

# **DisplayWorks**

## **V 2.0.13 - Updated May 2025**

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## **Introduction**

DisplayWorks is a scoreboard display software program for Windows. Based on modern web software it is meant as a simple solution to bypass complex setups and quickly scale between different boards and input sources.

DisplayWorks runs best on large format boards like you'd find in a stadium installation, but can be run on smaller displays as well.

It is important to understand that DisplayWorks uses dynamic styling to make content fit, so experimenting with text size is an important part of setting up your board. Throughout development it's become clear there's too many possible scenarios for text sizes to have them set in development. (this is true of boards both large and small)

Spend some time trying different text sizes.

## Download/Installation/Upgrading

The email address you use to purchase DW will be sent an email link to download the latest version of the program. Subsequent update downloads will be sent to this email as well. If you need to change your email please email [fieldworkssoftware@gmail.com](mailto:fieldworkssoftware@gmail.com) with a preferred email.

Installation uses a standard Windows installer. Program will open after installation. You should find the launcher in the start menu and pin to taskbar or desktop for easier launching.

Do NOT skip the firewall setup phase of installation. You must allow DW through Public and Private networks. Upgraded versions will install over previous version without issue.

## License

You will be provided an appropriate number of license codes based on your purchase. Upon launching the program, you'll come to an authentication screen. If your program is authenticated it will pass through the screen. If unauthenticated you'll have the option to enter information onto two fields, 1) your license key (emailed to you within 2 business days of your purchase), and 2) your machine ID. Machine ID is whatever you choose to set it, but it should describe the computer you're currently on (ie Brand/Model/Color) to distinguish the install from other installs (*DO NOT SET TO YOUR LICENSE CODE*). This can be helpful later if you need to move the license but are unsure what computer you installed it on. To authenticate your computer will need to be online the first time you launch and authenticate, after that it will not need to be online unless you need to reauthenticate.

## DisplayWorks Basics

There are two "screens" within the program. The **setup screen** is where you'll select your options, and then hit **"CREATE BOARD"** to go to the **board screen**, where the board is populated with data from your source.

Clicking on the **board screen** will return you to the setup screen. DisplayWorks automatically saves your settings on exit and reapplies upon launch.

DisplayWorks is a networked program and must be on a functioning network to operate. The computer it is being run on should be set to a static IP address for best connectivity. See the FieldWorks Software YouTube page for a network primer if unfamiliar.

DisplayWorks is purposely meant to be customizable. Because of the variations in sizes of stadium screens there can be no single setting that will work for all boards. You will need to customize the output screen to fit your board.

Smaller boards may not be able to support 8-10 lines on screen.

## Input Program Setup

DisplayWorks sets up multiple internal servers to accept inputs from several different programs with distinct port logic. This means you can change back and forth between sources with only a few clicks.

Also, DisplayWorks will display only information if it's receiving from these sources, **so if DisplayWorks is not displaying anything on the board screen it means the input source is setup incorrectly.**

### EagleEye Pro

EagleEye Pro setup has been done behind the scenes by EagleEye and DisplayWorks. Setup is simply selecting the number of lines on the board and the paging cycle time.

### FieldWorks

FieldWorks is a free, field event live scoring software. Within FieldWorks, setup the IP address of the DisplayWorks computer and TCP/IP port 42499.

Best results are achieved by launching FieldWorks and DisplayWorks, then in FieldWorks you select the IP and Port, "Set Address/Port". Then select "Use DisplayWorks Output". FieldWorks will remember your previous ports, so they might not always need to be set.

The image shows a screenshot of a software interface with a vertical list of four options. The first three options are in white boxes with black text, and the fourth is in a green box with white text. The options are: "Use DisplayWorks/RTV Output", "DisplayWorks/RTV IP", "DisplayWorks/RTV Port", and "Set Address/Port". The "Set Address/Port" option is highlighted with a green background.

