



R2 Touch iPhone App and Dome Automation

by CuriousMarc

What is R2 Touch?

Currently:

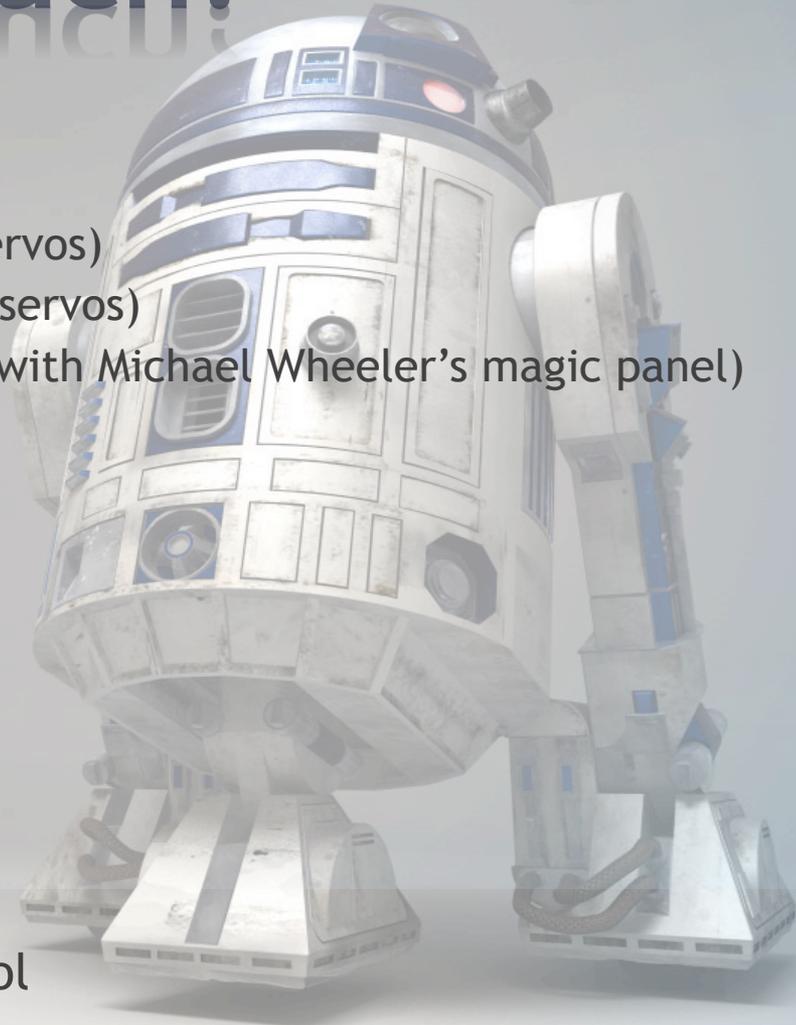
- Dome Control via iPhone
 - 10 Dome Panels Control (10 servos)
 - 3 Holog projector Movement (6 servos)
 - Magic Panel (now compatible with Michael Wheeler's magic panel)
- Sound and Lights control via
 - CF-III sound
 - JEDI Display

