

TWO-FOUR
RECEIVER

RECEIVER



KR-6340

INSTRUCTION MANUAL



 *the sound approach to quality*
KENWOOD

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To the New KR-6340 Amplifier Owner:

Because Kenwood Electronics, Inc., takes great pride in the long tradition of quality components the name Kenwood represents, your purchase of a Kenwood two-four receiver places you in a distinguished family of connoisseurs of superb high-fidelity sound reproduction.

The purpose of this manual is to acquaint you with the operating features of your new receiver. You will notice that in every detail of planning, engineering, styling, operating convenience, and adaptability, we have sought to anticipate your needs and desires.

We suggest that you read this manual carefully. Knowing how to set up your receiver to best advantage will enhance your listening pleasure right from the start. You will also become aware of the ease with which you can adjust your receiver to meet your special requirements.

Turn the pages and become acquainted with the exciting features of your new receiver, features that will remain new for endless hours of listening pleasure.

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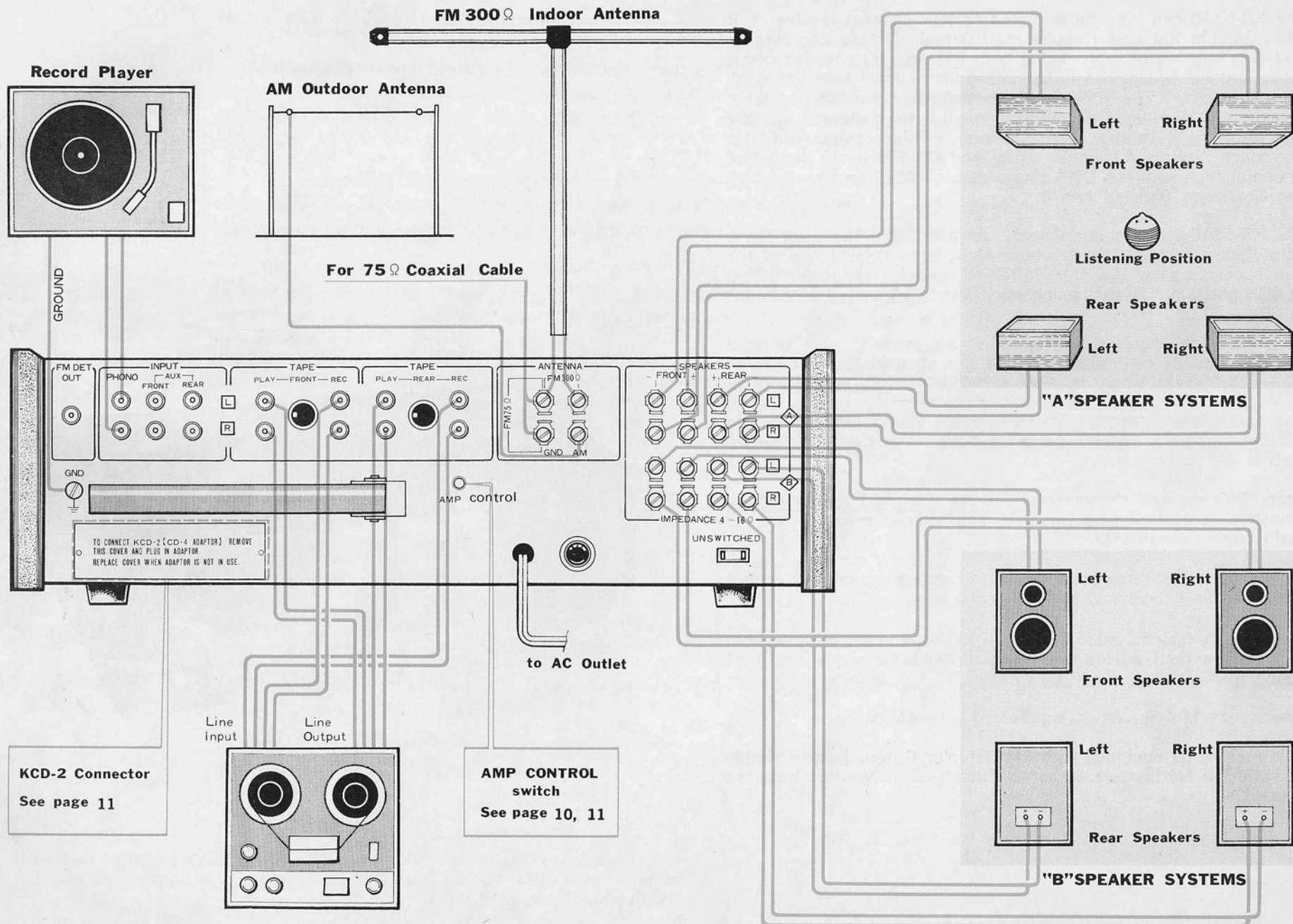
KR-6340 FEATURES

1. The KR-6340 can function as a two or four channel receiver. It has a built-in RM type (regular matrix) and SQ type decoders so that it is capable of reproducing both RM and SQ encoded discs, tapes and FM broadcasts in brilliant quadraphonic sound through four speakers. The RM decoder enhances conventional stereo programs by decoding the ambience found in most stereo programs and applying it to the rear speakers. This receiver can also reproduce discrete 4-channel tapes, and CD-4 discrete discs too, in conjunction with the CD-4 demodulator KCD-2 (optional) which can be simply plugged into it.
2. The KR-6340 has four amplifiers. As a 4-channel receiver these amplifiers are made to work separately, each driving one of the four speakers when the AMP CONTROL switch (rear panel) is set to 4CH position. Power per channel is then 15 watts into 8 ohms at 20 — 20,000 Hz.
As a 2-channel receiver, the amplifiers are made to work in pairs and are capable of driving 40 watts per channel into 8 ohms at 20 — 20,000 Hz, when the AMP CONTROL switch is set to 2CH.
3. The semi-complementary directly coupled power amplifiers have wideband and low distortion characteristics which ensure smooth, high fidelity amplification.
4. Tone, Balance and Volume controls are designed to permit fine adjustments of 4-channel sound to suit various program sources and listening conditions.
5. Two pairs of speakers connecting terminals are available to permit simultaneous listening at two different places.
6. A Double Switching Demodulator (DSD) is used in the MPX section. This DSD method is used to prevent carrier leaks and ensure best sound quality.
7. Interstation Muting circuit suppresses interstation noise.
8. This receiver is equipped with FM Detector Output jack to enable reception of FM discrete 4-channel broadcasts when this becomes a reality.



Do not connect the power cord to the AC outlet, before ascertaining that the position of AC Voltage Selector Switch on the rear panel corresponds with your line voltage. (see page 13.)

INTERCONNECTING DIAGRAM



CONNECTING YOUR KR-6340

SPEAKER CONNECTIONS

Connecting The "A" Speakers

Place the four speakers in your listening room as shown in the interconnecting diagram. Your listening position should be at the center of the four speakers, and facing the front speakers.

Speaker connections are made to the "A" SPEAKERS terminals as follows. The left-front speaker's (-) side should be connected to the L-FRONT (-) amp terminal. Its (+) side should be connected to the L-FRONT (+) terminal. The right-front, left-rear and right-rear speakers should be connected, respectively, to the R-FRONT, L-REAR and R-REAR terminals in the same manner, (+) to (+) and (-) to (-).

Any two-conductor wire such as an AC cord can be used as a speaker cord, but a "zip-cord" which is color coded is most convenient for making proper (+) to (+) and (-) to (-) connections. It is recommended that spade lugs are soldered to the tips of the speaker cord leads. When spade lugs are not used, be sure to twist together the strands of each individual lead to eliminate any possibility of short-circuits forming in the speaker connecting network.

If you intend to use only the "A" speakers for conventional 2-channel stereo, they should be positioned at the front. Be sure make proper (+) to (+) and (-) to (-) connections.

Connecting Additional Speaker Systems

When you connect additional speaker systems to the KR-6340, connections to the "B" SPEAKERS terminals should be made as described above. Observe polarity at all times when making speaker connections.

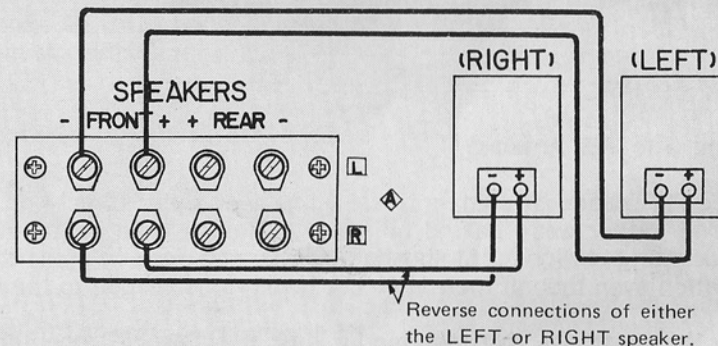
NOTE:

Any speaker with an impedance of 4 to 16 ohms can be used.

