



# Guideline 4000 LP+™

neuromodulation targeting system

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## Directions For Use

L011-57 (Rev D1, 2018-11-09)

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Contains directions for the following products:

MT-LPP, MT-LPP-APM, 66-EL-LP

[www.fh-co.com](http://www.fh-co.com)

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## Indications for use:

The microTargeting™ Guideline 4000 LP+™ neuromodulation targeting system is intended to assist in functional neurosurgical procedures where recording from and stimulation of brain motor and sensory neurons will aid in the placement of depth electrodes.








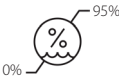

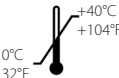


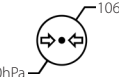









## Intended use:

The Guideline 4000 LP+™ neuromodulation targeting system is intended to be used by a neurosurgeon, neurologist or clinical neurophysiologist to accurately position depth electrodes during functional neurosurgical procedures.

## Applicable Standards:







General Standard: EN60601-1 General Electrical Safety; Collateral Standards: 60601-1-1, 60601-1-2, 60601-1-4, 60601-1-4, 60601-1-6; Particular Standard: EN60601-2-26; The Guideline 4000 LP+™ is a Class 1 medical device with a type BF applied part.

## Symbol Key

	WARNING / Caution, consult instructions for important cautionary information.		Authorized Representative in the European Community		Guideline 4000 LP+ Breakout Box
	Consult the instructions for use.		European Conformity. This device fully complies with MDD Directive 93/42/EEC and legal responsibilities as a manufacturer are with FHC, Inc., 1201 Main Street, Bowdoin, ME 04287 USA.		Digital input
	In reference to "Rx only" symbol; this applies to USA audiences only		Humidity limitation: Not to exceed 95%		Analog input
<b>Rx only</b>	<b>Caution-</b> Federal law (USA) restricts this device to sale by or on the order of a physician.		Temperature limitation: Storage conditions are between 0°C - 40°C (32°F - 104°F)		Analog output
	Medical device manufacturer, as defined in EU Directives 90/385/EEC, 93/42/EEC and 98/79/EC.		Atmospheric pressure limitation: between 500hPa and 1060hPa		Guideline 4000 LP+ Stimulation Remote Control
	Telephone number		Date when the medical device was manufactured.		Audio jack
	Indicates the catalog number so that the medical device can be identified.		Type BF Applied Part		Microphone
	Indicates the serial number so that a specific medical device can be identified.		Instructions for end of life disposal		

*microTargeting™ and Guideline 4000 LP+™ are trademarks of FHC, Inc.*

## Warnings and Cautions:

-  WARNING: The Guideline 4000 LP+ does no analysis, diagnosis, or monitoring for undesirable or dangerous physiological conditions.
-  WARNING: The Guideline 4000 LP+ issues no alarms should undesirable or dangerous medical conditions arise.
-  WARNING: The Guideline 4000 LP+ must be operated by a person who has been trained by an FHC authorized representative and has read and understood the directions for use (DFU).
-  WARNING: The Guideline 4000 LP+ must be installed by an FHC authorized representative.
-  WARNING: Do not use the Guideline 4000 LP+ system or any part of it as a diagnostic instrument.
-  WARNING: Potentially hazardous interactions between the Guideline 4000 LP+ and other patient connected equipment may occur. Review the documentation associated with all such equipment for relevant warnings and restrictions prior to use with the Guideline 4000 LP+.

**Rx only** CAUTION: Federal law (USA) restricts this device to sale by or on the order of a physician.

## System Maintenance and Repair:

### Handling Considerations

- The Guideline 4000 LP+ is intended to be used in a standard operating room environment.
- Store the Guideline 4000 LP+ at room temperatures between 0°C (32°F) and 40°C (104°F).
- Neither the Guideline 4000 LP+ nor its components are designed for sterilization.
- Do not drop the Guideline 4000 LP+ or its components.
- Only transport the Guideline 4000 LP+ inside of its shipping container, with included foam insulation.

 WARNING: Do not expose the Guideline 4000 LP+ to humidity of greater than 95%.

 WARNING: Do not store the Guideline 4000 LP+ near or expose it to strong magnetic fields.

