

ART ↔ FinishLynx Interface Instructions

This instructional guide offers insight into the settings and options of the interface.

Table of Contents:

1. *Necessary Components*
2. *General Computer Settings*
3. *Lynx Setup*
4. *ART Setup*
5. *Internal Sync Option*
6. *External Sync Option*
7. *Programming details of sync options*
8. *Counting number of laps completed (counting up)*

Section 1: Necessary Components

- Lynx
 - NCP Plug-in
 - Lap-Time plug-in
- ART
 - RFID version of the software

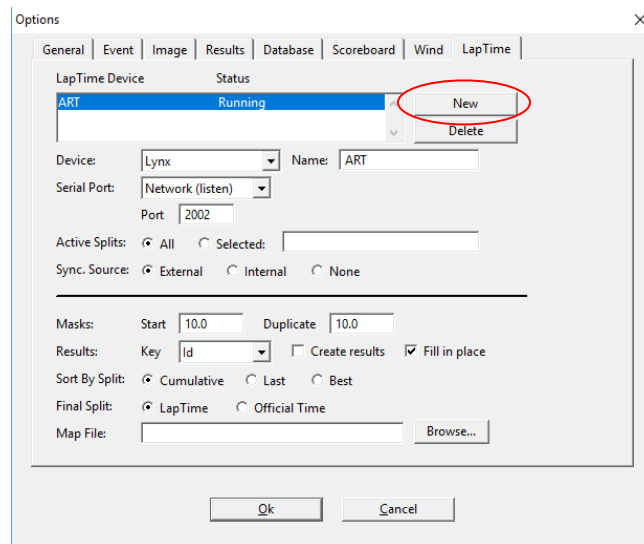
Section 2: General Computer Settings

- In order for Lynx to work properly, you'll need to set your computer to a static IP (typical IP: 192.168.0.xxx)
 - Caution: When you have a static IP set, the Motorola 9500 will not connect if you have Wifi enabled. On the other hand, if you don't set a static IP, you can use Wifi, but you may run into more problems with Lynx (cameras and scoreboards).

Section 3: Lynx Setup

- Setup a lap-time device (see image below for quick snapshot)
 - File > Options > Laptime > New
 - Device: Lynx
 - Name: ART (or some identifier that emphasizes ART)
 - Serial Port: Network(listen)
 - Port: 2002 (or any 4 digit number of your choice)
 - Sync Source Option
 - External: Used
 - Masks:
 - Start: 10 – Lynx won't accept any chip reads until after 10 seconds has passed.
 - Duplicate: 10 – Lynx won't accept a subsequent chip read until after 10 seconds has passed since prior read.
 - Results:
 - Key: ID – Identifier that is passed from ART to Lynx (ID refers to bib #)
 - Lane may be useful for T&F splits using hip/lane #'s
 - Create results – Used if you do not have a start list loaded
 - Note: This means that ANY chip seen by ART will be pulled over into Lynx. Rogue reads could be an issue using this option.
 - If you leave this option unchecked, only the participants within the start lists of Lynx will receive a time.
 - Fill in place – Assigns a place based on the time that is assigned to an athlete.
 - Final Split
 - LapTime – Meaning that the final official time will come from a chip read
 - This is typical in XC events where finish order is more important than an accurate time and where the main purpose of the interface is to quickly publish unofficial results.
 - Official Time – The athletes time will come from evaluating an image.

- This is typical in T&F where all splits can be from chip reads, but the final “official” time should be very accurate.
- Note: If you want ART to assign the final time to each athlete you must change some hidden settings.
 - First, go into the Lynx hidden settings:
 - File > then ctrl/shift/left click on Options all at the same time > Lapt Time > Fill In Time and change that value to 2
 - Now to get a split times to automatically fill in to the final time field in lynx there are 2 ways:
 - Set the number of laps in Lynx (near the wind reading) to the number of passings that you want the final time to fill in on.
 - For example in XC where ART will push chip reads at the finish line only, set the number of laps to 1. This will permit ART to send the chip read to the final time in Lynx.
 - If you want to force the camera read to fill in (for all runners) like usatf/ncaa blank out the laps number --literally delete the number so the laps field is blank.
 - Then as the image and chips come in mark the runner, then hit shift and left click.
 - You will now see a box pop up with the chip order. Simply select the right one.
- Note: Another example might be for a 1600 in track, set the laps to 4. In track and field it would be wise to have the Final Split set to “Official Time”. ART would send over the first 3 lap splits and then you would evaluate the image for the final official time.
- Map File – Is ignored with this interface.



