

Forum:[Hack Forums](#)

Thread: [IR Receiver](#)

A Kitty - March 1, 2017, 9:23 am

So I ordered 3 IR LEDs and 3 IR phototransistors. I thought I was ordering an IR receiver, so it demodulates the IR signal, but it's 2 pins instead. Is there a circuit I can make so I can get IR codes so I can program the IR LEDs, using the phototransistors, or would I just need to buy 3 pin receivers.

webdev77 - March 1, 2017, 10:38 am

Can you post links to what exactly you bought?

A Kitty - March 1, 2017, 12:15 pm

(Mar 1, 2017 11:38 AM)webdev77 Wrote: [\[CITE\]](#) Can you post links to what exactly you bought?
<https://www.amazon.co.uk/gp/product/B00ZX6BG18>

Here

slober - March 1, 2017, 2:24 pm

(Mar 1, 2017 10:23 AM)Ravada Wrote: [\[CITE\]](#) So I ordered 3 IR LEDs and 3 IR phototransistors. I thought I was ordering an IR receiver, so it demodulates the IR signal, but it's 2 pins instead. Is there a circuit I can make so I can get IR codes so I can program the IR LEDs, using the phototransistors, or would I just need to buy 3 pin receivers.

those 3 pin ones aren't that expensive and they most likely offer better support and libraries for your projects. ?.

The 3 pin ones are in general better in picking up signals. while these photo-transistors are most used as a proximity sensor

captainspalding - March 1, 2017, 5:59 pm

Seconding just getting the 3-pin. It's doable with 2-pin but you still need something to demodulate in the circuit. If you're buying parts, might as well buy the 3-pin IR RX.

A Kitty - March 3, 2017, 11:40 am

I'd like a challenge of demodulating, it'd also be educational. Any ideas how I'd do it?

webdev77 - March 3, 2017, 12:40 pm

(Mar 3, 2017 12:40 PM)Ravada Wrote: [\[CITE\]](#) I'd like a challenge of demodulating, it'd also be educational. Any ideas how I'd do it?

Well, first you need to learn what a band pass filter is and how they can be implemented. This is fairly essential or you are going to end up with noise galore. Then, after you can filter the signal, you need to actually demodulate it. An 8-bit microprocessor can do this fairly well.

I suggest doing to background reading on demodulation techniques and still see if you want to try this. It's definitely a lot cheaper and easier just to buy an IR receiver with built in demodulation.

A Kitty - March 3, 2017, 1:01 pm

(Mar 3, 2017 01:40 PM)webdev77 Wrote: [\[CITE\]](#) Well, first you need to learn what a band pass filter is and how they can be implemented. This is fairly essential or you are going to end up with noise

galore. Then, after you can filter the signal, you need to actually demodulate it. An 8-bit microprocessor can do this fairly well.

I suggest doing to background reading on demodulation techniques and still see if you want to try this. It's definitely a lot cheaper and easier just to buy an IR receiver with built in demodulation. Got any links on demodulating and filtering? ?

webdev77 - March 3, 2017, 2:08 pm

(Mar 3, 2017 02:01 PM)Ravada Wrote: [\[CITE\]](#) Got any links on demodulating and filtering? ? Here is a good start for you:

<http://www.instructables.com/id/Puzzlebox-Orbit-Using-an-Arduino-to-Control-an-In/>

Decent band pass explanation: <http://www.electronicshub.org/passive-band-pass-rc-filter/>

A Kitty - March 3, 2017, 3:25 pm

(Mar 3, 2017 03:08 PM)webdev77 Wrote: [\[CITE\]](#) Here is a good start for you:

<http://www.instructables.com/id/Puzzlebox-Orbit-Using-an-Arduino-to-Control-an-In/>

Decent band pass explanation: <http://www.electronicshub.org/passive-band-pass-rc-filter/>

So I'd want to receive IR LED input from a remote, run a bandpass filter to keep around 38kHz signals, and then I can see the specific signals it gives? Not sure.

webdev77 - March 4, 2017, 5:26 pm

(Mar 3, 2017 04:25 PM)Ravada Wrote: [\[CITE\]](#) So I'd want to receive IR LED input from a remote, run a bandpass filter to keep around 38kHz signals, and then I can see the specific signals it gives? Not sure.

Sounds about right. ?

A Kitty - March 5, 2017, 4:44 am

(Mar 4, 2017 06:26 PM)webdev77 Wrote: [\[CITE\]](#) Sounds about right. ?

Okay so the bandpass filter is all hardware, any idea what I'd put in the Arduino? Would it be a typical IR receiver code?

A Kitty - March 10, 2017, 9:11 am

(Mar 4, 2017 06:26 PM)webdev77 Wrote: [\[CITE\]](#) Sounds about right. ?

Guess not :D

webdev77 - March 10, 2017, 10:01 am

(Mar 5, 2017 05:44 AM)Ravada Wrote: [\[CITE\]](#) Okay so the bandpass filter is all hardware, any idea what I'd put in the Arduino? Would it be a typical IR receiver code?

Output of the filter would connect to the arduino. I would consider this fairly standard code required on an arduino.