FB1H102K<br>CK45FF1H103Z<br>CE04DW0J102M<br>CE04KW1A101M<br>CK45FF1H103Z      | CERAMIC 1000PF K<br>CERAMIC 0.010UF Z<br>ELECTRO 1000UF 6.3WV<br>ELECTRO 100UF 10WV<br>CERAMIC 0.010UF Z |              |          |

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|-----------------------------------------------|----------|----------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------|----------|
| C512-514<br>C517<br>C518<br>C519, 520<br>C521 |          |                                  | CK73FB1H103K<br>CE04KW1H010M<br>CK45FF1H103Z<br>CK73FB1H103K<br>CK45FF1H103Z | CHIP C 0.010UF K<br>ELECTRO 1.0UF 50WV<br>CERAMIC 0.010UF Z<br>CHIP C 0.010UF Z<br>CERAMIC 0.010UF Z         |                                 |          |
| C525<br>C526<br>C529, 530<br>C531<br>C532     |          |                                  | CE04KW1H010M<br>C90-3214-05<br>CE04KW1V4R7M<br>CK73FB1H103K<br>CK73FB1H102K  | ELECTRO 1.0UF 50WV<br>ELECTRO 100UF 6.3WV<br>ELECTRO 4.7UF 35WV<br>CHIP C 0.010UF K<br>CHIP C 1000PF K       |                                 |          |
| C534<br>C535                                  |          |                                  | C90-1827-05<br>CE04KW0J471M                                                  | ELECTRO 0.047F 5.5WV<br>ELECTRO 470UF 6.3WV                                                                  | YMCXIV<br>KP                    |          |
| CN1<br>CN1<br>CN8<br>CN9<br>CN11              |          | *                                | E40-4299-05<br>E40-8364-05<br>E40-8251-05<br>E40-9848-05<br>E40-8253-05      | PIN ASSY<br>PIN ASSY<br>FLAT CABLE CONNECTOR<br>PIN ASSY<br>FLAT CABLE CONNECTOR                             |                                 |          |
| CN12<br>CN13<br>CN13<br>CN51<br>CN52          |          | *                                | E40-8196-05<br>E40-4248-05<br>E40-8358-05<br>E40-8252-05<br>E40-8405-05      | PIN ASSY<br>PIN ASSY<br>PIN ASSY<br>FLAT CABLE CONNECTOR<br>FLAT CABLE CONNECTOR                             |                                 |          |
| CN53<br>J1<br>J1<br>J1<br>J2, 3               |          | 2C<br>2C<br>2C<br>2C             | E40-8250-05<br>E63-0046-15<br>E63-0046-15<br>E63-0172-05<br>E63-0047-15      | FLAT CABLE CONNECTOR<br>PHONO JACK<br>PHONO JACK<br>PHONO JACK<br>PHONO JACK                                 | KP<br>YMCXI<br>V<br>KP          |          |
