



C16A

3G/HD/SD-SDI Embedded Audio Monitor

User Manual



C-SERIES
AUDIO MONITORS

Thank You

Thank you for choosing the C16A for your SDI embedded audio monitoring needs.

The C16A is just one of many products from the C-Series of audio monitors offered by Census Digital. Please visit our website www.censusdigital.com for more information.

Overview

The C16A is a compact 2 RU 3G/HD/SD-SDI embedded audio monitoring system designed to extract up to 16 Channels of embedded audio from an SDI signal for monitoring.

The C16A has been designed with a simple and intuitive user interface to allow for easy access to the signals and information you need to monitor.

A large vacuum fluorescent display located on the front panel provides 16 bar graph VU/PPM meters. An additional bar graph meter is provided for LKFS ITU1770/1771 loudness measurements. A numerical readout of the LKFS and true peak measurement is also provided. Input signal format data and mode selection information is also displayed.

Located directly beneath the display are 12 high quality illuminated pushbuttons to provide intuitive channel source and mode selection.

Also located on the front panel is a high quality mil-spec push to mute rotary shaft encoder for volume control and a jackfiled style ¼" longframe jack for headset monitoring.

High quality full range speakers and an efficient class D amplifier provide unparalleled performance.

One 3G/HD/SD-SDI signal can be connected to the BNC on the rear panel while a reclocked output is available. Two 3-Pin terminal block connectors also provide a

stereo monitor output. This monitor output follows the signals that are being monitored on the internal speakers.

Features & Controls



C16A Front Panel Features and Controls	
1	Left Speaker
2	Right Speaker
3	Rotary Shaft Encoder turn for volume, push to mute
4	Longframe ¼" Headset Jack. When headset is inserted internal speakers are muted
5	Vacuum fluorescent display used to display audio meters and signal data information
6	Intuitive source select switches used to route signals to the speakers
7	Intuitive mode select switches allows for on the fly mode selection

Channel Source & Mode Selection

Selecting the audio channels you want to monitor is provided by eight pushbuttons located directly below the audio meters allowing the user to intuitively select whichever stereo pair they would like to route to the speakers.

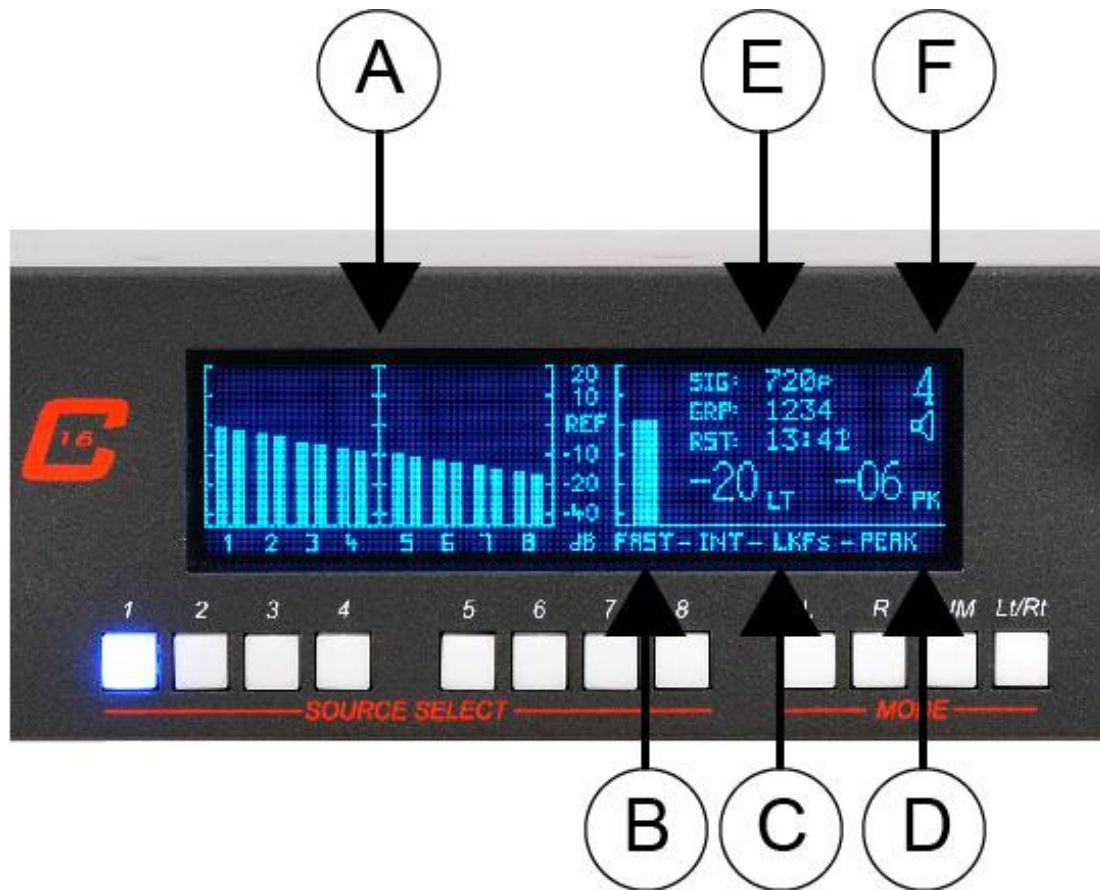
Pushbuttons numbered 1 through 8 allow the user to select the embedded audio pairs.

