NOTAUMATIC v2

User manual

NOTAUMATIC SOLUTION

Introduction

We thank you for choosing the Notaumatic for the management of your competitions.
To take advantage of all the features of this unit, please read these operating instructions very carefully.
Keep this manual handy for future reference

Version	Date	Editor	Nature / reason of the update
1.0	20/12/2019	Roland Poidevin	Initial version
1.1	07/06/2020	Roland Poidevin	Stable version
1.2	01/11/2021	Roland Poidevin	Soft power button
1.3	05/07/2022	Roland Poidevin	LiPo only
1.4	27/03/2024	Roland Poidevin	Shortcuts screen

Enhancements v2

This new version brings a number of improvements and fixes the main problems of the first version:

- No more external SD card that can disconnect.

- Earphone jack on the top of the case better protected.

- Rotary encoder to replace the micro-joystick

- Use of more common Lipo (2S) batteries. Be aware you cannot use LiFe batteries with v2.

- Battery protection and low battery warning

- Improved WIFI

- Automatic update of the application and flight programs: no more handling of the SD card

- Sound improvement managed by a dedicated component. Sound volume adjustment by soft

Table of contents

Safety rules

Charging batteries.

The Notaumatic is designed for working with Lipo batteries.

Lipo batteries are not able to accept deep discharge. Soft power button protects them.

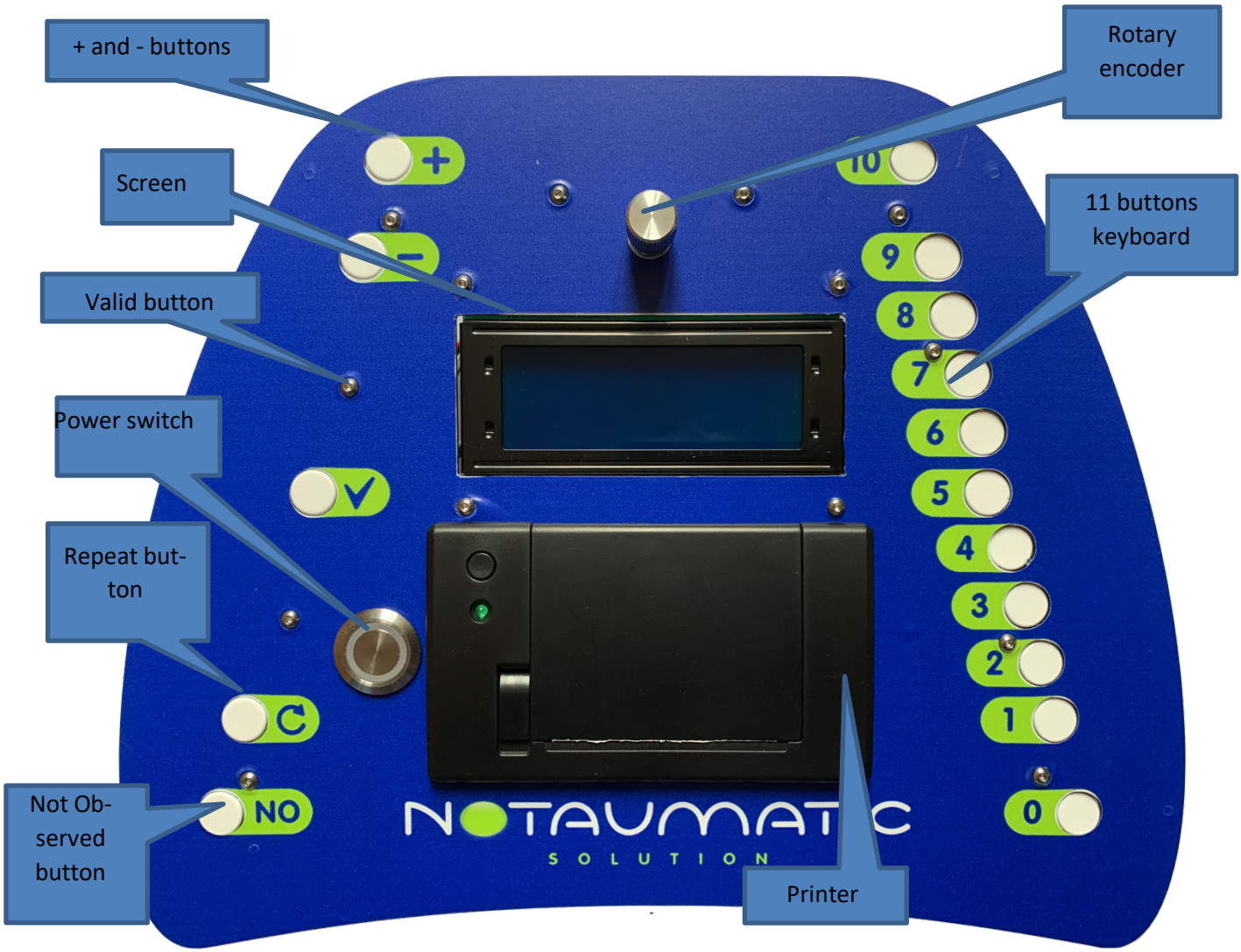
Be aware maximum voltage is 9V. Higher voltage will destroy the printer and/or processor.

Anyway, it is imperative to use a charger suitable for these batteries.

Prohibitions and precautions for use.

Do not short circuit the battery plugs.
Do not subject the batteries to heavy shocks.
Batteries can burn or destroy themselves in the event of an impact.
Protect the Notaumatic units against contact with fuel, oil, etc.
Do not dispose of batteries in a fire. Do not disassemble or recondition them.
Since LiFe and lipo batteries are recyclable, do not dispose of your batteries. Take them to a waste disposal center.

