

L S 2 1 0 0 S e r i e s



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Patents

This product is covered by one or more of the following U.S. and foreign Patents:

U.S. Patent No. 4,496,831; 4,593,186; 4,603,262; 4,607,156; 4,652,750; 4,673,805;
4,736,095; 4,758,717; 4,760,248; 4,806,742; 4,816,660; 4,845,350; 4,896,026; 4,897,532;
4,923,281; 4,933,538; 4,992,717; 5,015,833; 5,017,765; 5,021,641; 5,029,183; 5,047,617;
5,103,461; 5,113,445; 5,130,520; 5,140,144; 5,142,550; 5,149,950; 5,157,687; 5,168,148;
5,168,149; 5,180,904; 5,216,232; 5,229,591; 5,230,088; 5,235,167; 5,243,655; 5,247,162;
5,250,791; 5,250,792; 5,260,553; 5,262,627; 5,262,628; 5,266,787; 5,278,398; 5,280,162;
5,280,163; 5,280,164; 5,280,498; 5,304,786; 5,304,788; 5,306,900; 5,321,246; 5,324,924;
5,337,361; 5,367,151; 5,373,148; 5,378,882; 5,396,053; 5,396,055; 5,399,846; 5,408,081;
5,410,139; 5,410,140; 5,412,198; 5,418,812; 5,420,411; 5,436,440; 5,444,231; 5,449,891;
5,449,893; 5,468,949; 5,471,042; 5,478,998; 5,479,000; 5,479,002; 5,479,441; 5,504,322;
5,519,577; 5,528,621; 5,532,469; 5,543,610; 5,545,889; 5,552,592; 5,557,093; 5,578,810;
5,581,070; 5,589,679; 5,589,680; 5,608,202; 5,612,531; 5,619,028; 5,627,359; 5,637,852;
5,664,229; 5,668,803; 5,675,139; 5,693,929; 5,698,835; 5,705,800; 5,714,746; 5,723,851;
5,734,152; 5,734,153; 5,742,043; 5,745,794; 5,754,587; 5,762,516; 5,763,863; 5,767,500;
5,789,728; 5,789,731; 5,808,287; 5,811,785; 5,811,787; 5,815,811; 5,821,519; 5,821,520;
5,823,812; 5,828,050; 5,850,078; 5,861,615; 5,874,720; 5,875,415; 5,900,617; 5,902,989;
5,907,146; 5,912,450; 5,914,478; 5,917,173; 5,920,059; 5,923,025; 5,929,420; 5,945,658;
5,945,659; 5,946,194; 5,959,285; 6,002,918; 6,021,947; 6,036,098; 6,047,892; 6,050,491;
6,053,413; 6,056,200; 6,065,678; 6,067,297; 6,068,190; 6,082,621; 6,084,528; 6,088,482;
6,092,725; 6,101,483; 6,102,293; 6,104,620; 6,114,712; 6,115,678; 6,119,944; 6,123,265;
6,131,814; 6,138,180; 6,142,379; 6,172,478; 6,176,428; 6,178,426; 6,186,400; 6,188,681;
6,209,788; 6,216,951; 6,220,514; 6,243,447; 6,244,513; 6,247,647; 6,250,551; 6,295,031;
D305,885; D341,584; D344,501; D359,483; D362,453; D363,700; D363,918; D370,478;
D383,124; D391,250; D405,077; D406,581; D414,171; D414,172; D418,500; D419,548;
D423,468; D424,035; D430,158; D430,159; D431,562; D436,104.

Invention No. 55,358; 62,539; 69,060; 69,187 (Taiwan); No. 1,601,796; 1,907,875;
1,955,269 (Japan); European Patent 367,299; 414,281; 367,300; 367,298; UK 2,072,832;
France 81/03938; Italy 1,138,713.
rev. 10/01

Introduction

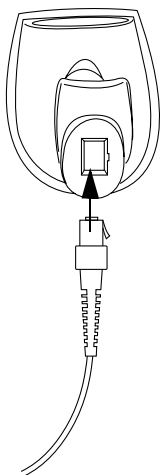
The LS 2100 Series scanners are lightweight laser scanners which combine the best in basic scanning performance and value. The 2100 series is made up of three versions of the scanner, which differ in their host interface capability. The three versions are as follows:

- LS 2100: the undecoded version
- LS 2104: the RS-232 and Synapse version
- LS 2106: the Keyboard Wedge and Synapse version

This *Quick Reference Guide* provides basic instruction on the set up and use of the scanner. Unless otherwise noted, the term LS 21xx refers to all versions of the scanner.

Setting up the LS 21xx

To set up the scanner, you must first attach the interface cable to the bottom of the scanner, ensuring that the connection is secure.

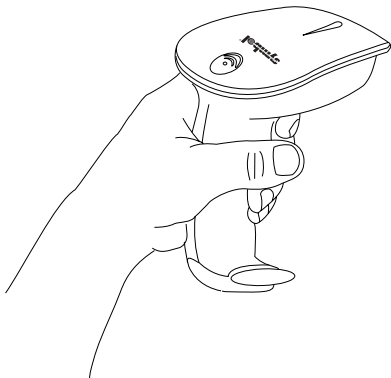




Scanning with the LS 21xx

Before you can use the scanner, it should have already been installed and programmed. If not, consult the appropriate **LS 21xx Product Reference Guide** for your specific scanner. If you need assistance, contact your local supplier or Symbol Technologies.

1. Before you use the scanner, make sure all cable connections are secure.
2. Aim the scanner away from you. Press the trigger; the scan beam lights and an orange light illuminates at the rear of the scanner.
3. Make sure the bar code is in the correct scanning range. Aim and press the trigger. The scanner has read the symbol when:
 - You hear a beep.
 - The orange light turns green.
 - The red laser turns off.

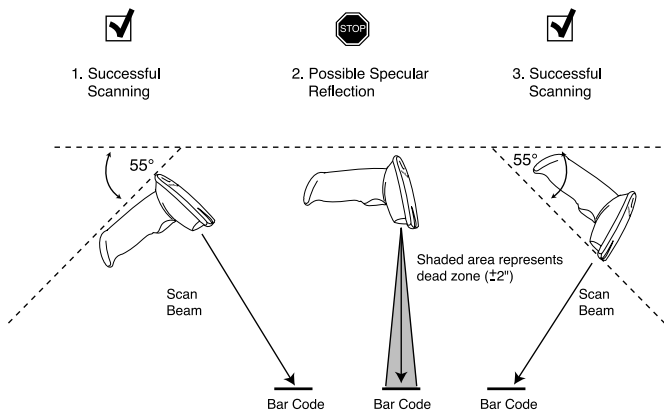


Aiming

Hold at an angle

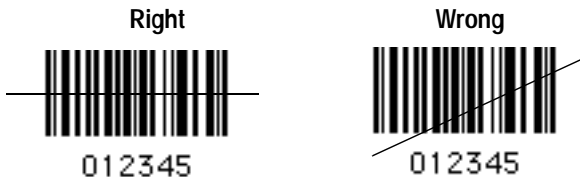
Do not hold the scanner directly over the bar code. Laser light reflecting *directly* back into the scanner from the bar code is known as specular reflection. This strong light can “blind” the scanner and make decoding difficult. The area where specular reflection occurs is known as a “dead zone”.

