

Certification Exhibit

FCC ID: ZC5022-GEN2-FP

FCC Rule Part: 15.231

ACS Project Number: 11-0009

Manufacturer: U.S. Jetting, Inc.
Model: 022-GEN2-FP

Manual



Supplement To
***General Owners & Operators
Manual For US Jetting High
Pressure Jetting Units***

***Operators Manual For
US Jetting Gen II Wireless
Remote Control System***



Basic Operating Instructions For Gen II Wireless Remote Control System

The Gen II Wireless Remote Control System is an integrated system designed for operating the high pressure jetting unit by the operator from a distant location. The High Pressure Water Selector Valve is operated by an electrically powered actuator. The **US Jetting** units that are equipped with the factory installed Gen II Wireless Remote Control System are easily identified by the ignition control panel. The Gen II Wireless Remote Control System allows the high pressure jetting unit to be operated in 3 different ways:

1. At the unit by the operator.
2. At a remote or distant location using a foot operated or handheld remote control transmitter.
3. At a remote or distant location using a tethered wired foot control switch.



Warning : Changes or modifications to this device not expressly approved by US Jetting, LLC could void the warranty & user's authority to operate the equipment.

Operating The Gen II Wireless Remote Control System Directly At The Control Panel



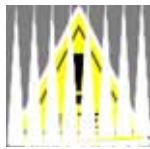
1. ***Electronic Strobe On / Off Switch***
2. ***LED Water Pressure Display & Diagnostic Mode Display***
3. ***Single LED (in lower right-hand corner) Indicates Remote Control Operation Only, Deactivates Water Control (Red) Switch***
4. ***Ignition Key Switch***
5. ***Water Control (Red) Switch***

US Jetting Model: 022-USJ-GEN2-WRL

Basic Operating Instructions For Gen II Wireless Remote Control System

Starting the high pressure jetting unit:

1. Complete unit maintenance checklist.
2. Open water shut-off valve to allow water to enter pump.
3. Open air bleed valve on pump, close when water appears.
4. Turn Water Selector (Red) Switch to the **OFF** position.
5. Turn Jump Jet System valve to **OFF** position.
6. Close the water Flow ByPass valve to the **OFF** position.
7. Position throttle cable to idle position.
8. Turn ignition key to **ON** position, check LED indicator lights for function.
9. Open throttle one half turn counterclockwise.
10. Turn ignition key to engage starter motor, start engine.
11. Allow engine to run, return throttle cable to idle position.



NOTE: Operators should connect nozzles or tool to the high pressure jetting hose, then position hose within the pipe to be cleaned with the safety colored leader hose and hose guide protector. If a high pressure safety dump gun is to be used, refer to the manual section on High Pressure Safety Dump Guns for specific instruction

To Operate the High Pressure Jetting Unit in Normal Mode (without a wireless handheld remote control or tethered wired foot switch).



NOTE: Whenever high pressure jetting units are used over a manhole, culvert or cleanout, it is recommended that operators use the control systems mounted directly to the unit. This allows the operator to have both hands free to operate the unit and to guide the high pressure jetting hose when necessary.

Operating the high pressure jetting unit under pressure with the half-inch high pressure jetting hose or with a smaller diameter hose kits:

To begin high pressure sewer jetting, with nozzle, drain jet extension, skid, safety leader hose and tiger tail hose protector placed within the pipe:

1. Start high pressure jetting unit (above steps 1 through 11).
2. Turn the Water Selector (Red) Switch to the **ON** position.
3. Increase the engine speed using the throttle cable while viewing either pressure gauge until the pressure reaches 4,000 PSI. The throttle can be increased in two ways:

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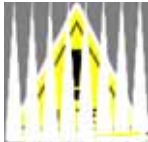
1. Turn the throttle knob counterclockwise
2. Press center red button on throttle cable while pulling on the throttle knob.

If pressure adjustments are required, use only the throttle twist function for engine speed adjustments.



Special Note About Throttle Adjustments:

On Gen II Wireless Remote Control Systems, engine throttle adjustments should be limited to the twist out - twist in function of the throttle control cable. The Pull-Out function of the throttle cable for increasing engine speed is acceptable. The Push-In throttle cable function for decreasing engine speed should only be used when the Water Selector (Red) Switch is in the **OFF** position.



