

# **iCade Developers Resource**

*Release: Ion iCade Language 1.4*  
*Date: December 1, 2011*

## Introduction

Welcome to the iCade Dev Resource for device connection.

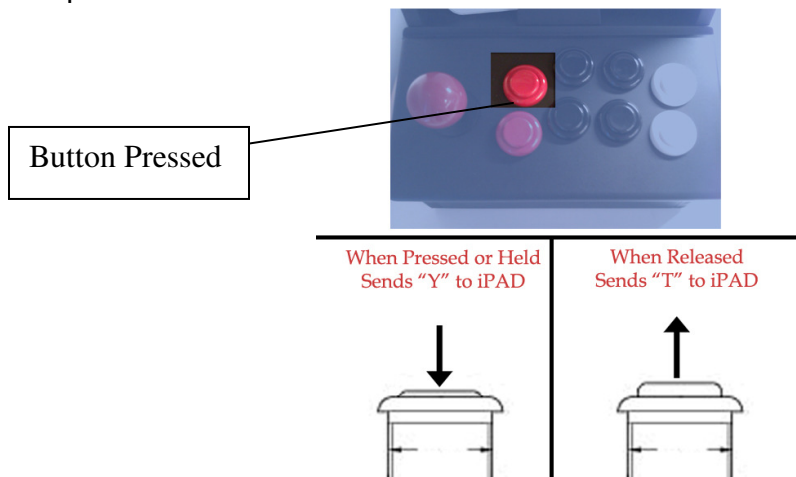
This Resource will demonstrate how to control your iPad application with the ION iCade.

## Communication

The iCade communicates through Bluetooth wireless technology, using a specific key map and protocol to talk with the applications.

For each button pressed, the iCade sends a Key Down character (when button is pressed or joystick is moved directionally) and a Key Up character (when the button is released, or the joystick is moved from its location). The application being made to work with iCade will need to be able to interpret these commands, as Key Up and Key Down characters are necessary for successful Application Submissions.

Example:



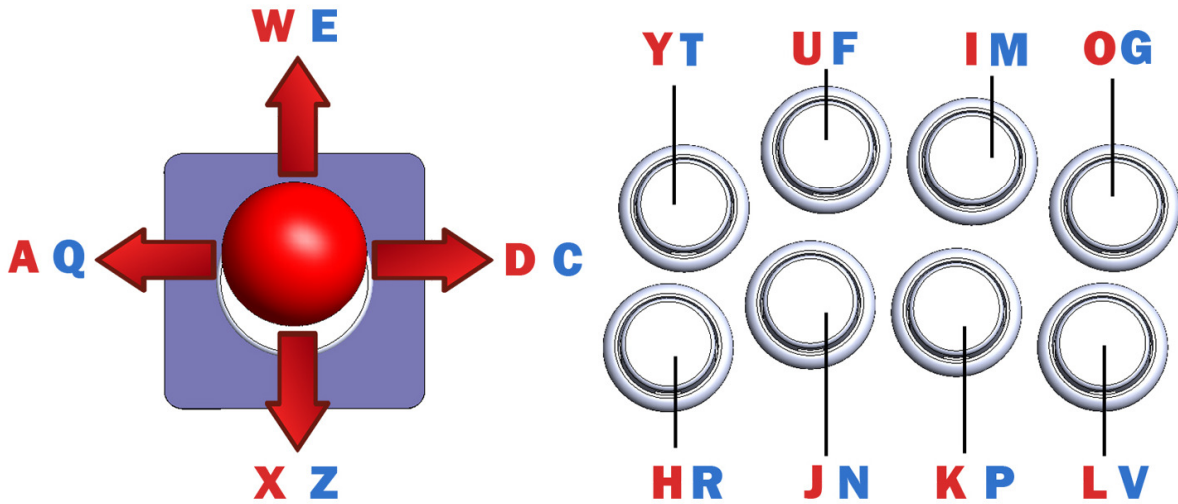
## Set-Up and Key Map

The iCade has 2 states:

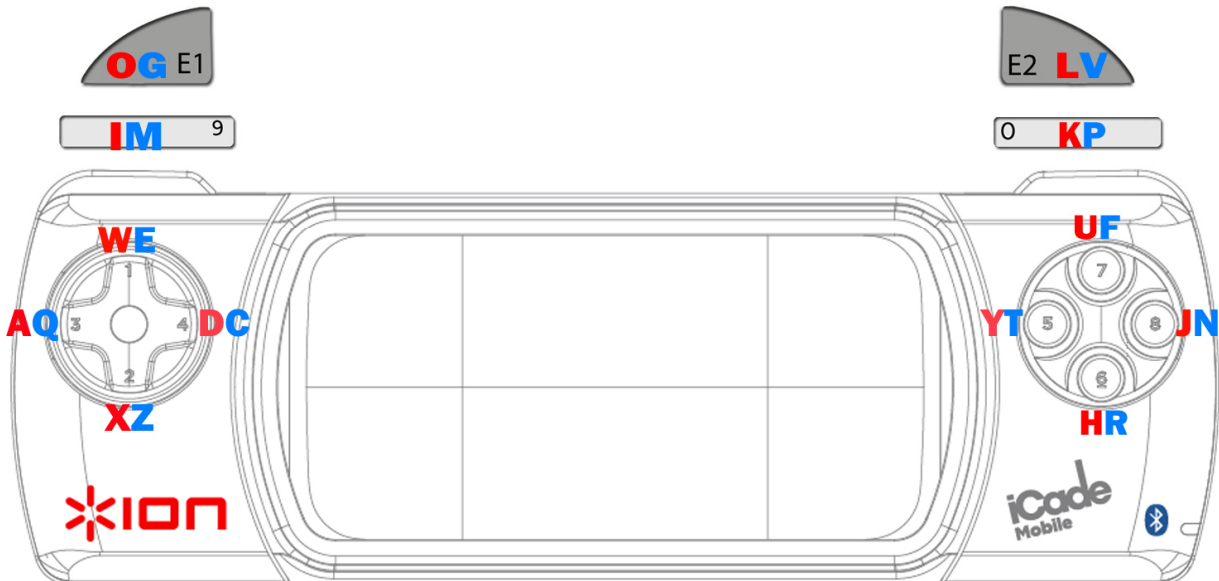
- **Pairing Mode** –This mode is engaged by holding the bottom row of buttons along with the top right button. At this point the buttons and joysticks 4 directions will send number characters to complete the iPad's challenge and response code and connect. These five buttons should not be assigned any "Press and Hold" functions together, as this will interrupt the users gaming experience, and require a re-pairing and connection. (If you have an iCade or Test Module see the included iCade Quickstart Instructions for pairing info)

- Gaming Mode** – This mode is entered the moment the iCade is connected properly to the iPad. At this time the iCade will send the gaming key map. As explained previously, Gaming Mode sends a character to the iPad to acknowledge a button pressed, and a character when a button is released. The keymap below shows the commands sent to the iPad.

**iCG04 Action Button Commands**  
 Letters written in **Red** denote Key Down, Letters in **Blue** denote Key Up for each direction



**iCG07 Action Button Commands**  
 Letters written in **Red** denote Key Down, Letters in **Blue** denote Key Up for each direction



## **Feedback**

Please direct feedback or questions about this resource kit to **[icadedev@ionaudio.com](mailto:icadedev@ionaudio.com)**.