

Wavelength Proto2-GE575 Pest Device Product Label, Directions For Use & Disclaimer

General information on the use of this device for the control of wood destroying pests & Fungi

This microwave generator unit and operating system has been designed for the localized treatment of termites, fungi and wood destroying beetle larva living within seasoned hard or soft wood timbers and framing of furniture & structures. It is capable of thermal treatment up to 9” in depth, this includes but is not limited to treatment of accessible infestation and infection concealed within inaccessible wall areas and voids constructed of masonry, wood, wood products, acrylic plastic and glass. Treatment will not penetrate metal or metal byproducts. Do not apply directly to metal, rubber or vinyl objects. It is to be operated only by or under the direct supervision of commercial professional pest control operators and/or certified applicators responsible for wood destroying pest problems and only for those uses covered by the certified applicator’s certification.

Controllable Pests & Organisms

Dampwood Termites

Zootermopsis

Drywood Termites

Kaloterme, Incisiterme

Subterranean Termites

Reticuliterme, Heteroterme

Coptoterme (Formosan)

Powderpost Beetles

Lycidae
(Pupa & Larvae stages only)

“False” Powderpost Beetles

Bostrichidae
(Pupa & Larvae stages only)

Furniture & Deathwatch Beetles

Anobiidae
(Pupa & Larvae stages only)

Wood Destroying Fungi (Brown Rot & White Rot)

Before purchasing this system and offering to perform it’s treatment procedures, read the entire label and check with your local government agencies for approval and required permits if any.

Locate wood destroying pest infestation or fungi infection by performing a complete thorough inspection of structure or item to be treated. Use professional expertise or that of a local professional in conjunction with tools of assistance; such as, moisture meters, sounding devices, inner wall boroscopes, calibrated frequency meters or other practical means to locate the target pest or fungi as needed. Upon location of target Infestation or infection, obtain applicable signed work authorization contract, signed Occupant Microwave Treatment Notice & Disclaimer provided in operators manual and any other permits or disclaimers as needed, and schedule treatment.

Treatment Preparation; Read the entire label and Operator’s Manual before using this device. Remove from the structure or area to be treated, all persons, domestic animals or pets present within a 50-foot radius of treatment site. This includes spaces, above, below, attached, non-attached or adjacent too, such as multi level apartment units or adjacent dwellings that reside within 50 feet of the treatment site.

Treatment Application

- (1) At treatment startup install an operable smoke detector within close proximity to treatment site.
- (2) With a wall stud finder locate the center of a wall stud or wood member at site to be treated and drill a pilot hole aprox. 2.5 inches deep with a 11/64-inch diameter drill bit. Use caution; do not drill into electrical, plumbing or metal objects.
- (3) Draw a diagram of treatment site on Field Safety Treatment Form provided in operator’s manual. Also on this form fill out the following; The leakage detector (Meter #), (Date of meter purchase), (Date & time meter tested), (Firm name), (Treatment date), (Applicators name), (Applicators signature), (Date signed), (Treatment address) and (General description of treatment site).
- (4) Place the system temperature probe inside the pilot hole drilled in step no. (2) and log the final temperature reading attained on the Field Safety Treatment Form at (Average Room Temperature) and remove temperature probe.
- (5) Estimate the desired treatment depth and log it on Field Safety Treatment Form at (Desired overall depth of treatment).
- (6) Refer to Treatment Time Reference Chart to the right, same chart also published in operator’s manual. Using the chart find the average room temperature logged at the left column and the desired depth of treatment logged on the top row. Where the two columns meet is the recommended estimated test treat time. Log the estimated test treat time on the Field Safety Treatment Form under area 1 at (Estimated Test Treat Time).

Average Room Temperature	DESIRED DEPTH OF TREATMENT IN INCHES								
	1"	2"	3"	4"	5"	6"	7"	8"	9"
110-119	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5
100-109	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
90-99	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5
80-89	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
70-79	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
60-69	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0
50-59	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5
40-49	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
30-39	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5

- (7) The following is information on warning sign placement and Microwave radiation exposure limits and guide lines. Warning signs are affixed permanent to safety shielding. Place other individual warning signs as applicable.

Article 104. Nonionizing Radiation

5085. Radio-frequency and Microwave Radiation

(a) Definitions.

Radio-frequency (RF) Energy. Electromagnetic energy restricted to portion of the spectrum commonly defined as the radio-frequency of RF region with frequencies between 3 megahertz (MHz) and 300 Gigahertz (GHz) and which for the purposes of this specification shall include the microwave region with frequencies between 100 MHz and 300 GHz. (Hertz = 1 cycle/second, MHz = 1 million hertz, GHz = 1 billion hertz.)

