Aclara is committed to helping you get the most from your STAR Network AMI System. We’ve added new offerings and updated our existing courses to ensure training is available for the full range of STAR related products. Register for classes by visiting the Aclara University page. Please contact the training department (training@aclara.com) if you have further questions or need help in registering for a class.

Aclara offers courses at our Solon, Ohio facility, customized courses at your site, regional training opportunities, and live webinars. This course catalog provides agendas and schedule information. Customer-site training can be customized to fit your training needs. Whether you need a brief refresher, training for new staff, or customized training, we are here to provide it. Please contact your Account Manager or the Aclara training department (training@aclara.com) to take the first step.
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**Note:** The AclaraONE software mentioned within this document is the next evolution of software to be used in place of the STAR NCC. We will still offer training specific to the NCC for customers who still have it as part of their STAR system but will also provide training on the new AclaraONE headend software beginning in 2018.
Classroom Training (at Aclara’s Solon, OH facility)

Training at our Solon facility is free to customers with Premier Maintenance Agreements and is $600 per company for customers with Base Agreements. Travel and lodging are at the student's expense regardless of Maintenance Agreement.

Upon registering, an email confirming your seat(s) in the class, a map of Aclara's location, and hotel information will be sent to the email address you provided during registration.

- Solon classes are on a first come, first served basis, pursuant to the maximum number of attendees from one utility, as specified in Schedule A of the Maintenance Agreement. Class sizes are limited to 20 students (max) to ensure every student receives the attention they need for a successful learning experience.

- The registration cutoff date is two weeks prior to the first day of class. Classes are subject to cancellation if there is insufficient enrollment.

- The class types available for STAR to be scheduled, upon request, at our classroom facility are the following:
  - Water MTU Installation and Programming
  - Gas MTU Installation and Programming
  - ZoneScan Installation and Operation
  - DCU Installation, Maintenance, and Troubleshooting
  - AclaraONE (NCC) Operation, and Administration
Customer Site Classroom/Field Training

Aclara provides a full range of STAR training programs at your facility. Please contact your Aclara Account Manager or the Training department (training@aclara.com) to discuss your needs and to schedule a program at your facility. We will work with you to tailor a course to fit your specific needs. Agendas for some common courses are below and can serve as a starting point. Aclara then provides a quote for the training once the topics, equipment needs, and course length are established. Available courses:

Water Meter Transmitter Unit (MTU) Installation and Programming

This is a 2-day course intended for the installer/technician who will be responsible for installing and programming STAR Meter Transmission Units (MTUs) on water meters. Mounting, wiring, best practices, and use of STAR Programmer are covered in detail. The course includes classroom sessions, as well as hands-on field application training. This course also includes topics covering through the lid (TTL) and series 3400 water MTUs.

**Note:** Students should already be familiar with a variety of common hand tool, along with, a basic knowledge of electrical and mechanical fundamentals.

Course Outline:

- Introduction
- Water Metering Overview
- Radio Frequency Fundamentals
- MTU Installation
- Using STAR Programmer
- MTU Field Training
- Activity Log Functions

Gas Meter Transmitter Unit (MTU) Installation and Programming

This is a 2-day course intended for the installer/technician who will be responsible for installing and programming STAR Meter Transmission Units (MTUs) on gas meters. Mounting, best practices, and the use of STAR Programmer are covered in detail. The course includes classroom sessions, as well as hands-on field application training.

**Note:** Students should already be familiar with a variety of common hand tools, along with, a basic knowledge of electrical and mechanical fundamentals.

Course Outline:

- Introduction
- Gas Metering Overview
- Radio Frequency Fundamentals
- MTU Installation
- Using STAR Programmer
- MTU Field Training
- Activity Log Functions
STAR ZoneScan Installation & Operation

This is a 2-day course intended for the utility that is deploying the STAR Zonescan acoustic leak detection system. Installation best practices and use of the STAR Programmer to activate Zonescan MTUs and Gutermann loggers are covered in detail. The installation portion of the course includes classroom sessions, as well as hands-on field application training.

Note: Students should have a basic familiarity with water distribution systems and the STAR AMI web interface.

