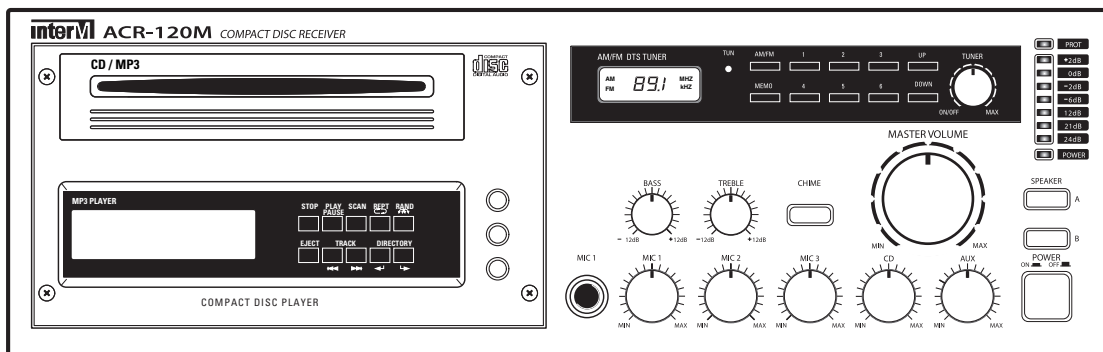


Operation Manual

ACR-120M Compact Disc Receiver



interM

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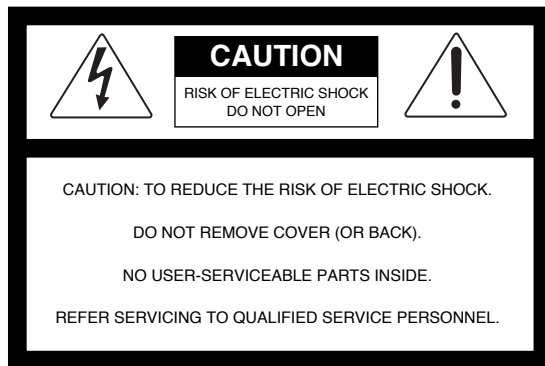
Welcome

A personal welcome to you from the management and employees of Inter-M

All of the co-workers here at Inter-M are dedicated to providing excellent products with inherently good value, and we are delighted you have purchased one of our products.

We sincerely trust this product will provide years of satisfactory service, but if anything is not to your complete satisfaction, we will endeavor to make things right.

Welcome to Inter-M, and thank you for becoming part of our worldwide extended family!



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attentions: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

*Do not install this equipment in a confined space such as a book case or similar unit.

*The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

*Worded: "WARNING FOR YOUR PROTECTION PLEASE READ THE FOLLOWING-WATER AND MOISTURE: Unit should not be used near water(e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so than objects do not fall and liquids are not spilled into the enclosure through openings."

*** It can be heated up if you use this product in closed box or ill-ventilated place.**

Unpacking

Although it is neither complicated to install nor difficult to operate your Compact Disc Receiver, a few minutes of your time is required to read this manual for a properly wired installation and becoming familiar with its many features and how to use them. Please take a great care in unpacking your set and do not discard the carton and other packing materials. They may be needed when moving your set and are required if it ever becomes necessary to return your set for service.

Installation

Environment

Never place this product in an environment which could alter its performance or reduce its service life. Such environments usually include high levels of heat, dust, moisture, and vibration.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



Features

- 120W OUTPUT POWER

These models can deliver very high output power at less than 1% THD.

- VERSATILE AND EASY TO USE

Incorporating all the necessary system components to provide versatility in an easy to use form: six channels of input signals (MIC 1~3, AUX, TUNER and CD), four tone chime, tone control and speaker impedance selector.

- CHANNEL PRIORITY AND MUTING

MIC 1 and the four tone chime have priority over the other input signals. The muting level is adjustable from the rear panel of the unit.

- TONE CONTROL

The two band tone control provides ± 12 dB of control over the TREBLE and BASS range.

- CHIME WITH FOUR TONES

Melodious four tone chime for pre-announcements, operation by front panel button.

- DIGITAL TUNER

Ability to store up to thirty broadcasting frequencies in the system's memory, in a simple and easy to use manner.

- 1CD/MP3

The product has a built-in CDP than can play back the CD stored in a MP3 file format to enable convenient use.(Support playback of CD in CD/MP3 format.)

Operation

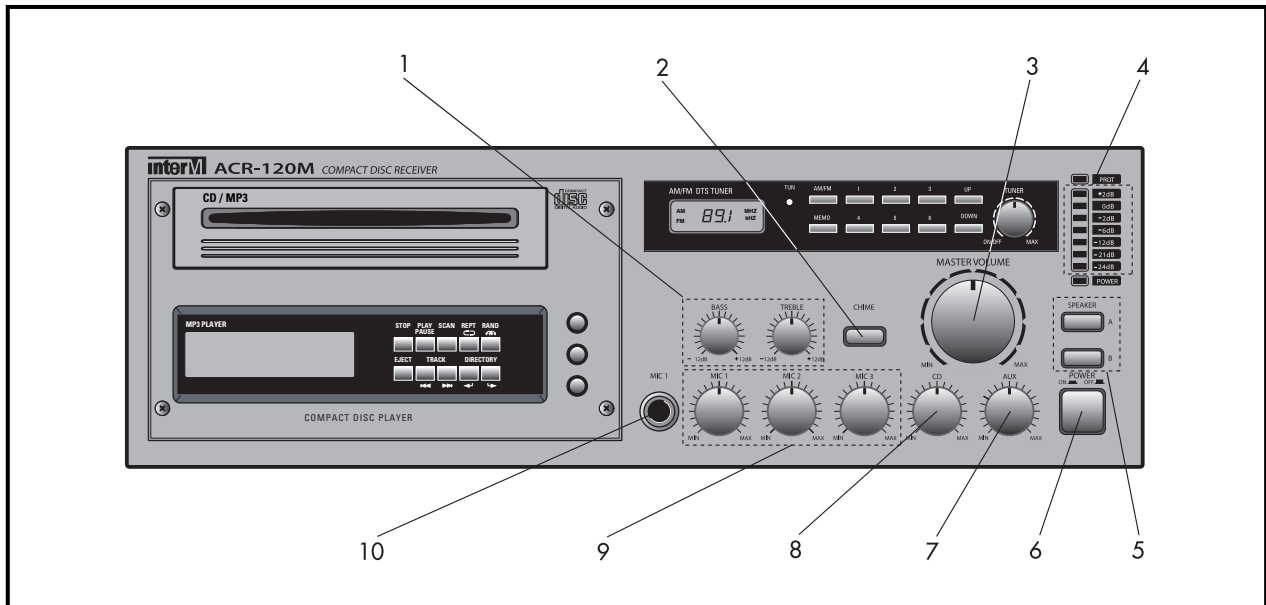
1. Before inserting the power plug to a socket, turn all switches off, put the tone control to the middle, and the volume to the lowest position.
2. Check if a speaker and input jack are connected correctly.
3. Check the power source and insert a power cord to a socket.
4. Pressing a power switch starts the unit.
5. Checking the volume from an output level indicator, adjust the volume with individual volume and master volume control, and the tone with a tone control as you want.
6. For the operation of chime, CD and deck, see the relevant detail description in the document.

