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## CO – SCC 103



## STUDIO CONTROL CENTER

## MANUAL

from serial no. 01010

# Mikkelsens Elektronikk



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CO – SCC 103

CO-SCC103 Studio Control Center has been developed through many years of experience making and working with local radio stations. Together with CO-SL143EG Studio line amplifier You will get all the facilities You need to get Your studio to operate professionally.

Because we are continuous doing research and development on our products, Your opinion on those are of interest to us. If You have any comments either positive or negative please write us:

Mik-EI  
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NORWAY

## Description:

CO-SCC103 is made up of different sections. We can split it in a remote, signal, power, and an analogue section.

There are two power supplies that delivers: + 24V./1A. and  $\pm$  15V./1A.

In the remote section there is space for 10 remote controls (5 boards), but it are delivered with remote control 1-6 (3 boards CO-RC22 pulse type) plugged in. Then You can expand it when needed with extra remote boards that each contains two separate remote controls.

We deliver two types of remote boards. Both are double types, i.e. they contains two separate remote controls. CO-RC22 is made for pulse remote and the other CO-RC12 is made for loop remote. How to plug in extra boards is explained in the description following each CO-RC22/CO-RC12.

In the signal section we have got relays that changes between white and red light in both the studio and the controlroom. In addition there is +24 volt available for feeding to other equipment. You can draw max. 600 mA from the light and +24V. outputs. 24V/50mA or 24V/80mA bulbs is commonly used for white and red lights in the studio and controlroom. In bigger studios or when there is a need for a higher lightcurrent we recommend the use of the separate lightpower CO-LP300 in addition. That will also give You outputs from the LINE and DIRECT switches on the CO-SL133E/CO-SL143EG Studio Line Amplifier.

An other relay is muting the lines to the amplifiers for the controlroom loudspeakers when working self-up. A damping of 10 dB is build in to avoid noise and protect the loudspeakers.

Then there is a D-connector for remote of two telephone hybrids and signal from the producerbox. It is easy to connect the Studio Control Center to the mixer, it is done in a single 25-pin D-connector. The remotes is activated by switching the conjugating pin to 0 V. That gives less possibilities of serious mistakes.

All remote outputs are isolated and meet the following specifications:

### Maximum ratings for each contact:

Power: 10 VA.  
Amp: 750 mA.  
Voltage: 150 V.

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The analogue section is made up of two headphone amplifiers, a loudspeaker amplifier, a stereo line amplifier for the radio return and a summation amplifier for signals to the producerbox. There is connection for two microphone channels for cough-muting with inserts.

One of the headphone amplifiers is for headphones in the studio (input: **A2**) and the other is for the producer headphone (input: via summation amplifier from the two microphone channels).

The loudspeaker amplifier is for the speaker in the studio (input: **Studio Mon.**) It is a mono amplifier with a stereo input and it is been muted by the studio red light signal.

The stereo line amplifier is amplifying the signals from the Tuner. It takes the signal up from the normal phono level (300mV) to a regular line level (1.22V) so it is possible to listen to the on air signal without any difference in signal level. It is internal adjustable to other levels.

**Mik. k.1** and **k.2** is made for connecting the signal from insert on the two microphone channels You want the cough-muting to activate. Because You will use the original insert possibilities when connecting, the cough-muting section is provided with two inserts, one for each channel.

The connector **Studiosignal** is for connecting cough-button, On Air light (max.50 mA) and cue-button.

CO-SCC103 has a build in buzzer that will give a audible signal when the cue-button is operated.

Studiosignalbox CO-SS02B is placed on the table in the studio and contains all three functions.

Producerbox CO-PB02 is a combined producer command and microphonestand for interviews in a self-up situation.



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## CONNECTIONS:

<u>Marking</u>	<u>Description</u>	<u>Connector</u>
TUNER L & R	Input from Tuner. Left and Right channels.	<u>PHONO Unbalanced:</u> Center: Signal Chassis: Screen
RADIO RETUR	Output from the stereo line amplifier. Level: 1.22V	<u>XLR-3M Unbalanced:</u> 1: Screen 2: Left output 3: Right output
MIK.K.1 MIK.K.2	In- and output from insert on mic.channel. Cough-button activates muting of those.	<u>1/4" Jack Unbalanced:</u> Center: Signal out Ring: Signal in Chassis: Screen
INS.1 INS.2	Inserts for the mic. channels.	<u>1/4" Jack Unbalanced:</u> Center: Signal return Ring: Signal send Chassis: Screen
A 2	Input to headphone amplifier for studio headphones. Usually A2 from the mixer.	<u>XLR-3F Unbalanced mono:</u> 1: Chassis ground 2: Signal 3: Screen
STUDIO HODETLF.	Output to headphones in the studio.	<u>XLR-3M Unbalanced mono:</u> 1: Chassis ground 2: Signal 3: Screen
STUDIO MON.	Input to loudspeaker amplifier for the studio speaker.	<u>XLR-3F Unbalanced stereo:</u> 1: Screen 2: Left input 3: Right input
STUDIO HØYTT.	Output to the Studio loudspeaker. (4 watt in 8 ohms)	<u>XLR-3M Unbalanced mono:</u> 1: Chassis ground 2: Signal (+) 3: Screen (-)



**STUDIO  
SIGNAL**

Connection for Studio-signalbox. I.e. cough-button, cue-button and On Air light.  
(Max. 50 mA.)

