

## SYSTEM OVERVIEW

- *The **KX** range is designed to serve reverse jet dust extraction systems and formulated specifically to address their needs .  
The **KX7700d RJ DP Valve Controller** offers a fully self contained solution to multi valve control, incorporating on board solenoid valves and differential pressure sensing. This unit offers the latest in Microprocessor technology in a compact enclosure, affording unparalleled levels of user friendliness, system flexibility and tamper-proof operation.  
Capable of running up to 12 on-board solenoid valves, the system may be extended by matching external serial drone units so that up to 180 valves can be accommodated in a comprehensive sequence cycle.*
- ***KX7700d RJ DP Valve Controller** takes care of system control. Using just four push buttons and the high resolution LCD Display, all aspects of system operation can easily be programmed for optimum performance.*

## CIRCUIT CONTROL TECHNOLOGY

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# Features

## ADVANCED MICRO-PROCESSOR CONTROL.

- Operating at over one million instructions per second the onboard micro-processor provides ease of use and a level of control which was virtually impossible with old plc or Cmos systems.

## ONBOARD EPROM MEMORY

- Ensures system settings are retained during power failure or disconnection of the Controller.

## EASY TO USE 4 BUTTON CONTROL

- **MODE:** Move forward through options
- **UP:** Increases values selected by mode
- **DOWN:** Decreases values selected by mode
- **START/STOP:** Run or halt the system

## HIGH RESOLUTION LCD DISPLAY

- Easily view and adjust system setup.
- Displays pressure readings in real time.
- Monitor current valve firing.
- Intelligent back-lighting to reduce power consumption and aid display visibility when needed.

## BUILT-IN DIFFERENTIAL PRESSURE SENSOR

- The KX7700d RJ DP has it's own internal differential pressure sensor. This allows display of and reaction to differential pressure changes without the requirement for additional hardware and electrical connections.

## REAL TIME SYSTEM MONITORING

- Whilst the system is running, Differential Pressure and system status can be monitored in real time. Differential pressure is displayed constantly whenever the Controller is running as well as the number of the valve currently being pulsed in the cleaning sequence. One quick glance at the display will tell the operator system status and position in the cleaning cycle.

## BUILT-IN SOLENOID VALVES & SLAVE POWER SUPPLY

- The KX7700d RJ DP is fully self contained and is supplied as standard with solenoid valves onboard thus keeping installation as simple as possible. The unit has an on-board power supply which may be used to power the extension slave units directly if required.

## CLEANING FAILURE WARNING

- The system is designed to expect effective cleaning to have taken place within five full cycles, if this is not the case a visual and (where fitted) an audible warning will sound.

## SEPERATE CLEANING CYCLE FOR SYSTEM FAN STOP

- A seperately programmable cleaning cycle is provided for optimum filter performance. This operates whilst the main system fan is not running and can be preset for number of cycles.

# Technical Specifications

**CONTROLLER:**

Part Number KX7700d RJ DP.

**INPUT SUPPLY:**

24Vdcc (+ 10%: -15%)

**INPUT FUSES:**

3.15 Amp HBC 20mm .

**OUTPUT FUSES:**

3.15 Amp HBC 20mm.

**POWER CONNECTIONS:**

INPUT: 3-Way 1.5mm , 10 Amp side entry insulated terminal block marked: 24V+, EARTH, 0V (fused)

OUTPUT: -Way 1.5mm 10 Amp side entry plug and socket insulated terminal block which is marked: 0V, 24V+ (fused)

**I/O CONNECTIONS:**

11 way 16 amp insulated terminal block with wire protector, designated :- 0V, SERIAL, DIG, 5V+, RL2, RL1, O12, O11, COM.

**POWER LOSS:**

In the event of power loss, the unit will cease to operate but will remember its operational settings. Operation will recommence as soon as the voltage level comes within the input supply limits.

**OUTPUT VOLTAGE:**

24Vdc, regulation as input.

**OUTPUT LOAD PER OUTLET:**

10VA continuous, 22VA pulsed into solenoid valves.

**START UP SEQUENCE:**

The unit will always start at output 1.

**PRESSURE SCALE:**

0 - 700mmWG.

**CONSTRUCTION:**

Solid state microprocessor components mounted on a double sided glass fibre P.C.B. with component mask.

**INDICATION:**

Valve Numbers 1-12 (or up to max 180 with drone units) will be displayed on the LCD as each output is energised in sequence.

**AMBIENT TEMPERATURE AT BOARD SURFACE:**

-10 to +45 deg.C. Storage Temperature: -20 to +70 deg.C.

**VIBRATION SPEC:**

Not greater than BEAMA Group 2.

**CONDUCTING MATERIALS:**

Standard PCB's can be supplied with their surfaces coated with a layer of Parylene C, a material that is to MOD standard 59-47/4, and MIL-1-460C. This treatment reduces the risk of damage through moisture and must be specified at time of order.

