

# RCP1

## Remote Control Panel

Owner's Manual

and

Operating Instructions

*Instructions for basic operation and installation*

*P/N 000-0000-002*



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## INTRODUCTION

Thank you for purchasing Advanced Technology Video's **RCP1** (*Remote Control Panel-1*) Keypad and the **PIDM** (*Point ID Module*) Interface. This instruction manual describes the powerful features of this product for basic operation. It also covers the installation steps that will allow quick and easy integration into your security system. The installation set ups are as follows:

- |                                    |         |
|------------------------------------|---------|
| Single DPX/SPX Multiplexer:        | Page 8  |
| Single MPX/MX4m/SX4m Multiplexer:  | Page 9  |
| Multiple Multiplexers and Keypads: | Page 10 |

**Note:** After carefully reviewing this manual, choose the installation set up that fits your custom installation.

## BASIC OPERATIONAL FEATURES DESCRIPTION

The RCP1 allows remote multiplexer view control and can address and control multiple sites and select views from as many as 63 multiplexers for a distance of up to 10,000 feet.

**Note:** To add an additional 10,000 feet a KTD-83 line splitter/distribution amplifier is required from Kalatel, Inc. They can be reached at (800) 343-3358.

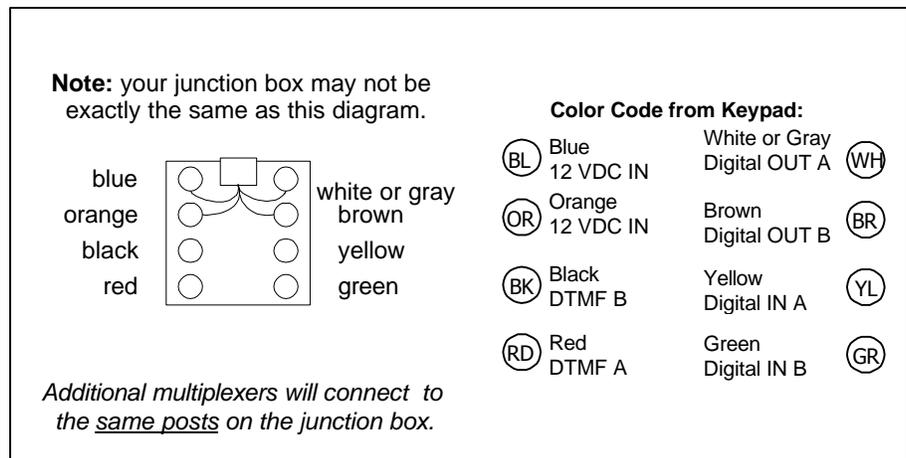
## INSTALLATION EQUIPMENT

To begin installation of your RCP1 you will need the following:

1. Small Phillips screwdriver
2. Small Blade screwdriver
3. Small wire strippers
4. Multimeter
5. Wire (1-pair) to connect junction box to PIDM Interface

The following components are supplied with your purchase of the RCP1:

