

ATU-2 \ ARU-2



ALARM TRANSMITTER \ RECEIVER UNIT

INSTRUCTION BOOK

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DESCRIPTION

These devices transmit and receive alarm and control signals encoded on video in coaxial cable or microwave. You can insert your alarm and control signals anywhere a video signal is being used including optical laser transmission. Two Alarm and control signals may be carried over any distance by the video signal. One of the contacts may be used for a signal integrity alarm.

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 video signal. The alarm and control signals are inserted into the Vertical Interval of the video signal so that they will not interfere with the picture. When the video signal 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 and receive 2 alarms. Three sets of units may be connected to any one video channel, allowing 6 alarms to be transmitted on one coaxial cable.

One channel may be used as a system alarm that will operate upon loss of power to either terminal or loss of transmission path (coax cable cut). In the event of power failure to the ATU-2 or ARU-2 the video thru-put is not interrupted.

Contact closures to the ATU-2 input will be repeated as contact closures at the ARU-2 output.

The system is housed in a bone colored ABS enclosure that has a UL flame rating of 94-VO and is powered by any 24 VAC or VDC power supply (24 VAC is supplied with the units). The system has a power on, video on LED for installation and trouble shooting of the video system.

MOUNTING INSTRUCTIONS

The rugged one piece mounting structure allows you to mount the unit firmly in place with two screws. Select a place to mount the unit away from harsh or wet environments, indoors is recommended. The ATU-2 should be located near your originating signals and the ARU-2 near your alarm panel or the place you wish to bring the signals to. Select a position that gives you the best access to cable the system and reduces the labor in installation.

HOW TO CABLE THE ATU-2

Connect the video cable you wish to use from the camera to the "VIDEO IN" BNC connector and connect the cable going to the ARU-2 to the "VIDEO OUT" BNC connector. It is not necessary for power to be on at this time, the video path will only be interrupted during the cable attachment. This system will function with video from any kind of CCTV camera or any NTSC professional video. Next attach the alarm or control wires for each station to the green connector block marked A and B. Each pair of screw terminals marked A and B are LOOP inputs. Attach your Dry Contact Closures to these screw terminals. The current for loop sensing is built into the ATU-2. Do not connect TTL signals to these connections.

HOW TO CABLE THE ARU-2

Connect the video cable you are using to the "VIDEO IN" BNC on the ARU-2 and the "VIDEO OUT" BNC goes to the monitor, recorder or other video equipment. **BE SURE TO TERMINATE THE END OF THE VIDEO CABLE WITH A 75 OHM TERMINATION OR PROPERLY TERMINATED INTO OTHER EQUIPMENT.** Next attach the alarm or control wires for each station to the green connector block marked A and B. These wire can go to your alarm panel or control device. Each pair of screw terminals marked A and B are relay contact closures. The outputs from connector block A and B will duplicate the signals from the ATU-2 inputs. A contact closure at A of the ATU-2 will result in a contact closure at A of the ARU-2 and so on.

POWER SUPPLY INSTALLATION

The ATU-2 and ARU-2 are powered by two 24 Volt AC or DC wall mount power transformers (24VAC included). Connect the 24 VAC power transformer to the Green terminal block marked 24V AC/DC. The ATU-2 can be powered by power sources as low as 9 volts AC or DC. However the ARU-2 must be operated with 24 Volts AC or DC.

At this time you will see the Green LED turn on to indicated power up, it will be on or be flashing on and off, depending on the video status. Power on with no video will cause the LED to light up and flash on and off. Power on with video input will cause the LED to light up fully.

SET-UP OF THE ATU-2 AND ARU-2

Both units can operate on 6 separate channels. The units are shipped on the standard channel 10 and 11. If you wish to use the units on a different channel or wish to operate more than one unit on the same video signal, then it is necessary to program the new channel. Programming the new channel is done with Jumper Jacks on the inside of the box. Open the box by removing the 4 screws in the outer most corners of the box. Lift up the lid and look for the Black selection jumpers, there are 2 of them near the selection table printed on the PC Board. Select the channel you wish to operate on lines 10-15 and arrange the jumpers to select that channel. You must select the same channel for both ATU-2 and ARU-2 so they will work together. As many as 3 ATU-2 and ARU-2 units can be used on the same video signal by programming them to different channels. When the ARU-2 is on the same channel as an ATU-2 with the power applied and video on the Green LED on the ARU-2 will stop flashing and stay on. This indicates that the video is being received.

OPERATION

When the units have been installed and are operating you will see that when a contact on the ATU-2 is closed and relay in the ARU-2 closes. Through the video\data path the alarm sense is relayed to the alarm panel or other equipment directly. If there is a power failure the video path is not obstructed by the ATU-2. If the power fails on the ARU-2 then both relays will open regardless of the position of the ATU-2 contacts. If a system alarm is desired to indicate a loss of communication between the ATU-2 and the ARU-2, one set of the contacts at the ATU-2 can be wired closed then the contact will serve as a system alarm contact. This contact will open if power fails on either unit or if the path between the two units is interrupted.

CARE AND MAINTENANCE

There is no routine maintenance or calibration required with this equipment. There are no controls to adjust inside the box. Open the box if necessary only to choose the desired operating channel.

APPLICATIONS (WHERE TO USE THE SYSTEM)

This system can be used anywhere that a video signal on coax cable or twisted pair exists. Some uses are in a CCTV camera installation, LASER OPTICAL transmission, STL microwave applications, Broadcast TV transmissions, Cable TV, Alarm and Control and many others.