

# Transforming Camera Maintenance Worldwide

- Eliminates costly and cumbersome bucket/lift trucks
- Maintenance cost, time, and personnel reduced
- Enhanced safety for maintenance personnel



**[MG]<sup>2</sup>**  
MC SQUARED  
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## The Heart of the System

The MG Squared Camera Lowering System utilizes a patented spring assisted connector assembly developed to operate multi-function surveillance cameras (color, B/W, thermal, IR) as well as other ITS roadside and security devices. Our standard connector body is molded in thermosetting synthetic rubber designed to handle the harshest environments. The connector pins allow for typical camera functions such as pan, tilt and zoom as well as data transfer needs including 100 base TX standards. The unit is rated for winds of 130 per hour (210 km/h) with a 1.3 gust factor and a 1.6 safety factor.



## 4th Generation Camera Junction Box

The 4th generation MG Squared camera junction box is a two piece clamshell design, with one hinge side and one latch side. This provides an easy access point for wire terminations and other connections between mounted equipment and the lowering device connector leads. The interior of the box offers ample space for surge protectors. The general shape of the box is cylindrical to minimize the EPA. The bottom of the junction box is provided pre-tapped with a 1 1/2" NPT thread to accept industry standard dome housings and can be factory or field modified to accept a wide variety of other camera mountings.

## The Lowering Tool



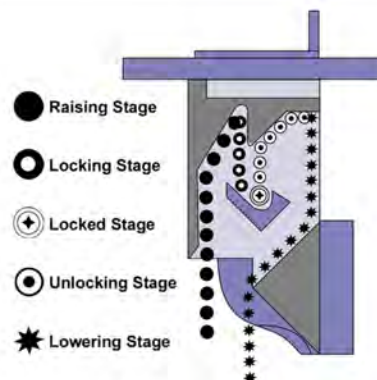
The lowering tool is composed of an auto braking winch and stainless steel aircraft cable with a breaking strength of over 1,700 pounds. The tool is operated by a single user to lower mounted equipment for safe and quick ground level maintenance or replacement. The lowering tool is available in both a lightweight portable design and depending on your application may be permanently mounted in a secured enclosure.



The winch may be electrically or manually operated. Electrically operated, cameras and other devices can be lowered to ground level in under a minute and raised back into operation in the same amount of time. Designed with a reduction gear to reduce the effort when operating the winch manually, an operator can expect to lower devices from typical heights with the manual hand crank in less than 3 minutes.

## 5 Operating Stages of the Disconnect Assembly

The disconnect assembly operates according to 5 basic stages: Locked, Unlocking, Lowering, Raising, and Locking. The assembly's design allows the unit to self-align, which enables attached components such as a camera, light fixture, or other device to lock into the same specified position every time the assembly is raised back into the locked stage. In the locked stage, twin tracking support arms with a 600 lbs (272 kg) 4:1 safety factor sustain the weight of the mounted components without any cable tension or braking device.



## Integral System

The integral system is provided complete with a new concrete, steel, aluminum, or fiberglass pole customized for the MG Squared lowering system. Sensitive power/signal, and stainless steel lowering cables are protected inside the interior of the pole. MG Squared integral systems are provided with a custom conduit fitter which allows the moving lowering cable to be isolated inside conduit, thereby keeping the cable from ever making contact or tangling with any installed or future installed equipment wires or cabling.



## External System

An external system provides a simple solution to add or retrofit a lowering system to existing infrastructure, such as towers, buildings, bridges, spans, and of course existing poles. The lowering device is attached to a customized upper mounting box. The upper mounting box is mounted to the desired height onto the structure via either banding straps, bolting, or welding depending on the application. A bottom box is mounted to the lower portion of the structure to provide access to a permanently mounted winch, or attachment for a portable lowering tool. The upper and bottom box are connected via conduit to provide a raceway for the lowering cable.



