Skyline Harness Modification

This document provides instructions for modifying the skyline cable to work with Firmware 1.2.0 and newer.

You will need:

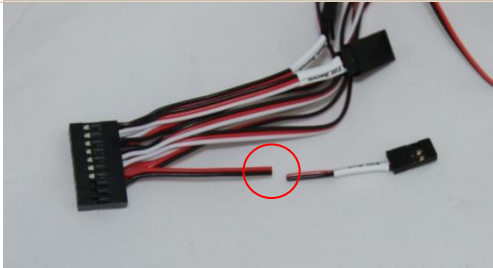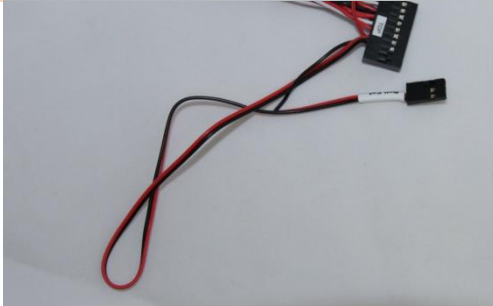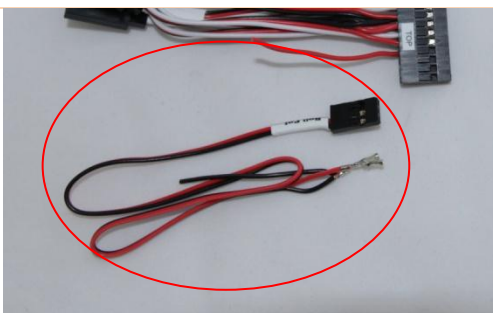|	
	Un modified skyline harness. If there are only six leads and no leads labelled "Tilt Pot" or "Roll Pot" then your harness doesn't need modification
	Heat shrink One small length of 3mm heat shrink
	Side Cutters
	Soldering Iron
	Small flat head screw driver

