

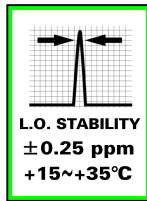
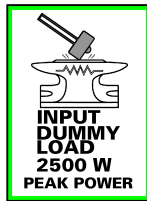
# AEMME TOP PERFORMANCE 144 MHz RADIOTRANSVERTER FK-855 G15 / G30



**HIGH LINEARITY  
MOS FET  
15 W RMS  
RF POWER  
AMPLIFIER**



**HIGH LINEARITY  
MOS FET  
30 W RMS  
RF POWER  
AMPLIFIER**



The top-performance radiotransverters\* for the 144 MHz band FK-855 G15 and G30 TWO METERS have been specifically designed for the use with any type of

high-class HF transceiver with a high dynamic range for the receiving section.

Always reliable and ready to use with three simple connections it guarantees high-performance in any possible emission mode.

The front-end is built with an MICROWAVE-POWER GaAs-FET MGF1801B - 31 Mitsubishi\* offering an IP3 of +36 dBm and a typical noise level of 0,3 dB @ 145 MHz.

The RX gain is variable with precise preset levels from 21 dB to 27 dB to obtain maximum performance regarding sensitivity and resistance to the intermodulation with any type of HF receiver (14 / 26 MHz).

In some cases, when the coaxial antenna's cable suffers excessive loss, the best way to improve the noise level is to put-up an external RX preamplifier in the immediate proximity of the radiant system, and to profit from this possibility, one can use the correct power supply with a continuous voltage of +12 VDC / 400 mA through the same coaxial cable.

The double-balanced mixer used is the TAK 1-H Mini-Circuits\* with an IP3 of +29 dBm, directly following an IF amplifier stage with a very high dynamic range (IP3 +41 dBm) and low noise level, made up of four JFET at high IDSS to complete the receiving section.

The input PTT IN (recommended for digital emissions) and the VOX RF control the radiotransverter in transmission phase, working on the activation of various circuits with electronic switches while the antenna switch, with the classic electro-mechanical relay system, allows one to fully enjoy the great dynamic capability of the receiving section.

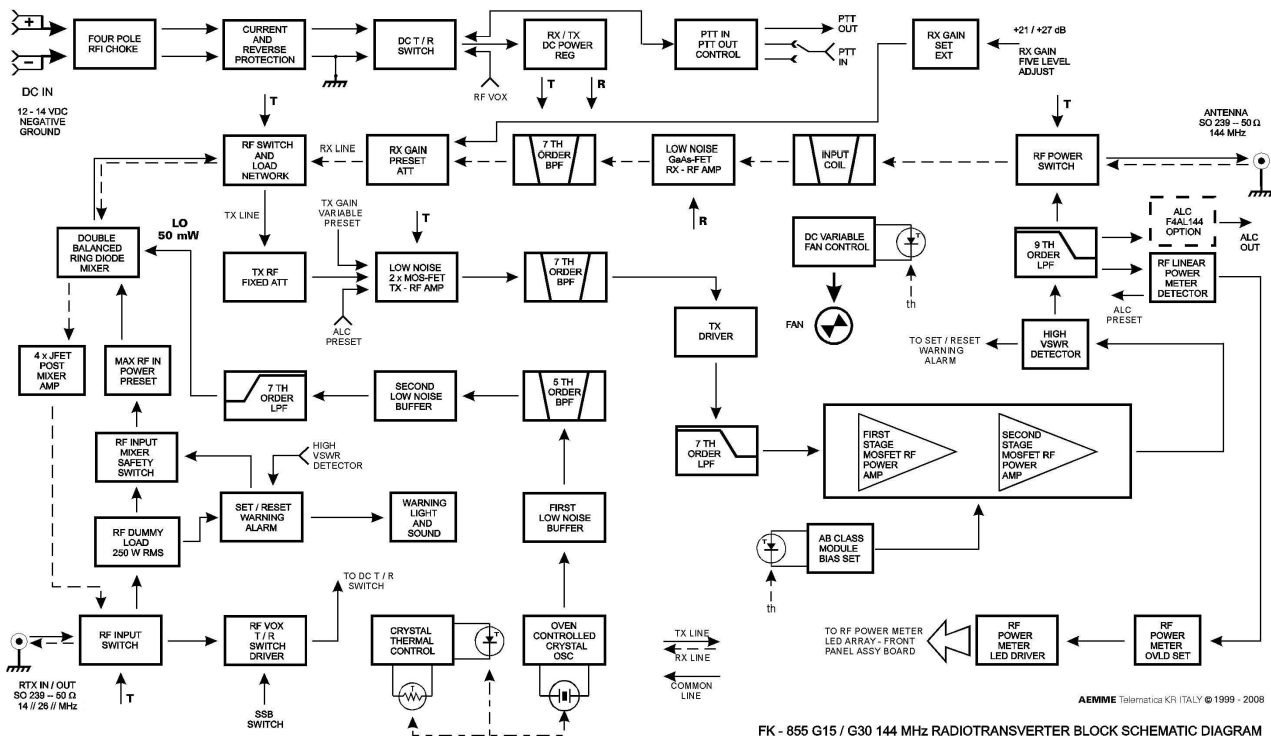
The maximum RF power that is continually sustainable at the input on the FK-855 G15 and G30 is 250 W RMS, twenty-five times as much as that of the RF input advised at 10 W RMS, moreover, the internal dummy load can support, without damage an RF power peak of 2.500 W.

