Protocol for 10000-count professional dual display DMM series

*USB communication protocol:	Conform to USB HID1.1

Commands to get read-time reading data:

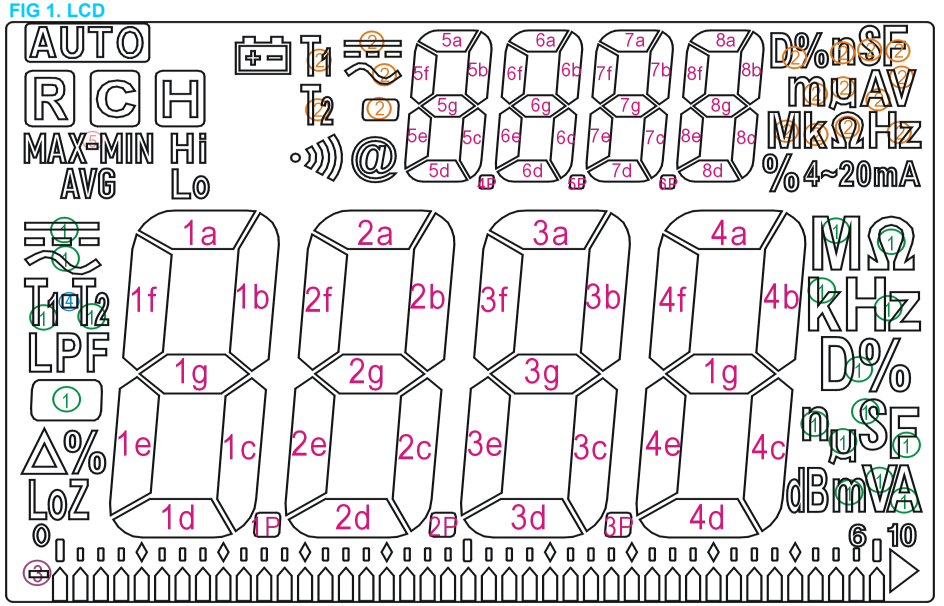
Report ID	Command 1	Command 2	Command 3
0x00	0x00	0x82	0x66

Real-time download: ***Returned 27-byte data table*** after sending out 4-byte requested **Commands**

TABLE 1. LCD map

Byte No.	bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
1	0x00 (Report ID= I)							
2	don't care							
3	**Hi**	**Lo**	①	①	**MIN**	⑤	**AVG**	**MAX**
4	①	△	%	**LoZ**	① **T2**	**LPF**	④	① **T1**
5	1b	1g	1c	1p	1a	1f	1e	1d
6	2b	2g	2c	2p	2a	2f	2e	2d
7	3b	3g	3c	3p	3a	3f	3e	3d
8	4b	4g	4c	**dB**	4a	4f	4e	4d
9	②	②	②	@		② **T1**	② **T2**	
10	0x00 (Report ID= II)							
11	5b	5g	5c	4p	5a	5f	5e	5d
12	6b	6g	6c	5p	6a	6f	6e	6d
13	7b	7g	7c	6p	7a	7f	7e	7d
14	8b	8g	8c	**%4~20mA**	8a	8f	8e	8d
15	② **m**	② **u**	② **A**	② **V**	② **D%**	② **n**	② **S**	② **F**
16	① **k**	① **M**	① **Ω**	① **Hz**	② **M**	② **k**	② **Ω**	② **Hz**
17	① **u**	① **m**	① **V**	① **A**	① **n**	① **D%**	① **S**	① **F**
18	don't care							
19	0x00 (Report ID= III)							
20	Model ID0: 0x82							
21	Model ID1: 0x82							
22	Model ID2: 0x82							
23	Model ID3: 0x82							
24	H	C	R	AUTO	don't care			
25	don't care							
26								
27								

