

Kaleidoscope: Dynamic LED Modes

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Binaries

old: Old Kaleidoscope firmware (see version info below)

new: New Kaleidoscope firmware (see version info below)

Resource Consumption

Program Storage

	Old/bytes	New/bytes	Change/bytes
overall	25990	26022	+32
text	25732	25762	+30
data	258	260	+2

Static RAM

	Old/bytes	New/bytes	Change/bytes
overall	1436	1343	-93
data	258	260	+2
bss	1178	1083	-95

Legend

text instructions

data initialized global or static variables

bss uninitialized global or static variables

Symbols

592 symbols found in Old Kaleidoscope firmware (see version info below)

598 symbols found in New Kaleidoscope firmware (see version info below)

Persisting Symbols

549 symbols persisted but changed size

Symbol ▲▼	Old Size/bytes ▲▼	New Size/bytes ▲▼	Change/bytes ▲▼
kaleidoscope::plugin::LEDControl::set_mode(unsigned char)	22	64	+42
kaleidoscope::Hooks::onSetup()	4	46	+42
kaleidoscope::plugin::TestMode::test_leds()	94	116	+22
kaleidoscope::plugin::StalkerEffect::onKeyswitchEvent(kaleidoscope::Key&, unsigned char, unsigned char, unsigned char)	42	60	+18
ColormapEffect	2	1	-1
AlphaSquareEffect	2	1	-1
StalkerEffect	2	1	-1
solidGreen	5	3	-2
solidIndigo	5	3	-2
solidRed	5	3	-2
solidBlue	5	3	-2
solidYellow	5	3	-2
solidOrange	5	3	-2
solidViolet	5	3	-2
LEDBreatheEffect	6	2	-4

_GLOBAL__sub_I_ZN12kaleidoscope6plugin14ColormapEffect9map_base_E	14	8	-6
LEDChaseEffect	9	3	-6
_GLOBAL__sub_I_ZN12kaleidoscope6plugin17AlphaSquareEffect6lengthE	14	8	-6
LEDRainbowEffect	11	3	-8
LEDRainbowWaveEffect	11	3	-8
_GLOBAL__sub_I_keymaps	98	86	-12
kaleidoscope::plugin::BootGreetingEffect::afterEachCycle()	170	156	-14
kaleidoscope::plugin::LEDControl::refreshAll()	54	40	-14
kaleidoscope::plugin::NumPad::setKeyboardLEDColors()	292	278	-14
kaleidoscope::plugin::LEDControl::beforeReportingState()	116	102	-14
toggleLedsOnSuspendResume(kaleidoscope::plugin::HostPowerManagement::Event)	84	68	-16
kaleidoscope::plugin::AlphaSquareEffect::onKeyswitchEvent(kaleidoscope::Key&, unsigned char, unsigned char, unsigned char)	228	208	-20
kaleidoscope::plugin::LEDControl::onSetup()	82	58	-24
kaleidoscope::plugin::LEDControl::prev_mode()	54	26	-28
kaleidoscope::plugin::LEDControl::next_mode()	56	24	-32

