AV-LINK Model AV-1500-MINI v1.1
AV-300-MINI

5.8GHz Audio / Video signal transmission set

AV-300-MINI/1500-MINI is radio transmission system designed to transmit analog Video (composite CVBS) and audio signals outside of buildings. The device uses one of seven available radio channels (5470MHz ~ 5860MHz), set by dipswitches. 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 beetween antenna and radio transmitter / receiver.

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

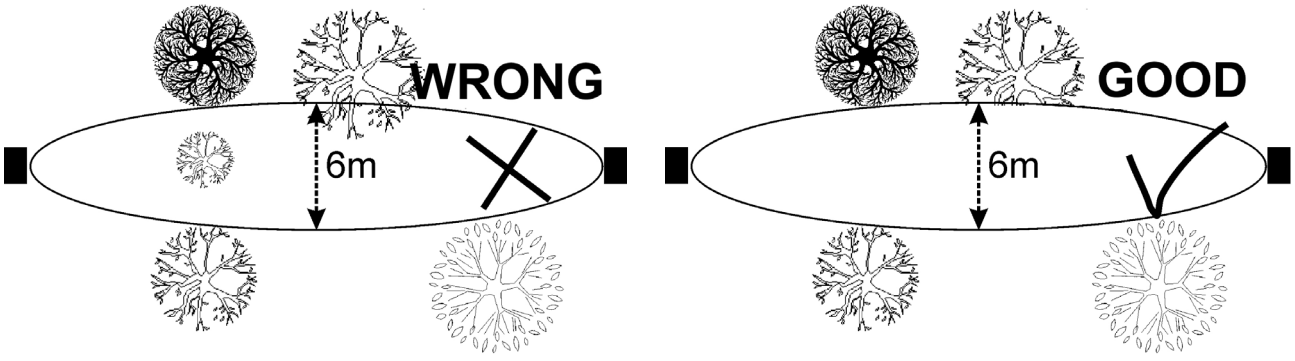
Audio Video signal are transmit in real-time without compression and delays. It's important to choose right place for installation and precisely align antennas.

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.

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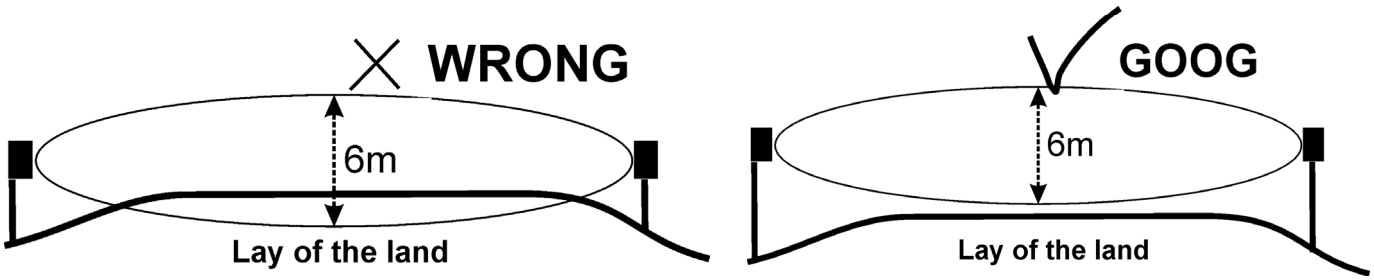
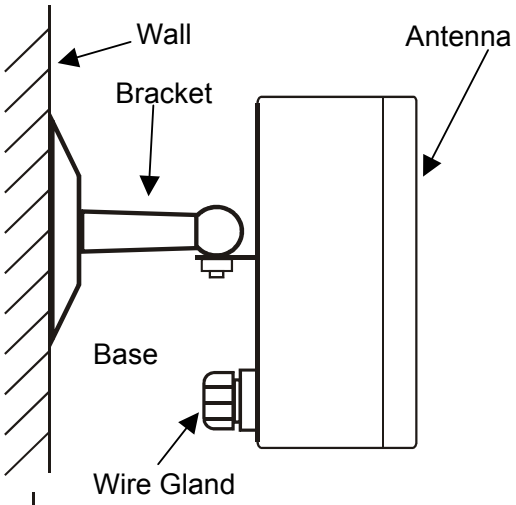


