

IQSDR/-R Re-Clocking Serial D. A.

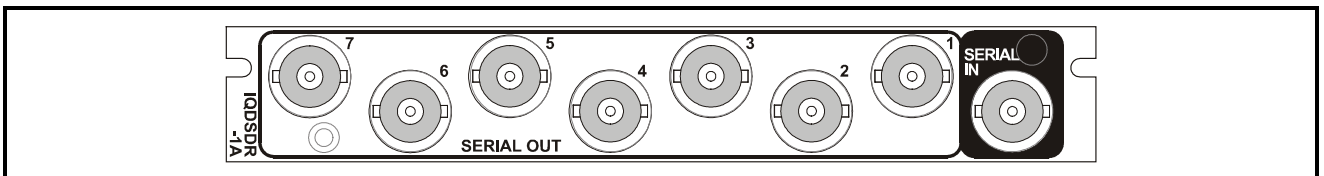
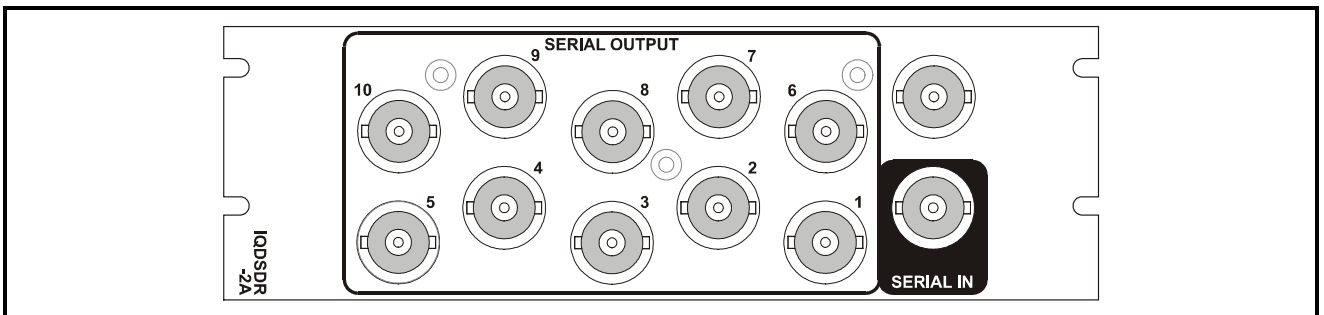
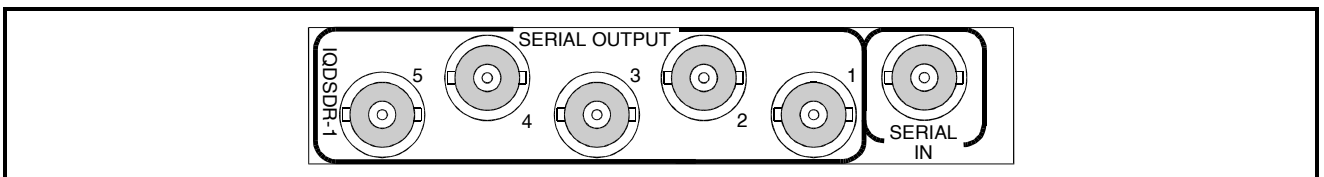
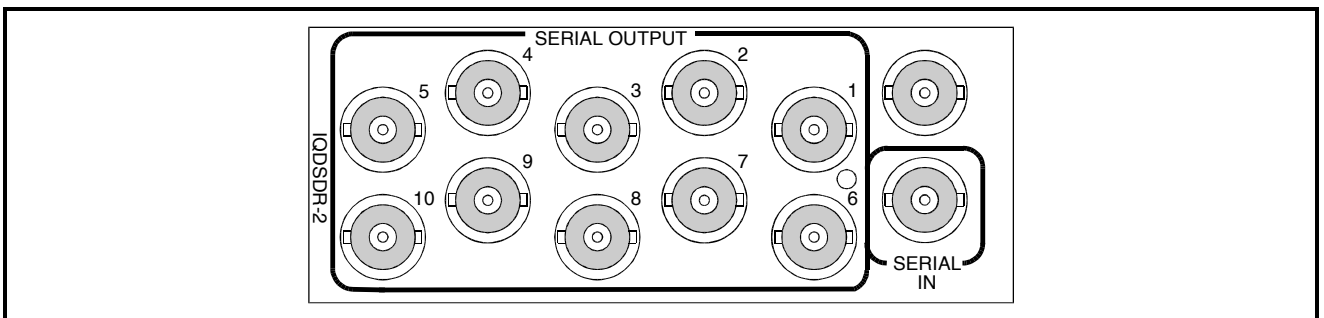


