

Introduction:

Two tutorials have been published up to now:

Tutorial Miru Part 1_V8

http://ufo-doctor.ch/descriptions/Parrot%20Infos/Tutorial%20Miru%20Part%201_V8.pdf

Tutorial Miru Part 2_V4

http://ufo-doctor.ch/descriptions/Parrot%20Infos/Tutorial%20Miru%20Part%202_V4.pdf

And here the new stuff Tutorial Miru Part 3_V4:

12. Selectable configurations with Miru Mod 007

July 28th Miru published his wonderful Mod 007 with selectable configurations. If you have read his README carefully and have understood every word, you do not need any further advice, the drone is flying as intended.

But it could be that you did not read all the stuff carefully or that you are the owner of a transmitter other than Spektrum DX6i or higher. In this case, the following instructions might be helpful:

12.1. Remote Control Transmitter DX6i or higher

- If your Spektrum transmitter is DX7, you can use the program "rx2atp.c" as it is
- If your Spektrum transmitter is DX6i, change the program "rx2atp.c" as described in the Tutorial Part 1, V.1.8, Chapter 7

12.2. Different Remote Control Transmitter

- There are a plenty of other 2.4 GHz RC on the market with different specifications.
- Check first the operation Mode. The different TX-Modes are explained here:

<http://www.rcgroups.com/forums/showpost.php?p=18933031&postcount=571>

The Miru Mod 007 is written for Mode 2, the next Mod008 will have a Mode selector!

- Check the travel adjust of your transmitter for all channels, please look at the post 582 by Totoff in the same thread as above.

Recommended for all channels: 1100 < pulse duration < 1900 (usec),
or corresponding values: -1000 < value < +1000

12.3. Selectable configurations

Miru Mod 007 offers 4 flight configurations:

cfg1 is the default, it has been used since the beginning of the mod

cfg2 has everything maxed out

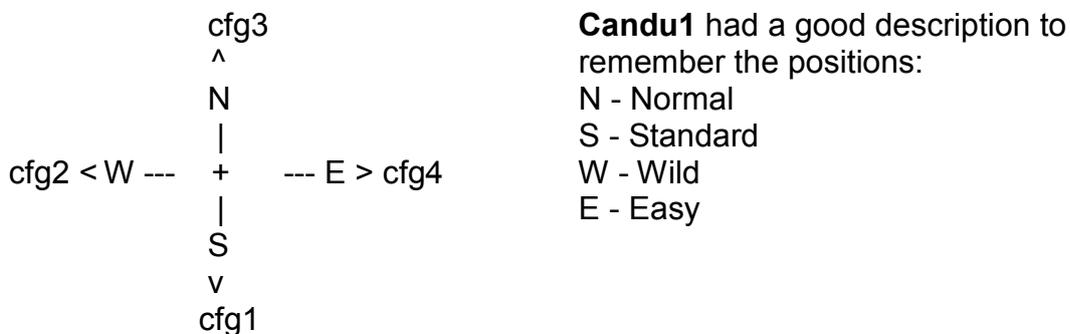
cfg3 is for indoors; believe it is the default indoor config, **with height limitation**

cfg4 is for indoors, tuned down even more, **with height limitation**

Your transmitter has 2 sticks for steering, lets call one 'throttle', the other 'elevator', because those functions are always on different sticks regardless of the mode (1, 2, 3 or 4) of your transmitter.

The drone needs to be in LAND. Push the throttle stick all the way up and leave the elevator stick centered, the **Arduino LED** indicates the current configuration with 1, 2, 3 or 4 blinks.

To select a configuration, use the elevator stick



To make it 'stick' hold the elevator stick on your new selection and move the throttle stick down. This will store your choice in EEPROM on the Arduino and upload the new parameters to the drone. You'll see the drone **motor LED** blinks when the new configuration is received.

13. Video and Battery Level monitoring with an iPhone

The control of the drone gets lost when the battery is low. There is no early warning! Checking the battery level by an iPhone can prevent a damage of your drone.

This is done here by a clamp, glued on the TX, holding the iPhone 4



Fig. 18. Clamp on Transmitter
1: Clamp; 2: O-Ring; 3: TX Display



Fig. 19. iPhone 4 in Clamp
1: Battery level monitor; 2: Video



Fig. 20. Manufacturing of the clamp
 1: iPhone 4; 2: Polymer protection;
 3: PVC 124x67.5x9mm; 4: O-ring 45x2
 5: Adhesive foam tape; 6: Milling tool



Fig. 21. Clamp for iPhone 4,
 manufactured by a 3D-Printer
 Brand: Objet
 Device: Alaris 30

You may download the drawing and the manufacturing program for the 3D-Printer here: www.ufo-doctor.ch, go to “descriptions”, then to “parrot info”. Right click “iphoneclamp.rar” and choose “save target as” on your desktop.

The polymer protection is a standard iPhone 4 accessory. It prevents the accidental pushing of the iPhone switches. Manufacturer: Handwoven, Ultra Clear, Polymer Jelly Series, Hydrocarbon Polymer™ Case, SKU: AP13-015SEA

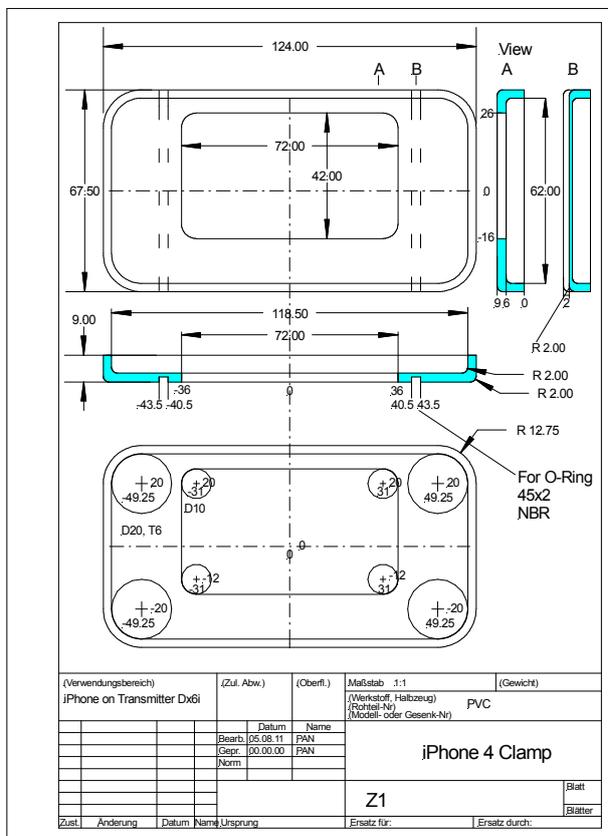


Fig. 22
 Drawing of the Clamp for an iPhone 4
 (for old-fashioned standard manufacturing!)

Good luck and kind regards
 UFO Doctor