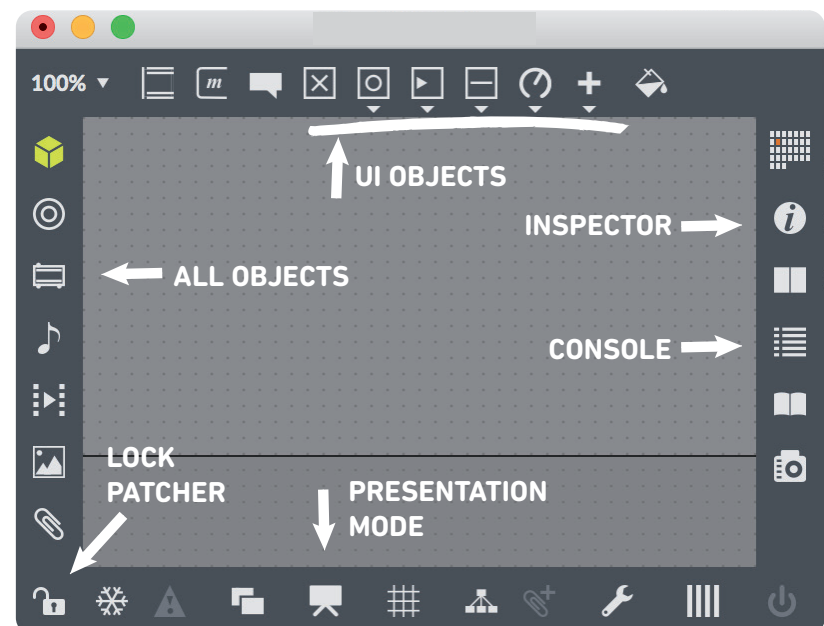


MAX CHEATSHEET 1

KEYBOARD SHORTCUTS!

- CMD + CLICK** ANYWHERE IN PATCHERWINDOW TO LOCK IT
- CMD + CLICK** ON UI OBJECT (e.g. SLIDER) TO EDIT ITS VALUE IN AN UNLOCKED PATCH
- HELP** RIGHT CLICK ON AN OBJECT > **HELP**
- n** CREATE A **NEW OBJECT**
- b** CREATE A **BANG** (= bang)
- m** CREATE A **MESSAGEBOX** (can be used as a debugger / monitor)
- i / f** CREATE A **NUMBOX** OR A **FLONUMBOX** (= 1 / 1.)
- t** CREATE A **TOGGLE** (= 1 / 0)

PATCHER WINDOW



AN OBJECT'S ANATOMY _n

object

- EVERY OBJECT HAS A **PARTICULAR FUNCTION**
- EVERY OBJECT HAS **INLETS AND OUTLETS**
- THE **LEFTMOST** INLET IS HOT – IT TRIGGERS THE OBJECT'S FUNCTION (AND THEREFORE OUTPUT)
- **ALL OTHER INLETS** ARE COLD – THEY'RE USED TO CHANGE ARGUMENT (THIS FUNCTION'S "SETTINGS")

- ARGUMENTS CAN BE SET WHEN CREATING THE OBJECT → **random 5**
- ARGUMENTS CAN BE OVERWRITTEN **10**

random 5

(BUT MIND: IT WON'T CHANGE IN THE OBJECT'S NAME!)

MESSAGE BOXES _m

OUTPUT THE MESSAGE
(AND REPLACE ARGUMENTS)

SET THE MESSAGE WITH
NO OUTPUT (ALSO GOOD FOR MONITORING!)

1 2 3 4

- A MESSAGE BOX IS AN OBJECT, TOO!
- IT CAN BE USED TO:
 - > **DISPLAY THINGS** (= E.G. THE OUTPUT OF OTHER OBJECTS)
 - > **SEND MESSAGES** TO OTHER OBJECTS
 - > **FORMAT STRINGS AND COMMANDS**
- A MESSAGE BOX CAN CONTAIN ANY DATA TYPE!


