

Appendix

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[Camy Group](#) Teir1 F.P.S. Controller Design Specification

v.0.2 Updated 12/13/13

Brief:

- The Teir1 F.P.S. controller family is designed to provide players a competitive advantage in videogame console online, multiplayer FPS (First-Person-Shooter) titles. This advantage is made possible by the means of three additional **Macro/Remap** buttons provided in addition to the standard compliment of buttons found on videogame controllers of each platform (Xbox 360, Xbox One, PlayStation 3, PlayStation 4).

Scope:

- The Tier1 controller project will total 4 SKUs, namely a version of the controller design for each major videogame consoles (Xbox 360, Xbox One, PlayStation 3, PlayStation 4). Each platform specific version of the controller will require certain modifications to the controller face so as to provide for license requirements, and each version of the controller will feature firmware unique and original to the Teir1 controller project and the specific console platform the controller is designed to function with.

Controller Layout and Ergonomics:

- The Tier1 controller family will share an ergonomic form and primary button layout. This layout is most akin to the Microsoft Xbox 360 ergonomic form and button layout. In relative similarity to this controller, the Tier1 design features
 - 2-Analog Potentiometer Thumb Sticks
 - Arranged in Xbox 360 style, with left stick placed higher than the right
 - 1-Guide Jewel
 - Similar to X / PS jewel found on Microsoft and Sony controllers
 - Carbon contact actuation
 - 2-Start / Select buttons
 - Or similar next-gen navigation buttons
 - Carbon contact actuation
 - 4-Shoulder Buttons
 - Arrayed in 2-over-2 fashion, comprised of LB, LT; RB, RT, similar to Xbox 360 shoulder button arrangement
 - LB and RB
 - Carbon contact actuation
 - LT and RT
 - Analog potentiometer via lever

- 1-Digital Direction Pad
 - + “Crosshairs” design
 - Carbon contact actuation
- 4-Face Buttons
 - Arrayed in Xbox 360 style 2-over-2 fashion, X,Y,A,B
 - Carbon contact actuation
- Wired Microphone Input
 - 2.5mm (Xbox 360, Xbox One), 3.5mm (PS3, PS4)



Texture and Surface Finishing

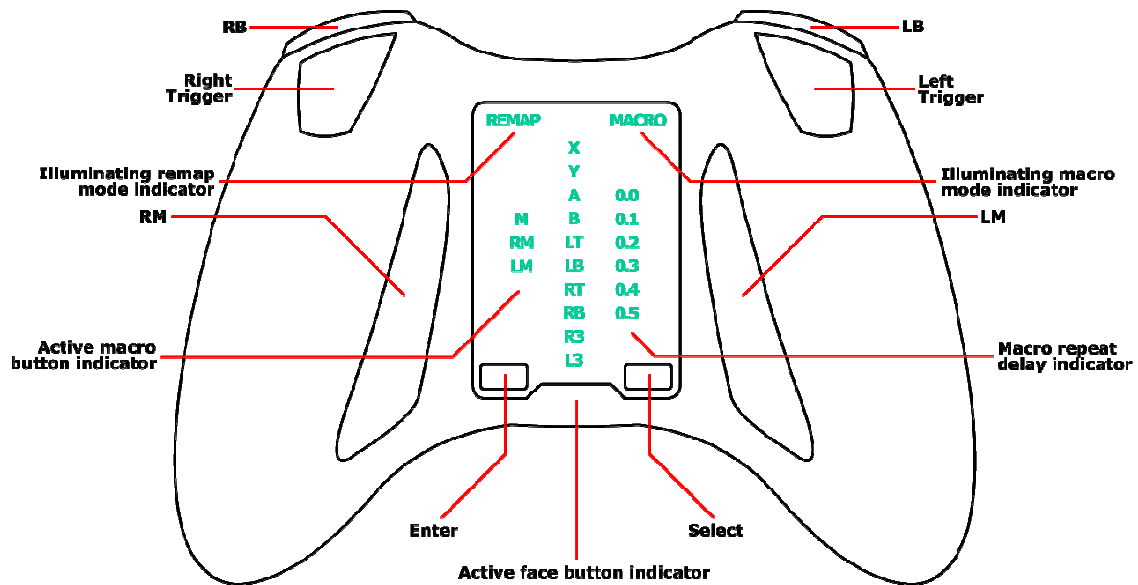
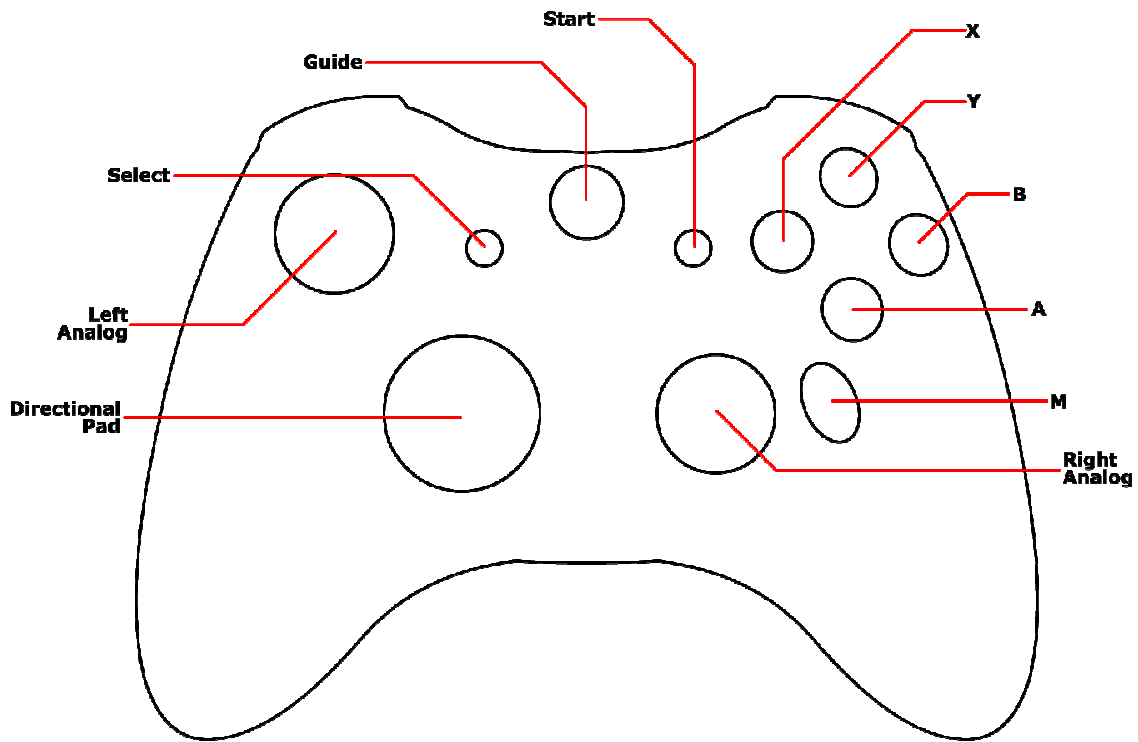
- Case texture, all controller models:
 - Main body-top case: follow Xbox One controller molded texture (matte effect)
 - Main body-bottom case: follow DualShock 4 (PS4) controller bottom case texture (square-dimple matte effect)
- Face buttons, construction and finish:

