

# SONIFEX

CM-CU21

Commentator Unit 2 Commentators & 1 Guest

2016  
Catalogue





## CM-CU21 Commentator Unit 2 Commentators & 1 Guest



**Category:** Talkback & Commentary.

**Product Function:** Commentator unit for two commentary positions and a guest position.

**Typical Applications:** Used in sports grounds and arenas by commentators to produce commentary & hear talkback.

**Features:**

- 2 Commentator positions plus a guest position, each with individual outputs; plus 2 mix outputs.
- Talkback outputs selectable by the two main commentators, with built in limiter & adjustable gain.
- 4 Return audio circuits that are routed to headphones along with all the commentator inputs. Any source can be individually level controlled and

sent to left, right or both ears.

- A wide input gain range and switchable phantom power on each commentary position allows support of a variety of microphone types including low output ribbon, headsets and high output phantom powered microphones.
- Individually switched 48V phantom power on all microphone inputs.
- User preset adjustable limiter on main mix outputs with limit activity indication.
- Built in line-up tone for 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.

The CM-CU21 is a high quality, portable Commentator Unit. Its sturdy construction and flexibility of features make it suitable for use in a wide variety of environments.

Sonifex has a solution for those situations where a separate commentary unit is required, or where ISDN/pots

communications, or a complex digital solution aren't needed. The CM-CU21 stand alone commentator unit is a rugged, reliable solution which includes all the features needed to ensure that up to two play-by-play announcers can provide their expertise, together with a guest position for



CM-CU21 Commentator Unit Top View.

further analysis by a visiting ex-professional, pundit (color commentator in the USA), or co-commentator. The guest position can alternatively be used as a line-level input for special effects such as the sounds of the action and spectators, also heard in the background.

Each of the 3 announcer positions has an individual output, with two additional outputs providing a mix of all active commentary channels. A limit indicator on

the main panel shows when the adjustable limiter on the mix outputs is active, and a bright 21 segment LED PPM meter, which can be disabled, shows the main output level. Two talkback output channels, with a built in limiter and adjustable gain, are available to each of the two main commentators and they can be linked to provide simultaneous operation.

A wide input gain range and switchable phantom power on each commentary



CM-CU21 Commentator Unit Front View.



CM-CU21 Commentator Unit Rear View.

position allows support of a variety of microphone types including low output ribbon mics, headsets and high output phantom powered microphones. The microphone level controls are accessible on the front panel but can be protected from adjustment by an optional cover plate if required. There are 4 transformer balanced return audio inputs which, along with the commentator inputs, are routed to the headphone monitor controls. These could be used to pass referee remarks to the sportscasters, as well as comments from guests in the studio.

The headphone input controls are very comprehensive allowing either of the two main announcers total control so that any monitor input can be adjusted in volume and sent to either the left, right or both ears. The switches are slightly recessed so that they can't easily be knocked and the volume knobs are fitted so that the bottom skirt of the knob is below the level of the panel, so that they can't fall off. Fitted Formica 'Sharpie' designation strips are used under each of the level controls so that different input and source types can be dynamically annotated.

A GPIO port gives an independent open-collector driven output indication for any of the three active On-Air or four talkback channels. Four remote inputs provide an external call/alert to each of the talkback controls which flashes the selected T/B button amber when used, to indicate active talkback.

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 On-Air lock switch prevents the On-Air buttons from being accidentally deactivated and this can be over-ridden with a single push button on the rear panel for individual circumstances where an announcer needs to go off air. A talkback (T/B) gang switch links the operation of talkbacks A & B to make the talkback buttons easier to use by the announcers.



CM-CU21CP Commentator Unit Front Cover Plate.

A flexible range of options allow the CM-CU21 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 any of the commentator inputs, default headphone signal routing and main panel indicator illumination levels.

The CM-CU21 Commentator Unit can be powered from a universal mains input between 85-264V AC at 47-63Hz, or from a 12-24V DC input, both on the rear panel. A transport case, the CM-CU21TP, is also available to protect the CM-CU21 which also has space for two headsets and/or microphones.

