

ISA110

LIMITED EDITION

user's manual

**Focusrite**  
audio engineering



# ISA110

LIMITED EDITION

Serial No. ....

Signed:

.....  
Phil Dudderidge, Director

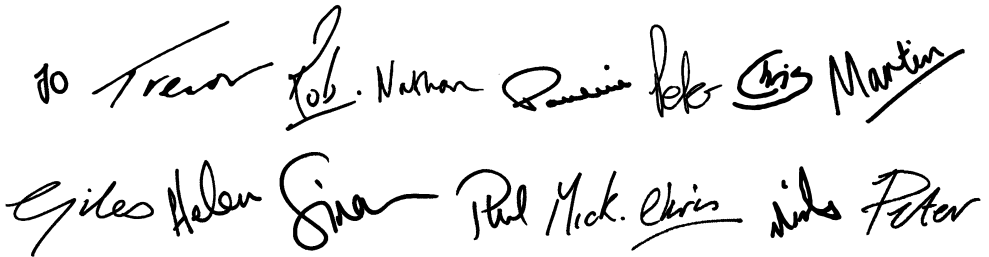
.....  
Simon Blackwood, Director

.....  
Rob Jenkins, Head of Sound

**T**hank you for purchasing the ISA110 brought to you by the Focusrite team – Trevor, Peter, Martin, Helen, Mick, Phil, Chris, Micky, Pauline, Jo, Chris, Nathan, Rob, Peter, Simon and Giles.

The chaps at Focusrite are a jolly hard working bunch and take a great deal of pride in designing, building and delivering the best audio products around; we hope your new Focusrite unit lives up to that reputation, and that you enjoy many years of productive recording.

If you would like to tell us about your recording experiences then email us at: [sales@focusrite.com](mailto:sales@focusrite.com)



Trevor Rob Nathan Pauline Jo Chris Martin  
Giles Helen Simon Phil Mick Chris and Peter

The FocusriteTeam

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## Important Safety Instructions

Read all of these instructions and save them for future reference. Follow all warnings and instructions marked on the unit.

- Do not obstruct air vents in the rear panel. Do not insert objects through any apertures.
- Do not use a damaged or frayed power cord.
- Unplug the unit before cleaning. Clean with a damp cloth only. Do not spill liquid on the unit.
- Unplug the unit and refer servicing to qualified service personnel under the following conditions:

If the power cord or plug is damaged; if liquid has entered the unit; if the unit has been dropped or the case damaged; if the unit does not operate normally or exhibits a distinct change in performance. Adjust only those controls that are covered by the operating instructions.

- Do not defeat the safety purpose of the polarised or grounding-type plug. A polarised plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. When the plug provided does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

This unit is capable of operating over a range of mains voltages as marked on the rear panel. Ensure correct mains voltage setting and correct fuse before connecting mains supply. Do not change mains voltage settings while mains supply is connected.

To avoid the risk of fire, replace the mains fuse only with the correct value fuse, as marked on the rear panel.

The internal power supply unit contains no user serviceable parts. Refer all servicing to a qualified service engineer, through the appropriate Focusrite dealer.

## Power Connections

There is an IEC mains lead supplied with the unit which should have the correct moulded plug for your country. The wiring colour code used is:

*For units shipped to the USA, Canada, Taiwan and Japan:*

**Live** - Black **Neutral** - White **Earth** - Green

*For units shipped to any other country:*

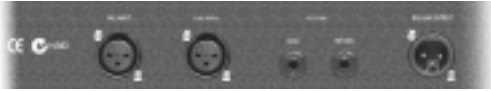
**Live** - Brown **Neutral** - Blue **Earth** - Green and Yellow

### **WARNING:**

**THIS UNIT MUST BE EARTHED BY THE POWERCORD**

**UNDER NO CIRCUMSTANCES SHOULD THE MAINS EARTH BE DISCONNECTED FROM THE MAINS LEAD.**

## Signal Connections



### XLR (Audio) Inputs and Outputs

All 3-pin XLR audio connectors (Output, Mic/Line Inputs) are wired as follows:

Pin 1	Screen/Chassis
Pin 2	Audio 0°
Pin 3	Audio 180°

### Insert Send and Return

1/4" Jack wired as follows:

Tip	Audio 0°
Ring	Audio 180°
Sleeve	Screen/Chassis

### Mic IP & Line IP

Either of these inputs may be used as the main input to the ISA110.

