C-Power1200 Multi-window control communication protocol

Version V3.3

Recension Log:

Version	Date	Changes	Executor
V1.0	2009.9.1	The first version	
V1.1	2009.12.28	Increase the protocol of select play stored	
		program and set variable value	
V1.2	2010.2.3	Increase the introduction of network data	
		package	
V1.3	2010.2.24	Increase the introduction of cancel select play	
		stored program	
V1.4	2010.5.20	Add protocol for setting user variable	
V1.5	2010.6.22	Add protocol for setting global display zone	
V1.6	2010.10.9	Add protocol for stopwatch timer	
V1.7	2011.5.14	Add protocol for template box play	

1. General agreement of communication

Data packet is used to communicate between the PC and the controller, in order to enhance the reliability of data, expanding capabilities to deal with images and other data.

Communication process:

- a).PC send a data packet to the controller;
- b). After the controller received the data packet, analysis and processing of data packet, and then return a data packet to PC;
- c). PC receives the data packets returned from the control card, and analysis the received data packets to determine whether communication is successful.

Serial setting:

Baud rate: 115200, 57600, 38400, etc. selected by the selected tool.

Format string: "115200, 8, N, 1", you can change the baud rate value 115200 according to what you set to the controller.

Packet data checksum

Communication process using the packet data checksum to check the correctness of data transmission, Checksum calculations we should pay attention: Data checksum is cumulative each byte of data, use the 16bit (2 bytes) unsigned number to represent, so when the data validation and more than 0xFFFF, the checksum, and retain only 16bit value. For example, 0xFFFA + 0x09 = 0x0003.

2. Data packet format

2.1 RS232/RS485 data packet format:

2.1.1 The data packet format of RS232/RS485 sending:

0xa5 0x68 0x32 ID 7B FF LL LH PO TP CC 。 。 。 。 。 SH SL 0xae

Data	Value	Length(Byte)	Description
Start code	0xa5	1	The start of a packet
Packet type	0x68	1	Recognition of this type of packet
Card type	0x32	1	Fixed Type Code
Card ID	0x01~0xFE	1	Control card ID, the screen No, valid values
	0XFF		are as follows:
			$1 \sim 254$: the specified card ID
			0XFF: that group address, unconditionally
			receiving data
Protocol code	0X7B	1	Recognition of this type of potocol
Additional	FF	1	The meaning of bytes in the packet is sent,
information/			"Additional Information", is a packet plus
confirmation			instructions, and now only use the lowest:
mark			bit 0: whether to return a confirmation, 1 to
			return and 0 not to return
			bit1 ~ bi7: reserved, set to 0
Packed data	$0x0000^{\sim}0xffff$	2	Two bytes, the length of the "CC" part
length			content . Lower byte in the former
LL LH			
Packet number	0x00~0x255	1	When the packet sequence number is equal to
PO			when the last packet sequence number,
			indicating that this is the last one package.
Last packet	0x00~0x255	1	The total number of packages minus 1.
number			
TP			
Packet data	CC	Variable-length	Command sub-code and data
Packet data	0x0000~0xffff	2	Two bytes, checksum . Lower byte in the
checksum			former . The sum of each byte from " Packet
SH SL			type " to " Packet data" content
End code	0xae	1	The end of a packet (Package tail)

2.1.2 The data packet format of the control card returned to

RS232/RS485 sender:

