

# **KROY**

**TM650 Owner's Manual  
Thermal Transfer  
Shrink Tube/Label Printer**

Order No. 2401820  
Rev A 11/99



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## General Precautions

For your safety, certain precautions should always be followed when using this product.

1. Read all instructions carefully.
2. Do not pull on the supply or cut while printing. It may damage the supply cartridge.
3. Do not put any objects onto or into the printer.
4. Do not expose the printer to high temperatures or high humidity. Never leave it on the dashboard or in the trunk of your car.
5. Do not use the printer in dusty places and avoid exposure to direct sunlight and rain.
6. Remove the batteries and/or disconnect the AC power supply if you do not intend to use the printer for a long time.
7. Use only the AC power supply specifically designated for this product.
8. Prior to installing cartridge, be sure to wind ribbon adjustment spool counterclockwise two full turns.
9. After inserting a new supply cartridge, advance the supply by pressing the FEED key.
10. Do not immerse the system in water or other liquids, due to the potential danger of electrical shock.
11. Do not attempt internal repair of the system. If service or repair is needed, contact Kroy Technical Service in the USA at support@kroy.com or 1-800-347-5769, or 1-216-426-5600. In europe, contact Kroy (Europe) Limited at +44-118-986-5200.

## **FCC Notice**

This equipment generates and uses radio frequency energy and, if not installed and used in strict accordance with these instructions, may cause interference to radio and television reception. It has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference to radio or television reception, which can be determined by turning the equipment off and on, will not occur. The user is encouraged to try to correct the interference by using one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a branch circuit different than the branch the receiver is connected to.
- Consult the dealer or an experienced radio/television technician for help.

If your system is operated from the same electrical wall circuit as other pieces of equipment and erratic operation of the unit occurs, it may be necessary to shut off other equipment or power the unit from a dedicated electrical circuit. The printer should be turned off when not in use.

## **CDC Notice**

This digital apparatus does not exceed Class B limits for radio noise for digital devices as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicable aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.





## Introduction

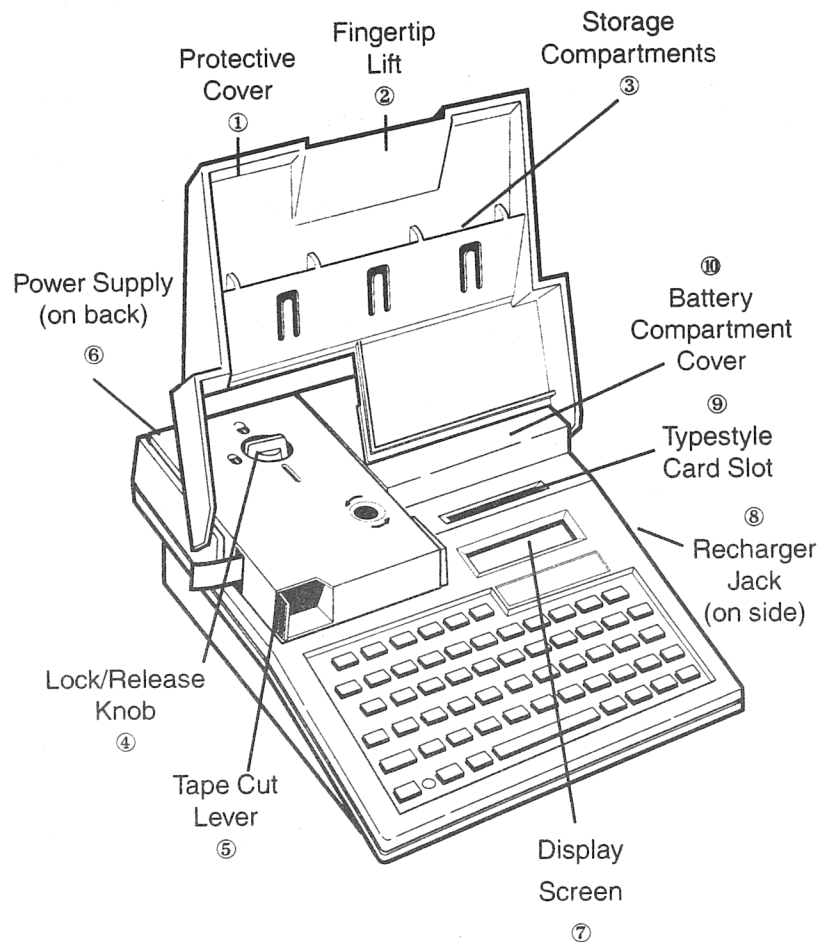
Congratulations on the purchase of your new TM650 printer. It was designed with your needs in mind, and offers many features to make your work easier.

We're sure that you'll welcome the convenience of having your own labeling printer within easy reach—a personal touch to your workplace. In spite of its compact size, the printer produces type on shrink tubing for wire and cable identification as well as professional quality type on tape for use on camera-ready art, architectural/engineering drawings, labeling, bar code, and numerous lettering applications.

You'll enjoy its simple operation: from the typewriter-like keyboard to the convenient supply cartridge with its self-contained, cutting blade that you never need to handle. The printer features thermal printing with a resolution of 240 dots per inch (dpi) and gives you a wide choice of typestyles and sizes.

While your TM650 printer is easy to use, please read the entire manual before starting and keep it handy for future reference.

