



Control Unit CU-12 / Interpreter Console IC-12

**INTERPRETATION SYSTEM**

**User Manual**

## About this Manual

Read this user manual carefully before installing and operating your Enersound Interpretation System. Use the equipment only as described to avoid accidental injury, damage or hearing impairment. Also, read safety warnings carefully. Keep this manual for future reference. If you give this system to someone else, remember to include this manual.

## Safety Precautions

- Make all connections before plugging the unit into an AC power outlet.
- Hot swapping is prohibited: Never connect or disconnect any cables with the system turned on, especially the 25-pin cables. Always turn off the system before plugging or unplugging interpreter units, microphones or cables so as not to damage the system.
- Do not leave the devices in places with high temperatures or high humidity.
- Do not handle the power cord with wet hands.
- Keep the devices away from fire and heat sources.
- Do not place the equipment on an unstable stand. Use appropriate or original packaging provided by the manufacturer before transporting the system to avoid damaging or breaking it.
- Adequate ventilation is beneficial for better performance and storage of the equipment.
- Keep the system out of the reach of children.
- The CU-12 must be connected to ground via the power cable for safety reasons and to ensure the audio performance of the system.
- Do not open the CU-12 and/or interpreter consoles. There are no user serviceable parts inside.
- Before using this product with a pacemaker or other medical device, consult your physician or the manufacturer of your pacemaker or other medical device.
- Using this product at a loud volume or over a prolonged period of time can lead to permanent hearing damage.
- Reduce the volume to its lowest setting before use.
- When using XLR microphone inputs, connect only microphones that can accept 48Volt Phantom power; otherwise, there may be risk of damage, injury, fire or explosion.
- When using a mobile phone near this product, noise may be produced, but this is not a malfunction. Keep mobile phones as far away as possible from the product.
- To clean, be sure to first switch off and unplug the CU-12 from the power outlet, then wipe with a dry cloth. When extremely dirty, use a soft cloth dampened in neutral detergent. Never use benzene, thinner or chemically-treated towels, which may damage the product's finish.
- Only use Enersound approved cables to connect the system. Do not use any accessory not recommended by the manufacturer.
- A maximum of 11 sets of IC-12 can be connected in one system. The cumulative cable length should not exceed 70 meters. For specific requirements, please contact Enersound at 1 800-644-5090 or [support@enersound.com](mailto:support@enersound.com).
- Service must be performed by authorized technicians only. For service, please contact your local distributor or Enersound at 1 800-644-5090 or [support@enersound.com](mailto:support@enersound.com).
- Turn off the power supply and unplug the equipment from the power supply in case the equipment is not in use for a long time.

Please register the product within 30 days of purchase. To Register Product:

- 1) Go to [www.enersound.com/registration.html](http://www.enersound.com/registration.html)
- 2) Follow instructions to complete the online product registration form.



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

**CAUTION:** To reduce the risk of electric shock, DO NOT open covers, no useable serviceable parts inside. Refer servicing to qualified service personnel only

This label may appear on the bottom of the unit due to space limitations.



The lightning flash with an arrowhead symbol and an equilateral triangle is intended to alert the user of the presence of uninsulated dangerous voltage within the product enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation mark within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:** To avoid fire or shock hazard, do not expose units to rain or moisture.



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical or applicable local codes.



Power Disconnect: Units with or without ON - OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON - OFF switch is in the ON position. The power cord is the main power disconnect for all units.

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Remarks:

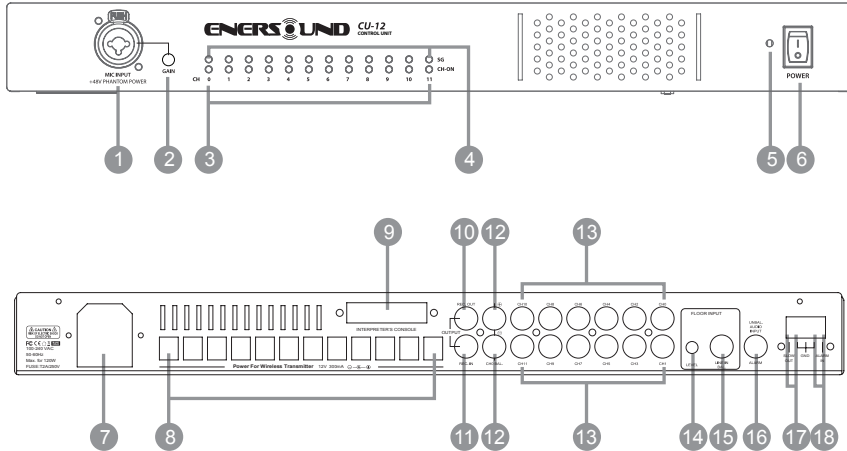
Enersound reserves the right to modify the products and its specifications without notice.

