User's Guide

ResulTV 6.31

Contents

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ResulTV User's Guide

February 10, 2025

ResulTV Introduction

ResulTV™ is a digital television graphic generation program for use with FinishLynx® timing systems. Use ResulTV at your next competition to display ***start lists and results*** (see "Sending a start list and results from FinishLynx"), configuring it to work with most monitor sizes. When used with the appropriate VGA - to broadcast signal converter, ResulTV works with any international ***television system*** (see "Sending data to television").

ResulTV is designed to display information that conforms to a pre-arranged layout. You can also create several different layouts that can be active at one time, and simply toggle between each layout when you want it ***displayed*** (see "Working with multiple layouts").

ResulTV allows you to display dynamic graphics, such as FinishLynx images for ***specific events*** (see "Displaying FinishLynx image dynamically").

Obtaining technical support

There are three ways to obtain technical support for Lynx products:

- Go to the ***Lynx website*** (www.finishlynx.com) and click the **Support** link
- Call (978) 556-9780 and ask to speak with someone in Tech Support, or
- Send an email to the ***technical support department*** (support@finishlynx.com).

Obtaining Lynx products and information

There are three ways to obtain Lynx products and information:

- Go to the ***Lynx website*** (www.finishlynx.com) and click the **Products** link
- Call (978) 556-9780 and ask to speak with someone in Sales, or
- Send an email to our ***sales department*** (sales@finishlynx.com).

CHAPTER 1

Installing ResulTV

ResulTV requires that you install a hardware dongle to receive data from external sources. If you do not install the hardware dongle, then you can run ResulTV in Demo mode only.

Follow the instructions in this chapter to install ResulTV onto a computer.

In This Chapter

Before you begin

Make sure you have the following:

- Lynx Software & Serial Numbers USB *or* access to the ***Lynx website*** (www.finishlynx.com).
- ResulTV license number - available by contacting Lynx System Developers, Inc.
- USB port on the ResulTV computer.
- Hardware dongle (green) - also available by contacting Lynx System Developers, Inc.
- A computer running a Microsoft Windows Operating System 95 or higher.
- Administrator privileges on the ResulTV computer.

What is ResulTV-VDM?

ResulTV-VDM is a simplified version of ResulTV. Like the VDM option for Vision-series cameras, the content of the ResulTV-VDM layout is controlled by the data received (e.g. from FinishLynx or FieldLynx). The display resolution is limited to the size of the display purchased with the solution and the layout limited to Working with Video Display objects.

Before you continue, verify if you own a license of ResulTV or ResulTV-VDM to correctly install and configure the software.

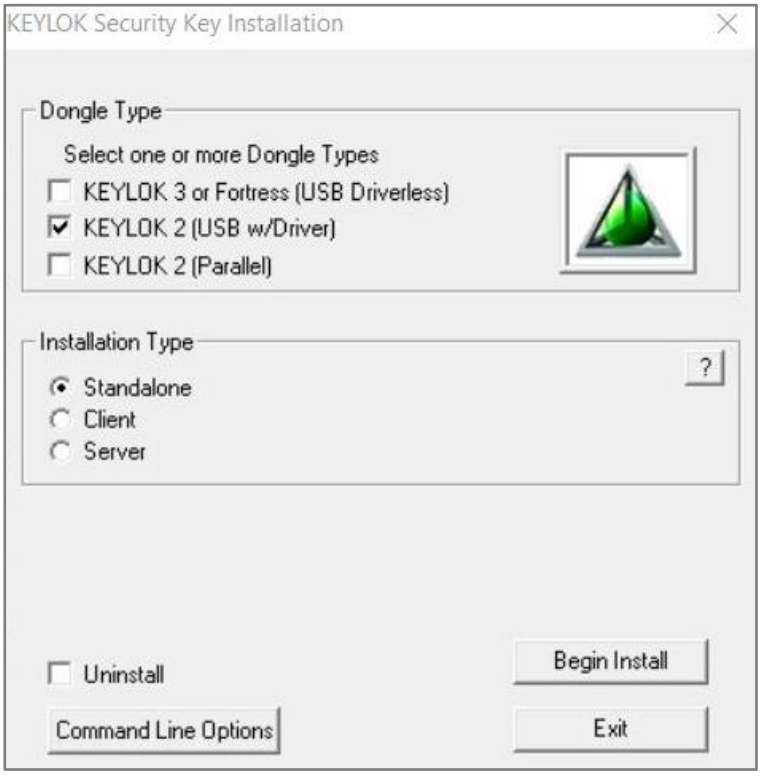
Install the ResulTV software

You can install the ResulTV software *either* from the **Lynx USB** *or* by visiting the Lynx website.

Installing from the Lynx USB

1. Insert the **Lynx USB** into your computer.
2. Double-click the ResulTV installer and begin installation.
3. If the **File Download - Security Warning** dialog appears, click **Run**.
4. Click **Yes** when asked if you wish to install ResulTV.
5. Follow the instructions on the screen to continue with the installation.
6. If you have a ResulTV license number, type it in the Serial text box when prompted. If you do not have a license number, you can demo this software by typing **DEMO** in the serial number text box. If you decide to purchase a serial number later, you can enter it later without reinstalling the ResulTV application
7. Click **Install**.
8. When the **Security Key Installation** dialog appears, click to select **KEYLOK 2 (USB w/Driver)** and **Standalone**.

- *DO NOT* connect the **USB Dongle** to the computer yet. Click **Begin Install** and wait until the Security Key Installation is complete.



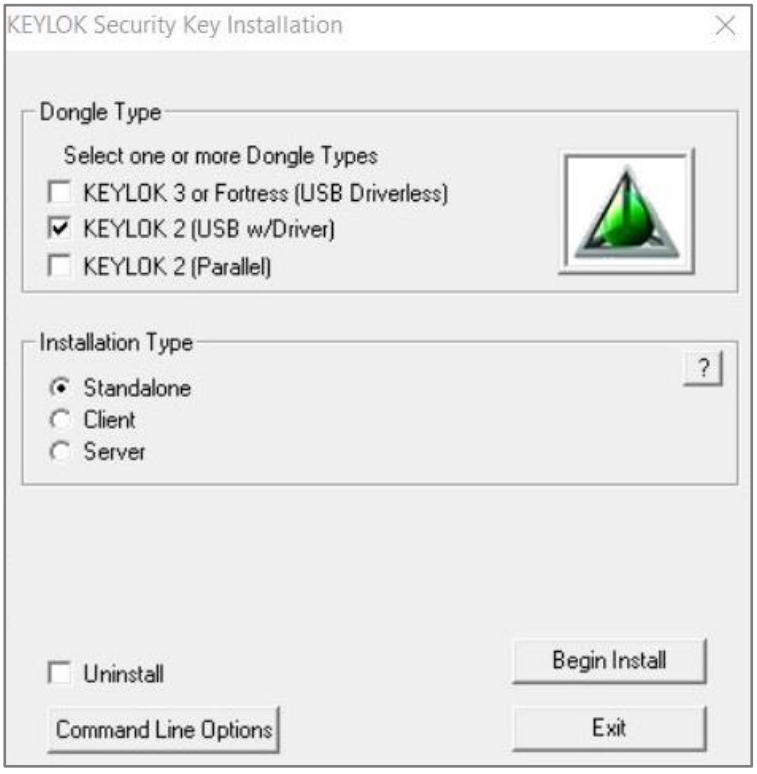
Note: The hardware dongle must be attached to the ResulTV computer at all times or the ResulTV software is disabled.

Installing from the Lynx website

1. Go to the ***Lynx website*** (www.finishlynx.com).
2. Click **Products** | **Software** | **ResulTV Data Display Software**.
3. Scroll down and click the **Downloads** tab.
4. Click the latest version of ResulTV software. Open the installer once it appears on your screen.
5. If the **File Download - Security Warning** dialog appears, click **Run**.
6. Click **Yes** when asked if you wish to install ResulTV.
7. Follow the instructions on the screen to continue with the installation.
8. If you have a ResulTV license number, type it in the text box when prompted. If you do not have a license number, you can demo this software by typing **DEMO** in the serial number text box. If you decide to purchase a serial number later, you can enter it later without reinstalling the ResulTV application
9. Click **Install**.

10 When the **Security Key Installation** dialog appears, click to select **KEYLOK 2 (USB w/Driver)** and **Standalone**.

- *DO NOT* connect it to the computer yet. Click **Begin Install** and wait until the Security Key Installation is complete.



Note: The hardware dongle must be attached to the ResulTV computer at all times or else the ResulTV software is disabled.

CHAPTER 2

ResulTV Quick Start Tutorial

Follow the steps in this Tutorial to get started using ResulTV as quickly as possible. This Tutorial assumes:

- you have already ***installed ResulTV*** (see "Installing ResulTV")
- you are using ResulTV with FinishLynx
- your ResulTV and FinishLynx computers are *either* connected ***serially*** (see "Using ResulTV over a serial connection"), *or* are ***networked*** (see "Using ResulTV over a network").

In This Chapter

Step 1: Start ResulTV

To create a shortcut on the Desktop, navigate you the ResulTV folder (by default this is in the C: drive). Right-click on the ResulTV application file and choose “Send to Desktop (Create shortcut)”.

Start ResulTV by double-clicking the **ResulTV** shortcut.

Step 2: Configure ResulTV to receive data

1. Click **File** from the **Menu** bar and select **Options…**. The **Options** dialog appears. Go to the **Sources** tab.
2. From the **Script:** drop-down list, select **FinishLynx.rss**.
3. If your ResulTV and FinishLynx computers are connected:
   - Via serial using a DB9 null modem cable, select the **COM** port the cable is connected to on the ResulTV computer from the **Serial Port:** drop-down list. Then, click **Ok**.

- If you are connecting the computers over a network, select **Network (listen)** from the **Serial Port:** drop-down list. Then, type a number greater than 1024 in the **Port** text box and click **Ok**.

4 To change the status of the source from “Not Loaded” to “Running” you will need to close and reopen ResulTV.

Tip: You can display the ResulTV configuration screen on a computer and send the ResulTV display to ***another device*** (see "Displaying ResulTV on multiple monitors"), such as a desktop monitor, scan converter, or projector.

Step 3: Configure FinishLynx to send data to ResulTV

1 Run FinishLynx.

2 Click **Scoreboard** | **Options…**. The **Options** dialog appears.

3 Click the **New** button to create a new scoreboard source.

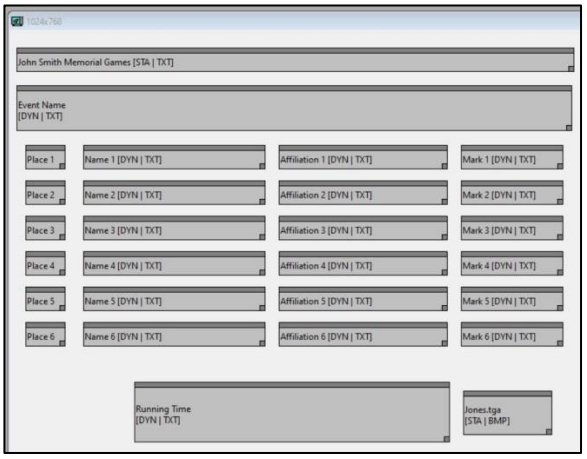
4 From the **Script:** drop-down list, select **ResulTV.lss**.

- If you are connecting the ResulTV and FinishLynx computers serially using a DB9 null modem cable, select the **COM** port the cable is connected to on the FinishLynx computer from the **Serial Port:** drop-down list. Then, click **Ok**.
- If you are connecting the computers over a network:
  a) Select **Network (connect)** from the **Serial Port:** drop-down list.
  b) Type the same **Port** number you assigned to the ResulTV computer in the previous step.
  c) In the **IP Address** field type the IP Address of the ResulTV computer and then click **Ok**.

5 To change the status of the scoreboard you just created from “Not Loaded” to “Running” you will need to close and reopen FinishLynx.