Technical description



Power switch

Switches the Notaumatic on or off. It is advisable to turn off the Notaumatic when not in use. Powering on is a bit slower than V1 (about 45 seconds). This button manages the power supply of the Notaumatic and displays some useful informations on battery state. (Remember : LiPo only)

- Start-up :
  - - The button flashes green / blue while the Notaumatic is starting up.
  - - It then turns solid green.
- Stop:
  - - Pressing the button displays a confirmation message (in the event of a false maneuver). The button turns blue.
  - - If nothing happens within 5 seconds, the Notaumatic returns to its normal state
  - - If a long press (10 seconds), the Notaumatic goes into the stop phase (rapid red / blue flashing) then turns off.
- Battery monitoring
  - - The button continuously monitors the battery voltage:
  - - From 100% to 20%: solid green
  - - From 20% to 10%: green / red flashing
  - - From 10% to 5%: purple / red flashing
  - - Less than 5%, rapid red flashing. After 4 minutes, the stop sequence is triggered.

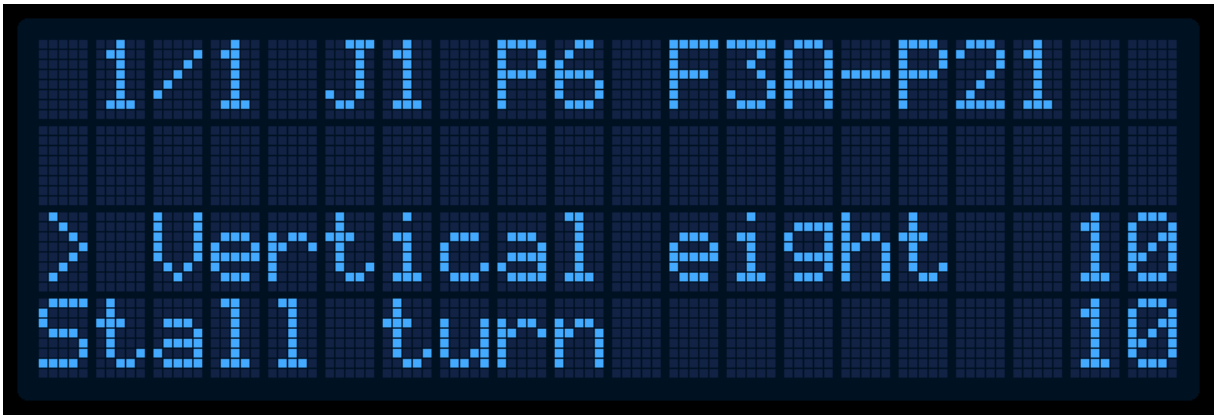
Rotary encoder	Navigates through the menus displayed on the screen, switch from one item to another, increase or decrease values.
Screen	4 lines of 20 characters. It displays the parameters at the beginning of the flight, and information on manoeuvers and scores during the flight.
Printer	A score sheet will be printed at the end of the flight, after validation. This printer uses thermal paper and doesn't need ink cartridge.
11 buttons keyboard	Used to enter scores. May also be used for entry of pilot, judge and flight number.
<+> and <-> buttons	These keys allow you to enter scores by decreasing the score as the maneuver is executed.
<Valid> button	Validates the score for each maneuver.
<Repeat> button	Re-plays the audio description of the maneuver.
<Not Observed> button	When a maneuver (or portion of the maneuver) cannot be fully observed.

At a glance

Starting

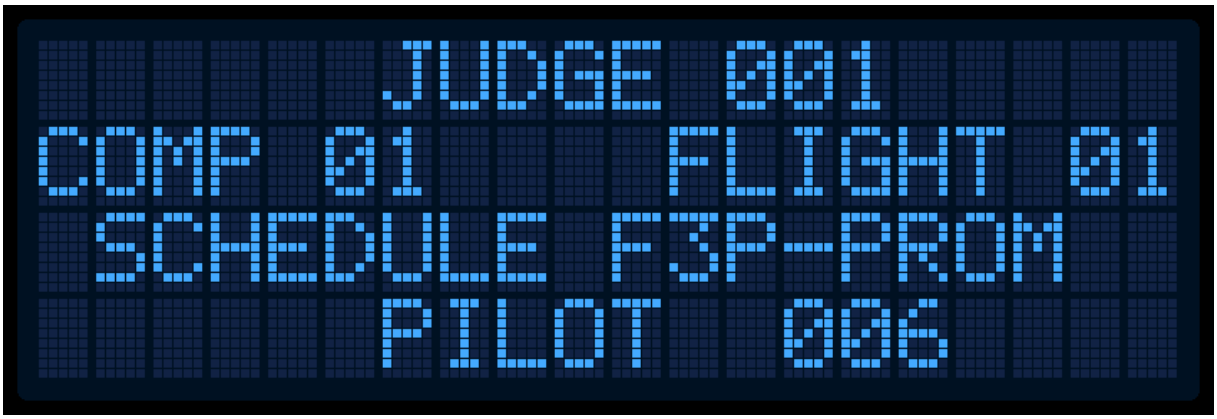
Two cases :

1) Everything is OK with the server, the WIFI and “next pilot” (see NotauScore manual) is already set.



All the parameters have been broadcasted to the Notaumatic. Comp #, flight #, schedule, pilot #... You only have to check if the judge number (Jx) is OK. If not or if something else is wrong, return to the main screen by long pressing “minus” button.
If everything is OK, you are now ready to enter scores.
If you want to return to main screen, long press “-” (minus button). Be aware you cannot return to the main screen once you have started scoring a pilot.

2) Something is not yet OK.



You can skip from one item to another with the rotary knob and then change the values with “-” or “+” button. Once you are happy with the values, press “Valid” until you are on the pilot number (pilot number is blinking). The Notaumatic proceeds to some checkings and will alert you in case of an issue. If everything is OK, you are now ready to enter scores. (See previous screen)

Entering scores

There is at least three ways for entering scores :

1) Gradually decrease the score from 10 (pressing “-”) decreases from ½ point. Each time the score changes, it is displayed in the earphone. ½ point is the default option. It can be set in NotauScore (see manual for settings ½, 1/10 or 1 point. Some international schedules are 1 point or even 1/10 for some other classes.

2) Mentally decrease the score and finally enter it with one of the right buttons (0 to 10). Half point are generated by pressing twice the same button (pressing “7” then “7” again scores 7.5.

