



SSC-16 Servo Bosrd Protocol

Using serial port:

Baudrate: 9600
 DataBits: 8
 StopBit: 1
 Parity bit: None

Real time Control Protocol:

PC → Board:

Name	Content	Bytes
Starting byte	0xFF	1
Servo Num ^[1]	0x00—0x0F	1
Angle data byte ^[2]	0x00—0xFD	1

注:

^[1]Servo Number: **0x00** means Servo in Port 1 ;

0x01 means Servo in Port 2 , etc.

^[2]Angle data byte : **0x00** means 0 degree , **0xFD** means 180 degree;

Formula: AngleDataByte = (0xFD/180)* Real Angle

Movements List download Protocol:

First, download the basic informations:

PC → Board:

Name	Content	Bytes	Memo
Starting bytes	0x7e 0x52	2	Fixed
Total Steps	0x01 - 0x1E	1	Fixed
Reserved	0x00	1	Fixed
Time between 2 steps (ms)	0xXX 0xXX	2	Translated ^[1]
Reserved	0x01	1	Fixed
Checksum	Sum up above	1	Translate ^[1]

注:

^[1] Translated: use **0x7d 0x5e** to replace **0x7e**;

use **0x7d 0x5d** to replace **0x7d**;

Samples:

Starting bytes	0x7e 0x52
10 steps	0x0a
reserved	0x00



1150ms between 2 steps	0x04 0x7e (translated to 0x04 0x7d 0x5e)
reserved	0x01
Checksum	0x5d sum up: 0x7e+0x52+0x0a+0x00+0x04+0x7e+0x01=0x15d only one byte(8 bits): 0x5d

Thus, 0x7e 0x52 0x0a 0x00 0x04 0x7d 0x5e 0x01 0x5d will be transmit

Board → PC (feedback):

Name	Content	Bytes	Memo
Starting bytes	0x7e 0x12	2	Fixed
Reserved	0x01	1	Fixed
Checksum	0x91	1	Fixed

Second, download the Data List:

PC → Board:

Name	Content	Bytes	Memo
Starting bytes	0x7e 0x53	2	Fixed
Step Number	0x01—0x1E	1	Fixed
Step data	0xXX	16	Translated
Checksum	Sum up above	1	Translated

Board → PC (feedback) :

Name	Content	Bytes	Memo
Starting bytes	0x7e 0x13	2	Fixed
Step Number	0x01—0x1E	1	Fixed
Checksum	Sum up above	1	Translated