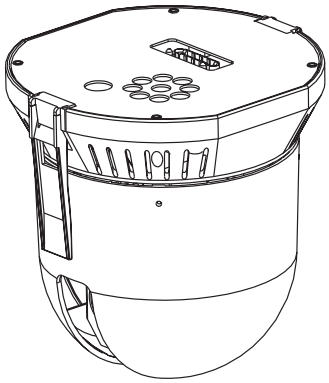

DD5TA Series
Dome Drive

Installation/
Operation Manual

C1498M-B (7/99)

Pelco • 300 W. Pontiac Way, Clovis • CA 93612-5699 USA • Pelco Online @ http://www.pelco.com
In North America and Canada: Tel (800) 289-9100 or FAX (800) 289-9150 • DataFAX (800) 289-9108
International Customers: Tel (1-559) 292-1981 or FAX (1-559) 348-1120 • DataFAX (1-559) 292-0435

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IMPORTANT SAFEGUARDS AND WARNINGS

Observe the following warnings before installing and using this product.

1. Installation and servicing should only be done by qualified service personnel and conform to all local codes.

2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.

3. Only use replacement parts Pelco recommends.

4. After replacing or repairing this unit's electrical components, measure the resistance between the line and exposed parts to verify the exposed parts have not been connected to line circuitry.

5. The installation method and materials should be capable of supporting four times the weight of the enclosure, pan and tilt, camera and lens combination.

The product and/or manual may bear the following marks:

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

CAUTION:
RISK OF ELECTRIC SHOCK. DO NOT OPEN.

Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

DESCRIPTION

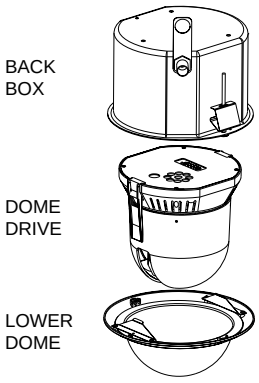

Figure 1. System Components (In-Ceiling Model Shown)

Dome drives in the DD5TA Series are part of the Spectra Lite™ dome system (refer to Figure 1). The dome drives can do the following:

- 360° pan rotation
- preset positioning
- +2 to -92° tilt
- variable speed

All dome drives include a color CCD camera with a 16X zoom lens and capability to focus when going to a preset position. An integral receiver has a switch to select the type of control. The receiver supports Coaxitron® and RS-422 control types. The dome operates on 24 VAC. The dome drive is quickly installed and removed from the back box without tools.

MODELS

DD5TAC	Dome drive with color camera and lens, NTSC standard (FCC, UL, cUL)
DD5TAC-X	Dome drive with color camera and lens, PAL standard (CE)

INSTALLATION

1. Turn on power to the back box. The red LED should light to indicate power. If the LED does not light, correct the trouble before proceeding. (Refer to the *Troubleshooting* section of the SD5 Series Spectra II™ and Spectra Lite™ Dome Installation/Operation manual.) If the light operates, you may either leave power on or turn it off before continuing the installation.

CAUTION: Make sure the dome drive locks into place. Pull down on the dome drive with moderate pressure to ensure that it stays in place.

2. Set the switches on the bottom of the dome drive. Refer to Table A for the settings for SW1, and Table B and Table C for SW2.

3. Install the dome drive in the back box. Line up the green tab and red tab on the dome drive with the green label and red label on the back box. Raise the dome drive into the back box and push on the ends of the tabs until they both click into place on the back box.

4. Turn on power, if it is not on. Listen for the fan operating. If the fan does not work, the dome will overheat and shut down. If the fan does not work, return the back box electronic assembly and dome drive to the factory for repair. Refer to the *Back Box Electronic Assembly Removal* section in manual C1487M-C.

Table A. Switch Settings for SW1

Control Type	Switch Setting							
	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
Coaxitron®	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF**
P-Type Control	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF**
D-Type Control	OFF	ON	OFF	OFF	OFF	OFF	OFF*	OFF**

NOTES: Switches SW1-3 through SW1-6 MUST be OFF.
D-type control is RS-422 that is compatible with Pelco's CM6700, MPT9500 and CM8500 controllers or with American Dynamics control systems using the AD2083 Translator.
P-type control is RS-422 that is compatible with Pelco's CM6700/CM9750/CM9760 control systems.
* OFF - Use with controllers that have more than 32 presets.
ON - Use with American Dynamics controllers (32 presets).
** OFF - Use with all control systems except CM9502 with variable speed keyboards.
For CM9502 with fixed speed keyboards, set switch OFF.
ON - Use with CM9502 with variable speed keyboards for smoother joystick control.

