

nomix frontline classic

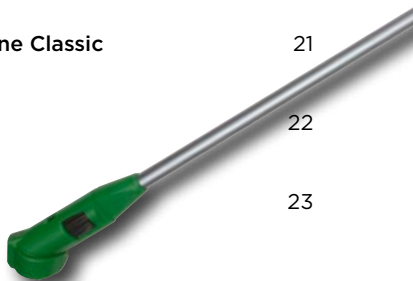
The original  
low volume  
TDC herbicide  
application  
system

## INSTRUCTIONS



**nomix**  
enviro

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## Section 1: Introduction

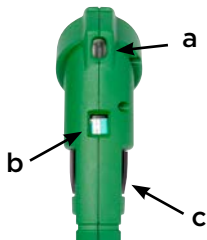
The Frontline Classic is a lightweight hand-held low volume herbicide applicator, designed for use with our range of Nomix Total Droplet Control (TDC) herbicides. Nomix TDC is a unique system, combining pre-mixed, highly effective herbicides with easy to use, efficient applicators.

Nomix TDC delivers a constant, uniform droplet size and spray pattern, significantly reducing run-off and virtually eliminating spray drift and droplet bounce. In times of increased environmental and legislative pressure, the Frontline Classic delivers efficient, compliant, cost effective and accurate herbicide applications every time.

Nomix TDC herbicides are supplied in ready to use, lightweight 5 litre packs that connect directly to the lance, eliminating the risk of spillages and operator exposure from mixing and measuring.



## Section 2: Component List



- 1 Spray head
  - a) Flow rate window
  - b) Flow rate indicator
  - c) Flow rate control



- 2 Control panel
  - a) Spray width control
  - b) Pacing control



- 3 Trigger



- 4 LCD readout



- 5 Spiral disc



- 6 Square disc



- 7 Serrated disc



- 8 Disc ejector tool



9 Rechargeable battery



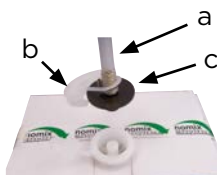
10 Battery charger



11 Car charger\*



12 Backpack



13 Box connector

a) Feed tube

b) C-clip

c) Connector



14 Calibration cup



15 Carry case\*

\* These items do not form part of our standard components. They can be purchased from Nomix Enviro. Please telephone 01264 388050.

## Section 3: Quick Start



- 1 Charge the battery for a minimum of eight hours



- 2 Attach the shaft



- 3 Select an approved Nomix TDC herbicide



- 4 Shake the herbicide box vigorously for at least one minute, in a circular motion



- 5 Place the herbicide box in the backpack



- 6 Attach the lance to the herbicide box, ensuring the c-clip is in place



7 Prime your Frontline Classic

8 Before calibrating the Frontline Classic you will need to select a disc. Do not attach the disc until calibration is complete



Spiral - Narrow spray

Square - Medium Spray

Serrated - Wide Spray



9 Calibrate your Frontline Classic

10 You are ready to spray

**Please Note:** For full operator instructions, always refer to sections 5 and 6.

### Battery and charger

**Please Note:** The battery must be charged before connecting it to the handset. Always connect the battery before connecting the herbicide pack.

- Plug the charger supplied into a mains outlet (do not switch on).
- Connect the battery to the charger.
- Switch the charger on at the mains supply.
- Charge the battery for a minimum of eight hours.
- The charger will monitor the battery state. Whilst charging, the red and green lights will remain on. When fully charged, the red light will go out and the green light will remain on.
- We recommend that you charge the battery after each full day's use.
- When the battery is fully charged, switch off the charger at the mains and disconnect the battery from the charger.
- Check the handset controls are in the 'OFF' position.
- Place the battery into the handset (point the handset downwards as you insert the battery).
- Close the battery compartment.
- The state of the art nickel metal hydride battery technology allows the battery to receive a part charge from a car charger, without any detrimental battery performance.





- Batteries should be fully charged prior to storage through the closed season. Store the batteries in a clean and dry environment.