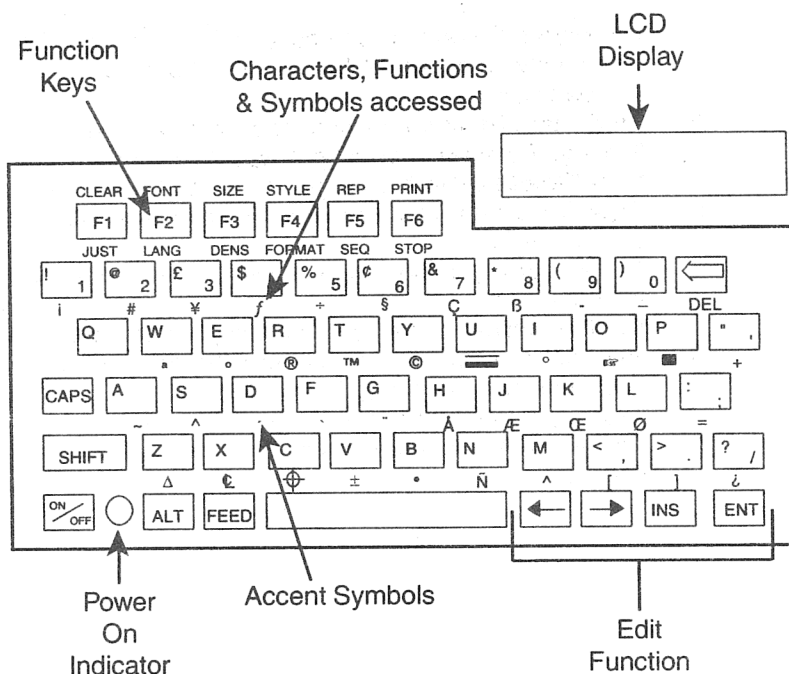
## Overview of Controls & Features



## Overview of Controls & Features (continued)

1. **Protective Cover** flips up easily and can be removed completely for access to keyboard and battery compartment.
2. **Fingertip Lift** aids in raising the protective cover.
3. **Storage Compartments** hold Typestyle Cards.
4. **Lock/Release Knob** ensures correct cartridge position.
5. **Tape Cut Lever** cuts your tape by firmly pressing with your fingertip.
6. **Power Supply** connects AC power supply to conserve your batteries.
7. **Display Screen** shows your message prior to printing.
8. **Recharger Jack** connects battery charger (for Nickel-Cadmium batteries only). Located on the side.
9. **Typestyle Card Slot** accepts Typestyle Cards.
10. **Battery Compartment Cover** provides access to batteries.

## Keyboard Layout



Use of function keys, symbols, and special characters is explained throughout this manual.

## Before you Start

Connect the AC adapter and plug into a convenient wall socket or power strip. For operation with batteries (not included) refer to page 8.

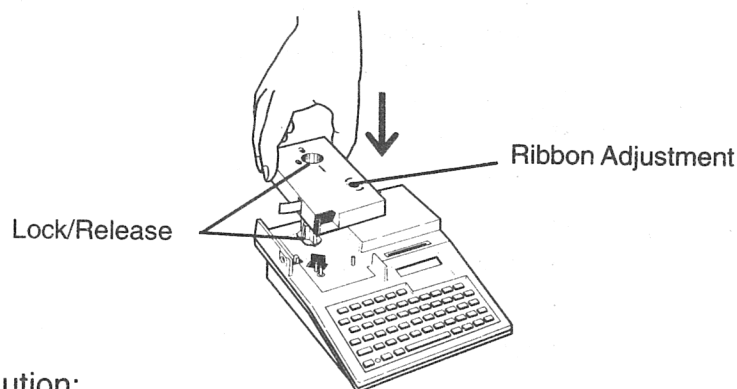


**Inserting  
Supply  
Cartridge**

The printer uses a unique supply cartridge with a cut blade built into the cartridge.

**To insert a new supply cartridge:**

- (1) Turn the ribbon adjustment knob on the cartridge counterclockwise two full turns to tighten the ribbon.
- (2) Align the large circular opening in the supply cartridge over the lock/release knob and lower it into position as shown in the following illustration.
- (3) Turn the lock/release knob counterclockwise until it clicks into position.
- (4) With the printer turned on, press FEED key once after installing new cartridge to engage drive system.
- (5) The TM650 uses supply cartridges similar in appearance to other 240 Series tape cartridges. However these supplies are designed for use in the TM650 printer only. Use of non-TM650 cartridges will produce inferior output. Refer to Appendix A for compatible cartridges.



**Caution:**

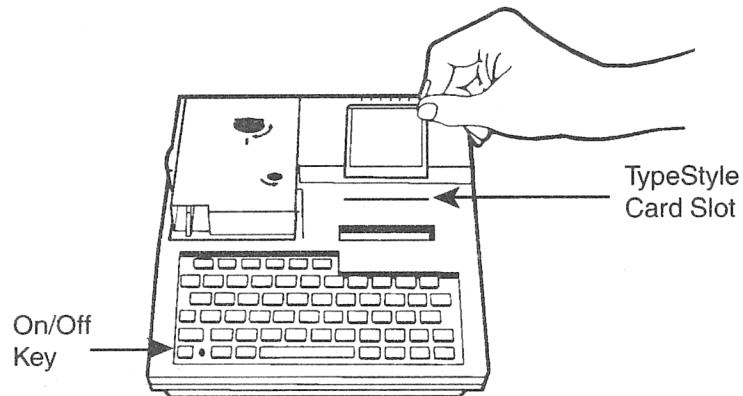
**Do not attempt to cut tube or tape until printing or feed cycle is complete and supply has stopped advancing from the cartridge. Failure to follow these instructions may result in a supply jam in the cartridge.**

### Inserting Typestyle Card

Your printer contains resident typestyles listed below:

#### To load a Typestyle Card:

- (1) Be sure the power is turned OFF before installing or removing Typestyle Card.
- (2) Insert the card into the card slot with the typestyle name facing you.
- (3) Press down firmly to ensure it is fully seated into its proper position.



