

**SONIFEX**

**CM-CU1**

Commentator Unit 1  
Commentator & Line Input

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catalogue



Manufacturers of audio & video products  
for radio & TV broadcasters

## CM-CU1

Commentator Unit 1 Commentator & Line Input



The CM-CU1 offers the same high quality, robust specification as the CM-CU21, with a feature set tailored to single commentator applications.

It provides a fully featured commentator position and a line-level input. The unit has an individual commentator output, with an additional output providing a mix of commentator and line input audio. A limit indicator on the main panel shows when the adjustable limiter on the main output is active, and a bright 21 segment LED PPM meter, which can be disabled, shows the main output level.

The line input can be configured to remain present at the mix output even if the commentator is off air, making it useful for routing crowd effects or pre-recorded material to the programme feed. Its presence in the commentator's headphones is also configurable to suit the application.

Four talkback output channels, with a built in limiter, are available to the commentator and they can be linked to provide simultaneous operation. Activation of one or more talkback channels removes the commentator audio from the main output until all talkback channels are deactivated.

A wide input gain range and switchable phantom power allows support of a variety of microphone types including low output ribbon mics, headsets and high output phantom powered microphones. There are 5 transformer balanced return audio inputs which, along with the commentator input, are routed to the headphone monitor controls. With these headphone controls,



CM-CU1 Commentator Unit Top View.



CM-CU1 Commentator Unit Front View.

any monitor input can be adjusted and sent to either the left, right or both ears.

A GPIO port gives an open-collector driven output indication of any active On-Air or talkback channel and four remote inputs provide an external call/alert to each of the talkback controls.

The unit has a built in line-up tone generator for easy channel identification and cabling checks. When enabled the test-tone is routed to the required output simply by pressing the corresponding on air or talkback button. An automatic tone mode repeatedly sends different quantities of tone bursts to each output ▶



CM-CU1 Commentator Unit Rear View.



- ▶ to make it effortless for a single technician to set up.

An On-Air lock switch prevents the On-Air button from being accidentally deactivated and a T/B Gang switch links the operation of talkbacks A, B, C & D.

A flexible range of options allow the Commentator Unit to be customised to better suit the operational and user's personal requirements. These include options for momentary or latching operation of the talkback buttons, permanently enabling or disabling the commentator input, default headphone signal routing and main panel indicator illumination levels.

The CM-CU1 Commentator Unit can be powered from a universal mains input between 85-264V AC at 47-63Hz, or from a 12-24V DC input.

## Features of the CM-CU1 Commentator Unit

- Commentator position with individual output; plus main mix output.
- Line input with configurable output and headphone presence.
- Talkback outputs selectable by the commentator, with built in limiter and adjustable gain.
- 5 Return audio circuits that are routed to headphones along with the commentator input. Any source can be individually level controlled and sent to left, right or both ears.
- A wide input gain range and switchable phantom power allows support of a variety of microphone types including low output ribbon, headsets and high output phantom powered microphones.
- User preset adjustable limiter on main output with limit activity indication.
- Built in line-up tone for initial cabling checks.
- 21 Segment LED PPM meter showing main output level.
- Transformer balanced inputs and outputs.
- Fitted formica 'Sharpie' designation strips.
- Robust mechanical design with protection for potentiometer knobs.
- Universal AC mains, or 12-24 volt DC power.

## Technical Specification For CM-CU1 Commentator Unit

### Microphone Input

Gain Range:	+20dB to +86dB
Maximum Input Level:	-6dBu
Equivalent Input Noise:	130dB Ref. 80dB gain with 150Ω termination
Equivalent Input Noise:	128dB Ref. 50dB gain with 150Ω termination
C.M.R.R.	>60dB
Frequency Response:	±0.5dB 20Hz to 22kHz Ref 50dB gain @ 1kHz

### Electronically Balanced Line Input

Gain Range:	-83dB to +10dB
Maximum Input Level:	+25dBu
C.M.R.R.	>70dB
Frequency Response:	±0.2dB 20Hz to 22kHz Ref 0dBu @ 1kHz

### Transformer Balanced Monitor Inputs

Gain Range:	-66dB to +11dB measured @ Headphone output
Maximum Input Level:	+21dBu
C.M.R.R.	>55dB
Frequency Response:	±0.5dB 20Hz to 22kHz Ref 0dBu @ 1kHz

### Transformer Balanced Mix Output

Maximum Output Level (Limiter Off):	+24dBu
Frequency Response:	±0.5dB 20Hz to 22kHz Ref 0dBu @ 1kHz
Noise:	-94dB Average weighting Ref +8dBu
THD & N:	<0.02% Ref. 1kHz @ +8dBu
THD & N:	<0.065% Ref. 1kHz @ +18dBu
1% Distortion Point:	+18dBu @ 24Hz

