

TEMABio Pantanal 2024



Introdução aos
gravadores
SwiftOnes



Phillips

Chave
phillips

Cartão SD



Cartão SD

Classe



The Cornell Lab of Ornithology
Bioacoustics Research Program



SD Card

Classe

Marca sugerida



The Cornell Lab of Ornithology
Bioacoustics Research Program



SD Card

Classe

Marca sugerida

Tamanho (max)



The Cornell Lab of Ornithology
Bioacoustics Research Program



SD Card

FAT32 e exFAT

Formato



The Cornell Lab of Ornithology
Bioacoustics Research Program



SD Card

Classe

Marca sugerida

Tamanho (máx)

Formato

FAT32 e exFAT



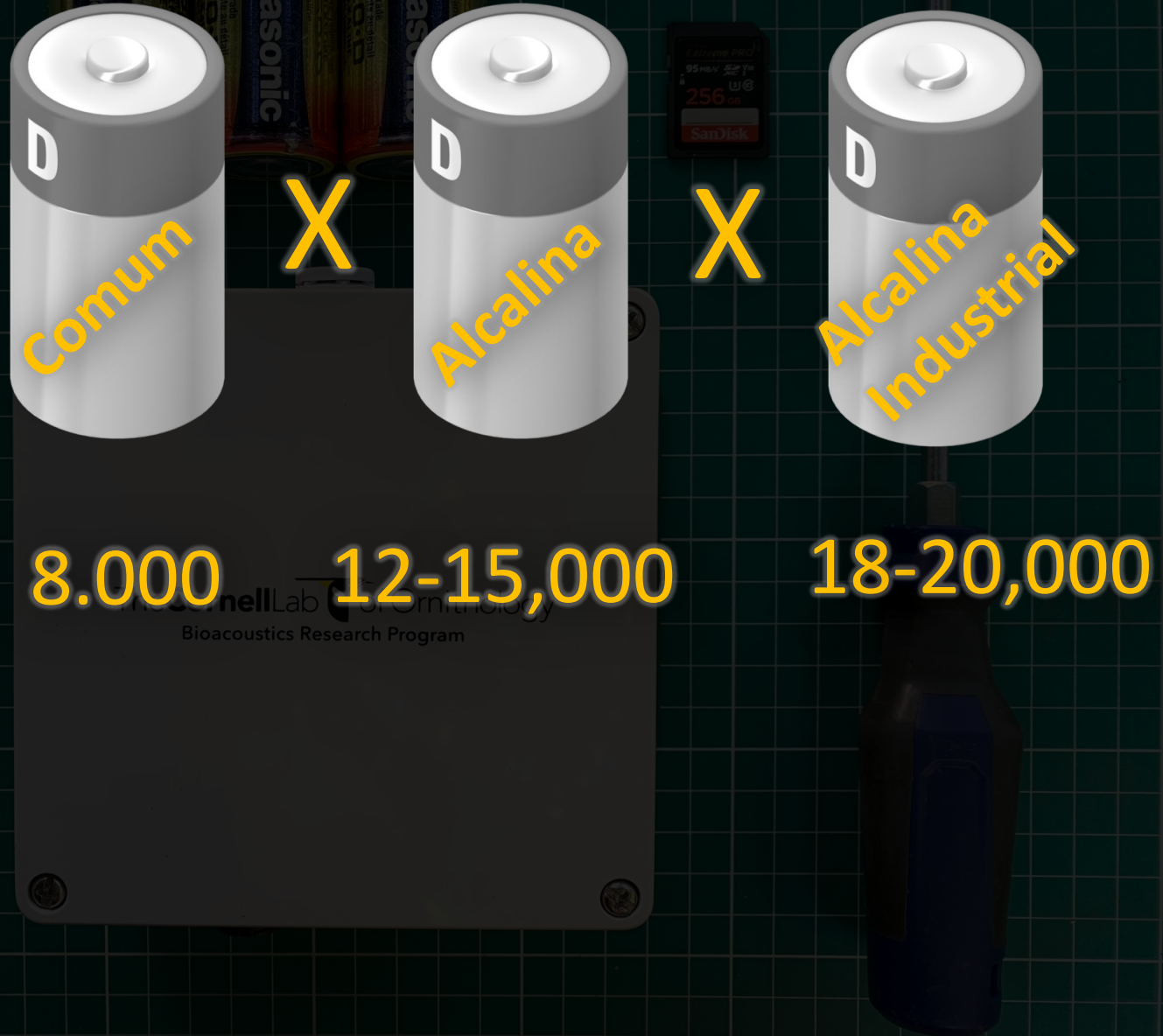
Lab of Ornithology
Research Program

Bateria alcalina D



Bateria alcalina D

Capacidade
(mAh)



Bateria alcalina D



Capacidade
(mAh)



Bateria alcalina D

Atenção

- *Max voltagem SwiftOne = 5V (3 Baterias)*
- **NÃO USAR BATERÍAS DE LÍTIO**

Alcalina D

Nom. voltage = 1.5 V

$3 \times 1.5 = 4.5V$

Lítio D

Nom. voltage = 3.6 V

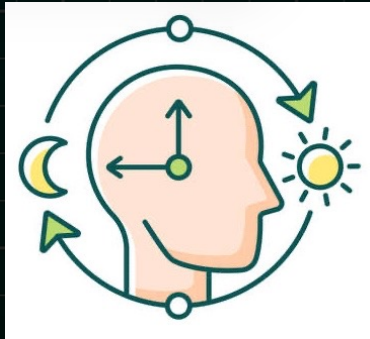
$3 \times 3.6V = 10.8 V$



Bateria de relógio (BR1225)



Bateria de relógio (BR1225)



Mudar > 1y

Compatível

Battery	Image
BR1225 Coin Cell 12.5 mm	
Lithium Coin (IEC- BR1225) 12.5 mm	
Coin Cell Battery 3V 12.5x2.5mm 48mAh	

CR 1225

Incompatível

Incompatible Coin Cell Batteries (Too Thin):

Battery	Image
	CR 1216
Battery Lithium 3V coin 12.5 mm	
Battery Lithium 3V coin 12.5 mm	
Energizer ECR1216 LITHIUM COIN CELL	

Cabo USB 2.0 micro USB

- Transmite energia
- Transmite dados

Cabo micro-
USB para USB

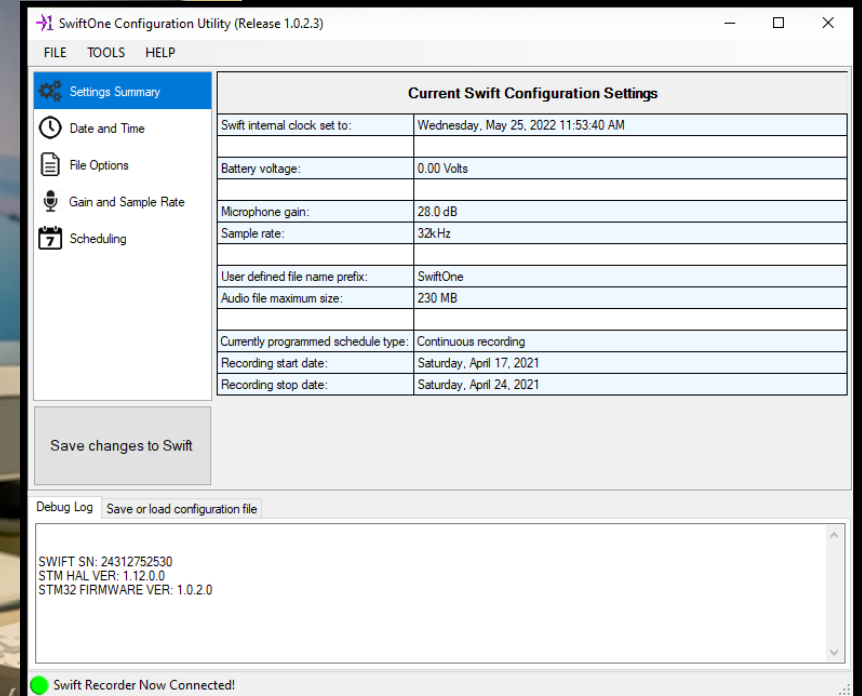
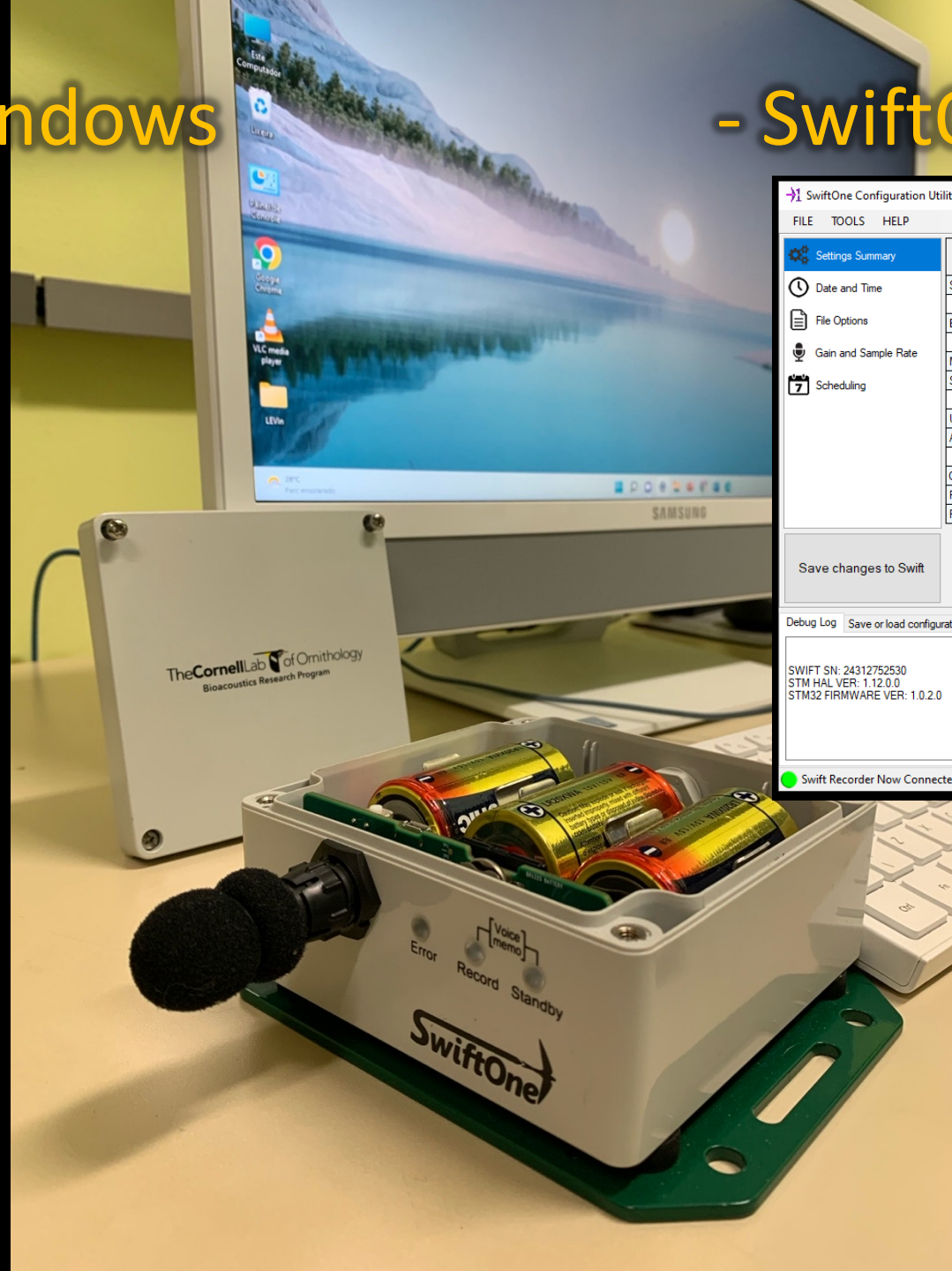


~~Cabo de celular~~

Ornithology
Program

- PC com windows

- SwiftOne ferramenta



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customization for frequency settings, voice memos, and greater microphone sensitivity. If you have any questions about SwiftOne units, please [contact us](#).

