

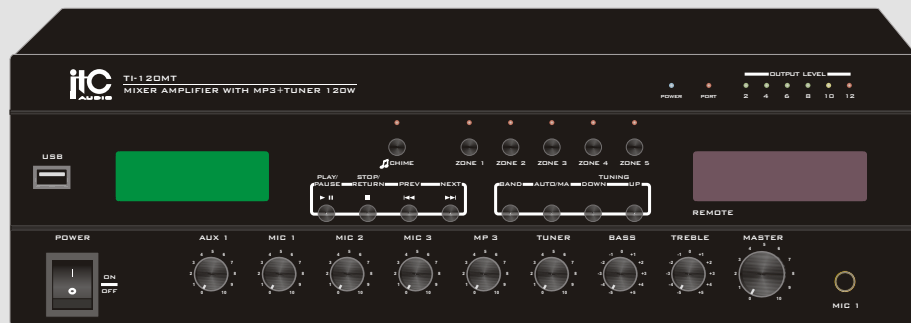


PUBLIC ADDRESS SYSTEM

OPERATION MANUAL

TI-60MT
TI-120MT
TI-240MT

MIXER AMPLIFIER WITH MP3+TUNER



Please follow the instructions in this manual to obtain the optimum results from this unit. We also recommend that you keep this manual handy for future reference.

TABLE OF CONTENTS

1. SAFETY PRECAUTIONS	3
2. GENERAL DESCRIPTION	5
3. FEATURES	5
4. NOMENCLATURE AND FUNCTIONS	
4.1 Front Panel	6
4.2 Rear Panel.....	7
5. CONNECTIONS	
5.1. Speaker Connections	8
5.2. XLR Connections	8
6. APPLICATIONS	9
7. TUNER OPERATION	10
8. MP3 OPERATION	10
9. BLOCK DIAGRAM	11
10. SPECIFICATIONS	12
11. DIMENSIONAL DIAGRAM	13

1. SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- We also recommend you keep this instruction manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety

WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

WARNING

When Installing the Unit

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- Be sure to replace the unit's terminal cover after connection completion. Because high voltage is applied to the speaker terminals, never touch these terminals to avoid electric shock.
- Be sure to ground to the safety ground (earth) terminal to avoid electric shock. Never ground to a gas pipe as a catastrophic disaster may result.
- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down, causing personal injury and/or property damage.

When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest **ITC** dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
 - If you detect smoke or a strange smell coming from the unit.
 - If water or any metallic object gets into the unit
 - If the unit falls, or the unit case breaks
 - If the power supply cord is damaged (exposure of the core, disconnection, etc.)
 - If it is malfunctioning (no tone sounds.)
- To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest **ITC** dealer.
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.

1. SAFETY PRECAUTIONS

CAUTION

When Installing the Unit

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.
- Do not block the ventilation slots in the unit's cover. Doing so may cause heat to build up inside the unit and result in fire.
- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.

When the Unit is in Use

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Make sure that the volume control is set to minimum position before power is switched on. Loud noise produced at high volume when power is switched on can impair hearing.
- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- Contact your **ITC** dealer as to the cleaning. If dust is allowed to accumulate in the unit over a long period of time, a fire or damage to the unit may result.
- If dust accumulates on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely.
- Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. Doing otherwise may cause a fire or electric shock.

An all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated in the electrical installation of the building.