Step 4: Open a layout

1 In ResulTV, click **File** | **Open…** and double-click to open an RTV (layout) file, for example, 1024x768.rtv. A layout screen appears.



2 Press the **Alt** and **Tab** keys simultaneously on the ResulTV computer keyboard. A dialog appears containing any windows currently running on the computer.

3 While holding down the **Alt** key, press **Tab** until the scoreboard display is selected, or click on it.

4 Release the **Alt** and **Tab** keys with the scoreboard display selected. The ResulTV display appears on the screen.

Step 5: Send data to ResulTV from FinishLynx

Configure the scoreboard from within FinishLynx by clicking **Scoreboard** | **Options**…. Then, either consult your *FinishLynx Operator's Manual* for specific instructions on configuring the scoreboard to display a start list, results, and running time, or follow these suggested steps.

1. Select the **Results: Auto** radio button to display results automatically.
2. Next to **Running Time:** click the Options down-arrow to expand the drop-down menu and check the "Send results if armed" option to display the start list as soon as you open the event in FinishLynx.
3. Next to **Results:** click the **Options** down-arrow to expand the drop-down menu and check the **Always Send Place** box to display place as soon as you evaluate the FinishLynx image.
4. Check the **Paging:** box, type 6 in the **Size** box, and type 5.0 in the **Time** box to scroll through 6 lines at a time at an interval of 5 seconds.
5. Verify the scoreboard status is "Running." If not, make sure there is a selection next to **Serial Port:** then Click **Ok** and restart FinishLynx. The start list displays automatically when you open a new event in FinishLynx.

This completes the Quick Start Tutorial. Continue reading this User's Guide for detailed instructions on:

- ***configuring*** (see "Configuring the Data Source") FinishLynx and other data sources
- ***editing*** (see "Editing the Layout") the ResulTV layout, and
- ***sending data*** (see "Sending Data to ResulTV") from FinishLynx and other data sources.

CHAPTER 3

ResulTV Basics

In This Chapter

Uses

Use ResulTV at your next competition to:

- display information from the FinishLynx Results Zone, such as ***start lists*** (see "Sending a start list and results from FinishLynx"), results, and any other information including names, ID numbers, lane assignments, affiliations and times.
- send data from other sources such as ***Hy-Tek Meet Manager*** (see "Sending data using Hy-Tek Meet Manager") for Track and Field or Swimming.
- display ***running time*** (see "Display running time and results").
- display static images/objects, such as sponsor logos.
- display ***dynamic images/objects*** (see "Displaying FinishLynx image dynamically"), such as FinishLynx images.

System requirements

➢ ***ResulTV requires the following:***

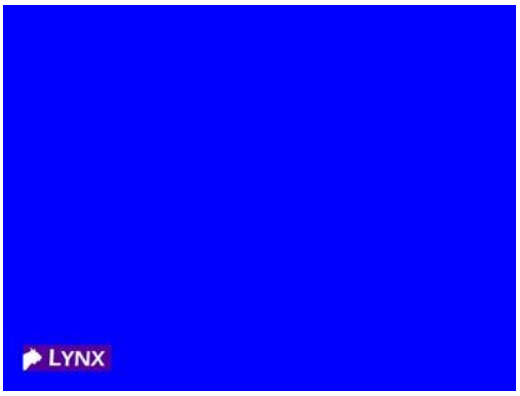
- Microsoft Windows 95 and higher operating system
- a minimum of 16 MB of RAM, and
- at least one available serial (COM) port or an Ethernet network card for the transfer of data from a computer running FinishLynx or Hy-Tek Meet Manager.
- at least one USB port for the **USB Dongle**.

Starting ResulTV

To start the ResulTV application:

1. Double-click the ResulTV Shortcut.
2. A blank, gray, ResulTV screen appears with some Menu bar items at the top. This is the ResulTV configuration screen.

3. Toggle between the configuration screen and the display screen by simultaneously pressing the **Alt** and **Tab** keys. The unconfigured default display screen is blue with the Lynx logo at the lower left corner of the screen.



Displaying static and dynamic data

ResulTV can display static or dynamic information.

- Static data remains the same on every screen. Examples of static information include the name of the competition and its sponsor.
- Dynamic data gets supplied and updated by FinishLynx or some other data source. Dynamic data includes running time, results, start lists, and graphics such as school logos or a ***FinishLynx image*** (see "Displaying FinishLynx image dynamically").

ResulTV configuration screen

When you first run ResulTV, the ResulTV configuration screen appears with a Menu bar at the top. You must be in the ResulTV configuration screen to open layouts, make all layout edits and change data source configurations.

ResulTV display screen

Access the ResulTV display screen from the ResulTV configuration screen by holding down the **Alt** key and pressing the **Tab** key until the scoreboard display screen is selected. When you release the Alt key, the scoreboard display screen appears.

You can return to the ResulTV configuration screen by holding down the **Alt** key and pressing the **Tab** key until the ResulTV configuration screen is highlighted. When you release the Alt key on this icon, you are returned to the ResulTV configuration screen.

ResulTV Profiles

ResulTV supports the concept of profiles in the same way as FinishLynx. A profile can be used to store a specific configuration.

When a profile is used, all of the settings are saved to the current profile when ResulTV is closed, and re-loaded the next time ResulTV is started. This makes it easy to switch from one application to the next.

- ***To create a new profile:***
  1. Go to **File** | **Create Profile...**
  2. Enter a name for this new profile.
  3. Hit **Enter**.

  NOTE: New profiles start with the standard ResulTV default settings.

- ***To load a profile:***
  1. Go to **File** | **Options...** | **General**.
  2. Select the profile name from the **Profile:*** list.
  3. Click **Ok**.
  4. Restart ResulTV.

  NOTE: When a custom profile is loaded, the application title bar will show the <profilename>.

- ***To save a profile:***
  1. Simply close ResulTV. The current options and open layouts will be saved to the current profile.

Three profiles for video display type layouts are included with the installation of ResulTV.

- **Video-Portable** - for the Lynx Portable Display
- **Video-Infield** - for the Lynx 1/2/3-sided Infield Display
- **Video-360 (single/double)** - for the Lynx 360 Display

CHAPTER 4

Setting up the Computers

In This Chapter

Connecting the computers

The computer running ResulTV and the data source computers running FinishLynx, Hy-Tek Meet Manager, etc. can be connected by one of two ways:

- With a **null modem cable** attached to both computers' DB9 serial (COM) port. You can buy a DB9 null modem cable from Lynx or at Radio Shack, CompUSA or similar store.
- By **wired** or **wireless Ethernet**. Make sure all of the computers have a wired or wireless Ethernet card installed and are on the same network.

Optional: You can also run ResulTV and FinishLynx on the same computer and **connect a second** monitor (see "Displaying ResulTV on multiple monitors") to the ResulTV computer.

Using ResulTV over a serial connection

Connect the ResulTV computer to a data source computer or SeriaLynx unit using a **DB9 null modem cable**. Attach each end of the null modem cable to a device's COM port.

Increasing the COM ports

You must have one available COM port on your ResulTV computer for every data source it is receiving data from. If you need to create an extra COM port to accommodate additional data sources, use a serial port add-on card or a USB to serial adapter.

Otherwise, we recommend that you put all of the computers on an Ethernet network and follow the instructions in this User's Guide to configure ResulTV to listen to each data source over the ***network*** (see "Using ResulTV over a network").

Using ResulTV over a network

You can put the ResulTV computer and all of the data source computers on a wired or wireless Ethernet network and then configure ResulTV to listen for data from each source.

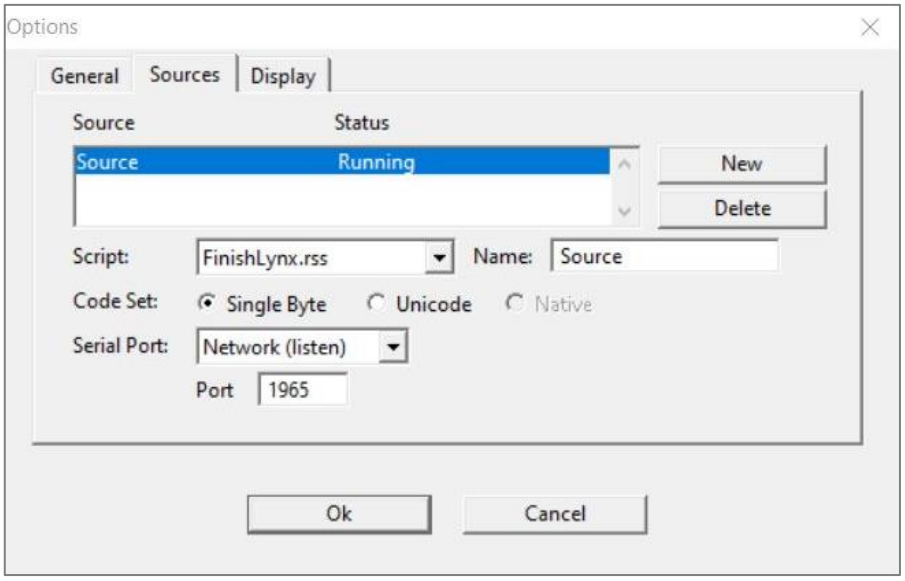
➢ *Pre-requisites*

For ResulTV to get data from sources over a network, the following conditions must exist:

- Your ResulTV and data source computers (such as FinishLynx) must all have wired or wireless Ethernet network cards installed and must all be on the same network.

➢ *Instructions*

1. Go to **File** | **Options** in ResulTV and ***create a new data source*** (see "Creating a new data source"), select the script, and give the source a unique name.
2. Select **Network (listen)** from the **Serial Port:** drop-down list. Then, tab to the **Port** text field and type the same port number the FinishLynx computer's scoreboard port setting is set to.



Click **Ok** to return to the ResulTV configuration screen.

CHAPTER 5

Configuring the Data Source

In This Chapter

Data source basics

Creating a new data source

You must create a new data source or modify an existing one so ResulTV knows how and from where it is receiving data.

➢ ***To create a data source***

1. Make sure you are at the ResulTV ***configuration screen*** (see "ResulTV configuration screen"). Click **File** | **Options**. The **Options** dialog box appears.
2. Click the **New** button.
3. From the **Script:** drop-down list:
   - select **FinishLynx.rss** for data coming from FinishLynx.
   - select **Hytek.rss** for data coming from Hy-Tek Meet Manager for Track and Field.
   - select **HytekSwim.rss** for data coming from Hy-Tek Meet Manager for Swimming.
   - select **MeetPro.rss** for data coming from MeetPro Meet Manager.
4. The default source name, Source, appears in the **Name:** text field. Type a new name if you want. This is helpful if you want to keep track of data coming to ResulTV from multiple sources.
5. From the **Serial Port:** drop-down list:
   - For data sources connected to the ResulTV computer via a ***null modem cable*** (see "Using ResulTV over a serial connection"), select the correct **COM** port.
   - For data sources connected to the ResulTV computer via ***wired or wireless Ethernet*** (see "Using ResulTV over a network"), select **Network (listen)**. In The **Port:** field, enter the same **Port** number that the FinishLynx computer's scoreboard network (connect) port is set to.
6. Click **Ok**. You have now created a data source within ResulTV.

7 Close ResulTV and then restart the application.

8 After restarting ResulTV, continue to the instructions for configuring the ***FinishLynx*** (see "Sending a start list and results from FinishLynx") or ***Hy-Tek Meet Manager*** (see "Sending a start list from Meet Manager for Track and Field for Windows") computer to send data to ResulTV.

Deleting a data source

1 Start at the ResulTV ***configuration screen*** (see "ResulTV configuration screen") and click **File** | **Options**.

2 Go to the **Sources** tab. Click to highlight a source you created earlier in the **Source...Status** text field.

3 Click the **Delete** button.

4 **Restart** ResulTV. When you return to the Options dialog, the data source you just deleted is gone.

Which RSS file do I select?