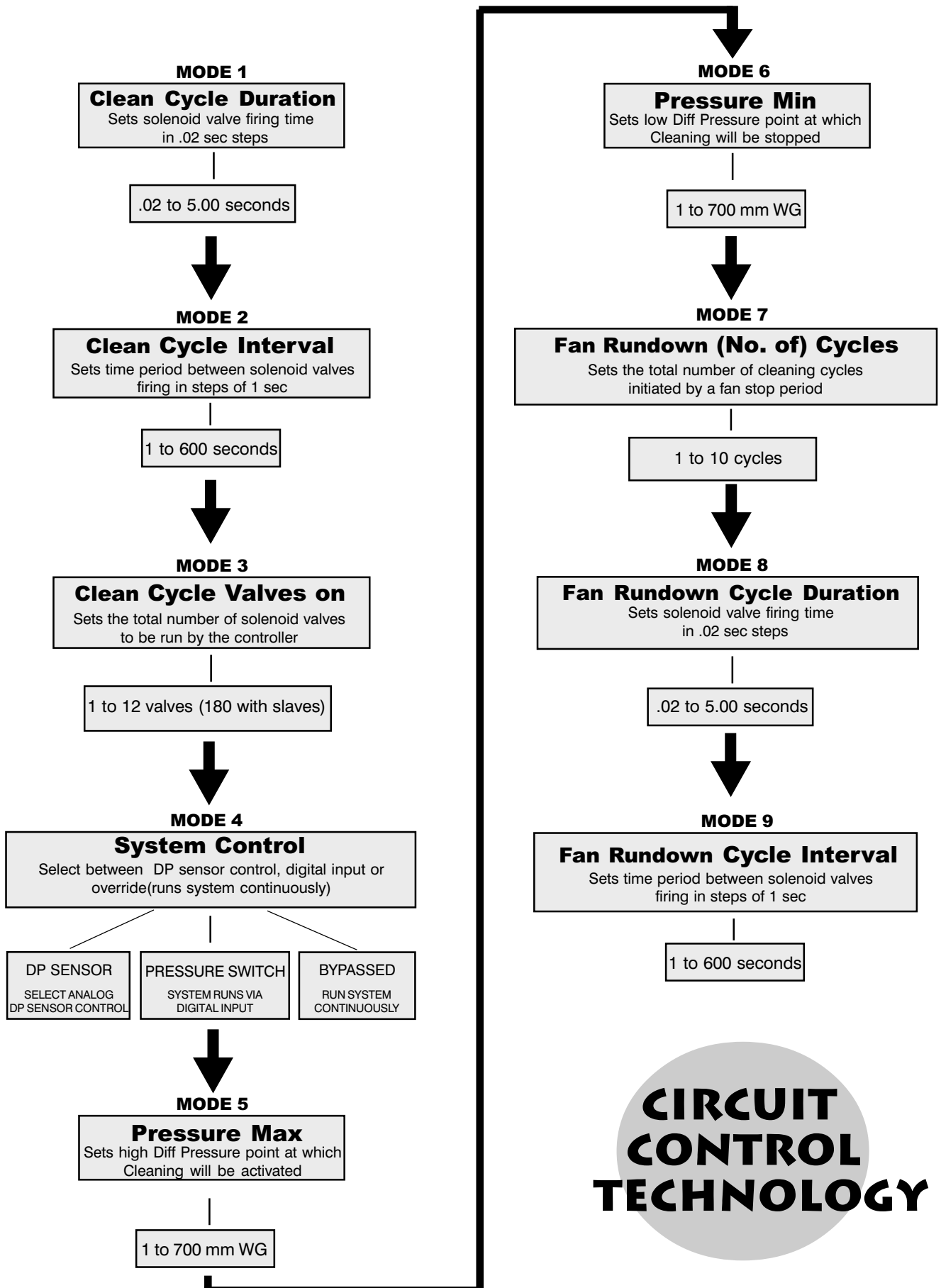
**ENCLOSURE:**

Polycarbonate box with removable clear cover (manufactured to IP65).  
Size: 340mm x 150mm x 100mm

**CCT reserve the right to change or revise product specifications at any time and without prior notification.**

# Programmable features

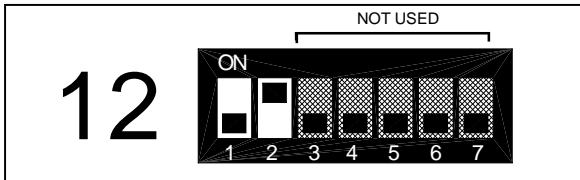
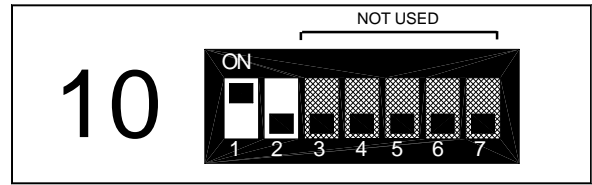
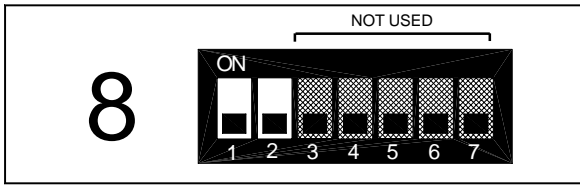
The following is a flow chart of the programmable settings available on the KX7700d RJ DP Valve Controller. The options available in each mode are explained in an easy to follow format.



