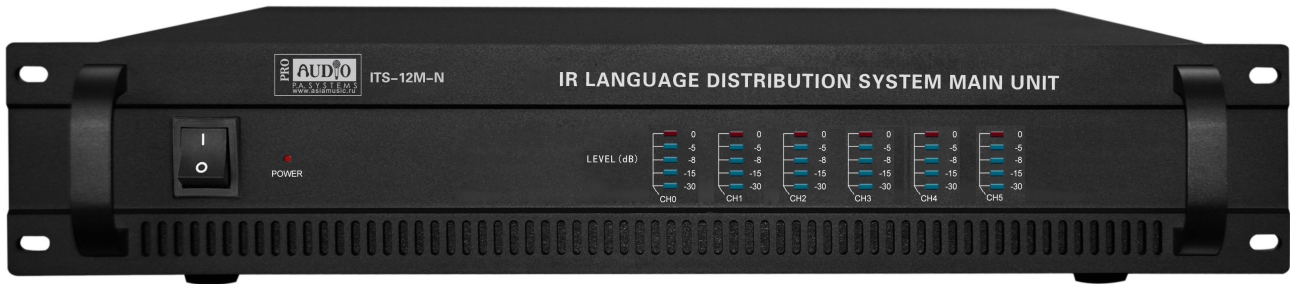# OWNER'S MANUAL

IR Language Distribution System

ITS-12

IR Language Distribution System

This system is ideal for use in business and government conferences, international conventions and other multilingual applications, offering simultaneous interpretation and wireless audio distribution for up to 6 different languages plus the floor language using state-of-the-art infrared transmission technology. It complies with the IEC industry standards, operating in the higher frequency band to avoid lighting interference.

PART ONE. System Configuration

Transmitter unit, IR Radiator, IR Receiver, IR receiver charger case and Interpreter unit

A. IR Transmitter unit ITS-12M-N

1. High security, prevent external interference.
2. Suitable for different conference hall
3. Automatic level control function (ALC).
4. No disturb under daylight lamp
5. Easy to operate and save in project cost
6. With the most advanced technology
7. Elegant configuration in accordance to ergonomics
8. Input channel direct function
9. Has 6CH interpreter's voice for record
10. Installed in a 19-inch frame
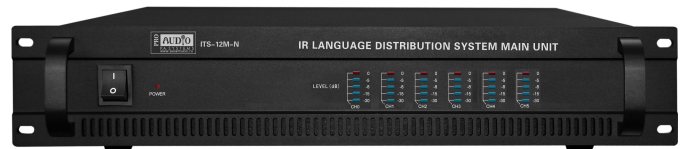
B. IR Radiator ITS-12T-N

1. Radiates & distributes up to 6 channels of audio signal
2. Auto switched on/off by carrier signals from transmitter unit
3. Auto gain control to ensure diodes with max. efficiency
4. Convection cooled for noiseless, reliable operation
5. Mounted on ceiling, wall, floor stand or optional tripod
6. Easily daisy-chained together to expand coverage
7. Half radiator angle: ±22°

C. Interpreter Unit ITS-12C-N

1. Design by the latest technology.
2. Work with headset earphone
3. 6CH simultaneous interpretation.
4. Easy to operate, just with a single press.
5. IR Transmitter unit could connect 5 interpreter's units.
6. Voice adjustable and with prevention on feedback
7. Ensure that every channel is correspondent to the RELAY function respectively.
8. Delegates speak too fast; give a request for slow the speed.
9. Automatic numbering on system units
10. Prevention on interpreter's cough
11. LCD can display input and output channel
12. Interpreter support 13P and 25P connection

D. IR Receiver ITS-12R-N

1. Pocket size wireless handheld unit
2. Accommodates up to 6 different languages
3. Channel selector and headphone connector
4. Power on/off switch and volume level control
5. Powered by rechargeable batteries
6. Aluminum carrying cases provided for receivers
7. Volume, channel, signal and battery power level display on LCD

E. IR Receiver Charger Case ITS-12B-N

1. Used for charging IR receivers
2. High efficiency switch mode
3. Input Voltage: AC110V~120V/220V~240V
4. Charges 24pcs of IR receivers per charging
5. Dimension: 45.5×32×34 cm