Important! When using ResulTV with FinishLynx or Hy-Tek Meet Manager, you must select the correct RSS file when configuring the data source!

Select this script in ResulTV...	With this script and/or program...
FinishLynx.rss	ResulTV.lss
Hytek.rss	Hy-Tek Meet Manager for Track and Field
HytekSwim.rss	Hy-Tek Meet Manager for Swimming
MeetPro.rss	MeetPro Meet Manager

Working with multiple data sources

You can configure ResulTV to get data from more than one data source. For example, you can use ResulTV to display ***running time*** (see "Display running time and results") coming from the FinishLynx computer and results coming from the Meet Manager computer.

1 Start at the ResulTV configuration screen.

2 Click **File** | **Options**. The **Options** dialog appears.

3 Go to the **Sources** tab. Click the **New** button to create a new source, and repeat the appropriate steps in “Creating a new data source.”

FinishLynx as a data source

Configuring ResulTV for use with FinishLynx

1. Click **File** | **Options** from the Menu bar on the ResulTV configuration screen. The **Options** dialog appears.
2. Go to the **Sources** tab. Click the **New** button.
3. Tab to the **Script:** drop-down list and select **FinishLynx.rss**.
4. Tab to the **Name:** text field and type a new name for your data source, for example, FinishLynx Primary.
5. Tab to the **Serial Port:** drop-down list and configure the ***serial or network settings*** (see "Setting Up the Computers").
6. Click **OK** and then exit and restart ResulTV. ResulTV is now configured to receive data from the FinishLynx computer.

Configuring FinishLynx for use with ResulTV

➢ ***Pre-requisites***

If you are configuring the FinishLynx computer to send data to the ResulTV computer, make sure that one of the following statements is true:

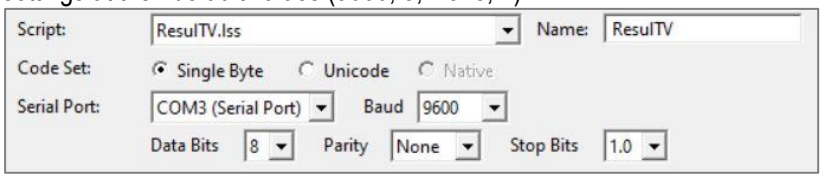
- The FinishLynx computer is connected to the ResulTV computer using a ***null modem cable*** (see "Using ResulTV over a serial connection") via the DB9 serial (COM) ports.
- The FinishLynx computer and the ResulTV computer are on the same ***wired or wireless Ethernet network*** (see "Using ResulTV over a network").

➢ ***Instructions***

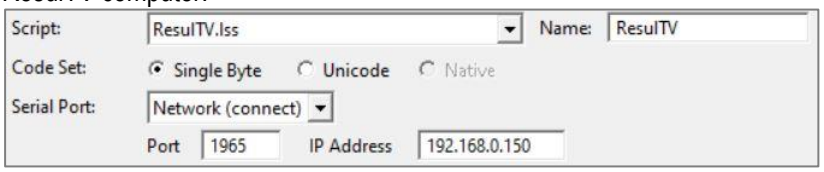
1. Run **FinishLynx**.
2. Click **Scoreboard** I **Options**. The **Options** dialog appears.
3. Click the **New** button to create a new scoreboard source.
4. Select **ResulTV.lss** from the **Script:** drop-down list.
5. Tab to the **Name:** text field and type a new name for the scoreboard FinishLynx is sending data to, if desired.

6 Click the **Serial Port:** drop-down list.

- If you are sending data from FinishLynx to ResulTV over a serial connection, select the COM port through which the FinishLynx computer is connected to the ResulTV computer. Leave the Baud, Data Bits, Parity, and Stop Bits settings at their default values (9600, 8, None, 1).



- If you are sending data from FinishLynx to ResulTV over a network, select **Network (connect)**. In the **port:** field type the port number you set the ResulTV computer to, and in the **IP Address** field type the IP address of the ResulTV computer.



7 Configure the rest of the scoreboard settings as desired. Refer to the *FinishLynx Operator's Manual* for complete instructions.

8 Click **OK** and **restart** FinishLynx. FinishLynx is now ready to send data to the ResulTV computer.

Hy-Tek Meet Manager as a data source

Hy-Tek Meet Manager for Track and Field

Configuring ResulTV for use with Meet Manager for Track and Field

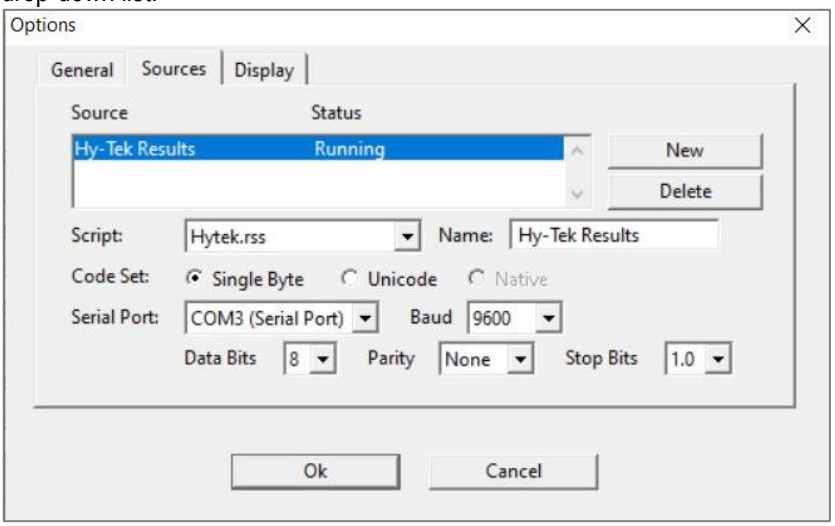
1 Click **File** | **Options** from the menu bar on the ResulTV configuration screen. The **Options** dialog appears.

2 Go to the **Sources** tab. Click the **New** button.

3 Tab to the **Script:** drop-down list and select **Hytek.rss**.

4 Tab to the **Name:** text field and type a new name for your data source, for example, Hy-Tek Database.

5 Tab to the **Serial Port:** drop-down list and select the correct COM port from the drop-down list.



6 Click **OK** and **restart** ResulTV. ResulTV is now configured to receive data from the Hy-Tek Meet Manager computer.

Configuring Meet Manager Track and Field for Windows for use with ResulTV

Note: The instructions provided here are for the convenience of our customers. Because Meet Manager for Track and Field is a software program designed by Hy-Tek, Ltd., the instructions below may not be valid for versions later than 1.2. Please refer to the ***Hy-Tek website*** (www.hy-tekltd.com) for more information.

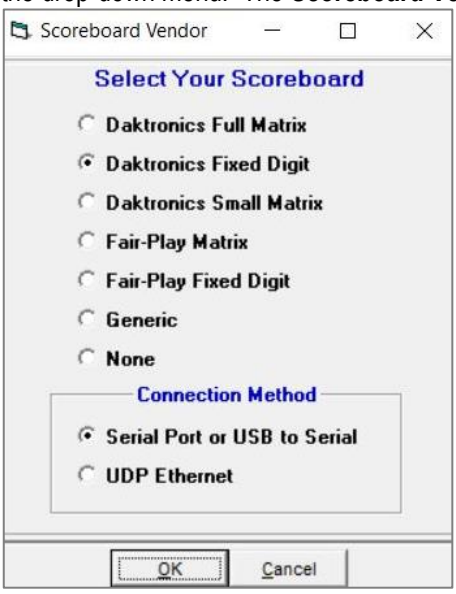
➢ *Pre-requisites*

If you are sending data from Meet Manager to ResulTV over a ***serial connection*** (see "Using ResulTV over a serial connection"), make sure the computers are connected with a null modem cable.

➢ *Instructions*

1 Run Hy-Tek Meet Manager.

2 Click **Set-up** from the menu bar and select **Alpha Scoreboard Interface** from the drop-down menu. The **Scoreboard Vendor** dialog appears.



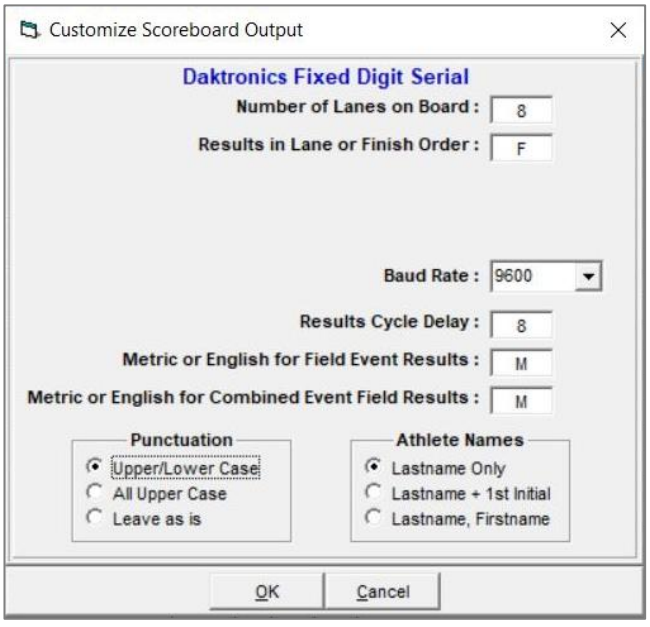
3 Select the **Daktronics Fixed Digit** radio button and then click **OK**.

4 Click **Run** from the menu bar. The **Run the Meet** screen appears.

5 Click **Interfaces** from the menu bar and select **Scoreboard - Daktronics Fixed Digit** | **Open/Close Serial Port**. The **Select Serial Port for Daktronics Fixed Digit** dialog appears.

6 Click in the **Serial Port for Scoreboard (0-16)** field and then type the number of the COM port on the Meet Manager computer that is connected to the null modem cable going to the ResulTV computer.

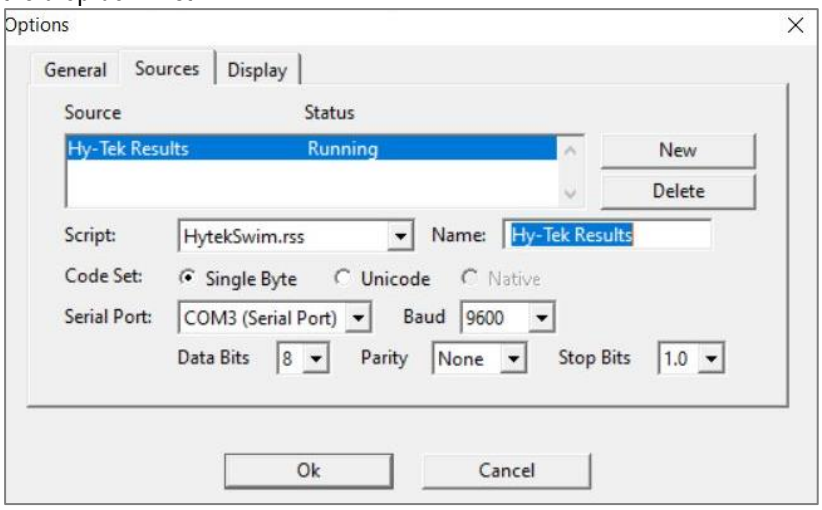
7 Go To **Interfaces | Scoreboard – Daktronics Fixed Digit | Customize**. Enter the number of results per page to be shown in ResulTV and specify **Lane or Finish order**. Confirm **Baud Rate** is **9600**, number of **seconds** each page of results is shown, and **Metric vs English** for field event results. You can also customize how names are shown (upper case, last name only, etc.). Click **OK**.



Hy-Tek Meet Manager for Swimming

Configuring ResulTV for use with Hy-Tek Meet Manager for Swimming

1. Click **File** | **Options** from the Menu bar on the ResulTV configuration screen. The **Options** dialog appears.
2. Go to the **Sources** tab. Click the **New** button.
3. Tab to the **Script:** drop-down list and select **HytekSwim.rss**.
4. Tab to the **Name:** text field and type a new name for your data source, for example, Hy-Tek Database.
   - Tab to the **Serial Port:** drop-down list and select the correct COM port from the drop-down list.



