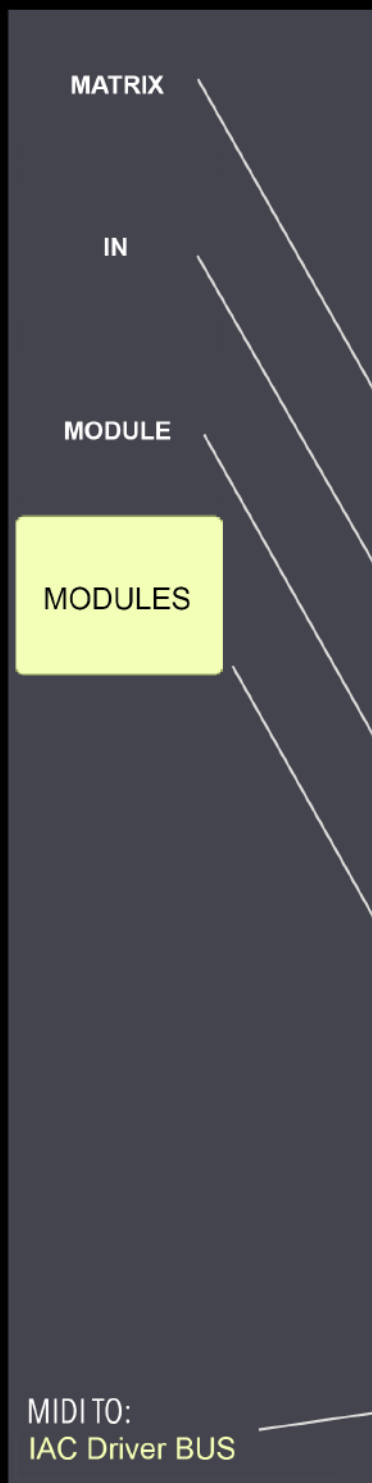


# INTERFACE #1

MATRIX software is the control interface between the data flowing from the external sensor system and streams sent to the artist.



MAIN page:  
routing controls for all the inputs  
and the outputs

INPUT page:  
abilitate the INPUT  
monitoring data flows

OUTPUT page:  
abilitate the OUTPUT  
monitoring data flows

MODULES page:  
technical settings for differents  
sensors' modules

SELECT MIDI out port

# INTERFACE #2

RND Process: gradual process of column and row random picking intersection at random intervals of time;  
 ALL MATRIX: all the matrix exposed to the process  
 COLUMN/ROW: choose a column/row to apply the process to.

RND Instant: instantly creates a total new random matrix;  
 1/COLUMN: an input can control only 1 output  
 DRUNK: an input can control 1 or more outputs.

DE-ACTIVATE: Disable all the matrix's cells  
 ACTIVATE: Enable all the matrix's cells  
 CLEAR ALL: Clear all the cell states  
 RESET: Initialize all the cell states as default

N.B.

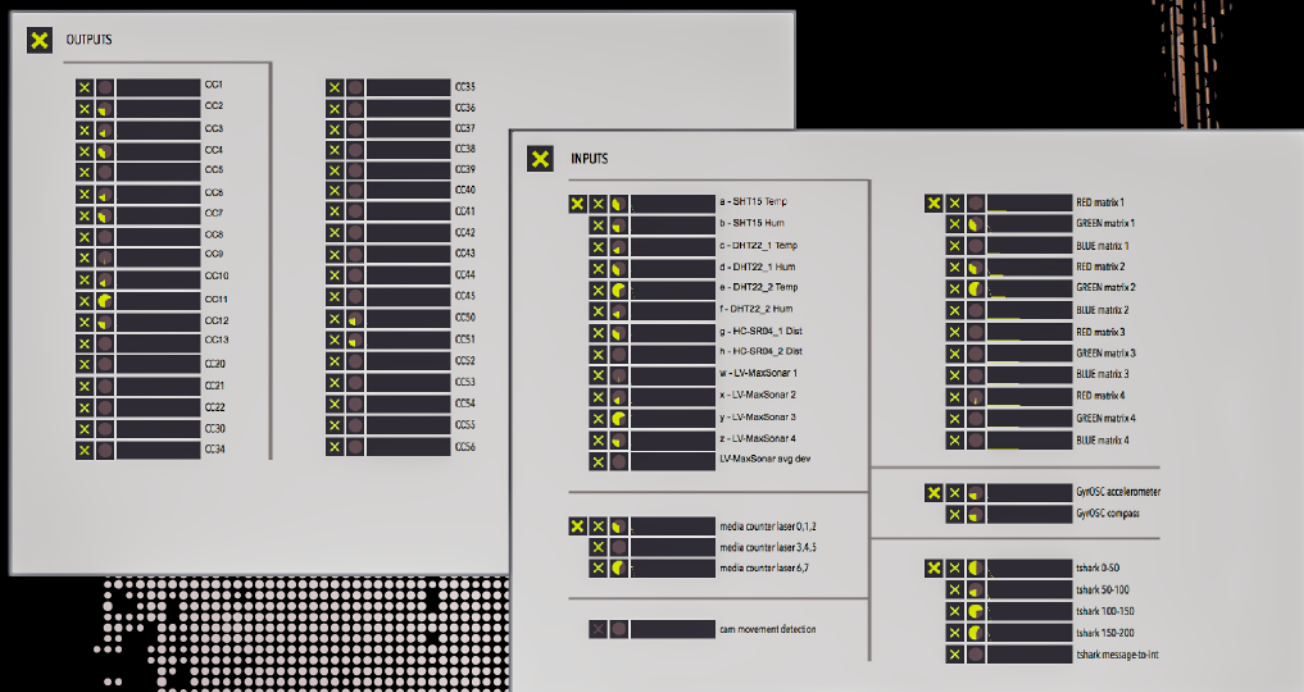
- In the matrix an OUTPUT can be controlled at least by ONE INPUT.
- Instead, as DEFAULT (without the selection of "only 1 in per out") an INPUT can control 1 or more outputs.



