Timed Animal Manipulation Data Logger (TAMDL)

Automating the recording and manipulation of animal behavior

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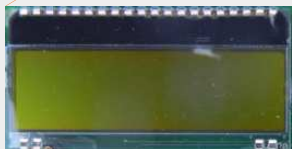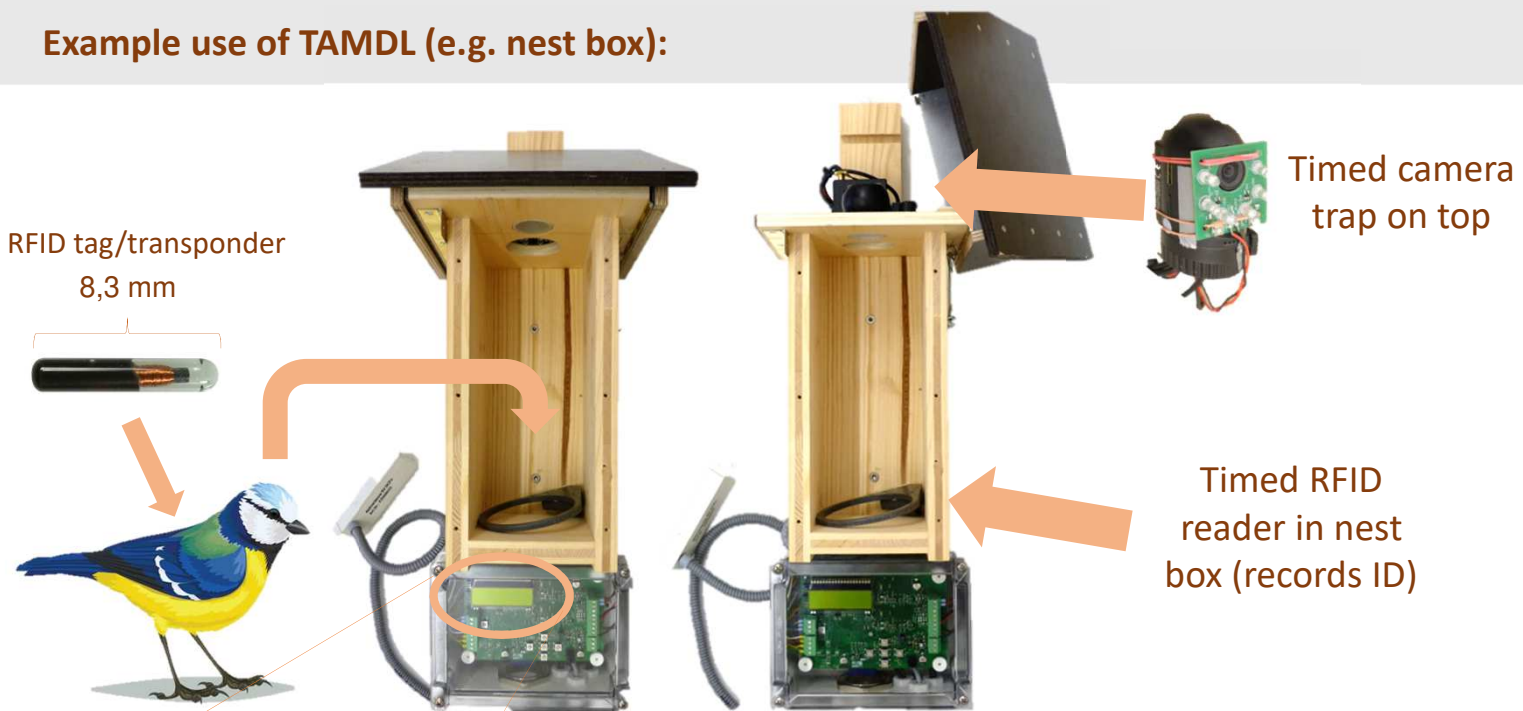Max-Planck-Institut
für Ornithologie

Uses of TAMDL:

o Timed activation of devices such as solar panels, automatic feeders, animal traps, and other electronic devices
o Ideal for nest boxes, roosting boxes, and open nests
o Can be combined with many external triggers such as pit tag (RFID) readers, camera traps, light barriers, lights, etc.
o Manipulation of organisms at e.g. simulating early light/dawn with timed lights in nest boxes

Benefits of TAMDL:

o Automated device → no observer bias, accurate recording, minimal disturbance to study species
o Only uses sleep and deep sleep mode to save battery life
o Large SD card data storage
o Timer connected to external devices (e.g. camera trap) lets you control the amount of data collected and energy output

Example use of TAMDL (e.g. nest box):

RFID tag/transponder 8,3 mm

Timed camera trap on top

Timed RFID reader in nest box (records ID)

LCD can be used to view settings (pushbuttons on the circuit board to go through different settings)

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Example Timer Setup:

Operating times for UA1 output [hour:min] → Camera Trap
UA1_ON_TIME_1   = 23:00
UA1_OFF_TIME_1   = 00:00
UA1_ON_TIME_2   = 05:00
UA1_OFF_TIME_2   = 06:00
UA1_ON_TIME_3   = 11:00
UA1_OFF_TIME_3   = 12:00
UA1_ON_TIME_4   = 17:00
UA1_OFF_TIME_4   = 18:00
Operating times for UA2 output [hour:min] → RFID Reader
UA2_ON_TIME_1   = 09:00
UA2_OFF_TIME_1   = 11:00