PART TWO. Technical Data

1. IR Transmitter unit

a. Modulation mode: FM
b. Frequency synthesis: digital PLL
c. Frequency band: 1.7 - 4.0MHz
d. Frequency response: 100Hz-14kHz
e. Frequency stability: 10ppm
f. Pre-emphasis: 75 μSec.
g. Distortion at 1 kHz: <0.5%
h. Channel separation: >70dB
i. RF output power level: 700mV

j. RF output impedance: 50 ohms

k. Input impedance: 18k ohms

l. Max. input power level: 2V

m. AGC range: 30dB

n. S/N ratio: >75dB

o. Power consumption: 40W

**p.** Operating voltage: 110/220VAC±5%

2. IR Radiator

a. Frequency band: 1.7 - 4.0 MHz

b. Max. IR output power: 25W

c. Max. coverage range: 30m

d. Output level control: Low/High (50%/100%)

e. Angle of half intensity: ±22°

f. RF output impedance: 50 ohms

g. RF input voltage: 100-2000mV

h. Power consumption: 55W / Stand-by 8W

i. Power Supply: 110/220VAC±5%

3. IR Receiver

a. Modulation mode: FM

b. Frequency synthesis: digital PLL

c. Carrier frequencies: 1.7 - 4.0MHz

d. Frequency response: 100Hz-14kHz

e. Pre-emphasis: 75 µSec.

f. Distortion at 1 kHz: <1%

g. Channel separation: >55dBA

h. Frequency stability: 10ppm

i. Operating voltage: 3.1V-5V

j. Power consumption: 60mW


## PART THREE. OPERATING INSTRUCTION

A. IR Transmitter unit ITS-12M-N
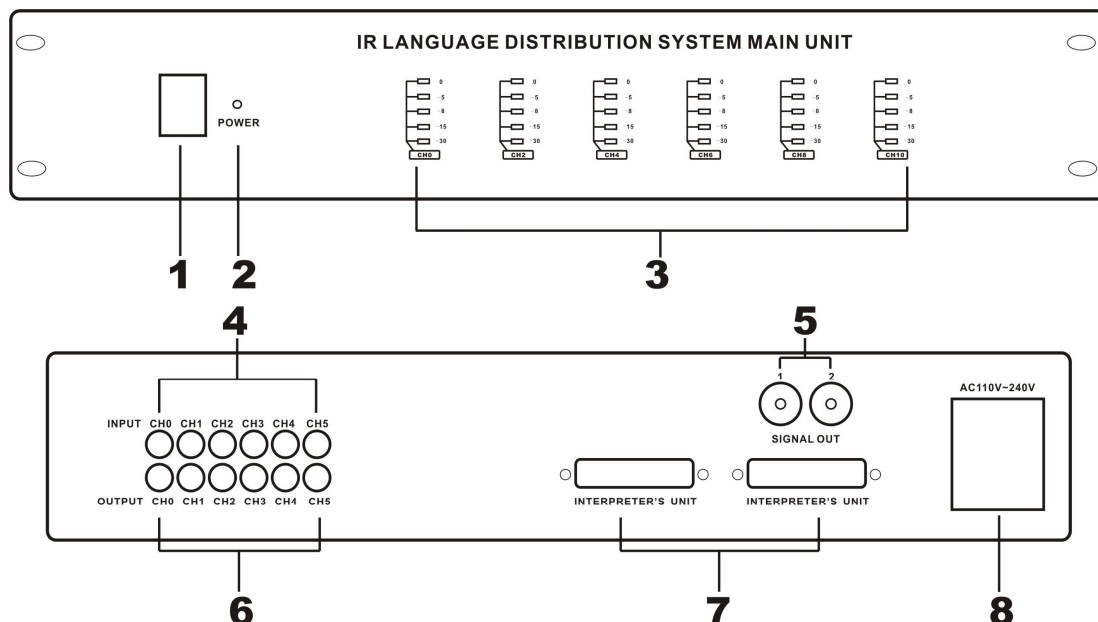
1. POWER SWITCH
2. POWER INDICATOR: The IR Transmitter unit will be on working mode after turn on the power switch, and power indicator will light.
3. LEVEL INDICATOR: When there has audio output, the relevant channel indicator will flashing.
4. AUDIO INPUT CHANNEL CH0-CH5: The original audio can be from wire microphone or wire interpretation audio input equipment.
5. SIGNAL OUT   (TO IR Radiator)
   Use BNC cable to connect from the "SIGNAL OUT' port of main unit to "INPUT" port of IR Radiator, and connect the next IR Radiator from "SIGNAL OUTPUT" of previous one to "SIGNAL INPUT" port of nest one by BNC cable.
6. AUDIO OUTPUT CHANNEL CH0-CH5:
7. INTERPRETER'S UNIT: Main unit can connect 1~5 interpreter unit by hand-in-hand connection.
8. AC POWER INPUT: 110/220VAC±5% 50/60Hz