 WARNING: Do not allow any liquid to contact any Guideline 4000 LP+ component.

### Maintenance

- The Guideline 4000 LP+ must be inspected and recalibrated each year by an FHC authorized representative. Contact FHC for more information on Service Agreements and Preventive Maintenance Programs.
- The Guideline 4000 LP+ and its components may be cleaned by wiping a dry rag lightly over all surfaces. If necessary, a slightly damp cloth moistened with a standard hospital disinfectant may be used.

CAUTION: Only qualified FHC representatives may calibrate the Guideline 4000 LP+.

### Repair

- All FHC products are unconditionally guaranteed against defects in workmanship for one year from the date of shipment, provided they have been exposed to normal and proper use.
- Should service or repair be required, please contact FHC at 1-800-326-2905 (US & Canada) or +1-207-666-8190 for return instructions.

### End-of-Life System Disposal



Return the Guideline 4000 LP+ to FHC for proper end-of-life disposal. Please contact an FHC factory authorized representative to arrange a return.

### Password Reminder:

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## System Specifications - Performance & Accuracy:

### Microelectrode Recording

Analog signal conditioning	Digital signal processing	Waveform Analysis
<ul style="list-style-type: none"><li>• Gain: 54 to 7201 user adjustable, Amplitude accuracy: <math>\pm 5\%</math>, Polarity: Inverting</li><li>• Upper frequency cutoff: 20kHz, 40dB/decade roll-off</li><li>• Lower frequency cutoff: MER - 200Hz, 20dB/decade; LFP - &lt;1Hz, 20dB/decade</li></ul>	<ul style="list-style-type: none"><li>• Sampling: 16 bit resolution over <math>\pm 1.4V</math> range</li><li>• Sample Rate: MER: 10-48kHz, LFP: 5-1000Hz</li><li>• Digital Bandpass Filter: High Pass - 0 to 1000Hz, Low Pass - 100 to 20kHz</li><li>• Adaptive line noise filter: adaptation weight adjustable from 0 to 10% per cycle</li><li>• Adaptive Stimulus Artifact Suppressor: adaptation weight adjustable from 0 to 10% per cycle</li><li>• Timing accuracy: <math>\pm 10\text{ppm}</math> (0.001%), resolution: <math>1/48,000\text{ s}</math> (<math>\sim 20.8\mu\text{s}</math>)</li></ul>	<ul style="list-style-type: none"><li>• Display Mode: scroll/sweep rate adjustable from 5s/window to 0.25s/window</li><li>• Spikes Mode: duration 290<math>\mu\text{s}</math>/sweep to 2.585 ms/sweep in 12 steps</li><li>• Spike discrimination method: Dual line level or Window</li><li>• Firing Rate: displayed in Hz, one second refresh rate</li></ul>

## Stimulation

Mode: Constant Current, Compliance Voltage:  $\pm 50V$

Macrostimulation: From macro-contact to common or between macro contacts	Microstimulation: Stimulate from microelectrode to common	Stimulus Parameters
<ul style="list-style-type: none"> <li>Range: 0 to 10.0 mA, Display Resolution: 10 <math>\mu A</math>, Accuracy: <math>\pm 5\%</math>, see performance graphs</li> </ul>	<ul style="list-style-type: none"> <li>Range: 0 to 100<math>\mu A</math>, Display Resolution: 1 <math>\mu A</math>, Accuracy: <math>\pm 5\%</math>, see performance graphs</li> </ul>	<ul style="list-style-type: none"> <li>Monophasic or biphasic, cathode or anode leading or user defined</li> <li>Pulse Train Frequency (Hz): 1 - 300</li> <li>Pulse Duration (<math>\mu s</math>): 20.8 - 3000</li> <li>Train Duration: Manual or timed (s): 0.5, 1, 2, 3, 5, 10, 20, 30, 60</li> </ul>

## Impedance Check

Measurement Waveform: sine wave, Frequency: 100Hz to 5kHz (1kHz default), Amplitude 1.0 $\mu A$ , Duration 1.0 to 10.0 s adjustable

Measurement Ranges: auto-ranging 10M, 1M, 100k, 10k

Accuracy:  $\pm 10\%$  of full range, Resolution: 2 digits

## Power Requirements

Input: 100 -240 VAC, 50 /60Hz.