5. Click **Ok**. ResulTV is now configured to receive data from the Hy-Tek Meet Manager computer.

Configuring Meet Manager Swimming for use with ResulTV

Note: The instructions provided here are for the convenience of our customers. Because Meet Manager for Swimming is a software program designed by Hy-Tek, Ltd., the instructions below may not be valid for versions later than 1.4. Please refer to the ***Hy-Tek website*** (www.hy-tekltd.com) for more information.

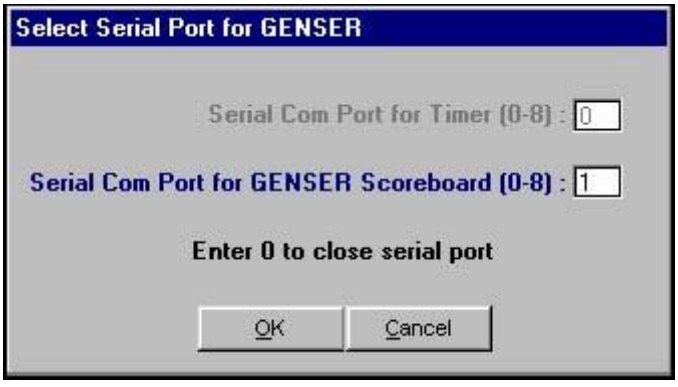
➢ *Pre-requisites*

If you are sending data from Meet Manager to ResulTV over a ***serial connection*** (see "Using ResulTV over a serial connection"), make sure the computers are connected with a null modem cable.

➢ *Instructions*

1. Run Hy-Tek Meet Manager.
2. Click **Set-up** from the menu bar and select **Alpha Scoreboard INTERFACE** from the drop-down menu. The **Scoreboard Vendor** dialog appears.

3. Select the **Generic Serial** radio button and then click **OK**.
4. Click **Run** from the menu bar. The **Run the Meet** screen appears.
5. Click **Scoreboard (Genser)** from the menu bar and then select **Open/Close Serial Port for GENSER**. The **Select Serial Port for GENSER** dialog appears.



6 Type the number of the COM port on the Meet Manager computer that is connected to the null modem cable going to the ResulTV computer.
7 Click **OK**. Meet Manager is now ready to send data to ResulTV.
8 To send a start list, simultaneously press the **Ctrl** and **F10** keys on the Meet Manager computer. To send Results, simultaneously press the **Ctrl** and **F11** keys on the Meet Manager computer.

Working with a dynamic data source

Configuring the dynamic source

You can select the data sources from where ResulTV obtains its dynamic text or graphic.

➢ ***If you want ResulTV to get dynamic data from the source specified by the layout (File | Options dialog)***

1 **Double-click** on a text object. The **Object Properties** dialog appears.
2 Click the **Basic** tab.
3 Select the **Layout default** radio button and then click **Ok.**

➢ ***If you want to specify where an object receives dynamic data from***

1 **Double-click** on a text object. The **Object Properties** dialog appears.
2 Click the **Basic** tab.
3 Select the **Local override** radio button. The **Any source** and **Selected sources:** selections become active.
   - If you want the dynamic data in the object to come from any data source, select the **Any source** button.
   - If you want the dynamic text in the object to come from a specific data source, select the **Selected sources:** button and then select the source from the drop-down list.

Local override

Local override allows you to specify where dynamic text comes from in a text object.

➢ ***To enable Local override***

1 **Double-click** a text object on an open layout. The **Object Properties** dialog appears.
2 Click the **Basic** tab.

3 Select the **Local override** button.

- If you want the dynamic data supplied from any data source, select the **Any source** radio button.

- If you want the dynamic data supplied from a specific data source, select the **Selected sources** radio button and then choose the source from the drop-down list.

Layout default

If **Layout default** is selected, the object receives dynamic data from the source as it is configured in the **File** | **Options** dialog.

➢ ***To enable Layout default***

1 **Double-click** a text or graphics object on an open layout. The **Object Properties** dialog appears.

2 Click the **Basic** tab.

3 Select the **Layout default** radio button and then click **Ok**. Dynamic data for this text object is supplied by the source configured in the **File** | **Options** dialog.

Note: The Layout default selection is only available for use with dynamic data. Make sure **Dynamic** is selected in the **Type:** section of the Object Properties dialog.

CHAPTER 6

Editing the Layout

In This Chapter

Existing layouts

Opening an existing layout

1. Start at the ResulTV ***configuration screen*** (see "ResulTV configuration screen").
2. Click **File** and select **Open**.
3. Double-click an **RTV** file listed in the dialog box. The layout appears on your screen.

Note: Several layouts have been provided for your convenience. We recommend that you open an existing layout and then click **File** | **Save As**, rename the layout, and modify it for your specific needs.

Creating a new layout or modifying an existing layout

You can create a new, custom layout or you can modify an existing layout.

➢ ***To create a new, custom layout***

1. Start at the ResulTV configuration screen.
2. Click **File** | **New**. A blank layout screen appears.
3. Add text and graphics object boxes to the layout by clicking **Layout** | **New text object** and **Layout** | **New bitmap** object.
4. Save the new layout by clicking **File** | **Save** and giving the file a name.

➢ ***To modify an existing layout***

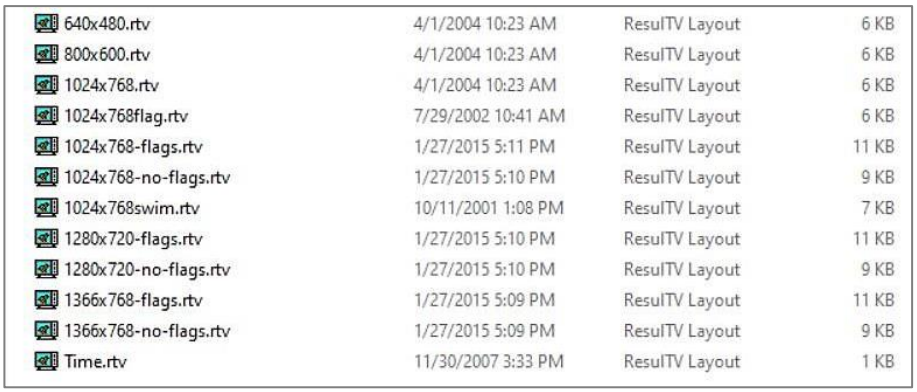
1. Click **File** | **Open** from the menu bar.
2. Double-click to open an **RTV** layout file.

3 Click **File** | **Save as**, give the file a new name, and then click the **Save** button. Now you can modify the new layout you just created. The original layout is saved under its original name for later use.

Different RTV files

ResulTV comes with several RTV, or layout files, described here.

Remember: If you do not want to use the existing layouts, you can customize existing ***or create new RTV files*** (see "Creating a new layout or modifying an existing layout").



640x480.rtv	4/1/2004 10:23 AM	ResulTV Layout	6 KB
800x600.rtv	4/1/2004 10:23 AM	ResulTV Layout	6 KB
1024x768.rtv	4/1/2004 10:23 AM	ResulTV Layout	6 KB
1024x768flag.rtv	7/29/2002 10:41 AM	ResulTV Layout	6 KB
1024x768-flags.rtv	1/27/2015 5:11 PM	ResulTV Layout	11 KB
1024x768-no-flags.rtv	1/27/2015 5:10 PM	ResulTV Layout	9 KB
1024x768swim.rtv	10/11/2001 1:08 PM	ResulTV Layout	7 KB
1280x720-flags.rtv	1/27/2015 5:10 PM	ResulTV Layout	11 KB
1280x720-no-flags.rtv	1/27/2015 5:10 PM	ResulTV Layout	9 KB
1366x768-flags.rtv	1/27/2015 5:09 PM	ResulTV Layout	11 KB
1366x768-no-flags.rtv	1/27/2015 5:09 PM	ResulTV Layout	9 KB
Time.rtv	11/30/2007 3:33 PM	ResulTV Layout	1 KB

- **2x1_Video Display.rtv**: basic Video Display layout (336x168 pixels) (see **Working with Video Display objects**)
- **84x168_Results1.rtv**: 1 line layout for the Lynx Portable 84x168 pixel LED Video display
- **84x168_Results3.rtv**: 3 line layout for the Lynx Portable 84x168 pixel LED Video display
- **84x168_Time.rtv**: running time layout for the Lynx Portable 84x168 pixel LED Video display
- **336x168_Results1.rtv**: 3 lines and running time layout for the Lynx 1/2/3-Sided LED Video Infield displays
- **1024x768.rtv**: configured to work with any 1024x768 pixel display. Fields include: competition name, event name, place, name, affiliation, mark/time, competition sponsor, running time up to 6 lanes.
- **1024x768flag.rtv**: configured to work with any 1024x768 pixel display, and is set up for you to display dynamic place (such as medals), affiliation (such as country flags), and event-round-heat (such as FinishLynx) images.
- **1024x768-flags.rtv**: configured to work with any 1024x768 pixel display. Fields include: competition name, event name, heat/flight number, place, name, affiliation, flags, mark/time, running time, and up to 8 lanes.
- **1024x768-no-flags.rtv**: configured to work with any 1024x768 pixel display. Fields include: competition name, event name, heat/flight number, place, name, affiliation, mark/time, running time, and up to 8 lanes.
- **1024x768swim.rtv**: configured to work with any 1024x768 pixel display and Hy-Tek Meet Manager for Swimming as its data source. Fields include: competition name, event name, place, lane, name, affiliation and mark up to 8 lanes.
- **640x480.rtv**: fields include those listed for 1024x768.rtv, but configured to work with this smaller size monitor.
- **800x600.rtv**: fields include those listed for 1024x768.rtv, but configured to work with this smaller size monitor.
- **Time.rtv**: fields include competition name, running time, and sponsor. Configured to work with a 640x480 size monitor.
- **1280x720-flags.rtv**: configured to work with any 1280x720 pixel display. Fields include: competition name, event name, heat/flight number, place, name, affiliation, flags, mark/time, running time, and up to 8 lanes.
- **1280x720-no-flags.rtv**: configured to work with any 1280x720 pixel display. Fields include: competition name, event name, heat/flight number, place, name, affiliation, mark/time, running time up to 8 lanes.
- **1366x768-no-flags.rtv**: configured to work with any 1366x768 pixel display. Fields include: competition name, event name, heat/flight number, place, name, affiliation, mark/time, running time, and up to 8 lanes.
- **1366x768-flags.rtv**: configured to work with any 1366x768 pixel display. Fields include: competition name, event name, heat/flight number, place, name, affiliation, flags, mark/time, running time, and up to 8 lanes.
- **1920x1080-no-flags.rtv**: configured to work with any 1920x1080 pixel display. Fields include: competition name, event name, heat/flight number, place, name, affiliation, mark/time, running time, and up to 8 lanes.

- **1920x1080-flags.rtv**: configured to work with any 1920x1080 pixel display. Fields include: competition name, event name, heat/flight number, place, name, affiliation, flags, mark/time, running time, and up to 8 lanes. Shown below.

Dynamic image layout

There is a layout available for use with ResulTV that allows you to dynamically display medals, country flags, and FinishLynx images on your ResulTV layout (see example below). Remember that you can still create a ***custom layout*** (see "Creating a new layout or modifying an existing layout") when displaying dynamic images. The layout is currently only available in a 1024 x 768 pixel size.