NOTE: The throttle cable only functions to control engine speed (increase or decrease RPM's) when the Water **ON - OFF** (Red) Switch is in the **ON** position.

When the unit reaches the desired pressure, the operator can begin jetting. Using the hydraulic reel control valve, allow the hose reel to dispense hose at a rate equal to the movement of the high pressure jetting within the pipe. Hose slack falling into an open manhole is an indication that hose is being dispensed too fast. Operators should always maintain some hose tension, never allowing excess hose slack to accumulate in the manhole. Operators need to be careful of excess hose un-spooling on the hose reel, an event that will occur if the hose is dispensed faster than the hose is traveling in the pipe.

Always rewind the high pressure jetting hose under pressure (except for the last few feet). In normal applications, the rewinding process of the hose provides for the most effective pipe cleaning results. The high pressure hose should be rewound slowly for better cleaning results. When rewinding the high pressure hose, operators should:

- Use the hose reel guide to align and distribute the high pressure hose evenly across the face of the hose reel.
- Inspect the high pressure jetting hose for any type of damage (cuts or abrasions) during the hose winding that may result in premature hose failure.

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When jetting is completed, to stop the jetting process:

1. Turn the Water Selector (Red) Switch to the **OFF** position. The engine speed will automatically return idle and the water will shut-off (return to tank mode). The operator has the option to leave the throttle positioned in place to avoid re-setting the throttle for the next high pressure jetting sequence. If the high pressure jetting unit is not to be re-used, return the throttle cable to the engine idle position. The throttle can be decreased in two ways:
 1. Turn the throttle knob clockwise to the idle position.
 2. Not recommended but is possible -Press center red button on throttle cable while pushing in the throttle knob.

In summary: to operate the unit,

1. Water Selector **ON**.
2. Throttle Up Engine.
3. Water Selector **OFF**, engine speed will return to idle.
4. If finished with unit, reset throttle cable to idle position.



NOTE: The throttle cable only functions to control engine speed (increase or decrease RPM's) when the Water ON - OFF (Red) Switch is the **ON** position

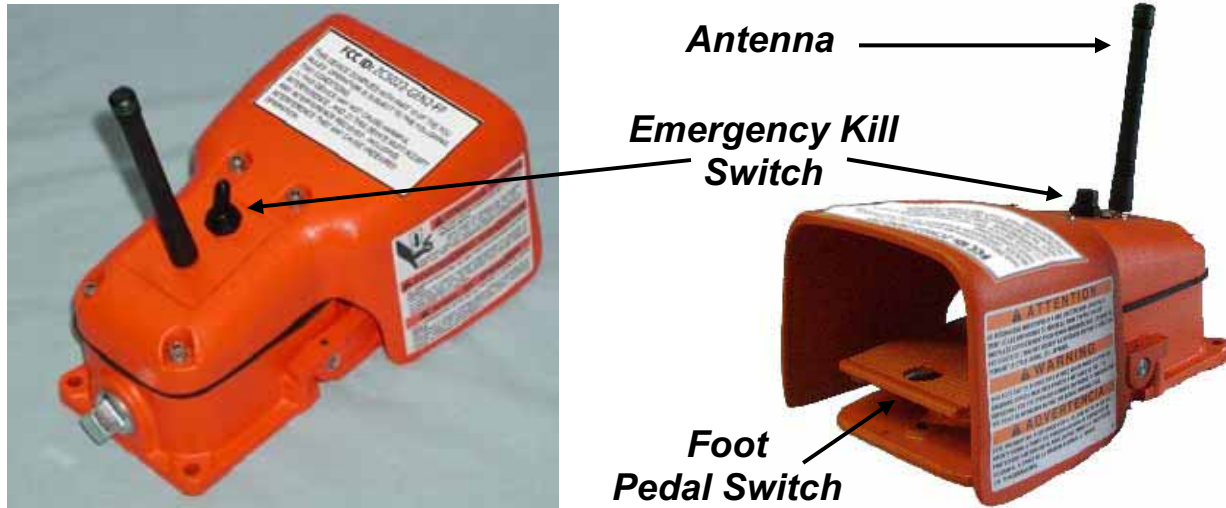
Operating The Gen II Wireless Remote Control System Via The Wireless Foot Pedal



NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

US Jetting Gen II Wireless Foot Control



US Jetting Part No.: 1J- 022-GEN2-FP-ASSY



NOTE: For the Gen II Remote Control Foot Pedal to operate, the throttle cable must be preset to the correct pressure output and engine speed. See Basic Operating Instructions for correct method to set correct pressure and engine throttle.