Make certain that speakers and input sources are properly connected before switching the unit on.

Keep volume levels turned down before switching on.

NOTE: The system's operation is delayed by approximately three seconds after pressing the power switch. This is due to the built-in protection circuitry, designed to protect the speakers and other system components.

Front Panel



1. TONE CONTROLS

The tone control section provides $\pm 12\text{dB}$ of control over the TREBLE and BASS ranges at the following frequencies (TREBLE: 10kHz, BASS: 100Hz).

2. CHIME BUTTON

Pressing this button will activate the chime circuitry.

3. MASTER LEVEL CONTROL

This control is used for adjusting the volume of the finally mixed sound.

4. OUTPUT LEVEL DISPLAY

This display indicates the signal output level.

5. SPEAKER SELECTOR

These switches are used for internally routing the output of the amplifier to the speakers, individually or totally.

6. POWER SWITCH

Pressing the switch to ON will illuminate the power LED and supply the power to this unit.

7. AUX LEVEL CONTROL

This control adjusts the volume level of the AUX input signal.

8. CD LEVEL CONTROL

This control adjusts the volume level of the CD input signal.

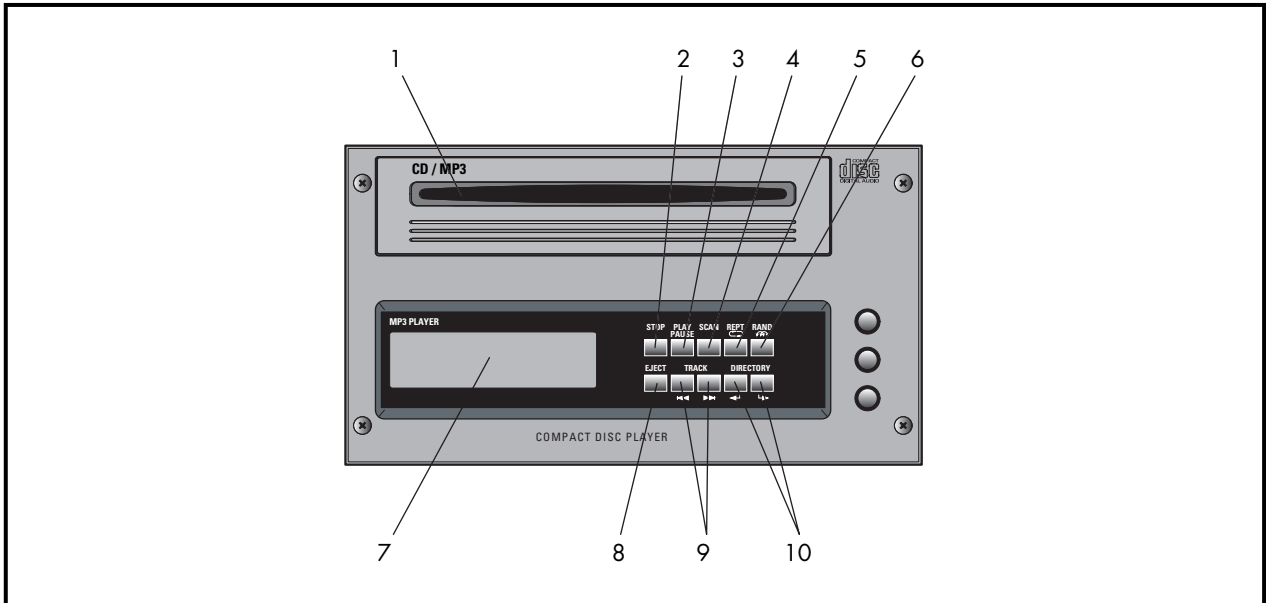
9. MIC LEVEL CONTROL

These controls adjust the volume level of the MIC 1, MIC 2 and MIC 3 input signals.

10. MIC 1 INPUT CONNECTOR

This jack be used for the MIC 1 input and is connected in parallel with the XLR jack on the rear panel. Input sensitivity is 1mV. The normal impedance is 600 Ω (BAL) or 10k Ω (UNBAL).

1. CD/MP3



1. DISC TRAY

The 1pc of CD/MP3 disc is inserted or ejected at disc tray. Only use the size of 12cm disc.

2. STOP BUTTON

Depressing this button stops playback of the CD/MP3 disc.

3. PLAY/PAUSE

Depressing this button will pause CD/MP3 Playback. Depressing a second time will resume play.

