

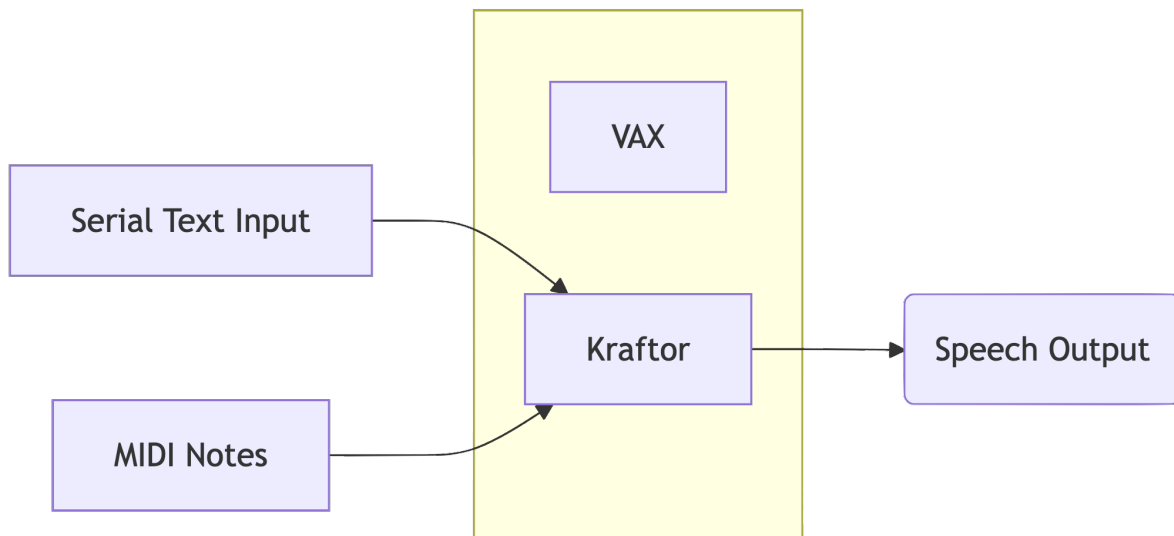
Vax Serial text to Midi for Kraftor

This firmware allows [Kraftor](#) to trigger VAX speech from MIDI notes.

The sentences are edited and stored in Kraftor using a serial terminal software.

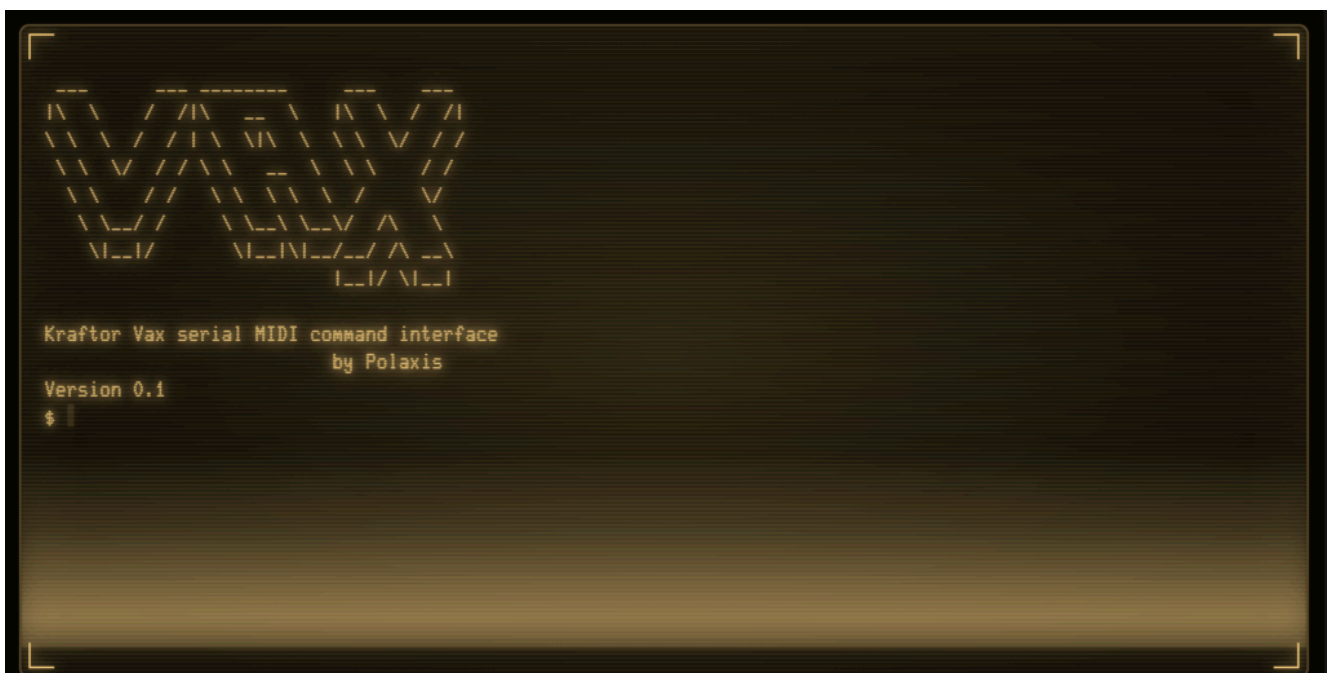
| Date | Revision | Changes |
|------------|----------|----------------------|
| 2025-09-13 | 0.2 | Modified text parser |
| 2025-09-01 | 0.1 | initial release |