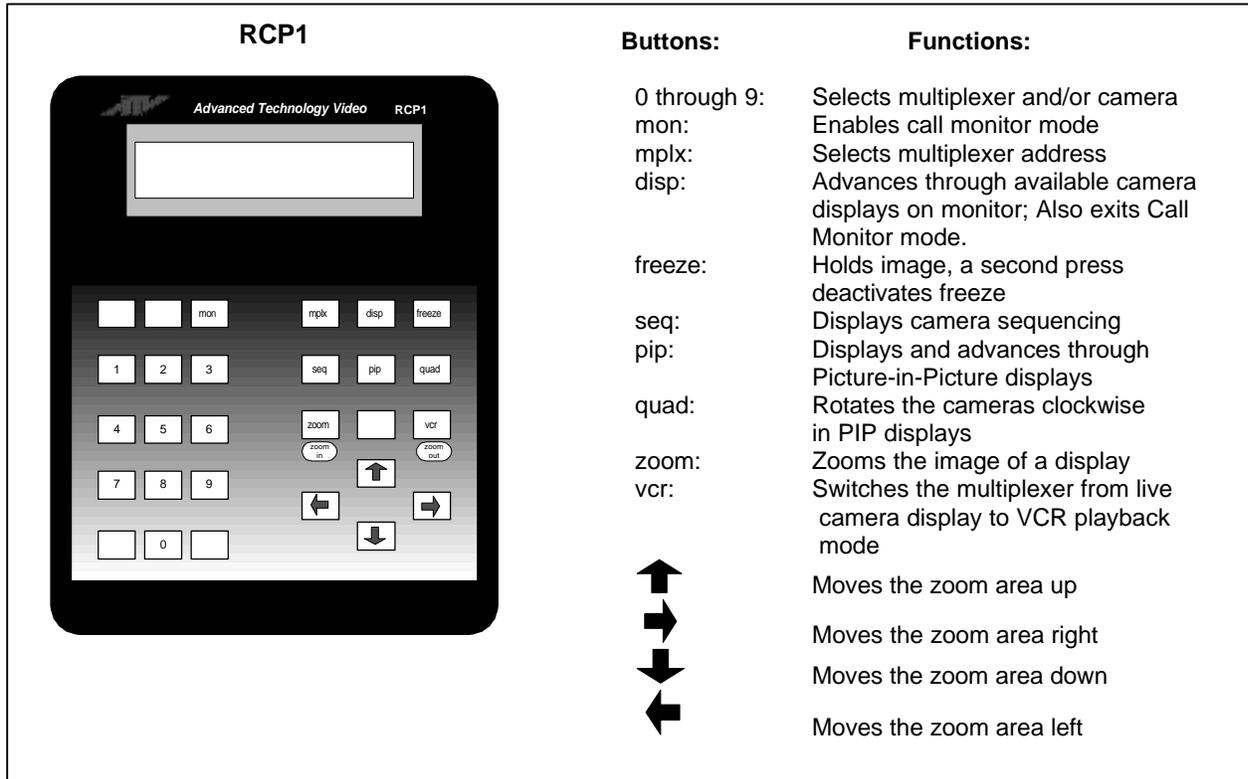
1. RCP1
2. PIDM
3. RJ45 Cable
4. Junction Box (Figure 1)
5. (1) Power Supply 9 VAC
6. (1) Power Supply 12 VDC
7. PIDM to Multiplexer Interface Cable



**Figure 1**

## KEYPAD OPERATIONS

When power is first applied to the RCP1 keypad, the LCD view will briefly display "ATV RCP1 121498". To choose which multiplexer you wish to control, press the "mplx" button and the address for the multiplexer. The multiplexer address is determined by the PIDM. (Example: for multiplexer "1" press "01").



**Figure 2**

**Note:** All numeric entries require 2 numbers e.g. for 1 enter 01, for 2 enter 02, etc.

Your RCP1 has nine mode control buttons and nine numbered camera buttons which allow easy access to all modes of operation. The nine mode buttons on the right are used to control monitor display operations and VCR playback. Following is a summary of each button's function and the RCP1 operating modes.

### RCP1 Keypad buttons

**Note:** The Multiplexer menus cannot be entered from the RCP1. Programming must be performed using the front panel multiplexer buttons.

- Mplx** Press this button to enter the address of the multiplexer you wish to control. (For more information see section on "Keypad Operations" above).
- Disp** Press the DISPLAY button to see the displays on the monitor that are available with the multiplexer.
- Freeze** A press of the FREEZE button will freeze the camera image on the monitor display. Another push of this button will deactivate the freeze mode.