| J2, 3<br>J2, 3<br>J4<br>J4<br>J4              |          | 2C<br>2C<br>2C<br>2C<br>2C       | E63-0047-15<br>E63-0173-05<br>E63-0116-05<br>E63-0116-05<br>E63-0164-05      | PHONO JACK<br>PHONO JACK<br>PHONO JACK<br>PHONO JACK<br>PHONO JACK                                           | YMCXI<br>V<br>KP<br>YMCXI<br>KP |          |
| J4<br>J4<br>J5<br>J5<br>J5                    |          | 2C<br>2C<br>2C<br>2C<br>2C       | E63-0164-05<br>E63-1016-05<br>E70-0089-05<br>E70-0100-05<br>E70-0100-05      | PHONO JACK<br>PHONO JACK<br>SCREW TERMINAL BOARD<br>SCREW TERMINAL BOARD<br>SCREW TERMINAL BOARD             | YMCXI<br>V<br>V<br>KP<br>YMCXI  |          |
| J6<br>J6<br>J6<br>J7<br>J7<br>J7              |          | 2C<br>2C<br>2C<br>2C<br>2C<br>2C | E70-0047-05<br>E70-0047-05<br>E70-0068-05<br>E63-0046-15<br>E63-0046-15      | LOCK TERMINAL BOARD<br>LOCK TERMINAL BOARD<br>LOCK TERMINAL BOARD<br>PHONO JACK<br>PHONO JACK                | KP<br>YMCXI<br>V<br>KP<br>YMCXI |          |
| J7<br>W401-405<br>W401-405                    |          | 2C                               | E63-0172-05<br>E29-1634-14<br>E29-1634-14                                    | PHONO JACK<br>LEAD PLATE<br>LEAD PLATE                                                                       | V<br>KP<br>YMCXI                |          |
| -                                             |          |                                  | J19-5928-03                                                                  | HOLDER                                                                                                       |                                 |          |
| L1-5<br>X501                                  |          |                                  | L39-1373-05<br>L78-0290-05                                                   | PHASE COMPENSATION COIL<br>RESONATOR (8MHZ)                                                                  |                                 |          |
| R1, 2<br>R3, 4<br>R5<br>R6<br>R8              |          |                                  | RK73FB2A513J<br>RK73FB2A273J<br>RK73FB2A222J<br>RK73FB2A333J<br>RK73FB2A152J | CHIP R 51K J 1/10W<br>CHIP R 27K J 1/10W<br>CHIP R 2.2K J 1/10W<br>CHIP R 33K J 1/10W<br>CHIP R 1.5K J 1/10W | YMXI                            |          |

