



Nintendo WaveBird Wireless Controller Receiver Teardown

Written By: bushing

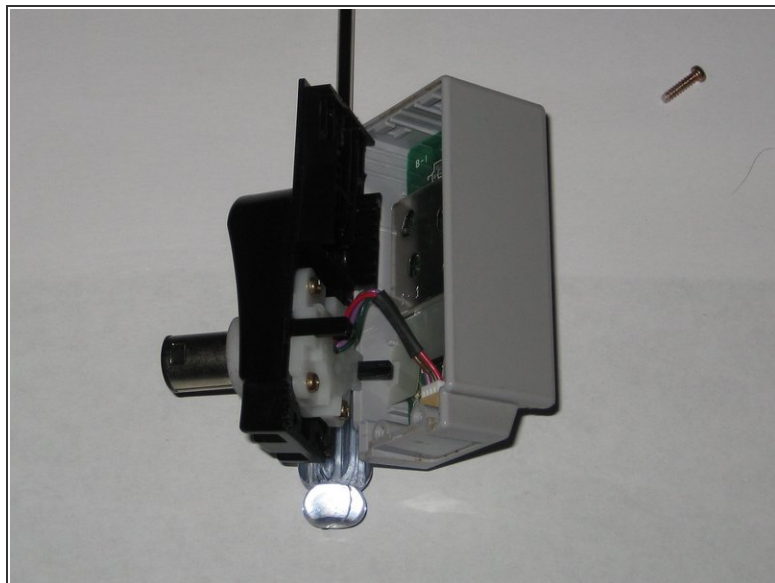




TOOLS:

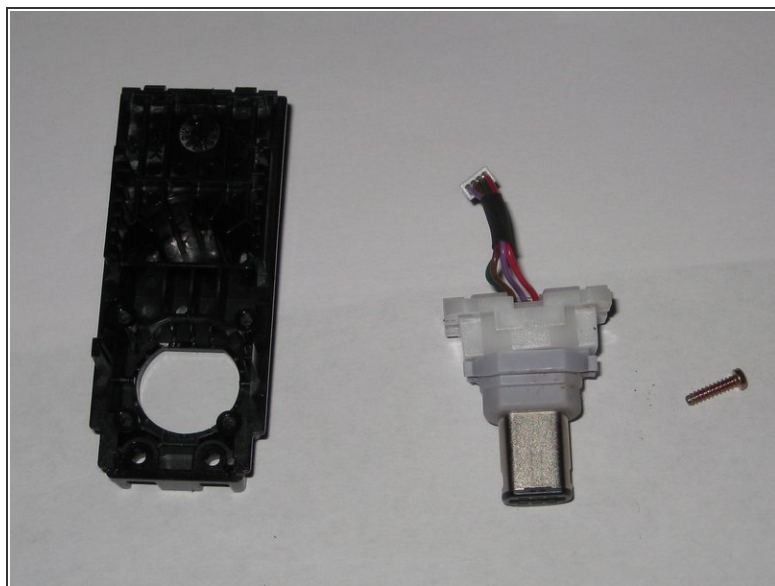
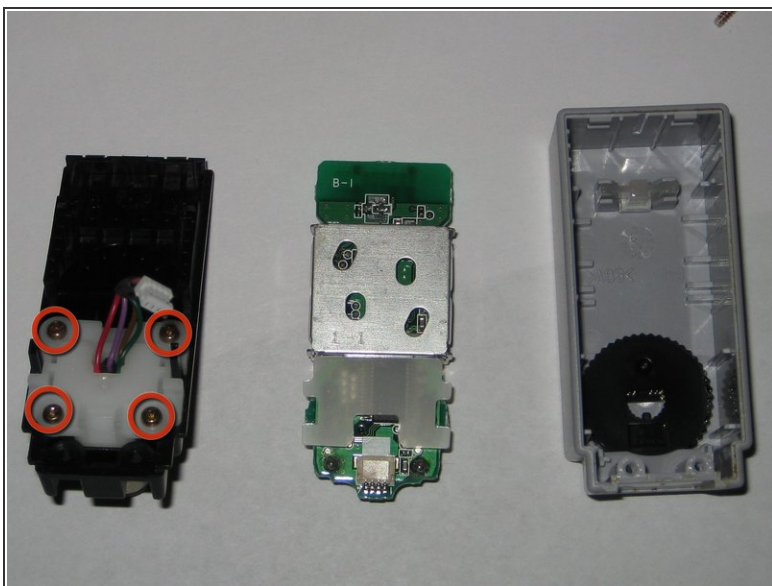
- [Spudger](#) (1)
 - [Tri-wing Screwdriver](#) (1)
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Step 1 — Nintendo WaveBird Wireless Controller Receiver Teardown



