AIR SURVEY CARRIAGE

powered by L.E.D.E (aka open-wrt)

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Page - Description

UNPACKING

First, unpack your kit:

You should have :

- Carriage (in box)
- Air Survey Radio (preloaded with LEDE)
- 5-7 dB antenna (dual band) 5/2.4 GHz
- Power Pack (ION or LIPO)
- Charger
- 4 zip ties
- Velcro

Report any damaged product when you unpack to your sales agent, VAR or distributor. Thank you for your purchase. Please join us on our online forum to help continue our development.

PRE-ASSEMBLED KITS

Your unit will come already assembled
and battery charged.

Simply remove unit from box, and remove packing wrapping slowly.

To Charge (unit needs to be fully charged before using):

- Turn Pack to Off position (O)
- Unplug Pack from gear, remove 12 volt cable.
- Plug into Charger
- Plug charger into wall or power outlet
- Turn pack to (I) to charge.
- Plug 12 volt charger into power pack.
- Once charged the 3 lights are green, power pack is ready to use or reuse.
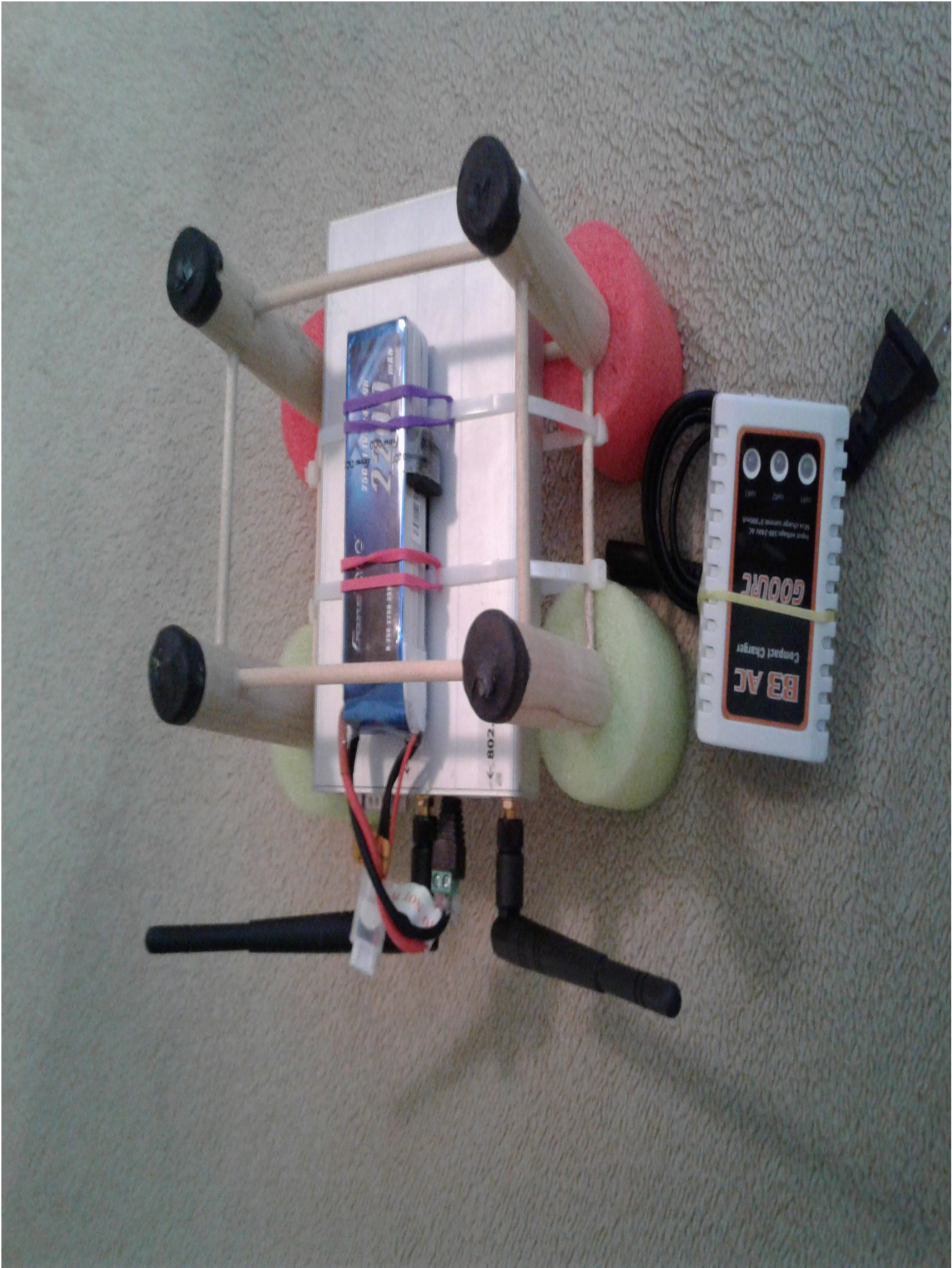
DRONE CARRIAGE ASSEMBLY