0xa5 0x68 0x32 ID 7B FF LL LH PO TP CC 。 。 。 。 。 SH SL 0xae

Data	Value	Length(Byte)	Description
Start code	0xa5	1	The start of a packet
Packet type	0xE8	1	Recognition of this type of packet
			$0xE8 = (0x68 \mid 0x80)$, for the app 3.2 or below
			return 0x68, app 3.3 or above return 0xe8 to
			same as other protocol(such as "set time"
			protocol), so you can ignore the highest bit
			(0x80), then it works for all app version
Card type	0x32	1	Fixed Type Code
Card ID	0x01~0xFE	1	Control card ID, the screen No, valid values
	0XFF		are as follows:
			$1 \sim 254$: the specified card ID
			0XFF: that group address, unconditionally
			receiving data
Protocol code	0X7B	1	Recognition of this type of protocol.
Return value	RR	1	RR = 0x00: that successful;
			$RR = 0x01 \sim 0xFF$: that the failure error code.
			(0x01: checksum error)
			(0x02: packet sequence error)
			(Other: to be confirmed)
			In addition, a certain period of time does not
			receive the returned data packet, said
			communication failures.
Packed data	$0x0000^{\circ}0xffff$	2	Two bytes, the length of the "CC" part
length			content . Lower byte in the former
LL LH			
Packet number	0x00~0x255	1	When the packet sequence number is equal to
PO			when the last packet sequence number,
Last packet	0x00~0x255	1	indicating that this is the last one package. The total number of packages minus 1.
number	0x00~0x233	1	The total number of packages minus 1.
TP			
Packet data	CC · · · · ·	Variable-length	Command sub-code and data
Packet data	0x0000~0xffff	2	Two bytes, checksum . Lower byte in the
checksum			former. The sum of each byte from "Packet
SH SL			type " to " Packet data" content .
End code	0xae	1	The end of a packet (Package tail)

[&]quot;Packet number", "Last packet number" in the return package was re-calculated by the number of packets returned.

2.1.3 RS232/RS485 packet data transcoding description:

The following process is done sending and receiving low-level functions, If you write your own PC side of the sending and receiving programs, you must implementation as below conventions. Use the without transcoding code to calculation checksum.

Send:

Between start code and end code, if there is 0xA5, 0xAA or 0xAE, it should be converted to two code.

 $0xa5 \rightarrow 0xaa \ 0x05$. The purpose is to avoid the same with the start character 0xa5

 $0xae \rightarrow 0xaa \ 0x0e$. The purpose is to avoid the same with the end of the symbol 0xae.

 $0xaa \rightarrow 0xaa \ 0x0a$. The purpose is to avoid the same with the escape character 0xaa.

Receive:

Received symbol 0xa5, said that the beginning of a packet

Received symbol 0xae, said that the end of a packet

When PC receive data from controller, if there is 0xA5, 0xAA or 0xAE, it should convert two code to one code, specifically for

0xaa 0x05 **→** 0xa5

0xaa 0x0e $\rightarrow 0$ xae

0xaa 0x0a → 0xaa

2.2 Network data packet format

2.2.1 The data packet format of network sending

Data	Value	Length(Byte)	Description
ID Code	0x00000000 ~	4	Control card ID, high byte in the former.
	0xffffffff		Need to set to the same value on the card.
Network data	$0x0000 \sim 0xffff$	2	The byte length that from "Packet type" to
length			"Packet data checksum".
Reservation	0x0000	2	Reservations. Fill 0
Packet type	0x68	1	Recognition of this type of packet
Card type	0x32	1	Fixed Type Code
Card ID	0x01~0xFE	1	Control card ID, the screen No, valid values
	0XFF		are as follows:
			$1 \sim 254$: the specified card ID
			0XFF: that group address, unconditionally
			receiving data
Protocol code	0X7B	1	Recognition of this type of protocol.

Additional information/ confirmation mark	FF	1	The meaning of bytes in the packet is sent, "Additional Information", is a packet plus instructions, and now only use the lowest: bit 0: whether to return a confirmation, 1 to
			return and 0 not to return bit1 ~ bi7: reserved, set to 0
Packed data length LL LH	0x0000~0xffff	2	Two bytes, the length of the "CC" part content. Lower byte in the former
Packet number PO	0x00~0x255	1	When the packet sequence number is equal to when the last packet sequence number, indicating that this is the last one package.
Last packet number TP	0x00~0x255	1	The total number of packages minus 1.
Packet data	CC	Variable-length	Command sub-code and data
Packet data checksum SH SL	0x0000~0xffff	2	Two bytes, checksum . Lower byte in the former . The sum of each byte from " Packet type " to " Packet data" content .