Connections



- **Serial USB:** Connect your favorite serial terminal to Kraftor via USB at 115200 bauds.
- **MIDI:** Connection can be made via USB or TRS MIDI type B.

You can also use [Echo](#), our Serial terminal that runs in a browser!





[Echo Polaxis Serial Console](#)

1 file(s) 14.00 KB

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You can also use [Vax vox designer](#) to tune the voice with a graphical interface and a dedicated app that also runs in the browser :

The screenshot displays the Vax vox designer web interface. It is divided into several sections:

- Voice tuning:** Features a dropdown menu for 'Name' with options: Paul (selected), Harry, Betty, Ursula, Dennis, Kit, Frank, Rita, and Wendy. Below this is a 'Rate' slider ranging from 75 to 600.
- Parameters:** Six adjustable parameters are shown with circular gauges: Average pitch (50-500), Pitch range (0-100), Breathiness (0-70), Head size (65-135), Laryngealization (0-100), and Gain (0-100).
- Command voice design:** A text input field for 'Designed voice command (editable)' containing the phonetic string 'ap 12 pr 38 br 6 ri 48 la 34 hs 50 sm 58 g5 86'. It includes 'Apply' and 'Reset' buttons.
- Voice test:** A text input field with 'welcome to the machine' and a 'Speak' button.
- Presets:** A list of presets, currently showing 'ok' with a 'Save' button, and a dropdown menu set to 'AlienResonance' with 'Delete', 'Export', and 'Import' buttons.
- MIDI notes pads:** A section header with a small upward arrow.
- Vax vox designer (Right Panel):** Shows the application name and version (1.0), a link to 'Polaxis', and connection details for 'Polaxis Kraftor'. The status is 'Connected to Polaxis Kraftor' with an 'ON' indicator. It includes 'Disconnect' and 'Refresh' buttons. The firmware version is 0.2. The MIDI output is 'Not connected'.



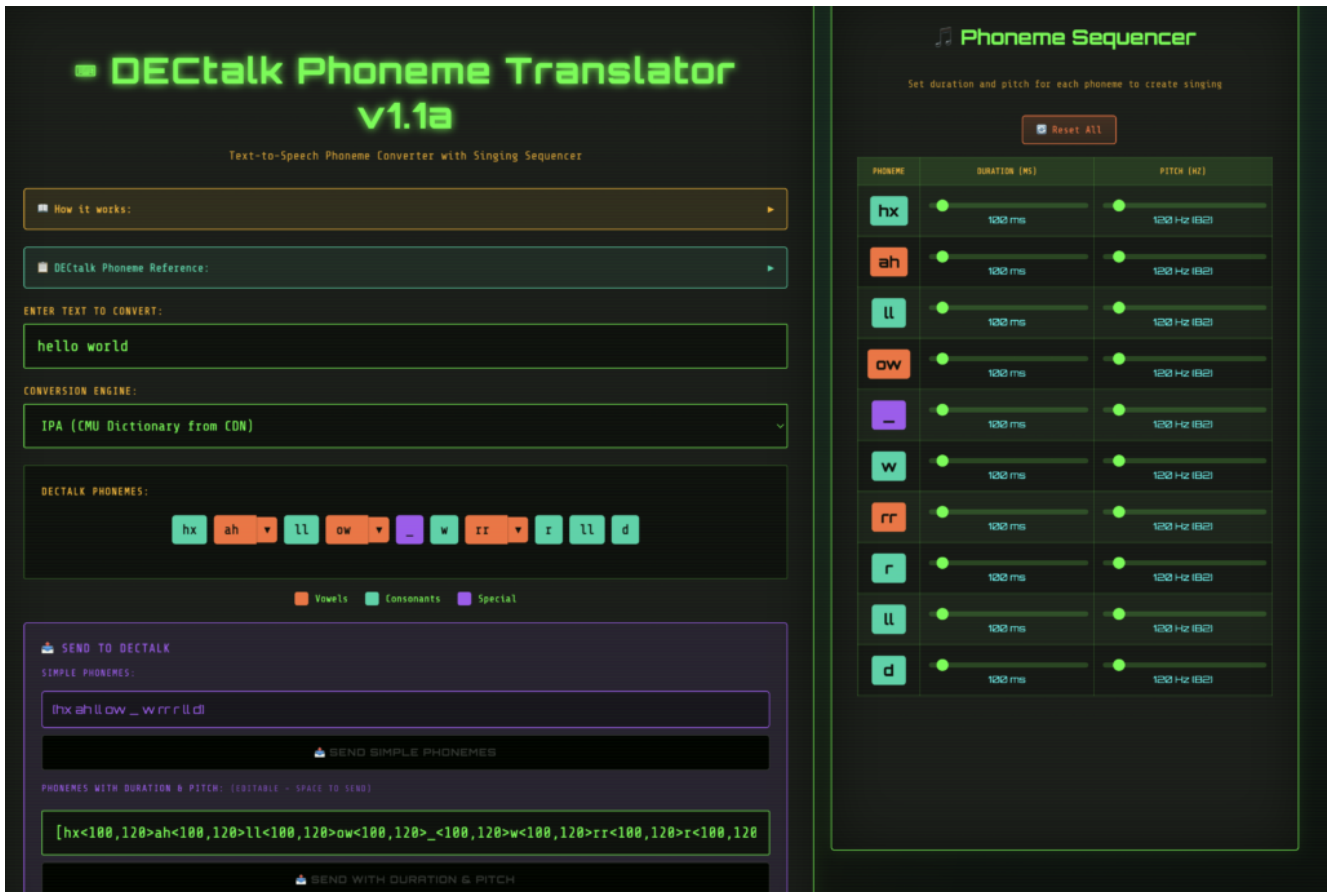
[Vax vox designer](#)