PHASING OF THE SPEAKERS

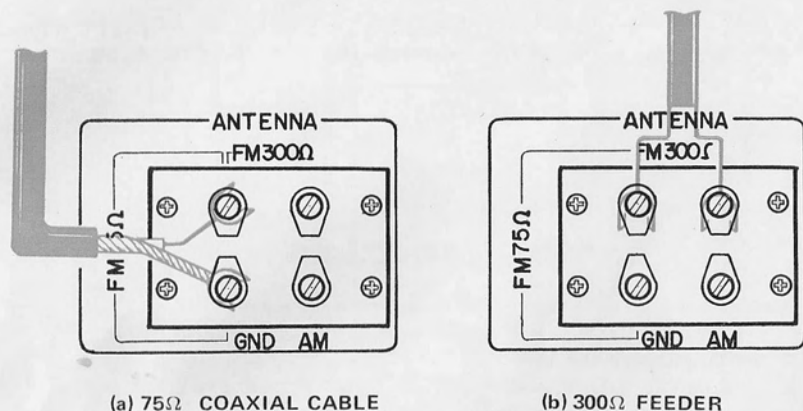
Speaker phasing can be determined in the following manner:

1. Set the SELECTOR switch to FM and press the A SPEAKERS button.
2. Set the MODE switch to MONO.
3. Tune in the desired station with the TUNING knob and adjust the VOLUME control to the desired listening level.
4. If the sound is coming directly from the front, the speakers are in phase. If the sound comes from both sides and there is a noticeable loss in low frequencies, the speakers are out of phase. In this case reverse the leads on one speaker.

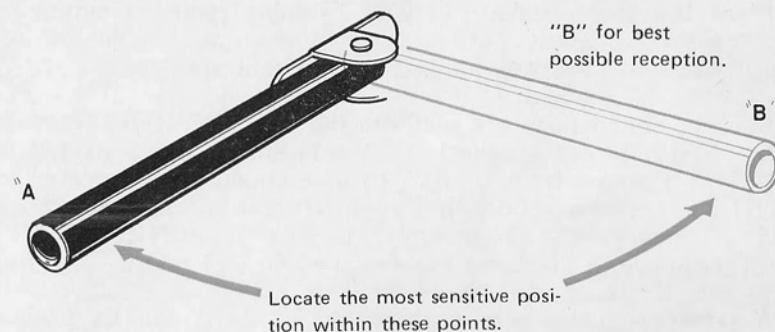


CONNECTING YOUR KR-6340

FM ANTENNA CONNECTIONS



AM ANTENNA SETTING



ANTENNA CONNECTIONS

Connecting The FM Antenna

Since FM broadcast signals travel along a straight, direct-line path, they become rather weak behind hills and buildings even in the vicinity of a broadcasting station. FM signals also become weak in areas distant from a station even though there may not be any obstruction to the direct path. The antenna should be installed in the most effective manner for best possible FM reception.

In areas near the FM station, where signals are strong, stretch the T-type indoor antenna that is supplied, to its maximum, and connect it to the FM 300 Ω ANTENNA terminals. This antenna should be carefully hung in the direction that provides best reception and clarity.

In areas subject to FM multipath interference such as locations behind hills or in the shadow of buildings, an outdoor FM antenna should be used. An outdoor FM antenna is also recommended for the reception of weak and distant FM stations. Connections should be made as

follows: 300 ohm twin leads should be connected to the FM 300 Ω terminals, and 75 ohm coaxial cable to the FM 75 Ω terminals.

Connecting The AM Antenna

The AM ferrite loopstick antenna built into your KR-6340 assures satisfactory reception of all local AM stations. Since the ferrite loopstick antenna has directional properties, you should adjust the antenna to the position which brings in the strongest signal.

In fringe areas or in locations surrounded by steel frame buildings where satisfactory reception cannot be obtained with the ferrite loopstick antenna, an AM outdoor antenna should be connected to the AM terminal.

NOTE:

AC cords, speaker leads, etc. which run adjacent to antenna may interfere with reception. Keep them away as far as possible from the AM ferrite loopstick antenna.

CONNECTING YOUR KR-6340

RECORD PLAYER CONNECTIONS

The two shielded audio cables from your stereo record player are normally terminated with phono plugs. Connect the left channel of the record player to the "L" PHONO input jack, and the right channel to the "R" PHONO input jack. If the record player has a grounding wire, connect it to this receiver's GND terminal to avoid hum.

TAPE RECORDER CONNECTIONS

Connecting Four-Channel Tape Recorder

Recording and playback of discrete 4-channel tapes can be made with this receiver by connecting shielded audio cables with phono plugs from a four-channel tape deck to the TAPE jacks of this receiver.

A 4-channel deck can be connected as follows for recording; front-left channel input of the deck connects to the FRONT-L REC jack of the KR-6340. Similarly, make the front-right, rear-left and rear-right connections between the corresponding inputs of the deck to the respective REC jack of the receiver.

A 4-channel tape recorder can be connected as follows for playback; front-left channel output of the tape recorder connects to the FRONT-L PLAY jack of the KR-6340. Similarly, make the front-right, rear-left and rear-right connections between the corresponding outputs of the deck to the respective PLAY jacks of the receiver.

Connecting 2-Channel Tape Recorder

If conventional 2-channel stereo tape recorders are used for both recording and playback, connections should be made to the TAPE FRONT jacks. The recording inputs of the tape recorder connect to the FRONT REC jacks of the KR-6340. Use shielded audio cables with phono plugs. The playback outputs of the tape recorder connect to the FRONT PLAY jacks of the KR-6340.

DIN Connector

If your tape recorder is equipped with a DIN type 5-pin connector, connect it to the DIN connector with a DIN connecting cord. A DIN connector enables recording and playback with this single cord.

When a DIN cord is used to connect the tape recorder, the PLAY and REC jacks should not be used. For highest fidelity recording and playback it is recommended that the tape recorder be connected to the PLAY and REC jacks instead of the DIN connector.

AUX (Auxiliary Inputs)

These inputs are suitable for connecting high level discrete 4-channel sources such as another 4-channel tape recorder, or a CD-4 demodulator other than the plug-in type CD-4 demodulator that is available as optional equipment with the KR-6340.

Use the FRONT AUX jacks when connecting 2-channel high level sources such as a tuner or another tape recorder.

FM DET OUT JACK

The FM detector circuit output is made available here so that this receiver will be ready for 4-channel broadcasting developments in the future. When FM discrete 4-channel broadcasting becomes a reality, a simple demodulator connected here will enable you to fully enjoy this coming development.

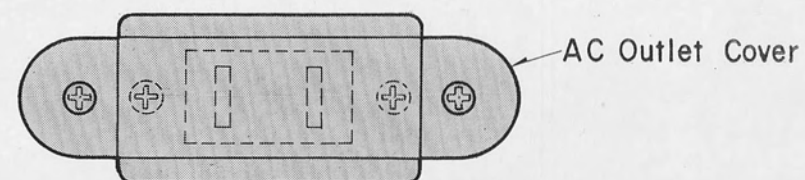
AC OUTLET

The AC outlet on the rear panel of the receiver may be used to supply power to other components such as a record player, tape recorder, etc.

UNSWITCHED outlet — This outlet is available at all times. (The maximum capacity is 200 watts.)

NOTE:

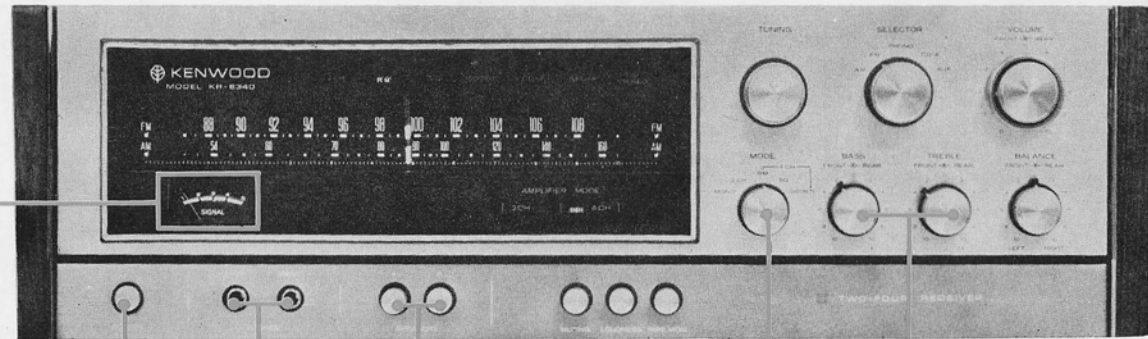
When AC convenience outlet is covered on your set as shown in this diagram, consult your dealer or serviceman when it is needed.



CONTROLS AND THEIR FUNCTIONS

SIGNAL meter

The meter indicates the intensity of the incoming FM or AM signal. Pinpoint tuning for any broadcast is indicated by maximum deflection. Simply tune for highest meter reading with the TUNING knob.



POWER switch

Push the POWER switch to turn the receiver on. Push it again to turn the receiver off.

PHONES jacks

2-Channel stereo: Plug stereo headphones into the FRONT jack for private listening and turn off the speakers by leaving the SPEAKERS buttons A and B in the extended "out" positions.

4-Channel Stereo: Insert 4-channel stereo headphone plugs into the FRONT jack for frontside and REAR jack for rear side reproductions. The A and B SPEAKERS buttons should be set to extended "out" positions.

SPEAKERS switches

Pressing these buttons turns the speakers on. When they are pushed again, all the speakers will turn off.

A: Pressing this button turns on the speakers connected to the A SPEAKERS terminals. Releasing this button (pressing it again) turns them off.