The network packet data does not need to do transcoding processing.

2.2.2 The data packet format of the control card returned to

network sender

Data	Value	Length(Byte)	Description
ID Code	0x00000000 ~	4	Control card ID, high byte in the former.
	0xfffffff		Need to set to the same value on the card.
Network data length	$0x0000 \sim 0xffff$	2	The byte length that from "Packet type" to "Packet data checksum".
Reservation	0x0000	2	Reservations. Fill 0
Packet type	0xE8	1	Recognition of this type of packet
			$0xE8 = (0x68 \mid 0x80)$, for the app 3.2 or below
			return 0x68, app 3.3 or above return 0xe8 to
			same as other protocol(such as "set time"
			protocol), so you can ignore the highest bit
			(0x80), then it works for all app version
Card type	0x32	1	Fixed Type Code
Card ID	0x01~0xFE	1	Control card ID, the screen No, valid values
	0XFF		are as follows:
			$1 \sim 254$: the specified card ID
			0XFF: that group address, unconditionally
			receiving data
Protocol code	0X7B	1	Recognition of this type of protocol.
Return value	RR	1	RR = 0x00: that successful;
			$RR = 0x01 \sim 0xFF$: that the failure error code.

			(0x01: checksum error)
			(0x02: packet sequence error)
			(Other: to be confirmed)
			In addition, a certain period of time does not
			receive the returned data packet, said
			communication failures.
Packed data length	0x0000~0xffff	2	Two bytes, the length of the "CC" part content. Lower byte in the former
LL LH			
Packet number PO	0x00~0x255	1	When the packet sequence number is equal to when the last packet sequence number, indicating that this is the last one package.
Last packet number	0x00~0x255	1	The total number of packages minus 1.
TP			
Packet data	CC	Variable-length	Command sub-code and data
Packet data checksum SH SL	0x0000~0xffff	2	Two bytes, checksum . Lower byte in the former . The sum of each byte from " Packet type " to " Packet data" content .

[&]quot;Packet number", "Last packet number" in the return package was re-calculated by the number of packets returned $_{\circ}$

The network packet data does not need to do transcoding processing. •

2.3 Command sub-code and data: CC.

CC: A sub-byte instruction code, specifying the meaning of the data.

。。。。。 Data content for different sub-code instructions, there are different elements.

If the data needs to be divided into several packages, command sub-code only in the first data packet appears, the other only contains the data content of data packets.

2.2.1 Command sub-code includes:

Commad	sub-	meanings
code(CC)		
0x01		Division of display window (area)
0x02		To send text data to a specified window
0x03		To send image data to the specified window
0x04		Static text data sent to the specified window
0x05		To send clock data to the specified window
0x06		Exit show to return to play within the program
0x07		Save / clear the data
0x08		Select play stored program (single-byte)
0x09		Select play t stored program (double-byte)
0x0a		Set variable value
0x0b		Select play single stored program, and set the

variable value

2.2.2 The specific definition of command sub-code and

data:

Division of display window: CC=0x01:

Data Items	Value	Length(byte)	Description
CC	0x01	1	Note This command is divided into display window (area)
Window Number	0x01~0x08	1	The window should be divided into the number of valid value $1 \sim 8$.
Window 1 X- coordinate XH XL	0x0000~0xfff f	2	Window x-coordinate, high byte in the former
Window 1 Y- coordinate YH YL	0x0000~0xfff f	2	Window y-coordinate, high byte in the former
The width of the window 1 WH WL	0x0000~0xfff f	2	The width of the window, high byte in the former
The height of the window 1 HH HL	0x0000~0xfff f	2	The height of the window, high byte in the former
Window N X- coordinate XH XL	f	2	Window x-coordinate, high byte in the former
Window N Y- coordinate YH YL	0x0000~0xfff f	2	Window y-coordinate, high byte in the former
The width of the window N WH WL	0x0000~0xfff f	2	The width of the window, high byte in the former
The height of the window N HH HL	0x0000~0xfff f	2	The height of the window, high byte in the former

