AV-LINK Model AV-2500-ECO

5.8GHz Audio/Video signal transmission set.

AV-200-ECO is radio transmission system designed to transmit analog Video (composite CVBS) and two independent audio signals in external conditions. The device uses one of seven available radio channels (5470MHz ~ 5860MHz), set by switches. Digital PLL generates high frequency, providing excellent work stability and high resistance to radio interference from adjacent frequencies.

Device includes an airtight case with active directional antenna and required connectors. This solution allows to obtain optimal radio range because radio signal isn't attenuated on cables between antenna and radio transmitter / receiver.

System can be used on professional CCTV installations to transmit Audio and Video from cameras, to presentation, Audio/Video solutions in home and hobby.

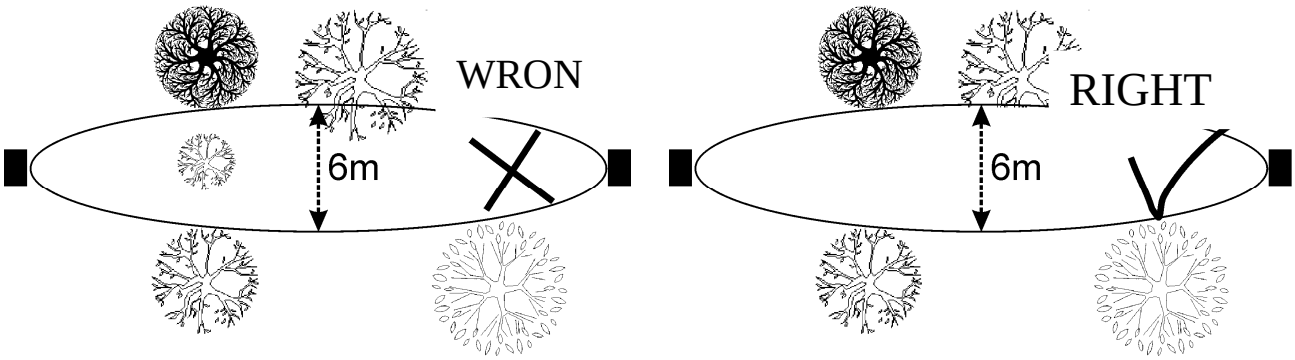
Audio Video signal are transmit in real-time without compression and delays. It's important to choose right place for installation and precisely align antennas.

Place of installation.

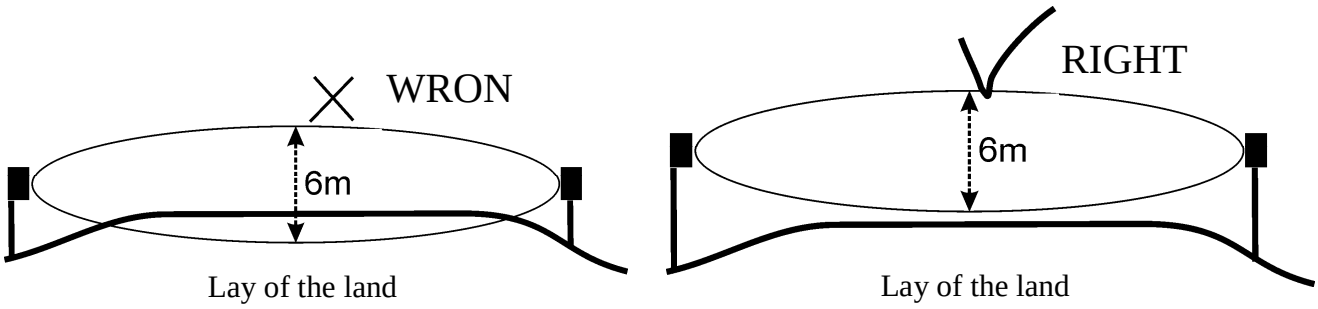
5.8GHz frequency provides high quality Video and protection from radio interferences, but it has defects just like devices using microwave frequencies (for example satellite antenna).

1. Antennas in devices needs to be accurately aligned relative to each other.
2. All solids, also the wood and leaves of trees attenuates microwaves
3. Antennas of sets need to be visible and the field of view needs to be clean at 3 meters from center of antenna (6m diameter)

Sometimes is important to use high mast, trim trees or remove other barriers. Devices are more safety against radio signal attenuation, when are hanging higher off the ground.

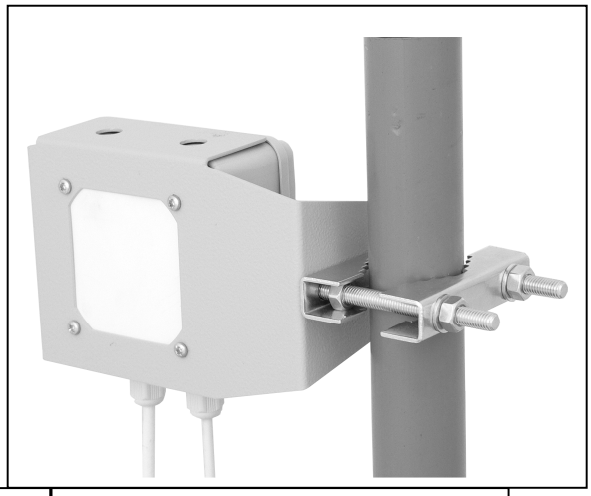


Land view from top. Land diameter without hindrance should be at least 6m.



