

Alright Devices
Chronoblob
User's Manual

Version 1.1.0



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Description

Chronoblob is a digital delay module!

Unlike other delays, Chronoblob can sync to an external clock. Patch one to the SYNC input and choose a multiplier/divider for rhythmic delays. Or don't do that and just sweep TIME for traditional, continuously variable delay times. Do you!

Chronoblob's OTA-based analog FDBK circuit is CV-controllable and can be pushed up to and beyond unity for near-infinite decay or harsh saturating feedback. The guts of the feedback loop are made available to you, the discerning modular enthusiast, via the SEND and RETURN jacks. Patch in a lowpass filter for smooth, shadowy echoes, or cop two blobs and get yr pingpong on! Use the equal-power crossfading dry/wet control to dial in your mix.

Chronoblob's mode switch selects its response to delay time changes. Throw the switch up to select resampling mode and get sweeping pitch effects reminiscent of a tape loop or BBD. With the switch down, Chronoblob smoothly crossfades between delay taps for quicker, more subtle changes. Patch in a clock and sequence the TIME CV input in this mode for rhythmic ratcheting delays!

Chronoblob also uniquely features a HOLD switch and gate input to freeze the audio buffer. Punch that shit and modulate TIME for mad stutter and glitch!

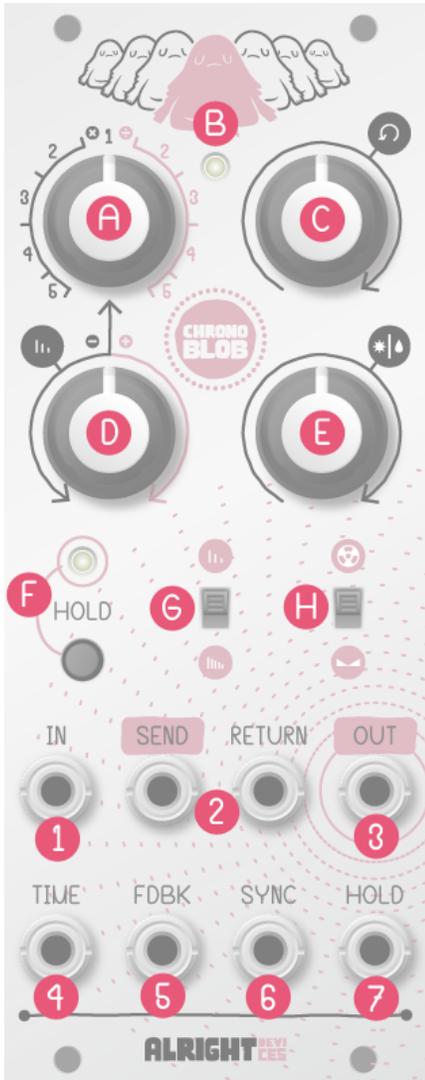
Features

- Syncable delay time with clock multiplier/divider
- CV and manual control of buffer hold
- Feedback loop send and return
- Equal-power crossfading dry/wet control
- Input overload LED (20 Vpp max)
- Voltage control of delay time and feedback level
- Resampling and crossfading delay modes
- Settings for hold switch behavior and clock prescaler
- Audio bootloader for firmware updates
- Skiff friendly

Specs

- 16-bit, 48 kHz audio
- +12V / 90mA, -12V / 30mA
- 10HP width, 30mm depth

Panel



A. TIME knob

Set the delay time or clock divider/multiplier when in SYNC mode.

B. Sync/overload indicator

If the module is synced to a clock and the RANGE switch is set to LONG (up), then this LED blinks at the selected multiple/division of the clock. Otherwise, it lights up when clipping is detected at the input. The maximum input signal is 20Vpp.

C. FDBK knob

Set the level of the feedback signal sent back to the input. The maximum is about +2.6dB.

D. TIME CV attenuverter

Set how strongly the TIME CV input affects the delay time. The response curve is scaled to make small modulations easy to dial in, and there is a small deadzone around the center position.

E. DRY/WET control

Set the balance between the original and processed signals at the output. This is an equal-power crossfader, so when set to its center position, the dry and wet signals will each be at -3dB.