Module Description

The IQSDR-1, IQSDR-1A and the IQSDR-2/-2A are re-clocking Serial Digital distribution amplifiers providing 5, 7 or 10 outputs. The IQSDR-1(1A)-R and the IQSDR-2(2A)-R allow remote monitoring of signal presence and standard selection via the RollCall remote control system. These modules handle 143, 177 and 270 Mbit/s SDI signals and include equalization and buffering.

In addition the five outputs of the IQSDR-1, outputs 1,3,4,6 and 7 of the IQSDR-1A, outputs 6 to 10 of the IQSDR-2 and outputs 1 to 5 of the IQSDR-2A are positive polarity (not inverted) buffered outputs suitable for use with 270 Mbit/s ASI serial streams. Standards selection is made automatically or manually with a switch.

REAR PANEL VIEWS



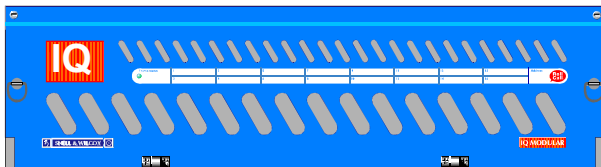
Versions of the module cards available are:

IQSDR-1	Serial Digital Distribution amplifier 5 re-clocked outputs	Single width module
IQSDR-1A	Serial Digital Distribution amplifier 7 re-clocked outputs	Single width module
IQSDR-2	Distribution amplifier 10 re-clocked outputs	Serial Digital
		Double width module
IQSDR-2A	Distribution amplifier 10 re-clocked outputs	Serial Digital
		Double width module
IQSDR-1-R	Serial Digital Distribution amplifier 5 re-clocked outputs and RollCall	Single width module
IQSDR-1A-R	Serial Digital Distribution amplifier 7 re-clocked outputs and RollCall	Single width module
IQSDR-2-R	Serial Digital Distribution amplifier 10 re-clocked outputs and RollCall	Double width module
IQSDR-2A-R	Serial Digital Distribution amplifier 10 re-clocked outputs and RollCall	Double width module

Note that there are two styles of rear panels available. They are not interchangeable between the two styles of enclosures. However, the cards may be fitted into any style of enclosure.

‘A’ Style Enclosure

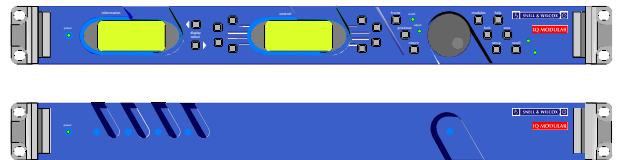
Rear panels **with** the suffix A may only be fitted into the ‘A’ style enclosure shown below.



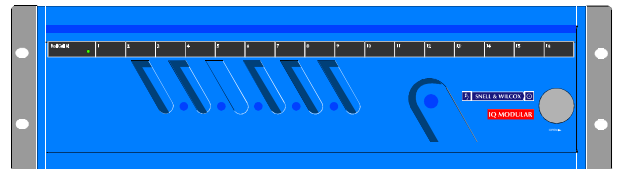
(Enclosure order codes IQH3A-E-0, IQH3A-E-P, IQH3A-0-0, IQH3A-0-P)

‘O’ Style Enclosures

Rear panels **without** the suffix A may only be fitted into the ‘O’ style enclosures shown below.