Table B. Switch Settings for SW2 – P-Type Control

NOTE: For Coaxitron® controls, SW2 is not used; set all switches OFF. For D-type control systems, refer to Table C.

Baud Rate	Switch Setting		
	SW2-6	SW2-7	SW2-8
2400	OFF	OFF	OFF
4800	ON	OFF	OFF
9600	OFF	ON	OFF

Receiver Address	Switch Setting				
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5
1	OFF	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF	OFF
3	OFF	ON	OFF	OFF	OFF
4	ON	ON	OFF	OFF	OFF
5	OFF	OFF	ON	OFF	OFF
6	ON	OFF	ON	OFF	OFF
7	OFF	ON	ON	OFF	OFF
8	ON	ON	ON	OFF	OFF
9	OFF	OFF	OFF	ON	OFF
10	ON	OFF	OFF	ON	OFF
11	OFF	ON	OFF	ON	OFF
12	ON	ON	OFF	ON	OFF
13	OFF	OFF	ON	ON	OFF
14	ON	OFF	ON	ON	OFF
15	OFF	ON	ON	ON	OFF
16	ON	ON	ON	ON	OFF
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 C. Switch Settings for SW2 – D-Type Control

NOTE: For Coaxitron® controls, SW2 is not used; set all switches OFF. For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	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
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
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

(Continued on next page)

Table C. Switch Settings for SW2 – D-Type Control (Continued)

NOTE: For Coaxitron® controls, SW2 is not used; set all switches OFF. For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
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
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF

(Continued on next page)

Table C. Switch Settings for SW2 – D-Type Control (Continued)

NOTE: For Coaxitron® controls, SW2 is not used; set all switches OFF. For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	**SW2-2**	**SW2-3**	**SW2-4**	**SW2-5**	**SW2-6**	**SW2-7**	**SW2-8**
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
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON

(Continued on next page)

Table C. Switch Settings for SW2 – D-Type Control (Continued)

NOTE: For Coaxitron® controls, SW2 is not used; set all switches OFF. For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
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
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON

(Continued on next page)

Table C. Switch Settings for SW2 – D-Type Control (Continued)

NOTE: For Coaxitron® controls, SW2 is not used; set all switches OFF. For P-type control systems, refer to Table B.

Receiver Address	Switch Setting							
	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
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

OPERATION

The red LED in the back box interconnect door lights when power is turned on, and the fan exhausts heat from inside the back box when the dome drive is installed. If you have an outdoor pendant model with a heater, heater elements in the back box turn on at 70°F (21°C) and off at 85°F (29°C). The heater element in the lower dome turns on at 40°F (4°C) and off at 60°F (16°C). The interconnect door fan and heater fans in the outdoor back box operate continuously.

POWER-UP DISPLAY

NOTE: The dome will stop operating if voltage at the dome drops below 18 VAC. It will turn back on and go through its start-up routine when the voltage exceeds 18 VAC.

When the dome is powered up or reset, the monitor displays the selected protocol, revision number, and other information, which remains until the dome moves. The information displayed depends on the selected protocol and the choice made on the menu for selectable power-up mode. As a default, the dome goes to a random position.

The control system protocol (C, D, or P) appears. C is for Pelco's Coaxitron® control system. D-type control is RS-422 compatible with Pelco's CM6700, MPT9500, and CM8500 controllers or with American Dynamics control systems using the AD2083 Translator. P-type control is RS-422 compatible with Pelco's CM6700 and CM9750/CM9760 control systems.

For D and P protocols, the device address, baud rate, parity (N), number of data bits (8), and number of stop bits (1) appears. For D protocol, "32 presets" appears if the 32-preset mode is selected (SW1-7 ON). "CM9500 mode" appears if CM9500 mode is selected (SW1-8 ON).

PAN AND TILT FUNCTIONS

Use your controller's joystick to control pan and tilt operation.

- Fixed-Speed Controllers – Pan and tilt operation is at a fixed speed; the controller determines the speed.
- Variable-Speed Controllers – Depending on the joystick's position, standard pan operation ranges from 0.5 to 80 degrees per second (dps); standard tilt operation ranges from 0.5 to 40 dps. When performing preset operations, pan speed is 250 dps; tilt speed is 200 dps. In turbo mode, pan speed is 150 dps, while turbo mode does not affect tilt speed.

