

# **itC** PROFESSIONAL POWER AMPLIFIERS OWNER'S MANUAL



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**TS-200PI/TS-350PI/TS-500PI/TS-700PI**

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**PRECISION SERIES**

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# CONTENT

■ DESCRIPTION .....	1
■ FEATURES .....	2
■ FRONT PANEL .....	3
■ BACK PANEL .....	4
■ CONNECTIONS .....	5
■ SPECIFICATIONS .....	7
■ DIMENSIONAL .....	8

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# WARNING

**ATTENTION:** This unit must be protected from moisture because of the risk of fire and the possibility of electrical shock.

1. Make sure that you have the correct mains voltage. Only operate the unit at the mains voltage marked on the rear panel.
  2. Make sure that nothing, especially metal objects, are inserted into the amplifier. This could result in a severe electric shock or malfunction.
  3. If the unit is subjected to extreme fluctuations of temperature, e.g. on being transported from outside into a heated room, condensation can form. The unit should not be used until it has reached room temperature.
  4. In the event of water or any other fluid being accidentally spilt on the unit, switch the unit off immediately and send it to a qualified service workshop for inspection.
  5. Make sure that the unit is always well ventilated and never exposed to direct sunlight.
  6. Do not use sprays to clean the unit as they have a detrimental effect on the unit and Could ignite ITC denyly.
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## DESCRIPTION

Thank you very much for choosing an ITC PRECISION SERIES amplifier. We are sure it will give you many years of satisfying performance.

ITC power amplifiers of the PRECISION SERIES meet the stringent requirements of tough touring applications. They are protected against over-temperature, overload, shorted outputs, radio frequency interference and DC faults. The power transistors are protected from damage from reverse feeding of electrical energy by means of an additional special protective circuit. For the so-called soft-start, the power outputs are switched on delayed via relays. An inrush current limiter circuit prevents the mains fuses from being blown.

Maximum precision is also guaranteed as regards mechanical construction and finish. The robust steel chassis features remarkable torsion resistance and is specially designed to cope with the tough wear and tear associated with going on tour. Thermal stability is guaranteed by several low noise 3-stage fans which also means that they can be used inside the studio. Comparator circuits constantly compare the power amplifiers' input and output signal and control the limiters under non-linear operating conditions. They protect the loudspeakers from overload due to power stage clipping. The PRECISION SERIES power amplifiers feature excellent transmission properties. The power amplifier topology also makes for extremely low distortion rates. Distortion factor (THD), intermodulation distortion (SMPTEIM) and transient intermodulation distortion (DIM 30 and DIM 100) are so low that they are only detectable with the most sophisticated measuring equipment. Generously dimensioned power supplies with low-leakage toroidal-core transformers provide considerable headroom well above the nominal ratings. V/I foldback limiter circuits were deliberately not included in the PRECISION SERIES power amplifiers to facilitate operation at complex loads up to a phase angle of +/- 90.

The inputs are electronically balanced on XLR connectors. (Isolation transformers can be retrofitted). Direct Outs in the form of XLR connectors (male), to loop the signal through, are also standard features. The modes DUAL/Stereo can be selected via the Input Routing Switch. Furthermore, the PRECISION SERIES power amplifiers can also be operated in "Bridged" mode.