(Enclosure order codes IQH1S-RC-0, IQH1S-RC-AP, IQH1U-RC-0, IQH1U-RC-AP, Kudos Plus Products)



(Enclosure order codes IQH3N-0, IQH3N-P)

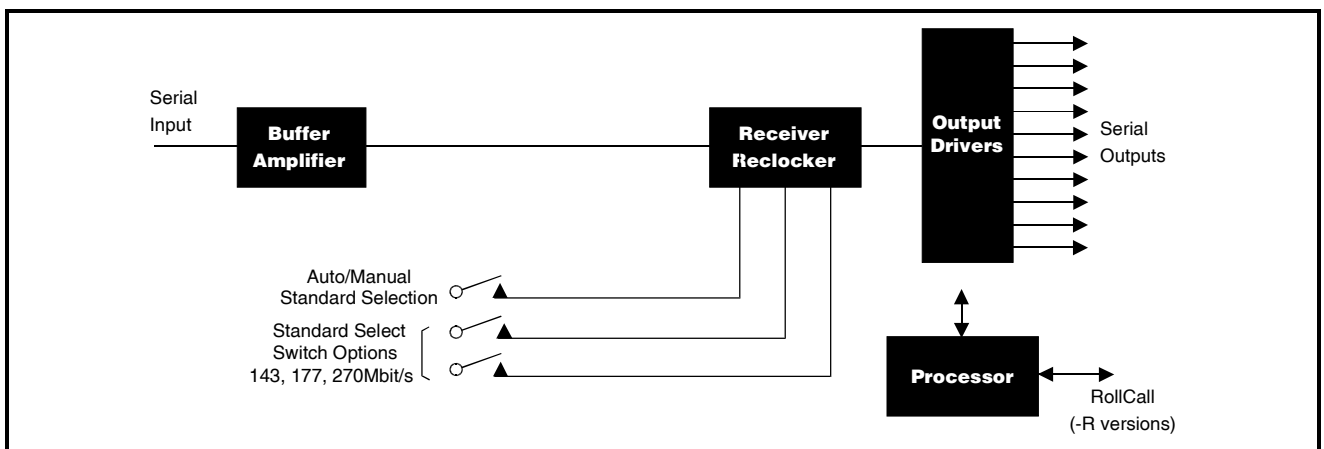


(Enclosure order codes IQH3U-RC-0, IQH3U-RC-P)

Features

- Performs equalization and reclocking of a serial 4:2:2/4fsc signal.
- Provides up to 10 buffered outputs
- Input equalizer and reclocking allows for use as a line receiver/ distribution amplifier
- Auto/manual Input format detect, selectable via a front card edge switch
- Input signal loss indicator LED on the front card edge
- Single and double width rear modules available
- RollCall controlled option available

BLOCK DIAGRAM



TECHNICAL PROFILE

Signal Inputs

Serial 143, 177, 270 SDI or 270 Mbit/s ASI

Standards SMPTE 259M-ABC-1997, DVB-ASI

Signal Outputs

Serial Digital Up to 10 SDI

Standards SMPTE 259M-ABC-1997, DVB-ASI

Card Edge Controls (also available via RollCall)

Input Signal Standard Auto Detect or Manual set

Functions Available via RollCall™ Only

Signal Presence Monitor

Signal Standard Monitor

Indicators

No Signal Loss of Serial Input

Power Presence of power supplies

SPECIFICATIONS

Input Return Loss better than 15 dB to 270 MHz

Maximum Input cable Length
250 m

Output Return Loss better than 15 dB to 270 MHz

Insertion Delay <5 ns

SDI Output Level 800 mv ± 5%

Preset Control Functions

Input Signal Standard 143, 177 or 270 Mbit/s

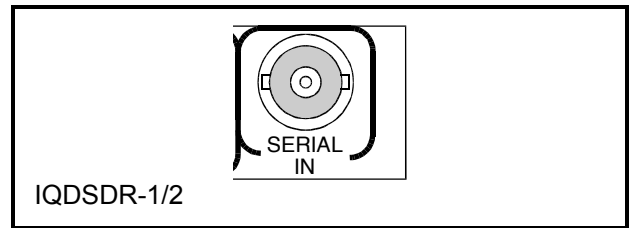
Power Consumption

Module Power Consumption
4.2 W max (-R versions)

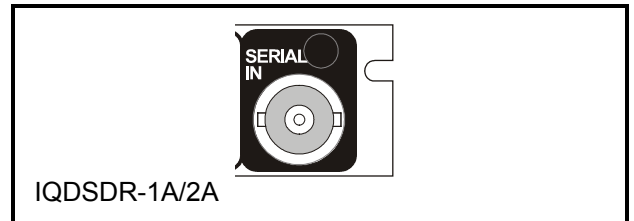
INPUTS AND OUTPUTS

SERIAL INPUT

The serial digital input to the unit is made via this BNC connector which terminates in 75 Ohms.



