

## **SPID & SPX Rotators Gear Setup:**

MD-01 and MD-02 controllers are standard configured for use with type RAS/HR or BIG-RAS/HR rotors. Because this, it is necessary to check the gear settings for both axes (AZ & EL):

**UPDATE:** Before you start, check which version firmware you have installed in your MD-0X controller.

You can check firmware version by pressing F2 and F button at the same time, actual version will be displayed on the LCD display.

How you change this Gear:....

- Press S button
- Press > button to select the rotor (1 or 2)
- Press S again, you now enter into the Motor 1 or 2 menu
- Press > several times to step through the menu and find GEAR
- Press the UP or Down button to change the Gear (step by step)
- When done, Press F button and save you changes

### **Gear Settings SPID/HR AZ and AZ&EL Rotators :**

All SPID /HR rotators do have different gear settings, you can check this in the menu by pressing the "S" button and switch into the menu Set Motor 1 and Set Motor 2 to enter the Gear.

Set Gear to the value which is in the list. Be sure to pick the right value from the list !

<b>ROTOR</b>	<b>Gear Firmware version &lt; v.2</b>	<b>Gear Firmware version &gt; v.2</b>
RAU/HR	0.1875	0.046875
RAK/HR	0.1250	0.031250
RAEL/HR	0.1250	0.031250
BIG-RAK/HR	0.0938	0.023450
RAS/HR	0.1250	0.031250
BIG-RAS/HR	0.093750	0.023438
RING-01/HR	0.0500	0.012500
RING-02/HR	0.0250	0.006250

### **Gear Settings SPX-0X/HR Rotator:**

<b>Rotor</b>	<b>Gear Firmware version &lt; v.2</b>	<b>Gear Firmware version &gt; v.2</b>
SPX-01/HR	0.140625	0.035156
SPX-02/HR	0.140625	0.035156
SPX-02/HR/MW	0.140625	0.035156
SPX-03/HR	0.140625	0.035156

### **Update firmware:**

SPID & RF HAMDESIGN introduces when necessary new firmware updates for your MD-0X controller.

You can find this firmware update for your MD-0X controller on the HR Support page.

Please refer our: how to Firmware update MD-0X controller info sheet on this HR Support page.

Find this page on our website: [www.rfhamdesign.com](http://www.rfhamdesign.com) / SPID HR Antenna Rotators / HR Support Page

You can check firmware version by pressing F2 and F button at the same time, actual version will be displayed on the LCD display.

**Note: Do not upload Firmware before you are sure you checked the correct working of your system with the current version Firmware !**

## SPID MD-0X Controllers default setting list used for Firmware v2.xxx or higher versions

### How the MD-0X menu works:

You enter the Menu on the MD-0X controller by pressing the "S" button and arrow buttons to swap from menu to menu. When the needed menu is on your screen you press "S" button again, now you can walk through the menu selected by the < and > buttons. Press "F" button to leave the setup and select save changes: YES or NO (Gear in this list below is set to RAS/HR model rotators)

**TIP:** If you are not sure which firmware version you are currently using: Press simultaneously "F2" and "F" button front of the MD-0X controller. (Picture right shows version during starting up in v2.xxx or higher)



### Start to setup your controller system:

Please check the setup in your supplied controller with the default values below in this list, this is VERY important to do, to avoid stress and long email exchange with our support team, we would ask you to double check if your system does not work as expected.

### Start by Enter menu press: "S" button

Info below are default and setup to generate a working rotor system through **USB** communication

**Note:** GEAR is set to rotor system: SPID RAS/HR (Check gear setting for **your** rotor system in this setup document.)

MENU	VALUE	MENU	VALUE
<b>MENU #1</b> MOTOR CONFIGURATION  Press 2 x "S" button to enter menu #1 Press < or > to walk through the menu (Use Up / down keys to walk inside the menu)		<b>MENU #4</b> SET COM0  Press 1 x "S" button, 3x ">" button and "S" to enter menu #4 Press < or > to walk through the menu (Use Up / down keys to walk inside the menu)	
Template:	1: AZ, 2:EL	State:	OFF
Show Azimuth:	NORMAL	Baud:	9600
Short Way:	OFF	Data Bits:	8
Start:	IMMEDIATELY	Stop Bits:	1
Stop:	IMMEDIATELY	Parity:	OFF
Mouse Control:	OFF		
Control AE:	USB		
Prot. AE:	SPID ROT2		
Disp. Resol.:	0.1 Degree		
Press "F" button to save or leave this menu			
<b>MENU #2</b> SET MOTOR 1  Press 1 x "S" button, ">" button and "S" to enter menu #2 Press < or > to walk through the menu (Use Up / down keys to walk inside the menu)		<b>MENU #5</b> SET COM1  Press 1 x "S" button, 4x ">" button and "S" to enter menu #5 Press < or > to walk through the menu (Use Up / down keys to walk inside the menu)	
State:	ON	State:	OFF
Type:	DIGITAL	Baud:	9600
Kind:	AZIMUTH	Data Bits:	8
Input:	ELECTRONIC	Stop Bits:	1
Gear:	0.031250 (SPID RAS/HR)	Parity:	OFF
Min Angle:	-5.0 Degree		
Max Angle:	360 Degree		
MAX Power:	75%		
Min Power:	50%		
Pulse Timeout:	4s		
<b>MENU #3</b> SET MOTOR 2  Press 1 x "S" button, 2x ">" button and "S" to enter menu #3 Press < or > to walk through the menu (Use Up / down keys to walk inside the menu)		<b>MENU #6</b> SET USB COM  Press 1 x "S" button, 5x ">" button and "S" to enter menu #6 Press < or > to walk through the menu (Use Up / down keys to walk inside the menu)	
State:	ON	State:	ON
Type:	DIGITAL	Baud:	115200
Kind:	ELEVATION		
Input:	ELECTRONIC		
Gear:	0.031250 (SPID RAS/HR)		
Min Angle:	-5.0 Degree		
Max Angle:	180 Degree		
MAX Power:	75%		
Min Power:	50%		
Pulse Timeout:	4s		
		<b>MENU #7</b> SET ETHERNET  Press 1 x "S" button, 6x ">" button and "S" to enter menu #7 Press < or > to walk through the menu (Use Up / down keys to walk inside the menu)	
		State:	OFF

TIP: Set communication by connected PC, start to set in Menu #1 your communication preference, for example:

**CONTROL AE: USB** / safe by pressing button "F" and select YES.

Second step: Enter Menu #6, set in this menu your preference, press "F" again and safe

(If you need another communication by PC, do the same but start with Menu #1)