

# 32ME-AES

HIGH DENSITY 32 CHANNEL AUDIO METER



by Ward-Beck Systems

## **Cautionary Information**

There are no user serviceable components in this unit. Repairs and calibration should only be performed by factory trained personnel.

Removing the top cover of this unit will expose the user to potentially lethal AC voltages and will void the warranty.

Contact our Service Department:

416-335-5999 or toll free 800-771-2556

## **In Case of Problems**

Should any problem arise with your unit, please contact the Ward-Beck Technical Support Department. 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 unit. If required, a temporary replacement unit 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 Ward-Beck Systems Inc. will be shipped collect. The Ward-Beck Technical Support Department will continue to provide advice on any product manufactured by Ward-Beck Systems, beyond the warranty period without charge, for the life time of the equipment.

# Chapter 1

## *Introduction*

### **1.0 Features**

- Simultaneous visual monitoring of 32 audio channels from 16 balanced AES inputs on 4x D-SUB 25 pin connectors. Audio is displayed on 32 tri-colored LED bar-graph meters.
- Loop through output of 16 AES inputs available on 4x D-SUB 25 pin connectors.
- Listen to any stereo pair of the 16 AES inputs through TRS headset, or on left / right analog audio monitor outputs.

# Chapter 2

## *Quick Setup and Installation Guide*

The 32ME-AES unit is a powerful device yet simple to operate and setup.

Steps for setting up the 32ME-AES unit are as follows:

1. The 32ME-AES mounts in a standard 19 inch rack and occupies one rack unit of space.
2. Plug in AC power to the socket located at the rear of the unit. Upon power up, the unit will display the current firmware version until the user presses the front control knob for the first time. Push the control knob to exit the firmware version screen.
3. The 32ME-AES unit accepts 16 balanced 110OHM AES/EBU pairs on 4 D-SUB type 25 pin connectors. Connect your AES sources to these connectors according to table 3.2-1. 32ME-AES handles sample rates between 32KHz -192KHz automatically.
4. The unit is now setup and ready for monitoring. For instructions on other configuration settings please refer to chapter 4 "Configuration Menu Settings".

# Chapter 3

## Front Panel Features and Rear Connections

This chapter provides detailed information on the features available on the front panel and descriptions of the rear panel inputs and outputs including pin-out diagrams.

