

## Xenon 1902g-bf

### Battery-Free Wireless Scanner FAQs

#### BATTERY-FREE ALERTS

##### Q. Why don't I see any alerts?

- A. Alerts only happen when the following conditions have been met:
- The discharge level specified for a given alert has been reached.
  - The scanner is out of the base.
  - No scanning has occurred for 10 seconds.
- They do not happen while scanning.

##### Q. Why don't alerts happen while I am scanning?

- A. Flashing a yellow or red LED in the middle of scanning will incorrectly indicate to the operator that something went wrong with the scanning operation, with the risk that they will scan the barcode a second time believing it was not successfully decoded the first time. This leads to errors and customer complaints.

##### Q. How many alerts are there?

- A. There are three scanner alerts:
- When charge level is down to approximately 50%
  - When charge level is down to approximately 30%
  - When charge level is down to approximately 10%

##### Q. Why do I only see 2 alert levels?

- A. The first charge level, when the charge level is down to 50%, is defaulted off to conserve power and extend operating life of the scanner between charges.

##### Q. How many scans will I get after an alert?

- A. The amount of scans you get depends not only on the quality of the barcode (the more difficult to read, the more charge [power] is consumed in attempting to read it) and the amount of time between scans. (Super-capacitors lose charge over time.) On average, you can expect:
- 50% charge alert (defaulted off so you may not be getting this alert): 200+ scans
  - 30% charge alert: 100+ scans
  - 10% charge alert: 50+ scans



##### Q. Can I turn off alerts?

- A. Yes, all alerts can be turned off or on.

##### Q. Are the number of flashes and beeps configurable?

- A. Yes, all alerts are configurable:
- You can turn on or off the alert.
  - The number of flashes/beeps can be configured from 1 to 9. However, the number of flashes and beeps are always the same.
  - You can't change the color of the LED flash.
  - You can't configure at what charge level the alert is activated.

##### Q. Why does the scanner continue to send out alerts?

- A. Once you have reached an alert condition, every time you stop scanning for more than 5 seconds (or place the scanner in the base), the scanner will issue another alert.

##### Q. Can I turn off super-cap charge alerts?

- A. Yes, all of the scanner alerts are configurable. They can be configured to be on or off. The first alert, at approximately 50% charge left, is defaulted off. The other two alerts, at approximately 30% and 10% charge left, are defaulted on.

**Q. I never saw the yellow alert – only the red alert. Why?**

- A. There are two possible reasons why this may occur:
  - Alerts will not occur while scanning. So, if you were continuously scanning for a long time, it is possible that when you stopped the scanner’s charge level had dropped to 10% or lower. Therefore, you would get the red alert after the next use of the scanner without ever seeing a yellow alert.
  - Super-capacitors lose small amounts of charge over time. So if the scanner was left out of the charger for a prolonged period of time before it was picked up and used again, it is possible that the scanner’s charge level had fallen to close to 10% or less. Therefore, you get the red alert after the next use of the scanner without ever seeing a yellow alert.

**Q. What about the other Xenon alerts? Can I turn those on and off?**

- A. Whatever alerts you can turn on or off with today’s Xenon 1902g scanner, you can turn on or off with the Xenon 1902g-bf scanner.

**Q. Why do I get a “buzzing/razz” sound when I press the base button to turn on temporary presentation mode?**

- A. If the scanner has just been placed back into the base, it takes approximately 10 seconds for the base to recognize the scanner. If you press the base button prior to the base recognizing the scanner, the base will buzz/razz to let you know it’s too soon. You will have to wait a few seconds and then press the base button again to turn on temporary presentation mode.

**SCANNING**

**Q. How many scans will I get out of a single charge?**

- A. You will get a minimum of 450 scans per fully charged scanner.

