

Chapter 4

Programming the LT 1850

Before programming the scanner, follow the instructions in *Chapter 1: Setting Up the LT 1850*.

If the default values suit your requirements, scan the **SET DEFAULT** bar code. (Be sure to select a Terminal Type, or data will not be transmitted to the host.) An LT 1850 is programmed for parameters other than default values by scanning sequences of bar codes. *Chapter 5: Parameter Menus* contain all the bar codes necessary to program the scanner for each parameter selection.

Scanning Sequences

A scanning sequence establishes a value for one parameter type. During a scanning sequence, you scan bar codes for a parameter type, a parameter value, and **ENTER**. The *Scanning Sequence Flowchart* on page 4-2 illustrates this process.

Suppose you want to program the scanner to disable Code 128. Go to the **CODE TYPES** parameter, and scan the following sequence of bar codes:

SCAN	YOU WILL HEAR...
1. DISABLE	Short high tone
2. CODE 128	Short high tone
3. ENTER	Hi/Lo/Hi/Lo warble

The above parameter value is now stored in memory.

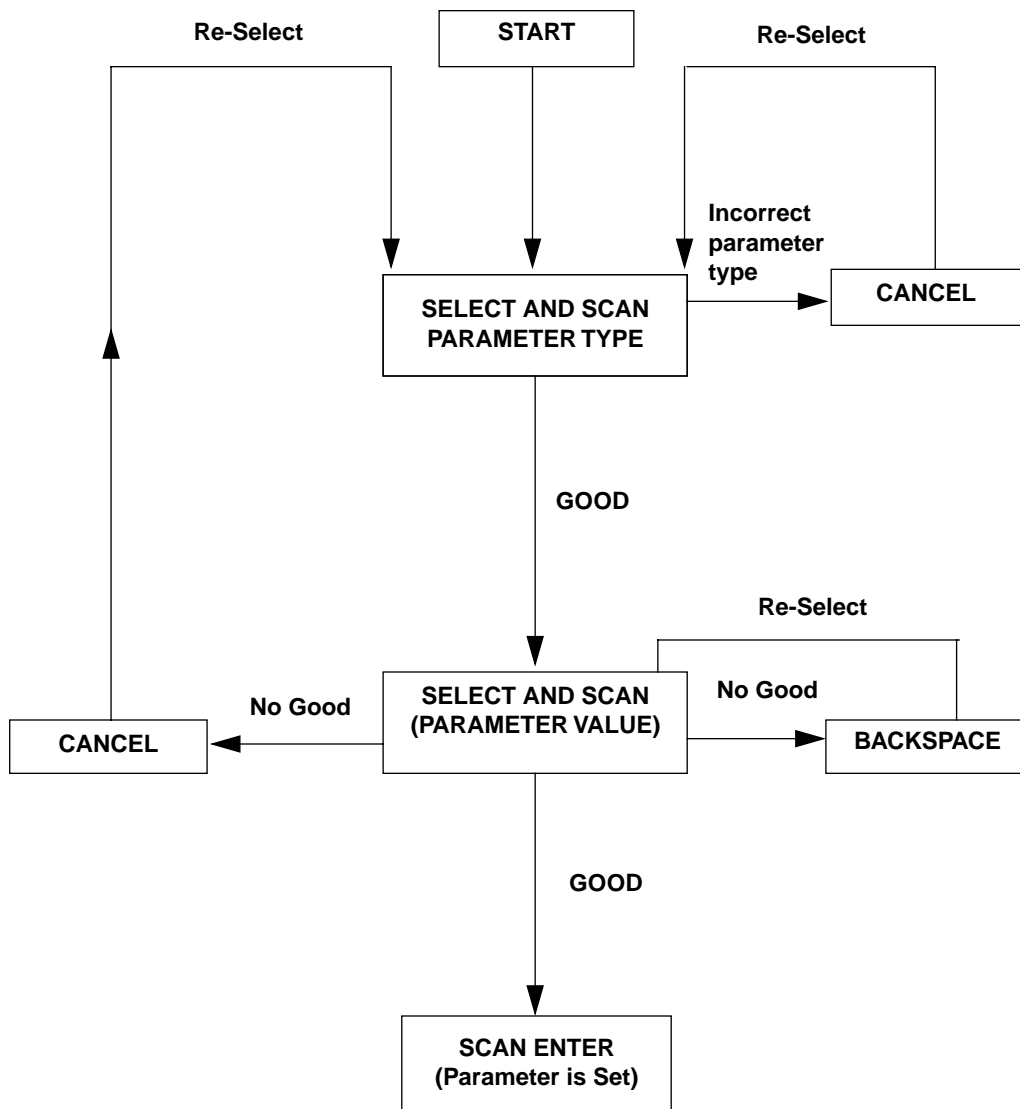
Errors While Scanning

Don't worry if you make an error during a scanning sequence. There are two special-purpose bar codes, **BACKSPACE** and **CANCEL**, to help you.

Scanning the **BACKSPACE** parameter menu erases the value of the previous bar code scanned but keeps you within the scanning sequence.

Scanning **CANCEL** removes you from the current sequence so that you can start again.

Scanning Sequence Flowchart



Parameter Descriptions

See *Parameter Selections* on page 4-7 for the range of values and default settings for each parameter type.

Set Parameter Defaults

Scanning the **SET DEFAULT** bar code returns all parameters to the default values listed in *Parameter Selections* on page 4-7.

POS Terminal Type

This parameter selects the POS terminal type used with the LT 1850. Note that it also sets a default clock edge value (clock polarity signal phase indicating data), and selects terminal-compatible code types. Clock edge is not user-selectable.

Code Types