AUTO FLIP

When the camera tilts down and just beyond vertical, the dome rotates 180 degrees. When the dome rotates (flips), the camera starts moving upward while you continue holding the joystick in the down position. Once you release the joystick after the dome rotates, joystick control returns to normal operation. Auto-flip is useful for following someone who passes directly beneath the camera. You can disable this feature in the auto flip programming menu.

SCAN SPEED

Scan speed is adjustable from 1 to 40 degrees per second through the programming menu.

ZOOM

The Spectra Lite™ dome can magnify an object up to 16 times (16X of optical zoom).

Zoom Telephoto – Press and hold down the Zoom Tele button or turn the joystick clockwise until you have the picture you want.

Zoom Wide – Press the Zoom Wide button or turn the joystick counterclockwise to increase the field of view.

PRESET FUNCTIONS

NOTE: For American Dynamics controllers with only 32 presets, set switch SW1-7 on the dome drive in the ON position. When SW1-7 is ON, preset

99 becomes 32
98 becomes 31
97 becomes 30
96 becomes 29
95 becomes 28
94 becomes 27
93 becomes 26
92 becomes 25
91 becomes 24
90 becomes 23

If the limit stops are turned off (refer to the Limit Stops *section), presets 23-26 can be used as regular presets.*

The Spectra Lite™ dome can go to 32 preset locations, each with a 20-character label. Presets are numbered 1-32. Refer to your control system documentation for programming presets.

When doing a preset operation, the amount of error in moving to the pan and tilt positions is 1/2 degree. You may get erratic operation if you command the dome to go to an undefined preset.

Presets 33 and 34 are fixed commands (you cannot program them). Preset 33 is the "flip" command, which pans the dome drive 180 degrees from its current position. Preset 34 is the "pan zero" command, which directs the dome drive to the factory-determined zero reference point. The following presets are reserved for special functions.

Preset	Function
1	Park
33	Flip command
34	Pan zero command
90-93	Limit stops
95	Select camera programming menu
96	Stop a scan
97-99	Activate scanning

In the following sections, sometimes a number in parentheses follows a preset. This second number is for 32-preset mode (conversion that lets Pelco's presets work with American Dynamics controllers). If you are using an American Dynamics controller, use the number in parentheses.

RANDOM, FRAME, AND AUTO SCANNING

Program preset 97 (30) to start random scanning. Program preset 98 (31) to activate frame scanning (three seconds of scanning followed by a three-second pause). Program preset 99 (32) to start auto (continuous) scanning.

Software controls scan limit stops. When the dome reaches one, it immediately reverses direction. Refer to the *Limit Stops* section to program the scan limit stops. Program preset 96 (29) to stop a scan. Any pan and tilt or lens command also stops a scan.

PARK

If the dome does not receive any commands for a specified period, it goes to preset 1 and parks. The dome will not park if the time specified is zero or preset 1 has not been programmed. The default is zero minutes.

PROGRAMMING THE SPECTRA LITE™

The dome can be programmed for the following functions:

AGC (automatic gain control)	Camera reset	Scan speed
Auto flip disable	Gain	Sharpness
Auto focus	Limit stops	Shutter speed
Auto park time	Power line synchronization	White balance
Backlight compensation	Power-up mode	

The main menu contains four secondary menus: Camera, Line Sync, Power Up, and Other. Each secondary menu has submenus, which are structured as follows:

1. Camera

First Camera Submenu	Second Camera Submenu
Backlight comp	Shutter speed
Reset camera	Auto focus mode
Gain/AGC	Sharpness
AGC mode	Sharpness
Gain	White balance
Auto-iris	Auto white bal
Auto-iris mode	White bal hue
Auto-iris level	Prev (to first camera submenu)
Next (to second camera submenu)	

2. Line Sync
   - Line sync
   - Line sync phase

3. Power Up
   - Power up

4. Other
   - Auto flip
   - Limit stops
   - Park time minutes
   - Scan speed deg/s

The following sections explain how to program the Spectra Lite™ dome using the menu choices.

MAIN MENU ACCESS

You can call up the main menu on your monitor by programming (setting or creating) preset 95 (28). Programming preset 95 for Pelco's controllers varies according to the type of controller you are using. Below are instructions for programming preset 95 for various Pelco controllers.