### Accessories

**CM-CU21CP:** This is an optional Commentator Unit Front Cover Plate which is attached to the front of the CM-CU21 to avoid accidental tampering with the microphone gain and phantom power control settings.

**CM-CUTC:** This is an optional carry case to transport the CM-CU1 or CM-CU21 commentator unit along with 2 x headsets and 2 x ribbon mics.



CM-CUTC Commentator Unit Transport Case.

## Specification For CM-CU21

### 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 Main Outputs

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 Outputs

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 Outputs

Gain Range:	-70dB to +7dB
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 1-3 Buttons:	Illuminated buttons with latching action
Talkback A & B 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:	Guest position line input mode level potentiometer
PPM Meter:	21 segment display showing mix output level, brightness level Is selectable
Limit LED:	Indicates mix output limiter is active, colour & brightness level is selectable
Power LED:	Indicates operating mode; normal or setup
<b>Front Panel Operational Controls</b>	
Phantom:	Switch to enable 48V microphone phantom power for positions 1 & 2
Phantom/Line:	Switch to enable 48V microphone phantom power or select line input mode for position 3
Mic Gain:	Microphone gain potentiometer and range select switch selects +20db to +56dB or +50dB to +86dB

### Rear Panel Operational Controls

On Air Lock:	Switch to prevent On Air controls from being deactivated Momentary push-button to override on air lock
T/B Gang:	Switch to link operation of talkbacks A & B
T/B Gain:	0dB to +12dB
Limiter:	Switch to enable limiter on mix outputs 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:	Position 3 line mode input routed/not routed to positions 1 & 2 headphones Position 1-3 inputs permanently routed/not routed to headphone monitors
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 Outputs:	2 x locking headphone jack socket for positions 1 & 2 1 x headphone jack socket for position 3
Microphone Inputs:	2 x XLR-3 pin latching female for positions 1 & 2
Microphone/Line Input:	1 x XLR-3 pin latching female for position 3

### Rear Panel Connections

Prog, A, B & C Inputs:	4 x XLR-3 pin female (transformer balanced)
Comm1-3 Outputs:	3 x XLR-3 pin male (electronic balanced)
Talkback A & B Outputs:	2 x XLR-3 pin male (transformer balanced)
Mix 1 & 2 Outputs:	2 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.
<b>Equipment Type</b>	
CM-CU21	Commentator unit, 2 presenter and 1 guest positions

### Physical Specification

Dimensions (Raw):	27cm (W) x 23cm (D) x 7cm (H - front) x 9.5cm (H - rear) 10.6" (W) x 9" (D) x 2.8" (H - front) x 3.74" (H - rear)
Dimensions (Boxed):	38cm (W) x 35cm (D) x 20cm (H) 15" (W) x 13.8" (D) x 7.8" (H)
Weight:	Nett: 3.34kg Gross: 4.32kg Nett: 7.35lbs Gross: 9.5lbs

### Accessories

CM-CU21CP:	Commentator unit front cover plate
CM-CUTC:	Commentator unit transport case
Dimensions (Raw):	53cm (W) x 21cm (D) x 41.5cm (H) 20.9" (W) x 8.3" (D) x 16.3" (H)
Dimensions (Boxed):	60cm (W) x 26cm (D) x 42cm (H) 23.6" (W) x 10.2" (D) x 16.5" (H)
Weight:	Net: 4.0kg Gross: 5.0kg Net: 8.8lbs Gross: 11.0lbs

# **SONIFEX**

[www.sonifex.co.uk](http://www.sonifex.co.uk)

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**UK Office:**

**Sonifex Ltd**

61 Station Road, Irthlingborough,

Northants, NN9 5QE, UK

Tel: +44 (0) 1933 650700

Fax: +44 (0) 1933 650726

Email: [sales@sonifex.co.uk](mailto:sales@sonifex.co.uk)

**Australian Office:**

**Sonifex Pty Ltd**

12/6 Leighton Place,

Hornsby NSW 2077, Australia

Tel: +61 (2) 9987 0499

Fax: +61 (2) 9476 4950

Email: [sales@sonifex.com.au](mailto:sales@sonifex.com.au)