2. GENERAL DESCRIPTION

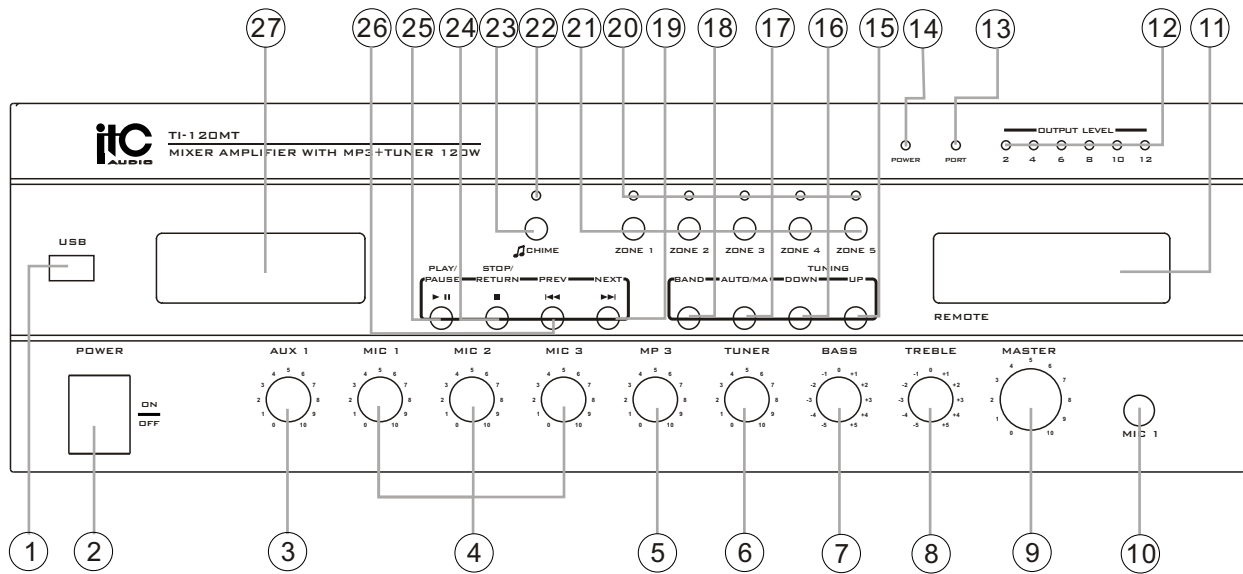
The MP3 + Tuner Mixer Amplifier series provide an integrated sound system for background music, paging and fire emergency alarm applications, the multi choices of power wattages from 60W to 120W and 240W can provide an ideal public address solution from small to big places such as mosques, schools, hotels and factories to train stadium and air stations.

3. FEATURES

1. Rated outputs from 60W to 120W and 240W.
2. 100V/70V line transformer-isolated speaker outputs, low impedance 4-16 ohms speaker outputs.
3. Ideal integrated sound solution of BGM and paging.
4. Built-in MP3 player and AM/FM tuner and remote control.
5. VFD English display.
6. USB port to download and store MP3 song with expandable memory storage.
7. MP3 song individual cycle and all cycle broadcasting modes.
8. AM/FM each 100 channels memory storage.
9. Tuner manual or automatic search.
10. Two balanced line inputs and three balanced microphone inputs.
11. One stereo aux input and one amp input.
12. Two MIC input and two line input and one AUX input.
13. One EMC input with priority over all other inputs except MIC 1.
14. AUX, MIC, MP3, Tuner, Bass, Treble and Master volume control.
15. MIC 1 mute level control.
16. Power and protection indicators and 6 output level meters.

