13. RS232 Transmission Specification

13.1 RS232 transmission format is 14 byte. Its transmission rate is 2400 bps. The format is as follow:

Sing	Data Byte				Space	Point	SB1	SB2	SB3	SB4	BAR	EOF	ENTER
1	2	3	4	5	6	7	8	9	10	11	12	13	14
+/-	X	X	X	X	020H	X	X	X	X	X	X	00DH	00AH

13.2 14 byte output code location:

a) Sing byte 1: 0f0H；
b) Data byte 2: 0f1H；
c) Data byte 3: 0f2H；
d) Data byte 4: 0f3H；
e) Data byte 5: 0f4H；
f) Space byte: 0f5H；
g) Point byte: 0f6H；
h) SB1 byte: 0f7H；
i) SB2 byte: 0f8H；
j) SB3 byte: 0f9H；
k) SB4 byte: 0faH；
l) BAR byte: 0fbH；
m) EOF byte: 0fcH；
n) ENTER byte: 0fdH。

13.3 Sing byte stands for the positive or negative sign of DMM measuring signal, and its output code is ASCII code:

a) positive（+）: 02BH
b) negative（-）: 02DH。

13.4 Data byte is 4 byte that stands for DMM measured data, and its output code is ASCII code:

a) Date byte 2: stands for Lcd_1；
b) Date byte 3: stands for Lcd_2；
c)Date byte 4: stands for Lcd_3；
d)Date byte 5: stands for Lcd_4。

13.5 Point Byte stands for the decimal location, and its output code is Hex code:

a)Point「0」: 030H stands for no decimal and LCDs『0000』;
b)Point「1」: 031H stands for no decimal and LCDs『0.000』;
c)Point「2」: 032H stands for no decimal and LCDs『00.00』;
d)Point「3」: 033H stands for no decimal and LCDs『000.0』。

13.6 SB1 Byte code is as follow (SB1), and its output code is Hex code:

Status	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
0								
1	0	0	AUTO	DC	AC	REL	HOLD	BPN

13.7 SB2 Byte code is as follow (SB2), and its output code is Hex code:

Status	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
0								
1	Z1	Z2	MAX	MIN	APO	Bat	n	Z3

13.8 SB3 Byte code is as follow (SB3), and its output code is Hex code:

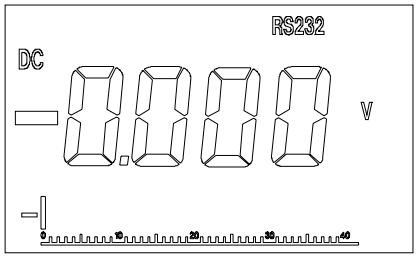
Status	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
0								
1	μ	m	k	M	Beep	Diode	%	Z4

13.9 SB4 Byte code is as follow (SB4), and its output code is Hex code:

Status	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
0								
1	V	A	Ω	hFE	Hz	F	℃	℉

13.10 Bar byte: Bit 7 stands for the positive or negative; Bit 0~6 stands for Bar graph number. Its output code is Hex code.

13.11 Example: measuring voltage mode『MEAS: 11010』: input 0V. LCD is as follow:



13.12 RS232 Output Format:

2D-30-30-30-30-20-31-11-00-00-80-80-0D-0A

13.13 RS232 Output Wave Form

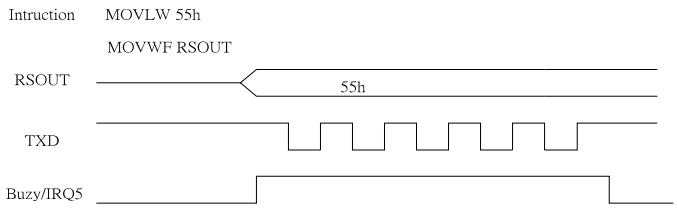


Diagram34 RS232 Output Wave Form