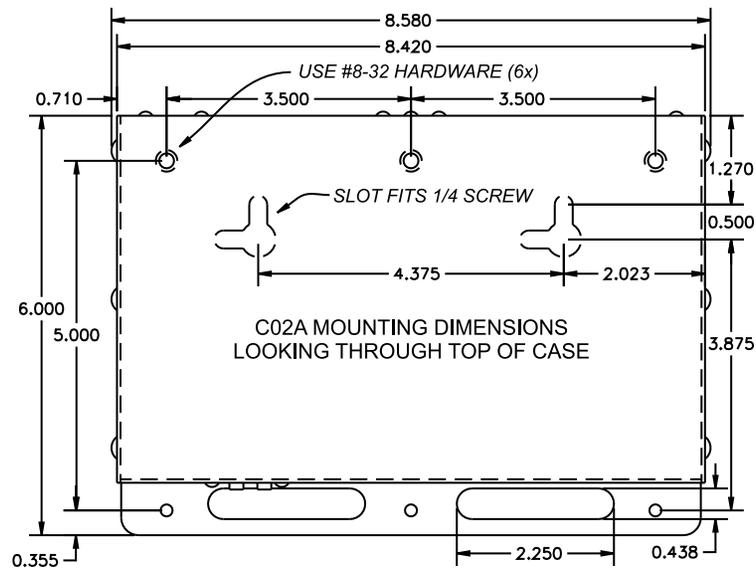


EMOD CO2a

2 Ch. Analog
Output Module



Whirlwind CO2A Specifications	
Frequency Response:	+/- .1 dBv 100 to 18 k Hertz. +/- .15 dBv 80 to 20 k Hertz -1.5 dBv at 20 Hertz
Total Harmonic Distortion +noise:	.004 % 20- 20 k Hertz
Range of remote level pot	36 dBV with full CCW muted (less than -85dBv)
Maximum Input level:	0 dBfs
Maximum output level:	+20 dBv at 1% thd
Output Impedance:	120 Ohms unbalanced, 240 Ohms balanced
Dynamic Range:	107 dBv
Isolation between output channels:	Greater than 109 dBv 20 - 20 k Hertz
Clip LED threshold:	-32 dBfs LED glows, -12 dBfs LED on full bright
Power consumption:	15 Watts max
Dimensions, inches (cm):	8.58 (21.8cm) X 6 (15.24) X 1.58 (4.01)
Weight:	3.25 lbs. (1.47 kg)
Specifications Subject to change without notice	

WARRANTY

This product is guaranteed to be free from defects in materials and workmanship to the original purchaser for a period of 5 years from the date of purchase. Should service be required, return the unit postage prepaid along with the original sales receipt to:

whirlwind
Attention - Repair
99 Ling Road
Rochester, New York 14612

The warranty on this product shall not apply to defects or damage resulting from abuse, abnormal use or from repairs or modifications performed by anyone other than whirlwind. If it is determined a manufacturing defect has occurred, whirlwind will repair or replace the unit at our option and pay the postage back to you.

99 Ling Road - Rochester, NY 14612
800-733-9473 / 585-663-8820 Fax: 585-865-8930
Website: <http://www.whirlwindusa.com>
Email: sales@whirlwindusa.com

The CO2a is Whirlwind's 2-channel CobraNet output module. Use it to provide networked digital audio wherever a 2-channel feed is required such as direct to an amp rack, feeding powered speaker arrays, stereo background music, paging systems and multimedia presentations.

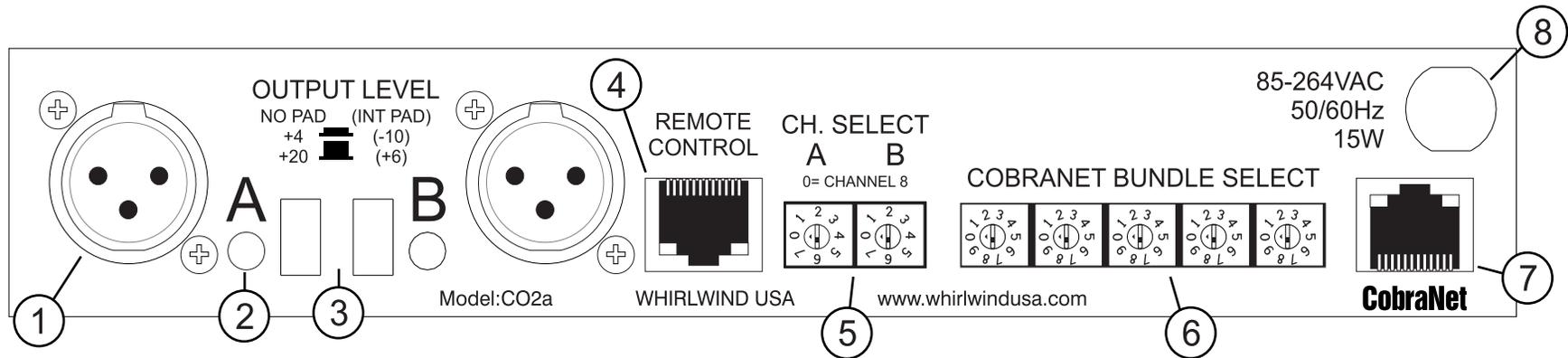
You can even use it as a quick CobraNet test device! Just plug it into the network, select the CobraNet bundle to be received and pick two channels from within that bundle, it's that simple.

FEATURES

- Uses CobraNet networking protocol - compatible with all other CobraNet devices from over 40 manufacturers.
- Auto-detects 20 or 24 bit word length.
- Auto-detects 5.33ms, 2.66ms or 1.33ms latencies.
- Output level is selectable between two ranges: +20dBv and +4dBv or +6dBv and -10dBv @ digital full scale input.
- Optional wired remote controls volume and channel select in stereo pairs or dual-mono selection.
- Integral mounting bracket provides for secure vertical or horizontal orientation or mounting to a rack shelf.
- Integrated universal power supply for 85-264VAC, 50/60Hz operation.

