



LASER SOLUTIONS

Ensure Accurate Setup from Simulation to Treatment



GAMMEX

A SUN NUCLEAR COMPANY

MOVEABLE: CT SIM+™ // FIXED: MICRO™ and MICRO+™

THE LEADER IN LASER ALIGNMENT

Gammex was the first company to replace incandescent lightbulbs with lasers in the 1970's. Our innovation in the field continues today, with high-quality, diode-based laser positioning systems to fit your workflow, from simulation and diagnostic imaging through patient treatment. With more than 4,000 laser installations worldwide, Gammex is a leading producer of patient alignment solutions.

Moveable Lasers for CT Simulation

CT SIM+™ with RapidSim™ Software



Fixed Lasers for Diagnostic Imaging and Treatment

MICRO™ and MICRO+™ Family



CT SIM+™ with RapidSIM™ Software

Ensure accurate patient marking with a simplified approach that works effortlessly within the CT Simulation room.

The CT SIM+ with RapidSim Software is the next generation in moveable lasers. Enabling multiple isocenter marking and designed with modern workflows in mind, this all-in-one platform features the Complete Connectivity Suite™ and your choice of red, green or blue lasers – each available at the same price.

The laser unit's industrial design includes a reinforced steel back plate for maximum strength and durability. The lightweight cover reduces the overall weight of the laser for stability and allows for easy access to all components.

THREE LASER WAVELENGTH OPTIONS



RED



BLUE



GREEN



The Complete Connectivity Suite includes the following:

- Handheld Wireless Pendant for in-room control
- Touchscreen Control Monitor for convenient patient workflow
- DICOM and Text file interconnectivity
 - Complies with DICOM radiation oncology standards
 - Compatible with major CT manufacturers' system



CT SIM+ Configurations

- 3-Arm System: Any coordinate can be achieved using the lasers and CT couch Y-axis adjustment. All vital functions can be performed in the control room or via the wireless pendant at the scanner.
- 5-Arm System: Any coordinate can be achieved with no need to manually move the couch in and out of the bore. CT SIM+ reads treatment planning and other simulation system coordinates for easy, accurate movement to the marked location.

Additional Highlights

- Closed loop mechanical and software systems ensure sub-millimeter accuracy with no measurable drift
- Blue, red or green light
- Multiple Installation Configurations
 - Wall / Ceiling
 - Stanchion
 - Floor Mount Post
- Steel frame and rails provide strength and sturdiness
- 2-year warranty included

Laser Output

| | |
|-------------------|--|
| Power (mW): | <1.0 |
| Range (m): | Up to 6 |
| Line Width: | ≤1 mm @ 4 m |
| Line Length: | ≥2 meter @ 4 m |
| Available Colors: | Wavelength 635 nm Red Wavelength 515 nm Green Wavelength 450 nm Blue |

Laser Beam Adjustment

| | |
|---------------------------------------|------------------|
| Length of travel: | 70 cm |
| Software Verified Accuracy of Travel: | ±0.5 mm at 3.0 m |
| Mechanical Encoder Accuracy: | 2µm |
| Positioning accuracy: | ±0.5 mm at 3.0 m |

Laser Dimensions

| | |
|----------------------|---------------------|
| Length (cm): | 112 |
| Width (cm): | 21 |
| Depth (cm): | 9 |
| Stanchion Width (m): | Customizable to 5.4 |

Laser Construction

| | |
|------------------|--|
| Laser Structure: | Reinforced Steel backplate |
| Cover: | Lightweight Polycarbonate |
| Window: | Translucent and impact resistant medical grade polymer |

Power Requirements

| | |
|----------|---------------------------|
| Voltage: | 110/240 VAC (auto-select) |
|----------|---------------------------|

Wireless Connectivity

| | |
|-------|--------------|
| Wifi: | 802.11 b/g/n |
|-------|--------------|

Certifications

Complies with Center for Devices and Radiological Health regulations for Class II lasers and all CE requirements. Certified to: IEC 60601 (Safety); IEC 60825-1 (Laser); 21 CFR 1040; MDD 93/42/EEC. FDA 510(k) clearance (K152303). Gammex is an ISO13485 certified medical device manufacturer.

MICRO™ and MICRO+™ Family

Enhance patient alignment workflow and accuracy for diagnostic imaging and radiotherapy.

MICRO: Compact Design and MR Compatibility

The MICRO fixed laser system's composite housing and aesthetically pleasing design fit seamlessly within your room's appearance. The non-metallic housing cover keeps the weight of the entire unit below 800 grams, and MR compliant.

MICRO+: Intelligent Innovation

The MICRO+ fixed laser system offers the latest technology in remote controlled lasers for patient alignment. The elegant design of the remote allows 12 possible adjustments from only 4 intuitive controls. Accuracy of 0.15 mm ensures optimal laser positioning, every time.