## Applications

- Perimeter Surveillance
- Intelligent Transportation Systems (ITS)
- Airports (CCTV and Lighting)
- Refineries (CCTV and Lighting)
- Offshore Platforms (CCTV and Lighting)
- Water Treatment (CCTV and Lighting)
- Military Bases
- Embassies
- Power Sub Stations
- Nuclear Power Stations
- RAID Towers
- Secure Facilities
- Parking Lots (CCTV and Lighting)
- Commercial (CCTV and Lighting)
- Rest Areas (CCTV and Lighting)
- Industrial (CCTV and Lighting)
- Sea Ports (CCTV and Lighting)
- Rail Yards (CCTV and Lighting)
- Boarder Surveillance
- Bridges



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# The Ultimate Solution for Maintaining CCTV Surveillance Systems

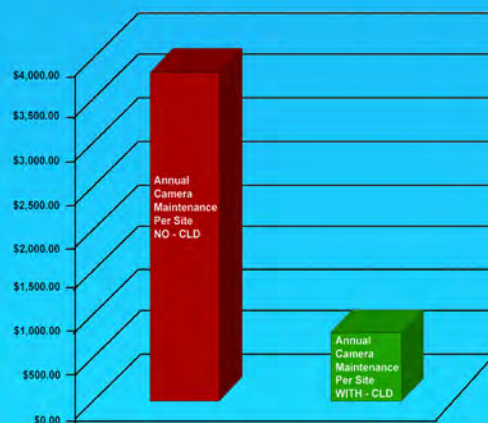
## MG Squared • Lowering Systems

Maintainability is never a question when the MG Squared Lowering System is implemented. Whether you have cameras deployed over 200 feet above the waterway on the support structure of the Sunshine Skyway Bridge in Tampa, or high end thermal cameras monitoring U.S. sea ports and military bases, or one of the thousands of cameras mounted to various height concrete and steel poles monitoring traffic along highways worldwide, MG Squared lowering systems provide the safest and most cost effective maintenance solution for your applications.

The utilization of a Lowering System provides distinct benefits in both the design and maintenance of Intelligent Transport Systems (ITS) and security surveillance systems. The Lowering System allows the entire camera and housing to be unlatched from its position atop a pole or structure and lowered on a stainless steel aircraft cable to ground level. When the camera is lowered, the only cable travelling within the pole is the lowering cable. The sensitive data and video cables are secured and separated inside the pole, which means the cables are not subjected to stress or bending over pulleys during the operation. Locking and guide pins cause the camera to lock into the exact position every time. This provides for safe, simple and quick camera installations, maintenance or replacement.

## \*Cut yearly CCTV maintenance cost by over 80%

\*Savings based upon published results documented in 2003 Florida DOT White Paper. Electronic copies available



In 2003 the Florida Department of Transportation ITS Office commissioned a White Paper to disseminate detailed application, design criteria, installation, and cost information regarding video surveillance systems and, specifically, to address questions regarding camera mounting heights, locations, and maintenance, and how these issues impact the life cycle costs of a closed-circuit television (CCTV) site. In regards to the implementation of a lowering device, the study concluded that the annual maintenance cost per site was reduced 86.2% versus those sites without a lowering device.



## KEY FEATURES

- Eliminates costly and cumbersome bucket/lift trucks and associated lane closures
- Safe and simple ground level maintenance or replacement of devices mounted to lowering system
- Maintenance cost, time, and personnel reduced
- Lowers cameras, light fixtures, and other devices electrically in seconds or manually in minutes
- Mountable at any height or location and on most existing structures
- Mountable to customized concrete, steel, aluminum, and fiberglass poles
- External system available for easy retrofit onto existing infrastructure
- Patented contact connector compatible for most ITS devices and cameras
- Contact connector disconnects electrically, allowing only movement of the stainless steel lowering cable during operation
- Eliminates engineering design constraints with regard to camera location or mounting height
- Custom contact connectors for use with IP communications, coax, power and twisted pair



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