
CE Image + II

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Thank you for purchasing this software

We think you will be pleased with this software.

Used with ImageMaster this software allow the making of quick reports. We think it is possible to complete a basic report, using a prepared template, in under 2 minutes.

This software has retained the easy to use features of previous software products. All the basic tools of thermography exist in this software in a easily used and understandable format.

New is a Getting Started Help. This Help file is 2000 compatible which allows the user to find a help files easily.

The features of this software

1. Load all the CE camera formats and calibrate them accurately and quickly from thermal camera generated floppies.
2. Save calibrated images in BMP, PCX formats- then reload them with calibrated data.
3. Load and store images into ImageMaster from the RS-170 camera output
4. Customize the software with preferences.
5. Extract temperature with the basic temperature tools - POINT, LINE, SHAPE, CIRCLE/ELIPSE, and RECTANGLE.
6. Graph temperature data from LINE temperature.
7. Select either a mini-graph or MIN, MAX, AVG temperature values annotated on the image with LINE, SHAPE, CIRCLE/ELIPSE and RECTANGLE.
8. ISOTHERM temperatures with Windows color.
9. Enhanced Template Editor with with GRIDS, SNAP TO GRID.
10. Place text anywhere with TEXT OBJECT.
11. FAST REPORT mode with ImageMaster.
12. AUTO LINKING for temperature data and image details when making a a report.
13. BATCH print reports with a LIST MANAGER.
14. POINTERS are available in Reports to call attention to important visual image details.
15. Use a optional fill in mode. Boiler plate this is going to be changed in a report can be highlighted with a color. This color is not printed.

What has changed . . .

Support for ImageMaster. ImageMaster captures visual, thermal, and audio notes and places them into the software with minimum effort. These images can be captured from a RS 170 port and calibrated in the software, with a newer method. ImageMaster uses a software package called Image Gallery to take images from ImageMaster and display them for loading in thumbnails.

This software does not have context sensitive help. This has been replaced by Getting Started. This can be made to display each time the software loades or can be turned off as an option.

This software supports ONLY Windows 95, 98, and NT.

There is an enhanced TEMPLATE EDITOR. Used GRIDS, SNAP TO GRID, TEXT OBJECT to make better and faster templates.

Introduction to the software

LINKING is enhanced. If a template is made with a VISUAL and THERMAL image and placed in the software first - and then a thermal or visual image is loaded from a FILE or ImageMaster -- image and temperature data linking is automatically done for the user. The TEMPLATE HAS THE LINKING INFORMATION.

Support

In recognition of how MISSION CRITICAL this thermal software can be to a user - the software is supported promptly free of charge.

Most problems when they do occur can be resolved on the spot with a telephone call.

Introduction

This software will run on any software that Windows 95, 98 or NT requires. If the user wishes he can use a 486 computer even though it is not encouraged or recommended.

Any printer can be used that is supported by the Windows software.

Do not run the computer in TRUE COLOR. This is VALID EVEN though some thermal images have ONLY 256 gray levels.

Suggested computer . . .

This is ONLY a suggested list of computer features that are desirable. This does not mean this is WHAT YOU NEED TO RUN THE SOFTWARE. It does run better, faster, smoother, on this computer. This can save the user time when using the software.

1. 400 MHZ Intel Pentium II CPU
2. Windows 98 operating system.
3. Enhanced printer port for ImageMaster .
4. 128 MEG of RAM
5. TRUE COLOR video card with 8 MEG of memory.
6. True color 17" monitor.
7. 7.2 GIG harddrive with a separate location for the software and DATA. Recommended Maxtor 90750D6.
8. Printer. Any of the higher end HP INK JET printers. Give careful consideration to COST PER PAGE since some of the inexpensive printers can be more expensive to run since they are designed for limited use.

Networking

The user can install the software on any NETWORK server desired. This is entirely the responsibility of the Network Administrator.

Restrictions

Courtesy of Microsoft - files can be ONLY 8 characters in length.

The copy protection used on this software will allow only one user to use the software at ONE TIME.

What can be done . . .

More than one user can access the software if it is not done at the same time.

Image Files can be used by any number of users.

Multi users . . .

Multiple Installs can be purchased to allow more than one user to access reports and operate the software on a network.

Operating Systems

Windows 3.1 or 3.12 is not supported. This software will support ONLY the following Microsoft operating systems -

1. Windows 95
2. Windows 98
3. NT 4.0

The software package

The software is contained in a 3.5 inch, 4 Disk Set...

1. Disk 1 contains the Setup.exe program, Program Files and COPY PROTECTION.
2. Disk 2 contains palettes, labels, Pointers, and Getting Started Help File.
3. Disk 3 contains Sample Reports, Sample Templates, DLL files, and Graphs.
4. Disk 4 contains, Sample Images.

These Disks are labeled as Disk 1 through Disk 4. The installation program asks for Disks by number. If you lose ANY of the disk it will not be possible to install the software.

The user can make a copy of Disk 2,3, and 4, but not Disk 1 because it contains the COPY PROTECTION.

Installing the software on the computer

Installing the software on Windows 95

Start Windows 95, if not already started.

Insert Disk 1 in the floppy drive.

CLICK on START, CLICK on RUN. Type Setup and CLICK OK.

You can create a Short Cut in Windows 95 with Windows 95, by opening up Explorer, and CLICKING the Right Mouse button on the software exe file, and then dragging the name to the Desk Top. You will then be asked if you want to create a Short Cut. Answer yes and you have a fast way to boot the software.

Registering the software...

The software has a computer generated registration form that takes place during installation. Fill out this form and send by MODEM.

You can register anytime by clicking on the Registration Icon in the program group.

You must register the software to get product support. Also upgrades will be sent only to registered owners of the software..

Copy Protection...

The process of managing Software Copy Protection under Windows is a very easy process with the copy protection installation program included with the software. **A dialog box with on-line help guides the user through every step of the process. There is an ICON in the software program group that starts this program. That ICON is BLACK with a yellow KEY on it. The program group was created during the installation process.**

Five important facts about the software copy protection.

1. **Moving copy protection from software Disk 1.** During installation COPY PROTECTION is moved from Disk 1 to the computer hard drive root directory - it normally is C:\>.
2. **Moving copy protection from the hard drive to Disk 1** of the software disk. To move the software, use the Copy Protection program to move the copy protection from the hard drive to Disk 1 of the soft-

The software installation

ware.

3. **Lost copy protection files.** If you have lost the copy protection files - you will need to call product support to reset the copy protection. Have your software registered. Resetting copy protection is done with the Copy Protection Installation.
4. **Disk 1. Software Disk 1 is the ONLY place where the copy protection files WILL LOAD.**
5. **Demonstration Mode a complete software package with no copy protection.**

What the Install Program Does . . .

The installation automatically updates the Windows registry

The installation program automatically a software INI file, WITH FACTORY DEFAULTS, in Windows System folder.

The install program creates the following directories . . .

C:\ceimagii	(ROOT derectory if defaults are accepted)
C:\help	(contains help files)
C:\images	(images stored in this folder unless USER places them elsewhere)
C:\reports	(reports placed in this folder unles USER places them elsewhere)
C:\templates	(templaced placed in this folder unless USER places them elsewhere)
C:\Palettes	(palettes stored in this folder unless USER places them elsewhere)
C:\graphs	(graphs stored in this folder unless USER places them elsewhere)
C:\pointers	(pointers stored in this folder unless USER places them elsewhere)
C:\labels	(labels stored in this folder unless USER places them elsewhere)

ImageMaster has its own directory structure - see the manual included with ImageMaster.

CHAPTER 4 *Use Preferences to Customize the software*

About this chapter

This chapter contains important information on starting/initializing the software. If the software user, depending on how the software was installed, need to initialize or setup the proper directories. Usually this involves finding the correct location for images, templates, reports, and graphs, all of which use standard Windows file menus.

The software operates according default settings in preferences and those in the software.ini file located in Windows. **Read through carefully this chapter prior to making changes in preferences. This is important because some changes in colors make it impossible to see annotations.**

Please pay particular attention to the settings of Setup, and the Editor and Text Editor tabs. These have a direct, immediate, and very important effect on the software operation.

What you see when the software starts up

The software will boot (start up) with the menu bar and tool bar shown below. The software always starts in the Image Editor. From the two menus - FILE, and REPORT all the functions of the software can be accessed.



You will also see that most of the Tool Bar is grayed and inaccessible. The only one that is available is the Folder and HELP.

To drop down any of the menus shown to the right CLICK on File, Report, or Help.

File

Load Image

Load BMP images that have previously been saved, into the editor.

BMP images save previous work such as annotations, temperature, extractions, isotherms, and text.

Load Graph...

Load into the Image Editor a previously saved Graph.

Load Report...

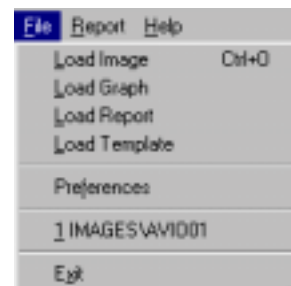
Load into the Report Maker a previously saved report.

Load Template....

Load a template into the Report Maker. From the template the user makes reports with the consistent formatting.

Set Preference.

Set software to the preferences of the user. Refer to section, later in this chapter, Customizing the Software for more information.



Use Preferences to Customize the software

The reports menu

Create Template

Make a new template.

This places the software into the Template Editor - makes available functions needed for creating a template.

Create Report from a Template...

CLICK on this function to load a template for use by a Report.

This places the software into the Report Editor.

Help

Getting Started

This is a HELP file that contains all the functions of the software. It derives its name from the fact that it opens with a GRAPHIC depicting all the software modules. Move the mouse cursor over the graphics and when it turns into a HAND click the LEFT MOUSE BUTTON to access the topic.

This is Windows 2000 compatible so that Getting Started displays as a LEFT and RIGHT PANE. The Left pane contains what looks like BOOKS. CLICK on these to open up the topics within that book. When a topic is opened it displays in the RIGHT PANE.

This help also contains a very complete index. CLICK on Index to open this dialog. Type in the name of a topic and that topic if it is indexed will display in the right pane.

Note that you can resize Getting Started so that it fits on a quarter of the screen. The user can select 'Place on top' in options so that this help is ALWAYS on top of the software.

To put away Getting started simply CLICK on the ESC key once. To get it back anytime CLICK on HELP and CLICK on Getting Started.

Use Getting Started

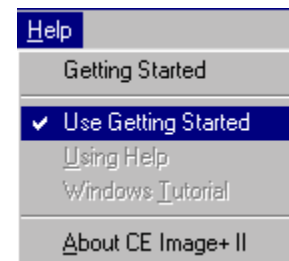
CLICK on Use Getting Started to place a CHECK MARK in front of the function. The example shown to the left has a check mark. THIS MEANS that each time the software is loaded - Getting Started will load and display the OPENING GRAPHICS DEPICTION of the SOFTWARE. This is done by default so that the user will know that such a HELP exist and to make it easy to use. If this is not wanted CLICK on the function again to REMOVE the check mark. Now Getting Started will not display.

Using Help

Using Help is required reading if you are not acquainted with Windows help.

Windows Tutorial

Windows Tutorial - excellent material on using Windows. Note: that in Windows 95 the tutorial is available but it must be installed as an extra item by using CUSTOM in the Windows Installed - so it may be grayed out on the software. In that case have it installed and access through the Start Menu.



Help About...

About is a special section of Help. This dialog box has information on the software serial number, the version, and the version numbers for the DLLs. In case of a software problem this can be useful information.

If you call for Software Support you may be asked to open the Dialog Box shown to the right and read some of the information.

Customizing the software

The software is setup with default preference selections.

The user is free to make what changes are desired, BUT It is strongly suggested that until some familiarity is had with the software make no changes from the default settings. Then at that time use this chapter as a reference. Always do things in small bites from which it is easy to restore changes to the original.



Initializing preference

How to.

CLICK on File, then CLICK on Preference.

Notice that preference is set up like a file folder. CLICK on a FILE FOLDER LIKE tab and a page opens with various dialog controls that the user can set to CUSTOMIZE the software.

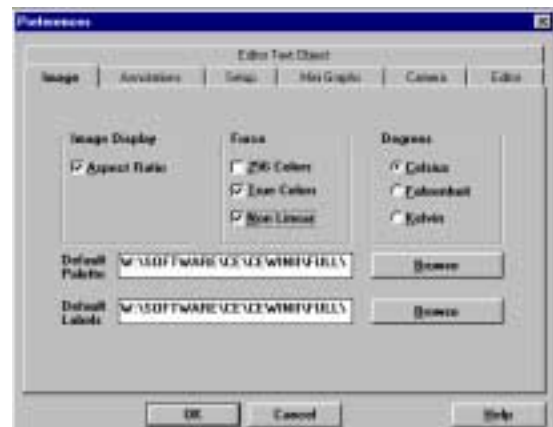
Be careful of some of the settings. Placing a black foreground on a black background will make data invisible and make the user think that there is a software malfunction.

The Image section

Applies to what..

To images as they are acquired.

1. **Image Display.** CLICK on the white box Aspect Ratio to place a check mark in that box. This means that height to width of ANY IMAGE when loaded or resized in the Image Editor will always be correct. To make this apply SET the preference and then LOAD the Image.
2. **Degrees.** CLICK on Celsius, Fahrenheit or Kelvin to set the Temperature scale used.
3. **Default Palette.** Using browse set the Default Palette to a desired palette - default is Ironbow3.pal.
4. **Default Labels.** Using browse set the Default Labels to a new label or the default Test.Lbl
5. **Force.** There are 3 functions in this section. **256 colors** has little use with today's more powerful VGA cards and should be left unchecked. Leave True Colors checked for the same reason. **NON LINEAR** has some very important effects. It is covered in CHAPTER 23 of this manual.



Use Preferences to Customize the software

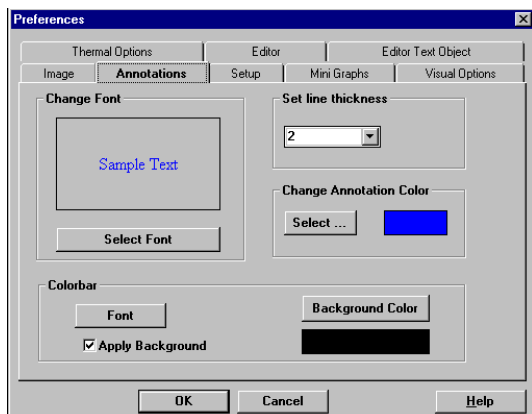
CLICK OK when satisfied with selections in the Image Section. The software user is free of course to set the default palettes and labels to other than those suggested.

The Annotation section

Applies to what...

To text and thickness of lines in any object used in the Image Editor only - for example lines, point temperature, rectangles, etc. Effects next object placed. Colorbar section applies to colorbar only.