4. SCAN

Depressing this button will play the first 10 seconds of each song in sequence. Depressing again will resume normal play.

5. REPT (REPEAT)

Depress this button once to repeat the currently playing song. Depress and hold for more than one second, to repeat all the songs in the current MP3 directory. Depress again to repeat all songs on the disc. Depress again to release Repeat function.

6. RAND (RANDOM)

Depress this button to play the songs on the disc in a random order. Depress again to release Random function.

7. LCD DISPLAY

This LCD display indicates the status of the CD unit.

8. EJECT

Depress this button to eject disc.

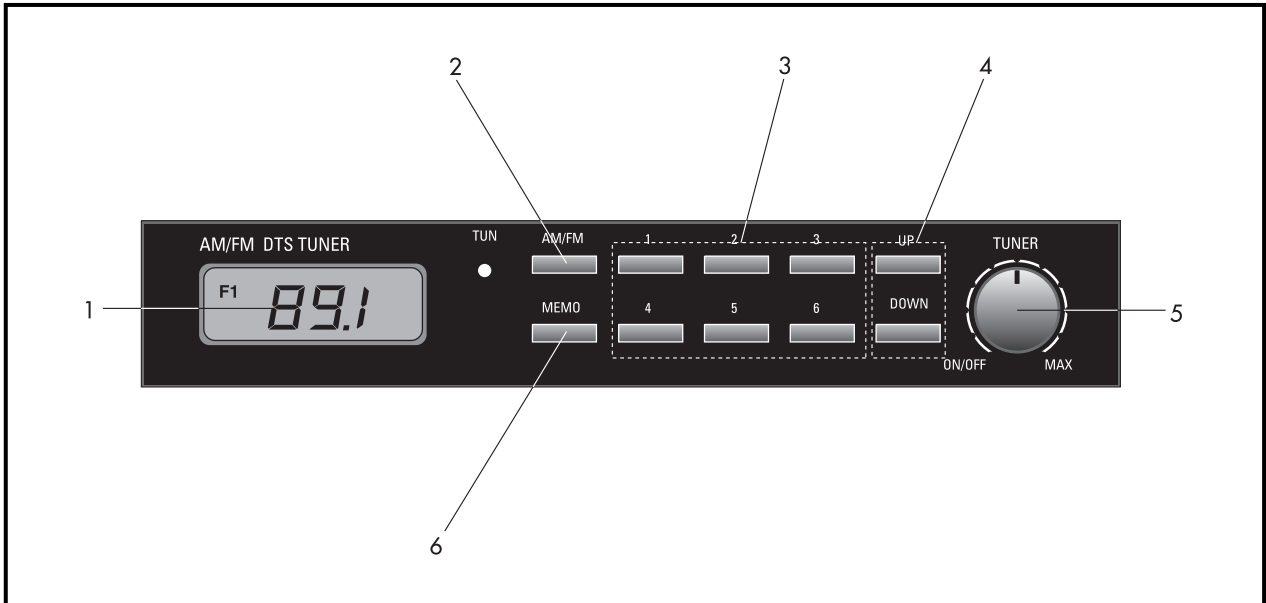
9. TRACK (REVERSE/FORWARD)

Depress this button to listen to the previous/next song on the disc.

10. DIRECTORY (REVERSE/FORWARD)

This function is available only for MP3 discs. It allows for movement between file directories on an MP3 disc. Depress this button to move to the previous/next directory.

2. TUNER SECTION



1. TUNING FREQUENCY DISPLAY

You can confirm the frequency of tuner through this display.

2. BAND SELECT BUTTON

This switch is for selecting AM or FM, when using the tuner.

3. ADDRESS SELECT BUTTON

These switches select six memory address banks for the storage of broadcasting frequencies. Each of these banks can hold five broadcasting frequencies at designated memory address areas, i.e., F1, F2, F3, A1 and A2. Therefore a total of thirty broadcasting frequencies can be stored.

4. UP/DOWN BUTTON

When the switch is momentarily pressed once, the AM/FM frequency will adjust with a single UP/DOWN count. When the switch is pressed continuously, the frequency is continuously fast UP/DOWN counted.

5. TUNER LEVEL CONTROL

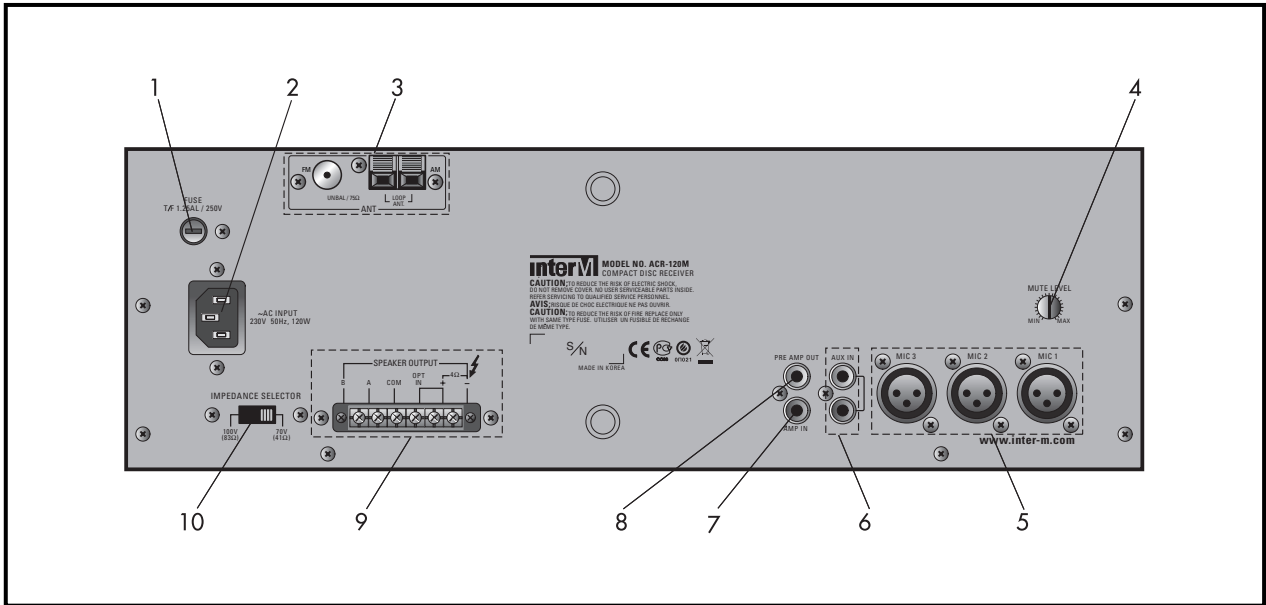
This control adjusts the volume level of the AM and FM radio signal.