CM6700

1. Enter the number of the Spectra Lite™ camera and press the CAM key.
2. Enter 95 and hold the PRESET key for two seconds.
3. In the Edit Preset menu, arrow to SET and press the ACK key. The main menu appears.

CM8500

1. Enter the number of the Spectra Lite™ camera and press the CAM key.
2. Highlight PRESET in the Camera menu and hold down the joystick button until the Set Presets prompt appears.
3. Enter 95 and press the PRESET key. The main menu appears.

CM9500

1. Enter the number of the Spectra Lite™ camera and press the CAM key.
2. Press the SELECT key twice.
3. Highlight CAM in the Setup menu and press the SELECT key.
4. Highlight PRESET in the Camera menu and press the SELECT key.
5. Enter 95 and press the F1 key. The main menu appears.

CM9750

1. Turn the KEY SWITCH to the ON position.
2. Press the PROG key. PROGRAM appears on the LCD screen.
3. Press the PRES key. The PRESET prompt appears.
4. Enter 95 and press the ENTER key. The main menu appears.
5. Turn the KEY SWITCH to the OFF position.

CM9760

1. In the default menu, select DEF. The Define Submenu appears.
2. Enter your four-digit PIN.
3. Enter 95 and select PRST. The main menu appears on the monitor.
4. Select the Quit icon to return to the default menu.

MPT9500

Standard Coaxitron® Mode

1. Enter 95 and press the PRESET SET key.
2. Position the asterisk in the YES row and press the F1 key. The main menu appears.

Extended Coaxitron® or RS-485 Mode

1. Enter 95 and press the PRESET SET key.
2. Press the F2 key. The main menu appears.

BACKLIGHT COMPENSATION

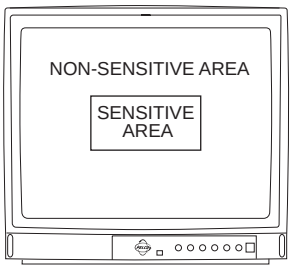

Figure 2. Backlight Compensation

The two backlight compensation modes are on and off. Backlight compensation lets the dome compensate for bright light behind the object you want to view. With backlight compensation ON, the dome uses only the center 10 percent of the picture for adjusting the iris (refer to Figure 2). A bright light source outside this area washes out to white. The camera adjusts the iris so the object in the sensitive area is properly exposed. To change the backlight compensation mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Backlight Comp.
4. Press the Iris Open button. The cursor moves to the right beside the word On or Off.
5. Move the joystick up or down to toggle between On and Off.
6. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

RESET CAMERA

Resetting the camera returns the following settings to their defaults.

Setting:	Default:
Auto-focus mode	Auto
Gain/AGC	
AGC mode	Auto
Gain	No default setting
Backlight comp	Off
Auto-iris	
Mode	Auto
Level	Default value depends on type of camera
Shutter speed	Auto
White balance	
Auto white balance	On
White balance hue	No default setting
Sharpness	
Sharpness	No default setting

The following settings are not reset when the camera is reset: park time, auto flip disable, and limit stops.

Turning off power to the dome does not reset the camera. Camera settings are retained in memory, and when power is restored, the settings are the same as when the camera was turned off.

To reset the camera:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Reset Camera.
4. Press the Iris Open button to reset the camera.

GAIN/AGC

AGC Mode

The two AGC (Automatic Gain Control) modes are auto and off.

- In auto mode, the dome automatically adjusts the gain–the amount of amplification the camera places on its video information to obtain a full 1-volt peak-to-peak video signal out. If the iris is manually opened to its wide-open position and the picture is weak, the AGC can be turned off and the gain increased manually to improve the picture. When you close the iris, the AGC turns back on automatically when the lens iris starts closing.

- In off mode, the AGC is off.

To change the AGC mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Gain/AGC.
4. Press the Iris Open button to enter the Gain/AGC submenu.
5. Move the joystick up or down to position the cursor beside AGC mode.
6. Press the Iris Open button. The cursor moves to the right beside the word Auto or Off.
7. Move the joystick up or down to choose between Auto or Off.
8. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

Gain

Gain adjusts the signal level of the video output. Increasing the gain in low light conditions increases the noise level in the picture. To change the gain:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Gain/AGC.
4. Press the Iris Open button to enter the Gain/AGC submenu.
5. Move the joystick up or down to position the cursor beside Gain.
6. Press the Iris Open button. The cursor moves to the right beside the current gain setting (a numeric value).
7. Move the joystick up or down to change the gain (making the picture on your monitor get brighter or darker).
8. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

AUTO IRIS

There are two settings for auto iris: mode and level.

