Issue

1

GLENSOUND ELECTRONICS LTD.

Broadcast Equipment Manufacturers

CLODIS 11

Glensound word clock distribution

Handbook

GLENSOUND ELECTRONICS LIMITED

CLODIS 11 HANDBOOK

6 Brooks Place MAIDSTONE Kent ME14 1HE
Phone +44 (0) 1622 753020• Fax +44(0) 1622 762330
www.glensound.co.uk

Table of Contents

Overview....3
Operating instructions....3
Mode Description....5
MASTER....5
AUTO SYNC FOLLOW....5
AUTO SYNC....5
AUTO SYNC FAIL....5
AUDIO SPECIFICATIONS CLODIS
....6

List of Tables

Mode description....

Overview

The CLODIS module is a master clock generator and word clock distribution module with 11 word clock outputs and 2 reference inputs, one DARS and 1 word clock.

The CLODIS 11 is capable of generating the frequencies 32, 44.1, 48, 88.2, 96, 176.4 and 192 kHz. It is also capable of locking to reference word clocks, black and burst or DARS.

The unit also offers options to just generate a user selected word clock even if there is a reference available or lock onto a reference if there is one or only generate a word clock if a reference is available. The CLODIS 11 remembers the last user selected mode and reverts to that when powered up.

Operating instructions

The LEDs are used to show the user selected mode and status of the unit. The 32-48 LEDs show the base frequency and the X2 and X4 LEDs show the multiplier of the base frequency ie 192KHz is 48Hz x 4. The FOLLOW REF LED is used to signal when the CLODIS will accept a reference clock. The LOCK LED is used to signal when the CLODIS has locked to a reference signal.

All of the modes are selected by pressing the momentary push button and are cyclic. The list below shows the order of the modes and the output clock frequency, if any. If a reference signal has been locked onto then the mode cannot be changed until the reference signal has been removed and the LOCK LED is off.

MODE	OUTPUT NO REF CLOCK	OUTPUT WITH REF CLOCK	FOLLOW REF LED
MASTER	32 KHz	32 KHz	OFF
MASTER	44.1 KHz	44.1 KHz	OFF
MASTER	48 KHz	48 KHz	OFF
MASTER	88.2 KHz	88.2 KHz	OFF
MASTER	96 KHz	96 KHz	OFF
MASTER	176.4 KHz	176.4 KHz	OFF
MASTER	192 KHz	192 KHz	OFF
AUTO SYNC FOLLOW	'LAST REF CLOCK'	DET REF CLOCK_A	ON
AUTO SYNC	32 KHz	DET REF CLOCK_B	ON
AUTO SYNC	44.1 KHz	DET REF CLOCK_B	ON
AUTO SYNC	48 KHz	DET REF CLOCK_B	ON
AUTO SYNC	88.2 KHz	DET REF CLOCK_B	ON
AUTO SYNC	96 KHz	DET REF CLOCK_B	ON
AUTO SYNC	176.4 KHz	DET REF CLOCK_B	ON
AUTO SYNC	192 KHz	DET REF CLOCK_B	ON
AUTO SYNC FAIL	NONE	DET REF CLOCK_A	FLASHING

Table 1. Mode description.

'LAST REF CLOCK' is the last frequency (32-192KHz) detected at the WORD CLK IN input.

'DET REF CLOCK_A' is the detected reference clock frequency if its 32-192KHz. If the reference is black and burst then the output will be the last detected reference (32-192KHz) but the phase will be matched to the black and burst signal.

'DET REF CLOCK_B' is the detected reference clock frequency if its 32-192KHz. If the reference is black and burst then the output will be the user selected frequency (32-192KHz) but the phase will be matched to the black and burst signal.

Mode Description

MASTER

The digital output frequency is set by the user and no lock will occur to any clock reference even if it is available. The FOLLOW REF LED will always be off in this mode and the LEDs 32-X4 will show the word clock frequency being generated.

AUTO SYNC FOLLOW

The digital output frequency will follow external reference if detected. If this reference is lost, then the output frequency will continue at the closest frequency to the input before it was lost. The FOLLOW REF LED will always be always on if there is a reference or not. When no reference is detected on the WORD CLK IN or DARS IN the LOCK LED and the LEDs 32-X4 will be off. If a reference clock is detected the LOCK LED will be on and LEDs 32-X4 will show the detected reference clock frequency.

If the reference signal is a black and burst video signal then the word clock frequency will be the last reference clock detected but the phase will be locked to the reference black and burst video signal. The LEDs 32-X4 will be off.

AUTO SYNC

The output frequency will follow the reference input. The FOLLOW REF LED will always be on if there is a reference or not. When no reference is detected on the WORD CLK IN or DARS IN the LEDs 32-X4 will display the user selected frequency and the LOCK LED will be off and he output frequency will be set by the user. If a reference is detected the LOCK LED will be on and LEDs 32-X4 will show the detected reference clock frequency.

If the reference signal is a black and burst video signal then the word clock frequency will be the user selected frequency but the phase will be locked to the reference black and burst video signal. The LEDs 32-X4 will display the user selected frequency.

AUTO SYNC FAIL

There will be output frequency unless a reference is present The FOLLOW REF LED will always flash at 1 second intervals. When no reference is detected on the WORD CLK IN or DARS IN the LOCK LED will be off and the LEDs 32-X4 will always be off. If a reference clock is detected the LOCK LED will be on and LEDs 32-X4 will show the detected reference clock frequency.

If the reference signal is a black and burst video signal then the word clock frequency will be the last reference clock detected but the phase will be locked to the reference black and burst video signal. The LEDs 32-X4 will be off.

AUDIO SPECIFICATIONS CLODIS

INPUTS
1 x AES/EBU Neutrik XLR 32-192kHz
1 x Word clock on BNC 32-192kHz, black and burst video
OUTPUTS
11 x Word clock BNC 32-192kHz
WORD CLOCK OUTPUT IMPEDANCE
75ohms
SAMPLE RATES
32, 44.1, 48, 88.2, 96, 176.4, 192 kHz
JITTER
48kHz -0.7 parts per million
44.1kHz +5 parts per million