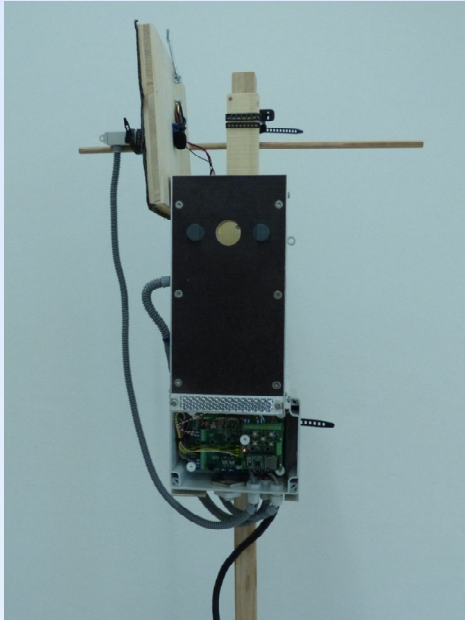# Multifunctional Mainboard to Observe and Manipulate Organisms (MOMO) Audio Application
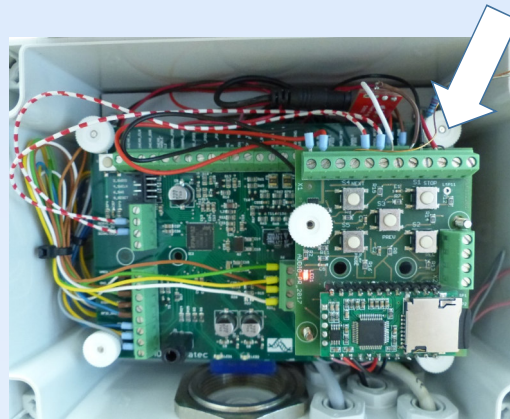
Automating the recording and manipulation of animal behavior
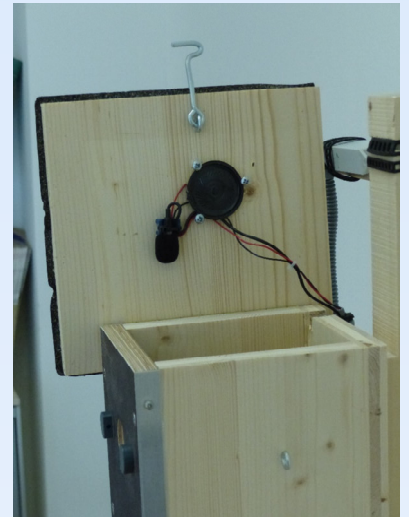
Peter Loës & Peter Skripsky
Department Kempenærs

Smart Nest Box, MOMO Board with Audio

Audio Board with FN-RM01 Audio Recorder and Player Module
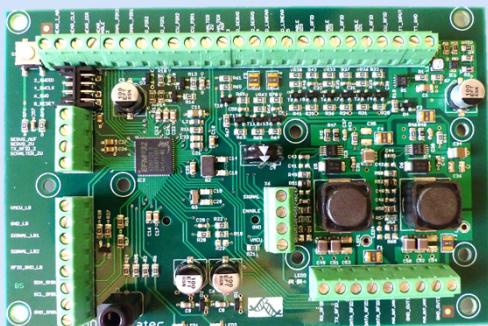

Speaker and microphone on top

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_ 1~5 [hour:min] = 04:00
OFF_TIME _1~5 [hour:min] = 23:00

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

ID / AUDIO - CONFIGURATION SETTINGS:

ID = 123456789012345:{PLAYBACK}:{RECORD}:{PLAYBACK_TYPE}
ID = 0123456789012345:20:0:1
20 sec. **playback** P001.wav/mp3

ID = 0123456789012345:0:20
20 sec. **record** R001.wav up to R999.wav

ID = 0123456789012345:20:20:2
Combined: first 20 sec. **playback** P002.mp3/wav
second 20 sec. **record** R100.wav up to R999.wav

MOMO Circuit Board

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