1. **Change Font.** CLICK on Select in Change Font to set font, font size, and font attribute for all annotations. Ignore color.
2. **Line Thickness.** CLICK on Set Line thickness to a 2 for optimum printing.
3. **Annotation Color.** CLICK on Select in Change Annotation Color and set to YELLOW as a good start.
4. **Colorbar section** - Set the Font and Font color for color bar temperature annotations. Set the background color of the color bar (place over which the temperature annotations are placed). CLICK Apply Background to enable a background (colored rectangle placed in the background the size of the color bar and text).



CLICK OK when satisfied with selections in the Image Section

Setup Section

Applies to what...

To Image Editor and the Report Editor.

1. Make selection to display Tool Bar, and Status Bar.
2. Make selection to display Ribbon (second tool bar for Report Maker).
3. Make a selection for Fast Isotherm Update.
4. **Fast Report Mode.** Check this box to make system operate in Fast Report Mode. NOTE there is no menu function that turns this ON. This is the ONLY place where it can be turned on. See the Chapter in this Manual on Fast Report Mode.

CLICK on OK when satisfied with settings.

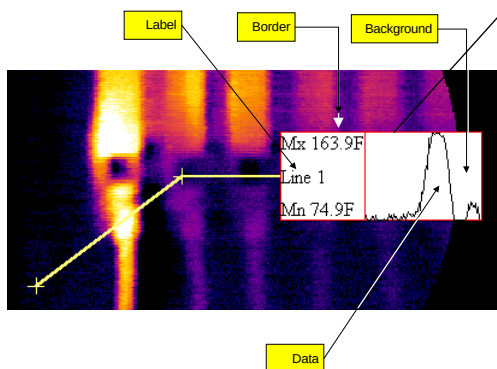
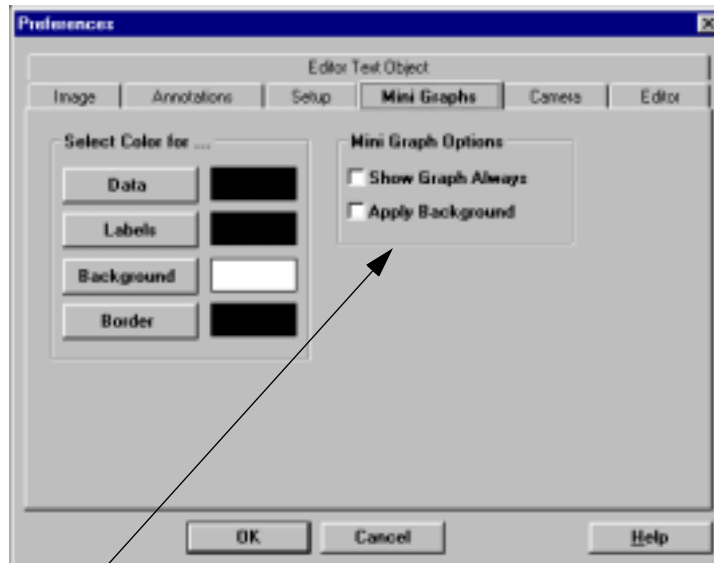


MiniGraph Section

Applies to what..

To Image Editor and the Mini Graphs only. The software is able to display a SMALL (mini) graph instead of a Min, Avg, and Max temperature readings for Line, Circle, Rectangle and Shape.

1. Select colors to apply to Label, Border, Background and Data.
2. Mini Graph Options. Check Show Graph Always to display a mini graph. Check Apply Background to place a filled rectangle back of the Mini Graph.



Label has 3 items Mx 163.9F, Line 1, Mn 74.9F

Background is the White.

Data is the graph of the line data.

Border is the line around the entire annotation.

CLICK on OK when satisfied.

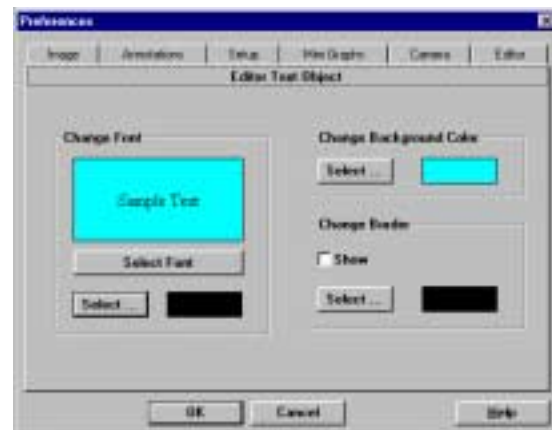
Editor Text Section

Applies to what...

Use Preferences to Customize the software

The Text Objects ONLY, and the Report Editor during template making and printing of reports if Reporter White or Black is on.

1. Select a font - set default font This font can be temporarily adjusted with a Menu Item or a speed menu.
2. Select a font color.
3. Change a Background Color. This is the color applied to the background of text objects. This will NOT show if the Preview Mode is on.
4. Change Border. **Select show** to always display a border around a text object. Individual text object can be changed to no border with a speed menu. A color for the border can be selected by **CLICKING** on Select. This color ALWAYS shows as a dashed line when the text object is selected for text entry during template making.

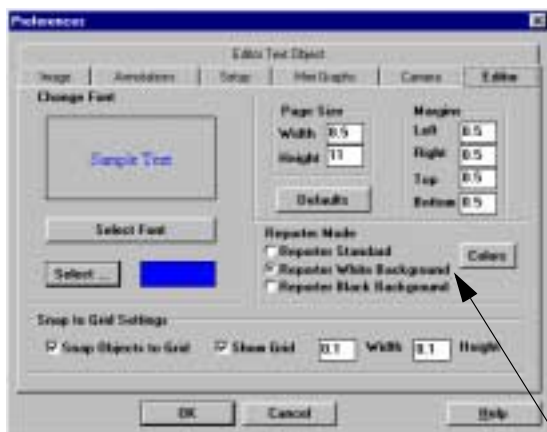


CLICK on the **Colors** in the Reporter Mode Group to display the dialog box shown to the right. From this control the foreground (text color) and background (fill in box) can be set to the users wishes. The defaults are best used initially until good reason exists to change.

CLICK on OK when satisfied, then CLICK on OK again to exit preferences.

Editor Section

Applies to what...



The Report Editor ONLY, and TEXT ONLY. Text is available at the Mouse Cursor anytime the Report Editor is accessed either when Creating a Template or Making a Report.

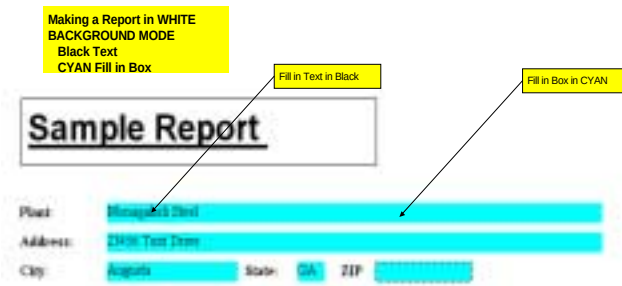
1. Change Font. Select Font and Font Color (foreground) to apply to a text object in a report.
2. Select . . . Change the Font Color.
3. Page Size. Select a page size. Any size desired up to the limits of the printer can be selected. Normally it is set to standard letter size.
4. Margins. Set the margins for the Report. Any text placed on the report will be within these page settings. Text objects can be placed outside these margins.

5. Reporter Mode. This sets up the software to use 1 of 3 modes.

Reporter Modes

Reporter Standard.

This is the former mode used by the Report Editor. . It is suggested that the software user does not use this mode. It is retained ONLY for compatability with previous uses of the software. This mode requires use of the KEY tool and Protect document if text and other objects are to be set so that they can't be moved.



Reporter White Background.

In the illustration to the right -- **Plant:** is text object and has been KEYED by use of the KEY tool. This is text that cannot be written into during Report Making with this template and is protected automatically when making a report.

The **fill in text box to the right of --- Plant: is not KEYED** and can be written into during Report Making. It is protected so that it can't be moved to a new location during Report Making.

To speed Reporting the background of ANY text objects NOT KEYED with the KEY TOOL is colored in CYAN, so the reporter knows that these are the items that need to be filled in. ANY TEXT PLACED in this TEXT OBJECT during TEMPLATE MAKING can be used as a guide and either left alone or changed during report making. The background of the Report is white.

This is the default mode of the software.

Reporter Black Background.

This mode makes the background of the report black, the UNKEYED Text Objects WHITE with a RED BACKGROUND.

In all other respects it is identical with Reporter White Background.

Altering Reporter Modes Colors

Use the dialog box to right, accessed by CLICKING on COLORS if you wish to change settings in Reporter Mode.

If things become muddled need to be restored to original settings for Reporter Black Background or White Background CLICK on Default COLORS to Restore. Foreground refers to TEXT COLOR, and BACKGROUND to the **COLOR to the back of text.**

The background color of the entire Report can't be changed.

Use Preview Mode to work with and view these two settings during template making.



Snap to Grid Settings (template making ONLY)

Use Preferences to Customize the software

Check (turn on) Snap to Grid if it is desired to have ALL objects snap to a grid during template making. These grids show as a black dots arranged in a rectangular pattern.

Snap to grid also effects the placements of text. A best placement of text with respect to the grid is used, so that text will be placed horizontally with respect to the text object boundary, but **ALLIGNED VERTICALLY** with the grid so that it appears always to be vertically justified to the center of a text object box. See the illustration to the right.



Check Show Grid if it is desired to display the grid during template making. This does not disable Snap to Grid.

Set the grid to any settings desired. Default is .1 grid which accommodates most text sizes.

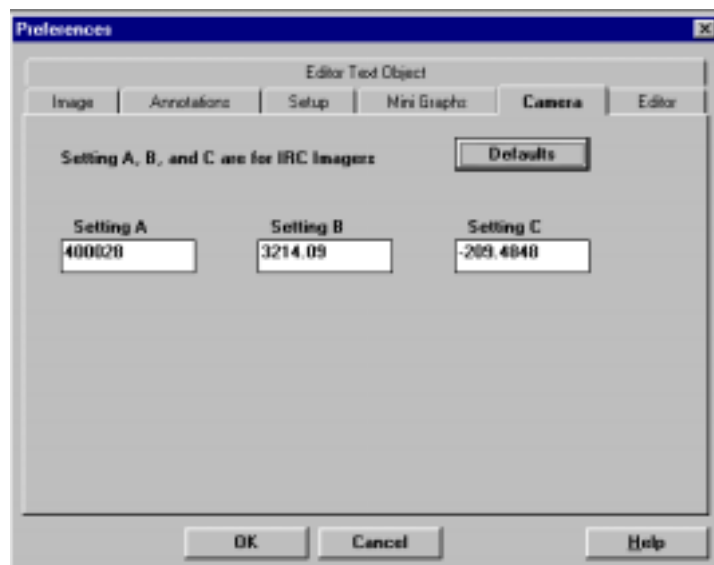
Camera

Applies to the IRC cameras ONLY.

These values create a **ROUGH APPROXIMATION** of the values the camera normally supplies with its generated thermal images. The values displayed on this page allow a **ROUGH** temperature calibration - and are used **ONLY** when the file does not have them.

Contact the camera manufacturer for further information.

The Default **BUTTON** restores ABC values to those shown.



Introduction

This chapter may make reference to functions that you do not have in ThemoRx Lite because they are optional items, which can be purchased separately.

How the software starts up

Refer to Chapter 4 which has all the needed information on software initialization. We also suggest that you become familiar with setting up and initializing the software - all covered in that Chapter. This is a very important part of using the software because some settings could cause functions to not work properly. For example if text is set to black on a black background.

The start-up menu



This menu appears when the software loads. The software always goes to this Image Editor menu FIRST, when the software boots. From there you can **access any function in the software**.

Loading an image file into the software changes the above MENU BAR to that shown below. This MENU BAR contains ALL the functions in the Image Editor.



The Getting Started Help . . .

This special help is designed to place in one help all the major functions/features of the software. This is could be an important learning tool or a quick reference for the software user.

How to use . . .

Move the mouse cursor over any of the buttons or graphics and the cursor will turn into a HAND. CLICK the right mouse button when this happens to display the topic.

CLICK on File and then load and image, or CLICK on Camera and access the Frame Grabber with acquire. Loading a file from the disk or from the frame grabber will cause the main menu to pop up so that it can be used. These start-up menus are abbreviated from the ones displayed when an image is loaded. These full menus are explained in this chapter.

The software Image Editor

Getting started

CLICK on File, then CLICK on Load Image. Then Double CLICK on sample1.bmp. This file will load with all the temperature information and a few annotations. Use this image to get acquainted with the software. If you need help access the Help Menu.

Speed menus

You will find speed menus to be helpful. These are short menus containing menus relating to the work under the mouse cursor or objects selected - in general related. They pop up anywhere the mouse cursor is located with a RIGHT MOUSE BUTTON click. Load the sample.bmp image and then Right CLICK the mouse anywhere on the screen to see this. You should see the same speed menu as that shown to the right. Notice how it groups functions relating to a Image Editor Screen.

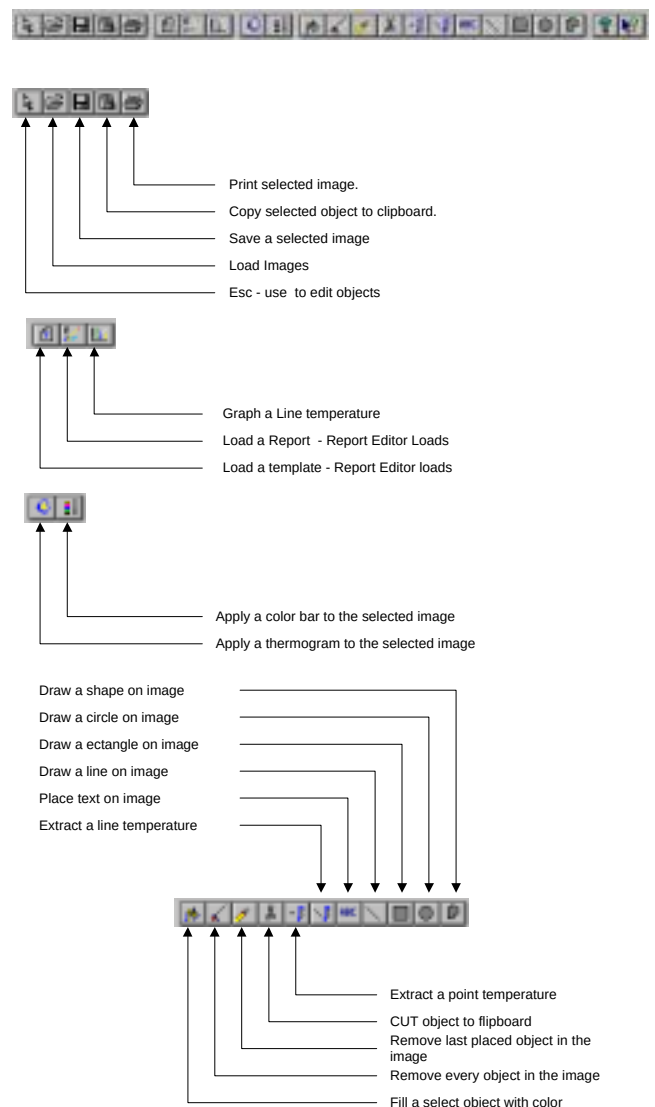


If you CLICK on any parts of the temperature extraction so that it is selected (squares appear on the end and a double circle in the middle) and then Right CLICK the Mouse the menu to the left will appear with items related to a temperature extraction.

