Swift Recorder Users Guide

Robert Koch | Cornell Lab of Ornithology - BRP | November 14, 2016 | Revision 2.1

Table of Contents

Document revision history

Revision	Revision date	Revision details
2.1	11/14/2016	Added the "Specifications" section
		Updated the "Installing the SD Card" section to reference the document "SD Cards – Selection and Formatting" and Fat32Format program
2.0	09/14/2016	Added "Whats included in box" section
		Added "Whats not included in box" section
		Added "Installing coincell battery" section

What's included in box

Qty. 1 Swift Recorder assembly

Qty. 1 Aluminum tree bracket

Qty. 1 Weatherproof microphone

Qty. 1 BR1225 3V coin cell battery (for internal clock backup power)

Qty. Micro-USB Cable (for use in configuring recorder through Configuration Utility)

Qty. 1 #2 Philips Screwdriver (for attaching or removing weatherproof enclosure lid)

Qty. 1 7/64" Hex Wrench (for optionally removing aluminum tree bracket)

Qty. 4 rubber feet and screws (for optionally attaching in place of tree bracket)

What's not included but required

Qty. 3 Alkaline D-Cell batteries

Qty. 1 SD Card formatted with FAT32 filesystem

A desktop or laptop computer running Windows 7 or later

Specifications

SIZE

8 x 5 x 4 inches with tree bracket attached

4.7 x 5.1 x 2.4 without tree bracket

WEIGHT

2.4 lbs with batteries and tree bracket attached

1.65 lbs with batteries but no tree bracket

RUN-TIME

The recorders run-time is dependant on several factors. Please see document titled "SD Cards – Selection and Formatting" for more details.

SUPPORTED AUDIO SAMPLING RATES

8kHz, 16kHz, 32kHz, 48kHz, 96kHz

Installing coin cell battery

The 3V coin cell battery is used to keep the internal clock and calendar running when the D-Cell batteries are removed or the unit is powered off. It's important to install the coin cell in the proper orientation.

Begin by finding the side with a large '+' on it

Slide the coin cell into the battery holder with the '+' side facing out as shown in the photo below.

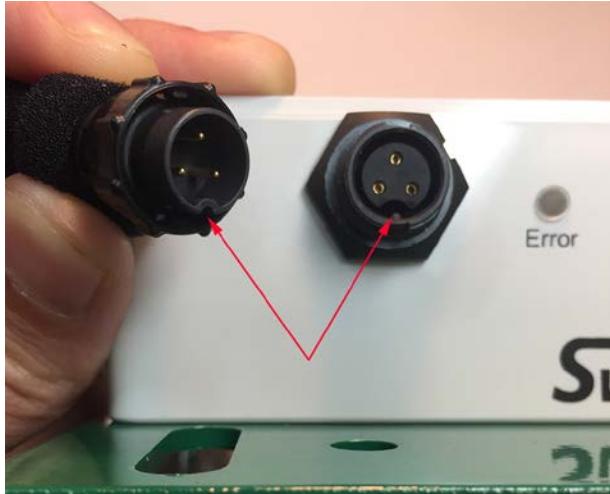Push the battery down until it's fully seated in the holder as shown here:

Installing D-Cell batteries

The Swift requires three D-Cell batteries. These can be either Alkaline or Lithium variety. The battery holder can be quite stiff at first, so getting the batteries in and out requires some force. We recommend installing the center battery first by aligning the positive battery terminal to the red-ringed connection on the battery holder. Then push the battery forward and down to seat it in place. Always make sure the positive battery terminal is contacting the red ringed battery holder terminal for all three batteries

Insert center battery first with positive battery terminal against red ringed contact on battery holder	Install two side batteries in the same way