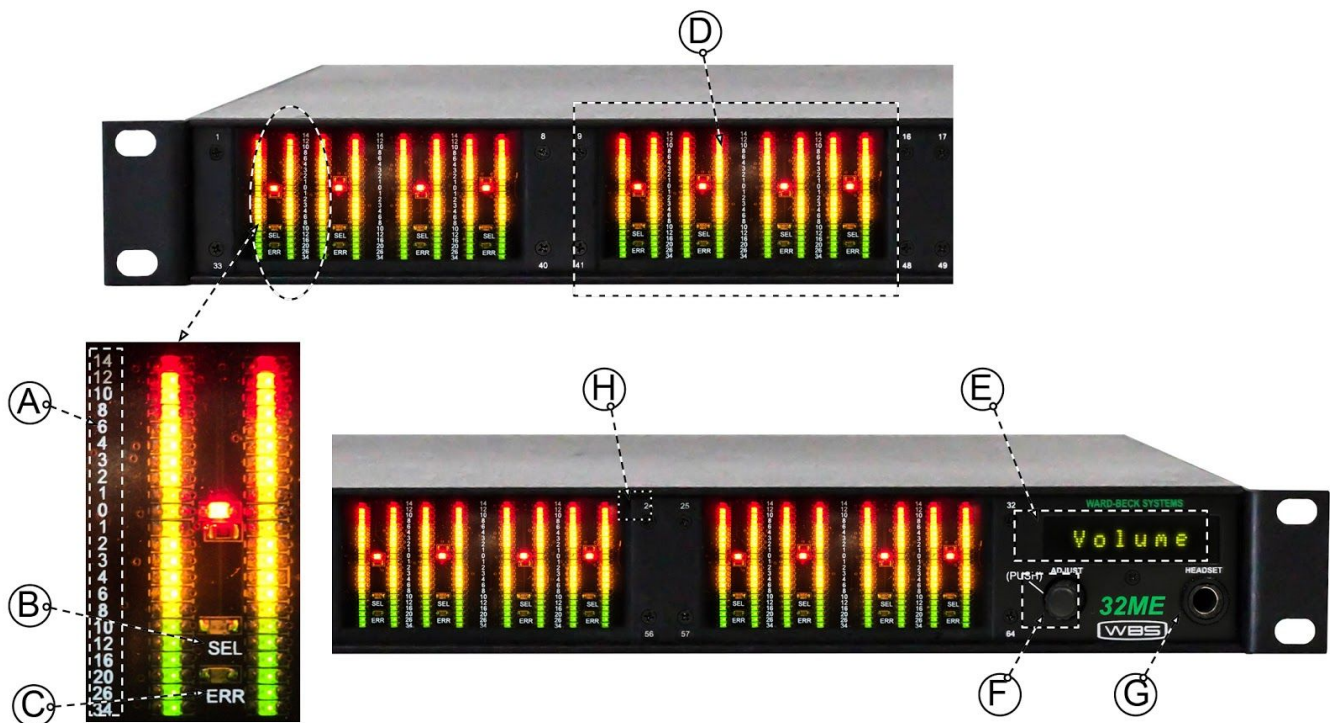


Figure 3.1-1 32ME Front Panel Drawing

### 3.1 Front Panel User Interface

The following section lists and describes the features located on the front panel of the 32ME. Figure 3.1-1 illustrates the location of each feature.

#### A) Audio Level Meters and Indicators

A silk is imposed onto the lens indicating the audio level, below and above the reference point, in dBFS. The zero level, or red reference level LED indicates the -20 dBFS reference point.

## **B) SEL Indicator**

SEL indicator is a visual indication of the currently selected audio pair being monitored. The monitored audio is available on the rear analog audio monitor outputs and front panel TRS headset output. The selected audio pair is indicated by an illuminated blue LED between bar-graph meters.

## **C) ERR Indicator**

Located on the front of the unit are sixteen ERR LED indicators. A single ERR LED is associated with each of the sixteen audio pairs respectively. When illuminated, the red ERR LED indicates there is no audio data present within its respective audio pair.

## **D) Audio Level Meters (1 to 32)**

Thirty-two 22-segment tri-colored audio bar-graph meters with simultaneous PPM dot over VU, indicate the current audio levels. Level displays are divided into groups of eight (four stereo pairs) to easily identify tracks. The audio level bar-graphs indicate a level starting from -34dBFS to -6dBFS.

## **E) Character Display**

Eight character alphanumeric display used to display menu and settings information.

## **F) User Control Knob**

The user control knob allows the user to cycle through menus by pushing the knob, or modify settings by rotating the knob.

## **G) TRS Headset Jack**

A TRS headset jack is available to listen to the selected audio pair being monitored. The TRS output follows the selected audio pair indicated by the BLUE monitor select LED. The TRS output volume can be adjusted through the volume setting.

## **H) Channel Number Indicators**

Numbers are located across the face of the unit ranging from 1 to 32 and 33 to 64 which provide a visual indication of the bar-graph meter channel number.

