

TAPUINO RELOADED

v0.44 - firmware 2.10.0

MANUALES

Alejandro Conde

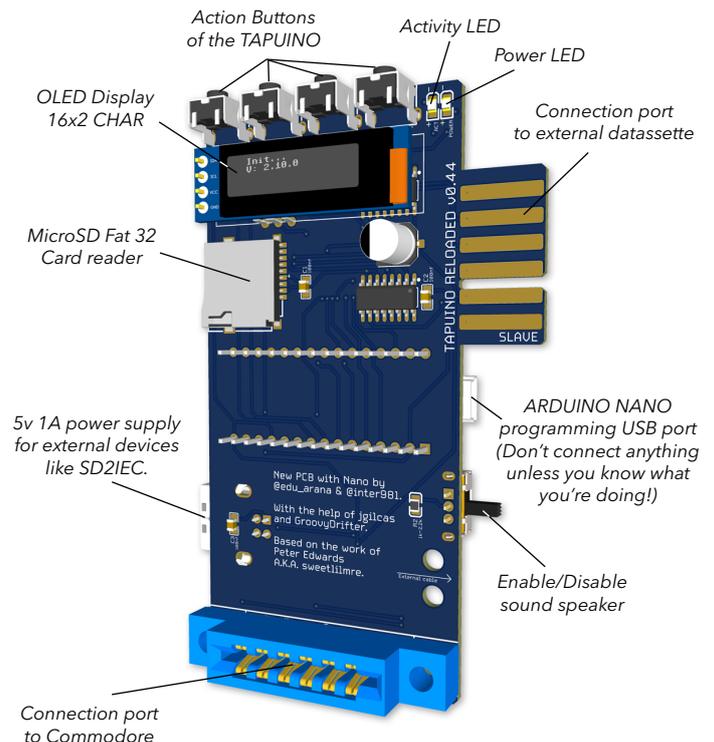
1.- WHAT IS THE TAPUINO?

The TAPUINO is a DIY hardware interface that fully emulates the Commodore 64 datassette and allows, among other things, the playback of .tap files on Commodore 64, Commodore 16 and VIC-20 systems.

The .tap file is a computer file containing information recorded from an actual Commodore 64 cassette tape (games, programs, demos...). Besides being used with TAPUINO, you can use tap files in emulators for Windows, Mac or Linux, such as VICE64, HOXS64, FRODO or CCS64.

As a real datassette emulator, TAPUINO can only play .tap files. .d64 (disk dumps), .t64 (compressed tapes), .prg (programs) or .crt (cartridges) files are not compatible with the TAPUINO drive. Note that the TAPUINO will not speed up loading a .tap on a real Commodore.

The loading cycles and times required to load a .tap will be identical to those required on a real cassette loaded from the original datassette.



2.- CONNECTING YOUR TAPUINO

MAKE SURE that the Commodore 64 is switched off before connecting the TAPUINO. All connections must ALWAYS be made with the Commodore switched off or damage to both the TAPUINO and the Commodore itself may occur.



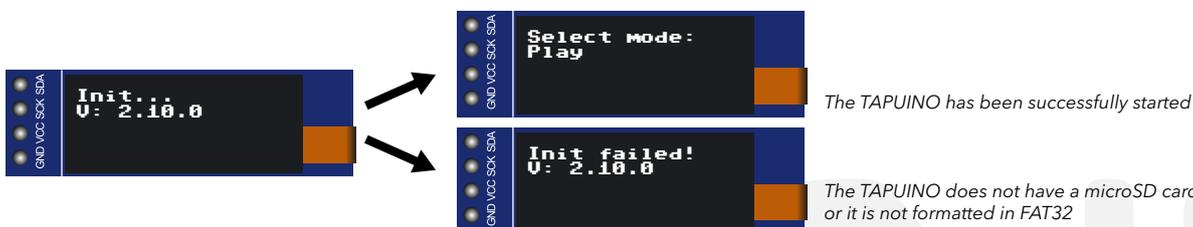
In case you have a datassette connected to the Commodore 64, you will need to disconnect it to connect the TAPUINO, as they use the same port.

