Heavy-Duty Spectra ${ }^{\circledR}$ IV Series


## In-Ceiling Back Box

## C3419M (8/06)

## Installation



1. Locate the center point of the mounting location and insert the compass tool. Draw a circle.
2. Cut the circle out of the ceiling.
3. Use the mounting ring as a template and mark the screw hole pattern onto the mounting surface. Prepare the holes.
4. Install the mounting plates. Use the eight $10-32 \times 3$-inch screws (supplied) and install the mounting ring $\boldsymbol{A}$ and two back mounting plates $\mathbf{B}$.
a. Line up the mounting ring with the eight fastener holes.
b. Feed one back mounting plate ( B through the hole in the ceiling $\mathbf{C}$ and line up with four fastener holes.
c. Install fasteners through the mounting ring $\boldsymbol{A}$, ceiling, and out the back mounting plate (B).
d. Install second back mounting plate B.
5. Attach the conduit fitting, lock nut, and safety chain bracket. Install a safety chain/cable (not supplied) that will support up to 16 pounds ( 7.3 kg ).
6. Open the hinged door to the back box. Push the tab lock towards the wall of the unit and lift the door open.

Pull wiring into the back box through the conduit fitting. Refer to Table A, Table B, and Table C for wiring distances.

Table A. Video Coaxial Cable Requirements

| Cable Type $^{*}$ | Maximum Distance |
| :---: | :---: |
| RG59/U | $750 \mathrm{ft}(229 \mathrm{~m})$ |
| $\mathrm{RG} 6 / \mathrm{U}$ | $1,000 \mathrm{ft}(305 \mathrm{~m})$ |
| $\mathrm{RG} 11 / \mathrm{U}$ | $1,500 \mathrm{ft}(457 \mathrm{~m})$ |

*Cable requirements:
75 ohms impedance
All-copper center conductor
All-copper braided shield with $95 \%$ braid coverage

Table B. 24 VAC/24VDC Wiring Distances
The following are the recommended maximum distances for 24 VAC and 24 VDC applications and are calculated with a 10 percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC- or DC-powered devices.)

| AC/DC <br> Total VA/ <br> Total Watts | Wire Gauge |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{2 0} \mathbf{~ A W G}$ <br> $\left(\mathbf{0 . 5} \mathbf{~ m m}^{2}\right)$ | $\mathbf{1 8} \mathbf{A W G}$ <br> $\left(\mathbf{1 . 0} \mathbf{~ m m}^{2}\right)$ | $\mathbf{1 6}$ AWG <br> $\left(\mathbf{1 . 5} \mathbf{~ m m}^{2}\right)$ | $\mathbf{1 4} \mathbf{~ A W G}$ <br> $\left(\mathbf{2} .5 \mathbf{~ m m}^{2}\right)$ |
| $23 \mathrm{VA} /$ | 123 ft | 196 ft | 311 ft | 495 ft |
| 15 watts | $(38 \mathrm{~m})$ | $(60 \mathrm{~m})$ | $(95 \mathrm{~m})$ | $(151 \mathrm{~m})$ |

NOTE: Input power for the dome is 24 VAC or 24 VDC. Using 24 VAC input power, power consumption is 23 VA per dome. Using 24 VDC input power, power consumption is 0.7 A ( 15 watts). Use a 24 VAC transformer with a minimum of 40 VA per dome.

Table C. UTP Wiring Distances

| Receiver | Maximum Distance |
| :---: | :---: |
| Active | $0-3,000 \mathrm{ft}$ |
| (Video Only) | $(0-914.4 \mathrm{~m})$ |
| Passive | $0-750 \mathrm{ft}$ |
| (Video, Coaxitron, Pelco V-Sync) | $(0-228.6 \mathrm{~m})$ |

NOTE: As a minimum, UTP requires Cat5, 100-ohm twisted pair cable.


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7. Install the back box by compressing the spring clips and pushing the back box through the hole. Tighten the screws until you hear a clicking noise.

WARNING: An electrical short in the back box may occur if the metal BNC connector is not completely covered by the protective boot.
8. Connect wiring to the circuit board inside the back box. When finished, close the door to the back box and turn on the power. The green LED will light.

