1.7 Special message display function

In general monitoring mode and soft key mode (16 KEYS or 8 KEYS), the user can configure the DAP to display every kind of message under some circumstances, and the two-line display on the LCD can be controlled separately to simultaneously display different messages. Every message is 1~511 words and numbers (ASCII code) long, in which a maximum of 16 variables (if variables with 32-digit are not used, then it can use up to 25) can be included. When a message has more than 16 words, the message will be displaced left for display, in which the moving speed or pause time can be configured flexibly.

1.7.1 Message display application

The FB-DAPB(R) can be connected up to 16 sets (Number 1~16). Each DAP not only can display different messages individually but make all the DAPs connected display the same message simultaneously. If you go to a special contact (R3780~M3813) set by Enable, the DAP will display the message ASCII Code) indicated by the corresponding indication register （R3780～M3813）. The content of the indication register is the start register of messages, i.e. start of ASCII Code. The indication register content can be changed anytime in order to change and display different messages.

The following is a list of corresponding special contacts and indication registers when each DAP is displaying a message for control.

Number of a message displayed	LCD line 1		LCD line 2	
	Special contact	Indication register	Special contact	Indication register
1～16	M1800	R3780	M1801	R3781
1	M1802	R3782	M1803	R3783
2	M1804	R3784	M1805	R3785
3	M1806	R3786	M1807	R3787
4	M1808	R3788	M1809	R3789
5	M1810	R3790	M1811	R3791
6	M1812	R3792	M1813	R3793
7	M1814	R3794	M1815	R3795
8	M1816	R3796	M1817	R3797
9	M1818	R3798	M1819	R3799
10	M1820	R3800	M1821	R3801
11	M1822	R3802	M1823	R3803
12	M1824	R3804	M1825	R3805
13	M1826	R3806	M1827	R3807
14	M1828	R3808	M1829	R3809
15	M1830	R3810	M1831	R3811
16	M1832	R3812	M1833	R3813

※ The start register of a message indicated by an indication register means：
0～8070：indicating R0～R8070
10000～13070：indicating D0～D3070

※ Special contacts M1800 and M1801 have a priority display function.

※ M1911 can control an alarm buzzer whether to sound or not. If M1911=0 （preset）, it shall be activated.

〈Example〉Assume M1803 from 0→1, R3783=100
Result：Line 2 of No. 1 of the LCD will display messages in ASCII Code with R100 start.

〈Example〉Assume M1828 from 0→1, R3808=10000
Result：Line 1 of No. 14 of the LCD will display messages in ASCII Code with D0 start.

〈Example〉Assume M1801 from 0→1, R3781=0
Result：Line 2 of all the DAPs will display messages in ASCII Code with R0 start.

1.7.2 The Information formats of messages（ASCII Table）

The information formats of messages are very similar to the file information in ASCII in chapter 15 in the Advanced Manual that are all categorized as fixed background information and dynamic variable information. The first can be words in English, numbers, or signs, and the second binary, decimal or hexadecimal system.

Length of a message is 1~511 digits (including blank spaces), but because there are only 16 digits a line in a DAP LCD, if a message has more than 16 digits, it will be displayed automatically toward the left (preset moving one time a second); if less than 16 digits, the tail will be filled in with blank digits and no moving occurs.

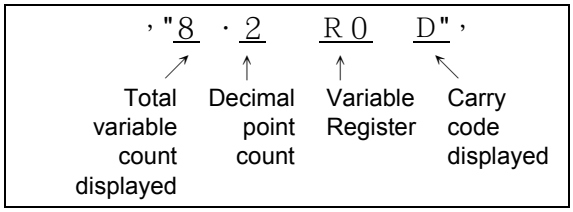
To edit a message, the WinProladder ASCII Editor can be applied. The editing command formats are as follows:

① Background information format

Any ASCII Code digits quoted with ' ' can be background information. To display a single quotation mark as such, two continuous quotation marks are a must. Example:

' I ' 'M A BOY' will be displayed I'M A BOY

② Variable information format



Description information in a pair of dual quotation marks 〝 〞 is used to indicate the register address (number) storing the variable information and in what format and carry code to display.

