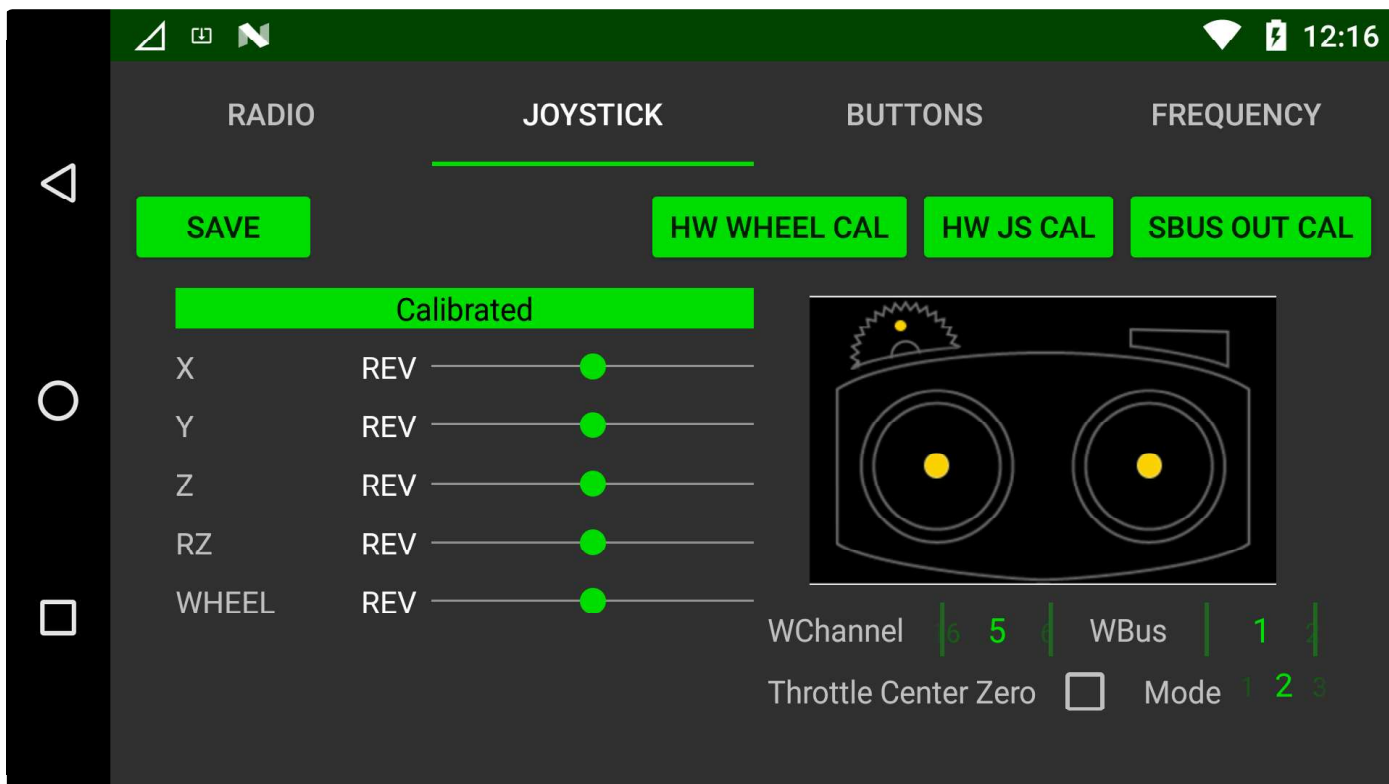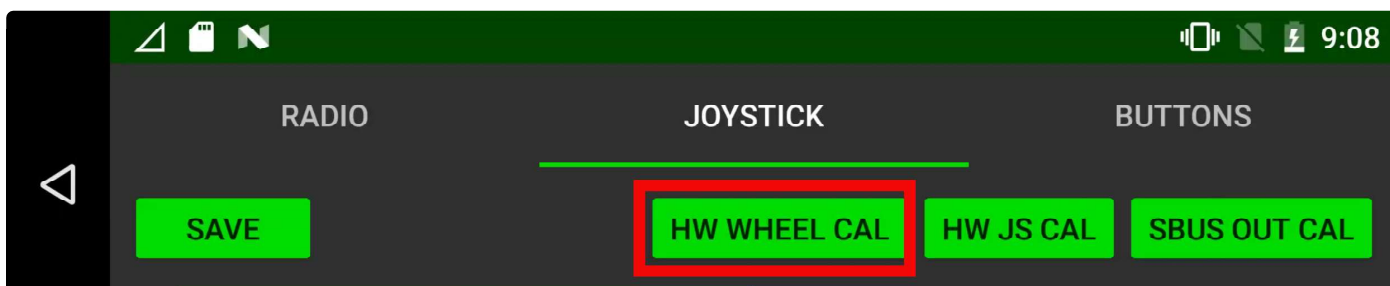Click the `JOYSTICK` tab to access the joystick screen

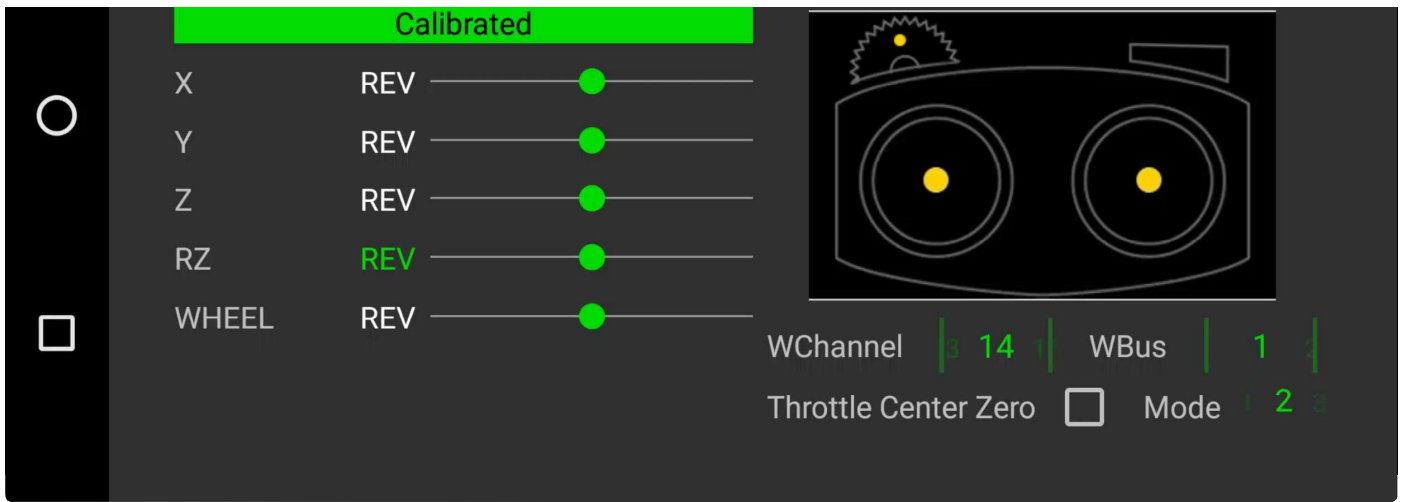Here you will find the sticks and hardware wheel options and calibration settings.

From this screen you can:

- See RC Calibration Status
- Calibrate Hardware Wheel
- Calibrate Sticks
- Set RC Stick Mode
- Set Hardware Wheel Sbus Channel & Bus
- Reverse RC Channel
- Set Throttle Centre Behavior

Calibrate the hardware wheel

Select `HW WHEEL CAL`

	Calibrated		
X	REV	●	
Y	REV	●	
Z	REV	●	
RZ	REV	●	
WHEEL	REV	●	

WChannel   3 **14** 1   WBus   1
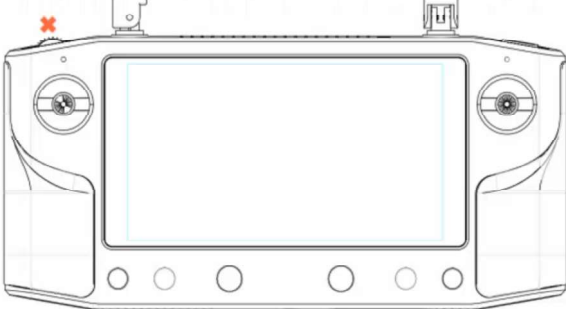Throttle Center Zero ☐   Mode   2 2

Click `Start rollwheel` and follow the calibration steps.

Note once complete you can check its correct functioning by looking at the values change, click `Pass` to return to joystick screen.

