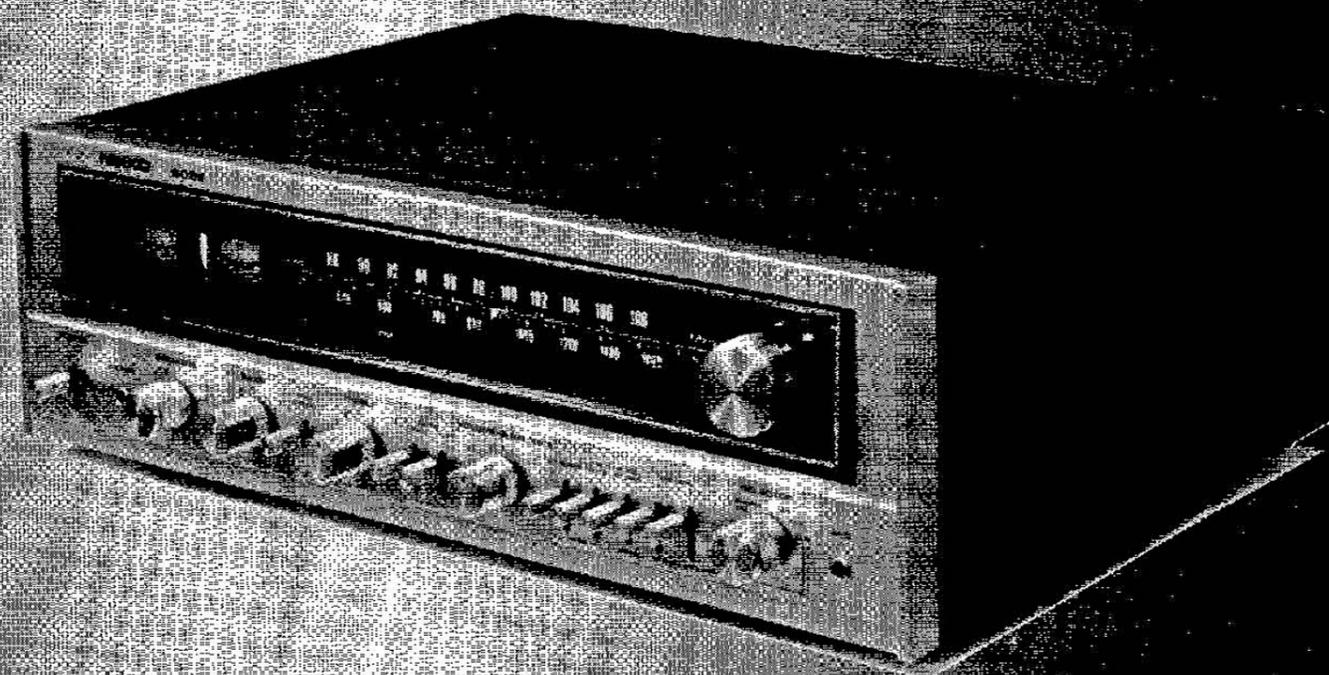


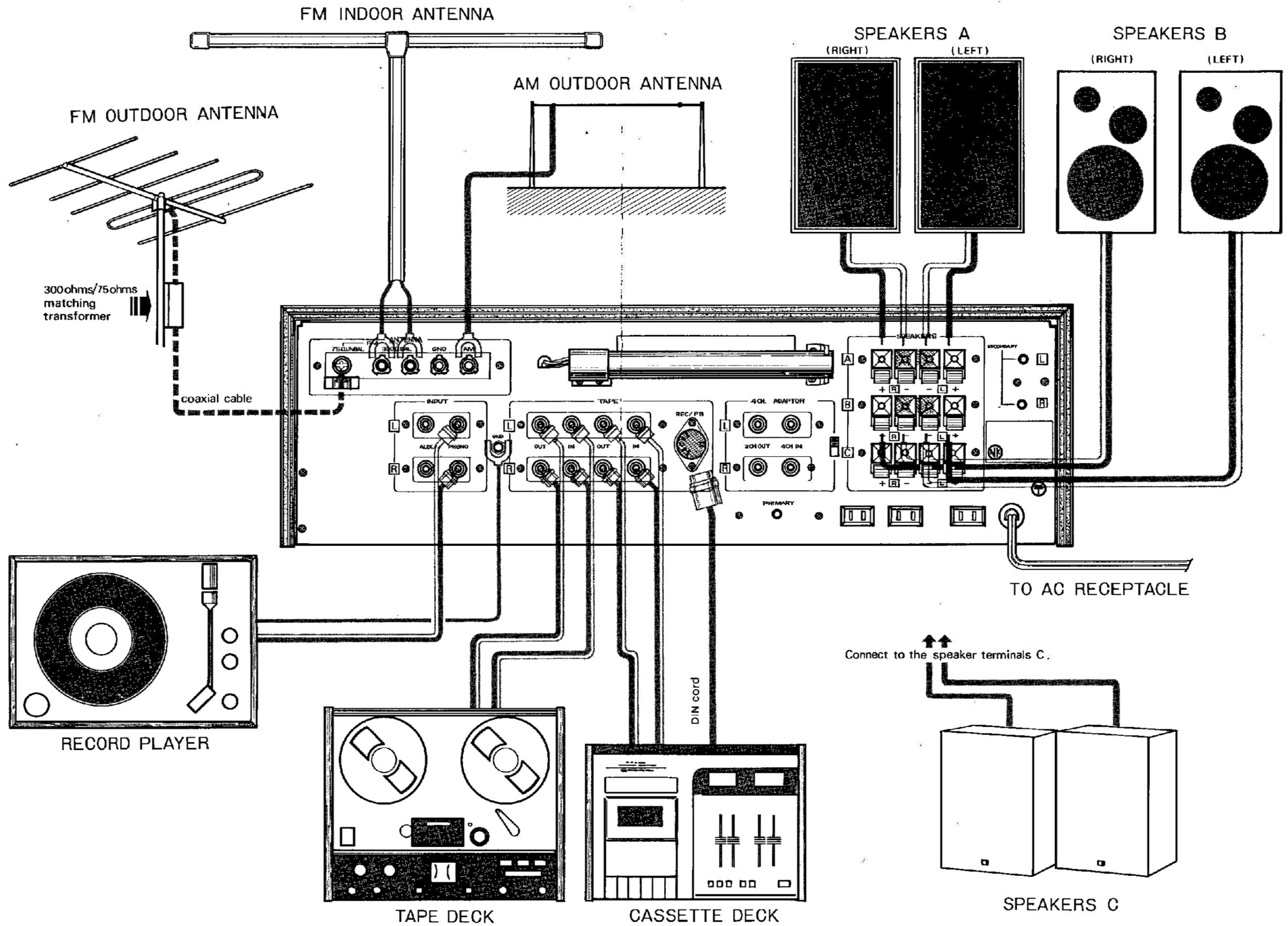
NIKKO
AM/FM
STEREO RECEIVER

8085

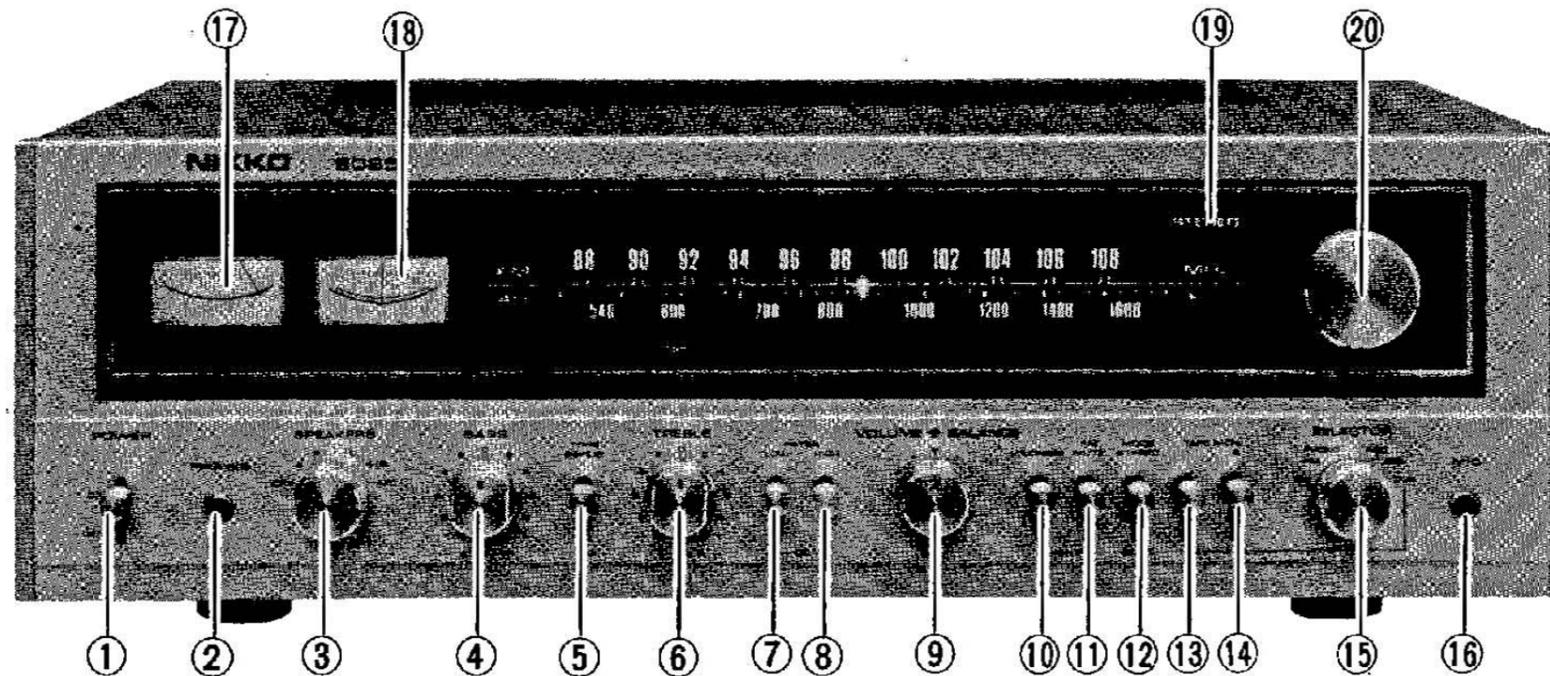
INSTRUCTIONS MANUAL



CONNECTION DIAGRAM



EXPLANATION OF FRONT PANEL



1. **POWER switch**
ON: The receiver turns on.
OFF: The receiver turns off.
2. **HEADPHONE jack**
Plug stereo headphone cord into this jack for monitoring or private listening. Set the **SPEAKERS** switch to the OFF position; output is now delivered to the jack for the private listening.
3. **SPEAKERS switch**
OFF: All outputs delivered to the speakers A, B and C are turned off to enable private headphone listening through the headphone jack.
A: Output is delivered to the speakers connected to the rear panel speaker terminals A.
B: Output is delivered to the speakers connected to the rear panel speaker terminals B.
C: Output is delivered to the speakers connected to the rear panel speaker terminals C.
A + B: Output is delivered to the speakers connected to the rear panel speaker terminals A and B.
A + C: Output is delivered to the speakers connected to the rear panel speaker terminals A and C.
4. **BASS control**
Adjust low frequencies for both left and right channels.
5. **TREBLE control**
Adjust high frequencies for both left and right channels.
6. **TONE DEFEAT switch**