XLR-5F:

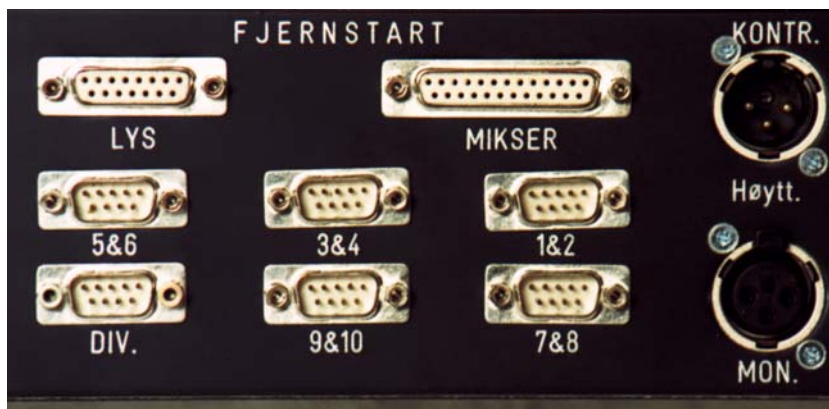
- 1: Earth
- 2: Earth from cough- button.
- 3: Earth from cue-button.
- 4: +24V for On Air Light
- 5: NC

**PROD.**

Connection for producer headphone.  
(T.ex. CO-PB02 Producer-box.)

XLR-3M Unbalanced mono:

- 1: Chassis ground
- 2: Signal
- 3: Screen



**LYS**

Connection for white and red light to studio and controlroom.  
Extra output of + 24 V.  
Maximum total load is 600 mA.  
When You need more current and to get optimum light-control together with the Studio Line Amplifier a separate Light Power, the CO-LP300 is recommended.

15-Pin D-connector F.:

- 1: Studio white +
- 2: Studio red +
- 3: NC
- 4: Contr.room white +
- 5: Contr.room red +
- 6: NC
- 7: + 24 Volt
- 8: + 24 Volt
- 9: Earth (-)
- 10: Earth (-)
- 11: Earth (-)
- 12: Earth (-)
- 13: Earth (-)
- 14: Earth (-)
- 15: Earth (-)



## MIKSER

Remote inputs from mixer.  
All remotes is activated  
by earthing the inputs to  
0V, logic earth.

A suitable cable between  
CO-SCC103 and the mixer is  
PFK 18x0.22 mm<sup>2</sup>. We sell  
the cable pr. meter or  
custom made following  
customers specifications.

## 25-Pin D-connector F.:

- 1: 0V, logic earth
- 2: Studiofaders
- 3: Faderstart 1
- 4: Faderstart 3
- 5: Faderstart 6
- 6: Faderstart 8
- 7: Faderstart 10
- 8: Telephone 1
- 9: Extra
- 10: NC
- 11: NC
- 12: NC
- 13: NC
- 14: Controlroom fader
- 15: Faderstart 2
- 16: Faderstart 4
- 17: Producer fader
- 18: Faderstart 5
- 19: Faderstart 7
- 20: Faderstart 9
- 21: Telephone 2
- 22: Extra
- 23: NC
- 24: NC
- 25: NC

## FJERNSTART 1-2 til 9-10

Remote connections for  
tape recorders,  
Turnables, CDs,  
cassette players, etc.  
Isolated switches with  
the following maximum  
ratings:  
Power: 10 VA.  
Current: 750 mA.  
Voltage: 150 V.

## 9-Pin D-connector M.:

- 1: Stop 2 to 10, a-rail
- 2: Stop 1 to 9, a-rail
- 3: Start 1 to 9, b-rail
- 4: Start 2 to 10, b-rail
- 5: NC
- 6: Start 2 to 10, a-rail
- 7: Start 1 to 9, a-rail
- 8: Stop 1 to 9, b-rail
- 9: Stop 2 to 10, b-rail



<p>DIV.</p>	<p>Remote connections for telephone hybrids and producerbox. Isolated switches for the hybrids with same specifications as over.</p>	<p><u>9-Pin D-connector M.:</u> 1: Telephone 1, a-rail 2: Telephone 2, a-rail 3: Producer, a-rail 4: NC 5: NC 6: Telephone 2, b-rail 7: Telephone 1, b-rail 8: Producer, b-rail 9: NC</p>
<p>KONTR. MON.</p>	<p>Input from mixer to a relay for muting the speakers in the controlroom by self-up.</p>	<p><u>XLR-3F Unbalanced. stereo:</u> 1: Screen 2: Left in 3: Right in</p>
<p>KONTR. HØYTT.</p>	<p>Output to amplifier for speakers in the controlroom. The signal is damped about 10 dB.</p>	<p><u>XLR-3M Unbalanced. stereo:</u> 1: Screen 2: Left out 3: Right out</p>

To standardise the connections between the mixer and Studio Control Center Mik-EI has recommended the following colour codes for the PFK 18 x 0.22 mm<sup>2</sup> nr.04268 cable:

<i>Pin no.</i>	<i>Colour</i>	<i>Function</i>	<i>cable no.</i>
<b>1</b>	Black	0 V. logic earth	6
<b>2</b>	Blue	Studio faders	2
<b>3</b>	Yellow	Faderstart 1	4
<b>4</b>	Brown	Faderstart 3	7
<b>5</b>	Orange	Faderstart 6	9
<b>6</b>	Turkis	Faderstart 8	11
<b>7</b>	Red/Blue	Faderstart 10	13
<b>8</b>	Yellow/Red	Telephone 1	15
<b>9</b>	White/Red	Extra	16
<b>14</b>	Red	Controlroom fader	1
<b>15</b>	Green	Faderstart 2	3
<b>16</b>	White	Faderstart 4	5
<b>17</b>	Violet	Producer fader	8
<b>18</b>	Rose	Faderstart 5	10
<b>19</b>	Mediumgrey	Faderstart 7	12
<b>20</b>	Green/Red	Faderstart 9	14
<b>21</b>	Red/Black	Telephone 2	17
<b>22</b>	Red/Brown	Extra	18