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Melrose District Progress Association

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Wednesday, August 8, 2007
General Manager
Digital Broadcasting
DCITA

Re Discussion Paper

MDPA has enjoyed the benefits of the support of DCITA in re transmitting free to air television to our immediate district. We are also pleased that the Department is being proactive in what we see is the next and important step in the delivery of Digital free to air television. Unfortunately, I do not possess the technical mind required to give valid comment for some of your discussion points but I will comment where I can. Currently our technician is away but will be able to make further comment with associated costs involved with the conversion.

Concerning individual transmitters Vs multiplexer transmitter, I would offer the following:

- Our service is now self funded in its day-to-day operation, but we recognise that running costs do need to be kept to a minimum. Therefore the simplest and easiest systems to maintain would be what we would seek to install, should sufficient funding be made available. This would need to be comparative to those households that receive direct transmission from the broadcaster(s).
- I believe that our broadcast antenna, receivers, cabling, racks and combiners are sufficient to enable immediate digital broadcasting, therefore our set up costs would primarily be centred around the replacement digital transmitters and associated equipment.
- Our preference would lean towards individual transmitters.
- We would continue to use our current maintenance plan with the possible addition of remotely controlling the system.

DTH satellite services would be an option for our area BUT anecdotal evidence suggests that local content is important to most viewers. The same evidence suggests similar for those who elect to use Pay TV only to disconnect 2-3 years down the track due to the repetitive nature of the service.

Timing- the sooner the better but we do recognise the importance of getting it right. In our area, I believe roll out is nearly complete so once tests are complete and possible interference mapped, then I suppose we could start digital re- transmission.

Regards,
Chris Smith
Sec.MDPA

TV Transmitter and Transposer

MAIN CHARACTERISTICS:

- Modular construction
- Conventional air cooling
- AGC and ALC controls
- 2-slope linearity pre-correction
- 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 through 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

telemetry 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.

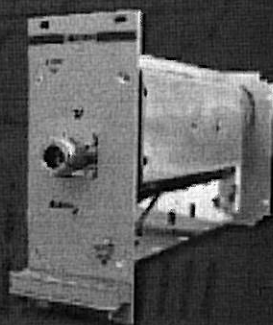
The OFFSET option allows frequency shifts in 1Hz (CCIR) or 0.999000999Hz (FCC) steps for operation in "precision offset" or "isofrequency" mode in the various television standards.

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.



VEGA Transposer Receiver Module



VEGA Rear panel

Technical characteristics



VEGA TV System

MODELS

TRANSMITTER	VEGA
TRANSPOSER	VEGAC

OPTIONS

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

► TRANSMITTER VERSION

VIDEO PARAMETERS

Input impedance	75Ω
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	600Ω or 10kΩ, selectable
Input level	0dBm ±9dB, 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	50µs (75µs) or flat
Stereo/Dual sound operation	Selectable with AUDIO STEREO option
Stereo Crosstalk	> 37dB (better than 40dB typ.)

GENERAL

Output power	0 to 15W (adj.)
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 280Vac
External reference frequency input	5MHz or 10MHz
Output impedance	50Ω
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
Sporadic 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	50Ω
Input matching	> 26dB
Input level amplitude	-30 to -75dBm
A.G.C. + A.L.C. dynamic	> 45dB
Noise figure	< 6dB

Specifications and characteristics are subject to change without notice.

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