**Q. Why do the number of scans vary?**

- A. There are a number of factors that impact the number of scans you will get – the three biggest being scanning, Bluetooth® communication and time.
  - Scanning: Every time you scan, charge is consumed. The amount of charge consumed varies depending on the quality of the barcode, symbology, density, amount of data, etc. For example:

SYMBOLGY/MIL	DATA LENGTH	AVG. NO. OF SCANS
C39 5 mil	5	271
100% UPC	12	441
C39 20 mil	20	391
PDF 6.7 mil	131	300
DM 10 mil	49	248
QR 20 mil	59	337
DM 6.7 mil	38	225

- Bluetooth communication: Even when you stop scanning, the scanner is in communication with the base, consuming charge. That is why, after 15 seconds, the scanner goes to sleep to reduce the amount of communication with the base and therefore reduce the amount of power consumed.
- Leakage: Super-capacitors lose charge over time, called “leakage”. So even when the scanner is idle or asleep, a small amount of charge is being lost. So how many scans you get is dependent on time as well as number of scan attempts. The faster you scan, the more scans you will get, as there is less loss of charge due to the scanner being idle.

**Q. Is there any performance difference between the battery-free and battery-powered Xenon scanners?**

- A. No, scanning performance is exactly the same.

**Q. How did you calculate the number of customers you can check out off a full charge?**

- A. Based on observational Voice-of-Customer (VOC) research, the average number of items scanned (for targeted market segments) was 5 items or less, and the overall time to complete a transaction was between 60 and 90 seconds. Based on this data, we calculated an average retail transaction to be 5 scans every 1 minute when there is a line at the checkout counter.

**Q. Does the Xenon 1902g-bf scanner support presentation mode?**

- A. Yes, it supports the same 2 standard presentation modes that other Xenon scanners support, plus a presentation mode specifically developed for the Xenon 1902g-bf scanner.
- Presentation mode and streaming presentation mode will work when the scanner is in the cradle. However, when the scanner is taken out of the cradle, it will continue in the selected presentation mode and will quickly drain the super-caps if the scanner is not placed back into the base.
  - Temporary presentation mode (new): When the scanner is in the base, you can turn on temporary presentation mode by simply pressing the base's paging button. The scanner will now go into presentation mode for a defined period of time (the default setting is 10 seconds). If a barcode is scanned before the timeout is reached, the timer starts over. When the timeout is reached, or if you lift the scanner from the base or press the page button on the base, the scanner will go back into manual triggering mode.

**Q. Can you set the temporary presentation mode to always on (0 seconds in configuration)?**

- A. Yes, but when you take the scanner out of the base, it will still go into manual trigger mode. You will have to press the base's page button to place the scanner back into presentation mode.

**Q. Why did the scanner go out of temporary presentation mode while I still had it in the base?**

- A. Unless you set the timeout to "0 seconds," temporary presentation mode will turn off when the timeout is reached. Note the timeout is reset after every scan.

**Q. Why does the temporary presentation mode go into manual trigger mode when it is taken out of the base?**

- A. For two reasons. First, by placing the scanner in manual trigger mode when taken out of the base, you prevent the accidental scanning of other items as the scanner is moved into position to scan the desired barcode. Second, to reduce the amount of power consumed by the scanner while it is being used out of the base so that it can scan more items.

**Q. Will there be a presentation mode that will have the scanner automatically go back into presentation mode when it is placed back in the base?**

- A. Yes, the feature is currently under development and will be included in the next battery firmware update.

**BLUETOOTH**

**Q. What is BTLE?**

- A. Bluetooth low energy (LE) is the power version of Bluetooth that was built for the Internet of Things (IoT). The power-efficiency of Bluetooth with low-energy functionality makes it perfect for devices that run for long periods on power sources, such as coin cell batteries or energy-harvesting devices. Native support for Bluetooth technology on every major operating system enables development for a broad range of connected devices, from home appliances and security systems to fitness monitors and proximity sensors.

**Q. Why am I not getting the same range as the battery-powered Xenon scanner?**

- A. In order to maximize the number of scans from a single charge, the decision was made to limit the output power to support the minimum Class 2 specification of 10 m (33 ft).