In the works

- Sound via MP3 trigger
- Teeces displays

Future

- Extend to more R2 gadgets
- Integrated with driving control

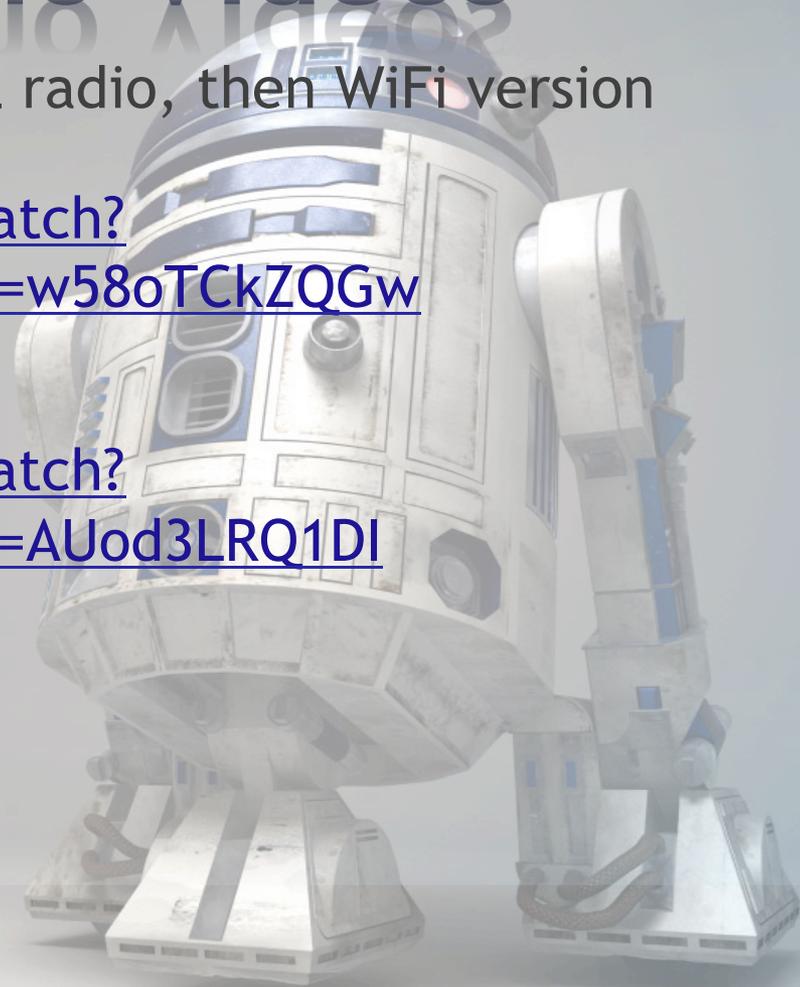


R2 Touch Demo Videos

Early version with external radio, then WiFi version

[http://www.youtube.com/watch?
feature=player_embedded&v=w58oTckZQGw](http://www.youtube.com/watch?feature=player_embedded&v=w58oTckZQGw)

[http://www.youtube.com/watch?
feature=player_embedded&v=AUod3LRQ1DI](http://www.youtube.com/watch?feature=player_embedded&v=AUod3LRQ1DI)



R2 Touch System Components

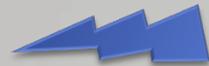
Optional External Radio

Adapter Board

XBee

Xbee
2.4 GHz
900 MHz

Xbee or
WiFly Rx



Built-in WiFi
(2.4 GHz)

MarcDuino 1
(Panels)

MarcDuino 2
(Holos)

10x Dome
Panel Servos

CF-III Sound

6x Holo
Servos

JEDI Display
System

Magic Panel

I want one! How do I get it?

All details on WWW.CURIOUSMARC.COM

R2 Touch

- On the Apple App Store

MarcDuino Boards - at present need to build yourself

- Order bare boards from Laen at oshpark.com
- Components list, assembly instructions and software on www.curiousmarc.com

CF-III Sound

- Order CF-III system online
- Software on www.curiousmarc.com
- Sound files not provided

