

cams™ Management Systems



Control Technology



cams™ Management Systems

Providing

- Choices to meet your needs
- Durability and reliability
- Component continuity not radical change
- Product compatibility - forward and backward



cams™ Base Station p.8

Bottomline

Pro2 p.4

Time

Select p.4

Water



Remote Link p.6

Stewardship

Crop

Pocket Pro p.7

Future

Soil

Basic p.5



Mechanical p.5





Maximize your resources

cams™ lets you better manage your time, water and chemical resources, helping to increase your bottom line. Plus, you can easily adapt and comply with government regulations at any time with reduced costs.



Centralized control with **cams™** Base Station

Manage all of your pivots from your home or office with the **cams Base Station** – a comprehensive computer irrigation management package. You'll have complete control at your fingertips of all your irrigation equipment running status, irrigation schedules and more.



In-field control with **cams™** panels

Choose your level of control with the **cams** panel that's right for you:

- **Pro2**—programmable management panel
- **Select**—feature-rich pivot management panel
- **Mechanical**—manual in-field pivot control panel
- **Basic**—entry level in-field pivot control panel



Direct remote control with **cams™** Remote Link and Pocket Pro

The **cams Remote Link** lets you control your pivots by radio or phone. You can order your pivots to start, stop, call you, and more, no matter where you are.

The **cams Pocket Pro** is designed with the user in mind, providing simple, intuitive, easy to use graphics on a PDA. Managing your irrigation equipment remotely allows you to multi-task and more efficiently contribute to the bottom line.

In-Field Control Options

With Valley® modular control panels, you can upgrade from one panel to the next as your needs change. You can even use a Valley control module to control non-Valley equipment. It's as fast and easy as replacing a panel. Valley control modules are built to withstand the elements—natural and man-made. The enclosure is a pregalvanized material that's powder-coated, not just painted. Hinges are stainless steel.

Automatic Operations



Pro2

- Our top-of-the-line panel
- Programmable to perform control functions automatically
- Program by time, position, direction, pressure or time delay
- Records the 50 most recent functions or changes, plus precise time and position changes
- With the Valley **cams**™ Base Station, the **cams** Pro2 panel can be controlled from your home or farm office computer—just point and click
- Field diagnostics and error codes indicate where attention is required
- Backlit screen and keypad
- Five year warranty



Select

- Auto-reverse at two positions in the field
- Change depth of application up to six times in the field
- Easy-to-operate switches, digital readouts
- With the Valley **cams**™ Base Station, the **cams** Select panel can be controlled from your home or farm office computer—just point and click
- End gun & stop-in-slot functions can be set at the panel
- Power & pressure auto-restart with pressure transducer
- Dual meters track total operating hours and “wet” hours
- Three year warranty

Manual Operations



Mechanical

- Provides all basic equipment controls
- Large, easy-to-operate switches & analog readouts
- Status lights
- Easily upgrades to Valley **cams** Select or Pro2
- From the industry leader in computerized and manual panels