- Seq** A button press will activate the cameras SEQUENCING according to the sequence set up on the multiplexer. Press again to deactivate the sequencing mode.
- Pip** Pressing the PIP (Picture-in-Picture) button will cause the unit to advance through the various PIP displays, "Single PIP", "Dual PIP", "Split Screen", "Squish Screen", and back to "Full Frame" display.
- Quad** The QUADRANT button rotates the orientation of the cameras clockwise on the screen into the desired positions in PIP, Dual PIP, Split Screen, and Squish Screen display.
- Zoom** (zoom in) - The ZOOM function will expand the selected portion of a full frame camera image.
- VCR** (zoom out) – Pressing this button will switch monitor display from the live camera display mode to the VCR Playback mode. It will also zoom out when Zoom is active.
- 0 – 9** Selects a camera. The cursor has to be in the "view line" on the display panel in the RCP1 keypad. When selecting cameras "1-9" it is necessary to place a "0" in front of the number. (Example: for camera "1" press "01"). When the cursor is on the "multiplexer line" use these buttons to select the multiplexer you wish to control.
- Mon** A press of the monitor button brings up the call monitor. To return to the main monitor press the disp (display) button.
- Arrows** **On the DPX and SPX only**, while in the zoom mode the arrow keys will move the display in the direction of the arrow.

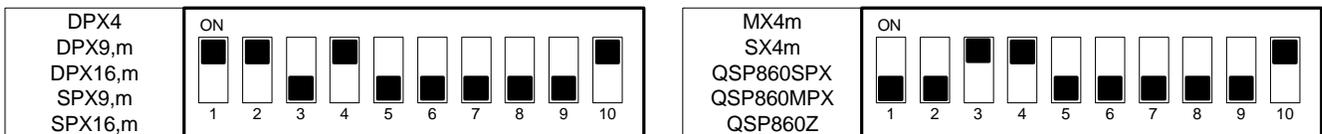
**PROGRAMMING THE PIDM INTERFACE**

**CAUTION: Please proceed to installation on page 8 unless you have an 860, MX, or SX series multiplexer.**

**The initial settings are set at the factory for DPX and SPX series multiplexers. The following steps concerning programming the PIDM will ONLY be required if the factory settings are altered!**

**Programming the Interface:**

1. Be sure power supply is NOT connected to the PIDM Interface.
2. To set baud rates and protocols: (see figure 3).
  - 2.1. For the **DPX, SPX** series multiplexers, set dip switches 1,2,4 & 10 to "on", all others off
  - 2.2. For the **860, MX and SX** series, set dip switches 3,4 and 10 to "on", all others off
3. Plug in power, watch for LED to glow dimly; this sets the PIDM's non-volatile memory.
4. Turn dip switch 10 off **first**, followed by all others.
5. Set address number using table on page 6.



**Figure 3**

**Note: This completes the programming of the PIDM. The next requirement is to set the site address for each multiplexer. (See page 6)**

**Site Addressing:**

After completing programming the PIDM (page 5), set the dipswitch to the appropriate address as shown below.

**Dipswitch Address Settings**

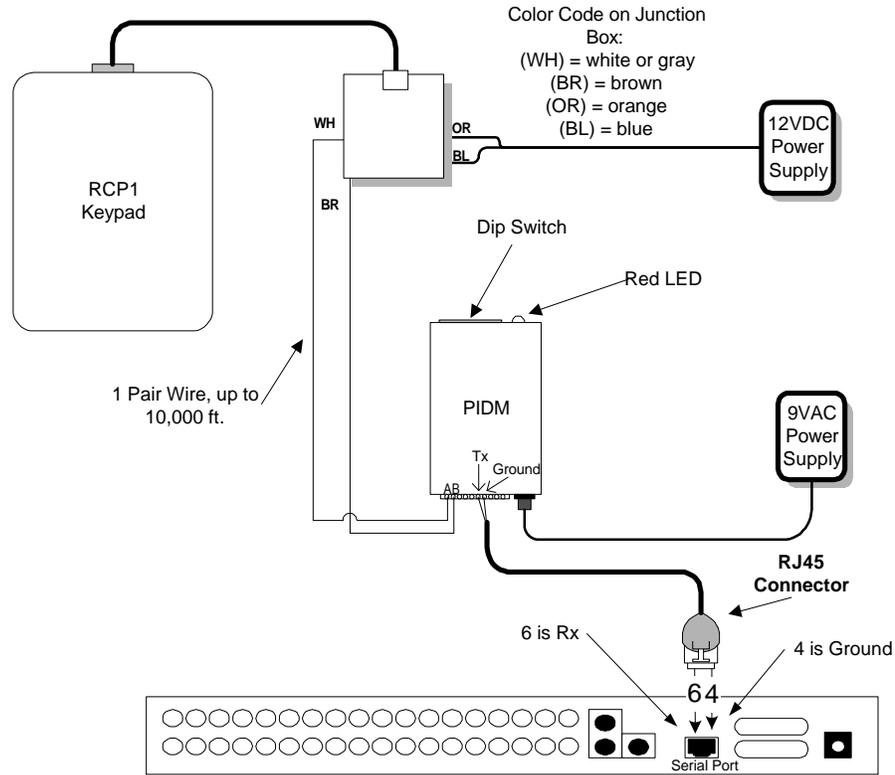
Multiplexer Number	Dipswitch Setting	Multiplexer Number	Dipswitch Setting	Multiplexer Number	Dipswitch Setting
1		12		23	
2		13		24	
3		14		25	
4		15		26	
5		16		27	
6		17		28	
7		18		29	
8		19		30	
9		20		31	
10		21		32	
11		22		33	