[•] Based on the above definition, requires 8 bytes for each window's location and size, then divided into N windows, data on a total of 2 +8 * N bytes

Send text data to a specified window: CC=0x02:

Data Items	Value	Length(byte)	Description

0x02	1	Description This is a text data packet
0x00~0x07	1	The window sequence number, valid values $0 \sim 7$.
1	1	0x00: Draw
		0x01: Open from left
		0x02: Open from right
		0x03: Open from center(Horizontal)
		0x04: Open from center(Vertical)
		0x05: Shutter
		0x06: Move to left
		0x07: Move to right
		0x08: Move up
		0x09: Move down
		0x0A: Scroll up
		0x0B: Scroll to left
		0x0C: Scroll to right
0~2	1	0: Left-aligned
		1: Horizontal center 2: Right-aligned
1~100	1	The smaller the value, the faster
0x0000~0xfff f	2	High byte in the former. Units of seconds.
	Variable-length	Every three bytes to represent a character. First bytes:
		Said the color and font size: High 4bits (1-7)
		said the colors (red, green, yellow blue, purple,
		cyan, white), low 4bits (= 0 that 8 text; = 2
		indicates that 16-point text; = 3 indicated that
		24-point text; = 4 indicated that 32 point text).
		Second bytes:
		English letters, symbols, is 0.
		Third bytes:
		English letters, symbols, its ASCII code.
	$0 \times 00 \sim 0 \times 07$ 1 $0 \sim 2$ $1 \sim 100$ $0 \times 0000 \sim 0 \times 0000$	0x00~0x07 1 1 1 1 1 1 1 1 1 1 1 1 0x0000~0xfff f

Send image data to a specified window: CC=0x03:

Data Items	Value	Length(byte)	Description
CC	0x03	1	Description This is a image data packet
Window No	0x00~0x07	1	The window sequence number, valid values 0
			~ 7.
Mode	0x00	1	0x00: Draw
Speed	1	1	The smaller the value, the faster. Now appears
			that this value is invalid
Stay time	0x0000~0xfff	2	High in the former. Units of seconds.
	f		
Image Data	0x01	1	0x01: gif image file format

Format			0x02: gif image file references.
			0x03: picture package picture reference.
			0x04: simple image format.
Image Display	0x0000~0xfff	2	Began to show the location of X coordinate.
X Position	f		Relative upper-left corner the window.
Image Display	$0x0000\sim0xfff$	2	Began to show the location of Y coordinate.
Y Position	f		Relative upper-left corner the window.
Image Data		Variable-length	According to "image data format" is defined to determine the meaning of the data.
			Image data format is 0x01: gif image file of
			the actual data, which contains the image
			width, height and other information;
			Image data format is 0x02: the gif image file
			name stored in the control card.
			Image data format is 0x03: The image package
			file name and image number that stored in
			the controller. The middle separated by
			spaces. For example, "images.rpk 1"
			Image data format is 0x04: Simple picture
			data, see the description format.

Send static text: CC=0x04:

Data Items	Value	Length(byte)	Description
CC	0x04	1	Description of the data packet is static text
Window NO	0x00~0x07	1	Window sequence number, valid values 0 to 7
Data type	1	1	0x01: Simple text data
The level of	0~2	1	0: left Alignment
alignment			1: center Alignment
			2: right Alignment
Display area X	0x0000~0xfff	2	The X coordinate of upper left corner of the
	f		display area。 Upper left corner of the window
			relative
Display area Y	0x0000~0xfff	2	The Y coordinate of upper left corner of the
	f		display area. Upper left corner of the window
			relative
Display area	$0x0000\sim0xfff$	2	The width of display area . High byte in the
width	f		former.
Display area	$0x0000\sim0xfff$	2	The height of display area . High byte in the
height	f		former.
Font		1	Bit0~3: font size
Text color R	0~255	1	The red color component
Text color G	0~255	1	The green color component
Text color B	0~255	1	The blue color component
Text		Variable-length	Text string to the end of 0x00.