# INTERFACE #3

Each input or output has a pre-switch monitoring system and can be individually enabled/disabled.

A Bigger switch in the corner act as universal ON/OFF for all the inputs/outputs.





# INTERFACE #4

## ARDUINO Sensor Receiver

- serial monitor from arduino UNO
- all data fluxes from sensors, MIDI scaled

## ARDUINO Laser Wire-trap

- serial monitor from arduino MEGA
- transition counter for each laser wire-trap
- nr. of transition to send a MIDI note

## SMARTPHONES Parameters RX

(only 10 devices accepted  
for testing)

- polling button to initialize OSC connections
- each device:
  - accelerometer scaled data,
  - compass scaled data,
  - port for communication

## NET Sniffer

- communication counter stages
- alpha-numerical message content to MIDI value

## CAM Movement Detection

- camera on/off, dimensions and axis settings
- real-time camera window

## RGB Multi-MTX

- matrix dimensions' controls
- reset button
- real-time 4 matrix pixelated camera
- RGB MIDI scaled values for each matrix

ARDUINO SENSORS RX

0113

>0

a - SHT15 Temp

>32

b - SHT15 Hum

>22

c - DHT22\_1 Temp

>44

d - DHT22\_1 Hum

>0

e - DHT22\_2 Temp

>25

f - DHT22\_2 Hum

>45

g - HCSR04\_1 Dist

>0

h - HCSR04\_2 Dist

>2

w - LV-MaxSonar 1

>20

x - LV-MaxSonar 2

>85

y - LV-MaxSonar 3

>99

z - LV-MaxSonar 4

>3

LV-MaxSonar avg dev

ARDUINO LASER WIRE-TRAP RX

0 11 21 30 40 50 60 70

1

>0

10 note1

20 note2

30 note3

40 note4

2

>0

10 note1

20 note2

30 note3

40 note4

3

>0

10 note1

20 note2

30 note3

40 note4

4

>0

10 note1

20 note2

30 note3

40 note4

5

>0

10 note1

20 note2

30 note3

40 note4

6

>0

10 note1

20 note2

30 note3

40 note4

7

>0

10 note1

20 note2

30 note3

40 note4

8

>0

10 note1

20 note2

30 note3

40 note4

SMARTPHONES PARAMETERS RX

Poll

Accelermtr

Compass

Port

>0

>0

9990

>0

>0

9991

>0

>0

9992

>0

>0

9993

>0

>0

9994

>0

>0

9995

>0

>0

9996

>0

>0

9997

>0

>0

9998

>0

>0

9999

>29

>30

NET SNIFFER RX

0

IP Stage 1 (1-50)

0

IP Stage 2 (51-100)

0

IP Stage 3 (101-150)

0

IP Stage 4 (151-200)

>0

Message to MIDI scale

CAM MOVEMENT DETECTION

On/Off

>0

470

Set X

209

Set Y

Flip AXIS

X

X

RGB MULTI-MATRIX

>8

Width

>2

Height

RESET

>0

>0

>0

>0

>0

>0

>0

>0

>0

>0

>0

>0



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MILAN  
2017

SODA  
MATRIX  
—project