Fuse: 2A 250V Type T H

## Analog Inputs

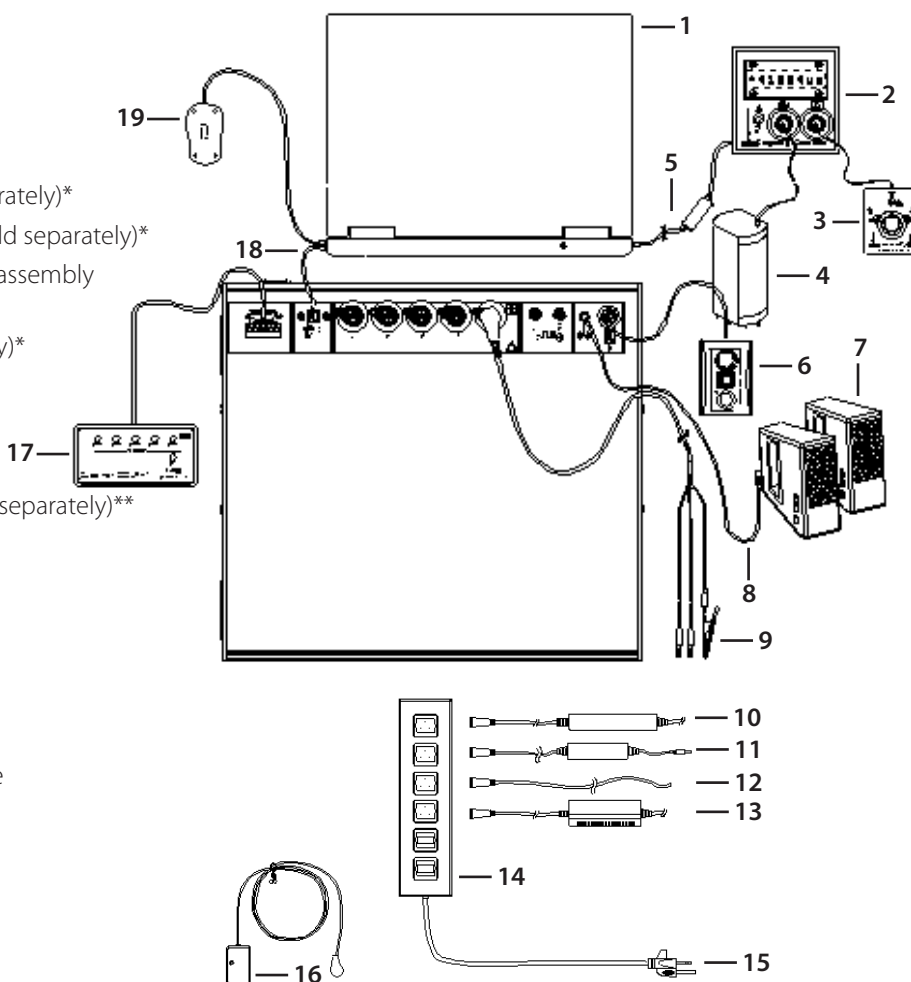
Quantity – two, earth referenced, patient-isolated, AC/DC Coupled, Bandwidth 0-5kHz

Ranges (factory configurable): 0 to 16V, -8.0V to +8.0V, 0 to 8.0V, -4.0V to +4.0V, 0 to 1.6V, -800mV to +800mV, 0 to 800mV, -400mV to +400mV, 0 to 160mV or -80mV to +80mV

## Inventory:

### MT-LPP: Guideline 4000 LP+

- Notebook computer
- microTargeting Controller module (sold separately)\*
- microTargeting Controller remote control (sold separately)\*
- microTargeting Controller motor or encoder assembly (sold separately)\*
- Inline serial-to-USB converter (sold separately)\*
- Stimulation remote control
- Speakers
- Audio cable
- microTargeting electrode cable for LP+ (sold separately)\*\*
- Power adaptor for notebook computer (1)
- Power adaptor for speakers (7)
- Power cord for Guideline 4000 LP+
- Power adaptor for microTargeting Controller (sold separately)\*
- Power strip, max load 10A 240V
- Power cord for power strip (multiple portable socket outlets; connect to mains)
- Guideline 4000 LP+ test electrode
- Breakout box (sold separately)\*\*\*
- USB cable
- USB-powered optical mouse



