

Wireless video link

Hello,

some time ago I built a wireless video link to get rid of some of the cables around my telescope. Enclosed some pictures and explanations of the transmitter and receiver which operate in the 2.4 GHz ISM band. As a starting point I used a consumer 2.4 GHz video link. For the transmitter I removed all the non-essential parts incl. the encasing and just used the RS-transmitter (encase in a tin-plated cabinet) and put it in a small plastic box. I had just to add a pre-emphasis network in the video-signal input-line and was done.



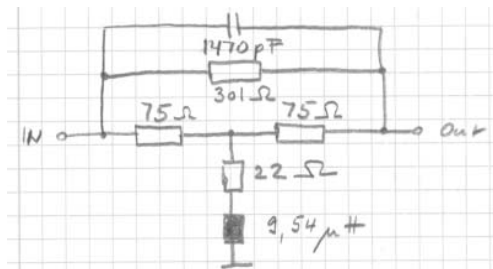
2.4 GHz 4 channel video transmitter side view



Video transmitter top view (connectors right are a RCA video input and power supply jack)



B/W monitor with integrated 2.4 GHz video receiver and white patch antenna on top. I use this monitor in the field next to the telescope for focusing etc.



This small passive network is needed between the video source and the RF transmitter modulation input. It provides the necessary pre-emphasis to the transmit-signal.

By means of this link I am able to transmit the pictures of my telescope to my receiver outside or inside my home. I use multiple sources of video: a video-camera or the video-output of a digital still camera. Everything is powered by a 12V supply (either from a rechargeable battery or from a mains powered DC power supply).

The Mintron video-camera, which is attached to the telescope, provides the video signal which is fed to the 2.4 GHz transmitter. I added a RS232 interface to my Mintron so that I can control it by a wireless RS232 link.

The video signal from my Casio QV2800UX digital still camera includes the on-screen-display and thus by means of this wireless video link and another remote control RS232 link I can also fully remote control the digital still camera.

I can receive the video signals with multiple receivers simultaneously. On one hand I can watch the pictures on the small portable monitor, which features a built in 2.4 GHz video receiver, next to the telescope. On the other hand I can record the video simultaneously inside my home using another receiver which feeds a video recorder or a frame grabber card of my PC.

Please note that you need a ham radio license to build or modify such a video transmitter device yourself. However there are also commercial devices available you may use.

Kind regards

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