ACAMS
Airport Tower Solutions

ACAMS ERC 2 Radio Communication System

General

The ERC 2 product is a radio control system specifically developed for air traffic control emergency radio operations. The system utilises a flexible architecture with modular control units each with a capacity of 2 channels. Up to 5 units may be configured at each operator position providing a capacity of 10 channels.

The control panels connect to the radio equipment via standard 600 ohm analogue interfaces. The system supports standard transmitter keying methods including 24VDC, GND, current loop and floating contact.

The system includes an AGC circuit for the microphone input and voice detectors for the receiver inputs. The transmitter outputs include adjustment for audio level.

A position recorder output is also available with adjustable output level.

The system supports remote switchover of the radio equipment from the main communication system which is required when dedicated emergency radio transmitters/receivers are not used.

In a multi-panel configuration with more than 2 channels, the microphone, loudspeaker and recorder signals and power supply are connected to the primary panel only. A secondary panel is simply connected to the primary panel with an expansion cable and the signals are automatically routed to the additional channels. The secondary panels receive power from the primary panel and do not need separate power connections. Up to 5 panels can be interconnected.

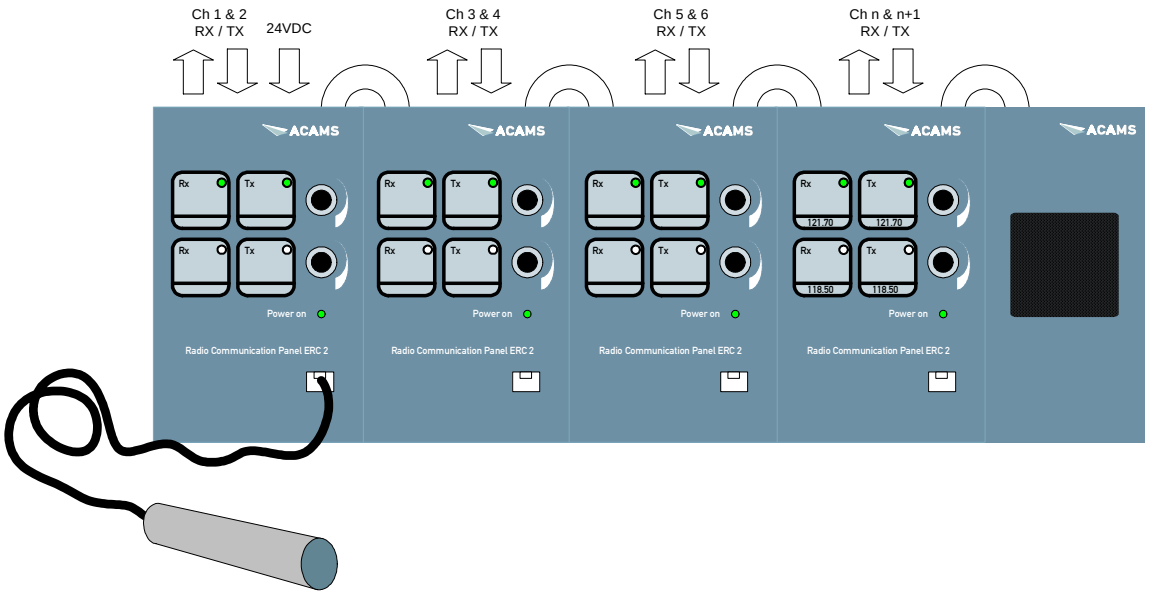
Operation

A channel is selected for receive by pressing the RX button. When the channel is RX-selected a green indicator LED in the RX button shows steady on. The channel is RX-deselected by pressing the RX button a second time and the green RX LED changes to off.

A channel is selected for transmit by pressing the TX button. When the channel is TX-selected, a green indicator LED in the TX button shows steady on. If the channel was not previously RX-selected, it will be automatically selected. The channel is TX-deselected by pressing the TX button a second time and the green TX LED changes to off. The channel will remain RX-selected.

Transmission on selected channels is activated by pressing the microphone PTT button. When PTT is active the green TX LED changes from steady to flutter. In addition the green RX LED shows flutter when voice is being transmitted.