By placing this lever switch to "ON" you can obtain a flat characteristic of tone regardless of positions of the BASS and TREBLE controls.
7. **LOW FILTER switch**
Set this switch to ON to eliminate low noise such as turntable hum and all sounds below 70Hz will be cut by 8dB.
8. **HIGH FILTER switch**
Set this switch to ON to eliminate high frequency noise such as record scratches and all sounds above 10kHz will be cut by 7dB.
9. **VOLUME control (inner knob)**
For controlling the volume. Turning it clockwise increases the volume.
10. **LOUDNESS switch**
Turn this switch ON for correcting tonal quality when operating the set at low sound level.
11. **FM MUTING switch**
Switch ON to eliminate unwanted interstation background noise. Set the switch to OFF when listening to weak FM signals.
12. **MODE switch**
Set the switch to MONO; the left and right signals are mixed and the sound is heard in monaural mode. The switch is normally set to the STEREO position.
13. **TAPE 1 MONITOR switch**
When you wish to listen to tape source, set this switch to the lower position, and then the recorded signal will be heard. In other cases, keep the switch at upper position (off).
14. **TAPE 2 MONITOR switch**
When you wish to listen to tape source, set this switch to the lower position, and then the recorded signal will be heard. In other cases, keep the switch at upper position.
15. **SELECTOR switch**
... selecting program source
AM — For AM reception.