6. MEMORY BUTTON

This is for memorizing the broadcasting frequency.

1. Select the memory area AM or FM with the BAND switch (2).
2. Select the frequency that you want to memorize with the UP/DOWN switch (4).
3. Press the MEMORY switch (6), then select the desired address with ADDRESS switch (3).
4. The present status of the tuner will be memorized in the selected address.

Rear Panel



1. FUSE HOLDER

This fuse holder contains the AC fuse. If blown, replace it with same type fuse as specified below. If the fuse continuously blows, refer servicing to qualified personnel.

MODEL	ACR-120M	
VOLTAGE	AC 100V-120V	AC 230V-240V
FUSE RATING	3A/250V	1.25A/250V

2. AC INLET

This is the AC INPUT for the AC INPUT CORD.

3. ANTENNA TERMINAL

This terminals for connecting the antenna terminal, when you can use the tuner.

4. MUTE LEVEL CONTROL DURING PRIORITY CALL

When the other channel signals are muted by MIC1 and CHIME, this control is used for adjusting the muting level.

5. MIC INPUT CONNECTORS

These jacks are for MIC 1~3 input. Input sensitivity is 1mV and input impedance balanced 600Ω or unbalanced 10KΩ, is optional.

6. AUX INPUT CONNECTOR

The sound source from cassette deck etc., is connected to this input.

7. AMP INPUT CONNECTOR

A signal processor like an equalizer or filter can be connected to this input, using an RCA jack plug.

8. PRE AMP OUTPUT CONNECTOR

The line out signal of this unit can be used for connecting to another amplifier, e.g. recorder or signal processor etc.

9. SPEAKER TERMINAL

These terminals are for the connection to speakers. Select the 4Ω terminals or the high impedance terminals. Do not select both low and high impedance terminals else overload may occur.

Voltage/Impedance	MODEL	ACR-120M
100V		83Ω
70V		41Ω
25V		5.2Ω
4Ω		4Ω / 21.9V

10. IMPEDANCE SELECTOR

This switch is for selecting the required high impedance at the speaker terminals.

* **WARNING:** For low impedance output (4ohm), remove the jumper from the option terminals. For high impedance output (70V, 100V) install the jumper. Do not use both the low and high impedance outputs at the same time, doing so could damage your amplifier and invalidate the warranty.

How to Use CD / MP3 Player

Power ON/OFF

- When there does not exist a disc upon power-on:
 1. If power is applied to CDP, **NO DISC** message is displayed, keeping a standby status.
 2. Push the CD softly until the tray pulls on the CD.
 3. While the unit reads CD, **S -- CDP-- -- --** message is displayed.
 4. For MP3 CD, **READING CD ROM** message is displayed.
 5. After the unit searches the music information on a CD (for about 10 seconds), **CD STOP** message is displayed, keeping a standby status.
 6. Press the switch to start operation. Then playback is started from the first song on a CD.

- When there exists a disc upon power-on:
 1. While the unit reads CD, **S -- CDP-- -- --** message is displayed.
 2. For MP3 CD, **READING CD ROM** message is displayed.
 3. After the unit searches the music information on a CD, **CD STOP** message is displayed, keeping a standby status.
 4. Press the switch to start operation. Then playback is started from the first song on a CD.

Functions

- PLAY Function
 1. Insert a CD, and press **PLAY/PAUSE** switch after CD information is displayed.
 2. When MP3 CD is played, **MP3** is displayed on the left top of LCD display.

- PAUSE Function
 1. If you stop playing at the current position temporarily, press **PLAY/PAUSE** switch.
 2. While this pause function is active, **S -- PAUSE** message is displayed.
 3. If you press **PLAY/PAUSE** switch once more, the pause function is released and the unit starts playing from the current position.
 4. While the pause function is active, you can move between directories or tracks. If, however, you make such movement, the pause function is released, and the unit starts playing automatically.

- SCAN Function
 1. You can use this function to search a desired song by hearing the first part of each track.
 2. If you press **SCAN** switch in the course of playing, the unit plays the beginning part of each subsequent track for 10 seconds.
 3. If you press **SCAN** switch in a stop status, **INTRO** message is displayed, and then if you press **PLAY/PAUSE** switch, the unit plays the beginning part of each track for 10 seconds from the first track of a CD.
 4. While the track is performing a search function, **D -- INT NO.** message is displayed.
 5. If you find a desired track, press **SCAN** switch once more to stop searching and start playing.
 6. In case of MP3, if you long-press **SCAN** switch for more than 1 second, **D -- INT NO.** message is displayed, and the unit plays the beginning part of each file in the directory for 10 seconds.

- REPEAT Function

1. You can use this function to listen to a song repeatedly.
2. If you want to repeat the song being displayed currently, press **REPT** switch.
3. While this repeat function is active, **S -- RPT NO.** message is displayed.
4. If the above message is displayed, the current song is played repeatedly.
5. In case of MP3, if you long-press **REPT** switch for more than 1 second, **D -- RPT NO.** message is displayed, and the unit plays the files in the directory repeatedly.
6. If you press **REPT** switch again, **A -- RPT NO.** message is displayed, and the unit repeats the entire songs from the beginning to the end.
7. To release the repeat function, press **REPT** once more.

