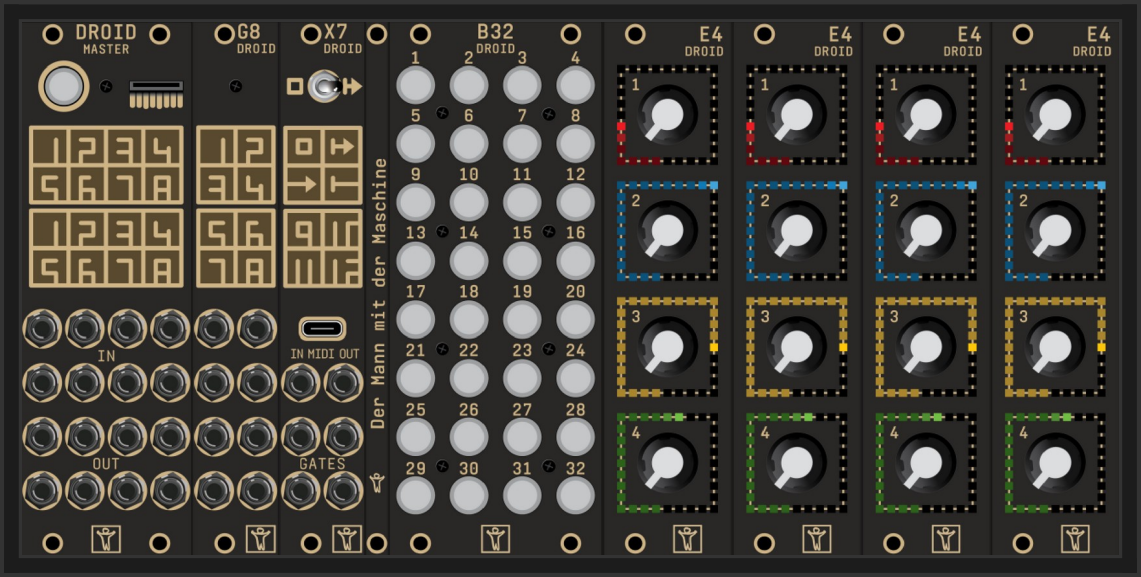
DROID blue-4

Release notes



These are the release notes for the DROID blue-4 firmware for your DROID master. Here you will learn about all the new features and also about a lot of bug fixes.

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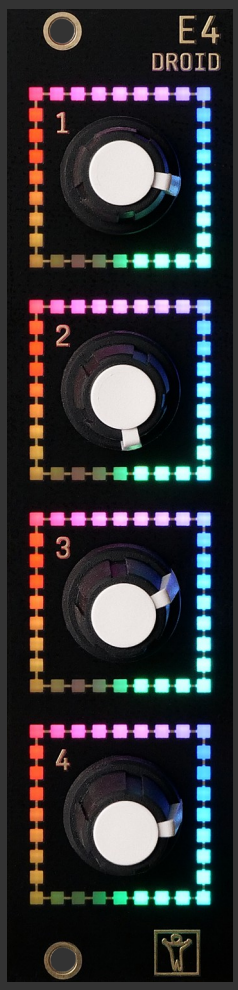
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HINTS FOR UPDATING

In the firmware ZIP file there is a subdirectory called **manual** with the current user manual for Droid. Please carefully read the chapter about how to update your firmware. In addition here are some hints:

- If you are still on the old **green-**8 firmware, you must first update to **blue-**1, then to **blue-2**.
- If you are one **blue-1**, you must first upgrade to **blue-2**.
- You may skip blue-3 and update directly from blue-2 to blue-4, if you like. Please read the release notes of blue-3 in this case. There are some things you might need to adapt in your patches.
- If you start the firmware upgrade and all LEDs of the master flash magenta, your firmware file is not accepted. In this case:
  - Put the firmware file (“droid.fw”) from your current firmware onto the SD card (that from blue-2)
  - Do an update of the bootloader as described in the user manual.
  - After that upgrade to blue-4.
- There is **no** new firmware for the X7 in this release. It is the same as in blue-3.
- There is **no** new firmware for the M4 in this release. It is the same as in blue-2.

GENERAL IMPROVEMETS



- Support for the new E4 controller. The E4 has four rotary encoders, each surrounded by a square LED ring with 32 multicolor LEDs. It is available as a single module or as a set of four.

NEW CIRCUITS

- [**encoder**]: New circuit for editing one value with an encoder of an E4.
- [**encoderbank**]: New circuit for editing up to eight values with up to eight encoders of one or two E4s
- [**encoquencer**]: New circuit implementing an interactive melody sequencer based on E4 encoders - with the exact same feature set as the [**motoquencer**].