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|---------------------------------------------------------------|----------|-----------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------|----------|
| R9, 10<br>R11, 12<br>R14<br>R16, 17<br>R18                    |          |           | RS14KB3D391J<br>RK73FB2A472J<br>RD14NB2E1R0J<br>RK73FB2A273J<br>RD14NB2E4R7J | FL-PROOF RS 390<br>CHIP R 4.7K J 1/10W<br>RD 1 J 1/4W<br>CHIP R 27K J 1/10W<br>RD 4.7 J 1/4W                    |              |          |
| R19<br>R21, 22<br>R23, 24<br>R25, 26<br>R27, 28               |          |           | RK73FB2A472J<br>RS14KB3A392J<br>RD14NB2E103J<br>RS14KB3A392J<br>RK73FB2A272J | CHIP R 4.7K J 1/10W<br>FL-PROOF RS 3.9K J 1W<br>RD 10K J 1/4W<br>FL-PROOF RS 3.9K J 1W<br>CHIP R 2.7K J 1/10W   |              |          |
| R30<br>R32<br>R34<br>R35<br>R37                               |          |           | RK73FB2A223J<br>RK73FB2A153J<br>RK73FB2A473J<br>RK73FB2A272J<br>RS14KB3A681J | CHIP R 22K J 1/10W<br>CHIP R 15K J 1/10W<br>CHIP R 47K J 1/10W<br>CHIP R 2.7K J 1/10W<br>FL-PROOF RS 680 J 1W   |              |          |
| R41<br>R43, 44<br>R45<br>R46<br>R47                           |          |           | RK73FB2A474J<br>RK73FB2A1R0J<br>RD14NB2E1R0J<br>RD14BB2C470J<br>RK73FB2A103J | CHIP R 470K J 1/10W<br>CHIP R 1 J 1/10W<br>RD 1 J 1/4W<br>RD 47 J 1/6W<br>CHIP R 10K J 1/10W                    |              |          |
| R50<br>R51<br>R101, 102<br>R103, 104<br>R105, 106             |          |           | RK73FB2A472J<br>RK73FB2A473J<br>RK73FB2A102J<br>RK73FB2A273J<br>RK73FB2A101J | CHIP R 4.7K J 1/10W<br>CHIP R 47K J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 27K J 1/10W<br>CHIP R 100 J 1/10W    |              |          |
| R117, 118<br>R119, 120<br>R121, 122<br>R123, 124<br>R125, 126 |          |           | RK73FB2A102J<br>RK73FB2A224J<br>RK73FB2A102J<br>RK73FB2A224J<br>RK73FB2A102J | CHIP R 1.0K J 1/10W<br>CHIP R 220K J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 220K J 1/10W<br>CHIP R 1.0K J 1/10W |              |          |
| R127, 128<br>R129, 130<br>R131, 132<br>R135, 136<br>R137, 138 |          |           | RK73FB2A224J<br>RK73FB2A102J<br>RK73FB2A224J<br>RK73FB2A102J<br>RK73FB2A224J | CHIP R 220K J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 220K J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 220K J 1/10W |              |          |
| R139, 140<br>R141, 142<br>R143, 144<br>R145, 146<br>R147, 148 |          |           | RK73FB2A102J<br>RK73FB2A224J<br>RK73FB2A102J<br>RK73FB2A224J<br>RK73FB2A102J | CHIP R 1.0K J 1/10W<br>CHIP R 220K J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 220K J 1/10W<br>CHIP R 1.0K J 1/10W |              |          |
| R149, 150<br>R151, 152<br>R153-156<br>R157, 158<br>R169-172   |          |           | RK73FB2A224J<br>RK73FB2A102J<br>RK73FB2A224J<br>RK73FB2A4R7J<br>RK73FB2A223J | CHIP R 220K J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 220K J 1/10W<br>CHIP R 4.7 J 1/10W<br>CHIP R 22K J 1/10W   |              |          |
| R173, 174<br>R175, 176<br>R177, 178<br>R201-204<br>R206       |          |           | RK73FB2A473J<br>RK73FB2A224J<br>RK73FB2A4R7J<br>RK73FB2A202J<br>RK73FB2A103J | CHIP R 47K J 1/10W<br>CHIP R 220K J 1/10W<br>CHIP R 4.7 J 1/10W<br>CHIP R 2.0K J 1/10W<br>CHIP R 10K J 1/10W    |              |          |
| R226<br>R227, 228<br>R229, 230<br>R231, 232<br>R238           |          |           | RK73FB2A103J<br>RK73FB2A183J<br>RK73FB2A224J<br>RK73FB2A183J<br>RK73FB2A103J | CHIP R 10K J 1/10W<br>CHIP R 18K J 1/10W<br>CHIP R 220K J 1/10W<br>CHIP R 18K J 1/10W<br>CHIP R 10K J 1/10W     |              |          |

