

CITIZEN

Micro HumanTech

CMP-20

CMP-30

Utility Command Manual

◆Table of contents

1.	ESC Commands Summary	3
2.	Command Description.....	4
3.	IC CARD Command.....	5
	ESC [I	5
4.	WiFi ISP Command.....	6
	ESC [M.....	6
5.	Bluetooth Control Commands.....	7
	FS F s b p.....	7
	FS F s b d.....	7
	FS F s b t n m(0x01)	7
	FS F s b t n m(0x0E)	8
	FS F s b t n m(0x80)	8
	FS F s b t n m(0x81)	8
	FS F s b t n m(0x82)	9
	FS F s b t n m(0x83)	9
	FS F s b t n m(0x86)	10
	FS F s b t n m(0x87)	10
	FS F s b t n m(0x88)	10
	FS F s b t n m(0x89)	10
	FS F s b t n m(0x95)	11
	FS F s b t n m(0x96)	12

1. ESC Commands Summary

Command	Function	CMP-20	CMP-30
ESC [Control WiFi & IC-Card module.	○	○
FS F b	Battery Calibration	○	○
FS F s b	Control Bluetooth module	○	○

2. Command Description

Command Notation

[Name] The name of the control command.

[Format] The code sequence.

In this description, <H> denotes hexadecimal numbers, <D> denotes decimal numbers and denotes binary numbers. [] k indicates the contents of the [] should be repeated k times.

[Range] The allowable range for the arguments.

[Description] Description of the command function.

[Details] If necessary provides important information on setting and using the printer command.

[Default] The default values for the commands.

☞ The numbers denoted by <H> is hexadecimal.

☞ The numbers denoted by is binary.

3. IC CARD Command

ESC [I

[Name] IC-CARD interface mode on/off

[Format] ASCII ESC [I *n*
Hex 1B 0C 49 *n*
Decimal 27 12 73 *n*

[Range] *n = 0, n = 1*

n	function
0	IC-CARD Interface Mode Off
1	IC-CARD Interface Mode On

[Description] This is to set " ON/ OFF " of IC-CARD interface mode status.

[Details]

To access the IC-CARD, the interface mode should be turned " ON ". After it finished the access on IC-Card, the interface mode should be " OFF ". Through the GEM Core Library, you can control the IC-CARDaccess.

4. WiFi ISP Command

ESC [M

[Name] Set WiFi Option
[Format] ASCII ESC '[' M *n*
 Hex 1B 46 4D *n*
 Decimal 16 70 77 *n*

[Range] *n = 0, n = 1*

n	function
0	WiFi ISP Mode Off
1	WiFi ISP Mode On

This is to set " ON/ OFF " for ISP mode of WiFi module.

To set the WiFi module, you are requested to set " ON " for ISP mode. After it finished the setting, it should be set as " OFF " of ISP mode. Through PC application, you can set the WiFi module.

5. Bluetooth Control Commands

FS F s b p

[Name]

[Format]

ASCII	FS	'F'	's'	'b'	'p'	<i>n</i>	<i>d(1 ~ 12)</i>
Hex	1C	46	73	62	70	<i>n</i>	<i>d(1 ~ 12)</i>
Decimal	28	70	115	98	112	<i>n</i>	<i>d(1 ~ 12)</i>

[Range]

n = Length *d* = PINCODE DATA

[Description]

n = PINCODE number(2Byte)

d = PINCODE DATA (Between 0 ~ 9), the maximum data will be " 12 ".

Ex) PINCODE Data = 0x30 0x30 0x30 0x30 0x1c 0x46 0x73 0x62 0x70 0x00 0x04 0x30 0x30 0x30 0x30

※ This command can be used only when the printer is disconnected in Bluetooth. If you use this command while the printer is connected with any other mobile device in Blue tooth, this command will be considered as " DATA " and printer will send this data to the connected mobile device.

[Reference]

ESC b p(CMP-20 does not support)

FS F s b d

[Name]

Bluetooth Discoverable Set

[Format]

ASCII	FS	'F'	's'	'b'	'd'	<i>n</i>
Hex	1C	46	73	62	64	<i>n</i>
Decimal	28	70	115	98	100	<i>n</i>

[Range]

n = 0x05: Discoverable Enable

n=0x06 : Discoverable Cancel

[Description]

If you use this command, the mobile devices can not find the printer. To connect with the printer, the address should be input directly.