Tool Bar

The Tool Bar provides single CLICK access to the functions of the software.

There are TOOL TIPS associated with each TOOL, which explain tool functions. To display place the mouse cursor on the Toolbar Icons without CLICKING the Mouse Buttons.



The software Image Editor

Image Editor Menus

File Menu

Load Image

Load any BMP, or PCX file.

Calibration information is saved and reloaded with BMP files.

Load Graph

Load a graph into the image editor that was saved previously. Do not confuse this with import a graph which places a graph into the report maker.

Load Report

Load a previously saved report into the Report Maker. This function will start the report maker, and if an image is present in the Image Editor will load that into the report and establish a link with any temperature data extracted.

Load Template

Load a previously saved template into the Report Maker. This function will start the report maker, and if an image is present in the Image Editor will load that into the report and establish a link with any temperature data extracted.

Close Image

Save an image if not previously saved and clear the image in the image editor.

Save Image

Save the image in the Image Editor to a previously chosen file name.

Save Image As

The first time an image is saved this menu will always be used in order to assign a unique name to an image that has been loaded into the image editor.

Preferences

A Dialog Box with many user selectable parameters for customizing the software to individual preferences.

Print

Print a report, template, or an image.

Print Preview

View as the printer will print.

Print Settings

Set up the size of the image so that the printer will not run out of memory. Also adjust the size of the image to individual preferences.

File List

The software adds to this list, from top to bottom assorted things that were loaded into the software. Use as a record or a quick load.

Exit

Stop running the software and leave for something else

File	
Load Image	Ctrl+O
Load Graph	
Load Report	
Load Template	
Close Image	
Save Image	Ctrl+S
Save Image As...	
Preferences	
Print...	Ctrl+P
Print Preview	
Print Settings	
1 IMAGES\SAMPLE1.BMP	
2 IMAGES\SAMPLE3.BMP	
Exit	

The software Image Editor

Edit

Redraw Screen

Remove bits of erased work, left In the process of editing an image.

Copy

Copy ANYTHING that is selected to the Windows Clipboard.

Paste

Place anything that is in the CLIP Board to a SELECTED image.

Remove

Remove a selected object. Remove is unavailable (grayed) when no objects are selected.

Remove Last

Remove the last object placed on the screen. Successive uses of Remove Last will remove the next to last object place and so on.

Remove All

Remove EVERYTHING from the screen. Exercise caution because this will remove work you may not want removed, because there is no UNDO in this software.

Edit

Activates the **Edit function**. The status bar will indicate this. This means an object can then be selected.

Mode

All the temperature extractions feature a LEADER drawn to any position on the image from the extraction, an annotation indicating the temperature and scale in Kelvin, Celsius, or Fahrenheit, and Label. The entire extraction, or object, is editable, and moveable. Shape, circle, rectangle, and line feature a mini-graph or min, max, average temperature statistics. Refer to the On-line Help for more details.

All the geometric annotation functions are fully editable, fillable with color, and moveable. Some of the edit functions also apply to text.

Point Temp

Extract a point temperature from an image.

Line Temp

Extract temperatures at one pixel intervals along any straight line drawn on an image. These temperatures can be graphed with the Graph Module and then the data exported through Clipboard by the Graph Module Data function.

Rectangle Temp

Extract min, max, and average temperature in a rectangle drawn on the screen.

Circle Temp

Extract min, max, and average temperature in a circle drawn on the screen.

Shape Temp

Extract min, max, and average temperature in a segmented shape drawn on the screen. There is no limit on the number of segments.

Text

Line Text

Place text on the screen in a single line. There is no word-wrap. Some editor functions of the keyboard such as Home, End, Backspace, del, insert, and space function.

Edit	
Redraw Screen	Ctrl+W
Cut	Ctrl+X
Copy	Ctrl+C
Paste	Ctrl+V
Remove	Del
Remove Last	
Remove All	
Edit	Esc

Mode
Point Temp
Line Temp
Rectangle Temp
Circle Temp
Shape Temp
Text
Line
Rectangle
Arrow
Circle
Shape
Emissivity Adjust
Temperature Adjust

Frame Text

By placing the rail cursor on the screen and drawing the mouse as the Left Button is held down a rectangle is drawn on the screen. Within this rectangle text can be typed. The same keyboard functions as in single line text function apply. Word-wrap also functions.

Line

Draw a line annotation on the image.

Rectangle

Draw a rectangle annotation of any size or shape on the image.

Arrow

Draw a line annotation with a arrow head on the image.

Circle

Draw a Circle annotation on the image.

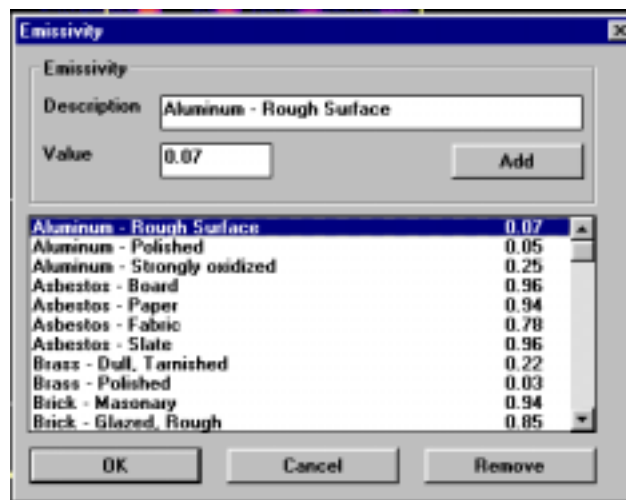
Shape

Draw a segmented shape on the image.

Emissivity Adjust

Click on this function to adjust an area for emissivity correction.

CLICK on Emissivity Adjust and the mouse cursor changes into a +. CLICK the Mouse again Hold the Mouse Button down and drag a rectangle to cover the area to be adjusted. Its size can be edited later. CLICK the Mouse again to access the Dialog Box above. From a user buildable table of Emissivity select an emissivity and¹ apply that to the rectangular just drawn. The rectangular area shows as a dotted line, with the emissivity correction across the top.



The emissivity rectangle adjust is moveable and resizable.

Temperature Adjust

CLICK on this function to adjust an area for temperature.

CLICK on Temperature Adjust and the mouse curser changes in a +. CLICK the Mouse again and drag a rectangle to cover the area to be adjusted. Its size can be adjusted later. CLICK the Mouse again

1.

The software Image Editor

Draw a rectangular area on the screen and apply a temperature adjustment to that area. The rectangular area shows as a dotted line and is editable and moveable.

Image

Load Palette

Load a Palette from the Palette Directory and apply that palette to the image currently loaded. The software as shipped has a number of palettes which the user should initially find very useful.

Adjust Palette

CLICK on this function to access the Palette Adjust dialog box. Refer to the on-line help for more detailed information.

Apply Palette to all Images

This function applies the same palette to ALL the images loaded into the software even if they are not selected.

Calibrate

See chapter 18 for more information.

Temperature Range Selection

See chapter 18 for more information.

Average Filter

Apply an average filter to the entire image.

Mark as Visual

Places the designation Visual Images on a selected visual images. This enables the software to recognize it as a visual image and establish a LINK.

Mark as Thermal

Places the designation Visual Images on a selected visual images. This enables the software to recognize it as a visual image and establish a LINK.

See Chapter 7 on the subject of LINKING. Images so marked will have that information in the title bar of the image.

Color Bar

Place a Color Bar on the Image. The Color defaults to a location on the Left side of the image. It can be, if selected located anyplace on the image. Text associated with the color bar will be moved to the left or right, depending on the color bar position.

The Color Bar, is treated as an object, and is fully editable, and locatable anyplace on the image.

There is a set of settings in preferences that also relate to the color bar.

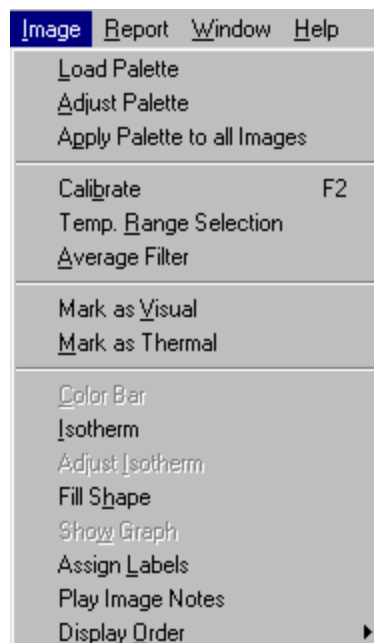
Only ONE color bar can be placed on an image.

Isotherm

Apply an Isotherm to the selected image.

Isotherms use the Color Bar on which the Isotherm is represented by a rectangle. This rectangle can be resized, or moved to adjust the Isotherm.

There is no limit on the colors, or numbers of Isotherms. CLICK the Right Mouse button to access a Speed Menu on which a Dialog Box which provides a incremental adjustment of the selected Isotherms to the temperature resolution of the camera.



Adjust Isotherm

CLICK to access a Dialog Box which provides a incremental adjustment of the selected Isotherms to the temperature resolution of the camera. It is the same dialog box as that accessed in the Speed Menu.

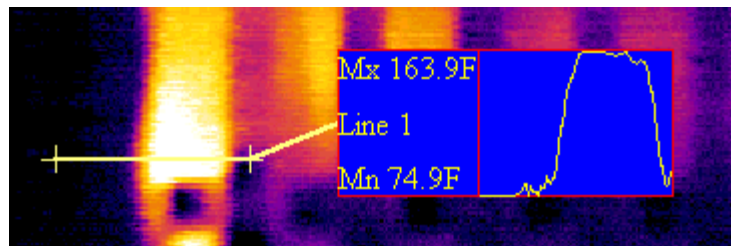
Fill Shape

Any selected object, including circle, rectangle, and shape temperature extractions, can be filled with a SOLID COLOR selected from the Color Selection Dialog Box.

Show Graph

Display a mini-graph, if Circle, Shape, Rectangle, or Line. A CHECK MARK indicates that this selection has been made. Preference Mini Graph Tab can be set to always display a graph. Also select and CLICK the Right Mouse Button to set this one time only with a Speed Menu.

A Mini Graph is shown to left that is used show data for a line temperature extraction. .

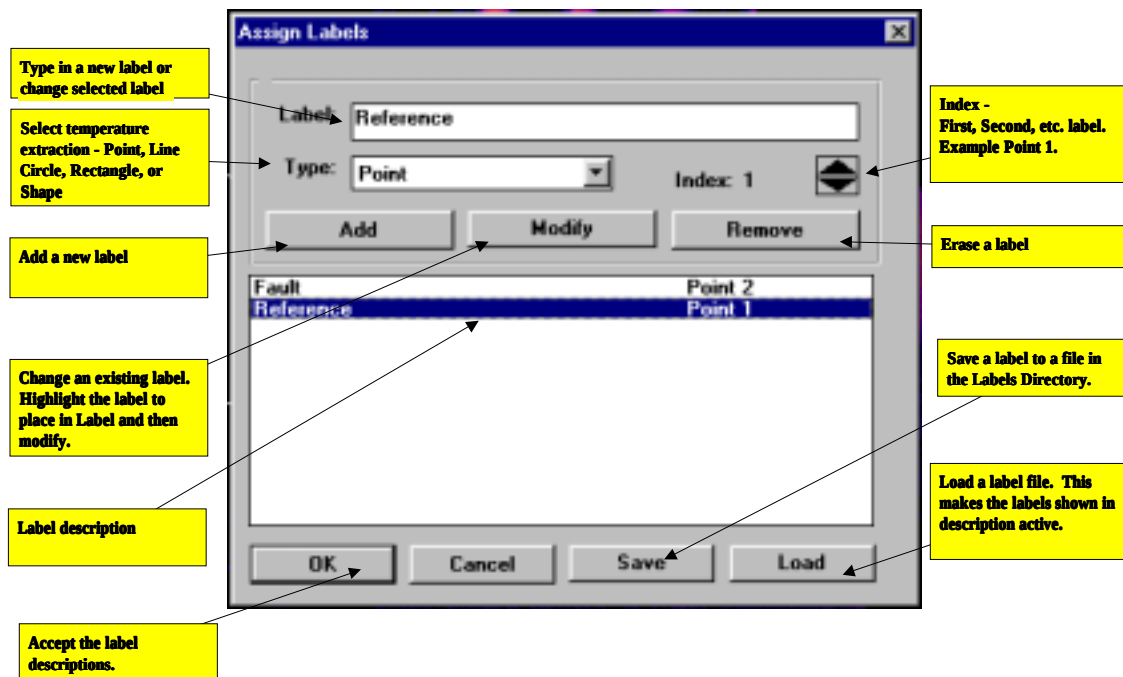


Assign Labels

Every temperature extractions, points, lines, etc., default to Label 1, Label 2, if no label is assigned or loaded. Normally a label is created according to the user's desires with the Assign Label function and saved. Then the software loads this each time it boots. It does not matter what the file is called - just leave off the extension and the file save will place the proper extension on the file for loading.

The purpose of this is to assign meaningful labels to a temperature extraction such as Fault and Reference.

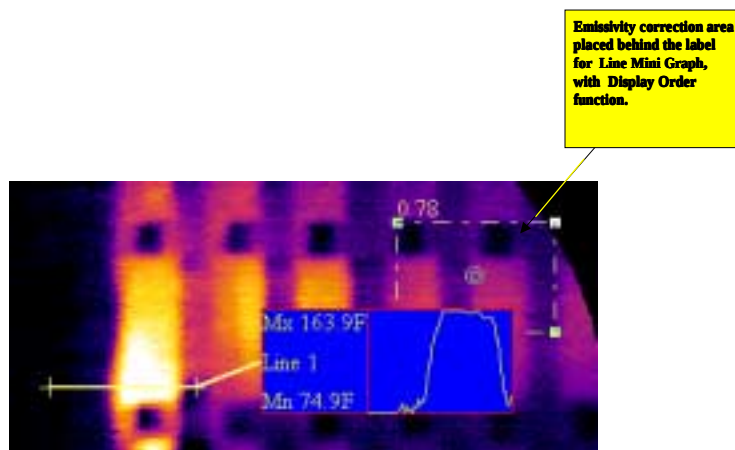
The software Image Editor



Display Order

Objects have a relationship to each other on a plane and layers. This function places an object above any other object so that these objects have a vertical relationship.