Connecting the microphone

The microphone connects to the front of the enclosure through the threaded connector. The microphone must be oriented so that the U-shaped dip at the mating end of the connector aligns correctly.
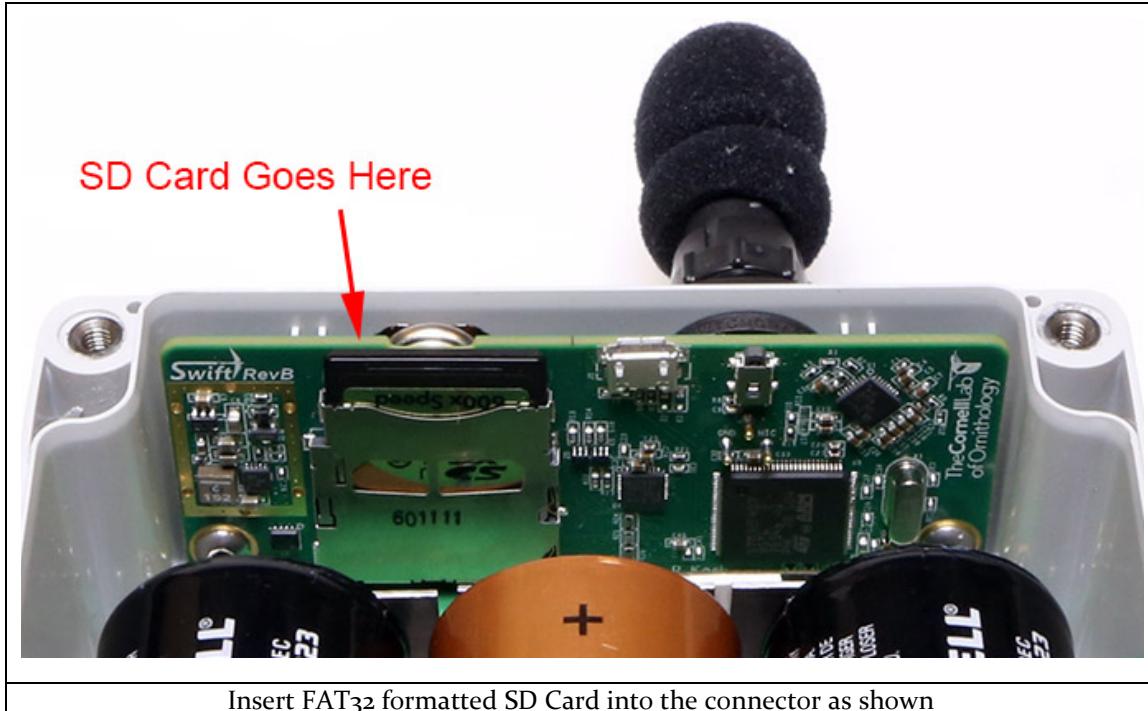

Once the microphone is aligned, push the two halves firmly together. Then rotate the threaded sleeve in the clockwise direction until it locks into place.
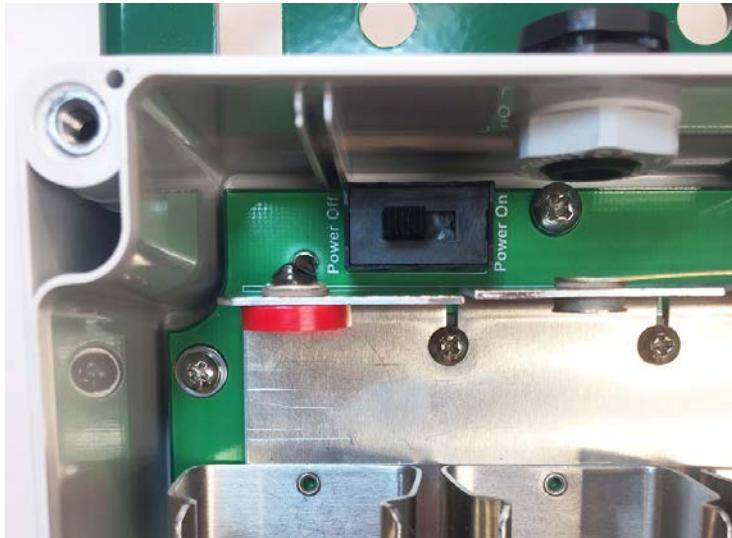
Installing the SD Card

Swift accepts SD Cards up to 256GB. We recommend Class 10 High Speed SD Cards or above. The card must be formatted in FAT32. Note that if the SD Card has a capacity of 64GB or greater, Windows does not directly support formatting it. There are various software tools available that will format SD Cards in FAT32. EaseUS Partition Master and Fat32 Format are two such programs. Please see document "SD Cards – Selection and Formatting" for more details.

Insert FAT32 formatted SD Card into the connector as shown

Turning the recorder on

The main power switch must be in the "Power On" position to connect battery power to the recorder. This switch is located near the back of the enclosure

When the switch is turned to the "Power On" position, the LED's on the front of the enclosure will flash to indicate it's current operating state.

LED indicators

The Swift has three external LED indicator lights which convey the operating state of the unit. There are three main operating states: Error, Record, Standby. A "USB Connected" mode also exists to indicate when the Swift is attached to a USB host computer.

Each LED has a unique color: red for error, green for record, and blue for standby. The LED's blink roughly once every 8 seconds, which conserves power and detracts attention from passersby. See table below for further details.

