# Turboo Communication Agreement V3.4

Default communication parameters:

RS232/RS485:

Baud rate：9600

Verification：nothing

Data bits：8

Stop bit：1

(The data in the following packets defaults to hexadecimal)
Every data package's length is fixed at 16 bytes, its interval is at least 5 seconds

Data package format as follows:

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SOI | RES | ADR_S | CID1 | CID2 | ADR_T | DLC | DATA | | | | | | | | CHK |
| baotou | reserve | | | | | | | | | | | | | | check |

SOI（Start Of Information）:Start Mark bit,fixed as AAH

RES：Reserved bytes (00~03),default is 00.

ADR_S：Source address, device address that sends data package(00~7F)

CID1：Control character is 1 (00~1F)

CID2：Control character 2 (00~1F)

ADR_T：Destination address, device address that sends data package(00~7F)

DLC：Data length(00~08)

DATA[8]：8 bytes' data area, is filled from left to right, the part that under 8 bytes can be filled with at will. The default fill is 00.

CHK: Accumulation and check bit (00~FF), is start from second byte RES of data package to data area. It's about 14 bytes' details that conduct cumulative sum and take low byte's data as proof test value.

Annotation:

The range of device address is 00~7F, 00 is broadcast address. When the device get the "00" order of destination address. It will give response accord with logical condition, otherwise it just give response to

the destination address and this device address order. The address “01” is used for upper computer software or third part device. So the device’s actual address range is 02~7F.

For example:(xx expresses device address, ss expresses checksum)

1. Checking online unit：CID1= 01 , CID2 = 01

| | | |
|---|---|---|
| Send CMD | AA 00 01 01 01 00 00 00 00 00 00 00 00 00 03 | Radio instruction |
| Respond | AA 00 xx 11 01 00 08 00 00 00 00 00 00 00 00 ss | |

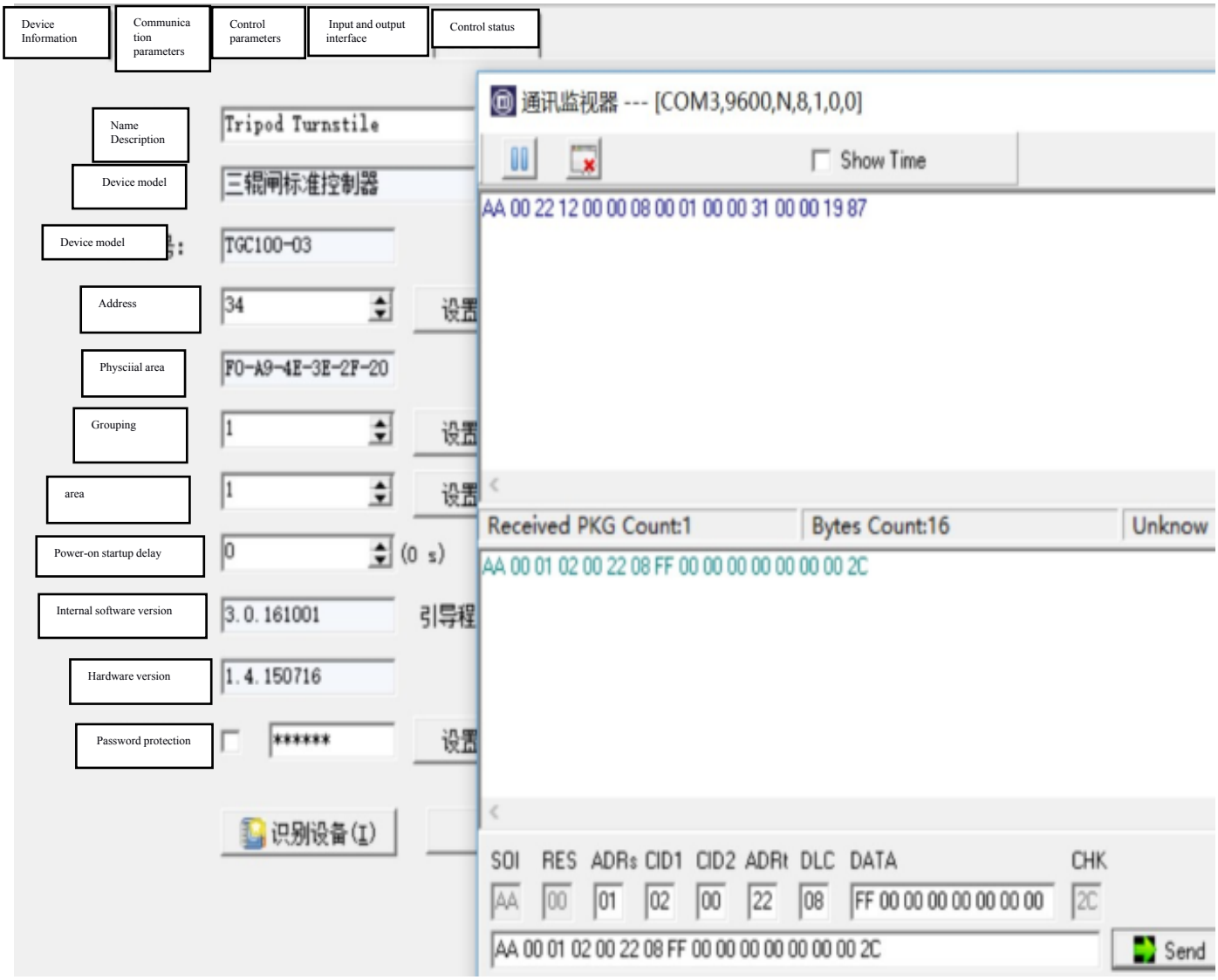
2.Setting the device address：CID1= 01 , CID2 = 05