See pictures

- Zip tie or glue the Air Survey Radio onto Carriage
- Add Zelcro and Bands to secure battery pack
- Plug into 12volt cable (from battery back)
- Attach Antennas (do not run without them)
- Turn on power (unit takes 2 minutes to boot)

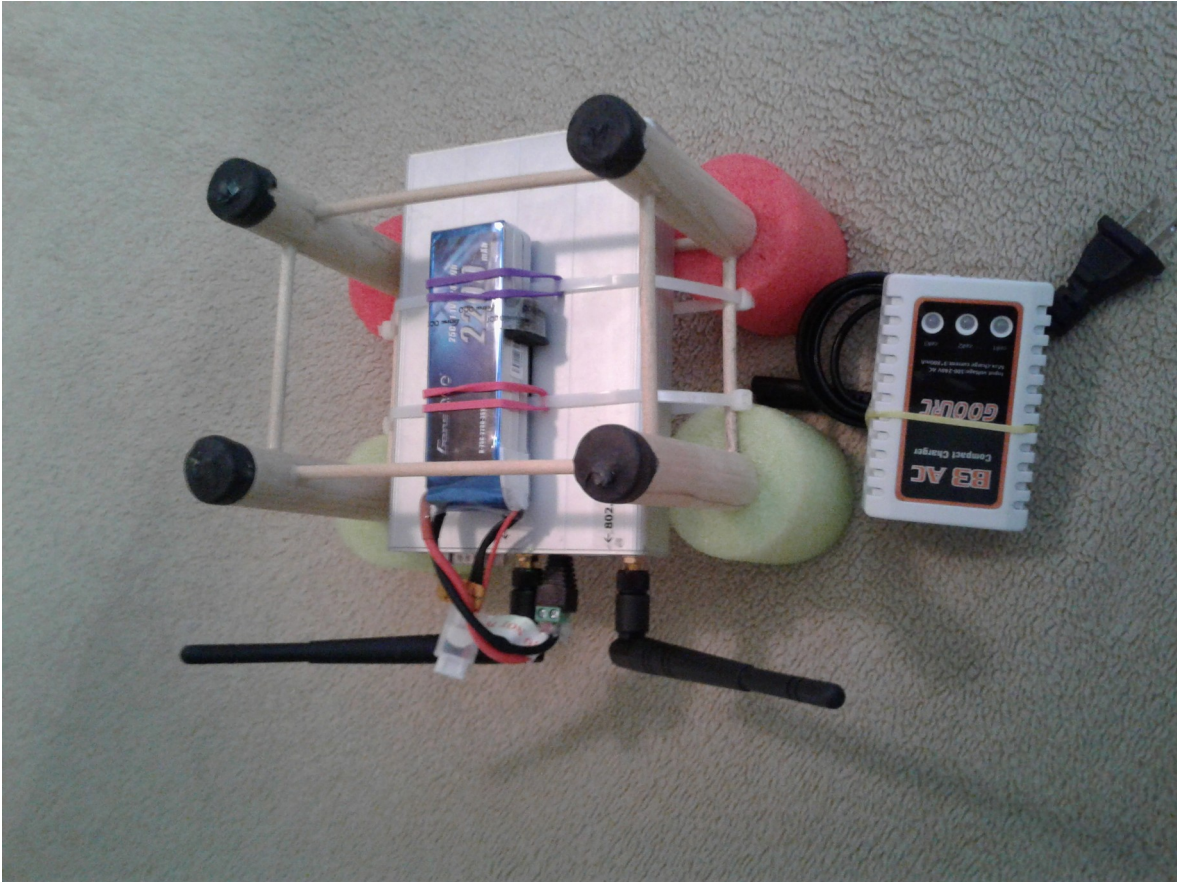see images below of unit before disassembled and shipped.