You can tilt the scanner up to 55° forward or back and achieve a successful decode. Simple practice quickly shows what tolerances to work within.



Scan the Entire Symbol

- The scan beam must cross every bar and space on the symbol (as in the left bar code below).
- The larger the symbol, the farther away you should hold the scanner.
- Hold the scanner closer for symbols with bars that are close together.



What Does The Beep Mean?

When you hear 1 beep (short high tone) it means data has been decoded successfully. If any other beeps are heard, contact the technical person in charge of scanning.

Troubleshooting

If the scanner does not work after you've followed these operating instructions:

- Check the system power.
- Check for loose cable connections.
- Be sure the scanning system is programmed to read the type of bar code you are trying to scan.
- Check to be sure the symbol is not defaced.

Cleaning

Note: LS 2100 series scanners require no user maintenance.

Wipe the scanner window periodically with a lens tissue or other material suitable for cleaning optical material, such as eyeglasses.

Caution: Do not pour, spray or spill any liquid on the scanner.

Introduction

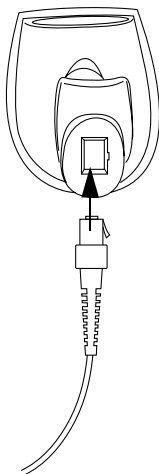
La série des lecteurs LS 2100 se compose de lecteurs légers qui offrent un rapport performances/prix imbattable. La série 2100 est déclinée en trois versions de lecteurs offrant des capacités d'interfaçage avec l'hôte différentes :

- LS 2100 : la version non décodée
- LS 2104 : la version RS-232 et Synapse
- LS 2106 : la version émulation clavier et Synapse

Ce *Guide utilisateur* fournit des instructions de base sur l'installation et l'utilisation du lecteur. Sauf indication contraire, l'appellation « LS 21xx » désigne toutes les versions du lecteur.

Installation du LS 21xx

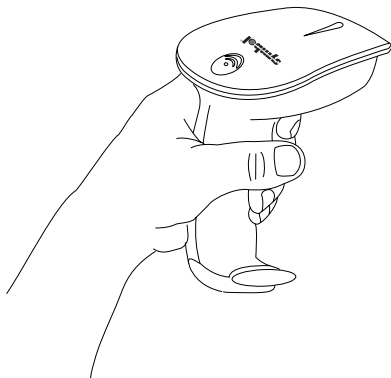
Pour installer le lecteur, vous devez tout d'abord raccorder le câble d'interface au dessous du lecteur et vous assurer qu'il est bien engagé à fond.



Maniement du LS 21xx

Pour pouvoir utiliser le lecteur, il doit avoir été installé et programmé. Si tel n'est pas le cas, reportez-vous au **Guide de référence produit LS 21xx** de votre lecteur. En cas de problème, prenez contact avec votre fournisseur local ou Symbol Technologies.

1. Avant d'utiliser le lecteur, vérifiez que tous les câbles sont bien branchés.
2. Pointez le lecteur, puis appuyez sur la gâchette. Le faisceau de lecture apparaît et un témoin orange s'allume sur l'arrière du lecteur.
3. Vérifiez que le code à barres est à la bonne distance, visez, puis appuyez sur la gâchette. Le décodage du code est effectué lorsque :
 - Un bip retentit.
 - Le témoin orange vire au vert.
 - Le faisceau laser rouge est coupé.

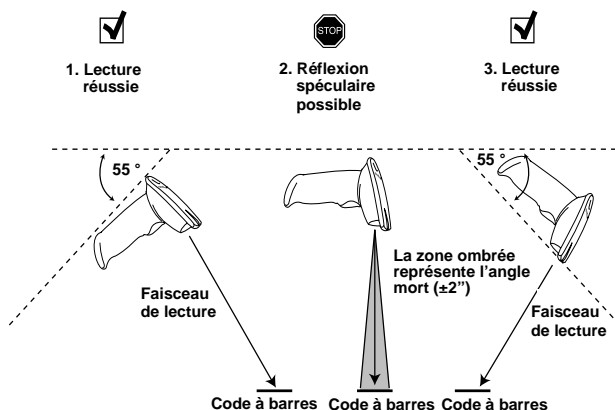


Visée

Inclinaison du lecteur

Ne tenez pas le lecteur perpendiculairement au code à barres. Le faisceau laser renvoyé par le code risque de se réfléchir *directement* dans le lecteur et d'engendrer un phénomène de réflexion spéculaire. L'intensité du faisceau risque « d'aveugler » le lecteur et de rendre la lecture délicate. L'angle dans lequel se produit la réflexion spéculaire est appelé l'« angle mort ».

Vous pouvez incliner le lecteur jusqu'à 55 ° vers l'avant ou l'arrière pour réaliser un décodage réussi. Avec un peu de pratique, vous vous familiariserez rapidement avec les angles de lecture.



Lecture de l'intégralité du code

- Le faisceau de lecture doit recouvrir toutes les barres et espaces composant le code (comme dans l'exemple de gauche ci-dessous).
- Plus le code est large, plus vous devrez éloigner le lecteur.
- Inversement, plus le code est dense, plus vous devrez rapprocher le lecteur.

**Correct****Incorrect**

Signification du bip

Lorsqu'un seul bip (signal sonore aigu et bref) retentit, cela signifie que le décodage des données a été effectué. Si vous entendez d'autres bips, contactez le technicien responsable de la lecture.

Dépannage

Si le lecteur ne fonctionne pas lorsque vous vous êtes conformé à ce mode d'emploi :

- Vérifiez que le système est sous tension.
- Vérifiez les branchements.
- Vérifiez que le système de lecture est programmé pour lire le type de code à barres en question.
- Vérifiez que le code est en bon état.

Nettoyage

Remarque : La série des lecteurs LS 2100 ne nécessite aucun entretien spécial.

Il suffit de nettoyer régulièrement la fenêtre de lecture avec un chiffon pour objectif ou un tissu convenant pour le nettoyage des optiques, tels que les lunettes.

Attention : Ne vaporisez ni versez de liquide sur le lecteur.