FM — For the reception of both FM monaural and stereo signals. Automatic switching operates between FM monaural and stereo sources. When an FM stereo broadcast is turned in, the STEREO indicator lights up.
PHONO — For playing a record player connected to the PHONO input jacks on the rear panel.
MIC — For using microphone.
AUX — Selects source connected to the AUX. jack.
DUB. — This position permits tape dubbing from tape "1" to tape "2" (TAPE 1 MONITOR switch should be in the down position), or vice versa (TAPE 2 MONITOR switch should be in the down position).
You can see at a glance which input source is running as the indication lamp of input selector lights at the lower position of the dial scale.
16. **MICROPHONE jack**
In case of using a microphone, plug the microphone into this jack.
17. **SIGNAL meter**
when Tuning knob is turned to desired station, meter should show maximum reading.
18. **CENTER TUNING meter**
In order to have more accurate tuning in FM broadcast reception, secure maximum reading on the SIGNAL meter first, then obtain reading in the exact center position of the CENTER meter.
19. **STEREO indicator**
When receiving FM stereo broadcast, the letters "STEREO" are illuminated.
20. **TUNING knob**
This selects the frequency of desired FM or AM station.

OPERATING INSTRUCTIONS

ANTENNA CONNECTIONS

FM ANTENNA

There are two types of FM antenna lead wires, a feeder wire and coaxial wire. When using a feeder wire or the accessory T-type antenna, connect it to the 300 Ω antenna terminals. When using a 75 ohm coaxial cable, connect it to the 75 Ω UNBAL. and secure it with the cable holder.

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 are no obstructions in the direct line path of the signal. Therefore, a good FM antenna should be installed in the most effective manner for best possible FM reception.

In areas near an 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 as shown in Fig. 1. After turning the receiver's volume control to the minimum position, turn on the power switch, set the SELECTOR switch to FM, and turn the tuning knob until the signal meter (No. 17) indicates the maximum deflection at a tuned point. Then, change the direction of the antenna and fix it at a position in which the rightward deflection of the signal meter is maximum and stable.

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 terminal.

- (1) For the best possible reception, use a high sensitivity, directional antenna (with 5~7 elements) and set it up as high as possible, away from buildings and heavy traffic.
- (2) When the antenna is located far from the receiver (83 feet or more), use of a coaxial cable is recommended.
- (3) Be sure to use an antenna designed exclusively for FM reception to prevent TV interference.