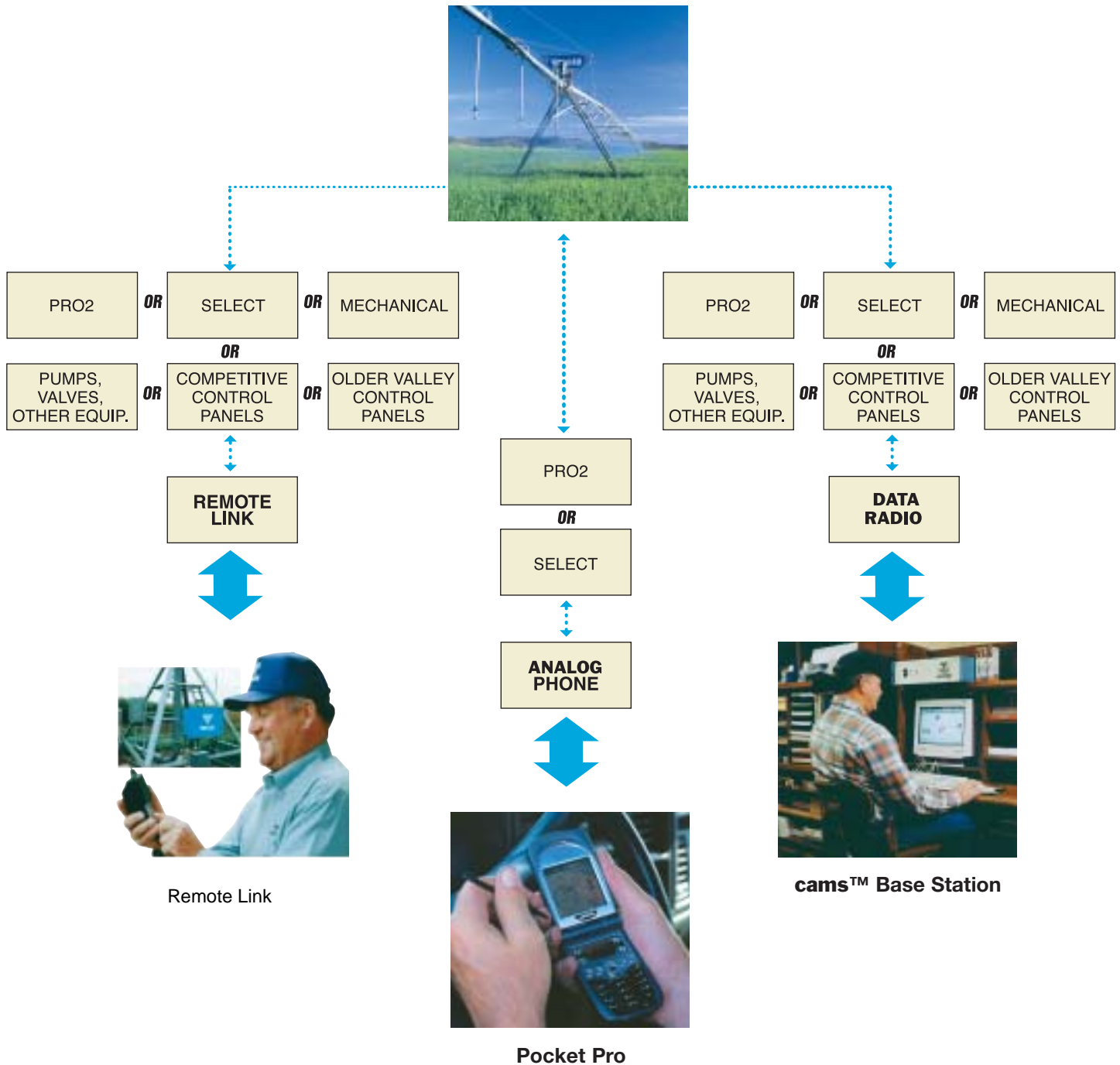


Basic

- Entry level
- Push button operation
- Mechanical switches
- Provides features for basic operations
 - start/stop
 - forward/reverse
 - water on/water off
 - dial for application depth

Direct or Centralized Remote Management

For monitoring and control on the go or from your office, consider the Valley® **cams™** Base Station, Remote Link, or Pocket Pro.





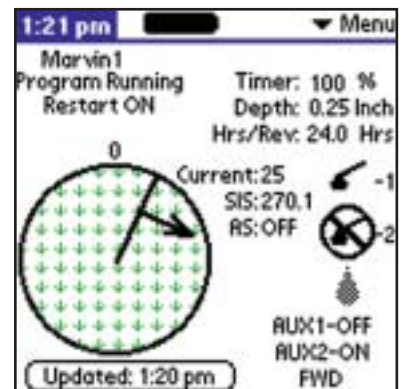
Direct Remote Communication with Your Irrigation Equipment



Pocket Pro

- Monitor and control pivots from a PDA cell phone combination
- Graphic display
- Full control with Pro2 or Select panel

Example screens:



Pocket Pro

Recipient of 2002 AE50 Award for Outstanding Technology Innovation

Centralized Control of Your Equipment



Monitor and control your irrigation equipment—from one to hundreds—from your home or farm office with the Valley® **cams™** Base Station. Use your PC to run the **cams™** software package, which graphically displays your fields on-screen. No need to go on-site to check your equipment's running status or make irrigation schedule changes.

