**Instructions for FAI F3F Timer Software (Android Devices) V2.0**

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The F3F Timer software is in three parts, Pilot Manager, Race Manager and Results Manager.

It is designed to run in conjunction with the Jon Edison F3F Timer Mk3 interface unit, see here <http://www.nymrsc.org.uk/Jons%20Timer%20mk3.htm> Other suitable timer interfaces may be available. For Further device technical details see <https://github.com/marktreble/f3f-timer>

**Access to a main Menu will, as far as these instructions are concerned, by Tapping the three dots in the top right-hand corner. This function may vary with different hardware.**

### Features

* Permanent database of pilot names (Pilot Manager App)
* Quick and easy race set up (Just type a name, and select pilots from the list)
* Flying order random shuffle or manual
* Start number: random generator or manual
* Flying order offset each round
* Real-time results over Wi-Fi (Requires mobile Wi-Fi hotspot)
* Real-time results through Results Manager App
* In-app Group scoring
* Multi-lingual voice synthesis
* Transfer of race data between devices over Bluetooth
* Generate a printable (PDF) list if pilots for use as score sheets
* Colour themes. Different screen colours will affect visibility and/or battery life.
* Export file to upload results to F3XVault
* Export files for F3Fgear <https://play.google.com/store/apps/details?id=gliderware.f3fgear&hl=en_GB>
* Results Manager: Added pilot names for each team in team results
* Results Manager: Added drill down from Leader Board to view the points/times for each pilot for the whole race showing discards

**Pilot Manager**

This app creates a database of pilot’s names and details which will be used in **Race Manager**. Once entered the details will be available for all future races.

Run the app and access the Menu, Tap the three dots. A menu appears containing the following: -

**New Pilot**: Tap this and a dialog box appears. Enter the individual details.

Note: Only a name is mandatory and, if possible, it is nice to get the pilot’s nationality correct. Frequency is only useful if the pilot’s transmitter is on 35 or 72mhz.

Should you wish to delete a pilot’s name the do a long Press on the name and Delete.

**NAC No.** is the national body. (e.g. the BMFA. It’s the GBR+BMFA number which is different to the FAI number.)

**FAI No.**

When finished Tap Save at the bottom of the dialog box.

**Race Manager and Results Manager:** Tap either of these and go to the appropriate app.

**Help**: Gives access to these instructions. (same in Race and Results Manager)

**About**: Gives software version details. (same in Race and Results Manager)

**Import/Export:** These functions allow you to transfer race data from one device to another or import data from an external source.

**Bluetooth**: Make sure both devices are paired then on the device that contains the source data, Tap the ‘Export Race' menu and choose ‘Bluetooth’.

On your destination device, Tap ‘Import Race’, menu and choose ‘Bluetooth’.

Choose your source device from the list of given devices.

Choose the race you wish to import from the list of races.

**File:** Tap the ‘Export Race’ menu and choose ‘To File’. Select the race(s) you wish to export.

Select the format (csv or json) Choose the destination folder and press ‘Export’.

You now have a restorable backup of the race at that point in time which you can use to transfer to another device or to restore on the same device.

Tap the ‘Import Race’ menu and choose ‘From File’. Select the file you wish to restore.

**From Web (f3ftimer api):** Download data from your own server. To do this you must implement an api that conforms to the f3ftimer api -> Link to details From Web (f3xvault api): Login to F3xVault to download entries.

**Race Manager**

This is the main app for running an F3F race meeting.

The first screen will list any previous races and the current race if it is entered. If the current race is shown then Tap it to access the race pilots. If you wish to delete any past races the do a long press on the appropriate race name and Tap Delete.

Tap the three dots for the main menu which contains the following: -

**New Race:** A Dialog box will appear.

**Race Name:** Enter the race name (e.g. World Champs 2019).

**Rounds per Flight**: the default value is 1 however, in certain circumstances it may be necessary to fly more than one round per flight.

**Flying Order Offset**: This field is optional and is normally left blank, however it is a different thing to the Start Number. The flying order offset moves the start pilot on by X number of pilots each round. It can be combined with the Start Number.

e.g. Flying Order Offset 5, Start Number 16:

R1 Pilot 16 starts R2 Pilot 21 starts R3 Pilot 26 starts etc...

Then Tap **‘Next’** button.

