





Operation Manual



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Version 1.0 October 2014

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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
RDV1	25/09/14	Preliminary Release



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1. INTRODUCTION

The IR Learner is an amazing tool for all your control system design. This compact yet functional device can turn your analog IR signal into digital and store it for many usages. With simple software tool user can combine all remote controllers signal into one desire place and control all devices through that place. IR Learner does not only learn the IR signal it can also send out the learned signal to prove that it learned was correct. The IR Learner is compliant with nominated produce devices for user's convenience.

2. APPLICATIONS

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

3. PACKAGE CONTENTS

- IR Learner
- Operation Manual

4. SYSTEM REQUIREMENTS

Input remote control with IR signal and output to PC/Laptop.

5. FEATURES

- Receive and blast out IR signal to confirm successful learning
- Converting IR signal into digital data for control system usage
- Wide range of IR format and IR frequency acceptance
- Compact USB dongle design
- Simple software installation

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Hardware Description



1 USB IN

Connect this port with PC/Laptop for IR signal transferring into data format.

2 Update

Press this button with pin and hold it while plug into PC/Laptop for firmware update. Copy the .bin file to your PC/Laptop in a location where you may use later.

3 IR Receiver

Send the IR signal that is to be learned by press on the remote control in direct line-of-sight towards this port.

4 IR Blaster

This slot can blast out the digital IR signal send from PC/Laptop to confirm the success learning of the received IR signal. Place the IR Blaster in direct line-of-sight of the equipment to be controlled for.



6.2 Software Application and Installation

6.2.1 Installation

Please download the software from www.cypress.com.tw with file name CDPS-IRL-driver.rar and save it in a directory where you may link with the IR Learner.

	er 🕨 Removable Disk (E:) 🕨 CDPS-IRL 🕨	✓ 44 Search CDPS-IRL		x
		✓ 4 Search CDPS-IRL	0	2
Organize 🔻 😭 Open	A		•	0
🔶 Favorites	Name	 Date modified Type 	Size	
💻 Desktop	🍌 driver	9/29/2014 10:21 AM File folder		
📜 Downloads	鷆 tools	9/29/2014 10:21 AM File folder		
📃 Recent Places				
□ Libraries □ Documents □ Music □ Pictures □ Videos				
🖳 Computer				
Local Disk (C:)				
Removable Disk				
Shared Folders (\				
driver Date File folder	modified: 9/29/2014 10:21 AM			

Connect the IR Learner to PC/Laptop and search it from the Device Manager.



🚔 Device Manager		
File Action View Help		
	1 📴 😼 6	
RD-Win7-test Batteries Computer Bick drives Bick drive	es Iers	
l ann an an Alla Ua data Drives Caffron	- Mineral for the colorised device	
Launches the Update Driver Softwa	re wizard for the selected device.	

Click on USB Virtual COM with mouse's right button and select Update Driver Software...

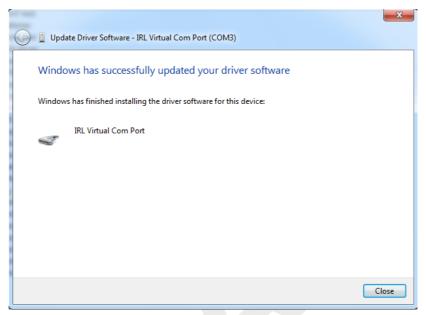


6	Update Driver Software - USB Virtual COM	x
0		
	Browse for driver software on your computer	
	Search for driver software in this location:	
	E:\CDPS-IRL Browse	
	✓ Include subfolders	
	Let me pick from a list of device drivers on my computer This list will show installed driver software compatible with the device, and all driver software in the same category as the device.	
	Next	incel

Click on Browse for driver software and direct the downloaded software location.

Windows Security will show warning message, click on Install anyway to continue the installation process.





Close the dialogue to finish the installation.



Now the IR Learner will be renamed as IRL Virtual Com Port in the Device Manager.

🚔 Device Manager	
File Action View Help	
⊿ - 🟯 RD-Win7-test	
🔈 🔊 Batteries	
> 📲 Computer	
Disk drives	
🔈 🔊 📲 Display adapters	
DVD/CD-ROM drives	
👂 🚽 Floppy disk drives	
Floppy drive controllers	
🔈 🕼 Human Interface Devices	
IDE ATA/ATAPI controllers	
Keyboards	
Mice and other pointing devices	
Monitors	
👂 📲 Network adapters	
Portable Devices	
Ports (COM & LPT)	
- IRL Virtual Com Port (COM3)	
Printer Port (LPT1)	
Processors	
Sound, video and game controllers	
Storage controllers	
> 📲 System devices	
🔈 – 🟺 Universal Serial Bus controllers	



6.2.2 Using the IR Learner Application

Now your PC/Laptop has install successful the IR Learner and you may start to use with the IR learner with IR Learning Tool by opening the IRL Tool from the download file.