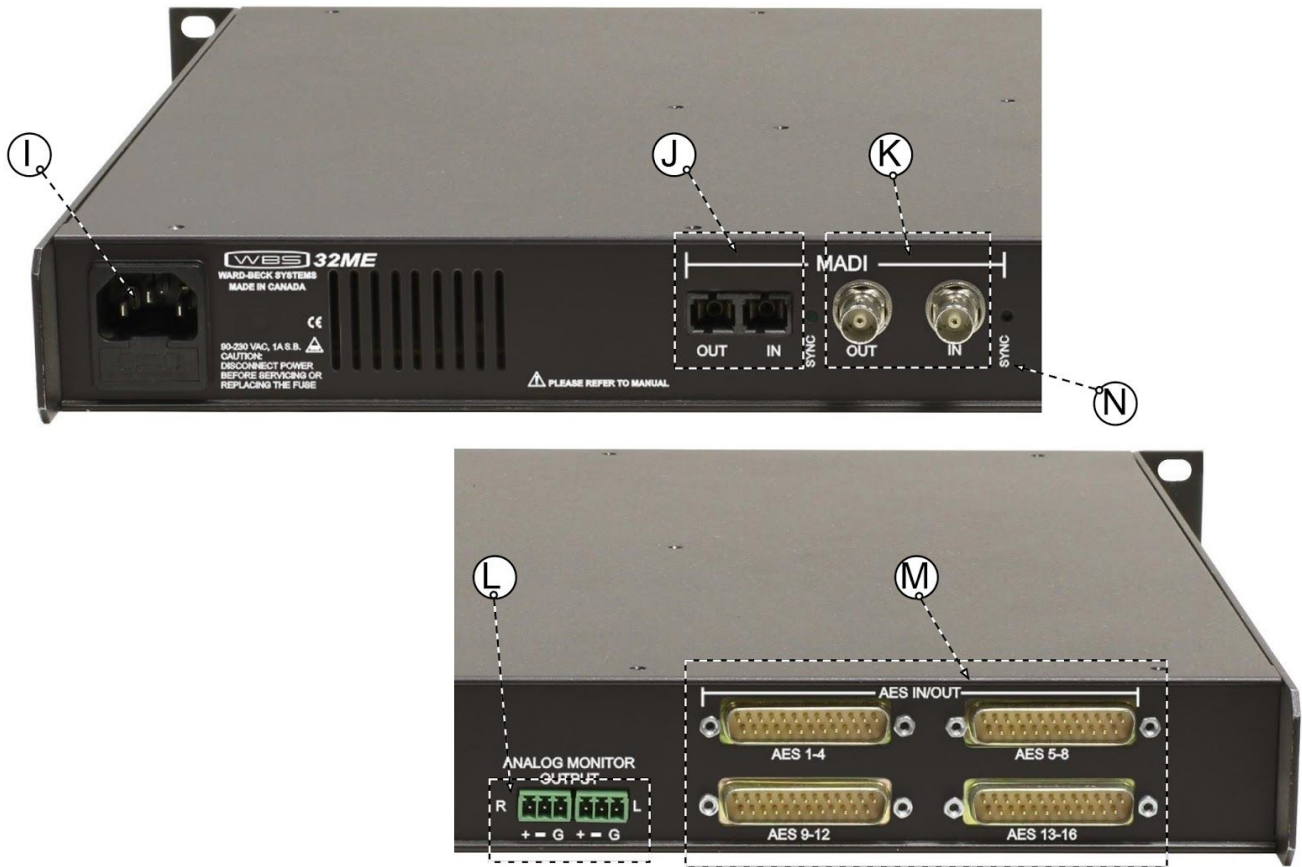


Figure 3.2-1 32ME Rear Panel Drawing

## 3.2 Rear Panel Connections

The following section lists and describes the connections located on the rear panel of the 32ME. Figure 3.2-1 illustrates the location of each connection.

### I) AC Power

AC power input.

### J) MADI Audio Fiber Optic Input / Output

ONLY for MADI Option.

### K) MADI Audio 75 Ohm BNC Input / Output

ONLY for MADI Option.

## L) Analog Audio Monitor Output

A left and right channel analog audio monitor output is available on the rear of the 32ME unit. The output is a balanced output with an impedance of 60 Ohms. The physical interface is available on two phoenix 3 pin terminal blocks (left and right channels). This analog monitor output follows the user selected audio pair indicated by the blue SEL LED. Refer to Figure 3.2-2.



**Figure 3.2-2** Analog Audio Output (3 Pin Phoenix Terminal Block)

## M) AES Inputs/Outputs

Sixteen AES inputs and outputs are available on the four female 25 pin D-SUB connectors. Refer to Table 3.2-1 for input and Table 3.2-2 for output pin assignment information.

## N) Sync LED Indicator

ONLY for MADI Option.



DB-25 AES1-4			INPUTS
Input	Signal	Contact Designation	
AES1	Shield	25	
	Return	12	
	Positive	24	
AES2	Shield	11	
	Return	23	
	Positive	10	
AES3	Shield	22	
	Return	9	
	Positive	21	
AES4	Shield	8	
	Return	20	
	Positive	7	

DB-25 AES5-8			INPUTS
Input	Signal	Contact Designation	
AES5	Shield	25	
	Return	12	
	Positive	24	
AES6	Shield	11	
	Return	23	
	Positive	10	
AES7	Shield	22	
	Return	9	
	Positive	21	
AES8	Shield	8	
	Return	20	
	Positive	7	

DB-25 AES9-12			INPUTS
Input	Signal	Contact Designation	
AES9	Shield	25	
	Return	12	
	Positive	24	
AES10	Shield	11	
	Return	23	
	Positive	10	
AES11	Shield	22	
	Return	9	
	Positive	21	
AES12	Shield	8	
	Return	20	
	Positive	7	

DB-25 AES13-16			INPUTS
Input	Signal	Contact Designation	
AES13	Shield	25	
	Return	12	
	Positive	24	
AES14	Shield	11	
	Return	23	
	Positive	10	
AES15	Shield	22	
	Return	9	
	Positive	21	
AES16	Shield	8	
	Return	20	
	Positive	7	

**Table 3.2-1** 32ME Rear Female DB-25 Connector Input Pin Assignment

<b>DB-25 AES1-4</b>			<b>OUTPUTS</b>
Output	Signal	Contact Designation	
AES1	Shield	19	
	Return	6	
	Positive	18	
AES2	Shield	5	
	Return	17	
	Positive	4	
AES3	Shield	16	
	Return	3	
	Positive	15	
AES4	Shield	2	
	Return	14	
	Positive	1	