**Entering pilots:** The pilot’s selection dialog box will appear. Tap on the pilot’s names in any order that you wish. Note, the order picked will be the flying order, although this can be changed later if required. If you make a mistake, you can press the device '**Back**' key to undo your last selection.

When all the pilots have been entered Tap the ‘Next’ button.

The following screen allows:

**‘Add a Pilot, Random Shuffle, Rotate Shuffle and Manual Shuffle’** to the flying order. When finished Tap the **‘Save’** button. The list of races in the device is now shown, Tap on the appropriate race. The screen should show the flying order. If any further alterations to a pilot’s details are needed then do a long press on the appropriate name and a sub menu will appear.

**Skip Round (Award 0 points)**

**Retire from Race:** This may be accessed at any time. However, if at a further time the pilot wishes to be reinstated then follow the same procedure but the menu will show ‘Reinstate.’

**Enter Time Manually**: Self-explanatory.

**Edit Pilot details:** A dialog box will appear with all the details that may be altered including the addition or amendment of Team Name, if appropriate.

**Team Names**: Should this be a feature of the competition then the Team name can be entered now or at any time in the future. Scroll down to the bottom where there is a box for the Team Name. Should the team Name have already been entered for another pilot the after the first few letters have been entered the name will appear. Tap on it. (this will save further typing and ensure that the name is correctly entered.) To finish Tap the ‘**Save**’ button.

**Import/Export Race:** See details above in Pilot Manager.

**Pilot Manager and Results Manager:** Tap either of these and go to the appropriate app.

**Change Start Number**: At ‘Pilots Briefing’ the first pilot to start should be determined. The default start number is 1. This can be changed either manually or randomly generated. With the Flying Order displayed Tap the three dots to access the menu, then Tap **‘Change Start Number’** and a dialog box will appear. Either input the pilot’s number manually or Tap **‘RANDOM’**. Tap **‘Generate Start Number’** and the system will display the starting pilot’s name and number. Tap ‘**Done**’ to finish. (Note: any previously generated numbers would not then be used again.)

**Group Score**: This will split the pilots into a given number of groups.

This is restricted as per the FAI rules (Section 4 – Aeromodelling Volume F3 Radio Control Soaring Model Aircraft 5.8.17 (<https://www.fai.org/sites/default/files/documents/sc4_vol_f3_soaring_19.pdf>)

The whole group must be divided into groups of equal size (plus or minus one competitor) with a minimum number of competitors in one group of ten (10) before the round starts.

Tap the menu (three dots) then Tap ‘Group Score’. Enter the number of groups required. Then Tap ‘Done’. When Group Score is no longer required follow the procedure above and for Number of Groups enter 1.

**Print Pilot List:** This will generate and print the pilots flying order for pen and paper recording of the times scored. You will need a printer and the associated printer driver software installed on the Android device. Ensure that the correct printer is shown at the top left of the screen then Tap the green circle top right of screen. The sheet can also be saved as a PDF and then emailed.

**Running a Race**

Note: The Jon Edison F3F Timer unit has the facility to use a Remote Start Push Button, this makes running a race much easier and will be referred to in these instructions by the term ‘Click’

**Racing:** With the pilots flying order of on screen the next pilot to fly will be highlighted. Click the Remote or Tap the next pilot’s name and a dialog box will appear displaying the pilot’s number and name. The pilot’s name will be announced.

At the bottom of the box there are 3 buttons, labelled: - Starting Working Time, Model Launched and Abort. When satisfied Click again or Tap the appropriate button and Working Time with a maximum of 30 seconds will start together with an audible countdown. The model must be launched during Working Time. When the model leaves the launcher’s, hand Click again or Tap the Model Launched button and the system will say “*Model Launched*” and a Climb-out time of 30 seconds will start. The system will then announce the 15 seconds mark and countdown the last 10 seconds. During the Climb-out time the model should gain height and leave the course via Base A. The system will say “*Off course*” Then when the model enters the course the system will say “*On course*” and the run timer will start. The system will count and say each lap. (Note: The ‘Buzzer Man’ at Base A should press the Buzzer button once when the model leaves the course and then once when the model enters the course together with all subsequent laps.)