B: Pressing this button turns on the speakers connected to the B SPEAKERS terminals. Releasing this button turns them off.

MODE switch

Switch positions and functions are as follows:

MONO — Sound will be heard in monophonic mode and the signals become mixed as one and the same sound is heard from all four front and rear speakers.

2-CH — Conventional 2-channel stereo reproduction is obtained from the front speakers only. The "2CH" indicator will light up.

RM — This position is used to play "regular matrix" encoded sources through the regular matrix decoder in 4-channel sound. Also, it can be used to enhance conventional 2-channel sources by applying ambience to the rear speakers. The "RM" indicator will light up.

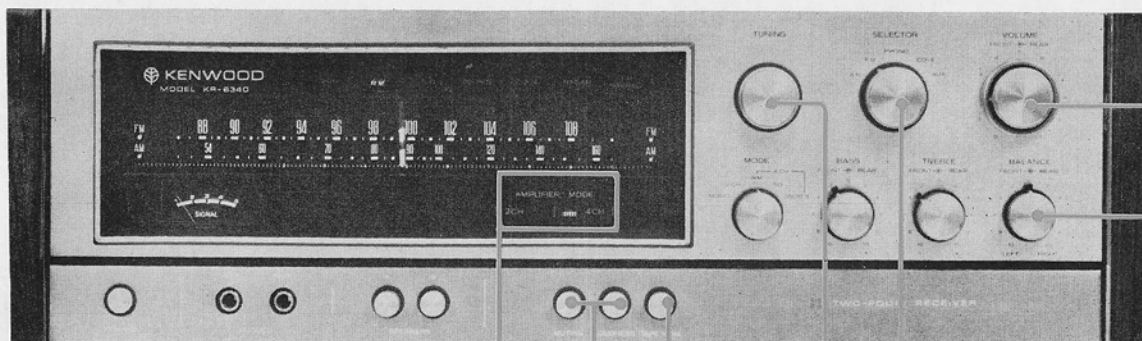
SQ — This position is used to play SQ encoded records, tapes or FM broadcasts through the SQ decoder in 4-channel sound. The "SQ" indicator will light up.

DISCRETE — This position is used for discrete 4-channel stereo reproduction. The "DISCRETE" indicator will light up.

TONE controls

The BASS and TREBLE controls are for adjusting the bass and treble tone. These are dual concentric friction type controls. The outer knob controls front side and the knob adjacent to the panel controls the rear side. By holding one knob firmly, the other may be rotated separately, thus providing independent tone level adjustment of the front or rear sides. Each knob controls both left and right channels equally. Turning the knobs clockwise increases bass or treble tone and counterclockwise decreases them. Tone is flat at center "0" position.

CONTROLS AND THEIR FUNCTIONS



VOLUME control

This is a dual concentric friction type knob which permits all four channel levels (front left and right, rear left and right) to be adjusted simultaneously. However, by holding one knob firmly, the other may be rotated separately. The large outer knob adjusts the volume levels of both rear-left and rear-right speakers simultaneously. The smaller center knob adjusts the levels of both front-left and front-right speakers simultaneously. Volume is minimum at full counter-clockwise position. Rotation clockwise increases volume level.

AMPLIFIER MODE indicator lamp

Either the 4CH or 2CH lamp lights up to indicate the setting of the AMP CONTROL switch on the rear panel which determines the mode of the amplifiers. The switch is preset at the factory for 4-channel amp operation so the 4CH pilot lamp should light up unless the switch has been reset for 2-channel amp operation.

FM MUTING switch

This switch silences interstation noise on the FM band, but it may also eliminate the signal of a weak and distant station along with the interstation noise. Therefore, set this switch to off (by pressing button release) when receiving a weak or distant station.

LOUDNESS control

The LOUDNESS control boosts bass and treble tones at low listening levels. Our ears have less sensitivity to low and high frequencies at low listening levels, and the LOUDNESS control compensates for this deficiency. This control should be switched off when listening at normal and high levels.

TAPE MON(ITOR) switch

The TAPE MON(ITOR) switch is used when operating a tape recorder for monitoring a recording or for tape reproduction. With the button pushed in, sound recorded on the tape is heard. When the button is released, the source signal is heard. The tape monitor switch should be kept switched off (by button release) unless monitoring or tape playback is performed.

TUNING knob

The TUNING knob selects the desired AM or FM station signal. Adjust it for maximum deflection of the SIGNAL meter as you listen to the sound output from the speakers.

SELECTOR switch

Switch positions and functions are as follows:
 AM — For AM reception.
 FM — For FM monaural and stereo reception. Automatic switching is performed for FM monaural and stereo sources. When an FM stereo broadcast is tuned in, the "FM STEREO" indicator lights up.
 PHONO — In this position the record player is available if one is connected to the PHONO input jacks on the rear panel.
 CD-4 — Use this position for reproducing CD-4 discrete disc records, in conjunction with a CD-4 demodulator "KCD-2" (optional equipment — see under "Operating Instructions"). The "CD-4" indicator will light up. "RADAR" lights up to indicate actual CD-4 discrete disc reproduction in progress.
 AUX — Selects source connected to the AUX input jacks.

BALANCE controls

This is a dual concentric friction type control. By holding one knob firmly, the other may be rotated separately, thus providing independent balance level adjustment of the front or rear sides.
 When BALANCE is set at "0" position, both left and right speakers operate at the same power. When it is turned to the left, the left channel is accentuated. When turned to the right, the right channel is accentuated.

OPERATING INSTRUCTIONS

AMP CONTROL SWITCH

The KR-6340 is equipped with an AMP CONTROL switch located on its rear panel to control the operation of its four independent amplifiers. This switch is preset at the factory to the 4CH position for four channel operation with all four amplifiers operating independently to feed the front left, front right, rear left and rear right speakers. This is indicated by the illumination of the "4CH" lamp on the front panel when the receiver is turned on.

The following instructions indicated by asterisks (*) refer to operation when the Amp Control Switch is set to 4CH position.

* FM RECEPTION

1. Set the SELECTOR switch to FM position.
2. Push the SPEAKERS buttons in accordance with system arrangement.
3. Set the MODE switch to 2CH ("2CH" indicator lights up) and the TAPE MON switch to off (by button release). Use Muting switch only when it is necessary or desired to suppress interstation noise. In such a case, push it in. This Muting switch, however, should be left off in extended position if the incoming signal is weak.
4. Tune in the desired station with the TUNING knob. Tune for maximum deflection of the SIGNAL meter. This indicates proper tuning.
5. The "FM STEREO" lamp lights up automatically when an FM stereo station is tuned in. Set the MODE switch to MONO if the received FM stereo signal is weak in relation to noise level.
6. Adjust the VOLUME, BASS, TREBLE, and BALANCE controls.
7. Set the MODE switch to RM for regular matrix encoded incoming FM broadcasts ("RM" indicator lights up), and to SQ for SQ encoded FM broadcasts. ("SQ" indicator lights up).

* AM RECEPTION

1. Set the SELECTOR switch to AM.
2. Set the MODE switch to 2CH ("2CH" indicator lights up) and the

TAPE MON to off (by button release).

3. Tune in the desired station with the TUNING knob. Fine tune for maximum deflection of the SIGNAL meter.
4. Adjust the VOLUME control as desired.
5. Adjust the BASS, TREBLE and BALANCE controls as desired.

* PHONO OPERATION

1. Set the SELECTOR switch to PHONO.
2. Set the TAPE MON switch to off (by button release). If you wish to use a conventional stereophonic disc, set the MODE switch to 2CH ("2CH" indicator lights up). You can get quadrasonic sound from a conventional stereo disc through the regular matrix circuit, by setting the MODE switch to RM. Set the MODE switch to SQ for reproduction of SQ discs and to RM for playback of regular matrix encoded discs.
3. Adjust the VOLUME, BASS, TREBLE, LOUDNESS and BALANCE controls as desired.

* TAPE RECORDER OPERATION

Tape Monitoring

If you wish to use the KR-6340 with 3-head type tape recorders, you can check the sound quality of the recording that is being made by momentarily comparing the original sound with recorded signals as follows.

Push in the TAPE MON switch ("in" position) to monitor the recorded signal. Release the TAPE MON switch ("out" position) to reproduce the source signal before it is recorded.

Recording

1. Set the SELECTOR switch to the desired program source.
2. Commence recording. To monitor the recording, push in the TAPE MON switch ("in" position).

OPERATING INSTRUCTIONS

- Recording level should be adjusted with the volume control of your tape recorder.
- Recording is not affected by the VOLUME, BASS, TREBLE, BALANCE and LOUDNESS controls of the receiver.

Playback

- The SELECTOR switch can be at any position.
- Push in the TAPE MON button ("in" position).
- For playback of discrete 4 channel tapes, the MODE switch should be set to DISCRETE position ("DISCRETE" indicator lights up). For conventional 2 channel tape playback, set the MODE to 2 CH. If you wish to get 4 channel sound from conventional 2 channel stereo sources, set the MODE switch to RM position. Set the MODE switch to SQ for SQ encoded tape playbacks and to RM for regular matrix encoded tape reproductions.
- Adjust the volume and tone quality.

