2018

The Race Director

IPICO Integration - Direct Connect

[IPICO INTEGRATION]

This document explains how to manage the results data between your IPICIO readers and Race Director using a direct connection to your reader.

The Race Director

IPICO Single Reader Scoring – Direct Connect

Contents

IPICO Single Reader Scoring – Direct Connect

1 - Overview

Note: Using Direct Connect is only necessary for IPICO Lite readers. If you are using an Elite reader, Direct Connect can be avoided by using the "Pull Directly From the Elite Reader" setting on the Chip Results import screen. See the IPICO Getting Started guide for Manual scoring for more information about how to pull results from the Elite reader. The explanation is at the end of that document.

Using a single reader to score a race where you collect both start and finish times can be a tricky proposition for the creation of finish results. It is important for **Race Director** to be able to determine for each time processed whether it is a start time or a finish time. The difficulty comes from the fact that often there will be multiple reads per chip at each point – the start and the finish. Almost always, you will want the *last* start read for a participant to be their official start time and you will want the *first* finish read for a participant to be their official finish time.

This document is meant to cover races where everyone starts in mass. This would include races where every participant starts at the same time or *groups* of participants start in different mass wave starts. This document does not cover the scenario where every participant has their own individual wave start time.

This document will address importing finish results into **Race Director** using the *Direct Connection* process. For this scenario, there must be ample time (at least 10 minutes) between the last start time and the first finish time

Definitions

Wave Time – The time defining the beginning of the race for a participant. In a race where everyone starts with the gun, everyone will have a zero time wave offset. In a race where one group starts with the gun and other groups start at increments after the gun, the time increment after the gun time where a participant starts is their wave time. For example, in a 5K / 10K race where the start of the 10K is 8:00 and the start of the 5K is 8:15, the 10K participants all have a zero time wave offset time and the 5K participants all have a 15 minute wave time.

Start Time – The time difference between when a participant's wave begins and when they cross the starting mat. In the example above, a participant in the 5K who starts at 8:15:05 will have a 5 second start time.

IPICO Single Reader Scoring – Direct Connect

Assumptions

This document assumes that you have enough experience and training on your IPICO reader to be able to establish a TCP-IP connection to **Race Director** and trigger gun and wave times on the reader.

Reminder on Networking

When connecting your computer to your Lite Reader you'll want to assign your computer a static IP address within your reader's network range. Typically, a Lite Reader will have an address within the 10.19.1.x network. The static address can be anything between 10.19.1.1 and 10.19.1.254 so long as it does NOT match the IP address of your reader.

Please also remember that IPICO Lite Readers use port 10,000 for communication with **Race Director**.

2 - Bib Chip Assignments

The first step in the chip scoring process is defining within **Race Director** how the chip codes that IPICO readers will transmit in the timing data are related to the bib numbers of the participants you will be setting up in **Race Director**. The way you establish the bib to chip assignments will depend of the type of chips you will be using. Your initial training on the equipment from IPICO should have covered various ways for you to create a simple cross reference file that has a single record for each bib number / chip code combination.