4. NOMENCLATURE AND FUNCTIONS

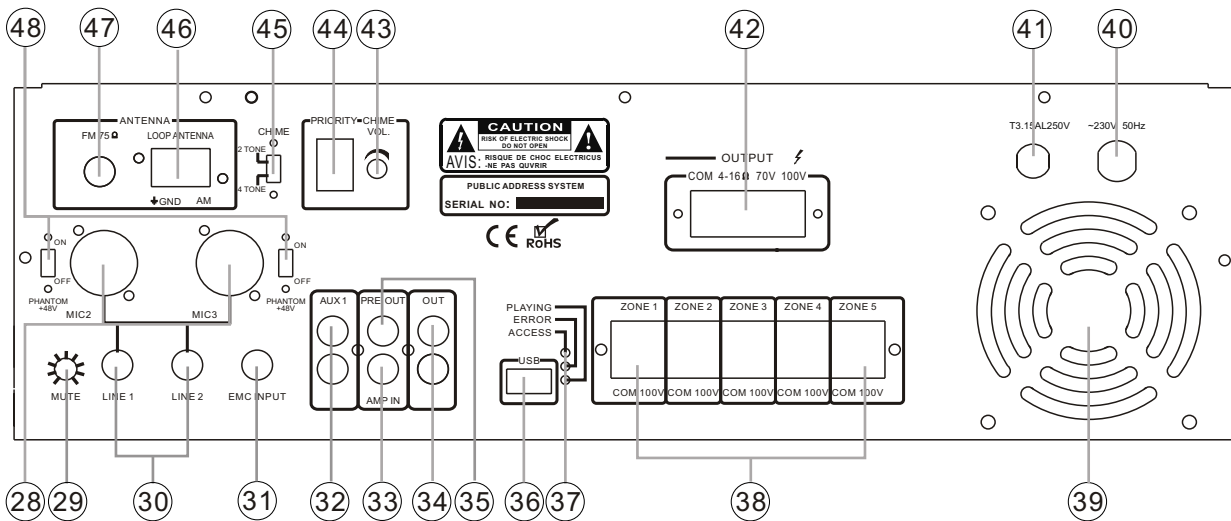
4.1 FRONT PANEL



- 1. USB**
USB Port Download and store Mp3 song
- 2. POWER SWITCH**
On top of the opening Power
Press the end, power shut down
- 3. AUX1**
AUX volume control (AUX 1)
- 4. MIC1 \ MIC2 \ MIC3**
MIC volume control (MIC1/MIC2/MIC3)
- 5. MP3**
MP3 volume control
- 6. TUNER**
Tuner volume control
- 7. BASS**
Adjust bass response. Rotate clockwise to increase bass output and anticlockwise to reduce it.
- 8. TREBLE**
Adjust treble response. Rotate clockwise to increase treble output and anticlockwise to reduce it.
- 9. MASTER VOL**
Master volume control All input level control
- 10. MIC1**
MIC1 input 6.3 Microphone jack input
- 11. TUNER SCREEN**
Display the working state of tuner
- 12. OUTPUT LEVEL**
Level meters 6 output level indicators
- 13. PROT**
Protection indicator
- 14. POWER**
Power indicator Indicator green lights when power on
- 15. UP**
UP search channel (Tuner)
- 16. DOWN**
Down search channel (Tuner)
- 17. AUTO/MA**
Auto/Manual band search button (Tuner)
- 18. BAND**
AM/FM Band select button (Tuner)
- 19. NEXT**
Next button (MP3)
- 20. ZONE (1~5) LEVEL**
Zone (1~5) level indicators
- 21. ZONE (1~5)**
Zone (1~5) button
- 22. CHIME LEVEL**
Chime level indicators
- 23. CHIME**
Chime button
- 24. STOP/RETURN**
Stop/Return button (MP3)
- 25. PLAY/PAUSE**
Play/Pause button (MP3)
- 26. PREVIOUS**
Previous button (MP3)
- 27. MP3 screen** Display the working state of Mp3

4. NOMENCLATURE AND FUNCTIONS

4.2 REAR PANEL



28. MIC2 \ MIC3

MIC balanced inputs

29. MUTE

Mute Microphone 1 mute level control

30. LINE INPUT(MIC2 \ MIC3)

Line Unbalanced inputs

31. EMC INPUT

EMC Input Fire alarm signal input

32. AUX1

Auxiliary input jack, Non-equilibrium of connecting peripherals signal

33. AMP IN

Amplifier Input

34. OUT

Line output, Non-equilibrium type, the output of all input signals.