* REPRODUCTION OF CD-4 DISCS

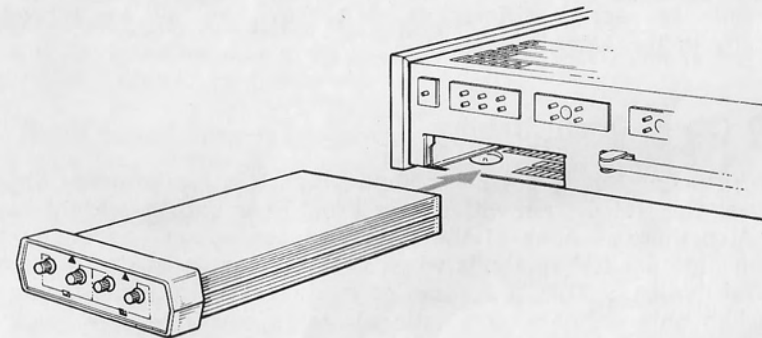
Reproduction of CD-4 discs is possible with this receiver in conjunction with the KCD-2 (optional equipment) which can be easily plugged into the receiver's rear panel. The plug-in connector is located under a covering lid at the lower left corner of the receiver's rear which can be taken off by removing two screws. Position the KCD-2 with the arrowhead mark on the front panel pointing up when making the plug-in connection. Remember that the player must have a suitable CD-4 cartridge, and it is recommended that low capacity connecting cables be used between it and the receiver.

Operating procedure is as follows:

- Set the SPEAKERS buttons as desired. Release the TAPE MON switch to extended "out" position.
- Set the SELECTOR switch of the KR-6340 to CD-4 position ("CD-4" indicator lights up however, this indicator will not light unless KCD-2 is inserted).
- Set the MODE switch to DISCRETE position. ("DISCRETE" in-

dicator lights up).

- Play the test record supplied with the KCD-2 in accordance with the directions outlined in the KCD-2 Operating Manual. The "RADAR" indicator will light up when the test record is played to show that CD-4 discrete disc reproduction is in progress.
- After making adjustments, other CD-4 discrete discs may be played.
- Adjust VOLUME and TONE as desired.



AMP CONTROL SWITCH SET TO 2CH

Switching the AMP CONTROL switch to the 2CH side lines up the two amplifiers on the left side to work as one, and the two amplifiers on the right side also to work as one. This more than doubles the stereo two-channel power output. (15 watts per channel into 8 ohms at 20 — 20,000 Hz in 4-channel mode; 40 watts per channel in 2-channel mode). This is indicated by the illumination of the 2CH indicator on the front panel. When the amplifiers are worked in this manner, the MODE switch should be set to either 2CH or MONO as desired.

NOTE:

Always leave the power switch off when resetting the AMP CONTROL switch. Otherwise it will activate the protection circuit to momentarily cut off sound. This does not indicate damage, however.

RM/SQ/CD-4 INTRODUCTION

Three types of 4-channel systems are explained briefly as follows:

1. RM (Regular Matrix) System

The RM regular matrix system produces four-channel sound in two ways; ie, from conventional 2-channel sources through a synthesizing action as in the so-called 2-2-4 system, and from 2-channel material (originally encoded from 4 channel discrete sources) through a decoding action back to 4-channels as in a so-called 4-2-4 system. In both, 4-channel sound is produced from 2-channel L and R signals by adding to, or subtracting from them.

Sansui, Scheiber, E-V, Dynaco, etc. utilize the RM system. They have some respective differences, but they can all be reproduced practically in the same manner.

2. SQ (Stereo Quad) System

In principle this is a 4-2-4 system which is a fundamental improvement over the RM system with better Front-Rear and Left Right separation. Also there is none of the unnaturalness sometimes encountered with conventional RM methods when reproduction is made in stereo or monaural modes. This is a superior method also for reproducing 4CH discs when only ordinary, conventional stereo cartridges are used.

3. CD-4 (Compatible Discrete 4-channel) System

CD-4 discs contain the main stereo signals including the L and R channels to which are added the Front-Rear characteristics. This is mixed with a difference signal that is FM modulated on a 30 kHz carrier when the stereo record is cut. Therefore, a special CD-4 cartridge capable of reproducing high frequency ranges up to 45 kHz becomes necessary for CD-4 reproduction of CD-4 discs. Moreover, a special CD-4 low capacity cable is necessary for connection between the cartridge and the demodulator.

Thus, special attention must be given to the use of a CD-4 cartridge and cable, but this will enable a perfect, discrete 4-channel reproduction.



MAINTENANCE

CONCERNING TRANSISTORS

Transistors differ fundamentally from radio vacuum tubes and require special attention to ensure their full performance capabilities. Given proper care, transistors will provide years of practically trouble-free performance.

- (a) Avoid locations subject to direct sunlight.
- (b) Avoid high or low temperature extremes.
- (c) Keep the receiver away from heat radiating sources.

PROTECTION CIRCUIT

The newly developed protection circuit is completely effective and prevents damage which may be caused by short-circuiting at the speaker outputs or the electrical overloading point. When a short-circuit occurs, this protection circuit will function automatically to protect the power output transistors. The program sound will be heard off and on intermittently about every four seconds. If this occurs, there is no fear of damage to the power output transistors. Just switch off the supply line and check the speaker connections.

ACOUSTIC FEEDBACK

Occasionally a disturbing howling sound caused by acoustic feedback, may be heard. This is generally caused by the relative positions of the turntable and speaker enclosures. The sound pressure radiated from the speaker box surrounds and vibrates the turntable. This vibration is picked up by the cartridge, sent to the amplifier as an electrical signal, and returned to the speaker. This again causes the speakers to radiate vibration which induces sympathetic vibrations in the turntable and cartridge. Sympathetic vibrations are reinforced with each repeating cycle and result in an undesirable sound called oscillation or "howling". To prevent it, keep your turntable away from your speakers. Also mounting your turntable on shock-absorbing pads may help.

CLEANING PRECAUTIONS

Do not use alcohol, thinner or gasoline when cleaning the receiver surface. Use a silicon cloth or a soft dry cloth.

AC VOLTAGE SELECTION AND POWER FUSE

The KR-6340 operates on 110 - 120 volt AC or 220 - 240 volt AC. The AC Voltage Selector Switch on the rear panel is set to the voltage that prevails in the area to which the receivers are shipped. Before operating this receiver, make sure that the position of the AC Voltage Selector Switch matches your line voltage. If not, it must be changed to the proper setting.

To change, first turn the receiver off, then remove the stopper plate and slide the AC Voltage Switch to the opposite side. Then reattach the stopper plate to the other side.

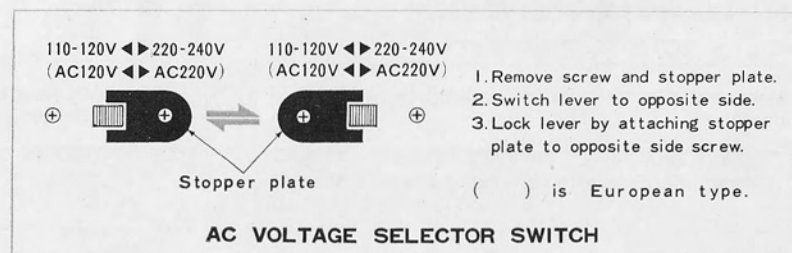
When the position of the AC Voltage Selector Switch is changed, it is also necessary to change the power fuse. For 110 - 120 volt operation a 4 ampere fuse should be used. For 220 - 240 volt operation a 2 ampere fuse should be used.

If the power fuse fails, remove blown fuse and replace with the same type fuse of the same capacity. Any trouble in the power supply circuit will cause the fuse to blow again. In such a case, consult a qualified serviceman.

When you replace the fuse, turn the fuse holder in the direction of the arrow using a Phillips screw driver. In some districts, the set will be provided with another type of fuse holder, which allows easy replacement of the fuse without using the Phillips screw driver.

NOTES:

1. Always disconnect power supply before replacing a fuse.
2. Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC Voltage Selector Switch.



TROUBLE SHOOTING

In initially installing this receiver, improper connections may result in one of the following indications of trouble. Their possible causes and corrective measures are listed below to facilitate installation.

