

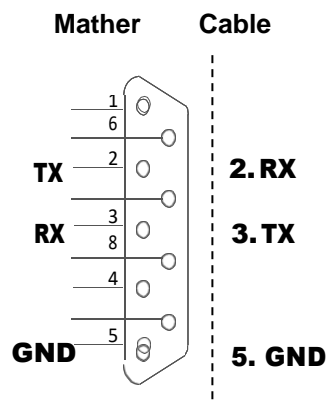
RS232 Protocol

RS-232C

1. Communication Specification

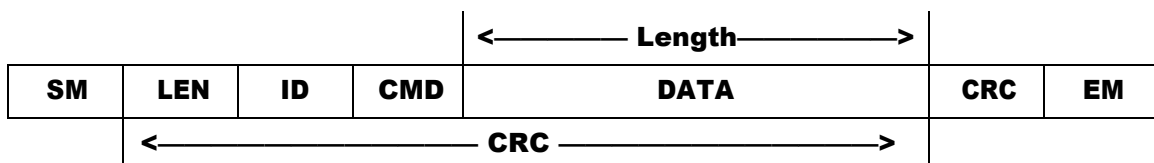
Baudrate	57,600bps
Data width	8bits
Parity	none
Stop bit	one
Flow control	none

Pin Map



D-sub 9P Female D-sub 9P Male

Communication Protocols



Name	Size	Function
SM	1	Start Marker (0x05)
LEN	1	Length
ID	1	ID
CMD	1	Command
DATA_n	n	DATA field
CRC	1	CRC (XOR calc.)
EM	1	End Marker (0x0A)

0	set matcher status	→	05	06	40	00					XX	0A
1	get matcher status	→	05	06	40	40					XX	0A
2	respond matcher status	←	05	02	40	C0					XX	0A
3	set load preset	→	05	06	40	01					XX	0A
4	get load preset	→	05	06	40	41					XX	0A
5	respond load preset	←	05	02	40	C1					XX	0A
6	set tune preset	→	05	06	40	02					XX	0A
7	get tune preset	→	05	06	40	42					XX	0A
8	respond tune preset	←	05	02	40	C2					XX	0A
9	get current load position	→	05	06	40	43					XX	0A
10	respond current load position	←	05	02	40	C3					XX	0A
11	get current tune position	→	05	06	40	44					XX	0A
12	respond current tune position	←	05	02	40	C4					XX	0A
13	get vpp value	→	05	06	40	45					XX	0A
14	respond vpp value	←	05	02	40	C5					XX	0A
16	get vrms and Irms	→	05	06	40	05					XX	0A
17	vrms and Irms response	←	05	04	40	C8					XX	0A
18	get matcher impedance	→	05	06	40	06					XX	0A
19	matcher Impedance Response	←	05	05	40	C9					XX	0A
20	get forward power	←	05	06	40	03					XX	0A
21	forward power response	←	05	03	40	C6					XX	0A
22	get ref power	←	05	06	40	04					XX	0A
23	ref power response	←	05	03	40	C7					XX	0A
24	Set Start and Stop SWR	→	05	06	40	13					XX	0A
25	Get Start and Stop SWR	→	05	06	40	14					XX	0A
26	Start and Stop SWR Response	←	05	04	40	D0					XX	0A
27	Get SWR	→	05	06	40	07					XX	0A
28	Response SWR	←	05	03	40	CA					XX	0A
29	Set Phase gain	→	05	06	40	06					XX	0A
30	Set Position Threshold	→	05	06	40	C9					XX	0A
31	Set Load Manually	→	05	06	40	0F					XX	0A
32	Set Tune Manually	→	05	06	40	10					XX	0A
33	Motor Reset	→	05	06	40	08					XX	0A
34	Get Phase Shift	→	05	06	40	11					XX	0A
35	Phase Shift response	←	05	03	40	CE					XX	0A

3. Communication Command Information

1.set matcher status

[cmd] 0x00	15 3 2 0			
[id] 0x40				
	[2:0]	auto-I : 0		
		Manual : 1		
		auto-II : 2		
		auto Preset-I : 3		
		auto preset-II : 4		
	[15:3]	reserved		

3.respond matcher status

[cmd] 0xC0	15 12 11 10 9 8 7 4 3 2 1 0															
[id] 0x40	rsv lt pl zl pe rsv mv am															
	[0]	auto matching 0:auto 1:manual														
	[1]	reserved														
	[2]	Panel 0:Normal, 1:Abnormal														
	[3]	RF 0:OFF, 1:ON														
	[7:4]	reserved														
	[8]	Motor Error 0:normal, 1:abnormal														
	[9]	reserved														
	[10]	Temp 0:normal, 1:abnormal														
	[11]	Matching 0: not matched, 1:matched														
	[15:12]	reserved														

4.set load preset

[cmd] 0x01	15 10 9 0			
[id] 0x40	null lpw			
	[9:0]	load preset 0~1,000(0x0000~0x03E8)		
	[15:10]	null not assignment. write data is '0'.		
	[NOTE]	load preset unit is "%". 12.3%=123(0x007B)		