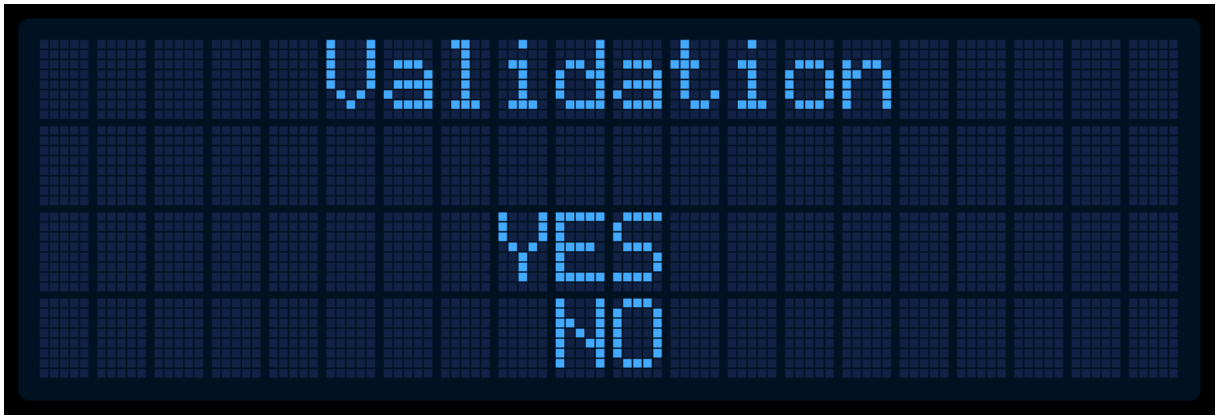
3) Manually decrease the score by successively pressing “9” then “8” and so on.

Keep in mind nothing is validated until you press “VALID”. That means you can change your score until you press “VALID”.

Please note the blinking arrow on left of the screen which indicates the current maneuver that is being scored.

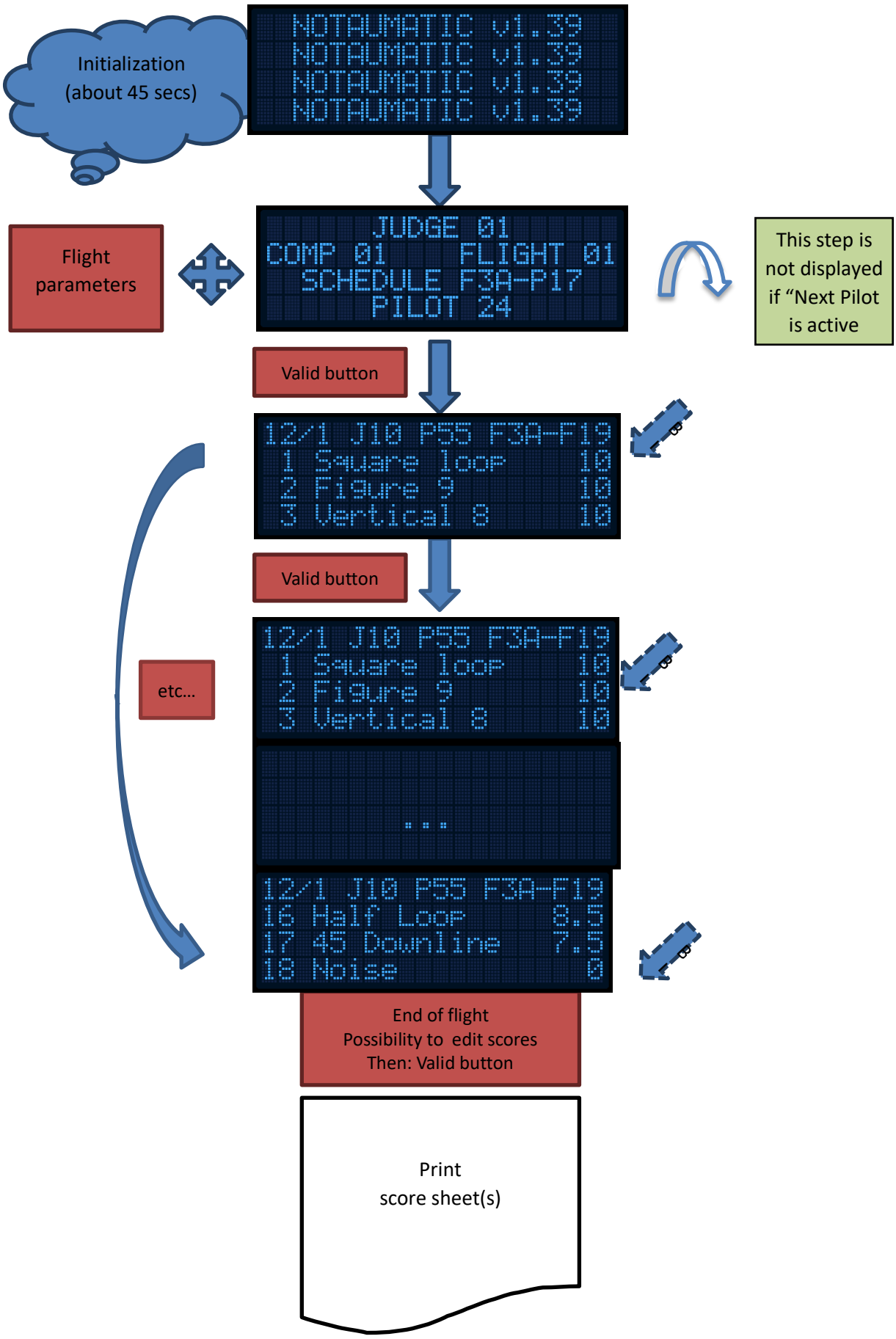
Once you press “VALID”, the next maneuver is announced in the earphone and the actual line is changed on the screen.

End of the flight



At the end of the flight, you have to “VALID” another time to validate the scores for this flight, a ticket is printed (don’t forget to sign it), score is stored into the Notaumatic and sent to the NotauScore software.