#### Internal Typestyles

Helvetica Regular 12 pt.

Helvetica Regular 8 pt.

Helvetica Regular 6 pt.

**Note:** All 36 point Typestyle Cards print in upper case only. The printer will not accept typestyle cards that are identical to an internal typestyle.

**Turning  
Power  
ON**

To operate the printer, simply press the **ON/OFF** key at the lower left corner of the keyboard. The green indicator light will become lit, and the LCD screen will show the active typestyle and then the prompt "Enter Text".

The printer is now ready for you to create your lettering.

To turn the printer off, simply press the ON/OFF key again and the green light will go out.

**Changing  
Typestyles**

After inserting a Typestyle Card, both the internal typestyles and the inserted typestyle are available to you. The typestyle from the inserted Typestyle Card automatically becomes active when you power up the printer. If you do *not* insert a Typestyle Card, the printer uses its internal typestyles when power is turned on.

**To change the typestyle for your text:**

- (1) Press the FONT (F2) key to display the typestyle currently in use and repeat to display other available typestyles.
- (2) Press the space bar or ENTER key to select the style displayed or press the FONT key again if you want to select another available typestyle.
- (3) Font Size selection may be limited depending on tubing size selected.

**(Also see FONT key function description on page 15.)**

### Changing Character Size

Printed characters can be enlarged to twice normal size horizontally, vertically, or in both directions. For example, 12 pt type enlarged 2x in both directions will be the same size as 24 pt type.

Note: The printer displays an error message if you attempt to enlarge any typestyle to a size beyond the tape width limitations. Refer to page 16 for complete sizing guidelines.

### Inserting Batteries

The printer operates with four batteries (not included). For optimum portable performance, high-capacity, 4Ah (Ampere hour) Nickel-Cadmium batteries are recommended. Regular 1Ah Nickel-Cadmium and alkaline batteries may produce marginal print quality or short battery life when printing large bold type. For extended use, the AC power supply is advised.

#### **To load batteries:**

- (1) Raise the protective cover and remove it by gently pulling outward on the connecting arms on both sides.
- (2) Pull firmly outward and upward on the rear tab of the battery cover.
- (3) Lift the battery cover off and set it aside.
- (4) Insert four batteries into the compartment observing the positive (+) and negative (-) polarity shown in the battery compartment.
- (5) Replace battery cover by inserting front tabs into the front slots, then press downward on rear edge to gently snap the battery cover into locked position.
- (6) Replace protective cover if you wish.

The operating life of your batteries is affected by the print size and typestyles you use. Generally, larger and bolder typestyles require much more power to generate the printing than smaller point sizes and will drain the power from your batteries more quickly.

When the printer has the AC power supply unplugged and batteries are removed or discharged, selected prompt language, density setting, and typestyle settings will be erased and the printer will contain default settings when power is reapplied. Desired selections must be reentered at this point.

**Note on operation with batteries:** When either the AC power supply or the optional battery recharger are plugged into the unit, the batteries are disconnected, which means that the unit will not operate from them.

## Creating a Label

### Typing Text

The printer keyboard operates like a typical typewriter-style keyboard, including its SHIFT and CAPS keys. Special characters and symbols (inscribed in blue beneath the regular key caps) can be entered by holding down the ALT key while pressing the appropriate key.

As you type your text on the keyboard, each character appears in the display screen.

*For symbols and accented characters, refer to the **Functions** section for further information on using special keys.*

If you wish to change any text before it is printed, use the edit features as described on pages 11 and 28.

### Viewing Text

The printer's display screen displays up to 16 characters at a time. They appear as standard dot matrix characters.

Messages up to 240 characters can be entered. However, only the last 16 characters are visible in the screen. The printers line lengths are 240 characters in single-line mode. In multi-line mode, characters per line are 120 in two line mode, 80 in three line, and 60 in four line.

The CLEAR key completely erases the entire line of text currently held in the printer's memory, so be cautious before pressing this key. It does not, however, clear away any added functions such as style or size variations.

**Note:** Display prompts may be viewed in English, Italian, German, Spanish, French, or Portuguese. (See page 15)

Editing Text
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If you wish to edit your text before printing it, you should use the left arrow key ( < ) or right arrow key ( > ) to move the cursor to the text to be changed. You can delete or add text at this time.

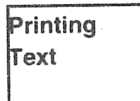
**You can delete text three ways:**

1. Position the cursor under the character to the right of the one to be deleted, and press the backspace key. Each time you press the backspace key the character to the left of the cursor will be deleted. This is most convenient for changes at the end of your text.
2. To delete a character in the middle of your text, use the left arrow key to move the cursor under the character you want deleted; by pressing both the ALT and backspace keys the character directly above the cursor will be deleted.
3. To delete an entire word, move the cursor under any character in the word and press both the SHIFT and backspace keys.

To add text, position the cursor under the character to the right of the position where the new character will appear. Now enter the new text. If you press the INSert key, newly entered text will **replace** the existing text.

Each time you press the INSert key, the insert feature is alternately set on or off, as shown in the display screen.

**(The Special Function Keys section provides further explanation of the edit keys.)**



The machine prints all characters in the print buffer when the PRINT key (F6), is pressed. You can advance the tape without printing by pressing the FEED key.