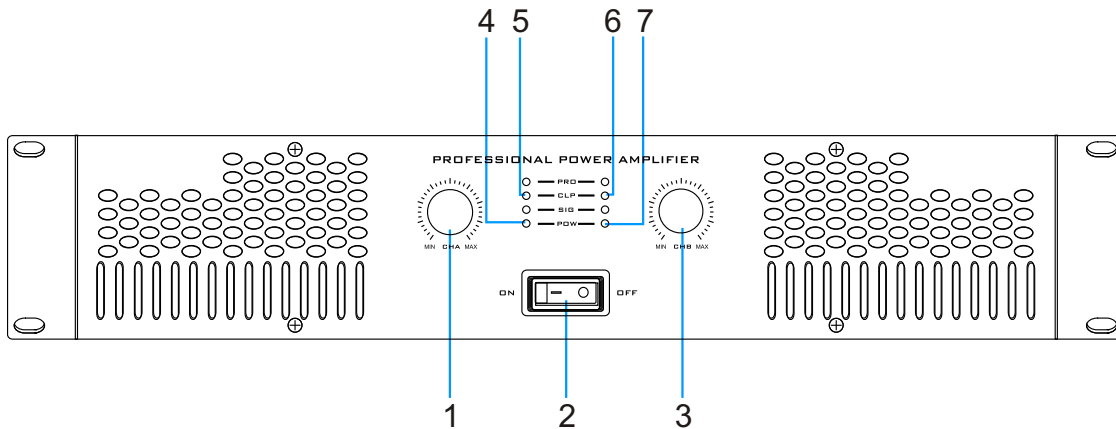
The front panel accommodates the dB-calibrated input Gain controls which are designed as especially precise and safe-to-operate detented potentiometers. The LED display provides information about the power amplifiers' operating status. For the two channels, they demonstrate readiness to operate, whether there is a signal at the input or output, when the Limiters have been activated and whether one of the protective features has been triggered. The power outputs Channel A, Channel B and Bridged Out are available on Speakon connectors. The rear side of the unit accommodates the ON/OFF switches for the integrated Hi and Lo cut filters, a groundlift switch which separates the housing from the circuit ground thus helping to prevent hum loops and the operating modes selector to mono bridged operation. They also feature extremely quiet fans with front-to-rear airflow, facilitating operation in large and narrow amplifier racks.

This Owner's Manual is meant to help you familiarize yourself with all the PRECISION SERIES' other features. Please read it through carefully and we guarantee that your new power amplifier of the PRECISION SERIES from ITC will give you great pleasure.

**Features:**

1. Input sensitivity adjustment.
2. Three operating modes: bridging, stereo and parallel.
3. Enter seat, ground pin ground and suspension control.
4. XLR and 6.35 inputs dual seat.
5. CHA and CHB signal LINK output.
6. With signal indication, protection instructions, instruction limiter, power indicator.
7. CHA and CHB volume control.
8. CHA, CHB and bridging SPEAKON output.
9. AC input over current protection.
10. The amplifier has short circuit protection, overload protection, DC protection and overheating protection, transformer overheating protection.

Front panel:



## 1. A channel volume control

A potentiometer controls the output volume of amplifier channel A. Clockwising to increase the volume, whereas the volume decreases.

## 2. Power Switch

After the switch is turned on, POWER LED lights after a few seconds. A ?ga?sound can be heard inside relay.

## 3. B channel level control

A potentiometer controls the output volume of amplifier channel B. Clockwising to increase the volume, whereas the volume decreases.

## 4. POW- power supply indicator

Lighted LED indicates that the power supply is on.

## 5. CLP- clipping indicator

When the yellow LED lights,which means the output signal has been distorted.Indicating that the input signal is too large,and the input signal should be decreased.