AM ANTENNA

The unit is equipped with a high performance AM bar antenna. This antenna will be adequate in most cases, however, the use of an outdoor antenna is recommended for reliable fringe area reception. Connect the lead wire to the AM antenna terminal.

AM-FM RECEPTION

1. Set the SELECTOR switch to AM or FM.
2. Set the TAPE MONITOR switch to upper side.
3. Adjust the VOLUME control to the desired listening level.
4. Use the BASS, TREBLE, FILTERS, LOUDNESS controls to adjust the sound as desired and to match the acoustic conditions of your room.

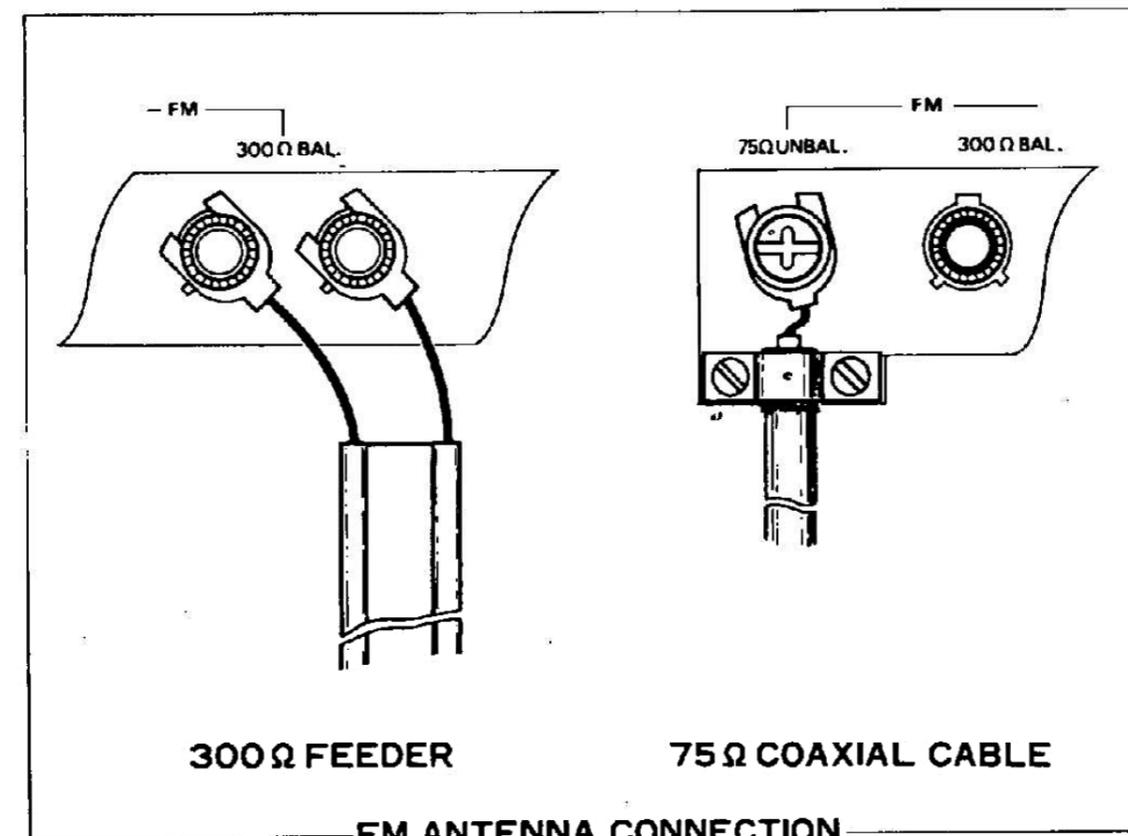
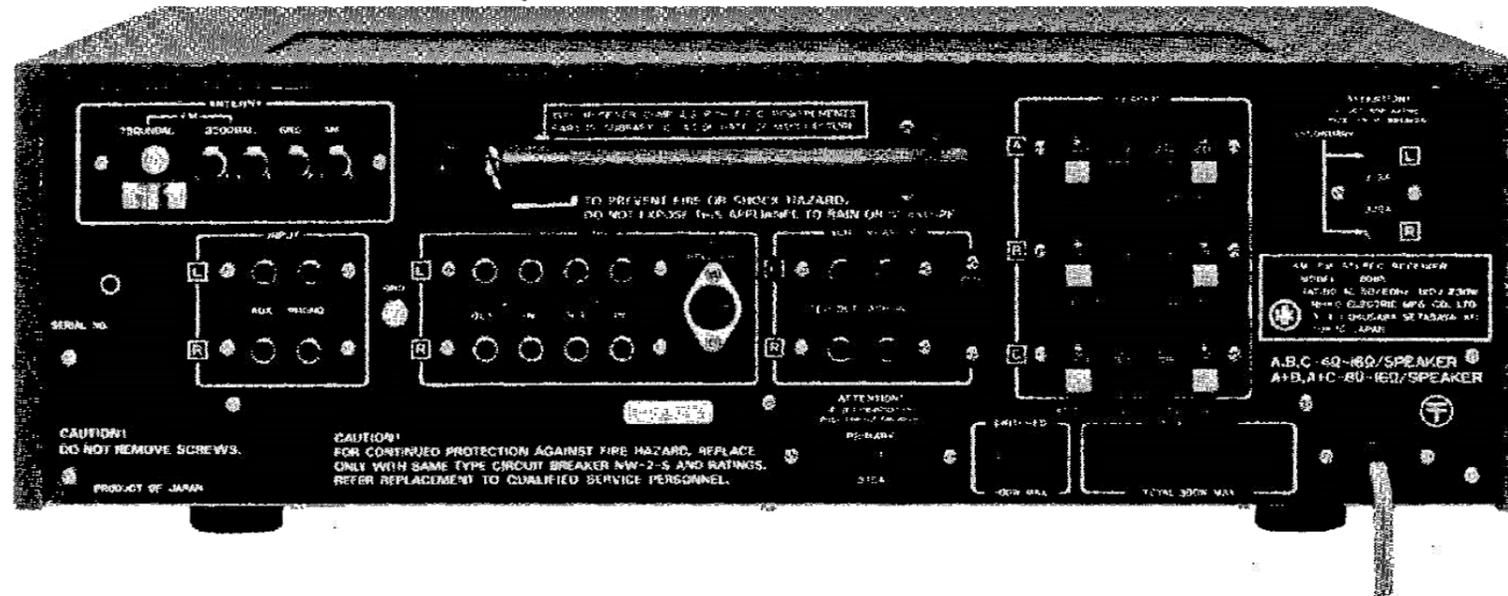