Individual unit monitor and control

- Control your irrigation equipment just as if you were out in the field
- The control keypad you see on your computer screen is identical to what you see in the field. No new operations to learn. Just point and click.
- Alarm status section indicates non-programmed status changes
- Display area shows current equipment location, direction of travel and run status
- Multiple unit monitor and control
- Running conditions are automatically updated at whatever interval you select
- Color codes indicate operating status
- Start and stop any or all units in seconds

Create customized farm layouts with the **cams™** Mapping program

- Draw your farm on-screen with easy-to-use drawing steps
- Full-circle pivots, part-circle pivots, linears, roads, property boundaries, buildings, pipelines, pumps and valves can all be drawn on the map
- Add additional equipment to your map at any time
- Use the zoom command, which enlarges specific sections of your farm map for easy viewing

Record keeping is easy with Valley **cams™** Base Station software

Periodic reports are available to record current status and status change history according to unit and date selection for:

- Running status
- Position and direction
- Water depth/percent timer speed
- Auxiliary status
- Calculating approximate total runtime hours, wet runtime hours and auxiliary runtime hours
- Pro2 module hour meter/wet hour meter
- Pro2 flow meter (pulse counter)

Valley **cams™** Base Station hardware

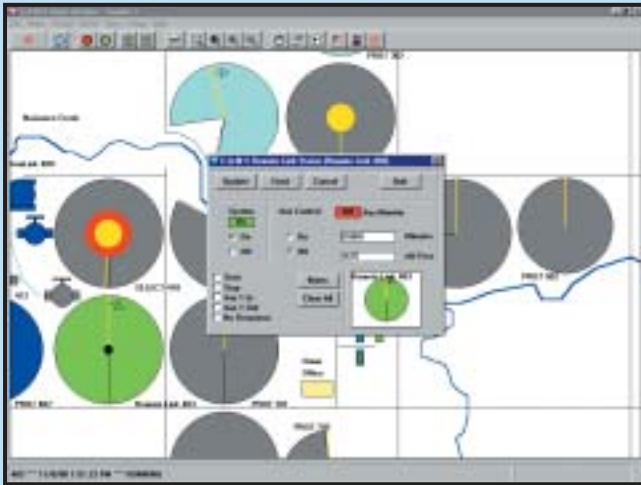
- Custom packages to meet your needs
- Choices of communication
- Complete package, hardware and software tested before sending to the field

Auxiliary Link

- Allows connection for monitoring and control of irrigation devices (i.e. pumps, valves...)
- Monitoring of environmental sensors
- User definable labels

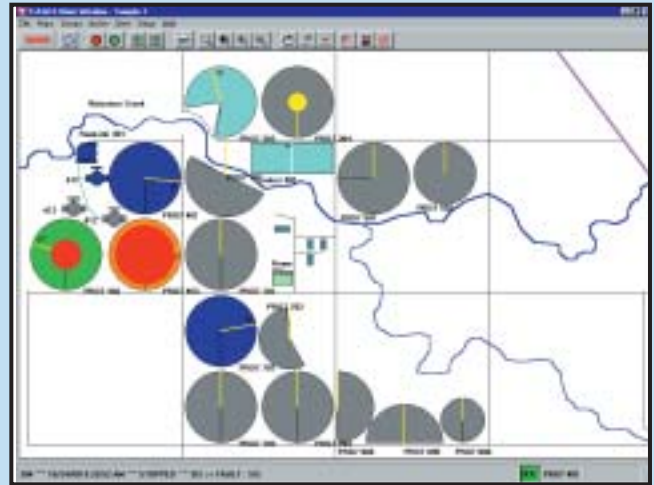
“Point and Click” Control

Here are some examples of the easy-to-read, easy-to-control screens of the Valley® **cams**™ Base Station.