The test is used for looking and calibrating roll wheel data(Follow the instruction)

Remote control structure chart

Calibrated

Start rollwheel

Current values:1486 mv
Maximum values:1695 mv
Minimum values:1161 mv
Range size:534 mv
Left range size:209 mv
Right range size:325 mv

Rollwheel completed calibration, start check: Please release rollwheel, keep center. If sample are not in special range, check failed.
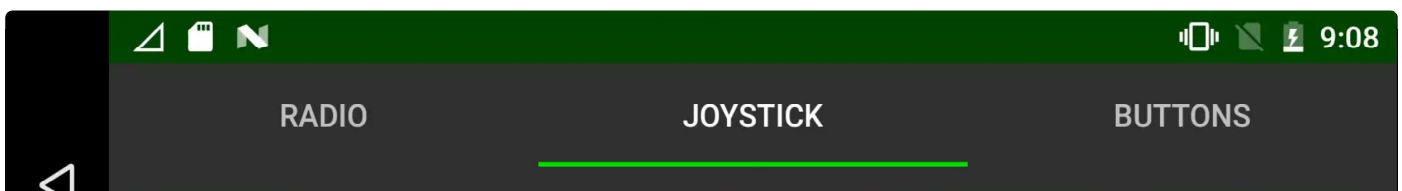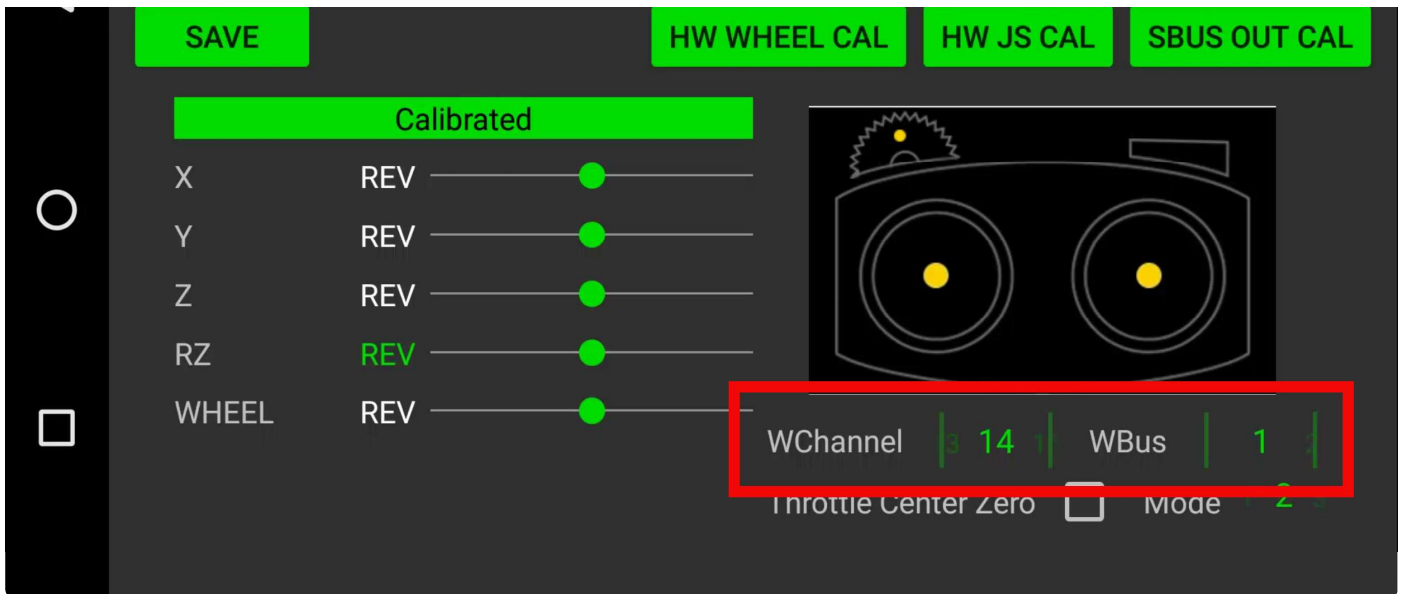Result:Rollwheel can center. Pass check

Pass	Fail

Once calibration is complete you can set the Sbus channel output and Bus output for the wheel on the highlighted settings

Bus 1 is the same output as the sticks and the wheel can be set to channels 5 - 16, on bus 2 the wheel can be set to channels 1 -16.
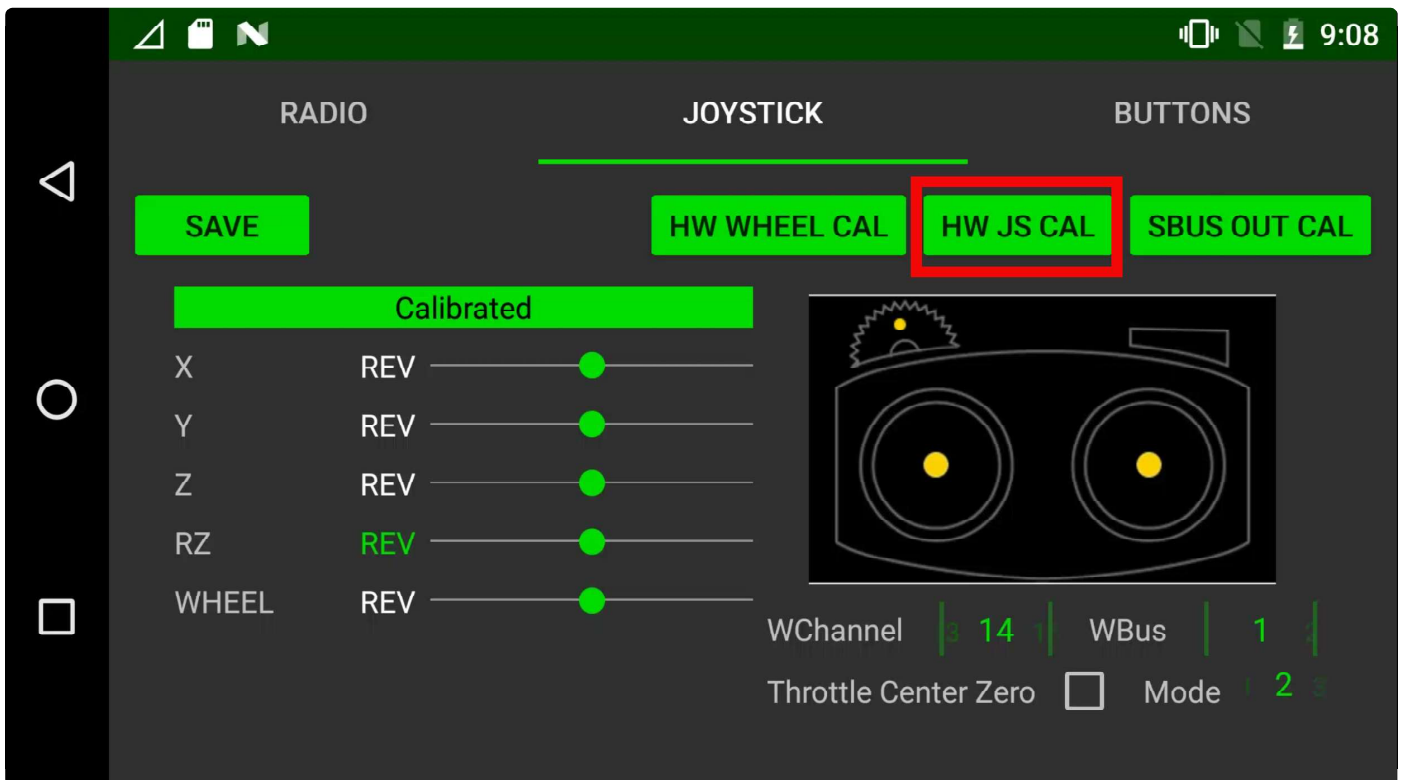

⚠ 📱 N   9:08

RADIO   JOYSTICK   BUTTONS

Once complete click `SAVE` to store settings

Calibrate the joysticks

- Click `HW JS CAL`

Calibration Instructions

On the calibration screen you will find the calibration display in the green box on the left and the remote input test display in the red box on the right. The blue box contains the current directions the user needs to follow.

To Calibrate

Click 'Start Calibration' and follow the instructions in the blue box and visualdirections as shown on the sticks in the blue circles.
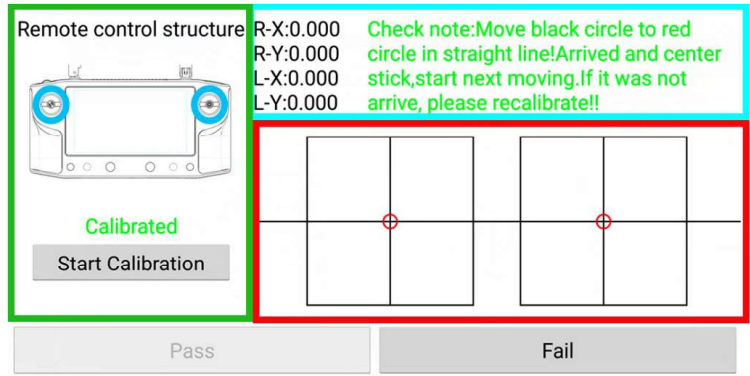
You will be prompted to move the sticks side to side, then both sticks to the top rh corners, then rotate them clockwise in all corners of the gimbal at least 5 times.

Between each step you will need to click 'Next' .

Important: When performing the calibration the input test display in the red box will not move, this is normal.