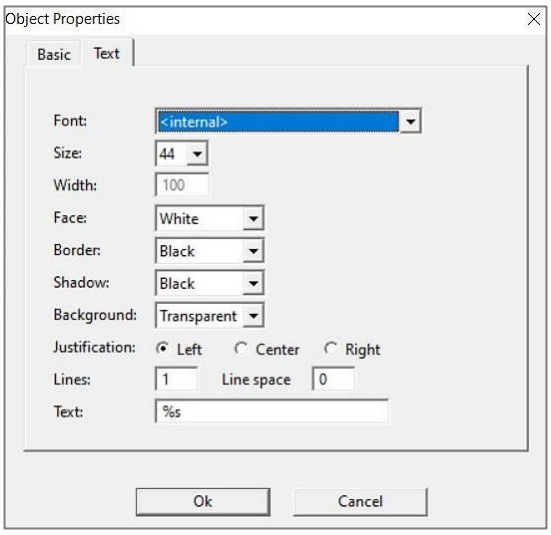
Working with text objects

The ResulTV layout consists of several fully editable fields, called text objects.

Basic text object editing

1 Make sure you have a layout open on the ResulTV configuration screen.

2 **Double-click** anywhere on the text object you want to edit. The **Object Properties** box for that specific text object appears.



Cutting, copying and pasting

You can cut, copy, and paste objects from one display to another from within ResulTV.

1 Click to select a text or graphic object.

2 Click **Edit** from the Menu bar and select **Cut**, **Copy**, or **Paste**.

Note: You can cut, copy, or paste multiple objects. Select multiple objects by holding down the **CTRL** key and clicking on all the objects you want to select.

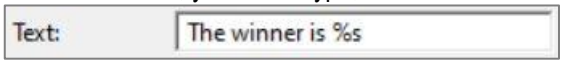
Entering static and dynamic text in the same text object

You can enter static and dynamic text in the same text object by making sure you use the %s dynamic text marker symbol. For example, you can combine static and dynamic text in the text object that displays the first place competitor's name to say, "The winner is [static text] Longley [dynamic text]."

➢ ***Instructions***

1 **Double-click** the text object where you want to combine static and dynamic text. The **Object Properties** dialog appears.

2 In the **Text:** field at the bottom, type the static text you want displayed and include %s wherever you want dynamic information to appear. In the example described above, you would type, "The winner is %s"



3 Click **OK**. The text object displays the static text you just entered, and will display the dynamic text when it is supplied by the data source.

Inserting a new text field

1. Click **Layout** from the Menu bar.
2. Select **New text object**. A new text object appears on the layout that is fully editable.

Changing the size of the text object

There are two ways to change the size of a text object.

- Drag and drop the handle in the lower right corner of the text object to a desired size, or
- Follow these steps:
  1. **Double-click** a text object. The **Object Properties** dialog appears.
  2. Click the **Basic** tab.
  3. Type, in pixels, the new Width and Height values in the text fields provided and then click **Ok**. The text object is resized to the values you just entered.

Changing the text position

You can change how text gets positioned on the ResulTV display by either clicking on a text object and dragging and dropping it to a new location, or by entering new co-ordinates for the top left corner of a text object.

➢ ***To change the position of a text object by dragging and dropping (easiest method)***

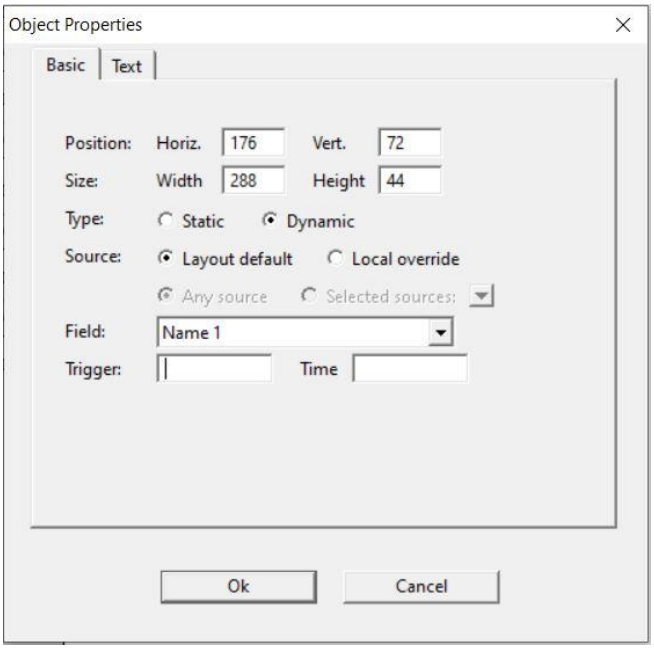
1. With a layout open on the ResulTV configuration screen, **click and hold** somewhere on a text object you want to move.
2. While continuing to hold down the mouse button on a text object, drag it to the desired location and let go of the mouse button. The text object remains in its new location, until you drag and drop it to a different location.

➢ ***To change the position of a text object by entering new co-ordinates***

The following method is recommended for greater accuracy.

1. **Double-click** the text object you want to re-position. The **Object Properties** dialog appears.

2 Click the **Basic** tab.



3 Enter new **Horiz.** and **Vert.** pixel co-ordinates in the text boxes provided and then click **Ok**. The text object gets re-positioned according to its new co-ordinates.

Changing the text content in a text object

1 **Double-click** on a text object. The **Object Properties** dialog appears, displaying the current text display in the **Text:** field at the bottom.

2 Type over the text in the field with new text you want displayed and then click **OK**. The text you just entered is displayed in the text object.

Changing the justification

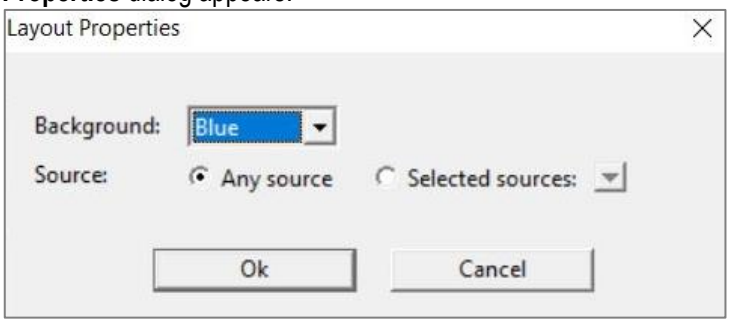
You can left-justify, center, or right-justify text appearing in a text object.

1 **Double-click** the text object you want to edit. The **Object Properties** dialog appears.

2 Click the **Left**, **Center**, or **Right** radio button to change the text justification and then click **Ok**. The text in the object changes to the new justification setting you just selected.

Changing the background color

1 Click **Layout** from the menu bar and choose **Properties...**. The **Layout Properties** dialog appears.



2 Select a new color from the **Background** drop-down list and click **Ok**. The background color for the display changes to the color you just selected.

Selecting a text object background color

1 Double-click on a text object. The **Object Properties** dialog appears.

2 Select a color from the **Background:** drop-down list. Note that when you select Background from the list, the text object defaults to the original background color of the layout.

3 When you press **Alt** | **Tab**, the text object is displayed with the new background color you selected.

Changing the shadow color

1 **Double-click** the text object you want to edit. The **Object Properties** dialog appears.

2 Select a color from the **Shadow:** drop-down list and then click **Ok**. The shadow color of the text in the text object changes to the color you just selected.

Changing the border color

The border color is the outline color of text in a text object.

1 **Double-click** the text object you want to edit. The **Object Properties** dialog appears.

2 Select a color from the **Border:** drop-down list and then click **Ok**. The border color of the text in the text object changes to the color you just selected.

Changing the face color

The face color is the main color of a text object.

1 **Double-click** the text object you want to edit. The **Object Properties** dialog appears.

2 Select a color from the **Face:** drop-down list and then click **Ok**. The face color of the text in the text object changes to the color you just selected.

Changing the text size

1 **Double-click** the text object you want to edit. The **Object Properties** dialog appears.

2 Select a new value from the **Size:** drop-down list and then click **Ok**. The size of the text in the text object changes to the value you just selected. Or you can specifically control the font size by clicking the **Basic** tab on the Object Properties dialog. Type a new value in the **Height:** text field and then click **Ok**.

Note: See "Shrink to fit" for text objects that may contain varying lengths of data such as names and affiliations.

Moving to back or front

You can select either "move to back," or "move to front," when objects are layered on top of one another.

1 Click to select the text or graphic object you want to move.

2 Click **Layout** from the Menu bar and select **Move to back** or **Move to front**.

Support for Microsoft Windows compatible fonts

ResulTV allows you to use any type of Microsoft Windows compatible font when selecting text for display.

Recommended fonts include any TrueType fonts.

Not recommended to use any script or ornate fonts.

Recommended Microsoft Windows operating system

It is recommended that your computer run one of the following Microsoft Windows operating systems when using alternative fonts with ResulTV:

- NT 3.2 and higher
- 2000, or
- XP
- 7, 8, or 10

Optimized Font Blending

The rendering of text with dark fonts and transparent border/shadow/background has been improved so that characters blend in better and appear less jagged. Further, the blending artifacts seen around light text with a light background can be removed by setting the border of the font to the color of the face.

Tip: For blending to occur, the border color must be achromatic (or transparent) and different than the face color (for example, no blending is done on a black font with a black border). See Advanced Settings for more options.

Note: These optimizations do not apply to the <Internal> font, only installed Windows fonts.

Selecting a new font for display

1. Double-click on a text object. The **Object Properties** dialog appears.
2. The original font is called "<internal>." Select a new font by choosing a new one from the drop-down list.
3. Click **Ok**. When you press **Alt** | **Tab**, the new font for the text object is displayed.

Note: Remember that fonts may vary on different computers. When displaying data on multiple computers, we recommend you select a universal font, such as Arial or Courier New.

Controlling font size

You can change the font size (based on points) of any text object. Our engineers have entered a size as large as 800 points!

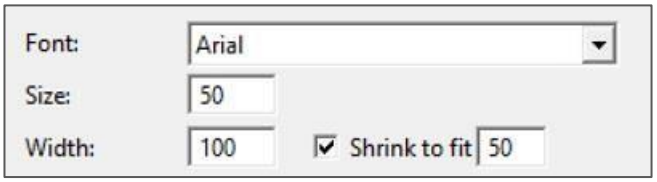
➢ ***To change a text object's font size***

1. Double-click on a text object. The Object Properties dialog appears.
2. From here, you have two options:
   - Select a preset value from the **Text:** drop-down list, or
   - Click the **Basic** tab and type a new value in the **Size: Height** text field.

Shrink to fit

Sometimes, text fields get sent data that are too long to fit in the text object using a fixed font size, so they will appear to get cut-off. This can occur with long names, affiliations, etc. To help your display look more professional, use this method:

1. Double-click on a text object. The Object Properties dialog appears.
2. Choose a font other than the default.
3. Enter a **size value** and check off the "**Shrink to fit**" option. The box beside it defines what **percentage** the font may be **reduced** by; this can be changed to a custom value. The default value of 50 means the font may be reduced by as much as 50 percent before it stops shrinking.



Supporting other language fonts

If you are using fonts in languages other than English, particularly Asian, Middle Eastern, and some Eastern European languages, you must use a Unicode data exchange between FinishLynx and ResulTV.

➢ ***Enable Unicode data exchange***

In ResulTV...

1. Select **File** | **Options…** from the Menu bar. The **Options** dialog appears.
2. Go to the **Sources** tab. Select **Unicode** in the **Code Set:** line and then click **Ok**.

In FinishLynx...

1. Run FinishLynx and select **File** | **Options…** from the Menu bar. The **Options** dialog appears.
2. Click the **Scoreboard** tab.
3. Select **Unicode** in the **Code Set:** line and then click **Ok**.

