



## How to squeeze 4 channels out of the old USB-3NT

I'm assuming that you already play VRC PRO using the USB-3NT dongle, so PLEASE MARK CH1 CONNECTED TO YOUR RECEIVER. Don't unplug until you did.

### **STEP 1: What do you need?**

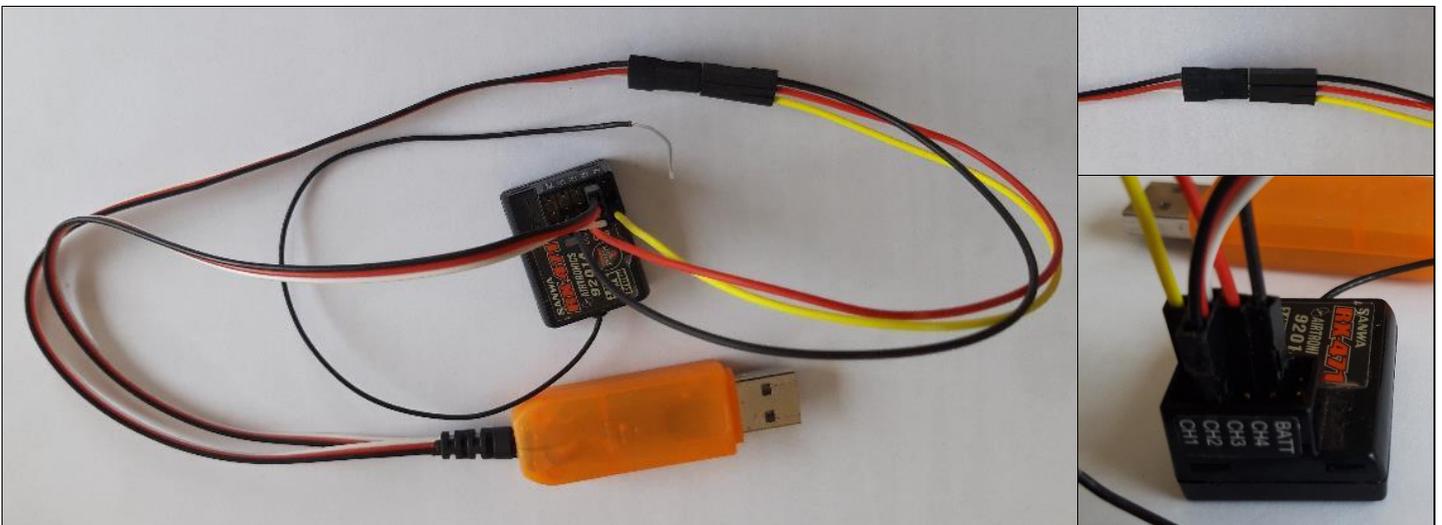
- USB-3NT dongle (ch1 marked, so 2<sup>nd</sup> chance to do this)
- 4 channel surface radio and 4 channel receiver (using Sanwa MT4 and RX471)
- 3 male - female jumperwires (preferably a black, red and white) if you don't want to hack your ch1 dongle servo cable  
OR 2 jr servo connectors if you are going to hack
- JoyToKey software ([https://joytokey.net/download/JoyToKeySetup\\_en.exe](https://joytokey.net/download/JoyToKeySetup_en.exe))