## NOTES:

- Aux 1: Maximum 2 A at low voltage $(<40 \mathrm{~V})$

Aux 2: Maximum 30 mA at 32 VDC

- If you are using both unshielded twisted pair (UTP) wiring and a translator board, install the UTP wiring before installing the translator board.


9. Configure DIP switches SW1 and SW2 located on the top of the dome drive. For DIP switch settings, refer to the labels located on the top of the dome drive or to the Switch Settings section of this manual.

NOTE: When connecting more than one Spectra dome to a single controller, terminate the unit farthest from the controller. To terminate the dome drive set the SW2-10 switch to the ON position.
10. Install the dome drive. Line up the blue and red tabs with the blue and red arrows on the hinged door inside the back box. Push in on the tabs. Insert one side and then the other side. Continue pushing on the ends of the tabs until both sides click into place.
11. Install the lower dome. Snap the clip of the lower trim ring leash $\mathbf{D}$ into the hole on the lip of the back box. Insert both keys in the barrel locks $\boldsymbol{E}$. Turn keys clockwise to the unlocked position. Keys cannot be removed from lock in the unlocked position. Align ball studs $\boldsymbol{\mathcal { C }}$ (located on the mount ring) with the ball stud receptacles $\mathbf{G}$ (located on the inside of the lower dome). Place the lower dome over the back box. Hold and turn both keys to the locked position.

To use your dome, refer to the operation and programming manual.

## Troubleshooting

If your dome does not power up properly after installation, use the following steps.

1. Check the fuse on the circuit board inside the back box for continuity. Replace the fuse if needed.
2. Check the wiring with a volt meter to ensure proper voltage is being received into the back box.

If your dome powers up correctly, but you do not have accurate control, use the following steps.

1. Check the signal with a volt meter or an oscilloscope.

NOTE: This step will not apply if you are using Coaxitron control.
2. Ensure that the switch settings on the dome drive are set correctly. Refer to the Switch Settings section.
3. If you are using a Pelco controller, ensure that the factory-installed 16-pin jumper has not been removed. If you are using a third-party controller, a TXB Series translator board must be installed. The dome will not function without this 16-pin jumper or a translator board installed.

## Switch Settings

WARNING: If you are using D-type or P-type control, your system may not operate if the baud rate and address switches are not set correctly. The switches are set at the factory at the defaults for D-type control (2400 baud and address 1).

Table D. Switch Settings for SW2

| Special Systems |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| AD-32 Preset System | ON |  |  |  |  |  |  |  |  |  |
| CM9502 Setting |  | ON |  |  |  |  |  |  |  |  |
| Vicon | Not currently available; SW2-3 is reserved for future use. |  |  |  |  |  |  |  |  |  |


| D or P Protocol Baud Rate |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2400 Baud (Default for D-type Control) |  |  |  |  |  | OFF | OFF | OFF |  |  |
| 4800 Baud (Default for P-type Control) |  |  |  |  |  | ON | OFF | OFF |  |  |
| 9600 Baud |  |  |  |  |  | OFF | ON | OFF |  |  |


| Video Cable Type |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Coax Cable |  |  |  |  |  |  |  |  | OFF |  |
| UTP Cable |  |  |  |  |  |  |  |  | ON |  |


| Dome Termination |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Terminated |  |  |  |  |  |  |  |  |  | ON |
| Not Terminated |  |  |  |  |  |  |  |  |  | OFF |

Table E. Switch Settings for SW1, P-Type Control
NOTE: For Coaxitron controls, SW1 is not used; set all switches OFF. For D-type control systems, refer to Table F.

