

IR-D14

14-Bit Infrared Remote Control Decoder IC

Quick & Easy - Infrared Remote Control

The IR-D14 IC is a custom pre-programmed microcontroller designed by Reynolds Electronics to decode Sony® Corporation's infrared remote control command protocol. Add instant remote control to your next robotics application, OEM products, or hobby projects with the IR-D14 and an "off-the-shelf" inexpensive universal remote control transmitter.

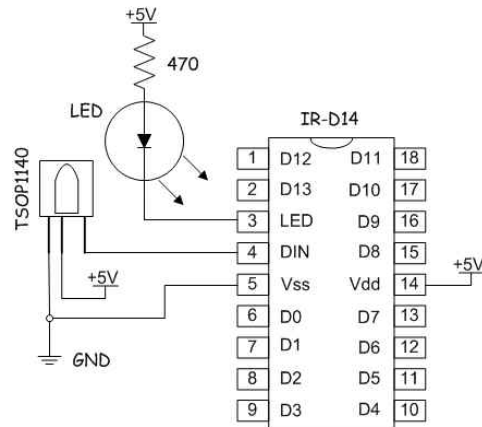
Use the IR-D14 IC with any universal IR remote control transmitter that supports the Sony® IR protocol for simple, and "instant" remote control solutions. If you can program your IR remote control transmitter to use the Sony® IR data protocol, you can control the IR-D14 IC.

The IR-D14 provides 14 individually controlled digital outputs + one additional 15th bit as an LED status indicator, and requires only a single external component. The IR detector module.

IR transmitter buttons 1 through 0, channel up, channel down, volume up, and volume down are used to control the 14 individual IR-D14 digital output pins shown in the table below.

The IR-D14 ignores data received for buttons not shown in the table - allowing unobtrusive system range performance testing without disturbing logic states of the 14 digital outputs.

Include IR remote control in your next product, robot, or home control project in minutes...!



A single 40KHz infrared detector module with the IR-D14 IC completes the entire remote control receiver assembly.

The LED drive output can be used as a 15th digital output providing a 15-bit IR decoder IC in a single 18-pin DIP package.

Transmitter Button #	Toggles IR-D14 Output Pin #	Transmitter Button #	Toggles IR-D14 Output Pin #
1 ->	6 / D0	8 ->	13 / D7
2 ->	7 / D1	9 ->	15 / D8
3 ->	8 / D2	0 ->	16 / D9
4 ->	9 / D3	Channel Up ->	17 / D10
5 ->	10 / D4	Channel Down ->	18 / D11
6 ->	11 / D5	Volume Up ->	1 / D12
7 ->	12 / D6	Volume Down ->	2 / D13

IR-D14

14-Bit Infrared Remote Control Decoder IC

Operation:

On power-up the IR-D14 digital outputs default to logic 0 or ground. The LED drive output defaults to logic 1 to turn off the status LED. A valid button press received from the universal IR transmitter corresponding to an IR-D14 digital output will toggle that outputs logic state from ground to logic 1. Pressing the same button a 2nd time will toggle the same digital output pin from logic 1 back to ground.

Depressing and holding a button on the transmitter will cause the corresponding output to toggle from logic 1 to logic 0 at rates of approximately 1/2 second "500 millisecond" intervals.

Note: The LED output pin will always toggle when a valid Sony® IR data packet is received, and will always return to a default logic 1 state during idle, or non-transmit periods.

The IR-D14 IC uses the internal oscillator of the microcontroller, requires no external oscillator or crystal for operation, and the IR-D14 IC firmware is "self-tuning" to help reduce false digital output triggers.

Maximum Output Sink / Source Current On Any Output 25mA
Maximum Output Sink / Source Current Total 200mA
Operating Voltage 5.0VDC
Avg. No Load Operating Current <2mA @5.0VDC

Refer to the Microchip® PIC16F62x series datasheet at <http://www.microchip.com> for detailed device electrical specifications.

DISCLAIMER

Reynolds Electronics reserves the right to make changes without notice. The information contained in this document is believed to be accurate at the time of publication. Specifications are based on lot samples. Values may vary from lot to lot, and are not guaranteed. Reynolds Electronics makes no guarantee, warranty, or representation regarding the suitability or legality of any product for use in a specific application. None of these devices are intended for use in applications of a critical nature where safety, life, or property is at risk. The user of this product assumes full liability for the use of this product in all applications. Under no conditions will Reynolds Electronics be responsible for losses arising from the use or failure of the device in any application, other than the repair, replacement, or refund limited to the original product purchase price.

Technical support:
Email: support@rentron.com
Sales: sales@rentron.com
Distributor inquiries: sales@rentron.com

Copyright © 2002 Reynolds Electronics
3101 Eastridge Lane
Canon City, Co. 81212
Phone: (719) 269-3469
Fax: (719) 276-2853

Web Site: <http://www.rentron.com>
IR-D14 application notes: <http://www.rentron.com/IR-D14.htm>