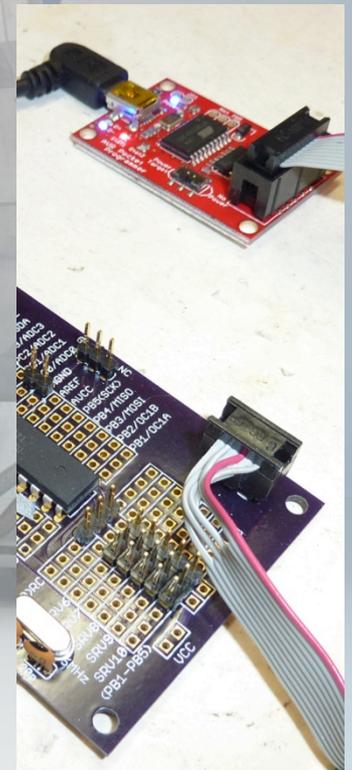
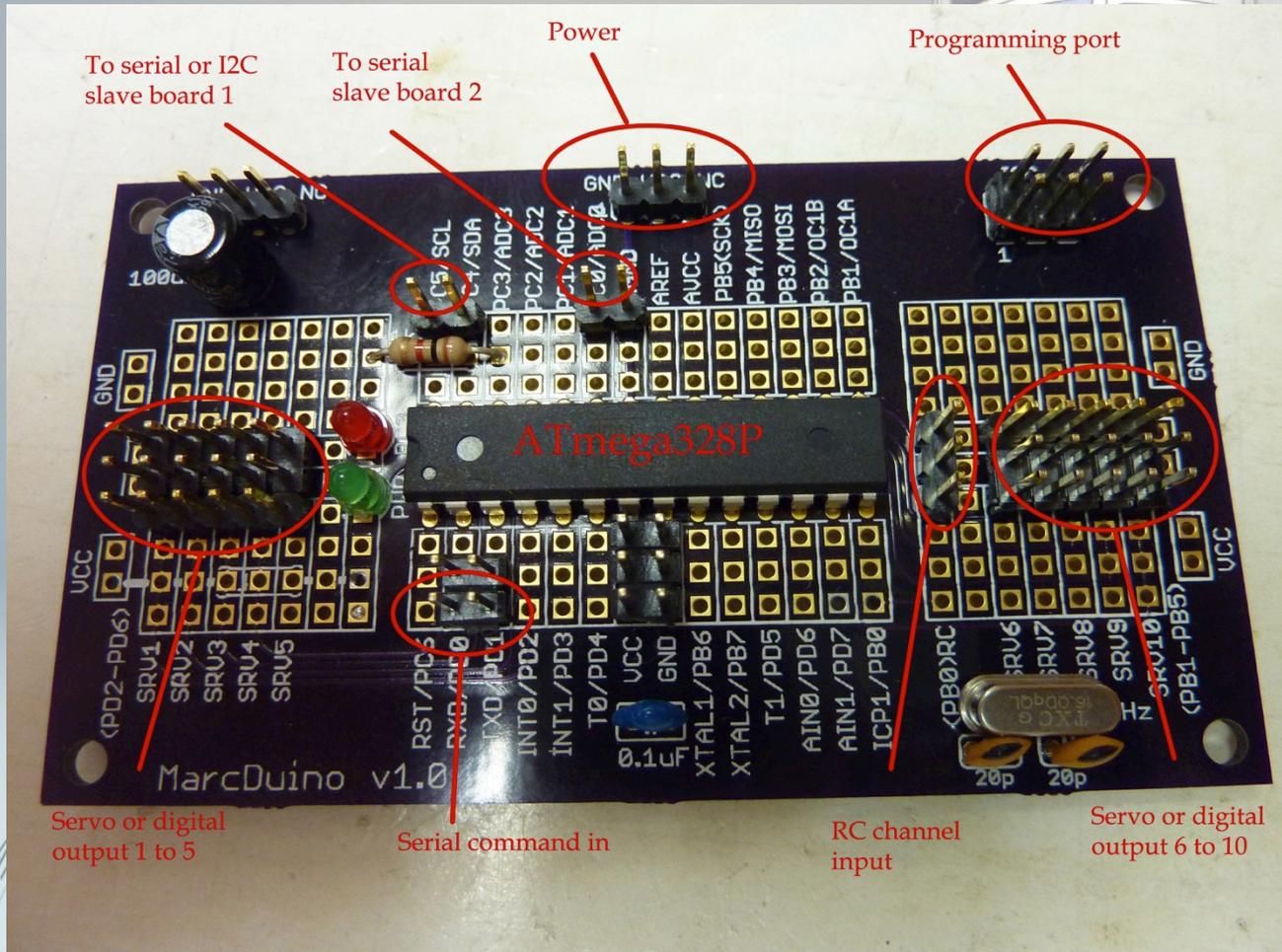
JEDI Display

- Scott Gray preparing new version
- Or wait for Teeces sketch update and use Teeces