With embedded Bluetooth technology, the MICRO+ system enables staff to move freely as they work. There is no need to stop and point the remote at the laser in order to make adjustments.

THREE LASER WAVELENGTH OPTIONS



RED



BLUE



GREEN



MICRO™ Highlights

- Sub-millimeter accuracy with no measurable drift
- Bright and crisp light in saggital or crosshair projections
- MR compatible¹
- Blue, red and low wavelength green
- Compact and lightweight
 - 1.6 lbs / 0.73 kg
- Easy to install and maintain
 - No need for additional mounting brackets for installations on angled walls

58% smaller footprint than alternative systems²



MICRO Specifications

Laser Output

| | |
|-------------------|--|
| Power (mW): | <1.0 |
| Range (m): | Up to 6 |
| Line Width: | ≤1 mm @ 4 m |
| Line Length: | ≥2 meter @ 4 m |
| Available Colors: | Wavelength 635 nm Red Wavelength 515 nm Green Wavelength 450 nm Blue |

Laser Beam Adjustment

| | |
|---------------------|-------------------------------|
| Coarse Planar (mm): | ±7.6 horizontal and vertical |
| Coarse Angular: | ±25° horizontal |
| Fine Angular: | ±3.5° horizontal and vertical |
| Line Rotation: | ±180° |

Laser Dimensions

| | |
|--------------|-----|
| Length (mm): | 164 |
| Width (mm): | 110 |
| Depth (mm): | 76 |
| Weight (g): | 725 |

Universal Power Supply

| | |
|----------|---------------------------|
| Voltage: | 110/240 VAC (auto-select) |
|----------|---------------------------|

Certifications

Complies with Center for Devices and Radiological Health regulations for Class II lasers and all CE requirements. Certified to: IEC 60601 (Safety): IEC 60825-1 (Laser): 21 CFR 1040: MDD 93/42/EEC Gammex is a ISO13485 certified medical device manufacturer.

¹When installed > 3 ft. from the center of the bore, and during imaging without the need for posts of stanchions.

²Based on total volume compared to LAP Apollo published specifications.

MICRO+™ Highlights

This elegant, all-in-one system does not have additional costs or external receivers to consider. Additional smart design touches include backlighting on the remote for use in dark rooms and a remote locator feature for fast finding in case of misplacement. With OneTouch™ control of any laser, you can increase efficiencies at every step.



+ Integrated Bluetooth technology eliminates the need for external receivers and provides maximum range of motion without the need for line-of-sight adjustments

+ Backlit controls for hassle- and error-free use in dark rooms

MICRO+ Specifications

| | |
|------------------------------|--|
| Adjustment Type: | Hand held remote control |
| Degrees of Movement/Freedom: | 6 |
| Left - Right: | ≥ ± 15 mm |
| Up - Down: | ≥ ± 15 mm |
| Rotation: | ≥ ± 5° |
| Horizontal Tilt (yaw): | ≥ ± 5° |
| Vertical Tilt (pitch): | ≥ ± 5° |
| Focus Range: | 1.5 m - 4 m |
| Adjustment Accuracy: | 0.15 mm |
| Adjustments Speeds: | Slow – Ultra accurate steps (0.15 mm) for each touch of the control |
| | Medium - Hold the control for continuous motion |
| | Fast – Continue to hold the control for faster speeds and larger movements |
| Remote Technology: | Bluetooth & infrared |
| Remote Receiver: | Integrated |
| Remote Operational Range: | > 10 m |
| Remote Locator: | “Find remote” option on each laser |

| | |
|------------------------------|---|
| Number of Lasers per Remote: | 6 |
| Laser Selection: | OneTouch™ automatic laser and remote pairing |
| Line Width (All Colors): | (@ 3 m) ≤ 0.5 mm |
| Line Length: | (@ 3 m) 4 m |
| Laser Projection: | No measurable drift |
| Laser Type: | Diode |
| Laser Output: | < 1 mW |
| Power Supply: | 100 – 240 volt (auto select) |
| Dimensions: | 216 mm × 134 mm × 80 mm (H×W×D) |
| Weight: | < 1 kg |
| Available Colors: | Wavelength 635 nm Red |
| | Wavelength 515 nm Green |
| | Wavelength 450 nm Blue |
| Installation Options: | Wall mount ± 45° (with optional tilt and adapter bracket) , Post mount (optional) |

Certifications

Gammex is a ISO13485 certified medical device manufacturer. Made in the USA. Complies with Center for Devices and Radiological Health regulations for Class II lasers and all CE requirements.

(21 CFR 1040) (IEC 60601) (IEC 60825-1) (MDD 93/42/EEC)



Gammex is an innovator in laser alignment systems with advanced configurations designed to meet all your patient alignment needs.

Call us or visit our website for details.
+1 608-828-7000 // www.sunnuclear.com

Gammex Corporate Headquarters:
7600 Discovery Drive, Middleton, WI 53562
800-426-6391 (800-GAMMEX-1)