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|---------------------------------------------------------------|----------|-----------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------|----------|
| R239, 240<br>R241, 242<br>R243, 244<br>R250<br>R251, 252      |          |           | RK73FB2A183J<br>RK73FB2A224J<br>RK73FB2A183J<br>RK73FB2A103J<br>RK73FB2A183J | CHIP R 18K J 1/10W<br>CHIP R 220K J 1/10W<br>CHIP R 18K J 1/10W<br>CHIP R 10K J 1/10W<br>CHIP R 18K J 1/10W    |              |          |
| R253<br>R254<br>R255, 256<br>R263, 264<br>R267-270            |          |           | RK73FB2A224J<br>RK73FB2A822J<br>RK73FB2A183J<br>RK73FB2A102J<br>RK73FB2A102J | CHIP R 220K J 1/10W<br>CHIP R 8.2K J 1/10W<br>CHIP R 18K J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 1.0K J 1/10W |              |          |
| R271<br>R272<br>R273<br>R274<br>R275, 276                     |          |           | RK73FB2A473J<br>RK73FB2A361J<br>RK73FB2A102J<br>RK73FB2A101J<br>RK73FB2A104J | CHIP R 47K J 1/10W<br>CHIP R 360 J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 100 J 1/10W<br>CHIP R 100K J 1/10W   |              |          |
| R277, 278<br>R283, 284<br>R285, 286<br>R291<br>R293           |          |           | RK73FB2A563J<br>RK73FB2A182J<br>RK73FB2A563J<br>RK73FB2A182J<br>RK73FB2A563J | CHIP R 56K J 1/10W<br>CHIP R 1.8K J 1/10W<br>CHIP R 56K J 1/10W<br>CHIP R 1.8K J 1/10W<br>CHIP R 56K J 1/10W   |              |          |
| R310<br>R311, 312<br>R313, 314<br>R315, 316<br>R317, 318      |          |           | RK73FB2A333J<br>R92-1866-05<br>RK73FB2A303J<br>RK73FB2A243J<br>RK73FB2A471J  | CHIP R 33K J 1/10W<br>METAL FILM 0.1 2W<br>CHIP R 30K J 1/10W<br>CHIP R 24K J 1/10W<br>CHIP R 470 J 1/10W      |              |          |
| R319, 320<br>R323, 324<br>R325, 326<br>R327, 328<br>R329, 330 |          |           | RK73FB2A333J<br>RS14KB3D4R7J<br>R92-1866-05<br>RK73FB2A303J<br>RK73FB2A243J  | CHIP R 33K J 1/10W<br>FL-PROOF RS 4.7 J 2W<br>METAL FILM 0.1 2W<br>CHIP R 30K J 1/10W<br>CHIP R 24K J 1/10W    |              |          |
| R331, 332<br>R333, 334<br>R337, 338<br>R339<br>R341           |          |           | RK73FB2A471J<br>RK73FB2A333J<br>RS14KB3D4R7J<br>R92-1866-05<br>RS14KB3D4R7J  | CHIP R 470 J 1/10W<br>CHIP R 33K J 1/10W<br>FL-PROOF RS 4.7 J 2W<br>METAL FILM 0.1 2W<br>FL-PROOF RS 4.7 J 2W  |              |          |
| R347, 348<br>R349<br>R350<br>R351, 352<br>R353                |          |           | RK73FB2A102J<br>RK73FB2A223J<br>RK73FB2A103J<br>RD14NB2E4R7J<br>RK73FB2A103J | CHIP R 1.0K J 1/10W<br>CHIP R 22K J 1/10W<br>CHIP R 10K J 1/10W<br>RD 4.7 J 1/4W<br>CHIP R 10K J 1/10W         |              |          |
| R354<br>R355<br>R356, 357<br>R361<br>R363                     |          |           | RK73FB2A223J<br>RK73FB2A473J<br>RK73FB2A104J<br>RK73FB2A303J<br>RK73FB2A243J | CHIP R 22K J 1/10W<br>CHIP R 47K J 1/10W<br>CHIP R 100K J 1/10W<br>CHIP R 30K J 1/10W<br>CHIP R 24K J 1/10W    |              |          |
| R365<br>R367-371<br>R372<br>R384<br>R385                      |          |           | RK73FB2A471J<br>RK73FB2A182J<br>RK73FB2A621J<br>RK73FB2A103J<br>RK73FB2A513J | CHIP R 470 J 1/10W<br>CHIP R 1.8K J 1/10W<br>CHIP R 620 J 1/10W<br>CHIP R 10K J 1/10W<br>CHIP R 51K J 1/10W    | YMXI<br>YMXI |          |
| R386<br>R387<br>R521<br>R522<br>R534                          |          |           | RK73FB2A103J<br>RK73FB2A472J<br>RK73FB2A103J<br>RD14NB2E1R0J<br>RK73FB2A101J | CHIP R 10K J 1/10W<br>CHIP R 4.7K J 1/10W<br>CHIP R 10K J 1/10W<br>RD 1 J 1/4W<br>CHIP R 100 J 1/10W           | YMXI<br>YMXI |          |

