

**ERC Version4 / ERC-M protocol-reference Firmware V3.6****Remarks for the annotation in this reference-document:**

<cr> = carriage return and represent the Ascii-code 13 = Hex-code 0D
 <lf> = line feed and represents the Ascii-code 10 = Hexcode 0A
 aaa = a 3-digit azimuth-position with leading 0
 eee = a 3-digit elevation-position with leading 0
 <s> = space and represents the Ascii-code 32 = Hex-code 20

Hygain DCU-1 with extensions for position-request

Some commands are redundant with slight differences to keep compatibility to the different implementations of the DCU-1-protocol in different programs

Command to ERC	Description	Returned from ERC
AS1;	Stop rotation	
AI1;<cr>	Request position azimuth	;aaa
AI1;	Request position azimuth	;aaa
AM1;<cr>	Execute rotation	
AM1;	Execute rotation	
AP1aaa;<cr>	Set azimuth-position to aaa	
AP1aaa;	Set azimuth-position to aaa	
D	Rotate CCW	
MGaaa	Rotate azimuth to aaa	
U	Rotate CW	
;	Stop rotation	

Yaesu GS232 A and B

The only difference in A and B is the format how a position is returned from the ERC

Note 1): This command was added by the Dual-AZ protocol by VE2DX and used to drive 2 AZ-rotators with a 2-axis interface

Command to ERC	Description	Returned from ERC
A<cr>	Stop rotation azimuth	<cr>
B<cr> (in GS232A-mode)	Request position elevation	+0eee<cr><lf>
B<cr> (in GS232B-mode)	Request position elevation	EL=eee<cr><lf>
C<cr> (in GS232A-mode)	Request position azimuth	+0aaa<cr><lf>
C<cr> (in GS232B-mode)	Request position azimuth	AZ=aaa<cr><lf>
C2<cr> (in GS232A-mode)	Request position azimuth + elevation	+0aaa+0eee<cr><lf>
C2<cr> (in GS232B-mode)	Request position azimuth + elevation	AZ=aaa<s><s>EL=eee<cr><lf>
D<cr>	Rotate DOWN or CCW 2 nd axis	<cr>
E<cr>	Stop rotation elevation	<cr>
L<cr>	Rotate CCW 1 st axis	<cr>
Maaa<cr>	Rotate azimuth to aaa	<cr>
MBeee<cr> 1)	Rotate elevation to eee	<cr>
R<cr>	Rotate CW 1 st axis	<cr>
S<cr>	Stops rotation both axis	<cr>
U<cr>	Rotate UP or CW 2 nd axis	<cr>
Waaa eee<cr>	Rotate azimuth to aaa and Rotate elevation to eee	<cr>