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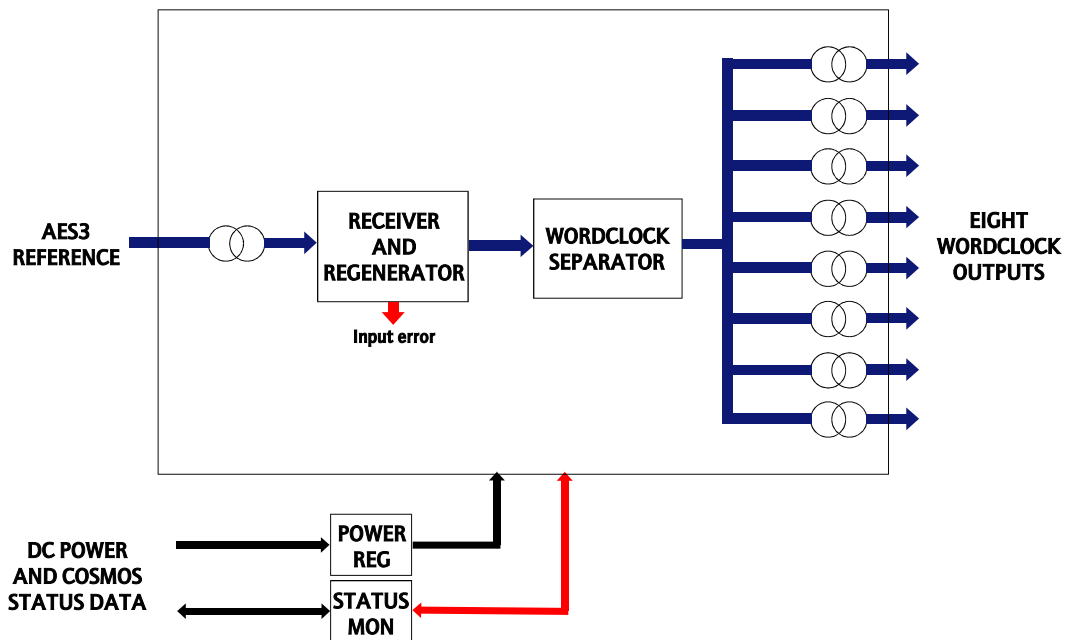
1 Introduction

The 4403 digital audio wordclock separator provides eight wordclock outputs from a digital audio input.

The module may be used in the 1050 3U and 1051 1U ICON modular product rackframes with a choice of balanced or unbalanced rear connectors.

Characteristics of the 4403 are:

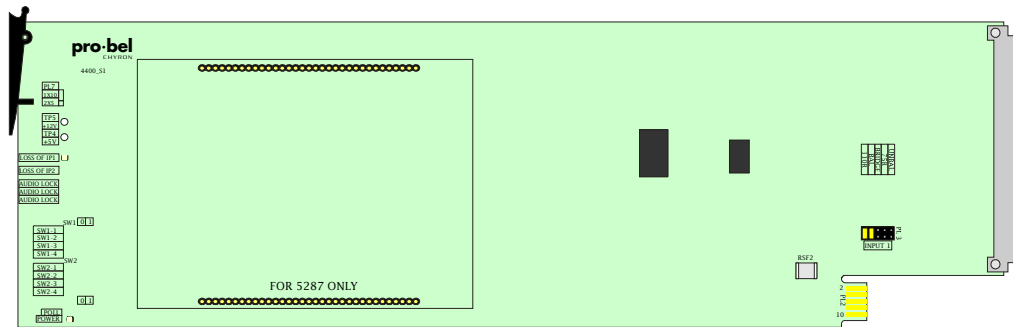
- one input to AES3-1992, at 110Ω balanced or AES3id at 75Ω unbalanced or high impedance
- eight wordclock outputs
- compatible with Pro-Bel COSMOS status monitoring



The 4403 digital audio wordclock separator

2 Installation

The 4403 digital audio wordclock separator fits in the 1050 3U and 1051 1U ICON modular product rackframes. It is used with either the K4403.3B 30mm rear panel for a balanced digital audio input or the K4403.3U 30mm rear panel for unbalanced digital audio input.