Einführung

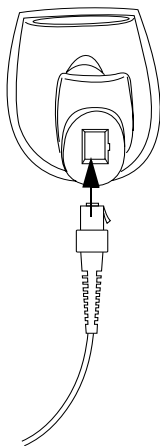
Die Scanner der Serie LS 2100 sind leichte Laserscanner, die Ihnen optimales Basisscannen und hohen Gegenwert bieten. Die Serie LS 2100 setzt sich aus drei Versionen des Scanners zusammen, die sich in ihrer Hostschnittstellenleistungsfähigkeit unterscheiden. Es handelt sich um die folgenden drei Versionen:

- LS 2100: die nicht decodierte Version
- LS 2104: die RS-232- und Synapsenversion
- LS 2106: die Tastaturweichen- und Synapsenversion

Diese *Kurzübersicht* enthält die grundlegenden Anleitungen zum Durchführen des Set-ups und zur Benutzung des Scanners. Sofern nicht abweichend angegeben bezieht sich die Bezeichnung LS21xx auf alle Versionen des Scanners.

Einrichten des LS 21xx

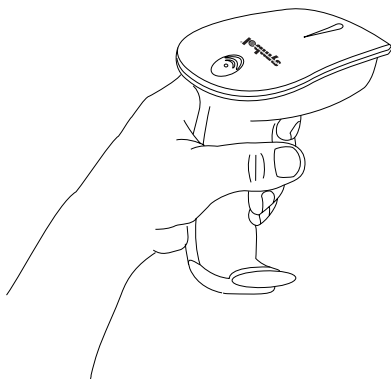
Zum Einrichten des Scanners müssen Sie zunächst das Schnittstellenkabel an der Unterseite des Scanners anbringen und darauf achten, daß es fest sitzt.



Scannen mit dem LS 21xx

Bevor Sie den Scanner benutzen können, sollte dieser bereits installiert und programmiert sein. Falls nicht, ziehen Sie den für Ihren Scanner gültigen **LS 21xx Produktleitfaden** zu Rate. Falls Sie Hilfe benötigen, wenden Sie sich an Ihren Händler vor Ort oder an Symbol Technologies.

1. Achten Sie vor dem Benutzen des Scanners auf festen Sitz aller Kabelverbindungen.
2. Richten Sie den Scanner von sich weg. Betätigen Sie den Auslöser; der Scanstrahl leuchtet auf, und an der Scannerrückseite geht eine orangefarbene Leuchte an.
3. Achten Sie darauf, daß sich der Barcode innerhalb des korrekten Scanabstands befindet. Zielen Sie und betätigen Sie den Auslöser. Der Scanner hat das Symbol unter folgenden Bedingungen gelesen:
 - Sie hören einen Piepton.
 - Das orangefarbene Licht wird grün.
 - Der Laser schaltet ab.

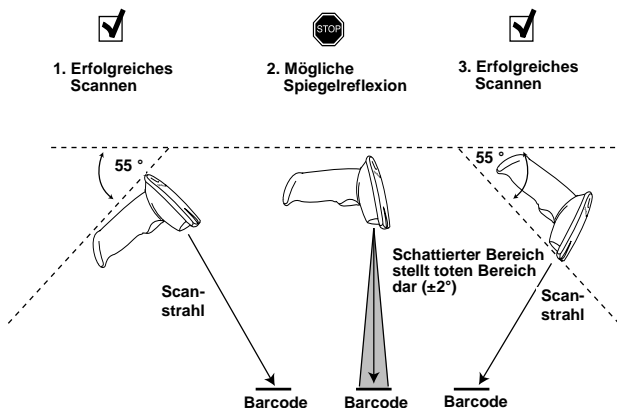


Zielen

Positionierung

Halten Sie den Scanner nicht unmittelbar über den Barcode. Das vom Barcode *direkt* in den Scanner zurückreflektierte Laserlicht wird als Spiegelreflexion bezeichnet. Dieses starke Licht kann den Scanner blenden und das Decodieren erschweren. Der Bereich, in dem die Spiegelreflexion auftritt wird als „toter Bereich“ bezeichnet.

Sie können den Scanner um bis zu 55° nach vorn oder hinten neigen und dennoch erfolgreich decodieren. Durch einfaches Üben lernen Sie die zulässigen Arbeitstoleranzen kennen.



Gesamtes Symbol scannen

- Der Scanstrahl muß alle Striche und Zwischenräume des Symbols (wie im Fall des linken Barcodes unten dargestellt) erfassen.
- Je größer das Symbol, desto größer sollte die Entfernung des Scanners sein.
- Bei Symbolen, bei denen die Striche enger beieinander liegen,



sollten Sie den Scanner näher heranzuführen.

Richtig



012345

Falsch



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Was bedeutet der Piepton?

Wenn Sie einen Piepton (einen kurzen hohen Ton) hören, bedeutet dies, daß die Daten erfolgreich decodiert wurden. Sollten Sie irgendeinen anderen Ton hören, wenden Sie sich an den für das Scannen zuständigen Techniker.

Fehlersuche

Falls der Scanner trotz Befolgens der Bedienungsanweisungen nicht funktionieren sollte, gehen Sie wie folgt vor:

- Prüfen Sie nach, ob das System mit Strom versorgt wird.
- Achten Sie auf festen Sitz aller Kabelverbindungen.
- Vergewissern Sie sich, daß das Scansystem für den Barcodetyp programmiert ist, den Sie scannen möchten.
- Überprüfen Sie, ob das Symbol noch in Ordnung ist.

Reinigen

Hinweis: Die Scanner der Serie LS 2100 erfordern keine Wartung seitens des Benutzers.

Wischen Sie das Scannerfenster regelmäßig mit einem Tuch oder mit sonstigen für das Reinigen von optischen Komponenten wie Brillen geeigneten Materialien ab.

Vorsicht: Achten Sie darauf, keine Flüssigkeiten auf den Scanner zu gießen, spritzen oder zu verschütten.

Introduzione

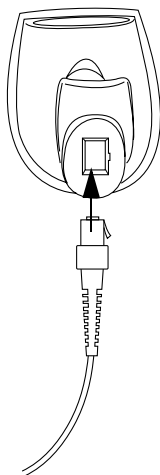
Gli scanner LS 2100 sono scanner a laser leggeri caratterizzati dal miglior rapporto valore-prestazioni. La serie 2100 è composta da tre versioni dello scanner, che differiscono nelle capacità di interfaccia con l'host. Le tre versioni sono riportate di seguito.

- LS 2100: la versione senza decodifica
- LS 2104: la versione RS-232 e Synapse
- LS 2106: la versione Keyboard Wedge e Synapse

La presente *Guida rapida* fornisce le istruzioni di base relative all'impostazione e all'uso dello scanner. Salvo indicazione contraria, il termine LS 21xx si riferisce a tutte le versioni dello scanner.