First generation of Swifts have already been deployed on every continent around the globe. We are proud of the fact that all of the components of the SwiftOne recorder (electronics, microphones, etc.) have been developed in-house at the Cornell Lab of Ornithology.

In its regular configuration, the unit is powered by three D-cell batteries, which provide power to the unit and enable continuous data collection for 3 or more weeks at a sampling rate of 48 kHz. Currently, the maximum supported sampling rate is 96 kHz (16 bit resolution). Data are stored on a single full-size memory card (SD cards up to 512 GB). Daily recording schedules can be programmed through a configuration tool. We can easily make

SwiftOne Recorder

Esse aqui

SwiftOne – Documentation and Downloads (second generation recording units)

[SwiftOne: Frequently Asked Questions](#)

[SwiftOne Quick Start Guide](#)

[SwiftOne Recorder Configuration Tool](#) – Compatible with SwiftOne Model (Windows only)

[SwiftOne training video](#) (19.09 minutes)- Basic setup and operation guide for SwiftOne units

[SwiftOne Datasheet](#)

Swift – Documentation and Downloads (first generation recording units)

Esse aqui **NÃO**

[Swift Recorder Configuration Tool](#) – Compatible with original

Remover a tampa

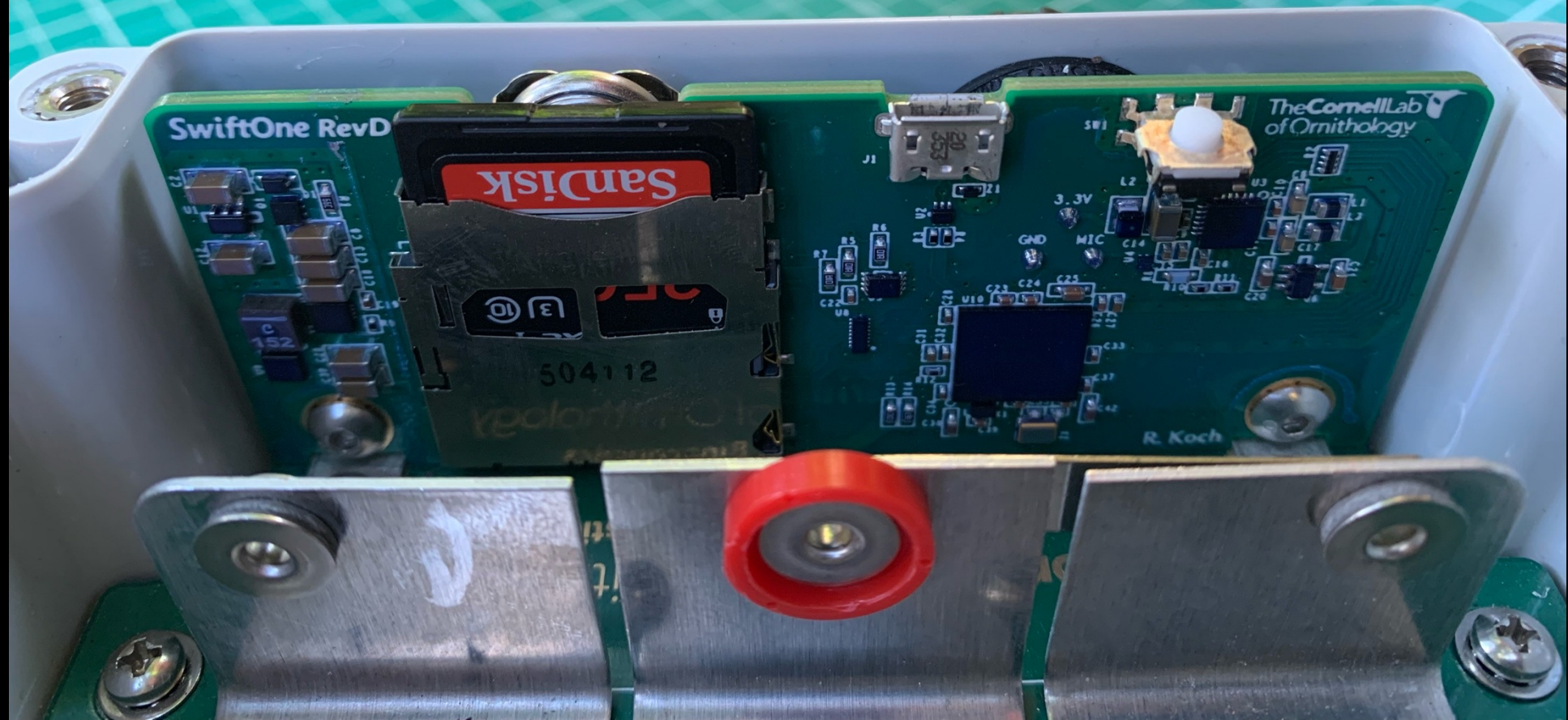


Instalar baterias
* Começar com a do meio

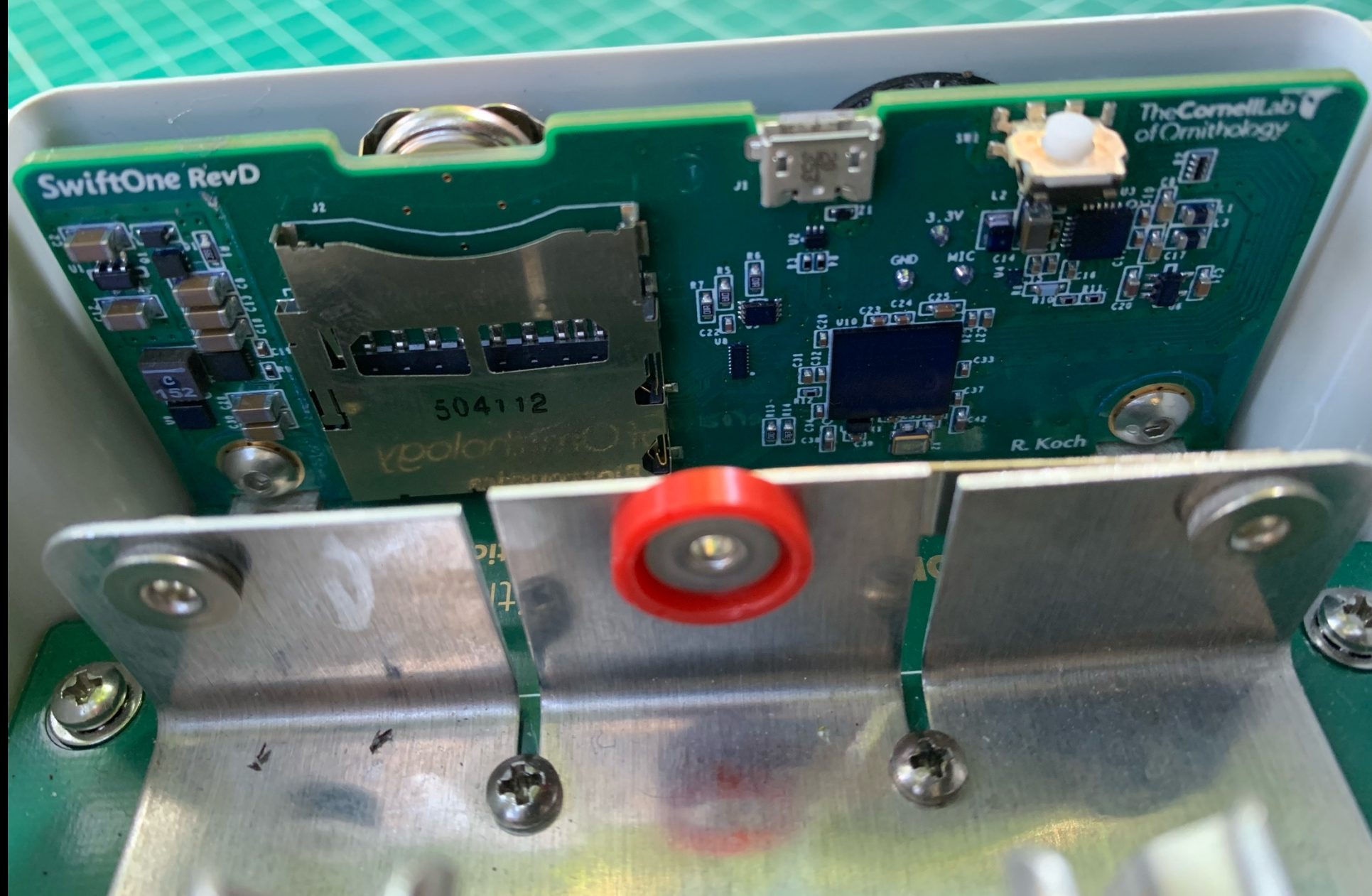


* Com o tempo, ajustar o assento das baterias

Cartão de memória



Bateria de relógio



Nossos planos

Conheça o SwiftOne

Tipos de configuração de gravação recording schedule

Usando a ferramenta de programação

Estimativa de bateria e uso de memória

Primeiros passos para a instalação em campo

Exercício!

Quero que o SwiftOne grave
.. de forma contínua (24h por dia)

Tipo: Continuous recording

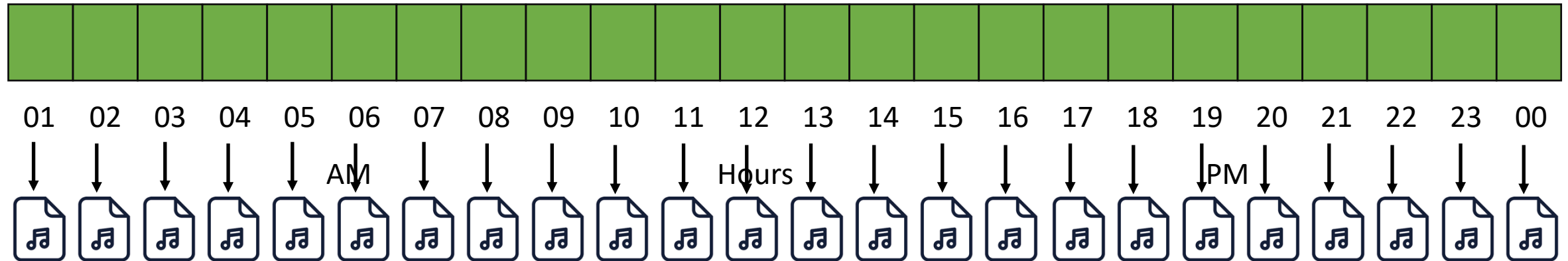
Day 1

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	00
AM						Hours												PM					

Quero que o SwiftOne grave
.. de forma contínua (24h por dia)

Tipo: **Continuous recording**

Day 1



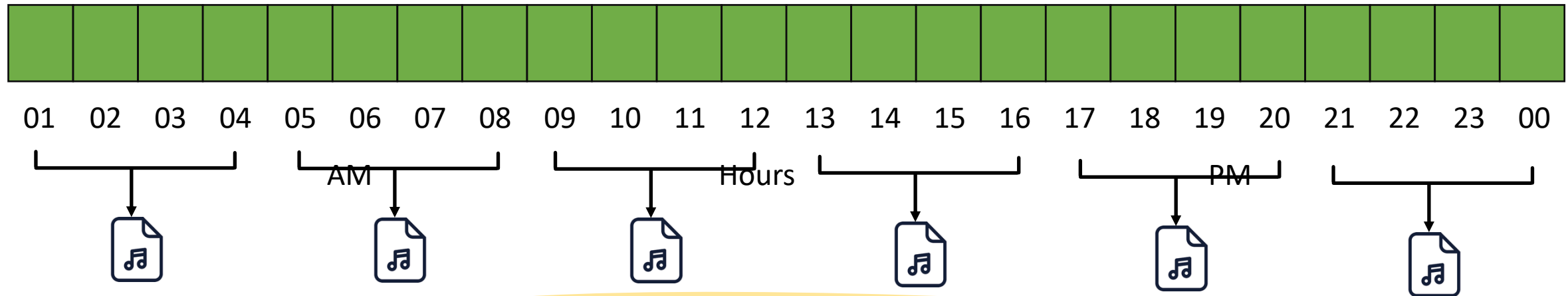
Se gravar **1 hora** em arquivos..