NOTE: The Foot Pedal is based upon a simple “Dead Man’s Control.” To activate or turn the water pressure on, press down and hold on the foot pedal. To turn pressure off, remove foot from pedal.

To program the Gen II Wireless Remote Control Foot Control Unit

1. High pressure jetting unit must be shut-off.
2. Locate the black programming button underneath the control panel between the two panel box wire plug connections.
3. Press & continue to hold the programming button.
4. Activate the foot control switch & hold.
5. Turn the ignition key to the On position, do not start the engine.
6. The LED Pressure Gauge display on the control panel will display a “widget” display. Observe the LED lights on the control panel, starting on the left side of the LED display, several illuminated sections will appear, gradually moving to the right.
7. Continue to press in the black button until a vertical line appears in the upper left-hand portion of the third digit from the left.
8. Release the black button at this point , this begins a timed programming sequence.
9. After approximately 10 seconds the vertical bar will disappear and a horizontal line will appear at the top of the third digit from the left.

US Jetting Gen II Wireless Foot Control

10. After the horizontal line disappears, a single red LED dot should appear in the lower right-hand corner of the LED display. The red LED dot is confirmation of the foot pedal synchronization with the unit.
11. Turn ignition key **OFF**.
12. Turn ignition key **ON** , then step on foot pedal. Red LED dot should appear on the LED display screen.
13. Remove foot pedal, red LED dot should remain lit.
14. Wireless remote foot pedal is programmed & ready for use. Step on foot pedal and watch the operation of the water control valve actuator for confirmation.

The Gen II Wireless Foot Control Valve has been programmed and is ready for operation with the unit running for high pressure jetting operations.

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THIS DEVICE COMPLIES WITH PART 15 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 RECIEVED , INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

Basic Operating Instructions For Gen II Wireless Remote Control System

Operating The Gen II Wireless Remote Control System Via The Handheld Remote Control



NOTE: As of 12-1-2010, the production and repair of Gen II Wireless Remote Control Units was terminated due to outside supplier problems. A limited amount of plastic cases, buttons & antennae are available until depleted. No electronic components are available.

This information is provided for historical reference only.

The Gen II Wireless Remote Control System Remote Control limits the operator to control:



- ? Turn the water control valve **ON** function.
- ? Turn the water control valve **OFF** function.
- ? Completely shutdowns the high pressure jetting unit.

NOTE: For the Gen II Remote Control to operate, the throttle cable must be preset to the correct pressure output and engine speed. See Basic Operating Instructions for correct method to set correct pressure and engine throttle.



The handheld remote control contains two operating buttons, one green and one red. There is also a single LED indicator light on the faceplate that will blink when in operation. The handheld unit is powered by two "AA" batteries. A protective case with a belt clip is provided with the handheld unit that should be used at all times.

The Green Button (on the Remote)

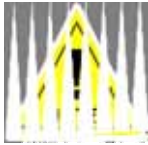
NOTE: When the high pressure jetting unit is running, depress the Green button to activate the Gen II Wireless Remote System, then depress the Green button again to place the system in the standby or ready mode. A blinking LED in the lower right hand corner of the LED Pressure Display will appear. Another LED will begin blinking on the face plate of the handheld remote control.

The Green Button, when depressed once activates the water control valve thus turning the high pressure water **ON**, raises the engine throttle to the preset position and deactivates the Water Control (Red) Switch valve on the control panel box. When the Green Button is depressed to activate, the Green Button should remain depressed within the

Basic Operating Instructions For Gen II Wireless Remote Control System

protective collar.

When the Green Button is depressed a second time, the water control valve is turned **OFF** thus turning the pressurized water flow **OFF** and the engine speed (RPM's) will return to the idle position. The throttle cable will remain in position, not moving even though engine RPM's decrease. The Water Control (Red) switch valve located on the control panel will remain deactivated.



NOTE: To reactivate the Water Control On / Off (Red) Switch located on the control panel or deactivate the Gen II Wireless Remote Control system function, the high pressure jetting unit must be shutoff and restarted using

Wireless Remote Water Selector Acuator

Acuator Off



Acuator On



When activated, actuator turns on immediately, there is a 2 second actuator delay when turned off.