**Dipswitch Address Settings**

Multiplexer Number	Dipswitch Setting	Multiplexer Number	Dipswitch Setting	Multiplexer Number	Dipswitch Setting
34		45		56	
35		46		57	
36		47		58	
37		48		59	
38		49		60	
39		50		61	
40		51		62	
41		52		63	
42		53			
43		54			
44		55			

## INSTALLATION FOR SINGLE DPX / SPX MULTIPLEXERS

Follow these steps to ensure proper connection and set up of your RCP1 with the standard configuration when using the **DPX16, DPX16m, SPX16, SPX16m, DPX9, DPX9m, SPX9, SPX9m, or DPX4**. Figure 4 below shows the overall connection configuration of the RCP1 with your multiplexer.



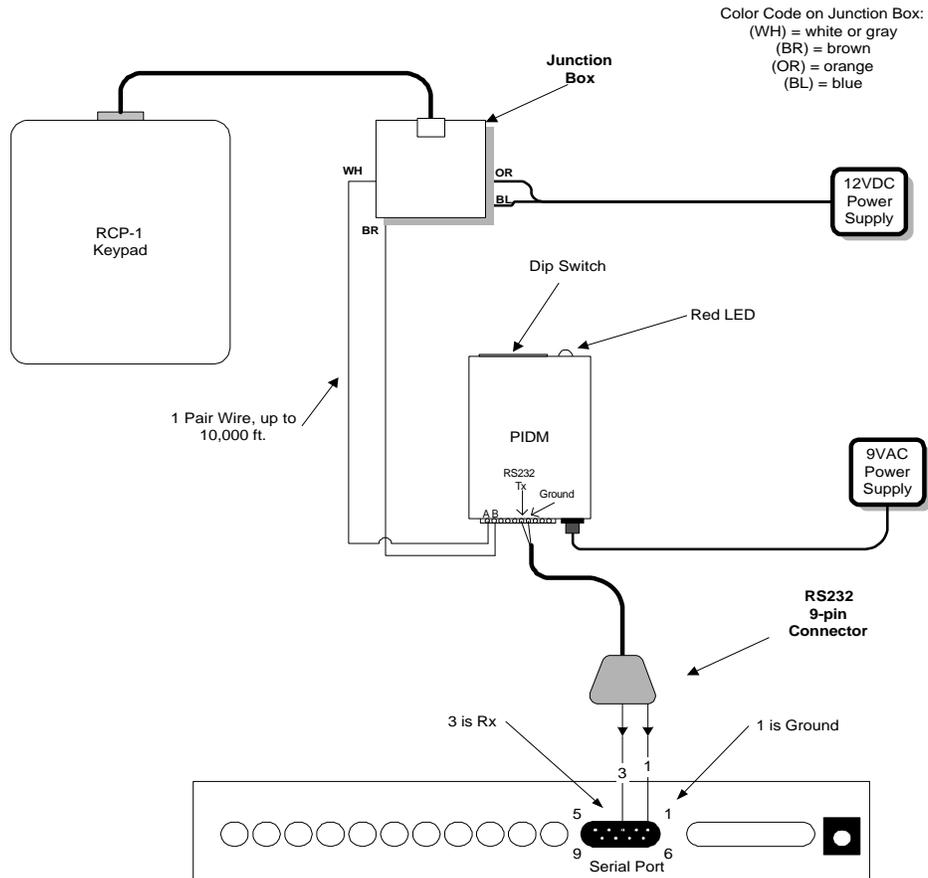
**Figure 4**

### Steps for Set Up:

1. Connect the RCP1 keypad to the junction box with RJ-45 cable as shown in Figure 4.
2. Using 1-pair wire from junction box, connect wire from "WH" (white or gray) terminal on the junction box to terminal "A" on the PIDM. Connect the other wire from "BR" (brown) terminal on the junction box to terminal "B" on the PIDM.
3. Using serial cable and multimeter, refer to serial port connector in diagram.
4. Locate pins 6 (Rx) and 4 (Ground) on the RJ45 connector and identify each wire at cut end of the cable.
5. Connect the Rx wire to RS232 Tx on PIDM and the Ground wire to Ground on PIDM.
6. Connect the 12VDC power supply to "OR" (orange) and "BL" (blue) terminals on the junction box (**Polarity is irrelevant**).
7. Connect the 9VAC power supply to the PIDM (see page 5 for programming).

## INSTALLATION FOR SINGLE MPX/MX MULTIPLEXER SET UP

Follow these steps to ensure proper connection and set up of your RCP1 with the standard configuration using the **QSP-860MPX, QSP-860SPX, MX4m, & SX4m**. Figure 5 below shows the overall connection configuration of the RCP1 with your multiplexer.



