

• Simplified Jetfile II Protocol VER 2.4

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Version Updated Record

Version No.:	Notes	Revised By	Date Revised
Ver1.0	First Version	Soar	2006-3-10
Ver2.0	Add commands demonstration	CZP	2006-5-17
Ver2.1	Add command <0x06>, Add commands demonstration for writing file to RAM drive & to Flash drive	CZP	2006-8-27
Ver2.2	Revised command format. Add <0xXX> for all hex commands	Soar	2006-9-7
Ver2.3	Revised font control commands	Soar	2007-1-24
Ver2.4	Explain of Commands Prefix	Soar	2007-7-26

1. Brief Introduction:

This file is a guide for the text file (display file) control commands in Jetfile II Protocol.

Notes: <0xXX> is for one hex code. For example, <0x30> is one ASCII code "0"

2. Communication Notes

For RS232 & RS485 communication: The default communication baud rate is 9600. This baud rate can be changed with software "Sigma" offered by manufacturer (related user's manual for "Sigma" will be offered at requirement)

For Ethernet communication: Apply UDP protocol, 3001 port

Buffer: The size for the buffer on the control board is 1200 bytes. 1200 bytes data are accepted for every time communication. We suggest the user send less 1024 bytes data to the control board every time.

3. Commands for TEXT file (display file)

Command format & Definition:

<0x01>ZXX<0x02>AA<0x06><0x1B>0b<0x1C>1<0x1A>1Test to display<0x04>

Commands definition:

<0x01>ZXX<0x02>: Commands Prefix, XX is the Unit address of the LED sign,

For example, 0x30 0x31 means sending the information to the LED sign

whose unit address is 0x30 0x31. 0x30 0x30 is Broadcast address.

AA: Command & file name, the first A is command, the second A is file name. If you want to write A & B & C & D four files, the commands should be AA, AB, AC, and AD. The valid file name can be the one between 0x21 - 0x80: Commands details below:

<0x01>Z00<0x02>AA<0x1C>1Test to display<0x04>

<0x01>Z00<0x02>AB<0x1C>1Test to display<0x04>

<0x01>Z00<0x02>AC<0x1C>1Test to display<0x04>

<0x01>Z00<0x02>AD<0x1C>1Test to display<0x04>

How to write file to the specified drive:

3.1. Write file to RAM drive command: A<0x0f>ETAA The first A is command, <0x0f>ET is the save path, the last two AA is the file name

3.2 Write file to flash drive command: A<0x0f>DTAA

The first A is command, <0x0f>DT is the save path, the last two AA is the file name

Notes:

- (1) RAM drive can be erased without limit. However, the file will be deleted after power off.
- Flash drive has working life limit, but it can save file even power off.
- (2) Default setting is to write file to flash drive, and you can use command AA only.

<0x1B>0b: Command for setting up type

The definition for place of '0' is reserved The definition for place of 'b' is options for automatic typesetting. Options as follow: 'a' (0x61): No automatic typesetting will be applied. When the display text exceed the

display length of the sign, the exceed text would not stop but move left.

'b' (0x62): Automatic typesetting will be applied. The default display mode is fixed display

Notes:

When 'a' command is used, no text moving in display modes or text moving out display modes is available. When 'b' command is used, you can use <0x0a> to control the display mode for display text.

<0x1C>1: Command for color setting

- + '0' Black
- + '1' Red color palette (Default)
- + '2' Green color palette
- + '3' Amber color palette
- + '4' Mixed colors palette 1
- + '5' Mixed colors palette 2
- + '6' Mixed colors palette 3
- + '7' Mixed colors palette 4

<0x1a>1: Command for font and character size (2 bytes format)

- + '0'(0x30) 5 × 5 Standard English Characters Font
- + '1'(0x31) 7 × 6 Standard English Characters Font (Default)
- + '2'(0x32) 14 × 8 Standard English Characters Font
- + '3'(0x33) 15 × 8 Standard English Characters Font
- + '4'(0x34) 16 × 8 Standard English Characters Font
- + '5'(0x35) 16 × 16 Standard Chinese Characters Font

Test to display: Display content

<0x04>or<0x03>: End of command (Necessary). Either of them must exist. <0x04>

means nothing returns; <0x03> means something returns. It will return "OK" if the command is handled successfully.

<0x0d>: Command for newline

<0x0c>: Command for new frame

<0x0a>: Command for display modes (3 bytes format)

'i' + Display mode code means text moving in display mode 'O' + Display mode code means text moving out display mode (Codes for display modes in details in APPENDIX A attached with this file)

<0x08>: [Control command for line space]

+ '0' = Line space is 0; + '1' = Line space is 1
; + '2' = Line space is 2; + '3' = Line space is 3;

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<0x06>: [Command to chose JetFileII protocol as the display protocol]

For example, <0x01>Z00<0x02>A1<0x06><0x1a><0x30> means to chose JetFileII display protocol and the font size is 5x5, standard English font.