Section 4: ART Setup

- In the options screen, enter the IP address of the computer, along with the port number that you specified in the Lap-Time options within Lynx (typical port #: 2002)

The screenshot shows the 'Options' window with several tabs: Database Settings, RFID Reader Settings, Printers & Camera Settings, and External Accounts. The 'Email Settings' section includes fields for 'Your Email Address', 'Your Email Account Password', and 'Provider' (set to Gmail), with a 'Send Test Email' button. The 'RunSignUp' section has fields for 'Environment' (set to Live), 'Email' (blueidgetiming@gmail.com), and 'Password', with a 'Test' button and a link to create a free RunSignUp account. The 'RaceRoster' section has fields for 'Email' and 'Password', with a 'Test' button and a link to create a free RaceRoster account. The 'TFRRS' section has fields for 'Username' and 'Password', with a 'Test' button. The 'FinishLynx' section, which is circled in red, has fields for 'IP Address' (192.168.0.5) and 'Port' (2002), with a 'Test' button. At the bottom, there is an 'Upgrade Your Software' button, contact information for Brian Agee, a 'View Video Library' link, and 'Save' and 'Cancel' buttons.

Section 5: Internal sync option

*** This option assigns times in Lynx from the Lynx running time clock**

*** Be sure that the settings in the Lynx LapTime device and ART are both set internal.**

*** If capturing lap times, be sure to set the number of laps within Lynx. In all cases be sure you have laps set at least 1.**

- When using this option, you do not need to worry about having any specific options selected in ART before the start of an event.
 - The Lynx clock would start, and then you could enable the Internal feed within ART. You could enable before the start as well.
 - The ART clock does not need to match Lynx, as all times are assigned according to the Lynx clock.
 - ART sends all chip reads, including multiple laps if setup in Lynx, every 5-60 seconds depending on the settings you chose.
- In short, when a tag is seen by ART, Lynx will assign that athlete the time that is displayed on the Lynx clock at the time of the read and ignore the time that is displayed in ART even though ART is reading the chips.
 - In order to make sure times are exactly what you see on the Lynx clock be sure that the offset is set to zero after the start.
 - In the Lynx event window, double click on laptime and then set offset to zero.

The screenshot shows the 'FinishLynx' software interface. The main window has a menu bar (File, Edit, Event, Image, Results, Scoreboard, LapTime, Window, Help) and a toolbar. Below the toolbar is a table with columns: LapTime, Total Laps, Laps/Splice, Too Fast Time, Too Slow Time, Place, Id, Lane, First Name, Last Name, Affiliation, License, Time, Delta Time, Last Split. The 'LapTime' column is circled in red. A 'LapTime Settings' dialog box is open, showing 'LapTime' set to 'Manual (0.0,10.0)', 'Time Offset' set to '0.0', and 'Time Mode' set to 'Internal'. The 'LapTime' and 'Time Offset' fields are circled in red. The dialog box has 'OK' and 'Cancel' buttons. The Windows taskbar at the bottom shows the time as 4:17 PM on 8/31/2017.

- Athlete Information
 - In ART
 - You never have to enter athlete information into ART. Although if you wanted to have a copy/log of chip reads, you would need to enter athletes and the corresponding number of laps in ART. If you are interested in having this log of chip reads, it is recommended that the ART clock somewhat matches the Lynx clock.
 - In Lynx
 - You could load the seeded event which includes all athletes.
 - Or, you could load a blank event and change the LapTime Device settings to “Create Results”
 - Caution: when selecting the “Create Results” option, ART will push all chip reads to Lynx regardless if the athlete is in the event or not.

Options

General | Event | Image | Results | Database | Scoreboard | Wind | LapTime

LapTime Device: ART Status: Running

Device: Lynx Name: ART

Serial Port: Network (listen) Port: 2002

Active Splits: ☒ All ☐ Selected:

Sync. Source: ☐ External ☒ Internal ☐ None

Masks: Start 10.0 Duplicate 10.0

Results: Key Id ☒ Create results ☒ Fill in place

Sort By Split: ☒ Cumulative ☐ Last ☐ Best

Final Split: ☒ LapTime ☐ Official Time

Map File: Browse...

Ok Cancel

- Lap Times
 - You must set the number of laps in Lynx. If you are just using chip reads for the finish, laps should be 1.
 - While it is not necessary to set up splits in ART, if you wanted a copy/log of chip reads you would need to setup splits in ART.

LapTime	Total Laps	Laps/Split	Too Fast Time	Too Slow Time
Women's 4000 meter run			2	1 1
Start	17:20:42.3 (Manual)			
Wind			200M (20.0,10.0)	
LapTime	4	1		
Finish				
60 Main	400	500	Zoom 100%	150 (68) Right
Results	4000			

- Final note: When using this option, the data/times in ART and Lynx will not be an identical match.

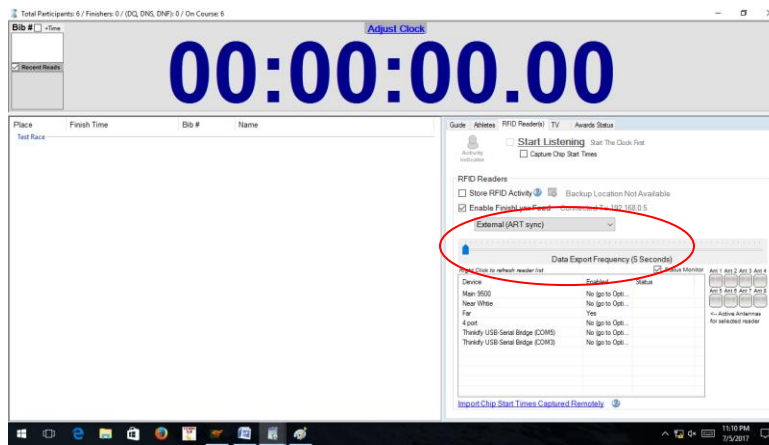
Section 6: External sync option

* This option pushes times from the ART running time clock into Lynx by using a time of day stamp.