Course Outline:

- Introduction
- Acoustic leak detection concept
- Sources of noise in water pipes
- Leak noise quality
- Effects of backfill material
- Logger placement and operation
- Trigger DCU
- Amplitude data
- Correlation data
- Logger/MTU installation
- Activation
- Field installation activity
- Monitoring logger operation via STAR
- Analyzing leak detection data via Zonescan.net

Data Collector Unit (DCU) Installation, Maintenance and Troubleshooting

This 2-day course is intended for the installer/technician who will be responsible for installing and maintaining STAR and Synergize RF Electric Network Data Collector Units (DCUs). Assembly and installation of pole-mount, roof-mount, and other DCUs are covered in detail, along with DCU commissioning procedures (all versions). Repair and replacement of major components are also discussed. Hands-on field activities can optionally be included in addition to the standard classroom sessions. This course also includes topics covering the new t-board and the upcoming (required) 4G LTE cellular card upgrade requirements.

Note: Students should already be familiar with a variety of common hand tool, along with, a basic knowledge of electrical and mechanical fundamentals

Course Outline:

- Introduction
- DCU Overview
- Installation – Rooftop, Pole, and Tower
- Component Connections
- Software configuration
- Checks and Repairs
- Troubleshooting
AclaraONE (NCC) Operation & Administration

This one-day course is intended for management, and administrative personnel who will be responsible for using STAR system reports and information in their day-to-day activities. Viewing and analyzing reading, maintenance, and diagnostic data as well as system administration and maintenance are covered in detail.

**Notes:** Students should have a basic familiarity with the use of a computer and web browser. We would be happy to work with you to tailor this training to the specific needs of your personnel. For example, this class can be broken into targeted sessions for specific types of users:

- **A 4-hour** session is recommended for customer service personnel. This covers areas and reports specifically related to account analysis and how to use STAR to aid in the resolution of customer billing issues.

- **A 2-hour** session is recommended for meter shop personnel and installation supervisors. This covers areas of specific interest to meter shop personnel including installation verification and analysis of reception problems.

- **A 2-hour** session is recommended for system and/or network administrators. This covers setting up user accounts and roles, alarm notifications, and basic DCU monitoring.

- **A 4-hour** session is recommended for power users who will be creating and managing reports within the STAR web interface. Students learn to create and manage reports and report groups tailored to specific needs.

Course Outline:

- Introduction
- Basic navigation
- Viewing Customer & Account info and Readings
- Managing DCUs
- Managing Installations
- Reporting
- Report configuration
- System Administration

Series 4000 Meter Transmission Unit (MTU) Installation and Programming

This is a 2-day course intended for the installer/technician who will be responsible for installing and programming STAR Series 4000 Meter Transmitter Units (MTUs) on gas volume correctors. Mounting, best practices, and use of the STAR Programmer are covered in detail. This course includes classroom sessions, as well as hands-on field application training.

**Note:** Students should already be familiar with a variety of common hand tool, along with, a basic knowledge of electrical and mechanical fundamentals.
Course Outline:
- Introduction
- Gas measurement theory
- Radio Frequency Fundamentals
- MTU installation
- Using STAR programmer
- MTU field training
- Activity log functions
- Review and conclusions

Aclara Certified Partner Training

To ensure all Aclara Partners are qualified to meet Aclara's deployment standards, to reduce our customers’ overall installation cost by improving first-install quality, and to reduce repair visits, we offer Aclara Certified Partner training. These programs benefit our valued installation and distribution partners and Aclara requires all of our partners to send trainers, field supervisory and installation staff to these sessions. Aclara then follows up with periodic auditing of partner installations, processes, and systems. To ensure your installations are performed correctly each time, we offer the following certification courses for all Aclara partners and distributors:

Water MTU Installation
Upon successful completion of this course, installers will be able to install water MTUs indoors, outdoors, and in pit applications successfully; identify optimal MTU mounting and installation requirements for a specific meter location; identify meter size, type and technology; activate water MTUs using STAR Programmer software; verify MTU settings; act upon STAR Programmer error messages; and upload programming records from the handheld programming device. Installation trainers will receive additional training.

Gas MTU Installation
Upon successful completion of this course, installers will be able to install gas MTUs indoors, outdoors, and in pit applications successfully; identify optimal MTU mounting and installation requirements for a specific meter location; identify meter size, type and technology; activate water MTUs using STAR Programmer software; verify MTU Settings; act upon STAR Programmer error messages; and upload programming records from the handheld programming device. Installation trainers will receive additional training.