- RAND Function (RANDOM)

1. You can use this function to listen to the songs on the current disc at random.
2. If you press **RAND** switch in the course of playing, songs are played at random order.
3. If you press **RAND** switch in a stop status, **RANDOM** message is displayed. Here, if you press **PLAY/PAUSE** switch, songs are played at a random order.
4. While the random function is active, **S -- RDM NO.** message is displayed.
5. If you want to stop the random function, press **RAND** switch once more.
6. In case of MP3, if you long-press **RAND** switch for more than 1 second, **D -- RDM NO.** message is displayed, and the unit plays the files in the directory at a random order.

- EJECT function (Disc ejection)

1. You can use this function to pull out a CD.
2. Regardless of the operation status of the player, pressing this switch ejects a CD.

- TRACK Function (Forward/Reverse tracking function)

1. You can use this function to listen to a previous or next song in a play or stop status.
2. If you press **TRACK ►►** switch, the next song is played.
3. If the RANDOM function is active, the next random song is played.
4. If you press **◄◄ TRACK** switch once, the unit plays the current song again from the beginning.
5. If you press **◄◄ TRACK** switch twice, the unit plays a previous song.
6. If the RANDOM function is active, the previous song is not played.
7. If you long-press **◄◄ TRACK** or **TRACK ►►** switch for longer than 1 second, you can do forward / backward search of a relevant song.


- DIRECTORY Function (Movement between directories)


1. This is the function used for only MP3 CD.
2. This function is available only when MP3 files are saved to different directories in a computer. If you press this switch, you can move to the songs in other directory.
4. Track number is given in a cumulative way counting the number of tracks of every directory.
5. This directory function works at a SCAN, REPEAT and RANDOM status while the unit is in a play or pause mode, and the directory name is displayed. If you move to other directory in a STOP mode, a directory name is not displayed but the number of the first song in a new directory is displayed.

▶ Example of movement between tracks

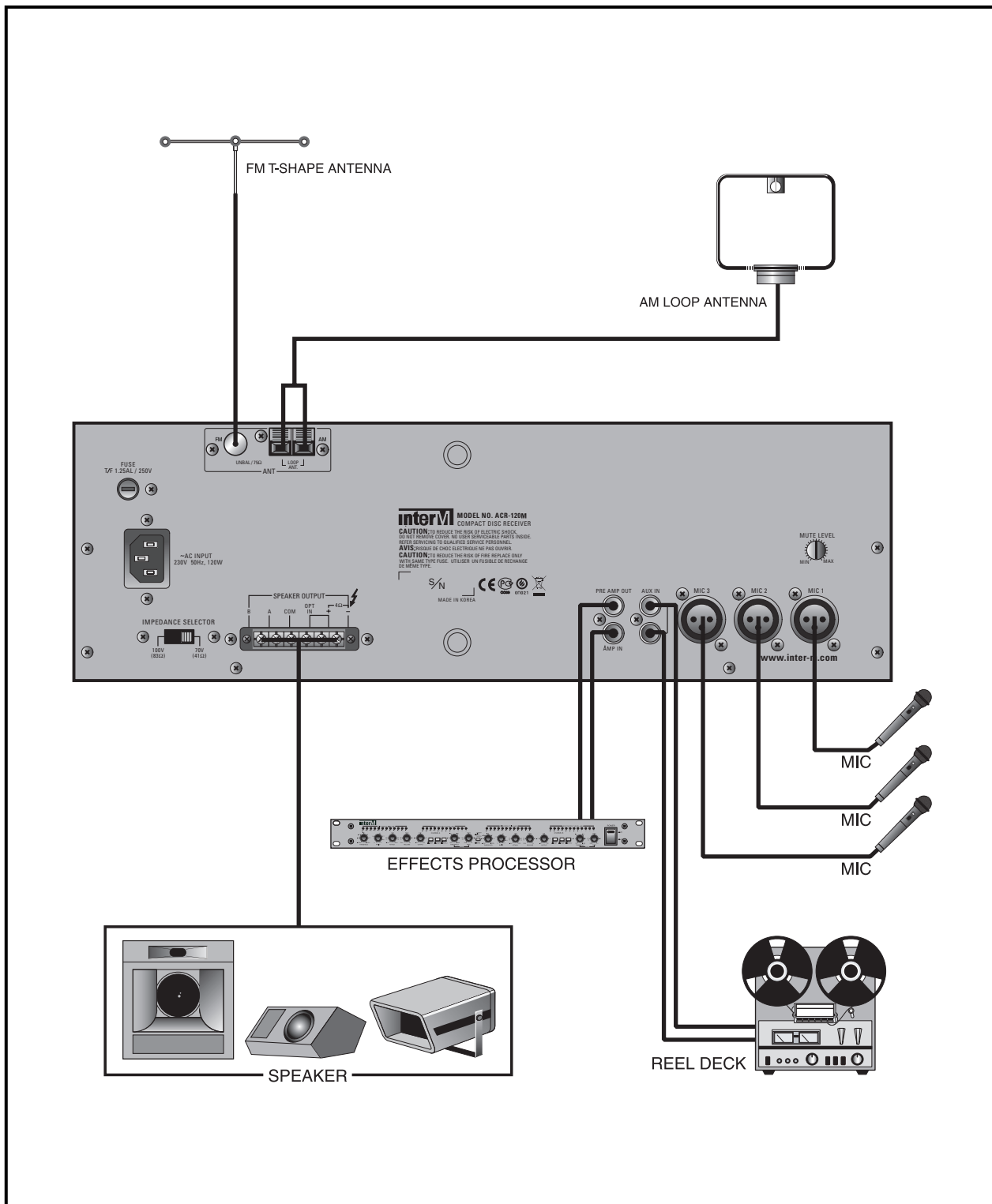
DIRECTORY	TRACK NUMBER
DIRECTORY 1 : ROCK (12 tracks)	01 ~ 12
DIRECTORY 2 : POP (10 tracks)	13 ~ 22
DIRECTORY 2 : METAL (5 tracks)	23 ~ 27

* When #5 song (# 5 song in directory 1) is displayed currently,

1) if you press **DIRECTORY** , # 13 song (# 1 song in directory 2) is displayed.

