

HOW TO ADD REMOTE CONTROL TO HD-TVI

By: Don McClatchie

The use of HD-TVI cameras in CCTV is growing due to the many advantages it has over the traditional high definition IP camera use. It is becoming popular because the installer can use the existing coaxial cable once used for the standard analog cameras and in most cases the price of the equipment is much lower in cost. Also the installer does not have to configure a network connection for two way communication as is required by the IP type cameras. Perhaps of greater importance the HD-TVI signal being analog in design can be cabled to much greater distances of over 1000 feet which is much further than the IP camera signal with its restriction of 100 meters.

With all the advantages of the HD-TVI standard comes some new opportunities one of them is the ability to send contact relay control and telemetry information along with the video signal on the same coaxial cable without interfering with the High Definition picture information. This is possible because the new HD-TVI signal is analog in nature and incorporates Sync Pulses and a Vertical Interval similar to the old analog cameras that dominated the industry for half a century. You can send contact relay information for alarm systems or to control door and gate access using the new HD Vertical Interval buried in the HD-TVI signal. This contact relay information is sent continuously along with the video signal and will go anywhere the HD-TVI signal is sent. It is possible to send contact relay signals in either direction allowing for both remote control and telemetry on the same signal cable.

FM SYSTEMS, INC. produces a product called ATU/ARU-2 that allows you to put two relay contacts onto any HD-TVI signal for control and telemetry. These devices transmit and receive alarm and control contact closures encoded on a video signal in coaxial cable, and twisted pair wire. You can insert your alarm and control signals anywhere a HD-TVI video signal is being used, including optical laser transmission and wireless transmission of video. Alarm and control signals may be carried over any distance by the video signal. Tele-metering and control contact closures are encoded onto the video signal by the transmitter unit and decoded to relay outputs at the receiver unit.

The ATU-2 ALARM TRANSMITTING UNIT and the ARU-2 ALARM RECEIVING UNIT together make up a 2 channel alarm and control system which can provide up to 6 alarm and control channels on any one HD-TVI video signal. The alarm and control signals are inserted onto the Vertical Interval of the video signal so that they will not interfere with the picture. If the video signal with its Vertical Interval is recorded, the alarm and control information is also recorded and can be recalled at play-back. Alarm and control signals will be correlated with the video events.

Each pair of ATU-2 / ARU-2 will transmit 2 alarms. Three sets of units may be connected to any one video channel, allowing 6 alarms to be transmitted on one coaxial cable. The operating channel can be set by the user in the field with the internal program jumper jacks.

One channel of the ATU-2 / ARU-2 can be used as a system alarm that will operate upon loss of power to either terminal, loss of the video signal or loss of transmission path (cable cut). In the event of power failure the video through-put is not interrupted. Contact closures to the ATU-2 input will be repeated as contact relay closures at the ARU-2 output.

The system is housed in Bone colored ABS enclosures that have a UL flame rating of 94-VO and is powered by 24 Volt AC or DC power transformers (24 Volt AC transformers are supplied with the units). The current draw is low allowing the units to be connected to the same power supply as the camera. Both the transmitter and receiver have power on/video on LED indicators for easy set-up.



RELAY TRANSMITTER



RELAY RECEIVER

For more information or to place an order a call: 1-800-235-6960.