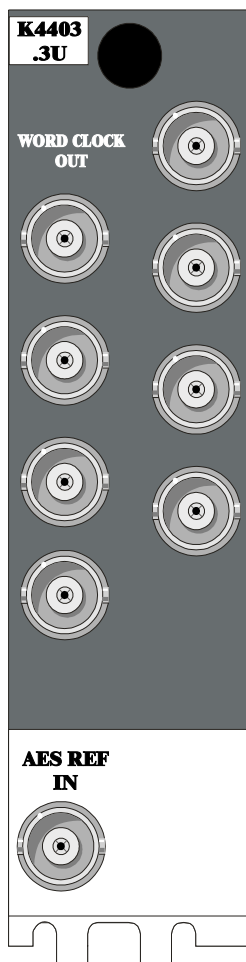


The 4403 digital audio wordclock separator

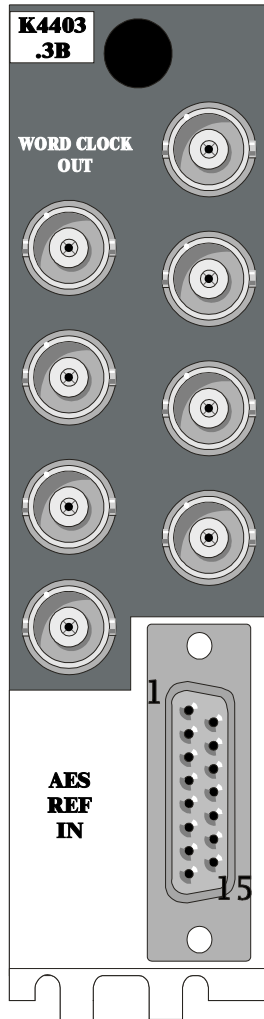
For module and rear connector installation please refer to the appropriate ICON rackframe section of the manual.

2.1 Signal I/O

The K4403.3U panel is equipped with BNC connectors for wordclock and an unbalanced digital audio input, whilst the K4403.3B panel is equipped with a 15 way 'D' type connector to accommodate a balanced digital audio input.



The K4403.3U rear panel for unbalanced I/O



Signal I/O (AES REF IN)			
Pin	Function	Pin	Function
1	N/C	9	N/C
2	GND	10	N/C
3	N/C	11	GND
4	N/C	12	N/C
5	GND	13	AES I/P +
6	AES I/P -	14	GND
7	N/C	15	N/C
8	GND		

The K4403.3B rear panel for balanced AES input

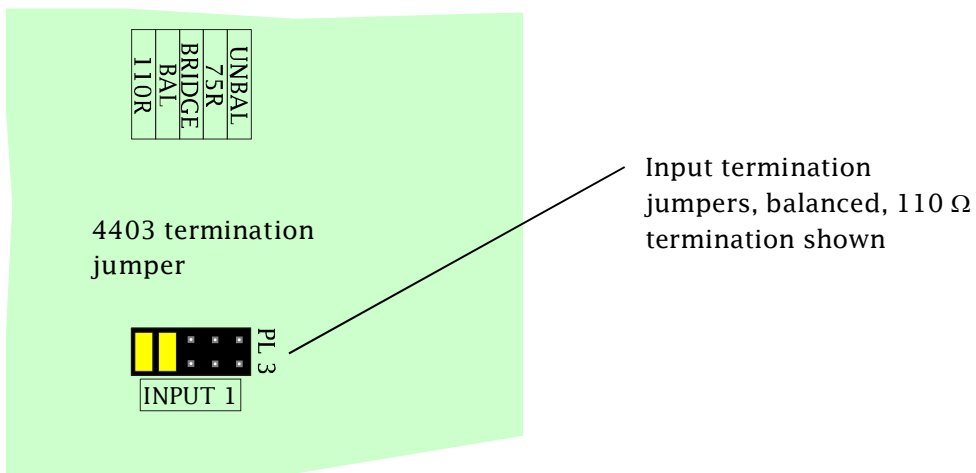
3 Configuration

The 4403 may be configured for different reference options to increase system flexibility.

