



CDPS-IRL

Infrared Learner



Operation Manual

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

VERSION NO.	DATE (DD/MM/YY)	SUMMARY OF CHANGE
VR0	25/03/15	Preliminary Release
VS1	01/04/15	Updated Text & Diagrams



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1. INTRODUCTION

The Infrared Learner is a versatile tool for all your control system design needs. This compact yet functional unit can convert your analog IR commands into digital data and store it for many uses. With the simple software tool the user can store the commands from multiple IR remote controls in a single convenient location such as a laptop for later recall as required. The unit not only learns the IR command but it can also test that the learning was successful by re-transmitting the command to prove that it has been learned correctly. It is compatible with a wide range of IR frequencies and source devices.

2. APPLICATIONS

- Analog IR signal learning
- IR signal transfer into digital data
- IR signal transmission

3. PACKAGE CONTENTS

- 1×Infrared Learner
- 1×Operation Manual

4. SYSTEM REQUIREMENTS

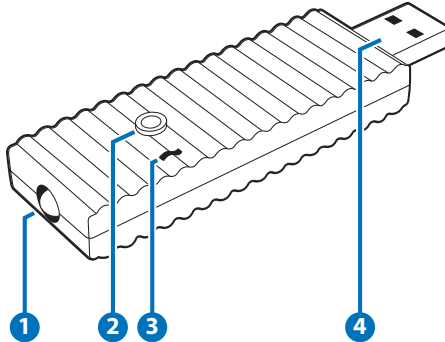
Source IR remote control and a PC/Laptop with Microsoft Windows and an spare USB port.

5. FEATURES

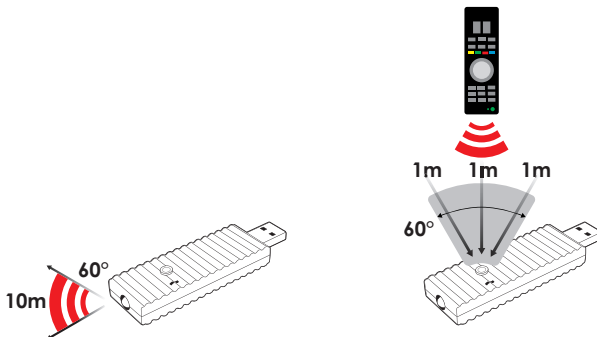
- Receives and transmit an IR command to confirm successful learning
- Converts an IR signal into digital data for control system usage
- Compatible with a wide range of IR format and IR frequencies
- Compact USB dongle design
- Simple software installation

6. OPERATION CONTROLS AND FUNCTIONS

6.1 USB Dongle



- 1 IR TRANSMITTER:** Transmits the digital IR signal sent from PC/ Laptop to confirm that learning of the received IR signal has been successful. Ensure that the IR Transmitter is in direct line-of-sight of the equipment to be controlled.
- 2 IR RECEIVER:** Receives the IR signal to be learnt. Ensure that the remote control being used is in direct line-of-sight of the IR Receiver.

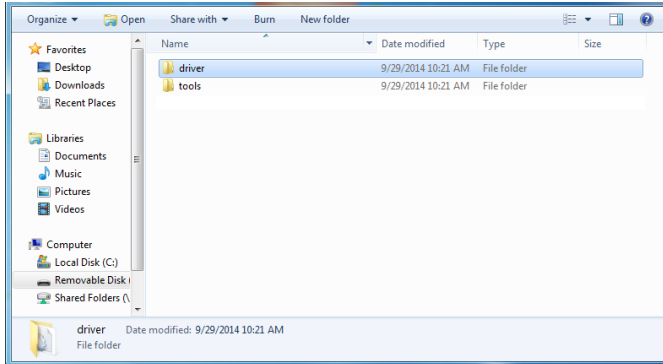


- 3 UPDATE:** Manufacturer use only.
- 4 USB:** Connect to a USB port of a PC/Laptop that has the IR Learning software installed for converting IR signals into data format.

