

VOICE COMMUNICATION SWITCHING SYSTEM

The VCSS 1002 is a medium capacity **V**oice **C**ommunication **S**witching **S**ystem designed to operate radio channels. Mainly suitable to control towers, it can be also useful as backup VCS in control centres. The maximum capacity of the system is 8 radio channels which can be operated by 8 **O**perator's **C**ontrol **P**anels (OCP), but a basic configuration offers a capacity of 4 channels and 4 OCPs. The number of OCPs is independent of the number of the radio systems installed.

The modularity of the system permits to install only the parts required to fit the needed capacity in terms of number of OCPs and radio channels. Therefore, the cost is optimised.

The heart of the system is the Switching Matrix Unit inside of which are installed:

- as many radio-interface PCBs as required radio channels
- as many OCP-interface PCBs as required operator's positions

When more than 4 POs and/or 4 radio channels are required, an auxiliary switching matrix unit is associated to the first one, thus doubling the capacity in terms of number of POs and radio channels. For a number of radio channels exceeding 4, an auxiliary module installed together with the basic one allows the selection of up to 4 new channels.



Additional modules can be mounted together with the OCP in order to offer extended possibilities: loudspeaker, remote connection-box for microphone and headset, as well as control modules for the radio equipment: Main/Standby selection, multi-channel radio frequency programming, etc ...

VCSS 1002

FUNCTIONS AVAILABLE WITH THE OCP (1)

- ▶ Listen-only (through headset and/or loudspeaker) of one or more radio channel(s)
- ▶ Traffic on one or more radio channels simultaneously (traffic coupling of channels), with share possibility of channels between several OCPs
- ▶ Rebroadcast operation on traffic-coupled radio channels
- ▶ Side-tone with adjustable feedback level to avoid AF oscillation
- ▶ Light indicator for channel availability : off if the channel is not installed, green for a ready-to-use channel, and red for a faulty channel
- ▶ Call indicator for each radio-channel (only the calling channel will be signalled in rebroadcast mode)
- ▶ Transmit indicator on each radio channel
- ▶ Automatic reception audio level control (can be disabled)
- ▶ Minimum listening level adjustable
- ▶ On/Off loudspeaker switch
- ▶ Light indicators brightness control by potentiometer, with OCP OFF control in far left position
- ▶ Test of the light indicators
- ▶ Label holder for identification of the channels
- ▶ Recording output for each OCP
- ▶ Operation from the front panel (microphone, headset and volume). Possible remote operation using an auxiliary mic/headset connection box
- ▶ Possibility to incorporate in the AF path an auxiliary audio signal independent from the radio channels

FUNCTIONS AVAILABLE ON THE SWITCHING MATRIX UNIT (1)

- ▶ Adaptability to the various radio configurations: transceiver or separated transmitter and receiver, with or without remote control
- ▶ Adjustment of the Audio Line levels of each radio channel from the front panel
- ▶ Front panel Access terminals on the audio lines
- ▶ Call and PTT Simulation push-buttons with PTT and Call signalling
- ▶ Integrated protection function against a permanent call with configurable time out (may be disabled)
- ▶ Overall Tx/Rx operation permanent test
- ▶ Recording output for each radio channel
- ▶ Independent connector for each radio channel
- ▶ Independent connector for each OCP

COMPOSITION OF THE SYSTEM

The system is articulated around the following equipment:

- ▶ SEL1002A Switching Matrix Unit for 4 radio channels and 4 OCPs
- ▶ SEL1002B 4-channel and 4-OCPs Switching Matrix Unit extension
- ▶ PO1002 4-channel OCP
- ▶ EPO1002 4-channel OCP extension

The INRA radio interface PCBs (one per radio channel) and INCM OCP interface PCB (one per OCP) are installed inside the Switching Matrix Units

(1) According to equipment installed

RADIO CHANNELS MANAGEMENT

- ▶ **Frequency availability indicator:**
One light indicator per radio channel
- ▶ **Listen-only Selection of the radio channels:**
One switch with light indicator per radio channel
- ▶ **Traffic Selection of the radio channels:**
One switch with light indicator per radio channel.
Simultaneous multiple channel traffic possible
- ▶ **Shared channel indicator:**
One light indicator per radio channel
- ▶ **Rebroadcast function:**
One switch with light indicator
Rebroadcast of the voice signal incoming on one traffic-selected channel onto the other traffic-selected channels
- ▶ **Receive CALL indicator:**
One light indicator per radio channel
- ▶ **Transmit indicator:**
One light indicator per channel, flashing at modulation rate

AUDIO FREQUENCY MANAGEMENT

- ▶ **Headset:**
Local connection on the front panel or remotely using mic/headset connection box
- ▶ **Loudspeaker:**
Output connector on the rear panel
- ▶ **Loudspeaker ON control:**
Switch with light indicator
- ▶ **Headset / loudspeaker volume Adjustment:**
Common control on the front panel.
Separate control when using mic/headset connection box
- ▶ **Minimum loudspeaker volume adjustment:**
Potentiometer under the label holder (adjustment on installation)
- ▶ **Microphone:**
Local connection on the front panel. or remotely using mic/headset connection box
- ▶ **PTT control:**
On microphone itself or using a remote device (Key or pedal)
- ▶ **Recording:**
Recorder output on the rear panel

GENERAL FUNCTIONS

- ▶ **Test of the light indicators:**
One push-button
- ▶ **Brightness control:**
Potentiometer on the front panel, with incorporated On/Off switch of the OCP

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