



Multipen Software Commands



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General parameters:

The SPP Bluetooth and USB (CDC) communication between the host and the Multipen is line oriented. A line is a sequence of ASCII characters ended by a CR character (ASCII code 13).

The communication settings of the Multipen are 9600 bps, 8 bits, no parity bit and 1 stop bit. No handshake. For testing the communication you can use our PC Programm TIDMultipen V.1.5.

1.0 Bluetooth Commands

1.1 Bluetooth Reset (Bluetooth has to be ON)

Command: br

Example: br

Answer MP: [BTM]:Reset done

All Bluetooth settings reset to factory default !

1.2 Switching to HID mode (by sending via USB CDC Bluetooth must be ON)

Command: bh

Example: bh

Answer MP: [BTM] now in HID mode

1.3 Switching to SPP Mode (by sending via USB CDC Bluetooth must be ON)

Command: bs

Example: bs

Answer MP: [BTM] now in SPP mode

2.0 System Commands

2.1 Show battery status

Command: sb

Answer MP: [Bat]:88% charging....

2.2 Set Date Multipen

Command: sb TT.MM.JJ

Example: sd 27.06.17

Answer MP: [RTC]: Date set to 27.06.17

2.3 Set Time Multipen

Command: st HH.MM

Example: sd 14:00

Answer MP: [RTC]: Time set to 14:00

2.4 Show Firmware version

Command: sv

Example: sv

Answer MP: [SNR]: 123456789000,Tectus-D55B,Tectus Multipen,SW:0v1.2,HW:Rev.B

2.5 Switch Power off Multipen

Command: sx

Example: sx

Answer MP: [SYS] Exit < Multipen switches off>

3.0 Configuration commands

3.1 Memory dump configuration

Memory dump of 128 bytes of configuration memory Multipen

End of list is marked with a dot

Command: cd

Example: cd

Answer MP: [CFG]: 00:FF,05,02,00,78,FF,FF,FF

[CFG]: 08:FF,02,06,00,78,FF,FF,FF

.

.

.

[CFG]: 78:FF,FF,FF,FF,FF,FF,FF,FF

.

3.2 Erase Configuration memory

Delete the contents from the configuration memory Multipen and

Reset it to Default configuration at next power up

Command: ce

Example: ce

3.3 Display / Vibrator commands

3.4 Switch on the Vibrator for 1 second

Command: dg

Example: dg

Answer: OK

3.5 Write text in line1 Display Multipen

Up to 20 chars, aa,bb,..... are the ASCII values in hex

Command: d1 aa,bb,cc.....

Example: d1,48,65,6C,6C,6F

Answer: OK (and Hello on the Multipen Display)

3.6 Write text in line2 Display Multipen

Up to 20 chars, aa,bb,..... are the ASCII values in hex

Command: d2 aa,bb,cc.....

Example: d2 57,6f,72,6c,64

Answer: OK (and World on the Multipen Display)

4.0 Memory commands

Up to 1.000 entries (UID+Date+Time) can be stored in the memory

By 1.000 entries the Display Multipen shows : **Memory Full**

4.1 Memory dump UID list

End of list is marked with a dot

Command: md

Example: md

Answer: [M0000]:31.05.16-14:00:32-01-04112E6498

[M0001]:31.05.16-14:02:32-01-04112E6498

[M0002]:31.05.16-14:02:32-01-04112E6498

.

.

.

[M0078]:15.06.16-19:02:32-01-04FF2E6488

.

4.2 Delete memory UID list

Erase the complete UID list from the Multipen

Command: me

Example: me

Answer: [MEM]: 0% used (0x0000 of 0x03E8 blocks)

Count of Tags: 0 of 1000

4.3 Show free memory UID list

Command: ms

Example: ms

Answer: [MEM]: 0% used (0x0003 of 0x03E8 blocks)
Count of Tags: 3 of 1000

5.0 Transponder commands (LF, HF, UHF)

5.1 Transponder detect (UID from LF and HF, EPC from UHF)

Command: td

Example: td

Answer: [TAG]: 06.09.17-10:31:44-41-E016240116038A71

5.2 Transponder read (only HF transponder)

Command: tr xx,yy

Example: tr 00,03 (reads 3 blocks)

Answer: [B00]:12345678
[B01]:12300000
[B03]:12346666

5.2 Transponder write (only HF transponder)

Before you write datas you have to send a td command to get the UID !