In **Race Director**, the screen for managing this cross reference is found on the menu *Enter Results -> Chip Systems -> Chip Assignments.*
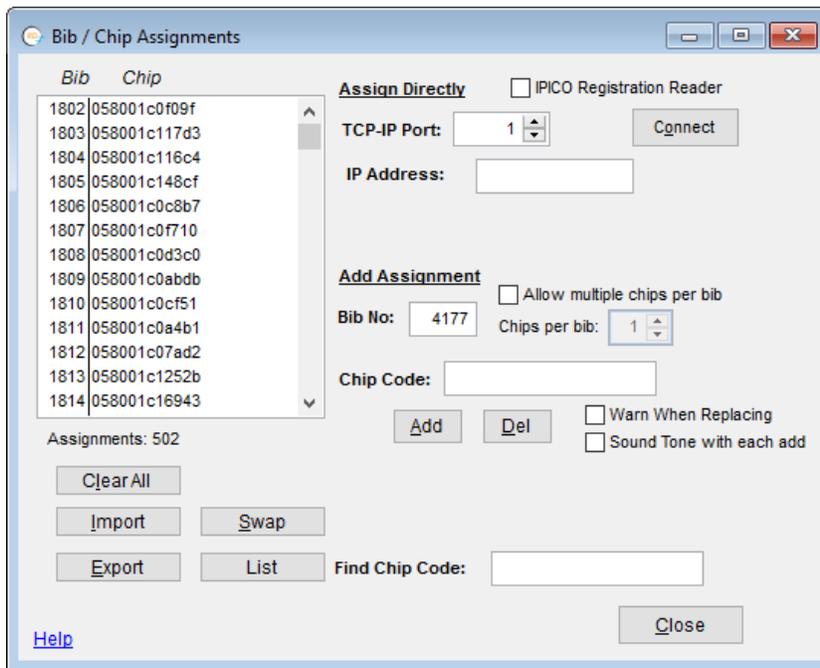
There is a great variety of ways to maintain this data. Usually it begins with an initial cross reference file that IPICO helps you create. If that is the starting point, the data is pulled into this screen using the "Import" button.

You can also use this screen to create the cross reference file from scratch. To do this, you will either connect to a finish line reader using the TICP IP Port and IP Address or you can connect to the IPICO Registration reader using the check-box shown above. As you scan chips it will begin with bib 1 (or whatever bib number you enter before the first read). As you scan each chip, the bib number will automatically increment.

IPICO Single Reader Scoring – Direct Connect

The most common on-going use of this screen is to use the Export button from this screen from the last race you scored and then use the Import button on the next race you score. Once you've imported the chip assignments from the last race scored, you can move to any individual bib number and scan in a replacement chip code if the chip did not get returned.

Use the "Help" button on this screen for more information about this process.

3 - Example Scoring Scenario

The examples you will see in the remainder of this document are from an actual race where there were three divisions – Half Marathon, 10K, 5K. The Half Marathon started at around 12:22 PM and the 5K and 10K had a combined start about 27 minutes later. The 5K and 10K divisions were both configured with wave group code 1.

This scenario is only for races where you have ample time between when the last participant starting the race and the first participant finishing the race. For this scenario, you must have at least 10 minutes between these occurrences to save a results file and import these results into **Race Director** as the start times for the race.

Start Times

Example: The division setup is shown below. In Tailor -> Options -> Finish Line, the race is configured with *Division Level* wave offset times. We have assigned *Wave Group Code* 1 for both the 5K and the 10K. Initially, our estimate is that this wave will be approximately 30 minutes after the initial gun time for the Half Marathon.
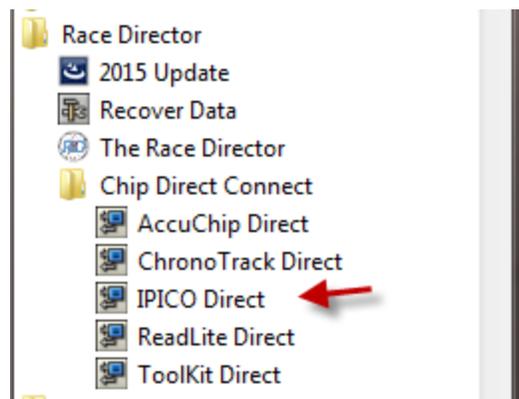
IPICO Single Reader Scoring – Direct Connect

