STARPLAT

COMPACT 75W LINEAR POWER CHIP WITH TEMPERATURE CONTROL MANUAL
v1.41

Manual v5.3

Features

- linear power regulated digital converter
- rising and lowering module
- reverse battery polarity protection
- overheat protection
- temperature control
- huge energy efficiency
- intuitive controlled multi-language interface,
- upgradable firmware
- very small size.

New!

- pre-heat with fine tuning power and duration
- wari-term mode
- lock function
- board heating real-time monitor
- rotate screen in menu
- detachable mounting holes
- internal charger
- custom logo
- low battery drain mode

Specifications:

Output voltage	0-9 Volts
Output Power	0-75 Watts
Atomizer Resistance	0.1 - 5 Ohm
Dimensions	Height 23.5 mm. Mounting plates 2 x 5 mm Width 20.5 mm. Thickness 13.5 mm.
Screen size	0.66'' OLED
Charger module	10x13 mm micro 1A Li-ion Battery Charging Board
Interface language	English, Spanish, French, Russian
Reverse battery polarity protection	+
Control	Gyroscopic and button control is available
Board temperature control	+
Step-Up / Step-Down	Linear
Ability to update software	+
Coil temperature control	Nickel / Titan / SS / User changeable coefficient
Saving settings after changing batteries	+

Main screen

Screen language can be changed in "Settings mode".

The main screen shows:
• Board heat state and temperature in Celsius
• Output voltage
• Real coil temperature (if TC or Wari-Therm mode enabled)
• Power
• Resistance
• Battery level

The "Up" и "Down" buttons directly change the power on the main screen.

Releasing the button, the screen lights at reduced brightness for 5 seconds, then it goes into standby mode. This brightness time is adjustable in menu "Settings" -> "Advanced".

Control

3 fast clicks - enter main menu.   +1 click - enter gyroscopic adjust power mode
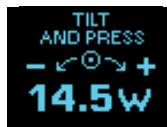
When in settings menu gyroscopic and button control is available.
Turn left and turn right to go on menu item.
"Fire" = ENTER, pushing main button will confirm action.
"UP" and "DOWN" buttons repeat your gyroscopic actions. To make control easy gyroscopic action turn off if you press "UP" and "DOWN" buttons in menu.

5 fast clicks - Lock mode.   7 fast clicks - On/Off.

Warning messages

Low Battery

No atomizer

Short circuit

Board overheat. Needs to cool down.

Non high drain battery or poor contact between the battery and board

Flashing temperature indicator
High heating chip. The power upper limit temporarily reduced to 50W.

Heat Up mode

Heat Up mode is designed for adjust coil pre-heat function.

All pre-heat function is based on a percentage of the currently-selected power.

You can choose from:
- SOFT – starts from 80% of power for 2 seconds. Then power be increased to 100%.
- NORMAL –100% of initial power = Pre-Heat is disabled.
- SOFT – starts from 120% of power for 2 seconds. Then power be decreased to 100%.
- CUSTOM – adjust initial power (%) and duration (milliseconds) for your taste.
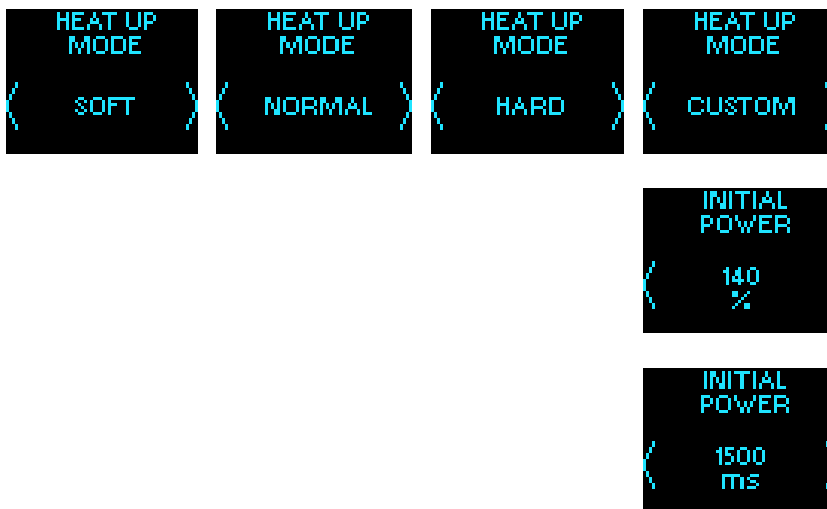
Advanced settings

