

# GeoVISION™ Borehole Video Camera Systems

The GeoVISION™ Deluxe is the most versatile and least expensive professional quality borehole camera system in the 0 to 2000 foot depth underwater range.



Seven cameras are available with the GeoVISION™ Deluxe system.

Standard and Jr cameras with manual pan and tilt  
The pictures in this brochure are not to scale.



micro and nano cameras



Standard camera with motorized pan and tilt



The motorized winch, tripod, and control panel provide a platform that can be adapted for use in almost any water well or borehole situation when equipped with the appropriate camera and options. The Deluxe system with a stainless steel camera has a two year warranty. See the [www.geovision.org](http://www.geovision.org) website for details.

## GeoVISION™ Deluxe Configuration Options

GeoVISION™ Deluxe System can be configured with:

- Five different lengths 325, 650, 1000, 1650, and 2000 feet of cable
- Seven different interchangeable cameras - Jr plastic (color and B/W), Standard stainless steel (color and B/W), nano (color and B/W), and color micro - GeoVISION™ cameras can view in boreholes as small as one inch in diameter to very large boreholes, caves, crevices, pipes, tanks, and mines.
- Up to five viewing modes – Standard view down, motorized pan and tilt, manual pan and tilt, motorized mirror for the micro and nano cameras only, and manual side-looking mirror
- Up to three methods for determining and recording the depth of the camera – OSD, cable depth marks, and pipe string
- Many different viewing and recording options – Use any NTSC monitor and recording system such as a VCR, hard drive, DVD, or laptop computer.
- Up to three ways to power the system -110 volts, 220 volts, or an inverter with power from a 12 volt battery
- Several ways of providing light - Standard and supplemental

# Viewing and Recording



The Sony DVD recorder, provides a very convenient and easy way to make a digital recording.



One can use the optional tie clip microphone to record comments using the system's audio circuitry.



The Microvision 7 inch LCD Color monitor

One may use any TV monitor (NTSC) that accepts an analog signal to view and any VCR to record from the GeoVISION™ video and audio outputs. Sunshades are standard on all GeoVISION™ monitors. There are several types of video to USB adapters available from electronic retailers, They are not stocked by MPI. These devices allow one to view with and record directly to a computer.

## Built-in and Supplemental Lights



The nano camera has four built-in LEDs



The three out-front LEDs, left, shown with the micro motorized mirror and ring light, provides excellent backlight with or without the ring light.



The 9 LED ring light is one of several options for the micro camera.



Eight high brightness LEDs are built into the standard stainless steel cameras. This camera also has a camera lights on and off circuit for use with supplemental lights. This switch helps GeoVISION™ obtain some of the best videos possible in poor quality water.



The Super 8 Light and the Dual and Quad Dive lights provide supplemental light for use in boreholes, shafts, mines, and caves. Versatile brackets allow these lights to be attached at many different places on the GeoVISION™ system. Supplemental off camera light also improves the quality of the image by increasing the subject texture and by reducing glare. The Super 8 Light is by far the brightest of these lights and is recommended for very large boreholes, shafts, and mines.



# Camera size, underwater depth limit, and system compatibility

Camera Type and Feature Dimensions are at the widest point.	Size in Inches		Max. Depth in Feet	Winch system		
	Diameter	Length		Deluxe	HD	Econo
Micro - color, stainless steel	1 3/8	13	2000	Yes	No	No
Nano - color, stainless steel	3/4	10	2000	Yes	Yes	Yes
Nano - black and white, stainless steel	3/4	10	2000	Yes	Yes	Yes
Standard color, stainless steel	1 5/8	2.77	2000	Yes	Yes	Yes
Standard B/W, stainless steel	1 5/8	2.77	2000	Yes	Yes	Yes
Jr - color, plastic	1 3/4	3.25	1000	Yes	Yes	Yes
Jr - black and white, plastic	1 3/4	3.25	1000	Yes	Yes	Yes



The motorized Pan and Tilt is shown left and above. The motorized pan and tilt option is used with the Jr and Standard cameras to view in any direction using a joy stick. Adjustable stainless steel centralizers as shown are standard. A close-up of the nano camera with the motorized side looking mirror is shown with a dime for scale.



The deluxe winch, the micro camera, the nano camera with motorized side looking mirror, the standard camera, the Jr camera, the motorized pan and tilt with a standard camera. They are resting on top of the deluxe carrying case which is 26 x 26 x 22 inches and foam lined. The encoder wheel and cable protector is to the side of the case.



Compass

Standard and Jr side looking mirror

## Up to five viewing modes are available with Deluxe GeoVISION™ systems

- GeoVISION™ system cameras are usually lowered into the borehole **viewing down**. In small and moderate size bores this is adequate. When one wants to view to the side or back up the borehole, or view into to a crevice or mine, there are several other choices.
- **Motorized pan and tilt option** with the Jr and Standard cameras as is pictured above. One may view 360 degrees by panning and tilt up and down 170 degrees with the motorized pan and tilt attachment. This option allows one to view in any direction with the operation of the joystick on the control panel.
- **One can manually pan and tilt** with the Jr and Standard cameras, pictured above left, by using a pipe string and the GeoVISION™ supplied manual head tilting assembly, the operator can view in any direction including up by pulling on the power cable and by turning the pipe. All GeoVISION™ systems have a threaded pipe-fitting, ready for attaching a user supplied pipe string. The camera can be pushed or pulled past obstructions or pushed and pulled horizontally or overhead with a pipe string. Pipe strings can be made from many different materials.
- The **motorized mirrors**, for the micro & nano cameras, allows one to view to the side 360 degrees.
- An **optional side-looking mirror** is available with the Standard and Jr cameras to allow side viewing in small diameter boreholes.

# Trident Tool Inc.

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Versatile and cost effective professional quality borehole camera systems since 1989.

For product information and prices: Call 800-523-5760 toll free from the US, elsewhere call 540-635-7753 or fax 540-635-6352. Email: [info@tridenttool.com](mailto:info@tridenttool.com), website: [www.tridenttool.com](http://www.tridenttool.com).

GeoVISION is manufactured by Marks Products, Inc.



The Deluxe GeoVISION™ system in field use. Note the push pole attached to the front to provide additional stability in deep boreholes.

Deluxe motorized winch, power supply, and control panel. The winch speed control, pan and tilt control switch, various OSD controls, speaker, and A/V input and output jacks are some of the items visible.



The On Screen Depth Display puts the depth of the camera on the recording and the screen in either feet or meters. The display can be placed in any of five screen locations. It also has count-up, countdown, and reset functions.

## Cable Lengths Available by Winch

Depth in Feet or Meters	2000	1650	1000	650	325
	600	500	300	200	100
Winch					
Deluxe	Yes	Yes	Yes	Yes	Yes
Heavy Duty	No	No	Yes	Yes	Yes
Light Duty	No	No	No	No	Yes

## Major Features and Options

	Depth Limit	Deluxe	Econo Heavy-Duty	Econo Light duty
On Screen Depth Display	2000	Standard	Yes	No
Motorized Winch	2000	Standard	No	No
Motorized pan tilt - Jr plastic cameras	1000	Yes	No	No
Motorized pan tilt - Standard stainless cameras	2000	Yes	No	No
Motorized side looking mirror - micro only	2000	Yes	No	No
Motorized side looking mirror - nano only	2000	Yes	Yes	Yes