An incoming radio transmission is indicated by a fluttering indication in the green LED of the respective RX button.



Typical Configuration

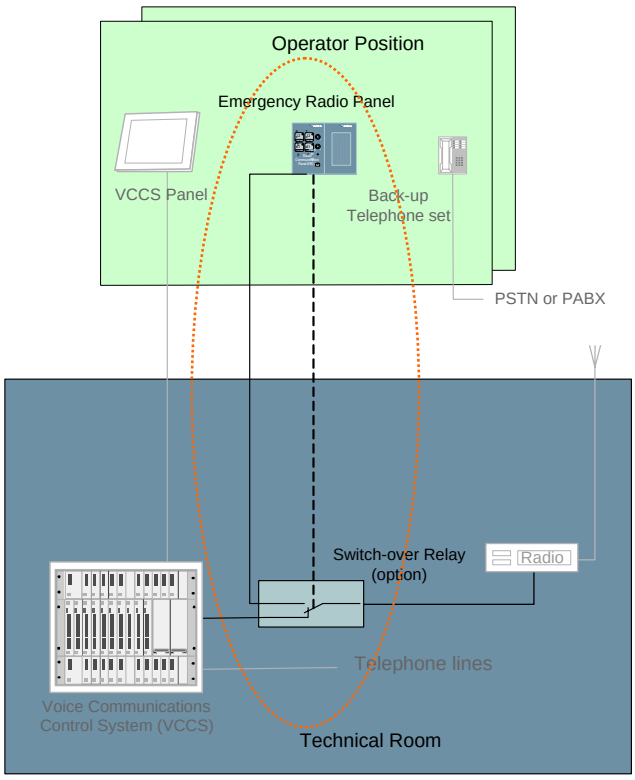
ACAMS ERC 2 Technical Specifications

Features

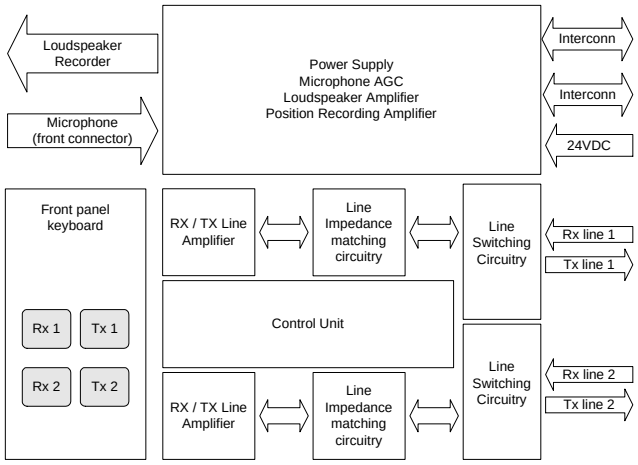
- ✓ Modular 2 to 10 channels
- ✓ Microphone AGC
- ✓ Configurable key interface
- ✓ Voice detector
- ✓ Recorder output
- ✓ Remote main/emerg switchover (option)
- ✓ Built-in main/emerg switchover (option)

Interfaces

Receiver audio:	600 ohm, -10 dBm
Transmitter audio:	600 ohm, -10 to 0 dBm adjustable
Transmitter key options:	+24VDC, GND, current loop, floating contact (500 mA max)
Microphone audio:	200 ohm dynamic
Microphone PTT:	Floating contact
Recorder:	600 ohm, -20 to 0 dBmadjustable
Loudspeaker:	5W max.



ERC System Principle



ERC 2 Block Diagram

Power

Voltage:	24 V DC +/-20%
Consumption:	20 W max.

Connectors

Power	AMP 2 pin ML
Operator instruments	D-sub 9 pin male
Radio Equipment	D-sub 25 pin male
Switched to main VCS	D-sub 25 pin male (option)
Microphone (front)	RJ11

Optional Accessories

- ✓ mc4030 Loudspeaker
- ✓ AC/DC Converter
- ✓ Interconnection cable
- ✓ DC power cable
- ✓ Radio equipment cable