MarcDuino Boards

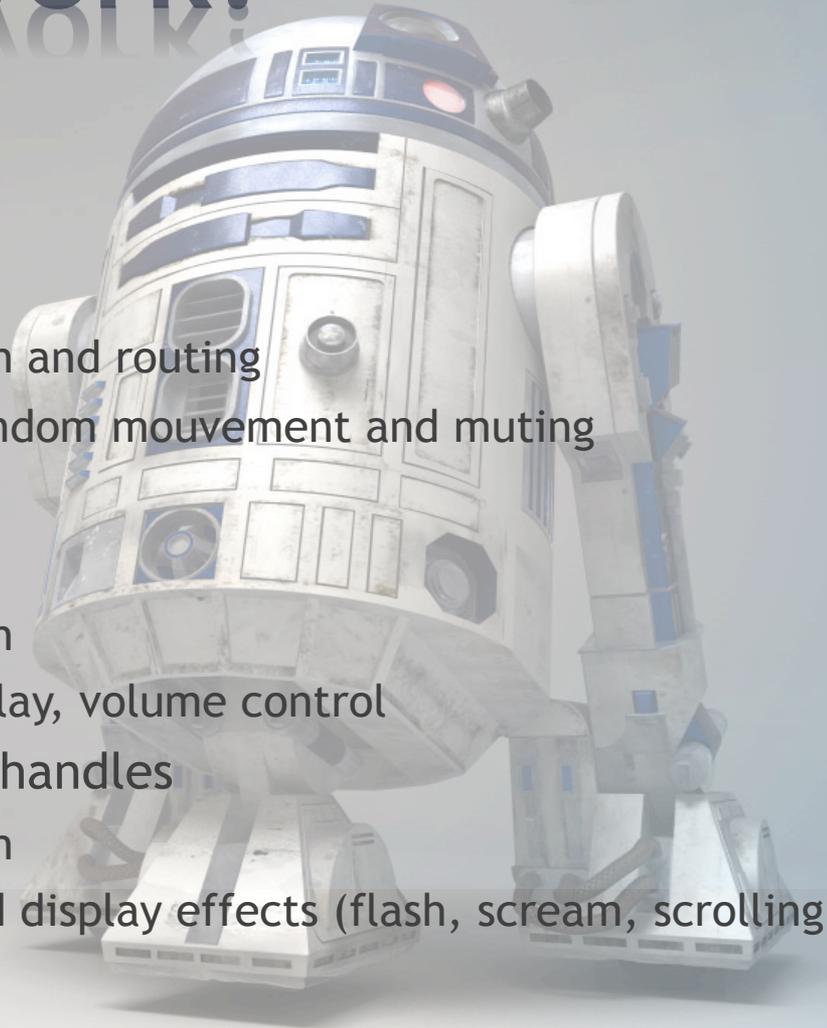
- Same chip as Arduino (ATMega328p)
- Different programming model (straight C) and tools (Eclipse, Atmel Studio)
- Mini Pocket Programmer required to upload firmware



How does it work?

