Timed Animal Manipulation Data Logger (TAMDL)

Automating the recording and manipulation of animal behavior

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Uses of Long Range TAMDL:

- Automated timed activation of devices/external triggers
- Installed on open nests (e.g. shorebirds, nightjars, birds of prey) or larger enclosed nests (e.g. owl nest box) for any species that can be equipped with an RFID pit tag/transponder
- Recording activity patterns
  - Incubation and brooding patterns, parental investment, sleeping behavior, return rates to breeding sites

TAMDL circuit board

Battery pack (lithium ion)

Radio clock receiver

Nest of study species

RFID Antenna

Configuration and Output Example:

15cm

50cm

RFID configuration (UA1)
RFID_TYPE = LR (long range reader)
RFID_POWER = UA1
RFID_ABSENT_DETECT_TIMEOUT = 5s

Operating times for UA1 output [hour:min]
UA1_ON_TIME_1 = 08:00
UA1_OFF_TIME_1 = 18:00

Power Cycle Interval for UA1 output [s] → Battery Saving
UA1_INTERVAL = 20
UA1_ON_DURATION = 10

Follow-up times after measurement [s]
UA1_MEASURE_FOLLOW_UP_TIME = 30

RFID Reader Output Example
20181122-152000.000 Transponder:
9516B2B43A6F0001
20181122-152500.000 Transponder:
9516B2B43A6F0001 ABSENT