



DCA-2/DCA-2T DIGITAL CONTROL ATTENUATOR & RC-16 REMOTE CONTROL

The Oxmoor DCA-2 Digital Control Attenuator™ and one or more RC-16 Remote Control™ units together constitute a unique, high-quality system for the remote control of audio level. The DCA-2 is a compact (1-3/4" high) rack mountable package that can control two discrete audio channels (90 dB of isolation is provided for two unrelated programs) or the two channels can be linked to control a single stereo program. Multiple DCA-2s can be linked, and up to 64 discrete channels can be controlled in a single chain with 1/4 dB tracking tolerance between channels.

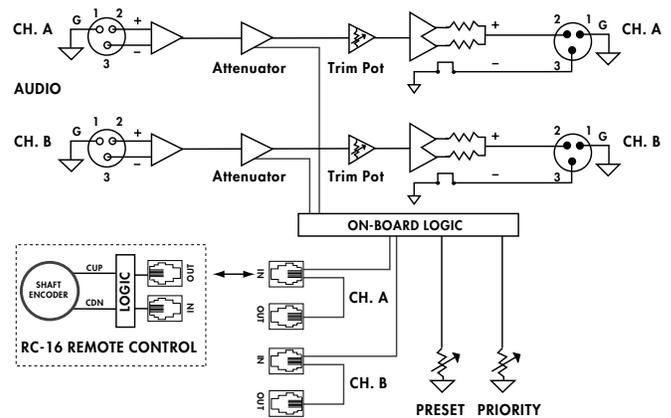
Designed for professional applications, the DCA-2 is equipped with XLR-type input and output connections. Additionally, Channel A & B maximum gains can be adjusted ± 15 dB from the nominal unity gain of the system via recessed, front-panel controls. Maximum cable length from the DCA-2 to the farthest remote is approximately 2,000 feet.

The Oxmoor system includes a number of unique features. A Preset control on the DCA-2 rear panel sets the degree of attenuation on power up, avoiding an unpredictable or unknown turn-on state. One or both channels can be switch-reset back to this "Preset" level at any time. Another rear panel control, labeled "Priority," sets a level to which the system can be temporarily forced by an external switch closure. Each RC-16 remote has terminals for preset and priority functions. The switch itself is not included.

The DCA-2T outputs are transformer balanced. Either system is capable of driving 600 ohm or higher impedance loads; maximum output is +18 dBm terminated, +20 dBu unterminated.



With the Oxmoor RC-16's Virtual Pointer, you can see where the volume is, wherever you are.



Block diagram of the DCA-2 and RC-16

Precise volume control can be provided at as many locations as required. The remote units are easily wired, in "daisy-chain" configuration, using simple modular telephone style cables. Up to four RC-16 remotes can be connected to a given control input (and that remote, or string of remotes, can be "daisy-chained" to control up to 64 audio channels). The system provides 29 steps of precise 1.5 dB attenuation from 0 to -43.5 dB, with a 30th step for 90 dB "full kill" attenuation. Virtual display of the set attenuation is simultaneously given at *all* locations via a circular LED array around the knob on each RC-16 Remote Control. The RC-16 can be mounted in a standard two-gang electrical wall box, or a pre-punched 2-gang plate is available from Oxmoor.

The RC-16 is actually a highly sophisticated shaft encoder which translates knob movements into a string of digital pulses; the pulses then alter the level of the digital attenuator(s) within the DCA-2 chassis. Unlike up/down buttons, the RCA-16 is sensitive to rate-of-change, and thus the faster the knob is turned, the faster the setting is changed. As any interconnected RC-16 knob is turned, the LEDs on all remotes in the chain follow until the upper or lower limit is reached. At that point, the knob will continue to turn, but the level and Virtual Pointers simply stop changing until any one of the knobs is turned in the opposite direction. Since there are no mechanical stops, a knob cannot be "twisted off" if it is turned beyond what would be the "stop" positions on a conventional level control.

For applications where access to one or more remote controls must be restricted, a key switch can be installed in place of a jumper on the back of the RC-16; the key switch must then close to activate the RC-16.

