

CM-CU21 Commentator Unit

2 Commentators & 1 Guest

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.

It provides two fully featured commentator positions and a third guest position that can alternatively be used as a line-level input. Each position 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, are available to each of the two



CM-CU21 Side View

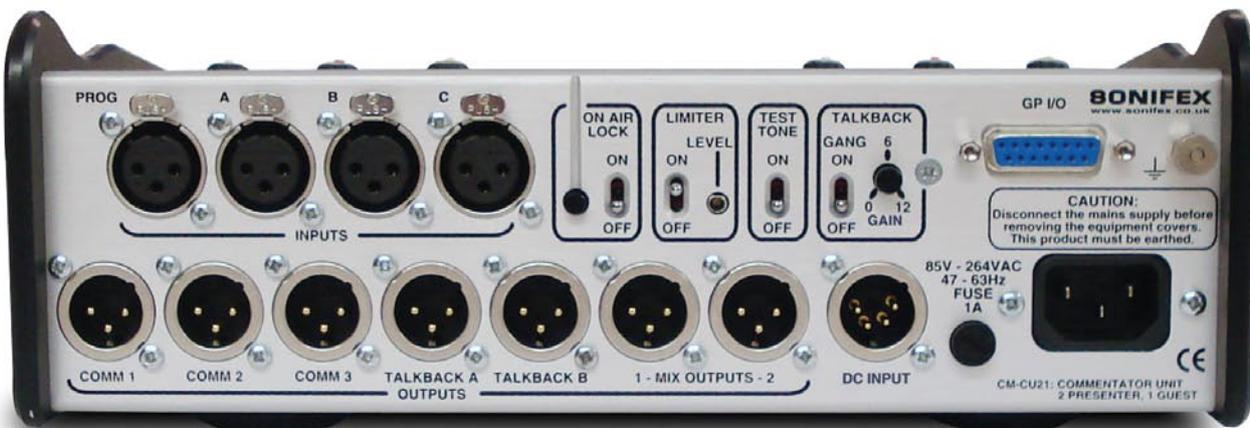
main commentators. They have adjustable gain and can be linked to provide simultaneous operation.

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. There are 4 transformer balanced return audio inputs which, along with the commentator inputs, are routed to the

headphone monitor controls. With these headphone controls, 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



CM-CU21 Rear View



CM-CU21 Front View



CM-CU21 Top View

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 a T/B Gang switch links the operation of talkbacks A & B.

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 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.

Features of the CM-CU21 Commentator Unit

- 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 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.

Sonifex CM-CU21 Commentator Unit Technical Specifications

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 0dB @ 1kHz

Transformer Balanced Monitor Inputs

Gain Range:	-70dB to +7dB measured @ Headphone output
Maximum Input Level:	+25dBu
C.M.R.R.	>60dB
Frequency Response:	±0.5dB 20Hz to 22kHz Ref 0dB @ 1kHz

Transformer Balanced Main Outputs

Maximum Output Level (Limiter Off):	+24dBu
Frequency Response:	±0.5dB 20Hz to 22kHz Ref 0dB @ 1kHz
Noise:	-94dB Average weighting Ref +8dB Line input
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 0dB @ 1kHz
Noise:	-94dB Average weighting Ref +8dB Line input
THD & N:	<0.02% Ref. 1kHz @ +8dBu
Gain Adjustment:	0-12dB

Electronically Balanced Comm Outputs

Maximum Output Level Limited:	+25dBu
Frequency Response:	±0.2dB 20Hz to 22kHz Ref 0dB @ 1kHz
Noise:	-98dB Average weighting Ref +8dB Line input
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 0dB @ 1kHz
Noise:	-85dB Average weighting Ref +8dB Line input
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

Front Panel Operational Controls

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 +20-+56dB or +50-+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
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.

Equipment Type

CM-CU21	Commentator Unit, 2 Presenter and 1 Guest Positions
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Physical Specification

Dimensions:	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 3.74" (H - rear)
Weight:	Nett: 3.4kg Gross: 4.2kg Nett: 7.5lbs Gross: 9.24lbs

Accessories

CM-CU21CP	Commentator Unit Front Cover Plate
CM-CU21TP	Commentator Unit Transport Case