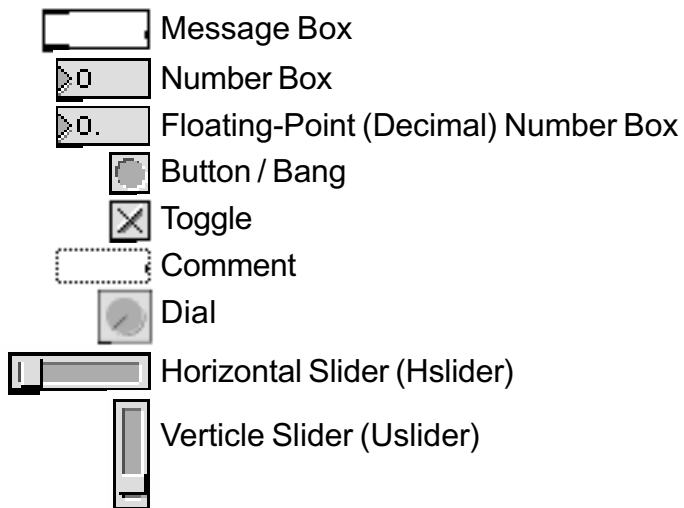


Objects

This list of objects are those that have been covered thus far in this course. Please review them to be sure that you understand these fundamental objects.

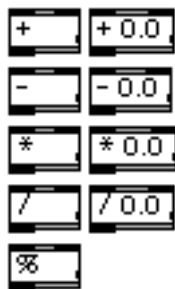
User Interface Objects



MIDI Objects



Mathematical Objects



Other Objects



Electronic Music Composition: MAX
Tuesday - September 21, 1999
Class Notes

Class Today

1. Questions and help on current assignment and Max in general.
2. Class Quiz
--Break--
3. Return/Review Quiz - Discuss
4. Introduce Max resources
5. Build a patch to generate random "music"

MAX Resources

Max List

<http://www.music.mcgill.ca/max/>

The MAX listserv is a newsgroup type mailing list where people can discuss and seek answers to MAX and MSP related topics/questions.

To subscribe to the listserv, submit a subscription request by sending an email message to listserv@lists.mcgill.ca with "Subscribe MAX" in the message body (not the subject). For example, your mail client (Eudora, Netscape, PINE, ELM) might show something like this:

From: "TimPlace" <tplace@cctr.umkc.edu>
To: listserv@lists.mcgill.ca
CC: .
Bcc: .
Subject: Doesn't Matter

subscribe max

Book:

Composing Interactive Music
(Techniques and Ideas Using Max) by
Todd Winkler. 1998 - MIT Press.

An excellent book to not only guide you through how to use Max, but to give you an idea of what you can do with Max. It comes with a CD-ROM of all of the books examples.

Assignment(s):

- A. Review the Max tutorial through number 14
- B. Continue work on your previous assignment

See back for today's new material

New Objects

Kslider (keyboard)



Kslider is a user interface object located on the tool palette at the top of the patcher window in MAX (when it is unlocked of course). The two outlets are PITCH and VELOCITY in the form of a number from 0-127. By hooking it up to a **makenote** object and a **noteout** object you can play notes on a MIDI synthesizer. If connected to a **notein** object by the inlet on the top, it will display the most recently played note.

Random and Urn (random number generators)



Random is an object that will generate random numbers whenever it receives a BANG in the left inlet. The right inlet takes a NUMBER (int) which controls the range of random numbers. For example: if the number 128 was fed to the right inlet, **random** would generate a random number between 0 and 127 (0 counts as one of the 128 values). You may also specify the range in the form of an argument to **random** rather than sending a NUMBER to the right inlet.



Urn is another object to generate random numbers. Much like **random**, **urn** generates a new random number each time it receives a BANG in its left inlet. *The difference is: urn* does not repeat the same number twice until it is reset by a CLEAR message to the left inlet.

Abs (Absolute Value Operand)



Abs takes a NUMBER from its inlet and gives the number's absolute value at its outlet. Another way of saying this is to say that it strips off the negative sign of any negative number that comes in. This can be useful for such things as inverting pitch or velocity in a patch.