35. PRE OUT

PRE-Amplifier Output

36. USB

USB Port Download and store Mp3 song

37. MP3 INDICATOR

ACCESS: Yellow lights means reading

ERROR: Red lights means error happens

PLAYING: Green lights means Mp3 song is broadcasting .

38. ZONE(1~5) OUTPUT TERMINAL (100V)

Connecting speakers

39. COOLING FANS

40. ~ 230V/50Hz AC power input

41. AC Fuse

42.SPEAKER TERMINALS

Connectors for 4-16 ohms or 70V and 100V speaker

43.CHIME VOL.

Chime volume control

44.PRIORITY

Short-circuit protection

45.CHIME(2 Tone\4 Tone)

Chime(2 Tone\4 Tone) volume Control

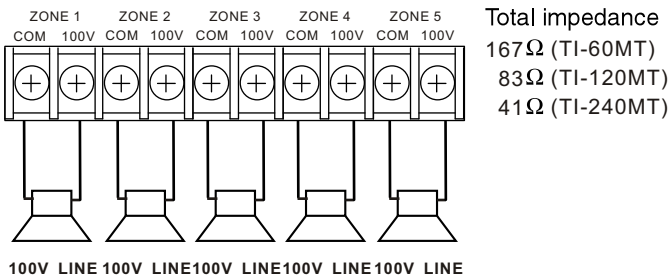
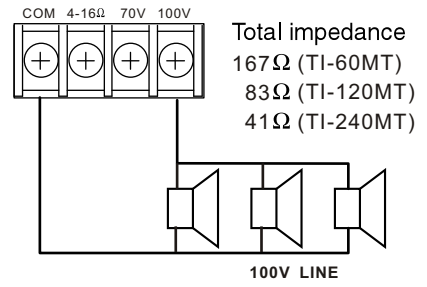
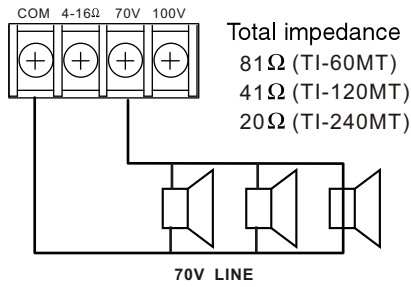
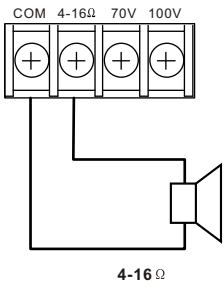
46.AM-BAND ANTENNA

47.FM BAND 75 OHM ANTENNA

48.+48V PHANTOM SWITCHES

5. CONNECTIONS

5.1 SPEAKER CONNECTIONS



Notes

- Both the 4 – 16 Ω and 70V/100 V terminals cannot be used at the same time.
- Impedances indicated in the figures represent the total speaker system (load) impedances.

! WARNING

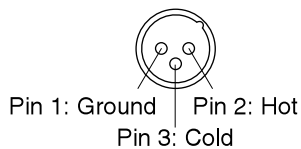
Be sure to attach the supplied terminal cover after connection completion. Because high voltage is applied to the speaker terminals, never touch these terminals to avoid electric shock.

5.2 XLR CONNECTIONS

Combined XLR (female)/phone jack connectors.