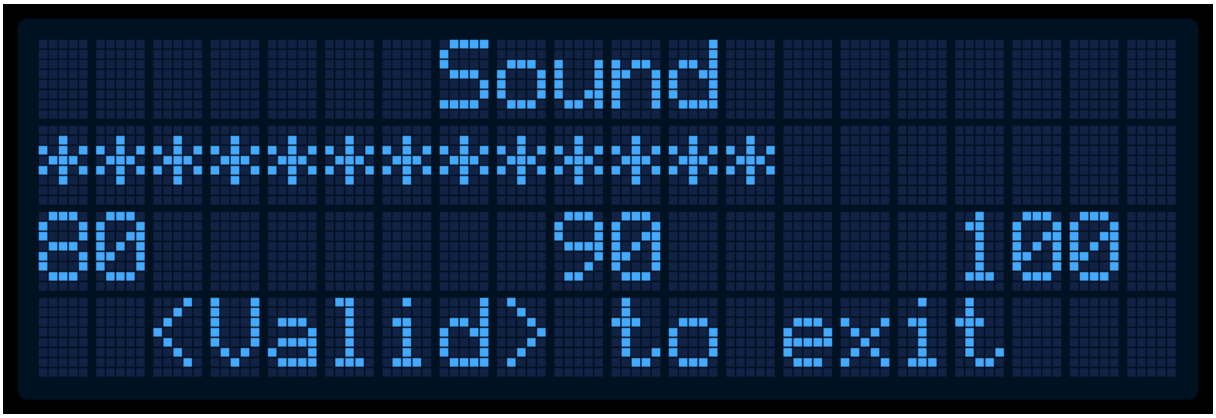
Next pilot is then displayed and you are ready to score another pilot.


Initialization
(about 45 secs)
NOTAUMATIC v1.39
NOTAUMATIC v1.39
NOTAUMATIC v1.39
NOTAUMATIC v1.39
Flight
parameters
JUDGE 01
COMP 01 FLIGHT 01
SCHEDULE F3A-P17
PILOT 24
This step is
not displayed
if "Next Pilot
is active
Valid button
12/1 J10 P55 F3A-F19
1 Square loop 10
2 Figure 9 10
3 Vertical 8 10
Valid button
12/1 J10 P55 F3A-F19
1 Square loop 10
2 Figure 9 10
3 Vertical 8 10
etc...
...
12/1 J10 P55 F3A-F19
16 Half Loop 8.5
17 45 Downline 7.5
18 Noise 0
End of flight
Possibility to edit scores
Then: Valid button
Print
score sheet(s)

Useful tips

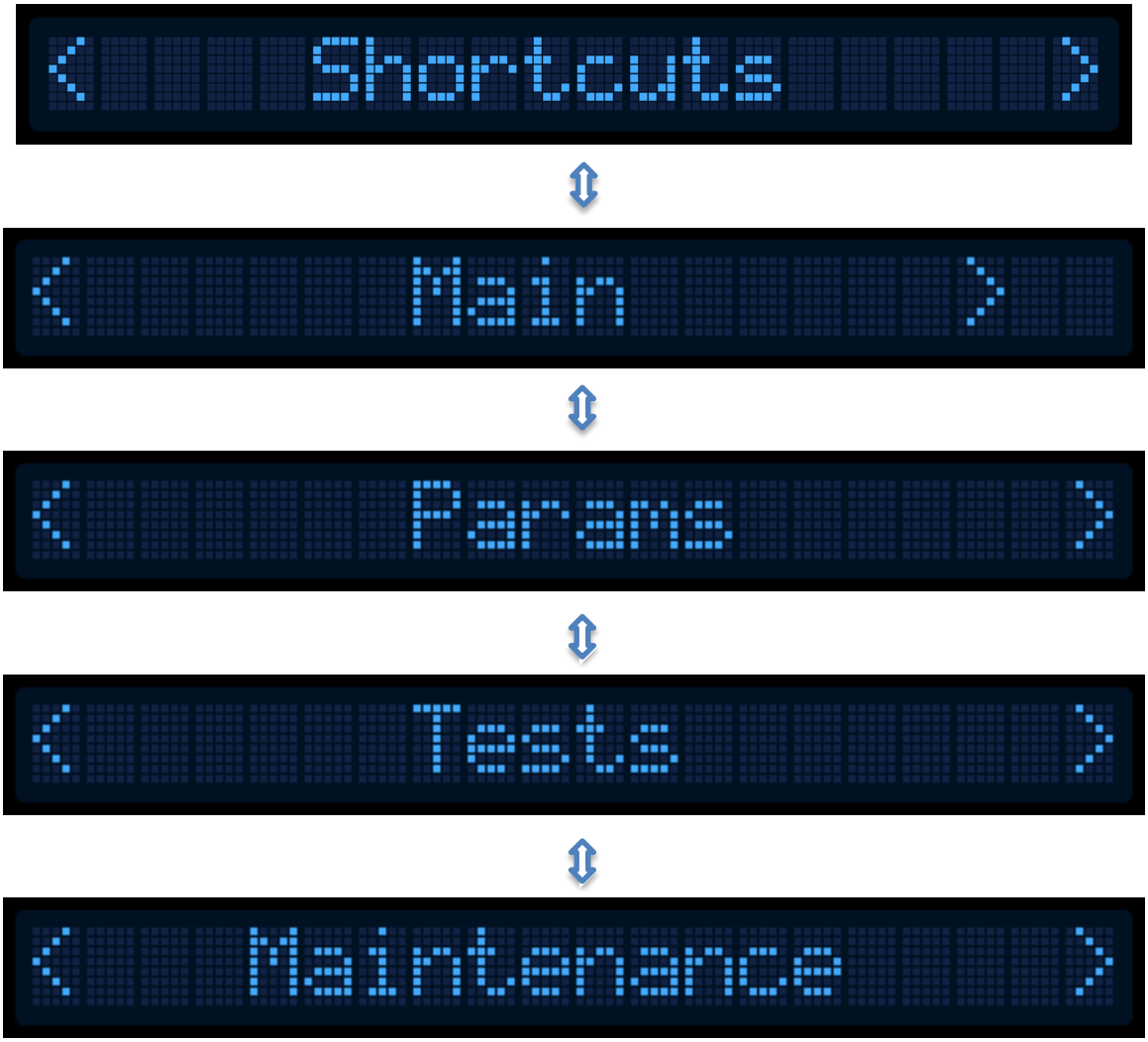
- “REPEAT” button will display again the maneuver description.
- Long and short maneuver descriptions. By default, a short maneuver description is played. A long press onto the “REPEAT” button will switch to the long maneuver description. Same to return to the short description.
- “NO” button allows you to enter “NO” as a score when you were not able to see the maneuver. You score will then be calculated as the average of the other judge’s scores.
- At the conclusion of the flight, if you don’t validate the flight, you can then go up and down in the list of maneuvers and change a score either with “minus” or “plus” button or with the digit buttons (10 to 0).
- Version 2 takes more time to boot (about 45 seconds). Don’t switch it off during a flight / round. Unless nothing is working…You have to know you can relaunch the application with “Repeat” an “NO” button pressed simultaneously.
- A full reboot can be performed with “Repeat”, “NO” and “0” buttons pressed simultaneously.
- “Next pilot” is proposed on your device, but he is not ready or you want to score a calibration flight (pilot 999). Long press on “minus” button will return to first screen where you’ll be able to change the pilot number
- It could be long and boring (…) to set pilot number 999 with “plus” button…
  The easiest way to do that is: press round knob to display the update screen :
  Then you are able to enter 999 for example with the digit buttons (0 to 10).
  The rotary encoder can also be used : By turning it quickly, you can accelerate the updating.