Once all reassembled power test.

Radio was one green light showing power is on.

The Battery pack has green lights to show on, and 5 lights capacity

Hint – Never run your packs completely dry if you can help it, or leave out in the sun. Both will drastically reduce battery life.

Attach Battery to Carriage

1. Add LIPO to top of AIR SURVEY as shown in pictures use two rubber bands (provided) and Velcro .
   (see image on page 5)
2. Attach bands to tie straps as shown. (image page 5)
3. Remove lining of Velcro
4. The attach Velcro to battery pack
5. Slide battery through bands
6. Next press sticky side of Velco against Air Survey .
7. Always charge/recharge your batteries before site surveys.

CONNECT TO AIR SURVEY

Via WiFi

This is a quick how to connect a laptop, tablet or phone to Air Survey.

- **Connect to radio via web browser on phone, tablet , or laptop via WiFi**

        ssid: wispdrone
        password: wispdrone

once connected to wispdrone (SSID) 2.4 GHz wireless on carriage

you will get an IP of 192.168.1.X assigned automatically from wireless router.

If not manually set
ip to 192.168.1.100,
subnet 255.255.255.0
gateway 192.168.1.1
dns (not required) 192.168.1.10

Radio IP 192.168.1.1 (core /required)
U/P – all lower case – root/wispdrone
warning – always backup your unit before doing any configuration changes

Login: Open web browser once connected to WiFi and point to 192.168.1.1

username root , password wispdrone

click Network, click WiFi, click Scan.