DCA-2/DCA-2T & RC-16 SPECIFICATIONS



RC-16 REMOTE CONTROL

DCA-2/DCA-2T DIGITAL CONTROL ATTENUATOR

CONTROL	Type	Incremental Rotary Bi-Phase Encoder with Quadrature-to-Pulse Conversion Circuit	FREQUENCY RESPONSE	20 Hz to 20 kHz	+0, - 0.3 dB
DISPLAY	Light-Emitting Diodes	Multiplexed Display Refreshed at Line Frequency Rate by Serial Data Burst. One of 16 Concentric Light-Emitting Diodes (LEDs) is Illuminated as a Virtual Pointer.	HUM AND NOISE	- 3 dB Points, Ref.1 kHz	4 Hz to 60 kHz (+4 dBm Output)
CONTROL LOOP	Max. Controls Per Ch	4	DISTORTION	Ref. +4 dBm Output @ Unity Gain	
	Max. Ch. Per Control Loop	64	THD + NOISE	0.002% (20 Hz to 20 kHz BW)	
	Max. Cable Length	600m (2000 ft)*	SMPTE IMD	0.002% (60 Hz & 7 kHz, Mixed 4:1)	
	Contact Requirements	Single Pole Switch or Open Collector Transistor (128 mA Capacity), Dry Closure to Logic Ground	Transient Intermodulation	0.004% (3.15 kHz SQ + 15 kHz Probe, 30 kHz BW)	
	Wiring Scheme	Daisy-Chained Connection Via Looping Jacks	CROSSTALK	Channel to Channel	- 90 dB (20 Hz to 20 kHz Input Terminated w/600 Ohms, Adjacent Channel Driven to 0 dBm)
	Cable and Connectors	6-Wire Modular Telephone type RJ-11/12	AUDIO INPUT	Type	Electronically Balanced (RF Suppressed)
LOCKOUT	Key-Switch	Single-Pole Dry Closure, 25 mA Capacity	Connector	Female XLR	
SAFETY LISTING	City Of Los Angeles		Pin Out	Pin 1 Shield (Chassis), Pin 2 +, Pin 3 -	
MECHANICAL	Front Dimensions	578 mm (2.28 in) Square 203 mm (0.8 in) Above Panel Surface	Input Impedance	80 k Ohms	
	Rear Dimensions	533 mm (2.28 in) Diameter 406 mm (1.6 in) Below Front Panel Surface	Nominal Input Level	+0 dBu	
	Max. Mounting Panel Thickness	9.6 mm (0.38 in)	Maximum Input Level	+20 dBu	
	Min. Required Depth	437 mm (1.72 in) Below Front Panel Surface Including Connectors	Trim Pot Gain Range	±15 dB (Ref. 0 dBu Output)	
	Finish	Matte Black Injection Molded High-Impact Plastic Escutcheon and Knob, Black Painted Can	AUDIO OUTPUT	Type - DCA-2	Electronically Unbalanced, Non-Inverting
	Weight	Shipping: 454 grams (1.0 lb) Net: 114 grams (0.25 lb)	Type - DCA-2T	Electronically Balanced, Non-Inverting	
			Connector	Male XLR	
			Pin Out - DCA-2	Pin 1 (Chassis), Pin 2 +, Pin 3 Shield	
			Pin Out - DCA-2T	Pin 1 Shield (Chassis), Pin 2 +, Pin 3 -	
			Source Impedance	75 Ohms	
			Recommended Load Impedance	600 Ohms or Greater	
			Nominal Output Level	0 dBu	
			Maximum Output Level (Ref. 1 kHz @ Rated THD)		
			Terminated w/600 Ohms	+18 dBm (All Outputs Driven Simultaneously)	
			Unterminated	+20 dBu	
			DIGITAL ATTENUATOR	Control Range	0 to -43.5 dB in 29 Steps Plus a 90 dB Full Attenuation "Kill" Step
				Tracking Accuracy (Ch. to Ch.)	Within ±0.1 dB Throughout Attenuator Range
				Preset and Priority Range	15 Steps (of 3 dB each) Plus "Kill"
			CONTROL LOOP	Maximum Controls Per Ch	4
				Maximum Ch. Per Control Loop	64
				Maximum Cable Length	600m (2000 ft)*
				Contact Requirements	Single Pole Switch or Open Collector Transistor (128 mA Capacity), Dry Closure to Logic Ground
				Wiring Scheme	Daisy-Chained Connection Via Looping Jacks
				Cable and Connectors	6-Wire Modular Telephone Type RJ-11/12
			SAFETY LISTING	UL & CE	
			MAINS POWER	Power Requirements	100 to 125 VAC or 200 to 230 VAC 50/60 Hz; 8 Watts Maximum
			MECHANICAL	Overall Dimensions	44H x 482W x 183D mm (1.72 H x 19 W x 7.18 D in)
				Finish	Textured Black Paint
				Weight	Shipping: 3.8 Kg (8.5 lb) Net: 3.1 Kg (6.9 lb)

* Total length based on typical modular telephone cable resistance of 12 ohms per 100m (330 ft).
Specifications subject to change without notice.