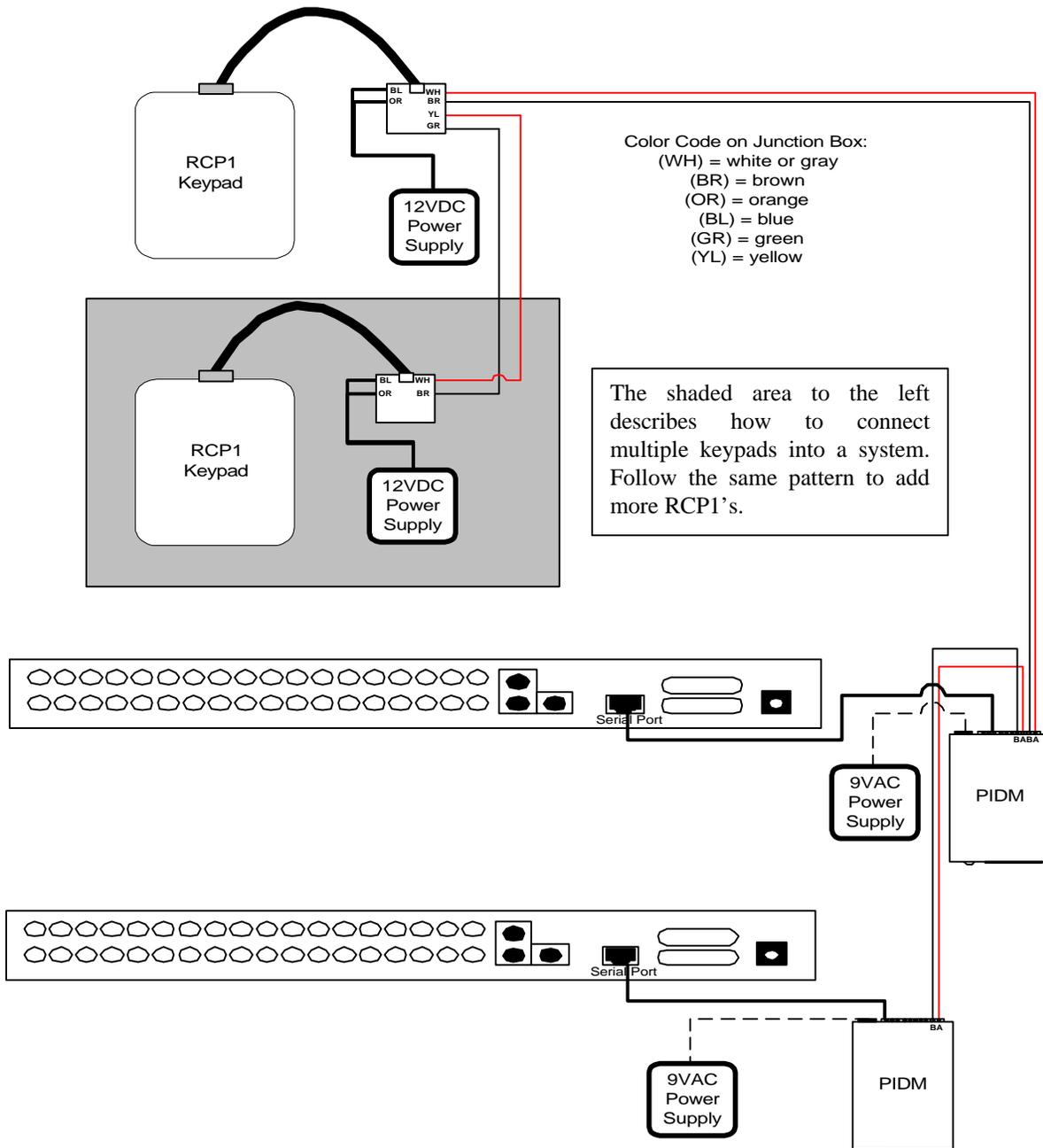
**Figure 5**

### Steps for Set Up:

1. Connect the RCP1 keypad to the junction box with RJ-45 cable as shown in Figure 5.
2. Using 1-pair wire from junction box, connect wire from “WH” (white or gray) terminal on the junction box to terminal “A” on the PIDM. Connect the other wire from “BR” (brown) terminal on the junction box to terminal “B” on the PIDM.
3. Using serial cable and multimeter, refer to serial port connector in diagram.
4. Locate pins 3 (Rx) and 1 (Ground) on the Standard 9-pin connector and identify each wire at cut end of the cable.
5. Connect the Rx wire to RS232 Tx on PIDM and the Ground wire to Ground on PIDM.
6. Connect the 12VDC power supply to “OR” (orange) and “BL” (blue) terminals on the junction box (**Polarity is irrelevant**).
7. Connect the 9VAC power supply to the PIDM (see page 5 for programming).