2) if you press ** DIRECTORY**, # 23 song (# 1 song in directory 3) is displayed.

Applications



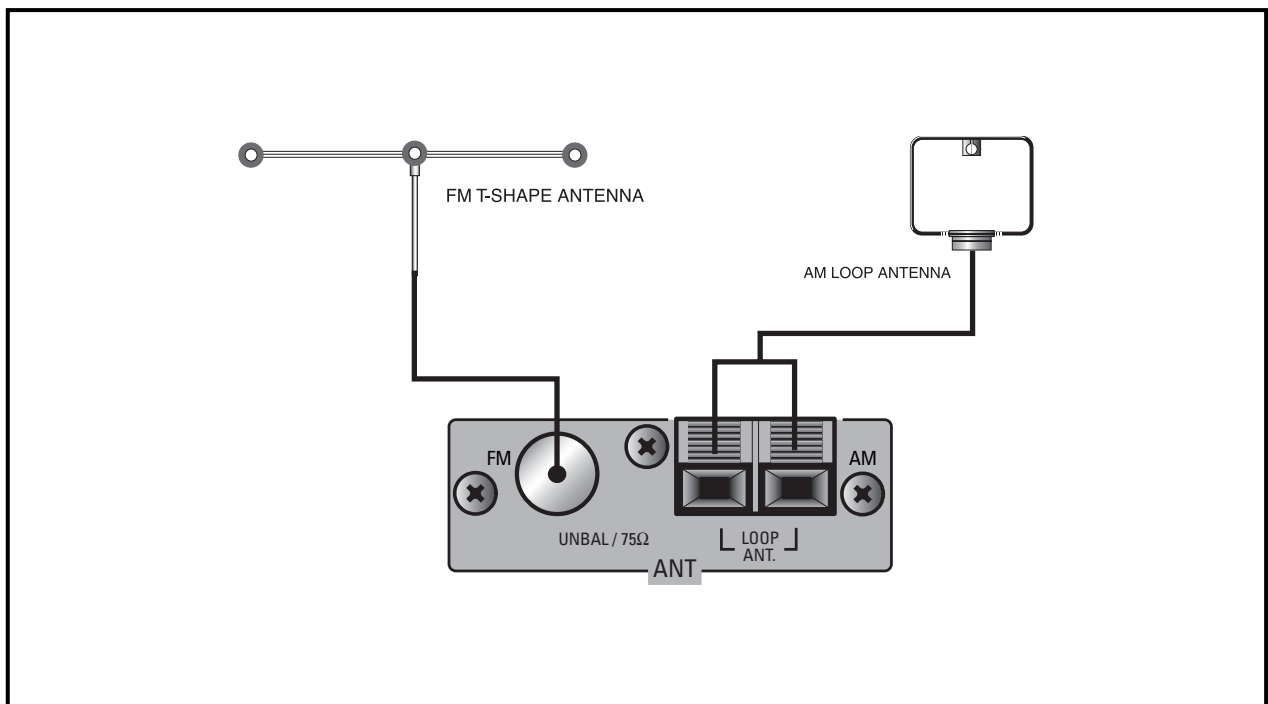
Application of The Antenna

- FM RECEIVING ANTENNA

The electric wave of FM broadcasting is weakening in hills and valleys, around buildings and in iron-reinforced buildings.

- INSTALLATION OF ANTENNA EXCLUSIVELY FOR FM

Listening to the broadcasting, fix the antenna after deciding the location and the direction so that the reception may be optimized.



- INSTALLATION OF ANTENNA USING THE COAXIAL CABLE

Noisy reception may occur in built-up areas and factory sites as well as around power cables. This may be the case even when an antenna is used exclusively for FM. In these regions, install the antenna using 75Ω coaxial cable.

- INDOOR ANTENNA

In the regions where FM broadcasting is heard comparatively well due to the near distance to the station or wooden structure, you can receive broadcasting of good quality by using T-type antenna.

- AM LEAD ANTENNA

Fix one end of a six to eight metre length of vinyl-coated single cable to the AM terminal and the other end to a high place like a wall.

