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“What new technology does is create new opportunities to do a job that customers want done.”

Tim O'Reilly

Demand For DAS Training on the Rise

by Michele Lawson | CSS

Curious as to reasons for the increased number of attendees in the Distributed Antenna Systems (DAS) hands-on course during ETA® International's annual Education Forum, the trade association turned to industry's leading experts in DAS to explain why communications professionals need to obtain this valuable training. The job demand for skilled people in DAS communications technology has never been greater since public space building owners must meet consumer demand for better mobile data usage along with industry standards for public safety response requirements and green energy building codes.

ETA International recently hosted the largest hands-on training leading to ETA certification in Distributed Antenna Systems (DAS) in Education Forum history. ETA turned to DAS trainer Ira Wiesenfeld, PE, CETms(RF), of IWA Technical Services Inc., to ask why there is such a huge interest as of late from wireless communications professionals for DAS training and ETA accredited certification.

"To put it simply," he said, "the same new green energy building codes that keep out cold air in the winter and heat in the summer are also blocking radio transmissions for public safety professionals and private cell phone usage, so DAS professionals must learn how to design, install and troubleshoot DAS properly to manage this situation."

Technology has evolved and indoor cell phone and data usage has increased, putting pressure on building owners by end users to offer better coverage from mobile operators. At the same time, building owners must follow the National Fire Protection Association (NFPA) standards¹ for public safety radio systems, and the International Green Construction Code (IgCC) standards².

DAS solutions are quickly becoming a necessity for businesses and buildings with coverage challenges and those that are being retrofitted to meet the updated governmental standards and new green energy building codes. Any building where people require reliable communication is a candidate for DAS, such as hospitals, casinos, transits, stadiums, universities, convention centers, and office buildings.

"Today, a building cannot be occupied without providing sufficient radio transmission coverage for the public safety agencies," Wiesenfeld said.

DAS design should meet today's performance standards demanded by government regulations, participating wireless providers, the building owner as well as the end user.

According to the DAS Forum Definition, a Distributed Antenna System, or DAS, is "a network of spatially separated antenna nodes connected to a common source via transport medium that provides wireless service within a geographic area or structure."

Top-tier DAS equipment is built by design to be able to handle a wide range of frequency bands and technologies, allowing for broader use by wireless service providers with modern 4G/LTE and 5G. The types of DAS solutions can be generally classified into three different categories: passive DAS, active DAS, and hybrid DAS. A typical system consists of bi-directional amplifiers (BDAs, or signal boosters) relaying and amplifying the RF signal traffic and a network to distribute the signal to every corner of the desired coverage area.

A DAS tutorial by Harris Communications, states that the bidirectional amplifier is a very important component in a DAS solution. "Without it, the RF signals would continue to grow weaker as they traveled a farther distance from the donor antenna. With the bidirectional amplifier, the signal is increased, or amplified, as it travels, so that the RF signal stays strong throughout the system and site."

Depending on the type of system, the signals are transported via coax or fiber optic cables to compact remote antennas which can be placed discretely in an indoor environment. With the aid of remote antennas, the RF signals are distributed to places they could not directly reach without the DAS.

"Because of the anticipated infrastructure shift being driven by both capacity growth and 5G, DAS technologies that are fiber-optic-driven are the natural choice," as stated in the article "In-Building Coverage Verification" of the April-May 2019 publication of *Mission Critical Communications*.

If overlooked or ignored, an improperly designed DAS results in degraded performance, unnecessary cost increases, and reduced public safety. Prompt and effective emergency response depends on reliable emergency services communications, which in turn, depends on qualified DAS professionals.

An ETA-certified DAS professional has acquired the skills to build the proper DAS solution for each particular client. DAS professionals know how to gather information regarding the building's construction materials (which will affect a signal's ability to travel), evaluate the RF reception in each area, determine the locations for each component of the system, and plan the fiber optic/coax cables route to ensure successful communication in all targeted areas. Once a DAS is constructed, the ETA-certified DAS professional must follow the 2019 NFPA 1221 Fire Code which requires compliance testing and record keeping as part of the project management.

To find expert industry DAS training with an emphasis on bi-directional amplifiers at an affordable price that leads to an accredited industry certification, plan now to attend ETA's Education Forum 2020, co-locating again with the International Wireless Communications Expo (IWCE), in Las Vegas March 30-April 3, 2020. Here, attendees can participate in hands-on labs with the industry's most respected training providers and become qualified to sit for ETA's accredited DAS certification exam.

To find other training opportunities prior to Education Forum, ETA will gladly share contact information to the industry's most respected DAS training providers. Call ETA at 800-288-3824 or email eta@eta-i.org.

1.) The National Fire Protection Association 1221 Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems 2019 provides procedural and physical criteria for the installation, performance, operation, and maintenance of public emergency service communications systems and facilities. NFPA 1221 establishes minimum signal requirements in buildings and structures on two-way radio communications enhancement systems used by public safety agencies.

2.) The International Green Construction Code frames the essential sustainable construction building blocks on which future resilient initiatives can develop and expand and envisions a new era of building design and construction that includes environmental health and safety as code minimums. Green building strategies reinforce societal health/life/safety benefits that building codes offer, providing resilience to natural disasters, climate change, resource consumption/management, and service interruptions due to unforeseen events.

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Features

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Technology has evolved and indoor cell phone and data usage has increased, putting pressure on building owners by end users to offer better coverage from mobile operators. DAS solutions are quickly becoming a necessity for businesses and buildings with coverage challenges and those that are being retrofitted to meet updated governmental standards and new green energy building codes.

4 COMMUNICATING EFFECTIVELY DURING REMOTE TELECOMMUNICATIONS TROUBLESHOOTING

Moments at which a technician might have to respond to a remote call for assistance will most likely happen unexpectedly and involve a situation where lines of authority or support are unclear. To assist novice technicians in becoming more confident in their future troubleshooting efforts, the writer offers tips to confidently and successfully complete a remote troubleshooting call or ticket for a customer.

7 SMART TECHNOLOGY SYSTEMS PROJECT

This Smart Technology Systems (STS) project utilizes a smart relay to turn an existing doorbell into an electronic keypad that can unlock a door. The stealth nature of the entry system (no outside hardware) and the smart features of the relay delivers increased security. In this example, extra protection is added by a porch light that turns on whenever the entry system is accessed.

21 LIFI AS A SERVICE - THE TRANSFER OF MONETARY FUNDS VIA LIGHT

Cote d'Ivoire (the country of the Ivory Coast) has very little cell service and a majority of the villages do not have electric power or connectivity to the Internet. Thanks to the implementation of LiFi technology in Brahimarko, people's lives are changing because they now have a means of connecting to the outside world and becoming educated in the needed skills for the markets entering their country.

23 TECHNICIANS AND THE WORLD OF TOMORROW

What will employment forecasts look like in the next decade for electronics technicians? Techs can thrive in the future with careful thought and planning. Electronics technicians have been featured in the news media as the rising stars of our digital and analog world. We now command more respect and earn higher incomes. The author suggests strategies for today's electronics technicians to thrive in tomorrow's technologies.



10 NEW ETA CERTIFIED TECHNICIANS

ON THE COVER: In-building public safety radio coverage is increasing rapidly. The April/May 2019 issue of *Mission Critical Communications* states that there are about six million commercial buildings in the U.S., with about 50,000 new buildings constructed annually. Most authorities having jurisdiction (AHJs) that create and enforce regulations require annual testing to ensure standardized response time from public safety personnel. The demand for communications testing personnel for Distributed Antenna Systems (DAS) is creating huge opportunities for properly trained and ETA-certified DAS professionals.

Communicating Effectively During Remote Telecommunications Troubleshooting

by Lawrence Orlosky | GCT1

INTRODUCTION

When a user of sophisticated telecommunications technology reaches out to a help desk or service support center with a request ranging from a simple question to seeking assistance for a full system failure, a troubleshooting call or “job ticket” may result. Tickets might be handled across a distance of thousands of miles between the customer and the support provider, and across different means of communications. To confidently and successfully complete a remote troubleshooting call or ticket for a customer - to the point of validating his or her telecommunications system - can result in system restoral and materials, resources, and, possibly, human lives saved.

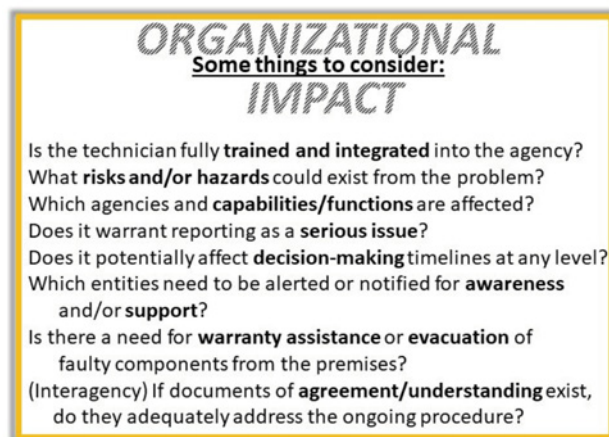
The intention of this article is to assist novice technicians in becoming more confident in their future troubleshooting efforts. The following paragraphs discuss the value of handling remote troubleshooting calls in brief terms of **knowing the impact to the user and the organization, establishing the means of notification, and maintaining contact with the customer during the effort**. The writer assumes good diligence, situational awareness, and technical knowledge on the customer’s behalf, that time is of the essence, and the technician has been duly empowered to act toward a clear objective.

A technician’s inclination or requirement to perform troubleshooting over distance may come from instructions from superiors, the scope of duties or responsibilities, safety constraints, organizational priorities, limitations in capabilities, and non-availability of resources such as time or transportation. Genuine dedication can compel the individual technician to see the process through to system restoration. Occasionally, this writer’s opportunities to perform remote system troubleshooting happened because of an after-hours phone call or making a quality assurance call to check a status. An experienced technician should be aware that just as there could be certain constraints and thresholds for how or when to initiate and gauge the level of response actions, the customer is not likely be able to affect self-repair or recovery for a host of possible reasons.

KNOWING THE ORGANIZATIONAL IMPACT

The **organizational impact** of remote troubleshooting to customers’ and the associated agency’s bottom line or capabilities can just as easily build bonds as it could create animosity if things go badly. Knowing what the impact of a problem is, as well as each responder’s procedure, can do wonders to motivate the team to improve or sustain their efforts. Moreover, it involves extensive coordination and clear communication between stakeholders.

If the troubleshooting call exists entirely within a single organization, then it is likely that things such as after-hours call rosters, response and elevation measures and thresholds,



briefing and reporting actions have been spelled out; thereby, allowing time and resources to be readily assigned to the call. If the troubleshooting call happens to involve external or even partnered agencies (i.e. interagency), then various things could impede troubleshooting efforts if they are not properly coordinated beforehand. A lot of confusion can arise and time can be lost between the “supporting” agency and the “supported” agency if telecommunications systems professionals are not properly trained in the basics.

It would be useful for the responding technician to understand what level of impact the customer’s problem is going to have if it does not meet with a successful and timely restoral. Things to be coordinated in advance that could delay handling a trouble call should include the agreement and understanding of each agency’s individual and cooperative roles and responsibilities, the assignment of liability in the event of damage or injury, establishing terms of authorized use of materials and resources, any exceptions to standing policies or procedures (such as operating hours), knowing who to call in the event of a system problem, when to call a telecommunications system manufacturer’s customer support team or call center, and establishing terms of risk and safety. The above factors and more can enhance the value of the technician’s handling of the situation for each organization that is involved.