Working with graphics objects

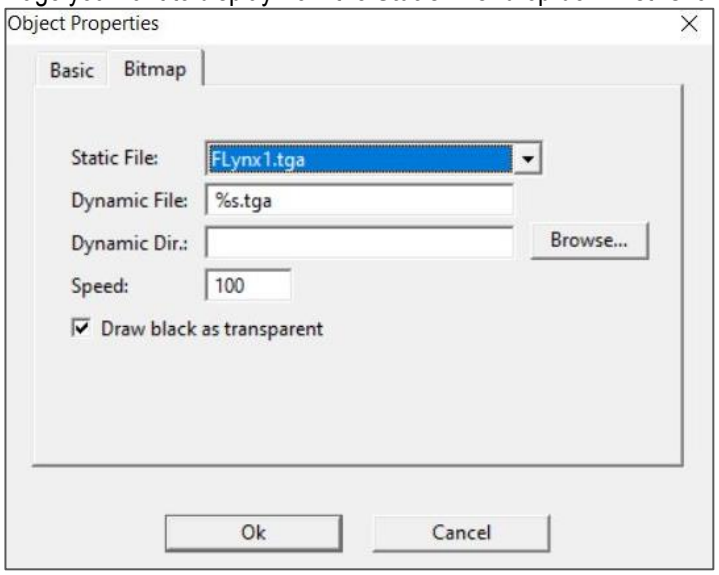
Displaying graphics

With the exception of the Lynx logo which is *not* editable (besides choosing which corner it will be located), static and dynamic graphics can be displayed anywhere on the ResulTV screen. You can either use existing graphics or you can create your own graphics for display.

➢ ***To place a graphic on the screen***

1 With a layout open on the ResulTV configuration screen, click **Layout | New bitmap object**. A new object box appears on the layout screen.

2 **Double-click** the object. When the **Object Properties** dialog appears, select the image you want to display from the **Static File:** drop-down list. Click **Ok**.



3 **Resize** the object box by clicking and dragging its handle to a new size.

4 **Move** the object box by dragging it and dropping it to a desired location.

Displaying FinishLynx image dynamically

You can display the FinishLynx image that corresponds with the results of the event you are sending to ResulTV.

➢ ***Pre-requisites***

1 Share the **C:\ResulTV** directory (or wherever you installed the ResulTV files on the ResulTV computer) with the FinishLynx computer, being sure it has both **read and write** permissions.

2 Make sure the FinishLynx and ResulTV computers are connected over a ***network*** (see "Using ResulTV over a network").

➢ *Configure ResulTV*

Now, follow these steps.

1. Be sure to be using the **FinishLynx.rss** source script.
2. Click **File** | **New** to create a new layout.
3. Click **Layout** | **New Bitmap Object...**. A new, blank graphic object appears on the layout.
4. Double-click the new graphic object. The **Object Properties** dialog appears.
5. Click the **Basic** tab.
6. Select the **Type: Dynamic** radio button.
7. From the **Field:** drop-down list, select **Event-Round-Heat**.
8. To view an example, click **File** | **Open** and select **1024x768flags.rtv**.

➢ *Configure FinishLynx*

Be sure to use the **ResulTV.lss** scoreboard script.

➢ *Send data from FinishLynx*

1. With a saved, evaluated FinishLynx image open, hold down the right mouse button to draw a box around the portion of the image you want displayed on ResulTV.
2. Click **Export....** A **Save As** dialog appears. Navigate to the ResulTV directory that the ResulTV computer is using and click **Save**. Leave the name of the file as its default Event-Round-Heat format name from FinishLynx, for example, 001-1-01. ResulTV displays the FinishLynx image along with the event results.

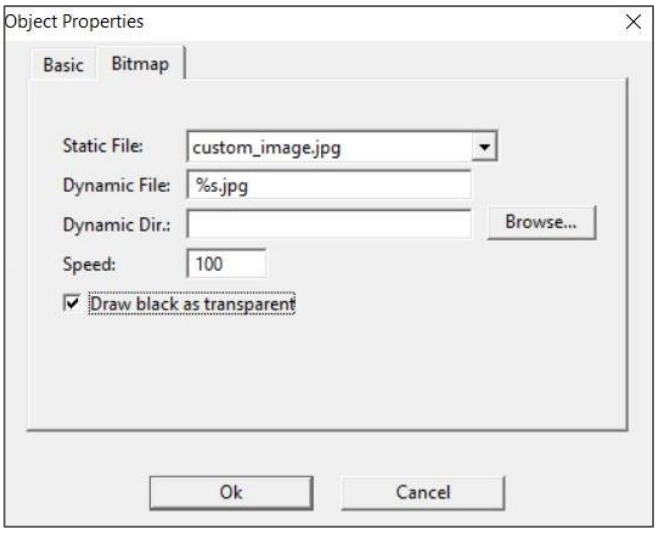
Note: By default, ResulTV will look for the image file in a Targa format (.tga). Your computer may save the image as a jpeg file (.jpg). If this is the case, go into the object's properties in ResulTV, and change the **Dynamic File:** from "%s.tga" to "%s.jpg".

Displaying a custom graphic

If you want ResulTV to display a custom graphic, make sure the graphic is an **uncompressed 24-bit Targa (TGA)** file, a **JPEG** file **(.jpg)**, or a **GIF** file **(.gif)**. Then, follow these steps:

➢ *Displaying Your Object Statically (company logos, backgrounds, etc.)*

1. Place the custom graphic file in the ResulTV directory on the ResulTV computer. This is the same directory where you stored the ResulTV files during installation, for example, **C:\ResulTV**.
2. Run ResulTV and open a layout on the ResulTV configuration screen.
3. Click **Layout | New bitmap object**. A graphics object box appears on the layout.
4. **Double-click** on the graphics object box. The **Object Properties** dialog appears.
5. From the **Static File:** drop-down list, select the custom graphic you placed in the ResulTV directory and then click **Ok**.



6 Move the graphics object box by dragging and dropping it to a desired location. When you click **Alt** + **Tab** to view the ResulTV display, your custom graphic appears on the screen.

➢ ***Displaying Your Object Dynamically (country flags, school logos, etc.)***

1 Save the file (.tga, .jpg, or .gif) in a directory. It must be named the same as what your object is representing will say. For example, if using an object for a school's logo, and whenever that school will be shown in ResulTV it will show as an abbreviation, your object must be named that same abbreviation.

2 Open a layout on the ResulTV configuration screen.

3 Click **Layout | New bitmap object**. A graphics object appears on the layout.

4 **Double-click** the object. Next to **Dynamic Dir.:** click "Browse" and select the directory that your object is located in. Next to **Dynamic File:** type "%s.(your file's extension). This will be either .tga, .jpg, or .gif. So if you have a JPEG of a school logo, you will put **%s.jpg**, and make sure the Dynamic Directory is configured to the directory. Confirm the other settings (draw black as transparent, and in the case of GIF animations you can change the speed).

5 Go to the **Basic** tab. Select the **Dynamic** radio button, and choose the appropriate field from the **Field:** drop-down menu. For example, in the case of the school logo, the object where place 1's logo should be, choose "Affiliation 1" from the drop-down menu. For layouts containing more than one line of results, each line would contain its own dynamic object, each only differing in their field's Affiliation #.

6 **Move** the object by dragging and dropping it onto a desired location. When you press **Alt** + **Tab** to view the ResulTV display, the file you just added appears.

Clearing a dynamic graphic or text object

To clear any dynamic graphic or text objects from either the configuration or the display screen, simultaneously hold down the **Alt** and **C** keys. Only dynamic objects (not static objects) are cleared using this keyboard shortcut.

Displaying an existing graphic

ResulTV comes with sample TGA graphics files that you can display.

1. Open a layout on the ResulTV configuration screen.
2. Click **Layout | New bitmap object**. A graphics object appears on the layout.
3. **Double-click** the graphics object box. An **Object Properties** dialog appears.
4. Select a TGA file from the **Static File:** drop-down list and then click **Ok**.
5. **Move** the graphics object by dragging and dropping it onto a desired location. When you press **Alt** + **Tab** to view the ResulTV display, the TGA file you just selected appears.

Displaying GIFs

ResulTV has the ability to display GIF files. You'll find that *.gif files appear in the Bitmap **Static File:** drop-down menu. The GIF file format includes the delay after each frame, which can be different for each frame. You should be able to set this in your GIF editor. If you find a GIF somewhere and don't like the speed, you should be able to change the delays in an editor.

The GIF file format (optionally) includes the number of times that the animation should be played. The way the spec is written the animation should only be played once if this value is omitted. In ResulTV, however, an omitted value results in the animation playing continuously. If you only want 1 loop (or a finite number) then be sure to set the value in your editor. Some editors may always set this value (either to a finite number or to the "continuous" value, which is zero).

Note: GIFs can take a while to load. 1.5MB file size takes about 1 second for ResulTV to load it. The mouse cursor should show the hourglass whenever a GIF is loading. Note that using undo/redo involves reloading bitmaps, so you'll see the delay then as well.

If you have many GIFs and/or large GIFs and/or GIFs overlapping large text areas then playback can slow down in ResulTV. In particular, a GIF overlapping text (especially long and/or large text) can cause some slowdown. Also, ResulTV enforces a minimum delay between frames of 30 milliseconds (corresponding to a maximum frame rate of 30 fps). GIFs are generally designed to run at less than 30 fps (20, 15, or 10 likely; [This is now controlled by a hidden setting (\Display\MinAnimDelay). The minimum value is 10 milliseconds]).

To change the **speed** of the GIF, double-click on the object and enter a new **Speed:** value. A value of 100 is "normal" speed, 200 is double, 50 is half, etc. Negative values can be used to run the animation backwards.

By default ResulTV will always use **black** for the **background color**. This allows ResulTV to easily “erase” the background of the GIF by displaying black as transparent. To keep the black background, double-click on the object and uncheck “**Draw black as transparent**.” There is a hidden setting (Display\GIFUseBg) that if set to **1** ResulTV will use the background color stored in the GIF rather than using black.

To display your GIF statically, see “Displaying a custom graphic”.

Displaying an existing graphic

ResulTV comes with sample TGA graphics files that you can display.

1. Open a layout on the ResulTV configuration screen.
2. Click **Layout | New bitmap object**. A graphics object appears on the layout.
3. **Double-click** the graphics object box. An **Object Properties** dialog appears.
4. Select a TGA file from the **Static File:** drop-down list and then click **Ok**.

5 **Move** the graphics object by dragging and dropping it onto a desired location. When you press **Alt** + **Tab** to view the ResulTV display, the TGA file you just selected appears.

Resizing a Bitmap Object

To avoid unexpected quality loss in bitmap objects, the size of new bitmap objects is locked. This can now be changed with the **Stretch** and **Keep Aspect** options.

1 **Double-click** the bitmap object box. An **Object Properties** dialog appears.

2 Go to the **Basic** tab.

3 Check the **Stretch** Box. **Note:** To maintain the current width and height ratio to prevent any distortion to the object, also check **Keep Aspect**

Tip: If you plan to resize a layout (see **Resizing the Layout**) and you want bitmap objects to also be resized, enable these options first.

Note: Resizing bitmaps works well for simple block graphics like coloring field backgrounds, but may produce jagged edges or other quality degradation for more complex images.

Can I edit or delete the Lynx logo?

You cannot edit or delete the Lynx logo. You can choose which corner it appears in by going to **File | Options | Display** and choosing a corner from the **Lynx Logo:** drop-down list.

Note: When the location of the display (File | Options… | Display) is set to **Other** and the height is <250 pixels, the Lynx logo will not appear.

Working with Video Display objects

Video Display Objects

Video Display objects enable the same Functionality as the Video Display Module (VDM) camera upgrade in Vision-Series cameras. By Using a Video Display object in a ResulTV layout, you can generate the content from commands in a compatible Lynx Scoreboard Script (LSS) file in FinishLynx, FieldLynx, or LynxPad.

➢ ***To create a layout using Video Display objects:***

1 Create a source using the *VideoDisplay.rss* and configure the port settings.

2 Restart ResulTV.

3 Click **File | New** to create a new layout, and then **Layout | New Video Display** (or open the sample *2x1_VideoDisplay.rtv)*.

4 Click **Layout | Edit Objects…** to define the *Position, Size,* or *Rotation* of the object.

5 Click **OK**.

6 Set up and configure a scoreboard using a compatible *ResulTV_Video_[identifier].lss* script in FinishLynx, FieldLynx or LynxPad.