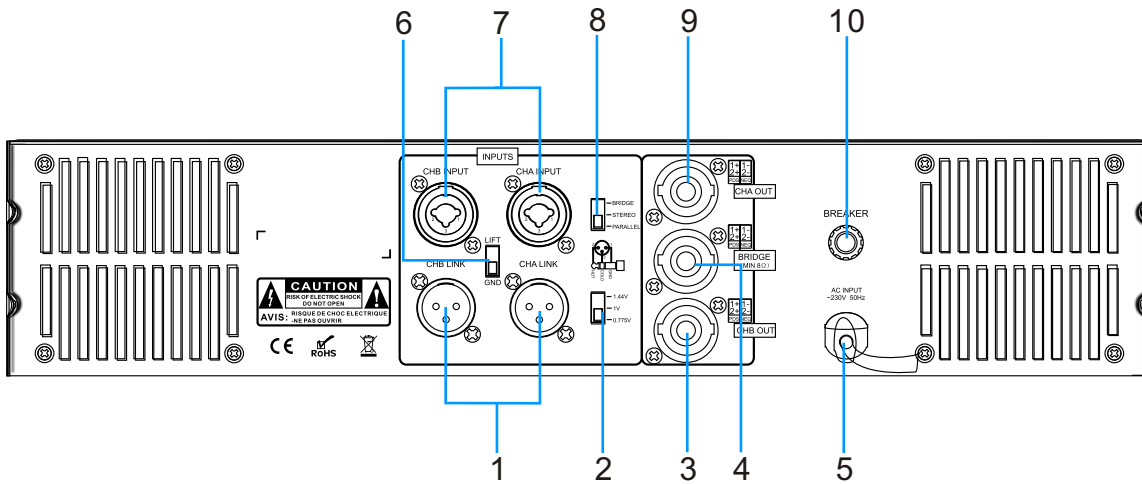
## 6. PRO- protection indicator

At the first three seconds of turning on the machine,the protecting indicator lights in red color.If the whole self-test is normal,then the machine will work and protecting indicator lights off after three second.If the protecting indicator keep lighting, then the machine is faulty, please contact your dealer.

## 7. SIG- signal indicator

When the machine inputs signal normally,the indicator lights in green color. When the machine fails or the signal is not entered correctly, the indicator lights off.

Back panel:



1. A / B channel balances LINK output.

2. Sensitivity Input switch.

There are three positions 1.44V, 1V and 0.775V (see rear panel diagram).

3. B-channel amplifier output connector.

4. The bridge output connects speaker.

5. AC power input.

Connected to the mains supply, please check if the use voltage is consistent with the marked 220V.

6. Switch sifts from ground and suspension control.

7. A / B channels of balanced and unbalanced inputs.

8. The bridge, stereo, and then switch.

9. A channel amplifier output connector.

10. Overload protection device.

## POWER AMPLIFIER INPUT CONNECTORS:

Connection methods:

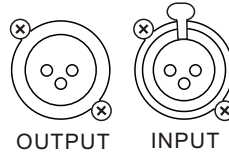
XLR connector is the connector for balancing transmission signal.

The definition of each input pin is:

PIN 1: Ground

PIN 2: Signal Hot End

PIN 3: Signal Cold End



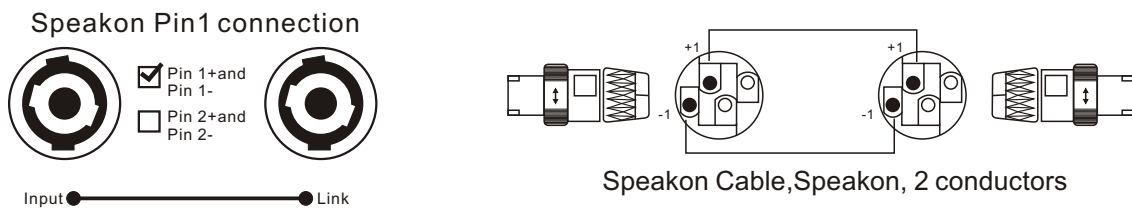
For unbalanced input method, PIN 1 and PIN 3 are short-circuiting. Input sensitivity is 0dB (0.775V).

## Amplifier output connector:

Wiring method is as follows:

+1; +2 positive output.

1; -2 negative output.



