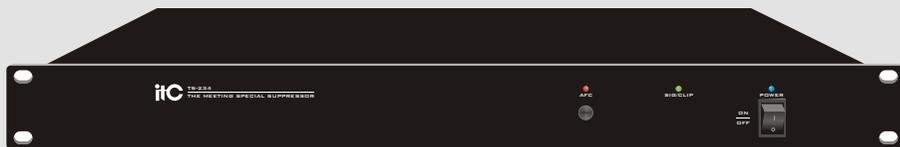




PUBLIC ADDRESS SYSTEM

OPERATION MANUAL

TS-234 THE MEETING SPECIAL SUPPRESSOR



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.

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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.

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.

1. DESCRIPTION

1. Using the world's most advanced high-speed floating-point digital signal processor algorithm, a 3rd generation digital feedback suppressor. It is an advanced and built-in the most advanced audio signal processing software and high-speed computer system, 32-bit floating point DSP, speed of 1Gflops. Harvard architecture, pipelining, dedicated hardware multiplier, special DSP instructions, fast instruction cycle, using Chirp. Z-transform (CZT) algorithm combined with FFT algorithm to detect the feedback, and use acoustic feedback signal to establish time-frequency characteristics, determine the conditions. The algorithm can detect and set digital acoustic feedback automatically, quickly and accurately. Does not change the acoustic signal spectrum to reproduce the Microphone signal, gain boost 9 - 15dB, high-fidelity sound quality, operating fool, with out any adjustment. Because of traditional feedback inhibition, the room is completely different adaptive feedback cancellation algorithm prediction can be completely eliminated without distortion from excited howling, compared with the traditional type, phase shifting, notch-in microphone to enhance the gain is very big, better sound quality, wider frequency response.
2. With a strong input signal automatic pressure limit function, the output signal is automatically limited to the nominal output level when a strong signal inputs, the signal will not clipping distortion and can still maintain fidelity signal output.

2. FEATURES

1. The new adaptive algorithm no need to debugging, accurate, reliable and easy to use, enables the system to gain 9-15dB.
2. Built-in limiter function allows signal input still maintains fidelity signal output in the case of large dynamic.
3. Straight / howling suppression switch makes operation easier with a key control without feedback suppressor when mining.
4. Configure the wireless microphone interface and the input signal intensity can be adjusted continuously through the potentiometer, makes the connections more convenient.
5. The signal input and output with RCA / XLR interface makes the system easy to connect.
6. Support of the international universal wide supply voltage range, AC100V ~ 240V.

3. NOMENCLATURE AND FUNCTIONS

3.1 Front Panel



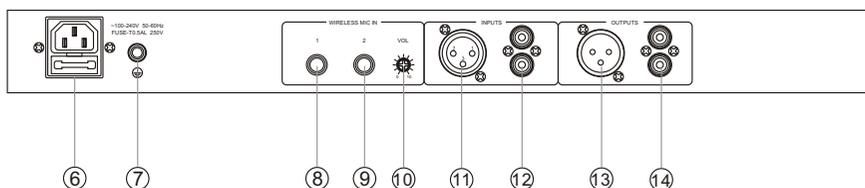
1. AFC—On/Off button
2. AFC—On/Off indicator
3. SIG/CLIP—Signal indicator

4. Power switch
5. Power indicator

Notes:

1. If the system generates whistle sounds, pls turn on the switch, the machine starts to suppress to produce whistle. If not, you need to open AFC switch.
2. The color changing of SIG / CLIP-signal indicator on panel delegates the state of the input signal, the green indicates that the input signal is too small and a bigger input signal needed, yellow indicates that the input signal is appropriate and the feedback suppression performance is the best, red indicates severe excessive input signal, the output distortion.