Insert an empty MicroSD (or one with .tap files) and make sure it is formatted in FAT32 system.

NTFS, ExFAT, HSF+ or APFS are not compatible disk formats with the TAPUINO unit.

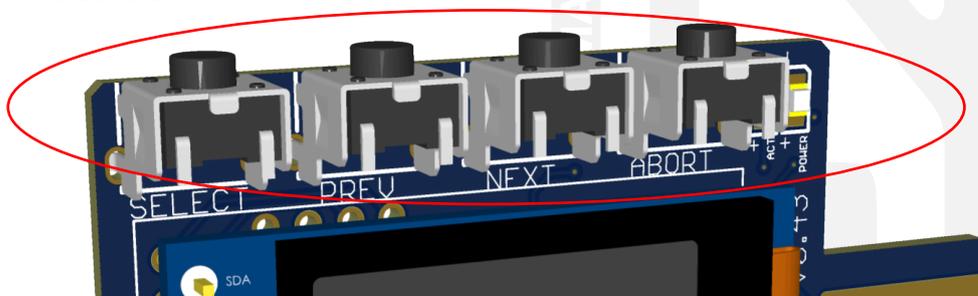
Once the MicroSD card is inserted and the TAPUINO is correctly inserted into the datassette port, you can switch on the Commodore.

The TAPUINO will not initialise correctly if it does not detect a microSD inserted in the datassette port or if the SD is not formatted in FAT32.



3.- USING THE TAPUINO

The TAPUINO has analogue buttons on the top with which you interact and move through the menu system displayed on your TAPUINO screen.



The **PREV** button will allow you to switch to the previous option or scroll to the previous item in the menu system. The **NEXT** button will allow you to advance or scroll forward in the TAPUINO interface.

ABORT will allow you to return to the previous menu and, if a .tap is playing or recording, to stop playing/recording the .tap. We will use the **SELECT** button to select the item displayed on the screen and **PAUSE** and **RESUME** the playback/recording of a .tap.

The TAPUINO RELOADED v0.43 also has a connector for an external datasette located at the top right of the TAPUINO. It is only necessary to connect a datasette to the port if you want to transfer a .tap file from a real tape to the MicroSD card (and vice versa), although it is safe to keep it connected, even if you do not use it.

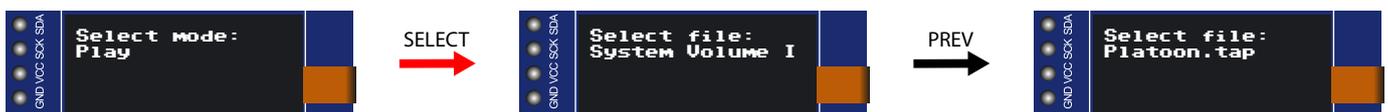
It is **NOT POSSIBLE** to play cassette tapes directly from the external datasette to a Commodore through that port of the TAPUINO. To play a tape from the datasette, you must disconnect it from the TAPUINO, disconnect the TAPUINO itself from the Commodore 64, and connect the cassette player directly to the Commodore 64.

4.- FUNCTIONS OF THE TAPUINO

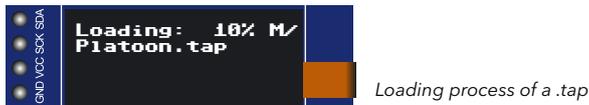
4.1.- TAP FILE PLAYBACK (Pre-set as default).

As mentioned above, the TAPUINO RELOADED will allow loading a copy of a cassette, stored as a digital (.tap) file, into a real Commodore.

To start loading, navigate through the TAPUINO screen to PLAY mode (by default, the TAPUINO starts in this option) and select by the action buttons the .tap file you want to load:



Press SHIFT+RUN/STOP on the C64, press SELECT on the TAPUINO, and it will start loading the selected .tap.



During the loading process, the TAPUINO OLED will give us information about the loading percentage during the load process. This value is taken from the total size of the .tap file, so if a .tap is multi-load or has several games inside it, this percentage may not be correctly displayed.

