Me First - 2019

Date updated: 20190610

Me First uses 2.4GHz technology. The effective distance is **30 meters minimum**, and should be more with current technology. One master FCU (Facilitator's Control Unit) should be able to **connect with stability to 36 answer PADs** (Personal Answer Dome). The selling unit is 1 master with 12 answer pads and 1 pc USB cable (1.3m) in a box.

Set-up

1. Switch on the master FCU first by pressing the **ON/OFF** button on the top of the device for about 3 seconds. **RED** light on FCU will be turned on.

2. Distribute one answer PAD to each participant (up to 36 PADs). Press and hold the **ON/OFF** button at the bottom of the PAD for about 3 seconds. When the PAD is turned on, **RED** light will flash 3 times and then turn solidly on. The answer PAD is ready.

3. Repeat #2 until all answer PADs are on and **RED** light is solidly on. The game can begin. Press the **RESET** button on the FCU to place the system in "Ready" mode. The answer PADs will display **YELLOW** light and FCU will stay **YELLOW**.

4. Each answer PAD has a "\9" plus 6-digit ID which is unique and engraved on the bottom of plastic housing. Points scored associated with each answer PAD will be recorded accordingly on master FCU and to be downloaded to PC at the end of the game in the form of a table. (pt.15d)

5. 5a) To start the game, switch on master FCU first, then switch on the answer PADs (up to 36 answer PADs) within 5 minutes. The RED lights of the master FCU and answer PADs will be solidly ON when ready (ref #2). Answer PAD(s) switch on after 5 minutes will not be accepted by the master FCU. This is to prevent interference from another set of master FCU and answer PADs maybe playing nearby.

5b) To add new answer PADs to join the game, switch off the master FCU and all answer PADs. Then switch on the master FCU, then switch on the answer PADs (up to 36 answer PADs) within 5 minutes. (#5a)

N.B. Minimum 5 minutes time delay should be allowed for any 2 sets of master FCU answer PADs setting.

To Play

6. Ask the question.

7. Students "buzz in" by pressing on the dome of their answer PAD. The first answer PAD "buzz in" will flash **GREEN**, while other answer pads will turn solidly **RED** and deactivated. The master FCU will turn solidly **GREEN**.

8. If the answer is **Correct**, press the **RIGHT** button on the master FCU to confirm. "**Right signal**" tone will ring **AND** the LED's on the player's Answer Pad will rapidly flashes **RED, YELLOW** and **GREEN** repeatedly until the **RESET** button or **Continue** button is pressed.

   a. Then either press the **CONTINUE** button on the master FCU to continue. The answer PAD of whom gives the correct answer will turn solidly **RED** and deactivated. The other answer PAD(s) will light up **YELLOW** indicating they can "buzz in" to answer.

   b. Or, press the **RESET** button (Note 4) on the master FCU to clear and reactivate ALL the answer PADs and move on to next question (ALL answer PADs will display **YELLOW** light and FCU will stay **YELLOW**)

   (Note 1) **AND** " **\Y** " will show on PC if master FCU is connected to PC via USB.

9. If the answer is **Wrong**, press the **WRONG** button on the master FCU to confirm. "**Wrong signal**" tone will ring and the LED's on the player's Answer Pad will rapidly flashes **RED** repeatedly until the **RESET** button or **Continue** button is pressed on the master FCU (Note 3)

   a. Then either press the **CONTINUE** button on the master FCU to continue. The answer PAD of whom gives the wrong answer will turn solidly **RED** and deactivated. The other answer PAD(s) will light up **YELLOW** indicating they can "buzz in" to answer.

      (Note 2) **AND** " **\N** " will show on PC if master FCU is connected to PC via USB.

   b. Or, press the **RESET** button (Note 4) on the master FCU to clear and reactivate ALL the answer PADs and move on to next question (ALL answer PADs will display **YELLOW** light and FCU will stay **YELLOW**)

      (Note 3) **AND** " **\P** " will show on PC if master FCU is connected to PC via USB.

   c. Repeat #7a and #8a until the **RESET** button on the master FCU is pressed to clear and reactivate ALL the answer PADs and move on to next question.