# 1. System Introduction

- The Enersound CU-12 Control Unit works as a main unit to provide power, input and output interface, and control for up to 11 dual interpreter consoles. It allows up to 22 interpreters to perform simultaneous interpretation for a maximum of 11 target languages plus one floor (original) language.
- The Enersound IC-12 is a 12-channel dual interpreter console with relay capabilities. It allows two interpreters to work together. Interpreters can choose either floor channel to listen to the speaker and perform direct interpretation or choose the relay mode when the interpreter does not understand the floor language and listen to the interpretation from a different booth in a language that this interpreter can understand.
- The IC-12 also allows interpreters to select the outgoing channel depending on the language they are interpreting into (two-way interpretation), switch on/ off and mute their microphone, and control the headphone volume.
- The system features a security lock that prevents two interpreters to select the same outgoing channel at the same time.
- The product is a professional, easy plug and play, stand-alone system that can be integrated with most infrared (IR) or radio frequency (RF) language discussion systems.

## 2. Product Introduction

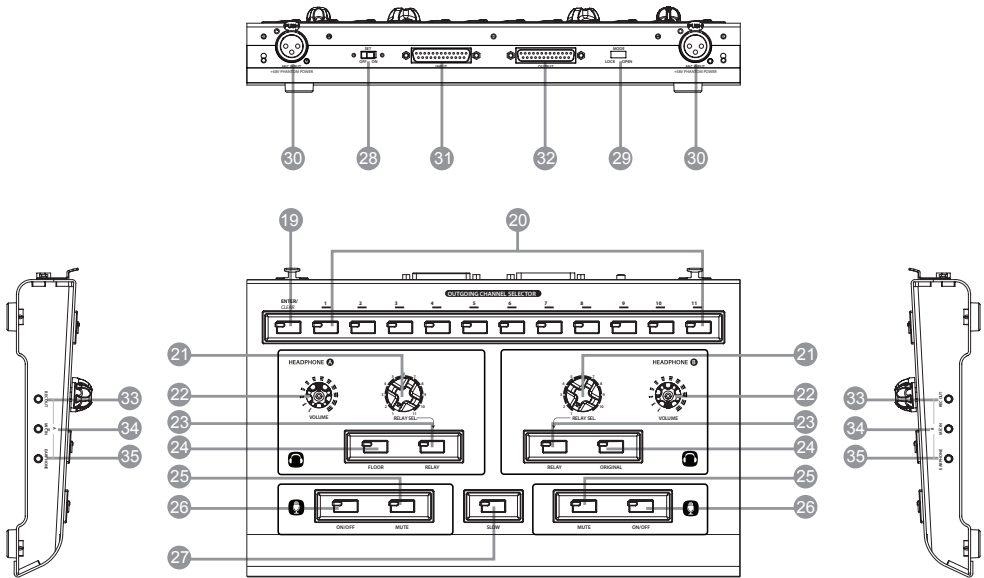
### 2-1 Control Unit CU-12



1. **Microphone Input:** This XLR and 1/4" (6.3mm) combination socket provides +48V Phantom power to a microphone with balanced XLR or unbalanced 6.3mm connector. The input signal will be mixed with the floor channel (CH0). Note: Since this input provides +48V Phantom power, make sure that the microphone you intend to connect can support this voltage. Do not connect any other equipment or adapter since damage may occur. Never use unbalanced XLR connectors (Pins 1 and 3 connected).
2. **Gain:** Adjusts microphone input sensitivity. The range is  $\pm 10\text{dB}$ .
3. **Active Channel Indicator:** Lights to indicate that the corresponding channel is active. Flashes to indicate the corresponding channel is in standby.
4. **Audio Level Indicator:** The brightness of this LED indicates the signal level of the corresponding channel.
5. **Power On Indicator (Red).**
6. **Power Switch:** Select "I" to turn on the system, and select "O" to turn it off.
7. **Power Supply Socket (3-Prong)** with built-in fuse, T2A/250V.
8. **DC Power Output:** The CU-12 includes 12 DC power outputs (+15V/500mA) for certain wireless transmitters in specific applications (not required in most applications).
9. **Interpreter Console Interface (D-sub 25pin socket):** 11 interpreter consoles IC-12 can be connected in a daisy chain.
