





MULTI-FUNCTION JOYSTICKS

The Multi-Stix[™] series from Cirus Controls brings you precision proportional plow control amplified with function and power. Offering multiple joystick options, Multi-Stix[™] helps provide meticulous operations in three configurations with fully proportional capabilities and multi-function control. Multi-Stix[™] configurations additionally provide the ability to individually program the speed of each direction of motion without changing wiring or making hydraulic modifications by utilizing Cirus Controls' Mako[™] software.

MULTI-STIX™ SERIES

- Multi-Stix™ 216, 320 and 420 models
- Fully proportional, 1 or 2 axis joysticks
- Multi-function control on any joystick
- Selectable safety triggers
- Hoist, wing or blade lock and limits available
- Controls up to 6 devices
- Control up to 20 proportional channels on multiple joysticks
- Easy capability upgrade options with Mako[™] electronics platform
- Configurable for snow and ice patrol, garbage and leaf collection trucks



Multi-Stix 216



Multi-Stix 320



Multi-Stix 420 Joystick Shown Mounted on an Armadillo Arm Unit with SpreadSmart Rx™ Controller





Multi-Stix[™] Proportional Plow Control System

Product Summary

- Multiple joysticks for proportional control of hydraulic devices (e.g., hoist, plow, wing)
- Utilizes Mako Trim ™, a Windows compatible program to set the speed of each direction of motion individually without wiring or hydraulic modifications

Product Application

- Multiple vehicle types (patrol trucks for snow/ice, garbage, leaf collection)
- Control of each hydraulic function on an individual joystick

Device & Signal Capacity

- MS 216 up to 4 devices;16 independent PWM channels
- MS 320 up to 6 devices; 20 independent PWM channels
- MS 420 up to 8 devices; 20 independent PWM channels
- Frequency settable from $40 450 \, \text{Hz}$

Joystick Button

• IP 68 top switch for safety interlock (hoist) or second mode actuation

Axis & Range of Joystick Motion Joystick Signal

- 1 or 2 axes of joystick motion: X and Y
- 27 degrees of motion available in each axis

Joystick Self Test Diagnostics with CAN Bus

- True Hall effect (magnetic) joystick with no mechanical contacts
- Mako™ uses CAN Bus for a self test of the joystick during power cycle
 SafeStik™ automatically disables the axis if an axis fails during use
- Joystick diagnostics for each axis of motion is visible on LED
- Channel Safe[™] detects and protects against open or short circuits in hydraulic drive channels

Combo-up (Panic) Button

• Momentary button trigger for parking of up to 6 devices

Float Functions

• User settable float controls for plow, wing toe, wing heel and blade

Plow Control Interlocked Features

Hoist lock, hoist limit, plow, wing and blade lock (requires external sensor, key or switch)

Electronic Backpack

• Mako™ multiplexed on CAN Bus and Cirus Bus

System Controller

- Mako Trim™ works on any Windows 2000 or newer computer
- Software included
- Field configurable buttons and function names

System Mounting

• Seat mounted or pedestal mounted

Warning Indicators

• Up to 8 labeled and colored indicators integrated into the joystick housing

Optional Equipment

Uni-Grip[™] control of plow float and Moray[™] system

Operating Temperature Range

• Minimum: -20 degrees Celsius; maximum: 70 degrees Celsius

Power Requirements

- Minimum: 11 Volts DC
 Maximum: 15 Volts DC
 Maximum: 10 Amps
- Internal fuse rated at 10 Amps



