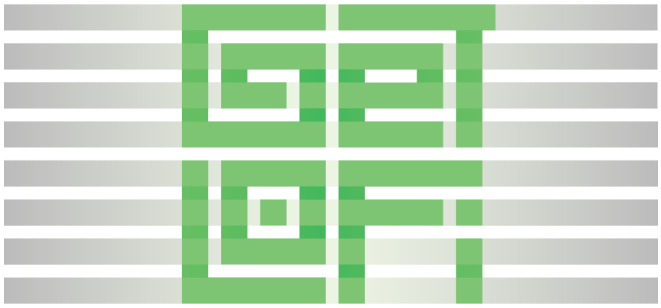
Synthino

programmable digital synthesizer

nootropic design



Features

- 12-bit DAC for true waveform synthesis
- Optionally programmable with Arduino IDE and C code
- 4-note polyphonic or it can be a high-quality monosynth
- ADSR envelope control (attack, decay, sustain, release)
- Low frequency oscillator (LFO)
- Over 4000 instrument waveforms available for your programs
- Endless possibilities for microcontroller-based audio synthesis!
- MIDI input - connect your favorite MIDI controller
- ¼" audio jack output
- Power with 9V battery or 9V adapter. 2.1mm jack, center *negative* like many guitar pedal adapters.
- ¼" jack connects battery power
- Volume thumbwheel on right side (clockwise to increase)

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Connections

Synthino comes equipped with a standard 80s style MIDI 5 Pin connector and will listen to the standard MIDI Note ON and Note OFF signals from a Keyboard controller or a Computer Interface. Synthino listens to ALL CHANNELS in this current firmware version.

The Output is through Instrument style ¼ inch MONO jack. Use included adapter to connect to a ⅛ inch stereo cable such as the one from laptop speakers and for line recording.

VOLUME thumbwheel, on the right side of the Synthino case, adjust for best output quality, typically start low to avoid clipping.

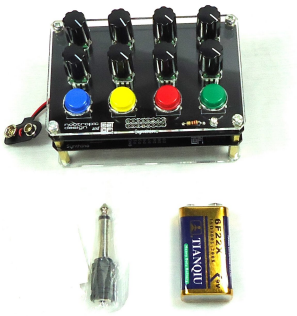
The jack is designed to turn the Synthino ON when running from a 9 Volt battery, using a STEREO CABLE will FAIL to enable the power. Always unplug the audio cable to conserve the battery.

The DC power connector is a standard barrel BOSS style 2.1 mm. We recommend the use of 1 Spot brand AC/DC power adapter (http://visualsound.net/1-spot-power-supply/) to continiously power the device without worrying about draining battery.

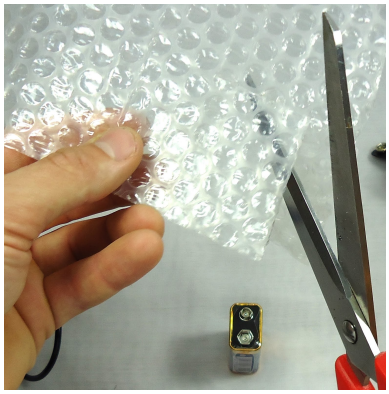
Programming Header is typically not in use unless you are Flashing an updated version of the internal firmware.

Start Up Guide

In your Synthiuno box you will find a ¼ inch to Stereo adapter and 9 volt battery. If you are planning to use the battery please follow the steps below.



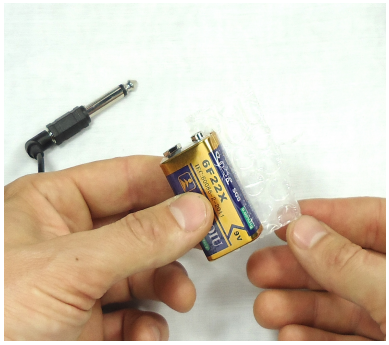
Remove only the top of the plastic from the connectors, keeping the sides of the battery covered. This will help to prevent any electrical shorts once the battery is wedged between the circuit board and the acrylic base plate.