| SPECTRA |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |$\quad$ SW1-1 $\quad$ SW1-2 $\quad$ SW1-3 $\quad$ SW1-4 $\quad$ SW1-5


| SPECTRA | SWITCH SETTING |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | SW1-1 | SW1-2 | SW1-3 | SW1-4 | SW1-5 |
| 17 | OFF | OFF | OFF | OFF | ON |
| 18 | ON | OFF | OFF | OFF | ON |
| 19 | OFF | ON | OFF | OFF | ON |
| 20 | ON | ON | OFF | OFF | ON |
| 21 | OFF | OFF | ON | OFF | ON |
| 22 | ON | OFF | ON | OFF | ON |
| 23 | OFF | ON | ON | OFF | ON |
| 24 | ON | ON | ON | OFF | ON |
| 25 | OFF | OFF | OFF | ON | ON |
| 26 | ON | OFF | OFF | ON | ON |
| 27 | OFF | ON | OFF | ON | ON |
| 28 | ON | ON | OFF | ON | ON |
| 29 | OFF | OFF | ON | ON | ON |
| 30 | ON | OFF | ON | ON | ON |
| 31 | OFF | ON | ON | ON | ON |
| 32 | ON | ON | ON | ON | ON |

Table F. Switch Settings for SW1, D-Type Control
NOTE: For Coaxitron controls, SW1 is not used; set all switches OFF. For P-type control systems, refer to Table E.

| SPECTRA <br> ADDRESS | SWITCH SETTING |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | ON1-1 | SW1-2 | SW1-3 | SW1-4 | SW1-5 | SW1-6 | SW1-7 | SW1-8 |
| 2 | OFF | ON | OFF | OFF | OFF | OFF | OFF | OFF |
| OFF | OFF | OFF |  |  |  |  |  |  |
| 3 | ON | ON | OFF | OFF | OFF | OFF | OFF | OFF |
| 4 | OFF | OFF | ON | OFF | OFF | OFF | OFF | OFF |
| 5 | ON | OFF | ON | OFF | OFF | OFF | OFF | OFF |
| 6 | OFF | ON | ON | OFF | OFF | OFF | OFF | OFF |
| 7 | ON | ON | ON | OFF | OFF | OFF | OFF | OFF |
| 8 | OFF | OFF | OFF | ON | OFF | OFF | OFF | OFF |
| 9 | ON | OFF | OFF | ON | OFF | OFF | OFF | OFF |
| 10 | OFF | ON | OFF | ON | OFF | OFF | OFF | OFF |
| 11 | ON | ON | OFF | ON | OFF | OFF | OFF | OFF |
| 12 | OFF | OFF | ON | ON | OFF | OFF | OFF | OFF |
| 13 | ON | OFF | ON | ON | OFF | OFF | OFF | OFF |
| 14 | OFF | ON | ON | ON | OFF | OFF | OFF | OFF |
| 15 | ON | ON | ON | ON | OFF | OFF | OFF | OFF |


| SPECTRA <br> ADDRESS | SW1-1 | SW1-2 | SW1-3 | SW1-4 | SW1-5 | SW1-6 | SW1-7 | SW1-8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16 | OFF | OFF | OFF | OFF | ON | OFF | OFF | OFF |
| 17 | ON | OFF | OFF | OFF | ON | OFF | OFF | OFF |
| 18 | OFF | ON | OFF | OFF | ON | OFF | OFF | OFF |
| 19 | ON | ON | OFF | OFF | ON | OFF | OFF | OFF |
| 20 | OFF | OFF | ON | OFF | ON | OFF | OFF | OFF |
| 21 | ON | OFF | ON | OFF | ON | OFF | OFF | OFF |
| 22 | OFF | ON | ON | OFF | ON | OFF | OFF | OFF |
| 23 | ON | ON | ON | OFF | ON | OFF | OFF | OFF |
| 24 | OFF | OFF | OFF | ON | ON | OFF | OFF | OFF |
| 25 | ON | OFF | OFF | ON | ON | OFF | OFF | OFF |
| 26 | OFF | ON | OFF | ON | ON | OFF | OFF | OFF |
| 27 | ON | ON | OFF | ON | ON | OFF | OFF | OFF |
| 28 | OFF | OFF | ON | ON | ON | OFF | OFF | OFF |
| 29 | ON | OFF | ON | ON | ON | OFF | OFF | OFF |
| 30 | OFF | ON | ON | ON | ON | OFF | OFF | OFF |