Starting the Direct Connect Program

Prior to starting the Direct Connect program, there is an important setting in Race Director that you must set. Be sure to check this setting only if you will be using a single reader for collecting both start times and finish times. When using this mode, it is required that each participant will have two reads separated by a gap of time that you will specify as the gap factor.
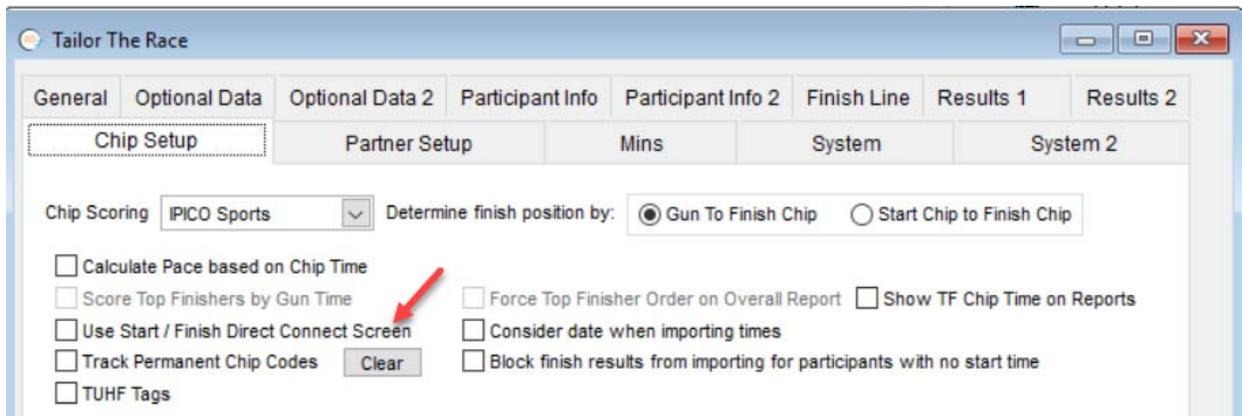
Earlier versions of Direct Connect required that Race Director be in Data Share mode. This is no longer necessary. To start Direct Connect, find your computer's Start button, find the IPICO Direct program. In Windows 8 or later, search for "IPICO Direct".

If the setting for a Start / Finish scenario (discussed above) is on, you will be presented the following screen. The "gap factor" is an important setting in this scenario.

IPICO Single Reader Scoring – Direct Connect

The first read (after the gun time) for each participant will be considered their start time and the first read after 10 minutes (in this case) will be considered the participant's finish time. Once start or finish reads are detected on this screen, you can use the "Import" button on the Chip Results Import screen in Race Director to process the reads.

In the details that follow below, there was a separate mat for the start reads, so the Start / Finish setting discussed above is not checked.

To capture start times, the settings needed are shown below:

Once the equipment is connected to your network, use the "Connect" button to establish the connection. The following screen shots are from the "replay" of an actual race, but what you see on the screen when you are connected to the equipment would be no different.

IPICO Single Reader Scoring – Direct Connect

In this example, the first wave (Half Marathon) started at around 12:22. At this point all of this start wave has cleared the start area:

Everything looks fine here. We'll wait until after the 5K / 10K participants start 27 minutes later. And now we've captured all of the start times.


