



INVELCO, S.A.

INVESTIGACIONES ELECTRONICAS Y COMUNICACIONES

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500W MF/HF TRANSMITTER MODEL EM-605-R

Completely solid state. As it made with modular technology, it is easier to repair.

Broadband technology in a coverage from 1.6 to 30MHz with instantaneous change of the working frequency and a resolution of 1Hz.

Appropriate for military, civil and maritime communication use; either on boat or coast stations.

**Exciter design
completely DIGITAL**

**Frequency range from
1.6 to 30MHz**

Output power 500W

**Telephone and data
communications**

**Memorizes up to
255 channels with
all its parameters**

**Modular fabrication
easy to maintain**

**Local/Remote control
by Ethernet or RS-232-C**

ROE tolerance Infinite

**Automatic operation
with Tuning Unit**

**Voice over Ip (VoIP) or
input line 600 Ω**



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MF / HF

**1.6 to
30 MHz**

500 W

**Ethernet
or RS232C**

500W MF/HF TRANSMITTER MODEL EM-605-R

TECHNICAL CHARACTERISTICS

GENERAL SPECIFICATIONS

SDR Technology (Software Defined Radio).	
Modular construction with units:	
Digital exciter mod.	EX-630-I
Linear Amplifier mod.	AL-635-A
Power supply mod.	FA-635-A
Rated power	500 W.
Fully designed in solid state.	
Possibility to operate in reduced powers.	
Remote control through Ethernet or bus RS232.	
Number of channels to memorize	255.
Linear phase filter for data transmission.	
Works in all modes	Telegraphy Voice Data
ROE tolerance	Infinite.
Works with three-phase or single-phase current.	
Made of aluminium able to work in seacoast areas with extreme temperatures and humidity.	
Mechanical design of small size.	
Ready for working with automatic antenna tuning unit.	
Voice over Ip (VoIP) or input line 600 Ω.	

ELECTRICAL SPECIFICATIONS

Working frequency	1.6 - 30 MHz.
Frequency resolution	1 Hz.
Frequency stability	0.5 ppm.
Optional	0.01ppm.
Number of channels to memorize	255.
Output power	500 W ±1dB
Power regulation:	-3 dB. -6 dB. -10 dB.
Operating with only exciter	75 W.
Wattmeter (incident/reflected)	Incorporated.
Power amplifiers	Solid state.
R.O.E. Tolerance	Infinite
Protected against antenna short-circuit and open-circuit of antenna.	
Radiated harmonics	-60 dB.
Out-of-band spurious	-60 dB.
Intermodulation (2 tones)	Best -31dB ±1dB.
Power amplifier made with four modules of 600 W added and possibility of operating with several modules in case of failure.	
Output impedance	50Ω.
Output connector RF	N (female).
Broadband designed without frequency tuning.	
Working regime	Continuous.
Transmission modes:	J3E, J2A, J2B, H3E, A1A, F1B.
Linear phase filters for data transmission.	

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TECHNICAL CHARACTERISTICS

Frequency response	300 - 3000 Hz.	PTT input line	Connected to ground.
Ripple band	±0.2 dB.	Data input through line (modem optional).	
Out-of-band attenuation	-60dB, 150 Hz, 3200Hz.	Data PTT through line	Connected to ground.
Constant group delay (FIR Filters).		Line compressor in data	0 dBm. to +6dBm.
Carrier attenuation:		Audio input level	0 dBm.
J3E	-50 dB.	Keyer input	Connected to ground.
H3E	-6 dB.	Keying modes	J2A, A1A.
TUNE	-10 dB.	PTT retention when keying	1 sec.
Not desired side band attenuation	-55 dB.	1000Ω sidetone output	1 Vpp adjustable.
ON/OFF relation (A1A, J2A)	-60 dB.	Sidetone output impedance	10000Ω.
Microphone inputs	Asymmetric.	Programmable delay in the output of external relays and mutes as for the PTT.	
Input impedance	600Ω.	External relay and mutes as for the PTT adjustable from 1 ms. to 31 ms.	
Input level	500 mVpp max.		
Microphone level compressor	42 dB.		
Compressor response time	1 ms.		
Compressor minimum threshold	3.90 mVpp.		
Micro. PTT input	Connected to ground.		
Line input	Symmetric/asymmetric		
Line input impedance	600Ω.		
Adjustable input level	0 dBm (nominal).		
Audio response	250/4000 Hz.		
Line compression	-24 dBm to +6 dBm.		
Compressor response time	1 ms.		
Compressor fall time	230 ms.		

500W MF/HF TRANSMITTER MODEL EM-605-R

TECHNICAL CHARACTERISTICS

POWER SUPPLY SPECIFICATIONS

Three-phased power supply voltage $\pm 10\%$ (Optional)	
Single-phased power supply voltage 220 Vac.	
Network power supply frequency	50/60 Hz.
Power consumed:	Stand by 400 W. Transmission <2.2Kw.

MECHANICAL SPECIFICATIONS

Mechanical composition:	
Digital Exciter mod.	EX-630-I.
Linear Amplifier mod.	AL-635-A.
Power supply mod.	FA-635-A.
Type of handling	Pilled up collections.
Handled in rack of 19 inches	Optional.
External dimensions:	
Width	500mm.
Height	680mm.
Depth	700mm.
Fabrication	Anticorrosive aluminium
Antivibration and crash support	Optional.
Total weight	160 Kg.

ENVIRONMENTAL SPECIFICATIONS

Operation temperature	0 to 60°C.
Storage temperature	-30 to 80°C.
Height	2500 mt.