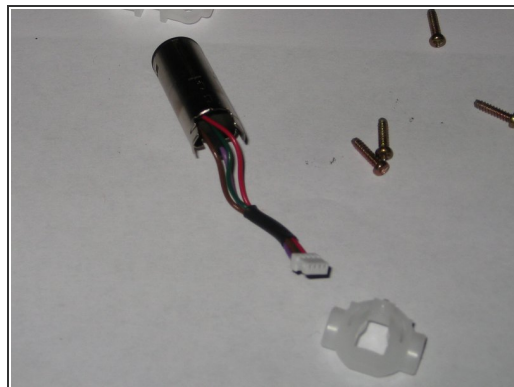
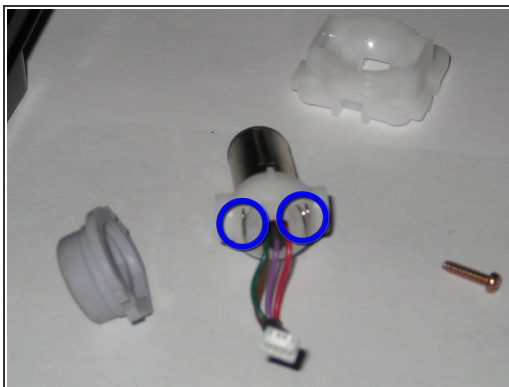
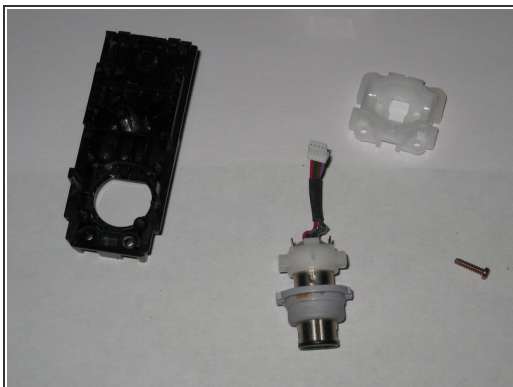
- This is the connector side of the WaveBird receiver.
- Remove two tri-wing screws, and separate the black and gray halves of the receiver.

Step 2



- Remove four tri-wing screws to remove the connector from the housing.

Step 3



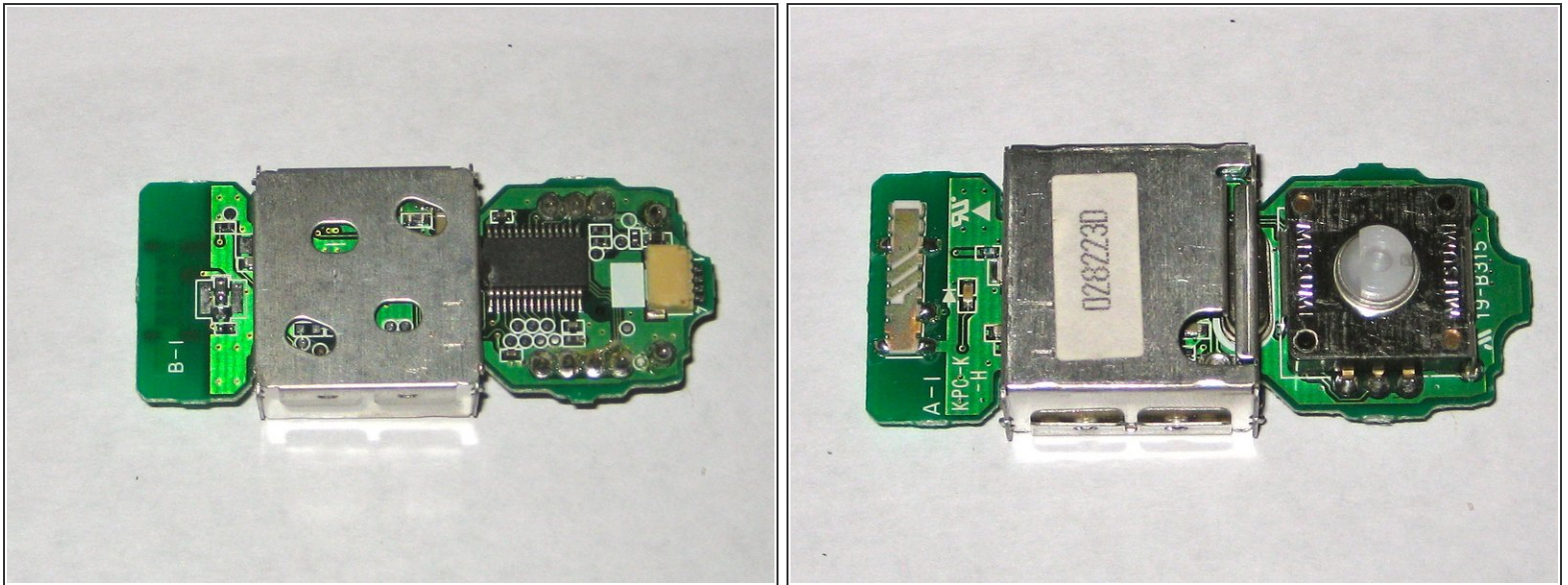
- Insert wisdom here.