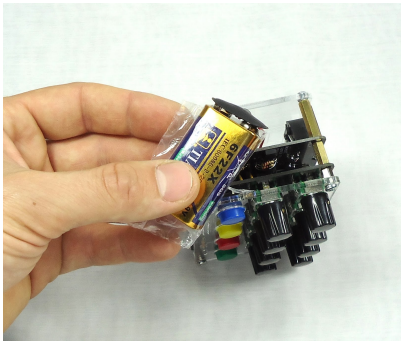


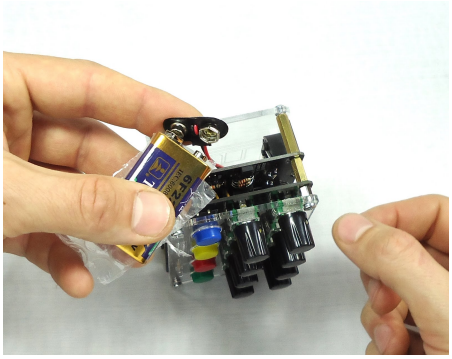
Cut a rectangular piece roughly the side of the battery from the included bubble wrap.

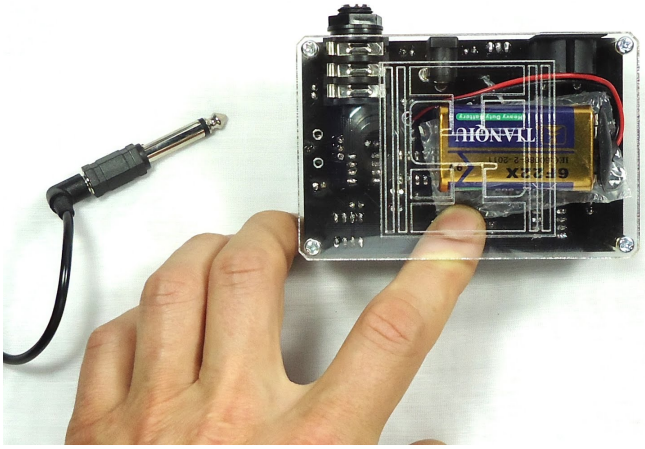
Attach the battery clip to the 9 volt battery terminals.

Insert the bubble wrap pad first under the black circuit board, then gently wedge the battery in there. Now, more safe and secure.









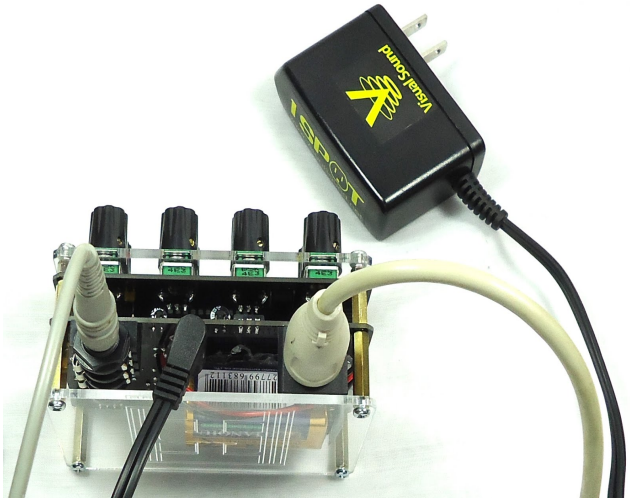
Power On

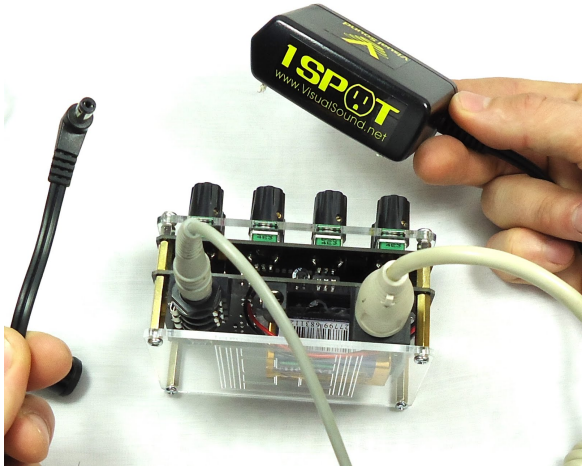
Please note that Synthino only powers on when the ¼ inch MONO plug is inserted. This acts to save battery life. At this point if you have added the battery following procedures in the first steps and after inserting the included plug or another MONO instrument cable, when you push one of the top control buttons you should see the Indicator LED glow ice blue! Congratulations your success is achieved.