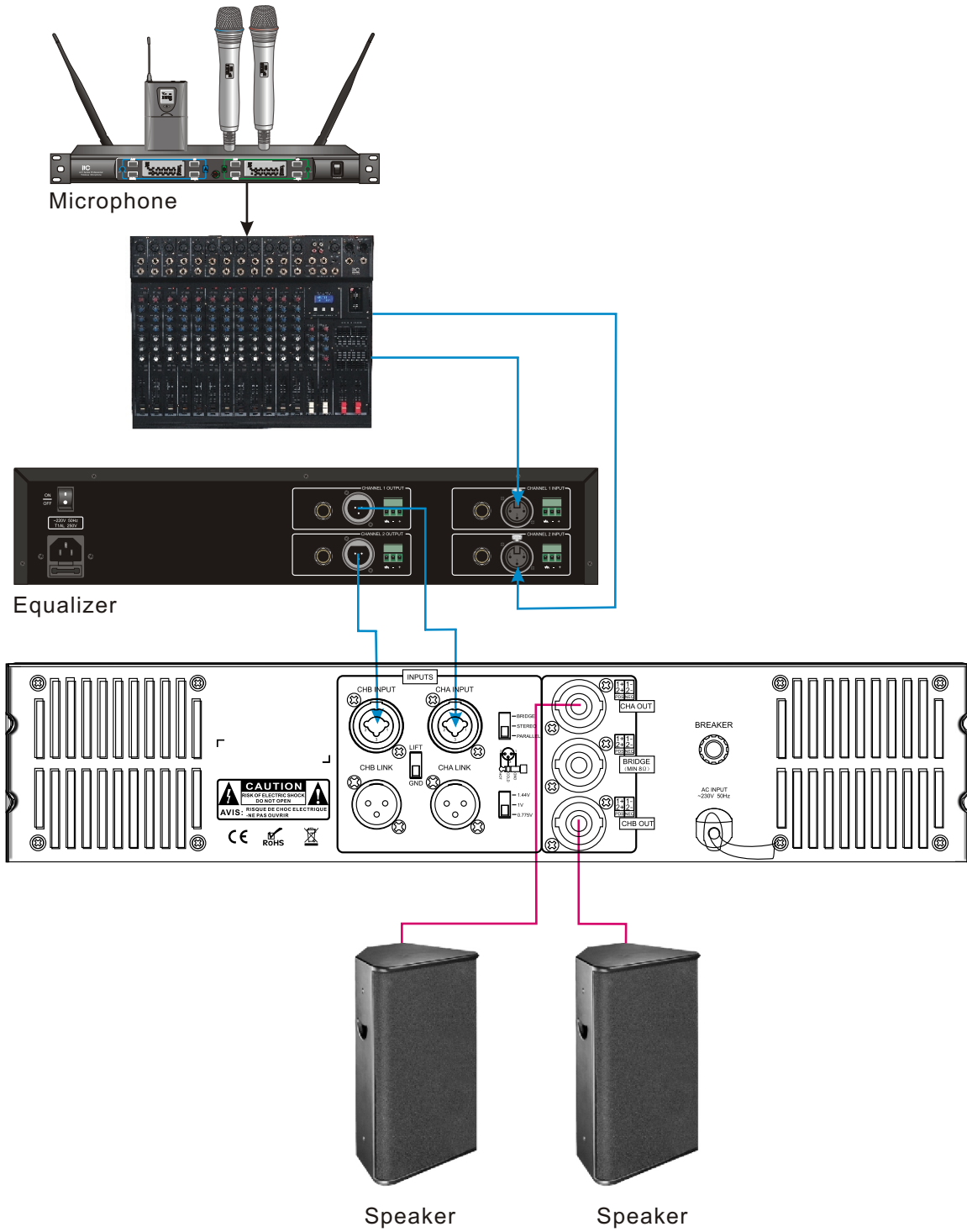
## Note:

To avoid over-heat protection caused by the clog of fan hole, the dust-proof net on the panel should be removed and cleaned.

The cleaning method : first remove the four screws on the panel, take out and clean the dust-proof net. After clean and dry the dust-proof net and put it back to original position.

