
# Racing Electronics

# SWITCH

## DESCRIPTION

Always hear the Race Officials over your Team Radio conversations. This is what the SWITCH does.

The Racing Electronics **SWITCH** And **SWITCH RACER** combine a **2 Channels Radio Receiver** with an **Audio Input Port** and an **Audio Output Port**. The Audio Input Port is connected to the output of your 2 way radio. It is internally looped to the Output Port where your headsets are connected so that you normally hear the conversation with your Team. Messages from Officials are detected by the built in Receiver and immediately routed to your headsets. When this happens, your 2 way Radio Audio is attenuated. The frequencies of the 2 channels are Preset but programmable.

The Switch is however fully versatile to be used different ways as follow:

1. The Audio from the Audio Input Port is not mandatory. If used, it will always be attenuated when activity is detected on a Preset Channel. You can connect any audio source to that port.

2. The Preset Channels can be used as follow:
    a. **Hold** on Preset Channel 1 (Always the default at power ON. Fully programmable)
    b. **Hold** on Preset Channel 2 (Fully programmable)
    c. **SCAN** Preset **Channel 1 or 2**. (activity must finish on an active channel before switching to other channel. Not available in SWITCH RACER)
    d. **SCAN** with **Priority** on Preset **Channel 1**. (Channel 1 interrupts channel 2. Not available on SWITCH RACER)
    e. **SCAN** with **Priority** on Preset **Channel 2**. (Channel 2 interrupts channel 1. Not Available on SWITCH RACER)

The SWITCH is shipped with Preset Channel 1 programmed at 454.0000 MHz, the frequency for the NASCAR Officials. You can however reprogram the frequency to any of the available 12.5 Khz bandwidth channels in the 450-470 MHz range. It is fully compliant with today's Motor Racing sanctioning body.

The SWITCH takes advantage of the Analog and Digital Squelch technology (DTCSS/CDCSS, PL/DPL from Motorola ™). Using that sub Channel technology insures that if a frequency is used by more than one team, you can select to listen only to the one you want from its sub Channel number.

The SWITCH generates distortion free audio, loud enough for the race environment. The Audio Input Port accepts 1/8 jack, mono or stereo. Headsets with 1/8'' mono or stereo jack can be connected to the Audio Output Port.

The Switch Operates from 2 AAA batteries. Normal Alcaline batteries provide 7 hours of continuous operation. A Battery Low indicator turns ON when you still have only 30 minutes of full

operation. After that, the Radio receiver is turned OFF. In that mode, you still have 5 hours of operation but from the Audio Input Port only.

The SWITCH comes with 2x AAA batteries, a lanyard & instruction manual.

## SPECIFICATIONS

### Features

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|---|---|
| Audio In: | Yes, cabled<br>Always muted when one RF Channel is active. |
| RF Channels: | 2, from built in Radio receiver<br>Preset but programmable by user |
| Automatic scan: | Between preset channels 1 and 2 only. (Not available on SWITCH RACER) |
| Functionality: | Hold on Channel Ch1 or Ch2,<br>Scan, Scan Priority Ch1, SCAN Priority Ch2 (Not available on SWITCH RACER) |
| Operation: | Normal (Audio In, Ch1 or Ch2)<br>Battery Low (Audio In, CH1 or Ch2)<br>Bypass mode (Audio In only, RF receiver is OFF when battery too low) |
| Battery Low Indicator: | Yes |
| Built In memory: | Yes, (last preset saved, even when changing batteries) |
| Compliance: | Compliant with official Motor Racing sanctioning body. |

### RF Radio Receiver

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|---|---|
| Frequency Range: | 450 MHz to 470 MHz |
| Channels Bandwidth: | 12.5 KHz, for a total of 1600 channels |
| Sub Channel Technology: | Analog CTCSS or PL (Motorola ™)<br>Digital CDCSS or DPL (Motorola ™) |

### Mechanical:

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| Dimensions: | 3.00"W x 1.75"H x .80"D |
| Weight: | 0,2 g (without batteries) |

### Electrical:

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|---|---|
| Audio Input: | 1/8” (3.5mm) Stereo socket, accepts mono and Stereo jack |
| Audio Output: | 1/8” (3.5mm) for Stereo earbuds/Headsets, 8 to 32 Ohms |
| Audio Output Level: | User adjustable for internal RF receiver.<br>Audio from Audio In adjusted from connected device only. |