To change the settings for auto iris:

1. Program preset 95 (28 if in 32-preset mode; refer to the *Preset Functions* section) to access the main menu (refer to the *Main Menu Access* section). The main menu will appear.
2. If the cursor (>) is not beside Camera, move the joystick up or down to position the cursor beside Camera.
3. Press the Iris Open button to enter the Camera submenu.
4. Move the joystick up or down to position the cursor beside Auto-Iris.
5. Press the Iris Open button. Another menu will appear with auto iris mode and level selections.

6. Move the joystick up or down to position the cursor beside one of the choices. Press the Iris Open button.

MODE – The cursor moves to one of two choices: Auto or Off. In the Auto mode, the iris is automatically adjusted to produce a constant video output as determined by the Level setting below. In the Off mode, auto iris is disabled, and control is always manual. Move the joystick up or down to toggle between Auto and Off. Press the Iris Open button to select the choice, or press the Iris Close button if you do not want to change the setting.

LEVEL – The cursor moves to a numeric value, which the Spectra Lite™ dome uses to try to maintain a certain light level. Changing the value of the Level setting will change the video level to which the auto iris adjusts. This setting should be adjusted if the video level in the auto iris mode is too bright or too dark. Move the joystick up or down to a value.

If auto iris is in the auto mode, it remains that way until you manually open or close the iris. The dome will return to auto iris when it is panned or tilted more than 15 degrees.

If there is not enough light for a good picture when the iris is wide open, you can increase the gain of the camera to improve the picture. To do this:

1. Hold down the Iris Open button until the iris is wide open.

2. Release the button.

3. Within one second, hold down the button again. This will start increasing the camera gain. Hold down the button until you get a desirable picture or reach the maximum gain.

SHUTTER SPEED

There are seven electronic shutter speeds:

Auto	1/125	1/500
1/1,000	1/2,000	1/4,000
1/10,000		

In the Auto setting the camera controls the shutter speed automatically. Increasing the shutter speed lowers the light sensitivity, but rapidly moving objects will be less blurred as the speed is increased. To change the electronic shutter speed settings:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Next.
4. Press the Iris Open button to go to the next camera submenu.
5. Move the joystick up or down to position the cursor beside Shutter Speed.
6. Press the Iris Open button. The cursor moves to the right beside the current shutter speed.
7. Move the joystick up or down to choose the shutter speed.
8. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

AUTO-FOCUS MODE

The two auto-focus modes are auto and off.

- If auto focus is in auto mode, pressing the Focus Near or Focus Far button places the focus in manual mode. The dome returns to auto focus if you pan or tilt the unit or do a zoom function.

- If auto focus is set to off, the dome operates in manual mode with one exception. If you issue a command to go to a preset, auto focus turns on and remains on until you press the Focus Near or Focus Far button.

To change the mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Next.
4. Press the Iris Open button to go to the next camera submenu.
5. Move the joystick up or down to position the cursor beside Auto-Focus Mode.
6. Press the Iris Open button. The cursor moves to the right beside the word Auto or Off.
7. Move the joystick up or down to toggle between Auto and Off.
8. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

SHARPNESS

To manually adjust the picture sharpness:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Next.
4. Press the Iris Open button to go to the next camera submenu.
5. Move the joystick up or down to position the cursor beside Sharpness.
6. Press the Iris Open button to move the cursor to the right beside the value.
7. Move the joystick up or down to a value. As you change the value, you can see the sharpness change. Press the Iris Open button to select the value, or press the Iris Close button if you do not want to change the setting.

WHITE BALANCE

The two white balance settings are auto and white balance hue. To change the white balance setting:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Camera.
2. Press the Iris Open button to enter the Camera submenu.
3. Move the joystick up or down to position the cursor beside Next.
4. Press the Iris Open button to go to the next camera submenu.
5. Move the joystick up or down to position the cursor beside White Balance.
6. Press the Iris Open button. Another menu appears with the auto and white balance hue selections.
7. Move the joystick up or down to position the cursor beside one of the choices. Press the Iris Open button.

AUTO WHITE BALANCE – Move the joystick up or down to toggle between the Auto and Off choices. Press the Iris Open button to select one, or press the Iris Close button if you do not want to change the setting.