[Reference]

ESC b d(CMP-20 does not support)

FS F s b t n m(0x01)

[Name]

Bluetooth reset

[Format]

ASCII	FS	'F'	's'	'b'	't'	<i>n</i>	<i>m</i>
Hex	1C	46	73	62	74		01
Decimal	28	70	115	98	116		1

[Range]

n = 0x01: Data length after " n "

m = 0x01: Bluetooth reset command

[Description]

Reset the Bluetooth module.

[Reference]

ESC b t n m(0x01) (CMP-20 does not support)

FS F s b t n m(0x0E)

[Name]	Get bluetooth address							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		0E
	Decimal	28	70	115	98	116		14
[Range]	n = 0x01: Data length after " n " m = 0x0E:Command							
[Description]	Read the address of Bluetooth module. It will be returned as "xx:xx:xx:xx:xx".							
[Reference]	ESC b t n m(0x0E) (CMP-20 does not support)							

FS F s b t n m(0x80)

[Name]	Get bluetooth ID							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		80
	Decimal	28	70	115	98	116		128
[Range]	n : Data length after " n " m = 0x80: Command							
[Description]	Read the ID of Bluetooth module.							
[Reference]	ESC b t n m(0x80) (CMP-20 does not support)							

FS F s b t n m(0x81)

[Name]	Set bluetooth ID										
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	m2	m3	...
	Hex	1C	46	73	62	74		81			
	Decimal	28	70	115	98	116		129			
[Range]	n : Data length after " n " m = 0x81: command m2 ~ mx: module ID to set - Should be in 19 character										
[Description]	Set the ID of Bluetooth module.										
[Reference]	ESC b t n m(0x81) (CMP-20 does not support)										

FS F s b t n m(0x82)

[Name]	Get bluetooth baudrate							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		82
	Decimal	28	70	115	98	116		130
[Range]	n : Data length after " n " m = 0x82: command							
[Description]	Read the current baud rate of Bluetooth module. Return data will be 0x27: 9600 0x4F: 19200 0x9D: 38400 0xEC: 57600 0x01, 0xD8: 115200 0x03, 0xB0: 230400 0x07, 0x5F: 460800							
[Reference]	ESC b t n m(0x82) (CMP-20 does not support)							

FS F s b t n m(0x83)

[Name]	Set Bluetooth baudrate									
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y1	y2
	Hex	1C	46	73	62	74				83
	Decimal	28	70	115	98	116				131
[Range]	n : Data length after " n " m = 0x83: command y1, y2: Baudrate value 9600: y1(0x27), y2(none) 19200: y1(0x4F), y2(none) 38400: y1(0x9D), y2(none) 57600: y1(0xEC), y2(none) 115200: y1(0x01), y2(0xD8) 230400: y1(0x03), y2(0xB0) 460800: y1(0x07), y2(0x5F)									
[Description]	Set baud rate of Bluetooth module. This will be applied after reset command.									
[Reference]	ESC b t n m(0x83) (CMP-20 does not support)									

FS F s b t n m(0x86)

[Name]	Get bluetooth parity bit							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		86
	Decimal	28	70	115	98	116		134
[Range]	n : Data length after " n " m = 0x86: command							
[Description]	Read the parity bit setting status of Bluetooth module Return value will be 0x00: none 0x01: odd 0x02: even							
[Reference]	ESC b t n m(0x86) (CMP-20 does not support)							

FS F s b t n m(0x87)

[Name]	Set bluetooth parity bit								
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y
	Hex	1C	46	73	62	74			87
	Decimal	28	70	115	98	116			135
[Range]	n : Data length after " n " m = 0x87: command y: 0x01(none), 0x01(odd), 0x02(even)								
[Description]	Set the parity bit of Bluetooth module. After the reset command, it will be applied.								
[Reference]	ESC b t n m(0x87) (CMP-20 does not support)								

FS F s b t n m(0x88)