..no final do dia = **24x 1-h arquivos**

Quero que o SwiftOne grave
.. de forma contínua (24h por dia)

Tipo: **Continuous recording**

Day 1

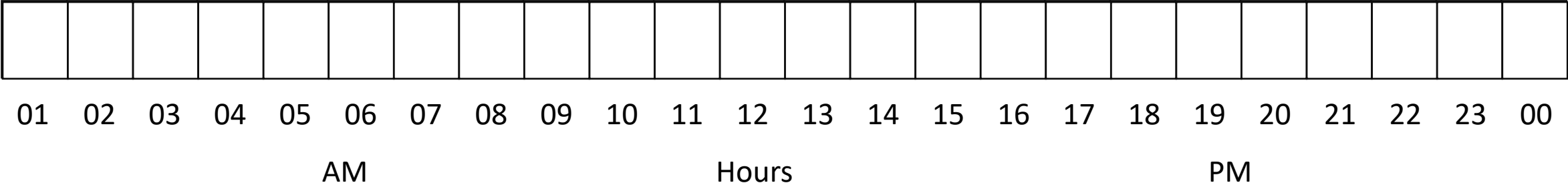


Se gravar cada **4 hora** em arquivos separados..
..no final do dia = **6x 4-h arquivos**

Quero que o SwiftOne grave
.. apenas o amanhecer e entardecer

Tipo: Arbitrary schedule

Day 1

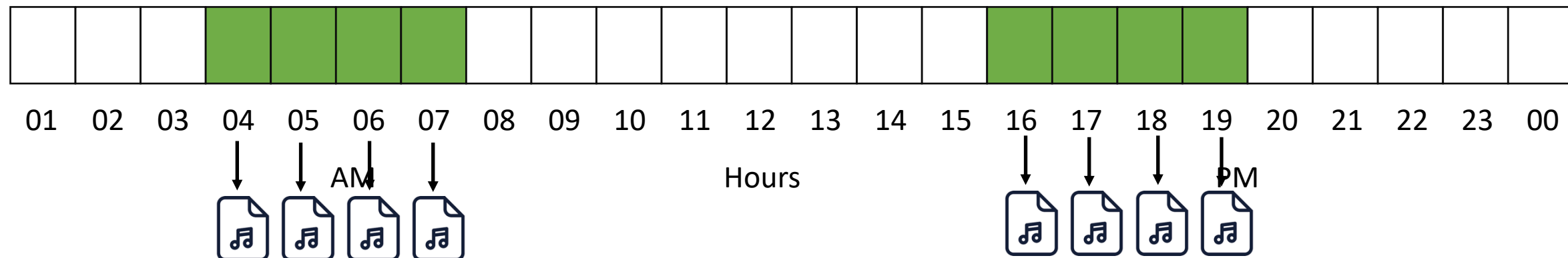


Quero que o SwiftOne grave

.. apenas o amanhecer e entardecer

Tipo: **Arbitrary schedule**

Day 1



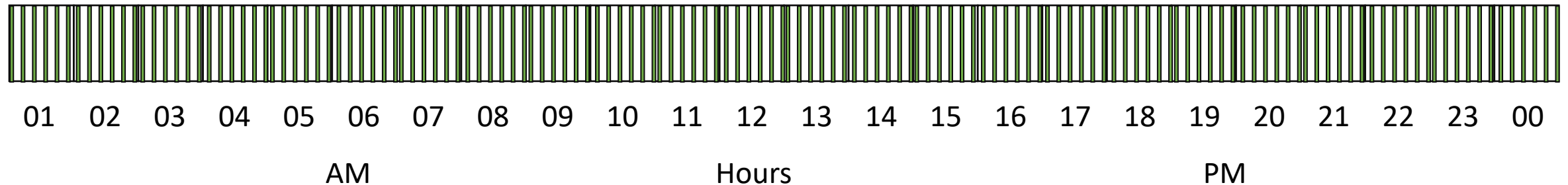
Se gravar cada **1 hora** em arquivos separados..

.. no final do dia = **8x 1-h arquivos**

Quero que o SwiftOne grave

.. 1 minuto a cada 10 minutos de intervalo

Tipo: **Duty cycle schedule**



Cada 1 minuto gravado em áudios separados..

..no final do dia = 144x 1-minute files

Nossos planos

Conheça o SwiftOne

Tipos de configuração de gravação recording schedule

Usando a ferramenta de programação

Estimativa de bateria e uso de memória

Primeiros passos para a instalação em campo

Exercício!

Conectar ao USB



Connect the micro-USB end



Abrir o app de configuração

Aba sumário dos ajustes

The screenshot shows the SwiftOne Configuration Utility (Release 1.0.2.3) window. A large yellow arrow points to the 'Settings Summary' tab in the left sidebar. Below the sidebar, a yellow box labeled 'Ajustes' has an arrow pointing to the 'Settings Summary' tab. Another yellow box labeled 'Sumário' has an arrow pointing to the 'Current Swift Configuration Settings' table. The table contains the following data:

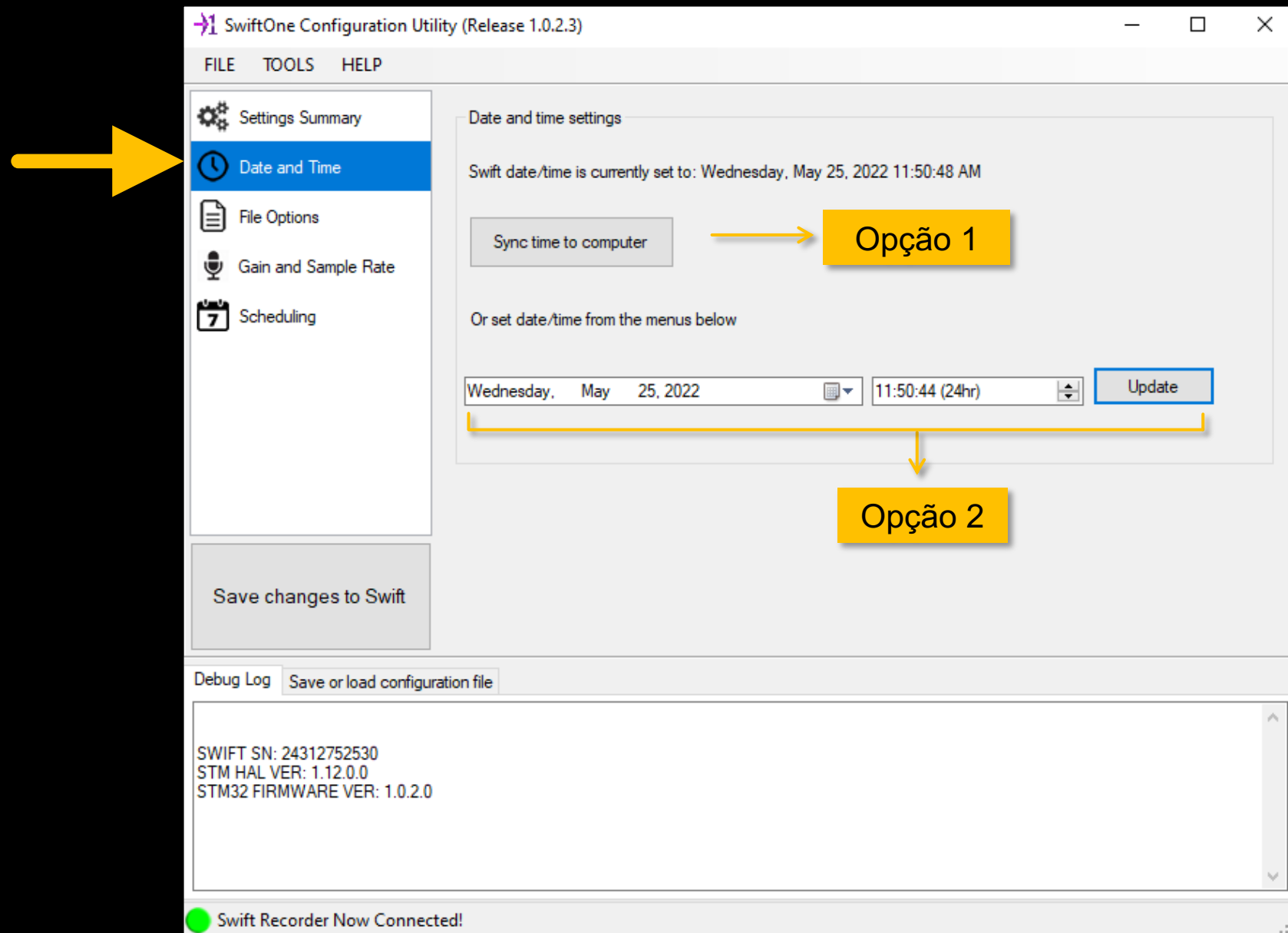
Current Swift Configuration Settings	
Swift internal clock set to:	Wednesday, May 25, 2022 11:53:40 AM
Battery voltage:	0.00 Volts
Microphone gain:	28.0 dB
Sample rate:	32kHz
User defined file name prefix:	SwiftOne
Audio file maximum size:	230 MB
Currently programmed schedule type:	Continuous recording
Recording start date:	Saturday, April 17, 2021
Recording stop date:	Saturday, April 24, 2021

At the bottom of the window, the 'Debug Log' tab is active, showing the following text:

```
SWIFT SN: 24312752530  
STM HAL VER: 1.12.0.0  
STM32 FIRMWARE VER: 1.0.2.0
```

The status bar at the bottom indicates 'Swift Recorder Now Connected!' with a green dot icon.

Data e hora



Opções de arquivo

SwiftOne Configuration Utility (Release 1.0.2.3)

FILE TOOLS HELP

Settings Summary

Date and Time

File Options

Gain and Sample Rate

Scheduling

Save changes to Swift

Debug Log Save or load configuration file

SWIFT SN: 24312752530
STM HAL VER: 1.12.0.0
STM32 FIRMWARE VER: 1.0.2.0

Swift Recorder Now Connected! Unsaved changes exist

File name prefix

Enter a prefix up to eight characters:

Full file name: SwiftOne_YYYYMMDD_HHMMSS.wav

New unsaved file name: Unit001_YYYYMMDD_HHMMSS.wav

Recording file size

Recording file size currently set to: 230 MB (1 hour of audio at 32kHz sample rate)

Ajuda o tamanho máx do arquivo

Gain e sample rate

The image shows the SwiftOne Configuration Utility (Release 1.0.2.3) window. The interface includes a sidebar on the left with a menu: Settings Summary, Date and Time, File Options, Gain and Sample Rate (highlighted with a blue bar and a yellow arrow pointing to it), and Scheduling. Below the menu is a 'Save changes to Swift' button, which is enclosed in a red dashed box. The main area is divided into two sections: 'Analog Gain Setting' and 'Audio Sample Rate'. The 'Analog Gain Setting' section shows 'Analog gain currently set to: 28.0dB' and a slider for 'New unsaved analog gain:' with a value of 28.0dB. A yellow box with the text 'Selecionar nível de ganho (28dB default)' has an arrow pointing to the slider. The 'Audio Sample Rate' section shows 'Audio sample rate currently set to: 32kHz (1 hour with 230MB file size)' and a slider with options: 8kHz, 12kHz, 16kHz, 24kHz, 32kHz, 48kHz, and 96kHz. A yellow box with the text 'Selecionar Taxa de amostragem (kHz)' has an arrow pointing to the 32kHz option. At the bottom, there is a 'Debug Log' section with a 'Save or load configuration file' button and a status bar showing 'Swift Recorder Now Connected!'.