WHITE BALANCE HUE – Adjust the color by moving the joystick up or down to a value between 1 (blue end of the spectrum) and 99 (red end). Hold the joystick up or down to fast forward or fast reverse through the values. As you change the value you can see the color change on your monitor. Press the Iris Open button to select the value, or press the Iris Close button if you do not want to change the setting. If Auto White Balance is on, it changes to off when you select a new value.

LINE SYNCHRONIZATION

You can turn line synchronization on or off.

- If it is on, you can adjust the synchronization of the power line voltage so it is in phase with other cameras. If cameras are out of phase with each other, they may produce what appears to be vertical roll when switching between cameras.
- If it is off, the dome synchronizes to an internal clock.

To change the line synchronization settings:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Line Sync.

2. Press the Iris Open button. Another menu appears with the Line Sync and Line Sync Phase selections.

3. Move the joystick up or down to position the cursor beside one of the choices.

LINE SYNC – Move the joystick up or down to toggle between On and Off. Press the Iris Open button to select the choice. If you changed to Off, the camera may reset itself as it adjusts to the new synchronization. If the camera resets, it only affects line synchronization–it will not change any other camera parameters, such as auto focus or auto iris. Press the Iris Close button if you do not want to change the setting.

LINE SYNC PHASE – Move the joystick up or down to change the numeric value. The value represents the phase angle in tenths of a degree between 0 and 350 degrees (for example, 900 is 90 degrees; 2400 is 240). Press the Iris Open button to select your choice. The Line Sync setting will change to On. The camera may reset or the picture on your monitor may wiggle when you change the phase angle. If the camera resets, it only affects line synchronization–it will not change any other camera parameters, such as auto focus or auto iris. Press the Iris Close button if you do not want to change the setting.

POWER-UP MODE

This feature lets the dome resume a desired condition following power-up. The menu includes the following choices:

- Default – On power-up, the dome goes through a configuration cycle and stops at zero reference, showing “Configuration Done,” address, and mode settings on the screen.

- Park – The dome moves to preset 1 when the power-up sequence finishes. The only text on the screen is the preset label (if any).

- Scan Auto – The dome initiates scan mode when the power-up sequence finishes. Again, there is no text.

- Scan Frame – The dome initiates a frame scan when the power-up sequence finishes.

- Scan Rand – The dome initiates a random scan when the power-up sequence finishes.

The default setting is Default. To select the power-up mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Power Up Mode.

2. Press the Iris Open button to enter the Power Up Mode submenu.

3. Press the Iris Open button to move the cursor to the right.

4. Move the joystick up or down to cycle through the selections. Stop on the item you want to select.

5. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

AUTO FLIP

The two auto flip modes are on (auto flip enabled) or off (feature disabled). To change the auto flip mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Other.
2. Press the Iris Open button to enter the Other submenu.
3. Move the joystick up or down to position the cursor beside Auto Flip.
4. Press the Iris Open button. The cursor moves to the right beside the word On or Off.
5. Move the joystick up or down to toggle between On and Off.
6. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

LIMIT STOPS

The two types of limit stop are manual and scan. When manual limit stops are set, a manual (joystick) pan operation stops when a limit is reached. When scan limit stops are set, the dome reverses direction during random, frame, and auto scanning when a limit stop is reached. Software controls limit stops. To set limit stops:

1. Turn on limit stop mode.
2. Program the limit stops.

Turning Limit Stops On or Off

To change the limit stop mode:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Other.
2. Press the Iris Open button to enter the Other submenu.
3. Move the joystick up or down to position the cursor beside Limit Stops.
4. Press the Iris Open button. The cursor moves to the right beside the word On or Off.
5. Move the joystick up or down to toggle between On and Off.
6. SELECT – Press the Iris Open button to select your choice.
   CANCEL– Press the Iris Close button if you do not want to change the setting.

Programming Limit Stops

MANUAL LIMIT STOPS

NOTE: Programming preset 90 (23) disables the manual limit stops until preset 91 (24) is set.

Refer to the documentation for your control system for programming presets, then do the following:

1. Make sure limit stops are turned ON (refer to the *Limit Stops* section), then exit the menu.
2. Push the joystick left until you reach the limit you want the camera to go to on the left.
3. Program preset 90 (23).
4. Push the stick right to the limit you want the camera to go to on the right.
5. Program preset 91 (24).

Setting presets 90 (23) and 91 (24) to the same point disables manual limit stops.

