SCT-1019

CAMERA CONTROL CODE TRANSLATOR
AD MANCHESTER to PELCO RS-422 Ver. 1.51

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PRODUCT DESCRIPTION

The SCT-1019 is an American Dynamics to Pelco control code translator designed to permit control of Pelco cameras from AD controllers. It receives AD manchester format commands and transmits the appropriate commands in Pelco RS-422 format. There are four independent Pelco RS-422 outputs.

Internal switches are used to configure the code translator. The AD input can be set to work with fixed or variable speed AD controllers, and normal or reverse tilt operation. The Pelco outputs can be "D" code or "P" code at 4800 or 9600 baud with even or no parity. The AD addresses can be offset to groups of Pelco addresses.

Input and output connections are made with mating screw terminal connectors. Front panel LEDs indicate status of power, receive, and transmit.

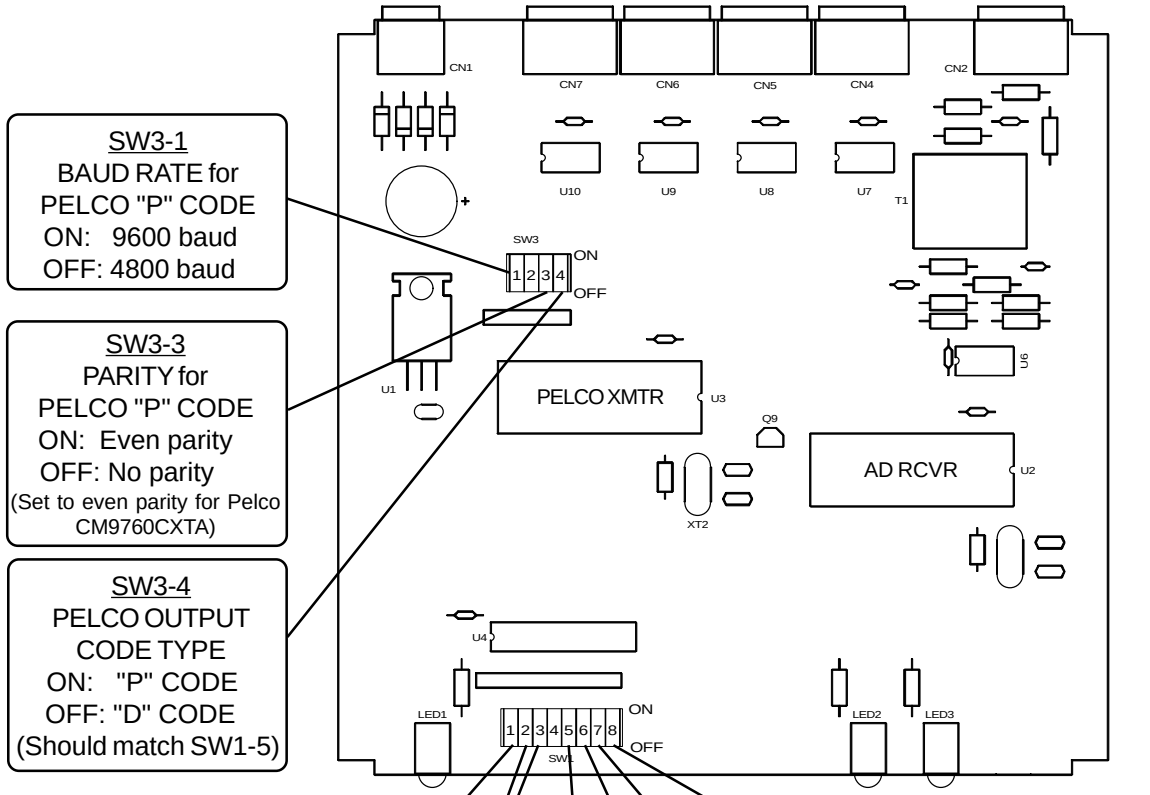
There is an optional 19" rack mount panel (one rack unit high).

SPECIFICATIONS

SIZE:	5.57"W x 1.52H x 5.45D
WEIGHT:	1.5 lbs.
POWER:	9Volt to 15Volt AC or DC at 75ma
INDICATORS:	Front panel LEDs: Power, Rx, & Tx
AD CONNECTION:	(1) mating 3-pin screw terminal connector
PELCO CONNECTIONS:	(4) mating 3-pin screw terminal connectors

SETTING THE SWITCHES

To set the configuration switches, remove the back panel, which is secured by two screws. Then slide the cover back to expose the switches. The switches can be changed while the code translator is powered up and the new settings will take effect immediately.