Note: ResulTV_Video compatible scripts are much like VDM scripts, except for a different wrapper. Each packet must start with \01V\02 and end with \05\03\04 to be recognized by ResulTV.

Video Display Object Properties

Video Display objects must have the following **Basic** properties: **Type: *Dynamic*** and **Field: *Video Display Data***

➢ ***To change a Video Display object's properties:***

1 **Double-click** a Video Display object. The **Object Properties** dialog appears.

2 Click on the **Basic** tab.

3 Next to **Type:** select the *Dynamic* radio button.

4 Next to **Field:** select *Video Display Data* from the drop-down menu.

5 Click **OK**.

It is possible to rotate how a Video Display object displays…

➢ ***To rotate how a Video Display object displays left or right:***

1 **Double-click** a Video Display object. The **Object Properties** dialog appears.

2 To rotate the object 90° to the left, select the **Left** radio button.

3 To rotate the object 90° to the right, select the **Right** radio button.

4 To return the object to no rotation, select the **Off** radio button.

5 Click **OK**.

Note: You can also change the rotation of the entire display (See **Scrolling the ResulTV Display**). If both the display and the Video Display object are set to rotate Left or Right, the content in the Video Display object will appear upside down.

Just like with dynamic bitmap objects (See **Working with graphics objects**), it is possible to load bitmaps into a Video Display object by using an Image block defined in the LSS. All parameters are controlled in the LSS. The *ResulTV_VideoDisplay_Example.lss* shows how to load a flag from C:\ResulTV\flags when the country code is included in the User3 field.

Note: Any supported type of bitmap can be loaded, however animated GIFs will only show the first frame.

Resizing the Layout

The Layout Resize function allows you to easily adapt an existing layout for a new display of different width and height.

➢ ***To resize a layout:***

1 Select the layout you want to resize so that it appears in the foreground.

2 Click **Layout | Resize…**

3 Enter the **Old** and **New** values for **Width** and **Height**.

4 Click **OK**.

Tip: The old and new values can be absolute or relative. For example, if you want to double the layout's size, you can enter "1" for the **Old** values and "2" for the **New** values.

Note: By default, new Bitmap Objects do not resize. See Resize Bitmap Object for more info.

Other layout editing commands

Align horizontal

You can align two or more text or graphics objects horizontally along the same axis.

1. Click to select a text or graphics object. Then, hold down the **Ctrl** key on your computer keyboard while clicking on additional text or graphics object(s). The objects are selected if their topmost borders are white.
   Tip: To select multiple objects, select an object by clicking on it, then skip over the objects you want selected. Hold down the **Shift** key while clicking on the last object you want selected. All of the objects between the first and last objects are selected.
2. Click **Layout | Align horizontal**. The text or graphics objects you just selected are aligned along the same horizontal axis.

Align vertical

You can align two or more text or graphics objects vertically along the same axis.

1. Click to select a text or graphics object. Then, hold down the **Ctrl** key on your computer keyboard while clicking on additional text or graphics object(s). The objects are selected if their topmost borders are white.
   Tip: To select multiple objects, select an object by clicking on it, then skip over the objects you want selected. Hold down the **Shift** key while clicking on the last object you want selected. All of the objects between the first and last objects are selected.
2. Click **Layout | Align vertical**. The text or graphics objects you just selected are aligned along the same vertical axis.

Select all

You can select all of the text or graphics objects on an open layout by clicking **Edit | Select all**. All of the objects on the layout appear with a white title bar, meaning you can now simultaneously edit them by clicking **Layout | Edit object(s)...**

Select none

If you want to de-select all of the text or graphics objects on a layout, click **Edit | Select none**. Title bars revert from white back to their gray, unselected state. You must select the objects again if you want to edit them.

Invert selection

Use **Invert selection** if you want to shift the selection of one text object to others on the layout.

With a layout open and a text object selected, click **Edit** | **Invert selection**. The previously selected object becomes deselected, while the other text objects on the screen are selected.

Changing the settings of multiple objects

1. Open a layout on the ResulTV configuration screen.
2. Click to select a text or graphic object.
3. Hold down the **Ctrl** key while clicking on more text or graphic objects to select multiple objects at once.
4. Click **Layout | Edit object(s)...**. The **Object Properties** dialog appears. Any changes you make in the Object Properties dialog are applied to all of the objects you selected.

Deleting multiple selected objects

1. Click to select the text or graphics object.
2. Click **Layout | Delete object(s)**. The object is removed from the layout.

Note: You can delete multiple objects by holding down the **Ctrl** key while clicking on each object you want to delete. When you select **Layout** | **Delete selected object(s)**, all of the objects you selected disappear from the display.

Tip: To select multiple objects, select an object by clicking on it, then skip over the objects you want selected. Hold down the **Shift** key while clicking on the last object you want selected. All of the objects between the first and last objects are selected.

CHAPTER 7

Sending Data to ResulTV

In This Chapter

Sending data from FinishLynx

Sending a start list and results from FinishLynx

You can configure FinishLynx to send a start list or results to ResulTV automatically or you can configure it to send the data manually.

1 Run FinishLynx.

2 Click **Scoreboard | Options**. The **Options** dialog appears.

➢ ***To send a start list or results from FinishLynx to ResulTV automatically***

a) At the bottom of the dialog, there is a **Results:** section. Select the **Auto** radio button and then click **Ok**.

b) Assuming you have already configured ResulTV and FinishLynx to exchange data serially or over the network, ResulTV will display the new start list as soon as you open it in FinishLynx.

➢ ***To send a start list or results from FinishLynx to ResulTV manually***

a) At the bottom of the dialog, there is a **Results:** section. Select the **Manual** radio button and then click **Ok**.

b) Open a start list or results in FinishLynx.

c) Assuming you have already configured ResulTV and FinishLynx to exchange data serially or over the network, click **Scoreboard** from the menu bar and choose **Refresh**. The start list or results are displayed on ResulTV.

Sending running time from FinishLynx

These steps assume you have already configured FinishLynx and ResulTV to exchange data serially or over a network, and that you have created and selected a script for a new scoreboard in FinishLynx.

➢ ***Instructions***

1 Run FinishLynx.

2 Click **Scoreboard | Options** from the Menu bar. The **Options** dialog appears.

3 In the middle of the dialog, there are **Running Time:** selections. Click the **Normal** radio button.

4 Click **Ok** and then **Restart** FinishLynx. FinishLynx is now configured to send running time to ResulTV. When the timing circuitry in the camera starts, ResulTV displays the running time.

Display running time and results

You can have more than one layout open and toggle between the display of running time and results when FinishLynx is one of the data sources.

1 Start at the ResulTV configuration screen.

2 Click **File | Open** from the Menu bar and double-click the **Time.rtv** layout file. The running time layout appears on the screen.

3 Click **File | Open** from the Menu bar again and double-click one of the other layout files to show results. The layout file you just selected appears on the screen.

4 Configure the text and graphics objects as desired, and set up the data sources.

5 Now that you have opened both layouts, simultaneously press the **Alt** and **1** keys and then simultaneously press the **Alt** and **2** keys on the ResulTV computer to toggle between the layouts.

Sending data using Hy-Tek Meet Manager

Meet Manager for Track and Field

Sending a start list from Meet Manager for Track and Field for Windows

After you have configured Meet Manager and ResulTV to exchange data, simultaneously press the **Ctrl** and **F10** keys on the keyboard of the Meet Manager computer to send a start list to ResulTV. The start list, ordered by lane number, appears on the ResulTV display.

Sending results from Meet Manager for Track and Field for Windows

After you have configured Meet Manager and ResulTV to exchange data, simultaneously press the **Ctrl** and **F11** keys to send results to ResulTV. The results, ordered by place, appear on the ResulTV display. If an event has multiple heats, after they are all finished you can send the event's combined results by pressing the **Ctrl** and **F12** keys.

Meet Manager for Swimming

Sending a start list from Meet Manager for Swimming

After you have configured Meet Manager and ResulTV to exchange data, simultaneously press the **Ctrl** and **F10** keys on the keyboard of the Meet Manager computer to send a start list to ResulTV. The start list, ordered by lane number, appears on the ResulTV display.

Sending results from Meet Manager for Swimming

After you have configured Meet Manager and ResulTV to exchange data, simultaneously press the **Ctrl** and **F11** keys to send results to ResulTV. The results, ordered by place, appear on the ResulTV display.

Working with multiple layouts

1 Open each layout by clicking **File | Open** from the Menu bar. The layout you most recently open appears on the screen.

2 Now that you have opened more than one layout, simultaneously press the **Alt** and **1** keys, then simultaneously press the **Alt** and **2** keys on the ResulTV computer to toggle between the layouts. You can also click **Window** at the top of your screen to see a list of layouts that are currently open along with their corresponding keyboard shortcut.

Automatic switching of display screens

ResulTV can receive commands from FinishLynx that cause the layout (RTV file) displayed to automatically switch. Specifically, you can create four different ResulTV layouts (start lists, results, running time, and messages), and display the appropriate layout on the ResulTV screen depending on data sent by FinishLynx without the use of an extra operator.

➢ *Before you begin*

You must use the **ResulTV.lss** scoreboard script in FinishLynx.

➢ *Basic instructions*

1 Start at the ResulTV configuration screen.

2 Create four new layouts, or RTV files, and assign each layout one of these names, associated with the type of information it displays:

- **Starts.rtv** for a start list display
- **Results.rtv** for a results display
- **Time.rtv** for a running time display, and
- **Message.rtv** for a message display.

➢ *Example #1*

In this example, an auto-switching occurs between the running time and results displays.

1 In ResulTV, open two layouts you created earlier: **Results.rtv** and **Time.rtv**.

2 In FinishLynx, set the scoreboard options to **Running Time** | **Normal** and **Results** | **Auto**.

3 When the running time in FinishLynx is armed or running, the Time.rtv layout, or running time, is automatically displayed on the screen.

4 When the running time is stopped and the FinishLynx operator starts evaluating the FinishLynx image, ResulTV automatically changes to the Results.rtv layout and the results are displayed.

Note: The running time must be stopped in order for FinishLynx to send results to the display. To stop the clock, simply **Scoreboard | Stop (Alt + S)** or use a photo-eye. See the FinishLynx User's Manual to configure a photo-eye or a FinishLynx camera using Automatic Capture Mode.

➢ *Example #2*

In this example, auto-switching occurs between the start list, results, and a scoreboard message.

1. In ResulTV, open three layouts you created earlier: **Starts.rtv**, **Results.rtv** and **Message.rtv**.
2. In FinishLynx, set the scoreboard options to **Running Time | Off** and **Results | Auto**.
3. When the FinishLynx operator opens a new event from the database, the Starts.rtv, or start list, is displayed in ResulTV.
4. When the FinishLynx operator begins evaluating the FinishLynx image, the results appear in ResulTV.
5. If a scoreboard message is sent, the Message.rtv layout causes the message to be displayed in ResulTV.

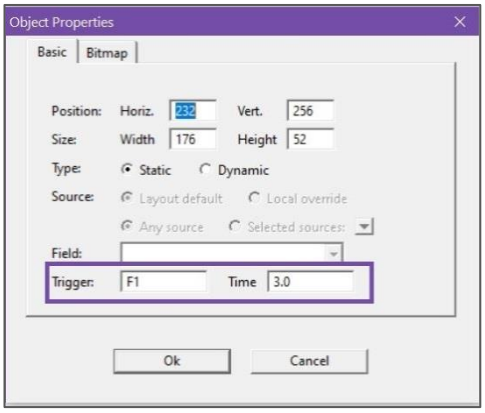
Manual and Automatic triggering of text and bitmap objects

Layout objects (both text and bitmap) can be **triggered either manually by keyboard events or automatically through remote commands that appear in the data stream**. A trigger is a string of characters (up to 15 and not case sensitive). When using a data stream, any string can be used. In order to have the ability to manually trigger the object, the trigger value must be able to be generated by the keyboard.