Impostazione dello scanner LS 21xx

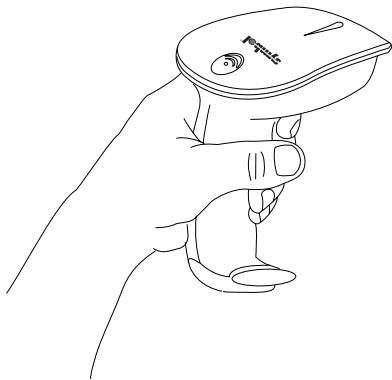
Per l'impostazione dello scanner, in primo luogo inserire il cavo di interfaccia nella parte inferiore dello scanner e controllare che la connessione sia ben fissata.



Letture con lo scanner LS 21xx

Prima dell'uso, lo scanner dovrebbe già essere stato installato e programmato. In caso contrario, consultare il **Manuale di riferimento dello scanner LS 21xx** in uso. In caso si desideri assistenza, contattare il fornitore locale o la Symbol Technologies.

1. Prima di usare lo scanner, verificare che tutte le connessioni dei cavi siano ben fissate.
2. Mirare lo scanner lontano da se stessi. Premere il grilletto, il fascio di scansione si illumina e l'indicatore luminoso di colore arancione si accende nella parte posteriore dello scanner.
3. Verificare che il codice a barre si trovi nel corretto campo di scansione. Mirare e premere il grilletto. La lettura del simbolo da parte dello scanner è avvenuta quando:
 - Viene emesso un segnale acustico.
 - L'indicatore luminoso di colore arancione diventa verde.
 - Il raggio laser di colore rosso si spegne.

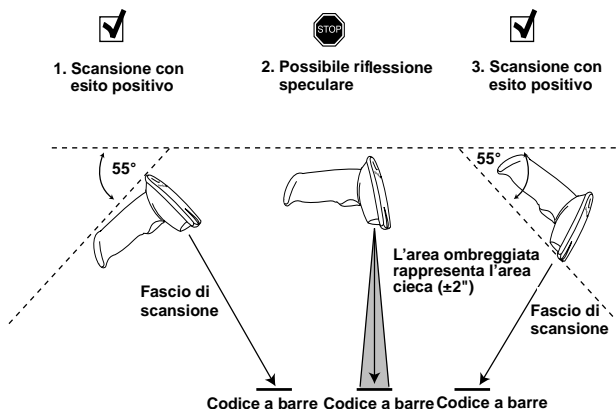


Mira

Posizionamento ad angolo

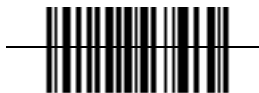
Non tenere lo scanner direttamente sopra al codice a barre. Il fascio luminoso laser che si riflette direttamente nello scanner dal codice a barre è noto come riflessione speculare. Questo forte fascio luminoso può “schermare” lo scanner e rendere difficile la decodifica. L'area in cui avviene la riflessione speculare è nota come “area cieca”.

È possibile inclinare lo scanner fino a 55° in avanti o all'indietro ed ottenere una decodifica valida. La semplice pratica mostrerà in tempi rapidi entro quali tolleranze operare.



Letture dell'intero simbolo

- Il fascio di scansione deve attraversare ogni barra e spazio presenti sul simbolo (come nel codice a barre riportato nella pagina seguente).
- Maggiore è la larghezza del simbolo, maggiore deve essere la distanza a cui è necessario tenere lo scanner.
- Tenere lo scanner più vicino ai simboli le cui barre sono ravvicinate.

**Corretto**

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Non corretto

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Cosa indica il segnale acustico?

Quando viene emesso un segnale acustico (breve tono alto) significa che i dati sono stati decodificati con esito positivo. Se vengono emessi altri segnali acustici, contattare il tecnico responsabile della scansione.

Risoluzione dei problemi

Se lo scanner non funziona dopo aver seguito queste istruzioni, effettuare le operazioni riportate di seguito.

- Controllare l'alimentazione del sistema.
- Verificare la presenza di connessioni difettose dei cavi.
- Assicurarci che il sistema di scansione sia programmato per la lettura del tipo di codice a barre che si desidera decodificare.
- Controllare che il simbolo non sia cancellato.

Pulizia

Nota: Gli scanner LS 2100 non richiedono alcuna manutenzione ordinaria.

Pulire periodicamente la finestra di scansione con una salvietta per lenti o altro materiale adatto alla pulizia di articoli ottici come gli occhiali.

Attenzione: Non versare, vaporizzare o rovesciare liquidi sullo scanner.

Introducción

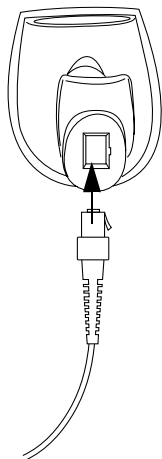
La serie LS 2100 dispone de scanners láser ligeros que combinan un rendimiento de lectura básica inmejorable con un precio óptimo. La serie 2100 consta de tres versiones del scanner, que se diferencian en la capacidad de la interfaz del ordenador central. Estas son las tres versiones:

- LS 2100: versión sin decodificador
- LS 2104: versión RS-232 y Synapse
- LS 2106: versión Synapse y emulación de teclado

Esta *Guía de Referencia Rápida* facilita instrucciones básicas sobre la configuración y utilización del scanner. A menos que se indique lo contrario, el término LS 21xx hace referencia a todas las versiones del scanner.

Configuración del LS 21xx

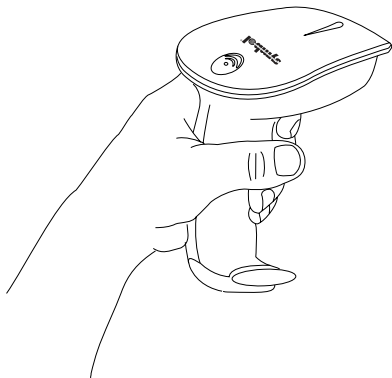
Para configurar el scanner, primero debe conectar el cable de interfaz a la parte inferior del scanner y comprobar que queda bien fijado.



Lectura con el LS 21xx

Para comenzar a utilizar el scanner, es preciso que ya esté instalado y programado. En caso contrario, consulte la **Guía de Referencia del Producto LS 21xx** correspondiente al scanner en cuestión. Si necesita ayuda, diríjase al proveedor local o a Symbol Technologies.

1. Antes de utilizar el scanner, asegúrese de que las conexiones de los cables estén bien aseguradas.
2. Apunte con el scanner hacia adelante. Pulse el gatillo, se encenderá el haz de lectura y una luz naranja se iluminará en la parte posterior del scanner.
3. Asegúrese de que el código de barras esté dentro del rango de lectura correcto. Apunte y pulse el gatillo. El scanner ha leído el símbolo cuando:
 - usted oye una señal sonora.
 - la luz naranja se vuelve verde.
 - el láser rojo se apaga.