Use DisplayWorks/RTV Output
DisplayWorks/RTV IP
DisplayWorks/RTV Port
Set Address/Port

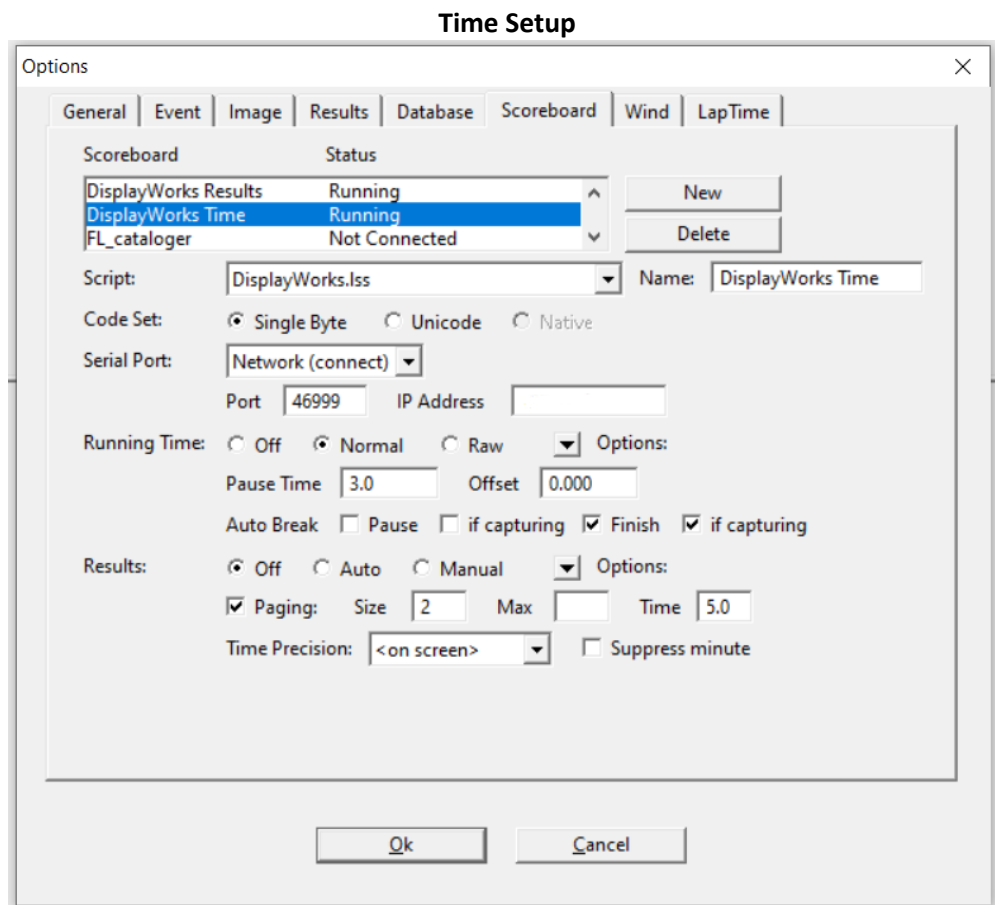
## FinishLynx

The *NetCom Plug-in* is necessary to output from FinishLynx. **(this plugin is included as of FL 13.00 released in 2025)**

To receive an output from FinishLynx you must use the DisplayWorks.lss file, placed in the Lynx directory. The file can be downloaded from the FieldWorks.app website. You may need to restart Lynx several times in order for this to work.

You should set up two independent scoreboards with this LSS file, one for results and one for time. Ten lines is the max supported output.

Results Settings:      Running Time Settings:      IP Address:  
Port 44999              Port 46999              ***Use IP Address of DisplayWorks Computer***



***Use IP Address of DisplayWorks Computer***

## Results Setup

Options

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

Scoreboard      Status

DisplayWorks Results	Running
DisplayWorks Time	Running
FL_cataloger	Not Connected

New  
Delete

Script: DisplayWorks.lss      Name: DisplayWorks Results

Code Set: ☒ Single Byte   ☐ Unicode   ☐ Native

Serial Port: Network (connect)

Port: 44999      IP Address:

Running Time: ☒ Off   ☐ Normal   ☐ Raw      Options:

Pause Time: 3.0      Offset: 0.000

Auto Break: ☐ Pause   ☐ if capturing   ☐ Finish   ☐ if capturing

Results: ☐ Off   ☒ Auto   ☐ Manual      Options:

☒ Paging:      Size: 3      Max:      Time: 5.0

Time Precision: Hundredths      ☐ Suppress minute

Ok      Cancel

***Use IP Address of DisplayWorks Computer***

Under Results Options: “Always Send Place” is recommended.