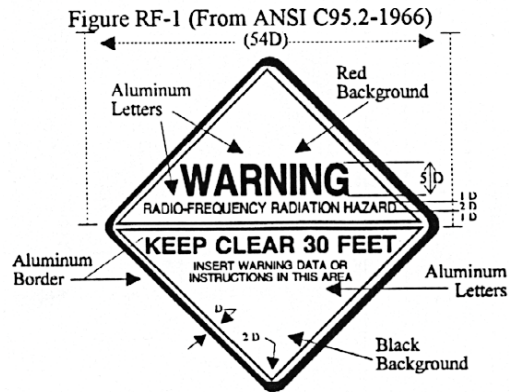
(b)Exposure. Limits. Employees shall not be exposed to RF energy from continuous wave of repetitively pulsed sources exceeding any of the following limits as averaged over any possible six-minute (0.1 hour) period.

- (1) Continuous exposure to an average maximum power density of 10 mW/cm² (milliwatts per square centimeter) or the equivalent free space average electric and magnetic field strengths of 200 V/M (volts per meter) rms and 0.5 A/M (amperes per meter) rms respectively.
- (2) Exposure to interrupted or modulated RF energy shall not exceed:
 - (A) An average maximum energy density of 1 mWhr/cm² (milliwatt-hour per square centimeter);
 - (B) A mean squared electric field strength of 4x10⁴ (V/m)² (volts squared per meter squared); These energy densities and field strengths are approximately equivalent to a far field power density of 10mW/cm.
 - (C) A mean squared magnetic field strength of 0.25 (A/M)² (amperes squared per meter squared).

These energy densities and field strengths are approximately equivalent to a far field power density of 10mW/cm².

(c) Information and Warning Signs. In areas where employee exposure may exceed the limits specified in par (b) of this section, employers shall provide warning signs containing the following manner.

- (1) Warning Signs of RF Radiation Hazards, as described in ANSI C95.2 - 1966 "Radio-frequency Radiation Hazard Warning Symbol," containing the necessary information and description of required protective actions. (See Figure RF-1.)
- (2) Signs shall be posted at all entrances to accessible areas containing RF radiation levels in excess of the exposure limits described in part (b).
- (3) Warning Signs shall be legible at a distance of ten (10) meters.



1. Place handing and mounting instructions on reverse side.
2. D- Scaling unit.
3. Lettering: Ratio of letter height to thickness of letter lines.

Upper triangle: 5 to 1 Large
6 to 1 Medium
Lower triangle: 4 to 1 Small
6 to 1 Medium

4. Symbol is square, triangles are right-angle isosceles
Radio-Frequency Radiation Hazard Warning Symbol

NOTE: Authority and reference cited: Section 142.3, Labor Code.

History

1. New Article 104 (section 5085) filed 4-16-81; effective thirtieth day thereafter (Register 81, No. 16).

- (8) Set generator up with warning label facing pilot hole drilled on step no. (2)
- (9) Station control panel approximately 35 feet to the rear of generator and connect the control cable ends, one to the generator and one to the control panel were stationed.
- (10) Place one safety shield upright to the rear (behind) target to be treated with the warning sign facing outward & visible.
- (11) Place a second safety shield upright behind the rear of generator with the warning sign also facing outward and visible.
- (12) Plug in the Generator and approach the control panel station with microwave leakage detector in hand.
- (13) Turn on the control panel security key switch and enter the following touch controls. (Time Cook) activates keypad timer. Next, enter on the touch control panel numeric keys the (Estimated Test Treat Time) as logged in minutes on the Field Safety Treatment Form and press (Start) key.
- (14) Remain at control panel station during generator operation. Monitor area were standing with the microwave leakage detector. Perform this by slowly moving the detector at arm length in front of you from your head to your feet while viewing the meter gage for changes. If an active reading is attained during monitoring, press the (clear off) key on control panel, perform step (15) and re-adjust the position of the control panel site and/or shielding and start from step (13) again. Repeat this procedure as needed until zero reading is attained during the microwave monitoring. Log reading obtained at (Personal Zero Exposure Test Reading) under area1 of Field Safety Treatment Form.
- (15) Upon completion of the control panel timer cycle, turn security key off and remove key from key switch. This is referred to as Lockout Blockout in industrial safety terms and is to prevent unauthorized access to the control panel while unattended.
- (16) Insert the temperature probe in the pilot test hole drilled in step (2) and log the final reading at (Probe Test Treat Temperature Attained) under area1 of the Field Safety Treatment Form.
- (17) Obtain lethal dosage temperature listed below for the control of the wood destroying pest or organism you are treating.