INDICATIONS

| Occurs Only During AM Reception | Cause | Correction |
|---|---|---|
| Continuous low frequency buzz. Most noticeable at night on weak signal stations. | Interference from electrical appliances or atmospherics. | Erecting a 10 meter outdoor antenna and securing good ground conditions should reduce interference considerably. Complete elimination is difficult. |
| Continuous high frequency whine which increases at night. | TV interference. 10 kHz beat interference from adjacent AM station. | Turn TV off. (Neighboring TV set may also be cause.) Impossible to eliminate from receiver side. This is one disadvantage of the AM broadcast system. Use High Filter to cut off high frequency interference. |
| Intermittent buzzing or sharp crackling noise. | Lightning interference. Interference from fluorescent lamps. AC Plug Connection. | Occurs when lamps are on and cannot be helped. Try reversing AC plug connections. Occurs only on certain stations due to high voltage power line and cannot be helped in many areas. |
| Interference from amateur stations. | Called BCI, this interference results from neighboring amateur stations. (Also occurs on FM) | Consult interfering station operator or authorities concerned. |
| Occurs Only During FM Reception | Cause | Correction |
| Continuous hiss or buzzing interference with broadcast. Becomes louder during stereo. | Incoming signal too weak at ANT terminal. | Erect outdoor FM antenna if only indoor T-type is used. A 5 or 7 element antenna is necessary if you are located at a considerable distance from the broadcasting station. |
| Occasional sharp buzzing or crackling noise. | Automobile ignition noise. More noticeable on weak signals. | Erect outdoor FM antenna as far away from roads as practicable. |
| Weak right channel response when listening to LEFT only test FM Stereo broadcast. | Called crosstalk, a very slight response is normal. | If leakage is less than one tenth, it is not a sign of trouble. It cannot be reduced to zero. |
| FM Automatic Circuit fails to respond to stereo broadcast. | Incoming signal is exceptionally weak. | Erect an FM outdoor antenna. |

TROUBLE SHOOTING

| During AM, FM or Record Playing | Cause | Correction |
|--|---|---|
| No pilot lamp indication, no sound although AC is switched ON. | Poor AC plug connection. Blown fuse. | Check plug contact. Replace fuse. If it blows again, trouble must be corrected. |
| No sound from LEFT and RIGHT, FRONT and REAR. | Speaker cords disconnected. SPEAKERS buttons OFF (button release). VOLUME Control at 0 (extreme left). TAPE MON switch at ON position (button push). | Check connections from amp. output to speakers. Push IN the speaker button which activates the speaker systems desired. Set to appropriate volume level. Always set to OFF except when using tape recorder. |
| Sound only from one side. | Poor speaker cord connections. BALANCE control set to one extreme or other. | Check amp. output and speaker connections. Adjust BALANCE control. |
| No sound can be heard from the FRONT side for 4-channel reproduction. | The 2CH source is connected to the REAR terminals of the AUX or TAPE. | Change the connection to the FRONT terminals of the AUX or TAPE. |
| The rear sound level is lowered when the MODE switch is set to RM. | The program source is monaural. | For 4-channel stereo reproduction through the regular matrix circuit, use the 2-channel program source. |
| Noise when AC is switched ON or when volume is adjusted immediately after. | Insufficient circuit warmup. | Allow 5 - 6 seconds interval after switching AC ON, before manipulating volume control. |
| Unbalance results when volume is lowered. | LEFT RIGHT resistor values unbalanced. | Adjust BALANCE control. |
| Intermittent speaker response at 4 seconds intervals. | Protection Circuit indication of short circuit in the output. | Check speaker cord connections. |
| Difference in volume level of radio and phono. | Difference in received signal and phono output levels. | Set to appropriate volume level. |
| During Phono Record Playing Only | Cause | Correction |
| No sound from LEFT and RIGHT, or sound only from one side. | Player output disconnected. | See that player output cord is firmly plugged into Amp. input. |
| Loud hum drowns out sound. | Poor player output cord prong connections. | See that player output cord is firmly plugged into Amp. input. |
| Sound audible but background hum occurs. | Player output cord picking up hum from AC cord. Player not grounded. | Keep player output cord away from AC cords. Choose cord paths which keep hum at a minimum. Twist LEFT RIGHT player output cords together. Reverse player AC plug connections. Connect player ground wire to GND terminal. |
| Sound audible but continuous background buzz interferes. | TV signal picked up by Player output cord. Frequently occurs near TV transmitting antenna. | Route player cord so that buzz is minimized. |
| Howling noise occurs when volume is raised or bass response is increased. | Speaker vibration induce feedback in pickup. | Increase distance between player and speakers. Choose speaker locations carefully. Remember, loose flooring induces howling. |

KR-6340 SPECIFICATIONS

FM TUNER SECTION

| | |
|--------------------------------|--|
| Usable Sensitivity (IHF) | : 2.0 μ V. |
| Frequency Response | : 20 Hz — 15,000 Hz \pm 1.2 dB. |
| Harmonic Distortion | : 0.5% Mono (at 400 Hz 100% modulation). |
| | : 0.8% Stereo (at 400 Hz 100% modulation). |
| Signal to Noise Ratio | : 63 dB at 1 mV input. |
| Image Rejection | : 60 dB. |
| Selectivity (IHF ALT. channel) | : 50 dB. |
| IF Rejection | : 90 dB. |
| Spurious Signal Rejection | : 90 dB. |
| AM Suppression | : 60 dB. |
| Capture Ratio | : 3.0 dB. |
| Stereo Separation | : 40 dB at 1,000 Hz. |
| | : 20 dB at 10,000 Hz. |
| Sub Carrier Suppression | : 45 dB. |
| Antenna Impedance | : 300 ohms Balanced & 75 ohms Unbalanced. |

AM TUNER SECTION

| | |
|--------------------------|---|
| Usable Sensitivity (IHF) | : 25 μ V. |
| Signal To Noise Ratio | : 45 dB at 1 mV input. |
| Image Rejection | : 45 dB. |
| Selectivity (IHF) | : 30 dB. |
| IF Rejection | : 35 dB. |
| Antenna | : Built-in ferrite bar antenna, External antenna terminals. |

MAIN-AMPLIFIER SECTION

| | 4 CHANNEL | 2 CHANNEL |
|-----------------------------------|--|----------------|
| RMS Power Output | | |
| Full channel driven | | |
| into 8 ohms | | |
| at 20 Hz — 20,000 Hz | : 15 x 4 watts | : 40 x 2 watts |
| into 8 ohms at 1,000 Hz | : 20 x 4 watts | : 50 x 2 watts |
| into 4 ohms at 1,000 Hz | : 23 x 4 watts | : 47 x 2 watts |
| Dynamic Power Output | | |
| into 8 ohms | : 120 watts | : 170 watts |
| into 4 ohms | : 152 watts | |
| Total Harmonic Distortion | | |
| | : 0.8% at rated power into 8 ohms. | |
| | : 0.3% at 1/2 rated power into 8 ohms at 1,000 Hz. | |
| Intermodulation Distortion | | |
| (60 Hz : 7 kHz = 4 : 1) | : 0.8% at rated power into 8 ohms. | |
| | : 0.3% at 1/2 rated power into 8 ohms. | |
| Power Bandwidth | : 20 Hz — 40,000 Hz. | |
| Damping Factor | : 20 at 8 ohms (4 channel operation). | |
| Speaker Impedance | : Accept 4 ohms to 16 ohms. | |

PRE-AMPLIFIER SECTION

| | |
|--|------------------------------------|
| Input Sensitivity and Impedance | |
| Phono | : 1.5 mV, 100 k ohms. |
| AUX | : 150 mV, 50 K ohms. |
| Tape Play | : 150 mV, 50 K ohms. |
| Maximum Input Voltage (rms) | |
| Phono | : 100 mV, T.H.D. 0.8% at 1,000 Hz. |
| Signal to Noise Ratio | |
| Phono | : 60 dB. |
| AUX | : 75 dB. |
| Tape Play | : 75 dB. |
| Output Voltage and Impedance | |
| Tape Rec. (Pin) | : 150 mV, 100 ohms. |
| (Din connector) | : 40 mV. |
| Frequency Response | |
| Phono | : RIAA Standard curve \pm 1 dB. |
| Tuner, AUX, Tape Play | : 20 Hz — 20,000 Hz \pm 1 dB. |
| Tone Controls | |
| Bass | : \pm 10 dB at 100 Hz. |
| Treble | : \pm 10 dB at 10,000 Hz. |
| Loudness Control (- 30 dB) | : +10 dB at 100 Hz. |
| | : + 5 dB at 10,000 Hz. |

GENERAL

| | |
|--------------------------|--|
| Switches | |
| Speaker Selector | : A, B Push Switch. |
| Input Selector | : AM, FM, PHONO, CD-4, AUX. |
| Mode | : MONO, 2ch, RM, SQ, Discrete. |
| Tape Monitor | : Push Switch. |
| Others | : Loudness, AMP Control, FM Muting, Power. |
| AC Outlet | : Unswitched 1. |
| Power Consumption | : 320 watts at full power. |
| | : 35 watts at no signal. |
| Dimensions | : W 21-27/32" (555mm), |
| | H 6-5/16" (160mm), |
| | D 14-3/16" (360mm). |
| Weight | : 33 lbs. (15 kg). |