The bar code menu selections enable the scanner to decode any or all of the following symbologies. If you try to decode a symbol which the terminal cannot recognize, the symbol will be decoded, but not transmitted to the terminal. The only exception is ITF-14/EAN-13 conversion, which is discussed in *ITF-14/EAN-13 Conversion* on page 4-5.

- UPC Versions A and E (EAN 8 and 13)
- Code 128
- Code 39
- Interleaved 2 of 5

If you want to add Interleaved 2 of 5, check the previously enabled lengths. To set lengths for these codes, see *Fixed Lengths For Code 1 2 of 5* on page 5-9.

Fixed Lengths for Code I 2 of 5

Select one or two lengths for the Interleaved 2 of 5 code. Determine the number of characters represented in the code by counting the number of printed (i.e., human readable) digits that represent a bar code label. One length (**LENGTH 1**) or two lengths (**LENGTH 2**) may be set, as needed.

If any default setting is in effect and is an appropriate length, it need not be reset. Set one or both lengths, one per scanning sequence. **LENGTH 1** may range from 01-31 and **LENGTH 2** may range from 00-31.

This code must be enabled, and one length set to 14 if you wish to use ITF-14/EAN-13 conversion (see below).

Decode Options

Transmit UPC-E/UPC-A Check Digit

Select if decoded UPC-E or UPC-A symbols are transmitted with or without the check digit.

Decode UPC Only (Not EAN)

If selected, this option limits LT 1850 UPC/EAN decode capability to UPC versions only. It disables EAN decode capability.

Convert UPC-E to UPC-A

Use this parameter to convert UPC-E (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data will follow UPC-A format and be affected by UPC-A programming selections (e.g., Preamble, Check Digit).

EAN Zero Extend

This parameter adds five leading zeros to decoded EAN-8 symbols to make them compatible in format to EAN-13 symbols.

ITF-14/EAN-13 Conversion

If your terminal supports EAN-13, this feature converts a 14 character I 2 of 5 code into EAN-13, and transmits to the host as EAN-13. In order to accomplish this, the **I 2 of 5 code must be enabled**, one length (either **LENGTH 1** or **LENGTH 2**) must be set to 14, the code must have a leading zero, and proper trailing check digit.