F. HOLD button and indicator



Press the button to manually toggle HOLD mode, which freezes and loops the delay buffer. The LED lights up when HOLD mode is engaged. If SYNC is active, the module waits until the next multiple of the clock before activating HOLD. The LED lights dimly while it's waiting.

G. RANGE switch

Select the range of delay times. In SHORT mode (down), the delay time ranges from 5ms to 500ms. In LONG mode (up), it ranges from 50ms to 2.73 seconds. This switch also selects the behavior of the sync/overload indicator when in SYNC mode.

H. MODE switch

Select how Chronoblob responds to changes in the delay time. RESAMPLE mode (up) creates pitch shifting effects, while CROSSFADE mode (down) simply fades between delay taps.

1. IN jack

The input signal goes here. The nominal level is 10Vpp and the maximum is 20Vpp.

2. SEND and RETURN jacks

Use these jacks to patch the feedback loop through filters, effects, etc. The RETURN input is normalized to SEND.

3. OUT jack

The dry/wet mixed signal is output here.

4. TIME CV input

Modulate the delay time with CV. The input is normalized to 5V. For example, if the TIME knob is fully counterclockwise and the TIME CV attenuverter is fully clockwise, 5V at this input will result in the



maximum delay time.

5. FDBK CV input

Voltage control of the feedback level. This signal is summed with the FDBK knob setting. With the knob fully counterclockwise, 5V at this input will give about +1dB of feedback.

6. SYNC input

Use this input to sync the delay time to a clock signal. Chronoblob detects when this input is patched, so even if the clock stops, it will remain in SYNC mode until the patch cable is removed.

7. HOLD input

Voltage control of HOLD mode. The threshold is about 1.2V.

Settings / Firmware Update

Chronoblob has some available user settings and advanced functions. To access them, set the RANGE and MODE switches to one of the following configurations, then power up the module while pressing the HOLD button.

HOLD button behavior (SHORT / CROSSFADE)



This setting selects whether the HOLD button acts as a toggling or momentary switch. Before powering on the module, turn the TIME knob counterclockwise for toggling or clockwise for momentary. The HOLD and OVERLOAD LEDs will flash three times to indicate that the setting has been saved.

SYNC prescaler (SHORT / RESAMPLE)



This setting selects the factor to divide or multiply the SYNC signal by before it is again divided/multiplied by the TIME setting. Before powering on the module, turn the TIME knob to your desired prescale factor. The HOLD and OVERLOAD LEDs will flash three times to indicate that the prescaler has been saved.

TIME calibration (LONG / CROSSFADE)



This will calibrate the module to 0V at the TIME CV input. Before powering on the module, make sure the TIME CV input is unpatched. The HOLD and OVERLOAD LEDs will flash three times to indicate that the module has been calibrated. Your module has already been calibrated so there is generally no need for you to do this.

Firmware update (LONG / RESAMPLE)



This will run the audio bootloader in order to update the module's firmware. The HOLD LED will glow dimly to indicate that the bootloader is waiting for firmware data. Make sure that the FDBK knob is fully counterclockwise, and play a valid firmware audio file into the IN jack. The HOLD and OVERLOAD LEDs will pulse while the firmware is being updated. If the update fails, the LEDs will blink alternately until you press the HOLD button, at which point you can try playing the firmware audio file again. If the update procedure succeeds, the module will automatically restart itself. Updating the firmware will not reset the user settings or calibration data.

Firmware Changelog

You can always find the latest firmware version at alrightdevices.com.

Version 1.1.0 – 2018-03-27

- Reduced artifacting when the delay time is changed in resampling mode.
- In resampling mode, the delay time now changes at a slower, more natural rate.
- Reduced noise in ADC reads.

Version 1.0.2 – 2017-09-21

- Fixed a bug where a sync signal with a period longer than 895ms would result in an incorrect delay time.

Version 1.0.1 – 2017-08-18

- Changed the behavior of the HOLD function to better emulate tape delay and to remove the click when it loops.
- The HOLD function is now time-quantized to the SYNC clock if one is present.



- Improved the accuracy of the sync time measurement, so that when HOLD is engaged, the buffer will stay in phase with the sync clock for much longer.
- The overload LED now blinks in time with the divided or multiplied clock if the module is in SYNC mode and the RANGE switch is set to LONG (up).

Support

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