### Transformer Balanced Talkback Outputs

Maximum Output Level Limited:	+8dBu
Frequency Response:	±0.5dB 20Hz to 22kHz Ref 0dBu @ 1kHz
Noise:	-94dB Average weighting Ref +8dBu
THD & N:	<0.02% Ref. 1kHz @ +8dBu
Gain Adjustment:	0dB to +12dB

### Electronically Balanced Comm Output

Maximum Output Level:	+25dBu
Frequency Response:	±0.2dB 20Hz to 22kHz Ref 0dBu @ 1kHz
Noise:	-98dB Average weighting Ref +8dBu
THD & N:	<0.002% Ref. 1kHz @ +8dBu

### Headphone Output

Gain Range:	-66dB to +11dB
Maximum Output Level:	+19dBu
Frequency Response:	±0.5dB 20Hz to 22kHz Ref 0dBu @ 1kHz
Noise:	-85dB Average weighting Ref +8dBu
THD & N:	<0.005% Ref. 1kHz @ +8dBu

### Main Panel Operational Controls & Indicators

On-Air Button:	Illuminated button with latching action
Talkback A, B, C & D Buttons:	Illuminated buttons with selectable momentary and/or latching action
Headphone Monitor Controls:	Input source level adjustment potentiometers Headphone channel selection switches
Line Input Level:	line input mode level potentiometer
PPM Meter:	21 segment display showing mix output level, brightness level is selectable
Limit LED:	Indicates main output limiter is active, colour & brightness level is selectable
Power LED:	Indicates operating mode; normal or setup

### Front Panel Operational Controls

Phantom:	Switch to enable 48V microphone phantom power
Mic Gain:	Microphone gain potentiometer and range select switch selects +20dB to +56dB or +50 to +86dB

### Rear Panel Operational Controls

On Air Lock:	Switch to prevent On Air control from being deactivated Momentary push-button to override on air lock
T/B Gang:	Switch to link operation of talkbacks A, B, C & D
T/B Gain:	0dB to +12dB
Limiter:	Switch to enable limiter on mix output Limit level adjustment potentiometer
Test Tone:	Switch to enable 1 kHz line-up tone

### Configuration Options - Accessible via Setup Mode

On Air Control Mode:	Disabled, normal or permanently on
Talkback Button Action:	Momentary, latching or both
Headphone Routing:	Line-level input permanently routed/routed if on air to Commentator headphones Commentator input permanently routed/not routed to headphone monitors
Line Level Input Routing:	Line-level input permanently routed/not routed/routed if on air to main output
Display Preferences:	Limit LED colour and brightness Button LED brightness PPM meter LED brightness/disable
Permanent Option Backup:	Save/load options to/from Permanent backup or return to factory defaults

### Front Panel Connections

Headphone Output:	1 x locking headphone jack socket
Microphone Input:	1 x XLR-3 pin latching female
Line Input:	1 x XLR-3 pin latching female

### Rear Panel Connections

Prog, A, B, C & D Inputs:	5 x XLR-3 pin female (transformer balanced)
Comm Output:	1 x XLR-3 pin male (electronic balanced)
Talkback A, B, C & D Outputs:	4 x XLR-3 pin male (transformer balanced)
Mix Output:	1 x XLR-3 pin male (transformer balanced)
GPIO Port:	15-way 'D'-type socket
Mains Input:	Universal filtered IEC, continuously rated 85-264VAC, 47-63Hz, 10W
Fuse Rating:	Anti-surge fuse 1A 20 x 5mm
DC Input:	XLR-4 pin male 12V DC, 650mA Typical, 850mA Maximum 24V DC, 325mA Typical, 425mA Maximum
Earth Point:	M4 stud.

### Equipment Type

CM-CU1	Commentator Unit, 1 Presenter
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### Physical Specification

Dimensions (Raw):	270mm (W) x 230mm (D) x 70mm (H - front) x 95mm (H - rear) 10.6" (W) x 9" (D) x 2.8" (H - front) x 3.7" (H - rear)
Dimensions (Boxed):	380mm (W) x 350mm (D) x 200mm (H) 15" (W) x 13.8" (D) x 7.8" (H)
Weight:	Nett: 3.3kg Gross: 4.3kg Nett: 7.3lbs Gross: 9.4lbs

### Accessories

CM-CU21TP	Commentator Unit Transport Case
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