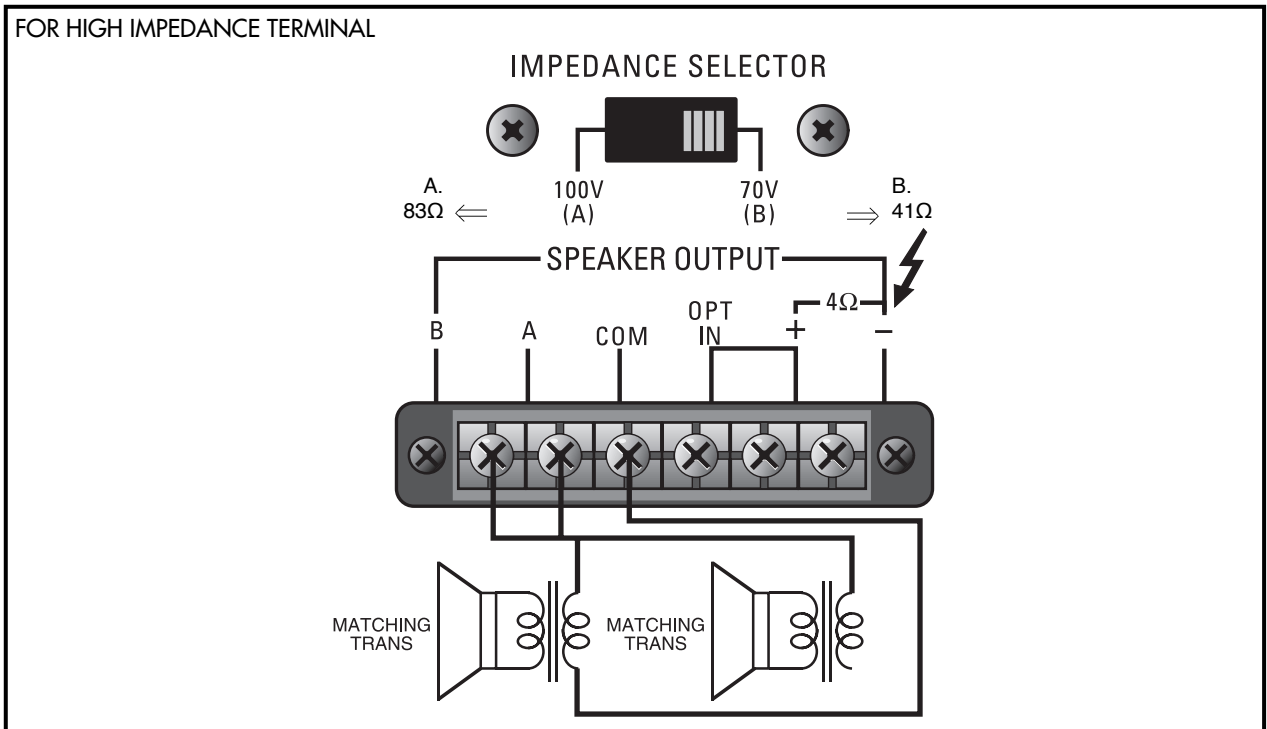
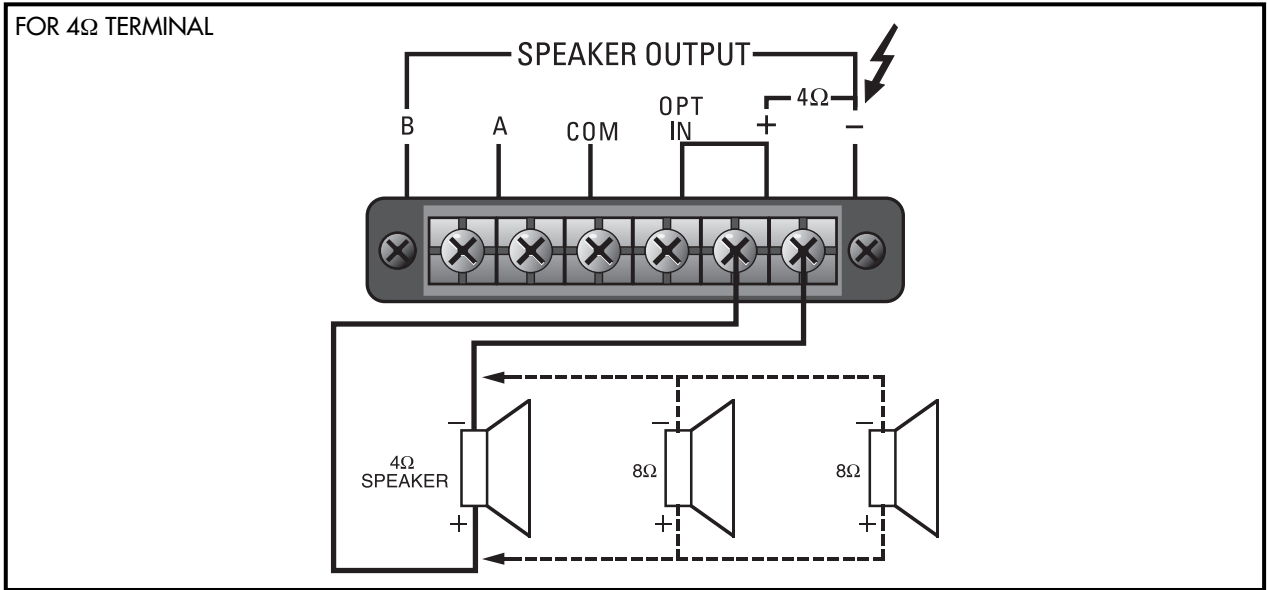
- AM OUTDOOR ANTENNA

Install the vinyl-coated cable to an outdoor place if the AM reception is not good enough.