Next to the load percentage, we have one of the following three characters and a rotating activity bar:

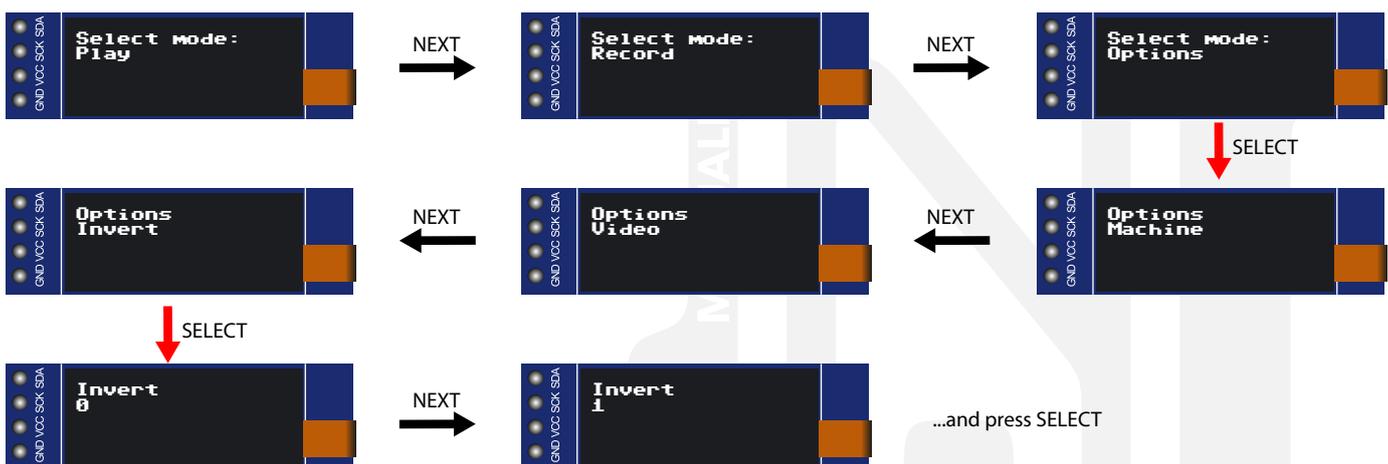
- **M**: (upper case.) indicates that you are actively accessing Memory (reading or writing).
- **m**: (lower case), the TAPUINO has automatically stopped accessing Memory (temporary stop).
- **P**: (upper case), reading is Paused by user action. Press SELECT to resume or pause loading.

4.2.- RECORDING A .TAP ON A CASSETTE

The TAPUINO not only allows the playback of .tap files recorded on the microSD, but It also allows the transfer of a digital .tap file from a microSD to an actual cassette.

The **INVERT** option: The TAPUINO has an essential option in the internal menu, which allows changing the origin of the reading or listening of the data to be done from the TAPUINO (value **0**) or from/to the datasette (value **1**).

To record a .tap file from the microSD to an actual cassette tape, be sure to set the value "1" in the INVERT option of the menu to be able to interact with the datasette.



Once the value "1" has been accepted with the SELECT button, press ABORT to go back to the SELECT MODE: PLAY mode, display the .tap and press REC+PLAY on the datassette. After 5 seconds, press SELECT on the TAPUINO to start playing the selected tap which will be recorded on the cassette.

Note that if the INVERT function is set to "1", it is not possible to play the tap files located on the microSD. Reset the INVERT function to "0" through the menus, or turn off the Commodore (turning off the TAPUINO unit will return this value to 0) to be able to reload .tap files located on the microSD.

Once the .tap playback is finished, you will have to stop the datassette recording manually.

4.3.- RECORDING A CASSETTE INTO A .TAP FILE

Make sure that the INVERT option is set to "1" (see section 4.2), choose **RECORD** mode and select the .tap naming system (MANUAL or AUTO).

If we set the name MANUAL, the TAPUINO will ask us to name the file. We will select the characters with the analogue action buttons PREV, NEXT, SELECT and ABORT.

