

<p><b>IQAES00/01/10/11</b>  <b>Single/Dual Stream AES/EBU Distribution Amplifier</b></p>
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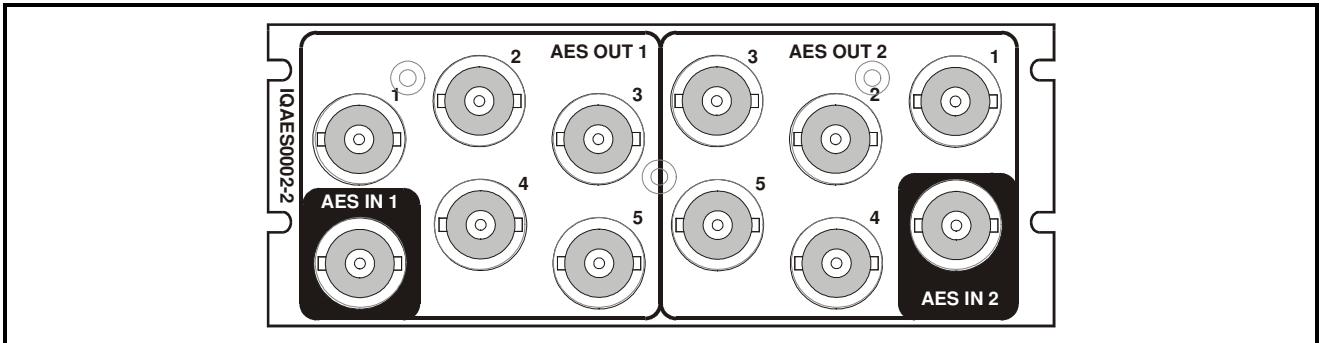
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**Module Description**

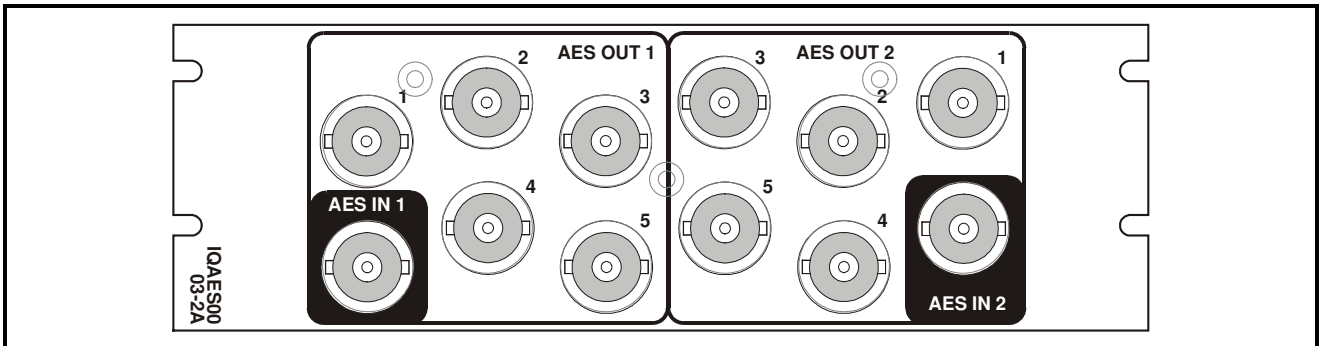
The IQAES00 digital audio distribution amplifier can receive digital audio from up to 500 m of RG59B cable for unbalanced inputs, or up to 150 m of AES approved cable for balanced inputs. The unit can be configured to provide up to 10 relocked outputs for a single input or up to 5 outputs per input for 2 inputs. Digital audio sample rates of 32, 44.1, 48 and 96 kHz can be automatically detected, however any input sample rates between 32 and 96 kHz may be applied.

**Rear Panel Views**

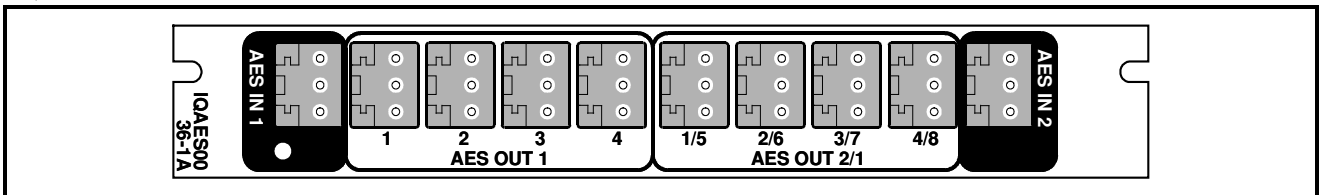
IQAES0002-2



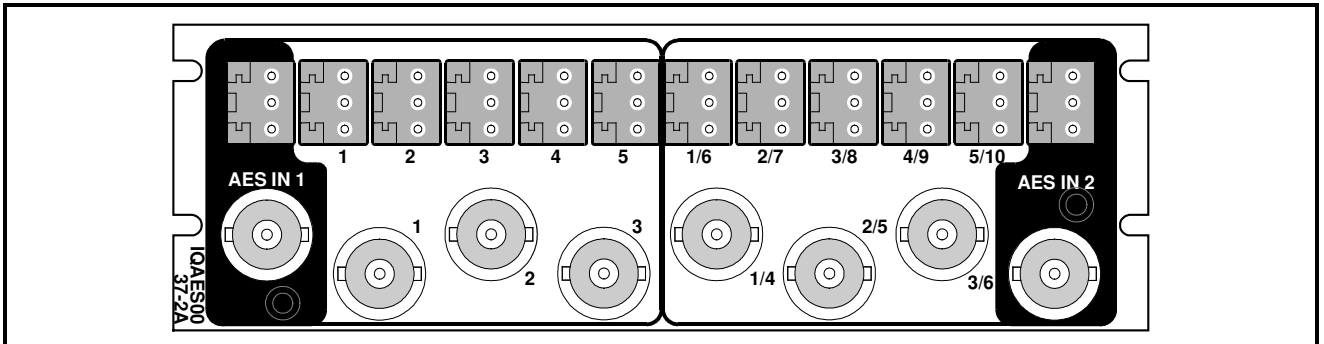
IQAES0003-2A



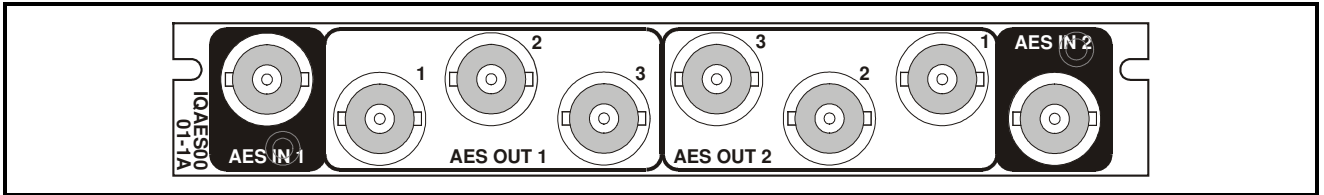
IQAES0036-1A



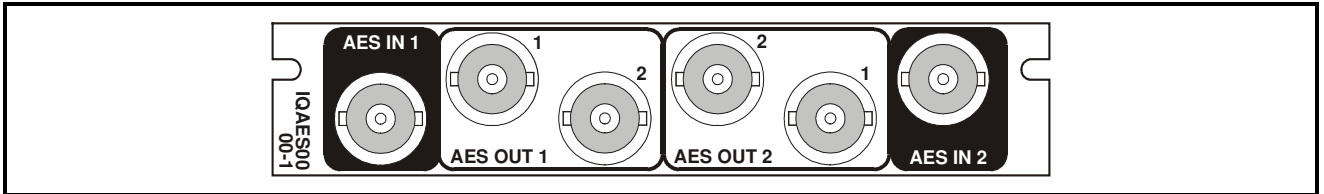
IQAES0037-2A



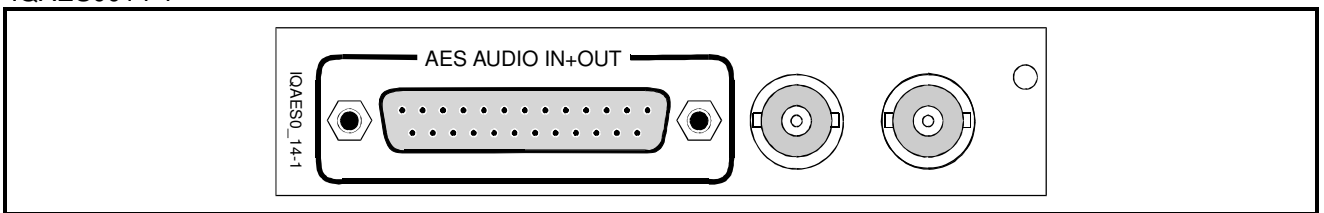
IQAES0001-1A



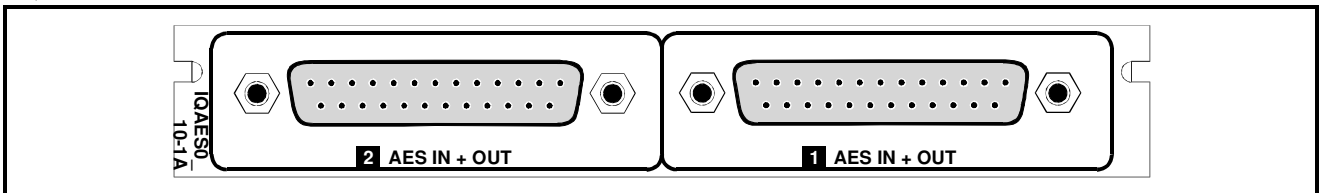
IQAES0000-1



IQAES0014-1



IQAES0010-1A



This manual covers the following products:

IQAES0001-1A Single/Dual stream AES DA. Unbalanced AES. Configurable for 1 input to 6 outputs or 2 inputs to 3 outputs per input

IQAES0003-2A Single/Dual stream AES DA. Unbalanced AES. Configurable for 1 input to 10 outputs or 2 inputs to 5 outputs per input

IQAES0036-1A Single/Dual stream AES DA. Balanced screw-terminal AES audio connections. Configurable for 1 input to 8 outputs or 2 inputs to 4 outputs per input

IQAES0037-2A Single/Dual stream AES DA. Balanced and unbalanced AES. Configurable for 1 input to 6 unbalanced and 10 balanced outputs or 2 inputs to 3 unbalanced and 5 balanced outputs per input

IQAES0000-1 Single/Dual stream AES DA. Unbalanced AES. Configurable for 1 input to 4 outputs or 2 inputs to 2 outputs per input

IQAES0002-2 Single/Dual stream AES DA. Unbalanced AES. Configurable for 1 input to 10 outputs or 2 inputs to 5 outputs per input

IQAES0010-1A Single/Dual stream AES DA. Balanced D-type AES audio connections. Configurable for 1 input to 10 outputs or 2 inputs to 5 outputs per input

IQAES0014-1 Single stream AES DA. Balanced D-type AES audio connections. 1 input to 5 outputs

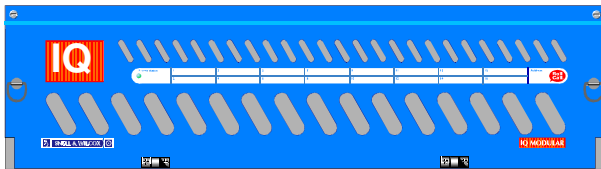
**Product Comparison**

Product	AES Inputs	AES Outputs	Width/Style
IQAES0001-1A	1 Unbalanced (BNC)	6 Unbalanced (BNC)	Single A
	2 Unbalanced (BNC)	3 Unbalanced Per Input (BNC)	
IQAES0003-2A	1 Unbalanced (BNC)	10 Unbalanced (BNC)	Double A
	2 Unbalanced (BNC)	5 Unbalanced Per Input (BNC)	
IQAES0036-1A	1 Balanced (Screw)	8 Balanced (Screw)	Single A
	2 Balanced (Screw)	4 Balanced Per Input (Screw)	
IQAES0037-2A	1 Balanced (Screw)	6 Unbalanced (BNC) and 10 Balanced (Screw)	Double A
	2 Balanced (Screw)	3 Unbalanced (BNC) and 5 Balanced (Screw) Per Input	
	1 Unbalanced (BNC)	6 Unbalanced (BNC) and 10 Balanced (Screw)	
	2 Unbalanced (BNC)	3 Unbalanced (BNC) and 5 Balanced (Screw) Per Input	
IQAES0000-1	1 Unbalanced (BNC)	4 Unbalanced (BNC)	Single 0
	2 Unbalanced (BNC)	2 Unbalanced Per Input (BNC)	
IQAES0002-2	1 Unbalanced (BNC)	10 Unbalanced (BNC)	Double O
	2 Unbalanced (BNC)	5 Unbalanced Per Input (BNC)	
IQAES0010-1A	1 Balanced (D type)	10 Balanced (D type)	Single A
	2 Balanced (D type)	5 Balanced per input (D type)	
IQAES0014-1	1 Balanced (D type)	5 Balanced (D type)	Single 0

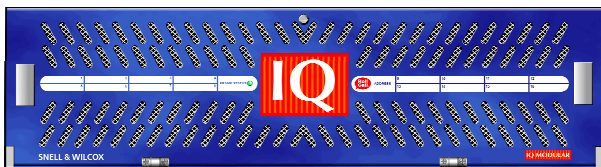
**Note that there are two styles of rear panels available. They are not interchangeable between the two styles of enclosures. However, the cards may be fitted into any style of enclosure.**

**‘A’ Style Enclosure**

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



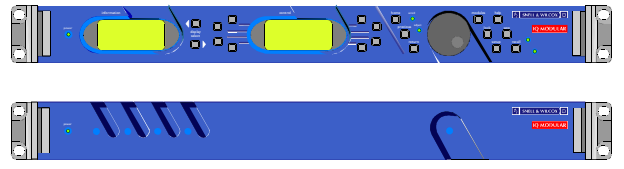
(Enclosure order codes IQH3A-E-0, IQH3A-E-P, IQH3A-0-0, IQH3A-0-P)



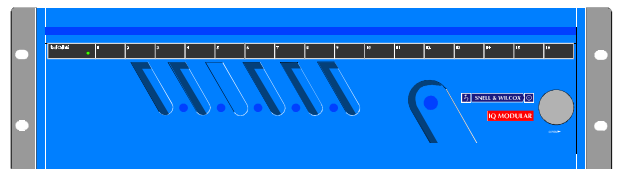
(Enclosure order codes IQH3A-S-0, IQH3A-S-P)

**‘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)

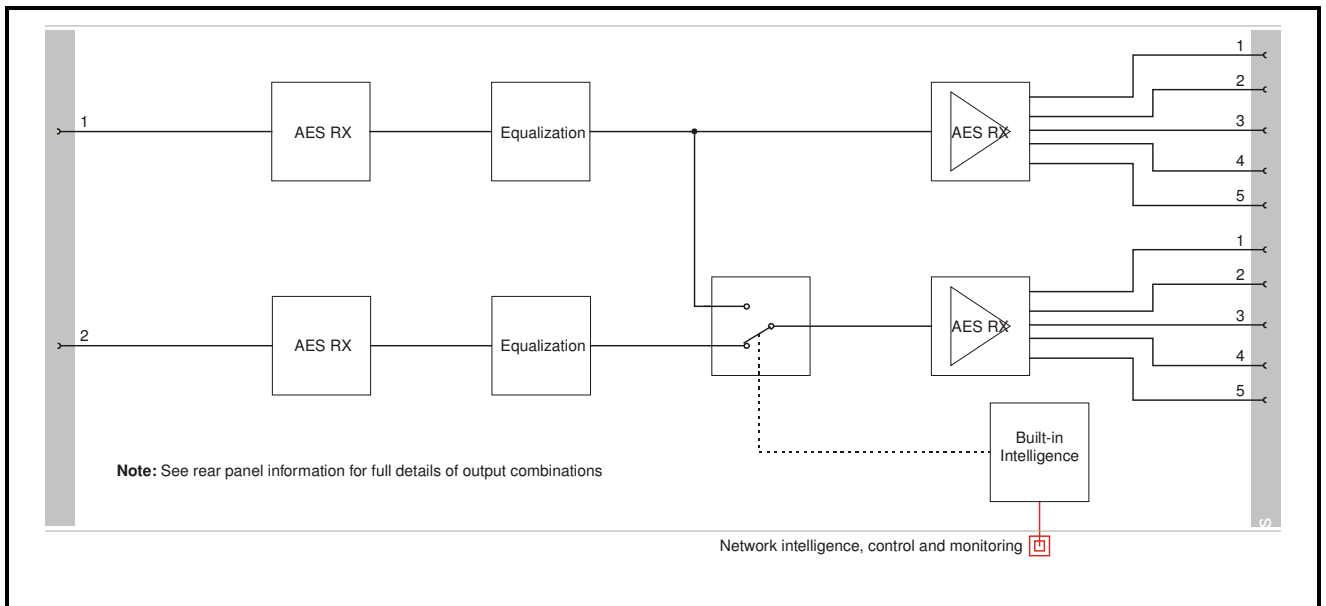


(Enclosure order codes IQH3N-0, IQH3N-P)



