



Your Solution to

MONITORING NATURAL GAS



PITMONITOR™

➤ Electronic Pressure Recorder

PIPEMONITOR™

➤ Cathodic Protection Monitor

PITMASTER™

➤ Master Station Controller

Listen to the customers and
Understand their desires.

Provide solutions
...that's our business!

IN VAULT REGULATOR STATION MONITORING

*The ideal solution for historic neighborhoods
with underground utilities and areas with
high incidence of vandalism.*

ATS-8

The first in the family, designed to provide real time alarm monitoring and data logging where power is not readily available. This Class 1, Division 1 device communicates via dial up telephone and is self powered by a sealed lead acid battery. Monitor alarms, changes in pressure, water level, vault security and gas presence. Small external solar panel can provide up to seven years battery life. Monitor Pressures from 27 Inch. WC to 5000 PSI



ABOVE GROUND SYSTEM MONITORING

*Affordable self powered dial-up alarm
and data recorder.*

ATS-8A

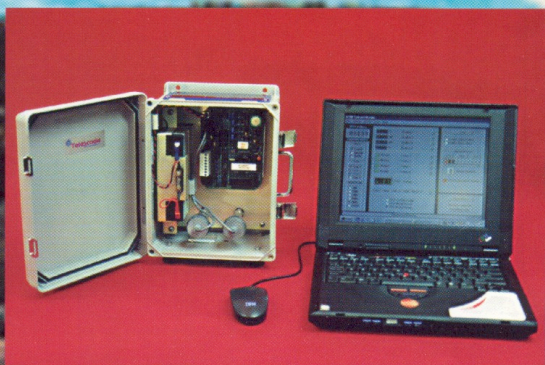
This unit is designed to be more economical for rural and commercial installations. This small NEMA 4/12 enclosure can be pole, wall or pedestal mounted. This device communicates via dial up telephone and is self powered by a sealed lead acid battery. Monitor and alarm changes in pressure, water level, vault security and gas presence. A small external solar panel can provide up to seven years battery life. Ideal for hard to reach, out of the way locations.

WINTER GAUGING, ENGINEERING STUDIES AND END-OF-LINE MONITORING

*Stop guessing about system low points
and guaranteed delivery pressures.*

ATS-8P

The ATS-8P is a small self powered recorder that is priced right. This device will record one or multiple pressures locally for up to 90 days.





WIRELESS SYSTEM MONITORING

*Ideal solution for Remote System Monitoring.
Low Power Wireless Communications provide
Real-Time Alarms and Data.*

ATS-8CF

This unit is designed to provide economical wireless communications. The NEMA 4/12 enclosure can be pole, wall or pedestal mounted. This device is powered by a sealed lead acid battery with a float charger attached for 24 hour service. Monitor and alarm changes in pressure, water level, security and gas presence. A local display module, LDM-220 is available to view system pressures and alarm status.

APPEALING PEDESTAL MOUNT CONSTRUCTION

*Rugged cast aluminum is ideal solution for Wireless
System Monitoring in Urban and Rural locations.*

ATS-8CA

A self powered unit designed to provide low powered wireless data and alarm monitoring for Div. 1, Class 2 installations. Powered by a 6V sealed lead acid rechargeable battery. The attached solar panel can maintain the battery for up to seven years without replacement. Monitor and alarm changes in pressure, water level, security and gas presence. A local display module LDM-220 is available to view system pressures and alarm status. Internal shut-off valves with test points are provided to facilitate annual test and calibration procedures.

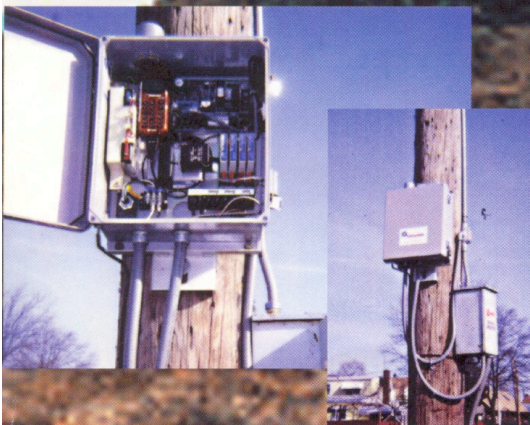


REAL TIME CATHODIC PROTECTION

*Is Your Investment Secure? Pipeline and Construction
Costs are rising, how well protected are you?*

ATS-8CC

The ATS-8CC RTU was developed with wireless communications designed for Real-Time monitoring of rectifier sites. This unit will report up to 4 analog and 4 status inputs for alarm and data logging. Pipe-to-Soil ($\pm 10\text{Vdc}$), Shunt and Drain Current ($\pm 200\text{mVdc}$), Rectifier Output ($\pm 200\text{Vdc}$), Loss of Primary AC, AC Input Fuse and DC Output Fuses are monitored. Rectifier Surge/Fault protection included.