\* Included with 66-DS-PA or 66-DS-PD kits, \*\* Sold as 66-EL-LP, \*\*\* Sold as MT-LPP-BOX

## Ordering Information:

### MT-LPP: Guideline 4000 LP+

Includes one of each of the following: notebook computer, desktop speakers, optical mouse, stimulation remote control, 18" USB 2.0 cable, 2 ft audio cable, test electrode, and Guideline 4000 LP+ Directions for Use.

Also includes: on-site installation, on-site training prior to first case, on-site support for up to three cases, 24/7 factory authorized representative phone support (1-800-326-2905 in US & Canada or +1-207-666-8190), full warranty against defects in workmanship for one year from the date of shipment, and 3 year extended on-site warranty for the notebook computer.

#### Required components (sold separately)

66-EL-LC-XXX: (1) Line cord, specific to country of use

66-EL-LP: (1) microTargeting electrode cable for LP+

#### Accessories (sold separately)

MT-LPP-APM: Extra channel, up to five channels per LP+

MT-LPP-BOX: Breakout box for data export

40-42-1-01: QuickWave function generator

mTD type electrodes

ST-DS-ME: microTargeting STar Drive

ST-DS-MA: microTargeting STar Drive, Manual System

66-DS-PA: microTargeting Controller and Power Assist System


66-DS-PD: microTargeting Controller and Position Display Assembly

SERV-WAR-LPP: Guideline 4000 LP+ one year service warranty

## System Set-Up and Pre-Use Checkout:


### 1. Assemble the Guideline 4000 LP+ as shown. (page 6)


- a. Perform a thorough visual inspection of the Guideline 4000 LP+ looking for damaged components.
- b. Inspect all system cables for damage to the cable jacketing and plugs.
- c. Inspect the Guideline 4000 LP+ and all associated equipment for possible biological contamination, clean if necessary.

 WARNING: Do not use the Guideline 4000 LP+ in the presence of flammable gas mixtures.

 WARNING: DANGER high voltage, do not disassemble.

 WARNING: No user-serviceable parts inside; do not remove external panels. Contact FHC if unauthorized disassembly is suspected.

 WARNING: Only the remote control and the electrode lead cables should be used within the patient environment. No other part of the system should enter the patient environment or the sterile field.

 WARNING: Do not touch the notebook computer, mouse, speakers, or Guideline 4000 LP+ and the patient simultaneously. If using headphones, use wireless headphones if contact with patient is possible.


 WARNING: The Guideline 4000 LP+ Multiple Portable Socket Outlets (MPSO) must be plugged directly into a wall outlet.

 WARNING: Plug only the Guideline 4000 LP+ and related equipment into the Multiple Portable Socket Outlets (MPSO) using only the adaptors provided.

 WARNING: Use only the Multiple Portable Socket Outlets (MPSO) provided with the Guideline 4000 LP+ system.

 WARNING: Do not connect non-specified equipment to the Guideline 4000 LP+.

CAUTION: Do not block the fan vents or intake air vents of the Guideline 4000 LP+.

 WARNING: Clean the Guideline 4000 LP+ using a cloth that has been slightly dampened with disinfectant if biological contamination is observed or suspected.

CAUTION: To avoid injury, use caution when lifting the Guideline 4000 LP+.

 WARNING: Assemble the Guideline 4000 LP+ and related equipment on a level, stable surface only. Do not move the Guideline 4000 LP+ during a procedure. If used on a wheeled work surface, lock the wheels to prevent movement.

CAUTION: If using a shipping case with a lock, do not lose the key for the lock.


 WARNING: Packing foam can not be sterilized. If contamination of the foam is suspected, contact FHC for disposal instructions.

