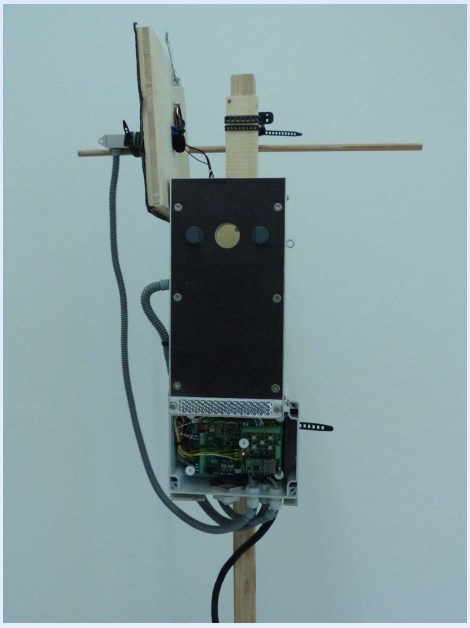
Multifunctional Mainboard to Observe and Manipulate Organisms (MOMO) Audio Application

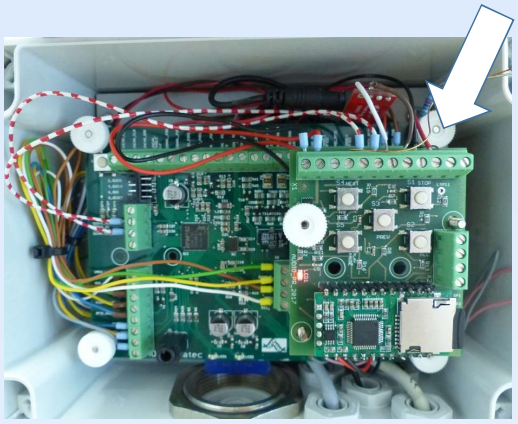
Automating the recording and manipulation of animal behavior

Peter Loës & Peter Skripsky
Department Kempenærs

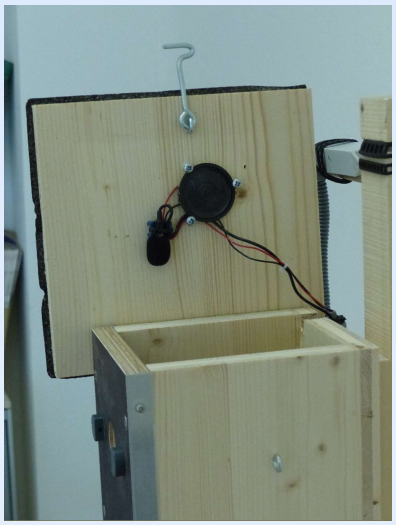
Smart Nest Box, MOMO Board with Audio



Audio Board with FN-RM01
Audio Recorder and Player Module



Speaker and microphone on top



APPLICATION AUDIO

- Targeted manipulation of 1000 and more individuals.
- Pit-tag number(RFID) run Playback- or Record-Soundfile
- Random Playback Audio file P001.wav/mp3 up to P005.wav/mp3.
- Record Audio files R001.wav up to R999.wav
- Combined Audio Playback and Record over time.

MOMO Circuit Board

RIFD(pit-tag number) : AUDIO SETTINGS

123456789012345:{PLAYBACK}:{RECORD}:{PLAYBACK_TYPE}
Playback:
ID = 0123456789012345:20:0:1
20 sec. playback P001.wav/mp3
Record:
0123456789012345:0:20
20 sec. record R001.wav up to R999.wav
Combined:
0123456789012345:30:10:2
30 sec. playback P002.mp3/wav
10 sec. record R001.wav up to R999.wav
Random Playback with Playback_Type:
0123456789012345:10:0:7
10 sec. playback
Random playback_type(7): P001.mp3/wav or P002.mp3/wav

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

Max-Planck-Institut
für Ornithologie

MAX-PLANCK-GESELLSCHAFT