SCAN LIMIT STOPS

NOTE: On power-up, the auto scan tilt angle will be whatever angle the camera was at when the right scan limit was set.

Refer to the documentation for your control system for programming presets, then do the following:

1. Make sure limit stops are turned ON (refer to the *Limit Stops* section), then exit the menu.
2. Push the joystick left until you reach the limit you want the camera to go to on the left.
3. Program preset 92 (25).
4. Push the joystick right to the limit you want the camera to go to on the right.
5. Program preset 93 (26).

Setting presets 92 (25) and 93 (26) to the same point disables scan limit stops.

PARK TIME MINUTES

NOTE: Preset 1 must be programmed for the dome to park.

This feature parks the dome at preset 1 after a programmed number of minutes of control inactivity. You can set the time from 1 to 720 minutes (12 hours). Setting the time to zero disables this feature. To change the park time:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Other.
2. Press the Iris Open button to enter the Other submenu.
3. Move the joystick up or down to position the cursor beside Park Time Minutes.
4. Press the Iris Open button. The cursor moves to the right beside the current park time.
5. Move the joystick up or down to change the park time.
6. SELECT – Press the Iris Open button to select your choice.
   CANCEL – Press the Iris Close button if you do not want to change the setting.

SCAN SPEED

Scan speed is adjustable from 1-40 degrees per second, and occurs in three scan modes: auto, random, and frame. To change the scan speed:

1. On the main menu, move the joystick up or down to position the cursor (>) beside Other.

2. Press the Iris Open button to enter the Other submenu.

3. Move the joystick up or down to position the cursor beside Scan Speed deg/s.

4. Press the Iris Open button. The cursor moves to the right beside the current number of degrees.

5. Move the joystick up or down to toggle through the number of degrees (1-40) until you reach the number you want. (If set on a low number, the scan will appear to barely move but is still functioning.)

6. SELECT – Press the Iris Open button to select your choice.
CANCEL – Press the Iris Close button if you do not want to change the setting.

TROUBLESHOOTING

NOTE: The dome drive contains no user-serviceable parts. If there is a problem with the dome drive, return it to Pelco as a complete unit for servicing.

Symptom: Unit or fan does not operate.

1. Make sure your controller is trying to communicate with the unit and not another camera.

2. Turn off power.

3. Remove the lower dome:

   In-Ceiling Models – Insert the flat blade of a screwdriver into one of the slots on the trim ring and twist the screwdriver to pop loose the trim ring and lower dome.

   Pendant Models – Remove the two screws that hold the trim ring to the back box. Insert the flat blade of a screwdriver into one of the slots on the trim ring and twist the screwdriver to free the lower dome from the back box.

4. Remove the dome drive: Push in on the green drive eject tab on the side of the dome drive and gently rock the dome drive to release the latch. When the green latch releases, pull the dome down.

5. Do one of the following:

   - If your problem was that the unit would not operate: Proceed to step 6.

   - If your problem was that the fan would not operate: Make sure the connector for the fan is fully seated. Replace the dome drive. Turn on power. If the fan does not operate, return the back box electronic assembly and dome drive to the factory for repair. Refer to the *Back Box Electronic Assembly Removal* section.

6. Turn on power.

7. If the red power LED on the door of the interconnect circuit board in the back box does not light, turn off power.

   a. Open the door to the interconnect circuit board and check the fuse (located next to the fan). If bad, replace it (Pelco part number FUS1.6-5X20FAST). This is a 1.6-ampere fuse, 5 x 20 mm, fast blow.

   b. If the fuse is good, turn on power and use a voltmeter to check if 24 VAC is getting to the power connector on the interconnect circuit board (located next to the fuse).

   c. If there is 24 VAC to the power connector, turn off power and return the back box electronic assembly to the factory for repair. Refer to the *Back Box Electronic Assembly Removal* section.

   d. If there is no voltage at the power connector, check your power supply.

8. If the red power LED is lit, turn off power.

   a. Open the door to the interconnect circuit board and check that all connectors are fully seated.

   b. Make sure the wiring is correct between the unit and controller.

   c. Close the door. Check the switch settings on the dome drive (refer to Tables A, B, and C) and reinstall the dome drive.

   d. Turn on power. If the unit still does not operate, turn off power and replace the dome drive with a unit that is good, if you have a spare. Check the switch settings on the substitute dome drive before installing it. If you do not have a spare, return the dome drive to the factory. Also return the back box electronic assembly. Refer to the *Back Box Electronic Assembly Removal* section.

   e. If you substituted a dome drive, turn on power. If the unit operates, the original dome drive is bad. Return it to the factory. If the unit still does not operate, then the interconnect board is bad. Return the back box electronic assembly to the factory. Refer to the *Back Box Electronic Assembly Removal* section.