| | | |
|---|---|---|
| Send CMD | AA 00 01 01 05 xx 01 yy 00 00 00 00 00 00 00 ss | xx is old device address，yy is new device address |
| Respond | AA 00 xx 11 05 00 01 yy 00 00 00 00 00 00 00 ss | |

3.Checking turnstile condition：CID1= 02 , CID2 = 00, DATA[0]=FF

| | | |
|---|---|---|
| Send CMD | AA 00 01 02 00 xx 08 FF 00 00 00 00 00 00 00 ss | |
| Respond | AA 00 xx 12 00 00 08 00 00 00 00 00 00 00 00 ss | turnstile status |

The last 6 digits of the data area are the number of people. EG:


Device Information
Communication parameters
Control parameters
Input and output interface
Control status
Name Description
Tripod Turnstile
Device model
三辊闸标准控制器
Device model
TGC100-03
Address
34
设置
Physciial area
F0-A9-4E-3E-2F-20
Grouping
1
设置
area
1
设置
Power-on startup delay
0
(0 s)
Internal software version
3.0.161001
引导程
Hardware version
1.4.150716
Password protection
******
设置
识别设备(I)
通讯监视器 --- [COM3,9600,N,8,1,0,0]
Show Time
AA 00 22 12 00 00 08 00 01 00 00 31 00 00 19 87
Received PKG Count:1
Bytes Count:16
Unknow
AA 00 01 02 00 22 08 FF 00 00 00 00 00 00 00 2C
SOI RES ADRs CID1 CID2 ADRt DLC DATA CHK
AA 00 01 02 00 22 08 FF 00 00 00 00 00 00 00 2C
Send


设备信息
通讯参数
控制参数
输入输出接口
状态&控制
刷新
闸机状态:
闸机已关闭(空闲)
最后执行的门控事件:
进向开闸
number of people who have already entered
49
number of people who have already passed
25
设置计数值
清除计数
清除进向
清除出向

4.Entry open door：CID1= 02 , CID2 = 00,DATA[0]=00,DATA[1]=00,DATA[2]=00(memory the quantity of person,Default 1 person)

| | | | |
|---|---|---|---|
| Send CMD | AA 00 01 02 00 xx | 08 00 00 00 00 00 00 00 00 ss | Radio instruction |
| Respond | AA 00 xx 12 00 00 | 08 00 00 00 00 00 00 00 00 ss | turnstile status |

After the device receives the instruction, it will open the gate. After the pedestrian passes, or the timeout does not pass, or receives the gate command, the gate will be closed.

5.Entry keep open door：CID1= 02 , CID2 = 00,DATA[0]=00,DATA[1]=01

| | | |
|---|---|---|
| Send CMD | AA 00 01 02 00 xx 08 00 01 00 00 00 00 00 00 ss | Radio instruction |
| Respond | AA 00 xx 12 00 00 08 00 00 00 00 00 00 00 00 ss | turnstile status |

After the device receives the command, it will open the gate and will not close the gate until it receives the gate command.

6.Enter close door: CID1=02,CID2 = 00, DATA[0]=00,DATA[1]=02

| | | | |
|---|---|---|---|
| Send CMD | AA 00 01 02 00 xx | 08 00 02 00 00 00 00 00 00 ss | Radio instruction |
| Respond | AA 00 xx 12 00 00 | 08 00 00 00 00 00 00 00 00 ss | turnstile status |

When gate receive this command, the entry of gate will be closed.

