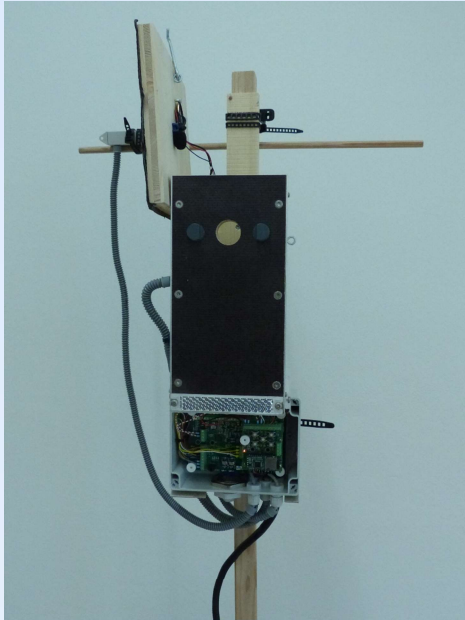# Multifunctional Mainboard to Observe and Manipulate Organisms (MOMO) Audio Application
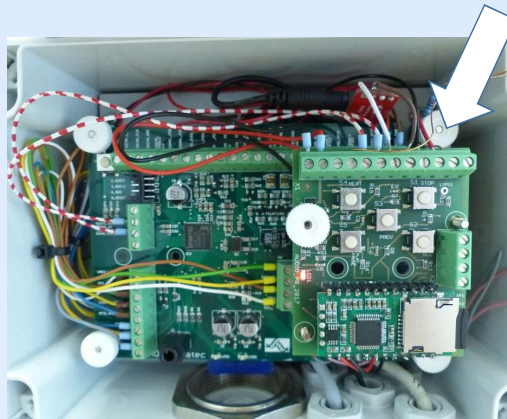
Automating the recording and manipulation of animal behavior

Peter Loës & Peter Skripsky
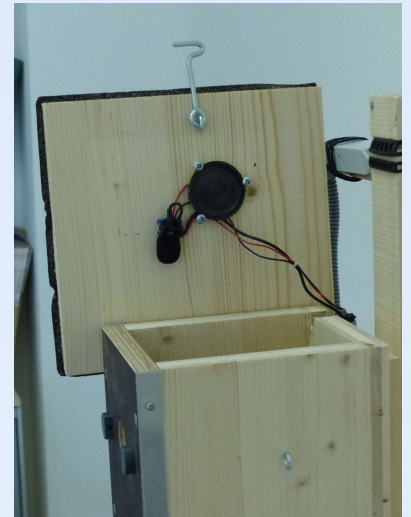**Department Kempenærs**

Smart Nest Box, MOMO Board with Audio

Audio Board with FN-RM01
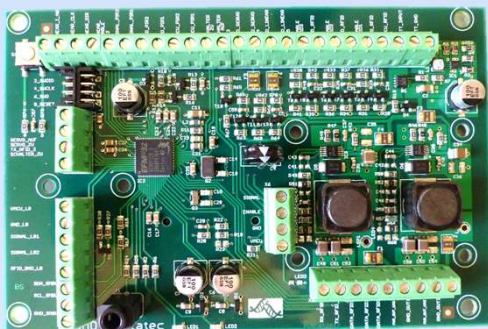Audio Recorder and Player Module

Speaker and microphone on top

APPLICATIONS OF THE MOMO (Audio):

- Targeted manipulation of 1000 and more individuals
- The Audio is combined to play and record audio files over time
- Could be used in other settings e.g. nesting or roosting areas to collect audio data.

POSSIBLE CONFIGURATION SETTINGS:

Operating time of the Audio [hour:min]
ON_TIME = 04:00
OFF_TIME = 23:00

RFID settings [sec]
RFID_TYPE   = SR   # Short Range reader
RFID_POWER   = UA1 # 5V output
RFID_ABSENT_DETECT_TIMEOUT = 5

Audio configurations
Duration in seconds
ID = 0123456789012345:{PLAYBACK}:{RECORD}
ID = 0123456789012345:20:20
Combined: first 20 sec. playback
second 20 sec. record
ID = 0123456789012345:20:0
20 sec. playback
ID = 0123456789012345:0:20
20 sec. record

MOMO Circuit Board

Max-Planck-Institut
für Ornithologie

MAX-PLANCK-GESELLSCHAFT