

KONTROLIR - programmable IR remote control

World's first Arduino compatible 45 → 49 button IR remote.

KONTROLIR Features

Standard Configuration:

- AnalysIR source device support with IR Tx support
- 45-→49 button stylish remote
- Indicator LED (*under your control*)
- Arduino/AVR ICSP Header
- ATmega328PB (*32KB/2KB*)
- Bootloader (*via Serial HDR*)
- 2xAAA Alkaline (*Standalone operation*)
- Low Power & long battery life support built in (*~1uA idle*)
- High Power IR emitter
- Wide 20kHz to 455kHz IR carrier frequency Tx coverage
- ICSP Programming Header (*6-pin*)
- Works with IRremote, IRLIB2 & any Arduino sketch.
- Comes with fully functional firmware source, easily enhanced by users.
- Your own custom IR sketches using Arduino IDE
- 100% Arduino compatible
- Size: 186x49x27mm (*LxWxH*)

Optional Configuration:

- Dual IR Receiver + IR Learner
- AnalysIR source device support with IR Rx + Tx
- External I2C EEPROM 16KBytes -> 256KBytes
- External Serial USB adapter
 - 5V Power via HDR
 - High quality IR Receiver
 - High quality IR Learner
 - Range: 15m+(Tx), <1m Rx
- Wide 20kHz to 60kHz carrier frequency Rx coverage

KONTROLIR Overview

KONTROLIR is a unique fully featured Infrared remote control with 45-→49 buttons, featuring all of the standard functionality and more. Powered by 2 x AAA alkaline batteries, the bundled firmware can be easily customised using the Arduino IDE to design your very own Remote – unlike any other available.

What is KONTROLIR

KONTROLIR comes with a fully functional example firmware application based on IRremote with some extensions for storing a large amount of signals in Flash storage. The example features 5 devices including: Philips TV, STB, Samsung TV, MCE remote, and finally a device with a selection of test signals to demonstrate various features.

Users are free to add any type of additional features such as: Macros, assign any signal to any button or device; control AC units, Fans, Led Lights or any other IR device; limit access to certain signals or devices by children, seniors, Shops, Schools, Hotels or Guest-houses.

The remote is programmed over serial USB using an optional adapter via the Arduino IDE. The code for LOW power operation is included along with an example demonstrating 5 devices (225+ buttons). Users can easily add more signals by populating pre-defined 'C' functions using the example 5 devices. The example application uses only 25% of FLASH and 35% of SRAM – leaving ample resources available for many more devices, features, signals & macros. In addition, we also provide an option to add in external EEPROM with 16KBytes to 256Kbytes of additional storage which essentially represents limitless expansion possibilities.

We have also exposed I2C headers on the PCB along with the ICSP programming port and LED. Potentially there are up to 7 spare GPIO pins available if any of the 2 IR receivers, LED or EEPROM are not configured.

To make KONTROLIR, we buy-in small batches of these existing remotes and replace the PCBs with our own Arduino compatible one. We also reuse as many of the original components as possible. Consequently, KONTROLIR will have some unrelated branding from the original device (Not displayed in Image). There may also be some slight colour variations between batches.



100% Arduino Compatible Remote

Most customisable IR remote control ever

Inspired by AnalysIR, IRremote & IRLIB - KONTROLIR is the first remote available that allows users to control every aspect of operation without restriction. The base model has everything needed to implement your own remote using the Arduino IDE & libraries like IRremote & IRLib or your own custom sketches.

Every IR protocol can be sent, including long Air Conditioner signals. You are now free to construct your own remote exactly as you like it. You can also create a custom remote for Seniors, children, Hotels or even customers with only the features they require. Now companies can easily & rapidly prototype and field test new remotes before deciding on production quantities with their overseas manufacturer. KONTROLIR is also tightly integrated with our AnalysIR application as a Transmitter & IR source (with receiver option)

Endless possibilities

You can create many interesting projects using KONTROLIR simply by extending the supplied firmware. The bundled firmware provides a comprehensive implementation of a 5 device remote control. Users have complete control over which signals or macros to attach to any button or device. Hybrid devices can be implemented in the same way as standard devices. Add support for passwords, AIR Conditioners, Fans, Lighting, access control and toys with simple Arduino code. Restrict access to certain signals or buttons for children or make operation less complex for seniors. Can be used to clone Domestic remotes, Hotel remotes, TV-B-Gone style gadgets or as a platform to offer custom remotes as-a-service to 3rd parties.

Licensing Model & Purchase

KONTROLIR, is supplied under an open source software licence which covers commercial & non-commercial use of supplied hardware & software when used with an original KONTROLIR device. Contact us for bulk pricing. You can purchase your own KONTROLIR via: <https://www.AnalysIR.com/blog/shop/> or our Tindie Store and other outlets. The KONTROLIR design & hardware is also available for integration into 3rd party systems or bundling with kits. Custom designs are possible with bulk orders.

Service and Support

Support is provided for KONTROLIR via email or our on-line [IRforum](#). Contact details for support are provided at time of purchase. Support is available only using your registered email address

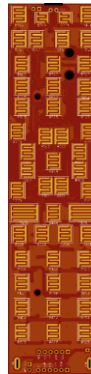
A MAKEIR Kit

KONTROLIR is part of the MAKEIR series which comprises a range of innovative infrared remote control modules for makers, hobbyists & professionals.
(Available now – visit www.ANALYSIR.com for details)



Additional Information

For more information visit <https://www.ANALYSIR.com/> or contact us directly using the contact information below.



Minimum Requirements

- Arduino IDE (or equivalent)
- 2xAAA Alkaline Batteries
- Serial USB adapter (optional)
- PC running AnalysIR (optional).

Quality IR Components

Uses the highest quality infrared receivers available from Vishay.

Carrier Frequencies

KONTROLIR supports all of the common IR carrier frequencies: 30kHz, 33kHz, 36kHz, 38kHz, 40kHz, 56kHz at the Infrared 940nm wavelength (i.e. 20-60kHz (for Tx+Rx), plus 455kHz for Tx only.

IR formats

KONTROLIR works with all common modulated remote control signals and formats, including very long Air Conditioner signals, which covers the vast majority of systems in the market. It performs very well with difficult signals. We also include examples of how it can be extended beyond formats supported by IRremote & IRLib.

Customisation

We provide options for: IR receiver, IR Learner, External I2C EEPROM & a Serial USB adapter for uploading sketches.

What is Included

- 1 x complete KONTROLIR
- 1 x Serial USB adapter(option)
- 1 x IR Receiver (option)
- 1 x IR Learner (option)
- 1x I2C EEPROM (option) (16->256KBytes.)
- Online Support.

About ANALYSIR

ANALYSIR is committed to providing leading edge Infrared solutions & technology to our Maker, Hobbyist, EDU and Professional users globally.



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