SwiftOne Configuration Utility (Release 1.0.2.3)

FILE TOOLS HELP

Settings Summary

Date and Time

File Options

Gain and Sample Rate

Scheduling

Save changes to Swift

Debug Log Save or load configuration file

SWIFT SN: 24312752530
STM HAL VER: 1.12.0.0
STM32 FIRMWARE VER: 1.0.2.0

Swift Recorder Now Connected!

Analog Gain Setting

Analog gain currently set to: 28.0dB

New unsaved analog gain: dB

Selecionar nível de ganho (28dB default)

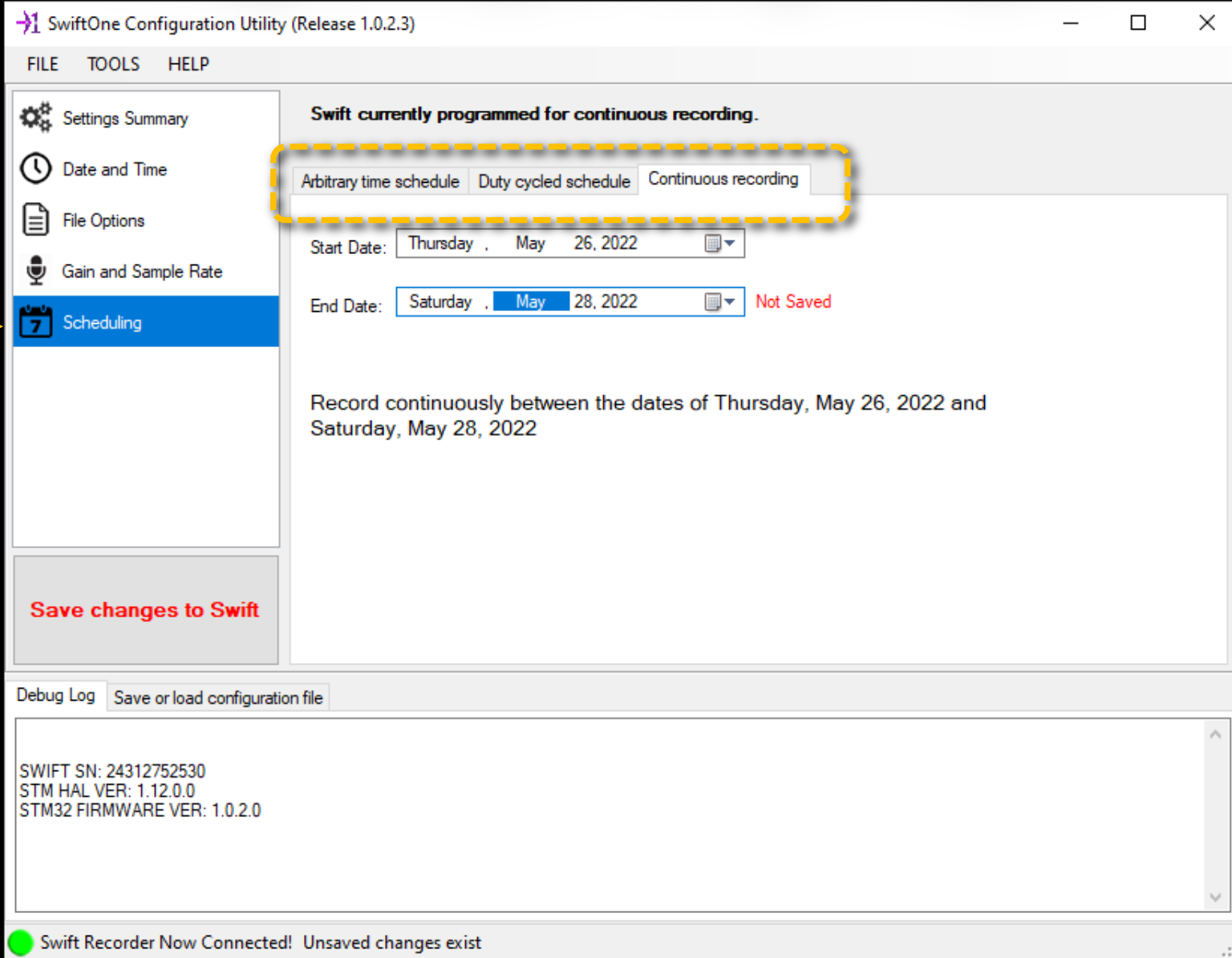
Audio Sample Rate

Audio sample rate currently set to: 32kHz (1 hour with 230MB file size)

8kHz 12kHz 16kHz 24kHz 32kHz 48kHz 96kHz

Selecionar Taxa de amostragem (kHz)

Programação de gravação



The screenshot displays the SwiftOne Configuration Utility (Release 1.0.2.3) window. A yellow arrow points to the 'Scheduling' tab in the left-hand navigation pane. The main area shows the 'Continuous recording' option selected, with a start date of Thursday, May 26, 2022, and an end date of Saturday, May 28, 2022. A red 'Not Saved' message is visible next to the end date. The bottom status bar indicates 'Swift Recorder Now Connected! Unsaved changes exist'.

SwiftOne Configuration Utility (Release 1.0.2.3)

FILE TOOLS HELP

Settings Summary

Date and Time

File Options

Gain and Sample Rate

Scheduling

Save changes to Swift

Swift currently programmed for continuous recording.

Arbitrary time schedule Duty cycled schedule Continuous recording

Start Date: Thursday , May 26, 2022

End Date: Saturday , May 28, 2022 Not Saved

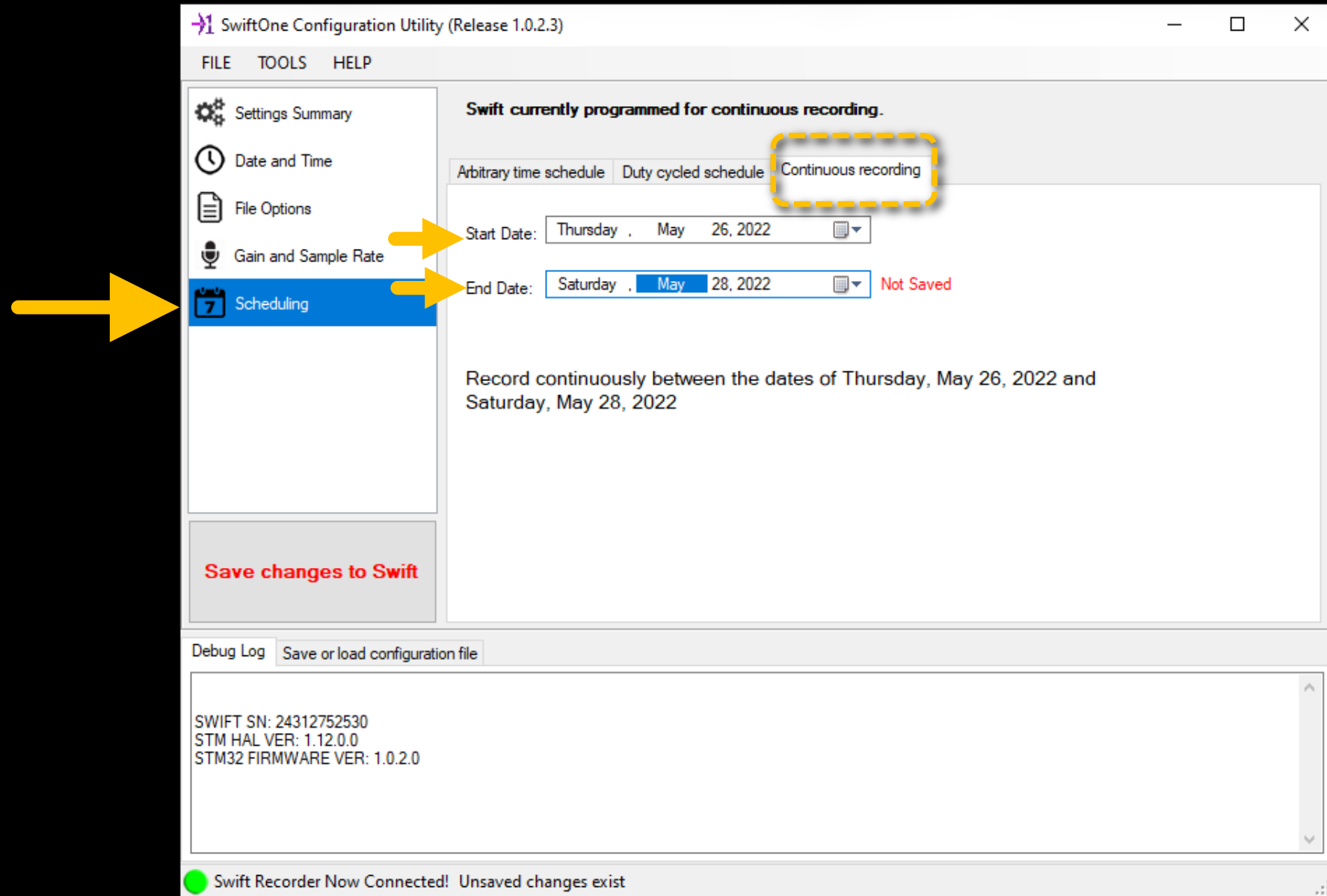
Record continuously between the dates of Thursday, May 26, 2022 and Saturday, May 28, 2022

Debug Log Save or load configuration file

SWIFT SN: 24312752530
STM HAL VER: 1.12.0.0
STM32 FIRMWARE VER: 1.0.2.0

Swift Recorder Now Connected! Unsaved changes exist

Gravação contínua (24h contínuas)



Ciclo de trabalho (Duty cycle)

The screenshot displays the SwiftOne Configuration Utility (Release 1.0.2.3) interface. The 'Scheduling' tab is selected in the left sidebar, indicated by a large yellow arrow. The main panel shows the 'Duty cycled schedule' tab, which is highlighted with a dashed yellow box. A yellow arrow points to the 'Start Date' field, which is set to 'Wednesday, May 25, 2022'. Another yellow arrow points to the 'End Date' field, set to 'Wednesday, June 1, 2022'. A note below these fields states: 'Note: Schedule start date is now or in the past, so schedule will start immediately upon device reset.' Below the date fields, the 'Record for' field is set to '00:10 (Hours:Minutes)', with a yellow callout box stating 'Duração: 10 minutos'. The 'Every' field is set to '01:00 (Hours:Minutes)', with a yellow callout box stating 'A cada 1 hora'. Below these fields, the text 'Record for 10 minutes every 1 hour' is displayed. A yellow callout box below this text states 'Gravar 10 minutos a cada hora'. The 'Total number of record periods per day is 24' is also shown. A list of recording periods is displayed: 'Record from 00:00:00 to 00:10:00', 'Record from 01:00:00 to 01:10:00', 'Record from 02:00:00 to 02:10:00', 'Record from 03:00:00 to 03:10:00', 'Record from 04:00:00 to 04:10:00', and 'Record from 05:00:00 to 05:10:00'. A large yellow arrow points to the 'Save changes to Swift' button. The bottom status bar shows 'Swift Recorder Now Connected! Unsaved changes exist'.