Link	ESSID	BSSID	Mode	Channel	Encr.	Signal	Noise
9/70	2WIRE557	28:16:2E:D2:C6:C1	Master	2.422 GHz (Channel 3)	on	-86 dBm	-95 dBm
14/70	ATT9KWE4TV	DC:7F:A4:1F:C5:AA	Master	2.452 GHz (Channel 9)	on	-81 dBm	-95 dBm
7/70	WRIGLEY	A8:6B:AD:F6:A2:78	Master	2.462 GHz (Channel 11)	on	-88 dBm	-95 dBm
58/70	homealone	08:3E:5D:E5:A1:18	Master	2.412 GHz (Channel 1)	on	-37 dBm	-95 dBm
12/70	Gabor	B4:2A:0E:4F:FC:F1	Master	2.412 GHz (Channel 1)	on	-83 dBm	-95 dBm
38/70	DIRECT-KZ-VIZIOTV	02:6B:9E:67:07:AF	Master	2.412 GHz (Channel 1)	on	-57 dBm	-95 dBm
9/70	ATTMRA7api	64:55:B1:B0:74:D0	Master	2.412 GHz (Channel 1)	on	-86 dBm	-95 dBm
6/70	SnotBeard	48:00:33:BB:1E:6D	Master	2.412 GHz (Channel 1)	on	-89 dBm	-95 dBm
8/70	Butterfly	30:F7:72:8F:59:FC	Master	2.412 GHz (Channel 1)	on	-87 dBm	-95 dBm
13/70	TC8715DB5	D0:B2:C4:49:4D:BB	Master	2.412 GHz (Channel 1)	on	-82 dBm	-95 dBm
19/70	MUSSELMAN	30:85:A9:68:DE:78	Master	2.417 GHz (Channel 2)	on	-76 dBm	-95 dBm
37/70	NETGEAR03	9C:3D:CF:C3:B4:68	Master	2.422 GHz (Channel 3)	on	-58 dBm	-95 dBm
30/70		FA:8F:CA:6C:5D:B2	Master	2.422 GHz (Channel 3)	off	-65 dBm	-95 dBm
30/70	MySpectrumWiFi88-2G	38:35:FB:80:A8:8E	Master	2.437 GHz (Channel 6)	on	-65 dBm	-95 dBm
23/70	TC8715DDE	48:00:33:B7:D4:E4	Master	2.437 GHz (Channel 6)	on	-72 dBm	-95 dBm
12/70	bulldogs	E0:46:9A:79:69:40	Master	2.437 GHz (Channel 6)	on	-83 dBm	-95 dBm
6/70	NETGEAR42	B0:7F:B9:06:59:33	Master	2.437 GHz (Channel 6)	on	-89 dBm	-95 dBm
5/70	NikkiPm	AC:B3:13:7B:F0:40	Master	2.437 GHz (Channel 6)	on	-90 dBm	-95 dBm
10/70	TheDudeAbides	14:CF:E2:81:B4:80	Master	2.437 GHz (Channel 6)	on	-85 dBm	-95 dBm
10/70	PIS4-8262E8AF699F	60:5B:B4:99:50:5F	Master	2.437 GHz (Channel 6)	on	-85 dBm	-95 dBm
14/70	TG1672G32	78:71:9C:50:12:30	Master	2.437 GHz (Channel 6)	on	-81 dBm	-95 dBm
26/70	Z98244.17	90:C7:D8:F1:05:E4	Master	2.437 GHz (Channel 6)	on	-69 dBm	-95 dBm
28/70	WIFIF221B8	34:68:95:F2:21:B7	Master	2.462 GHz (Channel 11)	on	-67 dBm	-95 dBm
17/70	MUSSELMAN	C0:FF:D4:E3:70:4B	Master	2.462 GHz (Channel 11)	on	-78 dBm	-95 dBm
17/70	WIFID50E06	40:B8:9A:D5:0E:0A	Master	2.462 GHz (Channel 11)	on	-78 dBm	-95 dBm
15/70	ATT4H5E3d8	84:61:A0:6E:FF:E0	Master	2.462 GHz (Channel 11)	on	-80 dBm	-95 dBm
2/70	MySpectrumWiFibc-2G	A0:39:EE:73:62:C2	Master	2.462 GHz (Channel 11)	on	-93 dBm	-95 dBm
14/70	MOB3-2G	14:B7:F8:E4:2C:1A	Master	2.462 GHz (Channel 11)	on	-81 dBm	-95 dBm
55/70	homealone5	08:3E:5D:E5:A1:19	Master	5.2 GHz (Channel 40)	on	-40 dBm	-95 dBm
20/70	NETGEAR03-5G	9C:3D:CF:C3:B4:6C	Master	5.745 GHz (Channel 149)	on	-75 dBm	-95 dBm
18/70	MySpectrumWiFi88-5G	38:35:FB:80:A8:8F	Master	5.785 GHz (Channel 157)	on	-77 dBm	-95 dBm
10/70	Boston	54:65:DE:C9:46:90	Master	2.412 GHz (Channel 1)	on	-85 dBm	-95 dBm

You have completed your site survey, congratulations ! Use screen capture to save data or ue CLI iwlist ath0 scanning | more via SHH (see CLI section)

Attach Drone to Carriage

Place drone on-top of carriage (point camera toward green carriage feet)

Using 4 white zip ties (included) , amd tie each carriage leg to the drone, through the hole in each carriage top.

Picture coming

Please report any carriage issues or flaws to us immediately. We will help you modify, alter and rebuild them in any configuration needed.

Tighten the zip tie snug (not super tight)

Picture coming

To test, simply pickup the drone and make sure carriage is not loose and does not move!

Picture coming

Your unit is now ready if you charged your drone and carriage !