Lethal Dosage Temperatures to be applied

Drywood Termites, Dampwood Termites, Subterranean Termites, Formosan Termites and all labeled beetles
Obtain temperatures between **130 and 180 Degrees Fahrenheit** for lethal kill.

Wood destroying Fungi (brown & white rot)
Obtain temperatures between **180 and 200 degrees Fahrenheit** for lethal kill.

NOTE: Do not exceed temperatures at or above 220 degrees Fahrenheit. Do not apply to highly flammable substances. Prior to applying chemicals or agents in conjunction with microwave application, always check the material safety data sheet for fire hazard data, flammable properties and flash point in Fahrenheit of the chemical or agent intended for use. Do not use in conjunction if flash point is close to lethal dosage temperature to be applied.

- (18) If probe test treat temperature attained and logged is within the recommended dosage rate continue application procedures. If probe test temperature attained is below or above recommended dosage rate, refer back to step (2), drill a new pilot hole at another site and increase treatment by one minute intervals to increase dosage. To decrease dosage, decrease the treatment by one-minute intervals. Repeat this procedure until proper recommended dosage rate is attained before continuing with further application procedures.

NOTE: Upon treatment commencement always start application at highest target point and move generator downwards at 10 inch intervals between time dosage applications. This aides in maintaining prior heat dosage applied.

- (19) On Field Safety Treatment Form, Log adequate treatment dosage time attained in minutes at (Sufficient Treat Time Achieved for Effective Treatment).
- (20) On Field Safety Treatment Form, at ledger, Log the application number being applied at (No. #) and the treat time dosage for this number application at (Treat Time) to the right of application number logged. Log a new numbered line of entry for each timed dosage applied. Use as many forms as needed. On diagram of treatment site drawn in step (3); indicate where each application number is applied.
- (21) Set generator up with Large Warning Label (Face) flush to within 1 to 2 inches of target treatment site surface.
- (22) Set shields in place as noted in step (9) & (10) and approach Control Panel Station with Microwave Leakage detector.

- (23) Turn on the control panel security key and enter the following touch controls, (Time Cook) activates key pad timer, Next, enter on the touch control numeric key pad the (Sufficient Treat Time Achieved For Effective Treatment) as logged in minutes on the Field Safety Treatment Form and press the (Start) key.
- (24) Remain at control panel station during generator operation. Monitor area where standing with the microwave leakage detector. Perform this by slowly moving the detector at arm length in front of you from your head to your feet while viewing the meter gage for changes. If an active reading is attained during monitoring press the (clear off) key on control panel, perform step (15) and readjust the position of the control panel site and/or shielding and start from step (13) again. Repeat this procedure as needed until zero reading is attained during the microwave monitoring. Log microwave leakage meter reading obtained under (Exposure Reading) at ledger to the right of application number & Treat Time applied of Field Safety Treatment Form. Monitor area during each timed dosage applied & log Exposure Reading finding with each corresponding numbered application.
- (25) Upon completion of the control panel timer cycle, turn security key off and remove key from key switch.
- (26) Move generator approximately 10 inches to next adjacent treatment site, reposition shields and repeat steps (23), (24), (25) & (26) until entire area has been treated as diagramed in step (3) on Field Safety Treatment Form. During treatment periodically perform additional probe tests at random to monitor applied heat dosage as performed in step (2), (16) & (18) and make adjustments as needed. If entire site of infestation or infection is not treated with microwaves and /or accompanied by chemical or non-chemical control agents, follow up treatment may be necessary.
- (27) Upon completion of microwave treatment, remain at treatment site and monitor smoke detector installed in step (1) for an additional 1 to 2 hours before allowing occupant to re-enter. Advise occupant upon re-entry to also monitor smoke detector for an additional 2 hours.

Applicability in lieu of fumigation for Drywood, Dampwood & Formosan Termites

Use of the Proto2 microwave treatment system is not a complete replacement for fumigation. Some infestations are too numerous to treat in a feasible time frame. Infestations are not always accessible to treat, such as damp sub areas and dusty attics. It is recommended to treat these areas locally with chemical and/or non-chemical agent application in conjunction with accessible Proto2 microwave treatable areas. When infestation is deemed impractical or not feasible for Proto2 microwaving and/or non-chemical agent or chemical treatment, It may be necessary to perform whole structure fumigation. However, in most user situations the majority of infestations encountered are Proto2 system microwave treatable accompanied by localized chemical use in lieu of fumigation with lethal gas. As with fumigation, follow up treatment may also be necessary.