Double click on IRL Tool



🚔 Device Manager		- • ×
File Action View Help		
	2	
Image: Second		IRL Version
 Jean Sound, video and game controllers Storage controllers Jean System devices Jean Universal Serial Bus controllers 		
	Send	Clear MSG

Select the Com Port according to IRL Virtual Com Port from the Device Manager and click on Connect.

To start IR signal learning, click on IR Learning and press the remote control with the direct line-of-sight towards the IR Learner's Receiver lens until the IR code has been learned and show Success from the IRL Tool.



🖳 IRL Tool V1.0			- • ×
Com Port Setting	Control IR Learning	IR Emitter	IRL Version
Status IR Data			
948C,0-151,B1,14,40,14,18,14,43 012132214212422232224122322 Message Box	,14,10,14,351- 14212422242224121:	31114222422242224	22225
\$IRLEARNER 948C.0-151.B 01213221421242223222412 5 Success!			4222422242222
		Send	Clear MSG

Then click on IR Emitter with IR Learner's Blaster in direct line-of-sight towards the remote device to confirm if the learning is correct (or activate).



F IRL Tool V1.0			- • X
Com Port Setting	Control IR Leaming	IR Emitter	IRL Version
Status IR Data			
012132214212422232224122322	214212422242224121	311142224222422242	22225
\$IRLEARNER 948C,0-151,B 01213221421242223222412 5- Success! \$IREMIT_Success!			22224222422222
		Send	Clear MSG

This IR code/data then may be stored in another control system/ application for future usage or may be utilized in many other forms. (Copy the IR code from IR Data box).



P IRL Tool V1.0	_ D X
Com Port Setting Control	IRL Version
Status IR Data	
Message Box SVERSION Firmware Version : V0.1.02 Success! Send	Clear MSG

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



🖳 IRL Tool V1.0			_ D X
COM3 Close	Control IR Learning	IR Emitter	IRL Version
Status IR Data 948C.0-151,B1,14,40,14,18,14,43,	14 1D 14 551		
012132214212422232224122322 Message Box		311142224222422242	22225
SHELPSIREMIT P M Data			*
IR EMIT, P=Port, M=Mode	:		E
\$IRLEARNER P M R			
IR Learner, P=Port, M=Mo	de, R=Repeat		
\$VERSION			-
SHELP		Send	Clear MSG

Type \$HELP to list all the IRL commands and use the command through RS-232 to control the IR Learning Tool. To clear the message in message box simply click on Clear MSG.

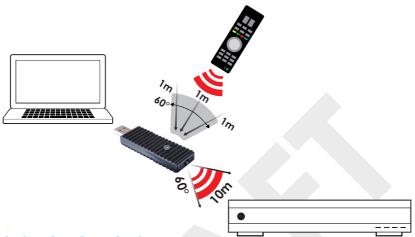


Command Chart

Command Code	Description	
ŞIREMIT	IR Emitter Send	
	\$IREMIT N M Data+Enter(\n\r) +0xf2h + 0xf3h	
	N =1(Port)	
	1- Port 1	
	M =0 (Mode)	
	0- CYP IR format	
ŞIRLEARNER	IR Learner Timeout: 5sec.	
	\$ IRLEARNER P M R+Enter(\n\r) +0xf2h + 0xf3h	
	P = 1	
	M =0(Mode)	
	0- CYP IR format	
	R =0~1(Repeat)	
	0- With repeat code	
	1- Without repeat code	
\$VERSION	Read Hardware and Firmware Version	
	Return: Version	
	<pre>\$VERSION+Enter(\n\r) +0xf2h + 0xf3h</pre>	
\$?		
ŞHELP		



7. CONNECTION DIAGRAM



8. SPECIFICATIONS

Input Port	1 x IR
Output port	1 x IR
	1 x USB
IR Frequency	20~60kHz
IR Input Signal Distance	Up to 1M
IR Blaster Out Distance	Up to 10M
ESD Protection	Human Body model:
	± 8kV (air-gap discharge)
	± 4kV (contact discharge)
Dimensions	85mm (W) x 25mm (D) x 12mm (H)
Weight	30g
Chassis Material	Plastic
Silkscreen 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)



MPM-CDPSIRL