NOTES

TWO-FOUR
RECEIVER

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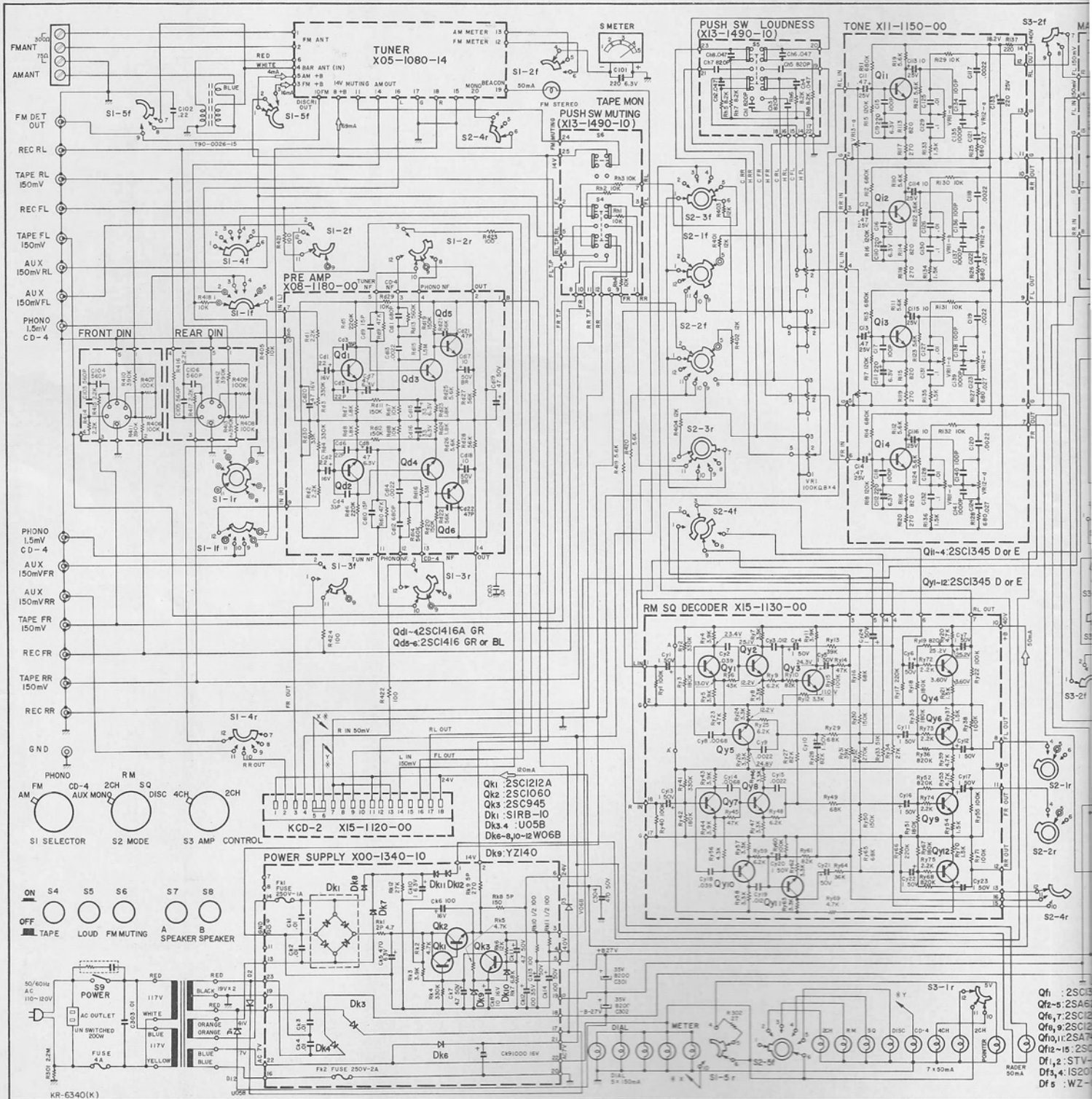
KR-6340 Serial No. _____

Owner _____

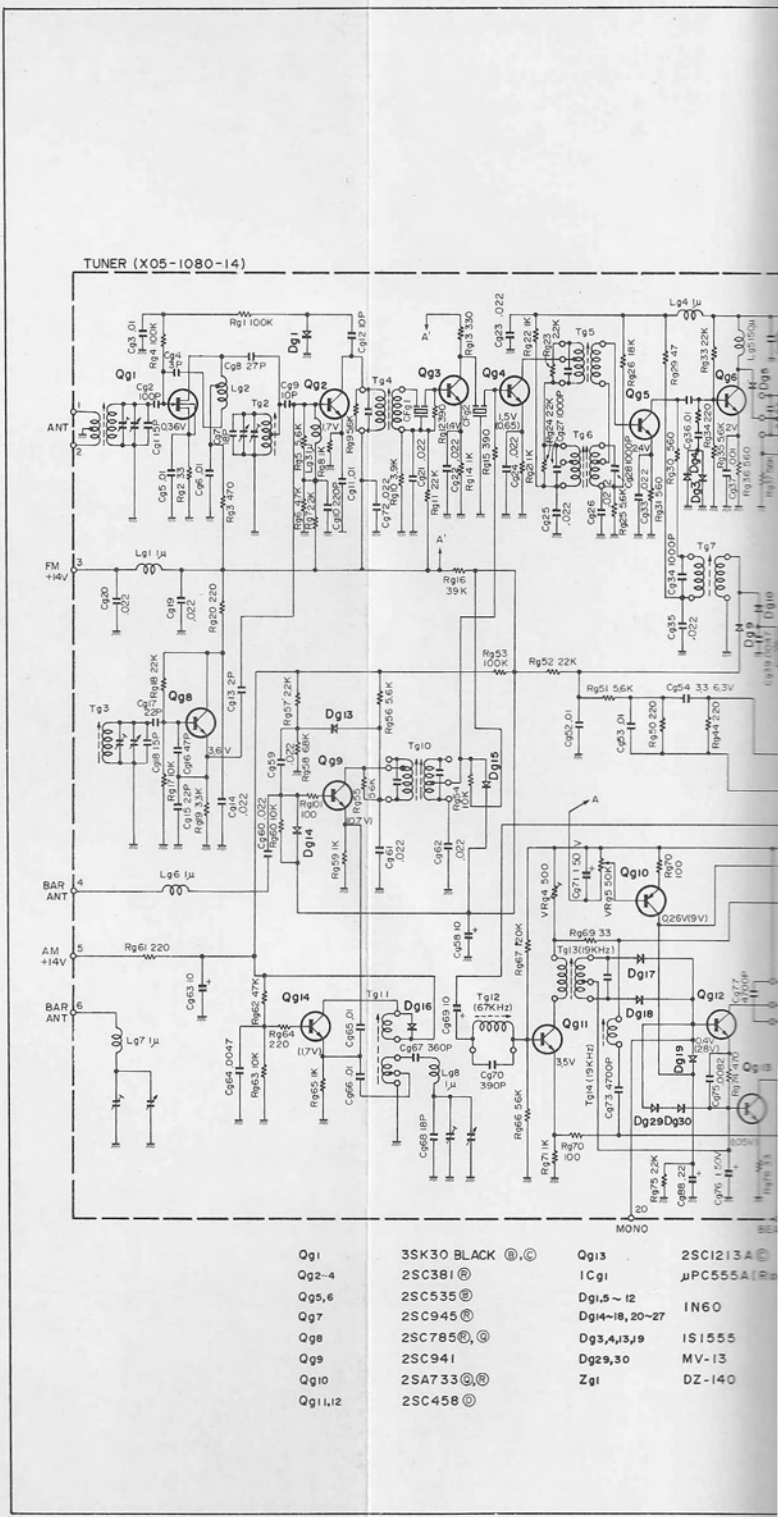
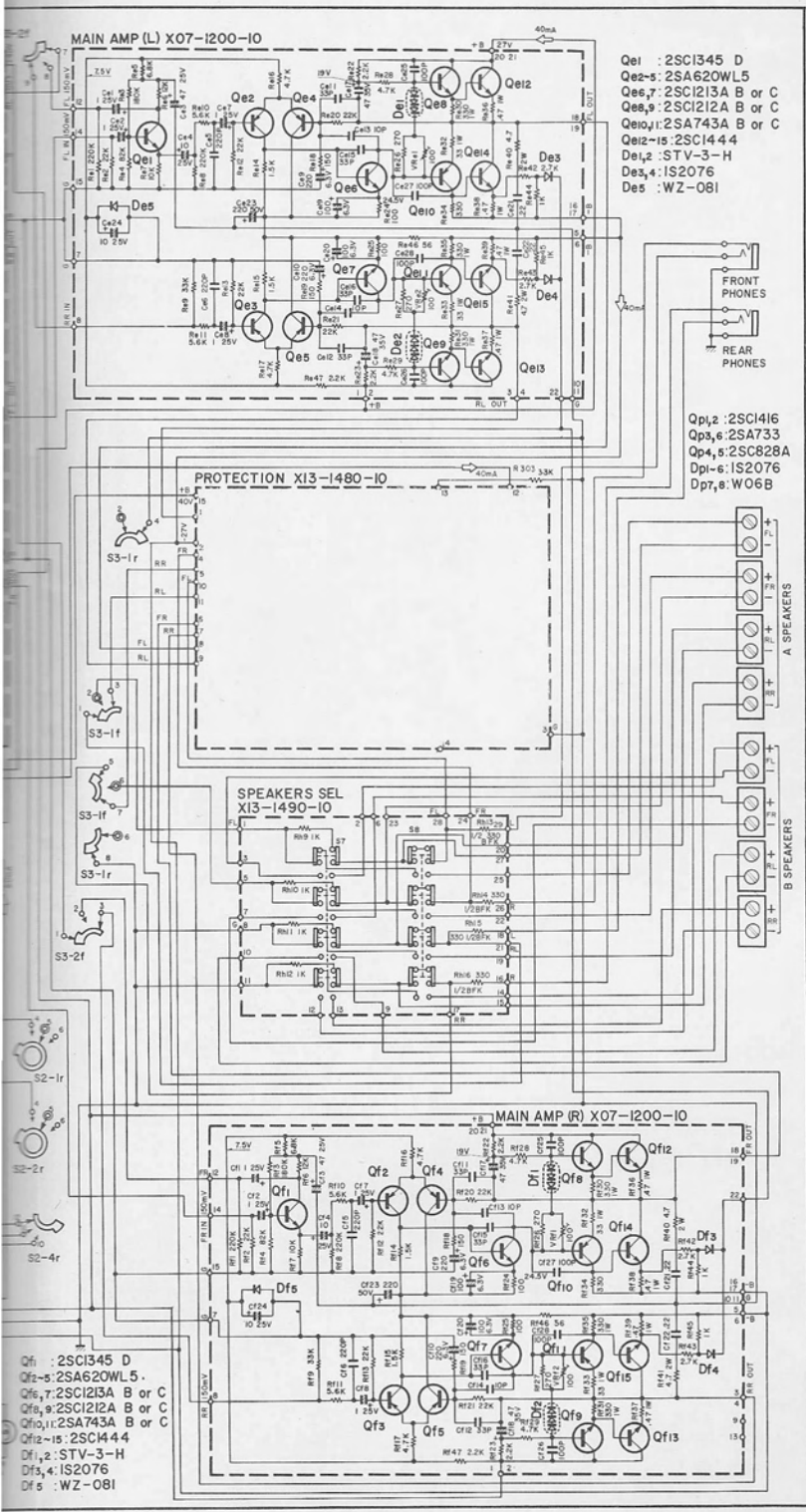