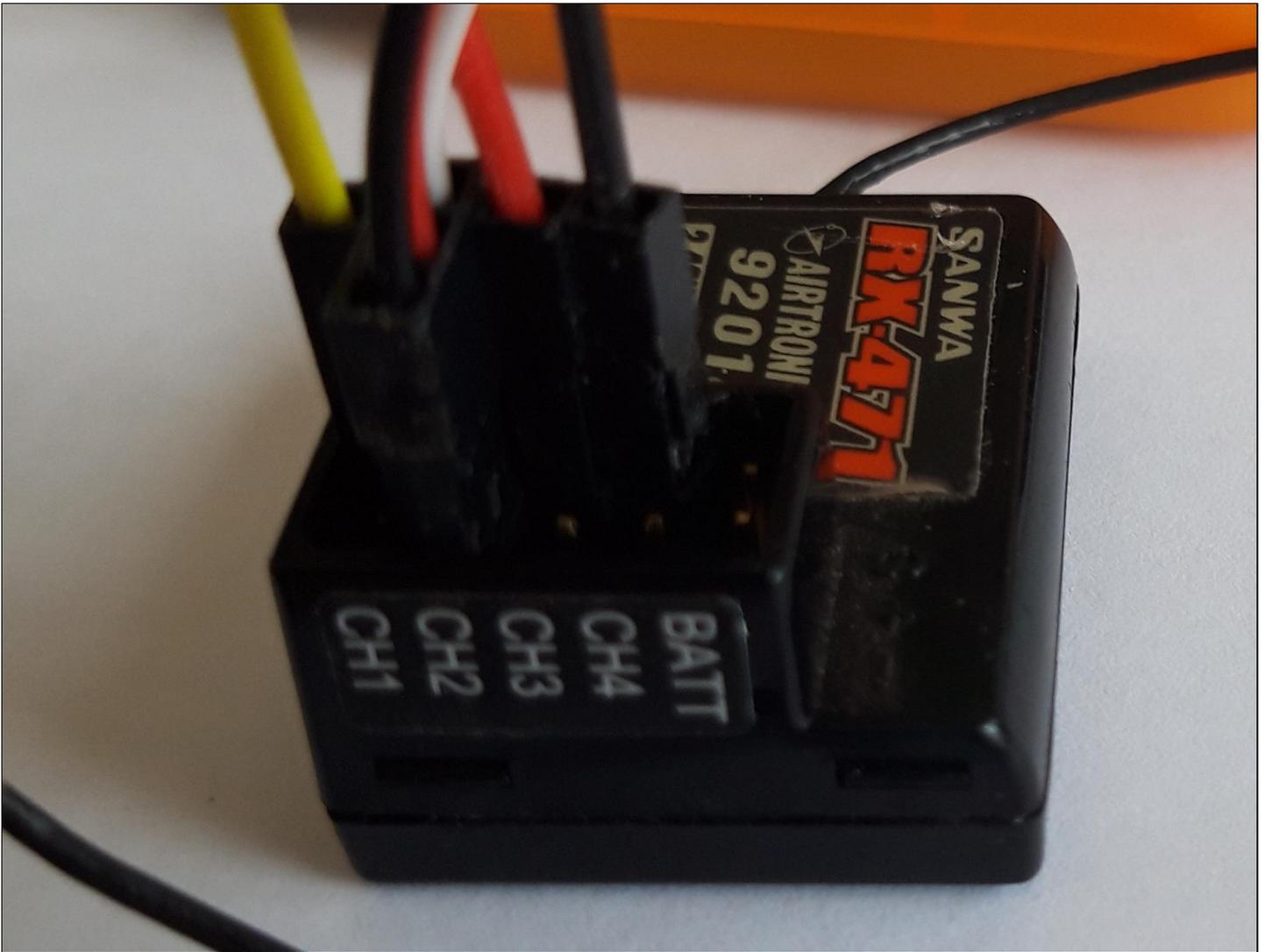


### **STEP 2: Make the necessary connections**

Unplug ch1 from your receiver. Leave the ch2 in the receiver unless you are going to use a different receiver. In that case, unplug ch2 and already plug that in ch2 on your new receiver.