10. In the course of the game, if the **RIGHT** or **WRONG** button is pressed on master FCU by mistake, the record can be corrected by pressing the correct button then followed by **CONTINUE** button or **RESET** button. Once the **CONTINUE** button or **RESET** button is pressed, the record of the game can no longer be modified.

11. During the entire game, the master FCU will record for each question (after **RESET** or **Continue** button is pressed each time) which answer PAD attempts to answer and whether the answer is **Right** or **Wrong**.

12. At the end of the game, the result of the game is shown as follows.

    a. When the **RIGHT** button on the master FCU is pressed for 3 seconds, the master FCU **AND** the answer **PAD** or **PADs*** with the most correct answers will flash **GREEN** for 5 seconds and the "Right signal" tone will ring for 5 seconds simultaneously or until the **Reset** button is pressed, whichever is sooner. After the **Reset** button is pressed, **ALL** the answer pads will turn **YELLOW** and the game will continue.

       *If there are ***more than 12*** answer pads have the same most correct answers scored, **ALL** the answer pads will flash **GREEN** for 5 seconds and the "Right signal" tone will ring for 5 seconds simultaneously, or until the **Reset** button is pressed.

    b. When the **Wrong** button on the master FCU is pressed for 3 seconds, the master FCU **AND** the answer **PAD or PADs*** with the most wrong answers will flash **RED** for 5 seconds and the "Wrong signal" tone will ring for 5 seconds simultaneously or until the **Reset** button is pressed, whichever is sooner. After the **Reset** button is pressed, **ALL** the answer pads will turn **YELLOW** and the game will continue.

       *If there are ***more than 12*** answer pads have the same most wrong answers scored, **ALL** the answer pads will flash **RED** for 5 seconds and the "Wrong signal" tone will ring for 5 seconds simultaneously, or until the **Reset** button is pressed.

13. The result log of the game will be stored as a separate batch of records every time the master FCU is switched off. New game results will be saved as a new file every time the master FCU is switched on again up to 50 games. Then new results will overwrite results of oldest game (FIFO).

    For example the result of 51st game will replace the result of the 1st game, 52nd will replace the 2nd, and so on.

14. In case the player needs to replace batteries of Answer **PAD**s or master FCU during a game, the result log of the game will not be stored as a separate batch of records if master FCU is NOT switched off longer than **15 minutes**.

    *Master FCU and the answer PADs will flash RED 5 times / minute to indicate battery power is low and need battery replacement (#15k)

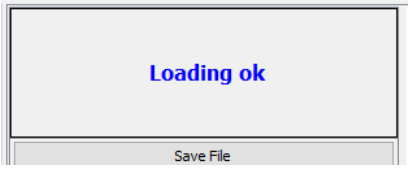
15. The memory record on master FCU can be cleared manually when it is connected with USB cable to PC and "Erase All" is pressed.

16. To download the result of the game (Me First Smart Responder),

a. Connect the master FCU to PC with Windows 7 or later using USB/mini USB cable provided (V2.0 or above) of 130cm long.

b. (i) A Windows auto-run program (*Me First Smart Responder**) will open and display a summary table (Appendix 1) with date and time in **Text file** showing the score of each game (*Score = Right – Wrong), (ii) Who (Which PAD ID) has attempted to answer (iii) The total number of correct answers and total number of wrong answers by each answer **PAD** (player).

c. The log will be automatically downloaded from master FCU to PC. User can save the result log text file on PC. The master FCU will light up **RED**, **YELLOW** and **GREEN** sequentially when downloading. The log can also be downloaded from the master FCU by clicking the "Upload" button in the *Me First Smart Responder.* "Loading OK" will be shown on the screen when download is completed.