If, on the other hand, instead of MANUAL, we select AUTO, the TAPUINO itself will assign an auto-incrementable numeric name of the type rec-0000.tap, rec-0001.tap, rec-0002.tap, etc.



Press SELECT on the TAPUINO and PLAY on the datassette.

When the cassette has finished, press ABORT to end listening to the TAPUINO and record the .tap file on the microSD. The file will be automatically saved in the RECORDED folder created in the root of the microSD.

Remember to set the INVERT option back to "0" to be able to load the .tap from the microSD.

5.- SETTING UP THE TAPUINO

5.1.- COMPUTER MODEL SELECTION

The TAPUINO is compatible with Commodore 64 (by default), VIC-20 and Commodore 16 computers. To use the TAPUINO properly, we must configure in the OPTIONS menu, the computer in which it is installed (in case of playback) or the compatibility format of the cassette we will record (.tap recording).



5.2.- VIDEO REGION SELECTION

On the TAPUINO itself, it is also possible to set the video format to PAL (25 fps, used in most European, African, and Asian countries, as well as Australia and some South American countries) or NTSC (30 fps, used in most of America, Japan and Southeast Asia).



5.3.- SCROLL SPEED OF THE TEXTS ON SCREEN

The TAPUINO will allow you to set the scroll speed (TICKER SPEED) of the texts displayed on the screen, in case they do not fit entirely on the screen.

The default value is 250 (ms), and the higher this value is set, the slower the scrolling of the text on the screen will be. Set the value to 50 (minimum) for the fastest scroll and 500 (maximum) for the very slow scroll.

Increase or decrease this value (in multiples of 50) with the NEXT or PREV analogue buttons, and set the value using the SELECT button.



In addition to the TICKER SPEED option, we have the TICKER HOLD option. This value, also in milliseconds, allows us to configure the text pause at the beginning and end of each scroll:



5.4.- AUTO-FINALIZE

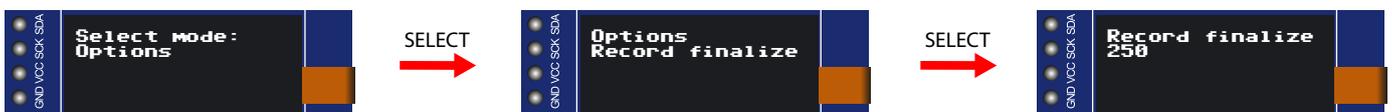
When making a recording on your TAPUINO, the TAPUINO can automatically stop the recording when it detects that no load signals are being emitted, instead of the user doing it himself by pressing the ABORT key. This option is activated every time you switch on your TAPUINO by default.

This option is activated every time you switch on your TAPUINO by default. To deactivate it set the option "0" in the OPTIONS menu section and in the AUTO FINALIZE subgroup. You can re-enable it by setting option "1" in the same menu again.



BE CAREFUL with the use of this feature, as on many occasions, the pauses established in the cassette loads can be understood as the end of the recording, which will irremediably generate an incomplete recording.

The RECORD FINALIZE option minimises this problem, allowing you to set (in milliseconds) the empty time of the audio signal, after which the TAPUINO will detect that the recording has ended.



6.- EXTERNAL PULSE SPEAKER

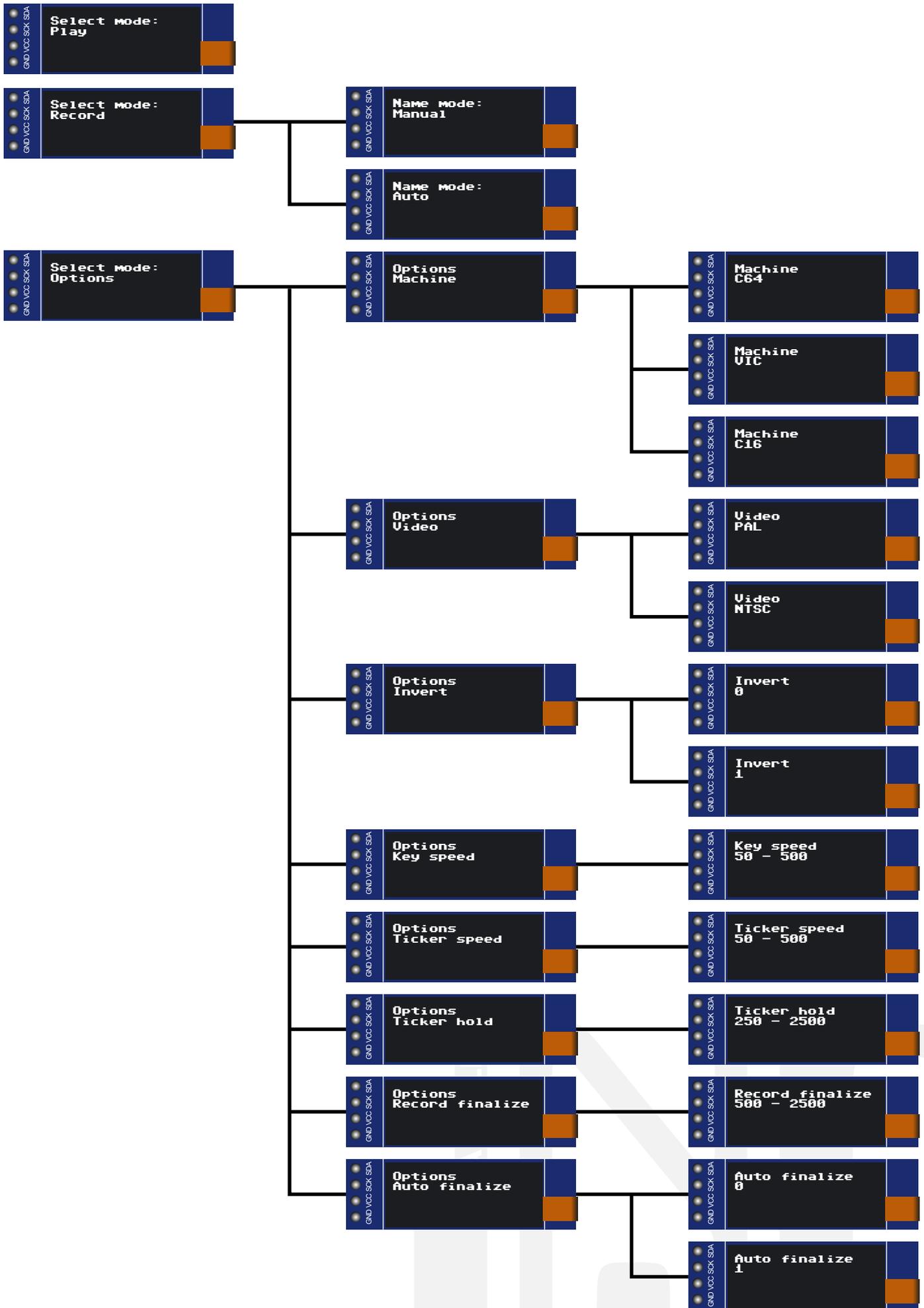
This TAPUINO, unlike conventional C2N datasets, has the possibility of listening to the loading sound of the taps while they are loading.

The speaker is a small buzzer that is located on the back of the TAPUINO and is turned on or off from the two-position switch on the right side of the TAPUINO. This speaker can be enabled or disabled at any time, regardless of whether the Commodore is on or off.