SW3-1
BAUD RATE for
PELCO "P" CODE
ON: 9600 baud
OFF: 4800 baud

SW3-3
PARITY for
PELCO "P" CODE
ON: Even parity
OFF: No parity
(Set to even parity for Pelco CM9760CXTA)

SW3-4
PELCO OUTPUT
CODE TYPE
ON: "P" CODE
OFF: "D" CODE
(Should match SW1-5)

SW1-1
AD CAMERA GROUP
for PELCO "P" CODE
ON: GROUP 2 (33 to 64)
OFF: GROUP 1 (1 to 32)
(This switch is ignored if SW1-5 is OFF)

SW1-2, SW1-3
AD GROUP SELECTION
for PELCO "D" CODE

SW2	SW3	BLOCK NO.
OFF	OFF	GROUP 1
ON	OFF	GROUP 2
OFF	ON	GROUP 3
ON	ON	GROUP 4

(These switches are ignored if SW1-5 is ON.)

SW1-5
PELCO ADDRESS
CODE TYPE
ON: "P" CODE
OFF: "D" CODE
(Should match SW3-4)

SW1-6
TURBO SPEED
ON: ENABLED
OFF: DISABLED

SW1-7
TILT SENSING
ON: Reverse tilt sensing
OFF: Normal tilt sensing

SW1-8
CONTROLLER TYPE
ON: Variable speed
OFF: Fixed speed

ADDRESS CONVERSION

These Charts show how the AD camera addresses will be converted to Pelco addresses based on the switch settings. If SW1-5 is ON for "P" Code, use the chart below.

If SW-5 is OFF for "D" Code, use the columns on the right. The AD manchester line addresses are grouped in blocks of 64. SW1-2 and SW1-3 determine the group number.

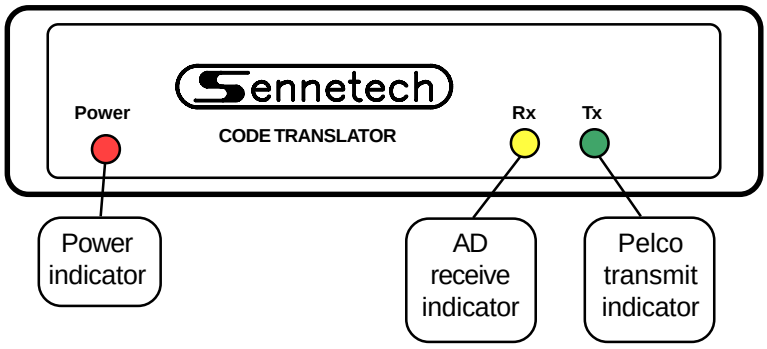
"P" CODE ADDRESS CONVERSION

GROUP1 (SW1-1 OFF)		GROUP2 (SW1-1 ON)	
AD#	PELCO#	AD#	PELCO#
1	1	33	1
2	2	34	2
3	3	35	3
4	4	36	4
5	5	37	5
6	6	38	6
7	7	39	7
8	8	40	8
9	9	41	9
10	10	42	10
11	11	43	11
12	12	44	12
13	13	45	13
14	14	46	14
15	15	47	15
16	16	48	16
17	17	49	17
18	18	50	18
19	19	51	19
20	20	52	20
21	21	53	21
22	22	54	22
23	23	55	23
24	24	56	24
25	25	57	25
26	26	58	26
27	27	59	27
28	28	60	28
29	29	61	29
30	30	62	30
31	31	63	31
32	32	64	32