[Name]	Get bluetooth stop bit								
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y
	Hex	1C	46	73	62	74			88
	Decimal	28	70	115	98	116			136
[Range]	n : Data length after " n " m = 0x88: command y: 0x00(1bit), 0x01(2bit)								
[Description]	Read the stop bit of Bluetooth module								
[Reference]	ESC b t n m(0x88) (CMP-20 does not support)								

FS F s b t n m(0x89)


[Name]	Set bluetooth stop bit								
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y
	Hex	1C	46	73	62	74			89
	Decimal	28	70	115	98	116			137
[Range]	n : Data length after " n " m = 0x89: command								
Description]	Read the stop bit data of Bluetooth module. Return data will be 0x00: 1bit 0x01: 2bit After the reset command, this will be applied.								
[Reference]	ESC b t n m(0x89) (CMP-20 does not support)								

FS F s b t n m(0x95)

[Name]	Get bluetooth authentication							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		95
	Decimal	28	70	115	98	116		149
[Range]	n : Data length after " n " m = 0x95: command							
[Description]	Read the current authentication data of Bluetooth module. Return value will be 0x00: This does not ask Pincode during pairing process. 0x01: This is requesting the Pincode during pairing process.							
[Reference]	ESC b t n m(0x95) (CMP-20 does not support)							

FS F s b t n m(0x96)

[Name]	Set bluetooth authentication								
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y
	Hex	1C	46	73	62	74		96	
	Deciaml	28	70	115	98	116		150	
[Range]	n : Data length after " n " m = 0x96: command y: 0x00: This does not ask Pincode during pairing process. 0x01: This is requesting the Pincode during pairing process.								
[Description]	Set the authentication status of Bluetooth module. After the reset command, this will be applied.								
[Reference]	ESC b t n m(0x96) (CMP-20 does not support)								

	Doc	Document of Development				
	Subject	Wireless Module Interface for CMP				

1. Bluetooth Command Set

FS F s b p


[Name]	Bluetooth PINCODE Set						
[Format]	ASCII	FS	'F'	's'	'b'	'p'	n d
	Hex	1C	46	73	62	70	n d
	Deciaml	28	70	115	98	112	n d
[Range]	n = Length d = PINCODE DATA						
[Description]	n = Number of PINCODE (2Byte) d = PINCODE DATA (Value of No. 0 ~ 9), Max. 12characters are available. ex) PINCODE Data = 0x30 0x30 0x30 0x30 0x1c 0x46 0x73 0x62 0x70 0x00 0x04 0x30 0x30 0x30 0x30 Caution) This command is available only if Bluetooth is not connected. If the printer is connected with other terminal, this command will be treated as data and transmitted to the terminal.						

FS F s b d

[Name]	Bluetooth Discoverable Set						
[Format]	ASCII	FS	'F'	's'	'b'	'd'	n
	Hex	1C	46	73	62	64	n
	Deciaml	28	70	115	98	100	n
[Range]	n = 0x05 :Discoverable Enable n = 0x06 :Discoverable Cancel						
[Description]	By this command, terminals can not search the printer. In order to connect the printer, should input manually the address.						

FS F s b t n m(0x01)

[Name]	Bluetooth reset						
[Format]	ASCII	FS	'F'	's'	'b'	't'	n m
	Hex	1C	46	73	62	74	01
	Deciaml	28	70	115	98	116	1
[Range]	n = Data length after 0x01: n m = 0x01: bluetooth reset command						
[Description]	Reset Bluetooth module.						

	Doc	Document of Development				
	Subject	Wireless Module Interface for CMP				

FS F s b t n m(0x0E)


[Name]	Get bluetooth address							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		0E
	Deciaml	28	70	115	98	116		14
[Range]	n = Data length after 0x01: n m = 0x0E: command							
[Description]	Read address of Bluetooth module. Reply to the address as follows : "xx:xx:xx:xx:xx".							

FS F s b t n m(0x80)

[Name]	Get bluetooth ID							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		80
	Deciaml	28	70	115	98	116		128
[Range]	n : Data length after n m = 0x80: command							
[Description]	Read ID of Bluetooth module.							