6.respondload preset

[cmd] 0xC1	15 10 9 0			
[id] 0x40	null lpr			
	[9:0]	load preset 0~1,000(0x0000~0x03E8)		
	[15:10]	null not assignment. read data is '0'.		
	[NOTE]	load preset unit is "%". 12.3%=123(0x007B)		

7.set tune preset

[cmd] 0x02	15 10 9 0			
[id] 0x40	null tnw			
	[9:0]	tune preset 0~1,000(0x0000~0x03E8)		
	[15:10]	null not assignment. write data is '0'.		
	[NOTE]	tune preset unit is "%". 12.3%=123(0x007B)		

9.respondtune preset

[cmd] 0xC2	15 10 9 0			
[id] 0x40	null tnr			
	[9:0]	tune preset 0~1,000(0x0000~0x03E8)		
	[15:10]	null not assignment. read data is '0'.		
	[NOTE]	load preset unit is "%". 12.3%=123(0x007B)		

10. respond current load position

[cmd] 0xC3	<table><tr><td>15</td><td>10</td><td>9</td><td>0</td></tr><tr><td colspan="2">null</td><td colspan="2">clpr</td></tr></table>		15	10	9	0	null		clpr	
15	10	9	0							
null		clpr								
[id] 0x40										
	[9:0]	load position 0~1,000(0x0000~0x03E8)								
	[15:10]	null not assignment. read data is '0'.								
		[NOTE] load position unit is "%". 12.3%=123(0x007B)								

11. respond current tune position

[cmd] 0xC4	<table><tr><td>15</td><td>10</td><td>9</td><td>0</td></tr><tr><td colspan="2">null</td><td colspan="2">ctnr</td></tr></table>		15	10	9	0	null		ctnr	
15	10	9	0							
null		ctnr								
[id] 0x40										
	[9:0]	tune position 0~1,000(0x0000~0x03E8)								
	[15:10]	null not assignment. read data is '0'.								
		[NOTE] tune position unit is "%". 12.3%=123(0x007B)								

12. respond vpp value

[cmd] 0xC5	<table><tr><td>15</td><td>14</td><td>13</td><td>0</td></tr><tr><td>null</td><td colspan="3">vpr</td></tr></table>			15	14	13	0	null	vpr		
15	14	13	0								
null	vpr										
[id] 0x40											
	[13:0]	vpp 0~10,000(0x0000~0x2710)									
	[15:14]	null not assignment. read data is '0'.									
		[NOTE] vpp unit is "V".									

13. respond Vrms and Irms value

[cmd] 0xC8	<table><tr><td>31</td><td>16</td><td>15</td><td>0</td></tr><tr><td colspan="2">vrms</td><td colspan="2">irms</td></tr></table>				31	16	15	0	vrms		irms	
31	16	15	0									
vrms		irms										
[id] 0x40												
	[15:0]	Irms Scaled by 10.0										
	[31:16]	Vrms Scaled by 10.0										
		[NOTE] irms unit is "A".										

14. respond Phase shift

[cmd] 0xCE	<table><tr><td>23</td><td>8</td><td>7</td><td>0</td></tr><tr><td></td><td></td><td></td><td></td></tr></table>				23	8	7	0				
23	8	7	0									
[id] 0x40												
	[7:0]	Sign 0: positive, 1: Negative										
	[23:8]	Phase shift in radian scaled by 10										
		[NOTE]										

15. respond swr reading

[cmd] 0xCA	<table><tr><td>23</td><td>8</td><td>7</td><td>0</td></tr><tr><td></td><td></td><td></td><td></td></tr></table>				23	8	7	0				
23	8	7	0									
[id] 0x40												
	[7:0]	Sign 0: positive, 1: Negative										
	[23:8]	current swr scaled by 100										
		[NOTE]										

16. respond forward power

[cmd] 0xC6			23	0
[id] 0x40				
	[23:0]	Fwd power scaled by 10		
		[NOTE]		

17. respond reflected power

[cmd] 0xC7	<table><tr><td>23</td><td>0</td></tr><tr><td colspan="2"></td></tr></table>		23	0		
23	0					
[id] 0x40						
	[23:0]	ref power scaled by 10				
		[NOTE]				

18. respond impedance

[cmd] 0xC9	<table><tr><td>39</td><td>24</td><td>23</td><td>8</td><td>7</td><td>0</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>						39	24	23	8	7	0						
39	24	23	8	7	0													
[id] 0x40																		
	[7:0]	Sign of imaginary 0: positive, 1: negative																
	[23:8]	real scaled by 10.0																
	[39:24]	imaginary scaled by 10.0																
		[NOTE]																

19. respond start and stop swr

[cmd] 0xD0	<table><tr><td>31</td><td>16</td><td>15</td><td>0</td></tr><tr><td colspan="2"></td><td colspan="2"></td></tr></table>				31	16	15	0				
31	16	15	0									
[id] 0x40												
	[15:0]	Start swr Scaled by 100										
	[31:16]	Stop swr Scaled by 100										
		[NOTE]										