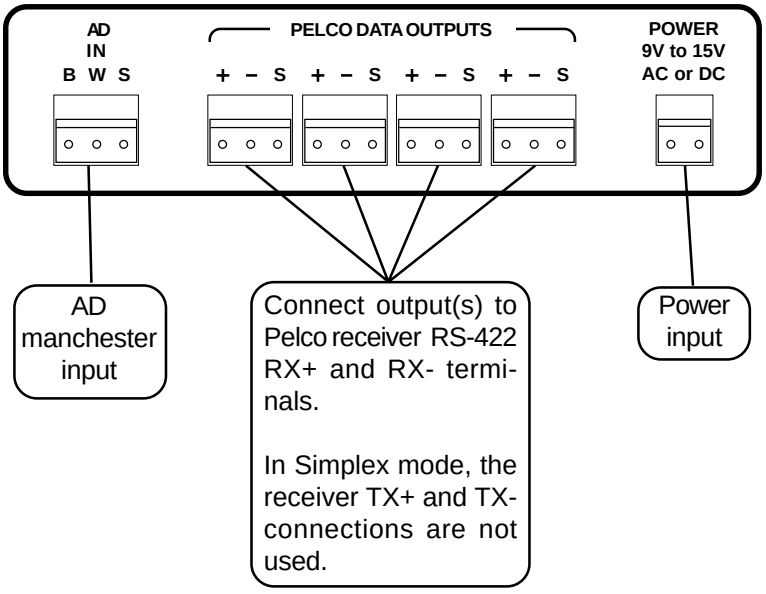
GROUP 1		GROUP 2		GROUP 3		GROUP 4	
AD#	PELCO#	AD#	PELCO#	AD#	PELCO#	AD#	PELCO#
1	1	1	65	1	129	1	193
2	2	2	66	2	130	2	194
3	3	3	67	3	131	3	195
4	4	4	68	4	132	4	196
5	5	5	69	5	133	5	197
6	6	6	70	6	134	6	198
7	7	7	71	7	135	7	199
8	8	8	72	8	136	8	200
9	9	9	73	9	137	9	201
10	10	10	74	10	138	10	202
11	11	11	75	11	139	11	203
12	12	12	76	12	140	12	204
13	13	13	77	13	141	13	205
14	14	14	78	14	142	14	206
15	15	15	79	15	143	15	207
16	16	16	80	16	144	16	208
17	17	17	81	17	145	17	209
18	18	18	82	18	146	18	210
19	19	19	83	19	147	19	211
20	20	20	84	20	148	20	212
21	21	21	85	21	149	21	213
22	22	22	86	22	150	22	214
23	23	23	87	23	151	23	215
24	24	24	88	24	152	24	216
25	25	25	89	25	153	25	217
26	26	26	90	26	154	26	218
27	27	27	91	27	155	27	219
28	28	28	92	28	156	28	220
29	29	29	93	29	157	29	221
30	30	30	94	30	158	30	222
31	31	31	95	31	159	31	223
32	32	32	96	32	160	32	224
33	33	33	97	33	161	33	225
34	34	34	98	34	162	34	226
35	35	35	99	35	163	35	227
36	36	36	100	36	164	36	228
37	37	37	101	37	165	37	229
38	38	38	102	38	166	38	230
39	39	39	103	39	167	39	231
40	40	40	104	40	168	40	232
41	41	41	105	41	169	41	233
42	42	42	106	42	170	42	234
43	43	43	107	43	171	43	235
44	44	44	108	44	172	44	236
45	45	45	109	45	173	45	237
46	46	46	110	46	174	46	238
47	47	47	111	47	175	47	239
48	48	48	112	48	176	48	240
49	49	49	113	49	177	49	241
50	50	50	114	50	178	50	242
51	51	51	115	51	179	51	243
52	52	52	116	52	180	52	244
53	53	53	117	53	181	53	245
54	54	54	118	54	182	54	246
55	55	55	119	55	183	55	247
56	56	56	120	56	184	56	248
57	57	57	121	57	185	57	249
58	58	58	122	58	186	58	250
59	59	59	123	59	187	59	251
60	60	60	124	60	188	60	252
61	61	61	125	61	189	61	253
62	62	62	126	62	190	62	254
63	63	63	127	63	191	63	255
64	64	64	128	64	192		

INSTALLATION

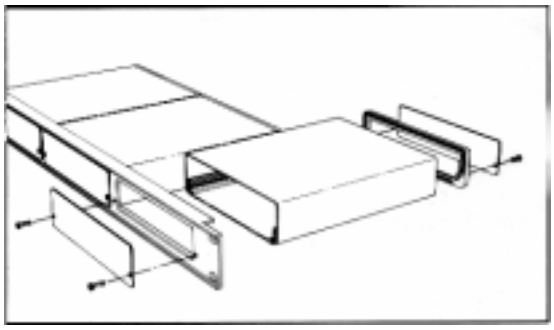
FRONT PANEL



REAR PANEL



To install the case on the rack mount frame, remove the front panel and the plastic bezel. The rack mount frame takes the place of the bezel as shown below.



SYSTEM NOTES

Which type of Pelco code to use depends on the particular application. Both AD manchester code and Pelco "P" code have address limitations.

If the code translator is to be connected to a CM9760CXT coaxitron generator, it must be set to send Pelco "P" code with even parity. The Pelco factory default setting is 4800 baud.
Two CM9760CXTs can be used with one code translator for control of 32 coaxitron cameras. (One connects to cameras 1~16, the other connects to cameras 17~32.)