Importing Into Race Director

In **Race Director**, we go to Enter Results -> Chip Results and set up the import of start times like below. The fact that you have collected some start times from the Direct Connect process is shown on the screen. If you have recorded the start time at the reader with the trigger, be sure to initially set the gun time to zero.
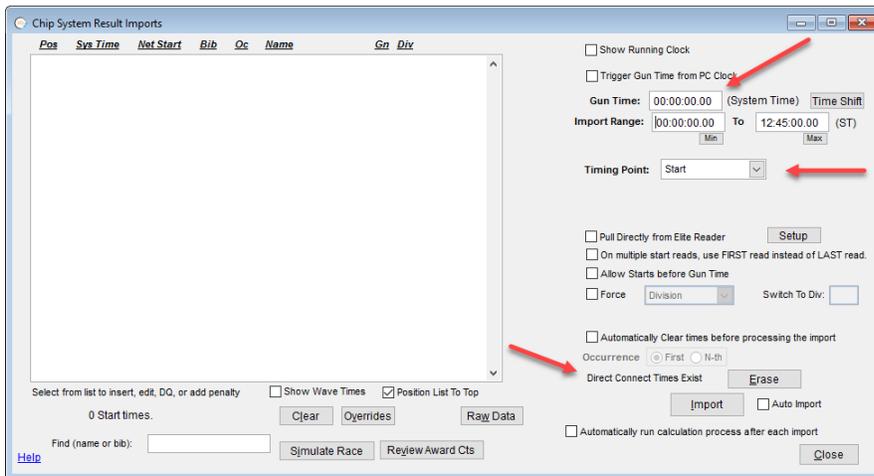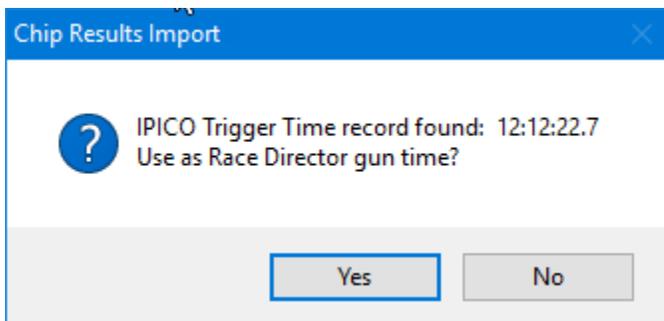
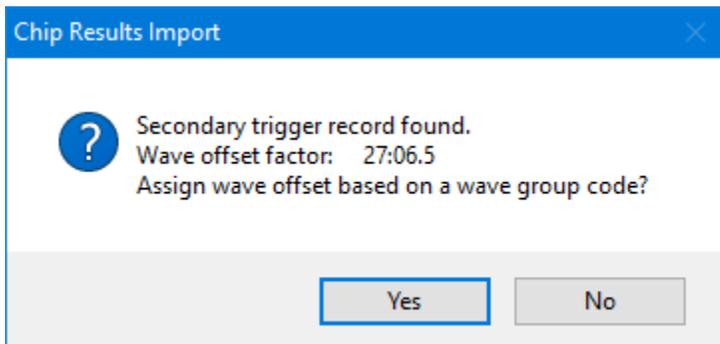**IPICO Single Reader Scoring – Direct Connect**

After using the import button, you receive this prompt – answer to the affirmative.
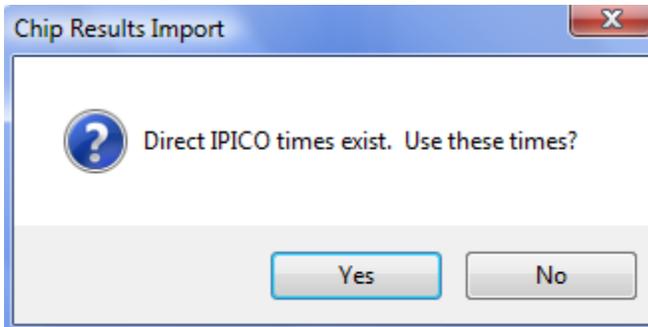
The next prompt you receive is to recognize that a trigger time was generated at the reader. In this case, it was the initial trigger that was created when the race started and we'll answer to the affirmative.
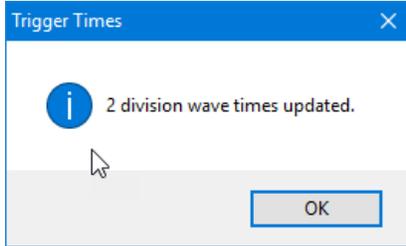