(see FEED key function description page 28)

**Important:** Operator control of print density is available by holding the ALT key and pressing the SIZE key (F3). Density should be adjusted to obtain optimum print quality depending on the size of characters being printed and type of supply being used. This is extremely important when printing bar code fonts as too much print density will result in poor read quality. If any voids should appear, adjust density higher while checking print quality. If trailing edges of characters are smeared, decrease print density. (See page 17)

Printing can be halted at any time by holding the ALT key and pressing the PRINT key (F6). This will stop printing without losing the text. (Refer to page 28 for more information.)

After a tape has been printed, you can change both the typestyle and character size for the entire tape and print it again in the new style and size without re-keying your text. This is done using the FONT (F2), SIZE (F3), and STYLE (F4) keys. **Remember that you can change only between the resident typestyle(s) and the currently installed Typestyle Card.** If you wish to change to a different Typestyle Card, you must turn the system off, replace the Typestyle Card, turn the system on, and re-key your text.



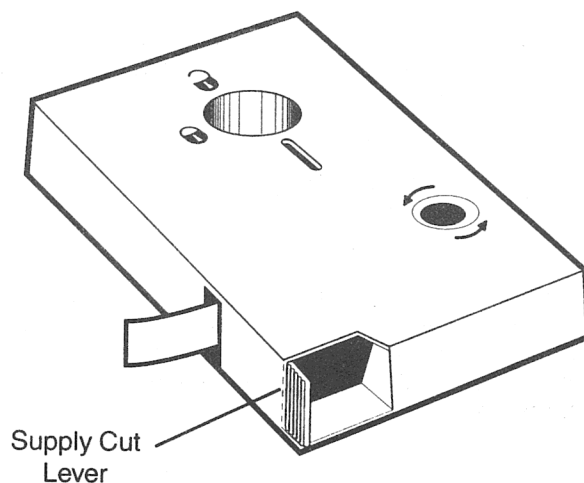
### Cutting Tape

Your printer uses a manual cutting mechanism. It is built into the supply cartridge and is located on the front of the cartridge where the supply exits. Wait until the supply has stopped feeding out of the printer and move the tape cut lever to the right until you hear and feel the supply cut.

If you intentionally stopped a print operation, you should manually advance the supply to position the last character past the cut off point using the FEED key.

You need never worry about changing cutting blades on the printer because the blade is self-contained inside every supply cartridge.

**Note:** Always wait until the machine has finished printing and the tape has stopped advancing before using the tape cut lever. **If you cut while the system is either printing or advancing the supply, you may jam the supply cartridge.**



## Functions

**CLEAR**

The CLEAR key (F1) displays the following message:

Clear [Y/N]:\_\_

Type a **Y** if you want to stop and erase the current line of text from the print buffer. Type an **N** to resume text entry.

**Note:** In multi-line mode each line must be separately cleared. All lines can be cleared at once by turning the printer OFF and back ON, or by pressing the ALT key and STYLE key (F4) and then selecting a number of lines other than what was being used.

**ALT**

**CLEAR**

**Justification:** When label length is entered or multi-line selected, you will be able to set left, right, or center justification. Press and hold the ALT key while simultaneously pressing the CLEAR (F1) key. The following prompt will appear:

Center

Center justification is the default. Use the left and right arrow keys to scroll through the available choices. Press the ENTER key to select it. The justification you select will be applied to the entire label and all subsequent labels. It will remain selected until you change it or the printer is turned off.

FONT

The FONT key (F2) displays the typestyle in use and is used to select other available typestyles. Upon pressing the FONT key, the printer displays the typestyle currently in use, for example:

Helv Reg 12 pt

Pressing the FONT key again displays another available typestyle. Pressing the ENTER key or space bar selects the typestyle, then prompts you to enter text.

**Resident typestyles:** The TM650 printer has resident in its system software three typestyles. This provides the user with the ability to access the resident typestyles) and an additional choice by inserting a Typestyle Card. (See page 6)

ALT

FONT

**Language Prompts:** The printer's software allows the user to select from the keyboard the language in which they want the prompts to appear, i.e. English, Italian, German, Spanish, French, or Portuguese. (The default language is set at the factory.)

The desired language is displayed by pressing and holding the ALT key while simultaneously and repeatedly pressing the FONT key (F2) until the desired language is reached.

Both keys are then released and the ENTER key pressed to select the language displayed. The printer will continue to display prompts in the language selected until power is removed or the user again changes languages.

**SIZE**

The SIZE key (F3) displays prompts for selecting the character size of your text. The SIZE key offers the selection of sizing direction options: horizontal, vertical or both.

**To change the character size:**

- (1) Press the SIZE key (F3). Your printer will display the following prompt in the display screen.

Horz,Vert,Both:

- (2) Press the **H** key to change character width, press **V** to change character height, or press **B** to change both width and height. Note that increasing the vertical height actually compresses your text since it will be proportionately taller than it is wide.
- (3) A prompt is displayed as shown below. Press the appropriate number key to select the multiplier you wish to use to change character size.

Size 1,2X: 1

- (4) Enter your text on the keyboard. All of the text you enter will then retain that same character size until you change it. You can also change the character size after entering text, if you wish.

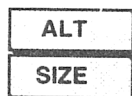
The selected character size applies to all of the text in a single line entered in the print buffer. In multi-line mode, each line is sized individually.