ESTABLISHING A MEANS OF NOTIFICATION

When referring to a means of notification, the writer is discussing the manner in which the telecommunications operator (at the distant location) will initially notify the supporting telecommunications support technician that there is a system problem. If policies are strict within an organization, the value of the means of notification should be critical. The ability to make some kind of positive contact in the event of trouble could save precious time, determine if an agency is obligated to respond, and whether or not a responding call center’s technician can efficiently respond to the call.

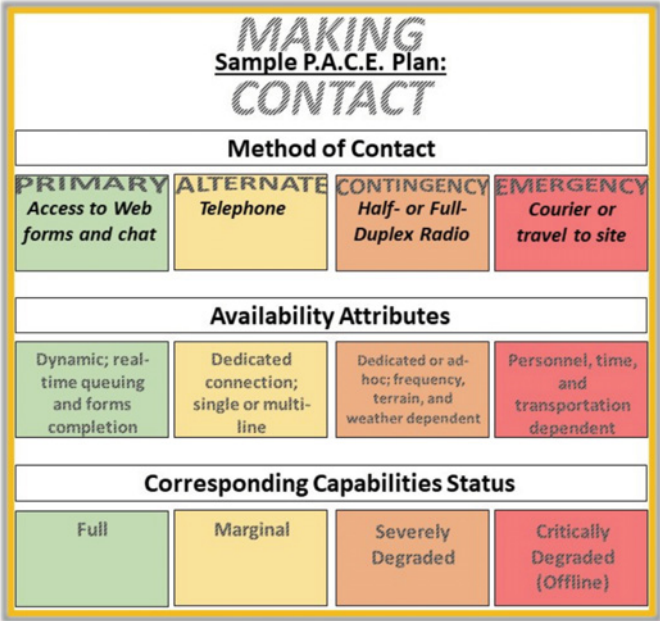
It is important for all parties involved to know if the supporting

agency’s requirements spell out different means of notification depending on the severity of the customer’s problem, or if a “by any means possible” rule exists. Astute technicians know there is trouble if a customer simply misses a scheduled routine contact such as a radio check, possibly signifying a catastrophic system failure. In less severe circumstances, trouble calls can be initiated by Web-based electronic forms, online chatting or texting, phone calls, electronic mail (e-mail) or attachments, word-of-mouth, or contact in-person or during a teleconference. The technician should hope to make as many of these formats available to him or her as possible along with an understanding of any underlying infrastructure that facilitates them. If the supporting technician is responsible for monitoring the efficiency or performance of the customer’s system, such as with quality of service (QoS) or performance metrics (i.e. bit error rates, call completion or failure statistics, etc.), then it would be very valuable to set response “flags” or “triggers” to prompt the agency into action.

Any means of notification should be able to be captured for the responding agency’s documentation for things such as trend analysis and efficiency management. It probably will not be practical to have a responder complete a long and detailed form for record’s sake, but having the customer complete a brief form with essential facts at some point in the process - beginning with the initial trouble ticket - can be helpful in satisfying a records requirement.

backup communications methods. Doing so could be considered to be a safeguard for ensuring uninterrupted contact during serious troubleshooting efforts amidst a potentially contested environment. The thought of being communications-isolated or attempting to contact an isolated out-site can make a simple task seem daunting and bring unnecessary stress to even the most seasoned professionals. Many organizations use Primary, Alternate, Contingency, and Emergency (PACE) methodology for communications plans, navigation, positioning, and system timing along with various other steps to help an individual or team be as self-sufficient and survivable as possible. As a condition to setting out on a mission or task, a traveling entity should ensure he or she has adequate equipment on-hand to maintain such a posture for the duration of the job.

A telecommunications technician should be familiarized with the most practical, robust, and readily available communications methods when assuming duties and ensure that the same means are available to potential callers for assistance. It might be enough to state that a potential caller should have access to two or three forms of communication with the “open world”, but there might be access requirements such as private Webpage or secure or encrypted phone and radio net requirements to satisfy. Some methods are more susceptible to outside intrusion or interference than others.



Communications redundancy exists if callers maintain two or more different links of communication in case of a system problem, thus allowing them to maintain contact if one or more of them fail while troubleshooting. A technician should know if there are dedicated communications methods scheduled at his or her disposal which would be assigned at the sole discretion of a specific user for a specific time or situation, or ad hoc communications which could be available only if needed but easily overcrowded. Having robust technical support for any communications medium is an important factor as well, should those systems fail or become influenced by outside factors such as weather or solar activity. When communications resources are very limited or competitive, the technician should be familiar with terms of preemption or reassignment by other users for any reason. Finally, and if the means exist, knowing when to elevate the form of communications to meet the increasing severity of a problem can be crucial, such as with the difference between sending e-mail and voice calling to discuss a serious problem.

IN CLOSING

Moments at which a technician might have to respond to a remote call for assistance will most likely happen unexpectedly and involve a situation where lines of authority or support are unclear. The writer hopes that the above points will assist technicians in completing the task successfully. //

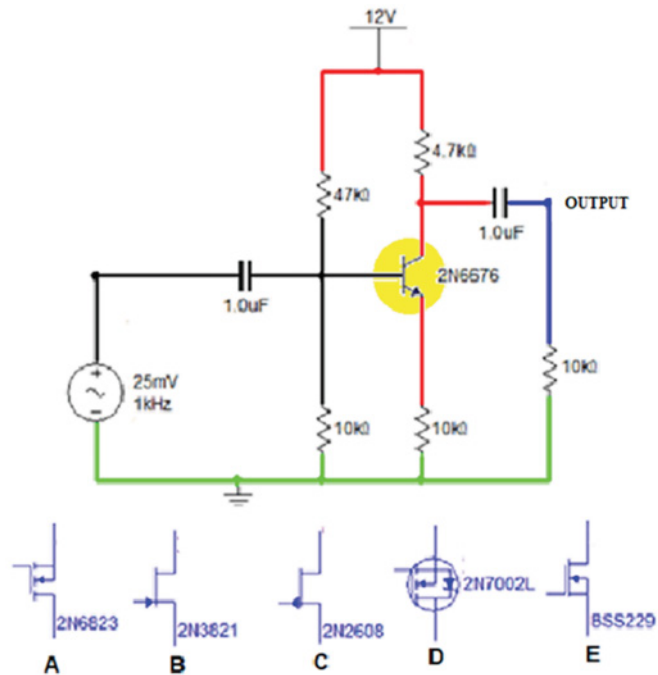
MAINTAINING CONTACT DURING THE EFFORT
The quality of sustainable response communications is vitally important. **Maintaining contact during the effort** is imperative. Remote troubleshooting may not require the technician to travel, but each person should have the presence of mind of being nearby to the distant site. Agencies should spell out their primary and

ABOUT THE AUTHOR Lawrence Orlosky retired from the U.S. military serving over 29 years of active duty in various roles that included telecommunications installer, operator, maintainer, and electromagnetic spectrum manager. He currently holds several credentials that include his ETA General Communications Technician Level 1 (GCT1) certification.

FIT A FET

Which of the FET's can replace the 2N6676 BJT transistor in the circuit.

Puzzle answer on page 22



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Smart Technology Systems Project

by Richard Agard | RESIma, Southeast PA Transit Authority

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This Smart Technology Systems (STS) project utilizes a TECO smart relay to turn an existing doorbell into an electronic keypad that can unlock a door. The stealth nature of the entry system (no outside hardware) and the smart features of the TECO relay delivers increased security. In this example, extra protection is added by a porch light that turns on whenever the entry system is accessed.

The smart relay should be mounted in the basement in the area of the doorbell transformer and the electric panel. Low voltage wires should be routed in the basement to the door frame. Figure 1 illustrates a typical doorbell installation.

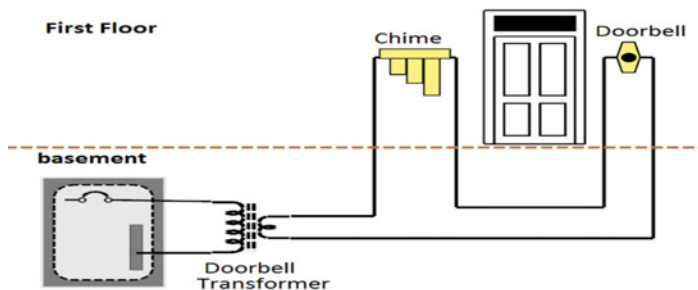


Figure 1: Typical Doorbell Installation

The doorbell and the chime operate off of 18 VAC. The doorbell transformer steps down the 120 VAC from the electrical panel to 18 VAC. Figure 2 shows an example of a typical doorbell transformer mounted on a basement rafter.

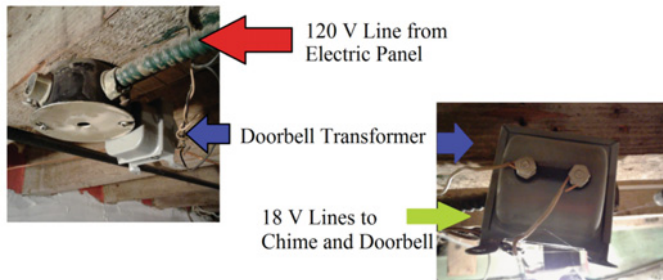


Figure 2: Typical Doorbell Transformer Installation

To meet electrical code requirements, 120 VAC lines in exposed locations should be protected. The line from the panel to the metal enclosure is armor clad. The 120 VAC connections to the doorbell transformer are made within the enclosure. The lower voltage 18VAC lines to the chime and doorbell are outside the enclosure and routed along the rafters.

The locking mechanism is a solenoid latch. The latch operates off of 12VDC. The latch can be mounted on the inside of the door frame and utilize the same wire-path as the existing doorbell. The wiring of the system is illustrated in figure 3.

The TECO smart relay provides control by the opening and closing of output contacts (labeled Q01 through Q04). In this project, Q01 switches the 18 V AC on and off to the chime, Q02 switches the 120 V AC on and off to the porch light and Q03 switches the 12 VDC on and off to the solenoid latch. The switching is dependent on a 120VAC input signal stepped up from the doorbell and the programmed software.

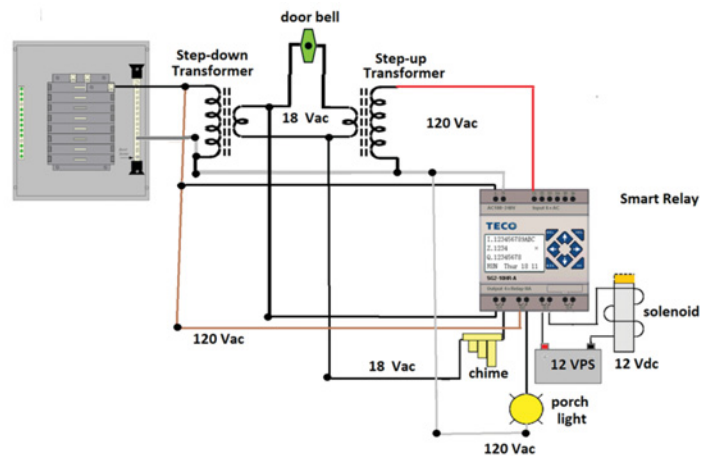


Figure 3: System Wiring

The 18V AC output from the doorbell switch is stepped up to 120 VAC to provide an input signal for the smart relay. The voltage is produced by a second doorbell transformer mounted on the doorbell transformer enclosure as shown in Figure 4. The primary and secondary windings of the second transformer are reversed to step up the voltage. All 120 VAC connections are made inside an enclosure, and all 120 VAC lines outside of the enclosure are protected by an approved method.