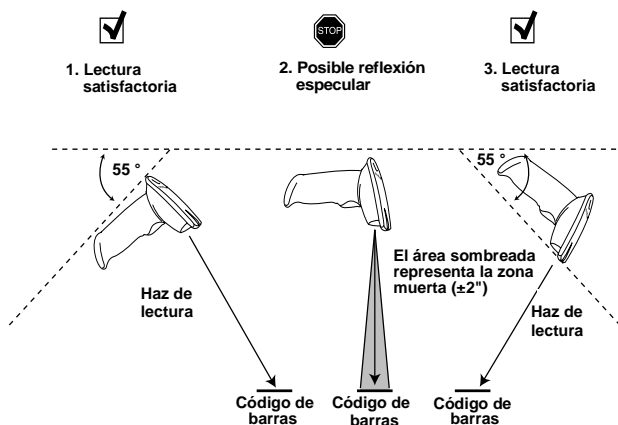


Para apuntar correctamente

Sujeción en ángulo

No sostenga el scanner directamente sobre el código de barras. La luz del láser que se refleja *directamente* en el scanner desde el código de barras se conoce como reflejo especular. Esta fuerte luz puede “cegar” al scanner y dificultar la descodificación. El área en la que se produce el reflejo especular se denomina “zona muerta”.

Puede inclinar el scanner hasta 55° hacia adelante o atrás para lograr una correcta descodificación. Con algo de práctica se familiarizará con el rango de tolerancia dentro del cual opera el aparato.



Para leer la totalidad del símbolo

- El haz de lectura debe cruzar todas las barras y espacios del símbolo (como en el código de barras de la izquierda que encontrará a continuación).
- Cuanto más grande sea el símbolo, tanto mayor será la distancia desde la que deberá apuntar y leerlo.
- Aproxime más el scanner a los símbolos cuyas barras estén muy juntas entre sí.

**Correcto**

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Incorrecto

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¿Qué significa la señal sonora?

Cuando perciba una señal (breve tono alto) esto indica que los datos han sido descodificados con éxito. Si escucha otras señales, consulte al técnico responsable de la lectura.

Solución de problemas

Si el scanner no funciona una vez ejecutadas estas instrucciones para su operación:

- Verifique la alimentación del sistema.
- Compruebe que las conexiones de los cables estén bien aseguradas.
- Asegúrese de que el sistema de lectura está programado para leer el tipo de código de barras que intenta leer.
- Compruebe que el símbolo no está deteriorado.

Limpieza

Nota: Los scanners de la serie LS 2100 no precisan mantenimiento por parte del usuario.

Limpie periódicamente la ventana del scanner con un paño para lentes u otro material apropiado para la limpieza de material óptico, como las gafas.

Precaución: No vierta, rocíe ni derrame ningún tipo de líquido sobre el scanner.

はじめに

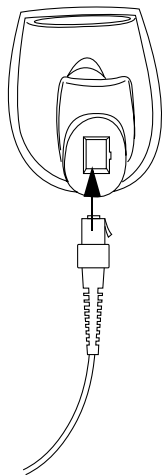
LS 2100 シリーズスキャナは、基本的スキャン パフォーマンスと使いやすさを兼ね備えた軽量のレーザ スキャナです。この 2100 シリーズには次の 3 つのバージョンがあり、それぞれホスト インタフェース機能が異なります。

- LS 2100 : ノンデコード バージョン
- LS 2104 : RS-232 および Synapse バージョン
- LS 2106 : Keyboard Wedge および Synapse バージョン

このクイック リファレンス ガイドでは、スキャナの基本的なセットアップ方法および使用方法について説明します。別途個々のバージョンが明記されていないかぎり、LS 21xx と記載されている場合は、上記 3 つのバージョンすべてを意味します。

LS 21xx のセットアップ

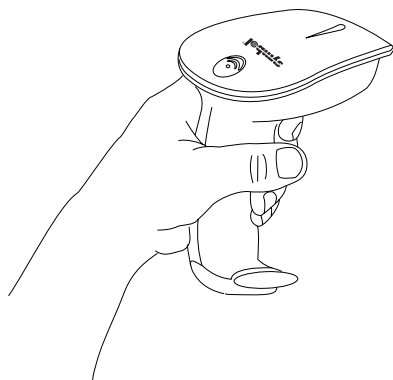
スキャナをセットアップするには、まず、インタフェース ケーブルをスキャナの下部に、しっかりと取り付けます。



LS 21xx 操作方法

スキャナを使用する前に、設定が必要です。該当する LS21xx 製品の取扱説明書を用いて、設定を行ってください。サポートが必要な場合は、最寄りの販売店または Symbol Technologies までお問い合わせください。

1. スキャナを使用する前に、ケーブルがしっかりと接続されていることを確認してください。
2. スキャナを構え、トリガを引きます。スキャンビームが射出され、スキャナ後部の LED がオレンジ色に点灯します。
3. バーコードが読み取り範囲内にあることを確認してから、トリガを引きます。次のようになれば、スキャナがバーコードをうまく読み込めたこととなります。
 - ピッとというピーパ音が鳴ります。
 - スキャナ後部の LED がオレンジ色から緑色に変わります。
 - 赤色のレーザ光が消えます。



読み取り操作

スキャナを傾けて持つ

スキャナをバーコード面に対して直角に向けないでください。バーコードから直接スキャナに反射して戻るレーザ光は、鏡面反射と呼ばれます。この強い光でスキャナが「眼つぶし」された状態になり、デコードしにくくなります。鏡面反射した部分は「デッドゾーン」と呼ばれます。

スキャナの前後 55° の範囲内で読み取りが可能です。最適な読み取り角度は実際に操作することでお分かりになります。



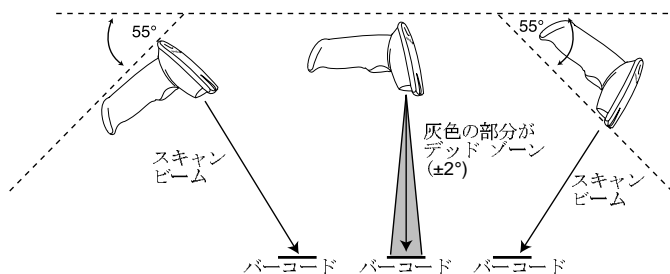
1. うまくスキャン
できます



2. 鏡面反射の可能
性があります

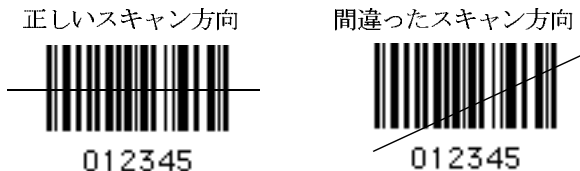


3. うまくスキャン
できます



バーコード全体をスキャンする

- スキャンビームがバーコード全体を横切るようにスキャンする必要があります。(以下の左のバーコードを参照)。
- バーコードのサイズが大きくなるにつれ、スキャナをバーコードから遠ざける必要があります。
- バーが細いバーコードの場合はスキャナをバーコードに近づけてください。