Uses - An object placed on top of another will obscure the one on the bottom. This function will move the object so that it is visible.



Play Notes

If ImageMaster is being used Play Notes has a function. Also the user will need to have sound equipment installed on the reporting computer.

How to . . .

Using Image Gallery acquire thermal or visual images with audio notes. CLICK on Play Notes and audio notes will play.

NOTE: RIGHT CLICK on the Image and Speed Menu will also have this item.

Camera

Acquire Visual

Click on Acquire Visual to select visual images from the frame grabber. Visual images have a palette and TOP and BOTTOM range associated. If Fast Report also sets other functions. See Chapter 19 - Fast Report Mode.

Acquire Thermal

Click on Acquire Thermal to select Thermal images from the frame grabber. Thermal images have a palette and TOP and BOTTOM range associated. If Fast Report also sets other functions. See Chapter 19 - Fast Report Mode.

Report

Create Template

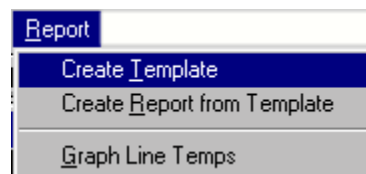
Go to the Report Editor and turn on all the functions needed to create a template. A second way of accomplish this is to go to File and then Load a Template for modification.

Create Report from Template

Go to the Report Editor and open the file dialog to enable the loading templates for use in a Report. This is the way to use templates in Reports. .

Graph Line Temps

After one or more Line Temperature Extractions have been taken - CLICK on this Function to make Line Graphs of the temperatures along the lines. A graph is not limited to one line.



DOUBLE CLICK on any parts of the LINE GRAPH MODULE to access detailed help. There is also ONLINE HELP available for this MODULE.

Window

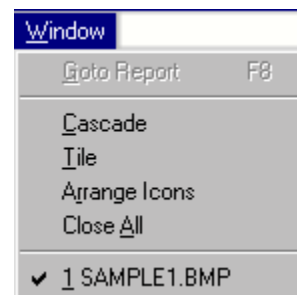
These are standard Windows functions and are useful to the software.

Cascade

Arrange Windows in File Folder like arrangement with the Title Bars readable.

Tile

Arrange Windows as tile so that is visible. Useful for displaying all the images loaded into the software at one time. It is possible by selecting more than one file with a shift and page down or arrow down to select as many files as desired and display all of them on the Image Editor screen for work.



Aspect Ratio is maintained with the use of this function. The number of images depends upon what the size and aspect ratio allows.

Arrange Icons

A minimized Window is displayed as an Icon at the bottom of the software screen. These Icons can be arranged with this function.

Close All

Exit any Windows that are active. If they have been modified but not saved a Dialog Box will pop up and request this action.

File List

List all the Windows that have been loaded into the software.

The software Image Editor

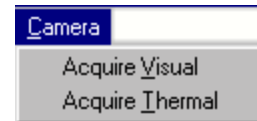
Camera

Acquire Visual

Click on Acquire Visual to select visual images from the frame grabber. Visual images have a palette and TOP and BOTTOM range associated. If Fast Report also sets other functions. See Chapter 19 - Fast Report Mode.

Acquire Thermal

Click on Acquire Thermal to select Thermal images from the frame grabber. Thermal images have a palette and TOP and BOTTOM range associated. If Fast Report also sets other functions. See Chapter 19 - Fast Report Mode.



Help

Image Editor

Detailed Help on the Image Editor

Reference

Technical details on the software.

Graphs

Help for the Graph Module.

Reports

Detailed Help on the Report Maker.

Software Support

Where to find the phone numbers for software support.

Using Help

Very detailed and useful information on using Help.

Windows Tutorial

In Windows 3.1, 3.11 this function will directly access a tutorial on Windows done by Microsoft.

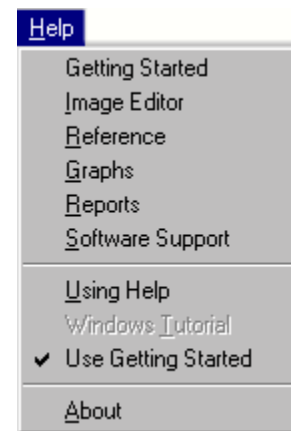
In Windows 95 this is grayed because that tutorial may or may not be installed. You will need to install that help and then access it through Windows 95. Or rename it to the same name as Windows 3.1, 3.11 and you can access it directly from this software.

About

Here the important Serial Number and Version Number of the Software is found. Several of the software components are DLLs and have a Version Number found here.

NOTE: if the Copy Protection is not installed this ABOUT BOX will say Demonstration Copy in the place of the serial number.

See Chapter 4 for more information.



CHAPTER 6 *The Report/Template Editor Module*

Introduction

Fast Report Mode

This software is capable of being set to FAST REPORT MODE. When set the user will need to prepare a template with a visual and thermal image place holder. When images are loaded into the software are marked as Thermal or Visual. If ImageMaster is used Images are designated as this when stored. When loaded they automatically LINK the Image and temperature data to a previously loaded template being used as a report.

Reports are made with templates

If preferences Edit Text page is set up for anything other than Standard Mode, this software **requires the use of a template made with the same module that makes reports.**

In this case all the functions used to make a template are available ONLY when the user has CLICKED on Create a Template in the Report Menu. When the function Create a Report from a Template is CLICK and that TEMPLATE is LOADED into the software ONLY those functions that pertain to making a REPORT are available, and all the other functions are grayed.

Reports made without a template

Software users can elect to make reports up as they go along, and not use a template. To do this set Preferences Edit Text page for Standard Mode. This is not a recommended method since this will preclude many new and time saving features of the software.

The report making process

Reports can be done quickly by :

1. Using a template.
2. The use of fill in modes.
3. Batch printing.

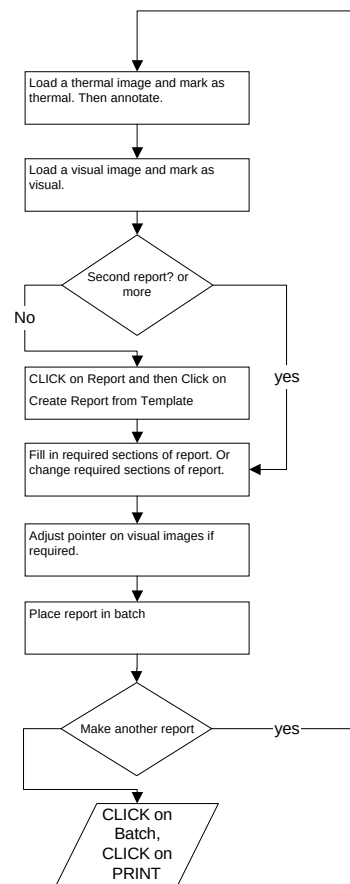
The keyboard

Space, Enter, Backspace, Delete, Home, End, and Arrow Keys are active along with all the numeric and alphabetic keys. The Tab Key is preset at 5 spaces and not adjustable. Text automatically wraps around at the Right Margin.

Preferences

There are a number of preference settings which determine how the Report Editor operates. These need to be studied in detail. This will result in better reports, and reports as the user wishes them.

Refer to Chapter 4,19,20, and 21 for information on how preferences are set

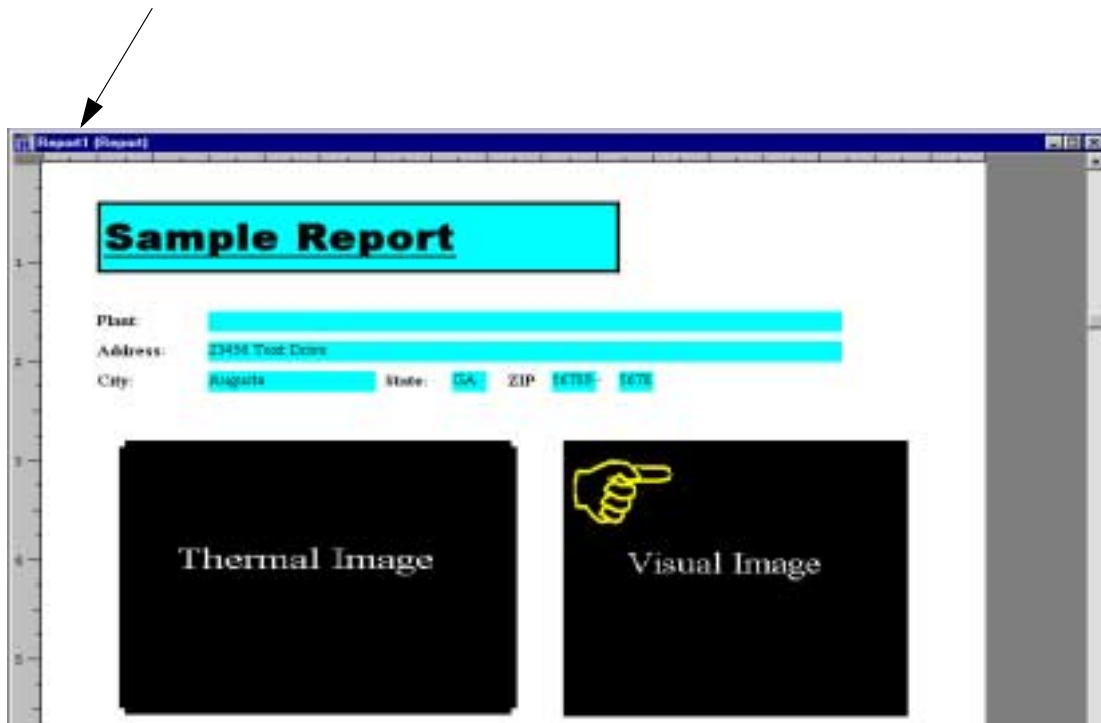


The Report/Template Editor Module

How to make Reports

In the Image Editor **CLICK** on Report and select make a report from a template.

When the user enters the Report Editor a template is loaded and the menu bar gives it a Report designation. **Sample1.tem** was used to illustrate this as shown below. The black squares are placeholders for thermal and visual images. When an images in the image editor is marked as visual or thermal these are filled in with that image.



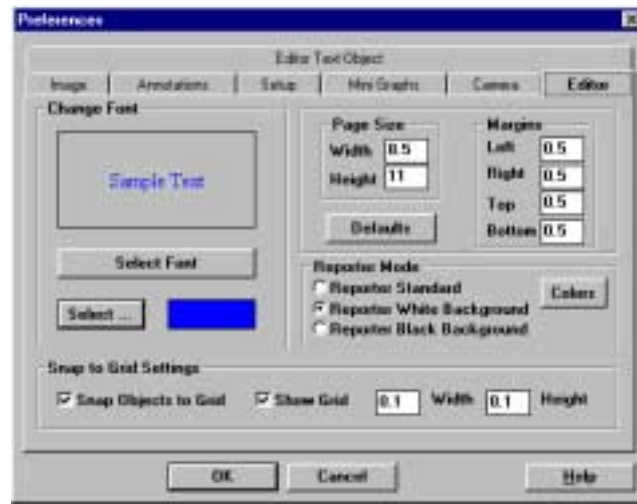
What needs to be done to make a Report

All that is necessary to make a report once a template is loaded is to fill in the blocks colored in CYAN. The software is designed to use fill in text blocks designated by a color.

The Preference Editor Tab is shown to the left has the CYAN with WHITE backgrounds fill in mode turned on.

Images are updated, and fields are filled in automatically with the LINKING function of the software.

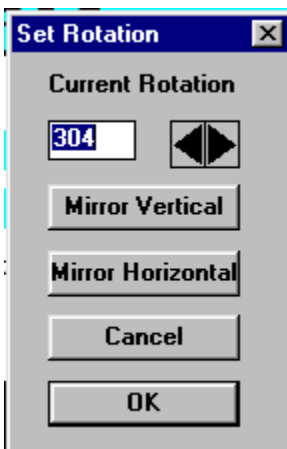
PLEASE NOTE - the software does not print reports as they display in Reporter White Background - they are printed as made in a template. AGAIN - the CYAN text entry blocks will not print with a color of CYAN. Turn off Preview mode in View to see how a report will look when printed, while building a templates user is free to select any other color desired for this Reporting mode. CLICK on Report and then CLICK on Make Report. The Report Module then becomes active.



It is not necessary to reload the template if more reports are to be made. All that is necessary is to load another set of visual and thermal images and then go directly the report by selecting the previously done report and then modifying it. Usually only a small part of the report needs to be redone.

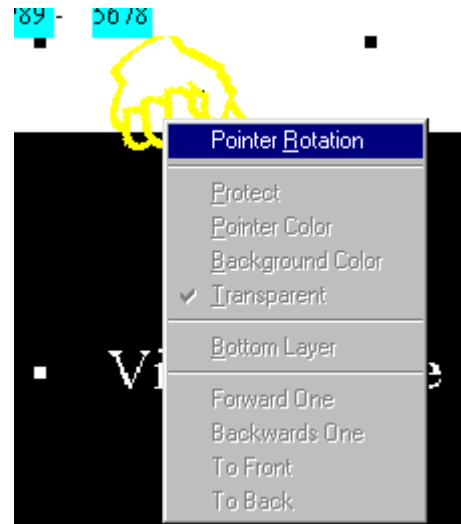
Review Chapter 20 Fast Report mode to see how reports are made in fast report mode.

Pointers -



If the template has a pointer, as sample1 and sample2 do, the user has the option of moving the pointer to the place desired and changing the angle of point. To do this select the pointer by CLICKING on the Pointer and then Right CLICKING the Mouse Button. And then CLICKING on Pointer Rotation. This supplies the dialog box shown below.

Enter a rotation degree in + or - numbers. For example to point upward at 45 degrees enter -45.



Mirror Horizontal and Mirror Vertical provide a quick way of moving to the opposite quadrant. For example if the pointer is pointer vertically at 45 degrees a vertical mirror moves the pointer to the II quadrant at 45 degrees.

Uses - a point is used to call attention to something that needs repair or attention in a report. A visual image directs repairs to the correct object in a report.

The Report/Template Editor Module

Batch Printing Reports

To speed the making of reports the software user can collect all the reports in one group and then print them at one time, during work hours or during off hours.

Features of batch mode:

1. The Batch menu is available in the Frame Grabber Module, Report Editor, and Image Editor.
2. Batch function enters date and time, and allows more than 26 characters of any combination of letters and numbers for a description of the report.
3. Batch function allows Additions, modification of entries, clearing of all entries, or removal of only one item.
4. Batch function allows printing of reports without number subject only to storage space AT ONE TIME.
5. Batch will save its data to floppy or hard disk.
6. Additions can be made to Batch with the F9 key.