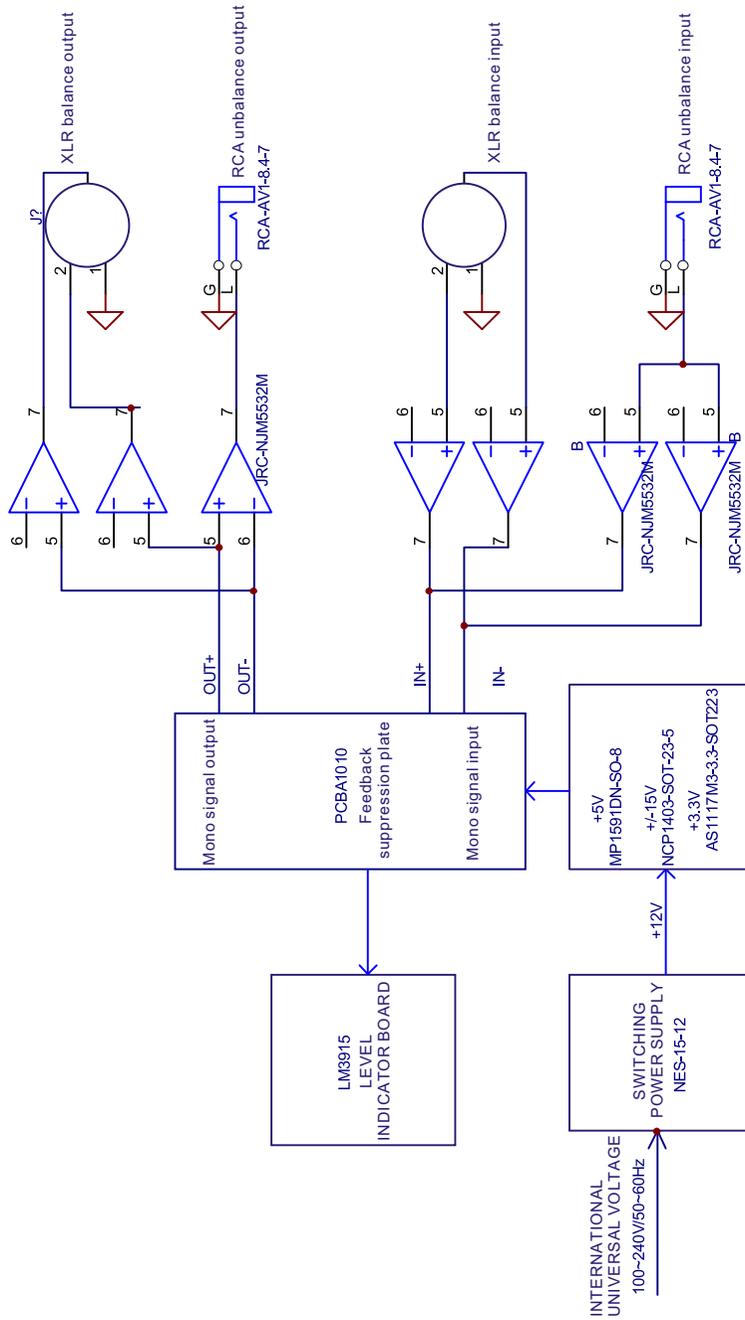
3.2 Real Panel



6. AC power input, support for AC 100V ~ 240V input
7. Ground terminal for connection to the earth
8. Wireless MIC input interface1
9. Wireless MIC input interface2

10. Wireless MIC volume control potentiometer
11. XLR input connector
12. RCA input connector
13. XLR output connector
14. RCA output connector

5. BLOCK DIAGRAM



6. SPECIFICATIONS

| | |
|--------------------------------|--|
| Line rated input level | 2.2dBu |
| Line maximum input level | 15dBu |
| Line inputs interface | RCA/XLR ports |
| Wireless mic rated input level | -19.7dBu(Continuously adjustable sensitivity) |
| Rated output level | 2.2dBu |
| Wireless mic input ports | 6.3 MIC socket |
| Line output ports | RCA/XLR ports |
| Line input impedance | Unbalance input 10K Ω balance input 20K Ω |
| Wireless mic input impedance | 1K Ω |
| Line output impedance | 50 Ω |
| S/N Ratio | ± 60 dB |
| Frequency response | 50~14.5kHz ± 3 dB |
| Ground Resistance | ≤ 0.1 Ω |
| Power Consumption | 5W |
| Power | AC100~240V 50/60Hz |
| Dimensions | 484X209X45mm |
| Weight | 2.75Kg |

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