- Attach the black jumpercable to the black side of your ch1 servo connector and plug it in the signal of ch4 on your receiver
- Attach the red jumpercable to the red side of your ch1 servo connector and plug it in the signal of ch3 on your receiver
- Attach the white jumpercable to the white side of your ch1 servo connector and plug it in the signal of ch1 on your receiver
- It should look like this (colors may vary, I used a yellow jumpercable for ch1 signal)





**STEP 3: Do you need to bind? No, then skip and go to STEP 4**

If needed bind your receiver to your radio by plugging the USB-3NT into your PC or laptop and following the bind procedure for your system. If you had to disconnect any of the wires, reconnect them afterwards.

## **STEP 4: Setting up your radio**

I can hardly go into these details specifically for every radio you might be using but the basics should apply. So this step might be a little challenging.

So for my Sanwa MT4:

- Go to SYSTEM, KEY ASSIGN, SWITCH and set SW1 to AUX1 (PUSH); same for AUX2
- Then go to SYSTEM, AUX TYPE and set AUX1 to POINT AUX (2point); same for AUX2
- Now go to AUX1, highlight P1, press the menuwheel so [ 0 ] is blinking, hold your SW1 pressed while turning the menuwheel until it reads [L100] NOT [H100]; release SW1, [ 0 ] blinks; press the menuwheel
- Then do exactly the same for AUX2

## **STEP 5: Calibration** with your dongle plugged in;

- Go to Control Panel, Hardware and sounds, Devices and printers.
- Rightclick on Virtual RC USB -> choose Gamecontrolsettings
- Then Properties, Settings tab, Calibrate



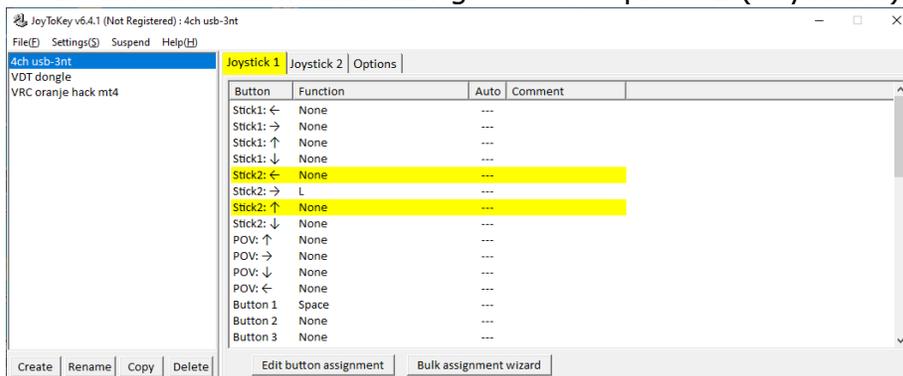
Virtual RC USB

Follow the wizard:

- Click NEXT -> PRESS SW2
- Turn steering wheel all the way left and all the way right -> full throttle and full brake (the crosshair should be somewhere centered by now)
- Click NEXT -> click NEXT -> PRESS SW1
- Test: steering left-right moves the crosshair left-right; throttle-brake moves it up-down; pressing SW1 should move Z axis, pressing SW2 should highlight button 1
- Click OK when satisfied, otherwise recalibrate

## **STEP 6: Customize** Download JoyToKey and install.

- Open JoyToKey
- Click create -> 4ch usb-3nt -> OK
- Push SW2 on your radio, button1 will light up -> Doubleclick on the button1 text
- Press spacebar (keyboard), click OK
- Push SW1 on your radio, stick2 left and up will go out and right and down will light up -> Doubleclick on the stick2 right text -> press L (keyboard), click OK



- File -> save
- DO NOT CLOSE JOYTOKEY! You will need it open EVERYTIME you want to use the button functionality playing vrc. So, go test it out in vrc!

**ADDED: Florian Priehler was so kind to send me his M12S settings we figured out together.**

In System:

Set aux 1/2 on sw1,2,or 3.(Push)

go to assign/dial and remove it from aux to---  
same with the lever.

Set AUX Type to Nor

In Setup:

REV aux 1 and 2

EPA settings H100 L0 both

Thanks Florian!