The next prompt we see is related to the trigger generated at the reader when the second wave started. In this case, we'll again answer in the affirmative and specify that this time is related to *Wave Group* 1.
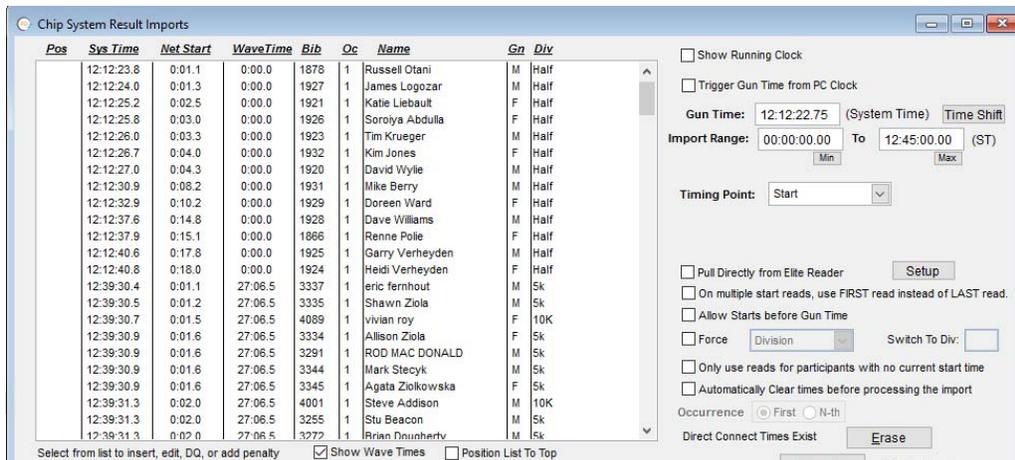
IPICO Single Reader Scoring – Direct Connect

This prompt confirms that the wave offset time for both the 5K and 10K divisions has been set:

The start times are imported.

When we examine the Division setup for the 5K and 10K, we see that the wave offset time has been automatically set:

Advanced Topic: Read the "Help" on the Division Setup screen to see how you can use the concept of Quarantine Divisions to catch people who register in one division but have a start time in a different division.

IPICO Single Reader Scoring – Direct Connect

Finish Times

Setup

Setting up Direct Connect for finish times is not much different than it was for the start line read setup. Be sure the reader is available on your network, set the port and IP address and use the "Connect" button to make the connection.

Batch Imports

Once a few finishers have crossed the finish mat, you will see finish results showing on the Direct Connect screen.

Importing Into Race Director

Next, in **Race Director**, use Enter Results -> Chip Results. The setup on this screen is important. When importing "Finish" times, we want to ignore any test reads that may have occurred prior to the first finisher, so we set the time filter such that the lower limit is just before the first expected finish time. We also see an indication that times from our Direct Connect session are sensed.

When we use the "Import" button, we're presented with this prompt:
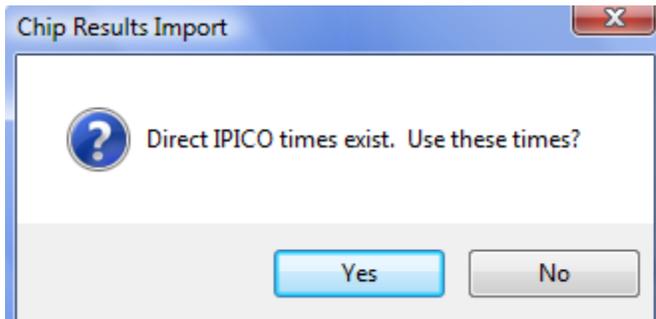
After answering to the affirmative, we see the results of the import:
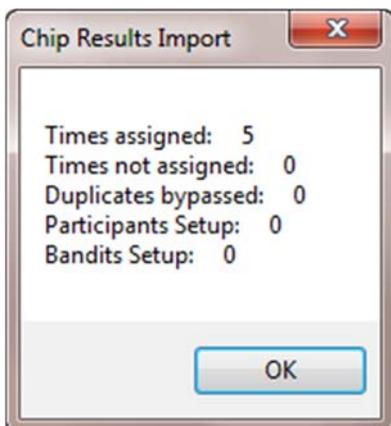
And, the list is populated.

Note: The Direct Connect screen indicated 10 *total reads*, whereas the chip import assigned only 5 times. The Direct Connect count includes multiple reads coming from the same chip.

3 - Reviewing Results

After each cycle of importing more finish times, you can print any of the results reports for preliminary review.

Importing proceeds every few minutes as the race is progressing. If you are publishing live results, the publishing happens with each import.

On the Chip Results Import screen, Net Times shown are relative to the gun time – and do have the wave factor deducted.

Once finish results begin coming through, results reports can be created.