- **ARGUMENTS CAN BE REPLACED** IN MESSAGES

1 2
i'm benni

hello \$1 \$2

hello i'm benni

"DATA TYPES"

INTEGERS	22	0	1
FLOATS	22.2451	1.1	999.123457
LISTS	1 2 3 4	hello stupid	1.1 211 hello
BANG	bang		
SYMBOLS	"1 2 3 4"	"bier wut"	"1.1 hallo"
SIGNALS			

MOST OBJECT "EXPECT" CERTAIN DATA TYPES (AND REACT ACCORDINGLY)

hello i'm benni

A SENDING A NON-NUMBER TO A [+] OBJECTS PRINTS AN ERROR INTO THE CONSOLE

B SENDING A NUMBER TO A [+] OBJECTS OUTPUTS THE RESULT

C IF YOU WANT THE OBJECT TO WORK WITH FLOATS, IT IS NECESSARY TO PRE-DEFINE IT WITH A FLOAT

! SENDING A FLOAT TO AN OBJECT DEFINED TO HANDLE INTEGERS WILL USUALLY TRUNCATE THE OUTPUT

+ 1

1
+ 1

1.2
+ 1.

+ 1.

2.24 5
unpack i i
2 5

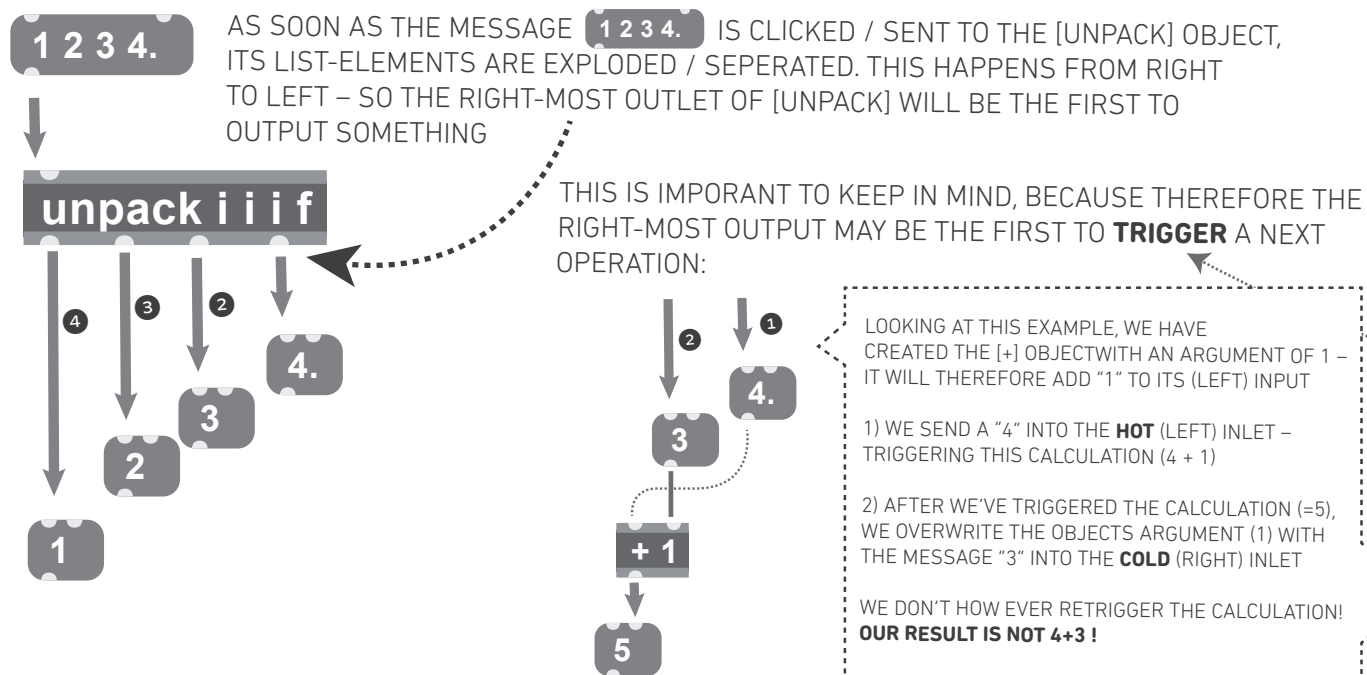
MAX CHEATSHEET²

ORDER OF MESSAGES

THIS IS CRUCIAL!

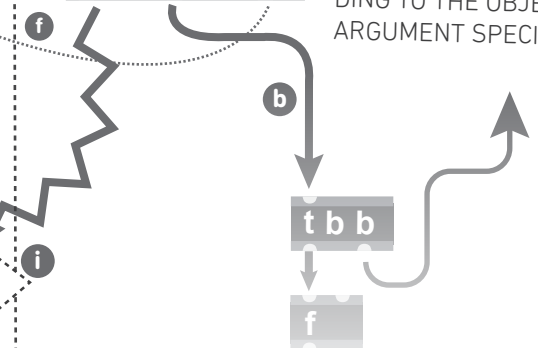
BE AWARE, THAT MESSAGES ARE ALWAYS ORDERED:

RIGHT TO LEFT



USE TRIGGERS!