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## PARTS LIST

KRF-V7020DN/8020DN/R-307/309/357

\* New Parts

Parts without **Parts No.** are not supplied.

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Teile ohne **Parts No.** werden nicht geliefert.

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| Ref. No                                               | Add-ress                         | New Parts | Parts No.                                                                    | Description                                                                                                 | Desti-nation           | Re-marks         |
|-------------------------------------------------------|----------------------------------|-----------|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------|------------------|
| R536<br>R539<br>R542<br>R549<br>R562                  |                                  | *         | RK73FB2A471J<br>RK73FB2A471J<br>RK73EB2B511J<br>RK73FB2A102J<br>RK73FB2A102J | CHIP R 470 J 1/10W<br>CHIP R 470 J 1/10W<br>CHIP R 510 J 1/8W<br>CHIP R 1.0K J 1/10W<br>CHIP R 1.0K J 1/10W |                        |                  |
| R578<br>R587<br>R592<br>R605-607<br>W503              |                                  |           | RK73FB2A103J<br>RK73FB2A103J<br>RK73FB2A102J<br>RK73FB2A103J<br>R92-0670-05  | CHIP R 10K J 1/10W<br>CHIP R 10K J 1/10W<br>CHIP R 1.0K J 1/10W<br>CHIP R 10K J 1/10W<br>CHIP R 0 OHM       |                        |                  |
| K1-4<br>S501-507<br>S509-512<br>S514-516<br>S520, 521 | 2A, 2B<br>2A, 2B<br>2A, 2B<br>2A |           | S76-0076-05<br>S70-0031-05<br>S70-0031-05<br>S70-0031-05<br>S70-0031-05      | MAGNETIC RELAY<br>TACT SWITCH<br>TACT SWITCH<br>TACT SWITCH<br>TACT SWITCH                                  |                        |                  |
| S517<br>S518, 519                                     | 2B<br>2B                         |           | T99-0602-05<br>T99-0605-05                                                   | ROTARY ENCODER<br>ROTARY ENCODER                                                                            |                        |                  |
| Δ D1<br>Δ D2<br>Δ D3<br>Δ D4<br>Δ D8, 9               |                                  | *         | D4SBL20UF03<br>D4SBL20UF03<br>S1ZB20(4101)<br>D4SBL20UF03<br>HZS16N(B2)      | DIODE<br>DIODE<br>DIODE<br>DIODE<br>ZENER DIODE                                                             | YMCXIV<br><br>KP       |                  |
| D8, 9<br>D11-14<br>D11-14<br>D15<br>D16, 17           |                                  |           | MTZJ16(B)<br>HZS8.2N(B2)<br>MTZJ8.2(B)<br>MA111<br>HSS104A                   | ZENER DIODE<br>ZENER DIODE<br>ZENER DIODE<br>DIODE<br>DIODE                                                 |                        |                  |
| D16, 17<br>D18<br>D18<br>D19<br>D19                   |                                  |           | 1SS133<br>HZS4.7N(B2)<br>MTZJ4.7(B)<br>HZS3.3N(B2)<br>MTZJ3.3(B)             | DIODE<br>ZENER DIODE<br>ZENER DIODE<br>ZENER DIODE<br>ZENER DIODE                                           |                        |                  |
| D20-23<br>D26, 27<br>D28<br>D30<br>D31, 32            |                                  |           | MA111<br>MA111<br>MA111<br>MA111<br>HZS30N(B2)                               | DIODE<br>DIODE<br>DIODE<br>DIODE<br>ZENER DIODE                                                             | YMXI<br>YMXI<br>YMXI   |                  |
| D31, 32<br>D33<br>D503<br>D503<br>D504                |                                  |           | MTZJ30(B)<br>MA111<br>HSS104A<br>1SS133<br>HSS104A                           | ZENER DIODE<br>DIODE<br>DIODE<br>DIODE<br>DIODE                                                             | YMXI<br>YMXI<br>8<br>X |                  |
| D504<br>D508, 509<br>D508, 509<br>D510<br>D510        |                                  |           | 1SS133<br>HSS104A<br>1SS133<br>HSS104A<br>1SS133                             | DIODE<br>DIODE<br>DIODE<br>DIODE<br>DIODE                                                                   | X                      | YMCXIV<br>YMCXIV |
| D511-522<br>D511-522<br>D525<br>D525<br>D526          |                                  |           | HSS104A<br>1SS133<br>HZS6.2N(B2)<br>MTZJ6.2(B)<br>HSS104A                    | DIODE<br>DIODE<br>ZENER DIODE<br>ZENER DIODE<br>DIODE                                                       |                        |                  |
| D526<br>D529-531                                      |                                  |           | 1SS133<br>HSS104A                                                            | DIODE<br>DIODE                                                                                              |                        |                  |