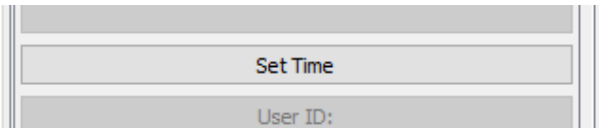
d. When the answer **PAD**s or the buttons on the master FCU are pressed, the corresponding number / text will appear on the screen. (* The **"\"** symbol is also required to be shown)

<u>Master FCU</u>
Right = \Y
Wrong = \N
Reset = \P
Continue = \C

<u>Answer **PADs**</u>
" \9###### " will show on PC with " \9 " being the common prefixes and " ###### " is the 6-digit unique ID of each answer **PAD**s which must be same as the engraved ID (######) on the plastic housing of each answer **PAD**s.

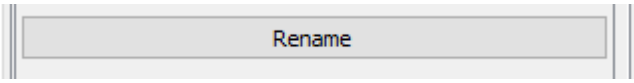
For example, " \9000001 " for PAD ID 000001, " \9000105 " for PAD ID 000105, " \9123456 " for PAD ID 123456, etc.. Same serial number should be shown on the PCB as well for reference.

e. The clock and timer IC of the master FCU will sync automatically with the PC which ensures the time and date of the game stay accurate. Or clicking the “Set Time” button to sync with the PC’s clock time.
* The time and date will be defaulted as 01/01/2019 00:00 until the master FCU is connected to the PC.

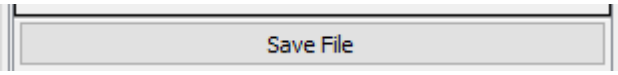


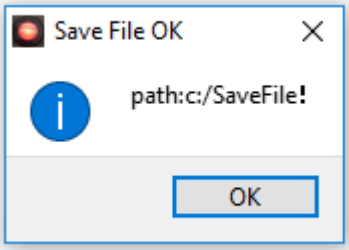
f. All game records in the master FCU will be erased instantly by clicking the “Erase All” button in the *Me First Smart Responder.*

g. The answer **PAD**s can be assigned names by clicking the “Rename” button in the *Me First Smart Responder*.



h. The game records can be saved to a default location (C:/SaveFile) as an Excel format by clicking the “Save File” button in the *Me First Smart Responder*. “Save File OK” will be shown when it is completed.





i. In some cases, some anti-virus program or OS setting will inhibit the auto-run function. Player need open the USB drive and execute manually.
j. Auto-run will quit automatically after USB cable is disconnected or master FCU is Power OFF.
k. The master FCU and answer **PAD**s are built with auto Power detection. When the batteries power is low, the light will flash RED 3 times per second. Please replace 3 x AAA batteries.

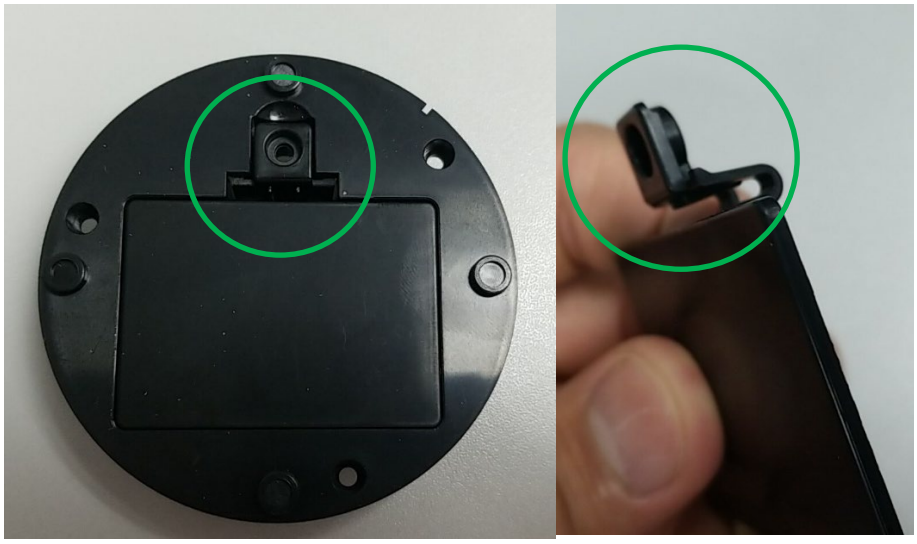
End of Play

17. Press the **ON/OFF** button on the master FCU for 5 seconds to switch off the unit. Once the master FCU is switched off, ALL the answer **PAD**s will power off automatically.