Symbols Disappeared

43 symbols disappeared

Symbol ▲▼	Size/bytes ▲▼
kaleidoscope::plugin::AlphaSquareEffect::refreshAt(unsigned char, unsigned char)	232
kaleidoscope::plugin::StalkerEffect::update()	222
kaleidoscope::plugin::AlphaSquareEffect::update()	186
kaleidoscope::EventHandlerResult	166
kaleidoscope_internal::EventDispatcher::apply<kaleidoscope_internal::EventHandler_onSetup>()	166
kaleidoscope::plugin::LEDChaseEffect::update()	148
kaleidoscope::plugin::LEDRainbowWaveEffect::update()	128
kaleidoscope::plugin::LEDRainbowEffect::update()	92
_GLOBAL__sub_I_ZN12kaleidoscope6plugin16LEDRainbowEffect6updateEv	72
kaleidoscope::plugin::StalkerEffect::map_	64
kaleidoscope::plugin::LEDControl::mode_add(kaleidoscope::plugin::LEDMode*)	48
kaleidoscope::plugin::LEDControl::modes	48
kaleidoscope::plugin::LEDControl::refreshAll() [clone .part.2]	48
kaleidoscope::plugin::LEDBreatheEffect::update()	46
_GLOBAL__sub_I_ZN12kaleidoscope6plugin14LEDChaseEffect6updateEv	36
kaleidoscope::plugin::LEDMode::onSetup()	34
kaleidoscope::plugin::ColormapEffect::refreshAt(unsigned char, unsigned char)	32
kaleidoscope::plugin::ColormapEffect::onActivate()	30
kaleidoscope::plugin::LEDControl::activate(kaleidoscope::plugin::LEDMode*)	30
_GLOBAL__sub_I_ZN12kaleidoscope6plugin16LEDBreatheEffect6updateEv	26
kaleidoscope::plugin::LEDControl::LEDControl()	20
kaleidoscope::plugin::LEDControl::get_mode()	20
kaleidoscope::plugin::LEDSolidColor::LEDSolidColor(unsigned char, unsigned char, unsigned char)	18
kaleidoscope::plugin::LEDSolidColor::refreshAt(unsigned char, unsigned char)	18
kaleidoscope::plugin::StalkerEffect::onActivate()	16
_GLOBAL__sub_I_ZN12kaleidoscope6plugin13StalkerEffect4map_E	14
kaleidoscope::plugin::LEDSolidColor::onActivate()	12
vtable for kaleidoscope::plugin::AlphaSquareEffect	12
vtable for kaleidoscope::plugin::ColormapEffect	12
vtable for kaleidoscope::plugin::LEDBreatheEffect	12
vtable for kaleidoscope::plugin::LEDChaseEffect	12

vtable for kaleidoscope::plugin::LEDRainbowEffect	12
vtable for kaleidoscope::plugin::LEDRainbowWaveEffect	12
vtable for kaleidoscope::plugin::LEDSolidColor	12
vtable for kaleidoscope::plugin::StalkerEffect	12
_GLOBAL__sub_I_ZN12kaleidoscope6plugin10LEDControl5modesE	8
kaleidoscope::plugin::LEDControl::get_mode_index()	6
kaleidoscope::plugin::AlphaSquareEffect::end_time_left_	4
kaleidoscope::plugin::AlphaSquareEffect::end_time_right_	4
kaleidoscope::plugin::LEDMode::activate()	4
kaleidoscope::plugin::AlphaSquareEffect::last_key_left_	2
kaleidoscope::plugin::AlphaSquareEffect::last_key_right_	2
kaleidoscope::plugin::StalkerEffect::step_start_time_	2
kaleidoscope::plugin::LEDControl::mode	1