### Insert Return

This is used as the insert input point after the Mic Pre and before EQ.

### Insert Send

This is used as the insert output point after the Mic Pre and before EQ.

### Output

This is a balanced output after the EQ.

## Getting to Know the ISA110

### On

Applies power to the unit. Turn on the ISA110 before powering up devices to which the outputs are connected.



### O/L LED

This LED illuminates when the peak signal level reaches or exceeds +20dB, or when the peak signal level reaches 6dB below clipping. The signal is monitored after the EQ stage.

Occasional short-duration peaks which may cause the LED to blink will not normally cause audible distortion, but if the LED is lit constantly, the level in the appropriate section of the module should be reduced to prevent overloading.

### Input Stage



Two input options are provided to give compatibility with Mic or Line sources.

### Mic

Mic input sensitivity is switched from -60dB to 0dB in 6dB steps. Phantom power is available on the rear panel XLR for condenser mics when +48V front panel switch is pressed.

### Line

A Line input is available on XLR, with a switched gain control giving a range of +/-18dB in 6dB steps.

### Trim

The TRIM control provides additional variable gain of 0 to 10dB.

## +48V

Provides +48V powering for condenser mics when pressed.

## Phase

Pressing PHASE reverses the phase of the selected input, to correct phase problems with close microphones or incorrect wiring polarity. Phase is before the Insert Send output.

## EQ Module

### All EQ

Pressing ALL EQ activates all sections of the EQ module (except the Hi and Lo Pass Filters) and also the insert return, placing the whole module in the audio path. Toggling ALL EQ allows A/B comparison of flat/EQ'd settings and insert effects.



### Filter In

Switch the control from the OFF position to make the Hi and Lo Pass Filters active in the audio path.

Both filters provide 18dB/octave rolloff.

### Low Pass Filter

Rolloff frequency is switch selectable at 3k9Hz, 5k6Hz, 8k2Hz, 12kHz or 16kHz.

### High Pass Filter

Rolloff frequency is switch selectable at 36Hz, 60Hz, 105Hz, 185Hz or 330Hz.

## PARAMETRIC EQ

Two separate bands of parametric EQ are provided, each with continuously variable boost/cut with centre detent, sweep control with two ranges, and variable Q. The first band covers the range 40Hz to 400Hz (120Hz to 1k2Hz when x3 is pressed) and the second band covers 600Hz to 6kHz (1.8kHz to 18kHz when x3 is pressed).



### Parametric EQ In

Press in to switch the Parametric EQ into the signal path. ALL EQ must also be on for the Parametric EQ to be active.

### x3

The Sweep controls have two ranges, the higher being selected when the x3 switch is pressed (frequencies shown in yellow on the panel).

## SHELVING EQ

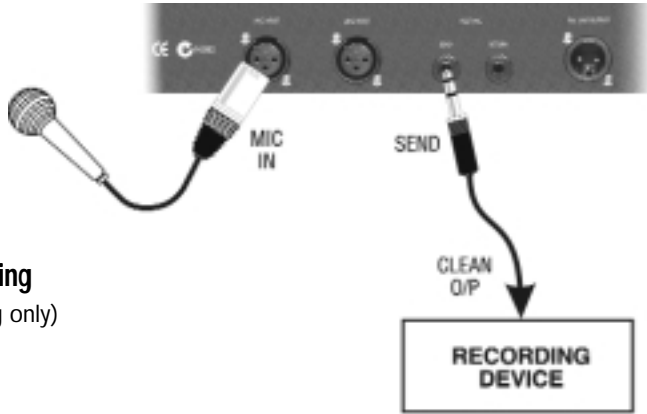
High and Low frequency shelving sections are available, each with continuously variable boost/cut with centre detent, and a six position rotary switch for selection of rolloff frequency.