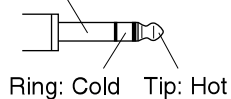
Usable connectors and plugs

- XLR type male connector

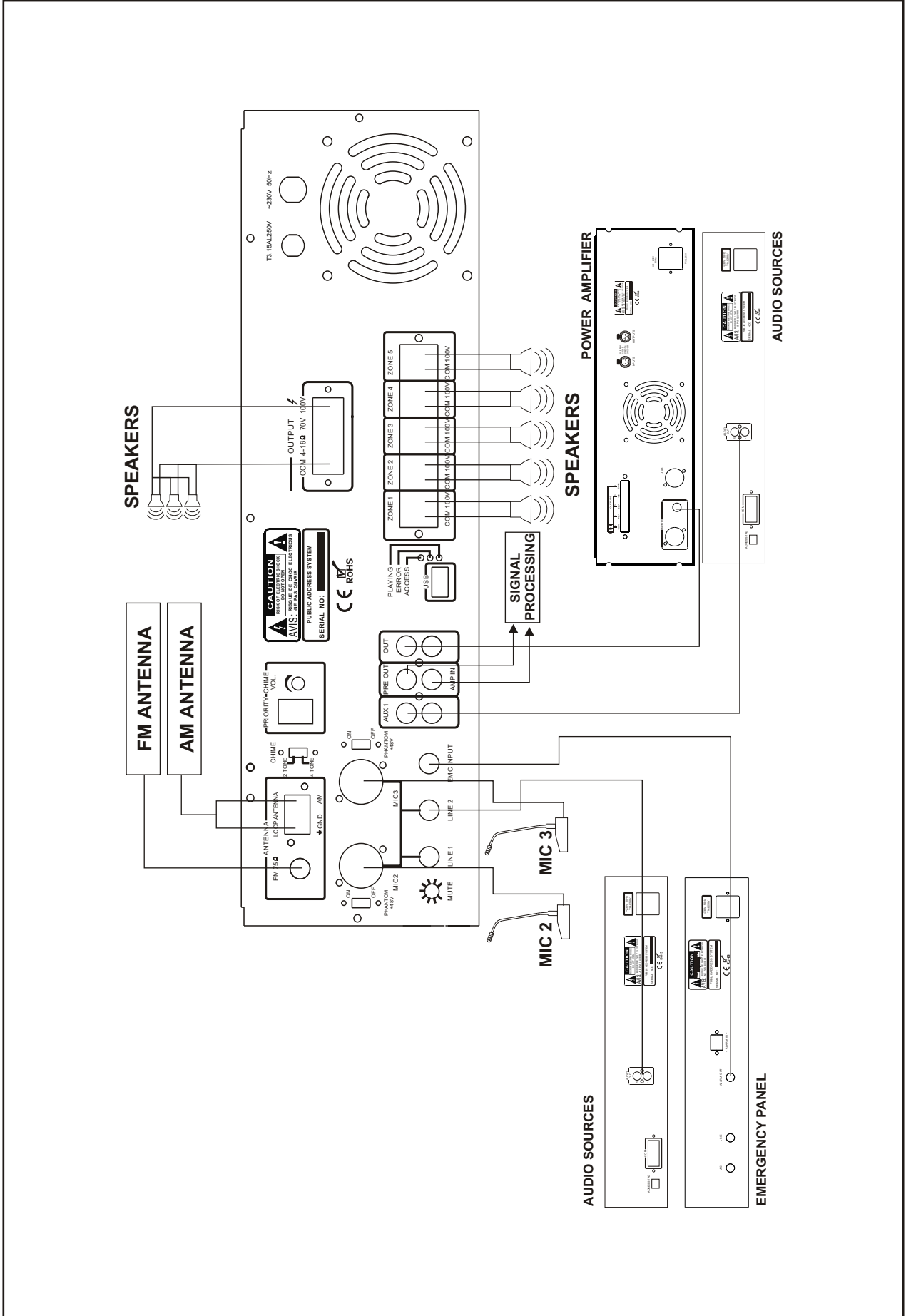


- Phone plug

Sleeve: Ground

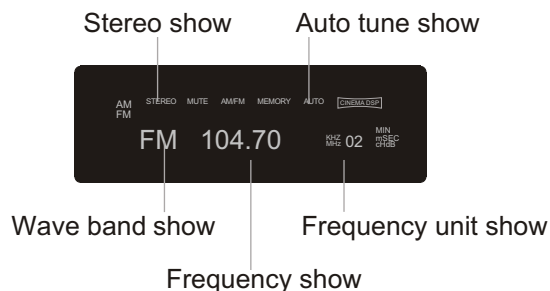


6. APPLICATIONS



7. TUNER OPERATION

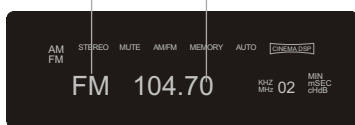
FLUORESCENCE DISPLAY



TUNER OPERATING

1. Open power supply switch on, fluorescence show last time close employment state.

Wave band show Frequency show

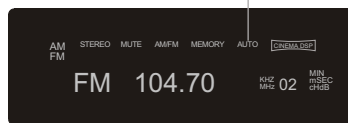


2. Select broadcast wave band

As if show an't want to wave band, invite press Wave band key stoke accept of wave band, per Press once, give switch fm/am.

3. Select broadcasting station means

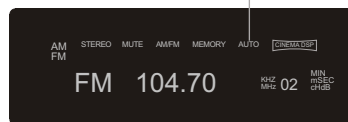
Auto tune show occasionally auto illumine



Per press once auto / Manual tune select key (auto/ma)give switch

4. Select broadcast broadcasting station Press key up direction high end frequency search, press key down direction low end frequency search.

Auto tune show occasionally auto illumine



Auto tune occasionally: Auto take over one Broadcasting station
Manual tune occasionally: Repeat press(or Persist press)up to select broadcasting station