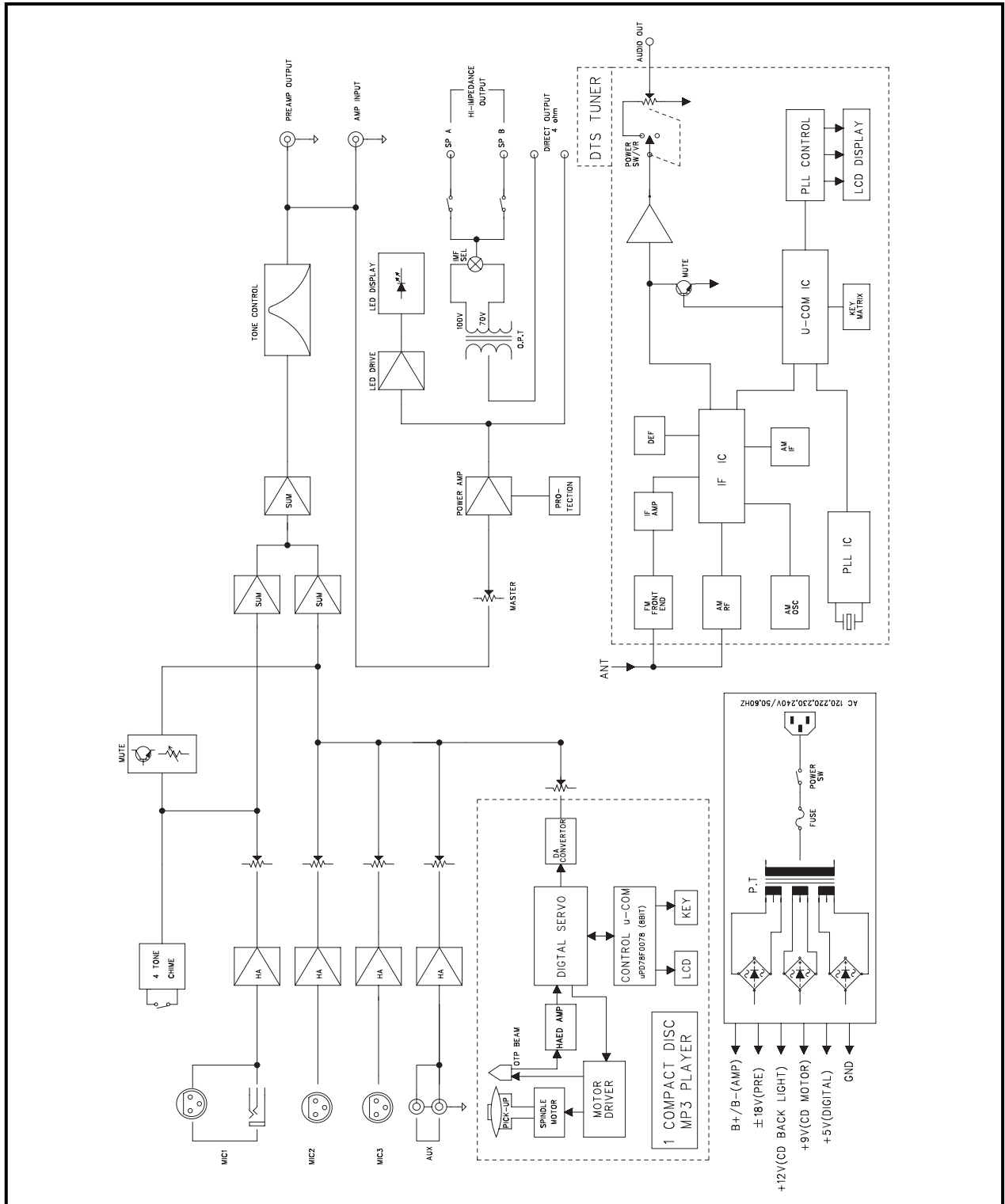
Installation of The Speaker

Before you connect the speaker, remove the power cord from the power outlet and switch the ACR-120M power switch off. When connecting the speaker wires to the SPEAKER OUTPUT terminals, use the output terminals that are suitable for the speaker (see below).

Extreme care must be exercised when connecting to these terminals as potentially hazardous voltages may be present.



Block Diagram



Specifications

0dB=0.775Vrms

- ELECTRICAL

Rated Output Power(RMS).....	120W
Speaker Output/Impedance	22V/4Ω, 25V/5.2Ω, 70V/41Ω, 100V/83Ω
Input Sensitivity/Impedance	
MIC 1-3.....	1mV/600Ω
Aux	350mV/10kΩ
Amp In	1V/10kΩ
Frequency Response (+1/-3dB)	
MIC 1-3	100Hz~12kHz
Aux.....	60Hz~15kHz
Amp In.....	60Hz~18kHz
T.H.D	0.25%
S/N	
MIC 1-3	60dB
Aux	82dB
Tone Control	
Bass (100Hz).....	±12dB
Treble (10kHz)	±12dB

- TUNER SECTION

Tuning Range.....	U.S.A : FM : 87.5~108.0MHz, AM : 530~1620kHz EUROPE : FM : 87.5~108.0MHz, AM : 522~1620kHz
Antenna Input.....	FM : 75Ω Unbal AM : Low Impedance Loop Antenna
Usable Sensitivity	FM : 2μV, AM : 18μV
S/N	FM : 60dB, AM : 50dB

- COMPACT DISC SECTION

Type.....	Single CD Capacity TRAY Type
Frequency Response (+1/-3dB).....	20Hz~20kHz
T.H.D	0.15%

- GENERAL

Power Source.....	100~120VAC or 220~240VAC; 50/60Hz, 24VDC (Supplied AC mains transformer depends on country requirements)
Power Consumption	120W
Weight	14.5kg/32lb
Dimensions.....	420(W)x132(H)x320(D)mm
Operating Temperature.....	-10°C ~ +40°C

* Specifications and design subject to change without notice for improvements.

Service

Procedures

Ensure the problem is not related to operator error, or system devices that are external to this unit. Information provided in the troubleshooting portion of this manual may help with this process. Once it is certain that the problem is related to the product contact your warranty provider as described in the warranty section of this manual.

Schematic

A Schematic is available by contacting your warranty provider.

Parts List

A Parts List is available by contacting your warranty provider.

Variations and Options

Variations

Products supplied through legitimate sources are compatible with local AC power requirements.

Options

No optional items are available for this product.

Warranty

Warranty terms and conditions vary by country and may not be the same for all products. Terms and conditions of warranty for a given product may be determined first by locating the appropriate country which the product was purchased in, then by locating the product type.

To obtain specific warranty information and available service locations contact Inter-M directly or the authorized Inter-M Distributor for your specific country or region.



Inter-M, Ltd. (Korea) began operations in 1983.

Since then, Inter-M has grown to become one of the largest manufacturers of professional audio and commercial sound electronics equipment in the world.

Inter-M has gained worldwide recognition for its own branded products, as well as private label manufacturing of electronics sold under other names (OEM).

The company is no longer just a Korean company, but rather a global company that is truly international in scope, with factories and offices in Korea and China, and sales and marketing operations located in Japan, Europe, and the U.S.A.

With more than 850 employees around the globe, Inter-M is well-poised for further growth and expansion.

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