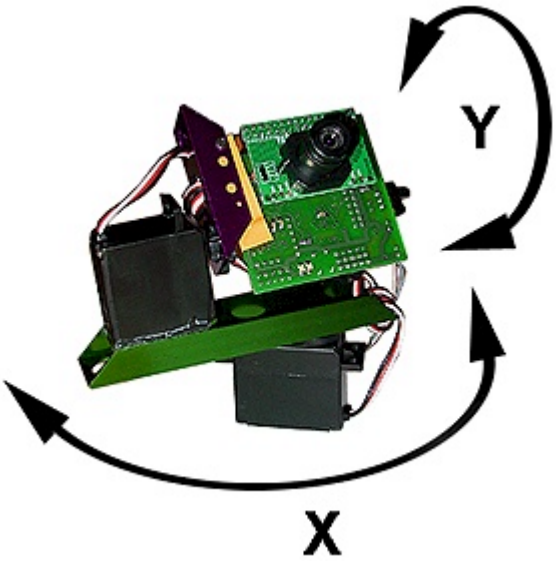
PanTilt module

Version 1.00

Guide assembly



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Lextronic
36/40 street of the gal of Gaulle
94510 the Tail in Brie
Tel.: +33-(0)1 45-76-83-88 Fax: +33-(0)1 45-76-81-41
Email: infos@lextronic.fr Web: http://www.lextronic.fr

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The characteristics of the product and the prices can change without any preliminary warning of our share.
The CMUcam2 module is manufactured by Lextronic under licence of the University of Carnegie Mellon.

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Contents of the package

You have just acquired the PanTilt module in kit, this last is made up:

- Of 2 servo-motors "S3003".
- Of 2 parts with "aluminum" holes
- Of 2 discs and attaching parts.
- Of one screw and nut
- Glue (not represented on the photo)

Note: it is also possible that you acquired the module without the servo-motors.

Assembly of the PanTilt module

(*) SIGNIFICANT NOTE: Although completely standard and very current, we draw your attention to the fact that the glue cyanoacrylate delivered must be imperatively used by a qualified person and **should IN NO CASE TO BE MANIPULEE BY CHILDREN**. Put on gloves and safety glasses when you use the glue. Close again the tube of glue after each use. Do not breathe the vapor of the glue. Avoid any contact with the skin or the eyes. Consult problem immediately a doctor in the event of. Lextronic declines any responsibility following a bad handling for your share with this glue.

Imperatively read the entire documentation before any operation of joining. We also suggest you to simulating the assembly (glue to be sure of the good position of all the parts.

About the the servo-motors:
You will have (during the assembly) to make turn the swing bar of the servo-motors manually. Slowly carry out this operation and with the greatest attention in order not to damage the latter (not taken into account by the guarantee).

1) Unscrew round plastic pcs of the servo-motors (keep the screws).

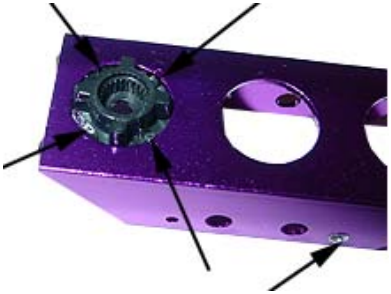
2) Put glue **(*)** on each end of the 2 parts below.

3) Join with glue **(*)** the plastic pcs with the “aluminum" pcs with 3 holes while be sure that it is to the opposit of the hole which pre-was increased (see above). Solidify all by adding glue **(*)** to the points indicated.

4) Stick the 2 plastic coins on the “aluminum" pcs as indicated below.

5) Let dry the assembly during several hours so that good held mechanical (**it is imperative to observe this condition to obtain a perfect assembly and not to be likely to put glue not perfectly dry on the fingers (*)**).

6) Solidify the pcs by adding glue **(*)** to the points indicated. Also done the same opeation on the other the “aluminum" pcs.



7) Let dry the assembly during several hours so that good held mechanical (**it is imperative to observe this condition to obtain a perfect assembly and not to be likely to put glue not perfectly dry on the fingers (*)**).

8) Position the discs on the servo-motors.

9) Put glue **(*)** on the section of only one servo-motors (the section which is opposed to rotation axle - see photo).

10) The opération which follows is one of most delicate. Position the servo-motor whose section just receive glue, so that this section rests in the content of green "aluminum" part and reinforce the position of servo by putting glue **(*)** on its 2 sides. You can also put glue **(*)** on all the parts of the servo-motor which are in contact with the green "aluminum" part. You ensure that axe of rotation of the servo-motor is perfectly parallel with the green "aluminum" part (the servo-motor should not be downwards or upwards tilted). Also check the extreme position of the servo-motor compared to the end of the green "aluminum" part (respect the photograph imperatively below).

11) Let IMPERATIVELY dry the assembly during several hours so that good held mechanical (**it is imperative to observe this condition to obtain a perfect assembly and not to be likely to put glue not perfectly dry on the fingers (*)**).