Send clock: CC=0x05:

Data Items	Value	Length(byte)	Description
CC	0x05	1	Description of the data packet is clock
Window NO	0x00~0x07	1	Window sequence number, valid values 0 to 7
Stay time		2	Stay time in second . High byte in the
			former
Calendar		1	0: Gregorian calendar date and time
			1: Lunar date and time
			2: Chinese lunar solar terms
			3: Lunar time and date + Solar Terms
Format		1	Format: Format
			bit 0: when the system (0: 12 hour; 1: 24 hours
			system)
			bit 1: Year digit (0: 4; 1: 2)
			bit 2: Branch (0: single; 1: multi-line)
			bit $3 \sim 7$: reserved (set to 0)
Content		1	By bit to determine the content to display.
			bit 7: Pointer
			bit 6: weeks
			bit 5: seconds
			bit 4: minute
			bit 3: hour
			bit 2: day
			bit 1: month
			bit 0: year
Font		1	Bit0~3: font size
Text color R	0~255	1	The red color component
Text color G	0~255	1	The green color component
Text color B	0~255	1	The blue color component
Text		Variable-length	Text string to the end of $0x00$.

Exit show and return to play within the program: CC=0x06:

Data Items	Value	Length(byte)	Description
CC	0x06	1	Play programs stored on the card

Save/clear the data: CC=0x07:

Data Items	Value	Length(byte)	Description
CC	0x07	1	The data packet is a request control card to save

			data in the window
Save/clear	0x00/0x01	1	0x00: save data to flash.
			0x01: Clear flash data
Reserve	0x00 0x00	2	Reserved for later expansion

Select play stored program (single-byte): CC=0x08

Data Items	Value	Length(byte)	Description
CC	0x08	1	Description of the data packet is
			stored program data select play(single-byte)
Options		1	Bit0: Whether to save select play message to
			flash. 0 not to save, 1 save.
			Bit1~7: Reserved, set to 0
The number of	1~255 or 0	1	The program number that to be selected to
programs			play, if the number is 0,the controller will exit
			the select play state.
The program	1~255	Variable-length	The program number list,1 byte for each
number table			program. Exceed the number of programs
			stored program number is ignored

Select play stored program (double-byte): CC=0x09

Data Items	Value	Length(byte)	Description
CC	0x09	1	Description of the data packet is
			stored program data select play(double-byte)
Options		1	Bit0: Whether to save select play message to flash. 0 not to save, 1 save.
			Bit1~7: Reserved, set to 0
The number of programs	1~512 or 0	2	The program number that to be selected to play, the max value is 512, high byte in the former. if the number is 0,the controller will exit the select play state.
The program number table	1~65535	Variable-length	The program number list,2 bytes for each program. Exceed the number of programs stored program number is ignored

Set variable value: CC=0x0a

Data Items	Value	Length(byte)	Description
CC	0x0a	1	Description of the data packet is the data set
			variable value
Options		1	Bit0: Whether to save all variable value to
			flash, 0 not to save, 1 save.
			Bit1: Whether to clear all variable value before
			save, 0 not to clear, 1 clear.

			Bit1~7: Reserved, set to 0
Variable	1~100	1	Bit0~6: The variable number
number and			Bit7: Whether to allow cross-variable zone
allow cross-			setting. 0 is not permitted; 1 is permit
variable zone			Corresponds to a variable number of each
			variable area size of each variable region is 32
			bytes. Multiple continuous variables can be
			linked to a variable area used, occupied area of
			the variable number of variables can not be
			used.
			When does not allow cross-variable area,
			more than 32 bytes of data are discarded;
			When allow cross-variable area, calculate the
			length of the data area to use the number of
			variables.
Variable data	n (0~255)	Variable-length	Specified by the order of bytes of data for each
length table			variable. The length of variable number and
Variable		Variable-length	data is $(1 + n)$ bytes. The first byte is a variable number, followed
number and		variable-length	by a specified length of variable data
data			of a specification gar of variable data

Note:

Valid values for the variable number is $1\sim100$. Number of variables corresponding to each variable area can store 32 bytes of data, a number of continuous variable area can be used together for a variable, the variable area occupied number of variables can not be used.