B. IR Radiator ITS-12T-N
1. IR Radiator front panel
2. Power on/off switch
3. AC POWER INPUT: 110/220VAC±5% 50/60Hz
4. Signal input BNC jack: connect to the "SIGNAL OUT' port of main unit or previous IR radiator output port.
5. Signal output BNC jack: connection to the next IR radiator input port
6. Fixable orifice
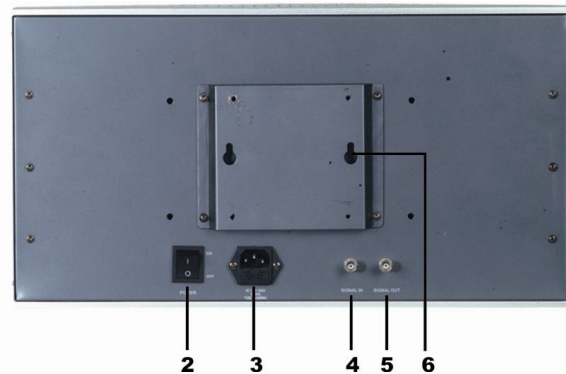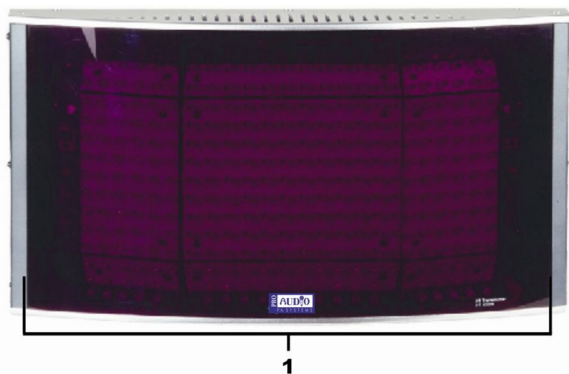
C. Interpreter Unit ITS-12C-N
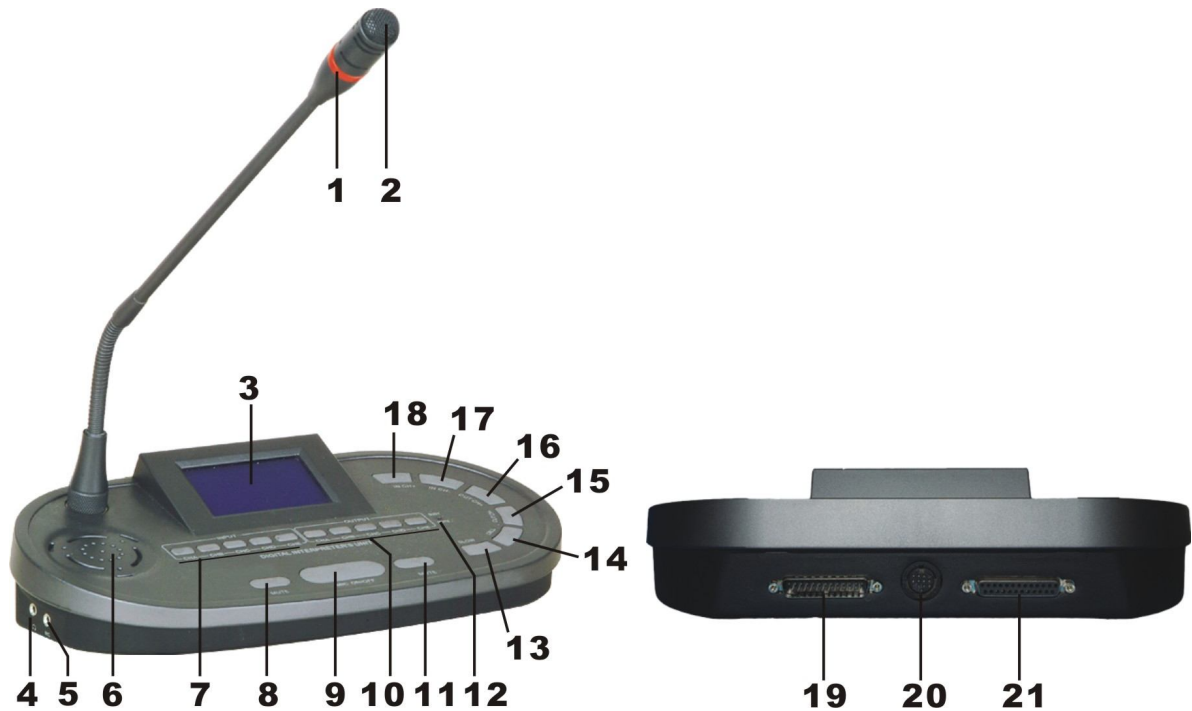
1. Microphone red indicator to show mic state
2. Unidirectional electret MIC
3. Microphone LCD, can display input and output channel
4. MIC. 3.5mm input jack to connect the microphone.
5. Phone 3.5mm input jack
6. Inner speaker
7. Microphone input channel (fast key channel 0-4)
8. Slow key: Delegates/Interpreter speak too fast; give a request for slow the speed.
9. Microphone on/off key
10. Microphone output channel (fast key channel 1-5)
11. Mute key: Prevention on interpreter's cough
12. Channel busy/mute indicator
13. Volume -: Decrease the input volume
14. Volume +: Increase the input volume
15. Output channel –
16. Output channel +
17. Input put channel –
18. Input channel +
19. Input DB25 connector: first unit connect to the main unit, and the next unit connect the previous unit output port.
20. 13P connector, use for connect 13P interpretation system
21. Output DB25 connector: connect the next interpreter's unit.