Proto2 Generator Made In USA: Power Rating = Vac / Hz: 120 / 60 @ 7amps: EPA Establishment no. 68965-Ca-001

Precaution to applicator microwave exposure limits.

This unit operates at 2450 mega hertz and generates 575 Watt of radio frequency electromagnetic radiation referred to as (RF)(EMR). The US federal government has established guidelines for safe levels of human exposure at 10 milliwatts per square centimeter of surface area per six-minute duration. Applicator is directed to seek to achieve zero or as close to zero exposure as possible without exceeding the established levels of safe human exposure during the controlled documented use of this generator as outlined in the operator's manual instructions.

Product is in compliance with FCC Rules & Regulations CFR 47, part 18 and also complies to UL 508/NEC1993

This device complies with part 15 Class A of the FCC rules. Operation is subject to the following two conditions;

- (1) This device may not cause harmful interference and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

WARNING

This device is capable of causing serious injury or death to living things. This device, outside the limits it was tested to can cause serious damage to electronic equipment that is not protected from its emissions. These devices include HEART PACEMAKERS and other LIFE supporting equipment. This equipment generates, uses and can radiate radio frequency energy and if not used properly may cause interference with other RF devices such as television, Radio and the like. If interference occurs, re-orient the equipment, place shields between the equipment and the receiver, or terminate operation of the device.

Fire Hazard

This device is capable of generating excessive temperatures resulting in combustion to site treated. Close temperature monitoring during treatment greatly reduces this risk. If combustion accidentally occurs, stop treatment, use A,B,C rated extinguisher on affected site and contact local fire department to control further as needed.

Fire Safety Monitoring Procedures

Prior to treatment commencement, install an operational smoke detector within close proximity to treatment site. Upon treatment completion, monitor smoke detector for one to two hours before leaving and advise occupant to do same.

USE ONLY AS DIRECTED BY LABEL & OPERATORS MANUAL & KEEP OUT OF REACH OF CHILDREN

Health Hazard Information

Direct prolonged duration overexposure to the radio frequency microwave energy emitted by this generator can damage living tissue at the body site or extremity exposed to a depth of approximately 1.18", (30mm). User is to follow all safety guidelines & precautions as directed within label and operator's manual for prevention of any prolonged duration of exposure whether direct or accidental.

First Aid Measures

If direct prolonged duration overexposure occurs, apply ice pack to affected area, retreat to a cool environment and seek immediate medical attention. Symptoms are Hyper Thermia (medical term for abnormally high body temperature) moderate to severe burning or tingling sensation and /or red itchy irritation at area exposed.

Limitation of Liability & Warranty Disclaimer

Wavelength warrants that this product conforms to the device description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions subject to the inherent risks set forth below.

Use only as directed by label & operators manual. Buyer assumes all risks in using or handling this product in any way. WAVELENGTH EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY. IN NO CASE SHALL WAVELENGTH BE LIABLE FOR CONSEQUENTIAL, SPECIAL, INCIDENTAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS DEVICE.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this device. Accidental scorching, damage to painted surfaces due to poor primer sealer, lack of performance, or other unintended consequences may result because of such factors as use of the device contrary to label instructions (including conditions noted on the label, such as accidental Fire, etc.) presence of other materials, the manner of application, or other factors, all of which are beyond the control of Wavelength or it's sales distributors. Purchaser shall assume all such risks.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from use of this device (including claims based on contract, negligence, strict liability, or other legal theories) shall be limited to refund of product's used wholesale appraised value upon product return to Wavelength. Wavelength shall not be liable for loses or damages resulting from handling or use of this device unless Wavelength is promptly notified of such loss or damage in writing, to include detailed documentation of treatment procedure leading to such loss or damage. In no case shall Wavelength be liable for consequential or incidental damages or losses.

All terms & conditions listed within this label & disclaimer or the complete Operator's manual cannot be varied by any verbal or written statements or agreements. No employee or sales agent of Wavelength or distributor is authorized to vary or exceed the Warranty or product label & disclaimer in any manner. Purchase or use of this device constitutes full acceptance and agreement to all written terms and conditions of entire label and operator's manual. Purchaser agrees to follow revised labeling and operator's manual guidelines upon notification of any revisions in writing from Wavelength only.