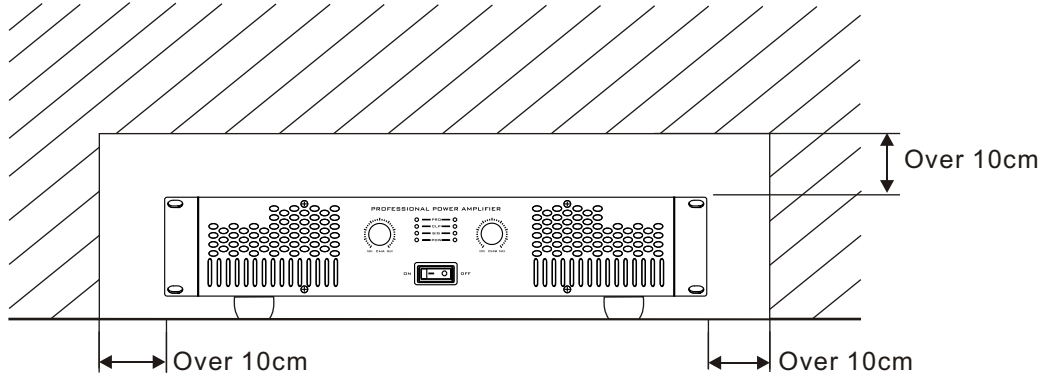


Connections:

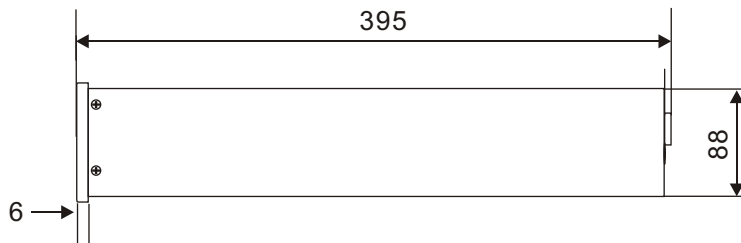
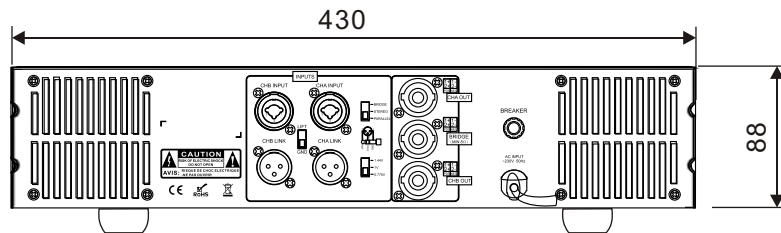
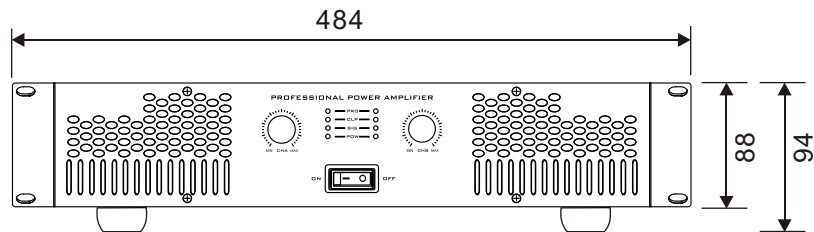


Model	TS-200PI	TS-350PI	TS-500PI	TS-700PI
Output Power				
Stereo/parallel 8Ω	200W X 2	350W X 2	450W X 2	650W X 2
Stereo/parallel 4Ω	300W X 2	550W X 2	600W X 2	900W X 2
Bridging 8Ω	600W	1050W	1200W	1800W
SNR	<-90dB	100dB	110dB	100dB
Frequency Response	20Hz-20KHz(+0dB/-3dB)			
Input impedance	>20K Ω			
Input sensitivity	0.775V/1V/1.44V			
Separation	>70dB			
Distortion	<0.05%			
Damping factor	>200			
Size	484X395X88mm		484X465X88mm	
Weight	11.2Kg	12.6Kg	15.8Kg	17.9Kg

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



UNIT :mm





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PRECISION SERIES**

Version V0.1