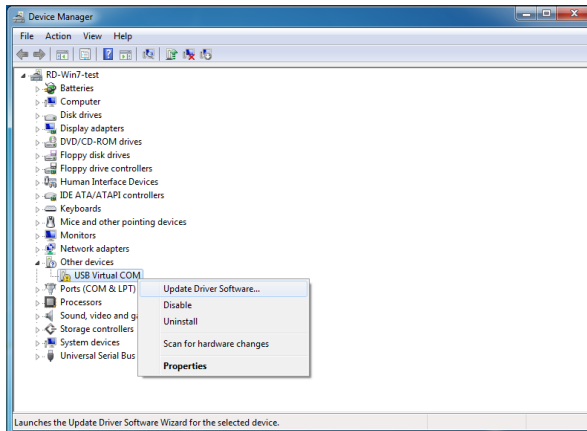
6.2 PC Application Control

6.2.1 Install the Driver

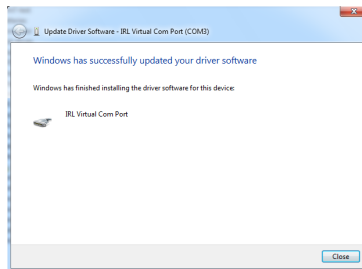
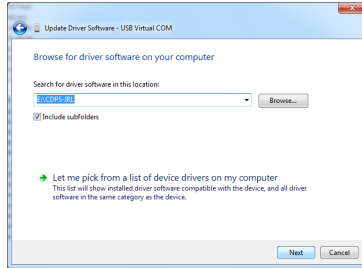
Please download the ZIP file from the 'Downloads' tab on the IR Learner product page on the Cypress website and save it in a directory where you can easily find it again. Once saved, locate the file on your computer and de-compress by right clicking it and choosing the 'expand' option.



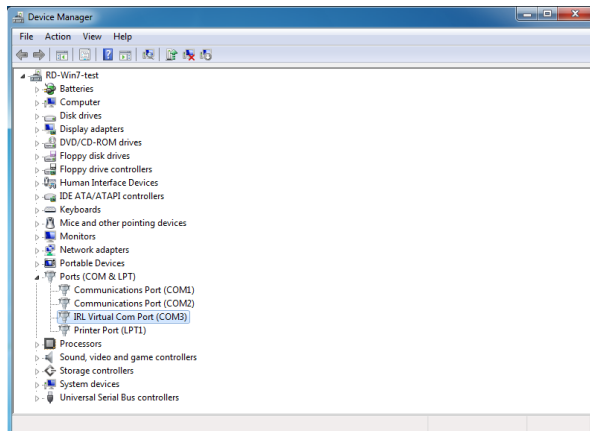
Connect the IR Learner to a PC/Laptop with a USB connection. It should now appear in the Device Manager as an unknown device with an exclamation mark. Right click on the 'USB Virtual COM' and select 'Update Driver Software' to start the driver installation process.



Click on 'Browse for driver software' and navigate to the folder where the downloaded software is located. Windows Security will show a warning message, click on 'Install this driver software anyway' to continue the installation process. Click 'Close' to finish the installation.

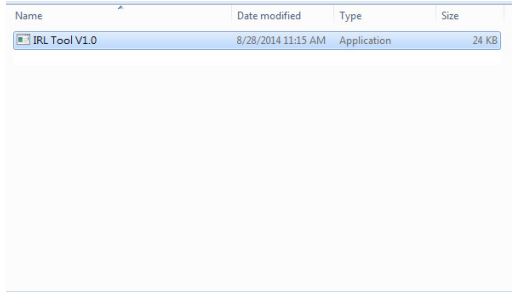


The IR Learner will be renamed to 'IRL Virtual Com Port' in the Device Manager.