SwiftOne Configuration Utility (Release 1.0.2.3)

FILE TOOLS HELP

Settings Summary

Date and Time

File Options

Gain and Sample Rate

Scheduling

Save changes to Swift

Swift currently programmed for continuous recording. Clicking "Save changes to Swift" button will change scheduling type to duty-cycled scheduling

Arbitrary time schedule **Duty cycled schedule** Continuous recording

Start Date: Wednesday, May 25, 2022

Note: Schedule start date is now or in the past, so schedule will start immediately upon device reset.

End Date: Wednesday, June 1, 2022

Record for 00:10 (Hours:Minutes) Duração: 10 minutos

Every 01:00 (Hours:Minutes) 'A cada 1 hora'

Record for 10 minutes every 1 hour

Total number of record periods per day is 24 Gravar 10 minutos a cada hora

Record from 00:00:00 to 00:10:00

Record from 01:00:00 to 01:10:00

Record from 02:00:00 to 02:10:00

Record from 03:00:00 to 03:10:00

Record from 04:00:00 to 04:10:00

Record from 05:00:00 to 05:10:00

Debug Log Save or load configuration file

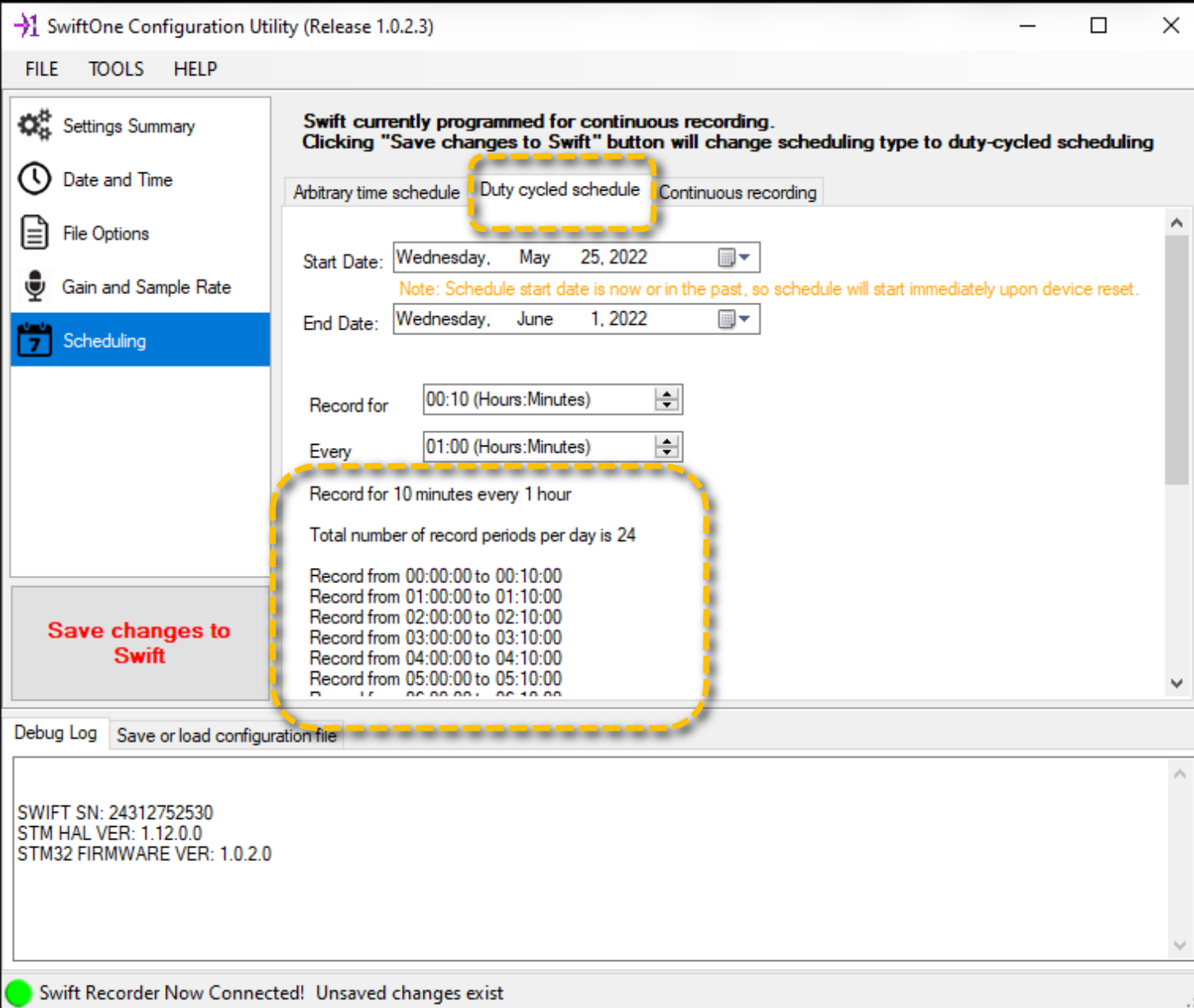
SWIFT SN: 24312752530

STM HAL VER: 1.12.0.0

STM32 FIRMWARE VER: 1.0.2.0

Swift Recorder Now Connected! Unsaved changes exist

Ciclo de trabalho (Duty cycle)



The screenshot displays the SwiftOne Configuration Utility (Release 1.0.2.3) window. A yellow arrow points to the 'Scheduling' option in the left-hand navigation menu. The main panel shows the 'Duty cycled schedule' tab selected, with a yellow dashed box highlighting the 'Duty cycled schedule' tab and the recording schedule details. The interface includes a 'Save changes to Swift' button and a status bar at the bottom indicating 'Swift Recorder Now Connected! Unsaved changes exist'.

Swift currently programmed for continuous recording. Clicking "Save changes to Swift" button will change scheduling type to duty-cycled scheduling

Arbitrary time schedule **Duty cycled schedule** Continuous recording

Start Date: Wednesday, May 25, 2022

Note: Schedule start date is now or in the past, so schedule will start immediately upon device reset.

End Date: Wednesday, June 1, 2022

Record for 00:10 (Hours:Minutes)

Every 01:00 (Hours:Minutes)

Record for 10 minutes every 1 hour

Total number of record periods per day is 24

Record from 00:00:00 to 00:10:00
Record from 01:00:00 to 01:10:00
Record from 02:00:00 to 02:10:00
Record from 03:00:00 to 03:10:00
Record from 04:00:00 to 04:10:00
Record from 05:00:00 to 05:10:00

Save changes to Swift

Debug Log Save or load configuration file

SWIFT SN: 24312752530
STM HAL VER: 1.12.0.0
STM32 FIRMWARE VER: 1.0.2.0

Swift Recorder Now Connected! Unsaved changes exist

Modo arbitrário

The screenshot displays the SwiftOne Configuration Utility (Release 1.0.2.3) window. The 'Scheduling' tab is selected in the left sidebar, indicated by a large yellow arrow. The main area shows the 'Arbitrary time schedule' tab selected, with a yellow dashed box around it. The 'Start Date' is set to Wednesday, May 25, 2022, and the 'End Date' is Wednesday, June 1, 2022. A note states: 'Note: Schedule start date is now or in the past, so schedule will start immediately upon device reset.' The 'Start Time' is 05:00 (Hours:Minutes) and the 'Stop Time' is 09:00 (Hours:Minutes). There are buttons for 'Add to schedule' and 'Delete Entry'. A message box states: 'No scheduled recording intervals. Recorder will remain in Standby all day or until mechanical start/stop button is pressed.' At the bottom, there is a 'Clear Table' button. The status bar at the bottom shows 'Swift Recorder Now Connected! Unsaved changes exist'.

SwiftOne Configuration Utility (Release 1.0.2.3)

FILE TOOLS HELP

Settings Summary
Date and Time
File Options
Gain and Sample Rate
Scheduling

Swift currently programmed for continuous recording.
Clicking "Save changes to Swift" button will change scheduling type to arbitrary time scheduling

Arbitrary time schedule Duty cycled schedule Continuous recording

Start Date: Wednesday, May 25, 2022
End Date: Wednesday, June 1, 2022
Note: Schedule start date is now or in the past, so schedule will start immediately upon device reset.

Start Time: 05:00 (Hours:Minutes) Stop Time: 09:00 (Hours:Minutes)

Add to schedule
Delete Entry

No scheduled recording intervals. Recorder will remain in Standby all day or until mechanical start/stop button is pressed.

Clear Table

Save changes to Swift

Debug Log Save or load configuration file

SWIFT SN: 24312752530
STM HAL VER: 1.12.0.0
STM32 FIRMWARE VER: 1.0.2.0

Swift Recorder Now Connected! Unsaved changes exist

Modo arbitrário

The screenshot displays the 'SwiftOne Configuration Utility (Release 1.0.2.3)' window. The 'Scheduling' tab is selected in the left sidebar, indicated by a yellow arrow. The main area shows the 'Arbitrary time schedule' tab selected, with a yellow dashed box around it. The interface includes fields for 'Start Date' (Wednesday, May 25, 2022), 'End Date' (Wednesday, June 1, 2022), 'Start Time' (05:00), and 'Stop Time' (09:00). A yellow arrow points to the 'Add to schedule' button. A red dashed box highlights the 'Save changes to Swift' button and the 'Debug Log' section, which contains device information: SWIFT SN: 24312752530, STM HAL VER: 1.12.0.0, and STM32 FIRMWARE VER: 1.0.2.0. A status bar at the bottom indicates 'Swift Recorder Now Connected! Unsaved changes exist' with a green dot. A hand cursor is visible at the bottom right.

SwiftOne Configuration Utility (Release 1.0.2.3)

FILE TOOLS HELP

Settings Summary
Date and Time
File Options
Gain and Sample Rate
Scheduling

Swift currently programmed for continuous recording.
Clicking "Save changes to Swift" button will change scheduling type to arbitrary time scheduling

Arbitrary time schedule Duty cycled schedule Continuous recording

Start Date: Wednesday, May 25, 2022
Note: Schedule start date is now or in the past, so schedule will start immediately upon device reset.
End Date: Wednesday, June 1, 2022

Start Time: 05:00 (Hours:Minutes) Stop Time: 09:00 (Hours:Minutes) Add to schedule
Delete Entry

No scheduled recording intervals. Recorder will remain in Standby all day or until mechanical start/stop button is pressed.