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

**Block Diagram**



**Features**

- Can receive digital audio from up to 150 m of AES cable (balanced inputs) or 500 m of RG59B or equivalent cable (unbalanced inputs)
- Automatic detection of 32, 44.1, 48 and 96 kHz sample rates
- Configurable for 1 input to 10 reclocked outputs, or 2 inputs to 5 reclocked outputs per input (dependant on rear panel type)
- Balanced and unbalanced I/O available simultaneously
- Channel status monitoring
- RollCall reporting of input lock, Non-PCM audio and PCM audio, sampling frequency (32, 44.1, 48, 96 kHz and unknown), consumer mode, channel mode, channel status – CRC error and byte 1

# Technical Profile

## Signal Input

Digital Audio Input ..... 1/2 x AES/EBU  
Standards (Balanced) ..... AES3-1992  
Standards (Unbalanced) ..... AES3-1992, SPDIF, SMPTE 276M

## Signal Outputs

Digital Audio ..... AES/EBU, up to 10  
Note: ..... See rear panel details for output options  
Standards (Balanced) ..... AES3-1992  
Standards (Unbalanced) ..... AES3-1992, SPDIF, SMPTE 276M

## Card Edge Controls (also available via RollCall)

### Indicators

Power up or CPU fault ..... Good = Off / Fault = Red  
CPU running but input 1 not detected (both inputs or input 1 when in single channel mode)  
Input detected = Off / Not Detected = Yellow  
CPU running but input 2 not detected (both inputs or input 1 when in single channel mode)  
Input detected = Off / Not detected = Yellow  
Normal operation with input detected (either input or input 1 when in single channel mode)  
Input not detected = Off / Input detected = Green

### Functions available via RollCall only

Input Mode ..... Single/Dual  
PCM/Non-PCM ..... PCM/non-PCM decision masks  
Restart unit

### Reporting \* also logged

Input 1 lock detect ..... \*No input present  
Input 2 lock detect ..... \*No input present  
Input 1 Channel Status Monitor  
\*Display's Channel Status information (Byte 1 bits 0-3)  
Input 2 Channel Status Monitor  
\*Display's Channel Status information (Byte 1 bits 0-3)

Input 1 Channel Status Warning  
CRC error (broken framing) - Pro mode only  
Input 2 Channel Status Warning  
CRC error (broken framing) - Pro mode only  
Channel mode ..... [unknown; 2-channel; 1-channel; primary/secondary; stereo] - Pro mode only  
Input 1 sample rate ..... \*Unknown, 32, 44.1, 48, 96 kHz detection  
Input 2 sample rate ..... \*Unknown, 32, 44.1, 48, 96 kHz detection  
Input 1 Type ..... \*PCM, \*Non-PCM  
Input 2 Type ..... \*PCM, \*Non-PCM  
RollTrack Controls ..... On/Off, Index, Source, Address, Command, Status, Sending.  
RollTrack Outputs (0-15) ..... Unused  
Input 1 missing  
Input 1 OK  
Input 1 CS Mode  
Input 1 PCM  
Input 1 non-PCM  
Input 1 SR Unknown  
Input 1 32k, 44.1k, 48k, 96k  
Input 2 missing  
Input 2 OK  
Input 2 CS Mode  
Input 2 PCM  
Input 2 non-PCM  
Input 2 SR Unknown  
Input 2 32k, 44.1k, 48k, 96k

## Specifications

Input Impedance ..... Balanced 110 ohm  
Unbalanced 75 ohm  
Sampling Frequency Range 32 - 96 kHz  
Cable Length ..... Balanced, > 150 m of AES3 Cable  
Unbalanced, up to 500 m of RG59 or Equivalent  
Output Impedance ..... Balanced 110 ohm  
Unbalanced 75 ohm  
Output Signal level ..... Balanced 3 V pk to pk min  
Unbalanced 1 V ±0.1 V pk to pk

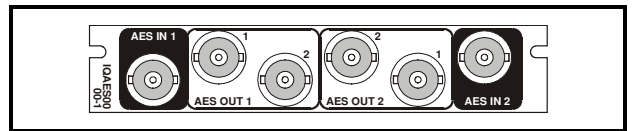
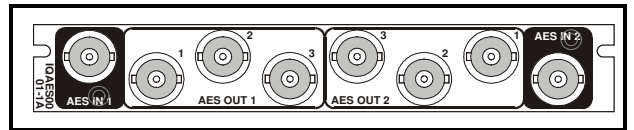
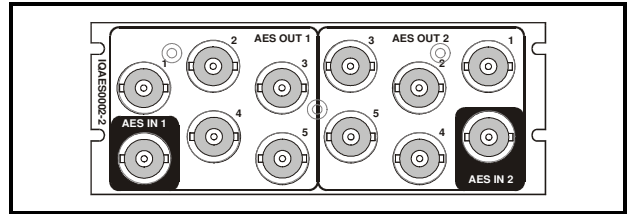
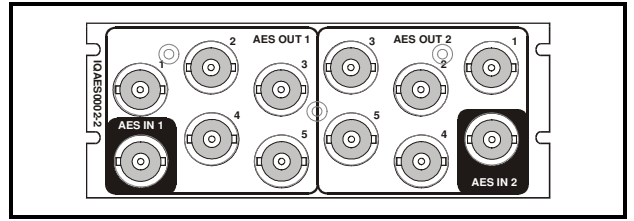
## Performance

Group Delay ..... @ 48 kHz TBD  
Jitter Rejection ..... 0.006 UI  
Re-clocking ..... Yes  
Power Consumption  
Module Power Consumption ..... 3 W

INPUTS

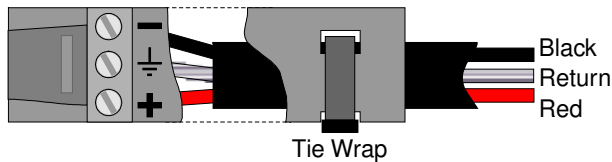
**AES Inputs**

Unbalanced AES inputs are made to the unit via BNC connectors which terminate in 75 Ohms.

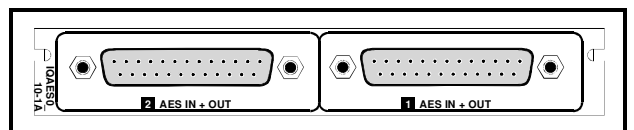
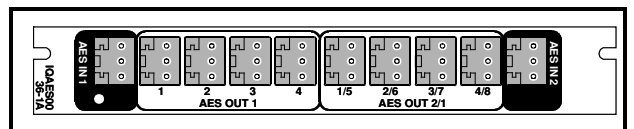
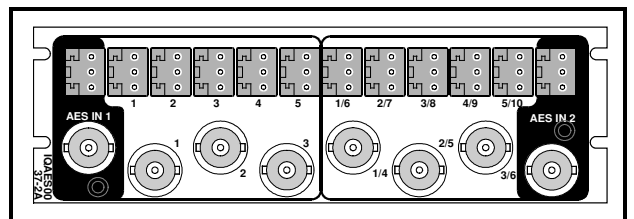


**Screw-Terminal Connector Rear Panels**

Balanced AES input connections are made via a screw-terminal connector as shown below.

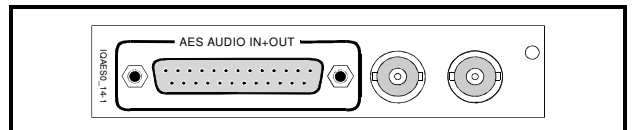


Cable used for AES screw terminals should equal or exceed Belden 1800B specifications for full module performance and the wire tails MUST be as short as possible and be assembled as shown above.