DCU Installation
Upon successful completion of this course, installers will be able to install and commission STAR/Synergize RF Electric Data Collector Units successfully in roof-mount and pole-mount applications.

Zonescan
Upon successful completion of this course, students will be able to deploy the STAR Zonescan acoustic leak detection system utilizing best installation practices, STAR Programmer to activate Zonescan MTUs, and the Gutermann software to evaluate Zonescan leak data and analysis.
Webinars

Webinars combine the traditional teleconference with graphic web technology for a learning experience much like that of a classroom setting. Students can follow the presentation and have the opportunity to ask questions and interact with the instructor. An internet connection and telephone access are required to take advantage of this enhanced educational experience. See course agendas below:

AclaraONE Overview and Operation

This webinar is intended for anyone interested in the use of the new AclaraONE/MDM software for use with a STAR gas or water AMI network. Topics include day-to-day administration, support, and maintenance of a STAR AMI Network. This includes personnel responsible for administration and maintenance of a STAR network, as well as senior customer service and finance personnel who require a broad knowledge of the system. Topics presented in this webinar will focus on the differences, new functionalities available, and best practices for the AclaraONE software operation.

Course Outline:
- Introduction
- Basic navigation
- Viewing Customer & Account info
- Managing DCUs
- Managing Installations
- System Administration
- Review and conclusions

STAR System Administration & Alarm Management

This webinar is intended for anyone interested in the day-to-day administration, support, and maintenance of a STAR AMI Network. This includes personnel responsible for administration and maintenance of the STAR system, as well as senior customer service and finance personnel who require a broad knowledge of the system. Participants will review the role of the system administrator and learn to identify and monitor system performance and alarm conditions, as well as how to develop an appropriate plan for response.

Note: This webinar assumes that participants have some familiarity with accessing the AclaraONE STAR (NCC) interface using a standard browser.

Course Outline:
- Basic system realities
- The role of the system administrator
- Daily tasks
- Managing installations
- Managing users and roles
- STAR system alarms
- Alarm notifications

STAR Reporting

This webinar is intended for customer service, finance, management, and administrative personnel who will be responsible for using STAR system reports in their day-to-day activities. Participants will learn to create and use STAR report groups, as well as how to configure, run, and interpret STAR system reports.

Note: This webinar assumes that participants have some familiarity with accessing the AclaraONE STAR (NCC) interface using a standard browser.
Course Outline:
- Introduction
- Basic navigation
- Reporting
- Special purpose reports
- Report groups
- Review and Conclusions

DCU Monitoring & Troubleshooting

This webinar is intended for system and/or network administrators responsible for the STAR Network as well as anyone interested in developing a better understanding of STAR data collectors. Participants will learn techniques for using STAR web pages and reports to monitor and analyze DCU performance in addition to a step-by-step procedure for field troubleshooting.

Note: This webinar assumes that participants have some familiarity with accessing the AclaraONE STAR (NCC) interface using a standard browser.

Course Outline:
- Introduction
- DCU architecture
- DCU communications
- DCU operational modes
- DCU battery charging
- DCU reports
- DCU alarms
- Monitoring DCU reception
- Managing DCU connectivity
- DCU field troubleshooting

STAR Database Architecture

This webinar is intended for individuals who wish to develop a better understanding of the structure and function of STAR's primary SQL database (STAR Database). Major functional areas of the database are presented along with data flows and sample queries that reinforce student learning.

Note: This webinar assumes that participants have some familiarity with relational database software and concepts.

Course Outline:
- Introduction
- STAR system architecture
- STAR database functions
- STAR data structures
- Sample queries
RF Propagation Basics

This webinar presents an introduction to the principles of radio frequency propagation and how they affect communications from MTU to DCU during the installation process. The session is intended for personnel who wish to develop a better understanding of RF propagation as it relates to the performance of STAR MTUs. This includes installation and maintenance personnel, STAR network and system administrators, and customer service personnel who use the AclaraONE STAR headend (NCC) to analyze the performance of individual MTUs.