The 4 pushbuttons located to the right side of the source selection switches are for the mode selection.

Modes

L only	Routes the Left Channel of the selected source to both speakers
R only	Routes the Right Channel of the selected source to both speakers
SUM	Allows any of the channels to be summed together to monitor more than one source at a time.
Lt/Rt	Provides an Lt/Rt downmix of your 5.1 surround mix. Select the pair where your 5.1 mix starts then press the Lt/Rt button the unit then selects the 2 pairs beside it and creates the downmix from these 6 channels.

Display



C16A Front Panel Display	
A	16 Channel Bargraph VU/PPM Meter REF = -20dBFS
B	ITU 1770 LKFS Bargraph FAST 10 second integration time
C	ITU 1770 LKFS numerical readout long term integration time LT
D	ITU 1771 LKFS numerical readout true peak PK
E	Signal data display SIG: Displays the type of signal detected at the input (eg. 720p or 1080i) GRP: Indicates which groups of audio are present (eg. 1234) RST: 99:99 minute reset timer. Resets each time you select a different source
F	Speaker volume level and flashing X underneath the number indicates the speakers have been muted using the push to mute rotary shaft encoder.

Technical Specifications

Technical Specifications C16A		75 Ohm SDI Input and Output
Input & Output Standards	Reclocked SMPTE259M,292M,424M	
Connectors	1: 75 Ohm BNC for input 1 :75 Ohm BNC for output	
Input Equalization	Automatic to 80m @ 3Gb/s Automatic to 120m @ 1.5Gb/s Automatic to 300m @ 270Mb/s	
Signal Level	800mV nominal	
Return Loss	-10dB to 3G	
		Analog Audio Monitor Output
Connectors	2: 3-Pin Terminal Blocks for left and right output	
Analog Output Reference Level	-20dBfs = +4dBu	
Analog Output Frequency Response	20 Hz to 20 kHz	
Analog Output Distortion	<0.01% THD + N	

Physical Specifications

Dimensions	Width = 19" Rackmount x Height = 3.5" 2 RU x Depth = 8.5"
Weight	Approximately 8 lbs
Power	90 – 240 VAC, 50/60 Hz

Warranty and Repair Policy

The C16A is warranted to be free of any defect with respect to performance, quality, reliability, and workmanship for a period of FIVE (5) years from the date of shipment from our factory. In the event that your C16A proves to be defective in any way during this warranty period, Census Digital Inc. reserves the right to repair or replace this piece of equipment with a unit of equal or superior performance characteristics.

Should you find that this C16A has failed after your warranty period has expired, we will repair your defective product should suitable replacement components be available. You, the owner, will bear any labor and/or part costs incurred in the repair or refurbishment of said equipment beyond the FIVE (5) year warranty period.

In no event shall Census Digital Inc. be liable for direct, indirect, special, incidental, or consequential damages (including loss of profits) incurred by the use of this product. Implied warranties are expressly limited to the duration of this warranty.

This C16A User Manual provides all pertinent information for the safe installation and operation of your C16A. Census Digital policy dictates that all repairs to the C16A are to be conducted only by an authorized Census Digital Inc. factory representative. Therefore, any unauthorized attempt to repair this product, by anyone other than an authorized Census Digital Inc. factory representative, will automatically void the warranty. Please contact Census Digital Technical Support for more information.

In Case of Problems

Should any problem arise with your C16A, please contact the MultiDyne Technical Support Department. Contact information is supplied at the end of this publication.

A Return Material Authorization number (RMA) will be issued to you, as well as specific shipping instructions, should you wish our factory to repair your C16A. If required, a temporary replacement module will be made available at a nominal charge. Any shipping costs incurred will be the responsibility of you, the customer. All products shipped to you from Census Digital will be shipped collect.

The MultiDyne Technical Support Department will continue to provide advice on any product manufactured by Census Digital Inc., beyond the warranty period without charge, for the life of the equipment.

Contact Us



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