**Note:** Since the machine prints on 1/2 inch wide tape, and three sizes of shrink tubing, certain typestyle sizes cannot be increased. For

example, increasing Helvetica Medium 24 point two times would cause only part of the characters to appear on the 1/2 inch supply. The printer will display an error message if you attempt to enlarge any typestyle to a size beyond the tape width limitations.

Use the following size ranges as a guide when changing character sizes:

- 6 to 12 point type can be increased up to two times (in one line text).
- In multi-line mode combined height of lines must be less than or equal to 24 point. Refer to multi-line printing on page 21.
- When using 1/4" tube we recommend you use 12 pt. and increase your size both horizontally and vertically (24 pt.)



**Print Density Setting:** Print density is controlled by software in the printer and the user may select higher or lower density (darker or lighter) levels.

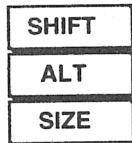
The desired density is selected by pressing and holding the ALT key and simultaneously pressing the SIZE key (F3). This displays the default density level of 4 in the following prompt:



Display density levels from 0 (lightest) to 6 (darkest) by pressing the left or right arrow keys to move down or up to the desired level. Press the space bar or ENTER key to select the density level displayed. The printer will print at the selected density level until the user selects a new level or the printer has the AC power supply unplugged and batteries are removed or discharged. The printer returns to the default level 4 when power is returned.

**Note:** Density setting may need to be adjusted when the supply cartridge or text dimensions change. If unsure about the setting, be prepared to press ALT and PRINT (F6) to stop printing, change

density, then press PRINT to reprint your text from the beginning.



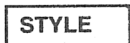
**Label Length:** You can set the length of your label by pressing the SHIFT, ALT, and SIZE keys (F3). Cut marks will be added to show you the selected length.

The desired label length is selected by pressing and holding the SHIFT-ALT keys and simultaneously pressing the SIZE key (F3). This displays the following prompt:

Length:

Feed length can be determined using two units of measurement: inches and millimeters, as determined by selecting your Unit of Measurement (see your Owner's Manual for this operation). For inches enter the information in increments of tenths of an inch. For example, to enter a length of one and half inches, you would enter 15 and press ENTER. It is not necessary to enter a decimal point and if pressed will be ignored by the system. If you wished a length of two inches you would enter 20 and press ENTER. If you enter 0 or press the ENTER key, feed length will be turned off and no feed will occur between the individual labels.

Your setting will be remembered by the system unless power is removed. The default feed length is approximately 7/8 of an inch. Maximum and minimum label sizes are 6 inches and .4 inches, or 150mm and 10mm. See page 24 for additional information on changing unit of measure.



The STYLE key (F4) gives you additional printing style transformations to customize your tapes for unique lettering applications. Depending on the supply and format, one or more of the following transformations may be used: mirror, vertical, outline, shadow, underline, frame, negative

image, and bold.

Select any of these transformations by simply depressing the **STYLE** key consecutively and turning it on or off by pressing the **Y** or **N** followed by the space bar or **ENTER** key when the desired transformation is displayed. Each transformation is explained below.

All text entered for a tape and all subsequent tapes will be printed in the transformation or combination of transformations selected until an unwanted transformation is set to off. All selected transformations are cleared from memory (turned off) when the printer is turned off. Refer to the following chart to determine which transformations are available in your printer.

Available Style Transformations

	Mirror	Vert	O/Line	Shad	U/Line	Frame	Neg. Image	Bold
Single-line	✓	✓	✓	✓	✓	✓	✓	✓
Multi-line			✓		✓			✓

#### **Mirror**

Creates a mirror image tape, typically used for subsurface labeling applications such as inside glass doors or windows and under countertops. (Not recommended for shrink tube applications).

#### **Vertical**

Causes each character of your text to be rotated 90 degrees, resulting in a tape that can be read vertically. Such tapes are typically applied to the spines of three-ring binders and narrow books reports or for vertical wire marking applications.

**Outline**

Causes each character of your text to be printed in an outlined format. (Not recommended for shrink tube applications).

**Shadow**

Causes each character of your text to be printed in a shadow format. When used in conjunction with outline, shadow adds a solid drop shadow to each character. (Not recommended for shrink tube applications).

**Underline**

Causes all text to be underlined. (Not recommended for shrink tube applications).

**Frame**

Causes all text to be enclosed within a rectangular box. The frame can give your label a distinctive, finished appearance. Maximum character size is limited to 14 points for this feature. (Not recommended for shrink tube applications).

**Negative Image**

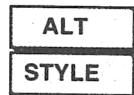
Causes characters to appear white against a black background. It is especially useful when you want your label to attract attention. (Not recommended for shrink tube applications).

**Bold**

Causes the text to be increased in thickness or weight. The increase is in vertical elements of the text so the height of characters is not increased, just width.

**Note:** To exit the style transformations selection mode at any point, just press the ENTER key or the space bar and return to text entry.





**Multi-line Format:** Software in the printer allows for the creation of 1, 2, 3 or 4 line label formats. Formats will vary based upon shrink tube supply widths.

To access multi-line mode, hold the ALT key and press the STYLE key (F4). The display then shows that you are in multi-line mode at the default setting of one line. To select more than one line, hold the ALT key and press the STYLE key until the desired number is displayed, then press the ENTER key or the space bar to enter your selection.

When you have selected multiple lines there are three style transformations available: outline, bold, and underline. Each line in multi-line mode can have a different combination of transformations or none at all. For example: line one could be bold, while at the same time, line two is underlined. To select a transformation for a particular line press the ENTER key until the screen shows the prompt for the line you wish to change. Press the STYLE key until the desired transformation is shown in the display, then press Y and either the ENTER key or the space bar to enter your selection.