- F3A and F3P are currently scoring with ½ points. It is obviously possible to score with integer points and even with 1/10 point (F2B). You can achieve these options in Notauscore schedule parameters.
- Sound volume.
  Pressing “Repeat” and rotating the knob displays sound volume setup :
  Rotating the rotary encoder increase/decrease the sound and updates the display. In “Sound” menu, you need to press the rotary dial to return to main screen.

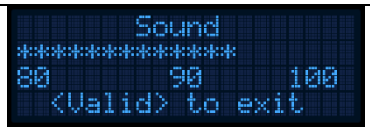


Screens chaining

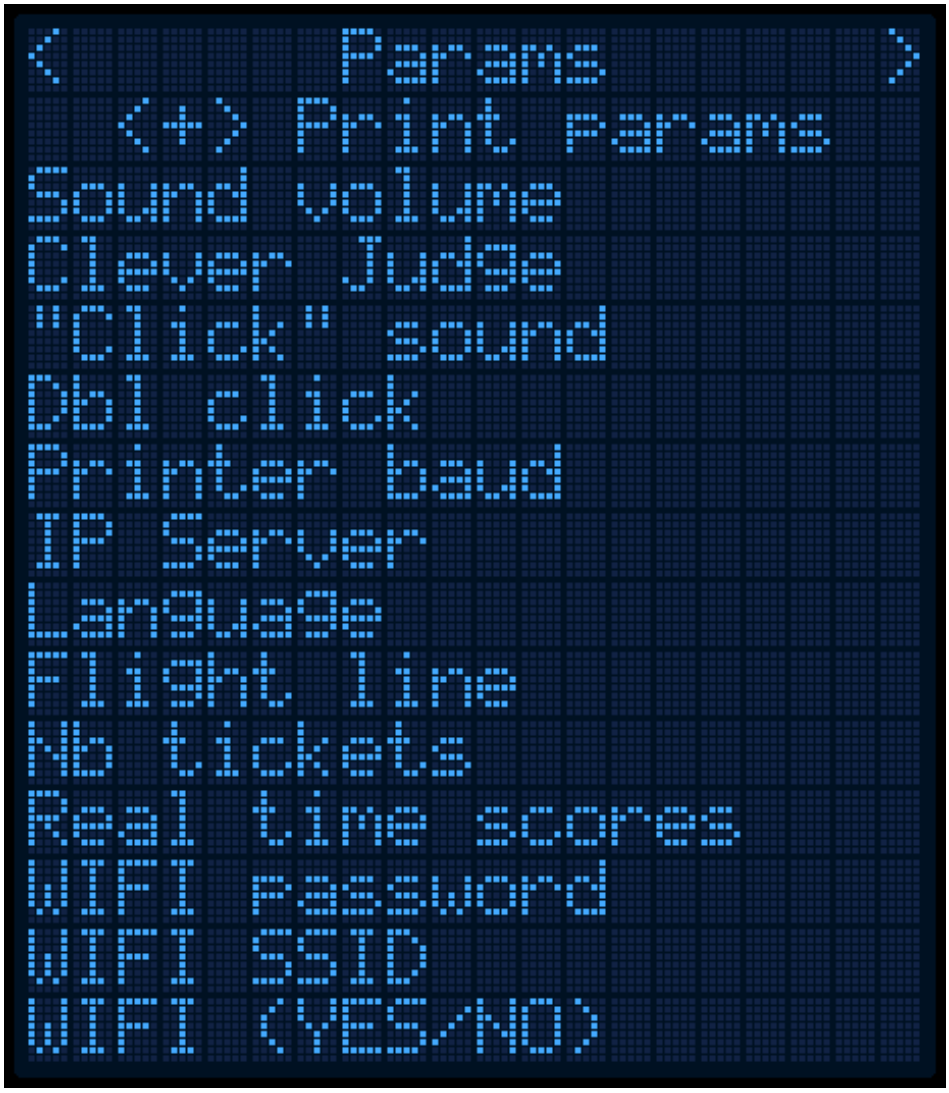
A long press on the round knob when first screen is displayed allows to switch to the other screens : SHORTCUTS, PARAMETERS, TEST and MAINTENANCE.



