

WBT-201 command protocol

Device mode	Function	Command	Distribution	
SET parameter to device				
Command Mode	Change device name	@AL,07,01,Device name	Length of Device name =< 20 character	
	Change device information	@AL,07,02,Device Information	Length of Device info. =< 20 character	
	Set Auto Sleep counter value	@AL,01,01,X	X: 0~3600 sec	
	Set Over Speed limit value	@AL,01,02,X	X: 0~3600 km/hr	
	Clear all log data	@AL,05,06		
	Cancel Read log	@AL		
	Read log	@AL,05,03,LogStartAddress	LogStartAddress:0~4095	
Set LOG Mode parameter				
Command Mode	Set LOG Mode	@AL,06,01,LogMode	LogMode: 0: disable LOG 1:by Heading change 2:by Speed Change 3:by Time Interval 4:by distance Interval 5:Mix (Distance & Time)	
	Set limit high speed	@AL,06,03,X	X:101~65535 km/hr	
	Set limit low speed	@AL,06,02,X	X:0~20 km/hr	
	Set low speed	@AL,06,05,X	X:0(& > limit low speed)~255(& < middle speed) km/hr	
	Set middle speed	@AL,06,06,X	X:0~255(& < high speed) km/hr	
	Set high speed	@AL,06,07,X	X:0~255(& < limit high speed) km/hr	

	Set heading mode interval	@AL,06,04,X	X:1~90 degree	
	Set time mode interval	@AL,06,13,X	X:1~65535 sec	
	Set distance mode interval	@AL,06,14,X	X:1~65535 meter	
	Set speed mode time interval of Low limit ~ Low	@AL,06,09,X	X:1~255 sec	
	Set speed mode time interval of Low ~ Middle	@AL,06,10,X	X:1~255 sec	
	Set speed mode time interval of Middle ~ High	@AL,06,11,X	X:1~255 sec	
	Set speed mode time interval of High ~ High Limit	@AL,06,12,X	X:1~255 sec	
Login				
Command Mode	Login (password)	@AL,'1'X @AL	'1': character '1' X: key in password (4 number)	
	Login (No-password)	@AL, @AL		
GPS Setting				
Bypass Mode	Cold Start	B5,62,06,04,04,00,FF,07,02,00,16,79	12 unsigned char (hexadecimal)	
	Warm Start	B5,62,06,04,04,00,01,00,02,00,11,6C	12 unsigned char (hexadecimal)	
	Hot Start	B5,62,06,04,04,00,00,00,02,00,10,68	12 unsigned char (hexadecimal)	
Switch different mode				
	Entry to Bypass Mode	@AL,02,01		
	Entry to	@AL		

	Command Mode			
GET setting parameter from device				
Command Mode	Get device name	@AL,07,01	Length of Device name =< 20 character	
	GET device information	@AL,07,02	Length of Device info. =< 20 character	
	GET Log Start Address	@AL,05,01		
	GET Log End Address	@AL,05,02		
	GET Log Start Area	@AL,05,09	Min. Log Start Address	
	GET Log End Area	@AL,05,10	Max. Log End Address	
	GET Auto Sleep counter value	@AL,01,01		
	GET Over Speed limit value	@AL,01,02		
Get LOG Mode parameter				
Command Mode	GET LOG Mode	@AL,06,01		
	GET limit high speed	@AL,06,03		
	GET limit low speed	@AL,06,02		
	GET low speed	@AL,06,05		
	GET middle speed	@AL,06,06		
	GET high speed	@AL,06,07		
	GET heading mode interval	@AL,06,04		
	GET time mode interval	@AL,06,13		
	GET distance mode interval	@AL,06,14		
	GET speed mode time	@AL,06,09		

	interval of Low limit ~ Low			
	GET speed mode time interval of Low ~ Middle	@AL,06,10		
	GET speed mode time interval of Middle ~ High	@AL,06,11		
	GET speed mode time interval of High ~ High Limit	@AL,06,12		
other				
	GET hardware version	@AL,08,01		
	GET software version	@AL,08,02		
	GET LOG version	@AL,08,03		

Read LOG produce:

1. Get LOG start address, LOG end address, LOG start area, LOG end area.
2. Calculate total log capacity (byte); total log point = total log capacity/16.
3. If total log capacity smaller than 4096, means that log data not full a section (4096kB) of memory. => readIndex=readCNT= total log capacity; else readIndex=readCNT=4096. Current_LOG_Point= LOG start address. Open one template .tk1 file.
4. Send read log command (Current_LOG_Point) to WBT201.
5. Read log data from comport that connect with WBT201 (read readIndex bytes one time); if more than 3 sec, not get any data, please check whether login or not. If not please login first. If already login please exit or re-send read log command (Current_LOG_Point) to WBT201 and repeat step 5.
6. If step 5 is finish, continue read check sum (1 unsigned char) (this section) from

- comport, then check the value and the check sum that calculate by receiver data (xor all receiver data) whether the same or not. If the same go to step 7; If not the same, re-send read log command (Current_LOG_Point) and repeat step 5, 6.
7. Finish step 6; Write all receiver data to template tk1 file. Calculate total check sum (2 unsigned char: CKA and CKB); $CKA = (CKA \text{ xor all receiver data})$, $CKB = (CKB \text{ xor CKA})$;
Then let $Current_LOG_Point = Current_LOG_Point + 4096$;
If $((Current_LOG_Point) > LOG \text{ end area})$, $Current_LOG_Point = LOG \text{ start area}$. And check If $(Current_LOG_Point < LOG \text{ end address})$ &
 $((Current_LOG_Point + 4096) \geq LOG \text{ end address})$ means that is the last section, $readIndex = readCNT = (LOG \text{ end address} - G_CurrentSectionPoint)$; otherwise $readIndex = readCNT = 4096$; send read log command (Current_LOG_Point).
 8. Repeat step 5~7, until read down all log data.