PELCO "P" PROTOCOL

GENERAL

This section describes the protocol used when sending commands to an Intercept Dome in the " P" version protocol. The protocol uses no parity, one start bit, eight data bits, and one stop bit. The recommended baud rate is 4800 (4800, 8, N, 1, 1).

MESSAGE FORMAT

Byte	Value	Function
1	$A0	STX (start transmission)
2	$00 to $1F	Address
3	Data byte 1	(see below)
4	Data byte 2	(see below)
5	Data byte 3	(see below)
6	Data byte 4	(see below)
7	$AF	ETX (end transmission)
8	$00-$FF	Check Sum

Byte 1 is always $A0
Byte 2 is the receiver address, set by DIP switch in the receiver
Byte 3-6, see below
Byte 7 is always $AF
Byte 8 is an XOR sum of Bytes 2-6

The protocol is " zero indexed" so that the hexadecimal address sent in the protocol for the first receiver is $00 which corresponds to address 1.

The bits within the " Data bytes" are broken up into two main groups. For Pan and Tilt commands, the functions are determined as follows:

PAN AND TILT COMMANDS

	Bit number							
	7	6	5	4	3	2	1	0
Data 1	0	Camera On	Autoscan On	Camera on / off	Iris Close	Iris Open	Focus Near	Focus Far
Data 2	0	Zoom Wide	Zoom Tele	Tilt Down	Tilt Up	Pan Left	Pan Right	0 (for pan / tilt)
Data 3	Pan Speed $00 to $3F and $40 for Turbo							
Data 4	Tilt Speed $00 to $3F							

EXTENDED COMMAND SET

The extended command set will have bit 0 of data byte 2 set and will follow the format in the following table:

Command	Data byte 1	Data byte 2	Data byte 3	Data byte 4
Set Preset XX	00	03	00	01 to FF
Clear Preset XX	00	05	00	01 to FF
Go To Preset XX	00	07	00	01 to FF
Flip (rotate 180º)	00	07	00	21
Zero Pan Position	00	07	00	22
Set Aux XX	00	09	00	01 to 08
Clear Aux XX	00	0B	00	01 to 08
Remote Reset	00	0F	00	00
Zone Start	00	11	00	01 to 08
Zone End	00	13	00	01 to 08
Write char to screen	00	15	0 to 28	0 to 7F
Clear Screen	00	17	00	00
Alarm Ack	00	19	00	01 to 08
Zone Scan On	00	1B	00	00
Zone Scan Off	00	1D	00	00
Pattern Start	00	1F	00	00
Pattern Stop	00	21	00	00
Run Pattern	00	23	00	00
Zoom Lens Speed	00	25	00	00 to 03
Focus Lens Speed	00	27	00	00 to 03

The receiver will respond with an ACK.

To accommodate features of new systems and maintain compatibility with our old systems, some functions have been added through the use of some of the unused preset functions. These are:

Preset Number	Function
99	Begin Auto-scan
98	Begin Frame Scan
97	Begin Random Scan
96	Stop Scan
95	Enter Menu Mode
94	Remote Reset
93	Set Right Limit Stop
92	Set Left Limit Stop
34	Home (return to 0 pan position)
33	Flip

Examples:

To SET PRESET 32 in the receiver with address 1, the command string (in Hexidecimal) would be:

A0 01 00 03 00 20 AF 17 (the last byte is the XOR sum of bytes 2 through 6)

To drive receiver with address 2 LEFT at half speed:

A0 02 00 04 00 1F AF 19