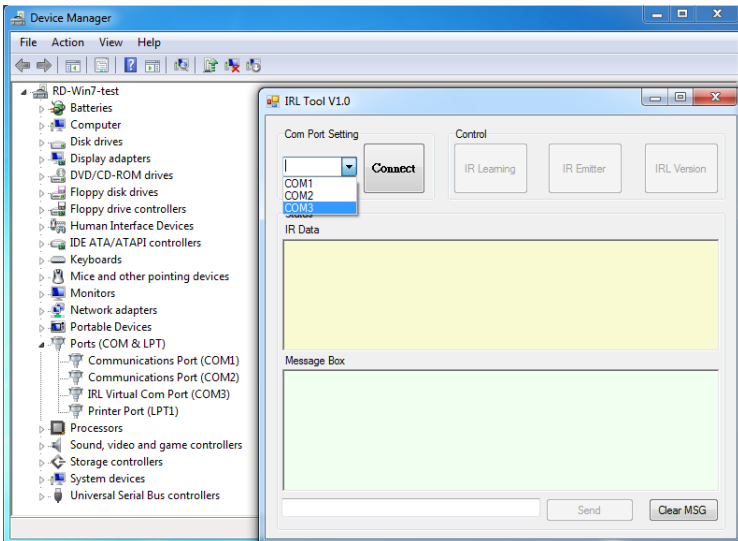


6.2.2 Use the Application

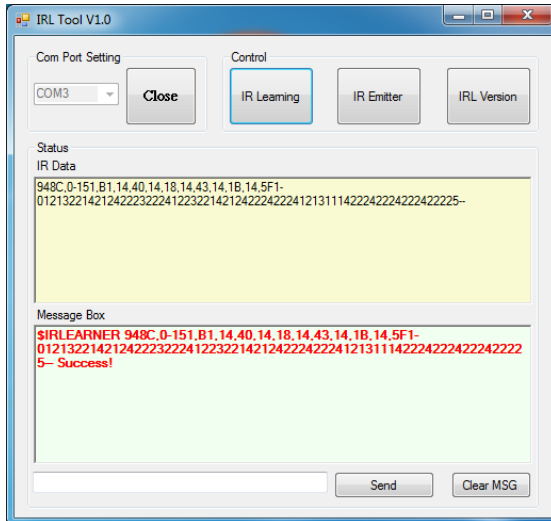
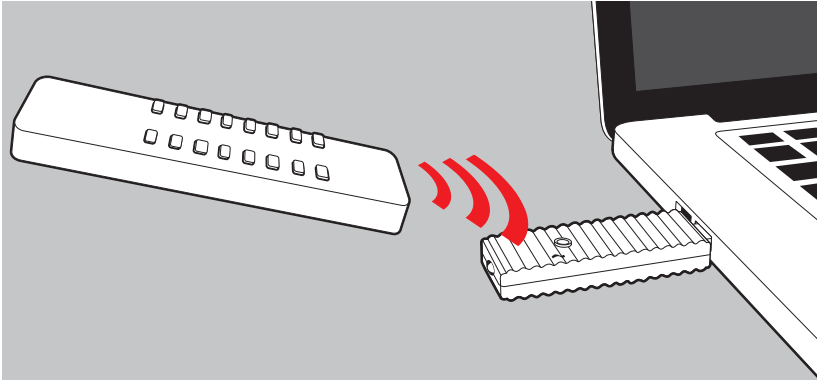
Now that the driver for the IR Learner has been successfully installed you may start to use the IR Learner with the IR Learning Software Tool by opening the 'IRL Tool' application.



Select the Com Port as indicated in the 'IRL Virtual Com Port' in the Device Manager and click on 'Connect'.

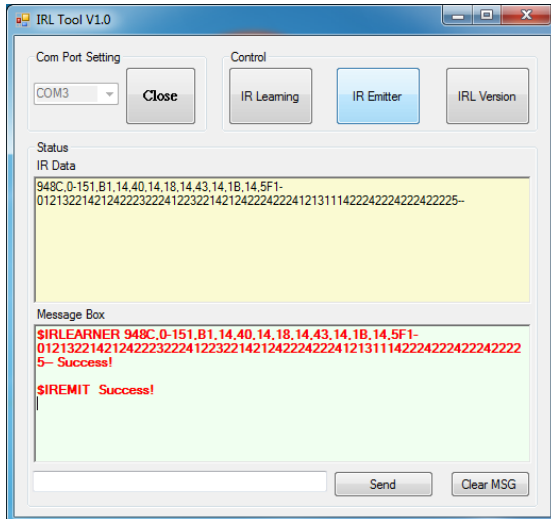
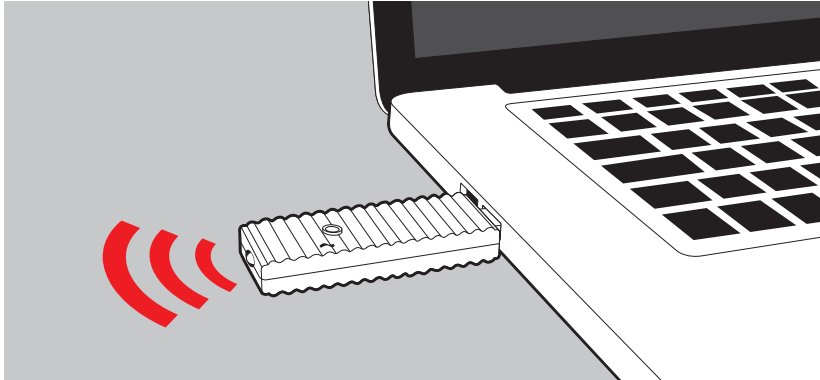