This section allows you to configure additional parameters:
- **LOW BATTERY DRAIN -> ON/OFF** - when enabled, decrease power to maintain work if battery is empty.
- **ROTATE SCREEN** - rotate screen by 180 degrees.
- **BATTERY DISPLAY -> GRAPHIC/NUMERIC.**
  - GRAPHIC – show battery power as simple level.
  - NUMERIC - show battery power as complex indicator: numeric value + simple level.
- **LUMINOSITY –> from 0 to 5 seconds** – specifies the time of full screen brightness after vape.

Temperature control and Wari-Term mode

General information
When the new coil is installed the chip automatically fixes the resistance of the "cold" coil and uses it for temperature control calculation methods.
WARNING: important to cool down the coil before use when new build installed.
Wattage in temperature control mod

TC in wattage mode
Setting wattage in TC power mode only affects the rate of heating spiral. The higher wattage the faster coil would be heated up (boost heating mod). As soon as the coil heated up to the desired temperature the chip instantly decrease the power just to maintain the desired temperature.

Wari-Term mode
In this mode you need to adjust only temperature. Coil type or coefficient must be set in settings. Setting wattage don't affect power and not changeable. Board increase power for quick reach desired temperature, then decrease or increase again the power to maintain this temperature.

TC settings
To set TC settings, enter the "Thermal Control" in "Settings" menu.
Pre-resistance values for titanium, nickel, ss 304, ss 316L, ss 317L are available. You can set custom coefficient selecting "Custom" menu item.

TCR
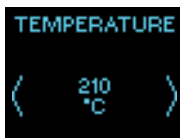
Nickel DH: "**7050**"	TitaniumGrade1: "**3550**"
Ni200: "**6200**"	TitaniumGrade2: "**3500**"
Nifethal 70 (Alloy120): "**5250**"	SS410: "**1550**"
NiFe30 (StealthVape): "**5000**"	Invar 36 / Nilo 36 / Pernifer 36: "**1100**"
NiFe30 (Resistherm): "**3200**"	SS304: "**1050**"
NiFe (Reactor Wire): "**4000**"	SS316L: "**0900**"
Nifethal 52 (Alloy52): "**4050**"	SS317L: "**0950**"

Firmware update

Bootloader and new firmware you can find following the link
http://starplat.com/firmwares/

Firmware update process
1) Load HIDBootloader (Windows).exe
2) Disconnect the battery.
3) Hold "FIRE" button and plug the chip to your PC.
   If nothing happened:
       Hold "FIRE" button and connect battery, then plug the chip to your PC again.
4) Wait till the chip will be ready for operations.
5) When ready release the "FIRE" button
6) Choose the update file "*.hex"
7) Click "program"
8) Wait till update is ready (the check procedure will fail - it is OK)
9) Disconnect the chip or click "reset"

Upload your logo

Logo must be only black and white (2 bit) bitmap in .bmp format 64x48 pixels

Logo changer software logo.exe you can find follow the link
http://starplat.com/firmwares/logo.zip

Change logo process
1. Run logo.exe
2. Connect board to computer (do not hold any button and no need to disconnect battery)
3. Click "Scan ports"
4. In drop-down menu choose "COM3"
5. Click "Open file" and select your bitmap file. File must be only black and white (2 bit) bitmap in .bmp format 64x48 px.
   You should see preview of bitmap in preview area.
6. Click "Load to Flash"
7. Disconnect from computer. Enjoy

Safety information

Very important!

• Do not heat a display above 60º C (140º F) ever for short time.
  Do not use hot glue gun or soldering iron near display.
  Overheating will cause a loss of display luminosity. All oled display fear of high temperature.

• Do not spill vape liquids on connector. Including E-liquids. This may hit the board and cause to board malfunction.