ピーパ音

ピーパ音（高く短いピツという音）が一度鳴った場合は、デコードがうまくできたことを意味します。その他の音が鳴った場合は、スキャナ担当の技術者にお問い合わせください。

トラブルシューティング

上記の内容に従って操作してもスキャナがうまく機能しない場合は、次のように点検してください。

- システムの電源が入っているか確認してください。
- ケーブルの接続部分が緩んでいないかどうか確認してください。
- スキャナが、スキャンするバーコードの種類を読み込めるように設定されているかどうか確認してください。
- バーコードが、表面の汚れなどのために読めない状態になっていないかどうか確認してください。

クリーニング

注記：LS 2100 シリーズスキャナは、ユーザによるメンテナンスの必要はありません。

レンズ用ティッシュまたはメガネなどを拭くのに適した材質のもので、スキャナのウィンドウの汚れを定期的に拭き取ってください。

注意： スキャナに液体をかけたり、散布したり、こぼしたりしないでください。

快速查阅

快速查阅

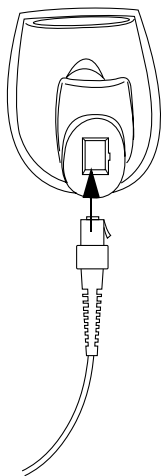
LS 2100 系列扫描器是轻型激光扫描器。它们兼备最佳的基本扫描性能和价值。2100 系列由不同接口的三种型号的扫描器组成。这三种型号如下：

- LS 2100：不解码型
- LS 2104：RS-232 和智能型
- LS 2106：键盘仿真和智能型

本《快速参考指南》提供关于扫描器设置及其使用的基本说明。除另行说明外，LS 21xx 是指所有型号的扫描器。

安装 LS 21xx

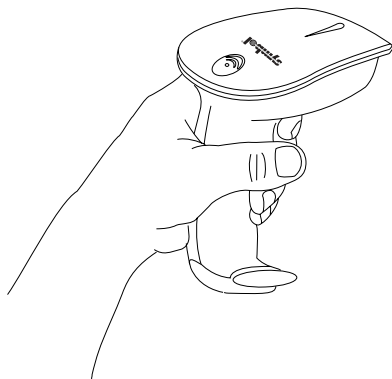
若要安装扫描器，您必须首先将接口电缆接到扫描器底部，确保连接可靠。



用 LS21xx 扫描

您使用扫描器前，它应该已被安装好和编好程序。否则，查阅您特定扫描器的相应 LS 21xx 产品参考指南。如需要帮助，请联系您的本地供应商或 Symbol Technologies。

1. 在您使用扫描器以前，确保所有电缆连接一定要可靠。
2. 扫描器不要瞄准人。按触发开关，扫描光束亮起，同时扫描器后部橙色灯也亮起。
3. 条形码一定要在正确扫描范围内。瞄准并按触发开关。当下例讯号出现时，表明扫描器已读取符号。
 - 您听到嘟嘟声。
 - 橙色灯变绿。
 - 红色激光器关闭。

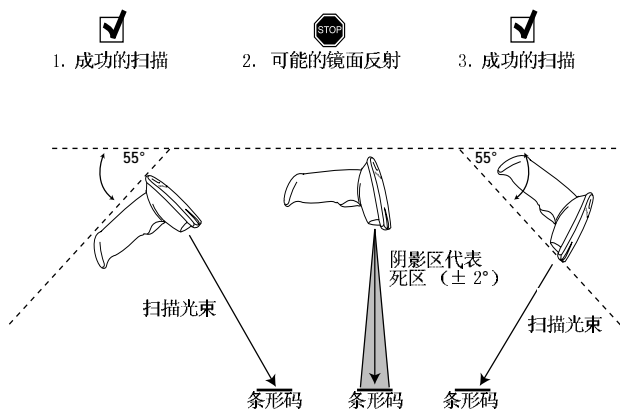


瞄准

按一定角度操作

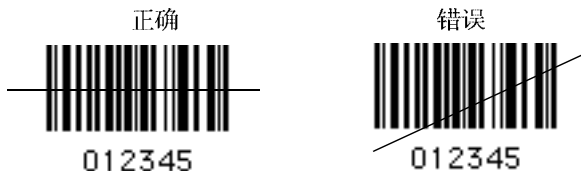
不要把扫描器对着条形码正上方。从条形码直接反射回扫描器的激光被称为镜面反射。这种强光能使扫描器失去判断力，造成解码困难。发生镜面反射的区域通常称为“死区”。

您可以向前或向后倾斜扫描器最多达 55 度以实现良好的解码。通过简单的练习就可很快地掌握在什么角度容限内工作。



扫描整个符号

- 扫描光束必须横穿符号上每个条和空格（如下面左条形码中所示）。
- 符号越大，您应把扫描器拿得越远一点。
- 对条密集的符号，把扫描器拿近一点。



“嘟嘟”声是什么意思？

当您听到“嘟嘟”声（短高音调）时，它的意思是数据已被解码完成。如果听到别的声音，请与负责扫描的技术人员联系。

故障查询

如果您按照这些操作说明做了以后，扫描器仍不工作：

- 检查系统电源。
- 检查电缆连接是否松动。
- 确保编好的扫描系统程序能读取您要扫描的条形码类型。
- 检查并确定符号没有表面损伤。

清洁

注意： LS2100 系列扫描器不需要用户维护。

用镜头纸或其它适于清洁光学器材（如眼镜）的材料定期擦拭扫描器窗口。

小心： 切勿将任何液体倾倒、喷射或溅到扫描器上。

소개

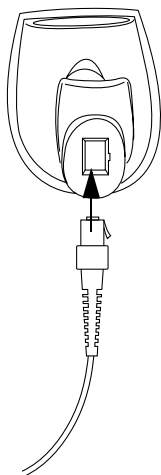
LS 2100 시리즈 스캐너는 기본적인 스캔 성능과 유용성이 최적으로 결합된 초경량의 레이저 스캐너입니다. 2100 시리즈는 세 가지 버전의 스캐너로 구성되는데, 각기 호스트 인터페이스 기능에 차이가 있습니다. 세 가지 버전은 다음과 같습니다.

- LS 2100: 비해독 버전
- LS 2104: RS-232 및 시넵스 버전
- LS 2106: 키보드 웨지 및 시넵스 버전

이 *요약 설명서*는 스캐너 설치와 사용에 관한 기본 지침을 제공합니다. 따로 언급하지 않는 한 LS 21xx 는 스캐너의 모든 버전을 말하는 것입니다.

LS 21xx 설정하기

스캐너를 설정하려면, 먼저 인터페이스 케이블을 스캐너 밑에 부착하고 확실히 연결되었는지 확인해야 합니다.