- Total variable count displayed：In this case, the value (including minus) of the variable R0 is displayed in a field with 8 digits. If the variable value is bigger than the total variable count displayed, the digits further from the point will be cut. If not enough, blank spaces will fill in.
- Decimal point count：the decimal point count in the total digits. In this case, with a total count of 8 digits, the decimal point count is 2. The decimal point sign 〝·〞 as such possesses one digit and there are 5 digits left in the integral part.
- Variable register：can be used as 16 digit register's R、D、WX、WY、……, or 32 digit register's DR、DD、DWX、DWY、……etc. The content value in the register will be retrieved and displayed with the format and carry code described in the 〝 〞.
- Contacts：generally displayed as ON or OFF (total digit count displayed is set to a fixed 3), but if added with binary system B in the tail, 0/1 will be displayed (total digit count fixed 1)
- Carry code：can be hexadecimal H, decimal D (the carry code will use decimal if without indication, so D can be omitted.), or binary B, etc., but a 32 digit variable can not be displayed with binary system.

In this case, R0's content value is －32768. In 8.2 format the result is displayed as:

－	3	2	7	.	6	8	

If the format is changed from 8.2 to 5.1, then the result becomes:

2	7	6	.	8

③ Basic command signs

- nS Left move speed (repeatable)

  Message displayed at a left LCD move per n（1～255）×0.1s。

- nP Stop move (repeatable)

  Message stop in（1～255）×0.1s，and then move left at a configured speed.

- ， Comma

  Used as a statement to divide the file information. Information between two neighboring commas is a complete and executable statement (unnecessary for the start and end of a file).

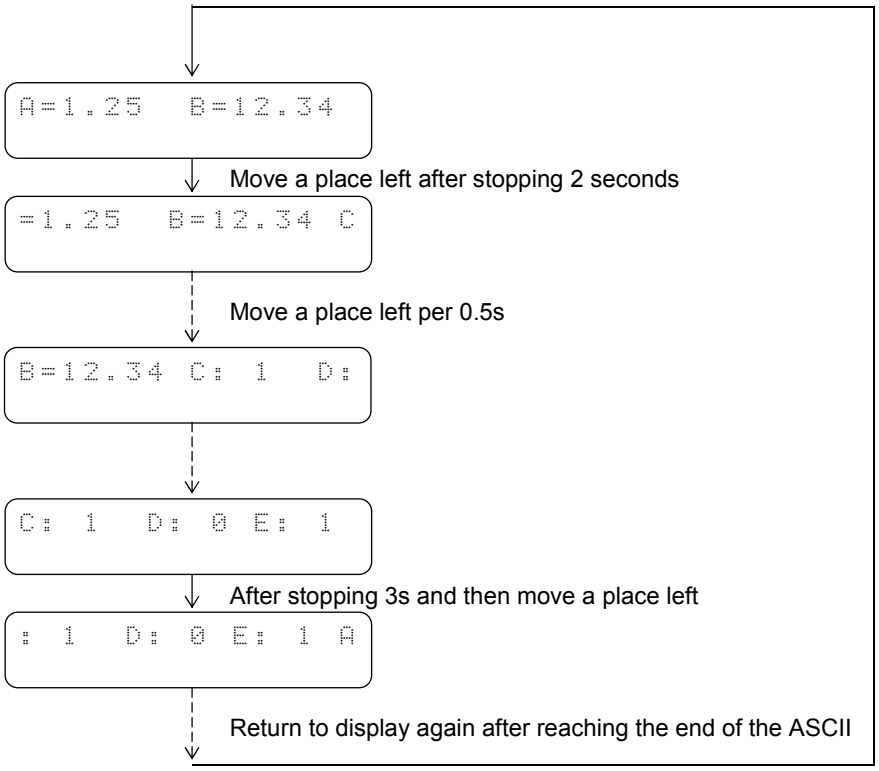
- END End of a file

※ nS and nP commands will not be activated until after the information following them moves to the left first place on the LCD display. They can have a repeatable arrangement of any place in ASCII, but the same command cannot be connected together.

〈Example〉 Information edited with WinProladder ASCII file editor. R0 is a start register of an ASCII file and the file information is shown as follows：

5S，20P，'A='，〝6.2R3840〞，'B='，〝6.2R3841〞，30P，'C： '，〝1M0B〞，' D： '，〝1M1B〞，' E： '，〝1M2B〞，' '，END

If M1800 from 0→1 and R3780=0（i.e. R0）, Line 1 of the LCD of DAPs of all numbers is shown as follows：



※ Variable information is renewable anytime.

※ To display another message, just change R3780 value and not for M1800.