BACK BOX ELECTRONIC ASSEMBLY REMOVAL

1. Turn off power.

2. Open the interconnect door and disconnect all wiring to the back box.

3. Use an 11/32 socket driver to remove the three 8-32 washers and nuts that hold the electronic assembly to the back box. When you remove the screws the interconnect back box receptacle will drop down. You may have to move the open interconnect door past 90 degrees vertical toward the side of the back box to release the door from the built-in grounding strip (and free the interconnect back box receptacle).

4. Remove the interconnect back box receptacle with the electronic components from the back box.

SPECIFICATIONS

MECHANICAL

Pan Movement:	360° continuous pan rotation	
Vertical Tilt:	Unobstructed +2° to -92°	
Manual Pan Speed:	0.5°-80°/sec manual operation, 150°/sec turbo	
Manual Tilt Speed:	0.5°-40°/sec	
Preset Speeds:	Pan	250°/sec
	Tilt	200°/sec
Fixed-Speed Controller:	Pan	30°/sec
	Tilt	12°/sec

CAMERA

Signal Format:	NTSC (Spectra Lite™ model DD5TAC)	
	PAL (Spectra Lite™ model DD5TAC-X)	
Scanning System:	2:1 interlace	
Image Sensor:	1/4-inch interline transfer	
Effective Pixels:	NTSC	510 (H) x 492 (V)
	PAL	500 (H) x 582 (V)
Resolution:	NTSC	350 TV lines
	PAL	350 TV lines
Lens		
Minimum f-stop:	F/1.6	
Focal Length:	3.9 mm to 63 mm optical	
Zoom Ratio:	16X optical zoom	
Horizontal Angle of View:	44° (at 3.9 mm wide zoom), 3° (at 63 mm telephoto zoom)	
MTBF:	>1 million cycles at room temperature (zoom, focus, iris)	
Focus:	Automatic with manual override and preset capability	

Sensitivity:	1 lux at f1.6 at signal level of 40 IRE, gain high (AGC on)
Signal Process:	DSP-3R
Sync System:	AC line lock
White Balance:	Automatic with manual override*
Shutter Speed:	Automatic (electronic iris)/manual
	NTSC 1/60 – 1/10,000*
	PAL 1/50 – 1/10,000*
Iris Control:	Automatic with manual override*
Gain Control:	Automatic with manual override*
Video Output:	.714 V ±.07 V (100 IRE ±10 IRE)
Signal to Noise:	>46 dB

* Manual control over camera setup functions depends on the head end and is not available on all control models.

(Design and product specifications subject to change without notice.)

REGULATORY NOTICES

This equipment has been tested and found to comply with the limits of 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 own expense.

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:

- Three years on Genex™ Series (multiplexers, server, and keyboard).
- Two years on all standard motorized and fixed focal length lenses.
- Two years on Esprit™, Legacy®, Intercept®, PV1000 Series, CM6700/CM8500/CM9500/CM9750/CM9760 Matrix, Spectra®, DF5 Series and DF8 Fixed Dome products.
- Two years on WW5700 series window wiper (excluding wiper blades).
- Two years on cameras.
- 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.

Ship freight prepaid to: Pelco
300 West Pontiac Way
Clovis, CA 93612-5699

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). Goods returned for repair or credit should be clearly identified with the assigned CA/RA number and freight should be prepaid. All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Ship freight prepaid to: Pelco
300 West Pontiac Way
Clovis, CA 93612-5699

REVISION HISTORY

Manual #	Date	Comments
C1498M	2/99	Original version.
	3/99	Removed reference to line synchronization. Added material on auto iris. Added FCC notice.
C1498M-A	7/99	Revised the preset tilt speed from 100 to 200 degrees/second. Added model number and specifications for a PAL camera. Revised *Troubleshooting* section. Revised manual to new format.
C1498M-B	7/99	Changed camera zoom from 12X to 16X. Added line sync and auto focus features. Removed auto iris peak and auto sharpness options. Replaced R-B and M-G white balance options with white balance hue option. Revised camera specifications.