MIDI Control

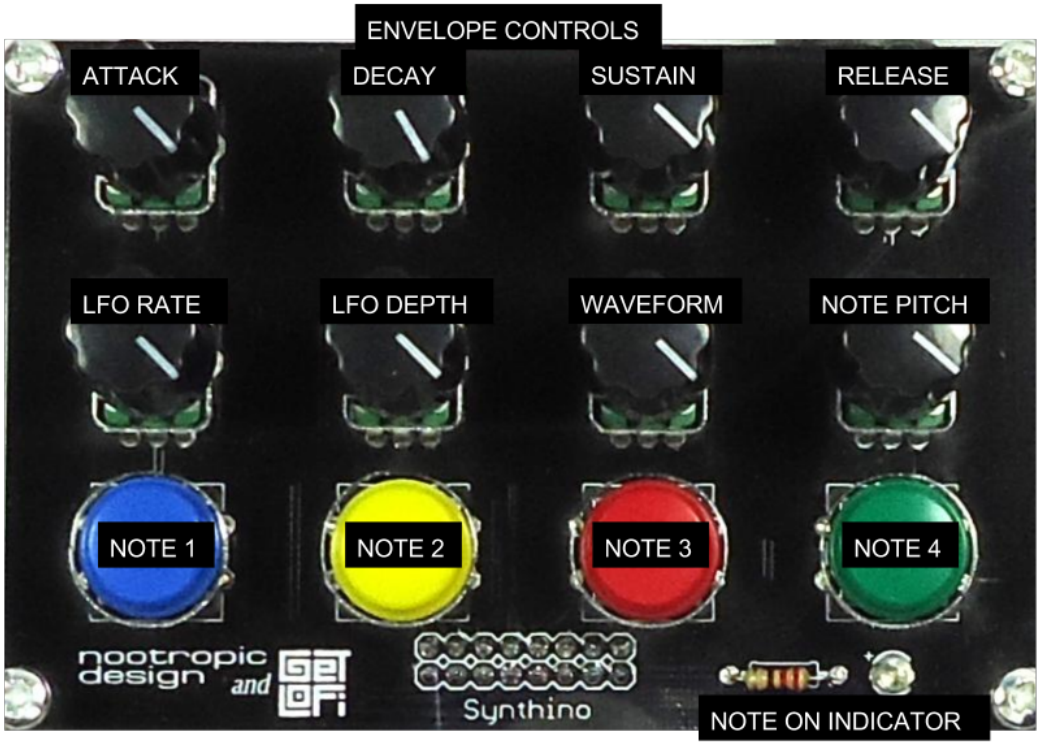
Synthino can be controlled externally with a MIDI keyboard, the device listens on all channels for MIDI notes and responds accordingly to the pitch note on and note off. The Synthesizer portion controls the current playing channel. Standard 5 pin MIDI DIN cable must be used. Shown with Audio and MIDI cables connected.

DC Power Connection





We recommend the use of a 1SPOT™ guitar effects power adapter (NOT INCLUDED) or any other approved 9 volt adapter from the Synthino.com website for powering the unit during prolonged periouds of time. Power supply must be at least 500 mA Tip -.



Controls

Use the controls to effect the notes played on the attached MIDI keyboard. You can also use the buttons to play notes. Hold a button and use the NOTE PITCH knob to select the pitch for that button. Use the WAVEFORM knob to choose a waveform for that button as well. Each button can have its own waveform.