Instructions

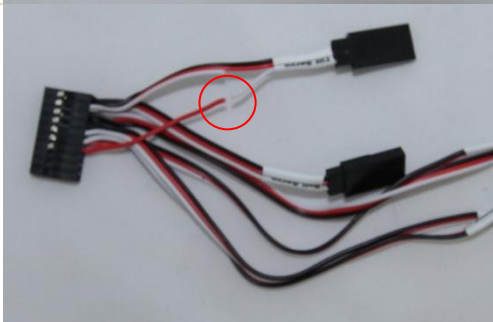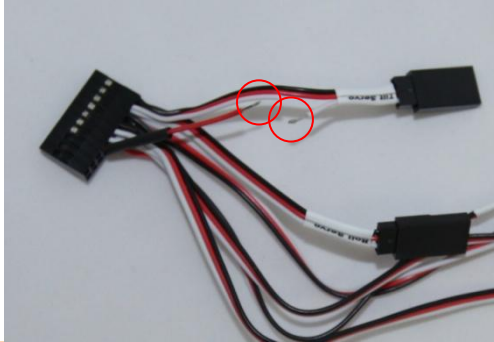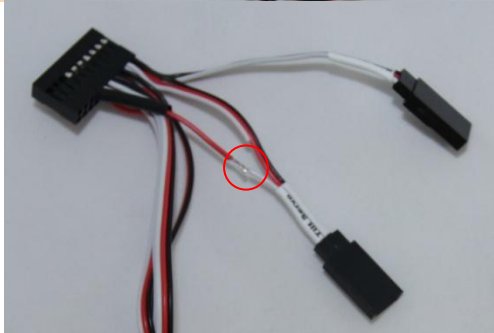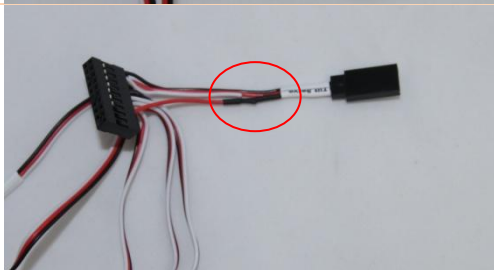|	
	1. Remove the skyline harness from your gimbal.
	2. Find the lead labelled "Tilt Pot" and cut off the connector at the location shown. Take note of the wire colour plugged into the third pin of the "Tilt Pot" connector. This will be either white or red depending on when your Skyline harness was produced.
	3. Separate the black "Tilt Pot" wire from the red (or white) signal wire. (If your cable uses the white wire then also remove the red centre wire that isn't connected to anything)
	4. Remove the lead labelled "Roll pot" along with the black "Tilt Pot" wire. You need to remove two pins in total from the connector. Save the "Roll pot" lead for later. Use a small flat head screw driver to lift the black tabs on the 20 pin connector and the pins will slide out easily.
	5. Cut the white wire on the lead labelled "Tilt Servo". Take care not to cut the red wire. The white wire will be joined to the wire from the tilt pot lead so cut the white "Tilt Servo" wire so it is long enough. (See picture on left) Separate a small section of the white wire on the servo connector end.
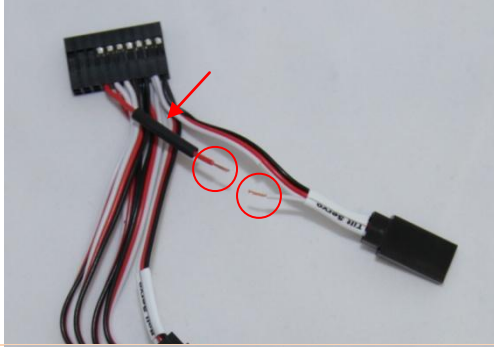
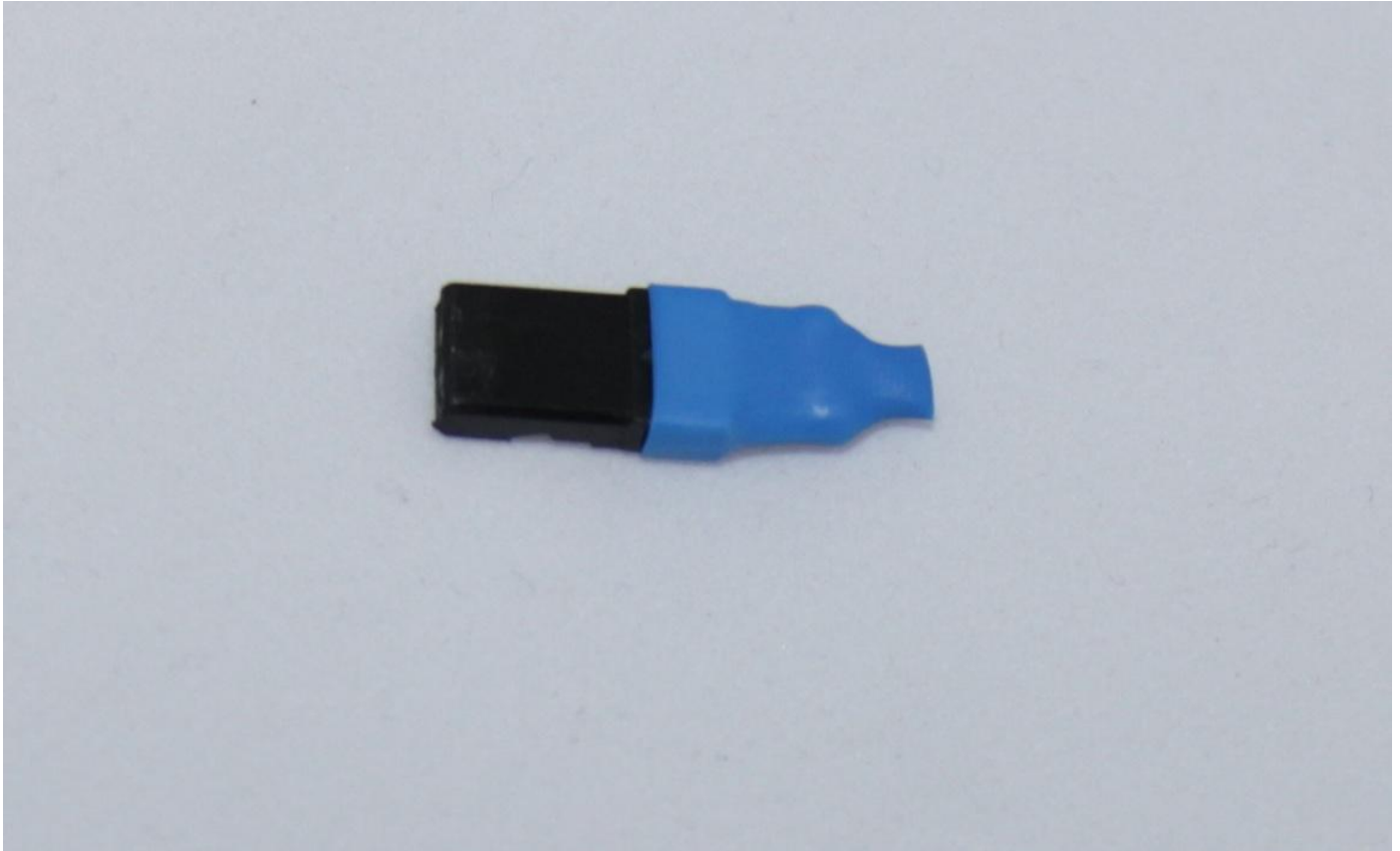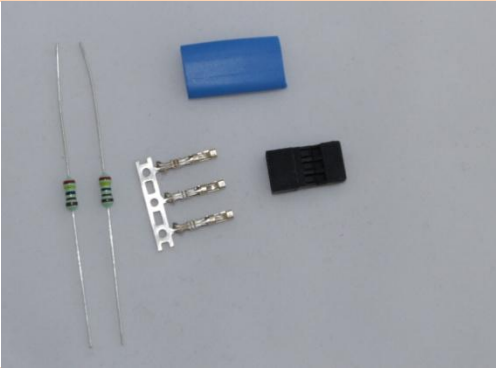|	
	6. Place a 20mm length of heat shrink on the free red (or white) wire and strip an 8mm length of insulator from the circled wires.
	7 Use a soldering iron to tin the ends of the wires you just stripped with solder.
	8. Solder the two ends together.
	9. Move the heat shrink over the join and shrink it with a heat gun, lighter or match.

