

MAX PROGRAMMING

“Connect to anything.”

– Cycling '74,

Reading

Max Getting Started, v4.5 (Cycling 74: Palo Alto, 2005), pp. 3, 9-13, 17-19 & 28-31.

Terms & Concepts

<p>Max Programming Visual programming language Patcher, or program Object-oriented programming Objects - Inlets/outlets - Assistance text Patch cords (delete with <i>esc</i>) Message (m) Lock/Unlock – Run/Edit Comment (c) Self-commenting code Subpatcher (<i>p</i>) Encapsulation</p> <p>Program Execution Forced Execution Bang! Triggering by left-most-inlet <i>trigger (t)</i> Order of Execution - Right-to-left - Bottom-to-top Runtime issues - Max Console (<i>print</i>) - Error messages - Debugging - Stack overflow</p> <p>Working with Objects Copy object (Option-drag) Help on ‘object’ (Option-click) Inspector (Cmd-i) Arguments - Obligatory - Optional Key commands (x): - z, n, t, b, c, i, f & m</p> <p>Messages Data types - Int & Float - List - Bang - Symbol - Any message</p>	<p>Send/Receive <i>send (s)</i> <i>receive (r)</i></p> <p>Working with Data Number boxes (int. vs. float) Number box (int) - Decimal - Pitch (C4) - Binary Variables: <i>int & float</i> <i>key</i> (ASCII) <i>pack/unpack</i> <i>table & coll</i></p> <p>Math Objects +, -, *, / and % <i>expr</i> <i>random</i></p> <p>MIDI Objects High-level MIDI messages - <i>notein/noteout</i> - <i>ctlin/ctout</i> - <i>pgmin/pgmout</i> - <i>bendin/bendout</i> Note on/off - <i>makenote & noteout</i> - <i>stripnote</i> - <i>flush</i> Low-level MIDI messages - <i>midin/midiout</i> - <i>midiparse & midifformat</i></p> <p>Routing, Selection & Counting Objects <i>gate</i> <i>select (sel)</i> <i>counter</i></p> <p>Timing Objects <i>metro</i> <i>tempo</i> <i>pipe</i></p>	<p>User Interface Objects <i>button (b)</i> – Bang! <i>toggle (t)</i> – off (0)/on (1) <i>sliders</i> - <i>kslider, nslider & dial</i> <i>panel</i> (Arrange > Send to Back) <i>umenu</i></p> <p>Human-Interface Design Resize an object Nudge keys (cursor arrows) Arrange > Align Distribute Object > - Show Fonts - Color - Fix Width (Cmd-j) - Hide/Show on Lock - Seg. Patch Cords (Cmd-y) Presentation mode</p> <p>Program Initialization <i>loadbang</i> <i>loadmess</i></p> <p>Environment Settings Max > Preferences Options > Overdrive Options > MIDI Setup...</p> <p>Documentation & Tutorials Max Tutorials, Topics & Guides Max Reference Interactive Help files</p> <p>File Extensions .maxpat, .txt, .coll, .mid, etc.</p> <p>Application Types Generative Parameter mapping Real-time interactive Transformative Sequenced Standalone</p>
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Reference

Cycling 74. 2018. *Max 8 Help and Documentation* (Palo Alto, CA: Cycling 74). Available online at: <https://docs.cycling74.com/max8/>.