How to use Batch print

CLICK on Batch to access the Batch Menu.

ADD

While in the Report Editor, and when a Report is Finished CLICK on Batch to drop down the menu shown to the left. Then CLICK on Add to enter a report for batch printing. The dialog box shown to the left will pop-up. This control keep track of the numbers of the report. You can CLICK on OK to accept the default entry of Report 1 . . . or type in a description, such as the one shown below. The entry will scroll to the LEFT permitting a longer entry. The next report # will be in sequence to the last number entered.



If you are using Windows 95 you can, HIGHLIGHT that description and CLICK on the RIGHT MOUSE BUTTON to save the entry to the CLIPBOARD using the dialog box shown to the LEFT. The next Addition can use that information for simple pasting and modification. This saves typing long entry, or errors when description are the same or slightly different. The results of an ADD are shown to the right. This is visible with modify.

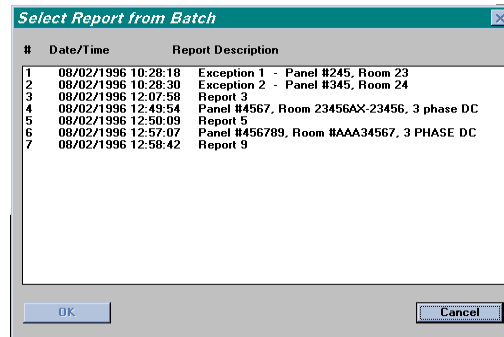
Entering the first report causes all the functions, Remove, Clear, Print, and Modify to become available.

REMOVE

CLICK on Remove and the box to the right will be displayed.
Any item that is highlighted is removed from the batch list.
CLICK on OK to confirm selection, and remove.

CLEAR

Drastic action. Clears out everything so that no LIST exists.
Exercise caution about using this function since a lot of work could be lost. Normally the user would use this only to begin a new batch of reports.



PRINT

Print EVERYTHING that is in a Batch List.

MODIFY

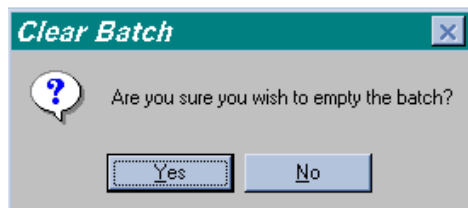
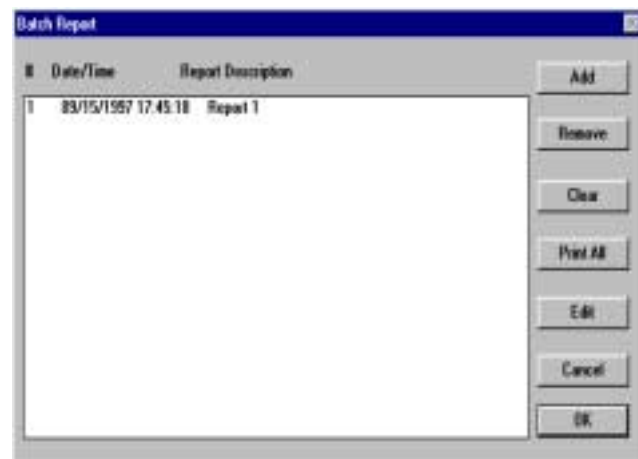
CLICK on MODIFY to display the Dialog Box shown to the right.

The functions Remove, Clear, Print All are the same as the functions described except for the new function edit.

Edit

CLICK on Edit and the Dialog Box shown below is displayed. Use that to modify Report description.

Alternative select a report item - Report 1 shown in the DOUBLE CLICK on the desired item in the Batch Report to EDIT, which will also display the dialog box below.



CHAPTER 7 *The software Graph Module*

What the Graph Module does

The Graph Module plots temperatures extracted by the Line Temperature function on a LINE GRAPH. If configured it is also a BAR GRAPH

Only Line Temps can be plotted with the Graph Module.

1. Line Temp extracts 1 temperature reading per pixel along a straight line. There is no limit to the length of a LINE.
2. There is no limit on the number of Line Temps that can be graphed on one graph.
3. Line Temperature extractions need to be done prior to using the Graph Module since the graph will not update in this configuration.
4. There is no limit on the number of graphs, the size, and where they can be placed in a report.

How to use the graph module

First -

Use as many LineTemps as desired to extract temperature, with the lines any length.

Then -

CLICK on Report, and CLICK on Graph Line Temps. Each Line Temp temperature data extracted will be plotted, with each temperature extraction plotted on a separate line.

The user can print this graphs with the built in print functions.

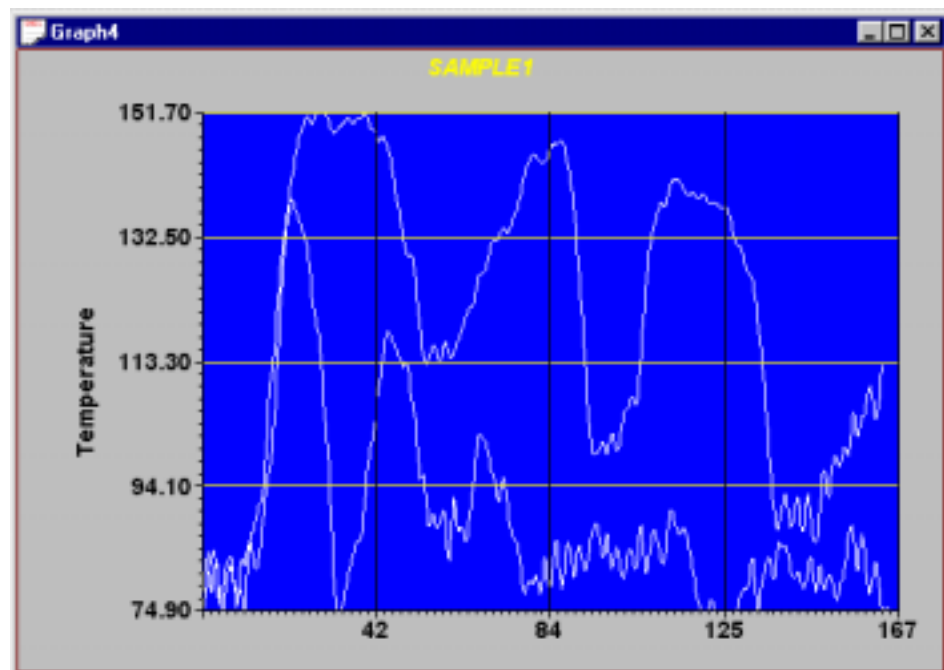
How to place Graphs in a Report

There are three ways of doing this:

1. Select a graph and copy it to the CLIP-BOARD. Then using CLIP-BOARD again copy the graph to Report Maker.
2. Save the graph with the File function and then Import

Graph using the File function again. That imported graph is then placed on the report in 2" x 2" size at the cursor location, where it can be resized and moved as desired.

3. Setup a template as described at the end of this chapter.



The software Graph Module

Data

When a graph is displayed CLICK on the Line. A dialog box appears with a listing of all the temperatures taken along the CLICKED LINE. The number of decimal digits can be controlled.

This data can be sent to Windows clipboard and then pasted into any Windows applications, particularly spreadsheets where more advanced graphing can be done on it.

Configuring the graphs

Here is how

1. DOUBLE CLICK DIRECTLY on any item such as Line, Scale, Heading, and dialog boxes will appear.
2. This provides a popup Dialog Box for custom configuration of the item.

Such things as marking lines with special marks, coloring each line, what kind of line is used, scale factors, grids or no grids, bar chart mode, line fill, etc. are possible.

It is best to spend some time experimenting with the graph module to see how configuration works.

Graphs and other Windows programs

Select the Graph Window, and then CLICK on Edit. The CLICK on Copy. The graph is now in the CLIPBOARD. Any windows program that uses the CLIPBOARD will paste that graph into its Window. The contents of CLIPBOARD can then be pasted into other programs, such as Microsoft Word.

Online Help

More advanced detailed help on graphs can be obtained from Online Help while the graph module is running, by CLICKING on many of the parts of the graph such as the LINE, GRIDS, X and Y DATA, etc. When the drop down menu is available CLICK on the associated HELP button.

Linking a Graph to a Report

CLICK on Report and then CLICK on Create a Template. This opens up the Template Editor. Then CLICK on Fields and CLICK on Active Graph. A black square marked with 'graph' will be placed on the Template. Select this, so that the rectangles on the corners become visible. Drag to a new position and resize the graph as in the center of that square. Select that square and drag to the position desired in the report and resize. Save this template.

Use this template to make a report by CLICKING on Report while in the Image Editor, and CLICKING on Make Report from Template. Load the template made above as a report. Follow the standard procedure of using the graph described in the first part of this chapter. While in the graph module CLICK on Make Graph Active. This will link the graph to the report. You will see that the black rectangle will be filled in with that graph.

Sample2.tem, included with this software has a linked graph to illustrate this.



CHAPTER 8 *Image Editor Speed Menus*

How to access the speed Menus

The speed menus shown, below, appear when the RIGHT MOUSE button is CLICKED. What Speed Menu appears depends EXACTLY on what is in process at the time. For example - select a temperature extraction and CLICK the RIGHT MOUSE button - the Temperature Object Selected menu appears. These are placed where the Mouse Arrow cursor is located - so be sure to provide plenty of room.

What is a speed menu

A speed menu relates to a process being performed. If a Temperature Extraction is being done then a Speed Menu upon a Right Mouse Button CLICK anywhere on the screen with functions needed for temperature extraction pops up.

A speed Menu provides FAST access to a group of functions that relate to a process taking place by a CLICK of the Mouse Button.

Navigating around Speed Menus

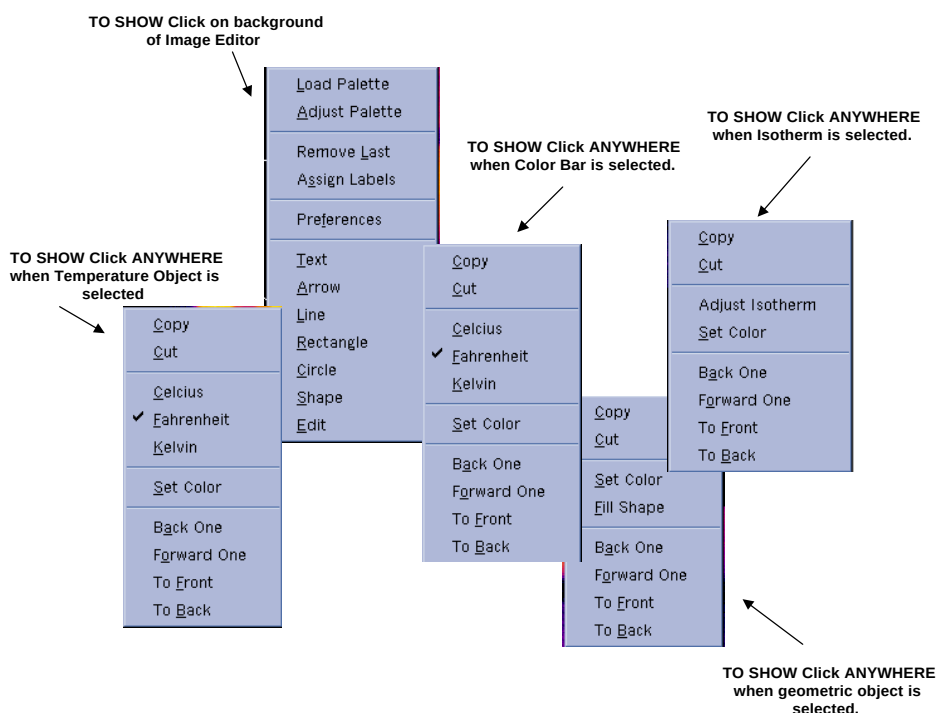
The Up/Down Arrow keys will also navigate around the menus and the

Enter Key will select a Highlighted item.

The Menus are put away, disappear, at once, when the function desired is selected.

Every Speed Menu Function is also found on the Tool Bar and/or the Menu Bar.

There is a explanation of all Speed Menu functions in Chapter 6 - the Image Editor.



How to access the speed Menus

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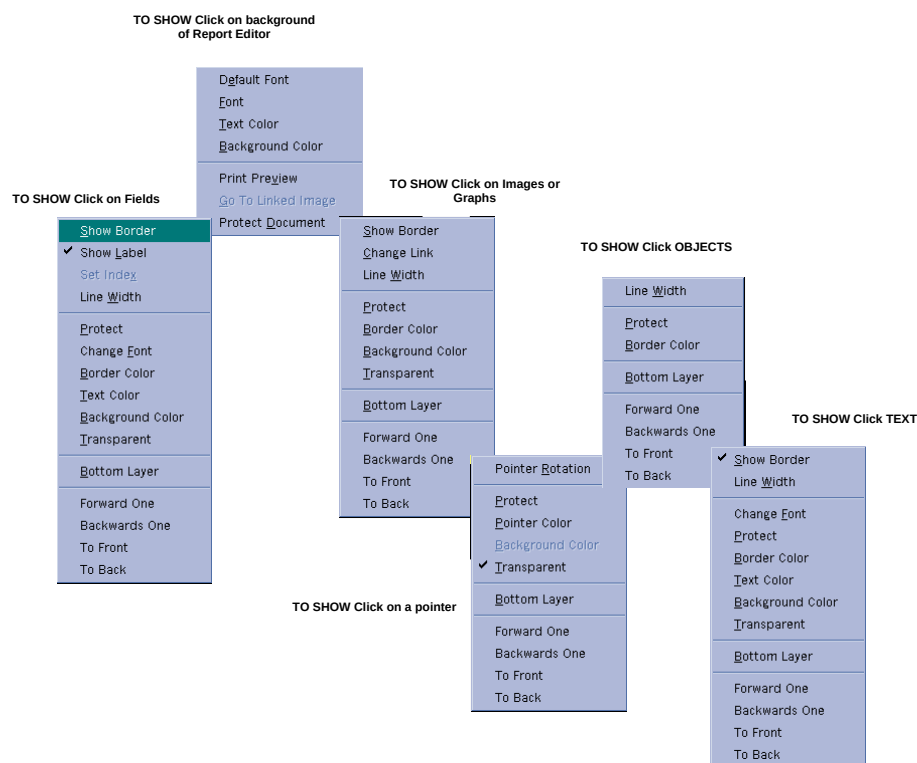
A speed Menu provides FAST access to a group of functions that relate to a process taking place by a CLICK of the Mouse Button.

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The Up/Down Arrow keys will also navigate around the menus and the Enter Key will select a Highlighted item.

Every Speed Menu Function is also found on the Tool Bar and/or the Menu Bar.

There is a explanation of all Speed Menu functions in Chapter 7 - the Report Maker.