When variable values are not updated and just save the variable value to the FLASH, it can set the "Variable number of the value of 0, set the "Options" to save

Select play single stored program and set the variable value:

CC=0x0b

Data Items	Value	Length(byte)	Description
CC	0x0b	1	Description of the data packet is the data select
			single program and set variable value
Options		1	Bit0: Whether to save program number to flash
			0 not to save, 1save.
			Bit1: Whether to save all variable value to
			flash, 0 not to save, 1save.
			Bit2: Whether to clear all variable value before
			save, 0 not to clear, 1 clear.
			Bit3~7: Reserved, set to 0
Program	1~65535	Variable-length	The program number list,2 bytes for each

numbers			program. Exceed the number of programs stored program number is ignored
Variable	1~100	1	Bit0~6: The variable number
number and			Bit7: Whether to allow cross-variable zone
allow cross-			setting. 0 is not permitted; 1 is permit
variable zone			Corresponds to a variable number of each
			variable area size of each variable region is 32
			bytes. Multiple continuous variables can be
			linked to a variable area used, occupied area of
			the variable number of variables can not be
			used.
			When does not allow cross-variable area, more
			than 32 bytes of data are discarded; When
			allow cross-variable area, calculate the length
			of the data area to use the number of variables.
Variable data length table	n (0~255)	Variable-length	Specified by the order of bytes of data for each variable. The length of variable number and data is $(1 + n)$ bytes.
Variable number and data		Variable-length	The first byte is a variable number, followed by a specified length of variable data
uata			

Note:

Valid values for the variable number is $1\sim100$. Number of variables corresponding to each variable area can store 32 bytes of data, a number of continuous variable area can be used together for a variable, the variable area occupied number of variables can not be used.

When variable values are not updated and just save the variable value to the FLASH, it can set the "Variable number of the value of 0, set the Options to save.

Set global display zone: CC=0x0c

Data Items	Value	Length(byte)	Description
CC	0x0c	1	Describe the packet is the data which to set the
			global display zone.
Options		1	Bit0: Whether to save the setup to FLASH
			0 not to save, 1 save.
			Bit1~7: Reserved, set value to 0
ZoneArea count	1~8	1	The count of global display zone which is to
			be set.
			Cancel all the zone when zone count is 0
Synchronization		1	Bit0: Synchronous display. 0 not synchronous,
			1 synchronous.
			Bit1~7: Reserved
Retention		2	Set value 0
Zone Definition		Zone Count*16	The specific definition of global display zone

Zone Definition: (16 bytes each item)

The first byte is zone type, available zone types:

Vale	Туре						
1	Display the variable's specify text						
2	Display the variable's specify file (.gif)						
6	Display hint text of other zone						
7	Display stopwatch timer value						
other	Reserved						

Type = 1

	0	1	2	3	4	5	6	7	8	9	Α	В	С	D	Е	F	
0x00	Type	reserved	Х		y		cx		cy		start	end	sta	y	font	align	1

Explanation:

Data Name	Data Size (byte)	Description
Type	1	1: Display the variable's specify text
X	2	Zone start point X. High byte previous
у	2	Zone start point Y. High byte previous
сх	2	Zone width. High byte previous
cy	2	Zone Height. High byte previous
Start	1	Start variable number, valid value $1\sim100$
End	1	End variable number, valid value 1~100
stay	2	The stay time when display each valid variable's content, the unit is second.
		High byte previous
font	1	Font size and color Bit0~2: font size(8,12,16,24,32,40,48,56)
		Bit3: Color invert
		Bit4: Red value of color
		Bit5: Green value of color
		Bit6: Blue value of color
		Bit7: Reserved
align	1	Text alignment