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| Ref. No                                            | Add-ress | New Parts | Parts No.                                                                    | Description                                                                                       | Desti-nation | Re-marks |
|----------------------------------------------------|----------|-----------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------|----------|
| Δ D529-531<br>Δ ED51<br>Δ IC1<br>Δ IC2<br>Δ IC3    |          | *         | 1SS133<br>11-MT-120GK<br>TA7815S<br>TA79015S<br>STK411-230D                  | DIODE<br>INDICATOR TUBE<br>IC(VOLTAGE REGULATOR/ +15V)<br>IC(VOLTAGE REGULATOR/~15V)<br>HYBRID IC |              |          |
| Δ IC3<br>Δ IC4<br>Δ IC5<br>Δ IC6<br>Δ IC7          |          |           | STK411-230K<br>STK410-030D<br>NJM4580ED<br>TC9164AF<br>TC9163AF              | HYBRID IC<br>HYBRID IC<br>ANALOGUE IC<br>MOS-IC<br>MOS-IC                                         |              |          |
| Δ IC8-12<br>Δ IC51<br>Δ IC53<br>Δ Q1<br>Δ Q2       |          | *         | NJM4565MD<br>CXP82852-139Q<br>S-80740AL-A4<br>2SC1845(F,E)<br>2SB1640        | IC(OP AMP X2)<br>MI-COM IC<br>IC(VOLTAGE DETECTOR)<br>TRANSISTOR<br>TRANSISTOR                    |              |          |
| Δ Q3-14<br>Δ Q15, 16<br>Δ Q17-21<br>Δ Q22<br>Δ Q23 |          |           | 2SC2878(B)<br>2SA1576A(R,S)<br>2SC1845(F,E)<br>2SA1576A(R,S)<br>2SA992(F,E)  | TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR                                |              |          |
| Δ Q24, 25<br>Δ Q26-29<br>Δ Q31<br>Δ Q32<br>Δ Q32   |          |           | 2SC1845(F,E)<br>DTC123JUA<br>2SC3944A(R,S)<br>2SA1123(S,T)<br>2SA1285A(F)    | TRANSISTOR<br>DIGITAL TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR                        |              |          |
| Q34, 35<br>Q36<br>Q37<br>Q38<br>Q40                |          |           | 2SC1845(F,E)<br>2SA1535A(R,S)<br>2SC1845(F,E)<br>2SC3722K(R,S)<br>2SC4213(B) | TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR                                | YMXI         |          |
| Q41<br>Q41<br>Q43, 44<br>Q501<br>Q501              |          |           | 2SC4081(R,S)<br>2SD1819A(Q,R)<br>2SC2878(B)<br>2SC4081(R,S)<br>2SD1819A(Q,R) | TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR<br>TRANSISTOR                                | YMXI<br>YMXI |          |
| Q503<br>Q503<br>TH1                                |          |           | 2SC4081(R,S)<br>2SD1819A(Q,R)<br>PTH9C42BD471Q                               | TRANSISTOR<br>TRANSISTOR<br>POSITIVE RESISTOR                                                     | YMXI         |          |
| A501                                               | 2B       |           | W02-2625-05                                                                  | OPTIC RECEIVING MODULE                                                                            |              |          |

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#### HOW TO READ THE PARTS LIST

Destination column has the abbreviation for the sale country and model. Alphabets mean the

country. Numerals do the model.

Example: X7 shows KRF-V7020D for Australia market. "X" does all models for Australia.

"7" does KRF-V7020D and VR-357.

#### ABBREVIATION OF MODEL AND MASS PRODUCTION'S DESTINATIONS

| MODEL      | CNT<br>ABB. | Australia<br>X | Canada<br>P   | China<br>C  | England<br>T     | Europe<br>E   | Germany<br>G | Korea<br>H      | Malaysia<br>I |
|------------|-------------|----------------|---------------|-------------|------------------|---------------|--------------|-----------------|---------------|
| KRF-V7020D | 7           | X7             | -             | C7          | -                | -             | -            | -               | -             |
| KRF-V8020D | 8           | X8             | -             | C8          | -                | -             | -            | -               | 18            |
| VR-307     | 6           | -              | P6            | -           | -                | -             | -            | -               | -             |
| VR-357     | 7           | -              | P7            | -           | -                | -             | -            | -               | -             |
| VR-309     | 8           | -              | P8            | -           | -                | -             | -            | -               | -             |
| MODEL      | CNT<br>ABB. | Mexico<br>R    | PX/IAFES<br>Y | Russia<br>R | Scandinavia<br>L | Shanghai<br>V | USA<br>K     | Other area<br>M |               |
| KRF-V7020D | 7           | -              | Y7            | -           | -                | V7            | -            | M7              | -             |
| KRF-V8020D | 8           | -              | Y8            | -           | -                | -             | -            | M8              | -             |
| VR-307     | 6           | -              | -             | -           | -                | -             | K6           | -               | -             |
| VR-357     | 7           | -              | -             | -           | -                | -             | K7           | -               | -             |
| VR-309     | 8           | -              | -             | -           | -                | -             | K8           | -               | -             |