The Site Survey

Connect laptop/tablet/phone to:

connect to carriage via wifi (from laptop preferred)
ssid ; wispdrone

login after power up:

        wireless ssid: wispdrone
        encryption password: wispdrone

once connected to wispdrone (SSID) 2.4 GHz wireless on carriage,
assign yourself an IP in the same subnet :

example 192.168.1.100
subnet 255.255.255.0
gateway 192.168.1.1

Then login via , web , *telnet or ssh

username : root
password: wispdrone

or SSH to root@192.168.1.1
password wispdrone

* telnet option was removed in default installs due to security issues.

Command Line Interface

~ cli and scripts ~

connected to radio via serial port:

speed settings 38400, 8 none, 1

or ssh (recommend putty)

ssh root@192.168.1.1

password wispdrone

Quick Site Survey Scan

iwlist ath0 scanning | more

Scripts

script for quick scan, dumping text and ftp into cloud

cd /tmp

iwlist ath0 scanning > /tmp/scan.txt

ftp:data@cloud.wispdrone.co
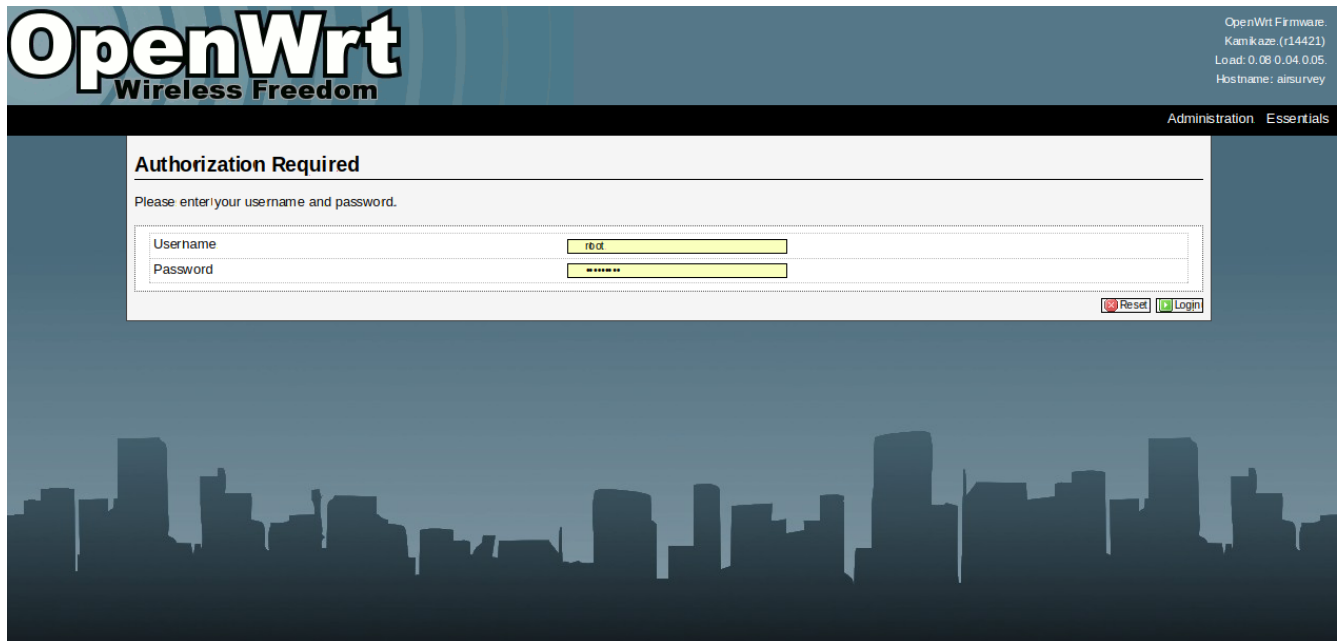
data/password

put scan.txt

quit

Reset Radio

While booting (thru serial console) there is no root login required and you can hit control C when prompted and reset the system back to default.