**25 Way D Connector Rear Panels**

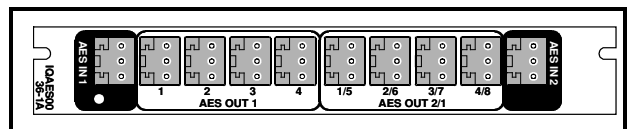
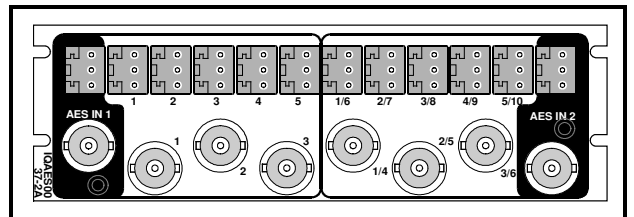
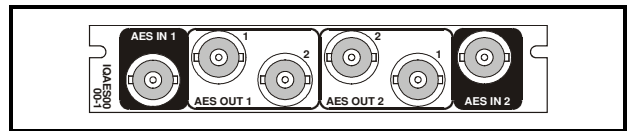
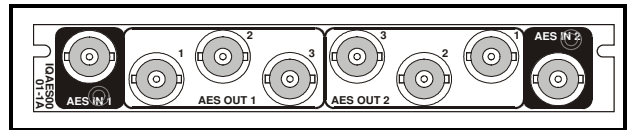
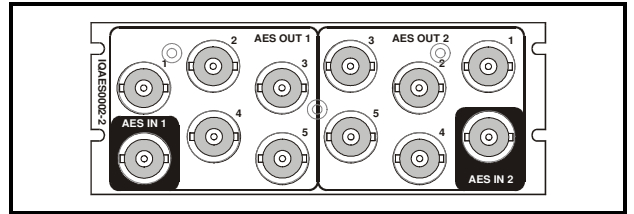
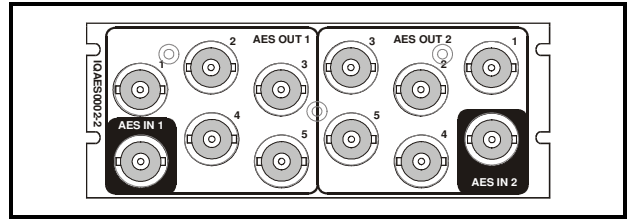
Balanced AES input connections are made via 25 way D type connectors.



OUTPUTS

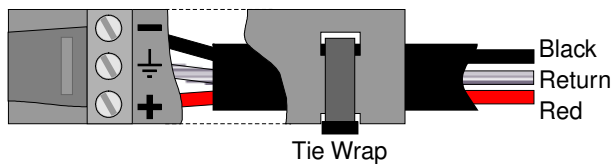
**AES Outputs**

All unbalanced AES outputs are available via BNC connectors for 75 Ohms.



**Screw-Terminal Connector Rear Panels**

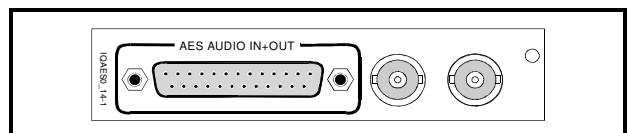
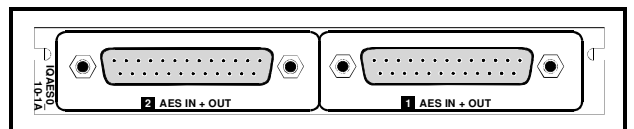
Balanced AES output connections are made via a screw-terminal connector as shown below.



Cable used for AES screw terminals should equal or exceed Belden 1800B specifications for full module performance and the wire tails **MUST** be as short as possible and be assembled as shown above.

**25 Way D Connector Rear Panels**

Balanced AES output connections are made via 25 way D type connectors.





**25 Way D Type Connection Details**

By Pin Number

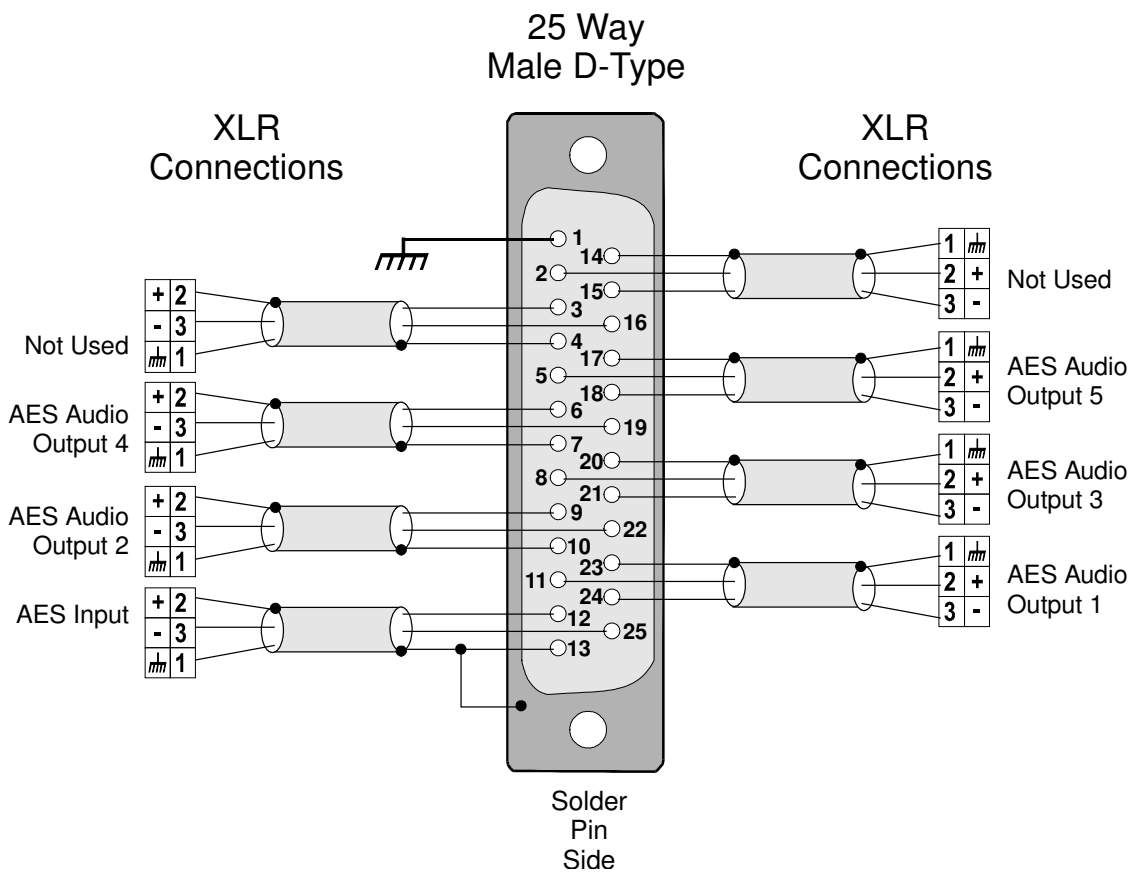
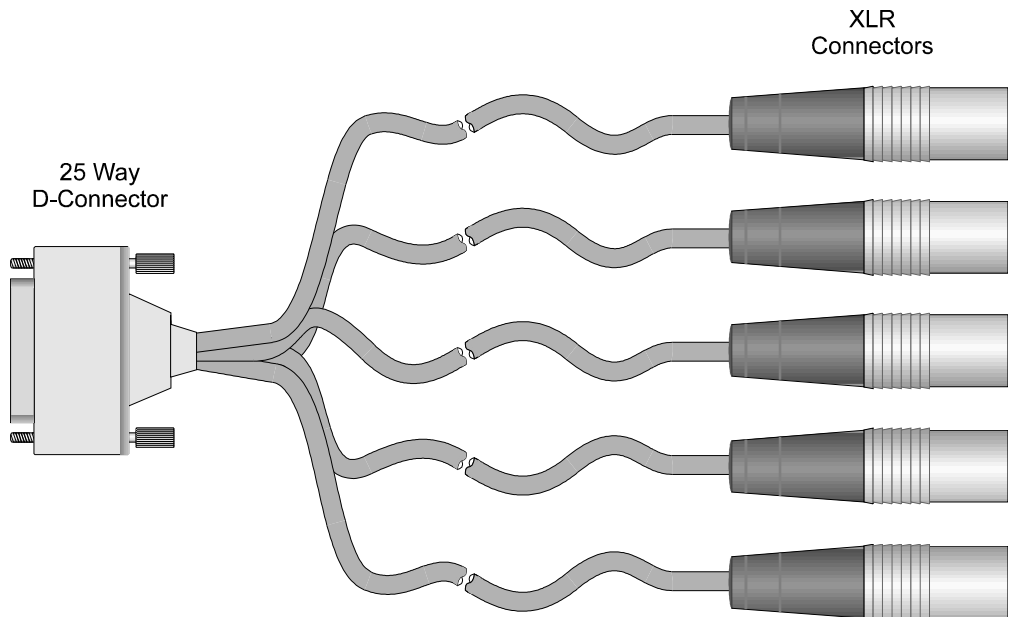
By Function