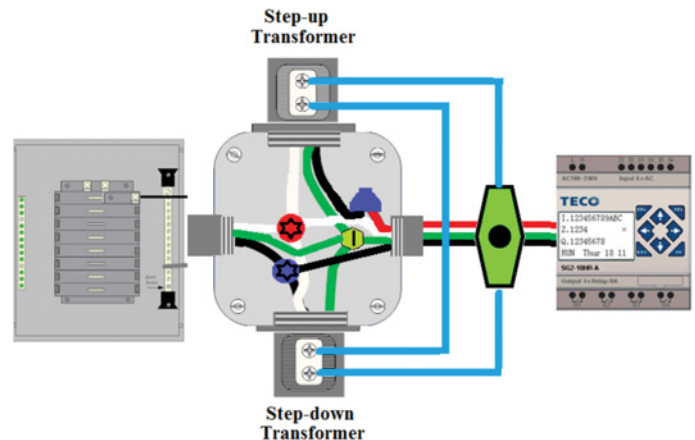


Figure 4: Addition of Step-up Transformer in Doorbell Transformer Enclosure

The installation of the UL listed TECO smart relay in an approved enclosure meets code requirements. The low voltage of the lines combined with the proximity of the latch to the doorbell eases installation.

Smart relays make possible the control, operation and programming of diverse systems working off of different voltages. Smart relays are ideal for basic home automation projects. The versatility of the software, the expandability of the module and the location of the relay near the electrical panel opens up the possibility of future home automation projects. In this application, the relay is used to enable the porch light when it is acting as an entry system. It could be used to turn on a camera, announce when someone has accessed the entry system or control the time, day and dates when the system is accessible.

THE PROGRAM

The smart relay is programmed with ladder logic. The output of the relay is controlled by the inputs and a selection of virtual devices. Ladder logic emulates the branches of a parallel electric circuit with relay logic. The TECO smart relay has available a variety of counters (labeled Cxx), timers (labeled Txx) and virtual relays (labeled Mxx) on its toolbar as shown in Figure 5. The devices are clicked and dragged into position on the ladder diagram.



Figure 5: Ladder Logic Toolbar

The system has two primary modes: bell and lock. The operational mode of the door lock circuit is determined by timers, while the lock combination is set by the counters and the sequential control is provided by virtual relays.

Timers T01, T02 and T03 control the mode. Timers T01 and T02 are delay on timers triggered by Input I01 from the doorbell as shown in Figure 6.

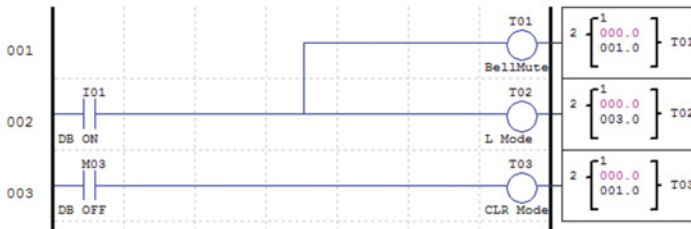


Figure 6: Mode Control Timers

The system is in bell mode when the doorbell is pressed for a period of less than one second, as shown in Figure 7. In bell mode, the doorbell enables Input I01, thereby enabling M0B pulsing Q01. Output contacts Q01 to close the circuit between the chime and the doorbell transformer.

Input I01 (DB ON) Enables M0B (Bell Relay)
Q01 (Bell) is turned on by M0B and pulsed by T0B

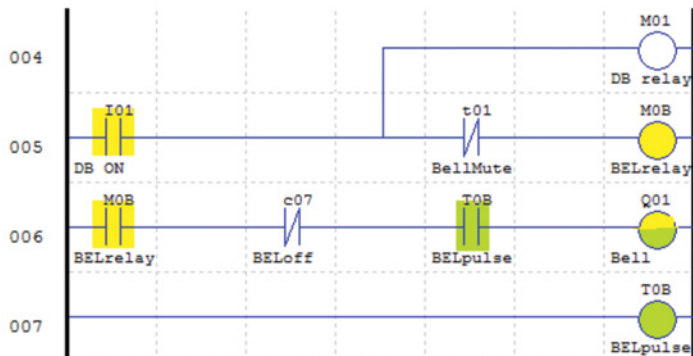


Figure 7: Doorbell Mode

Timer T01 takes the system out of bell mode, as shown in Figure 8. T01 is enabled when the doorbell is held for one second. The opening of T01's normally closed contacts denenergizes M0B (bell relay), disabling Q01, and breaking the connection between the chime and the transformer.

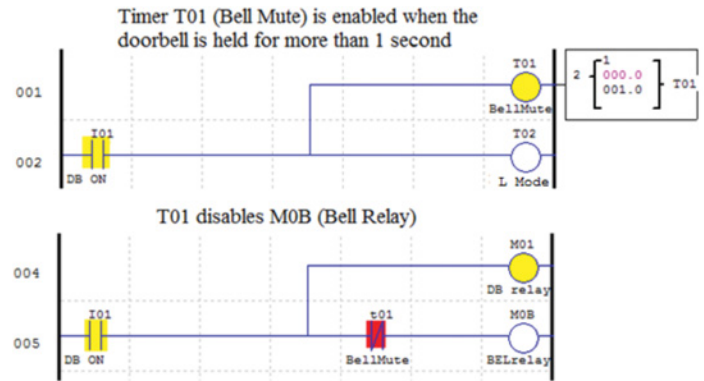


Figure 8: Mute

Timer T02 puts the system into lock mode as shown in Figure 9. Timer T02 is enabled when the doorbell is high for three seconds. T02 latches on M02, allowing the doorbell to be released in lock mode.

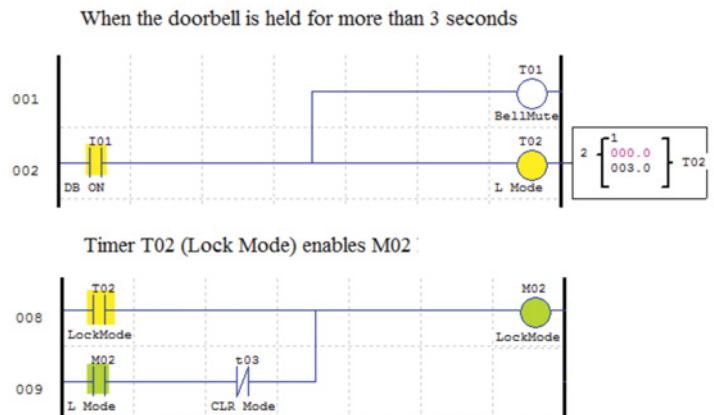


Figure 9: Lock Mode

When the system is in lock mode, virtual relay M02 energizes output contacts Q02, connecting 120 VAC to the porch light as shown in Figure 10.

Whenever the system is in lock mode M02 is energized turning on the porch light



Figure 10: Porch Light

As shown in Figure 11, when the doorbell is released in lock mode, M03 (DB OFF) goes high. In lock mode, the system starts utilizing reverse logic. M03 (DB OFF) is the input to the counters. The number is entered into the counters by short releases of the doorbell.

When the doorbell is released in lock mode M03 goes high

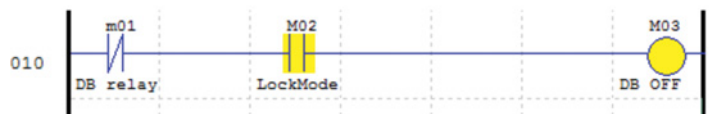


Figure 11: DB OFF (Lock Mode Input)

If the doorbell is released for more than 1 second in lock mode, T03 is enabled, thereby unlatching M02 and taking the system out of lock mode as shown in Figure 12.

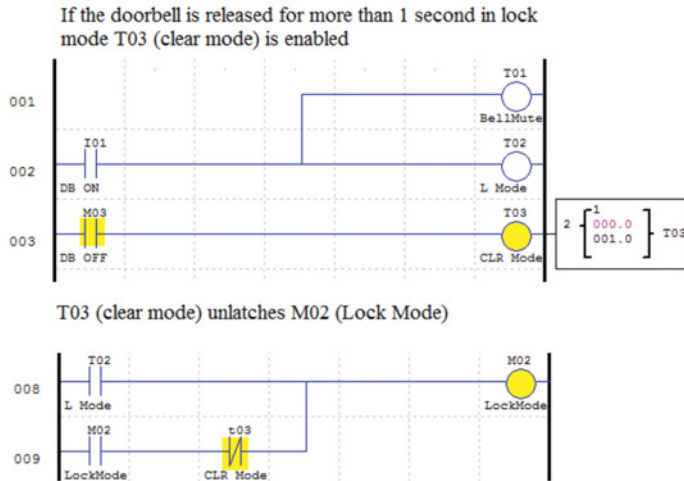


Figure 12: Lock Mode Release

The system is programmed with a three digit combination. Each digit of the combination is contained in a counter. The operation of the first digit counter is shown in Figure 13. The first digit of the combination is held in counter C01. The number is entered with a series of releases of the doorbell. Each release must be for less than one second. Associated with each counter is an over counter. If the digit counter is enabled and the over counter not enabled for a period of one second, that level will be sealed in and the number of the combination can be entered.

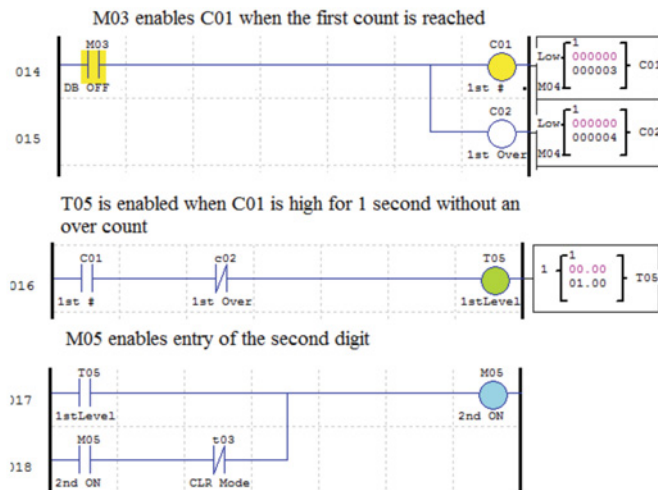


Figure 13: First Digit Operation

The operation of the second digit is similar to the first, as shown in Figure 14. Two virtual relays were required for M06 and M07 because of limited space on the rung.

As shown in Figure 15, the third digit of the combination opens the lock. If the third digit is entered and not exceeded for one second, the latch will unlock for five seconds.

The 12 V Bus bar connects the smart relay output Q3 to the 12 volt power supply and solenoid as shown in Figure 18.