UPC A and E Preamble(s)

Three options are given for the lead-in characters of decoded UPC-A or UPC-E symbols transmitted to the host device. Select one preamble for UPC-A decodes and one for UPC-E decodes. These lead-in characters are considered part of the symbol itself. The three options are:

- a system character only
- the country code and system character
- no preamble

The system character is the digit printed to the extreme left of a UPC symbol. The country code for UPC is always zero, and it cannot be transmitted without the system character.

Decode UPC/EAN Supplementals

Select whether UPC/EAN is decoded with or without supplemental characters, or whether the unit will autodiscriminate between the two. Supplementals are additionally appended characters, according to specific code format conventions (e.g., UPC A+2, UPC E+2, EAN 8+5).

If UPC/EAN with supplemental characters is selected, UPC/EAN symbols without supplemental characters won't be decoded. If UPC/EAN without supplemental characters is selected and the scanner is presented with a UPC/EAN plus supplemental symbol, the UPC/EAN will be decoded and the supplemental characters ignored. If autodiscrimination is chosen, the LT 1850 will, after additional processing to ensure a good decode, transmit either.

Beep After Good Decode

Determine if the unit beeper will sound during normal scanning. Usually it is desirable to operate the unit with the beeper enabled. In all cases, the beeper operates during parameter menu scanning and indicates error conditions.

Beeper Volume

Use this parameter to program the beeper for Full or Low volume.

Trigger Mode (for triggered models only)

Select whether you would like to use the scanner with the trigger (Triggered Mode) or if you'd like the laser to be in a constant blinking state (Triggerless Mode).

Decode Redundancy

Use this parameter to indicate whether the scanner must read a bar code one time (**LEVEL 0**), two times (**LEVEL 1**), or three times (**LEVEL 2**) before decoding it. A higher level of redundancy ensures the accuracy of a decode in, for example, poor quality symbols.

Parameter Selections

PARAMETER	SELECTIONS AVAILABLE	DEFAULT
Add Codes to be Decoded	Code 39, UPC/EAN, Code 128, Interleaved 2 of 5, All Code Types	All Code types for enabled terminal.
POS Terminal Type	See page 5-2 to page 5-5 .	None
First Length Interleaved 2 of 5	2 digit entry, ranging from 01-31.	14
Second Length Interleaved 2 of 5	2 digit entry, ranging from 00-31.	0
Decode UPC Only	Enable, Disable	Disable
IFT-14/EAN-13 Conversion	Enable, Disable	Enable
Convert UPC-E to A	Enable, Disable	Disable
EAN Zero Extend	Enable, Disable	Disable
Xmit UPC-A Check Digit	Enable, Disable	Enable
Xmit UPC-E Check Digit	Enable, Disable	Disable
UPC-E/UPC-A Preamble	System Character, System Character & Country Code, None	System Character
UPC/EAN Supplementals	No Supplemental, Supplemental Only, Autodiscriminate	No Supplemental
Beep After Good Decode	Enable, Disable	Enable
Beeper Volume	Low, Full	Full
Trigger Mode (triggered models only)	Triggered, Triggerless	Triggered
Decode Redundancy	Level 0, Level 1, Level 2	Level 0

Beeper Definitions

Standard Use

BEEPER SEQUENCE	INDICATION
1 Beep - short high tone	A symbol has been successfully decoded.
4 Beeps - long high tone	No POS Terminal Type selected. Select POS Terminal Type . Error in transmission to the host; loss of last data scanned. Reset the POS Terminal Type . Scan last bar code again. ITF-14 format error.
3 Beeps - short high tone	Successful power-up or reset.

Parameter Menu Scanning

BEEPER SEQUENCE	INDICATION
1 Beep - short high tone	Appropriate menu within the scanning sequence has been read.
1 Beep - warble sound	Parameter value has been entered successfully.
2 Beeps - long low tone	Incorrect programming sequence performed. Scan CANCEL and begin sequence again.