The print buffer holds up to 240 characters in one line mode, 120 characters in two line, 80 characters in three line, and 60 characters in four line mode. In multi-line mode, in addition to the character quantity limit, there is a 6" line length limit for each line. The 6" line length limit takes precedence over the character quantity limit.

Another feature of multi-line mode is the ability for each line to be set to a different font and/or point size, however, the total number of points cannot be greater than 24 points. For example, in three line mode you may select lines 2 and 3 to be 6 point and line 1 to be 12 point ( $6+6+12=24$ ). To enter a different font and/or point size for a particular line press the ENTER key until the screen shows the prompt for the line you wish to change. Press the FONT key (F2) until the desired font and/or point size is shown in the display, then press the ENTER key or the space bar to enter your selection.

Note: When using a Typestyle Card in multi-line mode, the printer defaults to the resident font and sizes listed below. Certain Typestyle Cards will not work in multi-line mode (i.e., 36 point Helvetica Med. exceeds the 24 point rule).

The default settings of the printer for each line in multi-line mode are as follows:

Two line mode	12 point Helvetica
Three line mode	8 point Helvetica
Four line mode	6 point Helvetica

Use the ENTER key to move from line to line when reaching the end of a line or desiring to edit another line. **The printer does not automatically go to the next line when the end of a line is reached.** They display a "Text Too Long" error message and the user must move to the next line by pressing the ENTER key.

### **Shrink Tube Setup**

#### Setting up Multiple Line Printing using Shrink Tubing Supply

Because of the three width sizes of shrink tubing, the user must set up the multi-line function differently than you would normally do with tape supply. The following instructions will walk you through the multi-line print process using Shrink Tube Supply.

For 1/8" Tubing with one line of text:

- (1) Depress and hold the Alt Key down.
- (2) Depress the F4 (Style) Key until Two Line prompt appears in the LCD screen.
- (3) Release the Alt Key.
- (4) Press the ENTER key until 2> appears in the LCD.
- (5) Type in text on line 2 and press Print Key.

For 3/16" Tubing with one line of text:

- (1) Depress and hold the Alt Key down.
- (2) Depress the F4 (Style) Key until Two Line prompt appears in the LCD screen.
- (3) Release the Alt Key.
- (4) Press the ENTER key until 2> appears in the LCD.
- (5) Type in text on line 2 and press Print Key.

For 3/16" Tubing with two lines of text:

- (1) Depress and hold the Alt Key down.
- (2) Depress the F4 (Style) Key until Three Line prompt appears in the LCD screen.
- (3) Release the Alt Key.
- (4) Press the ENTER key until 2> appears in the LCD.
- (5) Type in text on line 2, press ENT key. Type text on line 3 and press Print Key.

For 1/4" Tubing with one line of text:

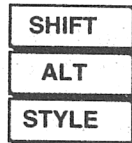
- (1) Type in text at Enter Text prompt and press Print Key.

For 1/4" Tubing with two lines of text:

- (1) Depress and hold the Alt Key down.
- (2) Depress the F4 (Style) Key until Three Line prompt appears in the LCD screen.
- (3) Release the Alt Key.
- (4) Press the ENTER key until 2> appears in the LCD.
- (5) Type in text on line 2, press ENT key. Type text on line 3 and press Print Key.

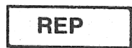
For 1/4" Tubing with three lines of text:

- (1) Depress and hold the Alt Key down.
- (2) Depress the F4 (Style) Key until Four Line prompt appears in the LCD screen.
- (3) Release the Alt Key.
- (4) Press the ENTER key until 2> appears in the LCD.
- (5) Type in text on line 2, press ENT key. Type text on line 3, press ENT key. Type text on line 4 and press Print Key.



**Unit of Measure:** Software in some models allows you to choose units of tenths of an inch or millimeters. To access this feature press and hold the SHIFT-ALT keys and press the STYLE key (F4).

Use the Left and Right arrow keys to scroll through the choices available and press ENTER. Unit of measure is set to inches at the factory and returns to it when power is removed.



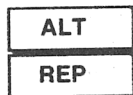
The REPEAT key (F5) is used to print multiple copies of a tape. The repeat feature prints up to 99 copies of any tape.

Press the REPEAT key. This message appears:

Repeat Count:

Enter a one or two digit number specifying the number of copies you wish to print. When using the repeat function, cut marks are automatically added to show you the edges of your label as well as center justify your text.

Press the space bar or the ENTER key once to set the number into memory. You will automatically be returned to text entry mode to either print the tape or continue entering text.



**Sequence:** The printer can automatically generate a sequence of numbers (up to 4 digits) or letters and print them. The sequence must be either all numbers or all letters and you can add text before or after the sequence. Cut marks are automatically added to show you the edges of your label as well as center justify your text.

Use the feature as described below and a sequential number series or a single alphabetical sequenced character is added at a single location in your line of text.

- (1) Hold down the ALT key and press the REPEAT key (F5). This message appears:

[A]lpha/[N]um: \_

- (2) Type **A** if the sequence will be alphabetic characters or type an **N** if the sequence will be numeric characters.

If you typed **A** in Step 2, the following prompt appears:

Start Char: \_

- (3) Enter the letter that will start the alphabetic sequence. The following prompt will appear:

End Char: \_

- (4) Enter the ending character of the sequence, the system will automatically initiate the sequence function. An omega  $\Omega$  symbol will appear to indicate the position of the sequence. Press PRINT key (F6) to begin printing.