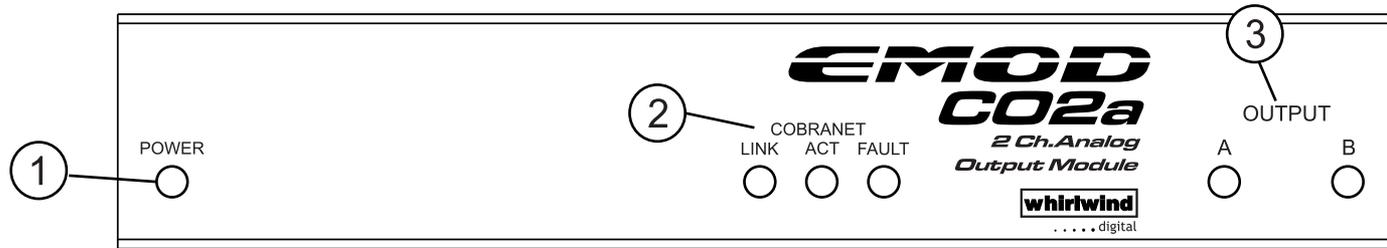
whirlwind

... digital



CO2a Controls and Connections (Back Panel)

1. XLR outputs A and B provide active balanced analog audio at line levels.
2. Signal LEDs light to indicate the presence of audio signal at the output of the device. The LEDs start to glow when the audio level exceeds -32dBfs. The same indicators are also on the front of the unit.
3. Output Level switches set the maximum signal level from the XLRs, referenced to 0dBfs at the digital input. The factory settings are -10 dBv and +6dBv. Internal jumpers can be changed to remove pads, setting the output levels to +4 dBv and +20 dBv, if desired. To change the jumpers, unplug unit from the AC outlet, remove the four screws in the XLRs and then the six screws on the sides of the cover. Slide the cover past the jacks and lift up and off. Reposition jumpers J1, J2, J3, and J4 as required. Refer to diagram on PCB.
4. Remote Control jack connects the CO2R remote control accessory. The single gang remote allows selection of any of the 8 audio signals in the CobraNet bundle and also provides volume control of the selected channel. Two remotes can be connected to control each channel independently or a single remote can operate the CO2a as a stereo output. In stereo mode, four pairs are available; A = ch1+2, B = ch3+4, C = ch5+6 and D = ch7+8. Connection is made via RJ45 cables with all 8 pins wired straight through. Maximum cable length is 500 feet.
5. Channel Select switches set the audio signal that is routed to the outputs. Outputs A and B can receive any one of the eight individual audio channels contained within the CobraNet bundle. The 0 position on the switch dial is channel eight. These controls are overridden when the CO2R remotes are connected.
6. CobraNet Bundle Select switches are used to select the bundle number to be received by the CO2a. All 65,279 CobraNet bundles are directly accessible from the encoders. Bundles 1-255 are Multicast bundles and 256-65,279 are Unicast. The leftmost encoder also has 3 special functions. With the encoder in the 7xxxx position, the two green audio LEDs will flash a code for the software version in the CO2a. The LEDs will blink the number of the software version with a long pause between the series of blinks; e.g., four flashes followed by a long pause equals version four. Should the CO2a ever need to be rebooted, the 8xxxx position of the encoder will cycle a reset of the unit every two seconds. Unplugging and reconnecting the power cord will also reset the CO2a. The 9xxxx position of the encoder is a self test for all the LEDs except the power LED.
7. CobraNet jack connects the CO2a to the Ethernet switch carrying the CobraNet network. A green LED indicates network link and a yellow LED indicates data activity. These are duplicated by two green LEDs on the front panel along with a red Fault LED indicator.
8. Power cord is a standard US 15A 3-wire connection. The power supply is internationally universal by changing the plug at the end of the cord. Black or Brown = Line; White or Blue = Neutral; Green or GrnYel = Ground.



CO2a Controls and Connections (Front Panel)

1. POWER LED illuminates when AC power is applied to the unit and the unit is operating.

2. CobraNet LINK, ACT, and FAULT LEDs indicate the status of the CobraNet network connection; LINK LED illuminates only when the Ethernet cable is connected to a network with other CobraNet devices. ACT (activity) LED is on only when there is a match between the bitwidth:latency and bundle settings of the CO8A and those of the transmitting device. FAULT LED is used to blink a numeric code to the user with a series of blinks followed by a pause. The number of blinks indicate the following:
 - 1 Mismatched format or bundle settings
 - 2 Received audio format is not supported (eg. 96 kHz)
 - 3 Invalid bundle number selected (greater than bundle # 65279)
 - 4 Ethernet cable disconnected or no other CobraNet devices on network.
 - 5 CobraNet can not communicate with DSP in the CO8A.
 - 6 This code blinks once on power up and whenever an encoder setting change is detected, to warn the user that persistence is enabled through CobraNet Discovery v3.4.4 and that changing the encoders from 00000 will defeat Disco control at the next power cycle. Persistence enabled means that the unit will remember its last settings through power cycling.
This code blinks once on power up and whenever an encoder setting change is detected, to warn the user that persistence is enabled through CobraNet Discovery v3.4.4 and that changing the encoders from 00000 will defeat Disco control at the next power cycle. Persistence enabled means that the unit will remember its last settings through power cycling.

3. OUTPUT LEDs light to indicate the presence of audio signal at the output of the device. The LEDs start to glow when the audio level exceeds -32dBfs The same indicators are also on the back of the unit.