120 Volt connections were made in the doorbell transformer enclosure and smart relay enclosure as shown in Figure 19.

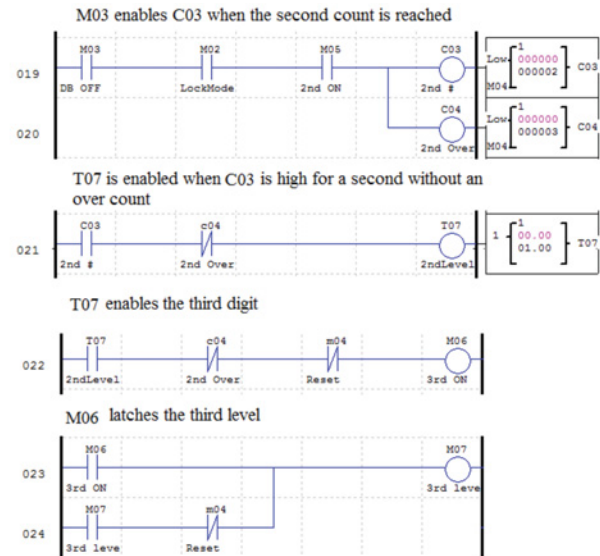


Figure 14: Second Digit Operation

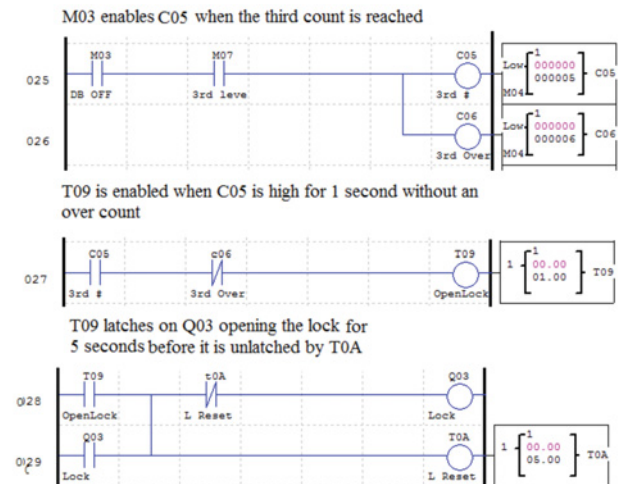


Figure 15: Third Digit Operation

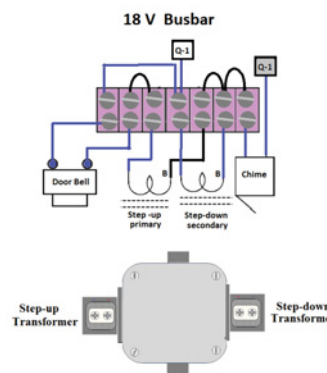


Figure 17: 18 V Busbar

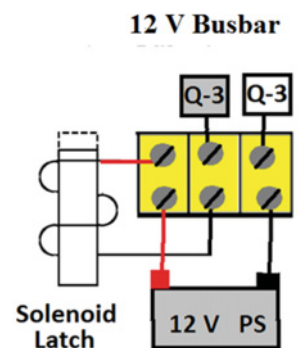


Figure 18: 12 V Busbar

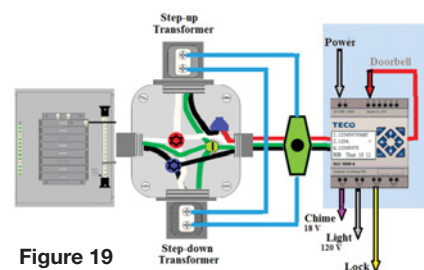


Figure 19

NEW ETA CERTIFIED TECHNICIANS

The following is a list of professionals who have earned new certifications between February 1 and March 31, 2019 under one or more of ETA International's 80+ certification programs. Names of these highly qualified technicians have earned ETA's formal endorsement and approval.

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
5G Technician (5G)				
5GT218846	Kosal Chum	ETA International	David Weaver	Las Vegas NV
5GT218847	Brian Cooley	ETA International	David Weaver	Las Vegas NV
5GT218848	Elden Erickson	ETA International	David Weaver	Las Vegas NV
5GT218849	Michael Green	ETA International	David Weaver	Las Vegas NV
5GT218841	Gabriel Honest	ETA International	David Weaver	Las Vegas NV
5GT218849	Pratulchandra Joshi	ETA International	David Weaver	Las Vegas NV
5GT218848	Patrick McNeerney	ETA International	David Weaver	Las Vegas NV
5GT218843	Russell Nicholas	ETA International	David Weaver	Las Vegas NV
5GT218845	Ron Rippley	ETA International	David Weaver	Las Vegas NV

Advanced RF Interference Mitigation (AIM)

AIM219761	Scott Cashmore	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM218867	Christian Chmielewski	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219756	Michael Clough	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219750	Daniel DeGirolamo	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219760	Ryan Donohoo	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219762	Eric Dye	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM218864	Cameron Horn	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219748	Robert Kays	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM218866	Emmanuel Lopez	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219752	Minh Ly	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219749	Jerod Majors	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219758	Scott Miller	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM218863	Arun Orn	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219759	Ken Prado	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219763	Justin Roose	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219751	Thomas Thoman	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM218865	Ken Waszkiewicz	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
AIM219757	James Wilson	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV

Audio Video Forensic Analyst (AFVA)

AFVA216732	Jennifer Pinto	Henry Inman Public Library	Natalie McGrath	Colonia NJ
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Avionics (AVN)

AVN216247	C Abreu-Velazquez	Caribbean Aviation Training Inst	Francisco Orsini	San Juan PR
AVN215810	G Cordero-Galarza	Caribbean Aviation Training Inst	Francisco Orsini	Carolina PR
AVN214622	Kelvin Flores-Colon	Caribbean Aviation Training Inst	Francisco Orsini	San Juan PR
AVN215811	H Gonzalez-Sepulveda	Caribbean Aviation Training Inst	Francisco Orsini	Carolina PR
AVN215934	Luis Jimenez-Millan	Caribbean Aviation Training Inst	Francisco Orsini	Carolina PR
AVN215165	L L De Victoria Ramirez	Caribbean Aviation Training Inst	Francisco Orsini	San Juan PR
AVN215074	Gary McQueen	373 Trng Squadron/Det 20 USAF	Richard Authement	APD AE
AVN215167	Eric Morales-Rivera	Caribbean Aviation Training Inst	Francisco Orsini	San Juan PR
AVN215166	Luis Negron-Cruz	Caribbean Aviation Training Inst	Francisco Orsini	San Juan PR
AVN216454	Charlie Ramos-Serrano	Caribbean Aviation Training Inst	Francisco Orsini	Carolina PR
AVN216245	Eduardo Rios	Caribbean Aviation Training Inst	Francisco Orsini	Carolina PR
AVN215809	G Torres-Gutierrez	Caribbean Aviation Training Inst	Francisco Orsini	Carolina PR
AVN216379	Sergio Torres-Ortiz	Caribbean Aviation Training Inst	Francisco Orsini	San Juan PR

Biomedical Imaging Equipment Technician (BIET)

BIET218157	Timothy Naegle	Trace Services Inc	Jay Chvalovsky	Bloomington IL
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Certified Electronics Technician (CET)

IND220062	John Carter	Veterans Assembled electronics	Zachary Barrett	Providence RI
AVN216850	Bradley Clark	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR
IND216733	Frederick Crume	Veterans Assembled electronics	Michael H Aubee	Providence RI
AVN216853	Miles Davis	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR
GCT2220201	Randall Emerjian	Cable Links Slumberger	Sandy Slumberger	Fresno CA

Associate CET Hands-On Assessment

The following technicians completed their optional hands-on practical assessment for the Associate Certified Electronics Technician. Congratulations!

Cert Number	Name	Location
AHOA218052	Deborah Jarvis	Bellevue FL
AHOA219890	Jessiah Stout	Melbourne FL
AHOA219920	Jeremy Wood-Gilbert	Providence RI

IND218431	Marcus Hopkins	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
GCT2216738	Joseph Hutchinson	Radio Solutions	Joseph S Casieri	Norwell MA
CST218090	Courtney Jackson	TN College of Applied Technology	Carlton M Carter	Memphis TN
TCM219978	Courtney Jackson	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
IND216621	Daniel James	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
IND219941	Jeremy Jweinat	Veterans Assembled electronics	Zachary Barrett	Hartford CT
LAS218638	Gregory Krantz	ETA International	David Weaver	Las Vegas NV
WCM220010	James Lovett	Rollover	ETA International	Greencastle IN
ITS216623	Ronald Milione	Motorola Solutions	Paul J Dalio	Old Bridge NJ
RS6220005	Bobby Rucker	Commdux Consulting	Michael C Barton	Atlanta GA
DAS219804	Robert Schelle	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
NST216747	Michael Stafford	Rollover	ETA International	Greencastle IN
AVN216859	Braden Tipsaas	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR
LAS218633	Jeffrey Vaughn	ETA International	David Weaver	Las Vegas NV

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
ITS218860	Jeffrey Vaughn	ETA International	David Weaver	Las Vegas NV
RS6220007	Darrell Wall	Commdux Consulting	Michael C Barton	Atlanta GA
WCM218300	Scott Young	Rollover	ETA International	Greencastle IN
GCT2218852	Colin Zapalac	ETA International	Bryan Allen	Las Vegas NV

Associate Certified Electronics Technician (CETA)