Pin No	Description	Connection
1	Chassis Ground	Ground
2	Channel 1 +	Not Used
3	Channel 2 +	Not Used
4	Ground (2)	Ground
5	Channel 3 +	AES Audio Output 5 +
6	Channel 4 +	AES Audio Output 4 +
7	Ground (4)	Ground
8	Channel 5 +	AES Audio Output 3 +
9	Channel 6 +	AES Audio Output 2 +
10	Ground (6)	Ground
11	Channel 7 +	AES Audio Output 1 +
12	Channel 8 +	AES Input +
13	Ground (8)	Ground
14	Ground (1)	Ground
15	Channel 1 –	Not Used
16	Channel 2 –	Not Used
17	Ground (3)	Ground
18	Channel 3 –	AES Audio Output 5 –
19	Channel 4 –	AES Audio Output 4 –
20	Ground (5)	Ground
21	Channel 5 –	AES Audio Output 3 –
22	Channel 6 –	AES Audio Output 2 –
23	Ground (7)	Ground
24	Channel 7 –	AES Audio Output 1 –
25	Channel 8 –	AES Input –

Pin No	Description	Connection
1	Chassis Ground	Ground
2	Channel 1 +	Not Used
15	Channel 1 –	Not Used
14	Ground (1)	Ground
3	Channel 2 +	Not Used
16	Channel 2 –	Not Used
4	Ground (2)	Ground
5	Channel 3 +	AES Audio Output 5 +
18	Channel 3 –	AES Audio Output 5 –
17	Ground (3)	Ground
6	Channel 4 +	AES Audio Output 4 +
19	Channel 4 –	AES Audio Output 4 –
7	Ground (4)	Ground
8	Channel 5 +	AES Audio Output 3 +
21	Channel 5 –	AES Audio Output 3 –
20	Ground (5)	Ground
9	Channel 6 +	AES Audio Output 2 +
22	Channel 6 –	AES Audio Output 2 –
10	Ground (6)	Ground
11	Channel 7 +	AES Audio Output 1 +
24	Channel 7 –	AES Audio Output 1 –
23	Ground (7)	Ground
12	Channel 8 +	AES Input +
25	Channel 8 –	AES Input –
13	Ground (8)	Ground

*Note that when configured as a single input, ten output amplifier, connector 1 should be used for the input signal. The additional five outputs will be available on connector 2.*

Example of Connection to XLR Connectors



CARD EDGE INDICATORS



**D1 OK (Green)**

This LED will illuminate if either input or input 1 (when in single channel mode) is present.

**D2 Warning (Yellow)**

This LED will illuminate if both inputs or input 1 (when in single channel mode) is missing. If either input is present this LED will not be illuminated.

**D3 Power-up or CPU fault (Red)**

This LED will illuminate during power-up or indicate a CPU fault.

## RollCall PC Control Panel Screens

### Status

#### Input 1 and 2

This will display various information about the status of the inputs.

#### Lock

This indicates the lock status. It may show:

- Unlocked      The unit is not locked to the input
- Locked        The unit is locked to the input

#### Sample Rate

This will show the sample rate of the input signal. It may show:

- No Input      No input signal detected
- Unknown      The sample rate cannot be recognized

32, 44.1, 48, 96 kHz  
The detected sample rate

#### PCM

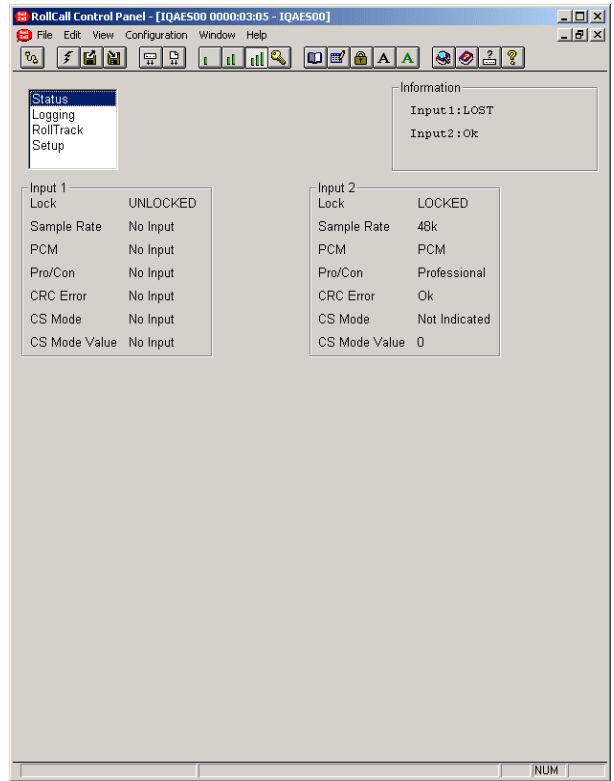
This will show the type of AES input signal. It may show:

- No Input      No input signal detected
- PCM            The input is a standard PCM signal
- \*Non-PCM      The input is a not a PCM signal

#### Pro/Con

This will show what sort of input signal has been detected. It may show:

- No Input      No input signal detected
- Pro            The signal is a professional type signal
- Con            The signal is a consumer type signal



#### CRC Error

In professional mode only this will show the number of CRC errors (broken framing).

- Or
- No Input      No input signal detected

#### CS Mode

In professional mode only this will show the channel status mode. It may show:

- Unknown
- 2-channel
- 1-channel
- Primary/secondary
- Stereo
- No Input      No input signal detected

#### CS Mode Value

This display's the Channel Status information (Byte 1, bits 0-3).

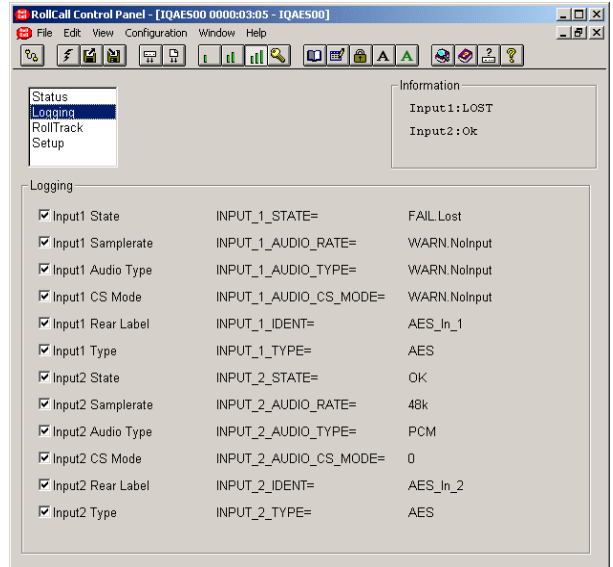
- Or
- No Input      No input signal detected

**Logging**

Information about various parameters can be made available to a logging device that is attached to the RollCall™ network by checking the appropriate box.

The status is shown to the right of the item.

Any of the items may be selected from the list.



**ROLLCALL LOG FIELDS**

Log Field	Log Value	Description
INPUT_1_TYPE =	AES	Type of signal the module processes
INPUT_1_IDENT =	AESIN1	Input rear label
INPUT_1_AUDIO_CS_MO	Number WARN:NoInput	Display's Channel Status information (Byte 1 bits 0-3)
INPUT_1_AUDIO_TYPE	PCM Non-PCM WARN:NoInput	Detects what type of AES signal present
INPUT_1_AUDIO_RATE	WARN:NoInput WARN:Unknown 32kHz 44.1kHz 48kHz 96kHz	Sample rate detection
INPUT_1_STATE =	OK FAIL:Lost	The presence or lack of input
INPUT_2_TYPE =	WARN:NoInput PCM Non-PCM	Type of signal the module processes
INPUT_2_IDENT =	AESIN2	Input rear label
INPUT_2_AUDIO_CS_MO	Number WARN:NoInput	Display's Channel Status information (Byte 1 bits 0-3)
INPUT_2_AUDIO_TYPE	PCM Non-PCM WARN:NoInput	Detects what type of AES signal present
INPUT_2_AUDIO_RATE	WARN:NoInput WARN:Unknown 32kHz 44.1kHz 48kHz 96kHz	Sample rate detection
INPUT_2_STATE =	OK FAIL:Lost	The presence or lack of input

**RollTrack**

This function allows information to be sent, via the RollCall™ network, to other compatible units connected on the same network. For example, it can enable compatible audio delay units to produce an audio delay dependent on this and other similar units. The audio delay unit will dynamically follow or track the received delay-time information. This allows processed video signals to be timed correctly with audio signals. This automatic tracking system via the RollCall™ network is call **RollTrack**.

For more detailed information, see the RollTrack section (Appendix) at the end of this manual.

**RollTrack Index**

This item allows up to 16 destinations to be selected.