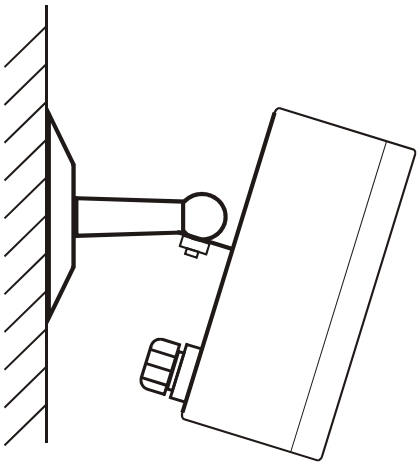
Mounting of device*

Construction of AV-1500-MINI is designed to mounting on wall of buildings. Device is equipped on articulated bracket, which allows regulation in horizontally and vertically.

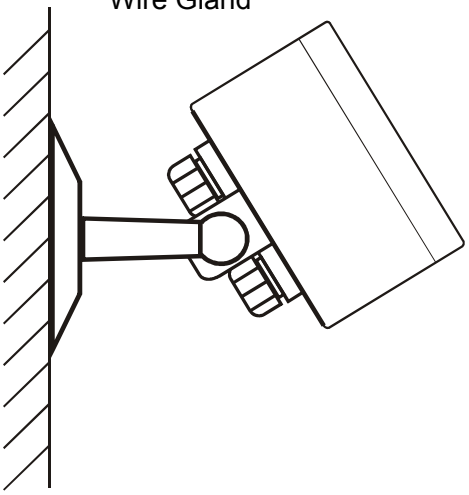
Regulation in horizontally and vertically is done by loosening screw, which clamping the articulated.

There is also possible independently the regulation in level after loosening bolts connecting bracket with mounting base.





Vertical adjustment



Horizontal adjustment

Connecting cables

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

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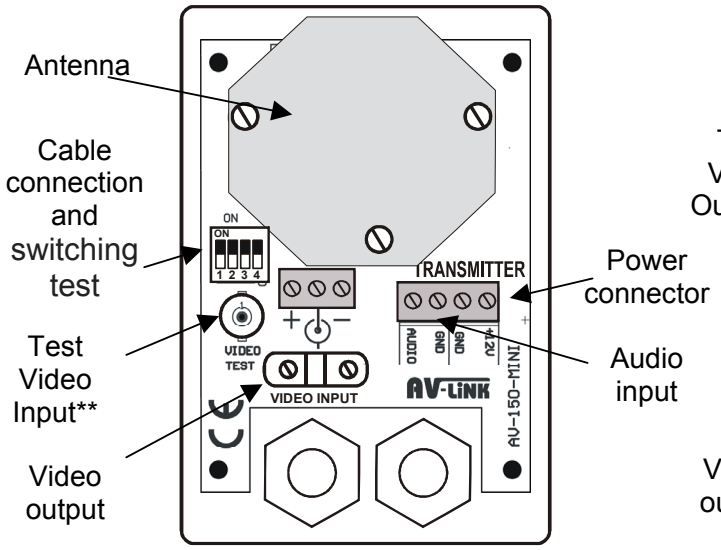
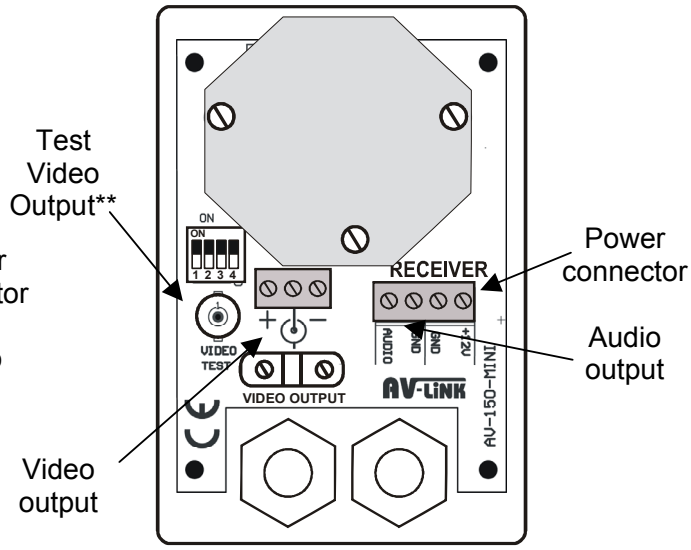


