

VHF SYNTHESIZED RECEIVER

The synthesized receiver RY 908 F has been designed to meet the civil aeronautical telecommunication requirements in the VHF range with an amplitude modulation (A3E) and for the Navy communications (Navy Mobile Service channels*) with a frequency modulation (F3E or G3E).

It can operate either with a spacing of 25 kHz, or with a channel spacing of 8.33 kHz, by selecting automatically the IF filter according to the frequency programming, and meets the standard ETSI ETS 300 676.

The receiver is synthesized, and the frequency can be selected either locally from the front panel, or remotely (operation from a remote control unit or RCMS).



An incorporated programmer permits to memorize up to 99 channels ; these channels may be authorized, protected or forbidden.

The synthesized receiver may be associated with a VHF transmitter, serie EM 900, to constitute a transmission-reception assembly.

(*) Described in appendix 18, radiocommunications regulation (UIT2001).

RADIOELECTRICAL CHARACTERISTICS

- **Modulation types:**
AM (A3E) and FM (F3E)
- **Frequency range:**
 - 118 to 144 MHz in AM
 - 137 to 163 MHz in FM
- **Frequency stability:**
± 1 p.p.m between -20°C and +55°C
- **Channel spacing:**
25 kHz, 12.5 kHz and 8.33 kHz
- **FM modulation (F3E or G3E according to configuration of EM 908 F):**
Max. frequency deviation 4.25 kHz ±0.5 dB
- **Sensitivity:**
(S+N)/N ≥ 10 dB, m = 0.3 ponderation CCITT: 1.5 µV
- **Image rejection:**
≥ 80 dB
- **Transmission with offset carrier (channel at 25 kHz):**
According to the annex 10 of ICAO
Compatible: 2, 3 or 4 carriers
- **Preset channels:**
99
- **Remote control:**
 - Configurable series access:
Current loop 0/20 mA
RS 485
 - 3-wire parallel access (channels 1 to 8)
- **Display of the frequencies:**
According to the annex 10 of ICAO
- **Overall bandpass:**
 - Channels at 25 kHz:
6 dB: ≥ ± 11 kHz / 60 dB: ≤ ± 25 kHz
 - Channels at 8.33 kHz:
6 dB: ≥ ± 3.5 kHz / 60 dB: ≤ ± 8 kHz
- **Switching of the IF filters:**
Automatic according to the frequency programming
- **3rd order intermodulation:**
≥ 80 dB (2 signals 500 kHz spaced, ref. 0.5 µV)
- **Crossmodulation:**
≥ 95 dB (jammer 500 kHz spaced, ref. 1.5 µV)
- **AGC regulation** (between 3 µV et 500 mV emf):
≤ 3 dB
- **Squelch:**
1 to 15 µV (adjustable on the front panel or by remote control)
- **AF outputs:**
 - 600 ohms symmetrical line:
-17 dBm to +10 dBm for 80% of modulation
 - Bandpass at 3 dB:
> 300-3000 Hz (channels at 25 kHz)
> 300-2500 Hz (channels at 8.33 kHz)
 - Harmonic distortion (1 kHz ; m=0.6): ≤ 5%
 - On headset plug: 0 to 100 mW
 - AF compressor: desactivable
- **RF outputs:**
 - Level on 50 ohms (excitation of a transmitter):
2 dBm ; ± 3 dB
 - Noise under the carrier (1% F0): > 150 dBc /Hz
- **Power supply** (d.c. voltage):

RY 908 F

CLIMATIC CHARACTERISTICS

- **Climatic conditions:**
Operation guaranteed between -20°C and +55°C
95% relative humidity at +40°C (without condensation)
- **Storage:**
-40°C to +80°C

MECHANICAL CHARACTERISTICS

The synthesized receiver RY 908 F has the shape of a drawer unit, standard rack 19", height 3U, width 1/6 rack.

- **Dimensions** (H x L x D):
130 mm x 70 mm x 450 mm
- **Weight:**
2.7 kg around

OPTION

- Variation range option on request in reception : 100-175 MHz
- Scanning (10 channels) SCAN (ADAP2) **
- Maritime Mobile Service SMM * (ADAP5) ***
- 108-144 MHz AM * (ADAP1)
- 116-163 MHz AM * (ADAP3)
- 118-163 MHz FM * (ADAP4) ****

* Depend on the associated receiver.

** No compatible with SMM option (ADAP5).

*** No compatible with SCAN option (ADAP2).

**** Requested for SMM option.