### INSTALLATION FOR MULTIPLE MULTIPLEXERS AND MULTIPLE KEYPADS

The following steps should be followed to ensure proper connection and set up of your RCP1 with the standard configuration using **multiple multiplexers**. Figure 6 below shows the overall connection configuration of the RCP1 with multiplexers.



**Figure 6**

**Note:** You can control up to 63 ATV multiplexers using this setup. Refer to this manual for individual set up and connection instructions for each particular model. Each PIDM must have a different “multiplexer number” programmed in. See the table on page 6 for switch settings.

## **EQUIPMENT REQUIREMENTS**

The RCP1 is designed to be compatible with all NTSC and PAL compatible equipment.

### **Specifications for RCP1**

#### **Physical**

Dimensions ..... 5.195 w X 6.166 h X 1.925 depth  
Weight ..... 0.95 lbs. Power Supply 1.0 lbs.

#### **Electrical**

Voltage ..... 12VDC  
Amperage ..... 1.0 AMP

#### **Connectors**

Serial Port ..... 1 RJ45 8 pin

**Communication Protocol** ..... RS422 (Between RCP1 and PIDM)

### **Specifications for PIDM**

#### **Physical**

Dimensions ..... 4.179" w X 2.400" h  
Weight ..... 0.02 lbs.