CAUTION: Sharp edges, use caution.

 WARNING: Multiple Portable Socket Outlets (MPSO) should not be placed on the floor.


## 2. Power up the Guideline 4000 LP+.


- a. Turn on the computer and log on as "Guideline 4000" using the password provided.
- b. Double click the Guideline 4000 icon on the Windows computer desktop to start the software.
- c. Once the Guideline 4000 opening screen appears, turn on the LP+, speakers, and, if desired, the microTargeting Controller.


 WARNING: Discontinue use of the Guideline 4000 LP+ should any erratic function or damage become evident.

CAUTION: Computer systems are periodically unstable. In the event of a system crash, the Guideline 4000 LP+ can be rebooted.

CAUTION: Please read the manual accompanying the notebook computer for complete information on the notebook's use and specifications.

 WARNING: Do not enable the wireless capabilities of the notebook computer in the hospital environment unless you are authorized to do so.

 WARNING: Do not install third party software onto the Guideline 4000 LP+ notebook computer unless authorized to do so by an FHC factory authorized representative.

 WARNING: Use only the supplied notebook computer to operate the Guideline 4000 LP+.

CAUTION: The Guideline 4000 LP+ notebook computer comes with pre-installed anti-virus software. Do not perform an anti-virus scan before or during a surgical procedure. Should a virus be found on the notebook computer, contact FHC for quarantine and removal instructions.

## 3. Perform the pre-use checkout procedure.

### A. Verify recording functionality.


1. Confirm that the channel status LED indicator lights for all available channels on the LP+ are green. The light will only turn green for installed channels.
2. Click on the "Electrode" tab on the computer screen. Confirm that a scrolling waveform is visible in the corresponding thumbnail window for each installed channel.
  - a. If any channels have failed to initialize properly, wait one minute for the LP+ to detect and automatically reinitialize them.
  - b. If after one minute a channel has still not initialized, right click on the corresponding thumbnail and select "Re-initialize."
  - c. If a channel has still not initialized, shut down the Guideline 4000 LP+ by selecting "Shutdown" from the system menu. Once the computer has shut down, turn off the LP+, speakers, and microTargeting Controller. Restart the system by following steps 1, 2, and 3 above.
3. Verify that sound is audible for each channel.
  - a. Toggle between muted and unmuted states for the channel using the corresponding numeric key (for example, "1" for channel 1). The speaker icon above the thumbnail will indicate the state of the channel.
  - b. Adjust the volume of the speakers using the "+" and "-" buttons on the side of the right speaker.
4. If using the microTargeting Controller and motor: without zeroing the motor, confirm that the microTargeting Controller motor rotates when the microTargeting Controller remote control is actuated.

### B. For each available channel, verify impedance check and stimulation functionality.

1. Click on the Patient tab, apply the "Factory" profile, and then click on the Electrode tab.
2. Click the "Impedance Check" button on the computer screen.
3. Select a channel for testing using the on-screen dialog box. Confirm that the LED status indicator light for this channel is yellow.
4. Plug the test electrode into the selected channel.
5. Press the orange activate button on the Guideline 4000 LP+ stimulation remote control.
6. The measured impedance will be displayed on screen. Confirm that the measured impedance of the test electrode is  $1 \pm 0.2$  MOhm.
7. Select "Done".
8. Click the "Stimulation" button on the computer screen.



9. Select "Microstim" in the dialog box.
10. Select the appropriate channel in the dialog box. Verify that the test electrode is still plugged into this channel.
11. Set the stimulation amplitude to 100  $\mu$ A. Set the pulse duration to 1000  $\mu$ sec. Set the stimulus duration to fixed duration and select 5 sec. Press the orange activate button on the remote control. Confirm that the software displays the warning "Compliance Voltage Reached." Confirm that the stimulus monitor tone is audible and set to a comfortable volume.
12. Switch to "Macrostim" mode.
13. Set the stimulation amplitude to 5 mA. Set the pulse duration to 1000  $\mu$ sec. Press and hold the orange activate button on the remote control to start stimulation.
14. Confirm that the current output is  $5 \pm 0.2$  mA, the voltage output is  $5 \pm 0.5$  V, and that stimulation stops when the orange button is released.
15. Close the stimulation dialog box.
16. Verify the impedance check and stimulation functionality of each available channel (by repeating step 3B) before every surgery.