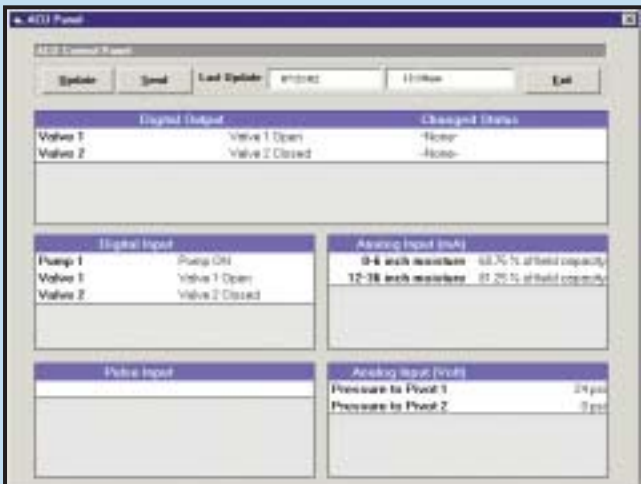
Remote Link

Screen shows operating status, option sensor information and more.



Map Main Window Color

Color codes indicate alarm status of each irrigation unit.



Auxiliary Link

- Screen shows current status of user-defined devices.
- You determine the labels.
- You input the constants and units for the sensor.



Panel Screen

The control keypad on the computer screen is identical to what you see in the field. A notepad is now available to keep track of each irrigated field activity.

cams™ Management Systems

	Direct Control Control Panels				Remote Control Communication		
	Basic	Mechanical	Select	Pro2	Remote Link	Pocket Pro	cams™ Base Station
MONITORING							
Pivot on/off	N	Y	Y	Y	Y*	Y*	Y*
Voltage	N	Y	Y	Y	N	Y*	Y*
Direction	N	Y	Y	Y	Y	Y	Y
Safety	N	Y	Y	Y	N	Y*	Y*
Diagnostics	N	N	Y	Y	N	Y*	Y*
Application depth	N	N	Y	Y	Y*	Y*	Y*
Water on/off	N	N	Y	Y	Y*	Y*	Y*
S I S on/off	N	N	Y	Y	N	Y*	Y*
Pressure	N	N	Y	Y	Y*	Y*	Y*
Field Position	N	N	Y	Y	Y*	Y*	Y*
Date	N	N	N	Y	N	Y*	Y*
Time	N	N	N	Y	N	Y*	Y*
Hours per revolution	N	N	N	Y	N	Y*	Y*
Auxiliary control status	N	N	N	Y	N	Y*	Y*
CONTROL - at panel							
Start / stop	Y	Y	Y	Y			
Water on/off	Y	Y	Y	Y			
Application depth	Y	Y	Y	Y			
Direction	Y	Y	Y	Y			
S I S on/off	N	Y	Y	Y			
Endgun settings	N	N	Y	Y			
Auto reverse / auto stop	N	N	Y	Y			
Auto restart	N	N	Y	Y			
CONTROL - remote							
Start / stop	N	N	N	Y	Y*	Y*	Y*
Water on/off	N	N	N	Y	Y*	Y*	Y*
Application depth	N	N	Y	Y	Y*	Y*	Y*
Direction	N	N	N	Y	Y*	Y*	Y*
Auxiliary control	N	N	N	Y	N	Y*	Y*
Field sector control	N	N	Y	Y	N	Y*	Y*
DESIGN							
Modular	N	Y	Y	Y	Y	Y	Y
Warranty	2	2	3	5	2	2	2
Enclosure pre-galvanized	Y	Y	Y	Y			
Lockable inner door	Y	Y	Y	Y			
Heavy duty disconnect	Y	Y	Y	Y			
Transient and induced voltage protection	N	N	Y	Y			
Industrial standards applied	N	Y	Y	Y			

Y = included N = not available Y* = yes if control panel has functional capabilities

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Component Details

cams™ Management System – products and components to save time, provide peace of mind, manage resources and maximize your bottom line.