New Symbols

49 symbols were newly introduced

Symbol ▲▼	Size/bytes ▲▼
kaleidoscope::plugin::StalkerEffect::DynamicLEDMode::update()	236
kaleidoscope::plugin::AlphaSquareEffect::DynamicLEDMode::refreshAt(unsigned char, unsigned char)	190
kaleidoscope::plugin::LEDChaseEffect::DynamicLEDMode::update()	152
kaleidoscope::plugin::AlphaSquareEffect::DynamicLEDMode::update()	140
kaleidoscope::plugin::LEDRainbowWaveEffect::DynamicLEDMode::update()	136
kaleidoscope::internal::LEDModeManager::getLEDMode(unsigned char)	96
kaleidoscope::plugin::LEDRainbowEffect::DynamicLEDMode::update()	96
kaleidoscope::plugin::LEDControl::activate(kaleidoscope::plugin::LEDModeInterface*)	84
kaleidoscope::internal::LEDModeManager::led_mode_buffer_	70
kaleidoscope::internal::led_mode_management::led_mode_factories	61
kaleidoscope::plugin::LEDBreatheEffect::DynamicLEDMode::update()	52
kaleidoscope::plugin::LEDMode*	
kaleidoscope::internal::led_mode_management::generateLEDMode<kaleidoscope::plugin::AlphaSquareEffect>(void*, void*, unsigned char)	42
kaleidoscope::plugin::LEDMode*	
kaleidoscope::internal::led_mode_management::generateLEDMode<kaleidoscope::plugin::StalkerEffect>(void*, void*, unsigned char)	42
kaleidoscope::plugin::LEDMode*	
kaleidoscope::internal::led_mode_management::generateLEDMode<kaleidoscope::plugin::LEDRainbowEffect>(void*, void*, unsigned char)	38
kaleidoscope::plugin::LEDMode*	
kaleidoscope::internal::led_mode_management::generateLEDMode<kaleidoscope::plugin::LEDRainbowWaveEffect>(void*, void*, unsigned char)	38
kaleidoscope::plugin::AlphaSquareEffect::DynamicLEDMode::DynamicLEDMode(kaleidoscope::plugin::AlphaSquareEffect*)	36
kaleidoscope::plugin::ColormapEffect::DynamicLEDMode::refreshAt(unsigned char, unsigned char)	32
kaleidoscope::plugin::LEDMode*	
kaleidoscope::internal::led_mode_management::generateLEDMode<kaleidoscope::plugin::LEDChaseEffect>(void*, void*, unsigned char)	32
kaleidoscope::plugin::StalkerEffect::DynamicLEDMode::DynamicLEDMode(kaleidoscope::plugin::StalkerEffect const*)	32
kaleidoscope::plugin::ColormapEffect::DynamicLEDMode::onActivate()	30
_GLOBAL__sub_I_ZN12kaleidoscope6plugin16LEDRainbowEffect14DynamicLEDMode6updateEv	28
kaleidoscope::plugin::LEDSolidColor::DynamicLEDMode::refreshAt(unsigned char, unsigned char)	28
kaleidoscope::internal::LEDModeManager::retrieveLEDModeFactoryFromPROGMEM(unsigned char, kaleidoscope::internal::led_mode_management::LEDModeFactory&)	26
kaleidoscope::plugin::LEDMode*	
kaleidoscope::internal::led_mode_management::generateLEDMode<kaleidoscope::plugin::ColormapEffect>(void*, void*, unsigned char)	24
kaleidoscope::plugin::LEDMode*	
kaleidoscope::internal::led_mode_management::generateLEDMode<kaleidoscope::plugin::LEDBreatheEffect>(void*, void*, unsigned char)	24

void*, unsigned char)	
kaleidoscope::plugin::LEDMode*	
kaleidoscope::internal::led_mode_management::generateLEDMode<kaleidoscope::plugin::LEDSolidColor>(void*, void*, unsigned char)	20
kaleidoscope::plugin::LEDSolidColor::DynamicLEDMode::onActivate()	20
_GLOBAL__sub_I_ZN12kaleidoscope6plugin14LEDChaseEffect14DynamicLEDMode6updateEv	18
memcpy_P	18
_GLOBAL__sub_I_ZN12kaleidoscope6plugin16LEDBreatheEffect14DynamicLEDMode6updateEv	14
vtable for kaleidoscope::plugin::AlphaSquareEffect::DynamicLEDMode	12
vtable for kaleidoscope::plugin::ColormapEffect::DynamicLEDMode	12
vtable for kaleidoscope::plugin::LEDBreatheEffect::DynamicLEDMode	12
vtable for kaleidoscope::plugin::LEDChaseEffect::DynamicLEDMode	12
vtable for kaleidoscope::plugin::LEDRainbowEffect::DynamicLEDMode	12
vtable for kaleidoscope::plugin::LEDRainbowWaveEffect::DynamicLEDMode	12
vtable for kaleidoscope::plugin::LEDSolidColor::DynamicLEDMode	12
vtable for kaleidoscope::plugin::StalkerEffect::DynamicLEDMode	12
_GLOBAL__sub_I_ZN12kaleidoscope6plugin10LEDControl7mode_idE	10
_GLOBAL__sub_I_ZN12kaleidoscope6plugin13StalkerEffect7variantE	8
kaleidoscope::internal::LEDModeManager::numLEDModes()	8
kaleidoscope::plugin::LEDModeInterface::activate()	4
kaleidoscope::internal::(anonymous namespace)::cur_led_mode	2
kaleidoscope::internal::LEDModeManager::setupStaticLEDModes()	2
kaleidoscope::plugin::LEDControl::cur_led_mode_	2
kaleidoscope::internal::(anonymous namespace)::cur_mode_id	1
kaleidoscope::internal::num_led_modes	1
kaleidoscope::plugin::LEDControl::mode_id	1
kaleidoscope::plugin::LEDControl::num_led_modes_	1