Skyline Potentiometer Modification

These instructions are for creating "dummy pots" that are needed when using Skyline Firmware 1.2.0 and above. You will need two dummy pots, one for the tilt servo and one for the roll servo. The pan servo comes already modified. Photo Higher will provide these dummy pots free of charge to anyone who has already purchased a Photo Higher Skyline.
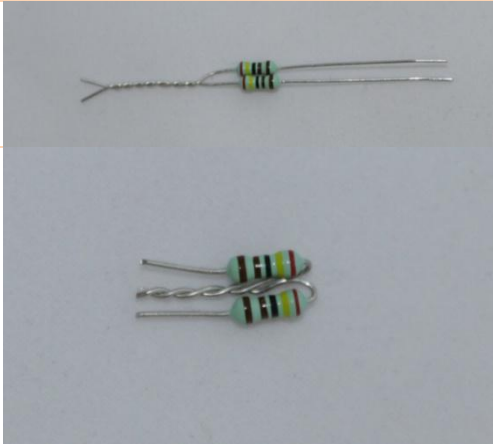
You will need

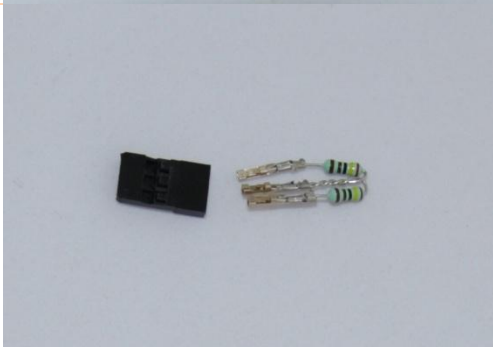|	
	2 x 2.4K ¼ Watt resistors: any value between 2K and 3K will work as long as the values are identical. JR male servo connector with pins 20mm of 6mm heat shrink.
	Double sided tape
	Side cutters
	Pliers

| | Heat gun or any other head source to use on heat shrink |

Instructions

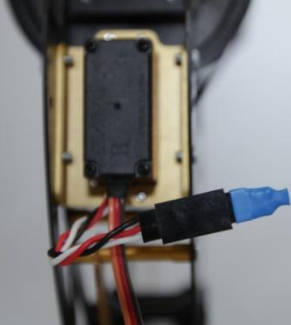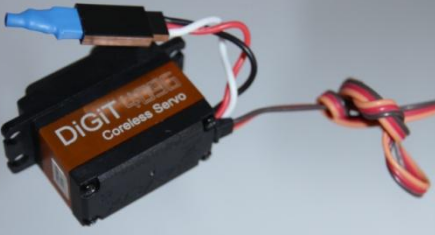| | Twist one end from each resistor together. |
	Fold the resistors leads together and the three ends to the same length with at least 1cm to spare.
	Use pliers to crimp the pins onto the ends of the resistors. It is easier to work with the ends if you separate them from each other
	Line up the three pins so they are approximately inline.