The RF power stages of the FK-855 G15 and G30 TWO METERS provides up to 15 W RMS and 30 W RMS respectively of power output, both using an RF POWER MODULE MOS-FET Mitsubishi\* with protection against excessive SWR, and ALC circuitry is always-active to provide an excellent output linearity.

ORDER CODE	ORDER CODE	CONVERSION
<b>855G15T14</b>	<b>855G30T14</b>	14 / 144 MHz
<b>855G15T26</b>	<b>855G30T26</b>	26 / 144 MHz

# RADIOTRANSVERTER\* AEMME FK-855 G15 / G30 – 144 MHz SPECIFICATIONS

<b>Frequency Conversion:</b>	14 / 144 MHz – 26 / 144 MHz
<b>Emission Modes:</b>	CW, SSB, FM, Packet F1 / F2, AFSK, AM
<b>Input / Output Impedance:</b>	50 Ω unbalanced – coax jack UHF SO239
<b>Operating Temperature Range:</b>	0°C - +50°C / Papst* fan with temperature control
<b>Frequency Stability:</b>	+15°C ~ +35°C better than ±0,25 ppm / 5 min. @ 25°C warm-up
<b>Input Voltage / Protection:</b>	13,8 VDC ±10 % / polarity mismatch – high current – RFI filter
<b>Power Consumption:</b>	RX 0,38 A / TX 3,2 A @ 15 W RMS – TX 5,5 A @ 30 W RMS
<b>Dimensions / Weight:</b>	244 (W) x 49 (H) x 220 (D) mm / FK-855 G15 Kg 1,35 – FK-855 G30 Kg 1,6
<b>TRANSMITTING SECTION</b>	
<b>Power Input:</b>	internal preset 8~10 W RMS / 18~20 W RMS / 100 mW RMS on demand
<b>Power to dummy load:</b>	250 W RMS continuous / 2.500 W peak 5 ms max
<b>Input Protection:</b>	threshold level 25 W RMS ±1 W
<b>Signaling Protection:</b>	acoustic with level +80 dB @ 6,5 KHz / optical LED WARNING
<b>TX / RX Switch:</b>	VOX RF / PTT IN positive or grounded – internal preset / PTT OUT output
<b>Attack Time VOX RF – TX ON:</b>	≤22 ms
<b>Release Time VOX RF – RX ON:</b>	≤35 ms switch SSB OFF / 1,2 s switch SSB ON – internal preset
<b>SWR Input:</b>	1,1 : 1 typ. – 1,3 : 1 max
<b>Frequency Range:</b>	144 MHz ~ 146 MHz ±1 dB
<b>Power Output:</b>	FK-855 G15 – 15 W RMS @ 13,8 VDC / FK-855 G30 – 30 W RMS @ 13,8 VDC
<b>SWR Output Protection:</b>	SWR 3,5 : 1 max
<b>Harmonic Radiation:</b>	better than -60 dBc
<b>RECEIVING SECTION</b>	
<b>RX Front-End Gain:</b>	+27,5 dB max GaAs-FET MGF1801B – 31 Mitsubishi*
<b>Noise:</b>	0,3 dB typ. @ 145 MHz
<b>Overall Gain:</b>	+21 dB ~ +27 dB external setting five level preset
<b>Double-balanced Mixer:</b>	TAK 1-H Mini-Circuits* IP3 +29 dBm
<b>Intermediate Frequency Rejection:</b>	85 dB or better
<b>Image Frequency Rejection:</b>	80 dB or better
<b>Frequency Range:</b>	144 MHz ~ 146 MHz ±1 dB



FK - 855 G15 / G30 144 MHz RADIOTRANSVERTER BLOCK SCHEMATIC DIAGRAM

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OPTION **1G144** - ALC MODULE F4AL144  
 OPTION **2G144** - N FEMALE ANTENNA JACK

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