Once calibration is complete you will be prompted to test the calibration by following the instructions in the blue and red boxes, once complete select Pass or Fail.
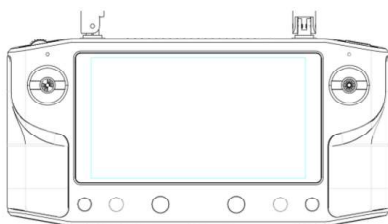
Remote control structure	R-X:0.000	Check note:Move black circle to red
	R-Y:0.000	circle in straight line!Arrived and center
	L-X:0.000	stick,start next moving.If it was not
	L-Y:0.000	arrive, please recalibrate!!

Calibrated

Start Calibration

| Pass | Fail |

Tap Here To Continue

This screen is split into 2 sections, joystick calibration on the left, joystick testing on the bottom right, instructions for the user to follow will be shown in the green box. Click `Start Calibration` to begin the process and follow the instructions in the green box and the sick movement arrows located around the sticks on the remote as highlighted in red below.

Note: The joystick testing area in the bottom right will not move or show any input while you are calibrating the sticks. This is normal, this area will only display input after the joysticks have been calibrated.

The test is used for looking and calibrating joystick data(Follow the Instruction)
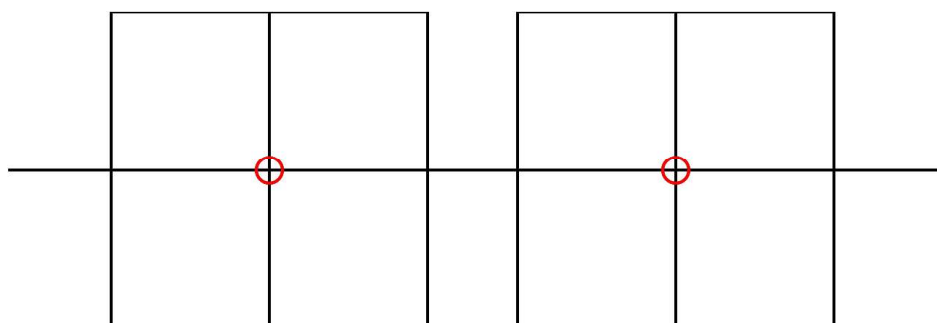
Remote control structure   R-X:0.000   Check note:Move black circle to red
R-Y:0.000   circle in straight line!Arrived and center
L-X:0.000   stick,start next moving.If it was not
L-Y:0.000   arrive, please recalibrate!!

Calibrated

Start Calibration

| Pass | Fail |

Once the joystick calibration step is complete the input test area in the red box will activate, follow the instructions above it to test the sticks input are functioning correctly by aligning the black and red circles in each step shown. This will test the joysticks are moving correctly in all axises.
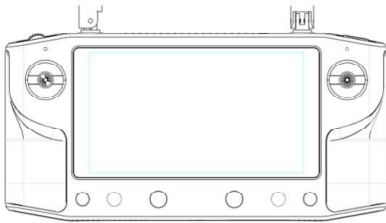
At the end of this process if you are happy with the input behavior you can click 'Pass' and the calibration will be stored, if you're experiencing any issues click 'Fail' and start the calibration process again using a little more pressure in the corners.

The test is used for looking and calibrating joystick data(Follow the Instruction)
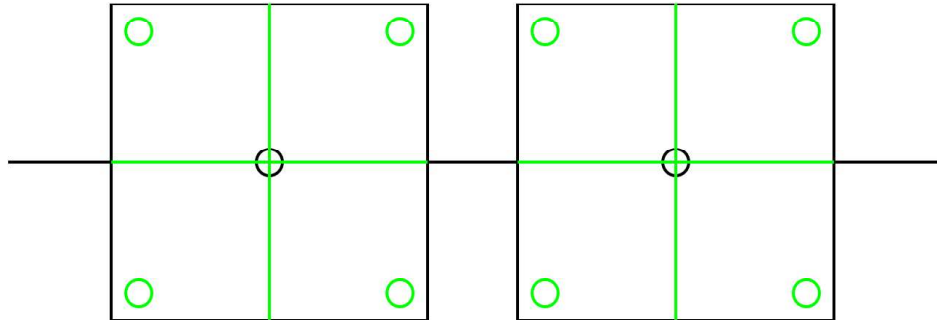
Remote control structure

R-X:0.000
R-Y:0.000
L-X:0.000
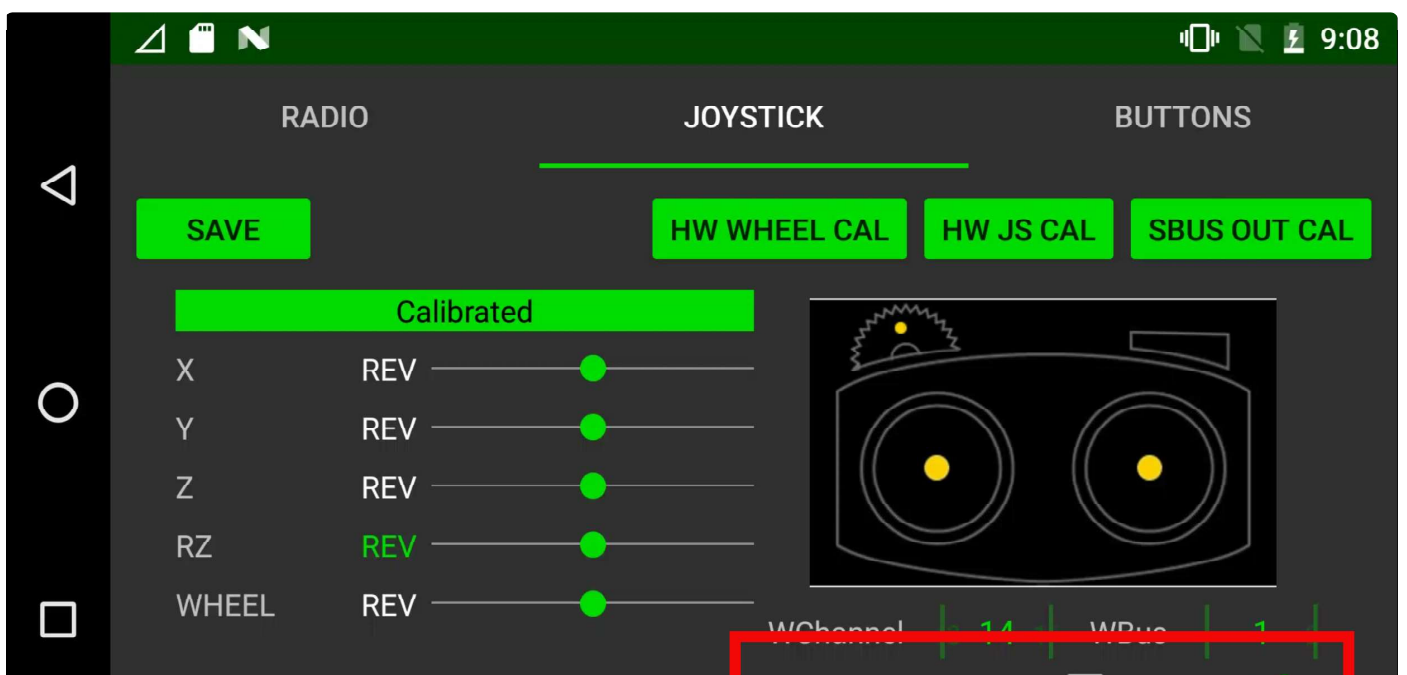L-Y:0.000

Check pass

Calibrated

Start Calibration

Pass	Fail

RC Mode Selection , Throttle Behavior & Channel Reversing

DataLink supports RC modes 1-4 as well as the option to set the throttle centre as zero PWM output and reverse each channel.

Set throttle center and RC mode via the below settings.

9:08

RADIO   JOYSTICK   BUTTONS

SAVE   HW WHEEL CAL   HW JS CAL   SBUS OUT CAL

Calibrated

X   REV
Y   REV
Z   REV
RZ   REV
WHEEL   REV

WChannel   14   WBus   1

The stick sbus output can be reversed by clicking on 'REV' next to the channel you want to change.