IPICO Single Reader Scoring – Direct Connect

Green Thumb Half & Shamrock'n Race
Overall Finish List — 5k

Race Date: March 13, 2017

Place Overall	Name	City	Bib No	Age	Gend	AG Place	Chip Time	Gun Time
1	eric fernhout	Surrey BC	3337	36	M	1 30-39	19:13.0	19:14.2
2	ROD MAC DONALD	ABBOTSFORD	3291	46	M	1 40-49	19:53.4	19:55.0
3	Brian Dougherty	Maple Ridge	3272	33	M	2 30-39	21:04.0	21:06.1
4	Jeff Martin	Abbotsford BRITISH	3293	44	M	2 40-49	21:35.1	21:51.4
5	Mark Stecyk	Vancouver BC	3344	28	M	1 20-29	21:35.3	21:37.0
6	Nick Bailey III	Port Ludlow	3253	61	M	1 60-69	22:59.9	23:03.3
7	Stu Beacon	Abbotsford BRITISH	3255	31	M	3 30-39	23:03.5	23:05.6
8	Heather Boey	Maple Ridge	3256	27	F	1 20-29	24:19.0	24:25.2
9	Noal Ruddy	Coquitlam BRITISH	3312	16	M	1 0-19	25:11.8	25:36.5
10	Jenifer Jonsson	pitt meadows	3282	38	F	1 30-39	25:38.2	25:42.9
11	Jordan Taylor	Victoria BRITISH CO	3319	32	M	4 30-39	25:46.2	25:49.9
12	Delaney Chapman	Abbotsford BRITISH	3260	12	F	1 0-19	25:59.6	26:08.2
13	Natisha Mathews	Surrey BRITISH CO	3297	35	F	2 30-39	26:44.0	26:51.3
14	Werner Loewen	Abbotsford BC	3348		M	2 0-19	27:57.7	28:05.3
15	Brenda Cosgrave	chilliwack BRITISH	3264	50	F	1 50-59	28:13.8	28:27.1
16	Edna Mathews	Surrey BRITISH CO	3296	63	F	1 60-69	29:20.0	29:30.1
17	Shelby Craiggs	Maple Ridge	3265	27	F	2 20-29	29:38.2	29:56.7
18	Shawn Ziola	Abbotsford BRITISH	3335	46	M	3 40-49	29:39.5	29:40.8
19	Briana Stevens	Richmond BC	3351	26	F	3 20-29	29:47.4	29:50.8
20	Scarlet Armstrong	Abbotsford BC	3340	49	F	1 40-49	29:48.3	30:21.7
21	Steven Cullen	Mission BRITISH CO	3269	34	M	5 30-39	30:05.5	30:38.0
22	Nicole Dyck	Cloverdale BRITISH	3273	32	F	3 30-39	30:09.9	30:24.2
23	Patti Traversy	Surrey BRITISH CO	3324	39	F	4 30-39	30:10.8	30:25.1
24	Allison Ziola	Abbotsford BRITISH	3334	47	F	2 40-49	30:29.9	30:31.5
25	YVONNE GANGA	SOUTH SURREY	3277	37	F	5 30-39	30:35.0	30:45.9

4 - Accessing Remote Data

When your event utilizes a remote timing location (such as a split point) there is often a challenge in accessing that data remotely. Using Race Director with both Dropbox and Direct Connect can help you to easily access/import that data as your race progresses.

Pre-Requisites:

-An internet connection at both the remote timing location as well as at your scoring computer.

-Dropbox (or similar program) installed on both machines.

Configuration:

When loading up Direct Connect you must specify that Race Director will *NOT* be connecting to a single reader for both start/finish reads.

The Race Director

IPICO Single Reader Scoring – Direct Connect

Upon setting up Direct Connect, you'll notice an "Auto Save" checkbox. Use this when the computer running Direct Connect is not on the same physical network as the scoring computer. The idea is that both the scoring computer and the direct connect computer have an internet connection.