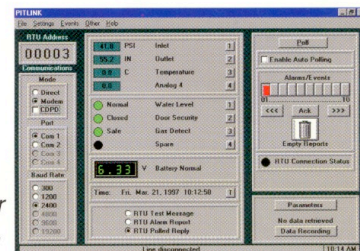
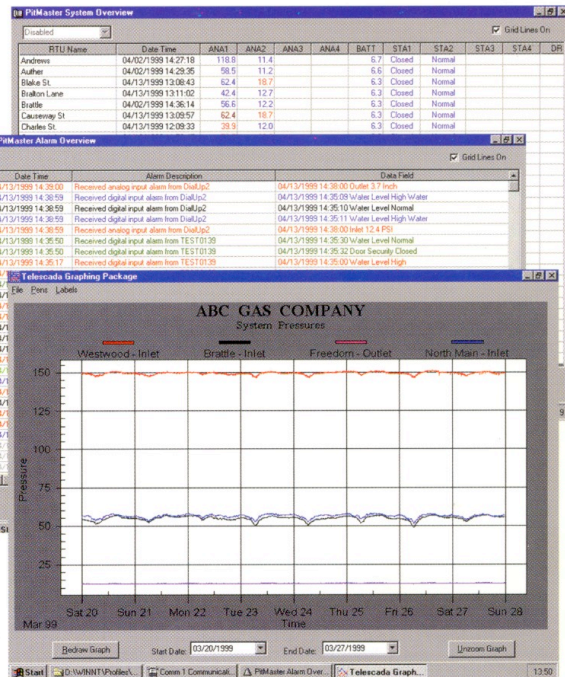
PITMASTER™ SOFTWARE APPLICATION SUITE

This User Friendly Solution is scalable and can support hundreds of ATS-8 type of RTUs. It provides operators and engineers with the tools necessary to facilitate the safe management and operation of a Natural Gas Distribution System. The **PITMASTER™** was developed for the Microsoft® NT/4.0 platform. **PITMASTER™** was developed as a Y2K Compliant Application.

PITMASTER™ is delivered complete with an AppLauncher to facilitate the operation of Pitmaster Software Application Suite.

- The AppLauncher allows the user to quickly navigate through both the Database directory and the Applications directory.
- The CommServer Application is used to select from a list of up to eight communications servers. (Comm1 through Comm8) The CommServer command buttons are used to maximize the CommServer application corresponding to the communications port selected.
- The System Overview Application provides the SCADA operator with a concise easy to read system overview including the most current information available from each field device.
- The System Alarm View Application will enunciate and log all alarms for the operator to review and acknowledge.
- The Graph Package Application allows the operator to create, view and save numerous charts and system trends for reviewing, documenting and reporting.
- The Database Editor Application is used to facilitate the operators ability to create, edit and implement system modifications.

PITMASTER™ software is a MS Windows application that was developed for users to configure, test and monitor the ATS-8 **PITMASTER™** type RTUs.





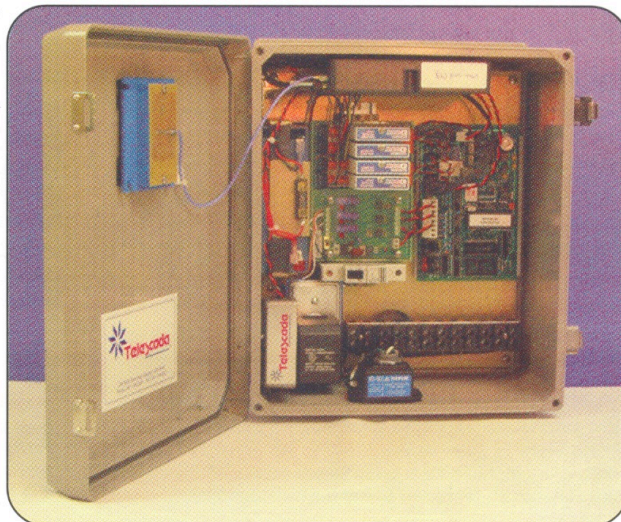
Introducing the **"WIRELESS" PIPE MONITOR™**

CATHODIC PROTECTION MONITORING REMOTE TERMINAL UNIT MODEL ATS-8CC

The Model ATS-8CC is an RTU designed primarily for real time monitoring and logging of Cathodic Protection Sites or similar applications. Shown in a standard NEMA 4/12 enclosure, the ATS-8CC is suitable for pedestal, pole or wall mount installation.

The ATS-8CC communicates via the local cellular telephone network. It will automatically report any out of range conditions as they occur.

The ATS-8CC is supplied with a ready to use MS Windows based support program to facilitate the storage and presentation of field data.