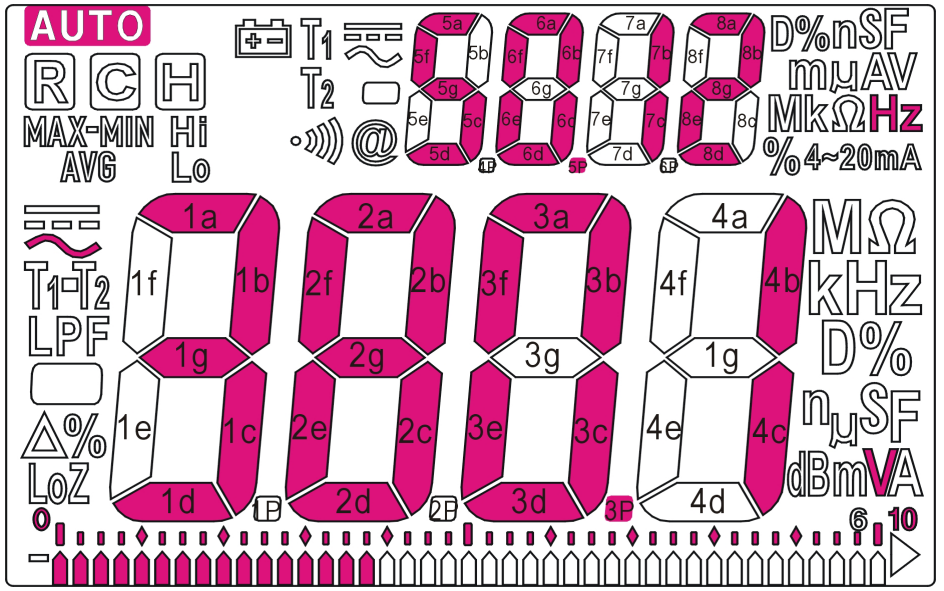
FIG 1. LCD



*Example for "**AC 380.1V / 50.12Hz**" dual display reading, output data 27 bytes: **00h, xxh, 10h, 00h, E9h, EFh, BFh, A0h, 00h, 6Dh, 00h, BFh, A0h, CBh, 00h, 01h, 20h, xxh, 00h, 82h, 82h, 82h, 82h, 1xh, xxh, xxh, xxh***

Byte No.	bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0	HEX
1	00h (Report ID= I)								00h
2	don't care								xxh
3	**Hi**	**Lo**	①	①	**MIN**	⑤	**AVG**	**MAX**	10h
4	①	△	%	**LoZ**	① **T2**	**LPF**	④	① **T1**	00h
5	1b	1g	1c	1p	1a	1f	1e	1d	E9h
6	2b	2g	2c	2p	2a	2f	2e	2d	EFh
7	3b	3g	3c	3p	3a	3f	3e	3d	BFh
8	4b	4g	4c	**dB**	4a	4f	4e	4d	A0h
9	②	②	②	@		② **T1**	② **T2**		00h
10	5b	5g	5c	4p	5a	5f	5e	5d	6Dh
11	00h (Report ID= II)								00h
12	6b	6g	6c	5p	6a	6f	6e	6d	BFh
13	7b	7g	7c	6p	7a	7f	7e	7d	A0h
14	8b	8g	8c	**%4~20mA**	8a	8f	8e	8d	CBh
15	② **m**	② **u**	② **A**	② **V**	② **D%**	② **n**	② **S**	② **F**	00h
16	① **k**	① **M**	① **Ω**	① **Hz**	② **M**	② **k**	② **Ω**	② **Hz**	01h
17	① **u**	① **m**	① **V**	① **A**	① **n**	① **D%**	① **S**	① **F**	20h
18	don't care								xxh
19	00h (Report ID= III)								00h
20	0x82h								82h
21	0x82h								82h
22	0x82h								82h
23	0x82h								82h
24	H	C	R	AUTO	don't care				1xh
25	don't care								xxh
26									xxh
27									xxh

* x: don't care



Proposal program design flowchart