Clear Table


Save changes to Swift

Debug Log Save or load configuration file

SWIFT SN: 24312752530
STM HAL VER: 1.12.0.0
STM32 FIRMWARE VER: 1.0.2.0

Swift Recorder Now Connected! Unsaved changes exist

Revise a aba de sumário



SwiftOne Configuration Utility (Release 1.0.2.3)

FILE TOOLS HELP

Settings Summary

- Date and Time
- File Options
- Gain and Sample Rate
- Scheduling

Current Swift Configuration Settings

Swift internal clock set to:	Wednesday, May 25, 2022 11:53:40 AM
Battery voltage:	0.00 Volts
Microphone gain:	28.0 dB
Sample rate:	32kHz
User defined file name prefix:	SwiftOne
Audio file maximum size:	230 MB
Currently programmed schedule type:	Continuous recording
Recording start date:	Saturday, April 17, 2021
Recording stop date:	Saturday, April 24, 2021

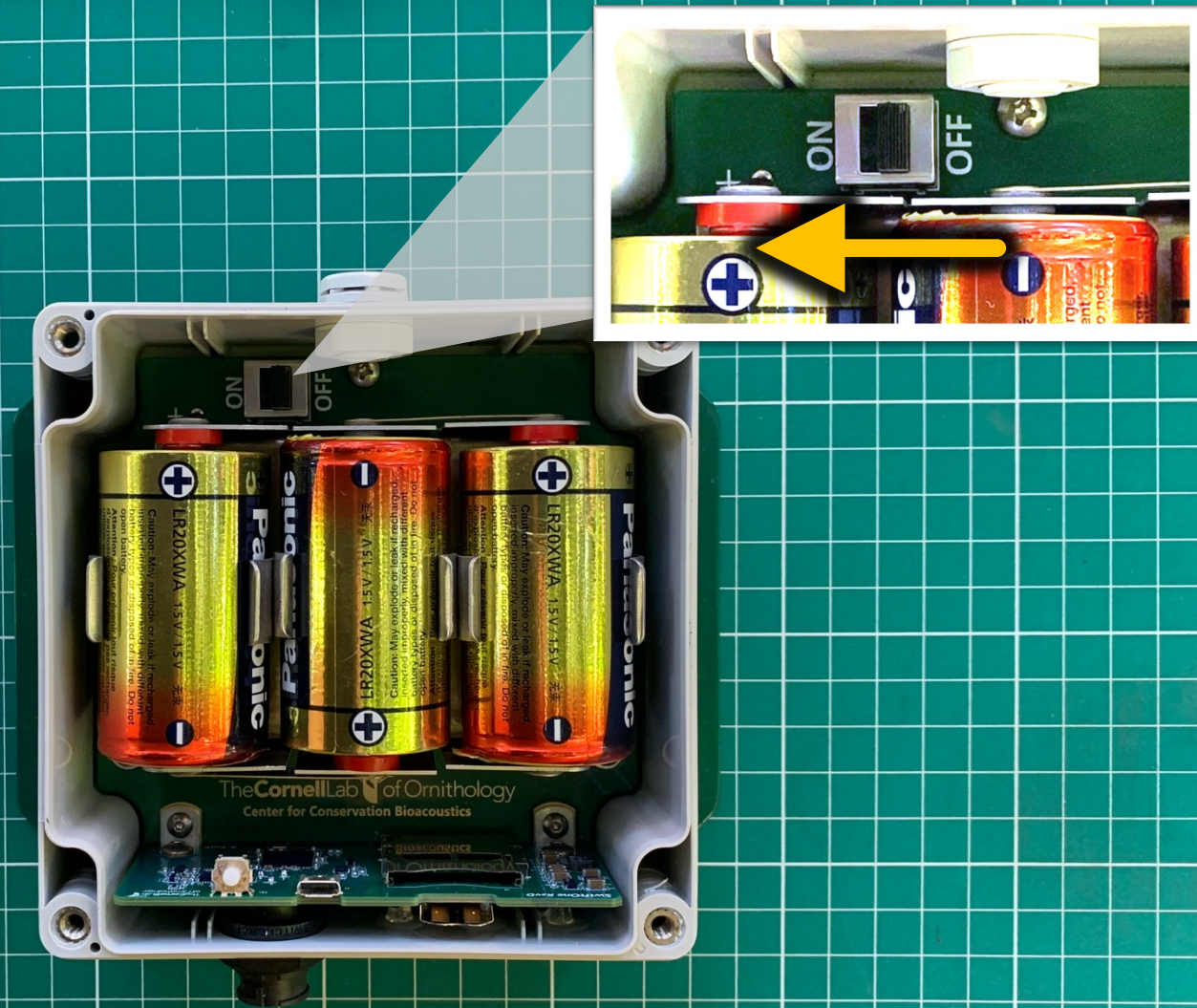
Save changes to Swift

Debug Log Save or load configuration file

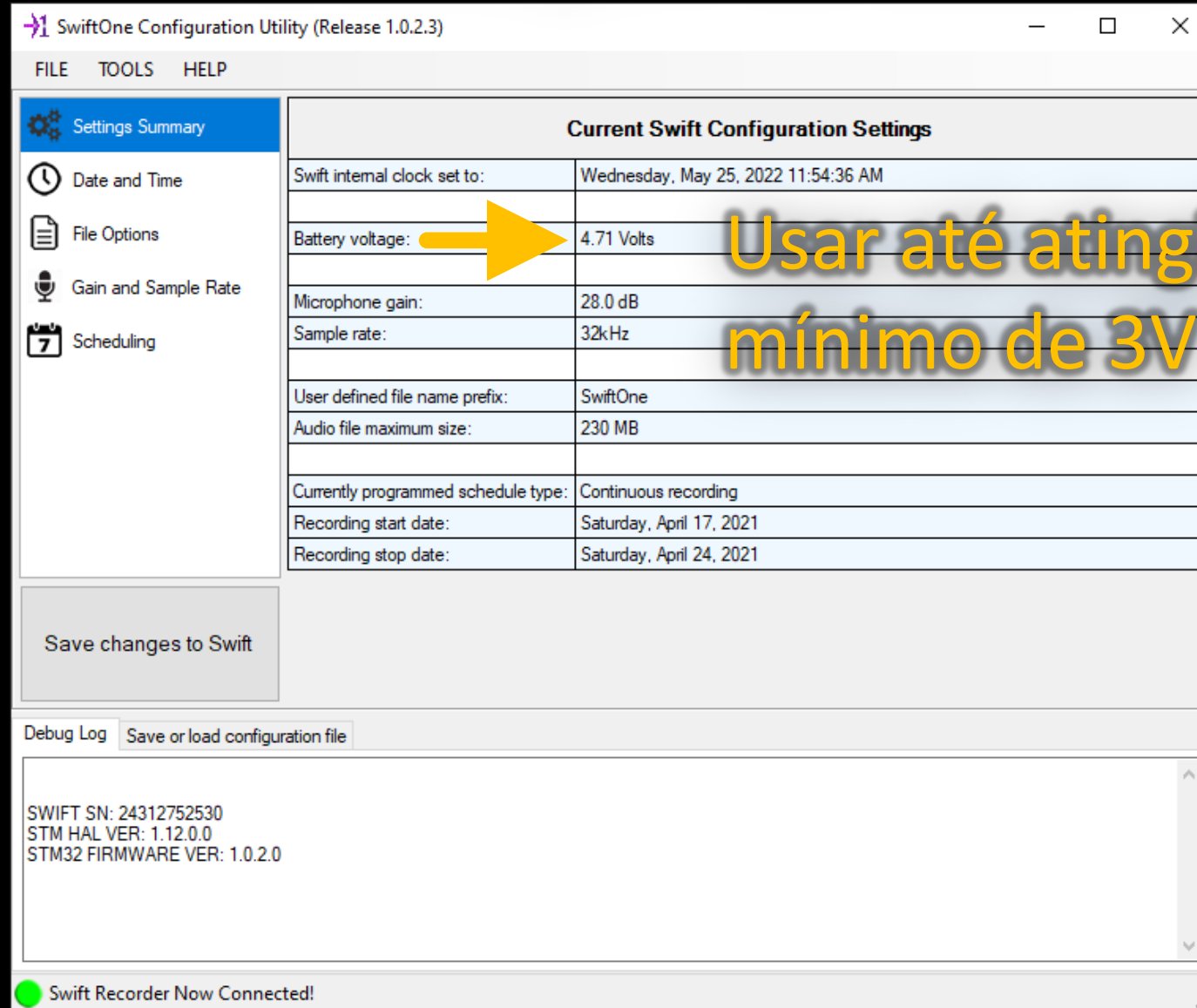
SWIFT SN: 24312752530
STM HAL VER: 1.12.0.0
STM32 FIRMWARE VER: 1.0.2.0

Swift Recorder Now Connected!

Checar a voltagem da bateria



Checar a voltagem da bateria



The screenshot shows the 'SwiftOne Configuration Utility (Release 1.0.2.3)' window. On the left is a sidebar with navigation options: 'Settings Summary' (selected), 'Date and Time', 'File Options', 'Gain and Sample Rate', and 'Scheduling'. The main area displays 'Current Swift Configuration Settings' in a table. A yellow arrow points to the 'Battery voltage' row, which shows '4.71 Volts'. Below the table is a 'Save changes to Swift' button. At the bottom, there is a 'Debug Log' section with fields for 'Save or load configuration file' and a log area showing device information: 'SWIFT SN: 24312752530', 'STM HAL VER: 1.12.0.0', and 'STM32 FIRMWARE VER: 1.0.2.0'. A status bar at the very bottom indicates 'Swift Recorder Now Connected!' with a green dot.

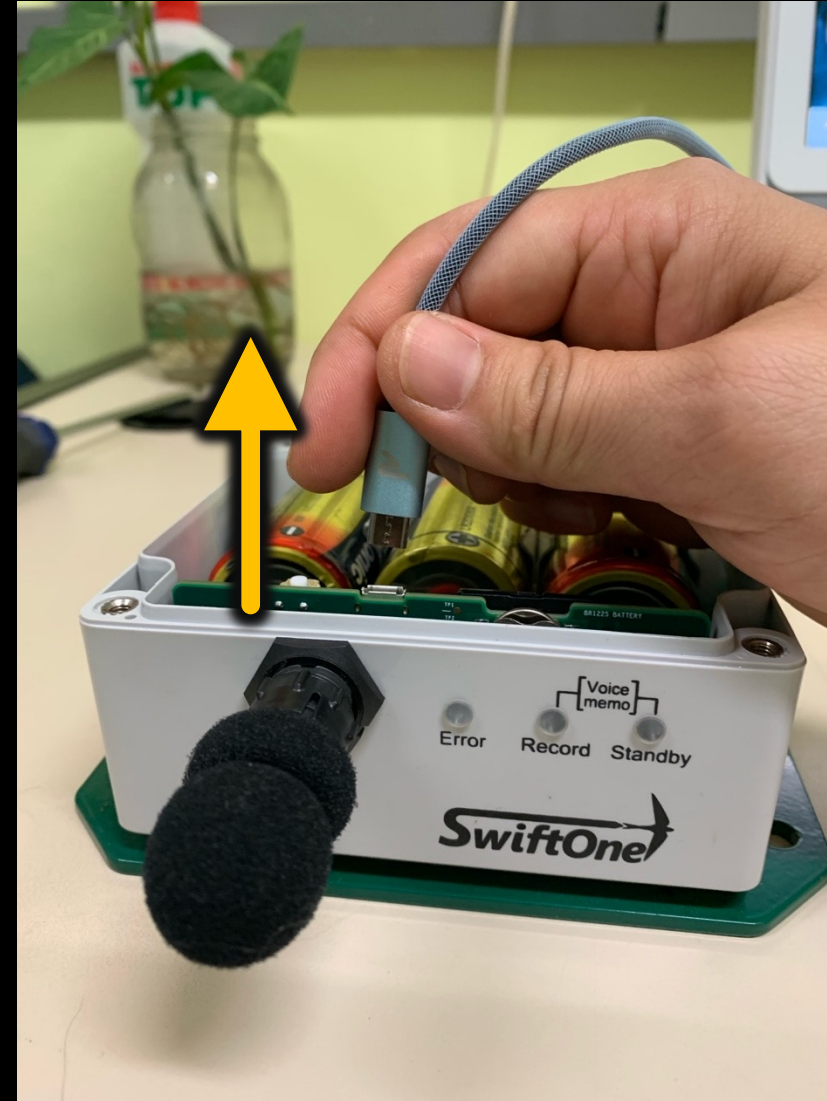
Current Swift Configuration Settings	
Swift internal clock set to:	Wednesday, May 25, 2022 11:54:36 AM
Battery voltage:	4.71 Volts
Microphone gain:	28.0 dB
Sample rate:	32kHz
User defined file name prefix:	SwiftOne
Audio file maximum size:	230 MB
Currently programmed schedule type:	Continuous recording
Recording start date:	Saturday, April 17, 2021
Recording stop date:	Saturday, April 24, 2021

SWIFT SN: 24312752530
STM HAL VER: 1.12.0.0
STM32 FIRMWARE VER: 1.0.2.0

Swift Recorder Now Connected!