TRIO

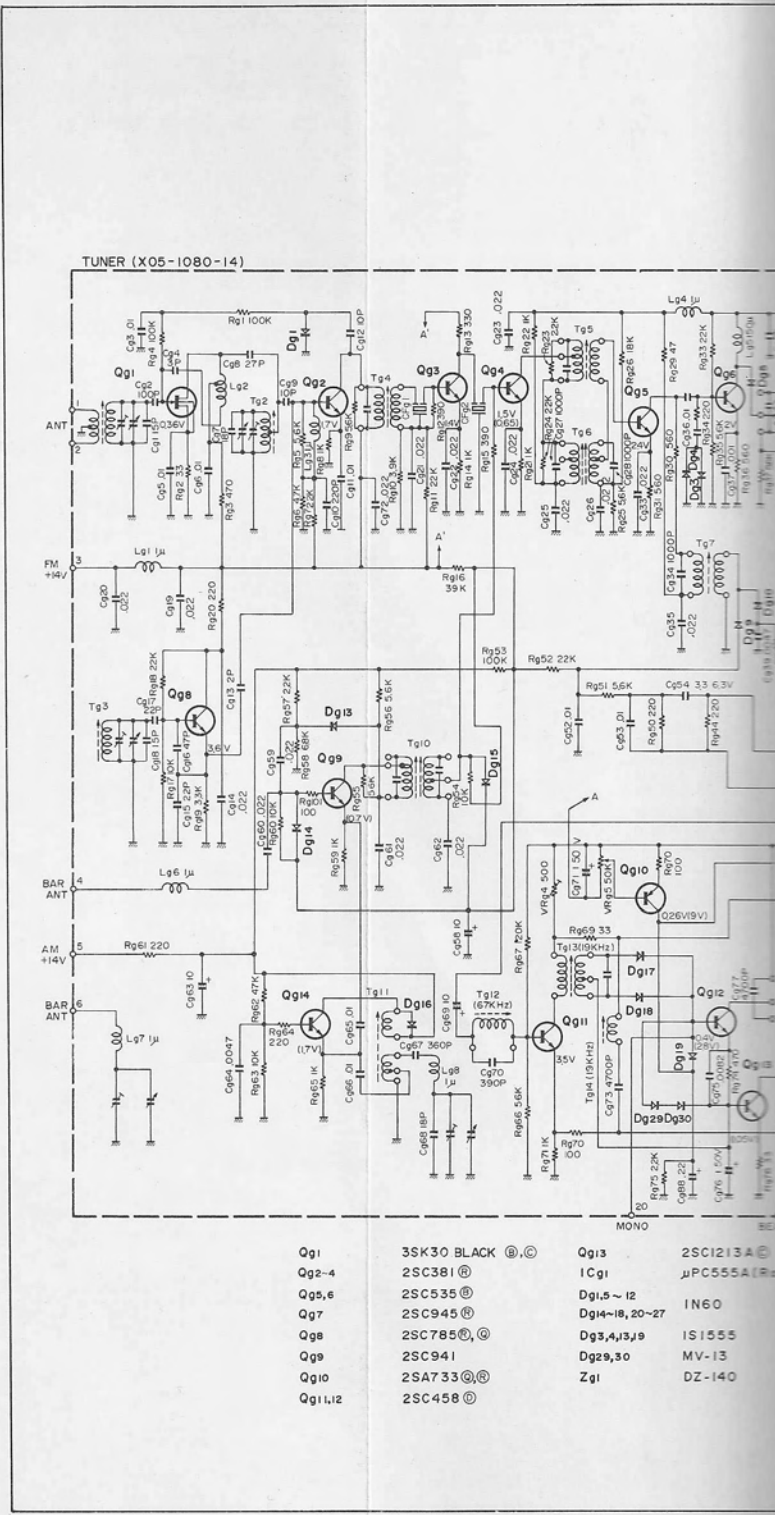
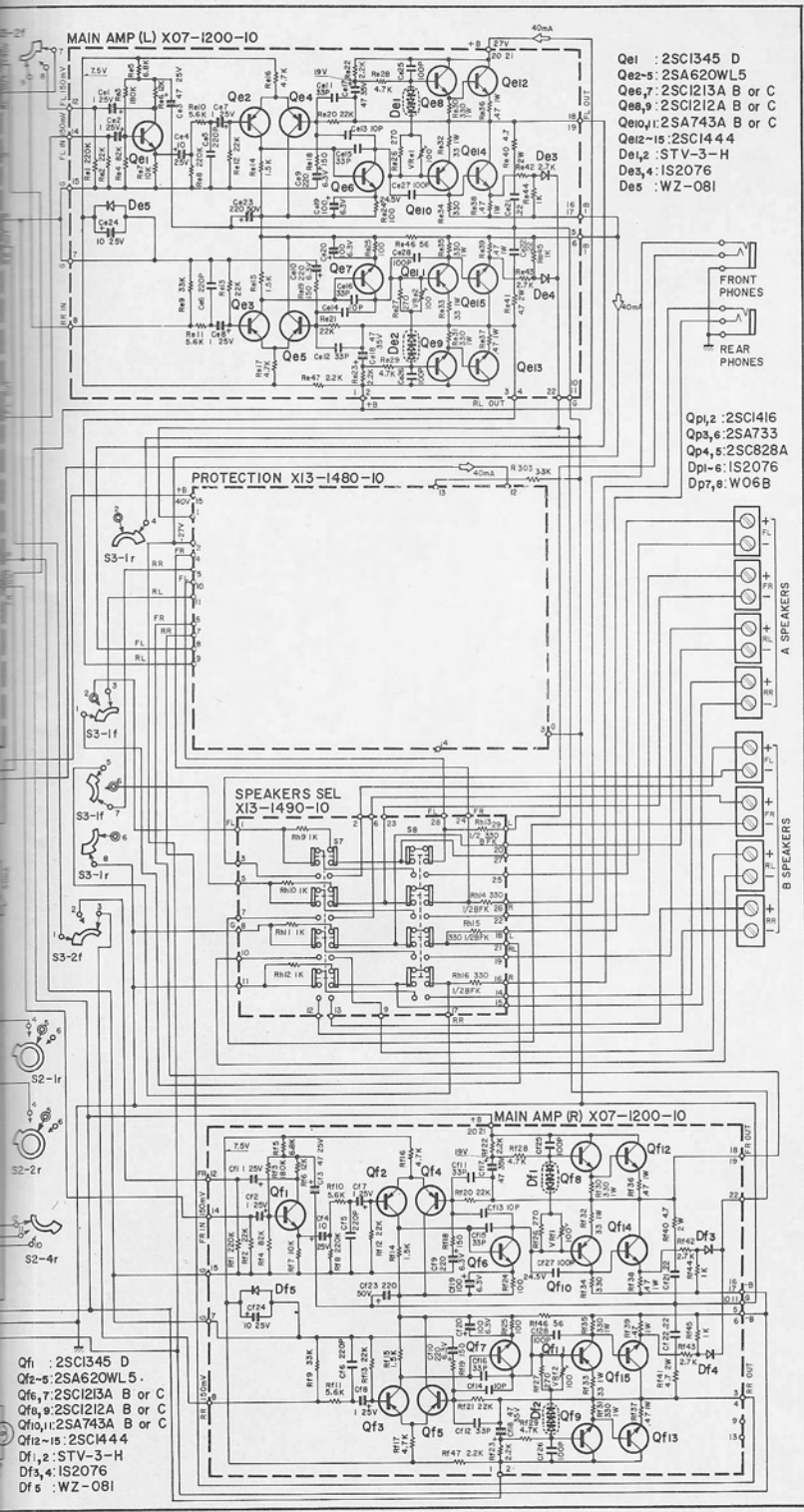
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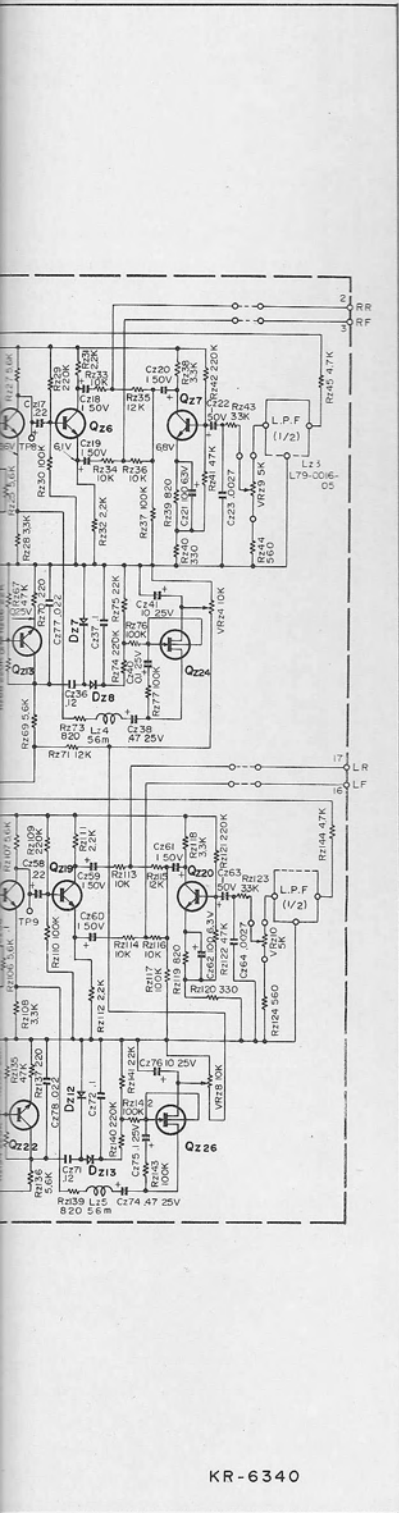