Here is the Shortcuts screen :

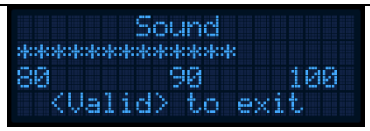
Reboot App		Reboot the application. Much better than power off/on.
Reprint Last Ticket		Reprint last printed ticket
Adjust Volume		Rotating the rotary encoder increase/decrease the sound and updates the display. Press « Valid » return to main screen. The volume can be set from 60 to 100 %.
Home		Return to main menu.

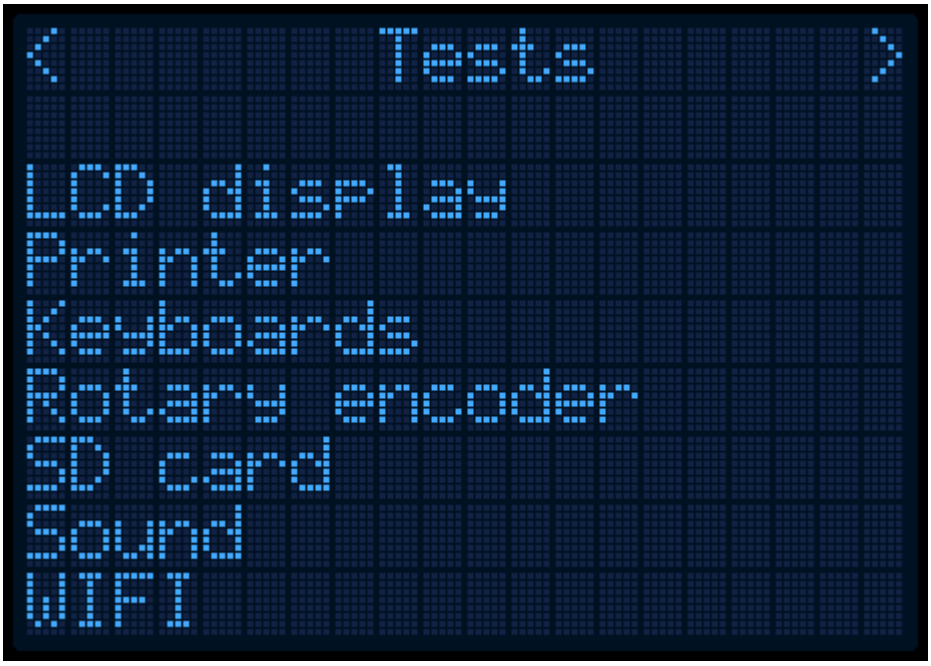
Here is the Parameters screen :



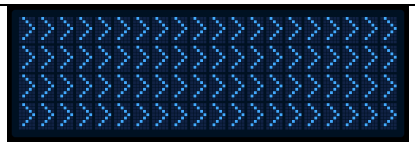
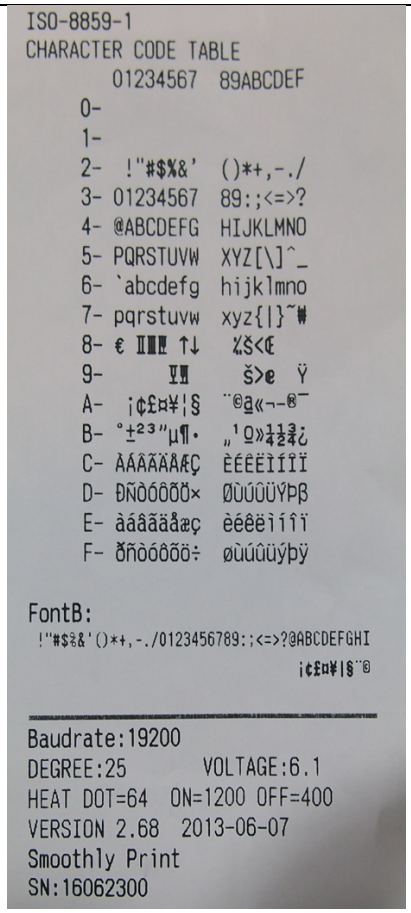
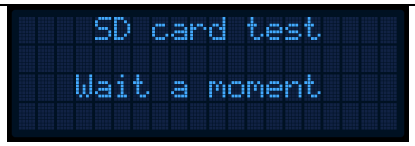
Press button “+”to print all the parameters.

An arrow is preceding the actual line. Rotate knob to go up and down. Press knob to select.
This screenshot represents all the menu entries.