 WARNING: If an error occurs during the pre-use checkout procedure (step 3), discontinue use of the system. Contact an FHC factory authorized representative for further instructions.

 WARNING: Failure to properly perform the pre-use checkout procedure may result in patient injury or death.

 WARNING: Disconnect the test electrode before connecting the LP+ to a patient.


#### 4. Load a user profile and enter patient information.

- a. Remove the test electrode if it is still attached to the LP+.
- b. Click on the "Patient" tab at the top of the screen. Select a profile at the bottom of the screen. Click "Apply Profile" to load the profile.
- c. Click "Add New Patient" on the left-hand side of the screen to create a new patient.
- d. Enter patient information in the fields provided.

#### 5. Enter equipment and targeting information.

- a. Click on the "Setup" tab at the top of the screen.
- b. Enter equipment information and patient targeting coordinates using the fields provided.

 WARNING: Incorrect equipment specifications could lead to errors in targeting or electrode depth.

 WARNING: Using a non-supported drive, frame, or other device may result in incorrect targeting.

 WARNING: Incorrect zeroing of the microTargeting Controller can cause serious injury or death.

















 WARNING: Incorrect specification of the initial target value can cause serious injury or death.


#### 6. Perform microelectrode recording.

##### A. Connect electrode cables as shown in the diagram on page two. Connect electrodes and cables one at a time to avoid confusion.

1. Assign an electrode to a channel using the Guideline 4000 LP+ software.
2. Check for a green light next to the channel on the Guideline 4000 LP+.
3. Connect the sterile electrode cable to the microelectrode, pass the DIN connector end out of the sterile field, and connect the DIN connector to the correct channel.
4. Click on the "Electrode" tab at the top of the screen.

- B. If using the microTargeting Controller and motor or encoder, connect the microTargeting motor or encoder assembly as shown and perform the following steps:**
1. Zero the microTargeting Controller by pressing the small black button on the front panel of the Controller.
  2. The depth readout of the microTargeting Controller should appear on the computer screen. If it does not (“MTC not detected!” appears when hovering the cursor over the gray exclamation point on the electrode tab), check that the encoder or motor assembly and remote control are properly connected. Click “Settings”; select the “mT Controller” tab, and verify that pressing the “Reset” button resets the microTargeting Controller. If it does not, or if the “Reset” button is inaccessible, reassign the COM port for the Controller.
  3. If using the motor, advance the drive towards the target by turning the remote control knob clockwise. Pressing the “Retract to Zero” button on the remote control will retract the drive to zero.
  4. If using the encoder, the drive must be manually advanced. Do not use the encoder with the remote control.
- C. If desired, change filter, gain, and LFP settings by clicking the “Electrode Settings” button on the computer screen. Change software preferences by clicking the “Settings” button on the computer screen. Remember to update the current user profile to save changes.**
- D. Check electrode impedance by clicking the “Impedance Check” button on the computer screen and pressing the orange activate button on the stimulation remote control.**
- E. Record events using the “Event/Recording” (for single channel recording) and “Record All” buttons (for multi-channel recording) or by right-clicking on the channel thumbnails on the “Electrode” tab.**
- F. Click the “Stimulation” button on the computer screen to enter stimulation mode. Select either “Microstim or “Macrostim” from the pull-down menu. Control stimulation amplitude using the knob. Start/stop stimulation using the orange activate button on the stimulation remote control. If desired, stimulation may be stopped by pressing the orange activate button again (during fixed-duration mode only).**