When the run is finished the device will show the time scored together with 2 buttons ‘Re-fly?’ and ‘Finish’. Should there be any reason to offer a re-flight Tap the Re-fly button and the time is deleted. If there is no reason for a re-flight or the pilot rejects a re-flight then Click the Remote button or the Finish button and the flight is completed. The system will say the time scored. Click or Tap again and the next pilot to fly will be announced.

**Re-flights**: If a re-flight is awarded then when the pilot is ready and when the next pilot to fly is displayed Tap the ‘Abort’ button. Scroll back to the re-fly pilot and Tap the name. Double check that all is correct then continue as normal. Should it be necessary, the award of a re-flight is available at any time even if a previous time score within that round has already been accepted. Do a long press on the pilot’s name and then Tap ‘**Re-fight’**. The previous time in that Round will be deleted.

After the re-flight the system will automatically go to the correct next pilot to fly.

**Penalty:** Should it be necessary to give a pilot a penalty then do a long press on the pilot’s name then Tap Add Penalty. A red coloured ‘Px’ will show against the pilot’s name and the point score adjusted. (where x is the number of penalties given.) You can also **Remove Penalty**.

**End of Round**: When all pilots have scored a time a dialog box will appear with 3 buttons:

‘**Abor**t’ Use only if there is a reason to query a pilot’s score or details.

**‘Finish Race’** will do some internal tidying up and go to Results Manager.

**‘Finish Round’** will also do some internal tidying up and go to the next round.

Note: All 3 buttons can be Tapped but only **‘Finish Round**’ can be remote clicked.

**Results Manager**

From the list on screen Tap the appropriate race. This is followed by a further menu:

**Round in Progress:** Shows the current positions for the pilots who have flown in the Round shown.

**Completed Rounds:** A list of rounds is shown, Tap a specific round and the times and points are displayed for that round.

**Leader Board:** displays the current positions, basically “who’s winning!”

For further scoring information Tap a pilot’s name then times and points together with any discarded rounds are shown.

**Team Results:** shows the team positions together with the pilots in a team.

(Note: Sometimes due to initial inaccurate input of team names in a pilot’s details the team result maybe incorrect. Go back to Race Manager. Back to the race concerned, a long press on the affected pilot’s name and tidy-up the team name. See ‘Team Names’ above.)

**Read Results:** Tap the ‘Play’ button and the results are read out (together with accompanying music!

Having Tapped the appropriate race access the 3 dot menu system and a menu list is displayed including: -

**Share:** by email will send the leader board to an email or Social Media address.

Tap the email app icon that you wish to use, enter the email addresses that are required and send.

**Export:** Results: this option exports all the race results data. This data can be used by various bespoke spreadsheet apps. Tap email CSV file, Tap the email app, enter the recipient email address and send.

**Pilot Manager and Race Manager:** Tap either of these and go to the appropriate app.

**Settings:** This screen shows the properties that enable the Android device and the Timer interface box to ‘talk’ to each other together with other options (Audio Options, Software Buzzer, Wind Meter, External Results (http) and Other Settings).

Note. The settings accessed here only affect the F3F software settings and not the main Android system settings.

**Speaker Volume**: If you are using a speaker that is wired to the Android device via the headphone socket then the volume can be adjusted via the device Settings app and not the F3F Timer settings menu. (E.G. Android Device Settings>Sound & Notification>Media volume. This may vary with different device hardware.)

**Connection Settings**: Most of the Android devices and Timer systems are connected via a USB cable.

Default settings: -

Input Source: IOIO

Baud Rate: 9600 (See note below)

Stop Bits: 1

Data Bits: 8

Parity: None

Jon Edison F3F Timer units: - for versions 5.8 or later use the default Baud Rate of 9600. For versions less than 5.8 use a Baud Rate of 2400. For information on connecting via Bluetooth see <http://www.nymrsc.org.uk/Jons%20Timer%20mk3%20Construction4.htm>

**Language for Voice Synthesis:** This enables language selection.

**Colour Theme:** The colours used on the device screen can be changed here.

It is also possible to connect the two units via Bluetooth; full details are available on the website shown at the top of page one.

Should you wish to familiarise yourself with the software without the Timer box and all the associated wires then Tap Input Source and then Tap Demo Mode.

For further details contact [mark.treble@marktreble.co.uk](mailto:mark.treble@marktreble.co.uk)

Instructions 2d – 06 Oct 2020