Low Cost • Wireless Communications • AC Powered or Solar Powered

- ✓ Cellular Digital Packet Data (CDPD)
- ✓ Private Radio Systems (VHF, UHF, 900Mhz) ✓ GSM

INPUTS / OUTPUTS:

- Built-in voltage transducers
- Electrically Isolated, High Input Impedance
- Temperature monitoring
- Extensive ESD Protection
- Four analog (voltage) inputs
- Four status (contact closure) inputs
- Two communications ports

FEATURES:

- * Wireless Communications
- * Communicates via Low Cost CDPD or GSM Digital Cellular Technology
- * Communicates via standard Circuit Switched Cellular Technology also
- * Supports Local RS-232 Communications Port
- * Battery backed operation
- * Operating parameters configurable, Locally or Remotely

PIPE MONITOR™

ATS-8CC WIRELESS REMOTE TERMINAL UNIT

ELECTRONICS

The ATS-8CC is a microprocessor based Remote Terminal Unit (RTU) employing the latest technology in low power circuitry for optimal battery operation. A watchdog reset circuit is provided for unattended operation.

- The real time clock is provided for data log time stamping and other time related operations.
- Nonvolatile memory is provided to store and maintain the RTU's operating parameters.
- Super capacitor provides reliable carry over and simple battery replacement when required.
- Internal Cellular Modem supports:
 - ✓ CDPD release v1.0 and v1.1
 - ✓ CCITT v.42bis, v.32bis, v.22bis
 - ✓ GSM Type Systems

ANALOG / VOLTAGE INPUTS

The ATS-8CC supports five analog inputs; one is used to monitor battery voltage; one to four are equipped with electrically isolated, high impedance transducer configuration.

- Each input has four remotely configurable thresholds and hysteresis. (very high, high, low, very low)
- Each input is user configurable to be critical or non-critical — when a critical threshold is exceeded the RTU will send an alarm report to the master controller.

VOLTAGE INPUTS

The ATS-8CC is supplied with one to four voltage transducers mounted inside the enclosure.

- Typical transducer ranges available from +/- 200mVDC to +/- 200VDC.
- Accuracy 0.1%

STATUS INPUTS

The ATS-8CC supports four status inputs each is filtered and ESD protected. Input conditioning provides monitoring of fuses, and status of power supplies.

- Each input is user configurable to be critical or noncritical.
- Upon a change of state at any critical point the RTU will send an alarm report to the master controller.

DATA LOGGING AND REPORTING

The ATS-8CC data log has the capacity to store up to 13,000 records. Configurable from 1 to 255 days.

- One to four analog channels may be selected.
- Analog sampling rate is selectable: 15, 20, 30 & 60 second intervals are available.
- Analog data recording interval is selectable: 1, 5, 15, 30 and 60 minute intervals are available.
- Local alarm log maintains the most current 25 records with time and date stamp. The alarm log can be retrieved on demand.

COMMUNICATION & PROTOCOLS

The ATS-8CC has two communication ports.

- RS232 local service port interfaces with local host (laptop computer) - Communication speed is user configurable from 300 baud to 19.2K baud.
- RS232 modem port is connected directly to the internal radio modem to provide wireless communication to the master controller.

RF MODEMS

Various types of RF Modems can be utilized.

- CDPD - Cellular Digital Packet Data, GSM.
- Private Radio Systems - VHF, UHF, 900Mhz.

MECHANICAL

The ATS-8CC is housed in a NEMA 4/12 high impact strength, UV resistant fiberglass reinforced polyester enclosure.

- Dimensions are 15 1/2" H x 13" W x 6 1/2" D
- Weight is approximately 35 lbs.
- Wall, Pole or Pedestal mounting options available.

POWER REQUIREMENTS

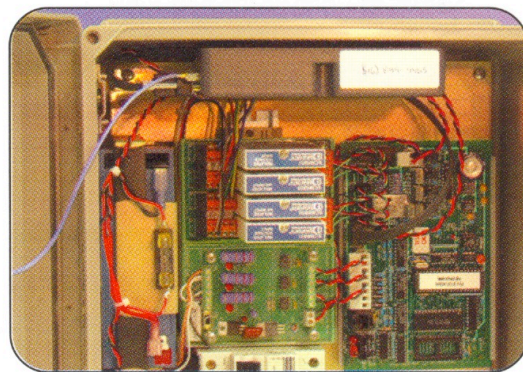
The ATS-8CC is powered by a 6 Volt, 10Ahr. sealed lead acid battery mounted inside the enclosure. This unit also comes equipped with AC battery charger to provide a charge for the battery.

- High output solar panel optionally available.

OPERATING ENVIRONMENT

The ATS-8CC is designed for outdoor operation.

- Temperature:
-40°C to +60°C (Battery Power)
- Humidity: 5% to 95%, non - condensing



PIPE MONITOR™ Tranducer Section.