

PAX 100-C

PROGRAMMABLE MICRO-DISPENSING SYSTEM



Introduction

The PAX 100-C computer controlled microapplicator provides fast and flexible dispensing to meet the demands of the modern laboratory user. Exclusively manufactured by Burkard Scientific at Uxbridge, UK, the PAX applicator system is widely used in laboratory research and chemical screening.

Applications

The PAX 100-C is a highly versatile instrument and as such can be used for the widest range of applications. Examples include the application of contact insecticides to individual insects; contact fungicides to leaves prior to the arrival of fungal spores; systemic insecticides and fungicides to leaves for foliar uptake prior to action; adjuvants (surfactants and stickers) to detached leaves for wettability and tenacity studies; precise injection techniques.

Application by syringe can usefully simulate field-spraying techniques. This is important when field spraying may not be environmentally acceptable, the chemicals are radio-labelled making spraying impractical, the crops on which they are tested are genetically modified or out-of-season or when it is just too expensive to operate.

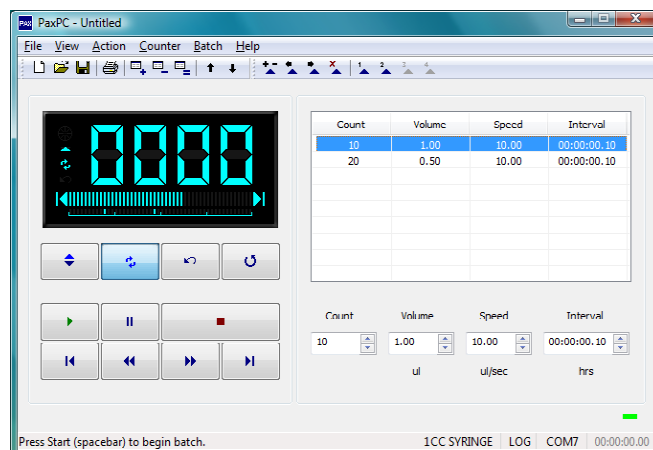
Application of chemicals to detached leaves and/or insects is one of the most popular uses for the PAX 100-C. Leaves and/or insects are displayed in Petri dishes with the syringe unit mounted horizontally on the base. The droplet of chemical in solution, which is formed on the tip of the needle, is detached and transferred by gently touching the surface of the leaf or insect to be treated. Angled cannulae with or without Teflon coating and in a range of sizes are supplied by Burkard Scientific to assist this.

Features

The PaxPC software allows complete control of the applicator via the PAX 100-C controller. The software allows the set-up of batches with variable count, volume, interval, and dispensing speeds. Single or multiple batches can be entered into a batch sequence, which is listed above the parameter entry boxes. Once programmed the sequence can be started by the footswitch, mouse or keyboard. Batch runs can be paused or stopped at any time and restarted or reset as required. Forward, rewind, home and end buttons allow dynamic control of the applicator plunger while setting-up the syringe. Batch sequence files can be saved to disc for repeat procedures.

Standard 1ml and 10ml all-glass syringes provide direct selection of μ l volumes from the controller. Standard cannulae sizes are 25g x 25mm and 29g or 30g x 25mm with Luer fitting. Syringes have fixed or removable needles that can be Teflon coated to reduce the effect of surface tension.

A mounting arm suitable for a universal retort stand is fitted to the applicator so that the operator can conveniently raise the height of the needle tip to ease dispensing of solution onto large numbers of whole plants, often required in greenhouse based evaluation. The unit is supplied with a foot switch permitting 'hands-free' operation. A ring finger switch is available as an option.



Summary

- Aliquot counter to confirm the total number of aliquots dispensed
- Batch list allowing programmable batch sequences
- Start, stop and pause buttons to control the dispensing cycle
- Auto increment for continuous interval dispensing of the same volume
- Batch repeat for automatic repeat of the batch sequence at the end of the run
- Counter can be set to count up or down and reset on demand
- Forward, rewind, home and end buttons allow dynamic positioning of the plunger
- Bookmarks for easy plunger positioning
- Saving and loading of batch parameters to file
- Export to and import from character delimited and xml files for use with other software such as spreadsheets
- Log with log history
- User definable syringe sizes
- User programmable software component
- Foot operated switch for "hands-free" operation
- Serial or USB connection

Specification

| | |
|---|--|
| Count range | 1 - 9999 |
| Aliquot range with standard 1ml syringe | 0.01 – 999.99 μ l; approx. 400 μ l max. |
| Interval range | 0.1 sec – 100 hrs |
| Dispensing speeds with standard 1ml syringe | 0.1 – 100 μ l/sec |
| All glass syringe (standard) capacity | 1ml |
| Optional syringe capacities | 10ml |
| Software requirements | Windows 2000, Xp, Vista or later operating system. |
| Minimum computer specifications | 500MHz processor (1GHz or higher recommended), 256MB RAM (1GB for Vista), 5MB hard disk space, 1 free serial or USB port |
| Applicator dimensions | 369mm x 156mm x 89mm |
| Controller dimensions | 160mm x 160mm x 85mm |
| Total weight | 4Kg |
| Supply Voltage | 110/240V, 50/60Hz |

Ordering Information

| Product Code | Description |
|--------------|------------------------|
| BS02756 | PAX 100-C Applicator |
| BS01062 | 1cc all glass syringe |
| BS01061 | 10cc all glass syringe |

The company reserves the right to make changes to the specification without notice. Other products in the range include the PAX 100-3 stand-alone micro-applicator, manual operated hand applicator and the precision micrometer syringe unit.