If the application is to add new Pelco cameras to an existing AD system, either "P" or "D" code can be used. If Pelco SpectraDomes are configured for "P" code, the highest address they can be set to is 32. If they are configured for "D" code, they can be addressed up to 255. By using "D" code, a single translator can handle more cameras.

AD manchester code has an address limit of 64. The manchester code is grouped in blocks of 64. The first group is cameras 1~64, the second is cameras 65~128, and so on. For example, when data is sent to camera 65, it is actually addressed to camera 1. The data only appears on the second group of connections and that camera (camera 65) will have its address switches set to 1. AD is also capable of "psuedo" address numbers, where the number shown on the keyboard is different from the video matrix number. The camera control code address always matches the video matrix number that is switched to the monitor for that keyboard.

The input to the code translator will be addressed from 1 to 64, so 64 is the maximum number of cameras that can be controlled through one translator. For "P" code, the translator can be configured to convert addresses 1~32 to Pelco addresses1~32, or it can convert addresses 33~64 to 1~32.
If Switch 1-5 is ON, Switch 1-1 determines which of these will take place.

If Switch 1-5 is OFF for "D" code, the addresses will be converted in groups of 64. Normally, it would make sense to follow the AD practice of numbering the cameras in groups of 64, setting camera 65 to address 1, camera 66 to address 2, etc. In this case, configure the code translator for group 1 and the Pelco code addresses will match the manchester code addresses.

Configuring the address switches for a group other than group 1 can be practical some scenarios:

> There are system camera numbers above 64 and it is desired to have the camera address switches match the AD matrix input numbers.
>
> A new AD switch is being installed in a system with existing Pelco receivers addressed above 64 and it would be difficult to change the receiver address switches.

In these cases, the code translator can be configured to offset the addresses by groups of 64. Thus if the code translator is connected to manchester group 2 and it is configured for "D" code group 2, input address 1 will be converted to Pelco address 65, input address 2 will be converted to Pelco address 66, etc.

OPERATION

American Dynamics Pan, Tilt, Zoom, Focus, Iris, Aux, and pre-position commands 1 through 16 are converted to the equivalent Pelco commands. Other Pelco commands are sent according to the following table.

AD CMD	PELCO CMD	AD CMD	PELCO CMD
	(Pelco Aux Commands)		
Aux 1~3 Off	Aux 1~3 Off	Aux 1~3 On	Aux 1~3 On
Call Preset 18	Aux 4 Off	Set Preset 18	Aux 4 On
Call Preset 19	Aux 5 Off	Set Preset 19	Aux 5 On
Call Preset 20	Aux 6 Off	Set Preset 20	Aux 6 On
Call Preset 21	Aux 7 Off	Set Preset 21	Aux 7 On
Call Preset 22	Aux 8 Off	Set Preset 22	Aux 8 On
	(Pelco Extended Commands)		
Call Preset 23	Start Random Scan	Set Preset 23	Set Pan Left Limit
Call Preset 24	Start Frame Scan	Set Preset 24	Set Pan Right Limit
Call Preset 25	Start Auto Scan	Set Preset 25	Set Auto Scan Left Limit
		Set Preset 26	Set Auto Scan Right Limit
		Set Preset 28	Pgm Preset 28 (Some Pelco domes can use this command to start dome programming.)
Call Preset 30~33	Set Zoom Speed from 1~4		
Call Preset 34~37	Set Focus Speed from 1~4		
Call Preset 39	Zone Scan On		
Call Preset 40	Zone Scan Off		
Call Preset 41~48	Zone End 1~ 8	Set Preset 41~48	Zone Start 1~8
Call Preset 51~58	Alarm Acknowledge 1~8		
Call Preset 63	Goto Home Zero Pan Position		
Call Preset 64	Clear Screen	Set Preset 64	Camera On
Call Preset 65	Auto Iris	Set Preset 65	Reset Dome
Call Preset 66	Auto Focus	Set Preset 66	Activate On-screen Menu (Use Tilt to navigate and Iris Open to select options.)

The Pelco pattern can be recorded and run as either a full pattern or as two separate halves. To record a pattern, send the appropriate Set Preset command, move the dome to define the pattern, then send Set Preset 69 to end the recording.

		Set Preset 69	End of Pattern Recording
Call Preset 70	Run 1st Half Pattern	Set Preset 70	Record 1st Half Pattern
Call Preset 71	Run 2nd Half Pattern	Set Preset 71	Record 2nd Half Pattern
Call Preset 72	Run Full Pattern	Set Preset 72	Record Full Pattern