Fig. 1.

OPERATING INSTRUCTIONS



TURNTABLE CONNECTIONS

Connect the left channel of the turntable to the "L" PHONO input jack, and the right channel to the "R" PHONO input jack. If the turntable has a grounding terminal, connect it to this receiver's GND terminal to avoid hum.

1. Set the SELECTOR switch to the PHONO.
2. Set the TAPE MONITOR switches (1 and 2) to upper side.
3. Adjust the VOLUME to the desired listening level.
4. Use the BASS, TREBLE, FILTERS and LOUDNESS controls to adjust the sound to your preference and to the acoustic conditions of the room.

For high output cartridge such as crystal and ceramic, connect to the AUX. input with the SELECTOR switch set to AUX.

CONNECTIONS FOR TAPE RECORDER

RECORDING

For recording, connect a tape recorder as follows: Left channel input of the tape recorder to TAPE "L" OUT jack. Right channel input of the tape recorder to TAPE "R" OUT jack.

PLAYBACK

Left channel output of the tape recorder to TAPE "L" IN jack.
Right channel output of the tape recorder to TAPE "R" IN jack.

DIN CONNECTOR (REC./PLAY CONNECTOR)

In case of a tape deck equipped with DIN connector terminals, a simple one DIN cord connection permits both recording and playback. Connect the DIN cord between the DIN terminal of the tape recorder and the REC/PB jack of the receiver.

NOTE:

When a DIN cord is used for connecting to the tape recorder, the TAPE IN and OUT jacks should not be used. For highest fidelity recording and playback sound, however, it is recommended that the tape recorder be connected to the IN and OUT jacks instead of the DIN connector.

TAPE MONITORING

If you wish to use the 8085 with 3-head type tape recorders, you can perform a sound quality check by momentarily comparing the recording source signal with the sound that has been recorded on the tape. If you set the TAPE MONITOR switch 1 or 2 to the lower position, the recorded sound is reproduced. If this switch is released, the source signal before recording can be reproduced.

RECORDING

1. Set the SELECTOR switch to the desired program source.
2. To monitor the recording, set the MONITOR switch 1 or 2 to the lower position.
3. Recording level should be adjusted with the volume control of your tape recorder.
4. Recording is not affected by the VOLUME, BASS, TREBLE, FILTERS, LOUDNESS controls of the receiver.

PLAYBACK

1. The SELECTOR switch can be at any position.
2. Set the TAPE MONITOR switch 1 or 2 to the lower position.
3. Adjust volume and tone quality.

TAPE DUBBING

To make a copy of recorded tape on to another tape, follow the connecting instructions given on Page 2.

1. Set the power switch for power ON.
2. Set the SELECTOR switch to the DUB. position.
3. When dubbing from TAPE 1 to TAPE 2, set the MONITOR switch to the "DUB. 1→2". In case of dubbing from TAPE 2 to TAPE 1, the MONITOR switch should be set to the "DUB. 2→1".

OPERATING INSTRUCTIONS

SPEAKER CONNECTIONS

Using the leads attached to speakers, connect their inputs to the receiver's A speaker output terminals. This receiver can be connected to 3 sets of speakers, A, B and C, for five different kinds of use — A, B, C, A+B and A+C.

SPEAKER CAPACITY AND IMPEDANCE

Maximum input capacity is indicated on each speaker system. Select speakers with proper input capacity. Note that too small a capacity will result in damage to the speakers. Proper impedance of speakers to be used with the receiver is from 4 to 16 ohms. When connecting speakers, be sure to observe the following points:

- (1) Do not connect many speakers in parallel to each channel.
- (2) When connecting to the A and B speaker terminals, do not use speakers of less than 8 ohms impedance.
- (3) Do not use speakers under 4 ohms.

CIRCUIT BREAKERS

(Primary)

The primary circuit breaker protects the receiver from major damage due to overload or short circuit.

(Secondary)

Left and Right outputs are protected against overload with their respective circuit breaker provided. In the event that the speakers are inoperative, push the reset buttons to release the circuit breakers. When the circuit breakers reoperate even after pushing the buttons, the 8085 is in trouble. Check the speaker output cords for a short-circuit.

AC OUTLETS

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

SWITCHED

This outlet is controlled by the power switch. Instruments with a power output of less than 100 W can be connected to this outlet.

UNSWITCHED

This is not controlled by the power switch, and instruments with a power output of less than 300 W can be connected to this outlet.

CAUTION:

When using these AC OUTLETS, never connect instruments with power output greater than the above specified.

MAINTENANCE

When installing the receiver, observe the following points:

- (a) Do not expose the receiver to direct sunlight or place it near a heating system such as an electric heater.
- (b) Do not use the receiver in a dusty location. Avoid excessive humidity.
- (c) Place the receiver on a rigid table or shelf to avoid vibration.

CABINET CLEANING

When cleaning the cabinet, use a silicon cloth or a soft dry cloth. Do not use a chemical dust cloth or chemical solutions such as alcohol, thinner or gasoline, as it affects the finish of the cabinet.