Course Outline:

- Why it is important to understand RF
- The electromagnetic spectrum
- Electromagnetic energy concepts
- RF Signal strength
- Line of sight propagation
- Factors affecting RF propagation
- Managing the impact on MTU installations

MTU Monitoring & Troubleshooting

This webinar is intended for meter technicians and maintenance personnel who are responsible for identifying, troubleshooting, and repairing problematic meter/MTU endpoints. Students will learn to apply a systems approach and use data from the AclaraONE STAR headend (NCC) to identify and verify malfunctions, as well as how to collect and analyze field data. A step-by-step procedure for troubleshooting, and auditing an individual MTU is also presented.

*Note: This webinar assumes that participants have some familiarity with accessing the AclaraONE STAR (NCC) interface using a standard browser.*

Course Outline:

- Introduction
- Before you do a field investigation
- The field investigation
- Documenting investigation results and solutions
- Monitoring STAR system for results

AclaraONE STAR Headend (NCC) Upgrades

This 2-hour webinar is intended for anyone interested in the day-to-day administration, support, and maintenance of a STAR AMI Network. This includes personnel responsible for administration and maintenance of the STAR system, as well as senior customer service and finance personnel who require a broad knowledge of the system. Topics presented in this webinar will focus on the differences, new functionalities available, and best practices (System Health Checklist). This webinar should occur upon completion of an AclaraONE STAR headend (NCC) upgrade (i.e. upgrading from version 7.4 to 7.5, or 7.5 to 7.6, etc.).

*Note: This webinar assumes that participants have working knowledge and familiarity with accessing and using the AclaraONE STAR (NCC) interface with a standard browser.*
Course Outline:

- Overview of which version upgrade occurred
- Explanation of back end/server changes (if any)
- Live look, explanation and demo of new features in upgraded version of AclaraONE STAR headend (NCC) interface
- Best practices for AclaraONE STAR headend (NCC) system checks (System Health Checklist)
- Review and conclusions

Through the Lid Antenna MTU Installation and Programming

This webinar is intended for meter technicians and maintenance personnel who are responsible for installing, programming, and maintaining MTU endpoints utilizing this specific antenna type. Mounting, wiring, best practices, and use of STAR Programmer software are covered in detail.

Note: Students should already be familiar with a variety of common hand tools, along with a basic knowledge of electrical and mechanical fundamentals.

Course Outline:

- Introduction
- Product overview
- Compatible MTU types
- Recommended tools, supplies and installation kit hardware components
- Installation and component wiring steps

STAR Programmer Field Devices

This webinar is intended for water/gas installers, maintenance, and supervisory personnel responsible for programming water or gas MTUs, to become more familiar with the device used in their day-to-day operations and MTU programming. The focus for this webinar is on the Panasonic Toughbook and Toughpad devices. Programmer familiarization and a review of MTU programming process is covered in detail.

Note: Students should already be familiar with a variety of common hand tools, along with, a basic knowledge of electrical and mechanical fundamentals.

Course Outline:

- Introduction
- Documentation
- Product overview
- Battery Removal/Replacement
- Startup Programmer device
- Use of the touch wand
- Screen Calibration
- Font character size changes
- Initiate STAR Programmer software
- Programmer to MTU programming process
- Troubleshooting Error Messages
- Orderly Shutdown
MTU Overview, Installation, Programming

This webinar is intended for water/gas installers, maintenance, and supervisory personnel, responsible for installing/programming MTUs, looking for a refresher course to know more about the MTU in detail, how they are installed (various environments), and how they are programmed.

*Note:* Students should already be familiar with a variety of common hand tools, along with, a basic knowledge of electrical and mechanical fundamentals.

Course Outline:

- Introduction
- Documentation
- MTU overview
- Identify MTU label characteristics
- MTU Radio Frequency signal propagation
- MTU Installations in various environments
- Programmer to MTU programming process
- Troubleshooting Error Messages
- Uploading Log Files at the end of daily MTU installations

Aclara University Online Learning Center

The [Aclara University site](https://www.aclara.com/university) provides customers with the ability to learn anytime, anywhere. AclaraU has a catalog of training courses ranging from 2 minute “how-to” courses, perfect for training employees on specific tasks, to complete courses on a wide variety of subjects. Some of the offerings include STAR Programmer, AclaraONE (NCC) software, ZoneScan, DCU Installation and more.

New subjects are added regularly, so feel free to check back often. If you have any suggestions, or ideas for a new class you would like us to offer, please contact us at [training@aclara.com](mailto:training@aclara.com).