 Once checked, specify the location on your computer (such as Dropbox) that you'd like Direct Connect to save the data to by using the "Path" button at the bottom of the screen. The files will be named with a prefix from what you specify in the spot for Auto Save Name, an underscore and the Timing Location name. In the example below, the file will be named FreedomRun_FINISH for the data flowing through location 1.
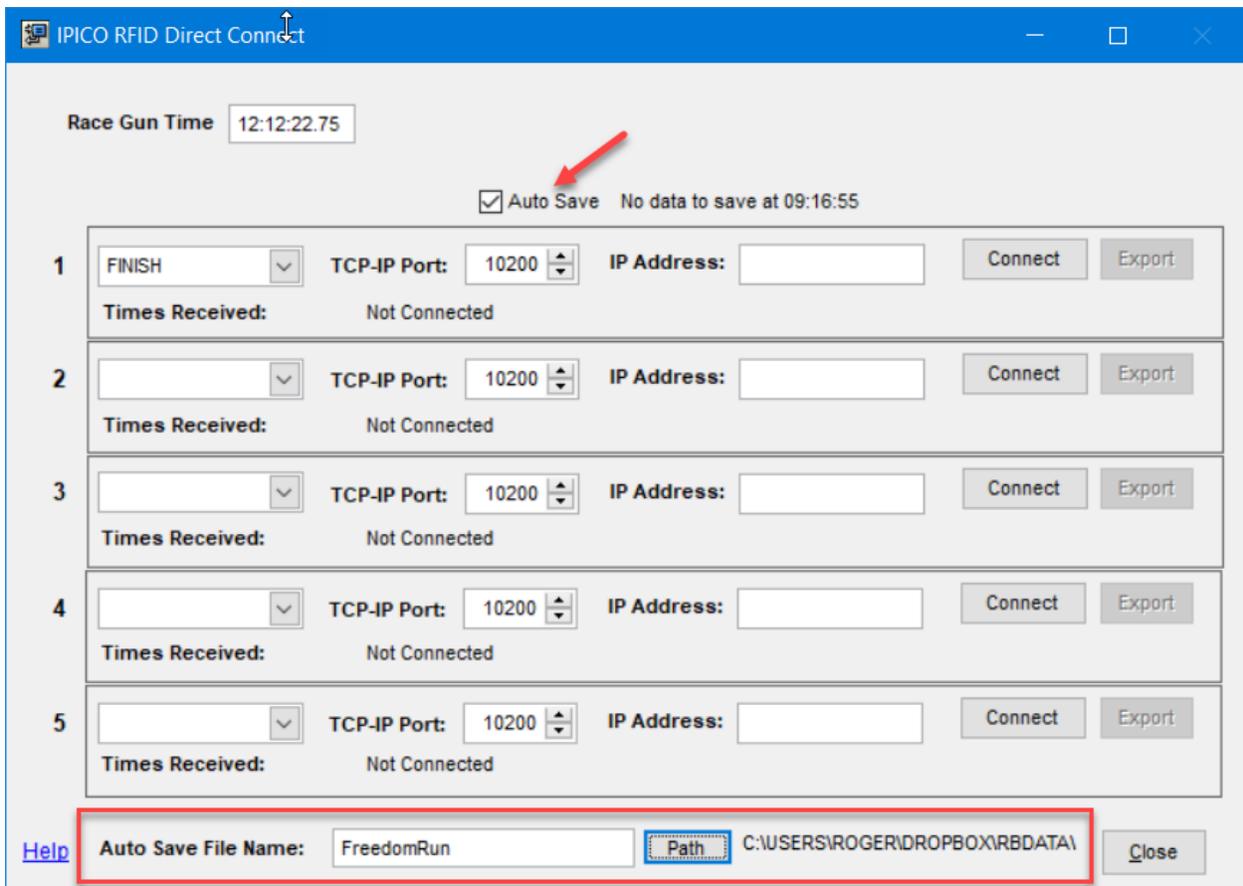
Once connected, every 30 seconds Race Director will take the data captured from Direct Connect and append it to the text file(s) you specified. From there, the scoring computer can access and import the data.