KR-6340 SCHEMATIC DIAG



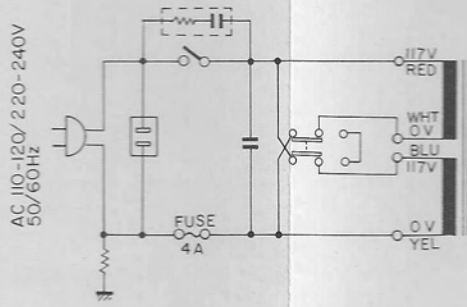
KR-6340 SCHEMATIC DIAG



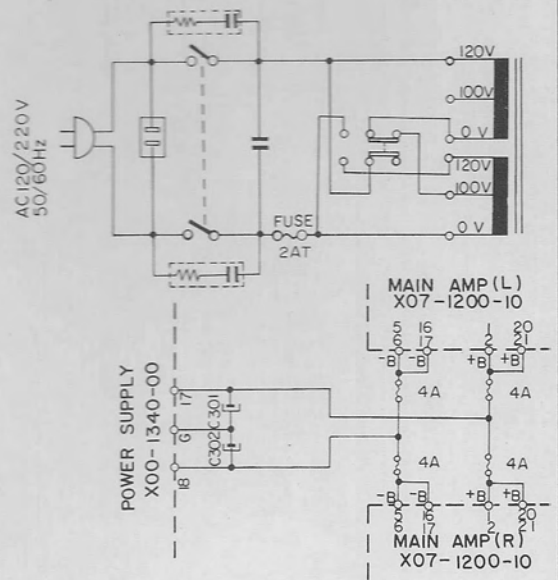


REVISED CIRCUITS

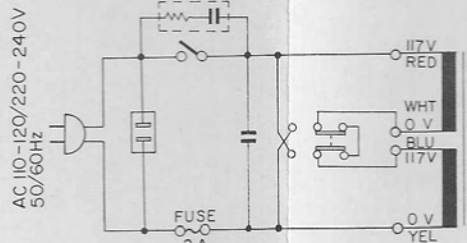
■ For 110-120/220-240V sets (1).



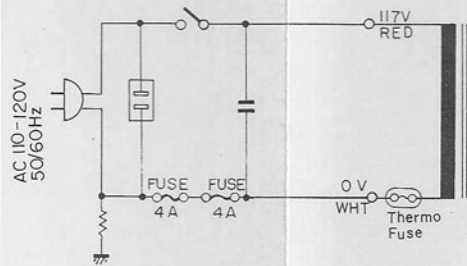
■ For the sets sold in Europe except England.



■ For 110-120/220-240V sets (2).



■ For the sets sold in Canada.

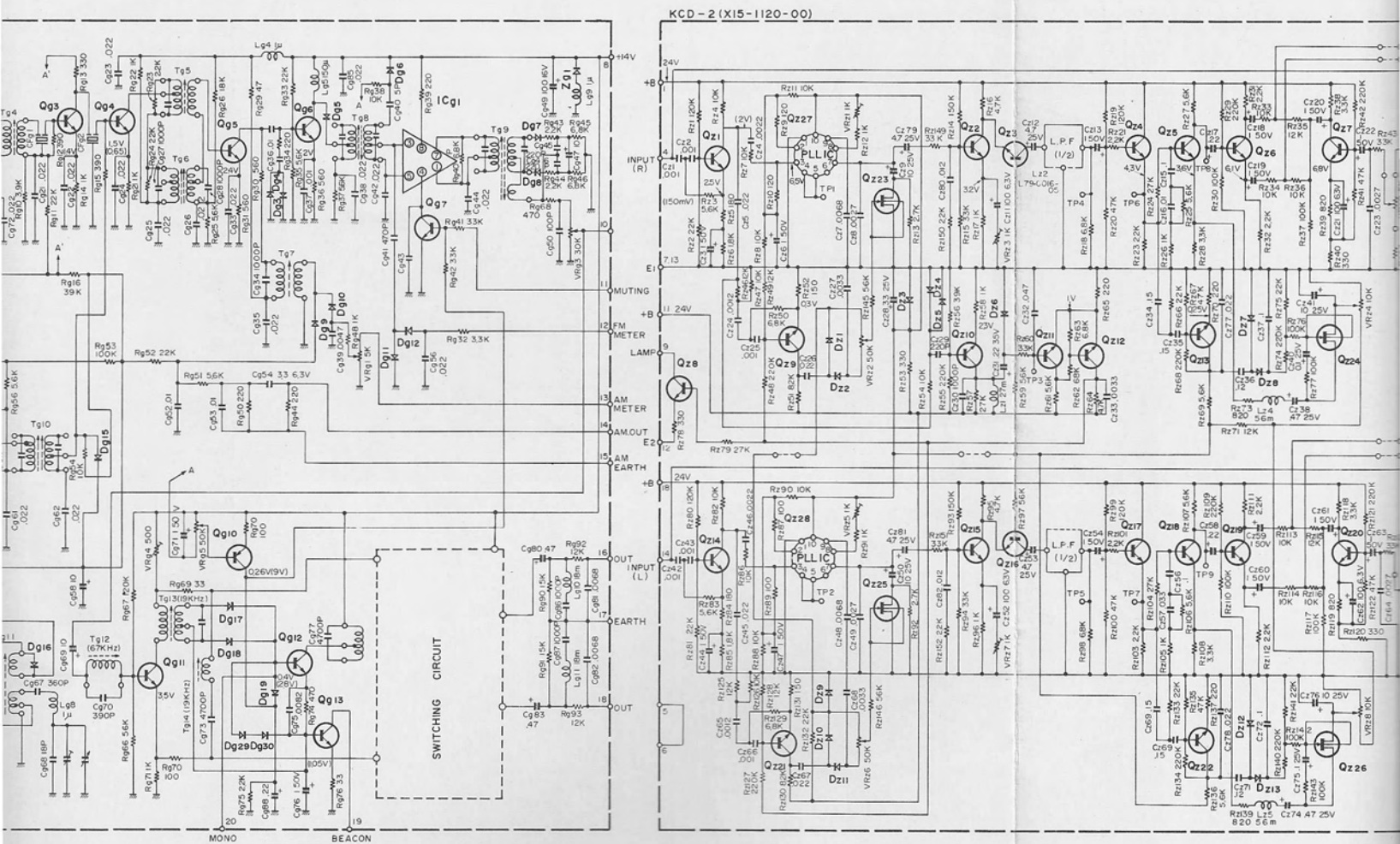


KR-6340

model in accordance with technical developments.

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CHEMATIC DIAGRAM



- 3SK30 BLACK (B,C)
- 2SC381 (E)
- 2SC535 (E)
- 2SC945 (E)
- 2SC785 (E,C)
- 2SC941
- 2SA733 (E,C)
- 2SC458 (E)
- Qg13 2SC1213A (C)
- ICg1 μPC555A (Ror B)
- Dg1,5 ~ 12
- Dg14-18, 20-27 IN60
- Dg3,4,13,19 IS1555
- Dg29,30 MV-13
- Zg1 DZ-140

- Q21-7,14-20 2SC1335 (E) or (F)
- Q28 2SC828A (S)
- Q29-13,21,22 2SC828A (C) or (E)
- Q225,25 3SK30 (A)
- Q224,26 3SK30 (A) or (B)
- Q227,28 24487 (CD894K)
- Dz1,2,4-6,9-11 IS1555
- D3 YZ-140
- Dz7,8,12,13 IN60

NOTE: We reserve the right to make modifications in this model in accordance with the latest revision of the schematic diagram.