

## SETTINGS FOR MINI-KITS MODIFIED K3NG SOFTWARE

- 1/ Using the Arduino IDE software, program the Mega with the Mini-Kits modifier K3NG software
- 2/ Using the serial monitor in the Arduino IDE software set the following to suit a Yaesu G-5500 rotator
- 3/ Set az starting point to 180 degrees. Send /I180 ( capital eye,1,8,0, ) This is because it goes from 180 degrees south CW through 0 degrees and all the way CW to 270 degrees.
- 3/ Check starting point by sending /I should read Azimuth starting point set to 180
- 4/ set the az rotation capability to 450. Send /J450 ( capital jay,4,5,0, )
- 5/ check az rotation capability by sending /J should read 450
- 6/ save settings in EEPROM by sending /Q
- 7/ Check that the AZ goes from 180 through 0 to 270 with a voltage between 0.255 to 4.692v on A6.
- 8/ Check that the EL goes from 0 through to 180 with a voltage between 0.312 to 4.992v on A7.

The Mini-Kits modified K3NG software has the following code changes and settings.

[rotator\\_features.h](#)

```
#define FEATURE_ELEVATION_CONTROL  
  
#define FEATURE_YAESU_EMULATION  
  
#define FEATURE_AZ_POSITION_POTENTIOMETER  
  
#define FEATURE_EL_POSITION_POTENTIOMETER
```

[rotator\\_pins.h](#)

```
#define rotate_cw_pwm 9  
  
#define rotate_ccw_pwm 10  
  
#define rotator_analog_az A6  
  
#define rotate_up_pwm 5  
  
#define rotate_down_pwm 6  
  
#define rotator_analog_el A7
```

[rotator\\_settings.h](#)

```
#define AZ_SLOWSTART_DEFAULT 1

#define AZ_SLOWDOWN_DEFAULT 1

#define AZ_SLOW_DOWN_STEPS 20 //20 // must be < 256 changed from 200 to 20 as rotator took too long
to stop and reverse direction

#define EL_SLOWSTART_DEFAULT 1

#define EL_SLOWDOWN_DEFAULT 1

#define AZIMUTH_SMOOTHING_FACTOR 50 // value = 0 to 99.9

#define ELEVATION_SMOOTHING_FACTOR 50 // value = 0 to 99.9

#define CONTROL_PORT_MAPPED_TO &Serial1 ( suits the external HC-05 Bluetooth module
```

In serial monitor Set speed X3

### Rotator settings in SatPC32

Turning point N

At sat position change

360 deg

Time interval 1 seconds

Position change 1 degrees

Constant.