After making any changes click `SAVE` to store settings.
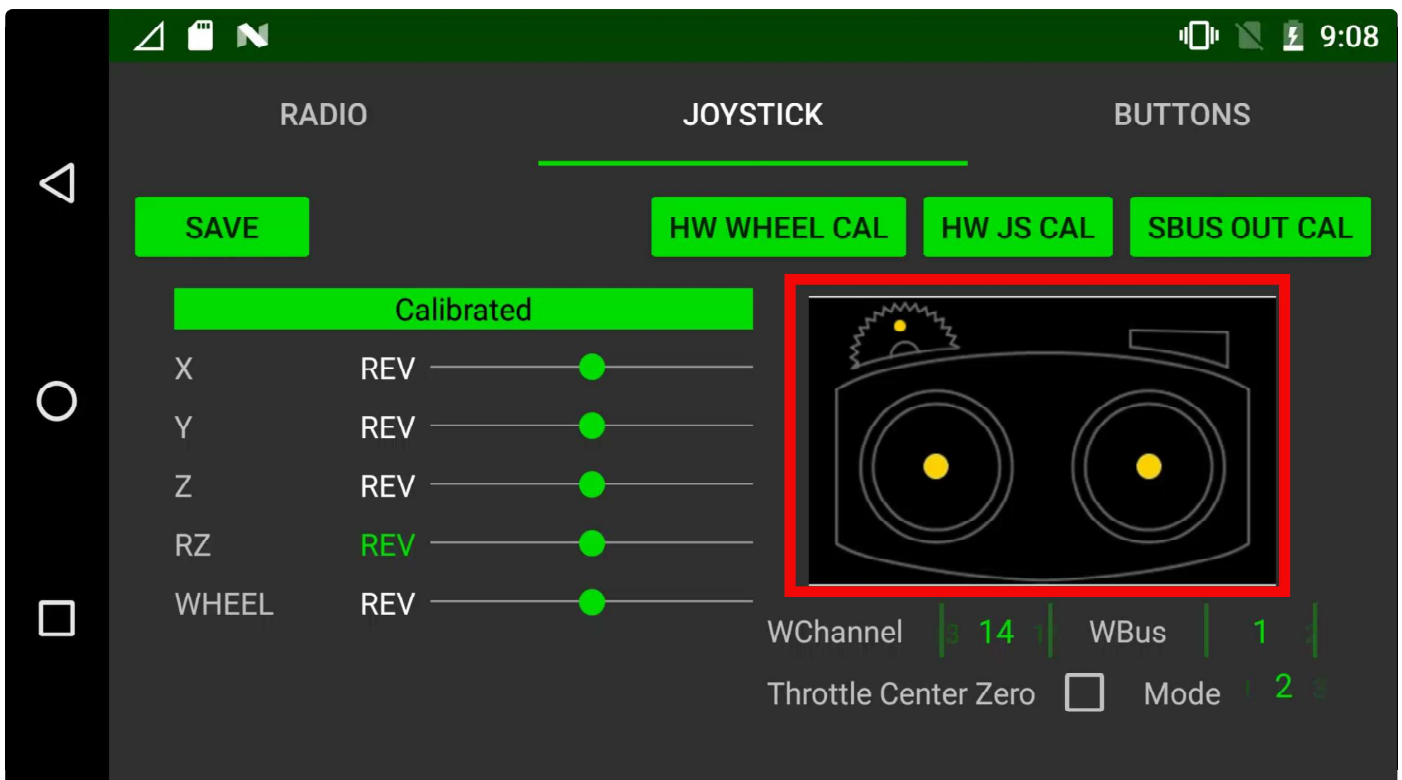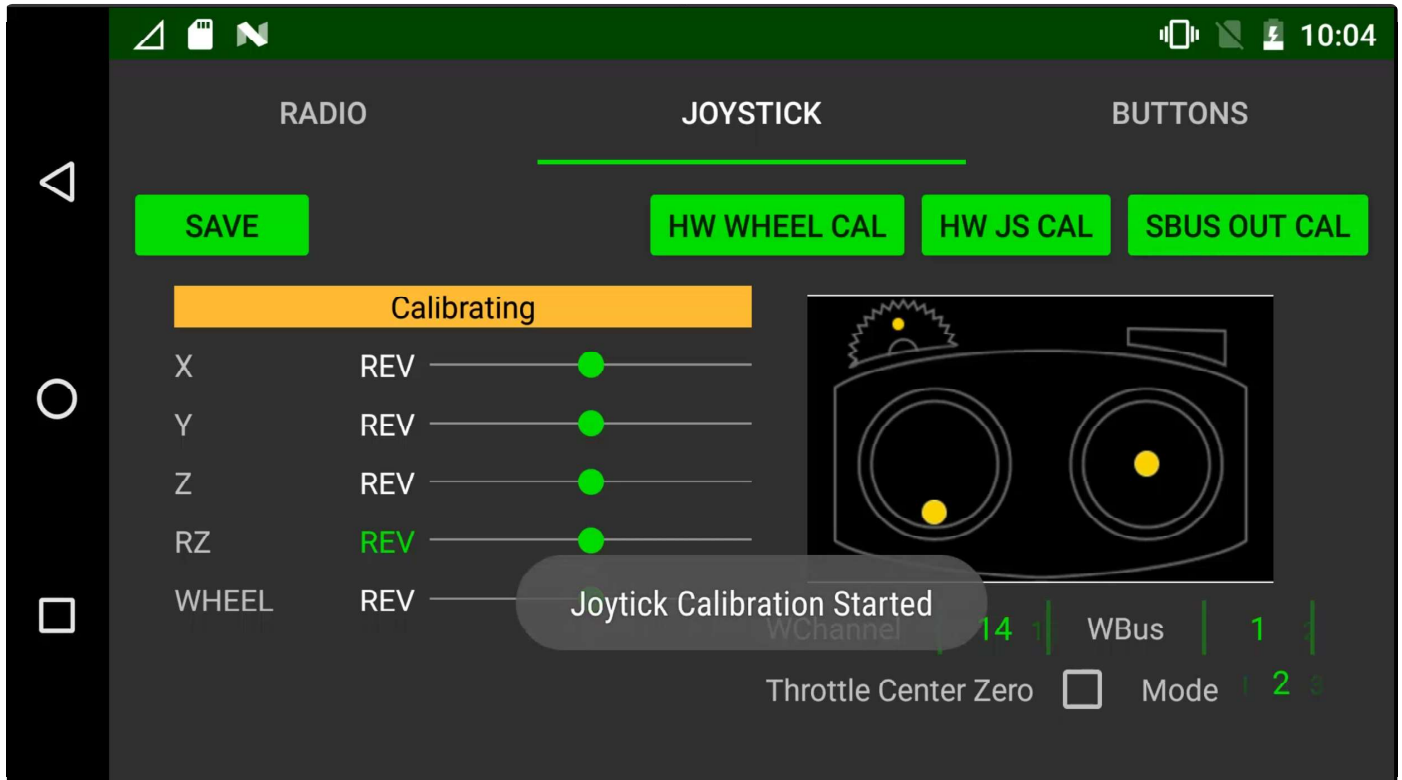

Calibrate SBUS Output

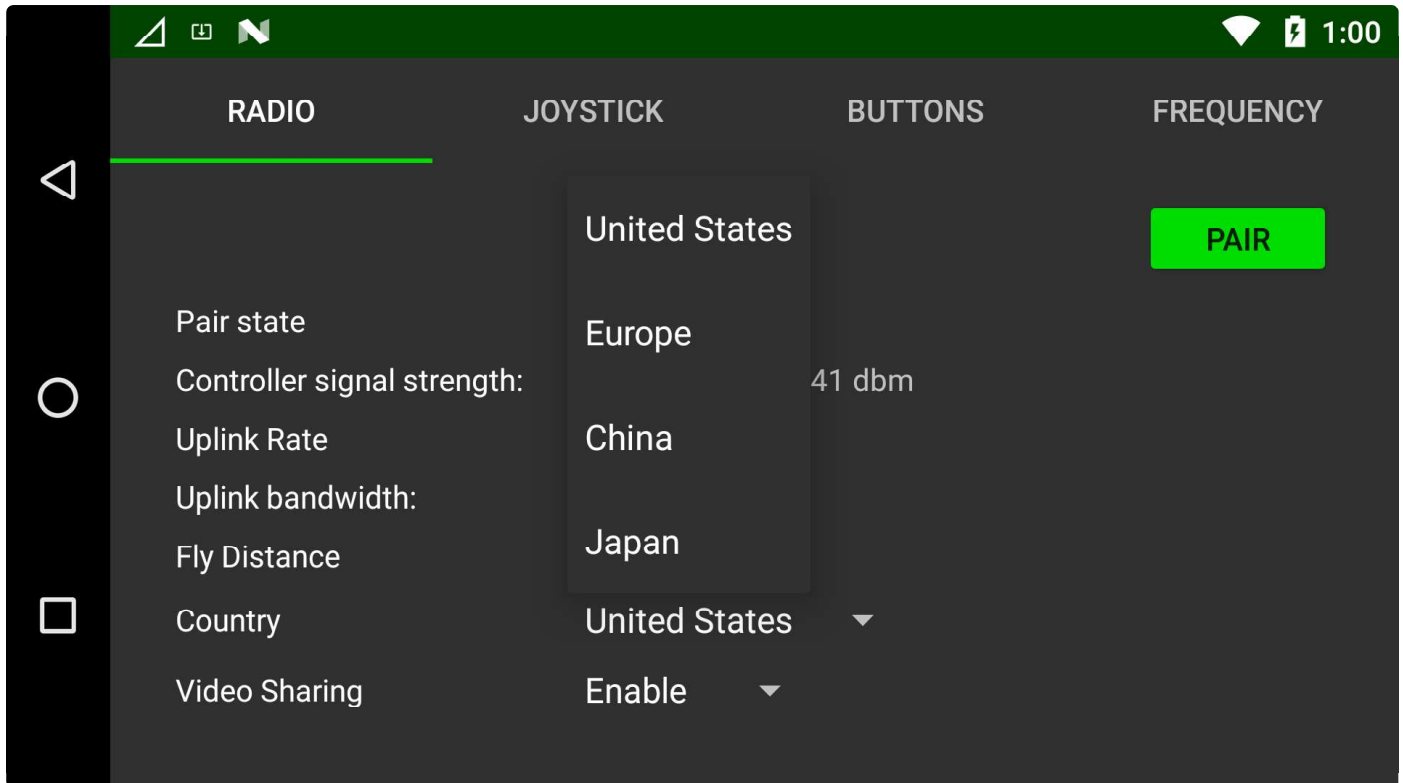To calibrate the joystick SBUS outputs click `SBUS OUT CAL`.