All the intelligence is in the R2

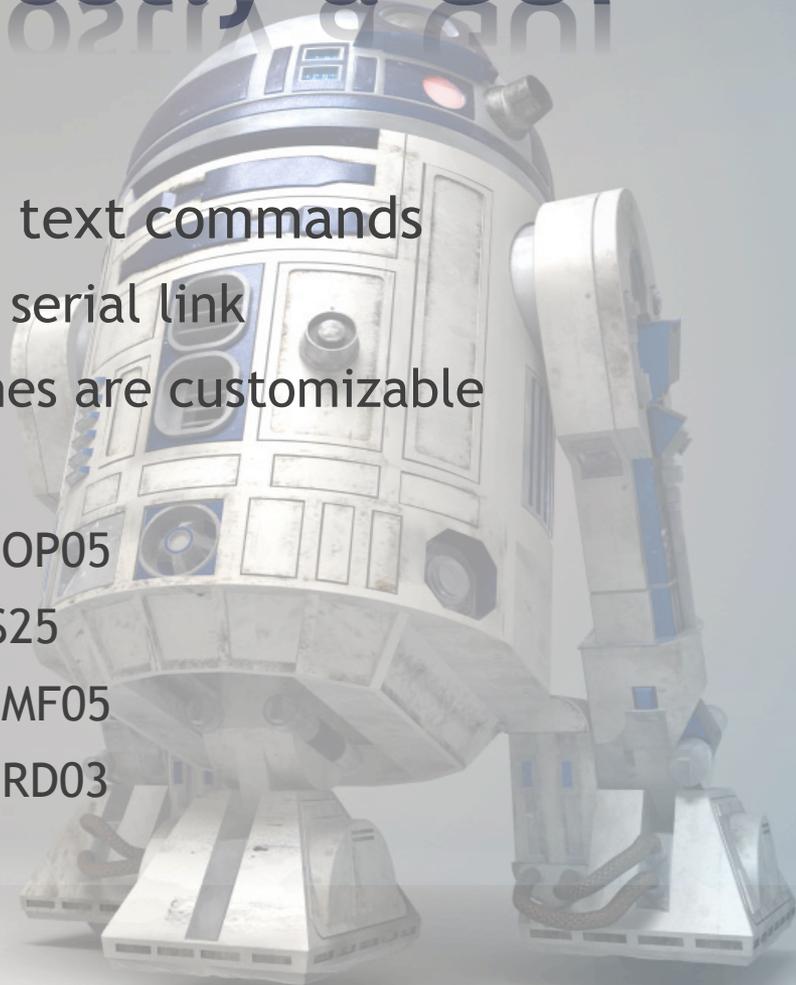
- MarcDuino boards handle
 - Serial command interpretation and routing
 - Servo control, sequencing, random movement and muting
 - RC input translation
- Sound system (CF-III) handles
 - Serial command interpretation
 - Specific sound play, random play, volume control
- Display system (JEDI display) handles
 - Serial command interpretation
 - PSI, Logics and Holo lights and display effects (flash, scream, scrolling text...)



R2 Touch is mostly a GUI

The R2 Touch app sends short text commands

- ASCII strings over a wireless serial link
- Most strings and button names are customizable
- Examples:
 - Open panel 5 :OP05
 - Play sound 5 of bank 2 \$25
 - Flicker Magic panel 5 sec *MF05
 - Holo 3 random move *RD03



Customizing R2 Touch

Most button names / string messages customizable

- Editable in app settings
- Setting files can be saved or uploaded via iTunes
- Setting files are editable too (XML)



Settings Main Screen

Top Keys

KEY 1	Name	OFF (can't be chang...
	Action	:SE10r
KEY 2	Name	QUIET
	Action	:SE10r
KEY 3	Name	SND ON
	Action	:SE13r
KEY 4	Name	HOLO ON
	Action	:SE14r

Keyboard Panel 1

KEY 1	Name	CLOSE ALL
	Action	:CL00r
KEY 2	Name	OPEN ALL
	Action	:SE14r

Future Work

Sound

- Alternate MP3 trigger sound system
- Plays via Bluetooth option

Display

- Teeces compatibility (new sketch for Teeces)