AAS216679	Chance Abul	Coastal Carolina Cmnty Coll	Justin K Sokoloski	Jacksonville NC
AST220170	James Armstrong	Ivy Tech Community College	Mark D Atkins	Indianapolis IN
AST216665	Tadeh Babakhani	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST219948	Andrew Barlich	ETA International	John Enfield	Las Vegas NV
AST218156	Raphael Battle	Greystone Adult School	Denise Wright	Repsa CA
AST216741	Tamba Bayoh	Sal Lake Community College	Maria A Raikh	SLC UT
AST216661	Arbi Begian	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST218107	Thomas Black	Upgrade	ETA International	Greencastle IN
AST216568	Marian Boado Encinosa	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
AST218349	Reynald Bowen	Rollover	ETA International	Greencastle IN
AST216678	Donna Boyachek	Coastal Carolina Cmnty Coll	Justin K Sokoloski	Jacksonville NC
AST220068	Paul Bradshaw	Upgrade	ETA International	Greencastle IN
AST218699	Myles Bruillard	ETA International	Bryan Allen	Las Vegas NV
AST218094	Conner Bryant	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST219935	John Carter	Upgrade	ETA International	Greencastle IN
AST216849	Bradley Clark	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR
AST218286	Mason Cooper	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST216680	Jared Cowser	Coastal Carolina Cmnty Coll	Justin K Sokoloski	Jacksonville NC
AST218093	Austin Creel	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST218200	Steven Cunningham	Chicago Communications	Donald Pierson	Elmhurst IL
AST218095	Joseph D'Angelo	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST220146	Daniel Dare	CE Brehm Mem Pub Library	Esther Curry	Mt Vernon IL
AST216851	Miles Davis	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR
AST218368	Nathan Davis	John D Rockefeller IV Career Cntr	Daniel J Koller	New Cumberland WV
AST216672	Andrew De Jong	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST218106	Charles Decker	Upgrade	ETA International	Greencastle IN
AST216572	Mitchell Dolberry	Everett Community College	Christine Eden	Everett WA
AST220169	John Downton	Ivy Tech Community College	Mark D Atkins	Indianapolis IN
AST218433	Kameron Duckett	TN College of Applied Technology	Carlton M Carter	Memphis TN
AST216668	Haygaz Eivazian	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST216624	Ethan Ellis	St Technical College of MO	Nyla L Rogers	Linn MO
AST220178	Joshua Felts	Ivy Tech Community College	Mark D Atkins	Indianapolis IN
AST216876	Damon Franklin	CALPIA	Alejandro Diaz	Imperial CA
AST218152	Hunter Garcia	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST216662	Artur Ghazaryan	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST216763	Maxwell Good	Ivy Tech Community College	Kim S Rice	Anderson IN
AST216659	Edwin Grigoryans	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST218579	Jeffrey Guffey	Ivy Tech Community College	Kim S Rice	Anderson IN
AST216744	Nick Hagley	Cape Fear Community College	Mark L Gray	Castle Hayne NC
AST216671	Artak Hakobyan	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST217998	Xavier Harlan	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST217999	Kalin Hart	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST218151	Marcus Hopkins	Upgrade	ETA International	Greencastle IN
AST216846	Sasha Johnson	Upgrade	ETA International	Greencastle IN
AST218541	Jeremy Jweinat	Upgrade	ETA International	Greencastle IN
AST216660	John Keshishoghli	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST216669	Razmik Khosravian	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST218254	Gregory Klimenko	Associated Technical College	Arnulfo C Runas	Los Angeles CA
AST218382	Andrew Krol	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST218004	Robert Lambert	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST218251	Boris Lasso	Bozeman Public Library	Kit Stephenson	Bozeman MT
AST218334	Julius San Marc Leconte	Broward Community College	Mohammad A Dabbas	Coconut Creek FL
AST218333	Marc Leconte	Broward Community College	Mohammad A Dabbas	Coconut Creek FL
AST218335	Shneider Leconte	Broward Community College	Mohammad A Dabbas	Coconut Creek FL
AST220159	William Lemily	Upgrade	ETA International	Greencastle IN
AST218002	Jecorey Lewis	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST220172	Matthew Longshore	Ivy Tech Community College	Mark D Atkins	Indianapolis IN
AST218283	Morgan Magee	Pearl River Community College	Vic Cerniglia	Poplarville MS
AST216683	Tyler Mansberry	Coastal Carolina Cmnty Coll	Justin K Sokoloski	Jacksonville NC
AST218417	Deandre McCarter	CALPIA	Alejandro Diaz	Imperial CA
AST220168	James Meadows	ETA International	Tracy L Montgomery	Greencastle IN
AST208418	Shad Mena	CALPIA	Alejandro Diaz	Imperial CA
AST218343	Uvaldo Mora	CALPIA	Alejandro Diaz	Imperial CA
AST219950	Sal Moreno	Greystone Adult School	Denise Wright	Repsa CA
AST218249	Alexander Mortillaro	Cape Coral Tech	Brian Hart	Cape Coral FL
AST216667	Robert Navasardyan	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST218195	Anthony Nordin	ETA International	Mel C Salas	Sacramento CA
AST218100	Daniel Odum	Chattanooga St Cmnty College	Cheryl Byrd	Chattanooga TN
AST218102	Eric Osterling	ETA International	Guy E Burchill	Meadville PA
AST219730	Todd Overbay	ETA International	Scott A Choroba	Knoxville TN
AST216848	Christopher Pederson	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR
AST216856	Johnathan Radcliff	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR
AST217875	Rian Raleigh	So LA Community College	Joan E Granger	Morgan City LA
AST218436	Johnathan Ramos	Minot Education Center	Justin N Gillespie	Minot ND
AST218010	Luis Ramos	Upgrade	ETA International	Greencastle IN
AST220022	Philip Rees	Upgrade	ETA International	Greencastle IN
AST218369	Kory Rhodes	John D Rockefeller IV Career Cntr	Daniel J Koller	New Cumberland WV
AST216684	Kevin Rico	Coastal Carolina Cmnty Coll	Justin K Sokoloski	Jacksonville NC
AST216663	Christopher Rivera	Glendale Community College	Patrick Shahnazarian	Glendale CA
AST218259	Andrew Rosengren	Advanced Training Associates	Joaquin J Coffey	El Cajon CA

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
AST218277	Karl Rudolf	College of Western ID	Mikel R Douglas	Garden Valley ID	CSS218764	Elise Boeve	Careerline Technology Cntr	Renee C Slagter	Holland MI
AST216658	Richard Sarthou	Glendale Community College	Patrick Shahnazarian	Glendale CA	CSS218027	Jami Bolton	Windham School District	Verna L Land	San Saba TX
AST218704	Robert Schelle	ETA International	Bryan Allen	Las Vegas NV	CSS218518	Lydia Botter	Windham School District	Debbie A White	Burnet TX
AST218696	Jared Schindler	ETA International	Bryan Allen	Las Vegas NV	CSS218260	Erick Braddock	Tsunami Adult School	Victoria Snow	Crescent City CA
AST220076	Richard Simmer	ETA International	Philip J Schmitt	Kalamazoo MI	CSS219851	Raymond Bradley	CALPIA	Aliza Shaw	Imperial CA
AST218104	Paul Simmons	Pearl River Community College	Vic Cerniglia	Poplarville MS	CSS218310	Andrew Brill	Careerline Technology Cntr	Kenneth J Toth	Holland MI
AST218284	Turan Smith	Pearl River Community College	Vic Cerniglia	Poplarville MS	CSS220060	Joi Brill	Gateway Technical College	Jane G Kluchka	Sturtevant WI
AST218092	Mason Speir	Pearl River Community College	Vic Cerniglia	Poplarville MS	CSS220139	Cheshire Brooks	Dardenelle Middle School	Monica G Bryson	Russellville AR
AST218108	Dylan Taylor	Upgrade	ETA International	Greencastle IN	CSS216761	Jatari Brooks	CALPIA	Aliza Shaw	Jamestown CA
AST216685	Tyrene Thompson	Coastal Carolina Cmnty Coll	Justin K Sokoloski	Jacksonville NC	CSS218729	Ethan Brown	Careerline Technology Cntr	Renee C Slagter	Holland MI
AST216858	Braden Tjsoas	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR	CSS218293	Knoel Browne	Careerline Technology Cntr	Kenneth J Toth	Holland MI
AST218003	Alex Travis	Pearl River Community College	Vic Cerniglia	Poplarville MS	CSS218313	Ian Buckingham	Careerline Technology Cntr	Kenneth J Toth	Holland MI
AST218373	Kenneth Tresch	Pearl River Community College	Vic Cerniglia	Poplarville MS	CSS217949	Richard Burnaman	Windham School District	Elia Hernandez	San Antonio TX
AST219951	Currie Vaughn	Greystone Adult School	Denise Wright	Represa CA	CSS218813	Dana Bushman	Careerline Technology Cntr	Renee C Slagter	Holland MI
AST216875	Ronnie Vaughn	CALPIA	Alejandro Diaz	Imperial CA	CSS216651	Maurice Caldwell	CALPIA	Dale R Mulhern	Soledad CA
AST219829	Jose Venegas	Upgrade	ETA International	Greencastle IN	CSS220086	Pedro Cano	CALPIA	Robert L Martinez	California City CA
AST218287	Nicholas Wager	Pearl River Community College	Vic Cerniglia	Poplarville MS	CSS216719	Robert Cardona	Pelican Bay SP	Emilio Calles	Crescent City CA
AST216860	Brandon Walker	Little Rock AFB AR	Richard Authement	Little Rock AFB AR	CSS220055	Jon Carrier	Gateway Technical College	Jane G Kluchka	Sturtevant WI
AST220175	Jeremy Weddle	Ivy Tech Community College	Mark D Atkins	Indianapolis IN	CSS218807	E Carrillo Garcia	Careerline Technology Cntr	Renee C Slagter	Holland MI
AST218000	Christopher Wineholt	Salt Lake Community College	Gilbert Ulibarri Jr	Salt Lake City UT	CSS216750	Dominic Carter	CALPIA	Stephen LeNoir	San Luis Obispo CA
AST218299	Scott Young	Roller	ETA International	Greencastle IN	CSS216553	Christopher Castorena	Windham School District	Elia Hernandez	San Antonio TX
AST218201	Michael Zajak	Chicago Communications	Donald Pierson	Elmhurst IL	CSS216755	Alfred Chadwick	CALPIA	Stephen LeNoir	San Luis Obispo CA
AST216664	Loris Zakareian	Glendale Community College	Patrick Shahnazarian	Glendale CA	CSS216554	Larry Christian	Windham School District	Cynthia Turner	Ney Unit Hondo TX
					CSS218558	James City	Windham School District	Robert A Gray	Huntsville TX
					CSS218529	Tonya Conn	Windham School District	Debbie A White	Burnett TX
					CSS217873	Brittanie Conway	TN College of Applied Technology	Daniel E Taylor	Newbern TN
					CSS218567	Francisco Cordero	Windham School District	Cynthia Turner	Hondo TX
					CSS218523	Brittany Cox	Windham School District	Debbie A White	Burnet TX
					CSS217948	Jeremy Crabtree	Windham School District	Elia Hernandez	San Antonio TX
					CSS216877	Desiree Cruder	CALPIA	Victoria Rodriguez	Chowchilla CA
					CSS216656	Shawn Dailey	Valley SP	Justin Andrews	Chowchilla CA
					CSS219956	Marissa D'Augustine	ASI Career Institute	M Neumann Monagle	Turnersville NJ
					CSS218019	Kayleigh Davis	Windham School District	Verna L Land	San Saba TX
					CSS219853	Ricky Davis	CALPIA	Stephen LeNoir	San Luis Obispo CA
					CSS219954	Glynes Davis-Gibson	ASI Career Institute	M Neumann Monagle	Turnersville NJ
					CSS218549	Tiffany Dawson	Windham School District	Debbie A White	Burnet TX
					CSS216642	Vincent DeGeorge	CALPIA	William R Anderson	Soledad CA
					CSS218803	Julia Delaney	Careerline Technology Cntr	Renee C Slagter	Holland MI
					CSS218028	Delilah Delgado	Windham School District	Verna L Land	San Saba TX
					CSS218528	Patricia Deliganes	Windham School District	Debbie A White	Burnet TX
					CSS217947	John DeMore	Windham School District	Elia Hernandez	San Antonio TX
					CSS218337	Robert Deninno	CALPIA	Alejandro Diaz	Imperial CA
					CSS220011	Stacie Deschenes	ASI Career Institute	M Neumann Monagle	Turnersville NJ
					CSS218555	Aubrey Dever	Windham School District	Debbie A White	Burnet TX
					CSS216647	Raymond DeWitt	CALPIA	William B Anderson	Soledad CA
					CSS218805	Anissa Diaz	Careerline Technology Cntr	Renee C Slagter	Holland MI
					CSS218473	James Diaz	CALPIA	Linda Goodman	Ione CA
					CSS218309	Koert Diekevers	Careerline Technology Cntr	Kenneth J Toth	Holland MI
					CSS219983	Joshua DiGiorgio	College of Western ID	Mikel R Douglas	Garden Valley ID
					CSS218362	Fanny DiLettera	Monroe Community College	Sarah White	Rochester NY
					CSS218762	Taylor Doyle	Careerline Technology Cntr	Renee C Slagter	Holland MI
					CSS218222	Kim Drayton	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC
					CSS220071	McGhee Duclos	Visions Adult School (COR)	Sarah Gabriel	Corcoran CA
					CSS218763	Willie Durst	CALPIA	Patricia Ackman	Vacaville CA
					CSS218534	Susie Eldridge	Windham School District	Debbie A White	Burnet TX
					CSS218801	Jordan Elliott	Careerline Technology Cntr	Renee C Slagter	Holland MI
					CSS218017	Shana Elliott	Windham School District	Verna L Land	San Saba TX
					CSS218026	Angela Ernst	Windham School District	Verna L Land	San Saba TX
					CSS217946	John Esquivel	Windham School District	Elia Hernandez	San Antonio TX
					CSS218593	Sergio Estupinan	Careerline Technology Cntr	Renee C Slagter	Holland MI
					CSS217944	Christopher Fisher	Windham School District	Elia Hernandez	San Antonio TX
					CSS216756	Joe Flowers	CALPIA	Stephen LeNoir	San Luis Obispo CA
					CSS218562	Vincent Friemel	Windham School District	Cynthia Turner	Hondo TX
					CSS219852	Felipe Fuentes	CALPIA	Aliza Shaw	Imperial CA
					CSS217956	Aaron Gandy	Windham School District	Robert A Gray	Huntsville TX
					CSS218550	Kensley Gardner	Windham School District	Debbie A White	Burnet TX
					CSS216552	Omar Garzon-Escobar	Windham School District	Elia Hernandez	San Antonio TX
					CSS218611	Leah Geerts	Careerline Technology Cntr	Renee C Slagter	Holland MI
					CSS218303	Kyle Gilbert	Careerline Technology Cntr	Kenneth J Toth	Holland MI
					CSS219987	Laura Gilmore	College of Western ID	Mikel R Douglas	Garden Valley ID
					CSS216583	Christopher Gonzales	PRIDE Enterprises	Jessica Driggers	Brandon FL
					CSS218531	Monica Gonzales	Windham School District	Debbie A White	Burnet TX
					CSS218524	Taylor Good	Windham School District	Debbie A White	Burnet TX
					CSS219847	Boris Goodloe	CALPIA	Aliza Shaw	Imperial CA
					CSS217874	Danny Goodman	TN College of Applied Technology	Daniel E Taylor	Newbern TN
					CSS218338	Pascal Gosselin	CALPIA	Alejandro Diaz	Imperial CA
					CSS218472	William Grajeda	CALPIA	Ione CA	Ione CA
					CSS216579	John Gray	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
					CSS216541	Andrius Green	Windham School District	Elia Hernandez	San Antonio TX
					CSS217951	Gabriel Guerrero	Windham School District	Robert A Gray	Huntsville TX
					CSS216718	Brandon Guiher	CALPIA	Victor Ojeda	San Diego CA
					CSS218520	Norma Gutierrez	Windham School District	Debbie A White	Burnet TX
					CSS218525	Diana Haddox	Windham School District	Debbie A White	Burnet TX
					CSS218761	Christopher Haiman	CALPIA	Aliza Shaw	Jamestown CA
					CSS216881	Shannon Hambley	CALPIA	Victoria Rodriguez	Chowchilla CA
					CSS218798	Allison Hamelink	Careerline Technology Cntr	Renee C Slagter	Holland MI