8. MP3 OPERATION

MP3 OPERATING

1. Press "power" switch on power supply

2. Button function

PLAY / PAUSE

STOP / RETURN

PREVIOUS

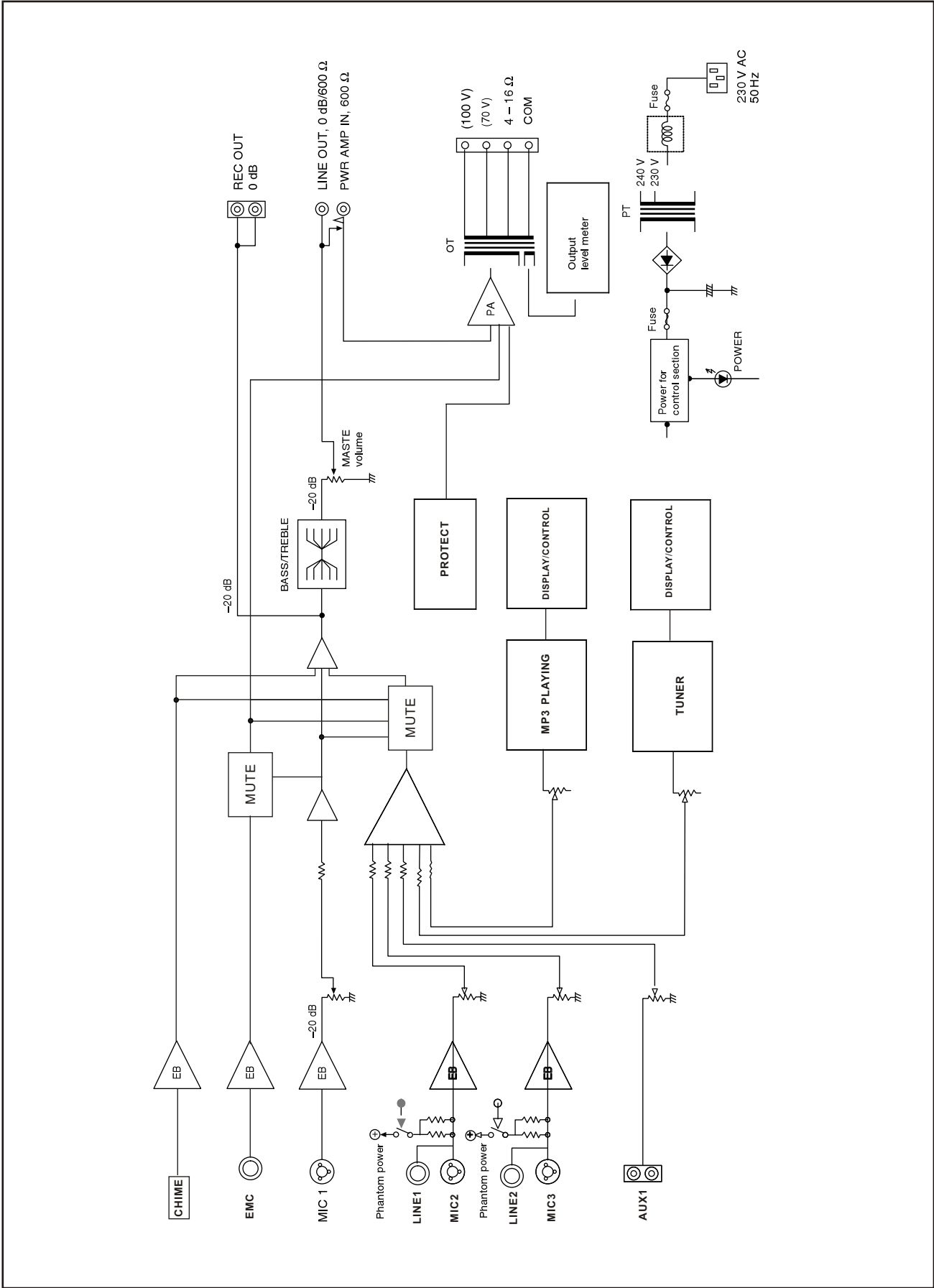
NEXT

3. MP3 Manual Play

(1).When press play button to enter playing for the selected items, then press the play button, means pause, it can select the one you want by previous and the next.