* Be sure that the settings in the Lynx LapTime device is set to external

* If capturing lap times, be sure to set the number of laps within Lynx

- When using this option, you must enable certain settings in ART **before** the start of the race.
 - When using this option you must do the following before the start of the event:
 - Have the event file loaded in Lynx
 - Have the sync option set to External in ART before the event starts.



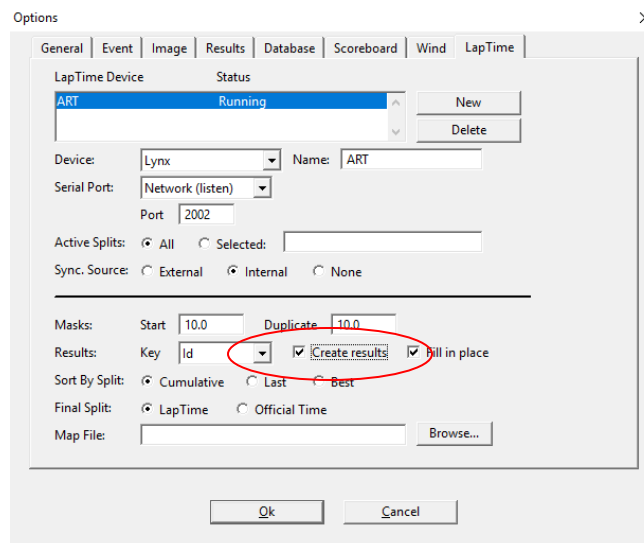
- Athlete Information

- In ART

- You never have to enter athlete information into ART. Although if you wanted to have a copy/log of chip reads, you would need to enter athletes and the corresponding number of laps in ART. If you are interested in having this log of chip reads, it is recommended that the ART clock somewhat matches the Lynx clock.

- In Lynx

- You could load the seeded event which includes all athletes.
 - Or, you could load a blank event and change the LapTime Device settings to “Create Results”
 - Caution: when selecting the “Create Results” option, ART will push all chip reads to Lynx regardless if the athlete is in the event or not.



- Lap Times

- You must set the number of laps in Lynx. If you are just using chip reads for the finish, laps should be 1.
 - While it is not necessary to set up splits in ART, if you wanted a copy/log of chip reads you would need to setup splits in ART.

LapTime	Total Laps	Laps/Split	Too Fast Time	Too Slow Time
Women's 4000 meter run			2	1 1
Start	17:20:42.3 (Manual)			
Wind			200M (20.0,10.0)	
LapTime	4	1		
Finish				
60 Main	400	500	Zoom 100%	150 (68) Right
Results	4000			

- Final note: When using this option, the data/times in ART and Lynx will be an identical match.

Section 7: Programming details of sync options

- Internal:
 - If no athletes are entered in ART:
 - If no athletes are in ART, ART stores every tag read in memory and then pushes those reads to Lynx at the specified number of seconds (use the slider bar to choose between 5 and 60 seconds). When the timer reaches the number of seconds you've specified, ART first sends a "T" record (<sync ok>) to Lynx to ensure the systems are in sync, and if there are any reads to send it will send them with a "<no sync>" tag. This is how Lynx knows that the reads are sent after the actual read occurred (although I'm not sure why they need to know that).
 - If athlete are entered in ART:
 - ART only sends the read(s) that cause a split/finish record to appear in ART, however it sends those reads immediately to Lynx. So no "T" record is submitted and all reads are sent with the "<sync ok>" tag.
 - This is basically the same functionality as the "None" sync option.
- External:
 - The assumption is that you will enable the Lynx interface before starting the race. ART will then send a "<sync ok>" "Z" record with a Time stamp of when the race started (down to the thousandths of a second).
 - Every tag read is marked as "<sync ok>".
- None:
 - This works exactly like the Internal sync if athletes are entered in ART. If no athlete are entered in ART, the only difference is that no "T" record is sent if no athletes are in ART.

Section 8: Counting the number of laps completed (count up)

- Regardless of the sync option and/or if you have a camera connected, if you blank out the number of laps within Lynx (so that no number is in that field, not even zero), Lynx will incrementally count the number of laps for each athlete.
- This could be useful in endroevents where the most laps completed would be the winner.

LapTime	Total Laps	Laps/Split	Too Fast Time	Too Slow Time
Women's 4000 meter run			2	1 1
Start	21:49:07.6 (Manual)			
Wind			200M (20.0,10.0)	
LapTime		1		
Finish				
Results	4000			