If you typed **N** in Step 2, the following prompt appears:

Start #: \_

- (3) Enter the beginning number of the sequence (up to four digits can be used), then press the space bar once. If you enter leading zeros, the generated numerical sequence will contain leading zeros. The following prompt will appear:

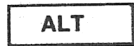
End #: \_

- (4) Enter the ending number of the sequence, then press the space bar once. The following prompt will appear:

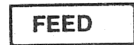
Incr #: \_

- (5) Enter the amount by which the beginning number will be incremented. For example: entering a 2 will generate a sequence of even numbers (provided you start at the number 2).
- (6) Press the space bar to initiate the sequence feature. An omega  $\Omega$  symbol will appear in the screen to indicate the position of the sequence in your text. Press PRINT to begin printing.

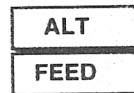
## Special Function Keys



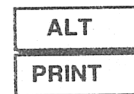
This key is used to access special characters inscribed in blue beneath the normal keyboard letters. ALT must be held down while the other key is pressed.



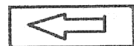
This key causes approximately one inch of tape to be advanced from the tape cartridge each time the key is pressed.



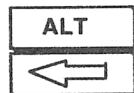
Feed characters can be entered and stored while you are entering text. To store feed character, hold down ALT and press FEED (< will appear in the display screen). This will cause the tape to be advanced while printing to allow extra space between text. The extra space is often needed to separate labels or for applying tape to various surfaces.



To stop the print function, yet maintain the current text in the printer's memory, hold the ALT key and press the PRINT key (F6). This will allow you to make a correction or restart the print function without having to shut the system off. Turning the system off would erase the current text in the print buffer. To resume printing just press the PRINT key. The system will print the message from the beginning, not at the point the printing was aborted.

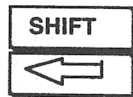


The backspace key deletes the character to the left of the cursor each time the key is pressed.

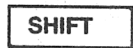


This delete function erases the character directly above the cursor.

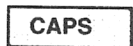




This function erases a word if the cursor is below any letter in the word or the space immediately following. Pressing this combination will delete the word until the next space to the left is encountered.



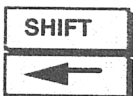
This key operates like the shift key on a standard typewriter: it allows you to enter uppercase characters.



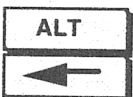
This key operates like the caps key on a standard typewriter: it allows you to lock the keyboard in uppercase mode without holding down the SHIFT key.



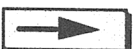
This cursor control key moves the cursor one character to the left each time it is depressed. Use it in conjunction with the INSert key to locate the position at which to insert one or more characters into existing text or to replace existing text.



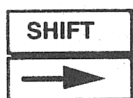
This combinations of keys enables you to move to the left one word at a time.



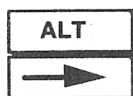
This combination of keys takes you to the beginning of a line of text.



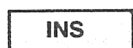
This cursor control key moves the cursor one position to the right each time it is depressed. Use it in conjunction with the INSert key to locate the position at which to insert one or more characters into existing text or to replace existing text.



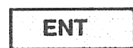
This combinations of keys enables you to move to the right one word at a time.



This combination of keys takes you to the end of a line of text.



This key enables you to insert one or more characters into existing text or replaces existing text. Pressing this key alternately turns the insert feature On or Off. When **On**, new text will be **inserted** in front of the character above the cursor. When **Off**, existing text will be **replaced**.



The ENTER key sets various entries or operations into the printer's memory.

### Accented Characters for European and other languages

The accents (~, ^, ' , " ) are commonly used with some letters in various languages. Accented letters are created by first holding down the ALT key and pressing the key above the desired symbol (printed in blue), The next key pressed will be the accented character. For example, press and hold the ALT key, then the "d" key and release both keys. Next press the "e" and "é" will be displayed in the display screen and printed as shown. If a non appropriate key is pressed, the accent is cancelled. Only the following accented characters can be created:

ãÄõÕñÑ âÂôÔ áÁóÁ àÀòÒ äÄöÖ êÊîÎûÛ éÉíúÚ èÈìùÙ ëËïüÜ.

Capital letters with accents can be created by holding down the ALT key while pressing the letter key above the desired symbol, then holding down the SHIFT key and pressing the appropriate letter key.

## Operator Messages

Your printer has been designed to diagnose certain error conditions and inform you when they occur. The following messages will appear in the display screen if an error occurs:

Battery Low

Replace batteries.

Tape Out

This function indicates that the supply cartridge is empty or that no supply cartridge is mounted in the printer. If tape-out occurs while the printer is on-line, the printer goes off-line and the "Tape Out" display remains until the cartridge is replaced and the printer is turned off and back on to come up on-line again, or until other keys are pressed to perform off-line operations or functions. During off-line operation, the tape-out function operates normally.

Text Too Tall

Select typestyle(s), size(s) and/or type transformation(s) that will fit within the height limits of the line(s).

Text Too Long

Remove characters from the line or select typestyles, size(s) and/or type transformation(s) that will fit within the length limits of the line(s).

Invalid Key

Review your text entry and type the correct key.

Press Enter

This occurs when the PRINT key is pressed while in a non-edit mode, such as FONT, SIZE, or STYLE selection. The PRINT key only functions in the edit mode. When the ENTER key is pressed the system will perform validation checks on the options selected and return to the edit mode if all selections are valid. Otherwise an appropriate message will be briefly displayed before returning to the option selection mode.