### Power:

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| Batteries: | 2x AAA (included) |
| Battery life: | 7 Hours (continuous) + 5 Hours in bypass mode |

### Accessories:

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| Included: | Lanyard with safety clip and quick detach<br>User manual |
| Optionnal accessories: | Belt-clip<br>Earbuds |


# Racing Electronics ''Switch'' Operation

| OPERATION MODE (Default mode when you power ON) | |
|---|---|
| **Audio In** | **Audio In. U**sed to connect a Radio device, Cell phone or Music player. The volume level for that input is controlled by the connected device only. This audio input is always attenuated whenever a signal is present on Preset Channel 1 or 2. Accepts mono or stereo 1/8'' jack. |
| **Audio Out** | **Audio Out. U**sed to connect headphones or earbuds. Accepts 1/8'' mono or stereo jack. |
| ⏻ | **Power ON-OFF**. Hold ⏻ for 2 Seconds to power ON-OFF. |
| 1 | **Preset Channel 1**. Press 1 to select Preset Channel 1. This Channel is always the default at power ON. Its as shipped value is NASCAR Officials frequency of 454.0000 Mhz. |
| 2 | **Preset Channel 2.** Press 2 to select Preset 2. |
| SCAN | **SCAN**, Press SCAN to SCAN between Preset 1 and 2. Once a conversation on one of the Preset is active, it must terminate before the scanning process resumes. (Not Available on SWITCH RACER) |
| SCAN 1 | **SCAN Priority 1**, Hold SCAN and press 1 to start SCAN with Priority on Preset 1. If Preset 1 becomes active, it will interrupt Preset 2. (Not Available on SWITCH RACER) |
| SCAN 2 | **SCAN Priority 2**, Hold SCAN and press 2 to start SCAN with Priority on Preset 2. If Preset 2 becomes active, it will interrupt Preset 1. (Not Available on SWITCH RACER) |
| ▲ | **Volume UP.** Press ▲ to increase volume of Preset 1 or 2. |
| ▼ | **Volume Down.** Press ▼ to decrease volume of Preset 1 or 2. |
| O Long Press | **PROGRAMMING**. Hold O for 2 seconds to enter programming mode. Details are provided below, in the Programming Sections. |
| 1 Long Press | Hold for 2 seconds to display Preset 1 sub channel information. |
| 2 Long Press | Hold for 2 seconds to display Preset 2 sub channel information. |
| **PROGRAMMING (Basic)** | |
| O Long Press | **PROGRAMMING** Mode access. Hold O for 2 seconds to enter programming mode.<br>1. Press or hold ▲ or ▼ key to select the desired channel or frequency.<br>2. Press O **twice** to exit programming mode and monitor the new channel.<br>3. Press 1 or 2 to exit Programming mode without storing the new frequency and return to selected Preset.<br>4. Long Press 1 or 2 store the new frequency as Preset 1 or 2. |
| **PROGRAMMING (Advanced)** | |
| O Long Press | **PROGRAMMING** MODE access. Hold O for 2 seconds to enter programming mode.<br>1. Press or hold ▲ or ▼ to select the desired channel or frequency.<br>2. Press O to access sub Channel programming.<br>3. Press or hold ▲ or ▼ key to select the desired sub channel number.<br>4. Press O to exit programming mode and monitor the new channel.<br>5. Press 1 or 2 to exit Programming mode without storing the new frequency and return to selected Preset.<br>6. Long Press 1 or 2 to store the frequency and its sub channel as Preset 1 or 2 and exit programming mode. |

## Avoid Hearing Damage !

To prevent possible hearing damage, do not use the SWITCH at high volume for a long period of time and always lower the volume level of the device you connect to the SWITCH Audio Input port before connecting.

**ID : _To be provided** **Model: SWITCH and SWITCH RACER**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.
(2) this device must accept any interference received, including interference that may cause undesired operation.

**WARNING:**

Modification of this device to receive cellular radio telephone service signals is prohibited under FCC rules and Federal Laws.

The complete declaration is available online at: www.racingelectronics.com