Reset Root (web/shh) Password

Boot via serial console you can hit control C when prompted and reset the system back to default, or at # (once done booting) use cli passwd root "yournewpasswordnoquotes"

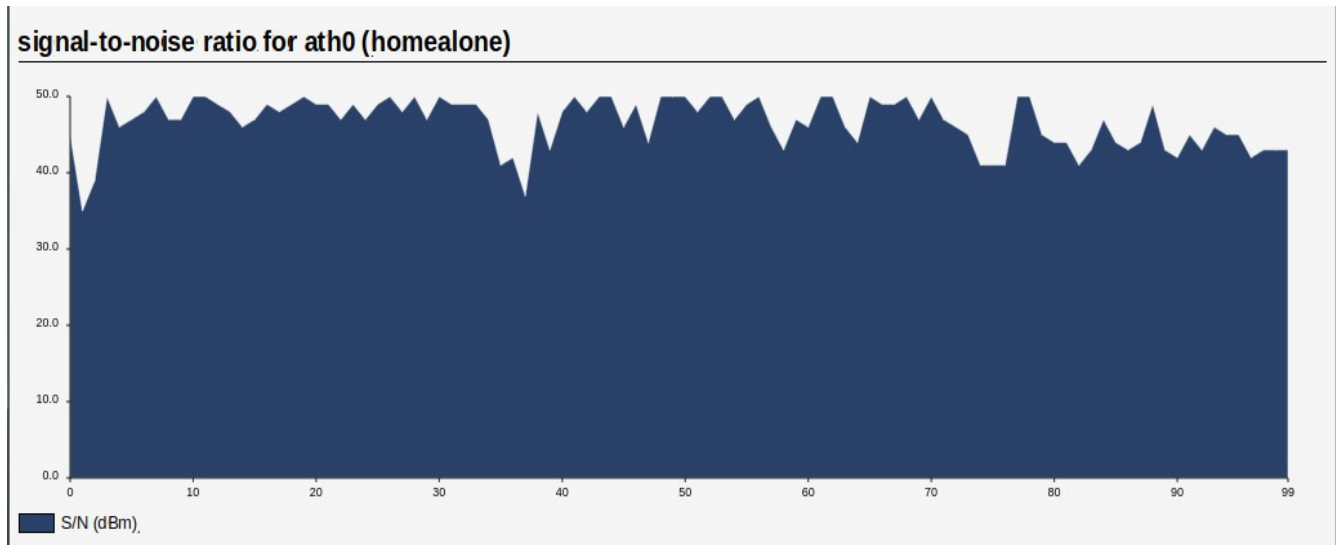# TROUBLE SHOOTING
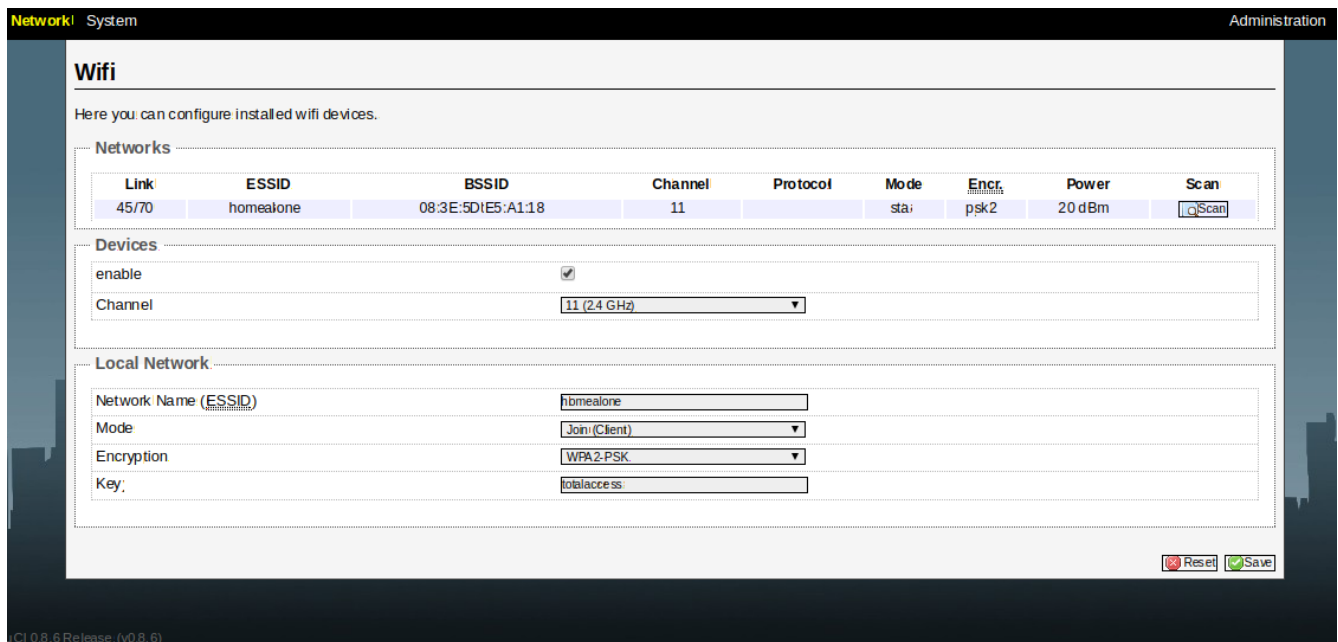
Login , first step login 192.168.1.1 with username root password wispdrone