## Shaft

- To insert the shaft into the handset, align the shaft connector's raised spine with the handset's receptor.
- Push the shaft completely into the handset.
- Screw the shaft nose cone fully onto the handset. Take care not to over tighten, screwing to finger-tight only.



## Trigger

- Press the trigger to power the lance functions and allow the chemical to flow to the spray head.
- The electronic single function (on/off) trigger mechanism ensures fast and accurate application. Press the trigger to start spraying and again to stop.



## Backpack and herbicide box

The Frontline Classic should only be used with approved Nomix TDC herbicides, carried in a Nomix backpack.





### Pacing control

- When in the 'OFF' position, the usage clock is visible on the LCD readout for a short time.
- The calibrate position disables the motor whilst calibrating.
- The other positions are used to set the lance to beep, indicating when to step to maintain the walking pace.
- Using the pacer will ensure the most accurate application. However it is not essential for it to be switched on during operation and it can be turned to the off position if preferred.



### Spray width control

- When in the 'OFF' position the lance will not activate, although the power is still on.
- Disc positions indicate the disc selection.
- Turn the control clockwise to increase the spray width available for the disc selected.



## LCD readout

The LCD readout is activated when the spray width control is set or the trigger button is pressed. Press the trigger to power the lance functions and allow chemical to flow to the spray head.

- Battery Information:
  - The five battery segments display the amount of battery charge remaining
  - The last two segments will flash to warn of low battery
  - When the last segment shows as 'LO', the battery must be charged or replaced
  - Shortly after the 'LO' reading displays, the processor will shut down and herbicide will not flow. This is a safety precaution to make sure the valve is not left in an open position.



- Clock:
  - The clock enables you to measure the hours of operation
  - To display the hours of operation, set the spray width and pacing controls to 'OFF'
  - Hours will show on the LCD readout for approximately 3 seconds
  - The clock is activated when the spray button is pressed
  - 'SER' will appear when a service is due

### Onboard electronics

- The onboard processor is activated when the trigger is pressed and monitors:
  - Battery condition
  - Valve operation
  - Spray width control
  - Pacer control
  - Usage time.



### Flow rate

- Eight settings (A-G and Prime) on the flow rate control regulate the chemical flow.
- The flow rate window shows the chemical flowing to the spray head.
- Always refer to the herbicide label for the correct flow rate setting.

## Section 5: Preparing for use

### Personal Protective Equipment (PPE)

The minimum PPE recommended for use is:

- Coveralls
- Suitable protective gloves
- Wellington boots.

Always refer to the herbicide product label for the recommended PPE.



### Inserting the battery

- Check the handset controls are in the 'OFF' position.



- Place the fully charged battery into handset (pointing the handset downwards as you insert the battery).



- Close the battery compartment.

## Section 5: Preparing for use (cont.)



### Connecting the herbicide box to the lance

- Select an approved TDC herbicide.
- Read the label for full product information and application rates.
- Shake the herbicide box vigorously for at least one minute in a circular motion.
- Place the herbicide box in the backpack with the bung positioned facing down and fasten the pack clips.
- Return the backpack to an upright position.
- Remove the bung stopper.
- Line the feed tube connector up with the bung, placing your fingers underneath the bung and pushing the connector in with your thumbs. The bung will then be pierced.
- **IMPORTANT:** Ensure that the c-clip fits securely over all three flanges as shown. The connector could pull out if it is not fitted correctly.
- Position the backpack comfortably on your back and adjust straps as required.

### Priming

ALWAYS PRIME THE LANCE BEFORE USE




Priming fills the lance with herbicide and removes air bubbles, which could interrupt the chemical flow or cause the lance to drip.



- Ensure there is no disc attached. If a disc is present, remove it using the disc ejector tool.
- Turn the spray width control to the 'OFF' position.
- Turn the pacer control to the calibrate position.
- Set the flow rate indicator to 'Prime'.
- Push the calibration cup on to the spray head.
- Press the trigger 'on'.
- Wait up to 20 seconds for herbicide to appear in the flow rate window.
- Press the trigger 'off'.
- Press the trigger 'on' and invert the lance to empty the calibration cup.
- Press the trigger 'off' when the calibration cup is empty.