Editing Objects

The software has extensive editing ability which allows OBJECTs to be easily and quickly altered.

There is nothing placed on the image that can't be moved, resized, recolored, and redone. There are some restriction on editing TEXT.

This means the software user can place all the objects desired on the image without regard to how the objects look or where they are located.

This chapter will also explain that objects can be moved side to side in one plane but also moved from one layer to another - which is a vertical dimension.

Before proceeding you will need to understand clearly the meaning of the term OBJECT. An object is any thing placed on the screen in addition to the image the image that is placed on the screen. An object is anything that is placed on the image, such as - color bars, isotherms, annotations, points, lines, etc.

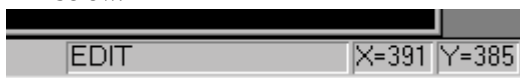
The software is designed to load as many images, each in its own separate screen, as computer resources allow.

How to select objects for editing.

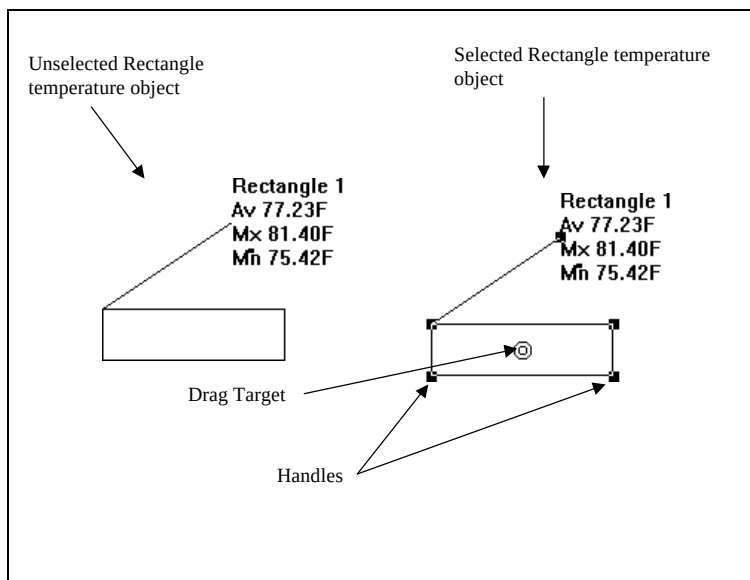
Before any editing IS DONE the object must be selected.

PLEASE UNDERSTAND THAT THE METHOD DISCUSSED HERE IS USED IN THE IMAGE EDITOR. THE METHOD IN THE REPORT EDITOR IS DIFFERENT.

1. **First change the mouse cursor to an Arrow.** Do this by pressing the Esc key or the Tool Bar arrow key - the status bar will say EDIT as shown below.



2. **Then Place the Arrow Mouse Cursor anywhere along the border of the object and CLICK the Left Mouse Button.** That border is ONLY SEVERAL PIXELS WIDE and may require some practice to select it the very first time. Look at the next drawing under 'Selected Rectangle temperature object, and note the black rectangle boxes and the double circle in the center. These appear ONLY when the OBJECT is selected. The color of the object does not change when selection is done.



Software editing

Editing terminology

THE BLACK RECTANGLES ARE CALLED HANDLES. THE DOUBLE CIRCLE IS A DRAG TARGET

How to resize or reshape objects during the editing process

1. Place the mouse arrow **on any one of the handles** and **CLICK** the Left Mouse Button and Release the Mouse Button.
2. Move the mouse - the object change or resizes when the mouse is moved.
3. When satisfied with the shape and size change **CLICK** the Left Mouse Button again and the object resumes its original appearance and will be locked into the new size and position until selected and changed again.

How place objects in new positions

1. Place the mouse arrow at the center of the Double Circle or Drag Target and **CLICK** the Left Mouse Button and release.
2. Move the mouse - the object moves in the direction the mouse is moved.
3. When satisfied with the new location **CLICK** the Left Mouse Button ANYWHERE and the object resumes its original appearance and will be locked into the new size and position until selected and changed again.

How to move objects to different layers

Objects in the software can be moved to a different layer. Objects are ALWAYS either in front of or behind text. Objects are ALWAYS in front of or behind other objects.

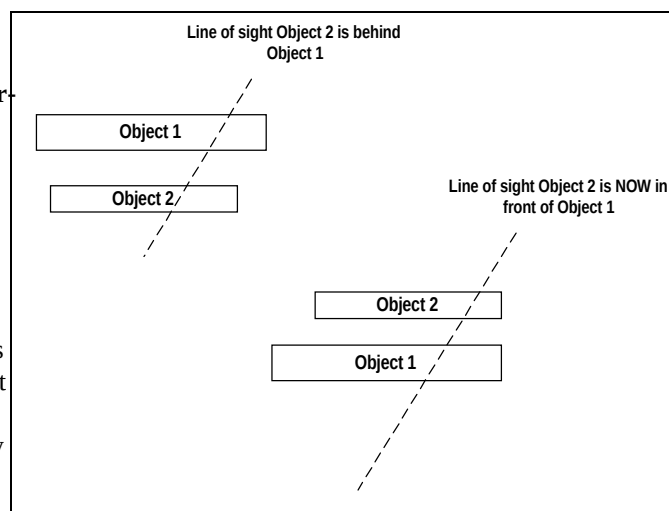
If you place two filled rectangles on the image. And move one partially on top of the other - one will be partially covered. Use the ability of the software to move the objects so that you can see them

Forward One has been applied to Object 2.

This function is useful in placing multiple isotherms on an image.

Here are the steps to move objects to a different layer.

1. Select the object first.
2. Use the Tool Bar or the Menu Image and the function Display Order to access the menu shown to the right. Move an object where you want it. Just **CLICK** on one of the menu items shown to the right to accomplish what you want. See the On-line Help for a more complete discussion of this very important topic.



How to edit both Line and FrameText.

Refer to either On-line help for a detailed explanation of Text or see the Chapter in this Manual on the Image Editor Chapter 6 for the meaning of Line Text and Frame Text

Back One
Forward One
To Front
To Back

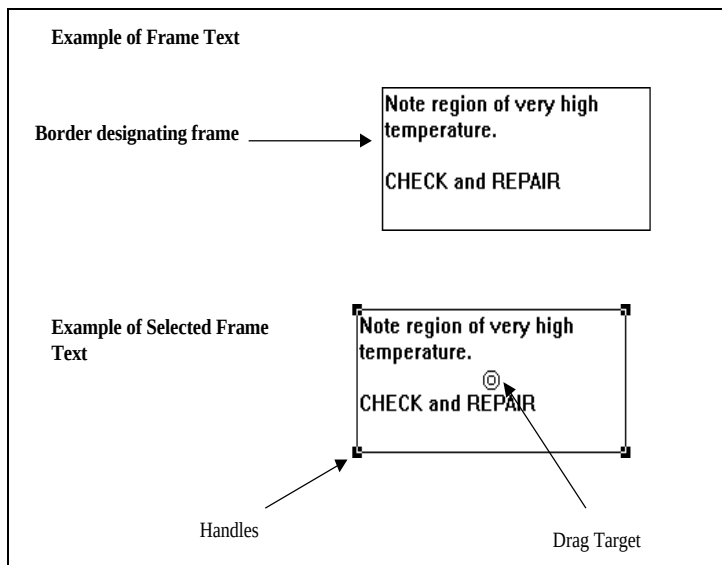
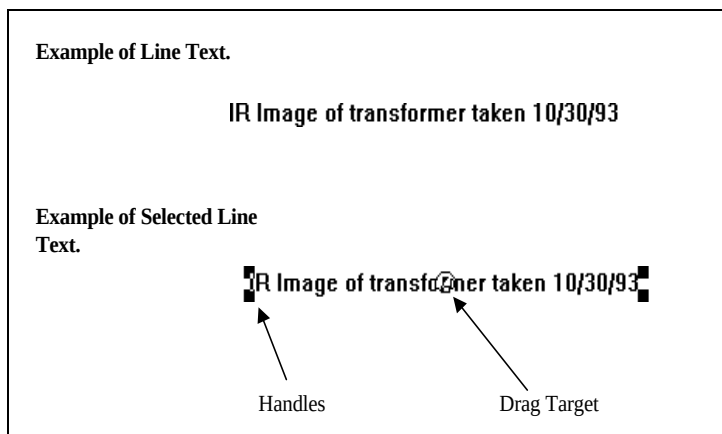
1. **Placing line text.** CLICK on Text from the tool bar, or one of the Menus and the Mouse Cursor turns into a Rail Cursor. Place this cursor at the beginning of the single line of text to be typed on the image.
2. **Placing Frame Text.** CLICK on Text from the tool bar, or one of the Menus and the Mouse The mouse Cursor turns into a rail cursor. Place this cursor at the upper right hand corner of where you wish to place a block of text. CLICK the left mouse button, HOLD it DOWN, and move the mouse downward and to the right. A box is drawn outline the block of text. Release the mouse button and the box is finished. The mouse rail cursor is place in the upper left hand corner waiting for text to be typed in.

Specific editing that can be done with line Text.

1. Select text for deletion, relocation to another place.
2. Change the color of the text.
3. Use backspace to delete text.

Specific editing that can be done with Frame Text

1. Select text for deletion, relocation to another place.
2. Change the color of the text.
3. Use backspace to delete text.



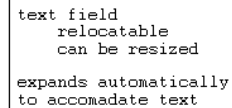
Selecting and editing objects during Template Making.

An Example is given for a text object. This applies to every object placed in the Report Editor, with the exception of a Pointer which is capable of being relocated but not resized.

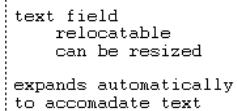
If the text object is difficult to select CLICK the Mouse anywhere off the text object and then CLICK on the Text Object.

1. **Text Entry mode.** Double Click the Left Mouse Button anywhere on the text field. When borders becomes a dotted line it is ready to accept text and should have a vertical line blinking cursor at the text insertion point
2. **Resize the text field.** CLICK on Text object to select. The text entry field will display handles when it has ben selected. Place the mouse cursor on these BLACK SQUARES and move while holding down the mouse button to resize the text object.
3. **Moving the Text object.** CLICK on Text object to select. Then place the mouse cursor anywhere except on the black squares, and move the mouse while holding down the left button to move the text object.

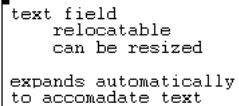
All other objects are edited according to 2 and 3



text field
relocatable
can be resized
expands automatically
to accomadate text



text field
relocatable
can be resized
expands automatically
to accomadate text



text field
relocatable
can be resized
expands automatically
to accomadate text

CHAPTER 2 *Hardware, Operating System, and Networking Requirements*

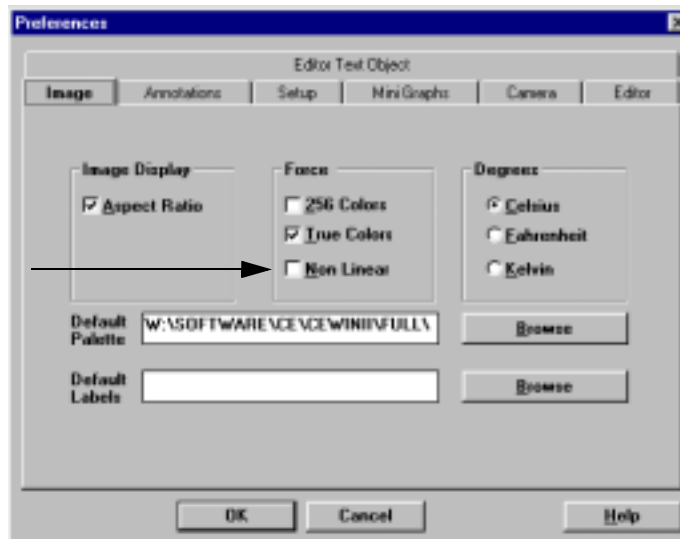
Introduction

This chapter has information on the use for **non linear** preference selection and how it modifies the Temperature Range Selection function, and on the use of Temperature Range Selection function.

Please understand that the intention of this chapter is software illustration ONLY, though the numbers shown make sense they are not intended as directions on use of the camera. That must be the user's responsibility.

Where to find non linear preference

The software defaults (when it is first installed and thereafter unless changed) to linear mode. **This means Preferences Image Tab has a no check mark next to non linear as shown to the right.**



This is VERY IMPORTANT because this function has direct consequences for how Temperature Range Selection operates. This item should be double checked prior to using the software. Set this item to non linear by checking this item by CLICKING with Left Mouse Button.

linear mode

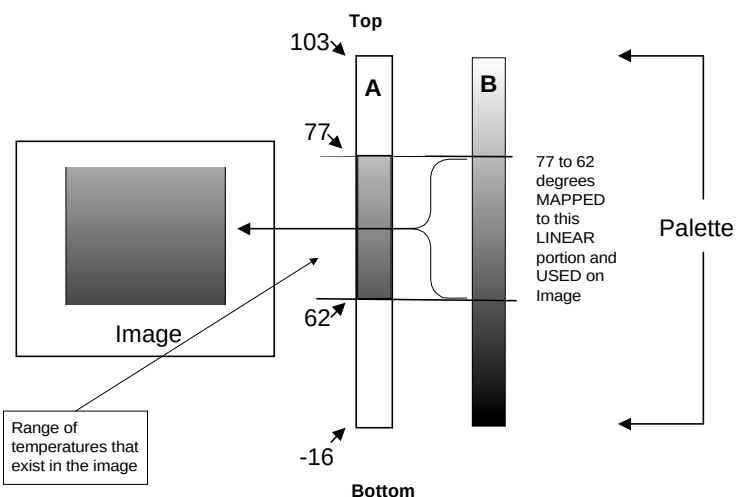
This means non linear does NOT have a check mark next to it.

Linear is understood by studying the following illustration.

In linear mode only a portion of the color palette is applied to the image.

In the drawing A is the same as B, except that the palette entries only are displayed in A.

A color bar is the representation used in A and B as an illustration because a color bar displays the palette and has a temperature scale important in the next section. In your study of this function load some images and use a color bar to follow the illustration.



The ENTIRE PALETTE is never used in the image. A selected range of the palette as set by Temperature Range Selection is used on the image.

Hardware, Operating System, and Networking Requirements

The illustration should not give you the impression that the palette selected is CONTIGUOUS and in fact, depending on the what the Camera saved to an image, may have many non adjacent palette selections. This permits the display of a selected temperature by adjustment of the Temperature Range Selection Control.

Non Linear mode

In this case the preference item discussed above has been check marked.

Non linear is understood by studying the illustration to the right.

In non linear mode the entire palette is applied to a selected range of temperature that exists in the image. It can be all of it or a part of it.

A is the same as B, only the palette entries not used in the image are illustrated.

A color bar is a representation used in A and B as an illustration because a color bar displays the palette and has a temperature scale which is important in the next section. In your study of this function load some images and use a color bar to follow this illustration.