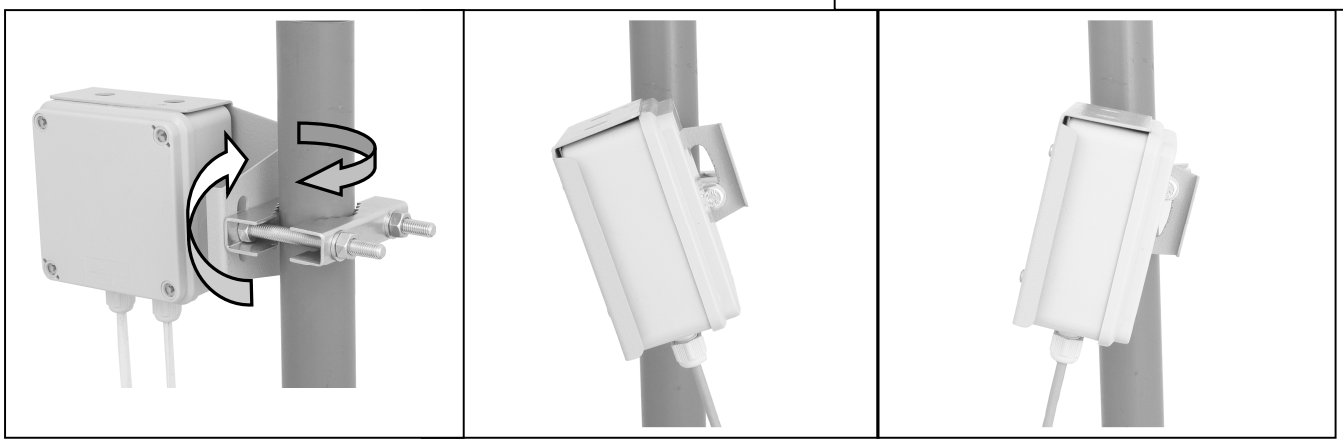
Mounting on mast or jib.

Transmitter and receiver have special grip to mounting on jibs or antenna masts at 43mm diameter.



Horizontal adjustment - device rotation on the mast pipe;Vertical adjustment - adjustable on handle

First, set transmitter in horizontal position and lightly tighten screws (to allow for vertical adjustment) and then strongly turn the whole.



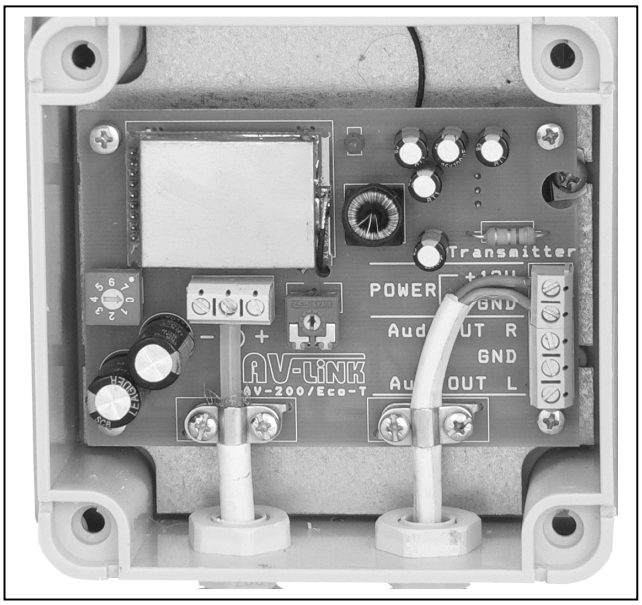
Horizontal and vertical antenna adjustment.

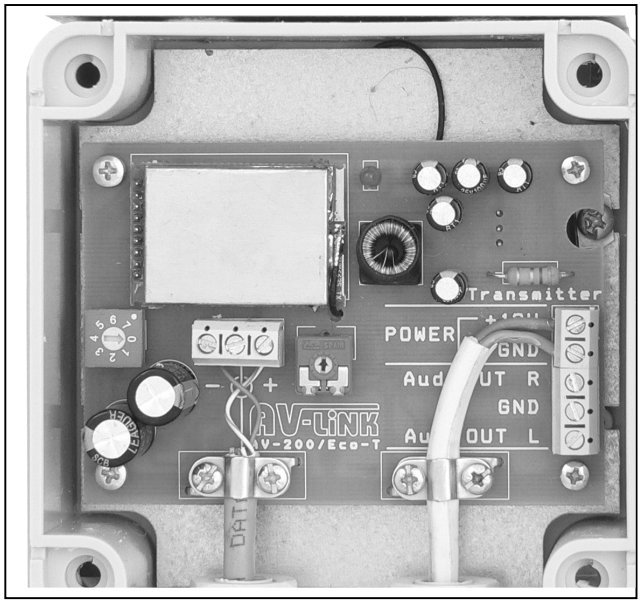
Connecting cables

Disconnect power before connecting cables protect device from accidental short circuits and damage. Connecting can be executed before mounting device on mast or when it's mounted (Depending on technical possibilities)