Operation

1. Set LCD contrast: Press INPUT (CH0+CH1), LCD will display "contrast setting",

press input CH0 or CH1 to decrease or increase LCD contrast, after setting, press input CH 4 to save and exit.

2. When interpreter choose output channel, Mic should be in off state.
3. Set Channel and language: operator can set the language of each channel: Press input CH0+CH2, LCD will display "CH & LAN set", then Press input CH0 or CH1 to select the channel, then press input CH2 or CH3 to select the language of this channel, after setting, press input CH 4 to save and exit.

Interpreter support following language display：

a. N/M: not display any language
b. CN-Chinese
c. UK-Ukrainian
d. TR-Turkish
e. TH-Thai
f. SV-Swedish
g. SR-Serbian
h. RU-Russian
i. RO-Romanian
j. PT-Portuguese
k. PL-Polish
l. NO-Norwegian
m. NL-Dutch
n. KO-Korean
o. JA-Japanese
p. IT-Italian
q. HU-Hungarian
r. HR-Croatian
s. FR-French
t. FI-Finnish
u. ES-Spanish
v. EN-English
w. EL-Greek
x. DE-German
y. DA-Denish
z. AR-Arabic

After setting the language of each channel, LCD will display the out/input language of each channel.
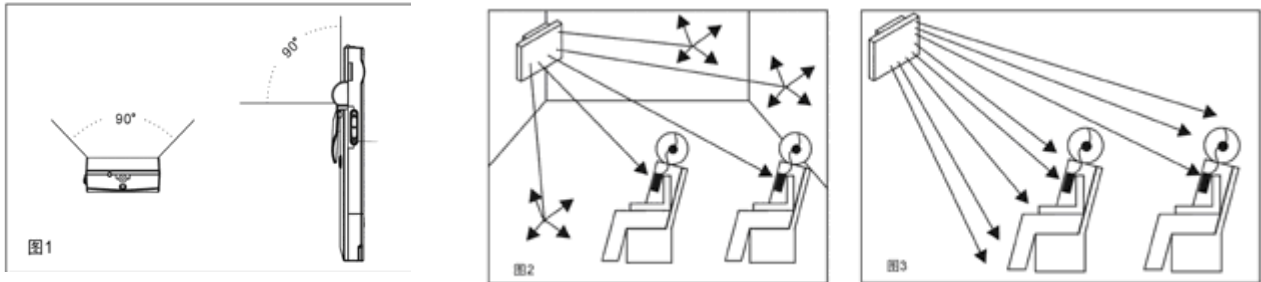
D. IR Receiver