TRIGGER, ALSO INSTANTIATED WITH THE SIMPLE NAME OF **T**, OUTPUTS ANY INPUT RECEIVED IN ORDER FROM **RIGHT TO LEFT** AND FORMATTED ACCORDING TO THE OBJECT-ARGUMENT SPECIFIED



SUMMING IT UP:

CREATING AND SETTING UP OBJECTS

THE NAME WE GIVE OBJECTS DEFINES "WHAT THEY ARE"

THINK: DELAY PEDAL – WE HOOK IT UP TO DELAY A GUITAR SIGNAL

THE ARGUMENTS WE GIVE OBJECTS DEFINE "HOW THEY BEHAVE"

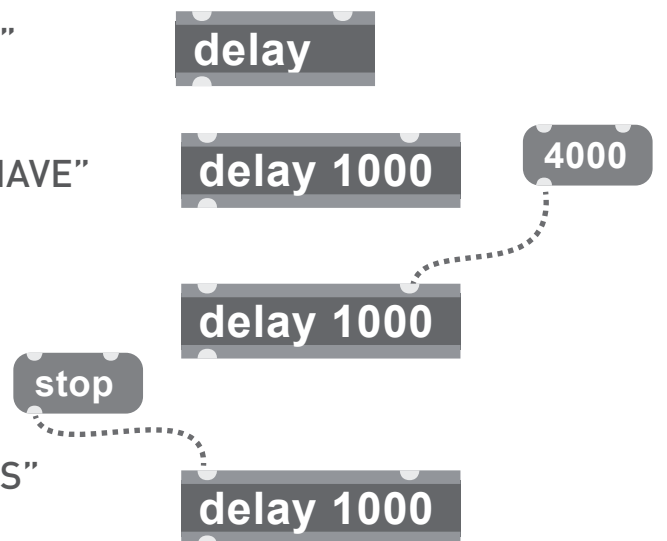
THINK: YOU SET THE DELAY TIME ON THE PEDAL BEFORE YOU PLAY

ARGUMENTS CAN USUALLY BE CHANGED DYNAMICALLY, ALTERING AN OBJECT'S BEHAVIOUR

THINK: MAYBE YOU WANT MORE DELAY LATER IN THE SONG

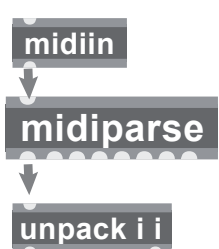
PARTICULAR MESSAGES ARE RESERVED AND MAY ACT AS "COMMANDS"

THINK: YOU WANT TO CLEAR THE FEEDBACK IMMEDIATELY WITHOUT CHANGING THE DELAY TIME OR THE PEDAL

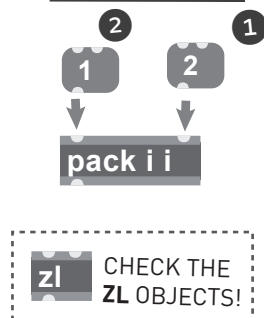


SOME RANDOM REMINDERS

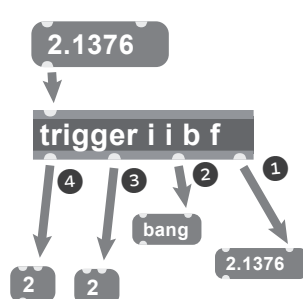
UNPACK LISTS



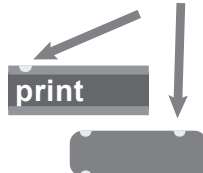
UNPACK LISTS



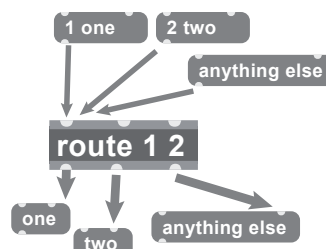
ORDER MESSAGES



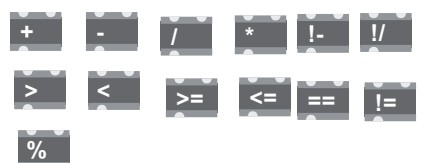
DEBUGGING



ROUTING



MATH & LOGIC



GATES & SWITCHES

