

# IR-D15A

## 15-Bit Infrared Remote Control Decoder IC

### Quick & Easy - Infrared Remote Control

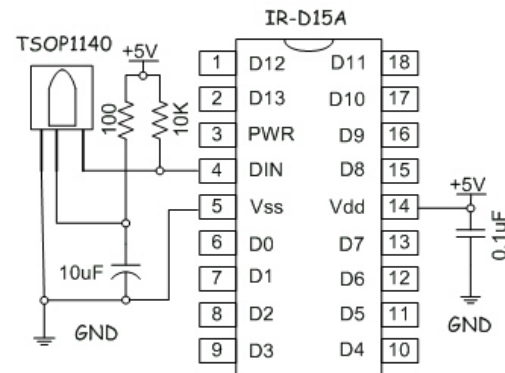
The IR-D15A IC is a custom pre-programmed microcontroller designed by Reynolds Electronics to decode Sony® Corporation's infrared remote control command protocol. Add instant remote control to your next robotics application, OEM products, or hobby projects with the IR-D15A and an "off-the-shelf" inexpensive universal remote control transmitter.

Use the IR-D15A 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-D15A IC.

The IR-D15A provides 15 individually controlled digital outputs. 14 are "momentary" outputs, with one "latching" output for remote power control or an LED indicator.

IR transmitter buttons 1 through 0, channel up, channel down, volume up, and volume down are used to control the 14 IR-D15A momentary digital output pins as shown in the table below.

The Power or ON/OFF button on the transmitter controls the latching PWR output, and can be used for turning power ON/OFF in the remote controlled circuit.



Two capacitors, two resistors, and a 40KHz infrared detector module with the IR-D15A IC complete the remote control receiver circuit. The capacitors & resistors shown above are to filter or eliminate power supply noise, and will enhance overall performance & operating range.

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

Transmitter Button #	Controls IR-D15A Output Pin #	Transmitter Button #	Controls IR-D15A Output Pin #
1 ->	6 / D0	9 ->	15 / D8
2 ->	7 / D1	0 ->	16 / D9
3 ->	8 / D2	Channel Up ->	17 / D10
4 ->	9 / D3	Channel Down ->	18 / D11
5 ->	10 / D4	Volume Up ->	1 / D12
6 ->	11 / D5	Volume Down ->	2 / D13
7 ->	12 / D6	Power ON/OFF ->	3 / PWR
8 ->	13 / D7		

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### Operation:

On power-up the IR-D15A digital outputs default to logic 0 or ground. The PWR drive output is "open-collector", and defaults to high impedance. A valid button press received from the universal IR transmitter corresponding to an IR-D15A momentary output will toggle that outputs logic state from ground to logic 1 while the transmitter button is pressed. Releasing the same button will toggle the same digital output pin from logic 1 back to ground providing 14 "momentary" outputs. The Power or ON / OFF button on the IR transmitter controls the latching PWR output pin.

**Note:** The open-collector PWR output pin will toggle & latch at ground when ON, and high-impedance when OFF. Pressing the transmitter Power or ON/OFF button again toggles the state of the PWR output back to the OFF or high impedance state. This output can be used to drive PNP transistors to control power ON/OFF in the remote controlled circuit.

The IR-D15A IC uses the internal oscillator of the microcontroller, requires no external oscillator or crystal for operation, and the IR-D15A IC firmware is "self-tuning" to help reduce false digital output activation.

<b>Maximum Output Sink / Source Current On Any Output .....</b>	<b>25mA</b>
<b>Maximum Output Sink / Source Current Total .....</b>	<b>200mA</b>
<b>Operating Voltage .....</b>	<b>5.0VDC [well filtered]</b>
<b>Avg. No Load Operating Current .....</b>	<b>&lt;2mA @5.0VDC</b>

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3101 Eastridge Lane  
Canon City, CO. 81212  
Phone: (719) 269-3469  
Fax: (719) 276-2853

Email Technical support: Tech@rentron.com  
Sales: sales@rentron.com  
Distributor inquiries: sales@rentron.com  
Website: <http://www.rentron.com>

The IR-D15A IC's are available for purchase online at: <http://www.rentron.com/IR-D15A.htm>