10. **Record Input Connector (RCA):** External audio signals will be mixed with the floor (CH0) for recording.
11. **Record Output Connector (RCA):** Connects to recording equipment. The floor signal (CH0) mixed with REC. IN will be recorded.

12. Floor (CH0, floor channel) Output (RCAx2/symmetrical output): Floor (CH0) balanced output with RCA connectors.
13. Outgoing Language Channel Audio Outputs: Channels 0 to 11, where CH0 is floor and channels 1 to 11 correspond to the target languages. These analog audio outputs allow connection of the CU-12 to any wireless language distribution systems (IR or RF). Notice: any unoccupied channel will be fed with CH0 (floor) channel.
14. Floor (CH0) Volume Control: This potentiometer adjusts the floor (CH0) sensitivity. The range is  $\pm 10\text{dB}$ .
15. Floor (CH0) Input Jack: This 1/4-inch (6.3mm) balanced socket needs to be connected to an output of a conference system or PA as the floor signal of the interpretation system.
16. Alarm Sound Input: This 1/4 -inch (6.3mm) jack / unbalanced input allows to connect audio from an emergency or alarm system.
17. Slow Output: When a Slow Key on the IC-12 is activated, this slow output will generate a 1-second 12V pulse activating the external notification system to request the lecturer to slow down.
18. Alarm Control Input: Connecting Alarm Ctrl. and GND together, will activate alarm procedure. All channels will receive alarm signal, and indicator LED will change from Light-On to Flashing. Note: This is not intended to replace any emergency system and is not licensed or certified as an emergency system. Please check with your local authorities about your required emergency procedures and equipment.

## 2-2 Interpreter Console IC-12



### 19. CLEAR/ ENTER Key:

In OPEN Mode (See 28 below), it serves as the CLEAR key to clear the active channel of the interpreter console. When the console is not going to be used and an output channel had been selected, then push the ENTER key to deselect active channel.

In LOCK Mode (See 28 below), it serves as the ENTER key to set the active channel of the interpreter console (when the MODE switch is in Lock Mode, and the Set switch is in the ON position).

### 20. Outgoing Channel Selector:

In OPEN Mode, it allows the interpreter to select the desired outgoing channel as long as it is not occupied by another booth. When a channel is selected the corresponding key light goes green. When attempting to select an occupied channel, the light will flash red.

Note: If the microphone is OFF, the active channel will be released if an interpreter from another booth selects the same channel.

In LOCK Mode, it allows to program the desired outgoing channel in SET Mode (See 29 below).