Insert all three pins at the same time into the male servo housing. Make sure each pin goes in far enough so the black tab locks the pin in place.

Place about 20mm of 6mm heat shrink on the end of the servo plug so that the resistors are totally covered.

Use a heat gun, lighter or match to shrink.

Plug the two dummy pots into the roll and tilt servos.

This turns the servo into a 360 continuous servo.

The dummy pots plug into the servo motors NOT the wiring harness.
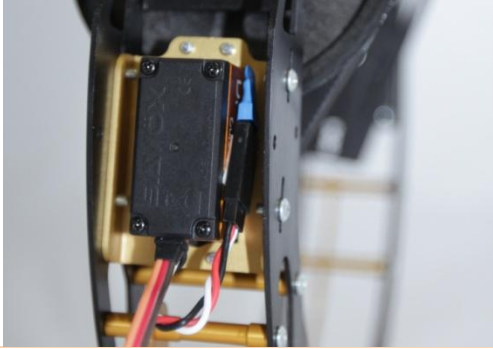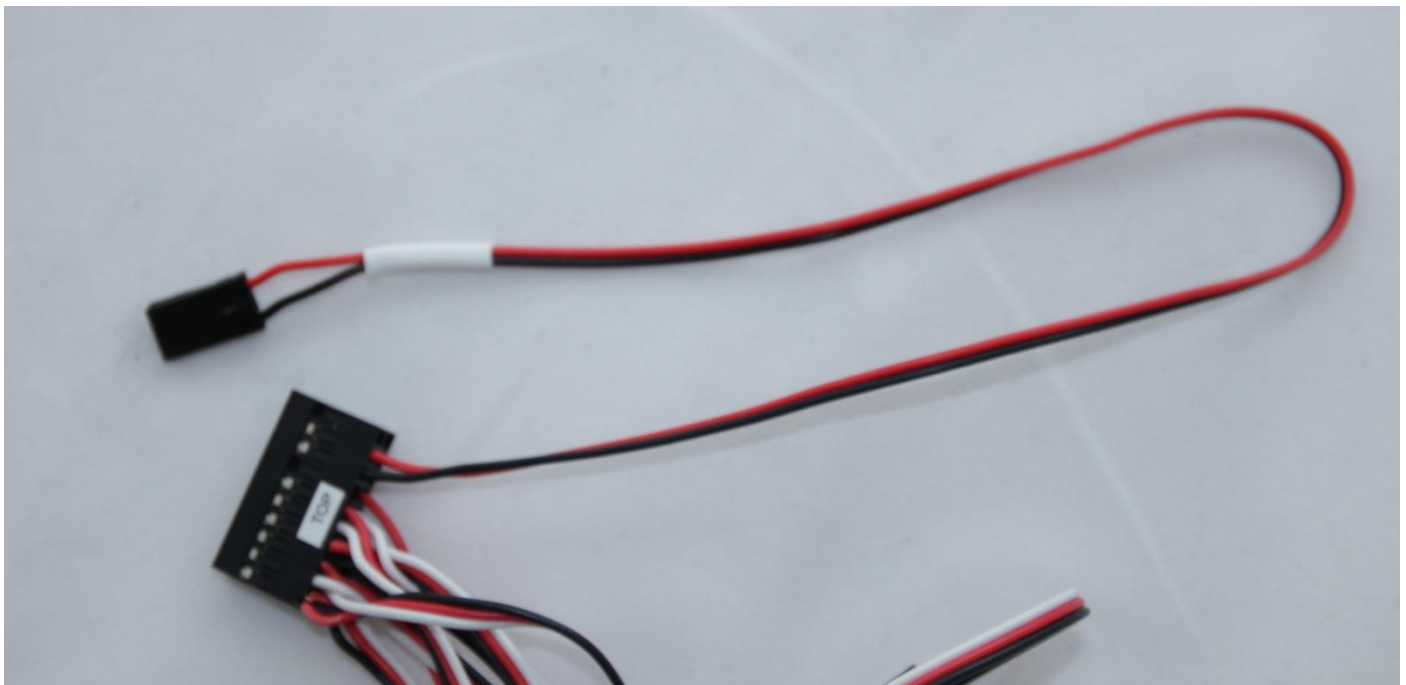
Attach the pots to the side of the servo with double sided tape.
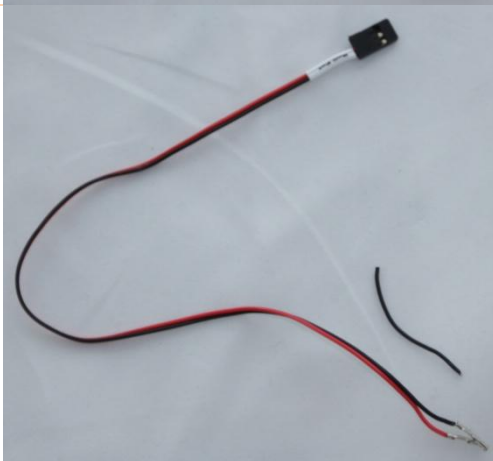
Optional Pan Switch Addition