7.Exit open door：CID1= 02 , CID2 = 00,DATA[0]=00,DATA[1]=03,DATA[2]=00(memory the quantity of person,Default 1)

| | | |
|---|---|---|
| Send CMD | AA 00 01 02 00 xx 08 00 03 00 00 00 00 00 00 ss | Radio instruction |
| Respond | AA 00 xx 12 00 00 08 00 00 00 00 00 00 00 00 ss | turnstile status |

When gate receive this command, the exit of gate will be opened. And gate will be closed after people passing, not pass overtime or receive the close command.

8.Exit keep open door：CID1= 02 , CID2 = 00,DATA[0]=00,DATA[1]=04

| | | |
|---|---|---|
| Send CMD | AA 00 01 02 00 xx 08 00 04 00 00 00 00 00 00 ss | Radio instruction |
| Respond | AA 00 xx 12 00 00 08 00 00 00 00 00 00 00 00 ss | turnstile status |

When gate receive this command, the exit of gate will be opened. And the gate will be closed after receiving the close command.

9.Exit close door: CID1= 02 , CID2 = 00,DATA[0]=00,DATA[1]=05

| | | |
|---|---|---|
| Send CMD | AA 00 01 02 00 xx 08 00 05 00 00 00 00 00 00 ss | Radio instruction |
| Respond | AA 00 xx 12 00 00 08 00 00 00 00 00 00 00 00 ss | turnstile status |

When gate receive this command, the entry of gate will be closed.

10.The command analyze of gate status：CID1= 12 , CID2 = 00

| | | |
|---|---|---|
| Respond | AA 00 xx 12 00 00 08 00 00 00 00 00 00 00 00 ss | turnstile status |

DATA[0]: Gate status

00: Gate was closed(free)
01: Gate was closed(Fire alarm)
02: Gate was closed(power off)
03: Gate was opened(free)
04: Gate was opened(Fire alarm)
05: Gate was opened(manual)
06: Gate was opened(entry)
07: Gate was opened(exit)
08: Entry gate was closing
09: Exit gate was closing
0A: Entry gate was closing(Anti-pinch)
0B: Exit gate was closing (Anti-pinch)
0C: Entry gate was opening
0D: Exit gate was opening
0E: Entry manual open gate
0F: Exit manual open gate
00:
00:
00:
00:
00:
5F: Stranded alarm
60: Intrusion alarm
61: Reverse alarm
62: Tail alarm
63: External alarm
00:
FF: Power On Self Test

DATA[1]: The last action of gate

01: Entry open
02: Entry close
03: Exit open
04: Exit close
05: Equipment failure
06: External alarm
07: Firm alarm
08: Intrusion alarm
09: Reverse alarm
0A: Tail alarm
0B: Stranded alarm
0C: Reserve

DATA[2-4]: Already passed number for entry(00 00 00 ~ F4 24 00, Max 16,000,000)
DATA[5-7]: Already passed number for exit

Note：With default situation, the machine will report the status only after receiving control command , such as control signal for opening, the infrared sensor status changes. The gate will not report the machine status if the timeout time delay control ;If you enable "automatically report" function, at any time, the gate will report the status automatically when the machine status changes .

Note: Machine control command CID1 = 02, CID2 = 00, DATA [0] = 00, can Radio control ADR_T = 00, when broadcast on the radio control, can also be grouped, distributed control, DATA [6]group, 0 means any set of equipment can be executed, 1-255 means the specified set of equipment can be executed, DATA [7] prefix, 0 means any equipment code can be executed, 1-255 means the specified set of equipment can be executed.

11. Check the status of input interface: CID1= 02 , CID2 = 02,

| | | |
|---|---|---|
| Send CMD | AA 00 01 02 02 xx 01 00 00 00 00 00 00 00 00 ss | |
| Respond | AA 00 xx 12 02 00 08 00 00 00 00 00 00 00 00 ss | Status of input interface |

**Wing gate swing gate control panel:**

**DATA[0]=00(DATA[4]-DATA[7] represents voltage),**

**DATA[0]=01 (DATA[4]-DATA[7] represents current),**

DATA[0] bit0: IR1 The first set of infrared states (0 no one, 1 person)

DATA[0] bit1: IR2 second group infrared state (0 no one, 1 person)

DATA[0] bit2: IR3 third group infrared state (0 no one, 1 person)

DATA[0] bit3: SW1 heading open interface status (0 no signal, 1 signal)

DATA[0] bit4: SW2 outbound interface status (0 no signal, 1 signal)

DATA[0] bit5: Fire interface status (0 no signal, 1 signal)

DATA[0] bit6: Man. Interface status (0 no signal, 1 signal)

DATA[1] bit0: Motor 1 In-position signal 1 (0 no signal, 1 signal)

DATA[1] bit1: Motor 1 In-position signal 2 (0 no signal, 1 signal)