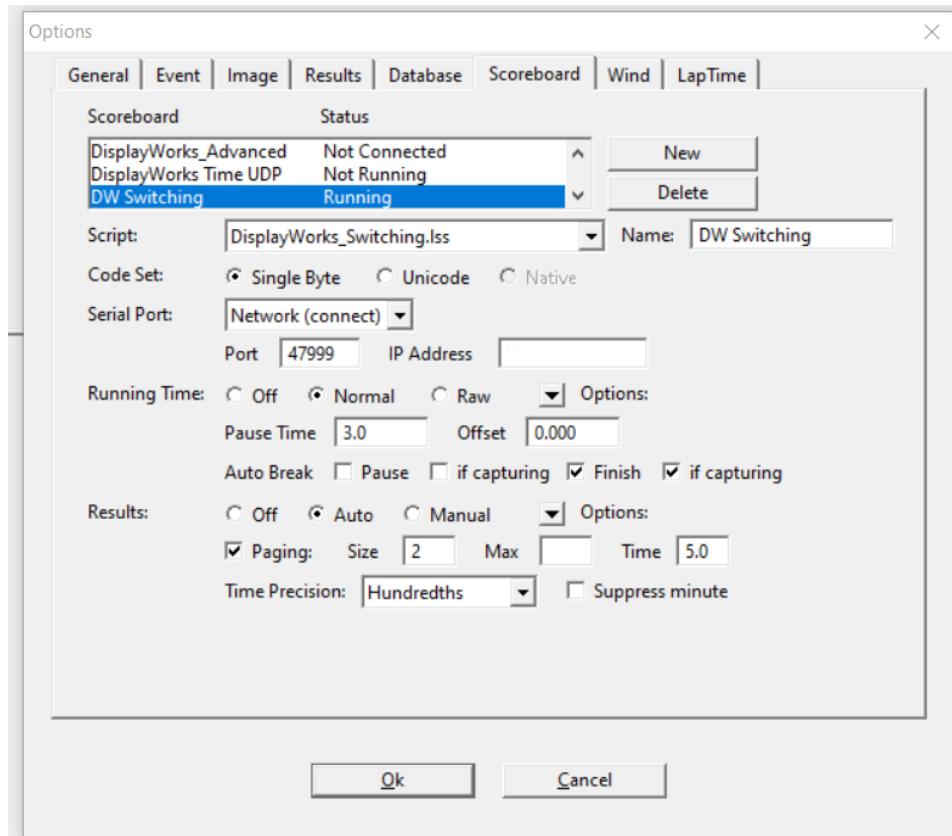
Set the IP address for the specific machine DisplayWorks is running on.

Layout and choices are self-explanatory. You can run a maximum of 10 lines of results. The board size should match the size of the display to understand the space on the board.

Board will not re-render between shifts back and forth, you need to “refresh” from Lynx for info to re-display. (Alt + e)

## FinishLynx – SWITCHING ONLY

The *NetCom Plug-in* is necessary to output from FinishLynx.



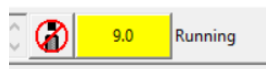
***Use IP Address of DisplayWorks Computer***

***“Send Results if Armed” and “Always Send Place” are also selected.***

The switching format MUST use DisplayWorks\_Switching.lss which is available on the downloads page at [www.FieldWorks.app](http://www.FieldWorks.app).

You must “Stop” the scoreboard while displaying the running time in order to call results. Use Alt-F if using the camera with the photoeye setting. You can always “stop” using Alt-S.

Running Time will always take priority within FinishLynx, so if you see this:



Your Scoreboard time is “Running”



Your Scoreboard time is “Finishing” and about to “Stop”

Upon result entry, the board will then change to Results mode.