The ENTIRE PALETTE is ALWAYS used. A selected range of the temperatures that exist in the image use the entire palette. This is the difference for linear mode.

The illustration should give you the proper impression that the palette selected is CONTIGUOUS.

Use of Temperature Range Selection

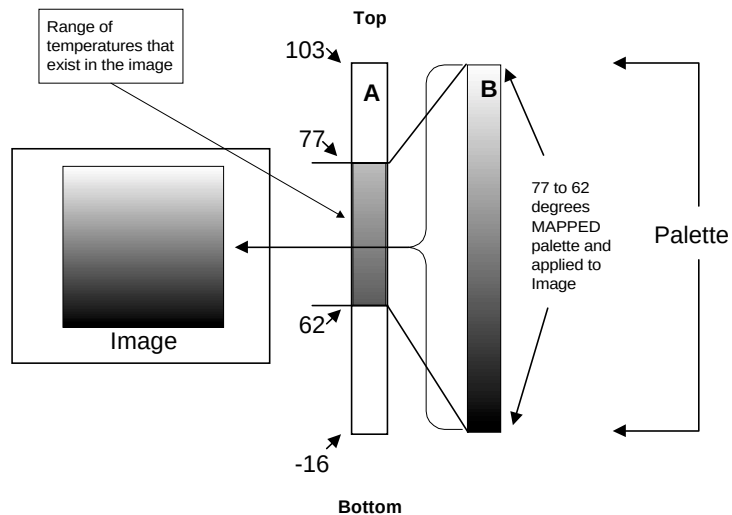
It must be understood that this function ALWAYS works along with non linear preference item and the user must always be aware of, in which mode the software is set.

The images in COLOR on the following page are in GRAY because it facilitates illustrations. Normally the user would use a color palette selection of his own making or from the palettes included.

It is best if the user works through lots of illustrations.

It is also important that the user be aware of the following dialog box found in Edit called Show Details which provides information useful to the proper use of this function. Example - the range of temperatures that exist in the image.

This particular Camera display is for an image different from the one illustrated in the following pages because it shows Upper and Lower temperature.



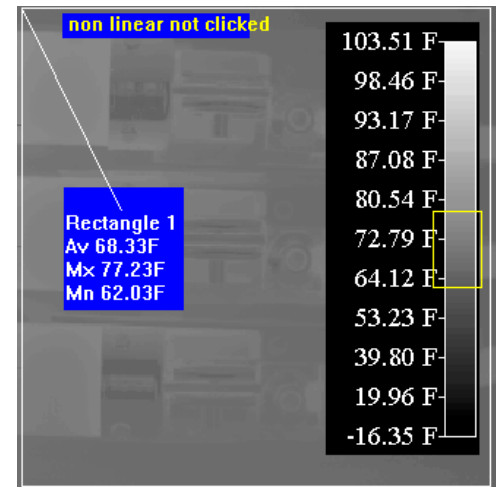
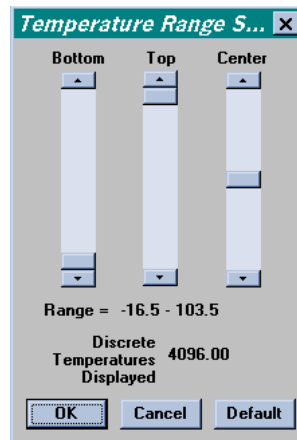
Details				X
Camera Type	Avio 2000	Upper Limit Temp	N/A	
Resolution	256 Temperatures	Lower Limit Temp	N/A	
Display Grad.	N/A	Upper Temp	95.42	
Display Color	N/A	Center Temp	83.26	
Emissivity	0.95	Lower Temp	71.10	
Lens	N/A	Sensitivity	1.52	
Averaging	N/A	Ambient Temp	75.38	
		Temp. Unit	F	
Date	09/13/1992	Table Name	T-XXX	
Time	9:48:06	A-Value	N/A	
		B-Value	N/A	
		C-Value	N/A	
Message	EQUINE HOSPITAL LINDAS LUCKY LAD			
OK				

Case 1 - non Linear Mode is not selected (not check marked)

The temperature range selected is greater than what is in the image and is -16.5 to 103.5 which is the entire range of temperatures available .

This is a Default Mode accomplished by CLICKING on Default. ONLY IRC and IRIS cameras have will default to these settings.

The range of Palette entries illustrated approximately by the yellow rectangle is 62.01 to 77.23. The color displayed on the image illustrates this.



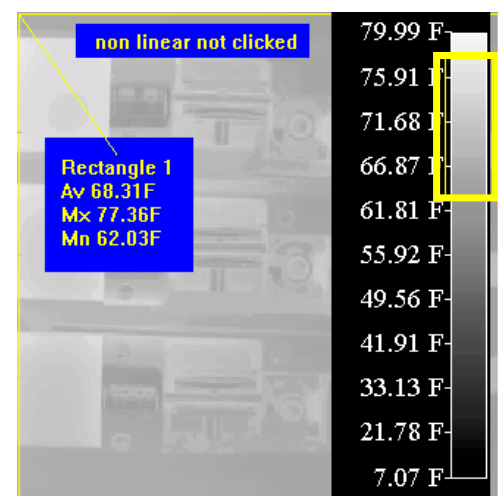
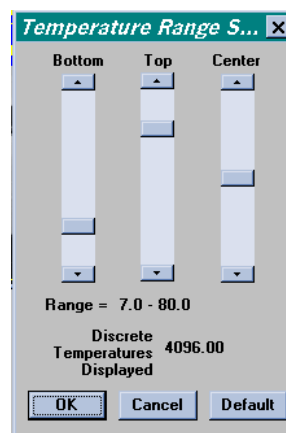
Notice that that the temperature scale on the color bar shows the range of temperature selected. Pay particular attention to the fact that the Palette entries correspond to the range of temperatures that EXIST in the image. This range of temperature is placed there by the camera.

Case 2 - non Linear Mode is not selected (not check marked)

The temperature range selected is is - 7.0 to 80.0 which is a part of the entire range of temperatures available .

This is done by CLICKING on the Bottom Slider and moving it upward AWAY from the bottom of the Palette.

Top is adjusted downward toward top of the Palette by using the Top Slider in the same way. The entire image has moved towards TOP WHITE though the temperature scale on the color bar remains the same.



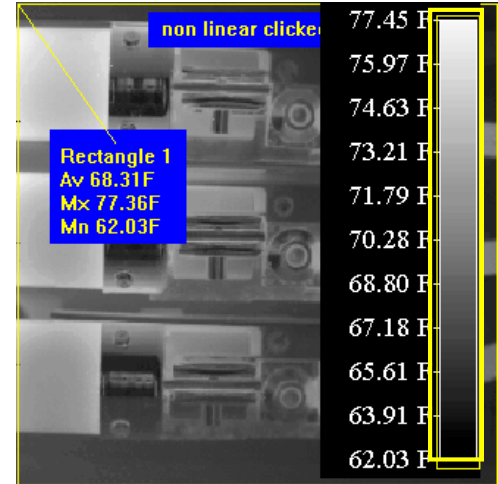
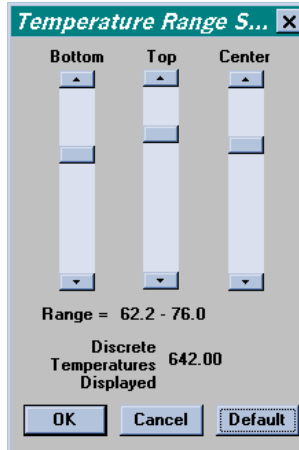
Notice that that the temperature scale on the color bar shows the range of temperature selected. Pay particular attention to the fact that the Palette entries correspond to the range of temperatures that EXIST in the image. This range of temperature is placed there by the camera.

Hardware, Operating System, and Networking Requirements

Case 3 - non Linear Mode is selected (check marked)

In non linear mode Temperature Range Selection is ALWAYS bound by the temperatures that exist in the image. It is not possible to adjust it outside this range.

In this case the range of temperature is 62.2 to 76.0 as shown to the right. There are 642 temperature readings that exist in this image since the selection was adjusted to full. Temperature range was adjusted to this full range.



The color bar temperature range shows what was selected. It also shows the palette entries, all of them in this case, that is displayed.

Notice that in this mode all the Palette entries are MAPPED into this temperature range.

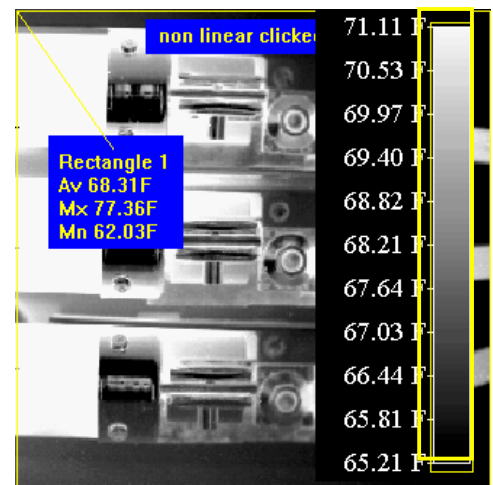
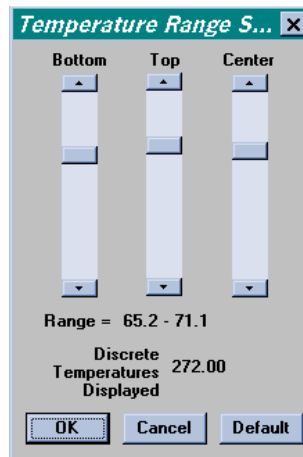
Case 4 - non Linear Mode is selected (check marked)

In non linear mode Temperature Range Selection is ALWAYS bound by the temperatures that exist in the image. It is not possible to adjust it outside this range.

In this case the range of temperature is 65.2 to 71.1. There are 272 temperature readings that exist in this range.

Notice that in this mode all the Palette entries are MAPPED into this temperature range.

The color bar temperature range shows what was selected. It also shows the palette entries, all of them in this case, that is displayed.



Temperature Range Selection

When done with adjustments CLICK on OK to save them. Subsequent images are displayed to a default conditions and the last settings are not saved.

CHAPTER 12 *Using the template making tools*

The purpose of this chapter

Please read the following before studying this chapter.

The purpose of this chapter is to present **ALL the details of the basic components of a template**. This chapter does require careful study - **Getting Started in the Start Help, which pops up when the software boots**. Use the existing sample1.tem and sample images to quickly acquire what is needed to start using the software.

You do not need to build many templates to use the software, since a template is used to make a report.

Also - review the chapter contents section below to understand what is covered in this chapter.

The contents of this chapter

4. Important parts of Preferences setup Page 2
5. Making a title block. Page 3
6. Adding text objects with protection and without. Page 4
7. Using image place holders. Page 5
8. Placing fields in a template, including the calculation control. Page 6
9. Working with Pointers and Placing a company logo in a report. Page 7

A word about the Sample Report

At the end of this chapter there is a sample report. This is taken directly from sample1.tem included with this software. The difference is that rather than just showing the place holders we have linked a visual and thermal image.

And this is displayed with Preview Report on. This creates the fill boxes with a CYAN color. All that is needed to make a report once the template is down is to fill in those text boxes. That is all that needed to create a report - fill in those boxes.

The sample template was created with the six topics outline above.

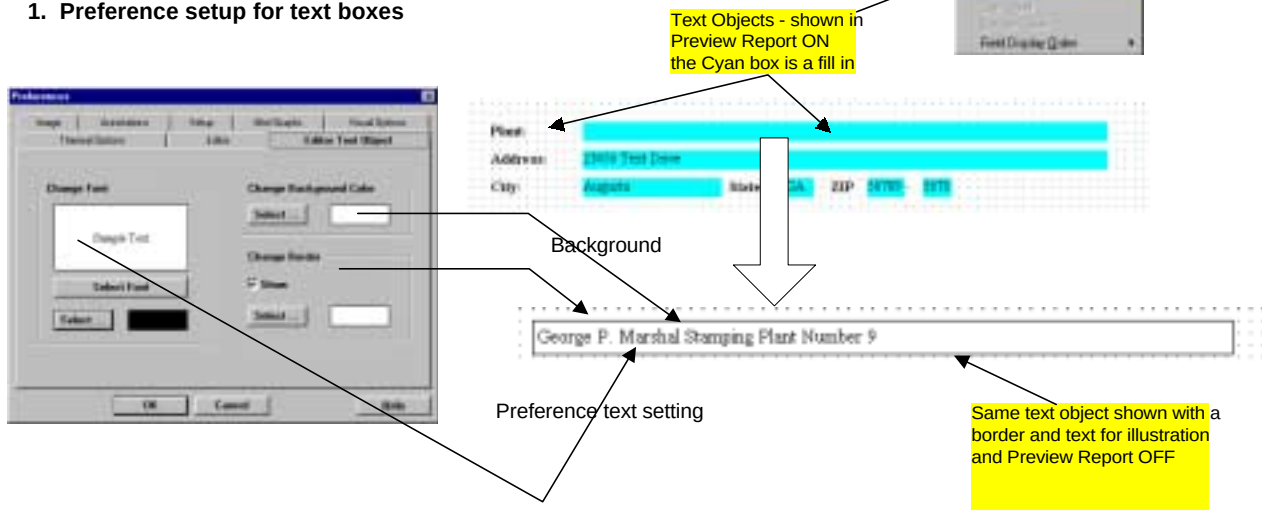
Advanced versions of the software . . .

Not all of the fields shown in the illustrations are available in ThermoRx, and can be purchased as options.