3.1 Setting reference options

To select the AES input termination options use jumper PL3 as explained in the following table:

AES input termination modes	
PL3 settings	Description
UNBAL	Use with unbalanced input
75R	Use with unbalanced input to terminate signal with 75 Ω
BRIDGE	Selects high impedance termination (Hi-Z)
BAL	Use with balanced input
110R	Use with balanced input to terminate signal with 110Ω



4 Status monitoring

The status monitoring circuit will provide the following information to the status monitoring controller:

- module present
- input present
- power OK

In addition, the module is programmed with the following information, which can be read by the status monitoring controller:

- Module type
- Module bar code
- Module issue no

For further details of the Pro-Bel status monitoring system please refer to the COSMOS status monitoring manual.

5 Trouble shooting

The green card edge POWER LED is not lit

- check the PSU indicator to confirm that there is power to the frame
- check the resettable fuses protecting the card - do this by removing the power to the card for about 30 seconds then restoring the power
- if necessary, refer to the power supply trouble shooting guide in the appropriate ICON rackframe manual section

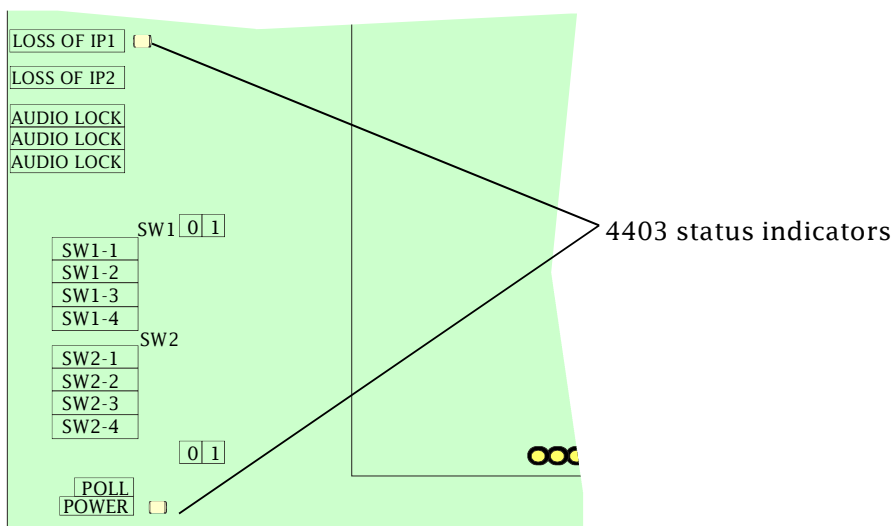
There are no output signals

- ensure that the green power LED on the front of the main card is lit
- ensure that a valid input is present and that the red loss of input1 LED is not lit

The output signal seems corrupted or low level

- check that the input signal is a valid AES 3 digital audio signal
- check that the appropriate termination has been set

4403 status indicators	
LED label	Meaning when lit
LOSS OF INPUT1	Lights red to show that no input is detected
POWER	Lights green if all voltage rails present



6 Specification

Inputs (reference)

Number and type:	1, transformer coupled, balanced to AES3-1992, or balanced to AES3id (or SPDIF)
Termination:	High, 75 Ω or 110 Ω
Sample frequency range	32-54kHz

Outputs (wordclock)

Number and type:	8, 1 volt p-p into 75 Ω , capacitively coupled, unbalanced. High voltage for left sample.
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Temperature range

Operating:	0° to +40°C
Storage:	-10°C to +70°C