## Selecting a disc

Select a disc using the following table. Before connecting the disc, you must carry out the full calibration procedure on pages 16 & 17.

Disc	Spray Width	Recommended areas of use
 Spiral	15cm - 30cm (6" - 12")	Spot treatment, narrow trim and edge work
 Square	30cm - 75cm (12" - 30")	Trim and edge work, spot treatment and fence lines
 Serrated	75cm - 100cm (30" - 40")	Broadcast spraying



### Calibrating

The Operator should carry out a full calibration procedure according to the corresponding product label. This should take account of:

- **Walking Speed:** This should be accurately measured. The Pacing Control on the applicator will assist with determining accurate walking speed.

Walking speed can be accurately determined using the following formula:

$$360 / \text{time taken to walk 100m (seconds)} = \text{Walking Speed (kph)}$$

- **Product Application Rate:** This can be found on the product label and will be the correct approved rate for the product and situation concerned.
- **Spray Width:** This will be dependent on disc selection, disc speed and height.
- **Flow Rate:** This is the rate of herbicide flow through the applicator, and is measured using the **Calibration Cup**.



The correct Flow Rate for the herbicide can be calculated using the following formula:

$$\text{Walking Speed (kph)} \times \text{Product Application Rate (l/ha)} \times \text{Spray Width (cm)} / 120 = \text{Flow Rate (ml/30secs).}$$



### Example:

*For a walking speed of 3.2 kph, product application rate 10 litres per hectare, spray width of 60cm:*

$$3.2 \times 10 \times 60 / 120 = \underline{16 \text{ ml/30 seconds}}$$

The product label will give a guide as to the best applicator settings to be used, in order to achieve the correct **flow rate**, as determined by the above formula. However, the flow rate **must** be measured using the **Calibration Cup** (having measured **walking speed** and **spray width**) and the applicator adjusted as necessary, to achieve the approved application rate.

### Connecting the disc

Once calibration is complete, connect the disc to the head of the lance by placing it onto the spindle and pushing it until secure.



## Spraying

- Hold the lance in a comfortable operating position.
- Set the spray width control to the required disc setting.
- Set the pacing control to your desired walking speed.
- Press the trigger to begin spraying.
- Press again to stop spraying.
- Always clean the lance at the end of a day's use. (Refer to section 7).

## Avoiding Spray Drift

The Frontline Classic produces uniform droplets and significantly reduces spray drift. However, care should always be taken to avoid drift, particularly when using wider spray width settings. If the spray pattern is being affected by wind, do not spray until the wind drops.

## Optimum Spray Pattern

Just a few drops of Nomix TDC herbicide will control weeds. This is the optimum spray pattern.



- Under applied.
- Optimum spray pattern.
- Over applied.

## Section 7: Cleaning



**Please Note:** You MUST clean the Frontline Classic at the end of each day's spraying and also before using a different herbicide. The ONLY way to clean the lance is with specially formulated Nomix Universal Cleaner.

Always refer to the Code of Practice for full instructions on the cleaning of herbicide application equipment.

- Switch the spray width control to the 'OFF' position.
- Place the backpack on the ground and hold the lance up.
- Press the trigger to allow the herbicide to drain back into the box.
- Once all the herbicide is drained, press the trigger again to stop the flow and disconnect the box.
- Remember to replace the bung cap in the herbicide box.
- Connect a box of Nomix Universal Cleaner to the lance.

- Run cleaner through the lance with the settings in the Prime position until liquid runs clear. Spray on an approved site or collect the liquid for disposal. DO NOT allow contaminated cleaner to drain back into the cleaner pack.
- Disconnect the cleaner box from the lance.
- Press the trigger to empty the lance of cleaner. When the flow stops, press the trigger again.
- Wipe any herbicide residue from the spray head with a paper towel and dispose of safely.
- DO NOT forget to recharge the battery.