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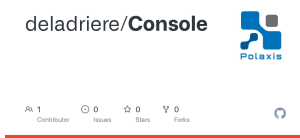
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You can also sequence the phoneme with pitch and duration



using this tool :



GitHub - deladriere/Vax_Phoneme_translator

Testing Sentences

Type the command /h for help. You should see the following command list:

- /a = about this code
- /c = clear display
- /h = display help
- /i = info about the current voice settings
- /d = design voice (e.g. /d ap 50 pr 20 br 10)
- /o = original voice settings
- /rxxx = voice rate (75-600)

/m = show MIDI settings
/vx = set voice number (0-8)
(Paul, Harry, Betty, Ursula, Dennis, Kit, Frank, Rita, Wendy)

[Enter] = type your text, then press enter to start speech
@ = use as MIDI note delimiter

You can now type some text and press Enter to hear the speech. Use the /r command to change the voice rate and the /v command to load a voice.

Phonetics

You can also use DECTalk phonetics between brackets to correct a pronunciation or to have it sing :

interpol and [D OW T SH AH<50>] bank
[W IY<500,90> AA<500,90> R DH AH R OW<500,90> B AA<200,5> T S]

Designing Voices

Use the /d command to design your own voice. Refer to the [DECTalk user guide](#) for more information about the various voice parameters. Check also the [VAX vox user manual](#).

Try these examples:

```
/d br 50 qu 100 ap 60 sr 0 hr 0 la 0 hr 30
```

```
/d ap 90 pr 0
```

| Option | Effect |
|--------|---------------------------------|
| ap | Average pitch, in Hz |
| as | Assertiveness, in % |
| b4 | Fourth formant bandwidth, in Hz |
| b5 | Fifth formant bandwidth, in Hz |
| bf | Baseline fall, in Hz |

| Option | Effect |
|--------|---|
| br | Breathiness, in decibels (dB) |
| f4 | Fourth formant resonance frequency, in Hz |
| f5 | Fifth formant resonance frequency, in Hz |
| hr | Hat rise, in Hz |
| hs | Head size, in % |
| la | Laryngealization, in % |
| lx | Lax breathiness, in % |
| nf | Number of fixed samples of open glottis |
| pr | Pitch range, in % |
| qu | Quickness, in % |
| ri | Richness, in % |
| sm | Smoothness, in % |
| sr | Stress rise, in Hz |
| sx | Sex 1 (male) or 0 (female) |

Preparing Your Sentences for MIDI Triggering

Use the @ delimiter to slice your entry into different sentences. Each sentence will be triggered by consecutive MIDI notes starting at note 36. Example:

```
$ @one@two@three@four
$ MIDI Note: 36: one
  MIDI Note: 37: two
  MIDI Note: 38: three
  MIDI Note: 39: four
$
```

MIDI Trigger

In your sequencer, select **Kraftor** as the MIDI USB input. Triggering MIDI notes will play the corresponding sentences as

defined above.

Firmware

Do not use this firmware for EMY or Terminal.

[How to install the firmware](#)



[VAX Serial MIDI for Kraftor](#)

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DECTalk user guide



[DECTalk user guide](#)

1 file(s) 1.08 MB

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