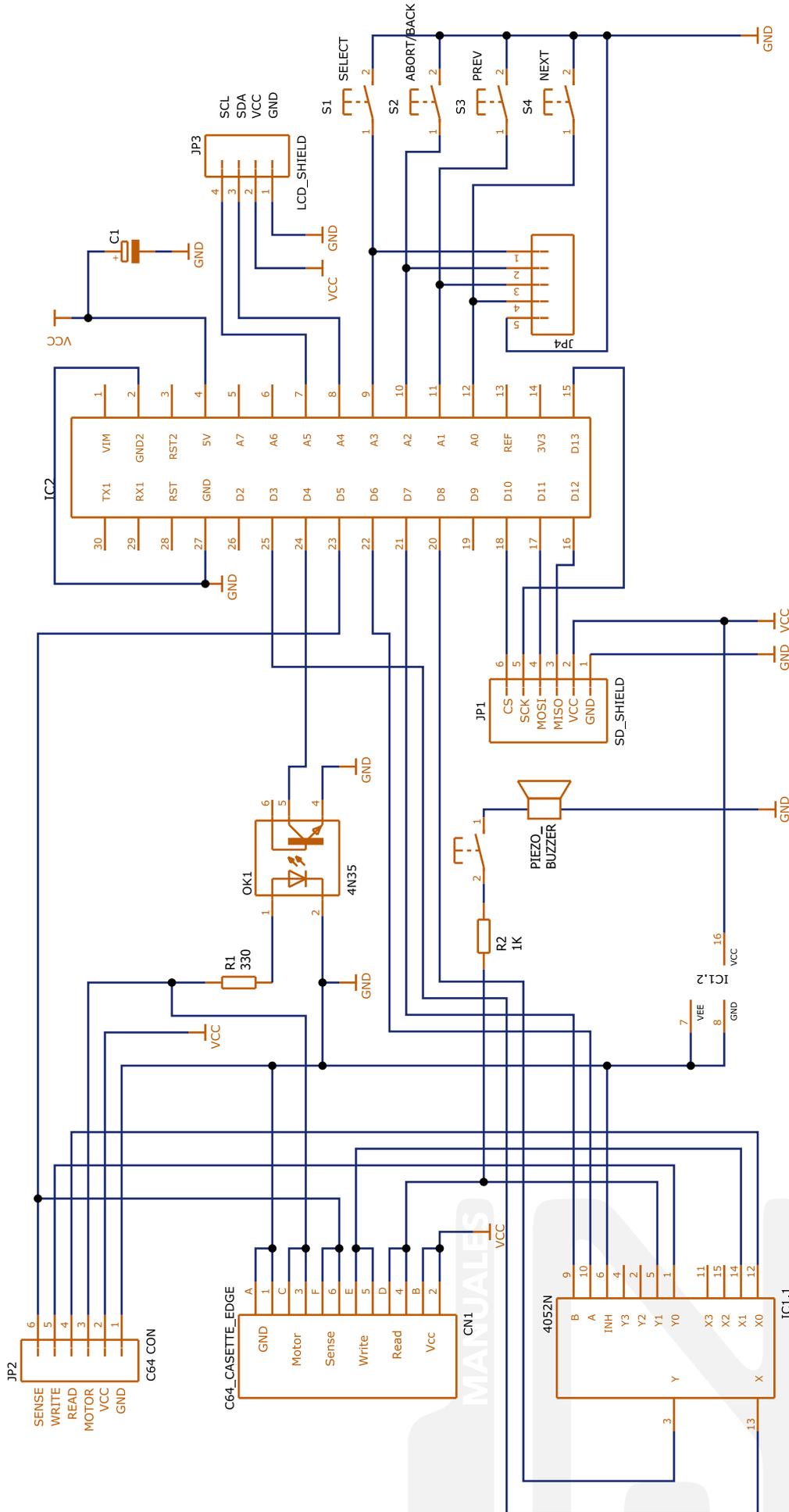
7.- CREDITS

- Original Project Development: Peter Edwards (sweetilmre)
- Tapuino Reloaded design: Edu Arana
- VERSION v0.43 and 0.44 with external dataset connector and pulses buzzer: Alejandro Conde (@inter981)
- Thanks for the help to Jgilcas, GroovyDrifter and Maverick
- User Manual designed by: Alejandro Conde (@inter981). Translation to English by Xavier (@xumetbdn)
- Official TAPUINO Github repository by Peter Edwards (sweetilmre): <https://github.com/sweetilmre/tapuino>

8.- SUMMARY OF TAPUINO OPTIONS



9.- TAPUINO HARDWARE SCHEMATICS



RS PART NUMBER 758-2007

ALPS P/N SKHLSA010
RED BUTTON 8.35MMH

DIPTRONICS DTS-A-65R

MANUALS