



## Adaptable functionality for intelligent plow control

Effective plow controls require performance, power and precision. Available with fully proportional capabilities and multi-function control in three different configurations, the Uni-Grip™ series of single joysticks from Certified Cirus Control Systems offer precision operations for superior winter maintenance. The Uni-Grip series utilizes our sophisticated Mako™ software, which allows operators to individually program the speed of each direction of motion without changing wiring or making hydraulic modifications.

### UNI-GRIP SERIES

- Uni-Grip 412, 620 and 820 models
- Fully proportional single joystick
- 2- or 3-axis options
- Multi-function control
- Standard safety grip trigger
- Controls up to 7 hydraulic devices
- Control up to 20 proportional channels on one stick
- Configurable for patrol, garbage and leaf collection vehicles
- Easy capability upgrade options with Mako electronics platform



Uni-Grip 412



Uni-Grip 620



Uni-Grip 820



Uni-Grip 620 joystick shown mounted on an Armadillo Arm Unit with SpreadSmart Rx™ color display



# Uni-Grip™ Series

## Proportional plow control systems

### PRODUCT SUMMARY

- Single joystick for proportional control of hydraulic devices (e.g., hoist, plow, wing, blade)
- 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, sanitation, leaf collection, etc.)
- Control of each hydraulic function independently

### DEVICE AND SIGNAL CAPACITY

- UG 412 - up to 3 devices; 12 independent PWM channels
- UG 620 - up to 5 devices; 20 independent PWM channels
- UG 820 - up to 7 devices; 20 independent PWM channels
- Frequency range from 40 – 450 Hz

### JOYSTICK BUTTONS

- UG 412 - 2 programmable buttons
- UG 620 - 4 programmable buttons
- UG 820 - 6 programmable buttons

### AXIS AND RANGE OF JOYSTICK MOTION

- UG 412 - 2 axes of joystick motion: X and Y
- UG 620 - 3 axes of joystick motion: X, Y and Z
- UG 820 - 3 axes of joystick motion: X, Y and Z
- 27 degrees of motion available in each axis

### JOYSTICK SIGNAL

- True Hall effect (Magnetic) joystick with no mechanical contacts

### JOYSTICK SELF TEST DIAGNOSTICS WITH CAN BUS

- Mako uses CAN bus for a self test of the joystick during each power cycle
- SafeStik™ automatically disables the axis if an axis fails during use
- Joystick diagnostics visible on LED, LCD or at valve body
- Channel Safe™ detects and protects against open or short circuits in hydraulic drive channels

### COMBO UP (PANIC) FUNCTION

- 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 Certified Cirus Control Systems bus

### SYSTEM CONTROLLER

- Mako Trim works on any Windows® 2000 (or newer) computer
- Field configurable buttons and function names

### DISPLAY TYPE

- UG 412 - LED indication mounted in joystick head
- UG 620 - graphic LCD (white/blue) or optional color TFT
- UG 820 - graphic LCD (white/blue) or optional color TFT

### 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



Minneapolis, MN  
763-493-9380

St. Louis, MO  
314-344-3300

Des Moines, IA  
515-244-7411

Chicago, IL  
847-573-3800

Toledo, OH  
419-873-7411

[www.certifiedcirus.com](http://www.certifiedcirus.com)