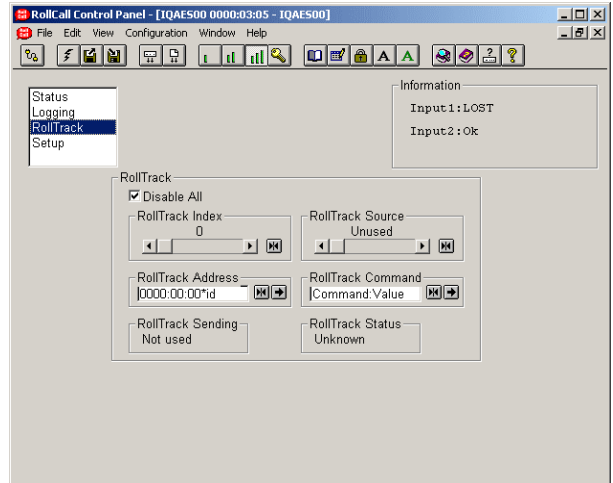
**RollTrack Source**

This allows the source of information that triggers the transmission of data to be selected.

Where applicable options are:

Unused (off)
Input 1 Missing
Input 1 OK
Input 1 CS Mode
Input 1 PCM
Input 1 Non PCM
Input 1 SR Unknown
Input 1 32k
Input 1 44.1k
Input 1 48k
Input 1 96k
Input 2 Missing
Input 2 OK
Input 2 CS Mode
Input 2 PCM
Input 2 Non PCM
Input 2 SR Unknown
Input 2 32k
Input 2 44.1k
Input 2 48k
Input 2 96k


Note that **SR Unknown** means that the sample rate does not conform to any of the standard sample rates (32kHz, 44.1kHz, 48k or 96kHz).




The destination for the information is set by the network code address as follows:

**Network Address**

This item allows the address of the selected destination unit to be set.

To change the address, type the new destination in the text area and then select  (return).

 (Preset) returns to the default destination

The full **RollTrack** address has four sets of numbers

For example: 0000:10:01\*99

The first set (0000) is the network segment code number

The second set (10) is the number identifying the (enclosure/mainframe) unit.

The third set (01) is the slot number in the unit

The Fourth Set (99)

Each RollCall unit has a unique identification embedded in the units' software. In this example 99 represents an IQBAXR, 142 would represent an IQDAMDD, 255 a TBS100D etc. Inserting this number in the RollTrack address ensures that only the correct type of unit (in this example an IQBAXR) will respond to the RollTrack command; any other unit will ignore the command. If this number was set to 00 **any type** of unit at this location would respond to the RollTrack command, possibly causing unpredictable results.

**RollTrack (continued)**

**RollTrack Command**

The full **RollTrack** command has two sets of numbers

For example: 84\*156

The first set (84) is the **RollTrack** command number

The second set (156) is the value sent with the **RollTrack** command number

**Disable All**

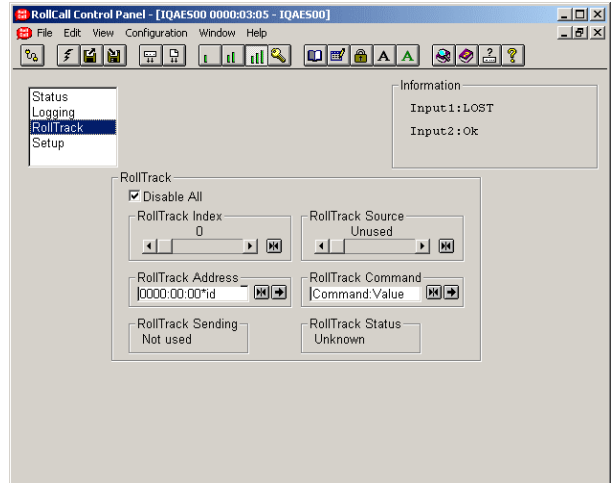
When this item is checked all RollTrack items will be disabled.

**RollTrack Sending**

This item shows when the unit is actively sending the RollTrack command.

This may show:

- Not Used RollTrack destination not in use
- String A string value is always being sent.
- Number A number value is always being sent.
- No The message is not being sent.
- Yes The message is being sent.
- Internal Inconsistent behavior; please contact your local Snell & Wilcox agent.
- Type Error



**RollTrack Status**

This item will show the status of the currently selected RollTrack index.

This may show:

- OK RollTrack message sent and received OK.
- Unknown Rolltrack message has been sent but it has not yet completed.
- Timeout RollTrack message sent but acknowledgement not received. This could be because the destination unit is not at the location specified.
- Error This indicates a broken RollCall state.
- Bad This indicates a broken RollCall packet.

**Setup**

**Mode**

These modules can be configured to provide up to 10 reclocked outputs for a single input or up to 5 outputs per input for 2 inputs.

**1 Input**

When checked all outputs will derive their input signal from Input 1.

**2 Inputs**

When checked AES Outputs 1 will derive their input signal from Input 1 and AES Outputs 2 will derive their input signal from Input 2.

**NonPCM Detect**

The non-PCM detector may be set to respond to the channel status bits as follows :

**Test Audio bit**

When checked and the Audio bit is found to be set to non-audio it will be considered as non-PCM.

**Test V bit**

When checked and this bit is found to be set to 1 (non-valid) it will be considered as non-PCM.

*Note that this is an OR function so if both items are checked and one of the test bits are considered to be non-PCM, the detector will report the signal as being non-PCM. If neither items are checked the detector will be disabled.*

This information will be reported to the logger (nonPCM) if selected, and sent as a RollTrack (Input non-PCM) if selected.

**Information Window**

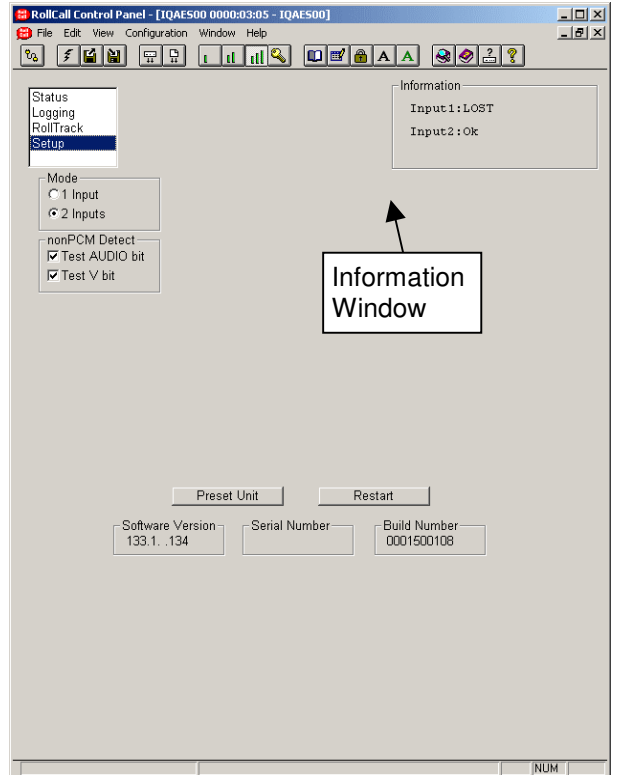
This will display basic information about the status of the unit.

**Input 1:, Input 2:**

This will show the status of the input. It can show:

**LOST**      The input signal has been lost

**OK**         The module is receiving a valid input signal



Information Window



Selecting this item sets all adjustment functions that include a preset facility, to their preset values.



This will reboot the unit simulating a power-down power-up cycle restoring power-up settings.

**Software version**

This item shows the version of the software fitted in the module.

**Serial Number**

This item shows the serial number of the module

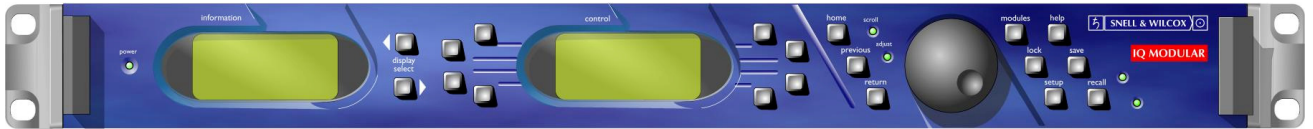
**Build Number**

This will indicate the factory build number. This number defines all parameters of the unit (software versions, build level etc.) for identification purposes.



**Operation from an Active Control Panel**

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

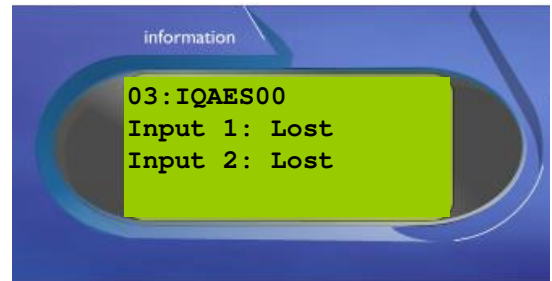


All operational parameters and selections are made using a system of menus displayed in two LCD windows.