Any normal key (letter, number, punctuation, etc.) generates a trigger with that single character as its value. Holding the Shift, Control, or Alt keys when hitting a normal key will prepend a "S+", "C+", or "A+" to the trigger. You can use one or more of these keys (in that order). Hitting the Function key generates the trigger "Fn", where n is the function key number. The Function keys can also be modified by Shift, Control, and/or Alt. **Note: the *display screen* must be active when manually triggering an object, not the configuration screen.**

A time can also be entered in the Time: field, in **seconds**, if you want the triggered object to only appear for a period of time and then disappear. If you wish for it to remain visible **indefinitely**, leave the Time: field **blank**.

The **Trigger:** and **Time:** fields can be found by going into an object's **Properties** and into the **Basic** tab.



Examples:

- If you want to trigger an object using the F1 key, enter "**F1**" in the objects trigger field.
- If you want to trigger an object using the Control and F1 keys, enter "**C+F1**" in the trigger field.
- If you want to trigger an object using the Control, Alt, and J keys, enter "**C+A+J**" in the trigger field.

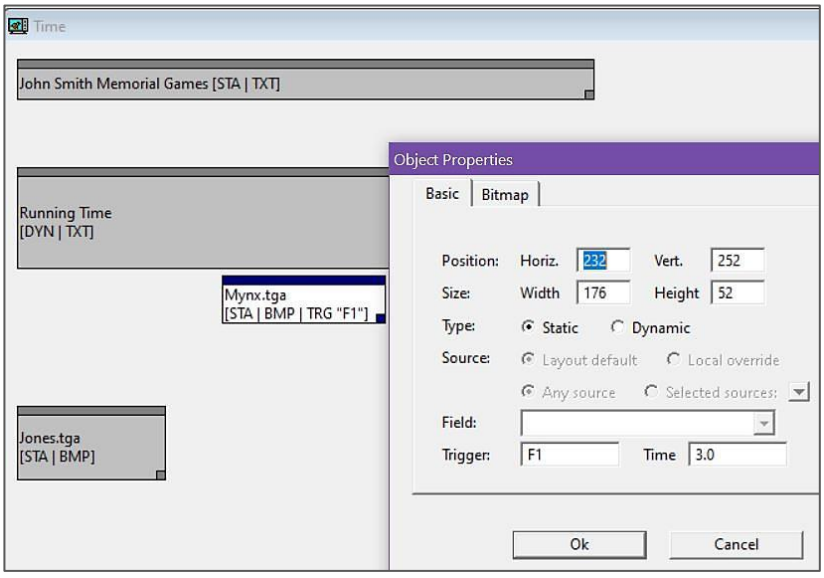
Note: Be careful not to choose a trigger that is also a menu accelerator, as the menu will capture the event and it will not make it to the display window to be used as a trigger.

Sending a trigger through the data stream uses the same mechanism as the automatic layout switching. The Command is “Trigger”, the Name is that of the string being used as the trigger, and the Action can be “On”, “Off”, or “Toggle”, each corresponding with how they wish to affect the state of the object they are triggering.

An **active example** of this feature can be found in the script ResulTV.lss in the TimeStopped section:

```
;;TimeStopped
; This is sent when the time is stopped by a beam break.
; Line codes are identical to the TimeRunning line codes.
;
; The following line (if not commented) will tell ResulTV to change layouts.
;\11\00Command=LayoutDraw;Name=Time;Clear=1;\0a
\11\01\01T\02%15.15s\03\04
; The following line will trigger event F1.
; Note that the event is triggered after the data is sent. This is important
; if the triggered field will use the TimeStopped data.
\11\00Command=Trigger;Name=F1;Action=On;\0a
```

In this case, the Trigger of F1 is being used to turn on an object that is in the Time.rtv layout in ResulTV. The object’s corresponding properties in ResulTV can be seen here:



Note: This object can also be triggered manually by hitting the F1 key since the trigger used in the data stream is also normal key.

Sending data to television

➢ ***Pre-requisites***

To send ResulTV data to television, you need to connect the ResulTV computer to a scan converter which is then connected to anything requiring a composite video feed. Examples of this include a closed-circuit television feed or a computer controlling a video scoreboard.

➢ ***Instructions***

Connect the monitor output on the ResulTV computer to a scan converter. The scan converter converts the VGA signal into a video signal for use by television. Most scan converters allow you to simultaneously display the ResulTV output on the computer monitor as well as on the television monitor.

Tip: You can display the ResulTV configuration screen on a computer and send the ResulTV display to ***another device*** (see "Displaying ResulTV on multiple monitors"), such as a desktop monitor, scan converter, or projector.

Displaying ResulTV on multiple monitors

The ResulTV display can be sent through the computer's VGA or HDMI port to an external monitor, projector, or scan converter. This means you can view the ResulTV configuration screen on the computer while viewing the ResulTV display on an external monitor.

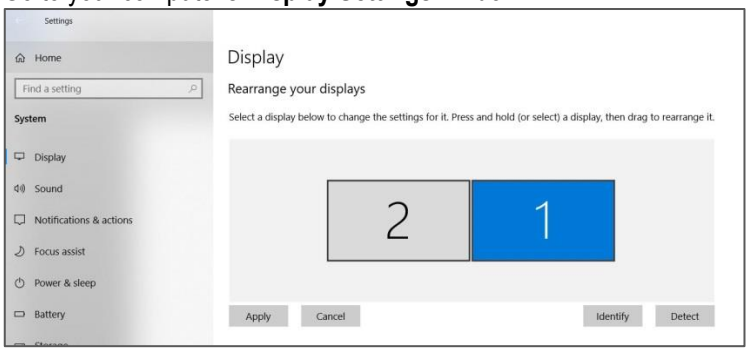
You can also run FinishLynx on the ResulTV computer while sending the ResulTV display to the external monitor, saving you the need for a second computer.

Note: To use this feature, you must run Microsoft Windows 98 and higher.

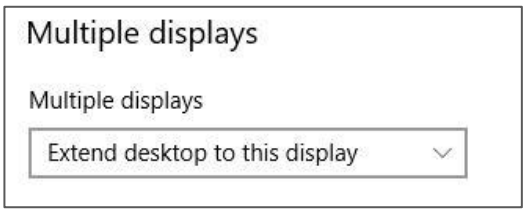
➢ ***Configure the Microsoft Windows display settings:***

1 Attach an external monitor, projector, or scan converter to the VGA port (15-pin female port) or HDMI port on the ResulTV computer.

2 Go to your computer's **Display Settings** window.



3 Click to select **#2**, and then select **Extend desktop to this display**.



➢ ***Configure ResulTV:***

1 Start ResulTV.
2 Click **File | Options...**
3 Click the **Display** tab.
4 Select **Monitor 2**.
5 Click **OK**.

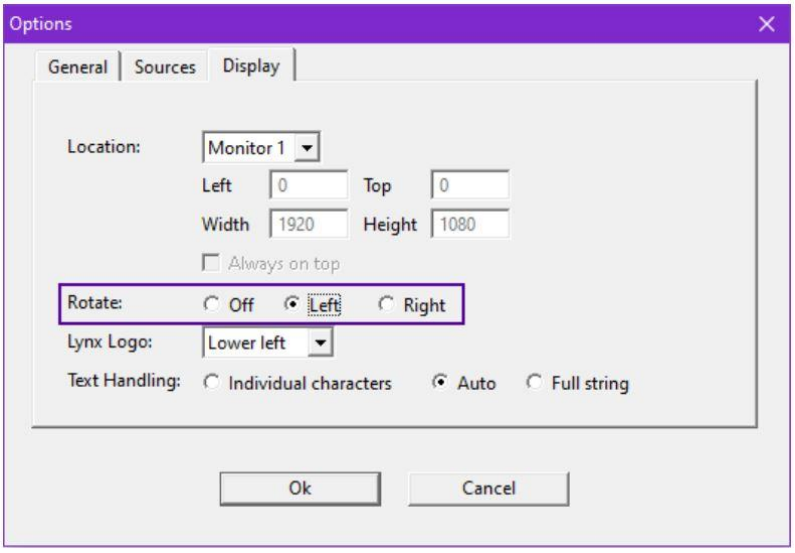
The ResulTV display screen now appears on the second monitor.

Displaying ResulTV on a Rotated Display

The ResulTV layout can be rotated clockwise or counter-clockwise when it is sent to a display. This is required to be used with the Portable 84x168-Pixel LED Video Finish Line Display, and may be used with any display that has been rotated 90 degrees.

➢ ***To rotate layouts:***

1 Go to **File | Options… | Display**
2 Select **Rotate:** (either **Off** (no rotation), **Left** (counter-clockwise), or **Right** (clockwise))



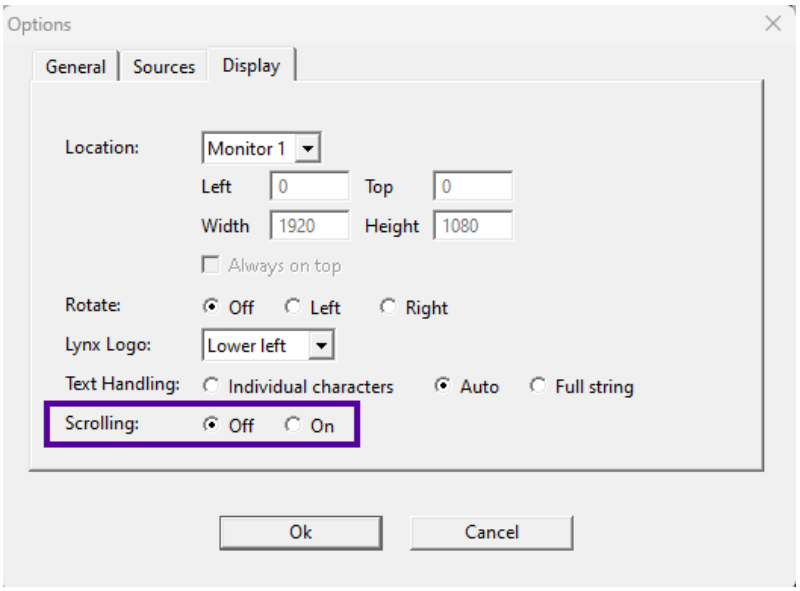
Scrolling the ResulTV Display

ResulTV has the ability to scroll the display window. This is intended to support the Lynx 360 display.

➢ ***To scroll the display:***

1 Go to **File | Options… | Display**

2 Set **Scrolling: On** (or Off to stop scrolling)



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Glossary of Terms

D

data source

Computer from which ResulTV is getting its data. Data source examples include a computer running FinishLynx or Hy-Tek Meet Manager. For ResulTV to display data from a data source, you must configure the data source from within ResulTV. Additionally, you must configure FinishLynx and Hy-Tek Meet Manager to send data to ResulTV.

dynamic

Data or graphic that gets supplied and updated by another data source, such as FinishLynx. Includes running time, results, start lists, and graphics such as a FinishLynx image.

G

graphic object

An editable block of image on the ResulTV layout screen.

H

hardware dongle

Security device that attaches to the computer running ResulTV. ResulTV cannot run properly without this device.

L

layout file

Visible from the ***configuration screen*** (see "ResulTV configuration screen"), is a template on which you can design your ResulTV display. Several layout, or RTV files, are available for you to use or modify. You can also create layout files from scratch.

LSS

Stands for Lynx Scoreboard Script.

R

RSS

Stands for ResulTV Source Script.

RTV file

A layout file with the file extension, RTV. Several layout files are included with ResulTV for your use. You can also create your own layout files and modify existing ones. An example of an existing layout file is the file 1024x768.rtv.

S

scan converter

A device that converts a computer generated VGA signal to a signal suitable for television broadcast.

static

Graphic or other data that remains the same on every screen. For example, the name of a competition and its sponsor.

T

text object

An editable block of text on the ResulTV layout screen.

V

VGA signal

A signal sent by a computer. With the help of a scan converter, you can convert it to something that is usable by television, for example, NTSC or PAL format.