

ISA 430/220

Digital Option



ISA 430/220 DIGITAL OPTION INSTALLATION GUIDE

ISA 430/220 Digital 24/96 Output Kit

The kit should contain: -

Qty	Description
1	24/96 Analogue to Digital converter card
4	Crosshead screws, for XLR, SPDIF and Opto connectors
2	Nuts, for BNC connectors
2	Washers, for BNC connectors
1	M3 X 6 Pozi Pan head screw, for earth wire (ISA 430)
1	M3 Nyloc nut, for earth wire (ISA 430)
1	Earth wire (ISA 430)
2	Nylon snap connectors (ISA 430)
2	M3 X 8 Pozi Pan head screws (ISA 220)

Tools required: -

No. 1 crosshead screwdriver, Pozihead preferred.
Small adjustable spanner or pliers to grip Nyloc nut.

Installation Instructions

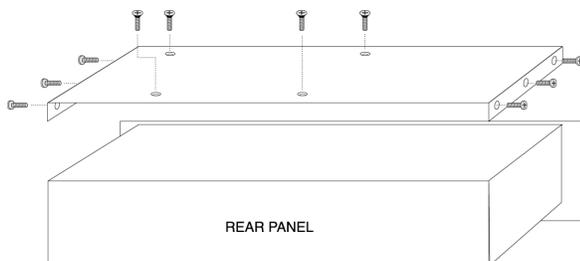
WARNING!

THE MODULE SHOULD BE DISCONNECTED FROM THE AC POWER BEFORE ATTEMPTING TO CARRY OUT THE FOLLOWING INSTRUCTIONS.

ANTI-STATIC PRECAUTIONS SHOULD BE TAKEN WHEN HANDLING THE CARD OUTSIDE OF ITS ANTI-STATIC BAG; ONLY HANDLE THE CARD BY GRIPPING THE CARD BY ITS EDGES AND AVOID TOUCHING ANY OF THE COMPONENT PARTS OTHER THAN THE CABLE AND CONNECTORS. PLACE THE UNIT ON A CLEAN, FLAT SURFACE.

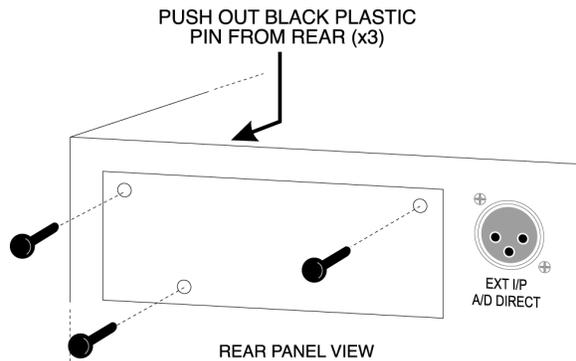
Top Cover Removal

Remove the 10 crosshead screws (4 countersunk head screws on the top of the lid and 3 pan head screws on either side) fixing the top cover to the top and sides of the module.



Digital Option Cover Removal

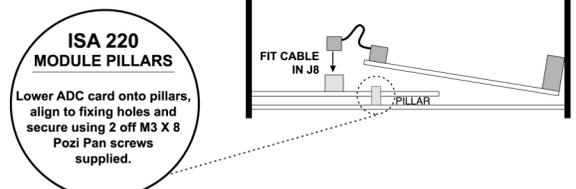
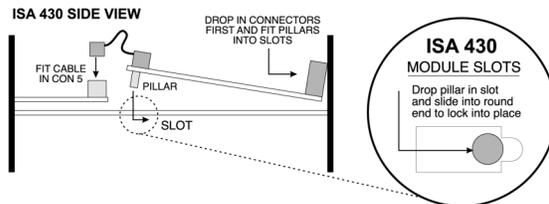
The rear panel digital connector area is accessed by removing the small rear cover plate next to the XLR marked "EXT A/D DIRECT I/P". The plate is removed by pushing out, from inside of the module, the 3 black plastic retaining pins. Once removed these retaining pins are no longer required.



Installing Digital Card

The digital card is mounted in place using the digital connector fixings and the two white plastic support pillars, at the cable end of the card, which are locked into the two rectangular slots in the module chassis. The card is mounted as follows; place the digital card inside the module, connector end first and with the connectors just passing through the rear panel.* Then drop the cable end of the card until the support pillars fall into the rectangular section of the chassis slots. Now slide the card towards the rear such that the connectors pass through the rear panel and the pillars lock firmly into the round end of the chassis slot.*

(* ISA 430 only)



ISA 220 MODULE PILLARS
Lower ADC card onto pillars, align to fixing holes and secure using 2 off M3 X 8 Pozi Pan screws supplied.

