TELEVISION

/fm/tv/digital/broadcasting/

ELETTRONIKA GROUP

VEGA

TV Transmitter and Transposer

MAIN CHARACTERISTICS:

- Modular construction
- Conventional air cooling
- AGC and ALC controls
- 2-slope linearity precorrection
- Excellent noise figure
- Programming of local oscillator from front panel
- Pre-set for precision OFFSET
- Multifunctional digital graphic display
- Soft-start circuit
- Low power consumption
- SAW vestigial filter
- Sync restore
- Group delay pre-correction
- Automatic white level and sync limiter
- Multistandard modulator
- Available in stereo/dual sound version
- ICPM and differential phase pre-corrector
- Possibility of use of common and separate carriers
- Remote Control of more than 50 parameters by RS232 or RS485

The transmitters and transposers in this series are characterized by high performance and capability and by excellent linearity over the entire working band thanks to the optimization of the RF circuits.
A high degree of reliability is guaranteed, by the use of oversized cooling devices and by control circuits operated by modern microprocessor technologies.
All of the on-board microprocessors can be reprogrammed from the frontal panel with the help of a PC.
From the same panel it is possible to display and change more than 50 parameters of the transmitter, stored into a non-volatile memory.
For analog parameters, the transmitter displays both the current value and the factory setting.
All of the parameters which can be read and set from the display can also be controlled from remote trough the RS232 connector on the front panel or the RS485 on the rear one.
The main parameters and the on/off status of the transmitter can also be controlled in a wired way through the telemetering connector on the rear panel.

These units are used as low-power transmitters or transposers or as driver stages for amplifiers of higher power and are available in 15W versions.
The excellent spectral purity of the conversion oscillator gives these units an excellent signal/noise ratio of the radiated signal.
The units are equipped with an input connector for a 5MHz or 10MHz external reference signal.
The OFFSET option allows frequency shifts in 1Hz (CCIR) or 0.999000999Hz (FCC) steps for operation in "precision offset" or "isofrequency" mode in the various television standards.
The AUDIO STEREO option allows to have stereo and dual sound audio input.
The EXTERNAL REFERENCE option allows have internal high-precision frequency reference.
The OUTPUT FILTER option allows to reduce the out-of-band signals.

The MONOSCOPE option allows have internally generated, fixed but programmable video and audio pattern.

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VEGA

Technical characteristics

MODELS

- Transmitter (VEGA)
- Transposer (VEGA/C)

OPTIONS

- Audio Stereo (TX only)
- High Stability
- Precision Offset
- Output Filter
- Monoscope (TX only)

TRANSMITTER VERSION

VIDEO PARAMETERS

Input impedance	75
Input level	1Vpp ±6dB
White/Sync level limiter	95%
2T K factor	< 1.5%
Amplitude / frequency response	±0.5dB (throughout the vision band)
Differential gain	< 5%
Differential phase	< 3°
Group delay	±35ns (throughout the vision band)
Sync pulse compression	< 3%
S/N Ratio (weighted)	> 60dB
ICPM	< 3°
Luminance non linearity	< 4%
Field time bar tilt	< 2%
Line time bar tilt	< 2%

AUDIO PARAMETERS

Input impedance	600 or 10k , selectable
Input level	0dBm ±8dB, 0.5dB step
Frequency response (30Hz to 15kHz)	±0.5dB (±0.2 typ.)
T.H.D. (30Hz to 15kHz)	< 0.4% (better than 0.2% typ.)
S/N Ratio (unweighted)	> 60dB
Pre-emphasis	50 s (75 s) or flat
Stereo/Dual sound operation	Selectable with AUDIO STEREO option
Stereo Crosstalk	> 37dB (better then 40dB typ.)

GENERAL

Ouput power	0 up to 150W pep (depend of the model)
Available standards	B, D, G, H, I, K, M, N
Cooling	Forced Air
Operating temperature	-10°C to +45°C
Maximum relative humidity	90%, non condensing
Mains power supply	90 to 260Vac
External reference frequency input	5MHz or 10MHz
Output impedance	50
Output connector	N Female
Dimensions	3U 19" Rackmount
Weight	15kg
Frequency stability	1ppm (0.05ppm with HIGH STABILITY option)
I.M.D. at rated output power	Better than -60dBc (-63dBc typ.)
Harmonics	-60dB or better
Sporious emissions	-60dB or better
External interfaces	Logic and analog signal outputs, enable input, RS485, Rs232

TRANSPOSER VERSION

INPUT PARAMETERS

Input frequency bands	VHF I, VHF III, UHF
Input impedance	50
Input matching	> 26dB
Input level amplitude	-30 to -75dBm
A.G.C. + A.L.C. dynamic	> 45dB
Noise figure	< 6dB

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