This modification allows you to turn on and off the stabilisation using an auxilary output on your receiver. When the switch is in neutral the gimbal functions as per usual. In the up position the pan is disabled and the down position all servos on the gimbal are disabled.

NOTE: This modification is only needed if you have legs attached to your gimbal and need to disable pan stabilisation while the aircraft is on the ground. Alternatively you can use this if you want a kill switch to disable the gimbal.
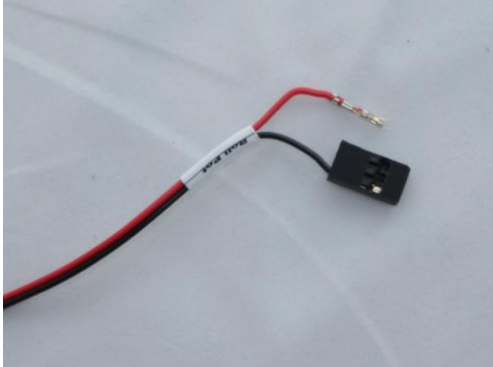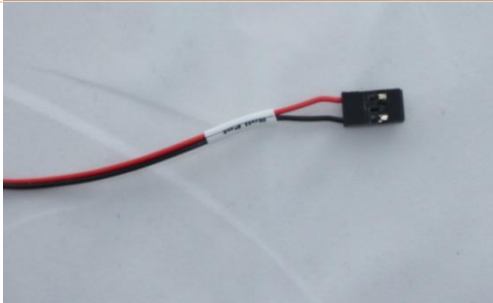
Instructions:
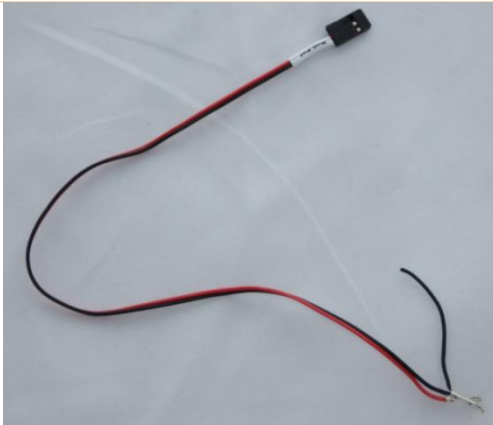
	Use the "Roll pot" lead you removed earlier.
	Cut off the left over black "tilt pot" lead as close to the pin as possible.

	De-pin the red lead from the "roll pot" servo plug.
	Put the pin back in the outside position
	Plug the red wire "roll pot" pin into the skyline connector in the second position from the right on the top row. Plug the black wire pin into the skyline connector in the third position from the right on the top row.
	Plug the old "roll pot" lead into an aux or gear output on your receiver. If you are using a three position switch set the two end points to 100% in the travel configuration on your transmitter. If you are using a two position switch set one to 100% and the other to 0%. You may need to swap them around to get the functionality you need.* You can re-label this wire as "aux" (Future versions of the software may allow you to use the switch functionality for other features) *(1000ms-1250ms=Pan Disabled. 1250ms-1750ms = Normal operation 1750ms-2000ms = All Disabled)