Operational details for the remote control panel can be found in the Modular System Operator's Manual.

**Information Window**

The Information window has four lines of text indicating the current state of the unit.

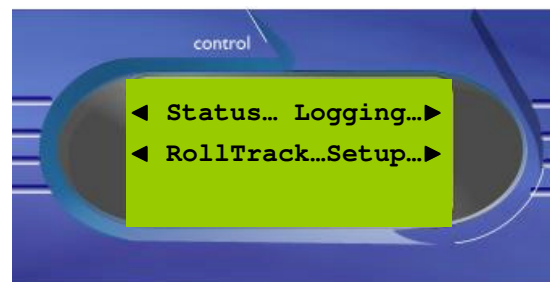


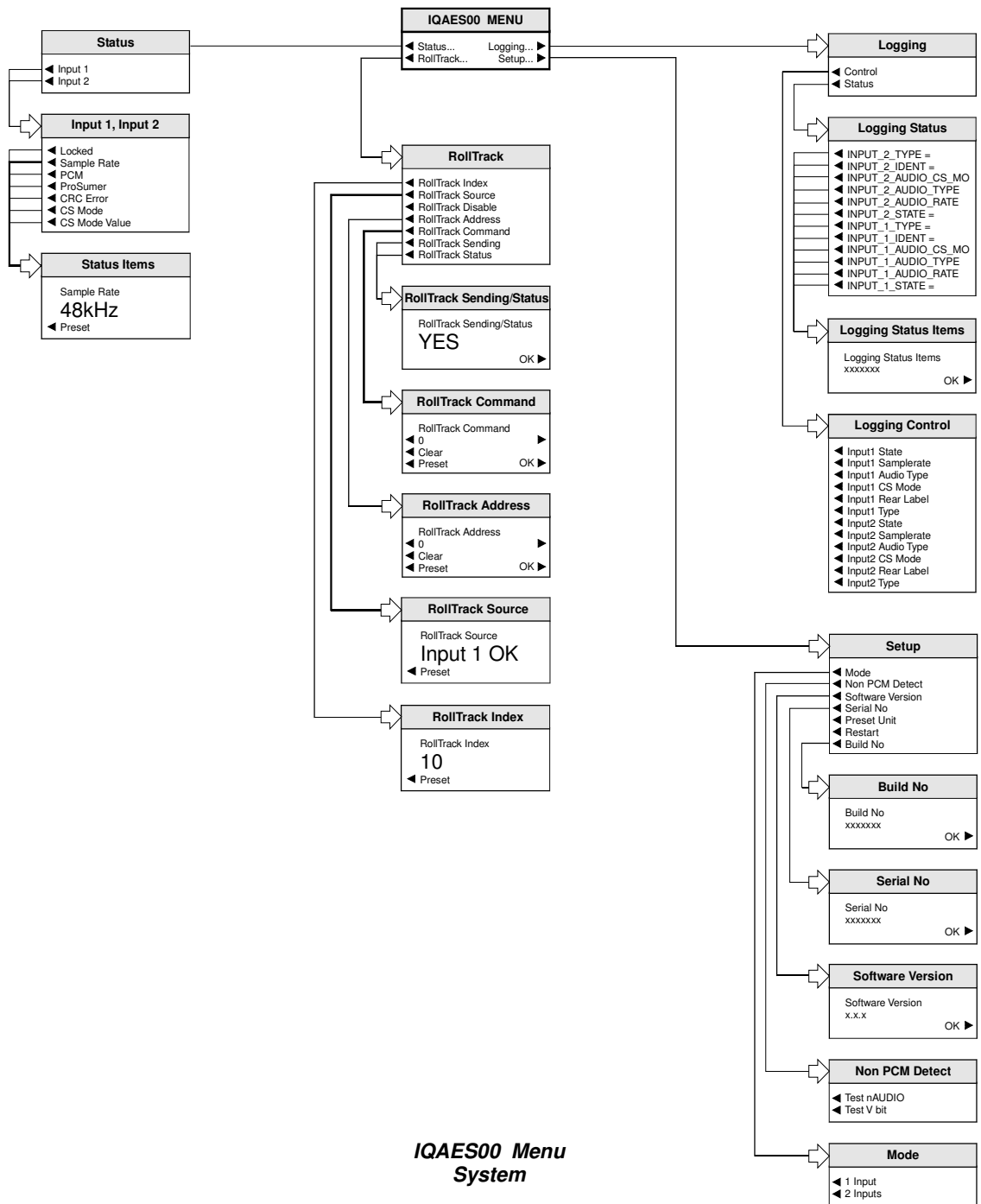
**Control Window**

The **Control** window displays all Selection Menus and sub-menus.

The selection is made by pressing the button adjacent to the required item.

The menu structure is detailed in the following pages.





***IQAES00 Menu System***

**MENU DETAILS**

(see IQAES00 Menu System on previous pages)

**MAIN MENU**

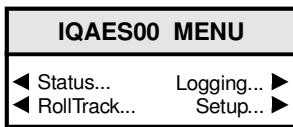
The main or top level menu allows various sub-menus to be selected by pressing the button adjacent to the required text line.

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.

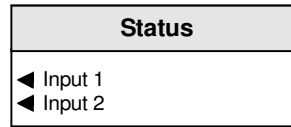
*Also refer to the block diagram on page 5 for more information.*

**MAIN MENU**



**Status**

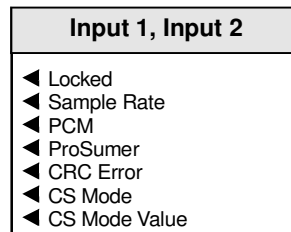
This will display various information about the status of the inputs.



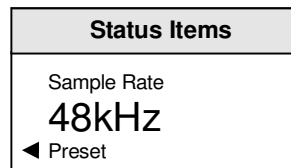
This allows either Input or input 2 to be selected.

**Input 1 and Input 2**

This will reveal a display showing the status items that may be selected.



This will show details of the selected status item, in this example it shows the sample rate.



It may also show the following:

Locked

This indicates the lock status. It may show:

Unlocked      The unit is not locked to the input

Locked      The unit is locked to the input

Sample Rate

This will show thew sample rate of the input signal. It may show:

No Input      No input signal detected

Unknown      The sample rate cannot be recognized

32, 44.1, 48, 96 kHz  
The detected sample rate

**PCM**

This will show the type of AES input signal. It may show:

- No Input      No input signal detected
- PCM            The input is a standard PCM signal
- \*Non-PCM      The input is a not a PCM signal

**ProSumer (Pro/Con)**

This will show what sort of input signal has been detected. It may show:

- No Input      No input signal detected
- Pro            The signal is a professional type signal
- Con            The signal is a consumer type signal

**CRC Error**

In professional mode only this will show the number of CRC errors (broken framing).

- Or
- No Input      No input signal detected

**CS Mode**

In professional mode only this will show the channel status mode. It may show:

- Unknown
- 2-channel
- 1-channel
- Primary/secondary
- Stereo
- No Input      No input signal detected

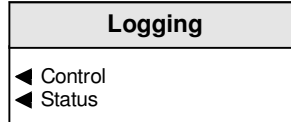
**CS Mode Value**

This display's the Channel Status information (Byte 1, bits 0-3).

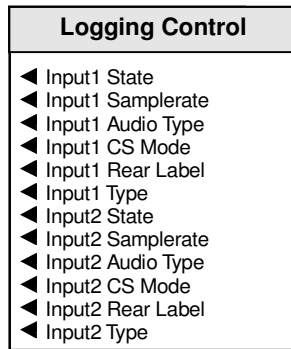
- Or
- No Input      No input signal detected

**Logging**

Information about various parameters can be made available to a logging device that is attached to the RollCall™ network by selecting the appropriate item from the Control menu.

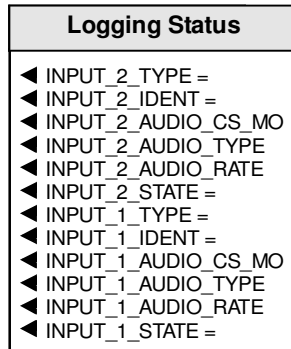


**Control**

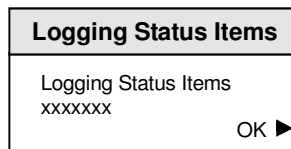


**Logging Status**

By selecting an item in this menu the status of the item will be shown in the display window.