Other commands:

<0x07>: Command for twinkling (2 bytes format),

'1' begins to flash

'0' ends to flash

<0x0b>: Command for special font (2 bytes format)

+ 0x20 MM/DD/YY

+ 0x21 DD/MM/YY

+ 0x22 MM-DD-YY

+ 0x23 DD-MM-YY

+ 0x24 MM.DD.YYYY

+ 0x25 YY

+ 0x26 YYYY

+ 0x27 MM (number)

+ 0x28 MMM.(char)

+ 0x29 DD (number)

+ 0x2A day of week (number)

+ 0x2B day of week (char)

+ 0x2C HH

+ 0x2D MIN

+ 0x2E SEC

+ 0x2F HH: MIN

+ 0x30 HH: MIN (12 Hours format, with AM or PM display automatically)

+0x31 Temperature (Celsius)

+0x32 Humidity +0x33

Temperature (Fahrenheit)

<0x0e>: Command for frame pause

(Different frame can have different pause time) +'0' time for stop (unit: second), range from '00' to '99' (4 bytes format) For example: 0x0e +'0' +'01':

Pause for 1 second 0x0e +'0' +'12': Pause for 12 seconds 0x0e +'0' +'68':

Pause for 68 seconds

<0x0f>: Command for display speed (2 bytes format)

'0' is the fastest speed
'6' is the slowest speed (7
display speed in total)

<0x1e>: Command for align horizontally (2 bytes format)

'0' means align centrally
(Default) '1' means align left '2'
means align right '//3' means
align left & right

<0x82>: 1/2 space

Notes: Different lines can be edited with different align mode. If some lines does not be edited with align mode, these lines would accept the align mode of their previous line as their align mode)

<0x1f>: Command for align vertically (2 bytes format)

'0' means align up & down
(Default) '1' means align up '2'
means align down '3' means align
centrally

4. Command Demonstration:

4.1 If you want to display the following text (statically)

ABCD2345
EFGH6789
IJKL0123
MNOP4567

You should send the following commands to the sign:

<0x01>Z00<0x02>AA<0x06><0x0a>I0ABCD2345<0x0D>EFGH6789<0x0D>IJKL0123<
0x0D>MNOP4567<0x04>

4.2 If you want to display the following text (moving left)

ABCD2345

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EFGH6789
IJKL0123
MNOP4567

You should send the following commands to the sign:

```
<0x01>Z00<0x02>AA<0x06><0x0a>I1 ABCD2345<0x0D>EFGH6789<0x0D>IJKL0123<0x0D>MNOP4567<0x04>
```

4.3 Display two lines text

If you want to display two lines of following text: OPEN 24HRS FREE GIFTS You should send the following commands:

```
<0x01>Z00<0x02>AA<0x06><0x08>0<0x0A>I<0x30>OPEN 24HRS <0x0d>FREE GIFTS<0x04>
```

Notes: <0x0A>I<0x30>: To set display mode (0x30 is Jump out mode) <0x0d>: To newline the text behind this command <0x08>0: To set the line space (<0x08>0 means the line space is 0)

4.4 Write file AA to RAM drive

If you save the following text file to RAM drive,
OPEN 24HRS
FREE GIFTS

You should write the following commands:

```
<0x01>Z00<0x02>A<0x0f>ETAA<0x06><0x08>0<0x0A>I<0x30> OPEN 24HRS <0x0d> FREE GIFTS <0x04>
```

Notes:

<0x0A>I<0x30>: To set display mode (0x30 is Jump out mode)
<0x0d>: To newline the text behind this command <0x08>0: To set the line space (<0x08>0 means the line space is 0)

4.5 Write file AA to flash drive

If you save the following text file to flash drive,
OPEN 24HRS
FREE GIFTS

You should write the following commands:

```
<0x01>Z00<0x02>A<0x0f>DTAA<0x06><0x08>0<0x0A>I<0x30> OPEN 24HRS <0x0d> FREE GIFTS <0x04>
```

Notes:

<0x0A>|<0x30>: To set display mode (0x30 is Jump out mode)

<0x0d>: To newline the text behind this command <0x08>0: To set the line space (<0x08>0 means the line space is 0)

4.6 If you want to display the following text (insert 1/2 space example)

ABCD 2345
EFGH 6789
IJKL 0123
MNOP 4567

You should send the following commands to the sign:

<0x01>Z00<0x02>AA<0x0a>|1 **ABCD<0x82>2345<0x0D>EFGH<0x82>6789<0x0D>IJK
L<0x82>0123<0x0D>MNOP<0x82>4567<0x04>**

APPENDIX A: Codes for display modes

0x2f : Random
0x30: Jump out
0x31: Move left
0x32: Move right
0x33: Scroll left
0x34: Scroll right
0x35: Move up
0x36: Move down
0x37: Scroll to L/R
0x38: Scroll up
0x39: Scroll down
0x3a : Fold from L/R
0x3b: Fold from U/D
0x3c : Scroll to U/D
0x3d: Shuttle from L/R
0x3e : Shuttle from U/D
0x3f : Peel off L
0x40: Peel off R
0x41: Shutter from U/D
0x42: Shutter from L/R
0x43: Raindrops
0x44: Random mosaic
0x45: Twinkling stars
0x46: Hip-hop
0x47: Radar scan
0x48: Fan out
0x49: Fan in

0x4a : Spiral R
0x4b: Spiral L
0x4c : To four corners
0x4d: From four corners
0x4e : To four sides
0x4f : From four sides
0x50: Scroll out from four blocks

0x51: Scroll in to four blocks 0x52
: Move out from four blocks 0x53
: Move in to four blocks 0x54:
Scrl from U/left,square 0x55: Scrl
from U/right,square 0x56: Scrl
from L/left,square 0x57: Scrl from
R/right,square 0x58: Scrl from
U/left,slanting 0x59: Scrl from
U/right,slanting 0x5a : Scrl from
L/left,slanting 0x5b: Scrl from
L/right,slanting

0x5c : Move in from U/left corner
0x5d: Move in from U/right corner
0x5e : Move in from L/left corner
0x5f : Move in from L/right corner

0x60: Growing up