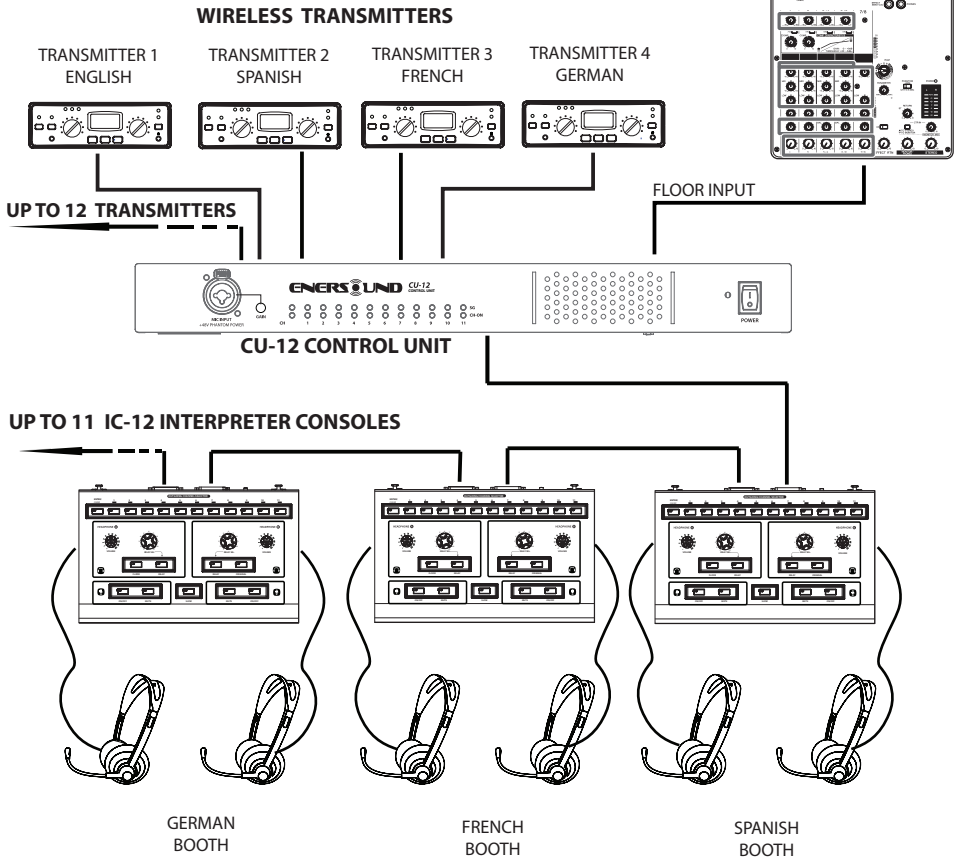
21. Relay Channel Selector: It allows the selection of the incoming channel for the interpreter to listen when pressing the Relay key.
22. Headphone Volume Control (VOLUME A, VOLUME B): It is used to adjust the volume of the headphones.



23. Relay Interpretation Key (RELAY): When the interpreter does not understand the floor language, they can press the Relay key to listen to another interpreted language from another booth. The channel will be selected through the Relay Channel Selector (See 21 above).
24. Floor Channel Key (FLOOR): The interpreter presses it to listen to the original floor language (the audio from CH0).
25. Mute Key (MUTE): It is used to momentarily mute the microphone when the interpreter needs to cough, for example. When released, the microphone returns to its active status.
26. MIC ON/OFF Key (MIC A ON/OFF, MIC B ON/OFF): Press it to turn the microphone on, the light indicator will be on. Press it again to turn the microphone off. Only one microphone at a time can be active per console (Microphones A and B will override each other).
27. SLOW Key: When this function is installed, it allows the interpreter to request the speaker to slow down.
28. Set Switch (SET): It is used only for the Lock Mode to program the desired outgoing channel. In Open Mode it should be in OFF position.
29. MODE Switch (OPEN / LOCK): The MODE switch needs to be selected before powering on the system. In OPEN mode an interpreter can activate any channel at any time as long as it is not occupied. In LOCK mode the outgoing channel is pre-set. Only one outgoing channel will be programmed per console (setting procedure: refer to System Installation and System Operation sections for more details).
30. XLR Microphone Input: Each interpreter unit includes 2 balanced XLR microphone input sockets with +48V Phantom power. Note: Since this input provides +48V Phantom power, make sure that the microphone you intend to connect can support this voltage. Do not connect any other equipment or adapter since damage may occur. Never use unbalanced XLR connectors (Pins 1 and 3 connected).
31. Input interface (INPUT): This 25-pin male connector is used to interconnect interpreter units and a control unit via 25-pin cables.
32. Output Interface (OUTPUT): This 25-pin female socket is used to interconnect interpreter units via 25-pin plugs.
33. Record Interface (REC OUT): This 3.5mm stereo jack is used to record the interpretation (Available on both left and right sides of the Interpreter Console).
34. Microphone Input (MIC IN): This 3.5mm stereo jack is used to connect the interpreter's headset microphone (Available on both left and right sides of the Interpreter Console).
35. Earphone Output (EARPHONE): This 3.5mm stereo jack is used to connect the interpreter headsets' earphones (Available on both left and right sides of the Interpreter Console).