Usar até atingir o
mínimo de 3V

Desplugar o cabo



Conectar o microphone



Encaixe dos pinos
e do 'U' invertido



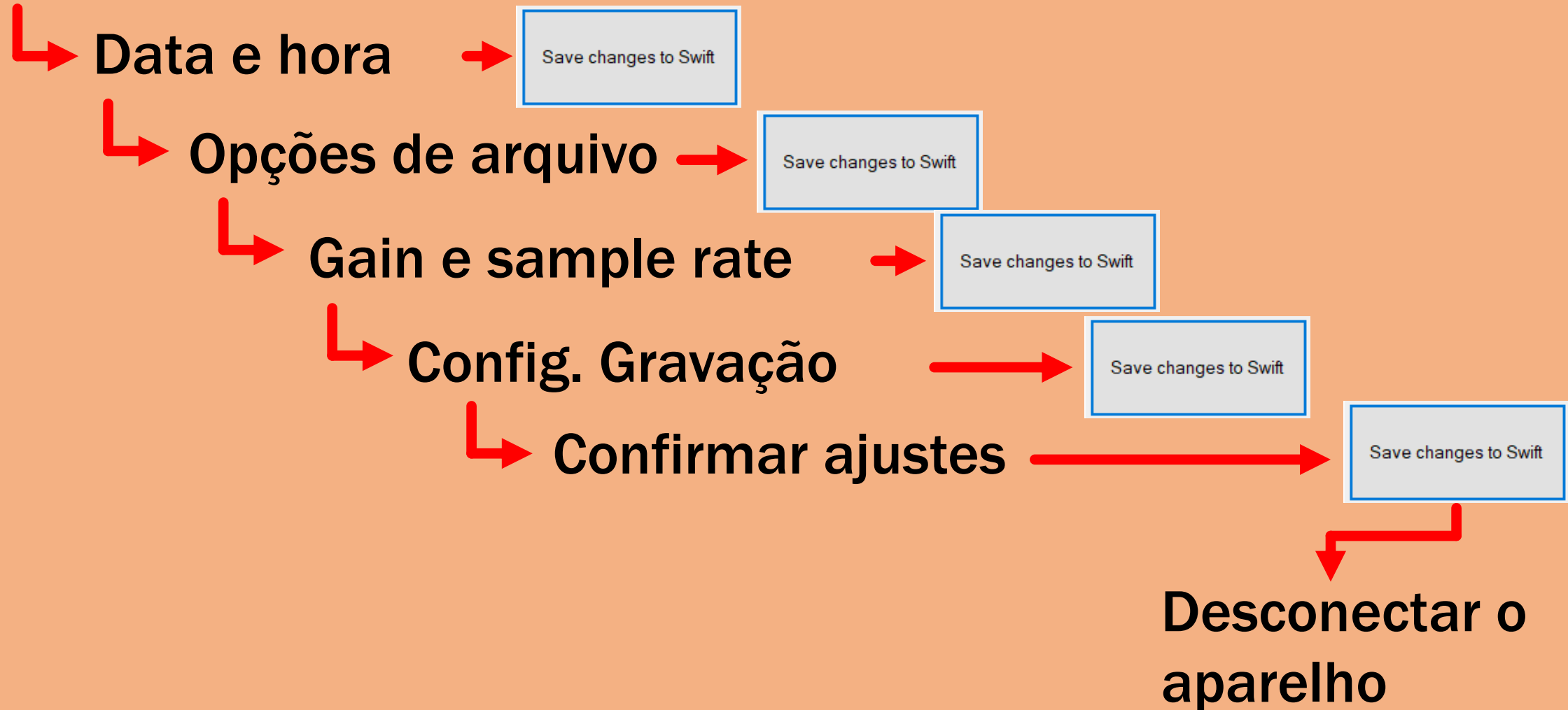
Depois rosquear o
plug do microfone

Recolocar e apertar os parafusos da tampa



Como mudar as configurações

Conectar o aparelho



Nossos planos

Conheça o SwiftOne

Tipos de configuração de gravação recording schedule

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Estimativa de bateria e uso de memória

Primeiros passos para a instalação em campo

Exercício!

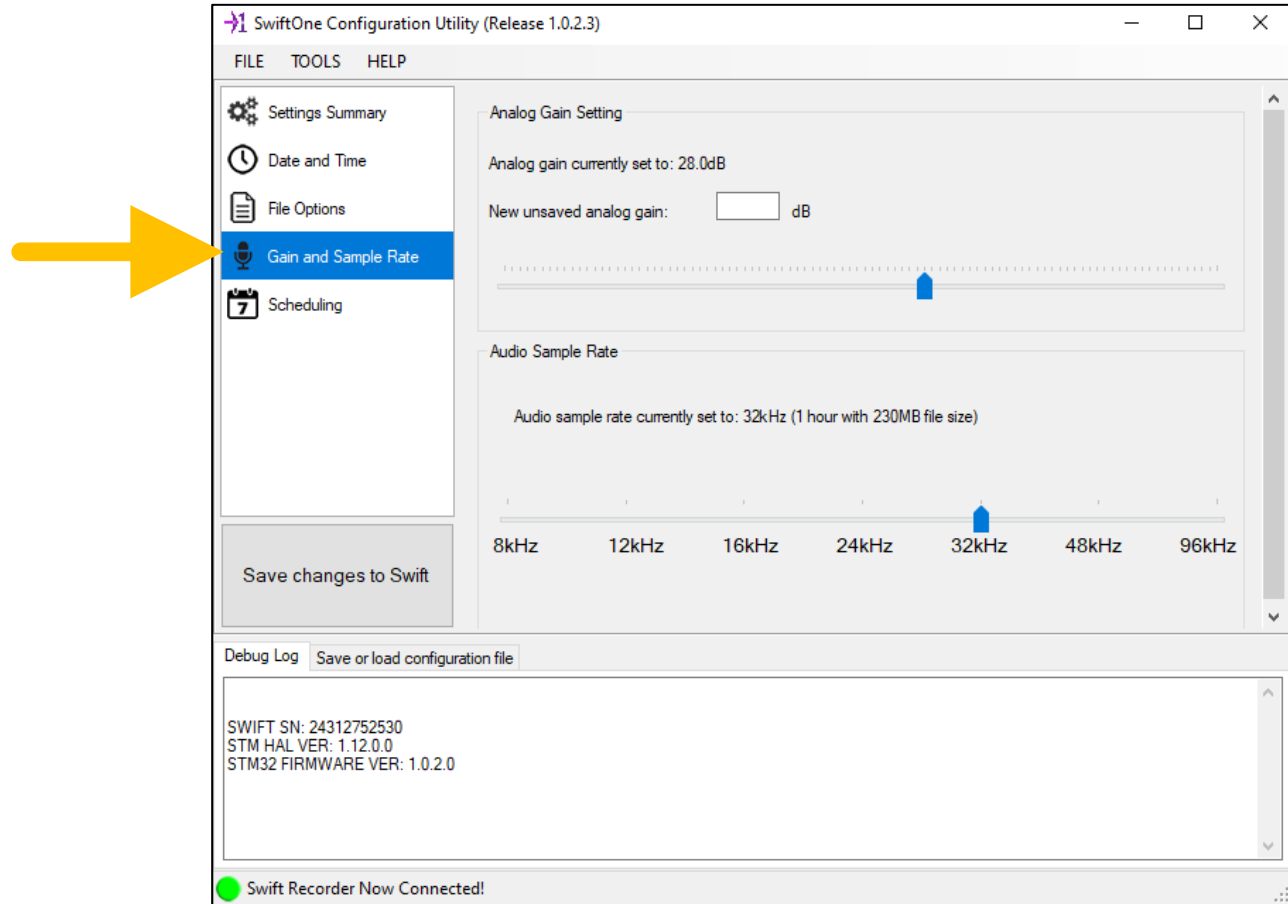
O quanto as baterias vão durar? Depende.

- Calor e frio influenciam durabilidade da bateria
- SwiftOne não funcionam bem em **< 3V**
- Teste/inspecione as condições de gravação!

Sample Rate (Hz)	Approx Runtime (Hrs)	Approx Runtime (Days)
8,000	672	28
16,000	636	26.5
32,000	588	24.5
48,000	552	23
96,000	504	21

O quanto demora para encher o cartão SD? (wav)

- Taxa de amostragem (Hz)



O quanto demora para encher o cartão SD? (wav)

- Taxa de amostragem (Hz)
- Bit depth (SwiftOne = 16 bits)
- Número de canais (1 mic apenas)
- Duração total de gravação por dia (segundos)

Type: Continuous recording

Se graver 1 h em arquivos separados..

..no final do dia = 24x 1-h arquivos

24 horas *

60 min *

60 segundos =

86,400 s

O quanto demora para encher o cartão SD? (wav)

- Taxa de amostragem (Hz)
- Bit depth (SwiftOne = 16 bits)
- N canais (1 mic)
- Duração total gravada no dia (segundos)



Tipo: Gravação contínua, 48 kHz

Sample rate * (Bit depth/8) * N canal * Tot segundos
(Hz)

$$\begin{aligned} 48,000 * (16/8) * 1 * 86,400 &= \text{total bytes} \\ &= 8,294,400,000 \text{ bytes} \\ &= 8.29 \text{ Gb} \end{aligned}$$

$$\begin{aligned} 24 \text{ h} * \\ 60 \text{ min} * \\ 60 \text{ segundos} &= \\ \underline{86,400 \text{ s}} \end{aligned}$$

$$\begin{aligned} 256 \text{ Gb} / 8.3 \text{ Gb} &= 30 \text{ dias} \\ &(\text{considerar menos do que} \\ &\text{isso}) \end{aligned}$$

O quanto demora para encher o cartão SD? (wav)

(01) $\text{Sample rate (Hz)} * (\text{Bit depth}/8) * N \text{ canais} * \text{Tot segundos per dia} = \text{Tot. bytes dia}$

(02) $\text{Total bytes per dia} / 10^9 = \text{Total Gigabytes per dia}$

(03) $\text{Total Gb cartão SD} / \text{Tot Gb gravados per dia} = \text{Número de dias até o cartão encher}$

Nossos planos

Conheça o SwiftOne

Tipos de configuração de gravação recording schedule

Usando a ferramenta de programação

Estimativa de bateria e uso de memória

Primeiros passos para a instalação em campo

Exercício!