Follow the RC stock movement steps as shown in the highlight section moving the stick through each position.

Once complete click SAVE to store settings.

Selecting FCC/CE settings

Select the region you are residing in or matches closest to your locations policy from Country Under "Union Robotics Settings" main screen.

Configure Buttons

Button Mapping

To configure buttons, the "Secret Mode" needs to be set to 'ON'.

Open the UR/Solex TX App

Press and hold the Version number at the bottom right of the screen for 5 seconds.

On release, the "Secret mode set to ON" message should appear.

Click the hamburger menu icon in the top left corner
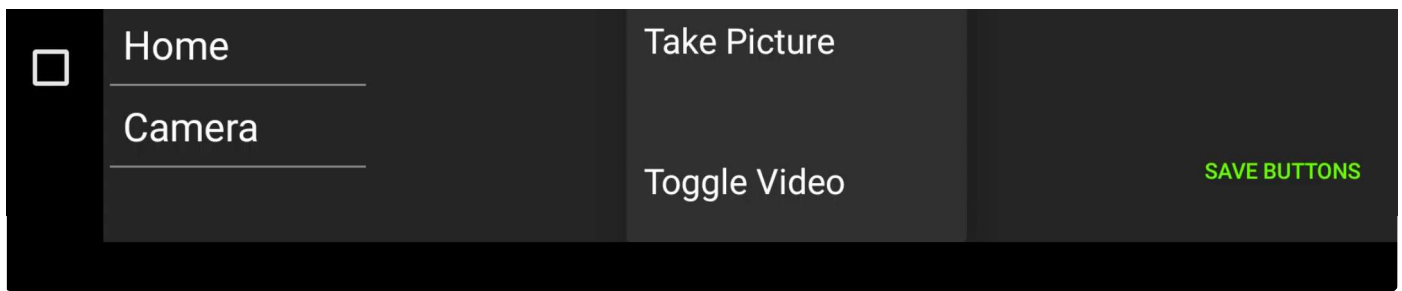
Select `Button Mapping`

Choose desired button

Select either `Click` or `Long Click` (**Note** this allows you to set two functions to each button)
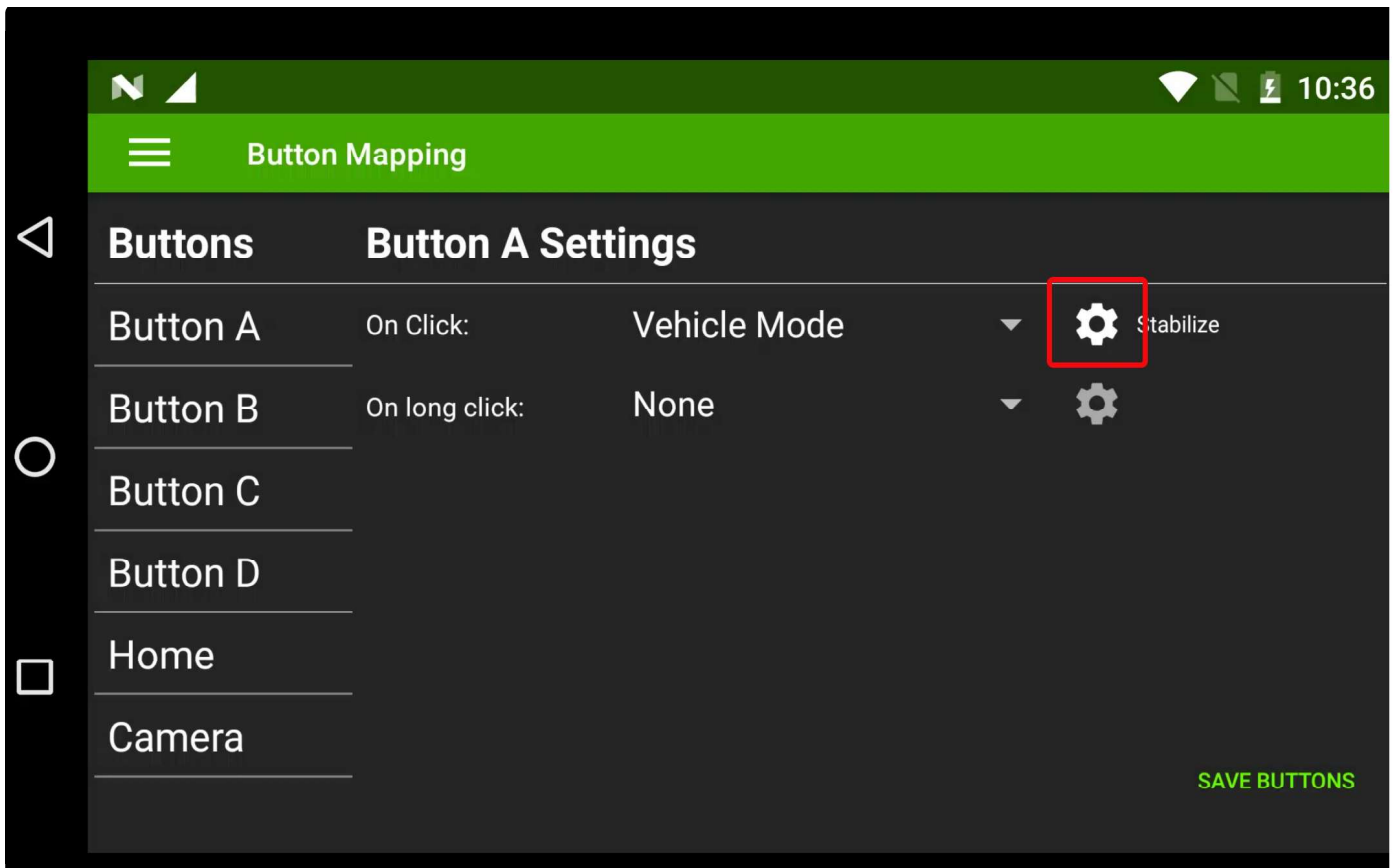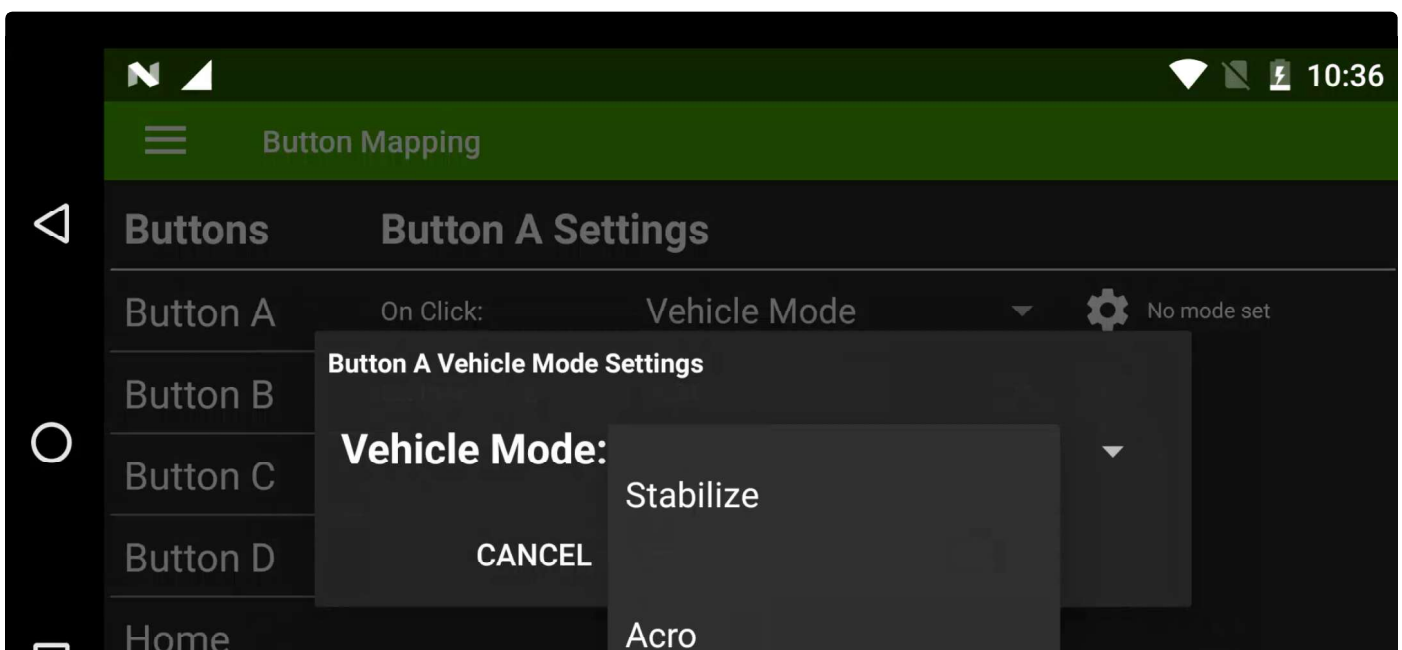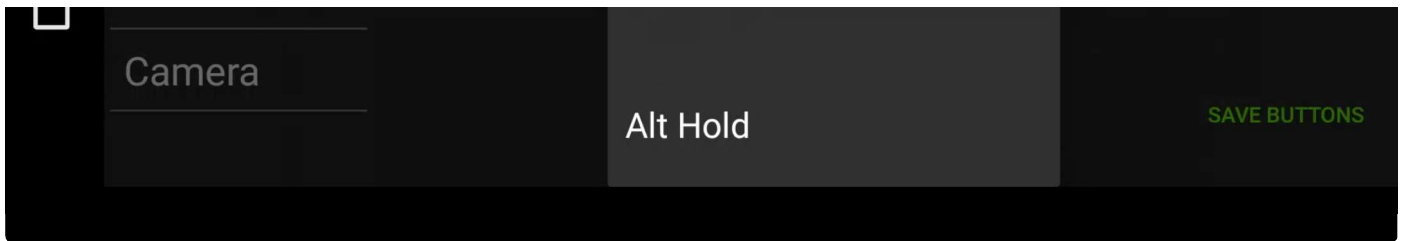