### 3. System Installation

#### EXTERNAL PA SYSTEM

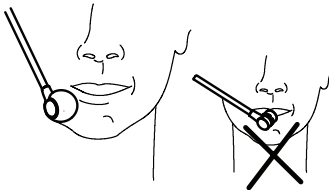


All consoles are connected via a D-Sub 25-pin cable in a daisy chain. On the rear panel of each IC-12 interpreter console, there are two 25-pin D-Sub connectors, "INPUT" (Male) and "OUTPUT" (Female).

1. Connect the plug (male end) from the 25-pin cable to the Control Unit CU-12. Then connect the socket (female end) from the 25-pin cable to the "INPUT" on the first Interpreter Console. After that, connect the plug of the second 25-pin cable to the "OUTPUT" of the first Interpreter Console and the socket to the "INPUT" of the next Interpreter Console.
2. Follow the same procedure until all interpreter consoles are connected. A maximum of 11 interpreter units can be connected, allowing up to 22 interpreters to perform simultaneous interpretation for a maximum of 11 target languages plus one floor (original) language. Each Interpreter Console accommodates two interpreters to work in pairs for the same language combination in the same booth.

Note: Extension cables can be used between Interpreter Consoles and/or Control Unit. Always use 25-pin high quality cables provided or approved by the manufacturer.

3. Connect the interpreter's microphones and stereo headsets in their corresponding jacks. Then turn the headphone volume control all the way down on each interpreter console.
4. Plug a line level audio signal from the floor language source into the Floor Input ¼" Jack on the rear panel of the Control Unit. Make sure there is audio coming from this source for testing purposes.
5. Connect any RF (FM) or IR wireless transmitter for language 1 to the CH1 output jack on the control unit. Do the same for all the other channels to be used. Set up the transmitters according to its instructions.
6. Assign a language to each output channel. Example: CH1 is English, CH2 is Spanish, CH3 is French. For each console, we recommend attaching self adhesive or magnetic labels above the corresponding outgoing channel switch with the names of the two languages used in that specific console for easy visualization.
7. Plug the control unit's line cord into an AC power outlet (100 to 240 V, 50-60Hz) and turn on the control unit.
8. In Open Mode, (make sure the Mode switch is in open position and the Set switch is in the off position) select the desired outgoing channel on each interpreter console. In Lock Mode, the outgoing channel is preset. (See 4. System Operation below).
9. On each interpreter console, select the FLOOR channel key so the interpreter can listen to the floor audio for normal interpretation or the RELAY key for relay interpretation when the interpreter does not understand the language spoken on the floor.
10. Have the interpreters who will be using the consoles to listen to the headphones and slowly turn up the volume until the Floor audio is at the lowest comfortable level.
11. Turn the interpreter microphone on by pushing its Mic On/Off button.
12. Have the interpreter speak into the microphone at a natural level. A microphone headset is recommended to maintain a constant distance between the interpreter's mouth and the microphone.



Place the microphone at the corner of the mouth so that it rests at about 1 inch away from the face. This will avoid noises generated from the interpreter's breathing and air blown while speaking.

**Do not place it in front of the mouth!**

13. Ensure the audio indicator for that specific channel on the control unit is flashing and you are able to hear the signal with a receiver. Adjust the transmitter input level control if necessary.

## 4. System Operation

### 4-1 Open Mode

This is the most widely used mode and will suit the majority of your interpretation needs. For the system to operate in Open Mode, the Mode switch must be in the OPEN position and the Set switch must be in the OFF position.

When the interpreter selects the desired outgoing channel, the light indicator will turn green while the channel is not occupied. If the key indicator flashes red when pressing the outgoing channel key, it means that the channel is occupied by another unit and the interpreter has to wait until the other interpreter occupying the channel either releases the channel or turns off their microphone. Note: If the microphone is OFF, the active channel will be released if an interpreter from another booth selects the same channel.

If there is a need to deselect the active outgoing channel, press the Enter/ Clear key.

When the output channel is selected, the interpreter must push the MIC ON/OFF key to activate or deactivate the microphone. To momentarily mute the microphone, the interpreter can press and hold the “MUTE” key.

If the SPEAK SLOWLY function is correctly installed with additional external equipment, when the speaker speaks too fast for the interpreter to follow, the interpreter can press the “SLOW” key to remind the speaker to slow down. A 1 second 12V Pulse will come out from the control unit CU-12 to activate the external notification system.

