Chapter 3 Scanning

Ready, Test, Scan

1. Ready

    Make sure all connections are secure.

2. Test

    Aim the scanner away from you and press the trigger. When you press the trigger, the scanning beam is energized for approximately 3.0 seconds (default).

3. Scan

    Make sure the symbol you want to scan is within the scanning range. See the *LS 400X Decode Zone* diagram on page 3-4.

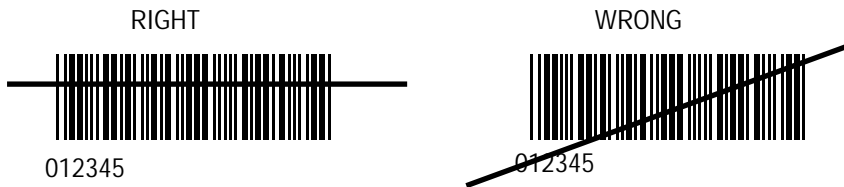   The scanner has read the symbol when:

    - You hear a short, high tone beep (if the beeper is enabled).
    - The yellow LED on the rear of the scanner turns green.

      The green LED stays lit until the next trigger pull, unless *LOW POWER* mode is selected. In this case, the LED is extinguished following the decode beep.

Aiming

Scan the Entire Symbol

- Cross every bar and space of the symbol with the scan beam.
- Hold the scanner further away for larger bar codes.
- Hold the scanner closer for symbols with bars that are close together.

RIGHT   WRONG

012345   012345

Hold at an Angle

Do not hold the scanner directly over the bar code. Laser light reflecting *directly* back into the scanner from the bar code is known as specular reflection. This strong light can "blind" the scanner and make decoding difficult. The area where specular reflection occurs is known as a "dead zone."

You can tilt the scanner up to 65° forward or back and still achieve a successful decode (Figure 3-1.). Simple practice quickly shows what tolerances to work within.
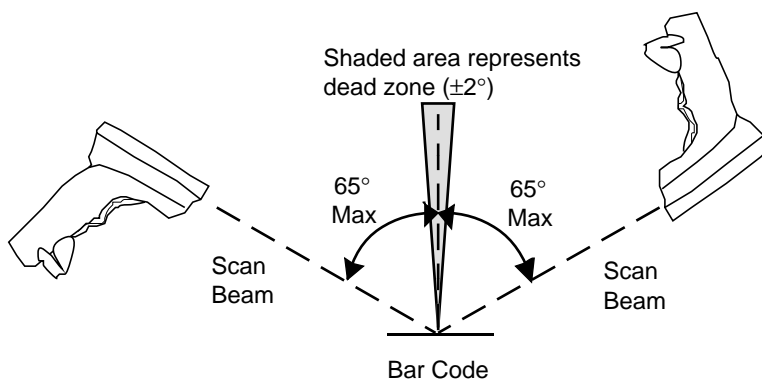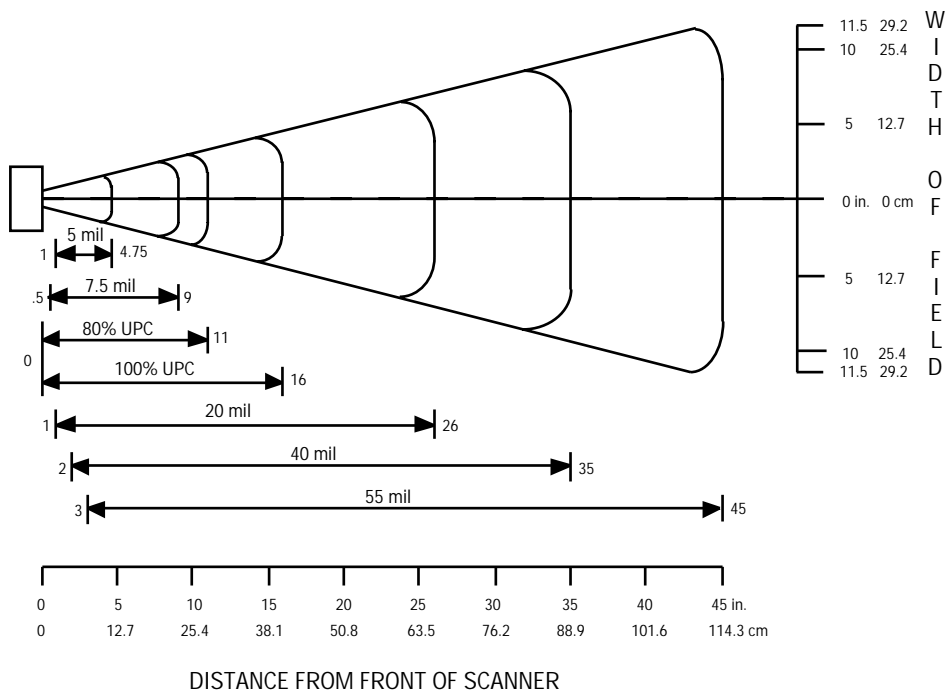
Shaded area represents
dead zone (±2°)

65°
Max

65°
Max

Scan
Beam

Scan
Beam

Bar Code

Figure 3-1. Maximum Tilt Angles and Dead Zone

LS 400X Decode Zone

Decode zone measurements are based on an integrated LS 400X scanner reading high quality bar codes at 23°C. Discrete LS 4000 scanner performance may vary slightly depending on interface controller or portable terminal being used.

Figure 3-2. LS 400X Decode Zone

What If...

Nothing happens when you follow the operating instructions?

You Should

- Check the system power. Is there a battery in the battery box?
- Be sure the scanner is programmed for the terminal in use.
- Make sure the scanner is programmed to read the type of bar code you are scanning.
- Check for loose cable connections.
- Check the symbol to make sure it is not defaced.
- Try scanning test symbols of the same code type.

Symbol is decoded, but not transmitted to the host terminal?

You Should

- Be sure the proper host type is selected (See *Chapter 5*).

Scanned data is incorrectly displayed on the terminal?

You Should

- Make sure the system is programmed for the correct keyboard type.
- Make sure the CAPS LOCK key is off.
- Be sure the proper host is selected.
- Be sure editing options (e.g. UPC-E to UPC-A Conversion) are properly programmed.

  Note: If after performing these checks the symbol still does not scan, contact your distributor or call the *Symbol Support Center*. See page vii for the telephone number.