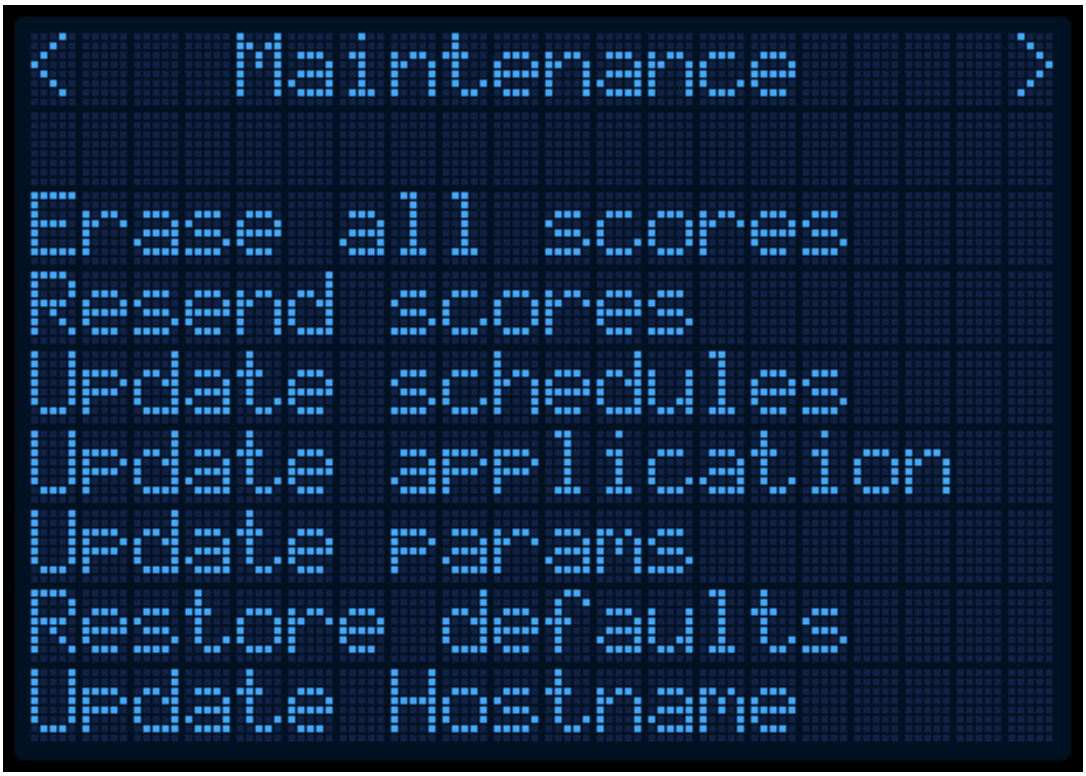
Sound volume		Rotating the rotary encoder increase/decrease the sound and updates the display. Press « Valid » return to main screen. The volume can be set from 60 to 100 %.
Clever Judge		Rotate the knob to switch between “ON” and “OFF”. When “ON”, allows the judge to change the basic values : competition, flight, etc…
“Click” sound		Set this param to ON to allow the Notaumatic to emit a “click” sound when user press a key. Useful with “silent” buttons.
Dbl click		Some rotary encoders generates a double « click ». Set this param to « ON » if device jumps 2 lines instead of 1.
Printer baud		Speedrate for printer communication. Some printers are 9600, others are 19200. See test page. Wrong value prints odd characters
IP server		IP Address for the Notauscore server (Raspberry). Rotate the knob to change each group of 3 digits. Press knob to switch to next group
Language		FRA for French, ENG for English… It depends on the language of the stored schedules
Flight line		Specify flight line. Default is 1. Can be 1 or 2
Nb tickets		Number of tickets printed. Some categories need 2 tickets
Real time scores		Set to “ON” allows the Notaumatic to send scores after each maneuver, not only at the end of the flight. Mandatory for real time displays. Deprecated.
WIFI password		Password for the WIFI access point. Rotate knob to cycle into characters. Press knob to switch to next character.
WIFI SSID		SSID (name) of the WIFI access point. Same procedure
WIFI (YES/NO)		Set to “OFF” allows the Notaumatic to operate without a WIFI connection. An alert message will appear during boot



Rotating the round knob scrolls up or down the items.

LCD display		Four lines of twenty arrows are displayed on the screen
Printer		Prints a test page and some datas
Keyboards		A key press will blink the associated zone with up/down arrows. Long press on the round knob exits the test
Rotary encoder		An arrow is visible at center of top line. Turning the round knob moves this arrow. Press the round knob to exit
SD card	 	A write/read test on the SD card (100 MB) is launched.Results are then displayed : time to write and read these datas. Press knob to exit.
Sound		This test plays the sound “Bienvenue”
WIFI		Proceed to a communication test with the NotauScore server. Displays “OK” if OK… If not displays the error number.

Maintenance



An arrow is preceding the actual line. Rotate knob to go up and down. Press knob to select.
This screen shot represents all the menu entries.

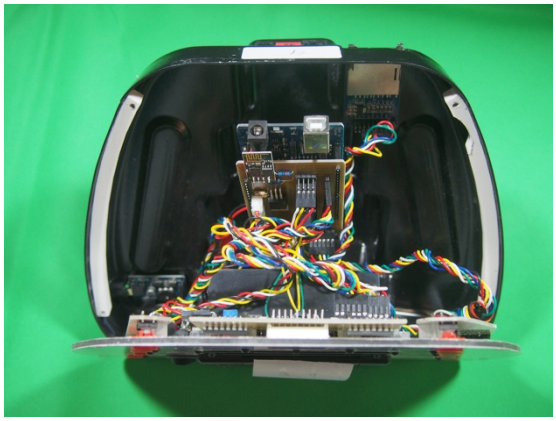
Erase all scores	All stored scores are erased from the internal database. No change to NotauScore. Useful before a competition
Resend scores	Useful in case of a WIFI/server issue. Once the problem fixed, use this option to resend all stored scores. Scores will be sent only for “open” flights. A list of all the “not sent” scores is printed.
List schedules	This option will print all the schedules stored in the Notaumatic.
Update schedules	This option will download all the schedules found in the server database. Useful to update a Notaumatic with new schedules
Update application	This option will download the version of the application stored in the server
Update params	This option will update the params with the value stored in NotauScore. The updated values are those beginning with « NOTAUMATIC_ ». Useful to update all the Notaumatics in a comp.
Restore defaults	This option will restore the default values Useful when you are lost…
Update Hostname	This option will update Hostname (the device name for the network). Used for factory setting. Useful for Notaumatic testing from “Kiosk/Network” screen in NotauScore.
Reboot	This option will reboot the device.

