

**Station Status**

Alarms

Tank High Level	Normal
Tank Low Level	Normal
Tank Level Sensor	Normal
System High Pressure	Normal
System Low Pressure	Normal
System Pressure Sensor	Normal
Power	Normal
Communication	Normal

Setpoints

Tank Level  Feet

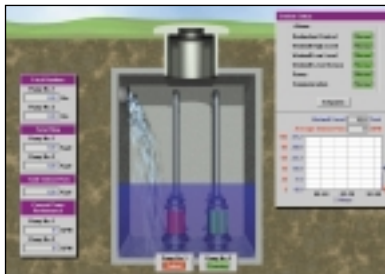
System Pressure  PSI

100 33.0  
80 26.4  
60 19.8  
40 13.2  
20 6.6  
0 0.0

00:00 09:28 10:00  
2 Hours

**USFilter**

**TELEMETRY:  
THE PULSE OF  
YOUR SYSTEM.**



USFilter Control Systems telemetry systems are designed to accommodate the changing requirements of municipal water and wastewater operations. As your system's needs grow, our technology lets you upgrade easily – without concern about system capacity limits or obsolescence.

We offer a selection of RTU's to provide a wide range of options, so you can choose the level of sophistication and complexity that meets your needs. Intelligent RTU's can provide both remote communications and comprehensive, stand-alone control. The RTU's

can be linked to one of our CCU's (central control units) or a personal computer. A variety of communications options lets us tailor a fast, economical, secure communication solution to your application.

Our commitment to open systems and interoperability means that we support multiple hardware, software and communications protocols. Communication options can even be blended to create a hybrid system that is tailored to your unique telemetry and control needs.

**NOTABLE FEATURES AND OPTIONS**

COMMUNICATION MODE	DESCRIPTION AND BENEFIT	D	6	7	9	P
		20	x	x	x	L
		i	x	x	x	T
						U
Polling	Polling is the most basic telemetry option, in which the central station communicates with the RTU's in a "round robin" fashion. Polling each RTU individually more quickly identifies RTU's that are not operational.	X	X	X	X	X
Priority Polling	Priority polling is a derivative of polling that enables more frequent polls with critical RTU's. Less critical RTU's are still polled in a "round robin" fashion but less frequently.			X		X
Broadcast	Broadcast mode communications cue RTU response in a time slotted fashion. Each RTU responds after a predetermined time delay. Broadcast mode removes the overhead of individually requesting each RTU to respond and can speed up system communications speed by as much as 50%.	X	X			X
Store & Forward Repeating	Store & Forward mode is often embedded in the basic communications mode (Polling/Broadcast) and allows repeating of data between the MTU and an RTU. This is typically used when communicating over radio and the MTU cannot reliably communicate with an RTU(s).	X	X			X
Quiescent	Quiescent mode communications allow an RTU to initiate communications without remote query from an MTU. The system is silent until an alarm or event triggers a communication. In essence, it only communicates when it needs to. This is particularly beneficial in dial-up systems and radio systems because it minimizes communication traffic.	X	X			
Failover/Alternate Path	Failover/Alternate Path mode is a back up communication configuration that is automatically enabled upon detection of primary system failure. The back up configuration can establish a new mode and path for communications. Utilizing this feature enhances system reliability.	X	X			X
Peer to Peer	Peer to Peer communications, simply stated, is an RTU that can communicate with another like RTU. Peer to Peer communications is often employed for back up operations and used in conjunction with Failover/Alternate path configuration. This capability expands system options when configuring communication back up modes.	X	X	X	X	X
COMMUNICATION MEDIUM	DESCRIPTION AND ADVANTAGE					
Dedicated/Leased Phone Line	Dedicated/leased phone lines are conditioned signal lines optimized for data signal transmission. A local phone company typically supplies these phone lines. The phone company extends a closed party type line from the MTU to each RTU. The communication medium channel is dedicated to your system and cannot be used by others.	X	X	X	X	X
Dial Up Line	Dial up phone lines are conditioned signal lines that are used for both voice and data transmission. A local phone company supplies the dial up line and all communications go through the telephone exchange. Dial up communication allows communications over any geographic terrain. They are also often less costly than dedicated/leased lines.	X				X
Radio VHF/UHF	VHF/UHF radios are employed to transmit data over dedicated licensed FM radio frequencies. The radio frequency is dedicated and licensed, reducing the possibility of communications overlap. Radio systems, in the long term, can be less expensive than dedicated leased phone lines.	X	X	X	X	X
Radio Spread Spectrum	Spread Spectrum radios are employed to transmit data over unlicensed FM radio frequencies. The radio frequency hopping techniques employed by this technology reduce the possibility of communication failure. The spread spectrum radios are often utilized to eliminate the need for radio frequency licensing through the FCC.	X	X	X		
Radio Trunked Systems	Trunked radio systems allow multiple users to share a limited number of frequencies/radio bandwidth. Trunked radio time is leased and is typically employed in radio congested areas that do not have any available frequencies that can be licensed to the user. Trunk radio supplier usually guarantees and is responsible for communications reliability.			X		
Filter Optics & Other LAN Media RS-485	Fiber Optics and other LAN media are utilized to communicate data over a dedicated communications path. Various LAN media are used in plant networking applications. They provide high-speed, reliable communications.	X	X			
Cable TV Systems	Cable TV systems provide a communication medium that typically spreads throughout the community and may be used for telemetry communications. Often the cable provider is required to dedicate channels for use by local government, offering a relatively inexpensive, reliable communications medium that is maintained by the cable provider.	X	X			

## COMPLETE CONTROL CAPABILITIES

USFilter Control Systems offers a single, high-quality source for everything from simple level sensors to telemetry systems to complex system control engineering and software. Based in St. Paul, MN, USFilter Control Systems is part of United States Filter Corporation, the leading global provider of industrial, municipal and residential water and wastewater treatment systems, products and services.

As a major manufacturer/integrator with an extensive selection of specialized product lines in the areas of SCADA and telemetry, power equipment integration, automation and measurement, USFilter Control Systems is uniquely positioned to provide cost-effective, comprehensive solutions for water, wastewater, and process control and telemetry applications. Our products and services encompass the following:

- Complete design and engineering services
- Field services, including training and

troubleshooting

- Autocon SCADA systems
- Consolidated Electric SCADA systems
- Microcat control and telemetry products
- Remote terminal units and central control units
- Control and monitoring software
- Process control and communications computers
- I/O boards, modems and power supplies
- Power equipment integration
- Programmable logic controller systems
- Programmable process controllers
- Controllers and controller/alternators
- Tank pump control systems
- Pressure/level controllers
- Pump flow and performance monitoring
- Flow switches and float switches
- Intrinsic safety barriers
- Level transducers and level sensors
- Pressure transducers

To find out more about how to put  
USFilter to work for you,  
contact us at



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[www.controlsystems.usfilter.com](http://www.controlsystems.usfilter.com)

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