DATA[1] bit2: Motor 1 in-position signal 3 (0 no signal, 1 signal)

DATA[1] bit3: Motor 2 In-position signal 1 (0 no signal, 1 signal)

DATA[1] bit4: Motor 2 in-position signal 2 (0 no signal, 1 signal)

DATA[1] bit5: Motor 2 In-position signal 3 (0 no signal, 1 signal)

DATA[2]: 0x00

DATA[3]: 0x00

DATA[4-5]: Power supply voltage (00 00 ~ 00 FE) (0~254*100mv) or Motor 1 Current operating current (00 00 ~ 4E 20) (0~20,000ma)

DATA[6-7]: Battery voltage (00 00 ~ 00 FE) (0~254*100mv) or Motor 2 Current operating current (00 00 ~ 4E 20) (0~20,000ma)

**Encoder driver board: DATA[0] = 0x00,**

DATA[0] bit0: IR1 The first set of infrared states (0 no one, 1 person)

DATA[0] bit1: IR2 second group infrared state (0 no one, 1 person)

DATA[0] bit2: IR3 third group infrared state (0 no one, 1 person)

DATA[0] bit3: SW1 heading open interface status (0 no signal, 1 signal)

DATA[0] bit4: SW2 outbound interface status (0 no signal, 1 signal)

DATA[0] bit5: Fire interface status (0 no signal, 1 signal)

DATA[0] bit6: Man. Interface status (0 no signal, 1 signal)

DATA[1-3]: Motor speed

DATA[4-5]: The encoder detects the current position of the motor (00 00 ~ 01 67) (0~359 degrees)

DATA[6-7]: Current operating current of the motor (00 00 ~ 4E 20) (0~20,000ma)

**Three roller shutter:**

DATA[0]: DIP dialer switch

DATA[1]: SW1

DATA[2]: SW2

DATA[3]: POS

DATA[4]: EX_IO1

DATA[5]: EX_IO2

DATA[6]: DOWN-TEST

12. Set external alarm：CID1= 02 , CID2 = 00, DATA[0]=02, DATA[1]=01

| | | | |
|---|---|---|---|
| Send CMD | AA 00 01 02 00 xx | 08 02 01 00 00 00 00 00 00 ss | Radio instruction |
| Respond | AA 00 xx 12 00 00 | 08 00 00 00 00 00 00 00 00 ss | turnstile status |

When the device receive this command, the indicator light and buzzer are in external alarm state, generally will not change the door status. The Specific status of external alarm is according to the configuration before "event data" to perform.

13. Cancel external alarm：CID1= 02 , CID2 = 00, DATA[0]=02, DATA[1]=00

| | | | |
|---|---|---|---|
| Send CMD | AA 00 01 02 00 xx | 08 02 00 00 00 00 00 00 00 ss | Radio instruction |
| Respond | AA 00 xx 12 00 00 | 08 00 00 00 00 00 00 00 00 ss | turnstile status |

When the device receive this command，the gate will cancel external alarm，and back to default situation.

14.Set the gate mode:
CID1= 02 , CID2 = 06, DATA[0]= GateMode (gate mode 1-13<01-0D>)

| | | | |
|---|---|---|---|
| Send CMD | AA 00 01 02 06 xx | 01 GM 00 00 00 00 00 00 00 ss | Support broadcast |
| Respond | AA 00 xx 12 06 00 | 01 GM 00 00 00 00 00 00 00 ss | Gate status |

Check the gate mode: CID1 = 02, CID2 = 06,

| | | | |
|---|---|---|---|
| Send CMD | AA 00 01 02 06 xx | 00 00 00 00 00 00 00 00 00 s ss | Support broadcast |
| Respond | AA 00 xx 12 06 00 | 01 GM 00 00 00 00 00 00 00 ss | Gate status |

15. Read the Bluetooth module MAC: CID1 = 02, CID2 = 21, DATA[0] = 0X02
(Only the Bluetooth protocol conversion module is valid)

| | | | |
|---|---|---|---|
| Send CMD | AA 00 01 02 21 xx | 01 02 00 00 00 00 00 00 00 ss | |
| Respond | AA 00 xx 12 20 00 | 06 XX XX XX XX XX XX 00 00 ss | XX=MAC(6Byte) |

16. Bluetooth module communication test: CID1 = 02, CID2 = 21, DATA[0] = 0X01
(Only the Bluetooth protocol conversion module is valid)

| | | | | |
|---|---|---|---|---|
| **Send CMD** | **AA 00 01 02 21 xx 01 02 00 00 00 00 00 00 00 ss** | Support broadcast | | |
| **Respond** | **AA 00 xx 12 20 00 04 41 XX XX XX XX XX 00 00 ss** | | | |