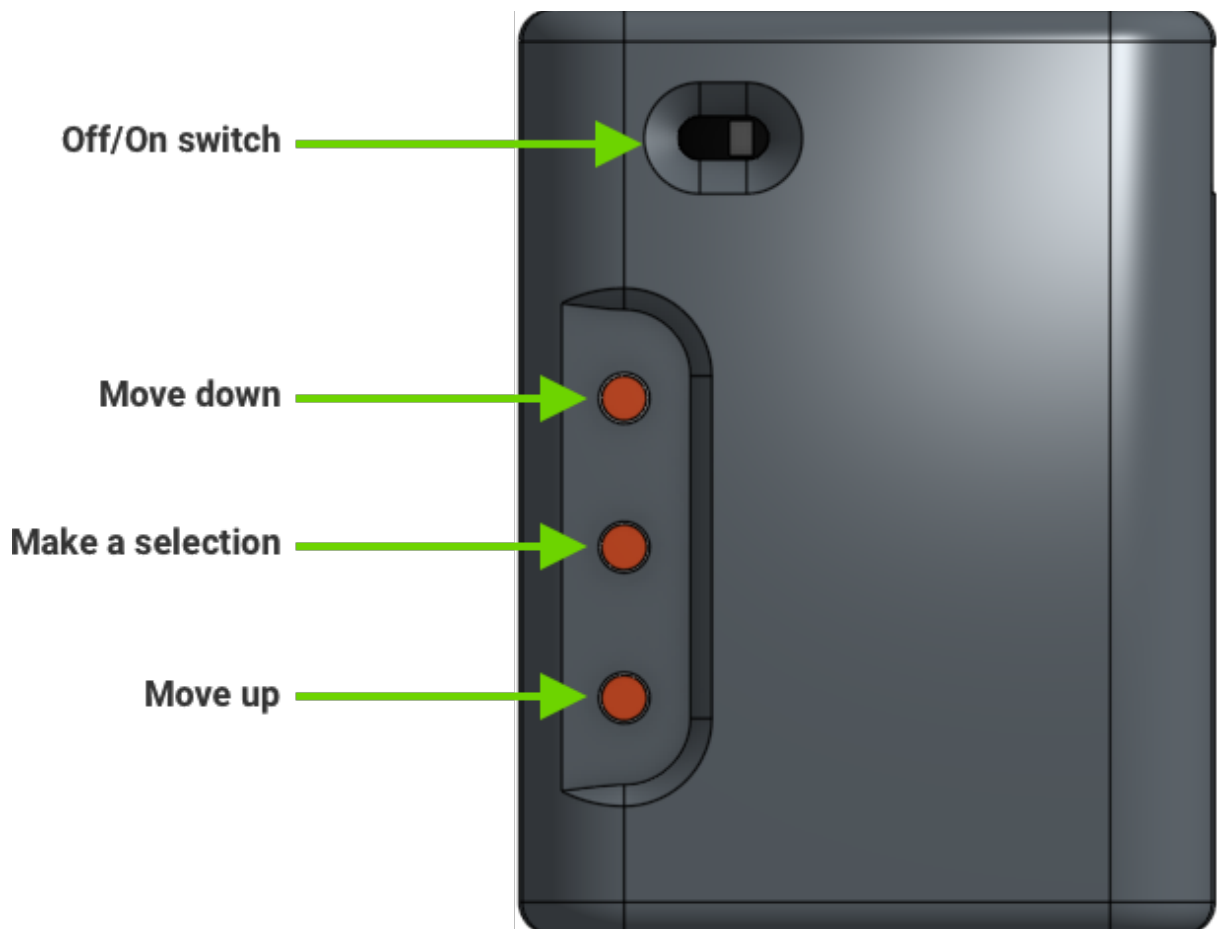


360 DOPE SCOPE 2 *VOL. 2*

The DopeScope 2 is built on a powerful ESP32 wireless SoC. This SoC features a dual-core CPU, 520 KiB SRAM, 4MB of program memory, 802.11bgn and Bluetooth 4.2 BR/EDR and BLE. We've attached an RGB IPS screen with a resolution of 160x80 with a lens that allows for easy hand-held Wi-Fi hunting.

Buttons



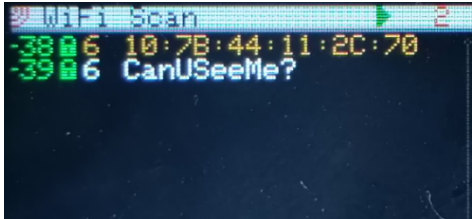
Main Menu



The Main menu allows you to choose between scanning modes as well as access user-configurable options. Use the buttons to move **UP** and **DOWN** the menu, pressing **SELECT** on the option you want.