18. In case of the master FCU and answer PADs are idle, or no activity is registered for 45 minutes, the system will auto power off.

Remarks:

1. Reception range is **30 meters minimum** indoor.
2. 1 master FCU can connect securely with 36 answer **PAD**s with stability.
3. RF module should be incorporated onto the main PCB (instead of a soldered-on piece that can be detached from the main PCB easily at shock).
4. During the game, the master FCU and answer **PAD**s will flash **RED** 5 times (Flash 5 times every minute) if **LOW POWER** (lower than 3.3V) is detected. Replace with new batteries immediately. If master FCU is power off for **more than 15 minutes** and power on again, it will be considered as new game and the game result log will be saved as a separate text file.
5. Both the master FCU and answer **PAD**s are powered by 3x AAA batteries (Alkaline battery is recommended.).
6. Master FCU beeps when first responder buzzers in when sound feature is activated. Press **SOUND ON/OFF** button on the top of master FCU for desired setting.
7. To prevent the interference from other master FCU and answer **PAD**s, When the master FCU is switched **ON**, it will only connect the answer **PAD**s automatically within 5 minutes, and the pairing function will be disabled until the master FCU is switched **OFF** and **ON** again.
8. Mold Tooling design should resemble current MeFirst (except the battery door locking mechanism must be improved as below)



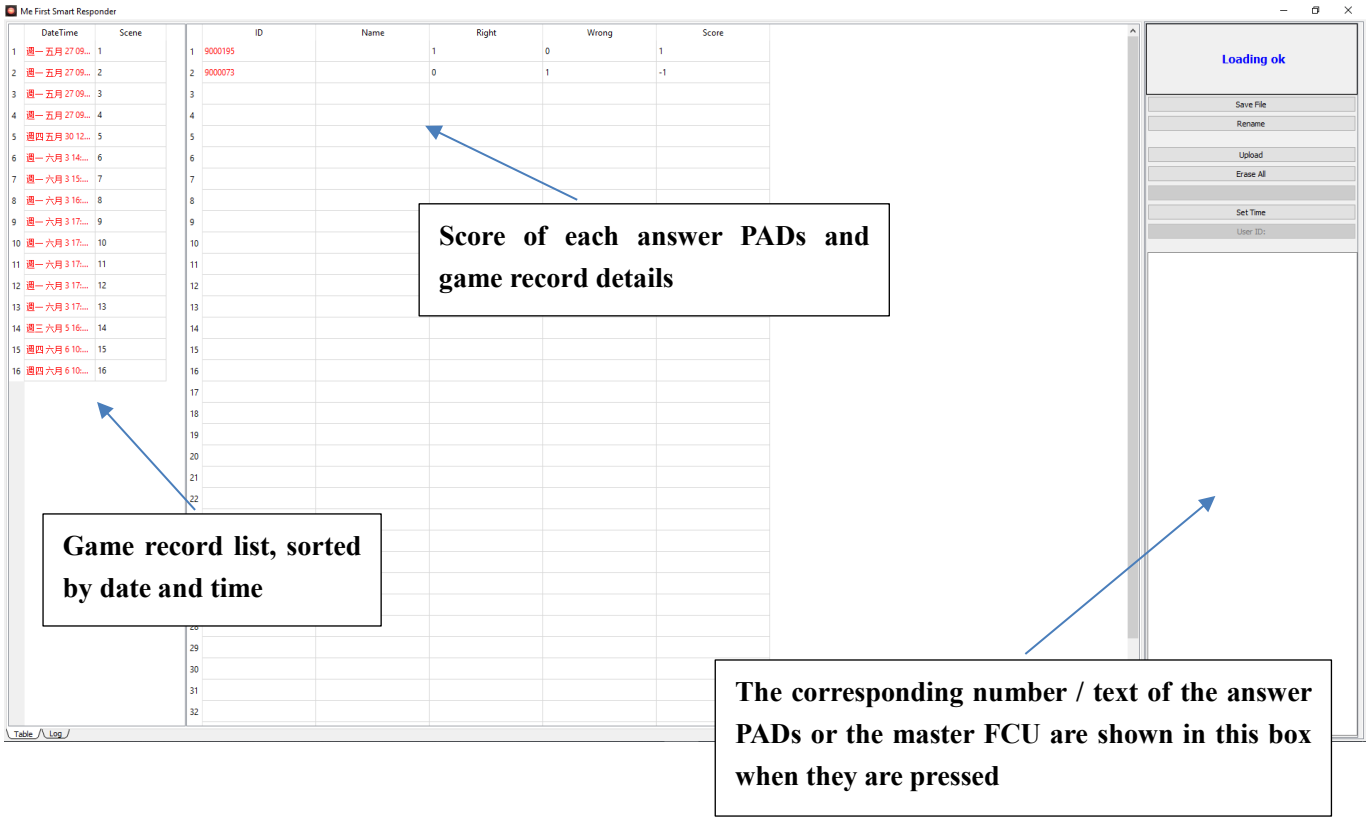
9. Improve the battery door mechanism with ease to use. Battery door is designed for the option of with and without screws. Also, the battery door snaps close securely and automatically. Please refer to the pictures above. (Remarks 8)
10. Production log code will be stamped/engraved on the inside of the battery door.
11. Need FCC and CE certification.(TBD)