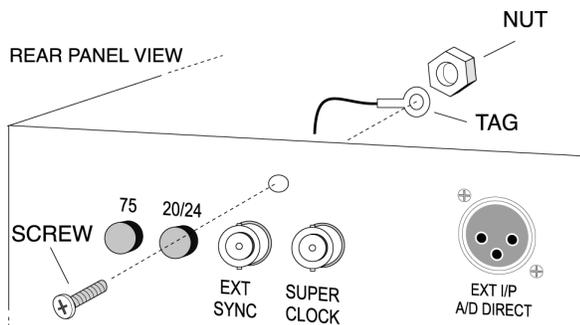
Installing Digital Card (cont)

Once the card is locked into place, with the connectors firmly up against the rear panel, the connectors and earthing cable can be screwed into place as follows:-

Connector	Fixing
AES/EBU	2 cross head screws
SPDIF	1 cross head screw
OPTO	1 cross head screw
EXT SYNC	washer and nut
SUPER CLOCK	washer and nut
Earth wire	Pan head screw and nyloc nut (ISA 430 ONLY)

ATTENTION! Earth Wire fitting (ISA 430 only – DO NOT FIT on ISA 220)

Fit the earth wire to the push-on spade terminal FIX1 located behind the opto socket on the digital card. The fixing hole for the other end of the earth wire is positioned on the rear panel of the ISA 430 above and between the two BNC connectors (see diagram below.) Insert the screw from the outside into the module rear panel and place the earth wire tag onto the screw, using either pliers or a spanner to hold the Nyloc nut in place, tighten the screw until the earth tag is contacted firmly against the rear panel.



Once the card has been secured in place the digital card ribbon cable can be connected to the adjacent plug, labelled "Con 5", on the ISA 430 circuit board, or "J8" on the ISA 220. The connector should be pressed firmly down in place to ensure good contact.

Replacing the Lid

The lid can only be placed back onto the unit correctly in one direction, so check that the 4 holes on the top of the lid correctly line up with the 4 holes on the module. Once the lid has been fitted correctly replace the 10 crosshead screws; 4 countersunk screws on the top of the lid and the 6 pan head screws on the sides of the module.

The installation is now complete and the module can be reconnected to the A.C. power.

The unit software will automatically recognise the presence of the digital card on power up and will go into calibration mode, which takes a few seconds. Once calibration is complete the front panel switches can be used to edit the A/D functions.

Addendum to ISA 430/220 User Guide

This installation guide should be read in conjunction with the ISA 430/220 User Guide. However, due to recent enhancements to the digital card, the following descriptions replace any relevant sections of your manual.

Ext Select Switch

This has three modes, as indicated by the LEDs below the switch:-

- 1 = off (No LEDs lit) the A/D free runs from its own internal clock frequency.
- 2 = Ext (EXT LED lit) puts the ISA 430/220 into External word clock synchronization mode.
- 3 = Ext/SC (EXT/SC LED lit) puts the ISA 430/220 into Superclock synchronisation mode. Superclock is a Digidesign specific synchronisation method and can be used when connected to Digidesign hardware such as the 888 interface.

To select a specific Mode, step through the modes by pressing the switch in the same way as the Input and Meter selectors.

External Word Clock

When EXT is lit (see EXT SELECT above) the module will attempt to synchronise to an external word clock signal which is connected to the ISA 430/220 digital card via the rear panel BNC connector marked "EXT SYNC". When the unit is correctly locked to the external clock source the front panel LOCK LED on the front panel will light to indicate correct operation.

Superclock

In superclock mode (see EXT SELECT above) the A/D convertor is clocked directly from the signal applied to the rear panel superclock connector. In superclock mode the LOCK LED is not operational.

75 Switch

The switch labeled "75" (see diagram on left) allows the user to terminate the incoming word clock signal with a 75 Ohm resistor. When a number of devices are chained together only the devices on the ends of the chain should be terminated. If the ISA 430/220 is the last device then press the 75 switch to enable the termination. Check that termination is disabled on all other devices in the chain, referring to the respective user manuals for guidance if required.

20/24 Switch

This switch (see diagram on left) changes the output level of the unit in relation to the output LED meter 0dBfs reading. With the 20/24 switch released, the output from the analogue output is +20dBu when the output LED meter reads 0dBfs. With the 20/24dB switch pressed, the unit raises the output level by +4dBu producing +24dBu for a 0dBfs reading. This allows different output operating level signals to be accurately metered to prevent overload or under recording on the following device.

Focusrite Audio Engineering Ltd
Lincoln Road, Cressex Business Park
High Wycombe, Bucks HP12 3FX, England
Tel: +44 (0)1494 462246
Fax: +44 (0)1494 459920
Email: sales@focusrite.com
www.focusrite.com