-  **WARNING:** Electrodes and microelectrode cables are single-use items. Do not attempt to sterilize and re-use. Dispose of electrodes according to hospital protocol.
-  **WARNING:** Use of non-supported electrodes can result in poor quality recordings, incorrect stimulation, inaccurate targeting, or patient injury.
-  **WARNING:** Electrodes and electrode cables should be connected one at a time. Be careful to assign electrode tracks and electrode contacts correctly.
-  **WARNING:** Route electrode lead cables carefully to avoid a tripping hazard or possible contamination of the sterile field.
-  **WARNING:** Never leave a microelectrode cable connected to the Guideline 4000 LP+ if it is not connected to an electrode.
-  **WARNING:** Do not connect the electrode cables to earth.
-  **WARNING:** Auxiliary inputs are provided to monitor additional biological signals. Do not rely upon the auxiliary inputs as the sole means of tracking vital signs.
-  **WARNING:** The auxiliary inputs and outputs are not isolated. Do not make direct connections between the auxiliary inputs/outputs and the patient.
-  **WARNING:** Always adhere to the electrode manufacturer’s recommendations with regard to the maximum amount of stimulation current applied.
-  **WARNING:** Do not attempt to use the Guideline 4000 LP+ stimulator to create lesions.
-  **WARNING:** Never touch electrode cables while stimulating.
-  **WARNING:** Use caution when electrically stimulating a patient with existing implanted electronic devices.
-  **WARNING:** Monitor the patient for adverse effects during electrical stimulation.
-  **WARNING:** Always remove any electrodes prior to using high frequency surgical equipment. Failure to do so could result in burns at the electrode site and possible damage to the Guideline 4000 LP+ .
-  **WARNING:** Cables are not defibrillator proof and must be removed prior to defibrillation.
-  **WARNING:** To prevent the risk of shock, all electrode and electrode leads should be disconnected from the patient before defibrillation. The Guideline 4000 LP+ is not defibrillator proof.

 WARNING: Operation of the Guideline 4000 LP+TM in proximity of short wave or microwave therapy equipment may produce instability in the electrical stimulator output.

 WARNING: Do not arrange electrodes and equipment in such a way that stimulation current may pass through the heart.

CAUTION: Incorrect setup could degrade recording and stimulation performance. Refer to equipment labeling and directions for use for instructions.

 WARNING: Do not connect earth-referenced signals to the patient lead inputs of the Guideline 4000 LP+.


 WARNING: Failure to correctly set the spike discriminator thresholds may result in inaccurate or insufficient targeting information.

CAUTION: Keep the BNC protective covers in place when the auxiliary inputs and outputs are not in use.

CAUTION: Voltage read-back of stimulation output may be inaccurate when using customized waveforms and stimulation trains.

## 7. Identify the implantation site.

- a. Click on the “Data Analysis” tab at the top-left of the screen to view Raster, RMS versus depth, and mean firing rate versus depth plots.
- b. Select “Raster” at the top-center of the screen to see snapshots of all recordings on all channels side-by-side. Right-click on snapshots to classify recordings. Double-click on snapshots to replay recordings.
- c. Select “Data Analysis” at the top-center of the screen to view root-mean-square (RMS) voltage versus depth and mean-firing-rate (MFR) versus depth plots for all channels.
- d. Click on the “Guidance” tab at the top-left of the computer screen to view an illustrative model of the electrode track and surrounding structures.

 WARNING: Do not use the illustrative model (“Guidance”) as the sole indication of electrode position. This model is provided for reference only and should not be interpreted literally.

## 8. Save patient data.

- a. Patient data will be automatically preserved until the patient is deleted from the “Patient Explorer” on the left-hand side of the screen. Patient data can be exported to a file (.glr file format) by clicking the “Patient” button and selecting “Export.” Multiple patients can be saved to an archive (.gla file format) by clicking the “Patient” button and selecting “Archive.”

## 9. Shut down the Guideline 4000 LP+.

- a. Shut down the LP+ by clicking the “System” button and selecting “Shutdown”.
- b. Wait until the computer fully shuts down, then power off the LP+, speakers, and microTargeting Controller.

For more information on running the LP+, refer to the Guideline 4000 LP+ help files. Click on the “Help” button at the top of the computer screen. Alternatively, contact GNS at 1-800-326-2905 or +1-207-666-8190. These files are available in paper format upon request.

Note: Please reference the Directions for Use for other devices as needed:

microTargeting STar Drive

microTargeting Drive

microTargeting Drive Accessories

microTargeting Electrodes

microTargeting Insertion Tubes