FS F s b t n m(0x81)

[Name]	Set bluetooth ID										
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	m2	m3	...
	Hex	1C	46	73	62	74		81			
	Deciaml	28	70	115	98	116		129			
[Range]	n : Data length after n m = 0x81: command m2 ~ mx: module ID to set up (Set up no more than 19 letters.)										
[Description]	Set up ID of Bluetooth module.										

	Doc	Document of Development						
	Subject	Wireless Module Interface for CMP						

FS F s b t n m(0x82)

[Name]	Get bluetooth baudrate							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		82
	Deciaml	28	70	115	98	116		130
[Range]	n : Data length after n m = 0x82: command							
[Description]	Read the status of baudrate configuration of the Bluetooth module. Returned Values are.. 0x27: 9600 0x4F: 19200 0x9D: 38400 0xEC: 57600 0x01, 0xD8: 115200 0x03, 0xB0: 230400 0x07, 0x5F: 460800							


	Doc	Document of Development				
	Subject	Wireless Module Interface for CMP				

FS F s b t n m(0x83)

[Name]	Set bluetooth baudrete									
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y1	y2
	Hex	1C	46	73	62	74		83		
	Deciaml	28	70	115	98	116		131		
[Range]	n : Data length after n									
	m = 0x83: command									
	y1, y2: baudrate Value									
	9600: y1(0x27), y2(none)									
	19200: y1(0x4F), y2(none)									
	38400: y1(0x9D), y2(none)									
	57600: y1(0xEC), y2(none)									
	115200: y1(0x01), y2(0xD8)									
	230400: y1(0x03), y2(0xB0)									
	460800: y1(0x07), y2(0x5F)									
[Description]	Set up baudrate of Bluetooth module.									
	Applied after the reset command.									

FS F s b t n m(0x86)

[Name]	Get bluetooth parity bit							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		86
	Deciaml	28	70	115	98	116		134
[Range]	n : Data length after n							
	m = 0x86: command							
[Description]	Read the status of Parity bit configuration of the Bluetooth module.							
	Returned values are							
	0x00: none							
	0x01: odd							
	0x02: even							

	Doc	Document of Development						
	Subject	Wireless Module Interface for CMP						

FS F s b t n m(0x87)


[Name]	Set bluetooth parity bit								
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y
	Hex	1C	46	73	62	74		87	
	Deciaml	28	70	115	98	116		135	
[Range]	n : Data length after n m = 0x87: command y: 0x01(none), 0x01(odd), 0x02(even)								
[Description]	Set up the Parity bit of Bluetooth module. Applied after the reset command .								

FS F s b t n m(0x88)

[Name]	Get bluetooth stop bit								
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y
	Hex	1C	46	73	62	74		88	
	Deciaml	28	70	115	98	116		136	
[Range]	n : Data length after n m = 0x88: command y: 0x00(1bit), 0x01(2bit)								
[Description]	Read Stop bit of Bluetooth module.								

FS F s b t n m(0x89)

[Name]	Set bluetooth stop bit								
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y
	Hex	1C	46	73	62	74		89	
	Deciaml	28	70	115	98	116		137	
[Range]	n : Data length after n m = 0x89: command								
Description]	Read Stop bit of Bluetooth module. Returned values are... 0x00: 1bit 0x01: 2bit Applied after the reset command.								

	Doc	Document of Development						
	Subject	Wireless Module Interface for CMP						

FS F s b t n m(0x95)

[Name]	Get bluetooth authentication							
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m
	Hex	1C	46	73	62	74		95
	Deciaml	28	70	115	98	116		149
[Range]	n : Data length after n m = 0x95: command							
[Description]	Read the status of authentication of the Bluetooth module. Returned values are.. 0x00: Do not ask pincode in the pairing step. 0x01: Requests pincode in the pairing step.							

FS F s b t n m(0x96)

[Name]	Set bluetooth authentication								
[Format]	ASCII	FS	'F'	's'	'b'	't'	n	m	y
	Hex	1C	46	73	62	74			96
	Deciaml	28	70	115	98	116			150
[Range]	n : Data length after n m = 0x96: command y: 0x00(Do not ask pincode in the pairing step..) 0x01(Requests pincode in the pairing step.)								
[Description]	Set up the condition of authentication of the Bluetooth module. Applied after the reset command.								