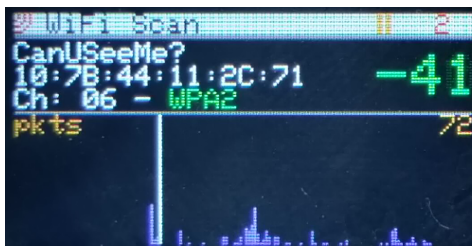
WiFi Scan

The default screen in the wifi menu will show a continual scan of the advertised networks within range. The display shows the RSSI, encryption type, channel and SSID (if not hidden) for the AP. The display will update roughly every 3 seconds. Using the buttons, you can pause the scan and scroll through the list of Aps. Pressing the **SELECT** button on an AP will bring up an option menu which will allow you to get more details, follow the AP, or return to **WiFi Scan** or the **Main Menu**. If you scroll back to the top of the screen, the device will resume scanning. Pressing the **SELECT** button while actively scanning will return you to the **Main Menu**.



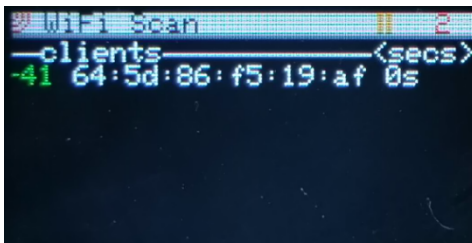
WiFi Details

The **WiFi Details** screen will show you the normal information about the AP (ESSID, BSSID, channel and encryption). The scope will then lock to the channel of the AP and listen promiscuously for all packets coming from the AP. The RSSI value will update every time a packet is observed from the AP and a chart at the bottom of the screen will show the activity of the AP in packets/sec. This will allow for better AP hunting. Pressing the **SELECT** button will return you to the scanning screen.



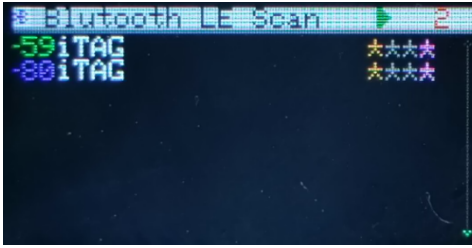
WiFi Follow

The **WiFi Follow** mode allows you to observe more activity related to the AP. The device will tune to the channel used by the selected AP and begin listening for all packets to and from the AP. A list of clients will be shown. By default, the list is sorted by the time(secs) since the client was last seen, but by pressing the **UP** and **DOWN** buttons you can change this to sort by the last RSSI of the client or the total number of packets seen from the client. This mode allows for greater insight into client devices and will allow for finding rogues clients. Pressing the **SELECT** button will return you to the scanning screen.



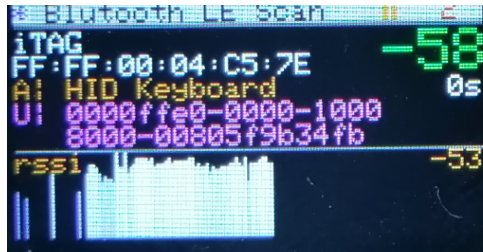
BLE Scan

The default BLE screen shows a survey very similar to the WiFi SCAN mode. You will be able to see any BLE device in range as well as their RSSI and what capabilities are being advertised. Four flags represent the “Appearance Data”, “Manufacturer Data”, “Service Data” and “Service UUID” if available. Using the **UP** and **DOWN** buttons, you can scroll through the list of devices. Pressing the select button on a device will open a details page. If you scroll back to the top of the screen, the device will resume scanning. Pressing the **SELECT** button while actively scanning will return you to the **Main Menu**.



BLE Details

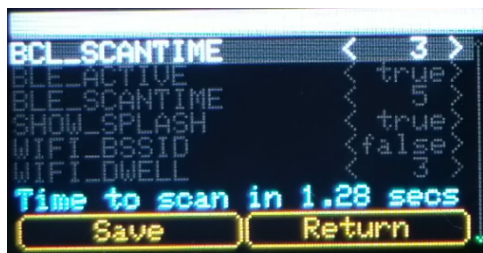
The **BLE Details** page is similar to the WiFi details page. It will show the Name of the BLE device (if advertised), the MAC address, the last observed RSSI (continually updated), seconds since last seen and the extended information included in the advertising frame. When possible, it will attempt to identify the manufacturer of the device if enough information is provided in the advertising frame. A chart in the lower half of the screen will show the RSSI over time to help locate the observed device. Pressing the **SELECT** button will return you to the **BLE Scan**.



** Be aware that BLE devices regularly change their MAC addresses to avoid tracking. If a device seems to disappear, return to the scanning menu to try to relocate it.*

Settings

The DopeScope uses a chunk of flash to store user configurable settings. You can set these in the **Settings** menu and save them to flash. These settings are:



Setting	Description	Default
BCL_SCANTIME	Seconds to scan for Bluetooth Classic Devices (not used)	3
BLE_ACTIVE	Perform an active BLE scan (more accurate)	true
BLE_SCANTIME	Time to scan for BLE devices (seconds)	5
SHOW_SPLASH	Show boot splash screen	true

WIFI_BSSID	Show WiFi BSSID instead of ESSID	false
WIFI_DWELL	Time to dwell per channel (in 100ms)	3
WIFI_HIDDEN	Show hidden SSIDs	true
WIFI_PASSIVE	Use passive scanning fo WiFi (slower)	false