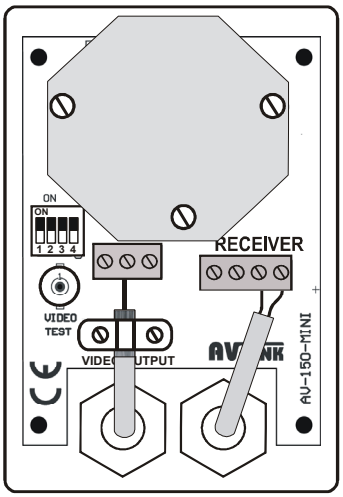
Connector of transmitter

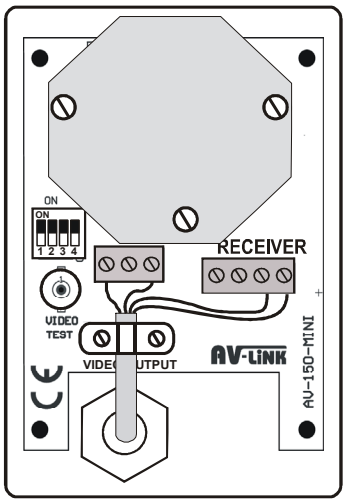


Connector of receiver

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 balun)





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

Audio terminal is designed to connect Audio signal from camera (in the transmitter) and to monitor or amplifier (in the receiver).
It's recommended to use cable shield, dedicated to Audio applications. It's protect device from distortion and hum collecting from energy network.

How to connect UTP twisted pair.**
Twisted pair need to connect with +/- pins of the terminal block, metal clamp is used to protection cables from pulling additionally.
On the other side UTP twisted pair is possible to use typical Video balun (good quality is recommended) 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

+12V / GND pins are designed to power supply of device. Connected power adapter voltage should be 12VDC. Power input is protected from reverse polarity. Power correctness is indicated by LED diode.

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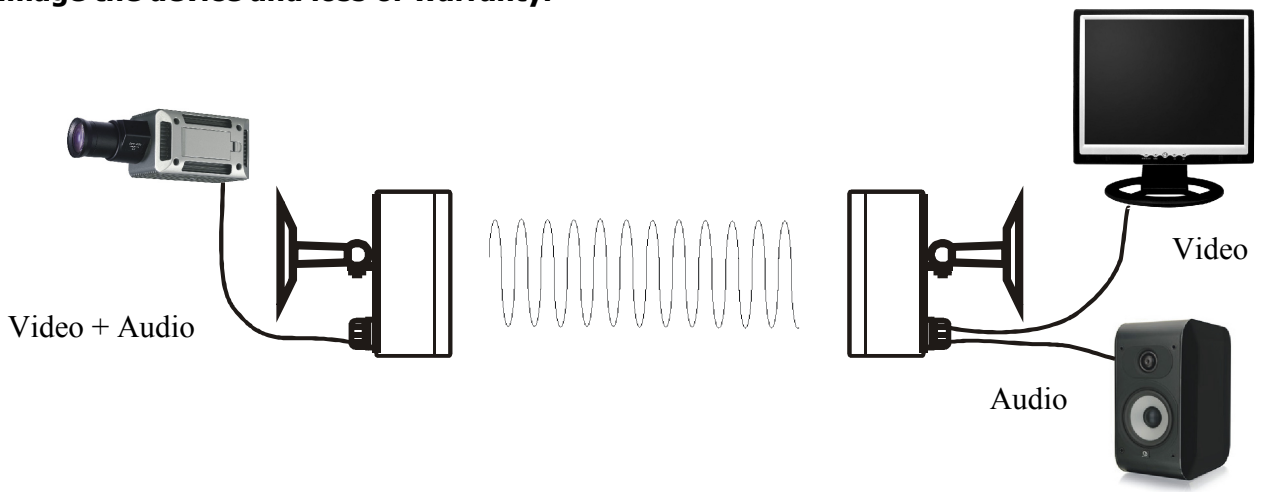
Test Video input in transmitter, is designed to temporarily connect source of Video. Do not connect at the same time a signal from 2 sources - for example of two cameras! **
Test Video output in receiver, is designed to test monitor at the time of making device regulation – may be simultaneously connect main receiver and test monitor.**

