KC1IKA HF Go box

HCRA Show & tell

April 9, 2021

Original Concept:

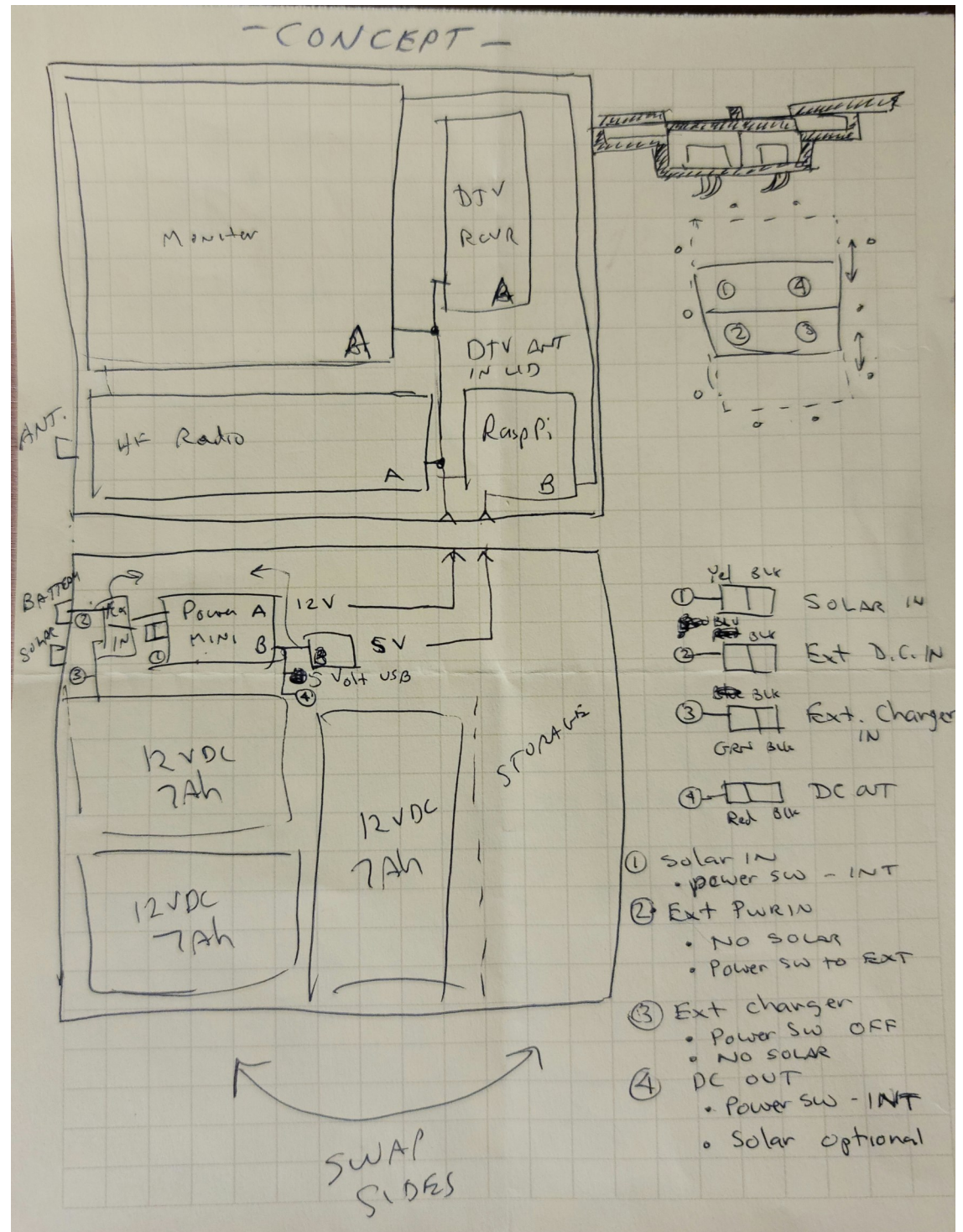HF Go-Box for digital comms

Battery powered

Solar or Mains Charging

Auxiliary Power in or out

DTV for situational awareness

Self contained Computer, radio,
    display, charger, DTV, GPS,
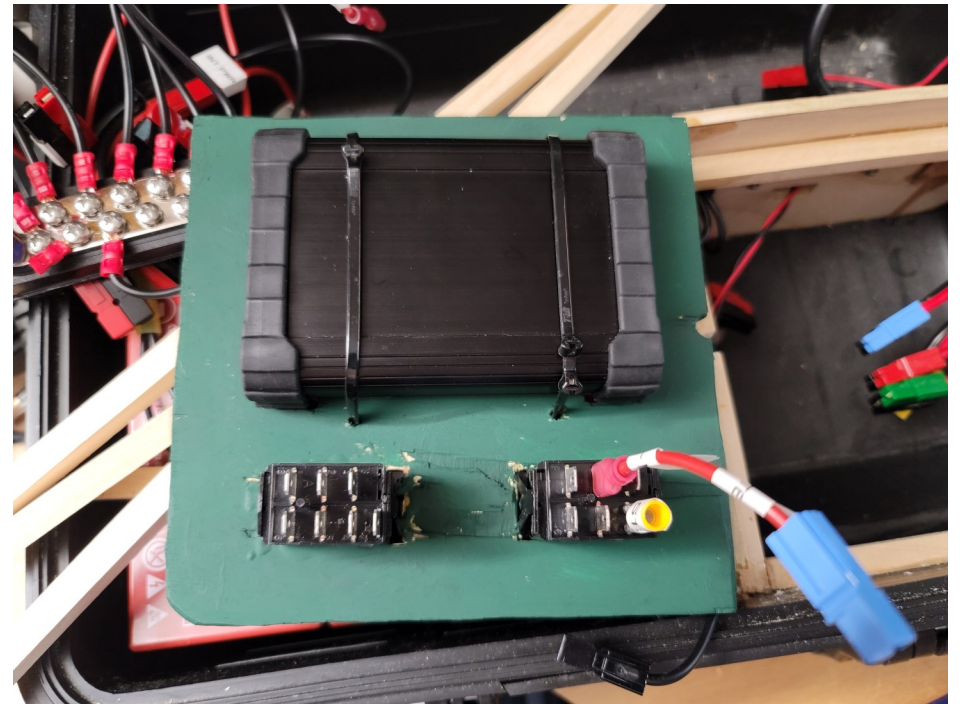   Keyboard

Relatively light

Original Layout:

HF Go-Box for digital comms

Too many batteries

Not enough room for charge
        controller and connections

Much better battery and power controller placement, and it works!

Final Layout:

Tested DTV reception

Tested Raspberry Pi operation

Still need to make control cable for
radio to test data transceiver

Packed up:

Soft pouch for DTV antenna and head phones

External Connections:

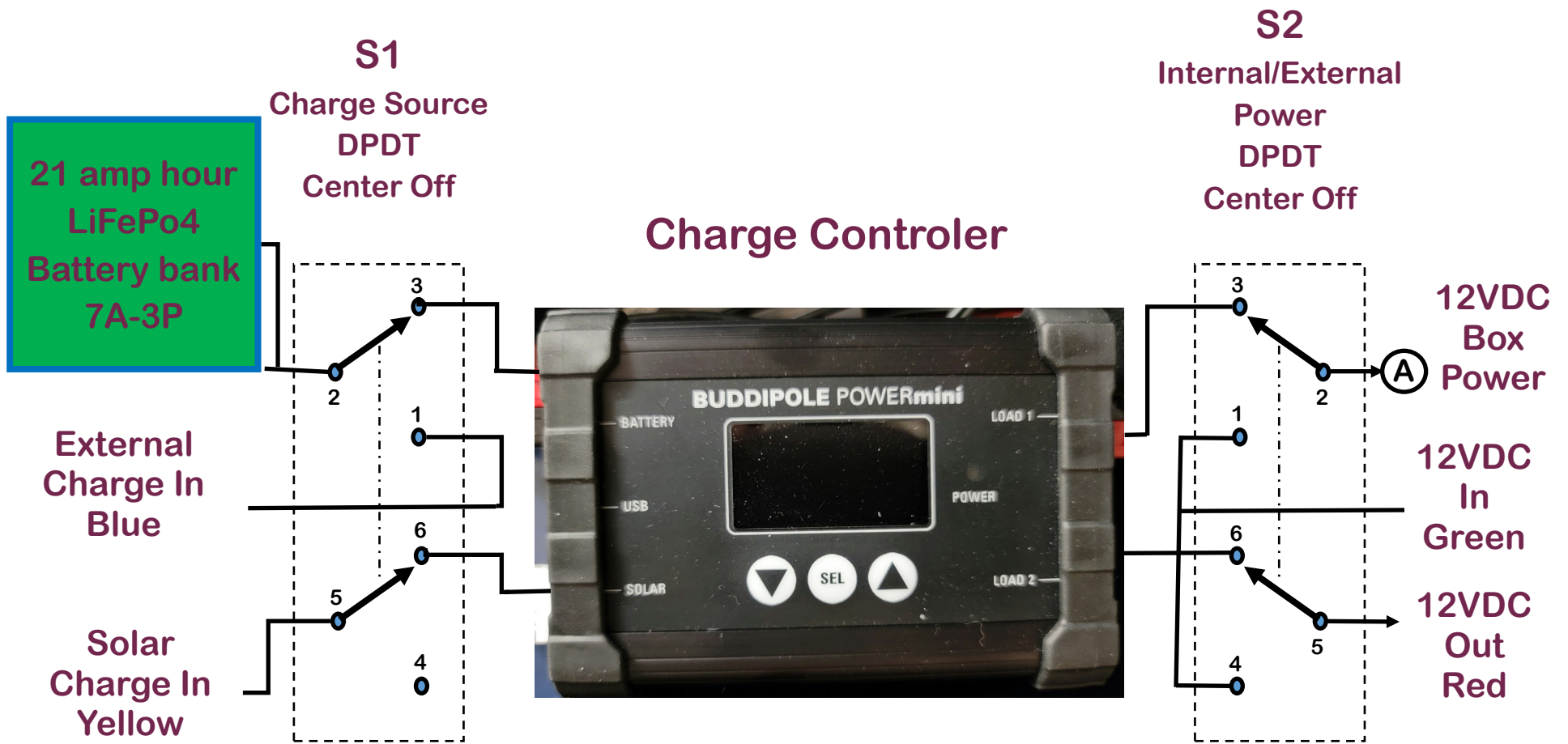HF BNC antenna connection in lid

Power in/out: Green 12VDC in, Red 12VDC out, Yellow Solar in, Blue External Charger in