THE LANCE WILL CONTAIN  
HERBICIDE UNTIL CLEANED

## Section 8: Storing

- Always clean the lance before storing and disconnect the cleaner pack.
- Remove the disc using the disc ejector tool.
- Store the herbicide box upright, with the bung stopper in place. Avoid freezing or high temperatures.
- Keep out of the reach of children.
- Do not store other objects on top of the lance.
- To help prolong the life of the lance, store it with the spray head pointing downwards. Use WD40 on the spray head for winter period dormancy.
- The lance may be wiped over but DO NOT immerse the spray head in water.
- The batteries should be fully charged before storing. Store the batteries in a clean dry environment.
- An applicator carry case is available for purchase from Nomix Enviro.



Nomix Enviro recommends that this equipment is serviced annually. Where possible, servicing should be completed at the end of the spraying season.

## Section 9: Safety Tips

- Always wear suitable PPE. (See product label for full details).
- NEVER press the trigger when the spray head is near your face.
- If a leak occurs on any part of the lance, STOP spraying immediately. Then dispose of the herbicide as directed on the product label and inform Nomix Enviro.
- Always make sure the spray width control is in the 'OFF' position before draining chemical back into the herbicide box.
- Take care not to spill herbicide. Always test the Frontline Classic in a banded area or on waste ground, away from ponds, drains, streams and ditches.
- Always follow the instructions in this manual.

ALWAYS READ THE LABEL

USE PESTICIDES SAFELY

Users must be competent to apply products safely and when using pesticides, by law, hold an appropriate certificate of competence, such as City & Guilds (NPTC) PA awards. In addition to 0216-49 (PA1), operators should hold 0216 -54-151 Land (PA6A), and for aquatic areas 0216-54-152 Aquatic (PA6AW).

## Section 10: Troubleshooting

Symptom	Potential Problem	Solution
<b>Head drips when lance is in the off position</b>	<ul style="list-style-type: none"> <li>• Air bubble in the lance</li> <li>• Valve sticking open</li> </ul>	<ul style="list-style-type: none"> <li>• Reprime lance</li> <li>• Contact Nomix Enviro</li> </ul>
<b>Head drips when lance is in use</b>	<ul style="list-style-type: none"> <li>• Disc not fitted</li> <li>• Disc not spinning</li> <li>• Too much herbicide reaching disc</li> </ul>	<ul style="list-style-type: none"> <li>• Refit disc</li> <li>• Make sure battery is charged</li> <li>• Recalibrate</li> </ul>
<b>No beeper sound</b>	<ul style="list-style-type: none"> <li>• Low battery</li> <li>• Pacer switched off</li> <li>• Mechanism failure</li> </ul>	<ul style="list-style-type: none"> <li>• Charge battery</li> <li>• Switch pacer on</li> <li>• Contact Nomix Enviro</li> </ul>
<b>Disc will not turn</b>	<ul style="list-style-type: none"> <li>• Battery not connected</li> <li>• Battery not charged</li> <li>• Motor problem</li> </ul>	<ul style="list-style-type: none"> <li>• Connect battery</li> <li>• Charge battery</li> <li>• Contact Nomix Enviro</li> </ul>
<b>No or low herbicide flow</b>	<ul style="list-style-type: none"> <li>• Valve/inline hose blocked with dried chemical</li> <li>• Thick herbicide</li> </ul>	<ul style="list-style-type: none"> <li>• Set head to Prime and follow cleaning procedure</li> <li>• Follow cleaning procedure and shake herbicide pack for a minimum of 2 minutes</li> </ul>
<b>Debris around disc</b>	<ul style="list-style-type: none"> <li>• Requires cleaning</li> </ul>	<ul style="list-style-type: none"> <li>• Remove disc using disc ejector tool, check alignment, clean and replace</li> </ul>
<b>Spray disc does not fit</b>	<ul style="list-style-type: none"> <li>• Disc damaged</li> </ul>	<ul style="list-style-type: none"> <li>• Replace with new disc</li> </ul>

Read the instruction manual and herbicide label carefully before using the Frontline Classic.

**Please Note:** Nomix Enviro reserves the right to change specifications and availability without notice. Limits on warranties and liabilities as well as necessary cautions are on the product labels. Nomix and Nomix Enviro are trademarks of Frontier Agriculture Ltd.

For further information contact Nomix Enviro on 01264 388050.



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