**Q. Will I get more than 10 m (33 ft) range?**

- A. The specification guarantees 10 m (33 ft) line of sight, meaning there are no obstructions like walls, shelving or people between the scanner and the base. Obstructions may reduce the range of the scanner.

**Q. Why does the scanner beep (make noise) when it is charging?**

- A. When the scanner has been fully discharged (does not scan anymore), there is not enough charge to maintain the Bluetooth connection. Under this condition, when you place the scanner in the base and enough charge has been added, the scanner will automatically reconnect with the base. When this happens, you hear a series of beeps.

**Q. Will I still get the out-of-range alert?**

- A. Yes, besides the alerts specifically having to do with the battery-free charging, you will get all of the alerts that today's Xenon 1902g scanner comes with.

**CHARGING/CHARGE BASE**

**Q. Are the bases that come with the Xenon battery-powered scanner interchangeable with the bases that come with the Xenon battery-free scanner?**

- A. No, each base has unique circuitry and software controls for charging their respective scanners. The battery-free base has been designed to prevent the battery-powered Xenon end cap from making contact with the charging pins. And the battery-free end cap has been designed so it will not make contact with the charging pins in the battery charge base. So, no damage will occur but neither will any charging.

**Q. How long will it take to fully charge the scanner?**

- A. How long it will take to fully charge the scanner will depend on how much charge is left in the scanner when charging starts. From a fully discharged scanner:
- USB (non-powered): Less than 120 seconds
  - USB powered: Less than 60 seconds
  - External power: Less than 60 seconds

**Q. What do the flashing LEDs on the base mean?**

- A. Yellow flashing LED: Unit is charging but there is not enough charge to begin scanning.  
Green flashing LED: Unit is charging but there is enough charge to scan 100+ scans.

**Q. What does a solid green LED on the base mean?**

- A. Scanner is fully charged.

**Q. How many times can the super-caps be recharged?**

- A. The minimum number of recharges for the super-caps is 500,000 recharge cycles. Technically a recharge is defined as cycling between rated voltage and half voltage with 3 seconds rest at 20°C (68°F).

**Q. Are the super-caps field-replaceable?**

- A. Yes, although with a minimum recharge life of 500,000 cycles, the typical super-cap power cell will last over 5 years before needing replacement.

**GENERAL PERFORMANCE**

**Q. Will the Xenon 1902g-bf scanner have the same performance as the regular Xenon 1902g scanner?**

- A. Yes, with the exception of features relating to the battery and super-caps, the Xenon 1902g-bf scanner will have identical performance to the regular Xenon 1902g scanner.

**Q. Will I be able to configure the Xenon 1902g-bf scanner the same as I do with the Xenon 1902g scanner today?**

- A. Yes, with the exception of features relating to the battery, the Xenon 1902g-bf scanner can be configured exactly the same as today's Xenon 1902g scanner.

**Q. Does the Xenon 1902g-bf scanner come with CodeGate?**

- A. No, CodeGate does not come with today's Xenon scanners and has not been added to the Xenon 1902g-bf scanner.

**Q. Will popular Xenon features like aimer delay, centering and mobile phone read mode be available with the Xenon 1902g-bf scanner?**

A. Yes, with the exception of features relating to the battery, all features like aimer delay, centering, mobile phone read mode, etc. that are available with today's Xenon 1902g scanner are available with the Xenon 1902g-bf scanner.

**Q. Does Digimarc code reading come with the Xenon 1902g-bf scanner?**

A. Yes, like today's Xenon 1902g scanner, the Xenon 1902g-bf scanner comes with Digimarc-capable software. To activate, the customer will need to purchase an upgrade code just like they need to do with today's Xenon 190Xg family of products.

**Q. Will the Xenon 1902g-bf scanner have the same scanning performance (depth of field, field of vision, snappiness, motion tolerance, etc.) as today's Xenon 1902g scanner?**

A. Yes.

**For more information**

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