<b>DB-25 AES5-8</b>			<b>OUTPUTS</b>
Output	Signal	Contact Designation	
AES5	Shield	19	
	Return	6	
	Positive	18	
AES6	Shield	5	
	Return	17	
	Positive	4	
AES7	Shield	16	
	Return	3	
	Positive	15	
AES8	Shield	2	
	Return	14	
	Positive	1	

<b>DB-25 AES9-12</b>			<b>OUTPUTS</b>
Output	Signal	Contact Designation	
AES9	Shield	19	
	Return	6	
	Positive	18	
AES10	Shield	5	
	Return	17	
	Positive	4	
AES11	Shield	16	
	Return	3	
	Positive	15	
AES12	Shield	2	
	Return	14	
	Positive	1	

<b>DB-25 AES13-16</b>			<b>OUTPUTS</b>
Output	Signal	Contact Designation	
AES13	Shield	19	
	Return	6	
	Positive	18	
AES14	Shield	5	
	Return	17	
	Positive	4	
AES15	Shield	16	
	Return	3	
	Positive	15	
AES16	Shield	2	
	Return	14	
	Positive	1	

**Table 3.2-2** 32ME Rear Female DB-25 Connector Output Pin Assignment

# Chapter 4

## Configuration Menu Settings

This chapter provides instructions for accessing the configuration menu settings and details on each setting.

### 4.1 Accessing the Configuration Menu

The 32ME is designed to be simple to operate providing the user with 4 menu settings. Toggle through each of the menu settings by pushing the user control knob. Refer to figure 3.1-1 item “F” for the user control knob location. Each setting can be modified by rotating the knob in either the clockwise or counter clockwise direction. Refer to figure 4.1-1 for the menu tree.

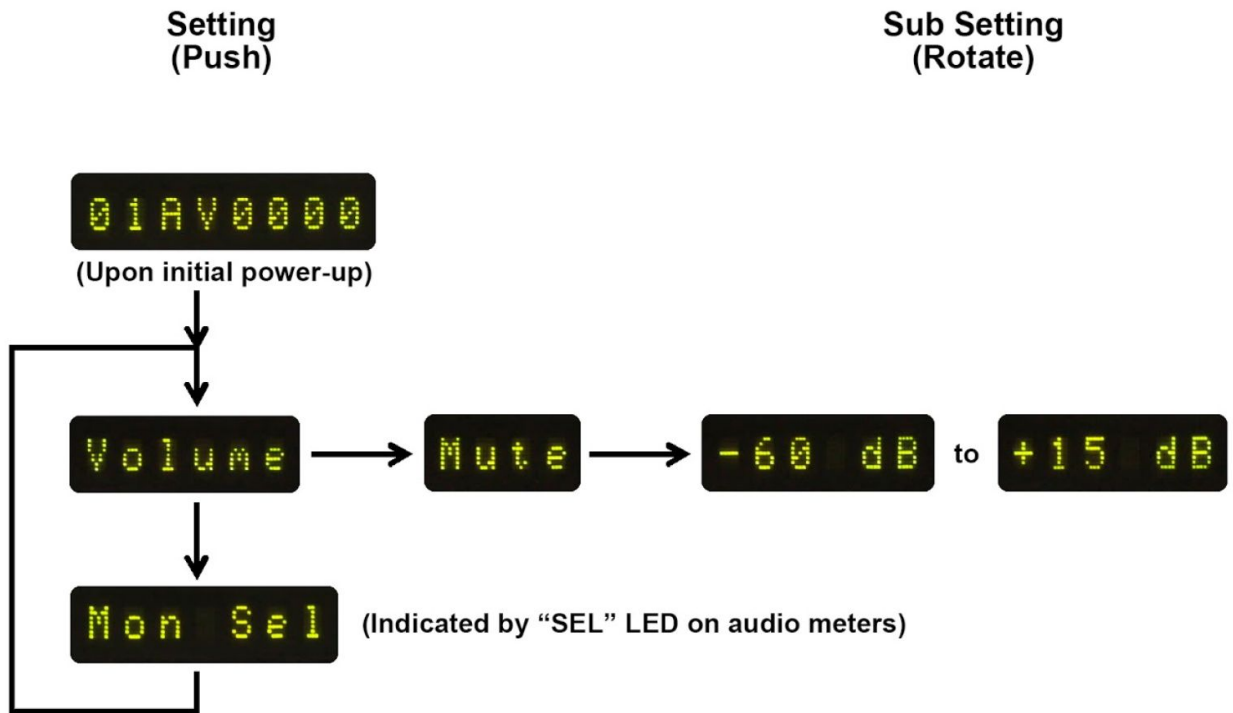


Figure 4.1-1 32ME Menu Tree

## **4.2 Menu Description**

Upon power up, the 32ME will display the current firmware version until the user pushes the control knob (location of control knob can be seen in figure 3.1-1 item F) for the first time.