**CIRCUIT  
CONTROL  
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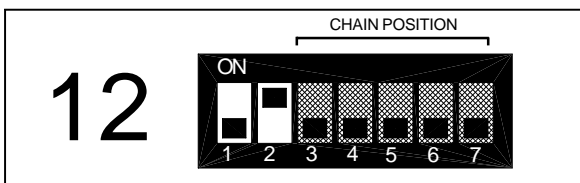
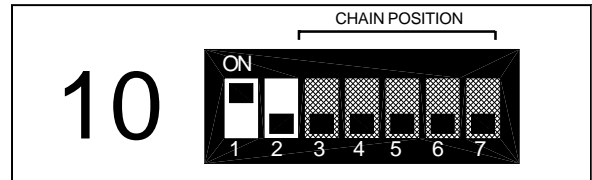
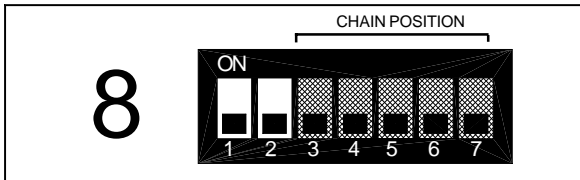
# Binary Dip Switch (Controller and Drone)

## CONTROLLER: VALVES INSTALLED



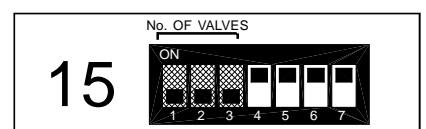
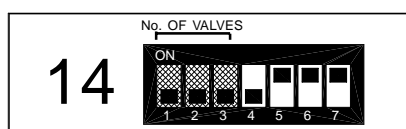
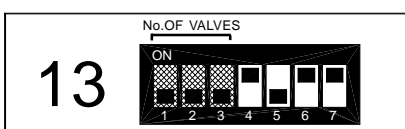
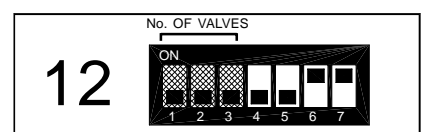
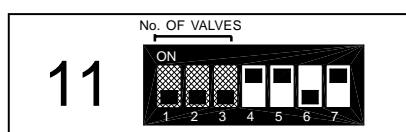
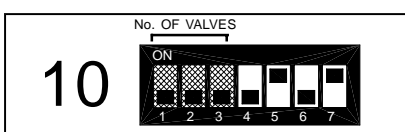
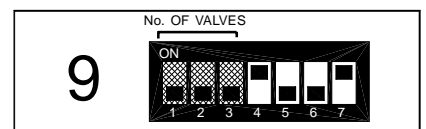
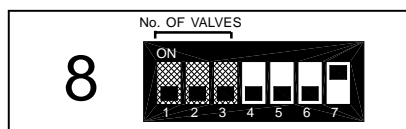
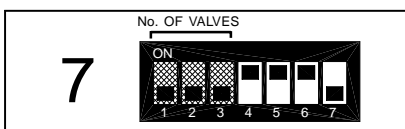
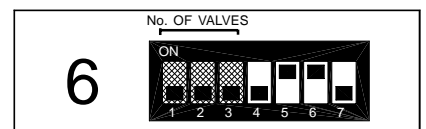
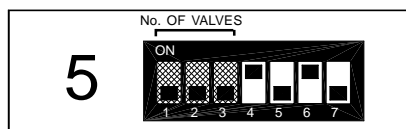
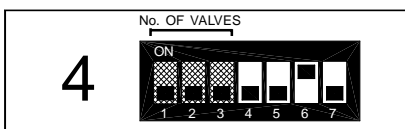
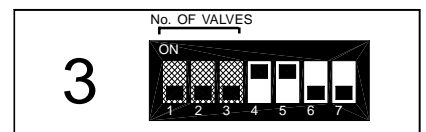
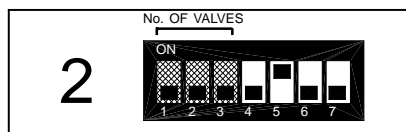
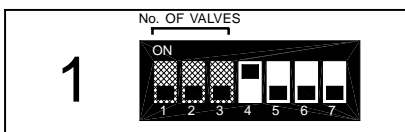
This setting should reflect the number of solenoid valves actually installed in controller unit.

## DRONE: VALVE OUTPUTS



This setting should reflect the number of solenoid valves actually installed in the drone unit.  
Controller and drones combination will pulse any number

## DRONE: CHAIN POSITION



This setting determines a drone unit's firing position in a chain. Any drone selected in position 1 will fire its valves simultaneously with the Controller. No more than 4 valves should be selected to fire simultaneously in a chain. N.B. The controller's position is always 1 (one) and does not require setting.