Senior Certified Electronics Technician (CETsr)

SETR56218198	Ralph Aguilar	Comdex Consulting	Michael C Barton	Plantation FL
SETDAS219796	Myles Bruillard	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
SETDAS219788	Bruce Cobb	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
SETR56220002	James Culbertson	Comdex Consulting	Michael C Barton	Atlanta GA
SETLAS218640	Richard Green	ETA International	David Weaver	Las Vegas NV
SETWCM218243	James Harris	Roller	ETA International	Greencastle IN
SETITS218855	Terry Hughes	ETA International	David Weaver	Las Vegas NV
SETIND218149	Deborah Jarvis	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
SETIND216734	Stancil Latasha	Veterans Assembled electronics	Jason E Greene	Concord NC
SETLAS218635	Nicholas LoCicero	ETA International	David Weaver	Las Vegas NV
SETRAD218347	Tim Mastrogiannakos	Roller	ETA International	Greencastle IN
SETCS218278	Tim Mastrogiannakos	Motorola Solutions	Ronnie A Abdool	Brooklyn NY
SETWCM218346	Jeffrey McClellan	Roller	ETA International	Greencastle IN
SETGCT2219891	Shannon McMellon	B&C Communications	Cynda C Simmons	Chillicothe OH
SETITS218853	Zachary Mills	ETA International	David Weaver	Las Vegas NV
SETR56219767	Steven Mollenhoff	ETA International	David Weaver	Las Vegas NV
SETCS218435	Ronald Polulak	Motorola Solutions	Ronnie A Abdool	Brooklyn NY
SETAWN216857	Johannath Radcliff	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR
SETR56218740	Jason Rucks	ETA International	David Weaver	Las Vegas NV
SETDAS219776	Jared Schindler	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
SETLAS218639	Steven Scott	ETA International	David Weaver	Las Vegas NV
SETAIM219753	Daniel Thell	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
SETDAS219771	Daniel Thell	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
SETDAS219780	Brian Tromp	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
SETAIM219754	Brian Tromp	Tx Rx Systems Inc	Donald E Huston	Las Vegas NV
SETCSIA218276	Michael Van Lenten	Motorola Solutions	Ronnie A Abdool	Staten Island NY
SETLAS218634	Michael Vargo	ETA International	David Weaver	Las Vegas NV
SETAWN216861	Brandon Walker	373 Trng Squadron/Det 20	Richard Authement	Little Rock AFB AR

Certified Satellite Installer (CSI)

CSI216864	Christian DeLaTorre	Hunter Business School	Ronald P Milione	Huntington Station NY
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Certified Service Manager (CSM)

CSM218105	Victor Attard	ETA International	Lawrence W Stark	Maryland Heights MO
CSM220128	Steven Calvert	Dardenelle Middle School	Monica G Bryson	Russellville AR
CSM216634	Fanny DiLettera	Monroe Community College	Robert Fisher	Rochester NY
CSM220026	Courtney Jackson	TN College of Applied Technology	Carlton M Carter	Memphis TN
CSM218753	Jesse Stanley	B&C Communications	Cynda C Simmons	Chillicothe OH

Customer Service Specialist (CSS)

CSS219844	Michelle Abrahamian	CALPIA	Caryn A Argenio	Folsom CA
CSS218538	Amanda Adams	Windham School District	Debbie A White	Burnet TX
CSS218016	Shelby Akers	Windham School District	Verna L Land	San Saba TX
CSS218465	Thomas Alcaraz	CALPIA	Victoria Rodriguez	Chowchilla CA
CSS218568	Antonio Aleman	Windham School District	Cynthia Turner	Hondo TX
CSS218415	Gabriel Allen	CALPIA	Victoria Rodriguez	Chowchilla CA
CSS218588	Henry Allen	Windham School District	Cynthia Turner	Hondo TX
CSS217953	Jimmie Allred	Windham School District	Robert A Gray	Huntsville TX
CSS219874	J Almonds-Bryant	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC
CSS216577	Brian Amaro	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
CSS218032	Eric Anderson	ETA International	David Weaver	Greencastle IN
CSS218565	Joshua Armenta	Windham School District	Cynthia Turner	Hondo TX
CSS216879	Isabel Arroyo	CALPIA	Victoria Rodriguez	Chowchilla CA
CSS216578	David Ashley	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
CSS219960	Miranda Babcock	ASI Career Institute	M Neumann Monagle	Turnersville NJ
CSS219991	Travis Barnett	College of Western ID	Mikel R Douglas	Garden Valley ID
CSS218097	Matthew Barraco	ASI Career Institute	M Neumann Monagle	Turnersville NJ
CSS218580	Lauren Baswell	Lawson St Cmnty Coll, Bessemer	Gwendolyn Bayes	Bessemer AL
CSS216652	Bryan Beaulac	CALPIA	William B Anderson	Soledad CA
CSS219986	River Beck	College of Western ID	Mikel R Douglas	Garden Valley ID
CSS218419	Palmer Beverly	CALPIA	Aliza Shaw	Jamestown CA

NEW ETA CERTIFIED TECHNICIANS

The following is a list of professionals who have earned new certifications between February 1 and March 31, 2019 under one or more of ETA International's 80+ certification programs. Names of these highly qualified technicians have earned ETAs formal endorsement and approval.