Command: tw xx,yy,zzzzzzzz

Example: tw 00,02,FFFFFFFFFFFFFFFF (write 2 blocks with FFFFFFFFFFFFFFFFFF)

Answer: [ERR]:0000

Check the written datas with tr command

Example: tr 00,02 (reads the datas from the 2 blocks)

Answer: [B00]:FFFFFFFF
[B01]:FFFFFFFF

6.0 Commands for individual configuration Multipen

With the cw command and the individual hex address you can configure the Multipen.

- Using Multipen for Left-hander or Right-hander
- Shows UID in big font or small font on the Display
- Display ON or OFF by reading tags
- Show UID in decimal on Display (only when MP is in HID Mode)
- Configuration Auto Power Off Timer
- Bluetooth ON by power ON
- And more.....
-

6.1 Display configuration

Switch Left-hander or Right-hander mode (Hex address 3)

Right-hander mode

Command: cw 03,00

Left-hander mode:

Command: cw 03,01

By next Power On Multipen the Display will switch !

Switch big or small font for UID (Hex address 3)

Big font (by UID's longer 10 digits the display will "ticker" the UID)

Command: cw 03,02

Small font:

Command: cw 03,00

Display ON or OFF by reading the UID (Hex address 3)

To save power

Display On:

Command: cw 03,04

Display Off:

Command: cw 03,00

Display UID in Decimal (Hex address 3)

UID in decimal:

Command: cw 03,08

UID in hexadecimal:

Command: cw 03,00

6.2 [Auto power off timer \(Hex address 4\)](#)

When the Multipen is ON and not connected via Bluetooth or USB the MP will switch off after approx.. 60 seconds.

With this setting you can change the time to max. 275 seconds or switch this time complete off. The values are in hex from 0....255 hex

Examples:

Change time to maximum (275 seconds):

Command: cw 04, 255

Change time to (120 seconds):

Command: cw 04,64

Time off:

Command: cw 04,00

6.3 [Bluetooth Power at startup Multipen \(Hex address F\)](#)

Normally you have to press the Button 2 to switch on the Bluetooth function.

With this parameter you can switch Bluetooth automatic On without pressing the Button 2.

Bluetooth Power On:

Command: cw 0F, 01

Bluetooth Power OFF (you have to use Button 2)

Command: cw 0F, 00

6.4 [Check installed RFID readers \(Hex address 08\)](#)

Shows the installed RFID readers with command cr.

LF (1), HF (2), UHF (3)

Command: cr 08

Answer depends on RFID readers:

[C08]:03 (LF + HF)

[C08]:01 (only LF)

[C08]:07 (LF and HF and UHF)

6.4 [Activate / Deactivate RFID readers \(Hex address 08\)](#)

With the cw command you can activate or deactivate RFID readers by using a Multipen with

all 3 RFID readers (LF, HF and UHF)

LF (1), HF (2), UHF (3)

Activate LF, HF and UHF:

Command: cw 08,07

Deactivate HF:

Command: cw 08,04

And so on....

6.5 [Read order by min. two RFID readers \(Hex address 0A\)](#)

By two or three installed RFID readers you can switch the read order.

0x00 UHF_LF_UHF_HF_UHF

0x01 LF_HF_UHF

0x02 LF_UHF_HF

0x03 HF_LF_UHF

0x04 HF_UHF_LF

0x05 UHF_LF_HF

0x06 UHF_HF_LF

Example for read order LF_HF_UHF:

Command: cw 0A,01

Example for read order UHF_HF_LF:

Command: cw 0A,06

6.6 [Bluetooth Echo On or OFF \(Hex address 0E\)](#)

Simulate HID on Bluetooth by pressing read button

Bluetooth Echo ON:

Command: cw 0E,01

Bluetooth Echo OFF:

Command: cw 0E,00

6.7 [Select USB interface mode \(Hex address 30\)](#)

Selection from USB interface mode (HID+CDC, only CDC, only HID, none)

HID+CDC:

Command: cw 30,03 (Default)

Only HID:

Command: cw 30,01

Only CDC:

Command: cw 30,02

None:

Command: cw 30,00