# KRF-V7020D/V8020D/VR-307/309/357

## SPECIFICATIONS

### For other countries

#### AUDIO section

Effective power output during STEREO operation  
KRF-V8020D  
1kHz, 10% T.H.D., at 8  $\Omega$  ..... 140 W + 140 W  
Rated power output during STEREO operation

100 watts per channel minimum RMS, both channels driven, at 8  $\Omega$  from 40 Hz to 20 kHz with no more than 0.7% total harmonic distortion.(FTC)

Effective power output during SURROUND operation  
FRONT (1kHz, 10% T.H.D. at 8  $\Omega$  one channel driven) ..... 100 W + 100 W  
CENTER (1kHz, 10% T.H.D. at 8  $\Omega$  one channel driven) ..... 100 W  
SURROUND (1kHz, 10% T.H.D. at 8  $\Omega$  one channel driven) ..... 100 W + 100 W  
Total harmonic distortion ..... 0.03% (1 kHz, 50W, 8  $\Omega$ )  
Frequency response  
CD ..... 10 Hz ~ 85kHz, +0 dB, -3.0 dB  
Signal to noise ratio (IHF'66)  
PHONO (MM) ..... 75 dB  
CD ..... 93 dB  
Input sensitivity / impedance  
PHONO (MM) ..... 2.5 mV / 27 k $\Omega$   
CD ..... 200 mV / 47 k $\Omega$   
Output level / impedance  
TAPE REC ..... 200 mV / 2.2 k $\Omega$   
PRE OUT (SUBWOOFER) ..... 2 V / 2.2 k $\Omega$   
Tone control  
BASS .....  $\pm 10$  dB (at 100 Hz)  
TREBLE .....  $\pm 10$  dB (at 10 kHz)

#### DIGITAL AUDIO section

Sampling frequency ..... 32 kHz, 44.1 kHz, 48 kHz  
Input level / impedance / wave length  
Optical ..... -15 dBm ~ -21 dBm, 600 nm  $\pm 30$ nm  
Coaxial ..... 0.5 Vp-p / 75  $\Omega$

#### VIDEO section

VIDEO inputs/outputs  
VIDEO (composite) ..... 1 Vp-p / 75  $\Omega$   
S VIDEO (luminance signal) ..... 1 Vp-p / 75  $\Omega$   
(chrominance signal) ..... 0.286 Vp-p / 75  $\Omega$

#### FM tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz  
Usable sensitivity (MONO)  
..... 1.6  $\mu$ V (75  $\Omega$ ) / 15.2 dBf (75 kHz DEV., SINAD 30 dB)  
50dB quieting sensitivity  
STEREO ..... 31.6  $\mu$ V (75  $\Omega$ ) / 41.2 dBf  
Total harmonic distortion (1 kHz)  
MONO ..... 0.6% (65 dBf input)  
STEREO ..... 0.7% (65 dBf input)  
Signal to noise ratio (1 kHz, 75 kHz DEV.)  
MONO ..... 75 dB (65 dBf input)  
STEREO ..... 68 dB (65 dBf input)  
Stereo separation (1 kHz) ..... 38 dB  
Selectivity ( $\pm 400$  kHz) ..... 50 dB  
Frequency response ..... 30 Hz ~ 15kHz, +0.5 dB, -3.0 dB

#### AM tuner section

Tuning frequency range  
9 kHz step ..... 531 kHz ~ 1,602 kHz  
10 kHz step ..... 530 kHz ~ 1,610 kHz  
Usable sensitivity (30% mod., S/N 20 dB)  
..... 16  $\mu$ V / (600  $\mu$ V/m)  
Signal to noise ratio (30% mod. 1 mV input) ..... 50 dB

#### GENERAL

Power consumption  
For U.S. military, Australia, Malaysia ..... 240 W  
For other countries ..... 230 W  
AC outlet  
SWITCHED ..... 2 (total 150 W max.)  
Dimensions ..... W : 440 mm  
H : 144 mm  
D : 400 mm  
Weight (Net) ..... 8.6 kg