Basic Operating Instructions For Gen II Wireless Remote Control System

the ignition key switch.

The Red Button (on the Remote)

After activating the remote control system, when the Red Button is depressed, the engine on the high pressure jetting unit will shut off. Once this occurs, the operator must restart the engine with the ignition key at the high pressure jetting unit and reactivate the Gen II Wireless Remote Control System to continue work.



NOTE: When in the wireless remote control operational mode, a single red LED light will begin blinking on the lower right corner of the LED display located on the control panel. In the event of an emergency, turning the ignition key to the Off position is the only method of shutting down the high pressure jetting unit at the unit, overriding the remote control system. The Water Control Valve ON / OFF (Red) Switch is deactivated when in the wireless mode.

When using the Gen II Wireless Handheld Remote Control, pressure and flow must be preset. The Gen II Wireless Handheld Remote Control only serves to function as a remote Water Control Valve ON / OFF (Red) Switch (mounted on the unit control panel).

Programming The Handheld Wireless Remote Control

Programming the handheld remote control is required whenever the “AA” batteries are changed (batteries are located inside the handheld remote, accessible from a rear panel). Programming is also required when a replacement handheld remote control is first used. If the battery of the high pressure jetting is replaced or disconnected, reprogramming of the handheld remote control will be required.

The Gen II Wireless Control System requires that each handheld remote control to be programmed to the unit’s control box. This procedure ensures that a single direct communication link between the remote control and the control panel exists, eliminating any possible interference.

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To program the Gen II Wireless Remote Control handheld unit:

1. High pressure jetting unit must be shut-off.
2. Locate the black programming button underneath the control panel between the two panel box wire plug connections.
3. Press & continue to hold the programming button.
4. Turn the ignition key to the On position, do not start the engine.
5. The LED Pressure Gauge display on the control panel will display a “widget” display. Observe the LED lights on the control panel, starting on the left side of the

Basic Operating Instructions For Gen II Wireless Remote Control System

- LED display, several illuminated sections will appear, gradually moving to the right.
6. Continue to press in the black button until a vertical line appears in the upper left-hand portion of the third digit from the left.
 7. Release the black button at this point, this begins a timed programming sequence.
 8. After approximately 10 seconds the vertical bar will disappear and a horizontal line will appear at the top of the third digit from the left.
 9. The horizontal line indicates that the system is ready for the handheld remote controller to be synchronized, this is a timed event that will last for 15 seconds.
 10. Press the green button down - wait two seconds then press the green button down again (this simulates turning the remote function ON & OFF. Repeat the process until a red dot or decimal point appears in the lower right-hand corner of the LED display.

NOTE: To test for a successful programming procedure, with the engine still **OFF** and the ignition key to the **ON** position, press the Green button to activate (turn On) the water control valve. This will activate the electric Water Control Valve actuator on the rear of the control panel. Test the **OFF** function by pressing the Green button again. Operation of the electric water control valve actuator can be clearly viewed on the backside of the control panel.



Operating The Gen II Wireless Remote Control System Via The Tethered Wired Foot Control Switch

The third method of control for the Gen II Wireless Remote Control System is a tethered wired foot control switch. This component of the system can be used when radio transmitted signals are blocked or interfered with. This is comprised of two components:

1. A Cable reel with 200 feet of cable with .
2. A foot control pedal switch with a protective orange cover.

To use the Tethered Wired Remote Foot Control, connect the end of the cable to the cable reel to the plug on the rear of the Gen II Wireless Remote Control panel box. Spool out cable while carrying cable reel to the work site. At work site, connect the foot control pedal switch cable to the connector on the side of the cable reel.

When plugged into the control panel, the Water **ON / OFF** located on the control panel is disabled. To shut the machine **OFF**, the ignition key must be turned to the **OFF** posi-

tion. The machined must be turned **OFF** and the Tethered Wired Foot Control Switch un-plugged to return the machine to normal operation.



Tethered Wired Foot Control Components

Using the Tethered Wired Foot Control Switch is similar to using the handheld Gen II Wireless Remote Control. The Tethered Wired Foot Control Switch controls the Water On / Off Switch, including the deactivation of the switch. Pressure and engine set-

tings must be preset before use, follow the setup directions for using the Gen II Wireless Handheld Remote Control.