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
CSS218808	Autumn Hamlin	Careerline Technology Cntr	Renee C Slagter	Holland MI	CSS216548	Reynaldo Mercado	Windham School District	Elia Hernandez	San Antonio TX
CSS218255	Daryl Hargis	CALPIA	Aliza Shaw	Jamestown CA	CSS218814	Troy Mesbergen	Careerline Technology Cntr	Renee C Slagter	Holland MI
CSS220059	Pamela Hargrove	Gateway Technical College	Jane G Kluchka	Sturtevant WI	CSS218036	Donald Meyer	ETA International	David Weaver	Greencastle IN
CSS218545	Mary Harrell	Windham School District	Debbie A White	Burnet TX	CSS218306	Dylan Meyer	Careerline Technology Cntr	Kenneth J Toth	Holland MI
CSS219875	Michael Hartman	CALPIA	William R Anderson	Soledad CA	CSS219949	Nick Mikaelian	Gateway Technical College	Jane G Kluchka	Sturtevant WI
CSS216580	Robert Haskins	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX	CSS218539	Sandra Miller	Windham School District	Debbie A White	Burnet TX
CSS218605	Morgan Haverdink	Careerline Technology Cntr	Renee C Slagter	Holland MI	CSS218554	Suzanne Mitchell	Windham School District	Debbie A White	Burnet TX
CSS2198585	Shadrack Henderson	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS217952	Joseph Mobley	Windham School District	Robert A Gray	Huntsville TX
CSS219981	David Henning	College of Western ID	Mikel R Douglas	Garden Valley ID	CSS218754	Natalia Monarrez	Careerline Technology Cntr	Renee C Slagter	Holland MI
CSS218439	Mario Hernandez	Careerline Technology Cntr	Kenneth J Toth	Holland MI	CSS218225	Kendrick Moncada	CALPIA	Alejandro Diaz	Imperial CA
CSS218023	Kristy Hesbrook	Windham School District	Verna L Land	San Saba TX	CSS218307	Austin Moore	Careerline Technology Cntr	Kenneth J Toth	Holland MI
CSS218221	Desiree Hillard	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	CSS218113	Gregory Moore	CALPIA	Valerie J Lacebal	Ione CA
CSS216558	Mark Hilton	Windham School District	Cynthia Turner	New Unit Hondo TX	CSS218543	Marissa Moore	Windham School District	Debbie A White	Burnet TX
CSS218042	Chris Hoffa	ETA International	David Weaver	Greencastle IN	CSS218552	Kassandra Moreno	Windham School District	Debbie A White	Burnet TX
CSS218288	Philip Hogan	Careerline Technology Cntr	Kenneth J Toth	Holland MI	CSS219952	Richard Munoz	Greystone Adult School	Denise Wright	Repressa CA
CSS218548	Natasha Hollis	Windham School District	Debbie A White	Burnet TX	CSS218556	Timothy Murphy	Windham School District	Robert A Gray	Huntsville TX
CSS218577	A H Geisenberger	Windham School District	Debbie A White	Burnet TX	CSS219994	Kyler Myers	College of Western ID	Mikel R Douglas	Garden Valley ID
CSS216749	Randall Houseman	CALPIA	Valerie J Lacebal	Ione CA	CSS220057	Stevie Nelson	Gateway Technical College	Jane G Kluchka	Sturtevant WI
CSS220084	Evert Howard	CALPIA	Victoria Rodriguez	Chowchilla CA	CSS218312	Sidney Newton	Careerline Technology Cntr	Kenneth J Toth	Holland MI
CSS220088	George Howard	CALPIA	Robert L Martinez	California City CA	CSS217950	Amouri Nicholson	Windham School District	Robert A Gray	Huntsville TX
CSS218218	Pamela Howard	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	CSS219985	Misty Northrop	College of Western ID	Mikel R Douglas	Garden Valley ID
CSS218294	Scott Howe	Careerline Technology Cntr	Kenneth J Toth	Holland MI	CSS219857	Sammang Noun	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS218590	Alyssa Hughes	Careerline Technology Cntr	Renee C Slagter	Holland MI	CSS216654	Anthony Oddie	Centinela SP	Alejandro Diaz	Imperial CA
CSS220085	Michael Huguez	CALPIA	Michelle Purdy	Susanville CA	CSS216565	Vinson Odle	Windham School District	Cynthia Turner	New Unit Hondo TX
CSS218570	Christopher Hullender	Windham School District	Cynthia Turner	Hondo TX	CSS216760	Frank Olivera	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS219859	Adam Ingala-Whiting	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS218034	Michael Palmer	ETA International	David Weaver	Greencastle IN
CSS217943	Christopher Jack	Windham School District	Elia Hernandez	San Antonio TX	CSS218607	Madelyn Pate	Careerline Technology Cntr	Renee C Slagter	Holland MI
CSS218564	Albert Jackson	Windham School District	Cynthia Turner	Hondo TX	CSS217939	William Paul	Windham School District	Elia Hernandez	San Antonio TX
CSS218561	Shawn Janes	Windham School District	Cynthia Turner	Hondo TX	CSS216759	Taurice Paylor	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS218367	Deborah Jarvis	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL	CSS218302	Daniel Peaslee	Careerline Technology Cntr	Kenneth J Toth	Holland MI
CSS218530	Brandi Jenkins	Windham School District	Debbie A White	Burnet TX	CSS218292	Tyler Perkinson	Careerline Technology Cntr	Kenneth J Toth	Holland MI
CSS218546	Ariel Jimenez	Windham School District	Debbie A White	Burnet TX	CSS219860	Reginald Perry	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS216559	Daniel Johnson	Windham School District	Cynthia Turner	New Unit Hondo TX	CSS220074	Nicholas Petralia	Visions Adult School	Sarah Gabriel	Corcoran CA
CSS220070	Dominic Johnson	Greystone Adult School	Repressa CA	Repressa CA	CSS218213	Chandra Petteway	Urban League - Cntrl Carolinas	Charlotte NC	Charlotte NC
CSS218516	Lakeshia Johnson	Windham School District	Debbie A White	Burnet TX	CSS218773	Spencer Phoon	Careerline Technology Center	Renee C Slagter	Holland MI
CSS217942	Lee Arthur Johnson	Windham School District	Elia Hernandez	San Antonio TX	CSS217938	Charles Pickens	Windham School District	Elia Hernandez	San Antonio TX
CSS218018	Rebecca Johnson	Windham School District	Verna L Land	San Saba TX	CSS218810	Marissa Pike	Careerline Technology Cntr	Renee C Slagter	Holland MI
CSS218760	Christopher Jones	FCI Ray Brook	James D Dukette	Ray Brook NY	CSS218098	Matthew Plank	ASI Career Institute	M Neumann Monagle	Turnersville NJ
CSS220091	Tyhone Jones	CALPIA	Paul Howell	Wasco CA	CSS218775	Sophia Puel	Careerline Technology Center	Renee C Slagter	Holland MI
CSS219858	Jeremy Jordan	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS217869	William Price	New Horizons Adult School	Art Gonzales	Lancaster CA
CSS218521	Terri Jordan	Windham School District	Debbie A White	Burnet TX	CSS219988	Carmelita Pryor	College of Western ID	Mikel R Douglas	Garden Valley ID
CSS219993	Kendall Joyner	College of Western ID	Mikel R Douglas	Garden Valley ID	CSS218535	Delandria Pryor	Windham School District	Debbie A White	Burnet TX
CSS218809	Sierra Kamor	Careerline Technology Cntr	Renee C Slagter	Holland MI	CSS218308	Nicholas Radakovitz	Careerline Technology Cntr	Kenneth J Toth	Holland MI
CSS218437	Elijah Kasten	Careerline Technology Cntr	Kenneth J Toth	Holland MI	CSS218412	Daisy Ramirez	CALPIA	Victoria Rodriguez	Chowchilla CA
CSS220087	Douglas Kell	CALPIA	Robert L Martinez	California City CA	CSS218812	Laura Ramirez	Careerline Technology Cntr	Renee C Slagter	Holland MI
CSS218216	Sherika Kemp	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	CSS216751	Ismael Ramos	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS218305	Andrew Keomankhuth	Careerline Technology Cntr	Kenneth J Toth	Holland MI	CSS218295	Caden Realini	Careerline Technology Cntr	Kenneth J Toth	Holland MI
CSS216560	Oudam Kheiv	Windham School District	Cynthia Turner	New Unit Hondo TX	CSS216648	Phil Reese	CALPIA	William B Anderson	Soledad CA
CSS218551	Crystal Killian	Windham School District	Debbie A White	Burnet TX	CSS219848	Raymond Reyes	CALPIA	Aliza Shaw	Imperial CA
CSS219843	Curtis Killian	CALPIA	Aliza Shaw	Jamestown CA	CSS216643	William Reynolds	CALPIA	William R Anderson	Soledad CA
CSS218750	Jenna Kloosterman	Careerline Technology Cntr	Renee C Slagter	Holland MI	CSS216540	Terrance Rice	Windham School District	Elisa Hernandez	San Antonio TX
CSS218815	Racquel Kranenberg	Careerline Technology Cntr	Renee C Slagter	Holland MI	CSS218563	John Richard	Windham School District	Cynthia Turner	Hondo TX
CSS216551	Kyle Kykendall	Windham School District	Elia Hernandez	San Antonio TX	CSS218533	April Rinaldi	Windham School District	Debbie A White	Burnet TX
CSS216546	Reginald L Niear	Windham School District	Elia Hernandez	San Antonio TX	CSS218471	Crystal Rincon	CALPIA	Alison Reidel	Folsom CA
CSS218547	Shamikia Lambert	Windham School District	Debbie A White	Burnet TX	CSS217954	Mark Rivera	Windham School District	Robert A Gray	Huntsville TX
CSS216880	Gina Lara	CALPIA	Victoria Rodriguez	Chowchilla CA	CSS219995	Corey Roark	College of Western ID	Mikel R Douglas	Garden Valley ID
CSS216561	Wesley Lawton	Windham School District	Cynthia Turner	New Unit Hondo TX	CSS216566	Charles Robinson	Windham School District	Cynthia Turner	New Unit Hondo TX
CSS219850	Justin Learmont	CALPIA	Aliza Shaw	Imperial CA	CSS216650	Jason Robinson	CALPIA	Dale R Mulhern	Soledad CA
CSS218727	Bryer Ledbetter	TN College of Applied Technology	John Laubach	Hohenwald TN	CSS220042	Sara Robles	Gateway Technical College	Jane G Kluchka	Sturtevant WI
CSS219849	Apollinar Lemus	CALPIA	Aliza Shaw	Imperial CA	CSS216581	Francisco Rocha	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
CSS216562	Steven Lewis	Windham School District	Cynthia Turner	New Unit Hondo TX	CSS215783	Cesar Rodarte	CALPIA	Emilio Calles	Crescent City CA
CSS229979	Alex Lopez	CALPIA	Aliza Shaw	Jamestown CA	CSS217868	Nicolas Roditti	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
CSS216655	Michael Lopez	Centinela SP	Alejandro Diaz	Holland MI	CSS218752	Jazmin Rodriguez	Careerline Technology Cntr	Renee C Slagter	Holland MI
CSS218522	Stephanie Lora	Windham School District	Debbie A White	Burnet TX	CSS220090	Jesus Rodriguez	CALPIA	Michelle Purdy	Susanville CA
CSS218096	Shanice Love	ASI Career Institute	M Neumann Monagle	Turnersville NJ	CSS216550	Robert Rodriguez	Windham School District	Elia Hernandez	San Antonio TX
CSS218811	Yoselin Lugo	Careerline Technology Cntr	Renee C Slagter	Holland MI	CSS218594	Val Rodriguez-Gallardo	Careerline Technology Cntr	Renee C Slagter	Holland MI
CSS220092	Joaquin Macias	CALPIA	Katica Bryant	Susanville CA	CSS218024	Lacey Romatz	Windham School District	Verna L Land	San Saba TX
CSS218769	Riley Main	Careerline Technology Cntr	Renee C Slagter	Holland MI	CSS220073	Lonnie Rosales	Visions Adult School	Sarah Gabriel	Corcoran CA
CSS218025	Melissa Maldonado	Windham School District	Verna L Land	San Saba TX	CSS219984	Daniel Runyan	College of Western ID	Mikel R Douglas	Garden Valley ID
CSS219997	Walter Maldonado	College of Western ID	Mikel R Douglas	Garden Valley ID	CSS218413	Daniella Saldivar	CALPIA	Victoria Rodriguez	Chowchilla CA
CSS218536	Crystal Marroquin	Windham School District	Debbie A White	Burnet TX	CSS220056	Megan Salinas	Gateway Technical College	Jane G Kluchka	Sturtevant WI
CSS218514	Regina Marshall	Windham School District	Debbie A White	Burnet TX	CSS218040	J Eduardo Sandoval	ETA International	David Weaver	Greencastle IN
CSS216543	Christopher Martinez	Windham School District	Elia Hernandez	San Antonio TX	CSS218015	Andrea Sario	Windham School District	Verna L Land	San Saba TX
CSS216752	Juan Martinez	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS218438	Kyler Schultz	Careerline Technology Cntr	Kenneth J Toth	Holland MI
CSS218587	Moses Martinez	Windham School District	Cynthia Turner	Hondo TX	CSS218553	Kayla Sears	Windham School District	Debbie A White	Burnet TX
CSS216644	Paul Martinez	CALPIA	Victoria Rodriguez	Chowchilla CA	CSS218595	Christopher Secrest	TN College of Applied Technology	S Brown-Harrison	Hohenwald TN
CSS219845	Tony Martinez	CALPIA	Aliza Shaw	Imperial CA	CSS218519	Tracey Shehan	Windham School District	Debbie A White	Burnet TX
CSS220054	Valerie Mazelis	Gateway Technical College	Jane G Kluchka	Sturtevant WI	CSS218224	Shaquoa Shelton	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC
CSS216874	Tyson McCalley	CALPIA	Alejandro Diaz	Imperial CA	CSS219980	Michael Siddoway	College of Western ID	Mikel R Douglas	Garden Valley ID
CSS216645	Colton McClain	Centinela SP	Alejandro Diaz	Imperial CA	CSS218566	Juan Silva	Windham School District	Cynthia Turner	Hondo TX
CSS218291	Evan McConnell	Careerline Technology Cntr	Kenneth J Toth	Holland MI	CSS218223	Shaneika Sinclair	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC
CSS218112	Shontreece McDaniel	CALPIA	Caryn A Argenio	Folsom CA	CSS218804	Sky Siphasouk	Careerline Technology Cntr	Renee C Slagter	Holland MI
CSS216544	Joshua McKenzie	Windham School District	Elia Hernandez	San Antonio TX	CSS219946	Kerri Skelton	American River College	Jerome P Lahey	Sacramento CA
CSS217941	Robert McKinnis	Windham School District	Elia Hernandez	San Antonio TX	CSS218802	Samantha Slanger	Careerline Technology Cntr	Renee C Slagter	Holland MI
CSS217940	Ryan McLaughlin	Windham School District	Elia Hernandez	San Antonio TX	CSS218414	Shayodolice Sledge	CALPIA	Victoria Rodriguez	Chowchilla CA
CSS220089	Sergio Medina	CALPIA	Robert L Martinez	California City CA	CSS219846	Bojour Smith	CALPIA	Aliza Shaw	Imperial CA