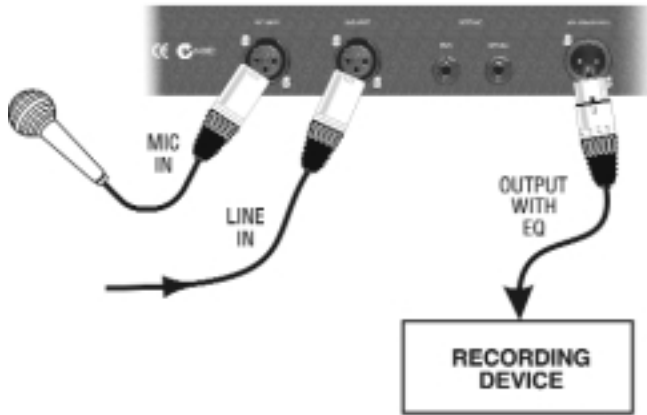
### Shelving EQ In

Press in to switch all the Shelving EQ into the signal path. ALL EQ must also be on for the Shelving EQ to be active.

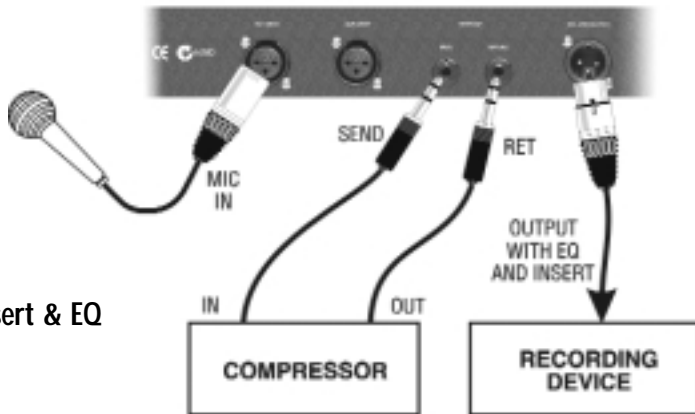
# APPLICATIONS



**Minimal Recording**  
(Mic pre recording only)



**Record with EQ**



**Record with Insert & EQ**

## Specifications

### Rear Panel Connectors

#### Insert Send

Connector:	TRS Jack
Signal:	Balanced
Operating Level:	+4dBu
Maximum O/P Level:	+20dBu

The connector is an output from the point in the signal path before the EQ.

#### Insert Return

Connector:	TRS Jack
Signal:	Balanced
Operating Level:	+4dBu
Maximum I/P Level:	+26dBu

The connector is the return or input to the signal path.

#### Line

Connector:	XLR
Signal:	Balanced (Transformer)
Operating Level:	+4dBu
Maximum I/P Level:	+26dBu
Gain Range:	+/-18dB in 6dB steps
Input Impedance:	10K $\Omega$
Noise:	-96dBu
THD:	0.003% with 0dBu 1kHz input and 20Hz-22kHz bandpass filter

#### Mic

Connector:	XLR
Signal:	Balanced (Transformer)
Operating Level:	+4dBu
Maximum I/P Level:	+26dBu
Gain Range:	0 to +60dB in 6dB steps
Input Impedance:	1k2 $\Omega$
Noise:	123dB EIN with 150 $\Omega$ input resistance at 60dB of gain
THD:	0.0008%

#### Output

Connector:	XLR
Signal:	Balanced (Transformer)
Operating Level:	+4dBu
Maximum O/P Level:	+26dBu

Signal is the transformer output stage.

#### Dimensions

Height	44mm (1.7")
Width	444.6mm(17.5") at rear 483mm (19") at front
Depth	309.7mm (12.2")

#### Accuracy:

Whilst every effort has been made to ensure the accuracy and content of this manual, Focusrite Audio Engineering Ltd makes no representations or warranties regarding the contents.

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#### Warranty:

All Focusrite products are covered by a warranty against manufacturing defects in material or craftsmanship for a period of one year from the date of purchase. Focusrite in the UK, or its authorised distributor worldwide will do its best to ensure that any fault is remedied as quickly as possible. This warranty is in addition to your statutory rights.

This warranty does not cover any of the following:

- Carriage to and from the dealer or factory for inspection or repair labour charge if repaired other than by the distributor in the country of purchase or Focusrite in the U.K.
- Consequential loss or damage, direct or indirect, of any kind, however caused
- Any damage or faults caused by abuse, negligence, improper operation, storage or maintenance

If a product is faulty, please first contact your dealer in the country of purchase; alternatively, contact the factory. If the product is to be shipped back, please ensure that it is packed correctly, preferably in the original packing materials. We will do our best to remedy the fault as quickly as possible.

Please help us to serve you better by completing and returning the Warranty Registration Card at the back of this manual. Thank you.



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