Click on drop down to select the function you want

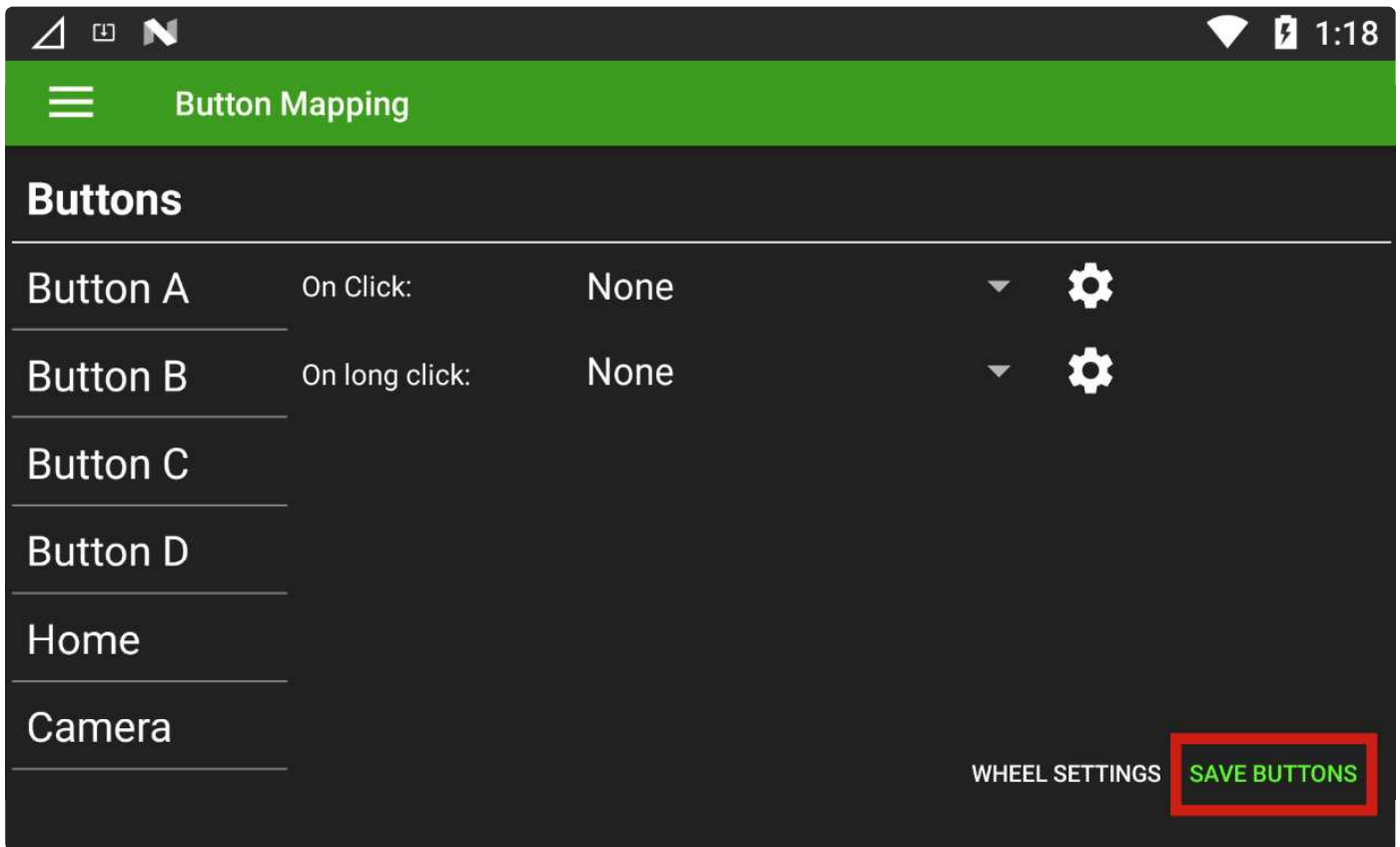Click on small cog to select option with-in selected function

Select function option

Repeat for each button assignment and click `SAVE BUTTONS` in bottom corner to finish
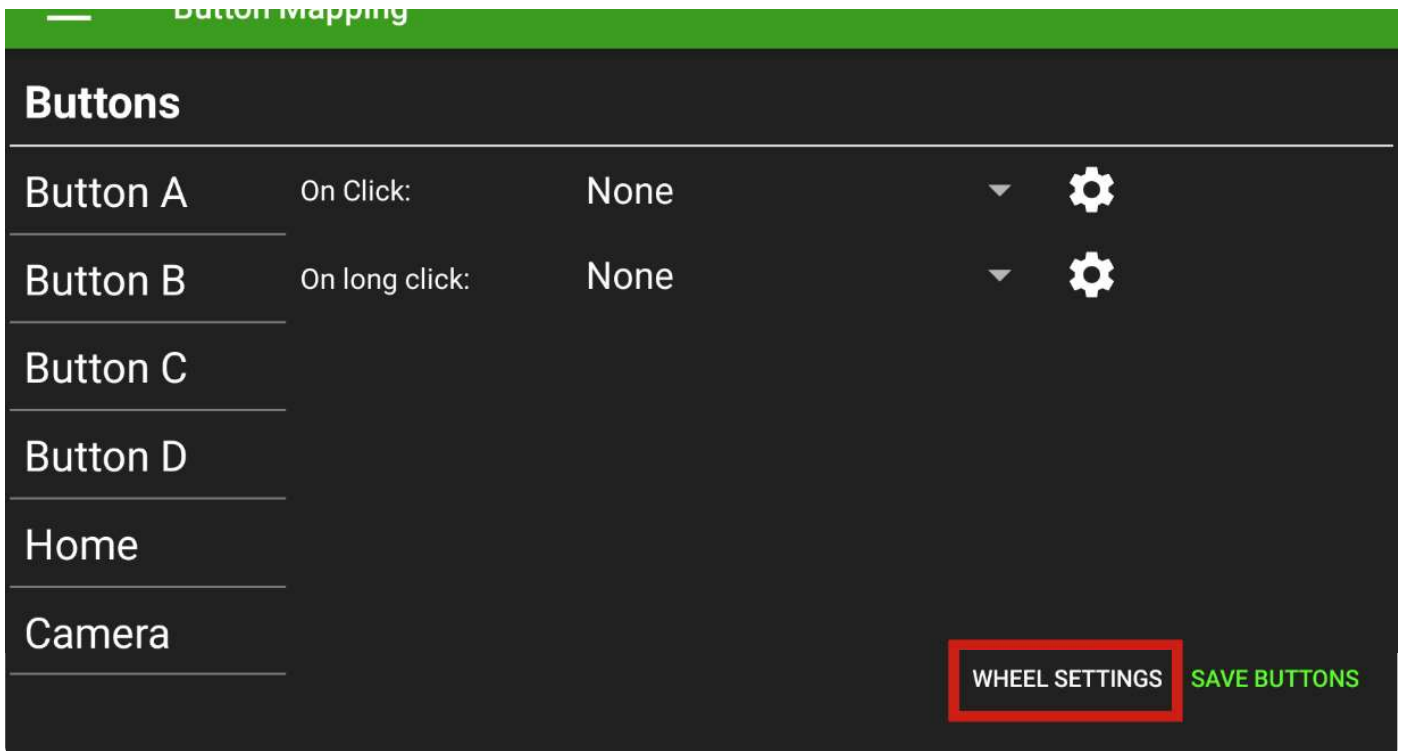