The top row of knobs is ENVELOPE CONTROLS (ATTACK, DECAY, SUSTAIN, RELEASE), their function is to shape the note volume over time. From short percussive sounds to long drone.

The low frequency oscillator (LFO) has RATE and DEPTH control. This will add tremolo changes in pitch to all of the notes being played at the same time.

Use the WAVEFORM SELECT knob to change the waveform or instrument played. There are 15 different waveforms.

Troubleshooting

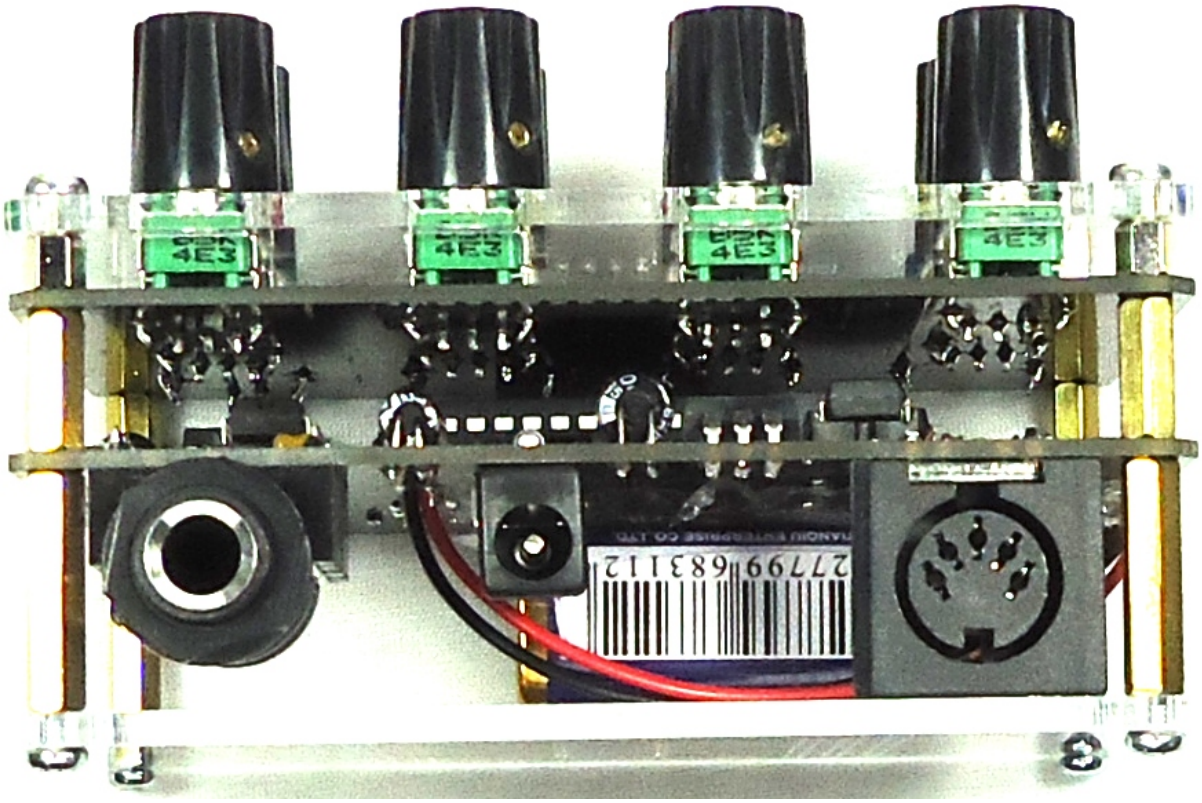
ERRATIC BEHAVIOR - Replace the 9 volt battery.