(*) Screen layout will be supplied by TW.

Specification

Specification	
DC Power	3x AAA
Operating frequency	2.4GHz
Reception range	30 meters minimum
Pairing time out (36 answer PADs)	10 seconds maximum
Sound Pressure Level @1 foot	85dBA minimum
Low battery detection level ^1	4.5 V
Battery life ^1 (AAA type, alkaline battery)	
Unit dimension	TBD

Appendex 1



Reference sample picture

*All dimensions are approximate only, please refer to the actual sample for production

Answer **PAD**

Master FCU

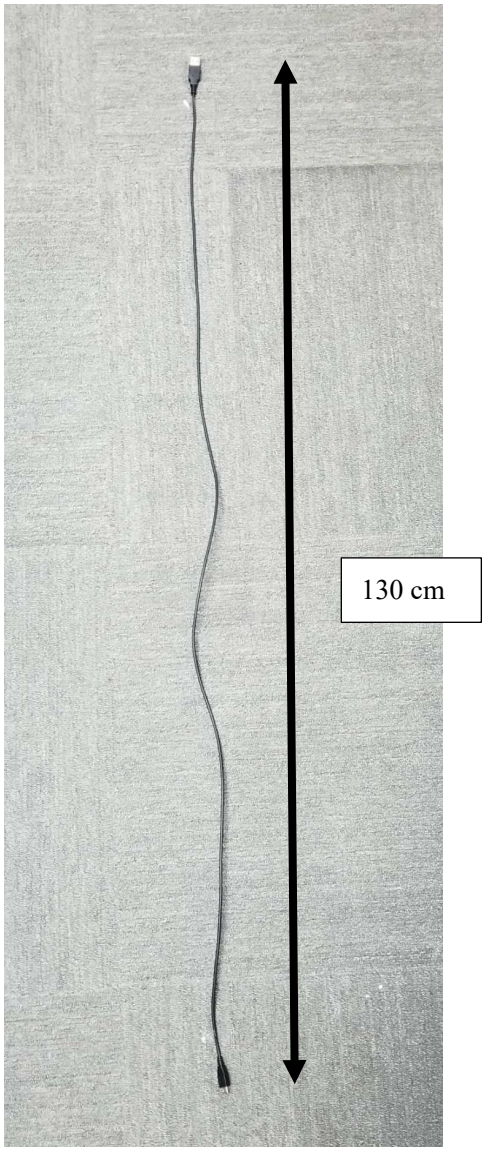
FCC Statement

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 or more 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 t which the receiver is connected.
•Consult the dealer or an experienced radio/TV technician for help. The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.



End