Hardware Wheel

The hardware wheel is mapped to SBUS channel 5 by default but can also be configured in UR/Solex TX to Servo output channels 1-16 on the Autopilot, you also have the ability to switch the servo output via a button in UR/Solex TX.
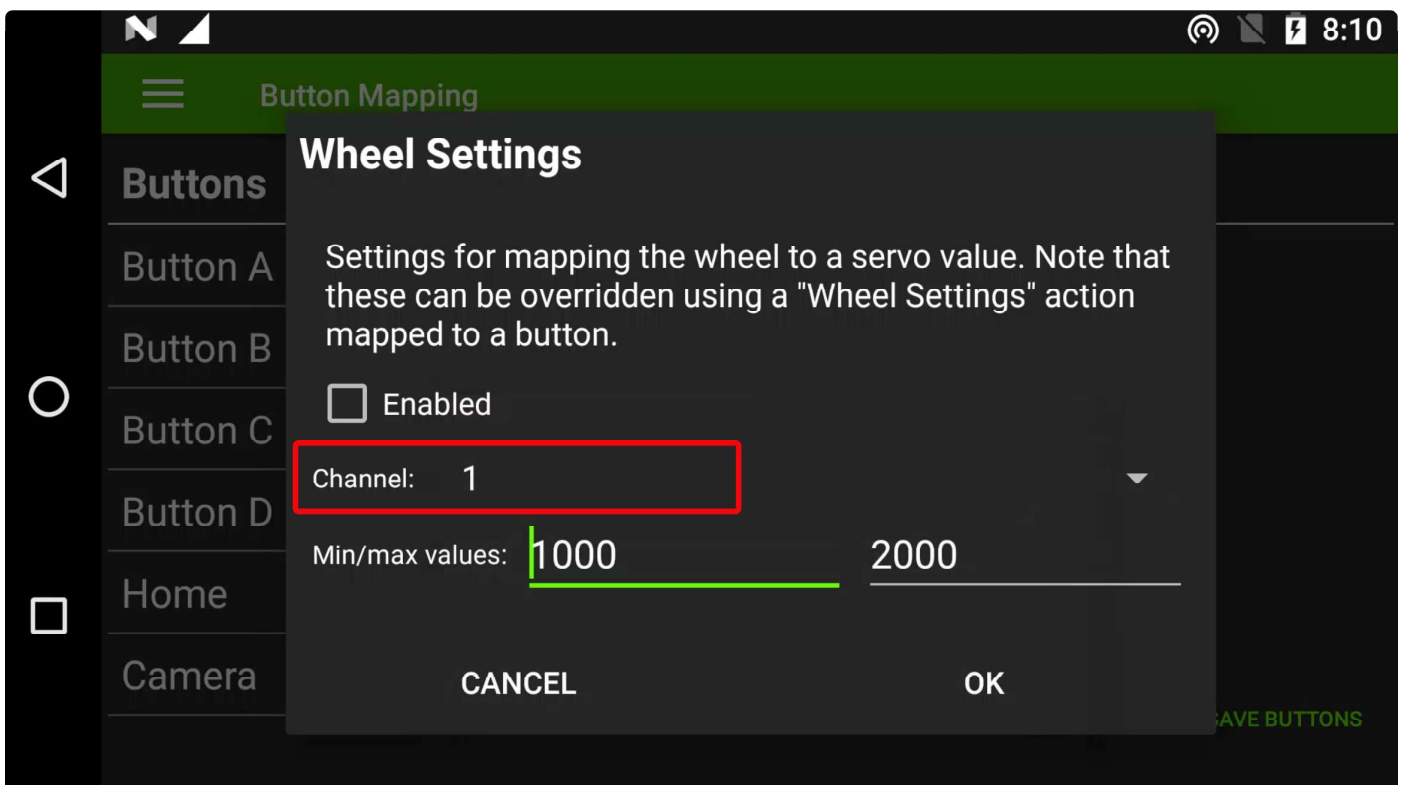
To Configure Wheel in Solex TX

- Open UR/Solex TX App
- Click the hamburger menu icon in top left corner
- Select `Button Mapping` as above
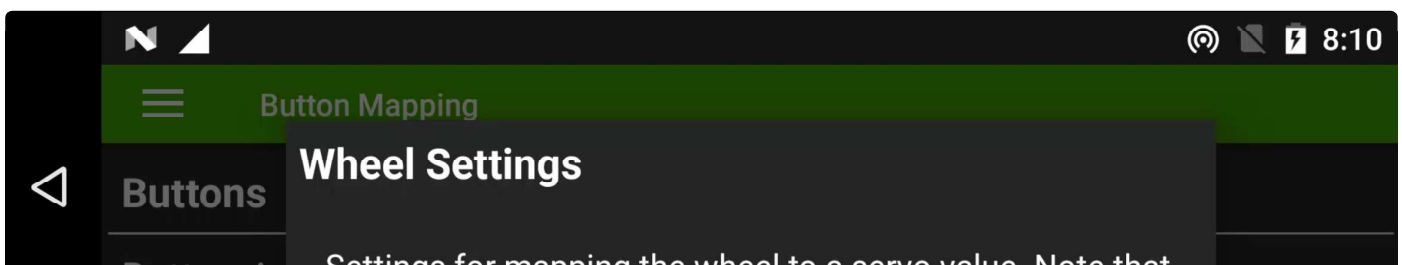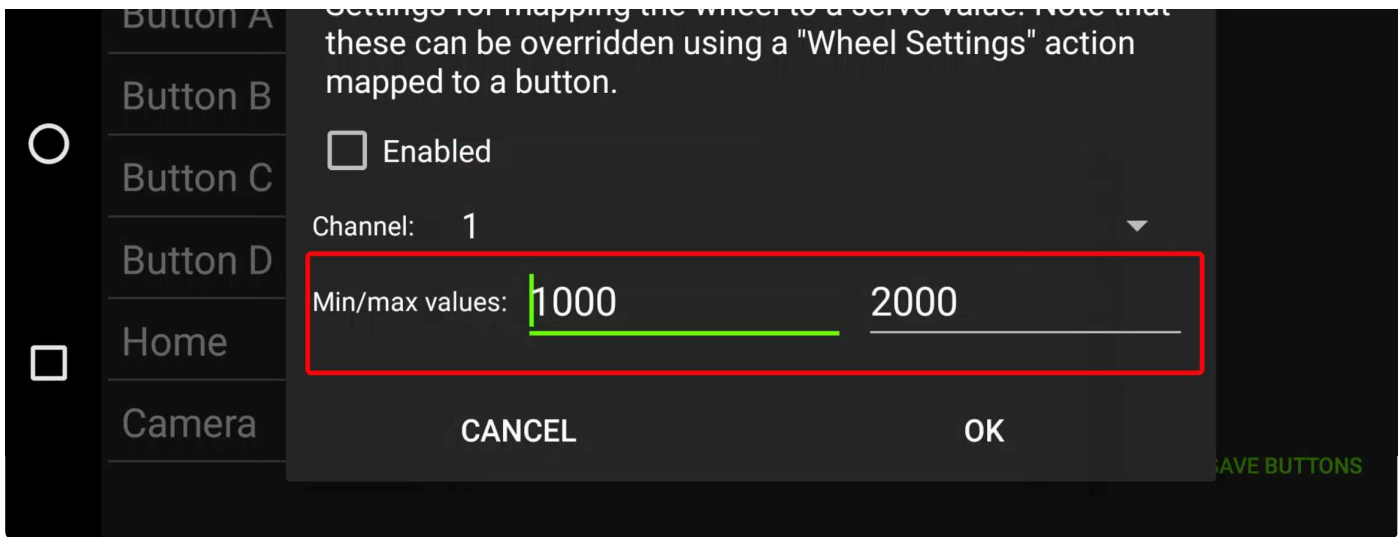- Click `WHEEL SETTINGS` in the bottom right corner