#### Notes

- 1.KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
- 2.The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

# KRF-V7020D/V8020D/VR-307/309/357

## SPECIFICATIONS

### For U.S.A and Canada

#### AUDIO section

Rated power output during STEREO operation

100 watts per channel minimum RMS, both channels driven, at 8  $\Omega$  from 40 Hz to 20 kHz with no more than 0.7% total harmonic distortion.(FTC)

Effective power output during SURROUND operation  
FRONT (1kHz, 0.7% T.H.D. at 8  $\Omega$  one channel driven) ..... 100 W + 100 W  
CENTER (1kHz, 0.7% T.H.D. at 8  $\Omega$  one channel driven) ..... 100 W  
SURROUND (1kHz, 0.7% T.H.D. at 8  $\Omega$  one channel driven) ..... 100 W + 100 W

Total harmonic distortion ..... 0.03% (1 kHz, 50W, 8  $\Omega$ )  
Frequency response  
CD ..... 10 Hz ~ 85kHz, +0 dB, -3.0 dB  
Signal to noise ratio (IHF'66)  
PHONO (MM) ..... 75 dB  
CD ..... 93 dB  
Input sensitivity / impedance  
PHONO (MM) ..... 2.5 mV / 27 k $\Omega$   
CD ..... 200 mV / 47 k $\Omega$   
Output level / impedance  
TAPE REC ..... 200 mV / 2.2 k $\Omega$   
PRE OUT (SUBWOOFER) ..... 2 V / 2.2 k $\Omega$   
Tone control  
BASS .....  $\pm 10$  dB (at 100 Hz)  
TREBLE .....  $\pm 10$  dB (at 10 kHz)

#### DIGITAL AUDIO section

Sampling frequency ..... 32 kHz, 44.1 kHz, 48 kHz  
Input level / impedance / wave length  
Optical ..... -15 dBm ~ -21 dBm, 600 nm  $\pm 30$ nm  
Coaxial ..... 0.5 Vp-p / 75  $\Omega$

#### VIDEO section

##### VIDEO inputs/outputs

VIDEO (composite) ..... 1 Vp-p / 75  $\Omega$   
S VIDEO (luminance signal) ..... 1 Vp-p / 75  $\Omega$   
(chrominance signal) ..... 0.286 Vp-p / 75  $\Omega$

#### Notes

1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

#### Note:

Component and circuit are subject to modification to insure best operation under differing local conditions. This manual is based on General market(M) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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#### FM tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz  
Usable sensitivity (MONO)  
..... 1.6  $\mu$ V (75  $\Omega$ )/ 15.2 dBf (75 kHz DEV., SINAD 30 dB)  
50dB quieting sensitivity  
STEREO ..... 31.6  $\mu$ V (75  $\Omega$ )/ 41.2 dBf  
Total harmonic distortion (1 kHz)  
MONO ..... 0.6% (65 dBf input)  
STEREO ..... 0.7% (65 dBf input)  
Signal to noise ratio (1 kHz, 75 kHz DEV.)  
MONO ..... 75 dB (65 dBf input)  
STEREO ..... 68 dB (65 dBf input)  
Stereo separation (1 kHz) ..... 38 dB  
Selectivity ( $\pm 400$  kHz) ..... 50 dB  
Frequency response ..... 30 Hz ~ 15kHz, +0.5 dB, -3.0 dB

#### AM tuner section

Tuning frequency range  
10 kHz step ..... 530 kHz ~ 1,700 kHz  
Usable sensitivity (30% mod., S/N 20 dB)  
..... 16  $\mu$ V / (600  $\mu$ V/m)  
Signal to noise ratio (30% mod. 1 mV input) ..... 50 dB

#### GENERAL

Power consumption ..... 2.6 A  
AC outlet  
SWITCHED ..... 2 (total 150 W, 1.25 A max.)  
Dimensions ..... W : 440 mm (17-5/16")  
H : 144 mm (5-11/16")  
D : 400 mm (15-3/4")  
Weight (Net) ..... 8.6 kg (19.0 lb)

### KENWOOD IBÉRICA S.A.

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