The set has two types interfaces for Video signal:

1. For coaxial cable - low-loss screw clamps
2. For UTP twisted pair – with converter (UTP transformer)





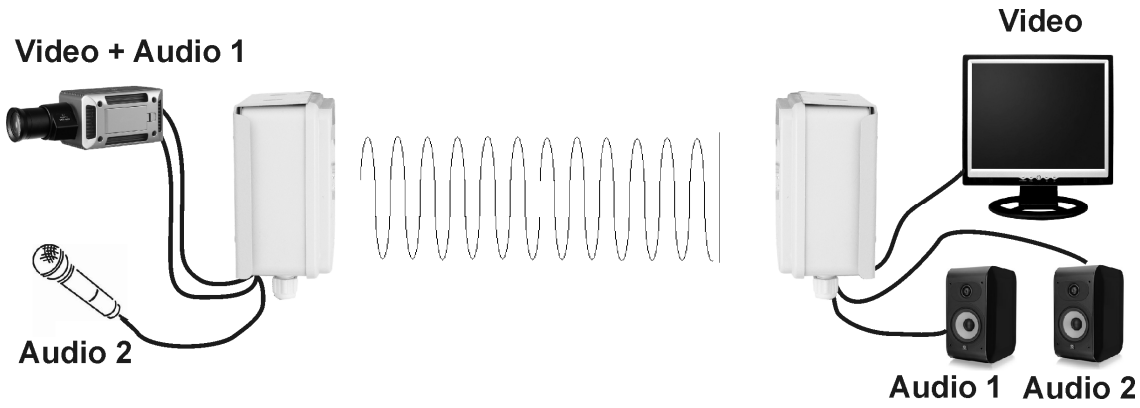
How to connect coaxial cable.
Signal cable need to be connected to center terminal block and cable shield clamp by metal clamp.

Audio L and Audio R clamps are designed to connect lines from camera (in transmitter) and in monitor or amplifier(in receiver).
It's recommended to use cable shield, dedicated to transmit Audio. It's protect device from distortion and hum collecting from energy network

How to connect UTP twisted pair.
Twisted pair need to connect with extreme terminal blocks, metal clamp is used to protection cables from pulling additionally

On the other side UTP twisted pair is possible to use typical Video transformer (we recommended good class) or active transmitter/receiver.
The set can be powered with available cables of twisted pair, but you need remember about voltage drop. Incoming voltage can't be lower that 9V.

POWER clamp is designed to power supply of device. Connected direct voltage should be 12 V. Power input is protected from reverse polarity. Power correctness is indicated by green LED.



An example of typical application of model AV-200-ECO

Device adjustment

Set doesn't need special knowledge and expensive tools for installing. The most important is proper positioning of transmitter and receiver a according to recommendations of instructions and aligned relative antennas to each other. System in ECO version hasn't radio measurement function and installer can verify antennas setting only optically. When the antenna isn't set exactly and the weather conditions are unfavourable(snowstorm, fog, heavy rain) may appear deterioration of image quality and will be necessary correcting antenna settings.

PRO version has radio function of measurement system.

You must set radio channel before you connect power supply. Rotary switch on the transmitter and receiver is used to this. Adhere to the following instructions

1. Radio channel must to be set the same in transmitter and receiver.
2. When we are dealing with sets work in immediate vicinity or in close proximity to transmitter and receiver, channels must be set every second one.
3. Number of radio channel are the same like number on switch.
4. Setting switch to position 0 is equivalent to selecting channel 1

Technical specification:

No.	Parameter	Value
	Video channels	Coaxial cable: 1 x 75Ω UTP twisted pair: 1 x 100 Ω
	Audio channels	2 x 2Vp-p
	Radio channels	Channel 1: 5470MHz Channel 2: 5760MHz Channel 3: 5780MHz Channel 4: 5800MHz Channel 5: 5820MHz Channel 6: 5840MHz Channel 7: 5860MHz
	Antenna	Directional, active
	Receiver sensitivity	-85dB
	Transmitter power	25mW, 14dBm
	Deviations for Video channel (at 10kHz)	4MHz
	Frequency control	Synthesis PLL
	Work temperature	-20°C ~ 40°C
	Hermetic class	IP65
	A/V Modulation	FM
	Frequency Range for Video	50Hz ~ 5,5MHz
	Frequency Range for Audio	50Hz~20kHz
	Power	9~13,5VDC
	Current draw	Transmitter: 300mA @ 12VDC Receiver: 120mA @ 12VDC
	Max diameter of mast	40mm
	Surge protection	600W for power, Video and Audio