Chronelec Electronic Timing Systems

Protocol of the Chronelec decoder

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Contents

Introduction

Decoder uses following setting :
19200 baud, 8 databits, 1 stopbit, no parity, no handshake.

Decoder with RJ45 port :
Protocol UDP, source port 2008, remote port 2008.

To receive a passing, decoder must be started.
A transponder passing send by decoder must be acknowledged by PC.

If you don't ACK the passing received, decoder will not send next passing. It's a secure protocol to avoid passing lost.

If one passing is not ACK, decoder sends to the computer NACK command every second. You can get last passing with "Repeat last passing" command.

Decoder commands

Start decoder :
0x1B 0x07
(Escape+CTRL G)

Stop decoder :
0x1B 0x13 0x5C
(Escape+CTRL S+\)

Repeat last passing :
0x1B 0x12
(Escape+CTRL R)

ACK :
0x1B 0x11
(Escape+CTRL Q)
Inform decoder that you are ready to receive next passing.

Status decoder :
0x1B 0x05
(Escape+CTRL E)
You can get noise, time elapsed and level detection from decoder.

NACK :
0x07
(CTRL G)
Decoder send 0x07 to inform computer that 1 passing is not acknowledged.
You can repeat last passing to know which passing is not acknowledged.

Set time decoder (example 10:45:15) :
0x1B 0x48 0x0A 0x2D 0x0F 0x74

10=0x0A, 45=0x2D, 15=0x0F

Passing record

Example : <STA 006141 00:02'57"541 38 07 0 1569>

Index	Character	Informations
1	<	First character
2,3,4	STA,BOX, MAN,B01,B02…	Loop ID STA=Start loop, BOX=Pit loop, MAN=Manual B01=Intermediate 1, B02=Intermediate 2 … When you receive a manual passing, transponder number is 000000
5	[SPACE]	
6,7,8,9,10,11	000000 to 999999	Transponder number
12	[SPACE]	
13,14	00 to 99	Hours of passing
15	:	
16,17	00 to 59	Minutes of passing
18	‘	
19,20	00 to 59	Seconds of passing
21	“	
22,23,24	000 to 999	Milliseconds of passing
25	[SPACE]	
26,27	00 to 99	Max power of passing received 00=very low, 99=very high
28	[SPACE]	
29,30	01 to 99	Number of times seen in the loop
31	[SPACE]	
32	0 to 3	Battery power 0=100-75% 1=75-50% 2=50-25% 3=< 25%
33	[SPACE]	
34,35,36,37	0000 to 9999	Checksum Sum of ASCII character (index number 2 to 33) in decimal
38	>	Last character
39	CR	Carriage return
40	LF	Line feed

Status record

Example : [00h02'56" 25 00 20 20]

Index	Character	Informations
1	[	First character
2,3	00 to 99	Hours of time elapsed
4	h	
5,6	00 to 59	Minutes of time elapsed
7	‘	
8,9	00 to 59	Seconds of time elapsed
10	“	
11	[SPACE]	
12,13	00 to 99	Noise information on start loop 00=Noise very low 99=Noise very high Consider noise important if >30
14	[SPACE]	
15,16	00 to 99	Noise information on pit loop 00=Noise very low 99=Noise very high Consider noise important if >30
17	[SPACE]	
18,19	00 to 60	Sensitivity level of start loop 00=High detection 60=Low detection Allow to fix the height of detection transponder.
20	[SPACE]	
21,22	00 to 60	Sensitivity level of pit loop 00=High detection 60=Low detection Allow to fix the height of detection transponder.
23	]	Last character
24	CR	Carriage return
25	LF	Line feed