The example below will help to explain how to operate the system in a conference setting using interpreter consoles in open mode with “direct” and “relay” interpretation.

Note: It is always necessary to utilize a PA System (Sound System) in conjunction with the interpretation system so that any speech to be interpreted can be sent to the interpretation consoles via the FLOOR input.

- Event type: Trilingual conference in the U.S.A with direct and relay interpretation
- Main language: English
- Other languages: Spanish and French
- Number of interpretation booths: 2 (one interpreter console IC-12 per booth)
- Booth #1: “Spanish” Booth from “English into Spanish” and from “Spanish into English”
- Booth #2: “French” Booth from “English into French” and from “French into English”
- Assigned channels: English=CH1 Spanish=CH2 French=CH3

#### **Scenario 1- The speaker talks in English or the audience asks a question in English:**

The Spanish interpreter will perform direct interpretation into Spanish. Her outgoing channel selector should be in CH2 (Spanish) so that her voice is routed to the Spanish channel. She will listen to the original floor audio; therefore, her “FLOOR” Channel Key should be selected.

The French interpreter will perform direct interpretation into French. Her outgoing channel selector should be in CH3 (French) so that her voice is routed to the French channel. She will listen to the original floor audio; therefore, her “FLOOR” Channel Key should be selected.

#### **Scenario 2- The speaker talks in Spanish or the audience asks a question in Spanish:**

The Spanish interpreter will perform direct interpretation into English. Her outgoing channel selector should be in CH1 (English) so that her voice is routed to the English channel. She will listen to the original floor audio; therefore, her “FLOOR” Channel Key should be selected.

The French interpreter will perform relay interpretation into French. Her outgoing channel selector should be in CH3 (French) so that her voice is routed to the French channel. Since she does not understand Spanish, she will listen to the relay audio (English) from the other interpreter booth. Her “RELAY” Channel Key should be selected and the rotary relay channel selector should be in CH1 (English). Note: If the French interpreter understands Spanish, she can perform direct interpretation into French listening directly from the “Floor”.

### **Scenario 3- The speaker talks in French or the audience asks a question in French:**

The Spanish interpreter will perform relay interpretation into Spanish. Her outgoing channel selector should be in CH2 (Spanish) so that her voice is routed to the Spanish channel. Since she does not understand French, she will listen to the relay audio (English) from the other interpreter booth. Her “RELAY” Channel Key should be selected and the rotary relay channel selector should be in CH1 (English). Note: If the Spanish interpreter understands French, she can perform direct interpretation into Spanish listening directly from the “Floor”.

The French interpreter will perform direct interpretation into English. Her outgoing channel selector should be in CH1 (English) so that her voice is routed to the English channel. She will listen to the original floor audio; therefore, her “FLOOR” Channel Key should be selected.

## **4-2 Lock Mode**

This mode is used in special cases when there is one-way interpretation (i.e. the interpreter will always interpret into one foreign language).

Each Interpreter Console IC-12 must be preset with a unique outgoing channel before being used. The procedure is as follows:

- a. Slide the Mode switch on all the interpreter consoles to the Lock position.
- b. Make sure all connections are correct, and power on the control unit CU-12.
- c. Slide the “SET” switch on the rear panel of the Interpreter Console to the “ON” position. The “ENTER” light indicator on that unit will start flashing. The available channels indicators will turn RED. Only one unassigned channel can be activated per console.
- d. Press one of the available outgoing channel keys and then press “ENTER” to save the selection. For example: if you want this unit to be assigned to CH1, press the outgoing key “1”. Then the indicator on the key will change to green. Press the “ENTER” key to save your selection.
- e. Turn the “SET” switch to the “OFF” position. The “ENTER” indicator will turn off and the output channel selecting procedure will be completed.
- f. Repeat the same procedure (Steps c~e) to assign all the Interpreter Consoles.

To Cancel Selected Output Channel (only for LOCK mode)

- a. Turn the “SET” switch to the “ON” position.
- b. Push the “ENTER” key for 3 seconds. Then all Outgoing Channel Indicators will turn off.
- c. Turn the “SET” switch to the “OFF” position. The Console will be reset to factory default setting.