Vermelho ●, verde●, standby●



Error State	Record State	Standby State
<p>This LED blinks red when Swift is in Error State. Reasons for an error to occur include:</p> <ul style="list-style-type: none">• 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	<p>This LED blinks green when Swift is recording audio and saving it to the SD Card.</p> <ul style="list-style-type: none">• 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	<p>This LED blinks blue when Swift is in Standby State, and remains on continuously when USB is connected.</p> <ul style="list-style-type: none">• 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

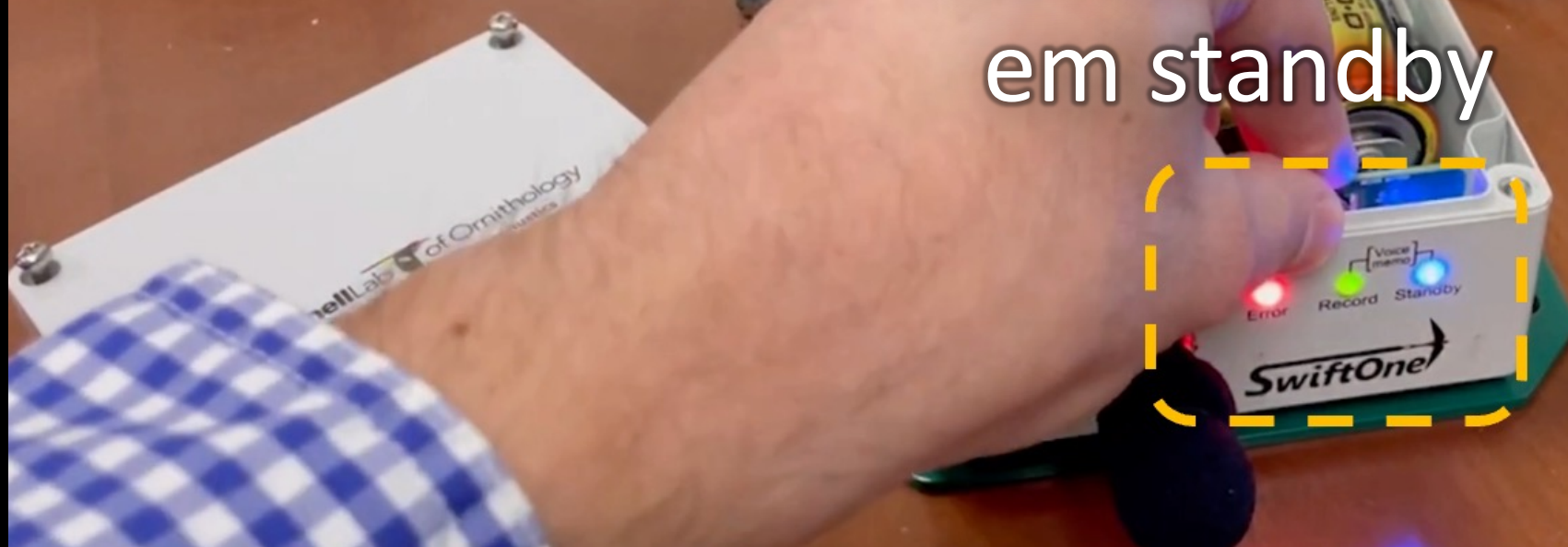
Ligando o aparelho

Luz vermelha vai piscar
quando o cartão de memória
não está inserido



Quando cartão é instalado,
todas luzes piscam

Luz azul pisca
em standby



Ligando o aparelho



Luz verde brilha
quando o aparelho
está ligado



Manutenção dos gravadores

Caso (1)

Hora de trocar baterias e cartões de memória. Você encontra o gravador em modo de gravação (**luz verde**). O que deve fazer?

Como parar uma gravação?

Usar o botão branco. A luz verde para de piscar e a luz azul começa a piscar.

O botão
branco

Agora Podemos
remover o cartão e
desligar o aparelho



Como retomar uma gravação?

Inserir o cartão de memória, ou ligar e desligar o aparelho

Manutenção dos gravadores

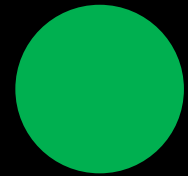
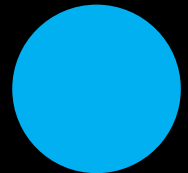
(Caso 2)

Hora de trocar baterias e cartões de memória.

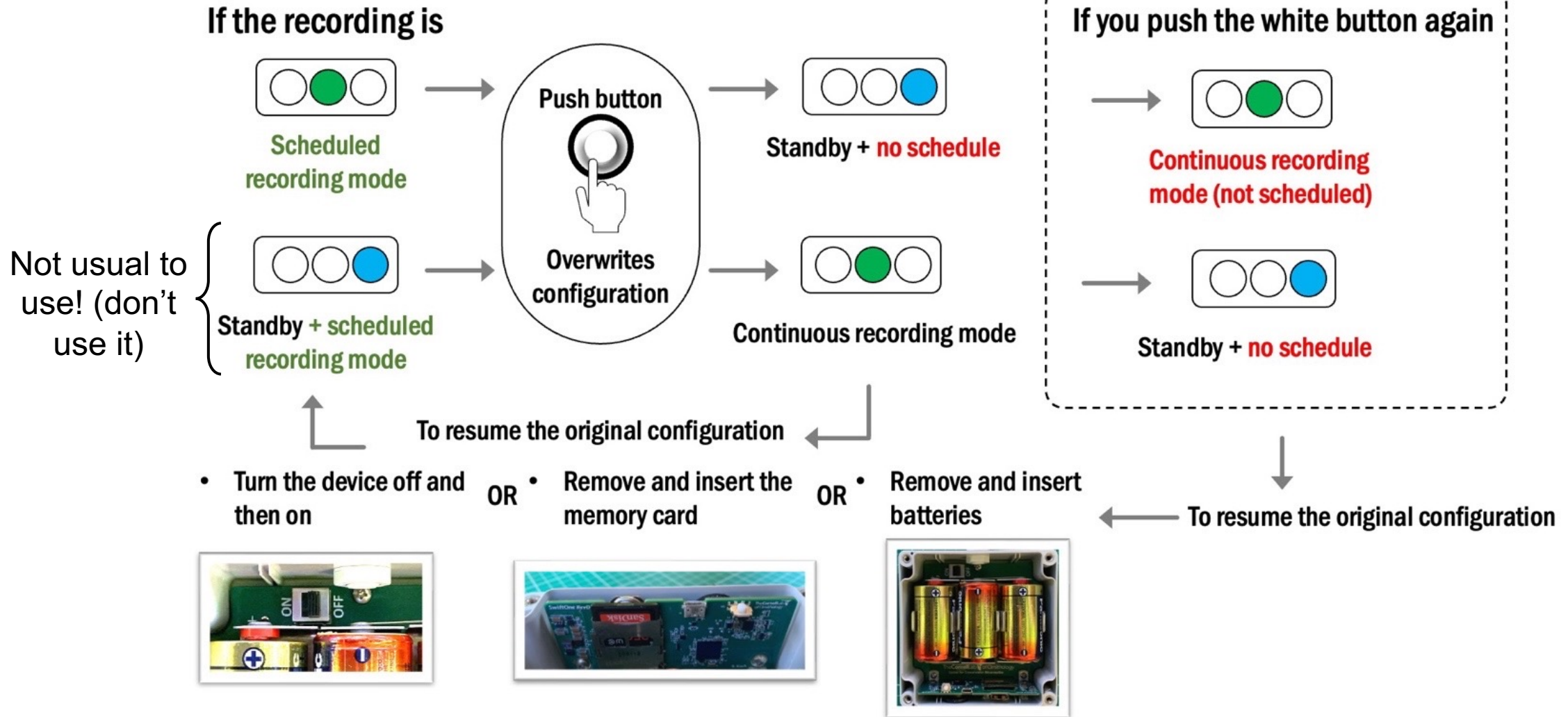
Você encontra o gravador em modo standby
(**luz azul**). O que deve fazer?

Apenas desligue o aparelho e troque pilhas e cartão. Ligue o aparelho novamente, e a configuração voltará a ser a mesma.

Manutenção/reinstalação

-  Recording on = use o botão branco
-  Standby = não use o botão branco

The white push button

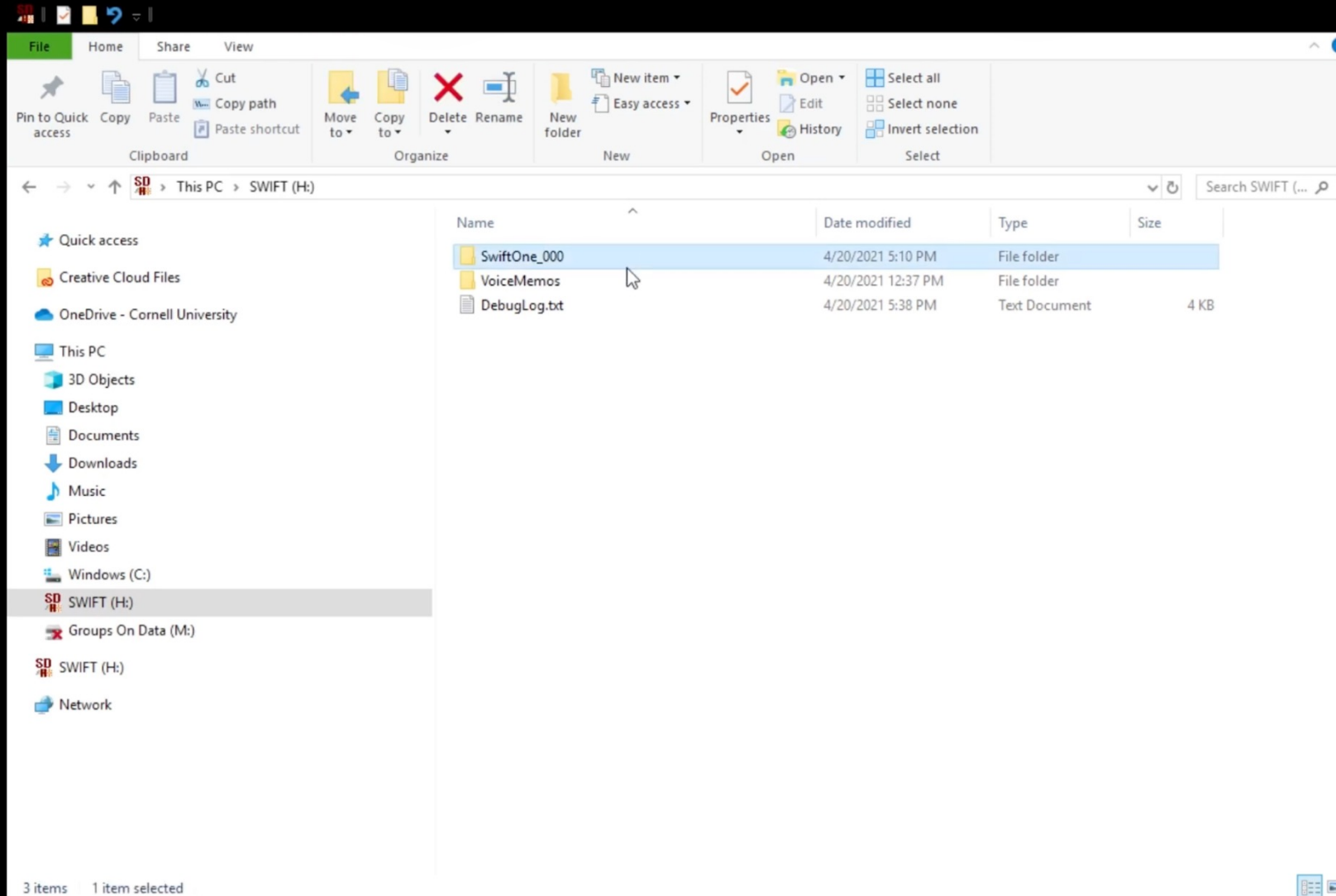


Mensagem de voz



Max 2 minutos

Mensagem de voz: pasta



O que dizer na mensagem de voz

- Nome da pessoa que está realizando a implantação
- Projeto
- Hora (incluindo fuso horário)
- Data
- Nome do local
- Latitude/longitude ou coordenadas UTM
- Numero do site
- ID e modelo do equipamento
- Número do cartão SD
- Descrição do Site
- Notas ou comentários

Dicas para Instalação em Campo

- TESTE!
- O vandalismo (e a interferência de outros animais) pode ser evitado através da instalação dos gravadores em alturas elevadas (por exemplo, 3 m)
- Certifique-se de que a árvore usada para anexar o gravador esteja ativa. Evite árvores de grande diâmetro (caso contrário, o som pode ser “bloqueado”)
- A água é perigosa!! Improvise telhados pequenos* e use uma boa fita adesiva para cobrir a ventilação
- A espuma do microfone é deliciosa (para insetos e outros animais misteriosos)! Pense em formas para protegê-lo (repelentes naturais, telas, etc.)

Grupos TEMABio

- Escolher uma área para instalar o gravador na BEP
- Criar um Código do local
- Nomear o seu arquivo com TMB_Código do local
- Gravação
 - 48kHz
 - Gain default
 - Duty Cycle – 1 minute every 6
- Foto do sumário antes de instalar
- Preencher lista de instalação e tirar foto