NEW FEATURES

- [`calibrator`]: New output "correction" and new input "clearhere". Also add an example to manual for how you can use an E4 encoder for the tuning correction rather than buttons. Using an E4 for the calibration speeds up the process and gives better visual feedback.
- [`motoquencer`]:
  - Metricsaver now also works in the song forms 1 (AAAB) and 2 (AABB).
  - New input parameter “luckycvbase”, setting a lower limit on the randomized CV values of “luckcvs” (suggested by @effiksmusic).
- [`droid`]: New trigger input “statusdump”, that does the same as a double click on the master's button: create a status dump with all current values (see the manual for details on status dumps). This features was suggested by @vyger.
- [`midiin`] and [`midifileplayer`]: New trigger outputs “cctrigger1” ... “cctrigger4”. These trigger whenever a corresponding CC event is received. For example if you set “ccnumber2 = 17”, the output “cctrigger2” will send a trigger when a CC#17 event is processed. This helps in situations where devices use CCs as singular events, rather than for indicating a change in a continous value (suggested by @james232377).

BUG FIXES

- Fix too slow pot smoothing in complex patches with a long cycle time.
- Improved quality of random numbers. If you listened to the output of [`random`] as a pitch you would have noticed that - depending on the speed with that you read the random values - the "melodies" would contain certain almost repeating patterns. This has now been fixed.
- [`algoquencer`]:
  - Fix timing of “startofbar” trigger. It triggered at the last step instead of at the first. Also fix the barleds. They moved forward one clock tick too early. This was found by @supergregg.
  - After a reset there is now no active step anymore - until the next clock tick (so neither the first nor the last LED is highlighted after a reset).
  - Avoid reset to step 0 on an external change of the pattern length. This is now only done if the current step is beyond the new length.
  - Add safety code to prevent rare freezes. Those should have gone but @effiksmusic still claimed to had seen some.
- [`motoquencer`]:
  - Fix bug that appeared when switching fader modes when the CV is not quantized. Here at every switch the faders moved down just a little bit. This was due to an internal rounding error (found by @Kai01W and others).
  - Removed the parameter "copymode". It was never used. It did nothing. The manual lied. Sorry for this.
  - In the situation where “keyboardmode = 1” and “mute = 1” and a key is hold on the keyboard, at the start of every new step for a very short time the pitch of the step instead of that of the keyboard as output. This lead to audible glitches like fake gates. This has been fixed (found by @eising).
- [`motorfader`], [`faderbank`], [`fadermatrix`]: Fix strange color alterations if "ledvalue" is > 1. Now all values > 1 are capped and considered as 1 (maximum brightness).
- [`buttongroup`]: The change of the output signals was always one loop cycle behind the trigger of "buttonpress". That bug was introduced in blue-3 and is now fixed. The bug just appeared when maxactive > 1 and maxactive is less than the number of buttons, because in that range the detection of a simultanous press of multiple buttons needs to delay the output.
- Fix loading patch in certain rare situations (the animation looked like loading the patch was successful but still the old patch was active).
- [`contour`]: Fixed the impact of the “pitch” input. This was by a factor of 10 too weak. In order to get times halved, you now correctly need 1V (0.1) instead of 1 (10V).
- [`midiin`] and [`midifileplayer`]: The trigger outputs “trigger1” ... “trigger8” had been missing in both the manual and in the Forge. They got lost when blue-3 was crafted, but are here again.

DROID FORGE

- Support for the new firmware blue-4
- Support for the new E4 controller
- Fix loosing parts of a circuit comment when it contains empty lines (found by @eising).
- Fix freeze when sorting the parameters of a circuit when the parameter names contain two numbers, like "outputmix9in13".
- Fix popping up G8 when from the X7 a gate is used (found by @Seaweed).
- Fix clicking and hiliting of the RGB-LEDs on G8 and X7 (found by @reheller + @Steven Nance)
- Automatic backup files had not been created for patches that had never been saved (well, they did, but were ignored). No the Forge creates auto backup for patches that have never been saved, in special hidden files in "DROID Patches". If you start the Forge after a crash and such a file is present, you are asked for a real file to save it to (found by @eising).
- Fix crash when there is a switch from dark mode to light mode or vice versa if a program icon is currently visible (found by @eising).
- Show problem, when there are too many circuits of a type in the patch. Circuits with presets (such as pot or button) can only be up to 255 times in a patch. This check avoids confusion when the Forge shows the patch as OK but the Droid master will not load it.
- Fix the problem with the Forge being unresponsive on Windows systems with network drives that are not connected. When "Poll regularly for DROID SD card" is unchecked, all drives will only be scanned until the DROID SD-Card path is found. This path will then be stored in the settings and other drives won't be polled anymore. The stored path can be reset by checking "Poll regularly for DROID SD card" again and restart the Forge. This patch was contributed by @Sublett.
- Fix crash when pasting the contents of a cell (e.g. a cable name) when the cursor is in the header line of a circuit or on the name of a parameter (first column).
- Fix garbled patch file if you copy&paste text with newlines into a register label. Now the newlines are replaced with spaces.
- Fix garbled graphics when you search for a text in folded circuits.
- Hide deprecated circuits (`togglebutton`, `switchedpot`, `fourstatebutton`, `notchedpot`), as suggested by @eising. These circuits still work in blue-4 but have been superseeded by modern circuits long ago and will be removed from Droid any decade now. Don't use them if you build new patches.
- Create patch problems when deprecated circuits are used. You can switch off this in the preferences if you still want to use them.