#### **Electrical**

Voltage ..... 9VAC

#### **Connectors**

Serial Port ..... 10 terminal breakout adapter  
Power jack ..... 2.1mm X 5.5mm

**Communication Protocol** ..... RS232 (Between PIDM and Multiplexer)

## TROUBLESHOOTING

- Problem:** *The LED indicator light doesn't come on when I power up, or comes on initially but doesn't go off again when the RCP1 receives the first command.*
- Solution:** Verify that your connectors are set to the correct terminals on the junction box as shown in the standard configuration diagram that correlates with your installation.
- 
- Problem:** *The LED indicator light comes on when I press buttons on the keypad, and blanks out momentarily to show that a command was received, but the display on the monitor doesn't change.*
- Solution:** Verify that your connectors are set to the correct terminals on the serial port as shown in the standard configuration diagram that correlates with your installation.
- 
- Problem:** *The LCD panel of the RCP1 doesn't light up when plugged in.*
- Solution:** Verify that your connections from the power supply are set to the correct terminals on the junction box.
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## TECHNICAL SUPPORT

**Call us, we are here to help.** If you have a question or would like help in configuring your ATV multiplexer with your RCP1 keypad, or for information on any other ATV product, please contact our technical support people at:

(888) 288-7644      Toll-Free in US and Canada  
(425) 885-7000      Outside the US

E-mail us at [tech@atvideo.com](mailto:tech@atvideo.com).

And please visit our Web Site at <http://www.atvideo.com>

## **WARRANTY INFORMATION**

Thank you for purchasing this Advanced Technology Video, Inc., hereinafter “ATV”, product. We have manufactured this product in accordance with high quality standards and when it is used in the manner intended, it has a **limited warranty against defects in material and workmanship for a period of five (5) years from the date of shipment from ATV**. During the warranty period ATV’s entire liability and your exclusive remedy shall be, at ATV’s option, upon receipt of proof of purchase, repair or replacement of products that prove to be defective. Repair of a defective product is contingent upon availability of replacement parts from their manufacturer. Should ATV be unable to obtain replacement parts, ATV will, at its option, pro rate the value of the defective product and offer this amount toward the purchase of any new ATV product.

For warranty service or repair, this product must be returned to a service facility designated by ATV. Within the United States, you must obtain a return authorization (RMA) number by calling (888) 288-7644. Outside of the United States, contact your sales representative or the ATV factory at (425) 885-7000 (email: tech@atvideo.com). For ATV factory service after obtaining an RMA number, send the product with shipping charges and applicable duties and taxes paid, along with a copy of your sales receipt or other proof of purchase and date of purchase to the ATV factory address.

## **LIMITATION OF WARRANTY**

This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, accident, misuse, neglect, voltage fluctuations, lightning, water damage (or other acts of God), faulty installation or adjustment of controls, interfacing with non-standard or custom equipment, or improper maintenance.

EXCEPT AS HEREIN EXPRESSLY SET FORTH AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ATV OR ANY OF ITS EMPLOYEES SHALL NOT, UNDER ANY CIRCUMSTANCES, BE RESPONSIBLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, DAMAGE TO THE EQUIPMENT. ATV MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. REMOVAL OR ALTERATION OF THE SERIAL NUMBER WILL VOID THIS WARRANTY.

## **YEAR 2000 CONFORMANCE**

All ATV products containing a date and time function meet Year 2000 Conformity Requirements as specified in BSI DISC PD2000-1 (described below). Year 2000 requirements do not apply to ATV products without a date and time function. ATV products’ date format is “Day – Month – Year” where “Year” is a two digit representation of the year. Conformity is defined as follows:

1. No value for the current date will cause any interruption in operation of the product.
2. Date-based functionality within the product behaves consistently for dates prior to, during and after year 2000.
3. The 2 digit date within the product is implicitly assumed to be greater than 1990.
4. Year 2000 is recognized as a leap year.

## **FCC STATEMENT**

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his expense.