Must be pay attention to respectively sealing of transmitter and receiver. Factory mounted is only one gland. Second can by mounted only where to power supply and Video signal are use suitable cables. Glands must by twisted tight, to prevent from ingress of moisture into device. Screwing front cover, need to check for the correct placement of gaskets and tighten fixing screws. Where water getting to inside is a result of bad seal of housing and may be reason of damage the device and loss of warranty.



Example of typical application for AV-1500-MINI model

Device adjustment

The 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 MINI 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.

The 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. Turning off all switches is equivalent to selecting channel 1.

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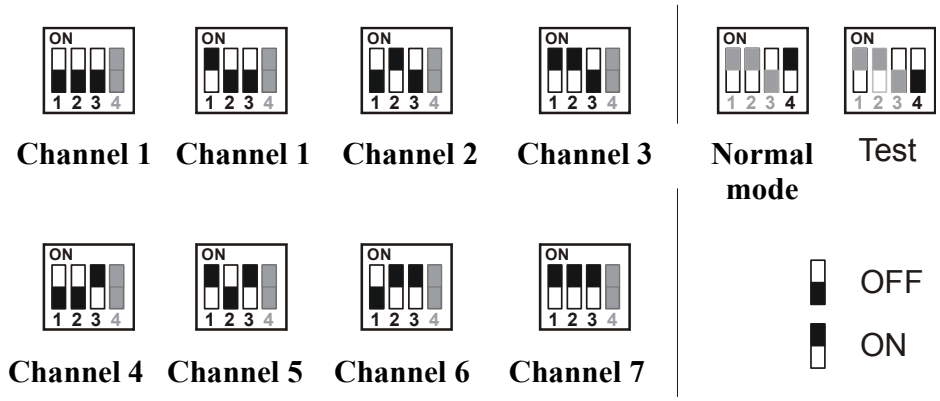

Only DIP 1~3 are used to set radio channels.

TESTU MODE** – it's designed to connected additional camera or / and service monitor, in order to verify proper operation of system. In normal mode the test clamp is connected electronically in main input (transmitter) and output (receiver). When test mode is enabled by using switch no. 4, only test clamp is connected to transmitter / receiver, main input / output is disconnected.

Technical specification:

No	Parameter	Value
1	**Video channels**	Coaxial cable: 1 x 75Ω UTP twisted pair: 1 x 100 Ω**
2	**Audio channels**	1 x 2Vp-p
3	**Radio channels**	Channel 1: 5470MHz Channel 2: 5760MHz Channel 3: 5780MHz Channel 4: 5800MHz Channel 5: 5820MHz Channel 6: 5840MHz Channel 7: 5860MHz
4	**Antenna**	Directional, active (AV-1500) / passive (AV-300)
5	**Receiver sensitivity**	-80dB
6	**Transmitter power**	25mW, 14dBm
7	**Deviations for Video channel (at 10kHz)**	4MHz
8	**Frequency control**	PLL
9	**Work temperature**	-20°C ~ 40°C
10	**Hermetic class**	IP65
11	**A/V Modulation**	FM
12	**Frequency Range for Video**	50Hz ~ 5,5MHz
13	**Frequency Range for Audio**	50Hz~20kHz
14	**Power supply**	9~13,5VDC
15	**Power consumption**	Transmitter: 300mA @ 12VDC Receiver: 120mA @ 12VDC
16	**Max diameter of mast**	40mm
17	**Surge protection**	600W for power supply, Video and Audio
18	**Radio range**	AV-300: Up to 300 meters in open area AV-1500: Up to 1500 meters in open area

Manufacturer reserves right to change technical specification without to prior notification.

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