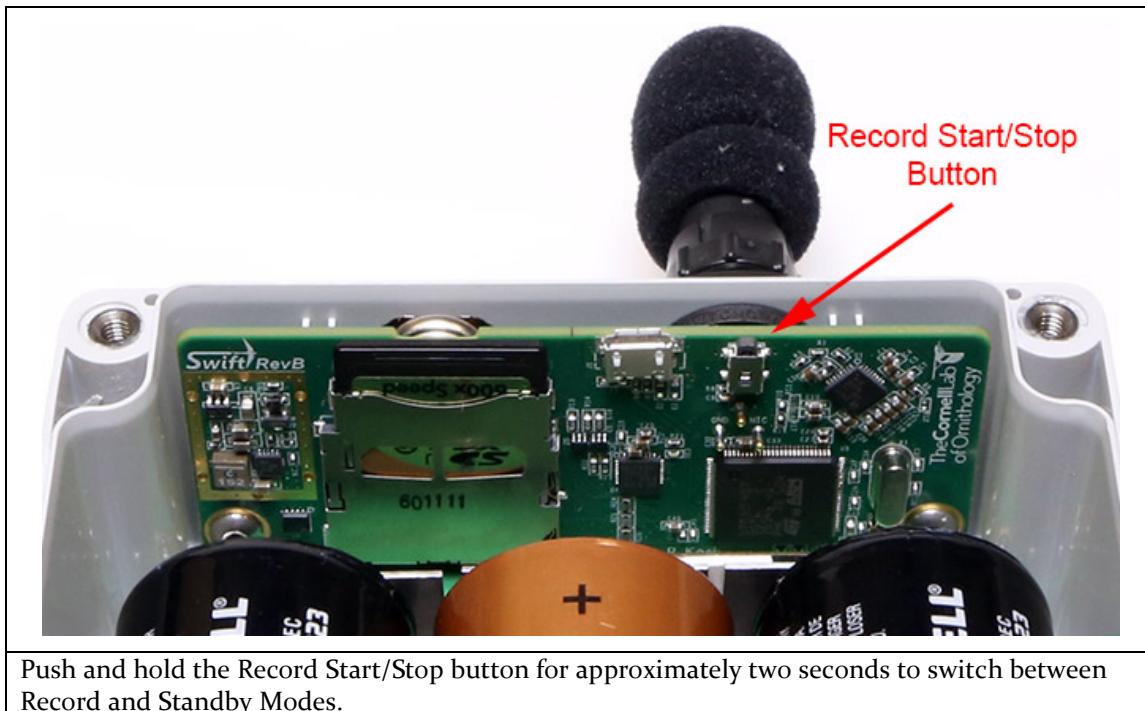| Error State	Record State	Standby State
This LED blinks red when Swift is in Error State. Reasons for an error to occur include: • SD Card not present • SD Card not formatted in FAT32 • SD Card full • Low battery voltage • USB Connection can be established when in Error state	This LED blinks green when Swift is recording audio and saving it to the SD Card. • Do not remove power or SD Card when Record State is active, as data corruption could occur. • To exit Record Mode, push and hold Record Start/Stop button for 2 to 3 seconds. • USB Connection **cannot** be established when Swift is in Record Mode	This LED blinks blue when Swift is in Standby State, and remains on continuously when USB is connected. • SD Card and batteries can be safely removed when in Standby State. • Pushing and holding Record Start/Stop button will force Swift into Record State • USB Connection can be established when in Standby State

USB Connection

The USB connection is required to configure the Swift via the Swift Configuration Utility.

To configure Swift, plug a micro USB cable into the usb connector as shown	The blue LED will remain continuously lit when the USB is properly connected. Note that the Swift must be in Standby Mode (blue LED blinking), or Error Mode (Red LED blinking) for USB to work. The USB connection will not work if Swift is in Record Mode (Green LED Blinking)

Record Start/Stop Button

The Record Start/Stop Button can be used to switch between Record Mode and Standby Mode. If the Swift is in Standby Mode, push and hold this button for approximately two seconds to switch to Record Mode and start a new recording. If the Swift is in Record Mode, push and hold this button to end the recording and return to Standby Mode.

Note that this button overrides the "Recording Start/Stop Date and Time" settings available in the Swift Configuration Utility

Push and hold the Record Start/Stop button for approximately two seconds to switch between Record and Standby Modes.

Attaching the Enclosure Lid

The lid attaches with four Philips head screws and seals the inside against moisture intrusion. The four lid screws should be firmly hand tightened with a similar amount of torque applied to each screw. It's important that the lid is properly aligned before the screws are tightened. The rubber gasket in the lid must follow the contour of the plastic ridge along the lip of the lower half of the enclosure. See pictures below

When the lid is oriented correctly, the rubber seal aligns with the ridge on the lower half of the enclosure	This image shows an improperly aligned lid. The rubber seal does not match up with the lower half of the enclosure. Rotate the lid 90 degrees in either direction for proper alignment