| SPECTRA ADDRESS | SW1-1 | SWITCH SETTING |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | SW1-2 | SW1-3 | SW1-4 | SW1-5 | SW1-6 | SW1-7 | SW1-8 |
| 31 | ON | ON | ON | ON | ON | OFF | OFF | OFF |
| 32 | OFF | OFF | OFF | OFF | OFF | ON | OFF | OFF |
| 33 | ON | OFF | OFF | OFF | OFF | ON | OFF | OFF |
| 34 | OFF | ON | OFF | OFF | OFF | ON | OFF | OFF |
| 35 | ON | ON | OFF | OFF | OFF | ON | OFF | OFF |
| 36 | OFF | OFF | ON | OFF | OFF | ON | OFF | OFF |
| 37 | ON | OFF | ON | OFF | OFF | ON | OFF | OFF |
| 38 | OFF | ON | ON | OFF | OFF | ON | OFF | OFF |
| 39 | ON | ON | ON | OFF | OFF | ON | OFF | OFF |
| 40 | OFF | OFF | OFF | ON | OFF | ON | OFF | OFF |
| 41 | ON | OFF | OFF | ON | OFF | ON | OFF | OFF |
| 42 | OFF | ON | OFF | ON | OFF | ON | OFF | OFF |
| 43 | ON | ON | OFF | ON | OFF | ON | OFF | OFF |
| 44 | OFF | OFF | ON | ON | OFF | ON | OFF | OFF |
| 45 | ON | OFF | ON | ON | OFF | ON | OFF | OFF |
| 46 | OFF | ON | ON | ON | OFF | ON | OFF | OFF |
| 47 | ON | ON | ON | ON | OFF | ON | OFF | OFF |
| 48 | OFF | OFF | OFF | OFF | ON | ON | OFF | OFF |
| 49 | ON | OFF | OFF | OFF | ON | ON | OFF | OFF |
| 50 | OFF | ON | OFF | OFF | ON | ON | OFF | OFF |
| 51 | ON | ON | OFF | OFF | ON | ON | OFF | OFF |
| 52 | OFF | OFF | ON | OFF | ON | ON | OFF | OFF |
| 53 | ON | OFF | ON | OFF | ON | ON | OFF | OFF |
| 54 | OFF | ON | ON | OFF | ON | ON | OFF | OFF |
| 55 | ON | ON | ON | OFF | ON | ON | OFF | OFF |
| 56 | OFF | OFF | OFF | ON | ON | ON | OFF | OFF |
| 57 | ON | OFF | OFF | ON | ON | ON | OFF | OFF |
| 58 | OFF | ON | OFF | ON | ON | ON | OFF | OFF |
| 59 | ON | ON | OFF | ON | ON | ON | OFF | OFF |
| 60 | OFF | OFF | ON | ON | ON | ON | OFF | OFF |
| 61 | ON | OFF | ON | ON | ON | ON | OFF | OFF |
| 62 | OFF | ON | ON | ON | ON | ON | OFF | OFF |
| 63 | ON | ON | ON | ON | ON | ON | OFF | OFF |
| 64 | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF |
| 65 | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF |
| 66 | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF |
| 67 | ON | ON | OFF | OFF | OFF | OFF | ON | OFF |
| 68 | OFF | OFF | ON | OFF | OFF | OFF | ON | OFF |
| 69 | ON | OFF | ON | OFF | OFF | OFF | ON | OFF |
| 70 | OFF | ON | ON | OFF | OFF | OFF | ON | OFF |