### FinishLynx – XC Score only

Options

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

Scoreboard Status

DW Time	Running
DW Results	Running
DW Local XC Scoring	Running

New  
Delete

Script: DisplayWorks\_TeamXC.lss Name: DW Local XC Scoring

Code Set: ☒ Single Byte ☐ Unicode ☐ Native

Serial Port: Network (connect)

Port: 47899 IP Address:

Running Time: ☒ Off ☐ Normal ☐ Raw Options:  
Pause Time: 3.0 Offset: 0.000  
Auto Break ☐ Pause ☐ if capturing ☐ Finish ☐ if capturing

Results: ☐ Off ☒ Auto ☐ Manual Options:  
☐ Paging: Size: 1 Max  
Time Precision: Seconds

- ✓ Always send place
- Include first name
- Affiliation abbreviation
- ✓ Track live results

Ok Cancel

**"Always Send Place" are also selected**

Must use DisplayWorks\_TeamXC.lss

Must NOT have Paging selected. Running Time selections do nothing.

Within DisplayWorks, selecting Use Timer Info will use the Timer Info line as the event name, allowing you to override what's coming from Lynx. This will also be able to be updated from DW Remote in an upcoming update. (Idea being title could be: "Unofficial Team Results")

## Hy-Tek Meet Manager

Hy-Tek uses the Daktronics Fixed Digit output. On the run screen go to the Interfaces menu, then Setup > Scoreboard. Select Daktronics Fixed Digit and UDP Ethernet. In the Interfaces menu then select "Scoreboard - Daktronics Fixed Digit" and then set UDP Port and Address. Set port to 41999 and set the IP address of the DisplayWorks computer.

Note – As the name implies this output is a "fixed digit" output. Longer event names will be truncated. Ten lines is the max supported output.

## MeetPro

Interfaces > Scoreboards > ResultTV It is recommended that you use TCP/IP, but if you are struggling you may also test on UDP using port 41999. If using UDP, instead of selecting MeetPro as source, select HyTek.

MeetPro connects on port 45999. Other options are yours to control. Ten lines is the max supported output.

## FieldLynx

FieldLynx output requires scoreboard add on. Currently FieldLynx send to ONE single script for DisplayWorks, and ONE standings script (available at FieldWorks.app), using port 42699. *Do NOT send byte-by-byte.*

DisplayWorks can use a Compact version (similar to "Two Line" and a Large Format version containing more information.

The FieldLynx boards are still in flux. If you have suggestions regarding additional formatting, I'd like to hear them.

The FieldLynx LSS scripts contain a marker that tells DisplayWorks when to switch between standings and single athlete versions. Because of this switch there is an additional Standings Line Font Size option. There is a board of test data, but it is not full due to weird limitations within the datagram.

There are no transitions for FieldLynx, and currently no ID or Team Logo incorporation.

More settings below. FieldLynx only supports one instance within Multis (as of 1.4)



Options

Database | LaserLynx | General | Scoreboard | Wind

Scoreboard	Status
DisplayWorks	Running

NewDelete

Result Scripts: Name: DisplayWorks

Metric: DisplayWorks\_FieldLynx.Iss

English: DisplayWorks\_FieldLynx.Iss

Standings Script: DisplayWorks\_FieldLynxStandings.Iss

Code Set: Single ByteUnicode

Serial: network (connect)

Port Number: 42699IP Address: 127.0.0.1

Settings...Message...Advanced...OKCancel

RESULTS

DisplayWorks

Results: OffManual

Allow: IndividualStandingsBoth

☒PagingSize: 6Time: 5.0Max:

☐Include First Name

☐Affiliation Abbreviation

☐Auto Display Mark

☐Auto Display Next Athlete

☐Auto Convert and Display MarkTime: 3.0Seconds

☒Only Output Valid Marks During Simultaneous Display

☐Output Athlete Timer (turns off results output)

OKCancel

- ☐ Send scoreboard data byte-by-byte (Legacy)
- ☐ Send scoreboard data line-by-line (Legacy)

## Setup Screen

**Screen Dimensions** – this sets the dimensions for the scaling that DisplayWorks will use to set the screen. If you are using a 1080p laptop, set your screen to 1920x1080 to fully utilize the display of your laptop. You may need to hide your taskbar. You may choose a much smaller size if you're outputting to individual panels, in which case a much smaller screen dimension would be necessary.

**Number of Boards** – You may select up to 4 boards

**Results Lines** – Number of lines you are planning to display.

**Typeface Setup** – A number of web-safe fonts are available for selection.

**Source Selection** – Choose the source for your data, options below Source Selection will appear if they are relevant to your data source.