Enter Y or N

You are in a selection mode and cannot enter text. Enter **Y** for yes or **N** for no.

Label Too Short

Enter a label length greater than 4 tenths of an inch or 10 millimeters.

Label Too Long

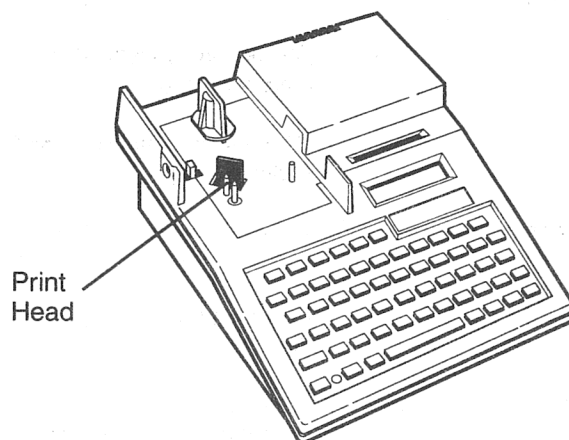
Enter a label length less than 6 inches or 150 millimeters.

Feed Too Long

Enter a label length less than 6 inches or 150 millimeters.

## Care and Cleaning

The printer requires no lubrication or other routine maintenance. Occasional cleaning of exterior surfaces and regular cleaning of the print head is all that is required.



The print head should be cleaned after every cartridge. Use isopropyl alcohol on a soft cotton swab to remove adhesive build up and tape and ribbon residue. Make sure the alcohol has evaporated before loading a supply cartridge.

**Note:** Avoid touching the surface of the print head with your finger. Acids and oils on your skin will damage the head.

Exterior surfaces can be cleaned with a damp cloth moistened in a mild detergent and water solution. Commercial cleaners designed for electronic equipment may also be used.

## Troubleshooting

<u>Problem</u>	<u>Solution</u>
The display stays blank after you have turned on the printer.	<ul style="list-style-type: none"><li>- Ensure green power indicator is lit.</li><li>- Check battery installation for correct polarity.</li><li>- Have power supply checked/ replaced.</li></ul>
The machine does not print.	<ul style="list-style-type: none"><li>- Ensure lock/release knob is in locked position.</li><li>- Check cartridge supply and its position.</li></ul>
Printed characters are not formed properly.	<ul style="list-style-type: none"><li>- Adjust print density setting for optimum character quality. See page 17.</li><li>- Batteries are possibly weak. Check printing with fresh batteries or power supply.</li><li>- Clean print head.</li><li>- Replace supply cartridge.</li></ul>
Printed characters appear scratched.	<ul style="list-style-type: none"><li>- Clean print head.</li><li>- Replace supply cartridge.</li></ul>

## Specifications

Input Device:	Standard typewriter-like keyboard with special function keys.
Character Size:	6 point to 36 point (with typestyle card)
Print Supply:	1/2 inch wide tape, 1/8 inch, 3/16", 1/4" Shrink Tubing
LCD Screen:	5 x 7 dot matrix, 16 characters
Power Supply:	4 D-size Nickel-Cadmium or alkaline batteries, or AC power supplies for 110VAC (60 Hz), 220VAC (50 Hz) or 240VAC (50 Hz).
Dimensions:	Inches: 8 wide x 9.5 depth x 2.9 height.  Millimeters: 200 wide x 230 depth x 130 height.
Weight:	4.6 lbs or 2.1 kg with batteries 3.4 lbs or 1.5 kg w/o batteries
Print Buffer Size:	240 characters <sup>‡</sup>
<sup>‡</sup> In multi-line mode, the print buffer for each line is 240 characters divided equally by the number of lines selected.	

## **Appendix A**

### **Tape and Shrink Tubing Supply List**

The following is a listing of authorized KROY Tape and Shrink Tube Supplies for the KROY TM650 Printer.

#### **Polyester Label Supplies:**

Part Number	Description
2464401	Black Ribbon on Clear Label
2464402	White Ribbon on Clear Label
2464416	Black Ribbon on White Label
2464417	Blue Ribbon on White Label
2464421	Black Ribbon on Silver Label
2464431	Black Ribbon on Blue Label
2464435	Black Ribbon on Red Label
2464439	Black Ribbon on Green Label
2464443	Black Ribbon on Yellow Label
2464448	Black Ribbon on Orange Label

#### **Cast Vinyl Label Supplies:**

Part Number	Description
2559401	Black Ribbon on Clear Label
2559416	Black Ribbon on White Label
2559421	Black Ribbon on Silver Label
2594431	Black Ribbon on Blue Label
2559435	Black Ribbon on Red Label
2559439	Black Ribbon on Green Label
2559443	Black Ribbon on Yellow Label
2559448	Black Ribbon on Orange Label

Please visit our web site [www.kroy.com](http://www.kroy.com) for a complete listing of KROY supplies.



**Appendix A (continued)**  
**Tape and Shrink Tubing Supply List**

Shrink Tubing Supplies:

1/8" Shrink Tubing:

Part Number

2404201

2404202

Description

Black Ribbon on White Tubing

Black Ribbon on Yellow Tubing

3/16" Shrink Tubing:

Part Number

2404210

2404211

Description

Black Ribbon on White Tubing

Black Ribbon on Yellow Tubing

1/4" Shrink Tubing:

Part Number

2404220

2404221

Description

Black Ribbon on White Tubing

Black Ribbon on Yellow Tubing

Please visit our web site [www.kroy.com](http://www.kroy.com) for a complete listing of KROY supplies.