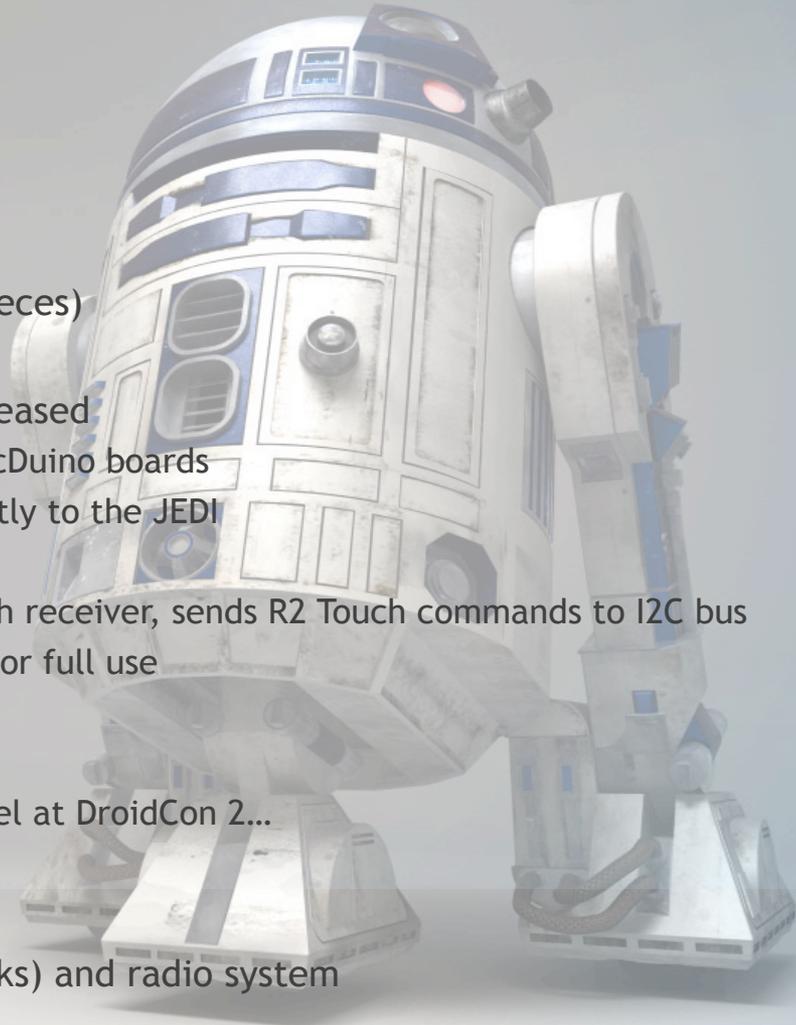
Integration with other systems

- JEDI - Almost complete, about to be released
 - use the JEDI system instead of the MarcDuino boards
 - simply connect the WiFlyreceiver directly to the JEDI
- R-Series
 - Michael Erwin just released an R2-Touch receiver, sends R2 Touch commands to I2C bus
 - Some programming might be required for full use
 - Does not support panel sequences
- McWhlr Magic Panel
 - Now compatible, just did it with Michael at DroidCon 2...

More gadgets, body panels control....

Full driving control

- With supplemental input hardware (sticks) and radio system



Questions

Don't forget: everything is on www.curiousmarc.com

Also follow "Preview of R2 Touch iPhone App" thread

The screenshot shows a Mozilla Firefox browser window displaying the website www.curiousmarc.com. The browser's address bar shows the URL, and the page title is "curiousmarc.com - Mozilla Firefox". The website's header includes the site name and a search bar. Below the header, there are navigation tabs for "CuriousMarc's R2-D2", "2-3-2 Actuation", "Holo Lights", "CF-III Sound", "MarcDuino", and "R2 Touch iPhone App".

The main content area is titled "CuriousMarc's R2-D2". It contains several sections:

- Navigation:** A list of links including "CuriousMarc's R2-D2", "2-3-2 Actuation", "CF-III Sound", "Holo Lights", "MarcDuino", and "R2 Touch iPhone App".
- External Links:** A list of links including "CuriousMarc R2-D2 Build Log", "Astromechnet (R2Builders Club Site)", "R2Builders Yahoo! Discussion Group", and "R2 Touch Thread on Astromechnet".
- CuriousMarc Build Log Videos:** A video player showing a person with a remote control. The video title is "Chris James with Bothan remote at Robo Games San".
- My R2 in 2012:** A photograph of the R2-D2 robot replica, with the caption "My R2 in 2012 Photographed at Maker Faire, San Mateo, CA".

The video player shows a person standing next to the R2-D2 robot replica. The video title is "Chris James with Bothan remote at Robo Games San". The video player controls show a play button, a progress bar at 0:00 / 0:37, and a volume icon.

At the bottom of the page, there is a "Visitor count:" label and a small "x" icon in the bottom left corner.