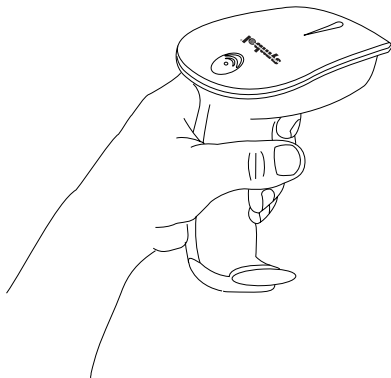




LS 21xx 로 스캔하기

스캐너를 사용하려면, 먼저 스캐너를 설치하고 프로그램해 두어야 합니다. 그렇지 않았을 경우, 특정 스캐너에 대하여 해당 *LS 21xx 제품 설명서*를 참조하십시오. 도움이 필요할 경우에는, 국내 공급업체 또는 Symbol Technologies 사에 문의하십시오.

1. 스캐너를 사용하기 전에, 반드시 모든 케이블 연결부가 확실히 연결되어 있는지 확인해야 합니다.
2. 스캐너를 몸에서 먼 쪽으로 조준합니다. 방아쇠를 누르면 스캔 광선이 켜지고 스캐너 뒷면에 오렌지색 표시등이 켜집니다.
3. 바코드가 정확한 스캔 범위 내에 있는지 확인하십시오. 조준하고 방아쇠를 누르십시오. 스캐너는 다음의 경우에 바코드 심볼을 읽어 들인 것입니다.
 - 경고음이 들릴 때.
 - 오렌지색 표시등이 녹색으로 바뀔 때.
 - 적색 레이저가 꺼질 때.



조준하기

각도를 유지하십시오

스캐너를 바코드 바로 위로 향하게 하지 마십시오. 바코드에서 스캐너로 직접 거꾸로 반사되는 레이저 광선을 거울 반사라고 합니다. 이 강한 광선이 스캐너의 “눈을 멀게” 만들어 해독을 어렵게 합니다. 거울 반사가 발생하는 구역을 “사각 지대”라고 합니다.

스캐너는 최대 55°. 전후방으로 기울어도 성공적으로 해독할 수 있습니다. 간단히 연습해 보면 허용되는 작업 범위를 쉽게 알 수 있습니다.



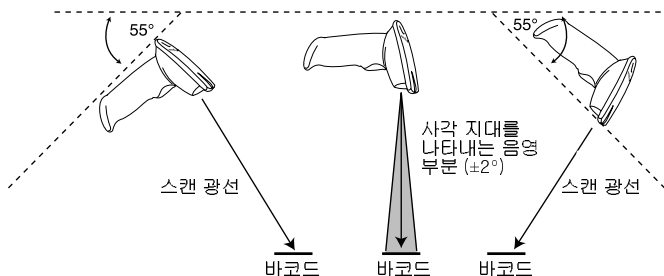
1. 성공적인 스캐닝



2. 가능한 거울 반사



3. 성공적인 스캐닝



심볼 전체를 스캔합니다

- 스캔 광선은 (아래의 왼쪽 바코드에서처럼) 바코드의 모든 바 (막대) 와 스페이스 (여백) 들을 가로 질러야 합니다.
- 심볼이 크면 클수록, 쥐고 있는 스캐너를 멀리 떨어 뜨려야 합니다.
- 바 (막대) 가 서로 가까이 붙어 있는 심볼의 경우에는 스캐너를 보다 가까이 가져 가십시오.



올바름



그름



경고음의 의미는 무엇입니까 ?

데이터를 성공적으로 해독하면 한번의 경고음 (짧은 고음) 이 들립니다. 그 외의 다른 경고음이 들리면, 스캐너를 담당하는 기술 직원에게 문의하십시오.

문제 해결하기

작동 지침을 따라 했는데도 스캐너가 작동하지 않을 경우 :

- 시스템 전원을 확인하십시오.
- 케이블 연결부가 느슨해졌는지 확인합니다.
- 스캔하려는 바코드의 형태를 읽어 들일 수 있도록 스캐닝 시스템을 프로그램 했는지 확인하십시오.
- 심볼 표면이 손상되지 않았는지 확인하십시오.

청소하기

주의 : 사용자는 LS 2100 시리즈 스캐너를 유지 보수할 필요가 없습니다.

렌즈용 티슈나 안경과 같은 유리 제품을 청소하는데 적합한 종류의 재질을 사용하여 정기적으로 스캐너 창을 닦아 주십시오.

경고 : 스캐너에 어떤 종류의 액체도 붓거나, 뿌리거나, 옆지르지 마십시오.

Ergonomic Recommendations

Caution: In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are meeting with your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

Regulatory Information

Radio Frequency Interference Requirements

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the Federal Communications Commissions Rules and Regulation. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Radio Frequency Interference Requirements - Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

CE Marking and European Union Compliance



Products intended for sale within the European Union are marked with the CE Mark which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or ENs are included:

Applicable Directives

- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 73/23/EEC

Applicable Standards

- EN 55 022 - Limits and Methods of Measurement of Radio Interference Characteristics of Information technology Equipment
- EN 50 082-1 - Electromagnetic Compatibility - Generic Immunity Standard, Part 1: Residential, commercial, Light Industry
- IEC 801.2 - Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment Part 2: Electrostatic Discharge Requirements
- IEC 801.3 - Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment Part 3: Radiated Electromagnetic Field Requirements
- IEC 801.4 - Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment Part 4: Electrical Fast Transients Requirements
- EN 60 950 + Amd 1 + Amd 2 - Safety of Information Technology Equipment Including Electrical Business Equipment

Laser Devices

Symbol products using lasers comply with US 21CFR1040.10, and IEC825-1:1993, EN60825-1:1994+A11:1996. The laser classification is marked on one of the labels on the product.

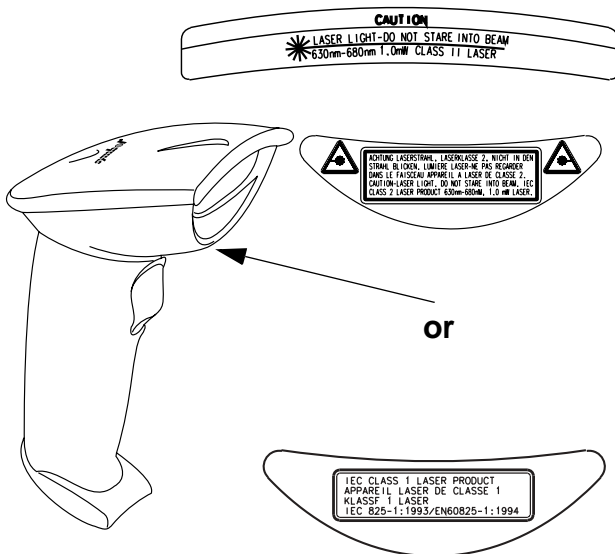
Class 1 Laser devices are not considered to be hazardous when used for their intended purpose. The following statement is required to comply with US and international regulations:

Caution: Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

Q u i c k R e f e r e n c e

Scanner Labeling



The scanner will also be marked with the following certification label:

Laser Bar Code Scanner

9B97



Listed Accessory ITE

LS 2100 Series

In accordance with Clause 5, IEC 0825 and EN60825, the following information is provided to the user:



ENGLISH
CLASS 1
CLASS 2
CLASS 1 LASER PRODUCT
LASER LIGHT
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT

DANISH
KLASSE 1
KLASSE 2
KLASSE 1 LASERPRODUKT
LASERLYF
SE IKKE IND I STRÅLEN
KLASSE 2 LASERPRODUKT
AL LASER DI CLASSE 2

DUTCH
KLASSE 1
KLASSE 2
KLASSE-1 LASERPRODUKT
LASERLICHT
NIET IN STRAAL STAREN
KLASSE-2 LASERPRODUKT

FINNISH
LUOKKA 1
LUOKKA 2
LUOKKA 1 LASERTUOTE
LASERVALO
ÄLÄ TUJOTA SÄDETTÄ
LUOKKA 2 LASERTUOTE

FRENCH
CLASSE 1
CLASSE 2
PRODUIT LASER DE CLASSE 1
LUMIERE LASER
NE PAS REGARDER LE RAYON FIXEMENT
PRODUIT LASER DE CLASSE 2

GERMAN
KLASSE 1
KLASSE 2
LASERPRODUKT DER KLASSE 1
LASERSTRAHLEN
NICHT DIREKT IN DEN LASERSTRAHL SCHAUEN
LASERPRODUKT DER KLASSE 2

HEBREW
מוצר לייזר רמה 1
רמה 1
אור לייזר
רמה 2
אין להביט אל תוך הזרם
מוצר לייזר רמה 2

ITALIAN
CLASSE 1
CLASSE 2
PRODOTTO AL LASER DI CLASSE 1
LUCE LASER
NON FISSARE IL RAGGIOPRODOTTO

NORWEGIAN
KLASSE 1
KLASSE 2
LASERPRODUKT. KLASSE 1
LASERLYS IKKE STIRR INN I LYSSTRÅLEN
LASERPRODUKT. KLASSE 2

PORTUGUESE
CLASSE 1
CLASSE 2
PRODUTO LASER DA CLASSE 1
LUZ DE LASER NÃO FIXAR O RAIO LUMINOSO
PRODUTO LASER DA CLASSE 2

SPANISH
CLASE 1
CLASE 2
PRODUCTO LASER DE LA CLASE 1
LUZ LASER
NO MIRE FIJAMENTE EL HAZ
PRODUCTO LASER DE LA CLASE 2

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KLASS 2
LASERPRODUKT KLASS 1
LASERLJUS STIRRA INTE MOT STRÅLEN
LASERPRODUKT KLASS 2

Warranty

Symbol Technologies, Inc. ("Symbol") manufactures its hardware products in accordance with industry-standard practices. Symbol warrants that the HotShot LS2100 series (the "Product") will be free from defects in materials and workmanship for a period of sixty months (60 months) from date of shipment and for the life of the product with regard to the Mylar Scan Element (consisting of a Mylar Strip, mirror assembly and magnet) embedded in the Product.

This warranty is provided to the original owner only and is not transferable to any third party. It shall not apply to any product (i) which has been repaired or altered unless done or approved by Symbol, (ii) which has not been maintained in accordance with any operating or handling instructions supplied by Symbol, (iii) which has been subjected to unusual physical or electrical stress, misuse, abuse, power shortage, negligence or accident or (iv) which has been used other than in accordance with the product operating and handling instructions. Preventive maintenance is the responsibility of customer and is not covered under this warranty.

Wear items and accessories having a Symbol serial number, will carry a 90-day limited warranty. Non-serialized items will carry a 30-day limited warranty.

Warranty Coverage and Procedure

During the warranty period, Symbol will repair or replace defective products returned to Symbol's manufacturing plant in the US. For warranty service in North America, call the Symbol Support Center at 1-800-653-5350. International customers should contact the local Symbol office or support center. If warranty service is required, Symbol will issue a Return Material Authorization Number. Products must be shipped in the original or comparable packaging, shipping and insurance charges prepaid. Symbol will ship the repaired or replacement product freight and insurance prepaid in North America. Shipments from the US or other locations will be made F.O.B. Symbol's manufacturing plant.

Symbol will use new or refurbished parts at its discretion and will own all parts removed from repaired products. Customer will pay for the replacement product in case it does not return the replaced product to Symbol within 3 days of receipt of the replacement product. The process for return and customer's charges will be in accordance with Symbol's Exchange Policy in effect at the time of the exchange.

Customer accepts full responsibility for its software and data including the appropriate backup thereof.

Repair or replacement of a product during warranty will not extend the original warranty term. Symbol's Customer Service organization offers an array of service plans, such as on-site, depot, or phone support, that can be implemented to meet customer's special operational requirements and are available at a substantial discount during warranty period.

General

Except for the warranties stated above, Symbol disclaims all warranties, express or implied, on products furnished hereunder, including without limitation implied warranties of merchantability and fitness for a particular purpose. The stated express warranties are in lieu of all obligations or liabilities on part of Symbol for damages, including without limitation, special, indirect, or consequential damages arising out of or in connection with the use or performance of the product.

Seller's liability for damages to buyer or others resulting from the use of any product, shall in no way exceed the purchase price of said product, except in instances of injury to persons or property.

Some states (or jurisdictions) do not allow the exclusion or limitation of incidental or consequential damages, so the proceeding exclusion or limitation may not apply to you.

Service Information

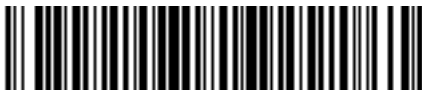
Before you use the unit, it must be configured to operate in your facility's network and run your applications.

If you have a problem running your unit or using your equipment, contact your facility's Technical or Systems Support. If there is a problem with the equipment, they will contact the Symbol Support Center:

United States ¹	1-800-653-5350 1-631-738-2400	Canada	905-629-7226
United Kingdom	0800 328 2424	Asia/Pacific	337-6588
Australia	1-800-672-906	Austria/Österreich	1-505-5794
Denmark/Danmark	7020-1718	Finland/Suomi	9 5407 580
France	01-40-96-52-21	Germany/Deutschland	6074-49020
Italy/Italia	2-484441	Mexico/México	5-520-1835
Netherlands/Nederland	315-271700	Norway/Norge	66810600
South Africa	11-4405668	Spain/España	+913244000
Sweden/Sverige	84452900		
Latin America Sales Support	1-800-347-0178 Inside US +1-561-483-1275 Outside US		
Europe/Mid-East Distributor Operations	Contact local distributor or call +44 208 945 7360		

¹Customer support is available 24 hours a day, 7 days a week.

For the latest version of this guide go to:<http://www.symbol.com/manuals>.



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