**Time Location** – Select the location for your Running time (for relevant sources). You can select "Upper" and "Lower" as well as "Left", "Center", and "Right". Center option unavailable for Upper source.

### Other Options

Transitions – Fast but noticeable fade in of results upon refresh from source

Use Background Image – Allows use of background image

Use Test Data – Hard Coded data presents on screen, will always be replaced if source is operational

Use Info Line – Displays info line at the bottom of board (see "Info Line" below)

Show Running Time – Shows Running Time

Show Wind Speed – Shows wind speed

Show Heat Number – Shows heat number

Send Time/Send Results – Switch Board Only – Toggle between Running Time and Results

Use Logo – Two Line and Switch Boards – Shows Team Image

Vertical Event – FieldWorks Only – use if High Jump/Pole Vault

Vertical Time Shift – Two Line and Switch only – gives users ability to shift the time/mark location on the Y-axis. Negative numbers move time UP board, positives move lower.

**Team Image/Folder Selection** – You must select whether your images are PNG or JPG. You must select the folder they are located. All images must be in the same folder. Only available on Two Line and Switching boards

Recommend using a 100x100 image. You'll have the option to set the folder and to select the file type (jpg and png are both options)

**Info Line** – Enter the line text you’d like to display at the bottom of the board. Text will only be at the bottom.

**Font Size Setup** – Select your font sizes for various segments of the board. Please note, your board text will fit horizontally, but might not fit vertically. Adjust your font size accordingly.

**Background Image** – Select a background image. JPG, SVG, and PNG options are available.

**Color Options** – Options to set various colors of the board. You can select a color from the chart and then set individual aspects to your choice. Current Color of each option is displayed below.

## **Board Screen**

Click anywhere on the screen to return to the setup page. Hiding the taskbar may be necessary within Windows for proper viewing.

## **Deactivation**

In order to deactivate, make sure you’re online and click the “deactivate” button.

## **Exit Program**

Click to leave, clicking “exit” saves settings.

## **Streaming Setup**

Streaming uses the board setup in the main setup area and allows you to offset that board for a streaming style display.

You can also add a separate time area for the clock to run in.

Workflow: 1) setup your main screen for results as you would normally, set the size, number of lines, colors, etc. 2) move to Streaming Setup. 3) Set up additional information regarding location, use/sizing of time area, use/sizing of border. (use Test Data works here too)

Click “Create Streaming Board”, click anywhere on screen to return to previous board.

## Troubleshooting

DisplayWorks is a “What You See, Is What You Got” program. If no data is on screen or test data is not replaced, you do not have your input settings correct. Test data will be replaced immediately if data from a new source arrives.

- Confirm that DisplayWorks is not behind a firewall for “private” and “public” networks.
- Confirm the IP address of the DisplayWorks computer. If using FinishLynx, MeetPro, or FieldWorks you must set an IP address and gateway.

Running time has priority over Event Name on any boards using Time in the UPPER position. Time should always be visible, Event Name will be hidden behind it.

DisplayWorks will correct names in All Caps by default for readability. COOPER will become Cooper. Onboard logic will determine if the change needs to occur. Currently only on Two Line boards.

## Port Master List

Program	Style	Port	Note
FinishLynx	Big, Abbrev, Two Line	44999	DisplayWorks.Iss
FinishLynx	Time Only	46999	DisplayWorks.Iss
FinishLynx	Switch	47999	DisplayWorks_Switching.Iss
FinishLynx	Switch-Time Only	47099	Keeps Time on Results Layout
FinishLynx	Laps/Splits (beta)	44299	DisplayWorks_LynxLaps.Iss
FinishLynx	Big, Abbrev, Two Line	44916	Diacritic Characters (Unicode)
FinishLynx	Switch	47916	Diacritic Characters (Unicode)
FinishLynx	XC Score	47899	DisplayWorks_TeamXC.Iss
FieldLynx	Standings	42399	
FieldLynx	Single	42699	
FieldWorks	Single	42499	
Eagle Eye	All-Results Only	Bound By Program	
Eagle Eye	All-Time Only	Bound By Program	
MeetPro	All	45999	Uses TCP only
HyTek	All	41999	Uses UDP only
Flash	All	Bound By Program	
Flash	Time	Bound By Program	

