COMMUNICATION PROTOCOL

JT-JDS6600

1. SUMMARIZE

For communication with the device, the baud rate must be set to 115200, 8 data bits, 1 stop bit and no parity bit are required.

The device executes the command sent by the PC, then returns the result to the PC .

The format of the sent data is as follows

Start bit	Instruction character	Function code	Connector	Data field	Tailed
:	w r a b	0 - 99	=	See the explanation	New line <CR><LF>

Explaination:

(1) The starting bit is the colon in the ASCII character table (:).

(2) The operator is four lowercase characters in the ASCII character table, and "w" is write the instruction is used to set various parameters, "r" is the read instruction used to return the parameters in the machine, "a". The instruction is used to write the data of any wave, and the "b" instruction is used to read the data of any wave.

(3) The function number is a numeric value in the ASCII character table, and the difference of the value represents the different parameter settings.

(4) According to the field: the data field is equivalent to the operand of the command, with a number of 1 to 2048 Each data is distinguished by "," or ".".

For example :w23=25786,0.<CR><LF> this instruction operand is 2, the first operand is"25786", the set output frequency is 257.86, the second bit operand is "0" set the frequency unit to Hz, in a word, this instruction sets the frequency of channel 1 to 257.86 Hz.

(5) Terminator: each instruction ends with a return character plus a newline.

<CR> represents the carriage return in the ASCII character table (the sixteen is represented as 0x0D).

<LF> is a newline of the ASCII character table (the sixteen is represented as 0x0a).

2. CHANNEL OUTPUT STATUS SETTINGS

E.g:

PC sends :w20=1,1.<CR><LF> means that channels 1 and 2 enable the output at the same time.

PC sends :w20 = 0, 0. <CR> <LF> means that channels 1 and 2 disable the output at the same time.

Waveform setting

for instance：
PC sends :w21=0.<CR><LF> indicates that the waveform of channel 1 output is a sine wave, and the device returns OK to indicate that the setup was successful.

The PC sends :w21=101.<CR><LF> indicates that the set channel output waveform is 01 of any wave, and the device returns OK to indicate that the setup was successful.

The PC sends :w22=0.<CR><LF> to indicate that the waveform of the channel 2 output is a sine wave, and the device returns OK to indicate that the setup was successful.

The other waveforms are set as follows：

Channel 1	Wave form	Channel 2
:w21=0.<CR><LF>	Sine wave	:w22=0.<CR><LF>
:w21=1.<CR><LF>	Square wave	:w22=1.<CR><LF>
:w21=2.<CR><LF>	Pulse wave	:w22=2.<CR><LF>
:w21=3.<CR><LF>	Triangular wave	:w22=3.<CR><LF>
:w21=4.<CR><LF>	Partial sine	:w22=4.<CR><LF>
:w21=5.<CR><LF>	CMOS wave	:w22=5.<CR><LF>
:w21=6.<CR><LF>	DC level	:w22=6.<CR><LF>

Channel 1	Wave form	Channel 2
:w21=7.<CR><LF>	Half wave	:w22=7.<CR><LF>
:w21=8.<CR><LF>	Full wave	:w22=8.<CR><LF>
:w21=9.<CR><LF>	Positive step wave	:w22=9.<CR><LF>
:w21=10.<CR><LF>	Negative step wave	:w22=10.<CR><LF>
:w21=11.<CR><LF>	Noise wave	:w22=11.<CR><LF>
:w21=12.<CR><LF>	Expotential-	:w22=12.<CR><LF>
:w21=13.<CR><LF>	Expotential-Decay	:w22=13.<CR><LF>
:w21=14.<CR><LF>	Multi-Tone	:w22=14.<CR><LF>
:w21=15.<CR><LF>	Sinc	:w22=15.<CR><LF>
:w21=16.<CR><LF>	Lorenz pulse	:w22=16.<CR><LF>

:w21=101.<CR><LF> is arbitrary wave 01,

:w21=102.<CR><LF> represents arbitrary wave 02,
By analogy, until the maximum of 160 is an arbitrary wave 60.

Frequency settings

PC sends :w23=25786,1.<CR><LF> the output frequency of the set channel 1 is 0.2586 KHz, and the device returns OK to indicate that the setup was successful.

PC sends :w24=25786,3.<CR><LF> the output frequency of the set channel 2 is 257.86 mHz, and the device returns OK to indicate that the setup was successful.