DTV antenna in

Dual USB, 5VDC power out

HF Go Box DC Power Control

21 amp hour LiFePo4 Battery bank 7A-3P

S1
Charge Source
DPDT
Center Off

3
2
1
6
5
4

External Charge In Blue

Solar Charge In Yellow

Charge Controler

BUDDIPOLE POWERmini

BATTERY
USB
SOLAR

LOAD 1
POWER
LOAD 2

SEL

S2
Internal/External Power
DPDT
Center Off

3
2
1
6
5
4

(A) **12VDC Box Power**

12VDC In Green

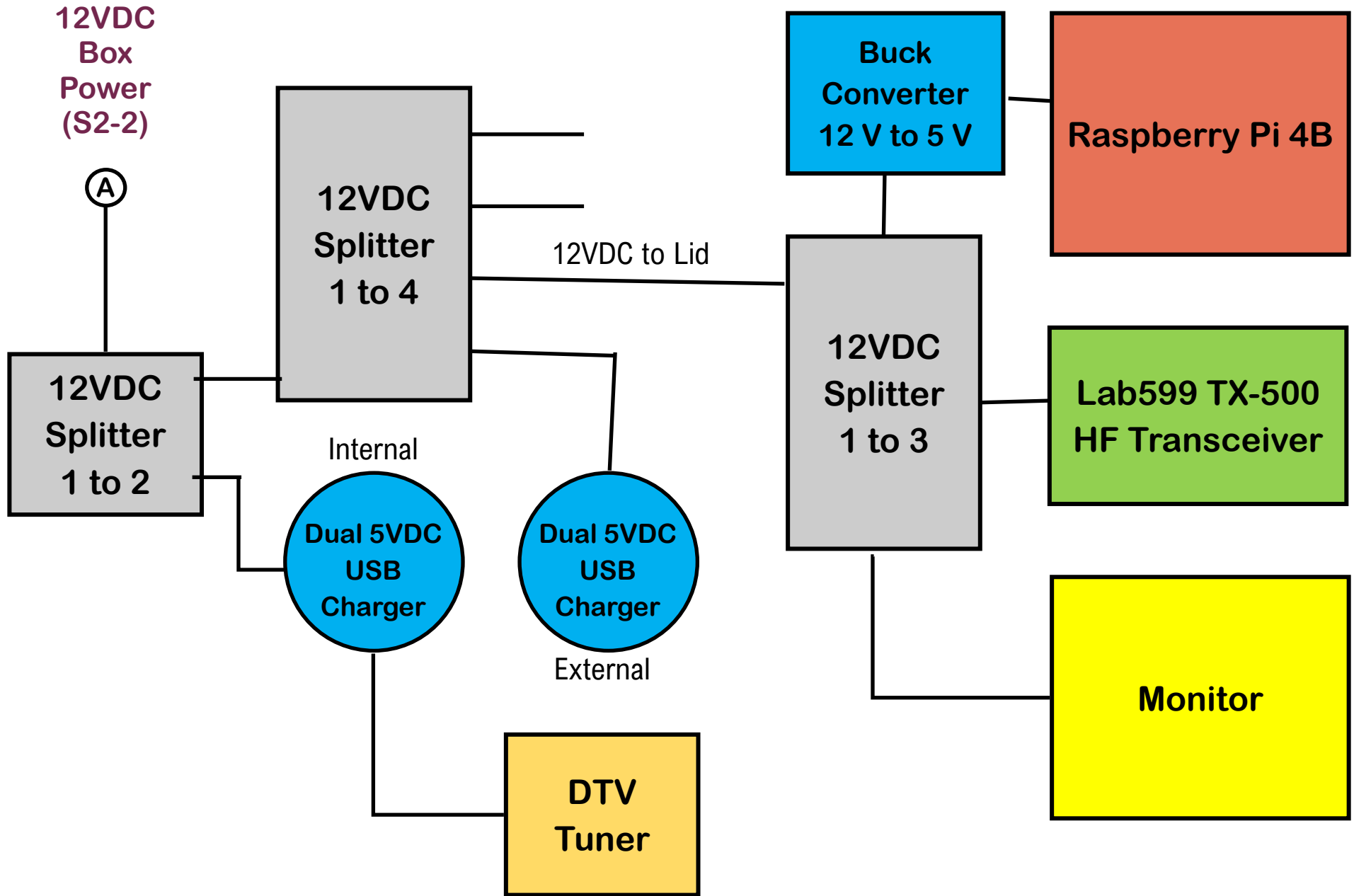**12VDC Out Red**

Note: Only positive wires shown. All negative connections go to common ground block

HF Go Box DC Power Distribution

12VDC
Box
Power
(S2-2)

(A)

12VDC Splitter 1 to 2

12VDC Splitter 1 to 4

12VDC to Lid

Internal

Dual 5VDC USB Charger

Dual 5VDC USB Charger

External

DTV Tuner

Buck Converter 12 V to 5 V

Raspberry Pi 4B

12VDC Splitter 1 to 3

Lab599 TX-500 HF Transceiver

Monitor

HF Go Box Major Parts

Dakota Litium 7Ah LiFePO4 Batteries, (3)

BudiPole PowerMini Charge Controller

Lab599 TX-500 HF Transceiver

Raspberry Pi 4B

7 Inch HDMI monitor

Double Pole, Double Throw, Center Off Rocker Switch (2)

DTV Receiver

DTV antenna

GPS receiver

Dual USB charger outlet (2)

Medium Project Box

Velcro for mounting items to lid

Wireless Keyboard

Wires and connectors as required

THANKS FOR WATCHING

73

KC1IKA

CHARLIE (SMITTY)