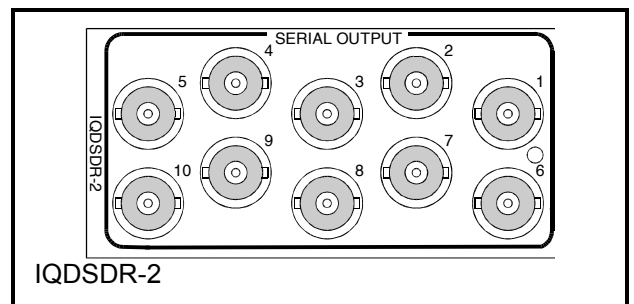
IQSDR-1/2



IQSDR-1A/2A

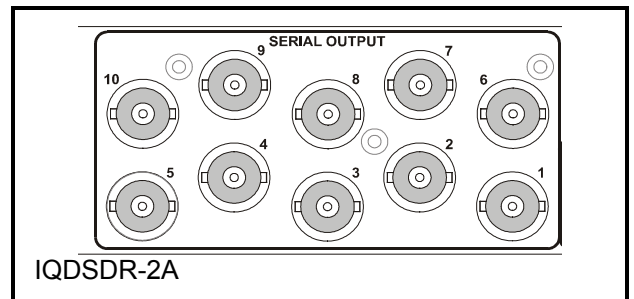
SERIAL OUTPUTS

These are the ten (-2 versions) or five (-1 versions) isolated Serial Digital outputs of the unit via BNC connectors for 75 Ohms.

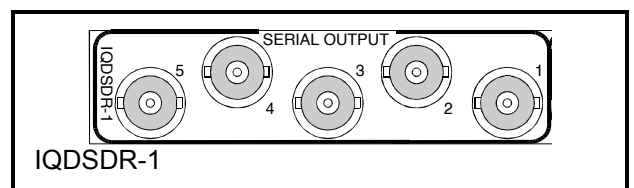


IQSDR-2

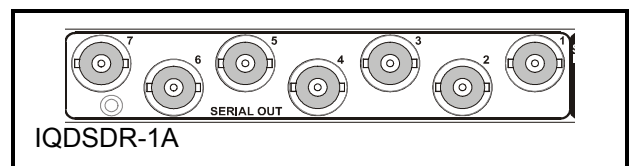
Note that outputs 6 to 10 (-2 versions), 1 to 5 (-1/-2A versions) and 1,3,4,6 and 7 (-1A versions) are the positive polarity outputs suitable for ASI serial streams.



IQSDR-2A

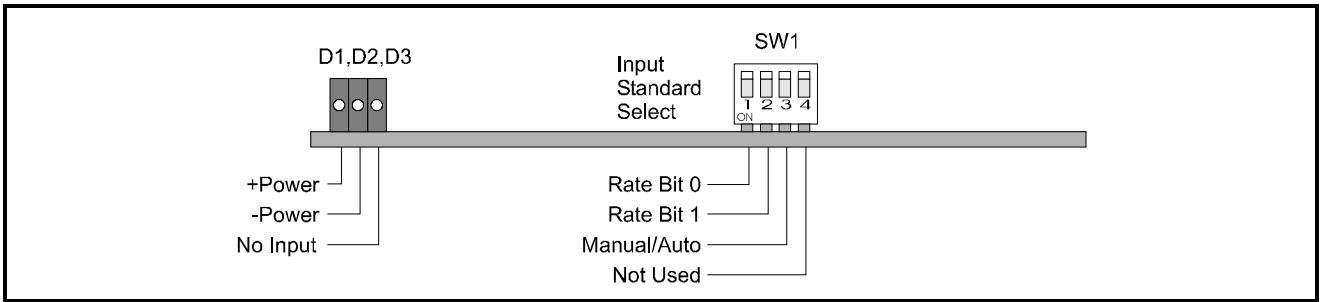


IQSDR-1



IQSDR-1A

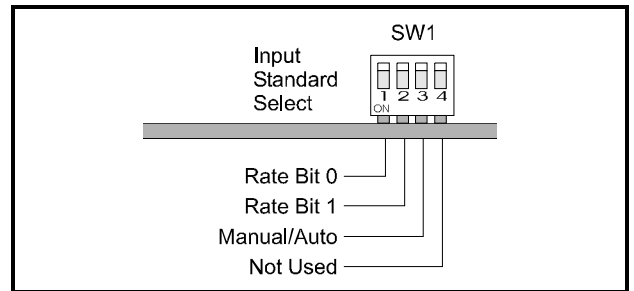
CARD EDGE CONTROLS



SW1 (INPUT STANDARD SELECT)

Positions 1 and 2 of this switch sets up a two bit code to manually select the processing required to match the input signal standard.

Bit 0 Position 1	Bit 1 Position 2	Input Signal Standard
ON	ON	143 Mbit/s
ON	OFF	270 Mbit/s
OFF	ON	177 Mbit/s
OFF	OFF	Not Used



Position 3 selects either **automatic** input signal standard selection or **manual** (using positions 1 and 2) input signal selection.

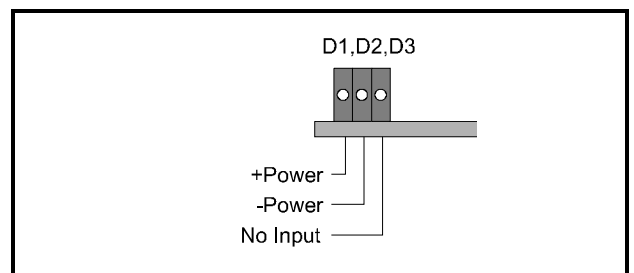
Manual/Auto Position 3	Input Signal Standard Selection
ON	Manual
OFF	Automatic

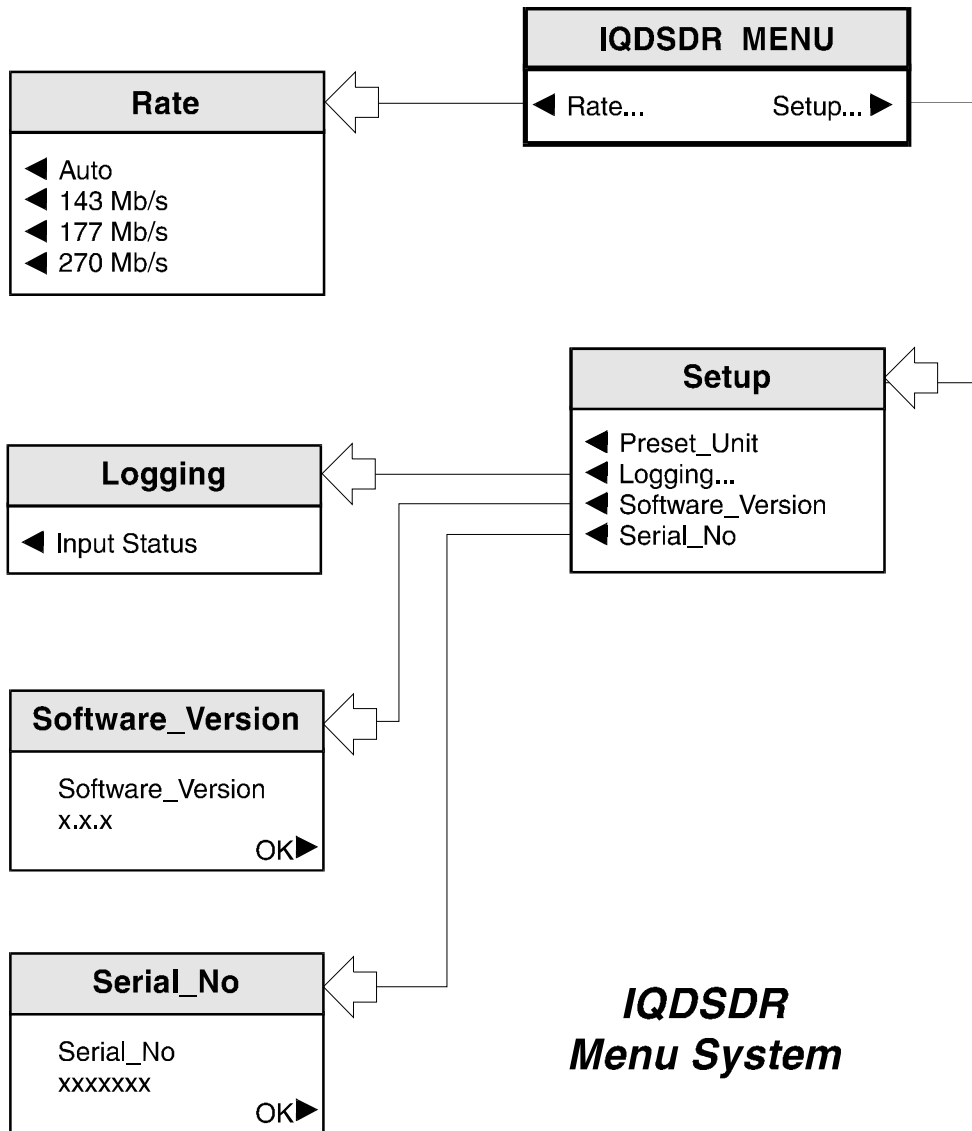
Position 4 is not used on this module.

LED INDICATORS

When illuminated, D1 and D2 indicate that the +5V and the -5V power supplies are present.

When D3 is illuminated this indicates that there is no valid serial input signal present.





***IQDSDR
Menu System***

OPERATION FROM AN ACTIVE CONTROL PANEL

The card may be operated with an active control panel via the RollCall network.

The menus available for this card are shown on page opposite and will appear in the Control display window.

Operational details for the remote control panel will be found in SECTION 1 of the Modular System Operator's Manual.

MENU DETAILS

(see IQDSDR Menu System on previous page)

MAIN MENU

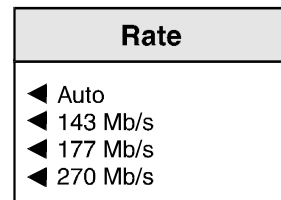
The main, or top level menu allows various sub-menus to be selected by pressing the button adjacent to the required text line.



Note that where a menu item is followed by three dots (...) this indicates that a further sub-menu may be selected.

Whenever a menu item is selected the parameters of that selection will be displayed in the Information window of the front panel. Where the selection is purely a mode selection and does not enable a sub-menu, the text will become reversed (white-on-black) indicating that the mode is active. If the mode is not available for selection the text will remain normal.

◀ Rate...



◀ Auto

Selecting this item sets the data rate to match the input data rate and the mode to Auto.

◀ 143 Mb/s

Selecting this item sets the data rate to 143 Mb/s and the mode to Manual.

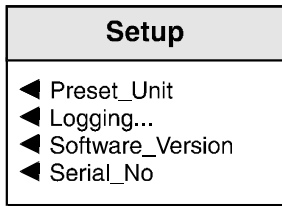
◀ 177 Mb/s

Selecting this item sets the data rate to 177 Mb/s and the mode to Manual.

◀ 270 Mb/s

Selecting this item sets the data rate to 270 Mb/s and the mode to Manual.

◀ Setup...



Selecting this item reveals a sub-menu that allows the following settings to be made:

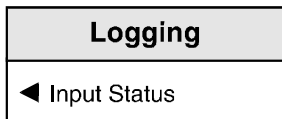
◀ Preset Unit

Selecting this item presets all functions available at the current access level.

◀ Logging

If a logging device is attached to the RollCall™ network, information about various parameters will be reported to the logging device assigned in the Remote Control Interface system. (See Section 1) The RCIF Menu System can be made available to such a device.

Selecting this item reveals a sub-menu that allows the following settings to be made:

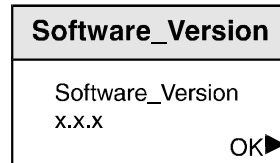


◀ Input Status

When activated the status of the input signal is issued to the logging device.

◀ Software Version

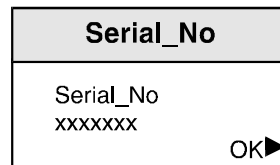
Selecting this item reveals a display showing the version of the software fitted in the unit.



Select OK to return to the Setup Menu.

◀ Serial No

Selecting this item reveals a display showing the serial number of the unit.



Select OK to return to the Setup Menu.