Using the template making tools

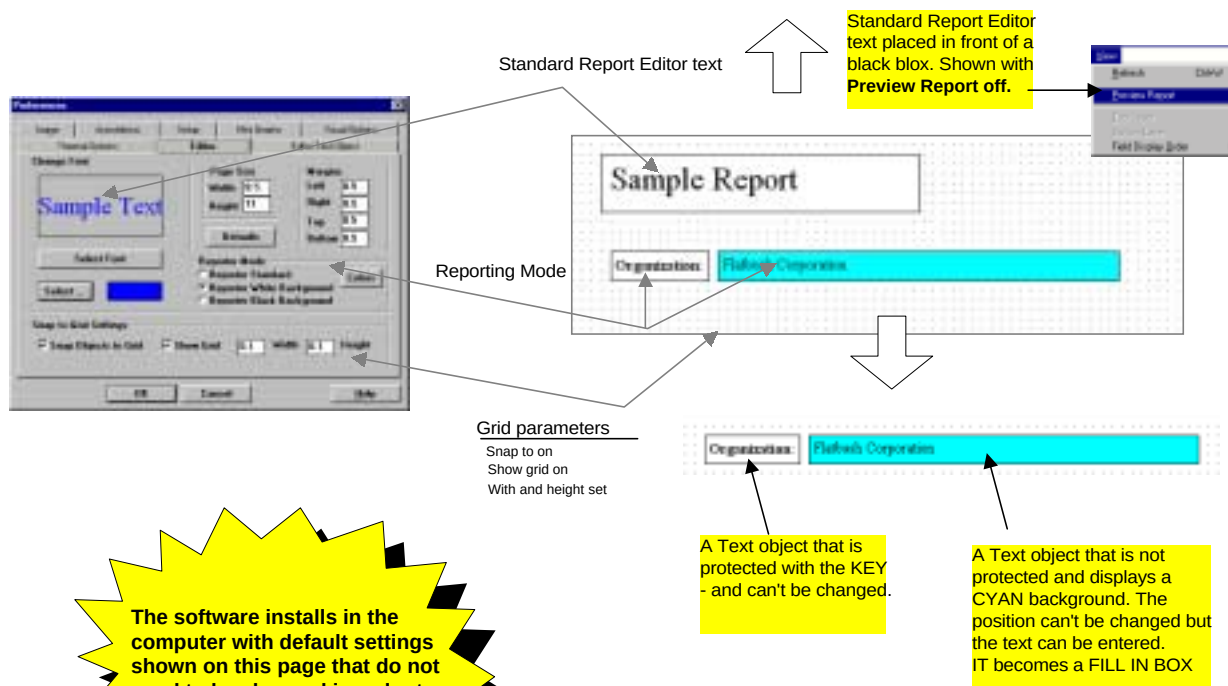
Text Objects - preference settings

1. Preference setup for text boxes



2. Setup Report Editor functions for making Template

Sample Report



1. Making a report TITLE BLOCK

START HERE

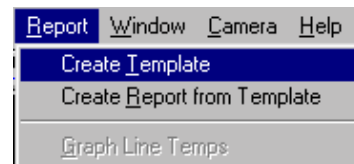
WHILE in the Image Editor
(where the software begins)

Step 1 - CLICK on Report and then
CLICK on Create Template
CLICK on Report and then CLICK on
Create Template



Step 2 - CLICK the mouse on
this tool on the Tool bar

To get this.

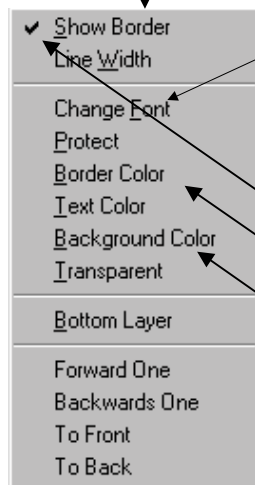


Step 3 - CLICK the mouse on
any of these and drag to desired
size and shape. And then
position on the template, by
dragging and dropping. .

Step 4 - Right CLICK the
mouse any place on this to get
a related speed menu.

Step 5 - CLICK on this menu
item to change font to this.

Then type in this text . . .



Step 6 - Finish the work

- Make sure Show Border is on.
- CLICK on border color to set a border.
- CLICK on Background Color to set a background color.

Step 7 - CLICK on the KEY Icon
to protect the item just finished.

Item must be selected (4 squares
are visible).



Using the template making tools

2. Adding fill in text blocks

Step 1 - CLICK on Text Tool in the tool bar. And get this BLANK text box.

Step 2 - Then type in the words as shown .

Step 3 - CLICK on the Text Box and get this.
Then CLICK on Key.

Step 4 - CLICK on Text Tool in the tool bar. And get this BLANK text box.
Then CLICK on Text Box and get this.
Then resize to the same size to hold organization text. Take care not to exceed a height of more than 2 grids.
Then CLICK on Preview Report. And get this.

Step 5 - Position to the two finished Text Blocks as shown.

Step 6 - CLICK on each of these to SELECT (square blocks) and then press Ctrl + D to replicate each one as many times as needed.
Finish by resize and typing in appropriate text.
Use KEY as required - such as Address, City, etc.

Turn off the preview mode for these illustrations.
Default software settings are used throughout this page.

Notes regarding this page -

1. There are two derivations of the Text Block used on this page. (a.) The block used to display 'Plant, Address, City, etc., which are transparent and fixed and (b.) - those used as blank FILL TEXT, some of which have boiler plate text such as 23456 Text Drive which is simply typed over or erased, during report making.
2. In either case (a.) text blocks when protected will not permit repositioning or changes and (b.) fill in text block will not permit repositioning or resizing but will allow typing text when making a report. This property comes from use of the and 'Protect Document, described later.
3. Once a text block is finished the user can use Ctrl D + D to replicate, or Paint Brush Tool to copy attributes such as text, color, etc.
3. Understanding these makes template making easy and fast.

Sample Report

Plant: []

Address: 23456 Text Drive

City: Augusta State: GA ZIP: 56789 - 5678

Sample Report

Printed: []

Printed: []

Application: []

Preparation: []

Printed: []

3. Using Image Placeholders

Thermal Image

Step 1 - Place a Thermal Image place holder on the report. By CLICKING on Fields and CLICK on Thermal Image to get this thermal image place holder.

Fields

Image

Thermal Image F5

Visual Image F6

Active Graph

Calculation

Point

Line

Rectangle

Circle

Shape

Units

Advanced

Others

File Date

File Time

Current Date

Current Time

Thermal Image

Step 2 - CLICK on this BLACK box to get this to

To resize CLICK on a WHITE corner SQUARE and drag the mouse.

To reposition CLICK anywhere on the black square and drag the mouse.

Visual Image

Step 3 - Place a Visual Image place holder on the report. By CLICKING on Fields and CLICKING on Visual Image to get this thermal image place holder.

Fields

Image

Thermal Image F5

Visual Image F6

Active Graph

Calculation

Point

Line

Rectangle

Circle

Shape

Units

Advanced

Others

File Date

File Time

Current Date

Current Time

Visual Image

Step 4 - Then in the same manner described in Step 2 resize and reposition the place holders.

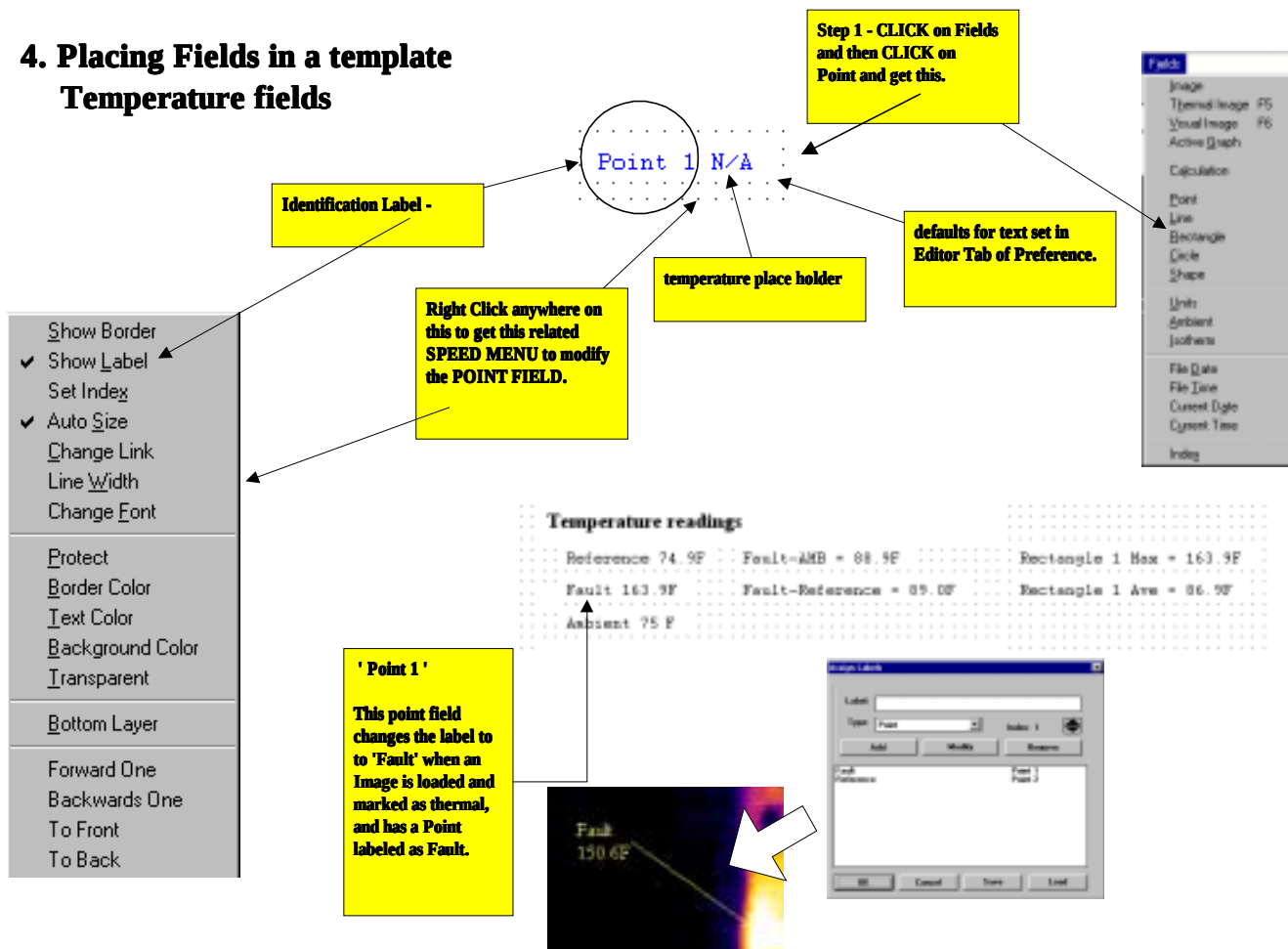
Notes regarding this page -

1. The software builds LINKS into a template by use of Thermal or Visual Image placeholders. This means such images are updated from images marked as thermal or visual in the Image Editor.
2. This means in order to use LINKS the user must use the methods described on this page.
3. There is no limit as to the number of images the user can place except that Fast Report Mode does not allow more than a Thermal and Visual Image.
4. By use of Active Graph in the Fields Menu the user can place a graph placeholder into the template with LINKS.



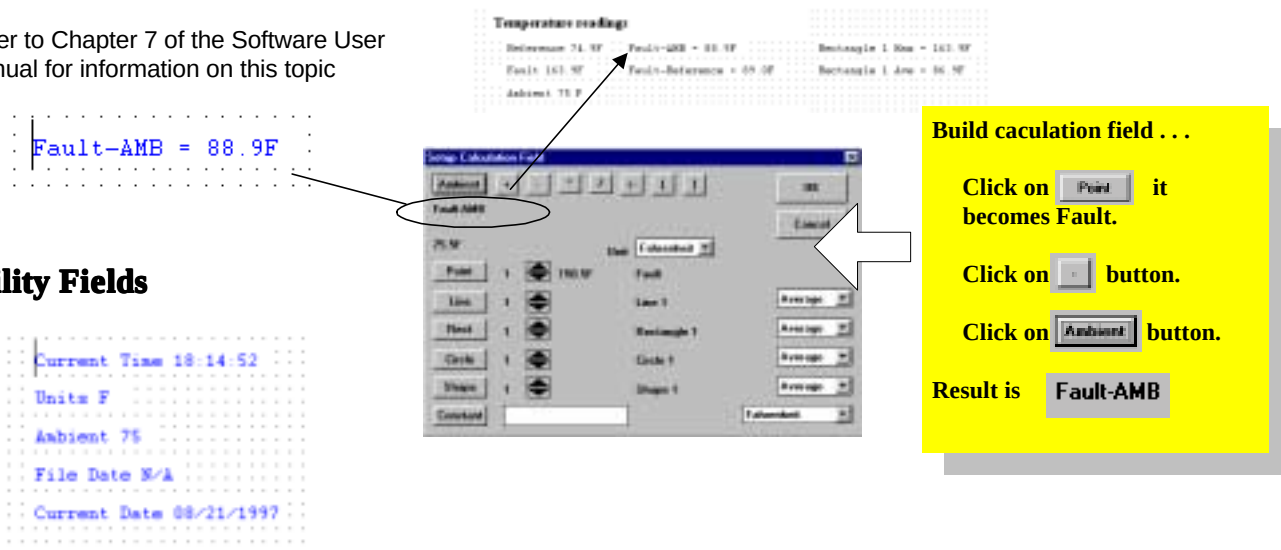
4. Placing Fields in a template

Temperature fields



Calculation Fields

Refer to Chapter 7 of the Software User Manual for information on this topic

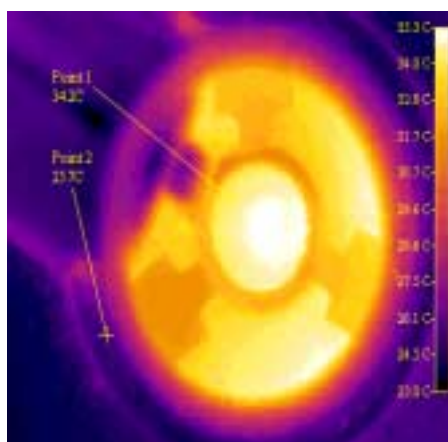


Rapid Scan

*Your full service
thermo scan service*



Plant:
Address:
City: State: ZIP -



Equipment Location

Plant: Plant Location: Equipment:

Temperature Extractions . . .

Point 1 136F	Point 1-AMB = 62F	Rectangle 1 Max = N/A
Point 2 78F	Point 1/Point 2 = 2C	Rectangle 1 Max = N/A
Ambient 73.9F 3547		

Action Recommended . . .

Report done by:

Report approved by:

Report Date Signed



1439 Woodland
Ann Arbor, MI 49428

Phone 616 457 7155

FAX 616 457 5210

Calibrating images with Image Master input

Introduction

To get images with ImageMaster use Image Gallery to download images into a thumbnail directory. Select these images for a report. Refer to the ImageMaster user manual for information on these procedures.

This software requires an 8 bit gray scale image for proper calibration. These images are marked with in the thumbnail directory.

Calibration

Load a thermal image into the Image Editor.

Then CLICK on Image and CLICK on Calibration. The dialog shown to the RIGHT will display. This is the dialog used to calibrate an image.

Step 1 - Fill in the dialog.

TOP TEMP

Enter the number located above the color bar into TOP TEMP. In this example the number is 28.3.

BOTTOM TEMP

Enter the number located below the color bar into Bottom Temp. In this example the number is 24.9.

CURSOR TEMP

Enter the number located below the BOTTOM TEMP in CURSOR TEMP. In this example the number is 25.6.

UNITS

Verify that units are the SAME as shown in the center and to the right of the color bar. In this example it is C.

Step 2 - Calibrate

Click on calibrate. The dialog described above will be put away.

To verify calibration place a color bar on the image or compare mouse cursor readings with those shown in the status bar located on the lower right part of the WINDOW.