Binary Details

Old Kaleidoscope firmware (see version info below)

```

4e0c7fef0520a57e29f208764ab32da754af3ac9 avr/bootloaders/caterina (v1.13-5-g4e0c7fe)
05a9c45c5578ed3b3b74934e7deba7422a6943ab avr/libraries/HID (heads/master)
+df3cfd9eccfbb9e7976b07d24fda3c208a4be69 avr/libraries/Kaleidoscope (shipped-model00-xmas-3628-gdf3cfd9)
f3803685a901698e1bbd0dc3f9c5a637415df62e avr/libraries/Kaleidoscope-HIDAdaptor-KeyradioHID (heads/master)
8eb334da21af1c24b5838edc3bb229af3485e97a avr/libraries/Kaleidoscope-Hardware-Virtual (heads/master)
f9e03b104b1aa66587cfa5893ee0ee8364cf0cc8 avr/libraries/KeyboardioHID (v1.0-90-gf9e03b1)
4224b8843f6eee29fe5e3d05961df2c204940a02 avr/libraries/KeyboardioScanner (v1.0-19-g4224b88)
+5b48f32b1c0e26b68fd9aed8dc700aa6749be9d5 avr/libraries/Model01-Firmware (v1.22-59-g5b48f32)
ea8e3fb60dc8afcfel397ccfaef83c7e8eaae91b build-tools (heads/master)
4c77e1c2d1013956eacfd09e28a72310374220f9 toolchain (heads/master)

```

New Kaleidoscope firmware (see version info below)

```

4e0c7fef0520a57e29f208764ab32da754af3ac9 avr/bootloaders/caterina (v1.13-5-g4e0c7fe)
05a9c45c5578ed3b3b74934e7deba7422a6943ab avr/libraries/HID (heads/master)
+84fe5c3ce078b882cc52ef52b2e61452f1259a31 avr/libraries/Kaleidoscope (shipped-model00-xmas-3634-g84fe5c3c)
f3803685a901698e1bbd0dc3f9c5a637415df62e avr/libraries/Kaleidoscope-HIDAdaptor-KeyradioHID (heads/master)
8eb334da21af1c24b5838edc3bb229af3485e97a avr/libraries/Kaleidoscope-Hardware-Virtual (heads/master)
f9e03b104b1aa66587cfa5893ee0ee8364cf0cc8 avr/libraries/KeyboardioHID (v1.0-90-gf9e03b1)
4224b8843f6eee29fe5e3d05961df2c204940a02 avr/libraries/KeyboardioScanner (v1.0-19-g4224b88)
+5b48f32b1c0e26b68fd9aed8dc700aa6749be9d5 avr/libraries/Model01-Firmware (v1.22-59-g5b48f32)
ea8e3fb60dc8afcfel397ccfaef83c7e8eaae91b build-tools (heads/master)
4c77e1c2d1013956eacfd09e28a72310374220f9 toolchain (heads/master)

```

Build Info

Arduino Builder 1.4.1
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gcc version: 5.4.0

Symbol Details

Persisting Symbols

skipped

Symbols Disappeared

skipped

New Symbols

skipped

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