(2). Press stop button when playing, themenu will back to the selected menu, use previous and the next button can select the item you want, press play button to enter related menu .

9. BLOCK DIAGRAM

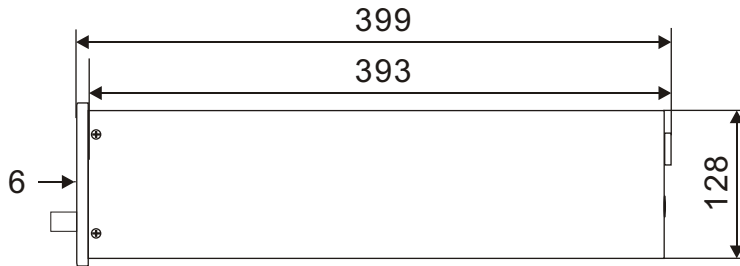
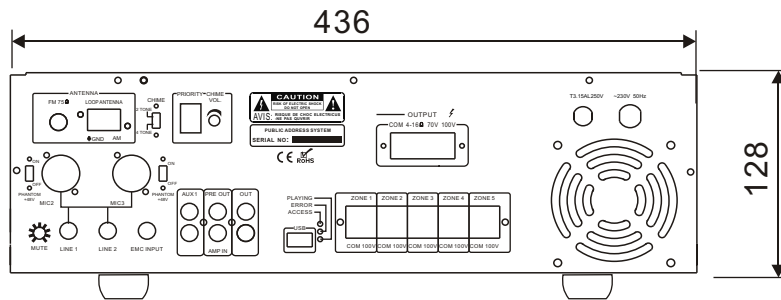
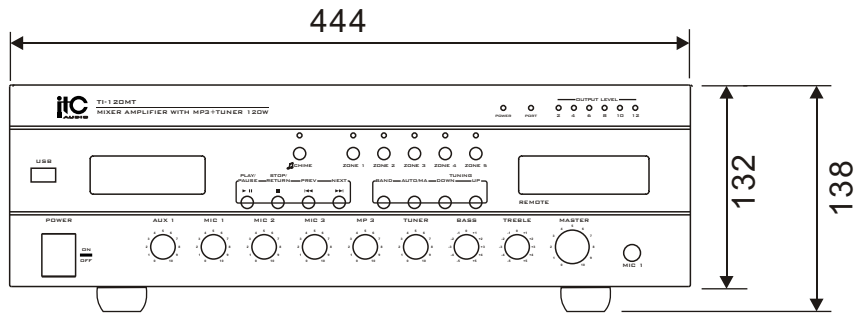