- Xbox 360 / Xbox One: two-piece (inner cylinder, outer sleeve) construction
- PlayStation 3 / PlayStation 4: One piece, dual process (pad-print, UV coat) construction
- Analog Thumbstick texture and shape, all controller models:
 - Follow Xbox One thumbstick shape and finish
- Rear mounted LM, RM buttons (additional feature buttons), all controller models:
 - Polished, UV-coat finish



Additional Macro/ Remap Buttons:

- In addition to the standard buttons noted above, the Tier1 controller also features 3-additonal, non-standard buttons, which will provide the user with configurable macro and remap functionality.
 - 1-“M” Controller Face Button
 - This button will be placed below the X,Y,A,B face button cluster
 - Micro-switch actuation
 - 2-“RM” and “LM” Rear Panel Buttons
 - These buttons will be placed on the left and right, rear sides of the controller
 - Micro-switch actuation
 - 2-“Select” and “Enter” programming buttons
 - These buttons will be placed on the rear panel of the controller for use in programming the Tier1 controllers’ Macro and Remap functions
 - Tac-Switch actuation



Controller Features:

- Tier1 controllers will make use of wired USB connections to the videogame consoles with which they will be used.
 - Cable length will be 10-feet
- Tier1 controllers will feature rumble-motor haptic feedback functionality. Controllers will employ standard 2-motor system.
 - Xbox One controller may feature additional RT/LT haptic feedback motors.
- The Tier1 controller for PlayStation 4 may feature capacitive touch input feature
- The Tier1 controller family will make use of security-IC and firmware provided by the manufacturers of the videogame consoles for which the Tier1 controllers are designed to function (Microsoft and Sony).
- The Tier1 controller will make use of a shine-through display on the rear panel of the controller for use in programming Macro and Remap functionality
 - The shine-through panel must support
 - Bi-color lighting
 - High and Low brightness capability

Macro / Remap Functionality:

- The Tier1 controller family will be distinguished via the users' ability to customize the functionality of the controllers three additional buttons (M, RM, LM)
 - Two types of customization will be possible
 - Macro Function
 - Remap Function
 - **Macro Functionality**
 - The Tier1 controller will allow the user to program simple macro functionality to each of the three additional buttons (M, RM, LM), drawn from inputs available via the standard controller buttons (X,Y,A,B,LT,LB,RT,RB,R3,L3)
 - The controller will allow for up to 3 inputs to be programmed, which will be executed in sequence upon actuation of the additional button to which the macro has been assigned
 - User-defined delay between these macro'd inputs may be a required feature for compatibility with all intended software
 - **Remap Functionality**
 - The Tier1 controller shall allow the user to reassign any of the controller's standard buttons (X,Y,A,B,LT,LB,RT,RB,R3,L3) to one of the Tier1 controllers additional buttons (M,RM,LM)
 - Standard buttons so remapped to an additional button shall be mirrored, so as both original button and additional button may each be actuated for the desired input

Compliance Requirements:

- The Tier1 controllers will require the follow compliance certifications, and possible additional certifications as required by licensors.

- FCC
- CPSIA
- CE
- UL
- RoHS

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.