## Change Log

### 1.2.0

- Fixed a bug where Background Image Scale was reset after reboot
- Added ability to have four consecutive boards – horizontally
- Added Logos (both png and jpg), as an option on Two Line Boards
- Logo boards have Team Image Background Color to standout
- Added Switching Layout for Lynx (requires updated LSS file)
- Added Messaging within Switching Layout (requires updated LSS file)
- Added Athlete IDs to be added in front of affiliation on Two Line/Switching boards
- Formatting tweaks to all boards for fit
- Added note after install that helps occasional situation when can't enter authentication information
- Modifications to setup page to save space and fit new options
- Modifications to Color Choice – opens to all colors
- Performance tweaks
- Fix for Event Name word wrapping
- Fix for missing team images on Switch
- Smaller Header Heights and Time Always On Top on Two Line and Switching
- Time/Mark Vertical Offset for Two Line and Switching
- Header Overlap fix on Two Line boards
- Message (from Lynx) works, uses Line Color

### 1.2.4

- Shrunk Header height by default on all boards
- Header defaults to size based on Running Time and Event Name, which ever is largest, if time is setup in header (upper location)
- DNF/DNS/DQ option to move to Result Column, if False, DNF/DNS/DQ are completely unaffected. This only affects Lynx and Eagle Eye boards
- Option to retain time on Lynx Switching when going to Results Board – uses port 47099 with DisplayWorks.LSS (not switching) otherwise identical settings except: do NOT “auto break” at all, and turn off results, and ignore pause, finish, and stop

### 1.2.5

Diacritic character availability for FinishLynx boards. Output from Lynx changes to Unicode from Single Byte. Port changes from 4X999 to 4X916 depending on board. Should be fine for all.

### 1.2.7

Saving and Loading of boards is now available. Settings are stored in JSON format, and can be edited (at your peril).

### 1.2.8

#### -Feature – New Transitions

“New” transitions specifically refer to “pop-in” effects. These have been integrated to be timed, using the “Set Line Delay” feature. Line Delay should be set to a small number, as it will be effectively multiplied as each line comes in. Default is .1s (One-Tenth of a second). Zero is possible as well.

Transitions are available on all boards

Transitions may not use line delay on first refresh

#### -Feature – Blank Board

“Blank” board is now an option. Will still display with background color and background image (if requested), Blank Board will also be callable through DW Remote.

#### -Fixed Overflowing text fields

#### -Added some default colors to prevent new user confusion

### 1.3.0

#### -New User Interface

New UI to de-clutter the program’s feel.

-“New” transitions, now “Complex Transitions” – will allow limited amount of result line delays in user interface. You can alter the JSON file for saved information to tweak even more, if necessary.

-fixed issue with MeetPro Big on complex transitions

-fixed issue with complex transitions not being available on streaming boards

### 1.3.9

-“Multi” boards now allows for multiple boards from different sources to be displayed concurrently

-Minor Layout Tweaks to better fit 720p screens

### 1.4.0

-FieldLynx Options – Port 42399 for single outputs, 42699 for Standings

-Saved State controls for options related to FieldLynx

-FieldLynx specific font size for Standings

-Flash Timing – incorporated

-Simplified Transitions Eliminated Complex Transitions still labelled as such

-Fixed EE Abbrev board with Complex Transitions

-Fixed Complex Transitions with Relays

-Added Background Image removal

-Added FieldLynx Styles for Single and Two Line

### 1.4.1

- FinishLynx "XC Score" supports output of nearly entire start list to score based on 5-2 cross country scoring
- XC Score has limited options (basically line limits), uses port 47899, and a new LSS file, DisplayWorks\_XCScore
- Fixed an issue with some boards where event name wraps to a second line

#### 1.4.2

- ID showing fix on Two Line boards

#### 2.0.0

- One Line board WITHIN Two Line boards to display logo rather than team name text
- Horizontal Boards included as beta (work in progress)

#### 2.0.11

- Fixes for Horizontal Boards

#### 2.0.12

- Fixes for board numbers

#### 2.0.13

- Fixes for Switching
- May Hotfix for Complex Animations
- DWRemote Hotfix

#### 2.0.14

Laps Beta