Frequency	Channel 1	Channel 2
Setting 257.86Hz	:w23=25786,0.<CR><LF>	:w24=25786,0.<CR><LF>
Setting 0.5786KHz	:w23=5786,1.<CR><LF>	:w24=25786,1.<CR><LF>
Setting 0.00025786MHz	:w23=25786,2.<CR><LF>	:w24=25786,2.<CR><LF>
Setting 257.86mHz	:w23=25786,3.<CR><LF>	:w24=25786,3.<CR><LF>
Setting 257.86uHz	:w23=25786,4.<CR><LF>	:w24=25786,4.<CR><LF>

Range settings

PC sends :w25=x.<CR><LF> when x=30 is set, the channel 1 output is 0.03V and the device returns OK to indicate that the setup was successful.

PC sends :w26=x.<CR><LF> when x=30 is set, the channel 2 output is 0.03V and the device returns OK to indicate that the setup was successful.

Duty cycle settings

PC sends :w29=x.<CR><LF> when x=500 is set, the channel 1 duty ratio output is 50%, the device returns OK to indicate that the setup was successful.

PC sends :w29=x.<CR><LF> when x=500 is set, the channel 2 duty ratio output is 50%, the device returns OK to indicate that the setup was successful.

Bias settings

PC sends :w27=9999.<CR><LF> the bias output of the set channel 1 is 9.99v, the device returns OK to indicate that the setup was successful.

PC sends :w27=1000.<CR><LF> the bias output of the set channel 1 is 0V, the device returns OK to indicate that the setup is successful.

PC sends :w27=1.<CR><LF> the bias output of the set channel 1 is -9.99v, the device returns OK to indicate that the setup was successful.

When setting the offset output of channel 2, just change W27 to W28.
For example, PC sends :w28=1.<CR><LF> setting channel 2 bias output to -9.99v, the device returns OK to indicate that the setup was successful.

Set up the phase

PC sends :w31=100.<CR><LF> indicates that the phase output is 10 degrees, and the device returns OK indicates that the setup was successful.

PC sends :w31=360.<CR><LF> indicates that the phase is 0 degrees, and the device returns OK indicates that the setup was successful.

The following settings are set as follows

The PC sends :w54=x, x, x, x, x.<CR><LF> tracking settings, the number of operands (x value) is 1, or for 0,1, it means synchronization 0, which means asynchronism, and synchronization is operated by channel 1. The number of operands corresponds to :w54= frequency, waveform and amplitude, Bias, duty ratio.

PC sends :w54=1,0,0,0,0.<CR><LF> set frequency synchronization (waveform, amplitude, Bias, duty ratio asynchronous), device returns OK to indicate that the setup was successful.

PC sends :w54=1,1,0,0,0.<CR><LF> sets frequency and waveform synchronization (amplitude Bias duty ratio asynchronous), and the device returns OK to indicate that the setup was successful.
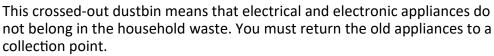
Extension function (writing of instructions)

For example, the PC sends the numeric value of the operands in :w32=x, x, x, x.<CR><LF> (xValue) only 1 or 0)

Our information and take-back obligations according to the Electrical and Electronic Equipment Act (ElektroG)

Symbol on electrical and electronic equipment:

This crossed-out dustbin means that electrical and electronic appliances do not belong in the household waste. You must return the old appliances to a collection point.
Before handing over waste batteries and accumulators that are not enclosed by waste equipment must be separated from it.

Return options:
As an end user, you can return your old device (which essentially fulfils the same function as the new device purchased from us) free of charge for disposal when you purchase a new device.
Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities independently of the purchase of a new appliance.

Possibility of return at our company location during opening hours:
Simac GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn, Germany

Possibility of return in your area:
We will send you a parcel stamp with which you can return the device to us free of charge. Please contact us by e-mail at Service@joy-it.net or by telephone.

Information on packaging:
If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

4. SUPPORT

If there are still any issues pending or problems arising after your purchase, we will support you by e-mail, telephone and with our ticket support system.

E-Mail: service@joy-it.net

Ticket system: http://support.joy-it.net

Telephone: +49 (0)2845 98469-66 (10-17 o'clock)

For further information please visit our website:

www.joy-it.net