If the receiver becomes defective or any damage has arisen in transit, please contact your dealer or the nearest NIKKO office.

8085 SPECIFICATIONS

FM TUNER SECTION

Sensitivity (IHF):	1.9 μ V
Quieting Slope (S/N 50 dB):	2.8 μ V
Capture Ratio (IHF):	1.2 dB
Selectivity (IHF):	75 dB (\pm 400 KHz)
Image Frequency Rejection:	85 dB (98 MHz)
IF Rejection:	100 dB (98 MHz)
Spurious Rejection:	100 dB
AM Rejection:	55 dB
Harmonic Distortion:	Mono; less than 0.2%
	Stereo; less than 0.4%
Frequency Response:	20Hz ~ 15KHz +0.5 dB, -1.5 dB
	50Hz ~ 10KHz \pm 0.5 dB
Stereo Separation:	45 dB (1 KHz)
Signal to Noise Ratio:	70 dB
Sub Carrier Suppression:	60 dB
Antenna Impedance:	300 ohms balanced and 75 ohms unbalanced

AM TUNER SECTION

Sensitivity:	300 μ V/m (IHF, ferrite antenna)
Selectivity:	35 dB
Signal to Noise Ratio:	50 dB
Image Rejection:	45 dB
IF Rejection:	40 dB

AMPLIFIER SECTION

Continuous RMS Power Output	
20Hz ~ 20KHz	
(Both channels driven):	45 watts + 45 watts (8 ohms)
	58 watts + 58 watts (4 ohms)
1 KHz	
(Both channels driven):	52 watts + 52 watts (8 ohms)
	67 watts + 67 watts (4 ohms)
Harmonic Distortion	
(20Hz ~ 20 KHz):	less than 0.3% (Continuous power output)
	less than 0.05% (1 watt + 1 watt power output)
Intermodulation Distortion:	less than 0.3% (Continuous power output)
	less than 0.1% (1 watt + 1 watt power output)
Power Bandwidth (IHF):	5Hz ~ 30KHz (H.D. 0.3%)
	(both channels driven)

Damping Factor:	More than 40 (1 KHz, 8 ohms)
Hum & Noise	
(IHF, closed circuit A network)	
PHONO:	75 dB
MIC:	70 dB
AUX:	90 dB
TAPE MON. 1, 2:	90 dB
4 CH (Main) IN:	100 dB
Residual Hum & Noise:	less than 0.5 mV
Input Sensitivity/Impedance	
PHONO:	2.5 mV/50 Kohms
PHONO overload level:	150 mV
MIC:	2.5 mV/20 Kohms
AUX:	180 mV/50 Kohms
TAPE MON. 1, 2:	180 mV/50 Kohms
Output level/Impedance	
TAPE OUT 1, 2:	170 mV/10 Kohms
TAPE OUT(DIN Connector):	30 mV/80 Kohms
2 CH(MAIN) IN: 1.3V/50K ohms	
2 CH(PRE) OUT: 1.3V/3.3K ohms	
Tone Control	
BASS:	\pm 11 dB (70 Hz)
TREBLE:	\pm 10 dB (10 KHz)
Loudness:	+10 dB(70 Hz), +4 dB (10 KHz)
Filter	
Low:	-8 dB (70 Hz) 6 dB/oct.
High:	-7 dB (10 KHz) 6 dB/oct.

SEMICONDUCTORS

FETs:	4
ICs:	7
Diodes:	11
Transistors:	26

MISCELLANEOUS

Power Source:	AC 120 V 60 Hz or AC 220/240 V 50/60 Hz
Power Consumption(U.S.A.Model):	230 watts
Dimensions	
(without package):	Width: 480 mm (19")
	Depth: 410 mm (16-1/8")
	Height: 163 mm (6-3/8")
Weight:	Without package: 12.1 kg/26 lbs
	With package: 14.4 kg/32 lbs

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