You will now no need any more glue - CLOSE the TUBE VER CARFULLY AND PUT IT IN a PLACE WHERE ANY CHILDREN CAN REACH

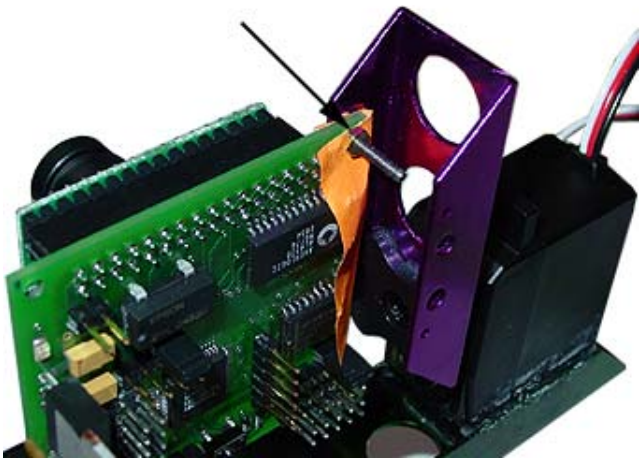
12) When all is quite dry (**AND ONLY IN THGIS CASE**), assemble "the aluminum" parts on the axes of the servo-motors as indicated on the photograph below.

Operate with softness in order not to damage joinings carried out. Attention the parts must be inserted into force and are of this fact rather difficult to insert on axe servo-motors.

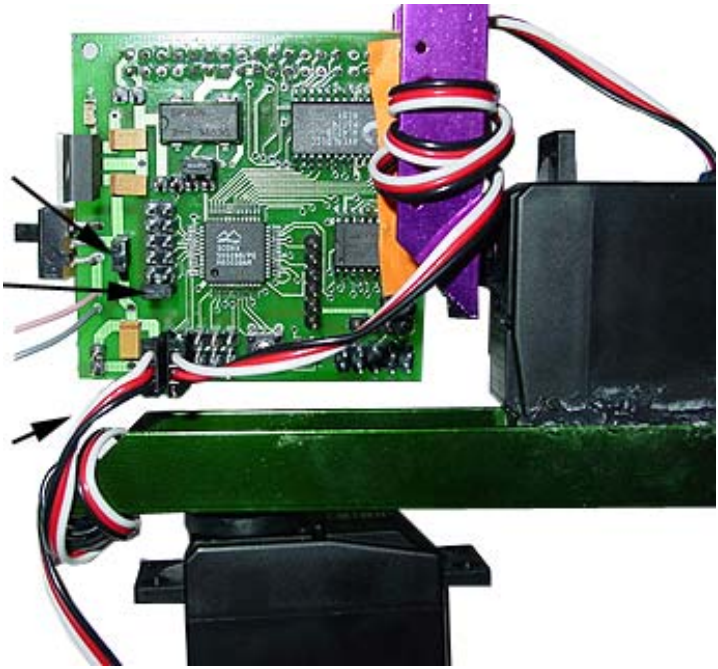
Before the final assembly, check that "the aluminum" parts are assembled in order not to be not “good”compared to the total "travel" of the servo-motors (see photographs below – the assembly is valid for the 2 servo-motors and the 2 parts in "aluminum"). Then, screw the parts on the axe of the servmoteurs

13) Place a small piece of paper on the left side of the camera (on the 2 faces, as indicated below). Bore with a small pointed object (attention with your fingers) the holes in top on the left.

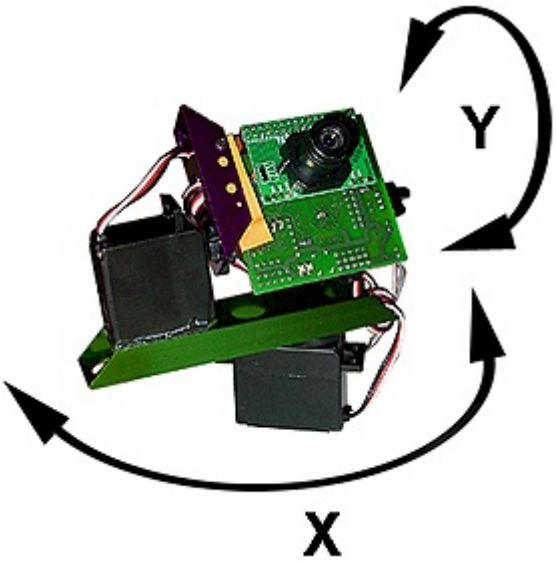
14) Screw with attention the board of the CMUcam2 in the indoor of "the aluminum" part with with the small screw and nut. The piece of paper must isolated the part "aluminum" from the front face of the printed circuit of the board of CMUcam2. The paper in the back of the card must be cut so that this last is NEVER in contact direct or close to the SX52.



15) Connect the servo-motors on the plug in bottom of the board (**Take care of the position**). Plug the jumper of power supply so that the servo-motors use the same power supply than the board of the CMU-cam2. Plug the jumper of reverse direction of servo-motor 1 as indicated on the photo below. Pass and roll up the cables in the holes of "the aluminum" parts (while leaving the "light one" so that the displacement of the turntable is not blocked).



16) Your PanTilt module is now operational. Defer to the note of CMUcam to activate the Test mode.



In all the cases, prevent that the servo-motors do not force and are into obstinate during the displacement of the camera (under penalty of destruction). If the phenomenon with tendency to occur, check that the servo-motors are not mounted compared to their total "race" (see foregoing explanations).

Fix the principal servo-motor on a plane surface with sticking double face (not delivered) or long screws.