## 5. Technical Data

### System environmental Conditions

Transport Temp	-40°C ~ +70°C
Operational Temp.	0°C ~ +45°C Max.
Relative humidity	<95%

### Control Unit CU-12 Technical Data

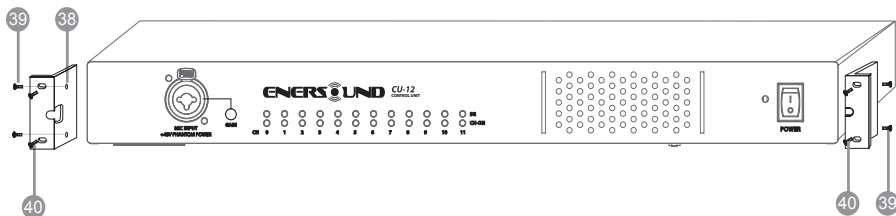
Power supply	110-240Vac
System consumption	90W
DC power output	+15V/0.3A x12
D-SUB power output	DC+15V/2A
Line In sensitivity	-30dB±2dB LEVEL VR at MAX.
Alarm In sensitivity	-20dB±2dB
MIC In sensitivity	-51dB±2dB Gain VR at MAX.
Alarm Ctrl	Shorted to GND
Slow output	+12V, 1sec Pulse.
CH0~CH11 output level	180mV±20mV
CH0 balance output level	85mV-GND85mV±10mV
REC OUT output level	170mV±15mV
REC IN input level	-25dB±2dB
Protocol	RS-485
Dimension (LxWxH)	421x213x44mm
Color	Gray
Weight	2.65Kg.

### Interpreter Console IC-12 Technical Data

Unit power	DC+15V
Unit power consumption	100mA±10mA
MIC sensitivity	-45dB±2dB
XLR MIC sensitivity	-45dB±2dB
Earphone max output level	30mW+30mW at 32Ω,
REC OUT output level	140mV±10mV
Protocol	RS-485
In/Out interface	D-Sub 25P plug and socket
Dimension (LxWxH)	330x206x57mm
Color	Gray
Weight	2.5Kg

## 6. System Mounting Instructions

A pair of rack mount brackets are included with the CU-12 (38), unscrew the side screws (39), then fasten the brackets with these screws and put the CU-12 in the rack, finally install the unit onto the rack with 4 screws (40).



## 7. Limited Warranty Statement

Enersound warrants its Interpretation System: CU-12, IC-12 to be free from defects in workmanship and material under normal use and conditions for one year from the date of purchase from an authorized dealer. All other products and accessories are warranted for 90 days from date of purchase. This warranty is only available to the original end purchaser of the product and cannot be transferred. If the product is determined to be defective, Enersound will repair or replace it, at its discretion, at no charge. Customer must pay for shipping. This warranty is void if damage occurred because of misuse or if the product has been repaired or modified by anyone other than a factory-authorized service technician. Warranty does not cover normal wear and tear on the product or any other physical damage unless the damage was the result of a manufacturing defect.

Enersound has no control over the conditions under which this product is used. Therefore, the company disclaims all warranties not set forth above, both express and implied, with respect to the Interpretation System, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. Enersound products manufacturer, distributors and/or dealers shall not be liable to any person or entity for any medical expenses or any direct, incidental or consequential damages caused by any use, defect, failure or malfunction of the product, whether a claim for such damages is based upon warranty, contract, tort or otherwise. The sole remedy for any defect, failure or malfunction of the product is replacement of the product. No person has any authority to bind Enersound to any representation or warranty with respect to the Enersound Interpretation System. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, and the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty applies to products sold only within the United States of America and does not cover products sold AS IS or WITH ALL FAULTS. For products sold outside the U.S., please consult with your local dealer about the terms and conditions applicable in your country. Proof of purchase in the form of a bill of sale, invoice number or receipted invoice, which is evidence that the unit is within the warranty period, must be presented to obtain warranty service. If you experience difficulty with your interpretation System, send an email to [support@enersound.com](mailto:support@enersound.com) with your name, address, phone number and a complete description of the problem. We will respond to you as soon as possible and if it is necessary to return the product for service, your Customer Service Representative will give you a Return Authorization Number (RAN) and shipping instructions. For more information, visit [www.enersound.com](http://www.enersound.com). You may also call 1-305-731-2416 or our toll-free number 1-800-644-5090 within the U.S.

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