### **Volume Menu**

To access the volume menu, push the control knob until the character display displays "Volume". Rotate the control knob clockwise to increase the volume on the analog monitor output and TRS headset outputs. Rotate the control knob counter clockwise to decrease the volume. The volume control does not affect the levels on the 25 pin female D-sub AES outputs.

### **Monitor Select Menu**

To access the monitor select menu, push the control knob until the character display displays "Mon Sel". Rotate the control knob clockwise or counter clockwise to select the audio pair to be monitored on the analog audio monitor output and TRS headset output. The currently selected pair is indicated by the blue "SEL" LED.

# Chapter 5

## *Technical Specifications*

### 5.1 Specifications

#### **AES Digital Audio**

Input Voltage	0.2 to 7 V pk-pk
Input Impedance	110 Ohm Balanced
Number of AES inputs	16
Input Sample Rate	32kHz to 192 KHz
Audio Input Format	AES3 / EBU
Output Voltage	3.02 V pk-pk
Output Impedance	110 Ohm Balanced
Number of AES outputs	16
Output Sample Rate	32kHz to 192 KHz
Noise	Less than -100 dBFS
THD	Less than 0.001%
Max Output Cable Length	250 meters
I/O Connector Type	25 Pin D-type (Female)- Tascam AES59 Standard
Audio Output Format	AES3 / EBU

#### **Analog Audio**

Max Output	23.5 dBU
Output Impedance	60 Ohm balanced
Frequency Response	1.5 dBU from 20Hz to 20KHz
Noise	Less than -65 dBU
THD	less than 0.05%
Monitor Output Connector	3 pin Phoenix type terminal block (output)
Number of Monitor Output Connectors	2 output (L / R)
Headset	1/4" TRS (output)

#### **Audio Level Bar Meter**

Reference Indicator	0 Ref = - 20 dBFS
Range	-34 dBFS to -6 dBFS
Resolution	22 LED segments

**General**

Power

90-230VAC 50-60Hz

Dimensions

19"W x 1 3/4" H x 13" D (483 mm x 44 mm x 300 mm)

*Ward-Beck Systems Inc. reserves the right to change performance specifications without prior notice.*

## **WARRANTY**

All Ward-Beck Systems Inc. products are warranted against defective materials and workmanship for a period of one year from the date of shipment.

Ward-Beck Systems Inc. will repair or replace, at its option and without charge, all said products or parts thereof which upon factory inspection prove to be defective during the warranty period, provided that:

1. The original serial numbers are intact and have not been tampered with.
2. The purchaser shall return any equipment or parts thereof to Ward-Beck Systems Inc. only after obtaining prior authorization and shipping instructions from the factory. (Ward-Beck Systems Inc. reserves the right to inspect or repair equipment on the purchaser's premises).
3. The purchaser assumes the obligation for all expenses in connection with the shipping and return of such goods, once authorization has been obtained.

This warranty does not cover items normally considered expendable, such as fuses and lamps.

This warranty does not cover damages caused by misuse, accident, neglect, unauthorized alteration, repair by unauthorized personnel, or damage caused by an act of God, war, or civil insurrection.

In no event shall Ward-Beck Systems Inc. be liable for consequential damages. Ward-Beck Systems Inc. shall have the rights to final determination as to the application of this warranty.

Ward-Beck Systems Inc. reserves the right, at any time and without notice, to make changes in its equipment, components, specifications or designs, as may be warranted by progress in state-of-the-art technology.

Ward-Beck Systems Inc. reserves the right to make design changes, additions to, and improvements in its products, without obligation to install such revisions in products previously manufactured.

The warranty set forth herein is in lieu of all other warranties expressed or implied, including the warranties of merchantability and fitness.

**WARD-BECK SYSTEMS INC.**  
**945 Middlefield Road, Unit 9, Toronto, Ontario M1V 5E1**  
**V 416 335 5999 F 416 335 5202 Toll-Free 800 771 2556**  
**Website: [www.ward-beck.com](http://www.ward-beck.com)**  
**E-Mail: [sales@ward-beck.com](mailto:sales@ward-beck.com)**