**Display Window**



**ROLLCALL LOG FIELDS**

Log Field	Log Value	Description
INPUT_1_TYPE =	AES	Type of signal the module processes
INPUT_1_IDENT =	AESIN1	Input rear label
INPUT_1_AUDIO_CS_MO	Number WARN:NoInput	Display's Channel Status information (Byte 1 bits 0-3)
INPUT_1_AUDIO_TYPE	PCM Non-PCM WARN:NoInput	Detects what type of AES signal present
INPUT_1_AUDIO_RATE	WARN:NoInput WARN:Unknown 32kHz 44.1kHz 48kHz 96kHz	Sample rate detection
INPUT_1_STATE =	OK FAIL:Lost	The presence or lack of input
INPUT_2_TYPE =	WARN:NoInput PCM Non-PCM	Type of signal the module processes
INPUT_2_IDENT =	AESIN2	Input rear label
INPUT_2_AUDIO_CS_MO	Number WARN:NoInput	Display's Channel Status information (Byte 1 bits 0-3)
INPUT_2_AUDIO_TYPE	PCM Non-PCM WARN:NoInput	Detects what type of AES signal present
INPUT_2_AUDIO_RATE	WARN:NoInput WARN:Unknown 32kHz 44.1kHz 48kHz 96kHz	Sample rate detection
INPUT_2_STATE =	OK FAIL:Lost	The presence or lack of input

**RollTrack**

This function allows information to be sent, via the RollCall™ network, to other compatible units connected on the same network. For example, it can enable compatible audio delay units to produce an audio delay dependent on this and other similar units. The audio delay unit will dynamically follow or track the received delay-time information. This allows processed video signals to be timed correctly with audio signals. This automatic tracking system via the RollCall™ network is call **RollTrack**.

RollTrack
◀ RollTrack Index
◀ RollTrack Source
◀ RollTrack Disable
◀ RollTrack Address
◀ Roll Track Command
◀ RollTrack Sending
◀ RollTrack Status

For more detailed information, see the RollTrack section (Appendix) at the end of this manual.

RollTrack Index

RollTrack Index
RollTrack Index
<b>10</b>
◀ Preset

This item is used to select which RollTrack Index is set up using the RollTrack Source, RollTrack Address and RollTrack Command functions.

RollTrack Source

RollTrack Source
RollTrack Source
<b>Input 1 OK</b>
◀ Preset

This allows the source of information that triggers the transmission of data to be selected.

Where applicable options are:

Unused (off)
Input 1 Missing
Input 1 OK
Input 1 CS Mode
Input 1 PCM
Input 1 Non PCM
Input 1 SR Unknown
Input 1 32k
Input 1 44.1k
Input 1 48k
Input 1 96k
Input 2 Missing
Input 2 OK
Input 2 CS Mode
Input 2 PCM
Input 2 Non PCM
Input 2 SR Unknown
Input 2 32k
Input 2 44.1k
Input 2 48k
Input 2 96k

Note that **SR Unknown** means that the sample rate does not conform to any of the standard sample rates (32kHz, 44.1kHz, 48k or 96kHz).

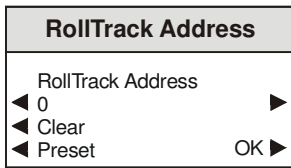
The destination for the information is set by the network code address.

**RollTrack Disable**

When this item is selected all RollTrack items will be disabled.

**RollTrack Address**

This item allows the address of the selected destination unit to be set.



To compile/edit the text the right ► and left ◀ buttons adjacent to the upper text line in the menu should be used to select the character position in the text and the spinwheel used to select the character.

The **Clear** function blanks the selected character.

The **Preset** function loads the default address.

**O.K.** ► saves the address and returns to the main menu.

The full **RollTrack** address has four sets of numbers

For example: 0000:10:01\*99

The first set (0000) is the network segment code number

The second set (10) is the number identifying the (enclosure/mainframe) unit.

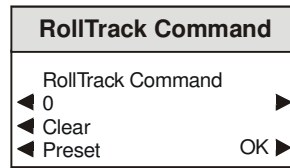
The third set (01) is the slot number in the unit

The Fourth Set (99)

Each RollCall unit has a unique identification embedded in the units' software. In this example 99 represents an IQBAXR, 142 would represent an IQDAMDD, 255 a TBS100D etc. Inserting this number in the RollTrack address ensures that only the correct type of unit (in this example an IQBAXR) will respond to the RollTrack command; any other unit will ignore the command.

If this number was set to 00 **any type** of unit at this location would respond to the RollTrack command, possibly causing unpredictable results.

**RollTrack Command**



The full **RollTrack** command has two sets of numbers

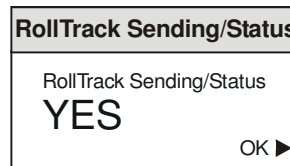
For example: 84\*156

The first set (84) is the **RollTrack** command number

The second set (156) is the value sent with the **RollTrack** command number.

**RollTrack Sending**

This item shows when the unit is actively sending the RollTrack command.

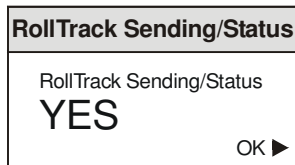


This may show:

- String      A string value is always being sent.
- Number     A number value is always being sent.
- No          The message is not being sent.
- Yes         The message is being sent.
- Internal Type Error    Inconsistent behavior; please contact your local Snell & Wilcox agent.

RollTrack Status

This item will show the status of the currently selected RollTrack index.



This may show:

- OK            RollTrack message sent and received OK.
  
- Unknown    Rolltrack message has been sent but it has not yet completed.
  
- Timeout    RollTrack message sent but acknowledgement not received. This could be because the destination unit is not at the location specified.
  
- Error        This indicates a broken RollCall state.
  
- Bad         This indicates a broken RollCall packet.



**Setup...**

This allows various functions to be setup.

Setup
◀ Mode
◀ Non PCM Detect
◀ Software Version
◀ Serial No
◀ Preset Unit
◀ Restart
◀ Build No

**Mode**

These modules can be configured to provide up to 10 relocked outputs for a single input or up to 5 outputs per input for 2 inputs.

Mode
◀ 1 Input
◀ 2 Inputs

**1 Input**

When selected all outputs will derive their input signal from Input 1.

**2 Inputs**

When selected AES Outputs 1 will derive their input signal from Input 1 and AES Outputs 2 will derive their input signal from Input 2.

**Non PCM Detect**

The non-PCM detector may be set to respond to the channel status bits as follows :

Non PCM Detect
◀ Test nAUDIO
◀ Test V bit

**Test Audio bit**

When selected and the Audio bit is found to be set to non-audio it will be considered as non-PCM.

**Test V bit**

When selected and this bit is found to be set to 1 (non-valid) it will be considered as non-PCM.

*Note that this is an OR function so if both items are selected and one of the test bits are considered to be non-PCM, the detector will report the signal as being non-PCM.*

*If neither items are selected the detector will be disabled.*

This information will be reported to the logger (nonPCM) if selected, and sent as a RollTrack (Input non-PCM) if selected.

**Software Version**

This item reveals a display showing the version of the software fitted in the module.

Software Version
Software Version x.x.x
OK ▶

Select OK to return to the Unit Menu.

**Serial No**

This item reveals a display showing the serial number of the module.

Serial No
Serial No xxxxxxx
OK ▶

Select OK to return to the Unit Menu.

**Preset Unit**

Selecting this item sets all adjustment functions that include a preset facility, to their preset values.

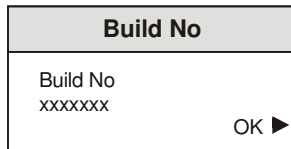
*Note that this is a momentary action.*

**Restart**

This will reboot the unit simulating a power-down power-up cycle restoring power-up settings.

**Build No**

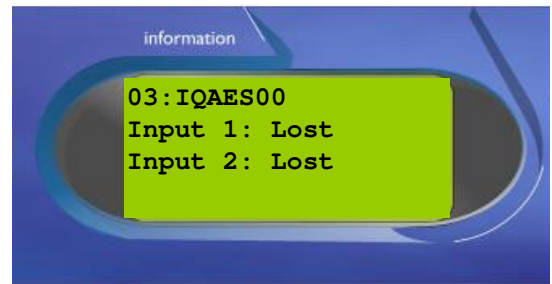
This will indicate the factory build number. This number defines all parameters of the unit (software versions, build level etc.) for identification purposes.



Select OK to return to the Unit Menu.

**Information Window**

This will display basic information about the status of the unit.



**Input 1:, Input 2:**

This will show the status of the input. It can show:

- LOST**      The input signal has been lost
- OK**        The module is receiving a valid input signal

### Manual Revision Record

Date	Version No.	Issue No.	Change	Comments
27-Jul-06	1	1		First issue released