| SPECTRA | SW1-1 | SWITCH SETTING |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | SW1-2 | SW1-3 | SW1-4 | SW1-5 | SW1-6 | SW1-7 | SW1-8 |
| 111 | ON | ON | ON | ON | OFF | ON | ON | OFF |
| 112 | OFF | OFF | OFF | OFF | ON | ON | ON | OFF |
| 113 | ON | OFF | OFF | OFF | ON | ON | ON | OFF |
| 114 | OFF | ON | OFF | OFF | ON | ON | ON | OFF |
| 115 | ON | ON | OFF | OFF | ON | ON | ON | OFF |
| 116 | OFF | OFF | ON | OFF | ON | ON | ON | OFF |
| 117 | ON | OFF | ON | OFF | ON | ON | ON | OFF |
| 118 | OFF | ON | ON | OFF | ON | ON | ON | OFF |
| 119 | ON | ON | ON | OFF | ON | ON | ON | OFF |
| 120 | OFF | OFF | OFF | ON | ON | ON | ON | OFF |
| 121 | ON | OFF | OFF | ON | ON | ON | ON | OFF |
| 122 | OFF | ON | OFF | ON | ON | ON | ON | OFF |
| 123 | ON | ON | OFF | ON | ON | ON | ON | OFF |
| 124 | OFF | OFF | ON | ON | ON | ON | ON | OFF |
| 125 | ON | OFF | ON | ON | ON | ON | ON | OFF |
| 126 | OFF | ON | ON | ON | ON | ON | ON | OFF |
| 127 | ON | ON | ON | ON | ON | ON | ON | OFF |
| 128 | OFF | OFF | OFF | OFF | OFF | OFF | OFF | ON |
| 129 | ON | OFF | OFF | OFF | OFF | OFF | OFF | ON |
| 130 | OFF | ON | OFF | OFF | OFF | OFF | OFF | ON |
| 131 | ON | ON | OFF | OFF | OFF | OFF | OFF | ON |
| 132 | OFF | OFF | ON | OFF | OFF | OFF | OFF | ON |
| 133 | ON | OFF | ON | OFF | OFF | OFF | OFF | ON |
| 134 | OFF | ON | ON | OFF | OFF | OFF | OFF | ON |
| 135 | ON | ON | ON | OFF | OFF | OFF | OFF | ON |
| 136 | OFF | OFF | OFF | ON | OFF | OFF | OFF | ON |
| 137 | ON | OFF | OFF | ON | OFF | OFF | OFF | ON |
| 138 | OFF | ON | OFF | ON | OFF | OFF | OFF | ON |
| 139 | ON | ON | OFF | ON | OFF | OFF | OFF | ON |
| 140 | OFF | OFF | ON | ON | OFF | OFF | OFF | ON |
| 141 | ON | OFF | ON | ON | OFF | OFF | OFF | ON |
| 142 | OFF | ON | ON | ON | OFF | OFF | OFF | ON |
| 143 | ON | ON | ON | ON | OFF | OFF | OFF | ON |
| 144 | OFF | OFF | OFF | OFF | ON | OFF | OFF | ON |
| 145 | ON | OFF | OFF | OFF | ON | OFF | OFF | ON |
| 146 | OFF | ON | OFF | OFF | ON | OFF | OFF | ON |
| 147 | ON | ON | OFF | OFF | ON | OFF | OFF | ON |
| 148 | OFF | OFF | ON | OFF | ON | OFF | OFF | ON |
| 149 | ON | OFF | ON | OFF | ON | OFF | OFF | ON |
| 150 | OFF | ON | ON | OFF | ON | OFF | OFF | ON |


| SPECTRA ADDRESS | SW1-1 | SW1-2 | SWITCH SETTING |  |  |  | SW1-7 | SW1-8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | SW1-3 | SW1-4 | SW1-5 | SW1-6 |  |  |
| 191 | ON | ON | ON | ON | ON | ON | OFF | ON |
| 192 | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON |
| 193 | ON | OFF | OFF | OFF | OFF | OFF | ON | ON |
| 194 | OFF | ON | OFF | OFF | OFF | OFF | ON | ON |
| 195 | ON | ON | OFF | OFF | OFF | OFF | ON | ON |
| 196 | OFF | OFF | ON | OFF | OFF | OFF | ON | ON |
| 197 | ON | OFF | ON | OFF | OFF | OFF | ON | ON |
| 198 | OFF | ON | ON | OFF | OFF | OFF | ON | ON |
| 199 | ON | ON | ON | OFF | OFF | OFF | ON | ON |
| 200 | OFF | OFF | OFF | ON | OFF | OFF | ON | ON |
| 201 | ON | OFF | OFF | ON | OFF | OFF | ON | ON |
| 202 | OFF | ON | OFF | ON | OFF | OFF | ON | ON |
| 203 | ON | ON | OFF | ON | OFF | OFF | ON | ON |
| 204 | OFF | OFF | ON | ON | OFF | OFF | ON | ON |
| 205 | ON | OFF | ON | ON | OFF | OFF | ON | ON |
| 206 | OFF | ON | ON | ON | OFF | OFF | ON | ON |
| 207 | ON | ON | ON | ON | OFF | OFF | ON | ON |
| 208 | OFF | OFF | OFF | OFF | ON | OFF | ON | ON |
| 209 | ON | OFF | OFF | OFF | ON | OFF | ON | ON |
| 210 | OFF | ON | OFF | OFF | ON | OFF | ON | ON |
| 211 | ON | ON | OFF | OFF | ON | OFF | ON | ON |
| 212 | OFF | OFF | ON | OFF | ON | OFF | ON | ON |
| 213 | ON | OFF | ON | OFF | ON | OFF | ON | ON |
| 214 | OFF | ON | ON | OFF | ON | OFF | ON | ON |
| 215 | ON | ON | ON | OFF | ON | OFF | ON | ON |
| 216 | OFF | OFF | OFF | ON | ON | OFF | ON | ON |
| 217 | ON | OFF | OFF | ON | ON | OFF | ON | ON |
| 218 | OFF | ON | OFF | ON | ON | OFF | ON | ON |
| 219 | ON | ON | OFF | ON | ON | OFF | ON | ON |
| 220 | OFF | OFF | ON | ON | ON | OFF | ON | ON |
| 221 | ON | OFF | ON | ON | ON | OFF | ON | ON |
| 222 | OFF | ON | ON | ON | ON | OFF | ON | ON |