Control Panel

- 1 NEMA 3R enclosures
- 1 Transient and induced voltage protection
- 1 Control panels with lockable inner door
- 1 Heavy duty disconnect



Communications

cams™ Base Station

- Customized packages
- Multiple communication choices
- Package factory tested

Remote Link

- Analog cell phone, land line or radio
- PAC control board
- Serial connection for Pro2 and Select panels
- Compatible with most competitive panels

Pocket Pro

- Use a personal digital assistant (PDA)/cell phone to monitor and control pivots
- Control multiple pivots
- Use anywhere analog cellular service is available



Span



Collector Ring

- Located above pivot swivel to minimize contact with water
- Watertight seal
- Stainless steel electrical conduit ensures years of trouble-free service
- High accuracy resolver provides position information for Select and Pro2 panels



Span Cable

- 8, 10, 12 gauge for power, 14 gauge control
- Shielded cable standard
- Standard color coded wire for easy service and maintenance
- 11 conductor standard, 12 conductor optional



Tower Box

- Galvanized steel construction with stainless steel shaft and nylon bearing assembly helps ensure long life
- Dependable field-proven cam and micro switch assembly
- Suppressor circuits reduce contact arcing to extend life

Irrigating more than 10 million acres!

Valmont® Irrigation is the acknowledged world leader in the development and manufacture of mechanized irrigation equipment and technology.

As the innovative source for irrigation ideas, Valmont is recognized for a number of industry firsts:

- **1983** First remote monitor and control package
- **1990** First computer control panel offered in the industry
- **1991** First C:A:M:S Base Station
- **1992** The Valley® Base Station was named to the prestigious Agricultural Engineering 50 List by a nationwide panel of engineers. This honor recognizes leaders who successfully transfer agricultural and food technology to the marketplace
- **1994** Valmont introduces the Select panel - the industry's only entry level automatic control panel
- **1996** Windows® C:A:M:S Base Station
- **2003** PocketPro - Valmont recognized with AE50 Technology Leader Award



Valley® Dealers #1 in product support

Valley Dealers combine their knowledge of local agricultural practices and conditions with Valmont's extensive irrigation experience and training...to design specific applications of Valley equipment that will best meet your needs.

Backing every Valley irrigation unit in the field are your Valley Dealer's service and part resources. Valmont provides rigorous, ongoing training to dealer personnel. Service Seminars, held throughout the year, provide local service technicians with up-to-the-minute parts and service manuals, plus extensive hands-on training.

These programs demonstrate Valmont's continuing commitment to service and parts support at the local level for your Valley equipment:

Valley RealParts®: Valmont's guarantee of the best quality and value for all of your parts needs.

RealParts Conversion: Drive train, electrical control, structural and sprinkler conversion packages are available for virtually any brand, whether currently manufactured or not.

RealParts Availability: Valmont maintains four parts distribution centers, plus four regional parts outlets around the globe to support local Valley Dealers' inventory requirements.

RealService®: Valley service technicians are factory trained and their service vehicles are well stocked with the necessary parts, tools and equipment to quickly service your irrigation equipment.

valmont 
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See your local authorized Valley Dealer:

Valmont Irrigation has a policy of continuous product improvement and development. As a result, certain changes in standard equipment, options, price, etc., may have occurred after the publication of this brochure. Some photographs and specifications may not be identical to current production. Your local Valley® dealer is your best source for up-to-date information. Valmont Irrigation reserves the right to change product design and specification at any time without incurring obligations.

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