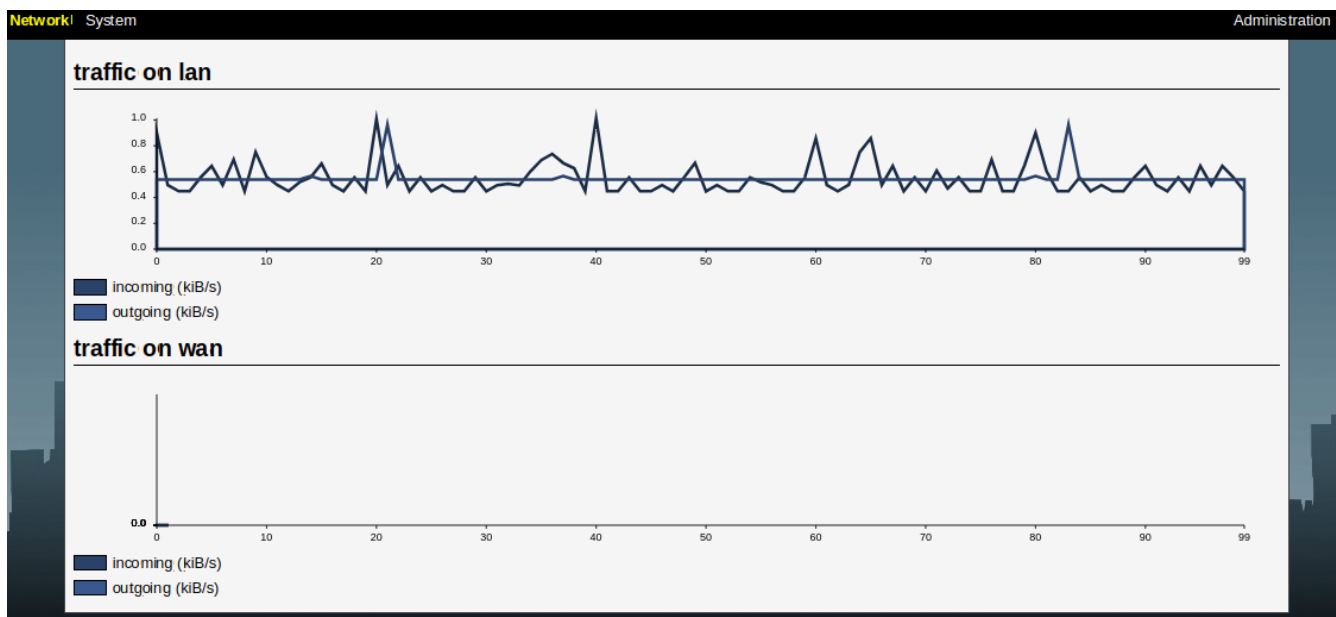

Next click network, click WiFi, click scan. Repeat scan a second time

As illustrated ,we connected the survey to a local router named "homealone"

Next click network, then click signal to noise. See image below.

you can also view traffic on wan or lan. Adding LTE soon.

NOTES: