TC0376

PROTOCOL

OF SERIAL INTERFACE

BAUDRATE: 9600
PARITY: none
DATA BITS: 8
STOP BITS: 1

For more information about our products and
services, please send us an email
cs@perfectprime.com

PerfectPrime®

Note: you have to send 8 byte to meter, for example, if you want to send
A comand, the format will be 0x02 0x41 0x00 0x00 0x00 0x00 0x00 0x03

USB command	function	note
A(ASC 41H)	Send encoded data	Return encoded 16 byte
C(ASC 43H)	C/F button	Return the same as you send
		Return the same as you send
E(ASC 45H)	REC button	Return the same as you send
H(ASC 48H	HOLD butten	Return the same as you send
K(ASC 4BH)	Ask model	Return 0x33 0x37 0x36 0x0D 4 bytes
M(ASC 4DH)	MAX/MIN button	Return the same as you send
N(ASC 4EH)	Exit MAX/MIN mode	Return the same as you send

COMMAND A(376):

1nd BYTE:

The first byte is the start byte , it value is 2.

2nd BYTE:

bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
C/F	Low Bat	Hold	REL	T1-T2	MAX/MIN		Recording

bit0: 1->now is recording

bit 2 bit 1

0 0 ->normal mode

0 1 ->MAXIMUM mode

1 0 ->MINIMUM mode

1 1 -> calculate MAX/MIN in background and lcd "MAX""MIN" will flash.

bit3:1 ->Memory Full

bit4:1->REL

bit5:1- HOLD 0->not HOLD

bit6:1->LOW BATTERY 0->BATTERY NORMAL

bit7:1->C 1->F

3nd BYTE:

bit0 ~ bit 4 : no use

bit5 auto power off on

bit6 ~ bit 7 : no use

4th BYTE:

Bit7 1-> minus 0->plus ;

Bit6 1-> - OL ;

Bit5 ~ bit 4 : no use

Bit3 1-> OPEN ;

Bit2 ~ bit 1 : no use

Bit0 1-> Lcd reading = (65536 +(5th BYTE) x 256 +6th BYTE)/100.0

0-> Lcd reading = ((5th BYTE) x 256 + 6th BYTE)/100.0

5th BYTE: =>High byte of Lcd reading value

6th BYTE :=>Low byte of Lcd reading value

7th BYTE:

Bit7 1-> MAX value is minus
Bit6 1-> MAX value is OL
Bit5 ~ bit 4 : no use
Bit3 1-> MAX value is N/A(OPEN)
Bit2 ~ bit 1 : no use
Bit0 1-> MAX value = (65536 +(8th BYTE) x 256 +9th BYTE)/100.0
0-> MAX value = ((8th BYTE) x 256 + 9th BYTE)/100.0

8th BYTE: =>High byte of Max

9th BYTE: =>Low byte of Max

10th BYTE:

Bit7 1-> MIN value is minus
Bit6 1-> MIN value is OL
Bit5 ~ bit 4 : no use
Bit3 1-> MIN value is N/A(OPEN)
Bit2 ~ bit 1 : no use
Bit0 1-> MIN value = (65536 +(11th BYTE) x 256 +12th BYTE)/100.0
0-> MIN value = ((11th BYTE) x 256 + 12th BYTE)/100.0

11th BYTE: => High byte of MIN value

12th BYTE: => Low byte of MIN value

13th BYTE: => represent HH of HH:MM

14th BYTE: => represent MM of HH:MM

15th BYTE: : => No use

16th BYTE:

The last byte is the end byte , it value is 3,
first and last byte are used to check frame error.

Example:

After sending A command to 376, it returned 0x02 0x06 0x20 0x00 0x0C 0x76 0x00 0x0C 0xBC 0x00 0x0B 0xBE 0x08 0x41 0x82 0x03

The 2nd byte is 0x06, that is 00000110b

bit0 = 0->not recording

bit2 bit 1=11 -> calculate MAX/MIN in background and lcd "MAX""MIN" will flash.

bit3 =0 -> Memory is not full .

bit4=0->not in REL

bit5=0->not HOLD

bit6=0->BATTERY NORMAL

bit7=0->C

The 3nd byte is 0x20, that is 00100000b

bit5=1->in auto power off mode

The 4th byte: is 0x00, that is 00000000b

Bit7=0->plus ;

Bit6=0-> not OL ;

Bit5 ~ bit 4 : no use

Bit3=0-> not OPEN ;

Bit2 ~ bit 1 : no use

Bit0=0-> Lcd reading = ((5th BYTE) x 256 + 6th BYTE)/100.0

5th BYTE=0x0C=12(decimal) 6th BYTE=0x76=118(decimal)

So, the Lcd reading=(12x256+118)/100.0=31.90

The 7th byte: is 0x00, that is 00000000b

Bit7=0-> MAX value is plus ;

Bit6=0-> MAX value is not OL ;

Bit5 ~ bit 4 : no use

Bit3=0-> MAX value is not OPEN ;

Bit2 ~ bit 1 : no use

Bit0=0-> MAX value = ((8th BYTE) x 256 + 9th BYTE)/100.0

8th BYTE=0x0C=12(decimal) 9th BYTE=0xBC=188(decimal)

So, the MAX value =(12x256+188)/100.0=32.60

The 10th byte: is 0x00, that is 00000000b

Bit7=0-> MIN value is plus ;

Bit6=0-> MIN value is not OL ;

Bit5 ~ bit 4 : no use

Bit3=0-> MIN value is not OPEN ;

Bit2 ~ bit 1 : no use

Bit0=0-> MIN value = ((11th BYTE) x 256 + 12th BYTE)/100.0

11th BYTE=0x0B=11(decimal) 12th BYTE=0xBE=190(decimal)

So, the MIN value =(11x256+190)/100.0=30.06

13th BYTE=0x08 14th BYTE=0x41

Represents that the clock shows 08:41