All "reserved" values need to be set to 0

$\mathbf{Type} = \mathbf{2}$

	0	1	2	3	4	5	6	7	8	9	Α	В	С	D	Е	F
0x00	Type	reserved	X		y		cx		cy		start	end	sta	y	mode	reserved

Explanation:

Data Name	Data Size (byte)	Description
Type	1	2: Display the variable's specify file (.gif)
X	2	Zone start point X. High byte previous
у	2	Zone start point Y. High byte previous
сх	2	Zone width. High byte previous

су	2	Zone Height. High byte previous
Start	1	Start variable number, valid value 1~100
End	1	End variable number, valid value $1\sim100$
stay	2	The stay time when display each valid variable's content, the unit is second. High byte previous
mode	1	Image draw mode:
		0: left top
Reserved	1	

All "reserved" values need to be set to 0

Type = **7**

	0	1	2	3	4	5	6	7	8	9	Α	В	С	D	Е	F
0x00	Type	reserved	X		У		cx		cy		font	format	res	erve	d	

Explanation:

Data Name	Data Size (byte)	Description						
Туре	1	7: Display stopwatch timer value						
X	2	Zone start point X. High byte previous						
у	2	Zone start point Y. High byte previous						
cx	2	Zone width. High byte previous						
cy	2	Zone Height. High byte previous						
font	1	Font size and color Bit0~2: font size(8,12,16,24,32,40,48,56) Bit3: Color invert						
		Bit4: Red value of color						
		Bit5: Green value of color						
		Bit6: Blue value of color						
		Bit7: Reserved						
format	1	0: "mm:ss"						
		1: "mm:ss:nn"						
Reserved	4							

All "reserved" values need to be set to 0

Push and set the variable value: CC=0x0d

Data Item	Value	Lenght(byte)	Description
CC	0x0d	1	Describe the package is the data which is push
			and set the variable value
Options		1	Bit0: Whether to save all the variable value to
			FLASH. 0 not save, 1 save.
			Bit1: direction。 0 push back,1 push forward
			Bit 2~3: retention, set to 0
			Bit4~7: push count. +1 means the variable

			count of push
Variable	area	1	Bit0~6: The variable count for push 1~100
count			Bit7: Retention, set 0
Variable	data	1	Specify variable data's byte.
length			The total length of variable number and data is
			(n+1) byte
Variable		changeable	The first byte is variable number, follow by
number	and		specify length variable data.
data			

Set Timer: CC=0x0e

Data Item	Value	Lenght(byte)	Description
CC	0x0e	1	Describe the package is the data of set
			stopwatch
Select Timer		1	Select the Timer by bite. Bit value 1 means the
			Timer valid
			Bit0: Timer 1.
			Bit1: Timer 2.
			Bit3: Timer 3.
			Bit4: Timer 4.
			Bit5: Timer 5.
			Bit6: Timer 6.
			Bit7: Timer 7.
Action		1	1: Initialize Timer
			2: Reset Timer
			3: Startup Timer
			4: Pause Timer
			5: Save the setup of Timer
			Other: Retention
property		1	Have different value according to the Action.
			Check the detail information in the below table.
Value		4	Have different value according to the Action.
			Check the detail information in the below table.

The description of all Actions and the correspondence property and value

Action	Description	Property	Value
Initialize		Bit0: 0 Time, 1 Countdown	High byte previous.
Timer		Bit1: 0 Pause, 1 start	The initialization value
		immediately	of countdown, measure
		Bit2~3: retention	time by millisecond.
		Bit4~7: Time count	The value retention
			when time, set to 0
Reset Timer		Bit0: 0 Use old value, 1 Use	High byte previous.
		new value	Countdown: Use as a
		Bit1: 0 Pause, 1 start	new initialization value

	immediately	when the property is set
	Bit2~3: Retention	to use new value.
		Ignore when the
		property is set to use the
		old value.
		Time: Retention, set 0.
Start Timer	Reserved, set 0	Retention, set 0
Pause Timer	Retention, set 0	Retention, set 0
Save the	Retention, set 0	Retention, set 0
setup of		
Timer		