| SPECTRA ADDRESS | SWITCH SETTING |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SW1-1 | SW1-2 | SW1-3 | SW1-4 | SW1-5 | SW1-6 | SW1-7 | SW1-8 |
| 223 | ON | ON | ON | ON | ON | OFF | ON | ON |
| 224 | OFF | OFF | OFF | OFF | OFF | ON | ON | ON |
| 225 | ON | OFF | OFF | OFF | OFF | ON | ON | ON |
| 226 | OFF | ON | OFF | OFF | OFF | ON | ON | ON |
| 227 | ON | ON | OFF | OFF | OFF | ON | ON | ON |
| 228 | OFF | OFF | ON | OFF | OFF | ON | ON | ON |
| 229 | ON | OFF | ON | OFF | OFF | ON | ON | ON |
| 230 | OFF | ON | ON | OFF | OFF | ON | ON | ON |
| 231 | ON | ON | ON | OFF | OFF | ON | ON | ON |
| 232 | OFF | OFF | OFF | ON | OFF | ON | ON | ON |
| 233 | ON | OFF | OFF | ON | OFF | ON | ON | ON |
| 234 | OFF | ON | OFF | ON | OFF | ON | ON | ON |
| 235 | ON | ON | OFF | ON | OFF | ON | ON | ON |
| 236 | OFF | OFF | ON | ON | OFF | ON | ON | ON |
| 237 | ON | OFF | ON | ON | OFF | ON | ON | ON |
| 238 | OFF | ON | ON | ON | OFF | ON | ON | ON |
| 239 | ON | ON | ON | ON | OFF | ON | ON | ON |
| 240 | OFF | OFF | OFF | OFF | ON | ON | ON | ON |
| 241 | ON | OFF | OFF | OFF | ON | ON | ON | ON |
| 242 | OFF | ON | OFF | OFF | ON | ON | ON | ON |
| 243 | ON | ON | OFF | OFF | ON | ON | ON | ON |
| 244 | OFF | OFF | ON | OFF | ON | ON | ON | ON |
| 245 | ON | OFF | ON | OFF | ON | ON | ON | ON |
| 246 | OFF | ON | ON | OFF | ON | ON | ON | ON |
| 247 | ON | ON | ON | OFF | ON | ON | ON | ON |
| 248 | OFF | OFF | OFF | ON | ON | ON | ON | ON |
| 249 | ON | OFF | OFF | ON | ON | ON | ON | ON |
| 250 | OFF | ON | OFF | ON | ON | ON | ON | ON |
| 251 | ON | ON | OFF | ON | ON | ON | ON | ON |
| 252 | OFF | OFF | ON | ON | ON | ON | ON | ON |
| 253 | ON | OFF | ON | ON | ON | ON | ON | ON |
| 254 | OFF | ON | ON | ON | ON | ON | ON | ON |

