

# GeoVISION™ Borehole Video Camera Systems

## GeoVISION Deluxe Configuration Options

- Five different depths 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), color nano, and color Dual Scan micro and old 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 seven viewing modes – Standard view down, motorized pan and tilt, manual pan and tilt, Dual Scan, motorized mirror for the old micro and nano cameras only, and manual side-looking mirror, Camera lights on or off with supplemental light
- 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 the Sony DVD recorder, a VCR, hard drive, 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 - On camera LEDs plus two supplemental light systems



Camera Options



Deluxe Winch Setup

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

MAJOR FEATURES & OPTIONS	Depth Limit	Deluxe	Econo Heavy Duty	Econo Light Duty
On Screen Depth Display	2000	Std	Yes	No
Motorized Winch	2000	Yes	No	No
Dual Scan micro	2000	Std	No	No
Motorized pan& tilt - Jr CPVC cameras	1000	Yes	No	No
Motorized pan & tilt - Standard stainless cameras	2000	Yes	No	No
Motorized side looking mirror - old micro only	2000	Yes	No	No
Motorized side looking mirror - nano only	2000	Yes	Yes	Yes

## TECHNICAL SPECIFICATIONS

### VIEWING & RECORDING

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 & SUPPLEMENTAL LIGHTS

The Super 8 Light and Adjustable Super 8 Light 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 two Super 8 Lights are bright and are recommended for large boreholes, shafts, and mines.

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.

### Camera size, underwater depth limit, and system compatibility

Dimensions at widest point	Diameter	Length	in Feet	Deluxe	HD	Econo
Dual Scan Micro - color, stainless steel	1 1/8	27	2000	Yes	No	No
nano - color, stainless steel	3/4	10	2000	Yes	Yes	Yes
Standard color or B/W, stainless steel	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

\*Not available in meter sizes

### VIEWING MODES

- 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. 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 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.
- One can rotate the side viewing camera of the Dual Scan micro. It has twenty-one high brightness LED's in three groups.
- The Motorized Mirrors for the old micro & nano cameras, allow 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.
- Camera Lights On-Off Circuitry- This switch allows the eight LEDs in the Stainless Steel Standard camera and the 21 LEDs in the Dual Scan micro camera to be turned on or off. Using the supplemental lights reduces glare from suspended particles in the water, increases texture of the subject, and improves depth perception by using indirect light. When the water quality is good the built in camera lights should be turned on to provide fill light. The combination of built-in and supplemental lights achieves the best images in clear water. Generally, the best videos are obtained by using brighter off camera lights such as the Adjustable Super Eight Light.

### Cable lengths available by width

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Dual Scan Micro - color, stainless steel	1 1/8	27	2000	Yes	No	No
nano - color, stainless steel	3/4	10	2000	Yes	Yes	Yes
Standard color or B/W, stainless steel	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