



Kramer Is an Educational Partner
for the AQAV Quality Management Programs

The Benefits of Joining the AQAV Program

Saving the AV Industry – One System at a Time



AQAV is a non-profit organization dedicated to improving the art of designing and installing audiovisual (AV) technology.

The ongoing transition from analog to digital AV has resulted in increasingly complex engineered audiovisual systems that are a challenge to integrate successfully. In response to this trend, AQAV has developed the industry's first comprehensive quality assurance and management certification program, AV9000. This program is designed to deliver "zero defects" AV systems the first time; every time.

AQAV focuses on both quality management of these systems and those who design and install them. This approach benefits the AV industry and all its stakeholders; from clients and users of AV technology to AV designers and installers, equipment manufacturers, related construction and architectural firms, and the environment.

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"QUALITY MEANS DOING IT RIGHT
WHEN NO ONE IS LOOKING."

Henry Ford

The AQAV Mission

Audiovisual technology increasingly commands a larger share of capital budgets. As a result, there is an urgent need to find AV designers and integrators that have implemented quality management systems in their organizations. You will pay a substantial price for poor quality!

- We define standards for quality management systems (AV9000 certification)
- We provide training on AV quality issues
- We conduct appraisal audits of AV systems
- We conduct appraisal audits of AV companies

Kramer Is an Educational Partner for AQAV Quality Management Programs

AQAV and Kramer have partnered to offer unique hands-on workshops in which students will learn the proper procedures and methodologies for designing, building, and commissioning an audiovisual system. Students will also demonstrate proficiency on the equipment required to test and verify AV systems performance.

Two AV9000 certifications are currently offered: [Certified Quality Assurance Technician \(CQT\)](#) and [Certified Quality Assurance Designer \(CQD\)](#). (Note that space is limited in these classes due to the hands-on nature of the instruction.)

"Being AV9000 compliant is a major plus for providers that want to work for us. It eliminates untold costs and aggravation that the client won't and the integrator shouldn't accept. (There's) no question the business is trending this way."

Elaine Manfredonia, Vice President, JPMorgan Chase, New York, NY.



What are the Benefits of Adopting AQAV?

Increasing Profits

Having well-defined processes for consistency, efficiency, and zero-punch lists will increase your profits.

Get It Right Before Installation

The “one-to-three” rule is a fact of life in the Pro AV business: One hour of troubleshooting in the shop equals three hours of troubleshooting in the field, where resources and communications are lacking – and time is money!

Some program participants reported that before they received AV9000 training, they often “parked a truck outside the client’s facility for months” to complete the AV installation to the satisfaction of the customer.

“Checklist” Your Way to Profitability

Pre-defined checklists do away with trial-and-error guesswork and help catch all defects. No matter what checklist system you’re currently using, you’ll find that the AV9000 system organizes everything.

Employees + Quality Work = Pride + Cost Savings

When quality management is the norm, your company is unified. Blame-fixing and back-stabbing gives way to a focus on “how can we do it better?” leading to innovation and continual improvement.

It’s All About the Hours

The more jobs dealers/integrators can complete in a payroll period with the same staff, the more net profits that are realized. One AQAV participant reported that his company was able to increase their capacity by 25% without adding employees.

AQAV Creates Unity

The AV9000 program allows everyone to work together as one team and makes everyone

on the team feel better about what they do. AV9000 also helps the team do the next job even better.

AQAV Benefits the Customer

AV9000 gives the customer exactly what they ordered, with the least possible effort, in the shortest amount of time.

AQAV Helps Close Sales

Having an AV9000 certified Quality Management System in place makes it easier to close a sale, adding confidence to the customer’s buying decision. Many integrators who successfully completed the AV9000 courses subsequently reported that they were awarded bids from savvy clients even when that integrator was clearly NOT the lowest bidder. The difference? AQAV.

“If you don’t have time to do it right, when will you have time to do it over?”

John Wooden.



AV's Hidden Costs - The Problems AQAV Can Help Solve

The following is a partial list of “hidden” costs that can result from the lack of a comprehensive quality management program for AV systems integration:

- Time wasted due to incomplete or misunderstood communications between clients, account executives, designers, and technicians; resulting in AV systems that do not function as the client requested
- Time wasted in unnecessary diagnoses and repairs by AV technicians (long punch-lists)
- Time wasted in corrective actions by technical management and supervisors
- Time wasted by the client in discovering and reporting defects
- Time wasted in confirming repairs made by the integrator
- Expedited shipping costs to get replacement equipment to a job site
- Inventory costs in storing and keeping incorrectly specified items that cannot be returned
- Restocking charges from manufacturers incurred when products are returned
- Tools and equipment left behind in the field, including cable
- Time spent in correcting inaccuracies in billing and administration information
- Travel costs, including travel time, for additional site visits required to correct problems
- Costs of hiring new vendors to repair or replace poor installations
- Loss of business from clients due to poorly-designed and installed AV systems
- Time and money wasted on purchasing, shipping, and installing items not specifically called for, but necessary for the operation of an AV system
- Costs of providing an alternative meeting space to a customer because the desired AV system was not installed in time
- Time wasted on too many documentation revisions (engineers' time, draftspersons' time, paper, toner, purchasing, etc.)
- Time and money wasted because someone didn't coordinate with other vendors, confirm access to elevators and buildings, arrange for clearance and delivery of large and heavy items
- Time wasted in not addressing administrative issues in a timely manner, such as COI requirements and permits
- Time wasted in phone calls to manufacturers' hotlines
- Time wasted in tracking down passwords and other configuration info on the laptops of former employees

“Like many integrators, we stage everything in the shop because we don't want to ‘practice’ on our clients’ systems. Problems still come up, but we find them and fix them here. What the client sees is a perfect installation. AV9000 has eliminated that missing screw that costs 15 cents in the shop and \$90 in the field.”

Will Seifert, Vice President of Technology, Applied Visual Communications, Inc. Herndon, VA.



AQAV Course Descriptions



CERTIFIED QUALITY ASSURANCE TECHNICIAN (CQT)

The CQT (Certified Quality Technician) course teaches students how to evaluate AV systems by applying skills to verify compliance with the customer's expectations and the AV9000 Standard. Candidates for the CQT certification should already have a CTS designation or at least four years of experience in AV systems design and/or installation.



CERTIFIED QUALITY ASSURANCE DESIGNER (CQD)

The CQD (Certified Quality Assurance Designer) course teaches attendees how to review a design to assure that it will be built and installed to comply with the customer's expectations, using industry "best practices." Note: this course does NOT teach how to design an AV system. Candidates for the CQD certification should already have a CTS-D designation or at least four years of experience in AV systems design and installation.



COMPETENT QUALITY ASSURANCE LEADER (CQL)

We are very excited to announce Kramer Electronics will be sponsoring a third program, the "Competent Quality Leader" or CQL, to be offered for the first time this fall. CQL is designed as a one-day course for C-level (executive) teams to learn about (a) the hidden and potentially damaging costs of poor quality, (b) the ROI involved in implementing and following a quality program, (c) training management in AV quality procedures, (d) and quality leadership that supports continual improvement and development of quality procedures.

Who Should Take The Classes?

Ideal candidates for the CQT or CQD classes are those individuals who can affect change within your organization, including but not limited to management, lead designers, and lead technicians. When a team member successfully completes the CQT or CQD course, they bring what they've learned back to your organization to train other staff members. By doing so, your organization progresses in becoming AV9000-Compliant or AV9000-Certified.

For more information you may visit www.AQAV.org or contact Malissa Dillman, Kramer's Director of Education & Training at mdillman@kramerus.com or 770-570-8538.

"Our initial goal was to improve our integration processes to produce a better installation for the client and a more profitable job for us. That's just good business. AV9000 has done that and more. We closed our first job at 75% of our labor estimate, had zero unexpected onsite costs, finished on time, and the client was delighted."

Carole Peters, CEO, Applied Visual Communications, Inc. Herndon, VA.

CQT

Certified Quality Assurance Technician Class

Learn how to evaluate AV systems by applying auditing skills to verify compliance with the customer's expectations and the AV9000 Standard.



Certified Quality Assurance Technician (CQT)

[Pre-Requisite: InfoComm CTS or 4 Years of AV Design and/or Installation experience.]

3-Day Onsite Training Course.

Continental Breakfast and Lunch Provided.

Written and Practical Exam.

24 InfoComm RU's.

3-Year Certification.

\$2,150 AQAV Non-Members or \$1,650 AQAV Members.

CQT Course Outline:

- General
 - Quality Principles and definitions: defining quality; quality assurance vs. quality control; quality management systems; Working within an ISO9000 QMS (Quality Management System): quality records; Applying auditing principles and practices
- AV System Commissioning
 - Pre-commissioning inspection
 - Audio calibration
 - Video calibration
 - Control system and networking testing
 - System documentation
- Instrumentation
 - Calibration
 - Instrument limitations
- Monitoring and Measurement Checklists
 - Contract review
 - Design review
 - Site ready
 - Staging
 - Commissioning
 - System acceptance
- Reports
 - Purpose and significance
 - Clear, unambiguous, objective language
- Practicum
- Examination and Registration

"Using AV9000 we still find issues on-site, but they aren't our issues. And they're easier to address because the system is fully documented. Recently, we saved \$2,000 on redesign and engineering design because we knew immediately onsite what was needed. This client was openly opposed to change orders, so had we incurred that cost we'd have had to eat it."

Jacques Casanova CTS, Vice President, ETI, Inc., Carle Place, NY.

CQT Course Details:

- Three-day, on-site course. Certification testing on the third day. Testing for the CQT Certification is not mandatory, but is recommended.
- Continental breakfast and lunch included each day.
- Prerequisites: CTS or 4 years of experience in AV design and installations.
- Students MUST bring a laptop, capable of WiFi access and be able to access Microsoft Office documents.
- Cost: \$2,150 per individual training (non-members), \$1,650 (members), includes membership, class, and certification examination. Certification is valid for three years. Completion of this course will earn the attendee 24 InfoComm RU's.



CQD

Certified Quality Assurance Designer Class

Learn how to review a Design in order to assure that it will be built and installed to comply with the Customer's expectations and best industry practices. Note that this course does NOT teach design.



Certified Quality Assurance Designer (CQD)

[Pre-Requisite: InfoComm CTS or 4 Years of AV Design and/or Installation experience.]

3-Day Onsite Training Course.

Continental Breakfast and Lunch Provided.

Written and Practical Exam.

24 InfoComm RU's.

3-Year Certification.

\$2,150 AQAV Non-Members or \$1,650 AQAV Members.

CQD Course Outline:

- Quality Principles and definitions
- Fundamentals of auditing AV; working within a QMS (Quality Management System)
- Contract Review
- Client performance checklist; AV metrics
- AV Calculations
- Design Review/Engineering Review
 - Display
 - Audio
 - Power, control, heat load
 - Networking
 - "General issues"
- The Design Review Report
- Practicum
- Examination and Registration

CQD Course Details:

- Three-day, on-site course.
- Continental breakfast and lunch included
- Prerequisites: CTS-D, or 4 years of experience in the design of engineered audio visual systems that includes job tasks such as creating an unambiguous document model of the AV system for it to be built, installed and tested, and predicting the audio and visual performance of a design before it is built. An understanding of the mathematics behind these tasks is essential when predicting the performance. InfoComm International's "AV Math for Design" is recommended.
- Students MUST bring a laptop, capable of WiFi access and be able to access Microsoft Office documents.
- Cost: \$2,150 per individual training (non-members), \$1,650 (members), includes membership, class, and certification examination. Certification is valid for three years. Completion of this course will earn the attendee 24 InfoComm RU's.

"We've built AV9000 into our campus facility standards and follow it on all our installations. It has everyone working from the same page and explains the 'why' as well as the 'how'. It's turned into a friendly competition between the installation team and the commissioning team."

Dan Doolen, Chief Instructional Media Systems Engineer,
University of Illinois, Urbana, IL.



Kramer Academy



OUR MISSION

To provide relevant and topical training and education on key industry concepts, technologies, and techniques; providing students with the comprehensive knowledge base necessary to succeed in the AV marketplace.



THE WEBSITE FOR PREMIER AV TRAINING

Kramer is continually developing new courses, resource materials and online training solutions. Check our website for a list of upcoming Kramer Academy courses. Contact your local Kramer office today to discuss and schedule Kramer Academy courses with our training professionals.



FLEXIBLE SCHEDULING AND LOCATION OPTIONS

We offer Kramer Academy courses at our New Jersey headquarters and we can also bring KA courses to your location! Kramer also offers regional classes that are convenient to attend. Wherever there is an audience, we can provide Kramer Academy instruction.



KRAMER HAS THE TALENT

Malissa Dillman, CTS-I, CTS-D, CQT (InfoComm's 2013 Educator of the Year) is our Director of Education and Training and runs the Kramer Academy. In addition, InfoComm's 2008 Educator of the Year, Pete Putman, CTS of ROAM Consulting LLC, develops course materials for the Academy and often teaches Academy courses. We are proud to have two of the very best educators in the AV industry in our Academy.



KRAMER TAKES EDUCATION VERY SERIOUSLY

We have made a significant investment in all our technical and sales personnel so that we can offer you the industry's most comprehensive education and training programs at the highest level of quality. All of Kramer Electronics' field sales and sales support personnel have completed our "Pillars and Keystones" program that teaches our representatives to be highly effective presenters.

While every AV manufacturer seeks an opportunity to present its product line, Kramer differentiates itself by providing relevant, commercial-free instruction on important industry technologies and techniques, bringing real value to your office. All our Academy courses can be condensed into Lunch & Learn sessions if necessary. Just ask any Kramer representative.



www.kramerus.com/academy/aqav.asp



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