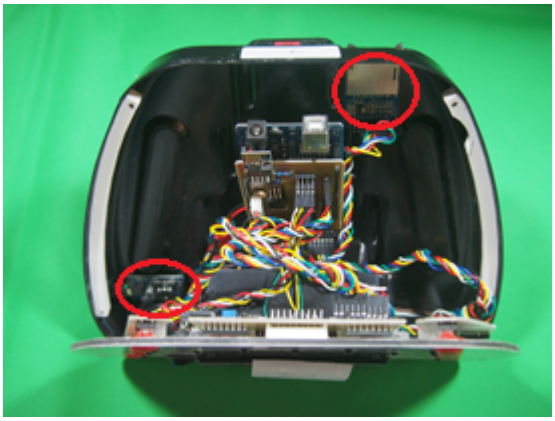
Retrofit

Disconnect the battery

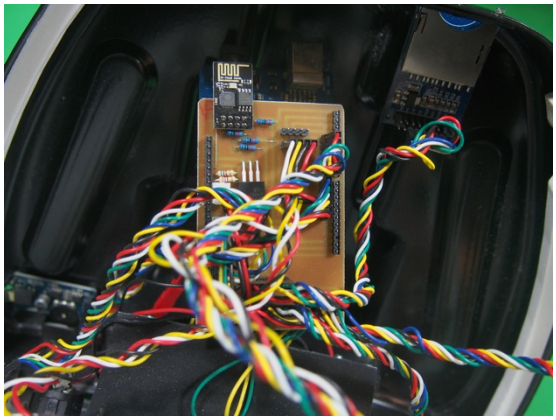
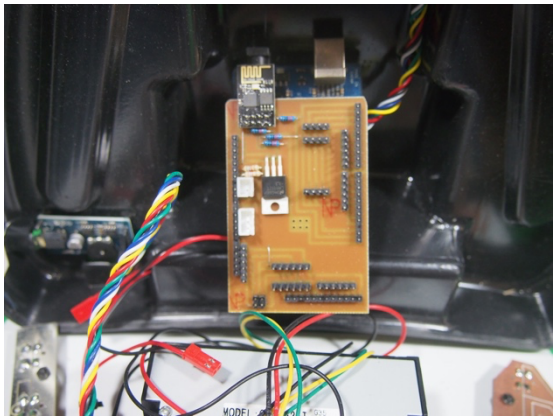
Unscrew the four 1.5 hex screws (red circle)

Open the device

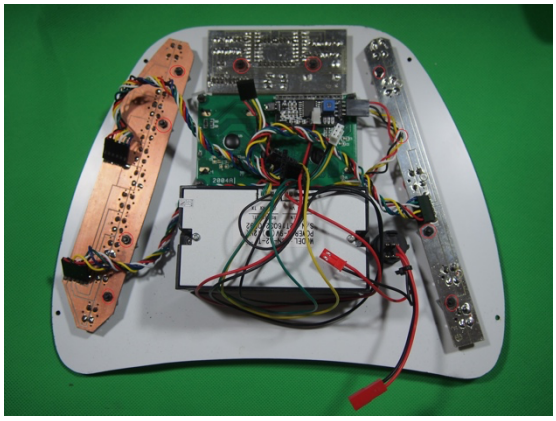




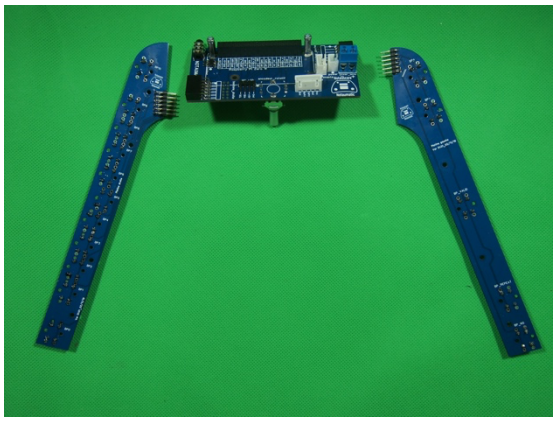
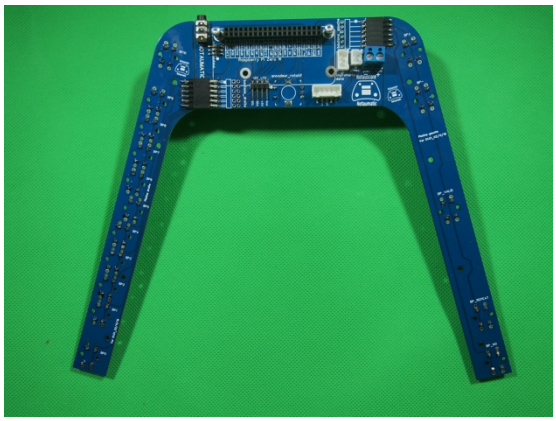
Remove all the cables from the mother board. You can remove the old SD card reader and earphone mount (red circles).
n

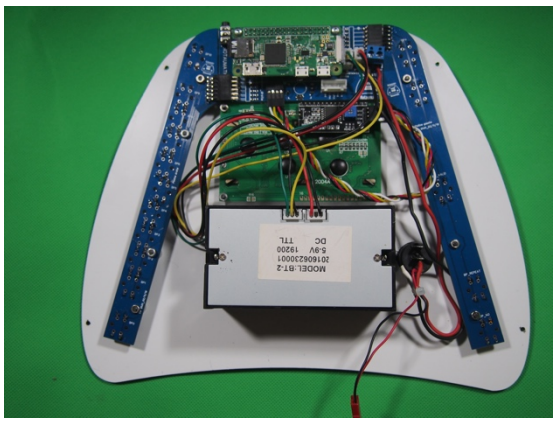
Remove the button and display PCB. 10 5.5 hex nuts (red circle)



New PCBs must be plugged in

Fix them in place of the old ones :



And reconnect the cables :

- Two for the printer.

- One for the LCD display (Mind the orientation !).
- The black and red from the switch (Mind the polarity !).

Drill a hole for the earphone plug (6 mm)

Plug in (if not yet plugged) the Raspberry PI zero.

Put the front cover in place and screw the 4 screws.

Reconnect the battery.

Switch on and wait about 45 seconds. You should see the welcome message on the display.

Congratulations for retrofitting your Notaumatic !!!

Errors

In order to save memory and to offer a multi-lingual application, error descriptions are stored in the database embedded in the Notaumatic.

The errors listed are as follows:

Error	Meaning
WIFI error	Something wrong with the WIFI. Check the params
100-Flight not found	The flight number cannot be found for this competition
101-Judge not found	Judge number cannot be found
102-Pilot not found	Pilot number cannot be found
103-Wrong param #	This param number doesn't exist
104-Wrong opt code	Internal problem
105-Pilot not flying	This pilot doesn't fly in this phase (preliminaries, semi or final)
106-Schedule name	Wrong schedule name
90x	Internal SQL errors
XXXX not found	XXXX represents the schedule name

Printer test	Parameters	Score ticket