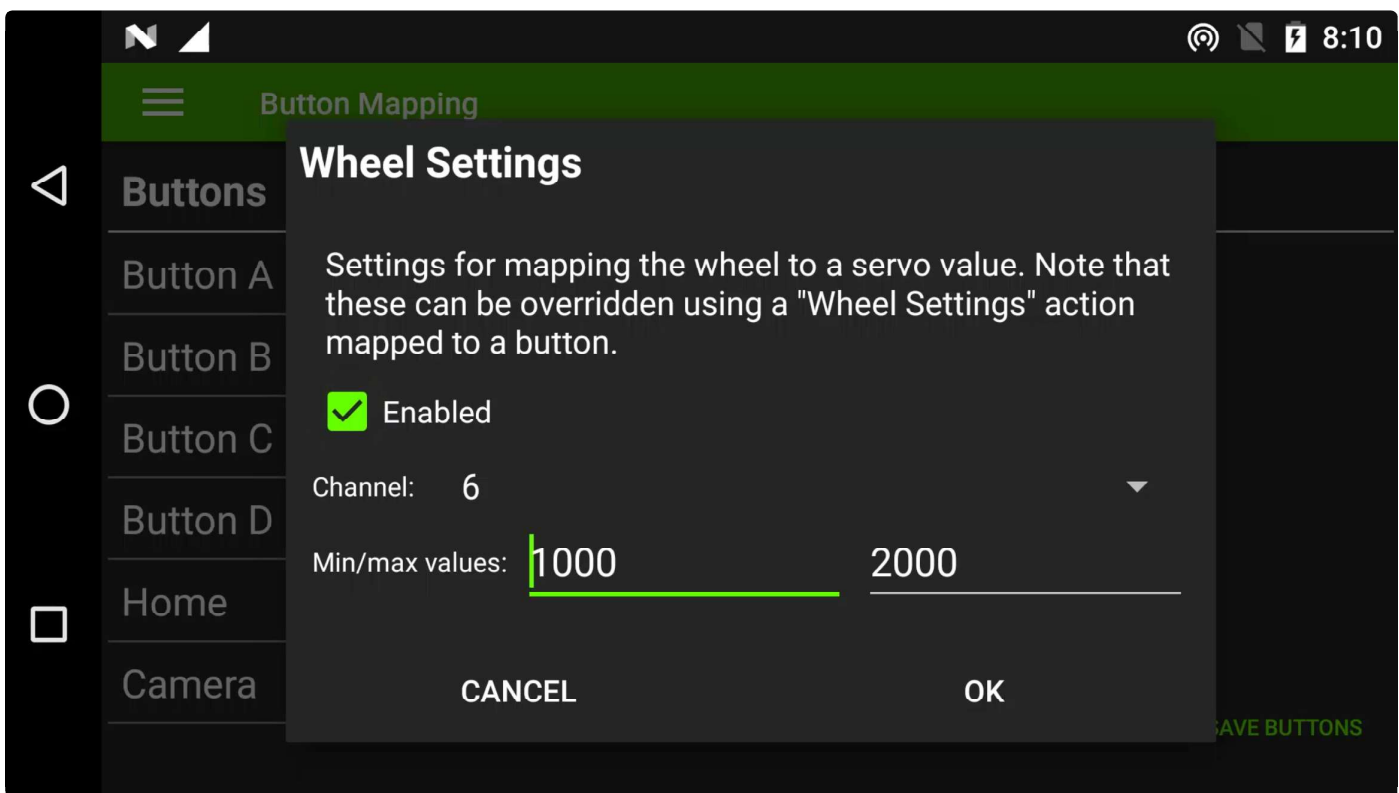Select the desired servo channel from 1- to 16

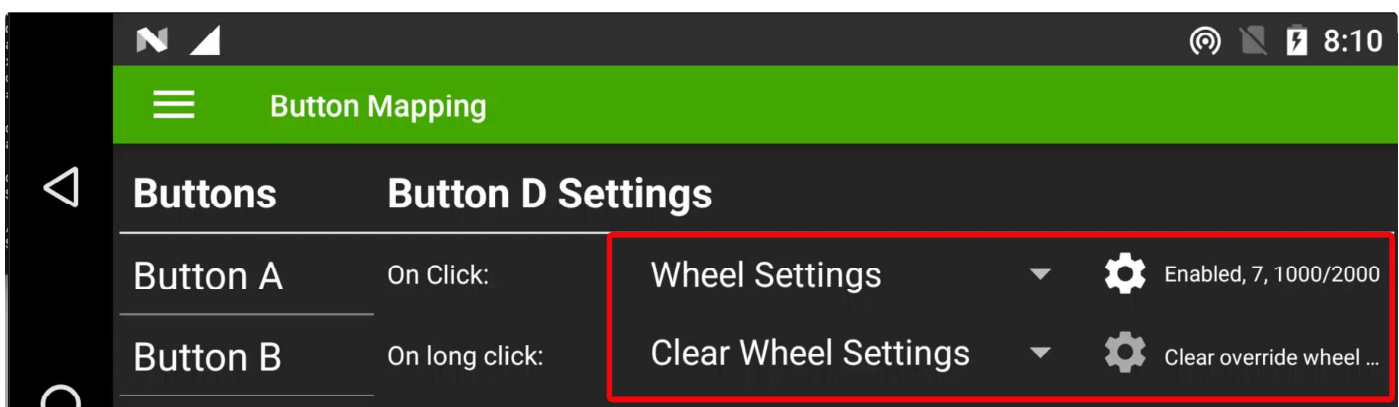Select the PWM output range for your application
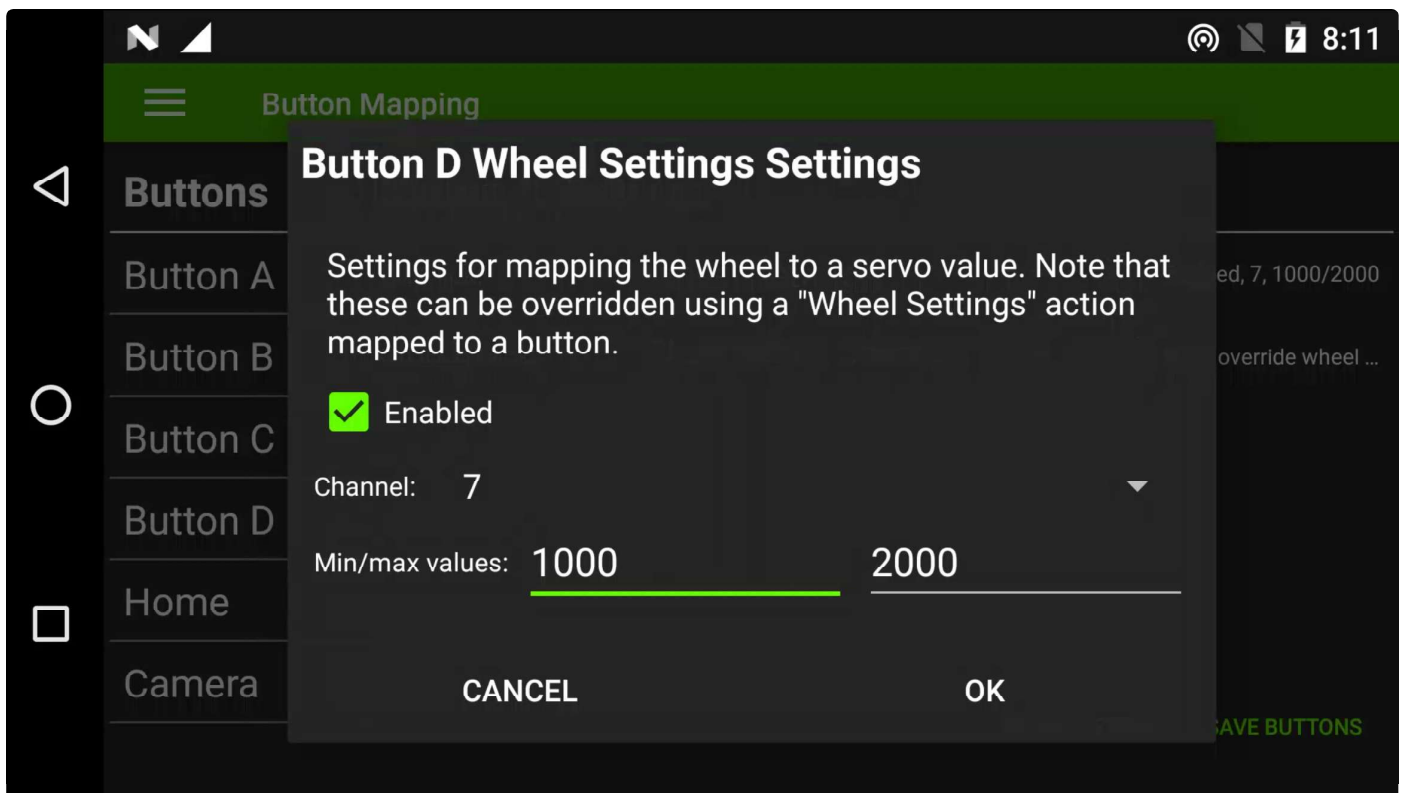
Click the `Enabled` box to activate the output

Finish by clicking OK and click `SAVE BUTTONS` in bottom corner

To configure a button to change the wheel servo output configure the button to `WHEEL SETTINGS`

Click the cog and set new channel and PWM values and click `OK` and then `SAVE BUTTONS` in bottom right corner.

Once changed the wheel will output on the new selected channel, to return to its original servo output you will need to program one button function to `Clear Wheel Settings` as shown above.

Configure Sbus Buttons & Wheel

DataLink is fitted with six programmable buttons and one hardware wheel. These can be configured to control sbus channel outputs from the Rover Unit's dual sbus connector and to send Mavlink commands to the autopilot via UR/Solex TX.

Autopilot Mode Selection - Important

Autopilot mode selection must not be programmed to sbus channels. Mode selection should be configured to Mavlink commands within UR/Solet TX to ensure predictable behavior in the event of signal loss or