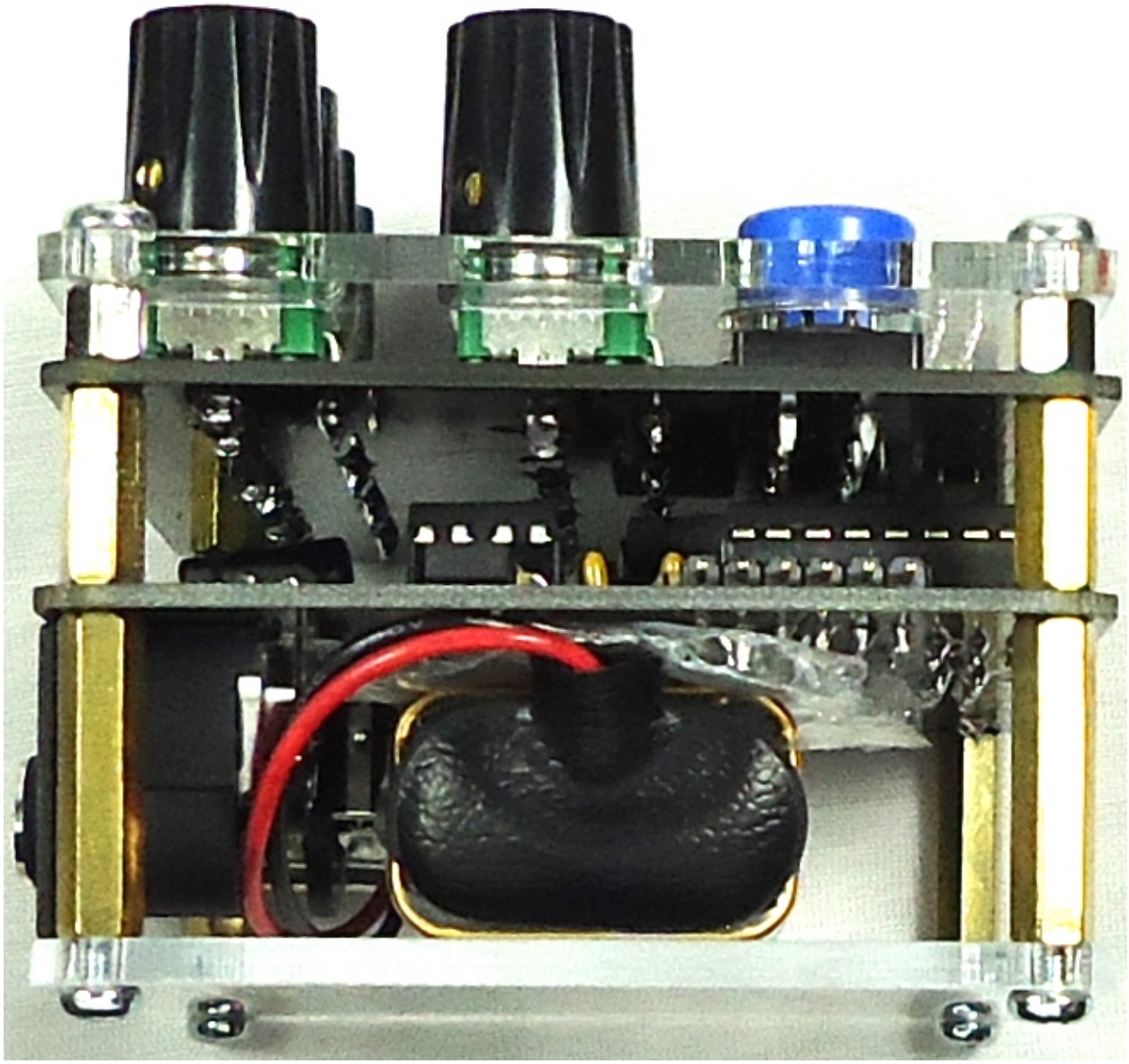
NO POWER - Make sure ¼ inch cable or adapter are plugged all the way IN. If running from battery ensure a solid connection to the terminal. NOTE INDICATOR should light up with a buttons is pressed.