1. LED display the signal, channel and power level
2. Volume –
3. Power on/off
4. IR Lens
5. Earphone jack: used for connect earphone to receiving the sound.
6. Channel +
7. Volume +
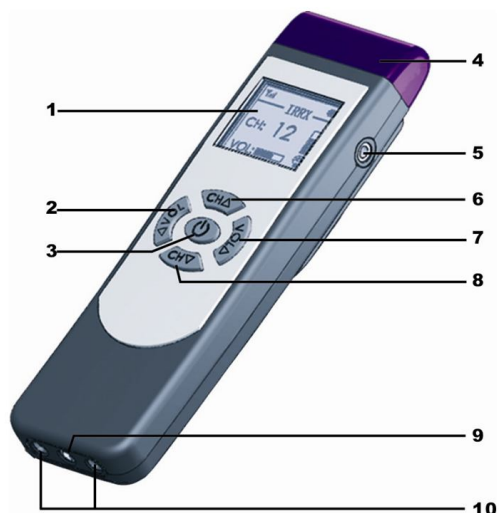
8. Channel -
9. Battery cover lock: the cover can be locked, and it can opened with key
10. Rechargeable interface

PART FOUR. The Installation Introduction of IR radiator

**The Direction and Sensitivity
of IR Receiver (Fig.1)**   **(Fig.2)**
The infrared ray is a kind of directional and sightless light; the sensitivity of the IR receiver is the best when the receiver faces the IR radiator. The receiving angle of the IR receiver is level and vertical ±45º (Fig. 1) The signal receive directionality within this range is the best.
The infrared emission signal is a kind of sightless light, it can transmit the signal to the IR receiver directly or reflecting (Fig.2) so you should consider this factor while installing the IR radiator. It is the best that the IR receiver receives the signal directly, But the reflected signal can also improve the signal effect. The front-seat audience will block the signal of the back row IR receiver in the large-scale meeting-place, it will influence the receiving effect, So you'd better install the IR radiator a little higher.

**PART FIVE. Configure
Required Performance**
  ◘The area of meeting room is 600 square meters.
  ◘5 countries' languages are to be interpreted.
  ◘Rostrum holds 20 representatives and 240 delegates

List of Equipment

Name	Model No.	Quantity
IR Transmitter unit	ITS-12M-N	1
IR radiator	ITS-12T-N	8
Interpreter Unit	ITS-12C-N	5
Headset earphone	ITS-12E-N	5
IR Receiver	ITS-12R-N	240
Receiver charger case	ITS-12B-N	10
Receiver headphone	ITS-12H-N	260
Conference system main unit		1
Delegate unit		19
Chairman unit		1

PART SIX. System set up and debug

1. Connect IR Transmit main unit to Interpreter unit

    Use DB25 cable to connect from the "INTERPRETER'S UNIT' port of main unit to "INPUT" port of interpreter unit, and connect the next interpreter unit from "OUTPUT" of previous one to "INPUT" port of next one by DB25 cable.

2. Connect IR Transmitter unit to conference system main unit

    Use the Audio cable connects from the RF output port of conference system main unit to "SIGNAL IN CH0" port of IR Transmitter unit.

3. Connect other equipments to IR Transmitter unit.

    Use the RF cable connects from the output port of the equipments to "SIGNAL IN" port of IR Transmit main unit.

4. Connect IR Transmitter unit to IR radiator

    A)   Use BNC cable to connect from the "SIGNAL OUT' port of main unit to "INPUT" port of IR radiator, and connect the next IR radiator from "SIGNAL OUTPUT" of previous one to "SIGNAL INPUT" port of next one by BNC cable..

    B)   Turn on other equipments to test if they can work properly.

PART SEVEN. PROJECT FOR INFRARED LANGUAGE DISTRIBUTION