## Specifications

GENERAL
Construction
Back Box
Dome Drive
Lower Dome

Cage Thickness
Cage Color
Cable Entry (Back Box)
Pan Movement
Vertical Tilt
Manual Pan/Tilt Speeds* Pan

Tilt
Preset Speeds
Pan
Tilt
Environment
Operating Temperature
Weight (approximate)
Back Box
Dome Drive
Lower Dome
In-Ceiling
In-Ceiling with Cage

Aluminum
Aluminum, thermoplastic
Clear polycarbonate, 0.090-inch thick
$0.12 \times 0.30$-inch cast stainless steel
Black, for maximum discreetness
0.75 -inch conduit fitting
$360^{\circ}$ continuous pan rotation
$+2^{\circ}$ to $-92^{\circ}$
$0.1^{\circ}-80^{\circ} /$ sec manual operation, $150^{\circ} /$ sec turbo
$0.1^{\circ}-40^{\circ} /$ sec
$400^{\circ}$ sec
$200 \%$ sec
Indoor only
$32^{\circ}$ to $122^{\circ} \mathrm{F}\left(0^{\circ}\right.$ to $50^{\circ} \mathrm{C}$ )
$2.17 \mathrm{lb}(0.98 \mathrm{~kg})$
$3.3 \mathrm{lb}(1.48 \mathrm{~kg})$
$0.2 \mathrm{lb}(0.09 \mathrm{~kg})$
$1.6 \mathrm{lb}(0.73 \mathrm{~kg})$
$3.6 \mathrm{lb}(1.63 \mathrm{~kg})$

## ELECTRICAL (Dome Drive Only)

Input Voltage 18-32 VAC; 24 VAC nominal 22-27 VDC; 24 VDC nominal
Input Power
24 VAC 23 VA nominal (indoor, without heater)
24 VDC $\quad 0.7$ A nominal (indoor, without heater)
Fuse $\quad 1.25 \mathrm{~A}$
Auxiliary Outputs
2 (Spectra IV SE only)
Alarm Inputs 7 (Spectra IV SE only)


NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.
*For variable-speed operation an appropriate controller is required. With fixed-speed controllers, pan/tilt speed is $20^{\circ} / \mathrm{sec}$. The CM6700/CM6800 controller with the KBD200A keyboard has programmable fixed speeds.

[^0]
## PRODUCT WARRANTY AND RETURN INFORMATION

## WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment.

## Exceptions to this warranty are as noted below:

- Five years on FR/FT/FS Series fiber optic products and TW3000 Series unshielded twisted pair transmission products.
- Three years on Spectra ${ }^{\circledR}$ IV products.
- Three years on Genex ${ }^{\oplus}$ Series products (multiplexers, server, and keyboard).
- Three years on Camclosure ${ }^{\circledR}$ and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Three years on PMCL200/300/400 Series LCD monitors.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy ${ }^{\circledR}$, CM6700/CM6800/CM9700 Series matrix, and DF5/ DF8 Series fixed dome products.
- Two years on Spectra III $I^{T M}$, Esprit ${ }^{\oplus}$, ExSite ${ }^{\text {TM }}$, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit and WW5700 Series window wiper (excluding wiper blades).
- Two years (except lamp and color wheel) on Digital Light Processing (DLP ${ }^{\circledR}$ ) displays. The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, and Endura ${ }^{\text {™ }}$ Series distributed network-based video products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

## RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a $20 \%$ restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:

> Service Department
> Pelco
> 3500 Pelco Way
> Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:

If the goods are to be sent by a COURIER SERVICE, send the goods to:
Pelco
3500 Pelco Way
Clovis, CA 93612-5699 USA
If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:
Pelco c/o Expeditors
473 Eccles Avenue
South San Francisco, CA 94080 USA
Phone: 650-737-1700
Fax: 650-737-0933

## REVISION HISTORY

| Manual \# | Date | Comments |
| :--- | ---: | :--- |
| C3419M | $8 / 06$ | Original version. |



# Worldwide Headquarters <br> 3500 Pelco Way <br> Clovis, California 93612 USA 

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[^0]:    (Green The materials used in the manufacture of this document and its components are compliant to the requirements of Directive 2002/95/EC

    This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

