
Anisca Bird

Release 1.0

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May 14, 2022

CONTENTS

1 Contents	3
1.1 Webhooks	3
HTTP Routing Table	9

Anisca Bird replaces the usual roosting place with a weighing and tracking device and can be used with owls, eagles, pigeons, chickens and any other bird that can be ringed.

CONTENTS

1.1 Webhooks

The primary method that Anisca Bird uses to deliver data is through the use of webhooks. A webhook URL will be called via a POST request with the message encoded as a JSON body.

1.1.1 Messages

Your webhook URL should be prepared to receive the following messages:

weight: Bird detected and weighed

This message is sent when a ringed bird is detected on the perch. A detection is valid if the RFID tag was successful read.

POST `example.com/webhook`

Example request body:

```
{
  "timestamp": 1648642396,
  "serial": "CODEABFFEE",
  "device_id": "secret-red-wake",
  "type": "weight",

  "activation": {
    "latlng": "46.535,6.569",
    "site_id": "rdc20",
    "activation_date": 1648641394
  },

  "body": {
    "duration": 12,
    "flags": "ab",
    "weight": 120.5,
    "uid": "0600c9a463",
    "raw_adc_pos": 56020,
    "stddev": 1,
```

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```
    "temperature": -10
  }
}
```

Request JSON Object

- **timestamp** (*integer*) – Epoch timestamp (UTC+0): seconds since January 1, 1970 12:00:00 AM
- **serial** (*string*) – device serial number
- **device_id** (*string*) – human readable hash of serial number that is also printed on device label
- **type** (*string*) – message type (one of `weight`, `status`, `offset`, or `calibration`)
- **activation** (*string*) – when and where this device was last activated
- **duration** (*integer*) – number of seconds that owl is on perch (max. 240)
- **flags** (*integer*) – reserved
- **weight** (*integer*) – weight estimate in 0.01 grams (unsigned value)
- **uid** (*integer*) – RFID UID (hexadecimal). Attention: the second byte of the RFID tag is not transmitted in order to save data. Example: The UID 050031b049 will become 0531b049.
- **raw_adc_pos** (*integer*) – raw ADC value from “positive excitation” (incl. offset)
- **stddev** (*integer*) – weight measurement series standard deviation in 0.1 grams
- **temperature** (*integer*) – temperature in degrees Celsius (signed value)

status: Device status

Device status is sent twice a day.

POST `example.com/webhook`

Example request body:

```
{
  "timestamp": 1648642396,
  "serial": "CODEABFFEE",
  "device_id": "secret-red-wake",
  "type": "status",

  "activation": {
    "latlng": "46.535,6.569",
    "site_id": "rdc20",
    "activation_date": 1648641394
  },

  "body": {
    "header": "ff",
    "events_with_id": 29,
  }
}
```

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```

    "events_unknown_id": 16,
    "flags": "ab",
    "vbat_mv": 4620,
    "memory_used": 56,
    "days_since_boot": 120
  }
}

```

Request JSON Object

- **timestamp** (*integer*) – Epoch timestamp (UTC+0): seconds since January 1, 1970 12:00:00 AM
- **serial** (*string*) – device serial number
- **device_id** (*string*) – human readable hash of serial number that is also printed on device label
- **type** (*string*) – message type (one of `weight`, `status`, `offset`, or `calibration`)
- **activation** (*string*) – when and where this device was last activated
- **header** (*integer*) – internal device status header (0xFF)
- **events_with_id** (*integer*) – number of events with successful RFID detection since last status update [0-255]. The value of 255 means ≥ 255 .
- **events_unknown_id** (*integer*) – number of events with UN-successful RFID detection since last status update [0-255]. The value of 255 means ≥ 255 .
- **flags** (*integer*) – reserved
- **vbat_mv** (*integer*) – Battery voltage in mV
- **memory_used** (*integer*) – Percentage of Flash memory used [0-100]
- **days_since_boot** (*integer*) – Number of days since last reboot [0-255]. The value of 255 means ≥ 255 .

offset: Tare weight

This is the tare weight (unladen weight) and is sent every 2 hours.

POST `example.com/webhook`

Example request body:

```

{
  "timestamp": 1648642396,
  "serial": "CODEABFFEE",
  "device_id": "secret-red-wake",
  "type": "offset",

  "activation": {
    "latlng": "46.535,6.569",
    "site_id": "rdc20",
    "activation_date": 1648641376
  }
}

```

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```
},  
  
"body": {  
  "header": "fa",  
  "flags": "ac",  
  "weight": 31660,  
  "raw_adc_pos": 4999,  
  "raw_adc_neg": 4986,  
  "stddev": 0,  
  "temperature": 20  
}  
}
```

Request JSON Object

- **timestamp** (*integer*) – Epoch timestamp (UTC+0): seconds since January 1, 1970 12:00:00 AM
- **serial** (*string*) – device serial number
- **device_id** (*string*) – human readable hash of serial number that is also printed on device label
- **type** (*string*) – message type (one of `weight`, `status`, `offset`, or `calibration`)
- **activation** (*string*) – when and where this device was last activated
- **header** (*integer*) – internal device status header (0xFA)
- **flags** (*integer*) – reserved
- **raw_adc_pos** (*integer*) – raw tare ADC value from “positive excitation”
- **raw_adc_neg** (*integer*) – raw tare ADC value from “negative excitation”
- **stddev** (*integer*) – tare measurement series standard deviation in 0.1 grams
- **temperature** (*integer*) – temperature in degrees Celsius (signed value)

calibration: Calibration result

This message is sent after the user has performed a calibration.

POST `example.com/webhook`

Example request body:

```
{  
  "timestamp": 1648642396,  
  "serial": "CODEABFFEE",  
  "device_id": "secret-red-wake",  
  "type": "calibration",  
  
  "activation": {  
    "latlng": "46.535,6.569",  
    "site_id": "rdc20",  
  }  
}
```

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```
    "activation_date": 1648641376
  },
  "body": {
    "slope": 29,
    "intercept": 25,
    "temperature": 2,
    "r2": 1.0
  }
}
```

Request JSON Object

- **timestamp** (*integer*) – Epoch timestamp (UTC+0): seconds since January 1, 1970 12:00:00 AM
- **serial** (*string*) – device serial number
- **device_id** (*string*) – human readable hash of serial number that is also printed on device label
- **type** (*string*) – message type (one of `weight`, `status`, `offset`, or `calibration`)
- **activation** (*string*) – when and where this device was last activated
- **slope** (*integer*) – linear regression slope: (raw ADC counts per 10mg)
- **intercept** (*integer*) – linear regression intercept: (raw ADC value)
- **r2** (*float*) – linear regression R^2
- **temperature** (*integer*) – temperature in degrees Celsius (signed value)

HTTP ROUTING TABLE

/example.com

POST example.com/webhook, 6