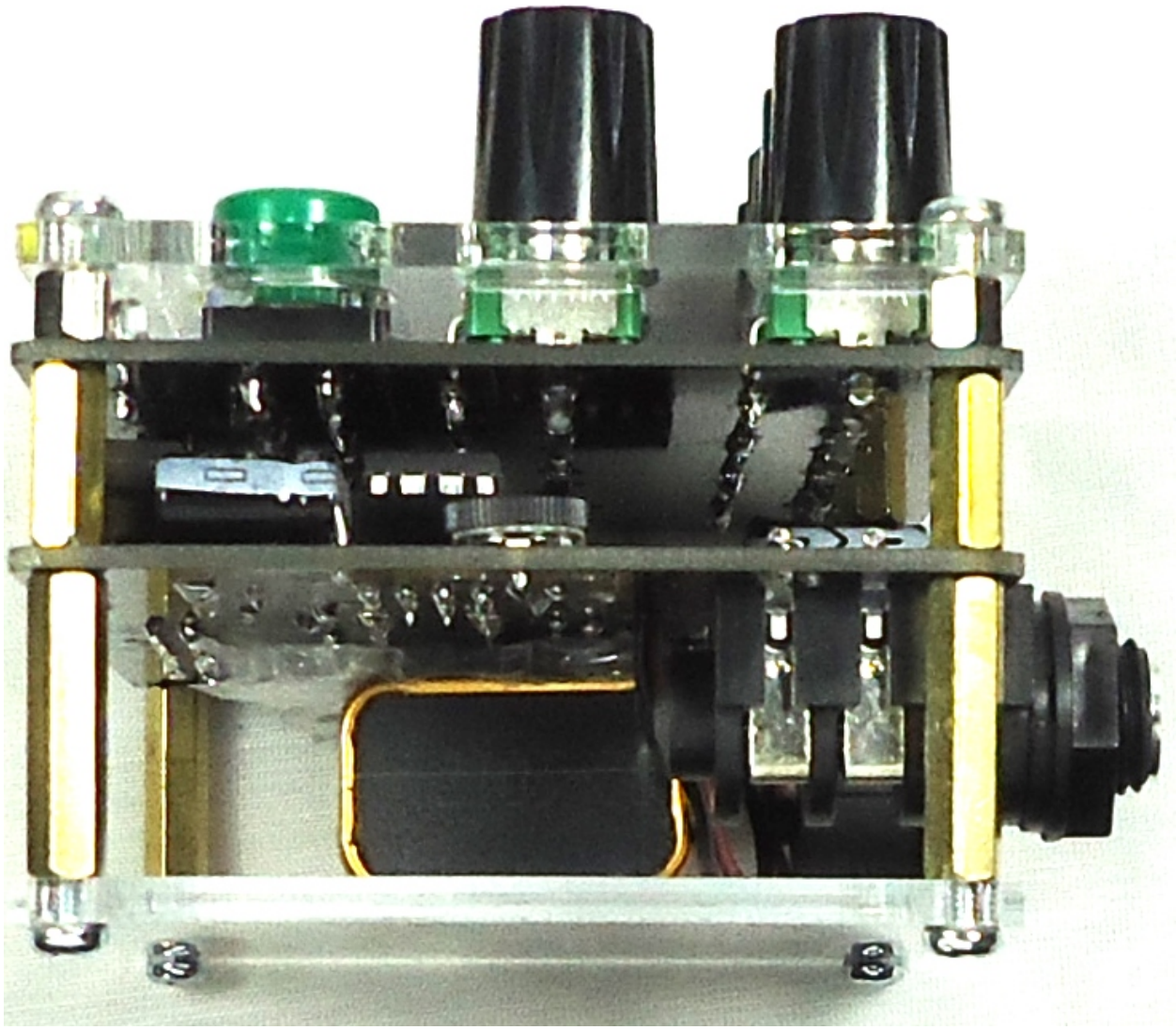
NO SOUND - If power is present and audio output is connected with included adapter, and NOTE INDICATOR is flashing Blue when button is pressed. Adjust the VOLUME thumbwheel and turn all of the ENVELOPE CONTROL knobs to clockwise (Right) position.

ALL OTHER PROBLEMS OR QUESTIONS contact info@synthino.com

Device Images







Links

www.synthino.com
www.getlofi.com
www.nootropicdesign.com