To start learning an IR command, click on 'IR Learning' and, with the remote control pointed at the IR Receiver on the top of the unit. Ensure that the remote being used is in direct line-of-sight of the IR Receiver. Press and hold the key for the IR command on the remote control that you wish to learn until 'Success' is shown in the Message box.

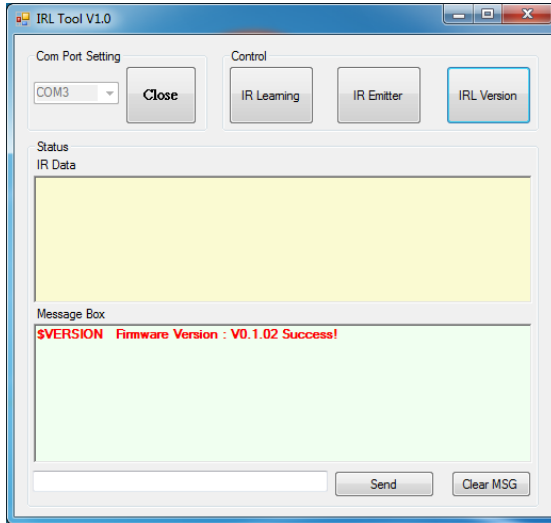




To test the learned IR command, with the IR Transmitter is in direct line-of-sight the equipment to be controlled and click on 'IR Emitter' to confirm if the learning is correct. This IR code/data can then be stored in another control system or application for future use or the data may be utilized in many other forms i.e the IR code can be copied and pasted directly from IR Data box.

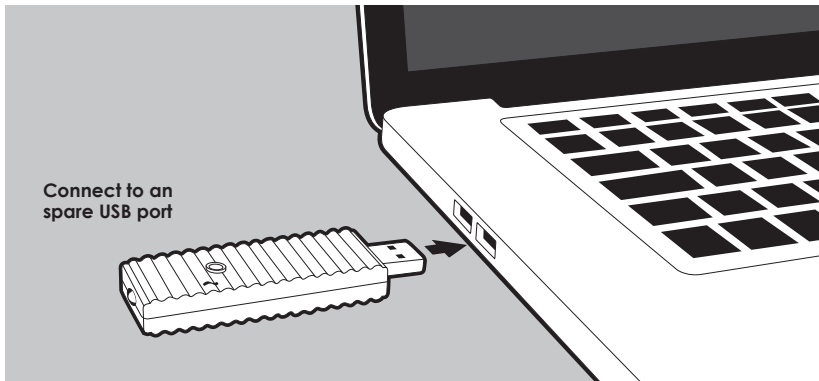


Click on 'IRL Version' to see the IRL Tool's version update status.



Note: The 'Send' function is designed for manufacturer use only. To clear the message in the Message box simply click on 'Clear MSG'.

7. CONNECTION DIAGRAM





8. SPECIFICATIONS

Input Port	1×IR Receiver
Output Port	1×IR Transmitter
IR Frequency	20~60kHz
IR Input Distance	Up to 1 meter
IR Output Distance	Up to 10 meters
ESD Protection	Human Body model: ± 8kV (air-gap discharge) ± 4kV (contact discharge)
Dimensions	70.5mm (W)×25mm (D)×11 mm (H)/Jack Excluded 85.5mm (W)×25 mm (D)×12mm (H)/Jack Included
Weight	14g
Chassis Material	Plastic
Color	Black
Operating Temperature	0°C~40°C/32°F~104°F
Storage temperature	-20°C~60°C/-4°F~140°F
Relative Humidity	20~90% RH (no condensation)

9. ACRONYMS

ACRONYM	COMPLETE TERM
IR	Infrared



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MPM-CDPSIRL