Step 4 — Controller pinout



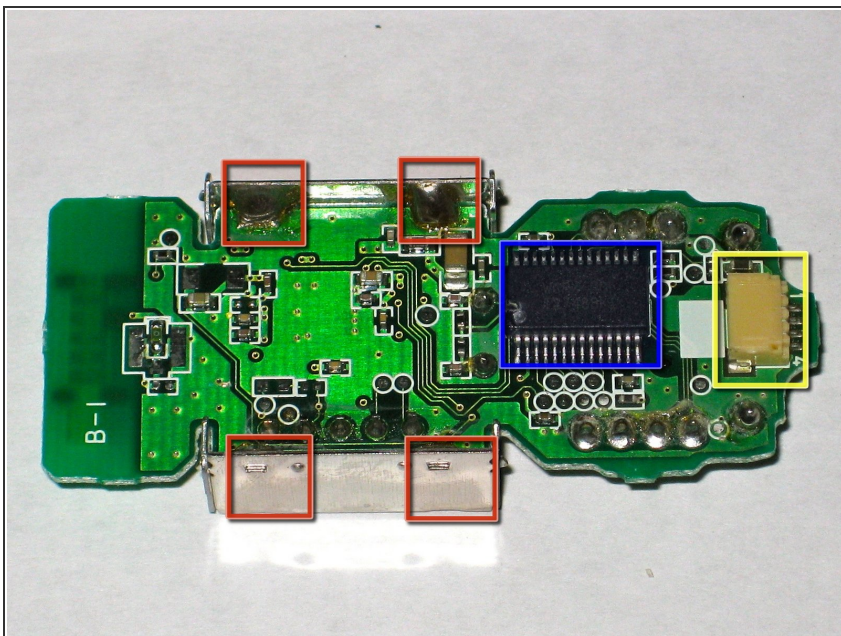
- Red: 3.43V logic supply (pin 1 on cable)
- Brown: Ground (pin 3 on cable)
- Green: Data (pin 2 on cable, recessed by 2mm into connector)
- Violet: Shield (pin 4 on cable)

Step 5



- The PCB has a metal RF shield that protects the radio from interference from the game console; this extends the useful range of the controller.
- One half of the shield is held on with friction clips; the other half must be desoldered.

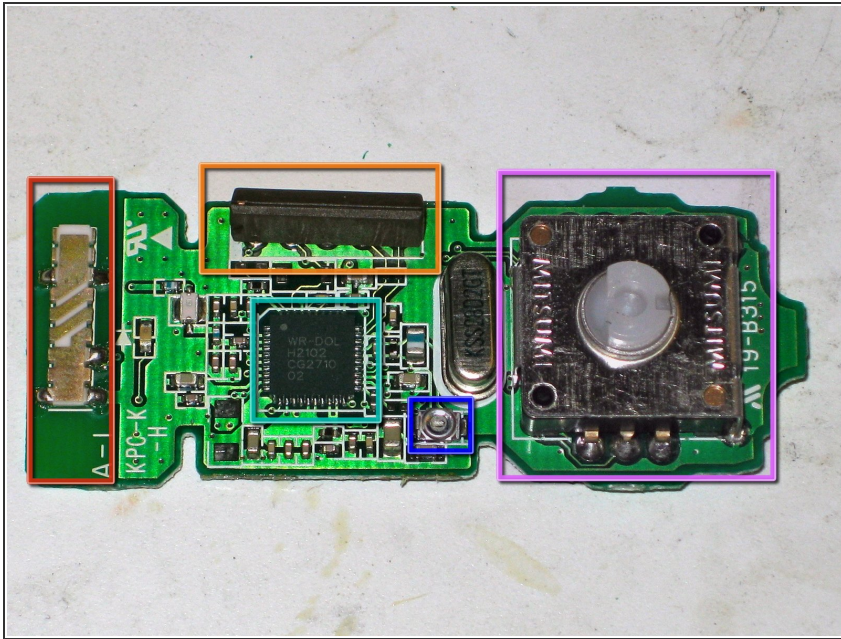
Step 6



- The IC is a custom (or relabeled) Nintendo chip marked "WCRX-DOL / T2.7488K1". ("Wireless Controller Receiver - Dolphin"). It is presumably a microcontroller that decodes signals from the radio and sends them to the console.
- This 4-pin connector goes to the joypad connector on the GameCube.

- Desolder these four points to remove the shield and expose the radio on the other side.

Step 7



- The bottom side has all the RF circuitry -- the chip is a Nintendo chip marked "WR-DOL / H2102 / CG2710 / 02", presumably the radio.
- [EPCOS X6882](#) custom bandpass filter
- Trim-pot for adjustment at the factory -- could be a frequency tweak or gain adjustment.
- The rotary switch allows the user to choose a frequency to avoid interference with other devices.
- The antenna is mounted directly on the PCB, inside the device.

To reassemble your device, follow these instructions in reverse order.