



MICROWAVE

TV Links



The Neetra **TV Microwave Link** is a system composed by MWT-AV Transmitter and MWR-AV Receiver.

It is developed for point-to-point fixed radio link of high quality TV signals.

It operates in the microwave band with FM carrier and broadcasting capability of one Video signal and up to four Audio signals (only one without '3 Additional Audio' option). The transmission band can be chosen among 1GHz, 2GHz, 3.5GHz, 7.5GHz, 8.5GHz, 10GHz and 14GHz. Other bands are available on request with a maximum bandwidth of 400MHz.

The System respects the CCIR rules, imposing an Intermediate Frequency of 70MHz.

The MWT-AV Transmitter is an Indoor unit that contains Modulator, two up-converters and RF Amplifier. The MWR-AV Transmitter is an Indoor unit that contains one down-converter to 70MHz and demodulator. Both Transmitter and Receiver units can be split into two section: the indoor unit and the aerial head.

The modular design allows great flexibility and easy access for maintenance. The cabinet is pre-set for 19" rack mounting with height of 3 units.

It can operate with power supply by electrical

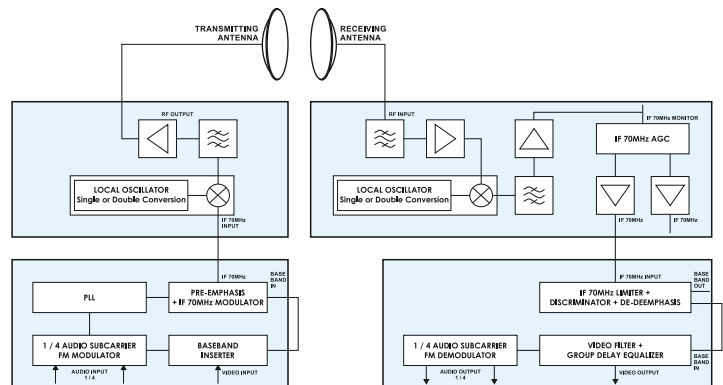
MODELS

Tx	Rx	FREQUENCY RANGE
MWT-AV/2	MWR-AV/2	0.7 - 2.5GHz
MWT-AV/3.5	MWR-AV/3.5	3.3 - 3.6GHz
MWT-AV/7.5	MWR-AV/7.5	7.1 - 7.5GHz
MWT-AV/8.5	MWR-AV/8.5	8.3 - 8.7GHz
MWT-AV/10	MWR-AV/10	10.3 - 10.7GHz
MWT-AV/14	MWR-AV/14	14.2 - 14.6GHz

Other bands on request (max bandwidth 400MHz)



network or 36Vdc (TX) - 24Vdc (RX) external battery.



Main characteristics

- AC or Battery Input
- Low Power Consumption
- Available with Sealed RF Heads for outdoor use
- 1 Video and up to 4 Audio channels
- FM Modulation
- 1, 2, 3.3, 7.5, 8.5, 10 and 14GHz available bands, other on request
- IF Frequency at 70MHz
- Modular construction 19" 3HE, plug-in modules

Applications

- All LINK models are available with Aerial Head
- 3 Additional Audio Modulator Slot (for Tx models)
- 3 Additional Audio Demodulator Slot (for Rx models)
- MWA-20 Output Amplifier 20W (for MWT-AV/2 model only)

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Technical characteristics

TRANSMITTER - RF SECTION

Video Input Level / Impedance / Connector	1Vpp / 75 Ohm / BNC Female
Video Input ROS	< -30dB
Video Pre-emphasis	CCIR (Rec. 405-1)
Video Modulation	±4MHz
Audio Input Level / Impedance / Connector	2Vpp Nominal ±6dB / 600 Ohm balanced - 10kOhm unbalanced / XLR Female
Audio Subcarrier Frequencies	7.02, 7.50, 8.065, 8.59MHz (other on request)
Audio Subcarrier Modulation	±300kHz
Audio Modulation	±75kHz
Intermediate Frequency IF1 / IF2	70MHz / 700 to 1100MHz
IF1 Input / Output Level	0dBm
IF1 Input / Output Impedance	50 Ohm
Image Frequency Rejection	65dB
Output Power	5W (1.0GHz - 3.5GHz), 1W (7.5GHz - 8.5GHz), 0.5W (10GHz - 14GHz)
RF Output Connector / Impedance	50 Ohm / N Female (1.0GHz - 3.5GHz), Flanged Cavity (7.5GHz - 8.5GHz - 10GHz - 14GHz)
Spurious and Harmonic Level	≤ -60dBc

RECEIVER - RF SECTION

Intermediate Frequency If1	70MHz
IF1 Output Level	0dBm
IF1 Input Impedance	50 Ohm
Minimum Input Level	-80dBm (with S/N = 40dB)
Maximum Input Level	-30dBm
Muting Threshold	-75dBm
Audio Subcarrier Frequencies	7.02, 7.50, 8.065, 8.59MHz (other on request)
Audio Subcarrier Modulation	±300kHz
Audio Modulation	±75kHz
Image Frequency Rejection	> 65dB
Video Output Level / Impedance	1Vpp / 75 Ohm
Video Output ROS	< -30dB
Video De-emphasis	CCIR (Rec. 405-1)
Audio Output Level / Impedance	2Vpp / 600 Ohm balanced - 10kOhm unbalanced)
Audio / Video Output Connector	XLR Female / BNC Female

OVERALL SYSTEM PERFORMANCE (Tx+Rx)

Frequency Band	1GHz, 2GHz, 3.5GHz, 7.5GHz, 8.5GHz, 10GHz or 14GHz (others on request - max bandwidth 400MHz)
Broadcasting Capability	1 Video + 4 Audio (with 3 Additional Audio option) signals
Differential Gain	< 1%
Differential Phase	< 1°
Group Delay	< 20ns
2KT Factor	< 2%
Video Bandwidth (PAL)	2Hz to 5MHz (±0.5dB - other on request)
Video Noise (Weighted)	< -70dB
Audio Bandwidth	30Hz to 15kHz
Audio T.H.D.	< 1%

AERIAL HEAD

Output Tx / Input Rx	70MHz / N Connector
Remote Power Supply	2 - 3.5GHz (+12Vdc), 7.5 - 8.5 - 10 - 14GHz (+24Vdc)

GENERAL

AC Power Supply	220VAC / 110VAC ±10% 50/60Hz
DC Power Supply	+36Vdc (Tx), +24Vdc (Rx) +20% (Negative to Ground)
Dimensions	Rack 19"-1U
Operating Temperature	-5°C to +45°C

Specifications and characteristics are subject to change without notice