10. SPECIFICATIONS

MIXER AMPLIFIER				
MODEL		TI-60MT	TI-120MT	TI-240MT
RATED POWER OUTPUT		60W	120W	240W
SPEAKER OUTPUTS		4~16Ω,70V/100V		
INPUT		MIC 1、 2、 3: 5mv/600 Ohms,Balanced/Unbalanced AUX 1、 2: 250mV/15KOhms, Unbalanced EMC : 250mV/15KOhms, Unbalanced		
TONE		Bass:±10dB at 100Hz Treble:±10dB at 10KHz		
FREQUENCY RESPONSE		50Hz~15KHz		
S/N RATIO		MIC 1、 2、 3: 66dB;AUX 1、 2: 80dB		
T.H.D		Less than 1% at 1KHz,1/3 rated power		
CROSSTALK		MIC : 80dB;AUX 85dB		
MUTING FUNCTION		MIC 1 over other input signals with 0~30dB attenuation EMC ove all inputs except MIC 1		
CONTROLS		Individual gain controls, power switch		
INDICATORS		Power LED,LED level meter,protect		
PROTECTION		AC fuse, short-circuit and high temperature		
TUNER				
FREQUENCY RESPONSE	FM	87-108MHz	AM	522-1611kHz
SENSITIVITY	FM	≈20uV	AM	≈6.0mV/m
SIGNAL / NOISE RATIO	FM	≈40dB	AM	≈36dB
MP3				
MP3 FREQ RESPONSE		30Hz~20Hz		
MP3 STORE METHOD		Download 1GB(expandable)		
MP3 STORE FORMAT		Compatible FAT12、 FAT16、 FAT32		
ELSE				
POWER REQUIREMENTS		~230V/50Hz		
POWER CONSUMPTION		120W	200W	350W
DIMENSION(mm)		444X399X132		
NET WEIGHT		11.6Kg	13.4Kg	16.2Kg

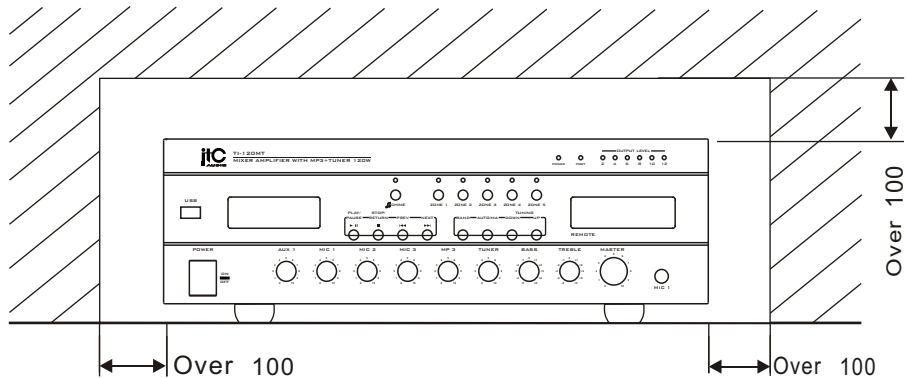
11. DIMENSIONAL DIAGRAM

UNIT :mm



Keep the unit's all sides over 10 cm away from objects that may obstruct air flow to prevent the unit's internal temperature rise.

UNIT :mm



PUBLIC ADDRESS SYSTEM



Guangzhou ITC Electronic Technology Limited
[Http://www.itc-pa.com.cn](http://www.itc-pa.com.cn)