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
CSS216754	DaShawn Smith	CALPIA	Stephen LeNoir	San Luis Obispo CA	DAS217971	Bryan Cockwell	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218214	Deanna Smith	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	DAS217973	Eric Curtis	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS216873	Jeffery Smith	CALPIA	William R Anderson	Soledad CA	DAS217982	Todd DeLong	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218557	Kahil Smith	Windham School District	Robert A Gray	Huntsville TX	DAS217995	Craig Eaton	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218771	Savannah Smith	Careerline Technology Cntr	Renee C Slagter	Holland MI	DAS217987	Elden Erickson	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS216800	Addam Solano	CALPIA	Katica Bryant	Susanville CA	DAS219810	Kenneth Fox	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS216878	Maxine Solomon	CALPIA	Victoria Rodriguez	Chowchilla CA	DAS217978	Carlos Garay	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS219958	Karen Staiano	ASI Career Institute	M Neumann Monagle	Turnersville NJ	DAS217984	Frank Ghassemi	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218215	Chassity Stanback	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	DAS217990	Arthur Gutierrez	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS216649	Brian Stasko	California Rehabilitation Center 5	Roberto Hernandez	Norco CA	DAS219797	Robert Hodgden	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS216549	Jarrod Stewart	Windham School District	Elia Hernandez	San Antonio TX	DAS219808	Shepherd James	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS216582	Arturo Suniga	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX	DAS219783	Benjamin Kuchar	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218777	Holi Swann	Careerline Technology Center	Renee C Slagter	Holland MI	DAS219798	Bryce Mallory	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS219955	Audrey Sweeney	ASI Career Institute	M Neumann Monagle	Turnersville NJ	DAS219785	Mark Mason	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218586	Tori TenBroeke	Careerline Technology Cntr	Renee C Slagter	Holland MI	DAS219772	Trevor Mathews	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218296	M Teran-Hernandez	Careerline Technology Cntr	Kenneth J Toth	Holland MI	DAS219800	William McCulloch	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS219996	Isaac Terry	College of Western ID	Mikel R Douglas	Garden Valley ID	DAS219801	Russell Nicholas	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS220058	Sammy Tholo	Gateway Technical College	Jane G Kluchka	Sturtevant WI	DAS219811	Keone Peiler	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218111	Natasha Thomas	CALPIA	Victoria Rodriguez	Chowchilla CA	DAS219775	Alan Pugh	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS216567	Tommy Thomas	Windham School District	Cynthia Turner	Ney Unit Hondo TX	DAS219793	Luis Quinones	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218226	James Thompson	CALPIA	Valerie J Lacey	Ione CA	DAS219781	Jonathan Rines	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218569	Reginald Tillis	Windham School District	Cynthia Turner	Hondo TX	DAS219803	Carey Rochelle	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218517	Crystal Torres	Windham School District	Debbie A White	Burnet TX	DAS219792	Eric Schluter	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218099	Theresa Tull	ASI Career Institute	M Neumann Monagle	Turnersville NJ	DAS219794	Cliff Sedberry	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218537	Whitney Turk-Pirtle	Windham School District	Debbie A White	Burnet TX	DAS219789	Lester Shafer	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218606	Grace Turner	Careerline Technology Cntr	Renee C Slagter	Holland MI	DAS219799	Komil Shagunov	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS220072	Caurice Ulmer	Greystone Adult School	Denise Wright	Repra CA	DAS219806	Andrey Sklyar	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218290	Daniel Unglenieks	Careerline Technology Cntr	Kenneth J Toth	Holland MI	DAS219769	Thomas Thoman	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218800	Samantha Uribe	Careerline Technology Cntr	Renee C Slagter	Holland MI	DAS219779	Don Jarred Young	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
CSS218513	Nahomi Valdivia	Windham School District	Debbie A White	Burnet TX					
CSS218608	Arianna VanDenBeldt	Careerline Technology Cntr	Renee C Slagter	Holland MI					
CSS218311	Silas VanderPol	Careerline Technology Cntr	Kenneth J Toth	Holland MI					
CSS218806	Kendra VanSpriell	Careerline Technology Cntr	Renee C Slagter	Holland MI					
CSS216547	Luis Vasquez	Windham School District	Elia Hernandez	San Antonio TX					
CSS215782	Harry Vedder	CALPIA	Heather McCracken	Crescent City CA					
CSS218039	Ryan Veith	ETA International	David Weaver	Greencastle IN					
CSS218799	Hailey Venlet	Careerline Technology Cntr	Renee C Slagter	Holland MI					
CSS216573	Hean Victor	New Horizons Adult School	Art Gonzales	Lancaster CA					
CSS216571	Joshua Villalobos	Windham School District	Cynthia Turner	Ney Unit Hondo TX					
CSS219957	Miguel Vinales	ASI Career Institute	M Neumann Monagle	Turnersville NJ					
CSS216574	Dylan Vitello	Windham School District	Cynthia Turner	Ney Unit Hondo TX					
CSS218257	Orlando Waites	CALPIA	Paul Howell	Wasco CA					
CSS219854	Christopher Walchock	CALPIA	Stephen LeNoir	San Luis Obispo CA					
CSS219990	Ryan Waldrop	College of Western ID	Mikel R Douglas	Garden Valley ID					
CSS217937	Gerry Walker	Windham School District	Elia Hernandez	San Antonio TX					
CSS216748	Jeffery Walker	CALPIA	Valerie J Lacey	Ione CA					
CSS217935	Ken Darius Walker	Windham School District	Elia Hernandez	San Antonio TX					
CSS216635	Troy Walls	Visions Adult School	Sarah Gabriel	Corcoran CA					
CSS218256	Jeffrey Ward	CALPIA	Aliza Shaw	Jamesstown CA					
CSS216897	Jay Warmke	ETA International	David Weaver	Greencastle IN					
CSS218109	Emily Warn	Safety Harbor Pub Library	Mallory Cyr	Safety Harbor FL					
CSS219959	Domonique Watkins	ASI Career Institute	M Neumann Monagle	Turnersville NJ					
CSS218610	Adrienne Watson	Careerline Technology Cntr	Renee C Slagter	Holland MI					
CSS218110	Rose Watson	CALPIA	Victoria Rodriguez	Chowchilla CA					
CSS218342	Kevin Webb	CALPIA	Dale R Mulhern	Soledad CA					
CSS218609	Merril Wedeven	Careerline Technology Cntr	Renee C Slagter	Holland MI					
CSS219992	Talan Weeks	College of Western ID	Mikel R Douglas	Garden Valley ID					
CSS218589	Emilie Weyhmiller	Careerline Technology Cntr	Renee C Slagter	Holland MI					
CSS218416	Francis Whalen	CALPIA	Victoria Rodriguez	Chowchilla CA					
CSS218532	Betty Whitaker-Capko	Windham School District	Debbie A White	Burnet TX					
CSS218526	Jennifer White	Windham School District	Debbie A White	Burnet TX					
CSS218212	Markita White	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC					
CSS218341	Terrance Wilcher	CALPIA	Dale R Mulhern	Soledad CA					
CSS216545	Billy Williams	Windham School District	Elia Hernandez	San Antonio TX					
CSS218336	James Williams	CALPIA	Linda Goodman	Ione CA					
CSS216575	Jesse Williams	Windham School District	Cynthia Turner	Ney Unit Hondo TX					
CSS218339	Kwante Williams	CALPIA	Alejandro Diaz	Imperial CA					
CSS218022	Lana Williams	Windham School District	Verna L Land	San Saba TX					
CSS218542	Debbie Wilson	Windham School District	Debbie A White	Burnet TX					
CSS216576	Cecil Word	Windham School District	Cynthia Turner	Ney Unit Hondo TX					
CSS218467	Lionel Wright	CALPIA	James Hernandez	Delano CA					
CSS218544	Angel Wytaskie	Windham School District	Debbie A White	Burnet TX					
CSS218515	Ashley Ybarra Campos	Windham School District	Debbie A White	Burnet Texas					
CSS216753	Charles Yi	CALPIA	Stephen LeNoir	San Luis Obispo CA					
CSS219856	Frederick Young	CALPIA	Stephen LeNoir	San Luis Obispo CA					
CSS216646	Lisa Young	CALPIA	Melissa Bayer	Corona CA					

Computer Service Technician (CST)

CST219842	Andrew Gardiner	Roller	ETA International	Greencastle IN
CST218280	James Gow	Roller	ETA International	Greencastle IN
CST218348	Walter Hughes	Roller	ETA International	Greencastle IN

Distributed Antenna Systems (DAS)

DAS219809	Mohammed Alolyani	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
DAS219786	Travis Bontjes	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV
DAS219807	Haran Chelliah	IWA Technical Svcs Inc	Ira M Wiesenfeld	Las Vegas NV

Data Cabling Installer (DCI)

DCI216871	William Cruz	FiberOptic.com	John H Ianire	Fairfax DC
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Electronics Modules - DC (EM1)

EM1218600	Noah Austin	Rockbridge Co HS/Floyd S Kay YTC	Alton T Jarvis	Lexington VA
EM1216620	Thomas Barnette	The Career Academy	Gary A Thomas	Flat Rock NC
EM1220047	Matthew Beck	Nichols Career Center	Travis W Plume	Jefferson City MO
EM1218647	David Bravo	Northeast AL Community College	Julie George	Rainsville AL
EM1217867	Dalton Broadway	TN Applied Technical College	S Brown-Harrison	Hohenwald TN
EM1218049	Kevin Byler	TN College of Applied Technology	S Brown-Harrison	Hohenwald TN
EM1218248	Joshua Carey	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM1220045	Michael Carroll	Nichols Career Center	Travis W Plume	Jefferson City MO
EM1218601	Cory Conger	Rockbridge Co HS/Floyd S Kay YTC	Alton T Jarvis	Lexington VA
EM1220052	Shanon Connell	Nicholas Career Center	Travis W Plume	Jefferson City MO
EM1218441	Ethan Conway	Enterprise High School	Joshua L King	Enterprise AL
EM1220051	Braden Cook	Nichols Career Center	Travis W Plume	Jefferson City MO
EM1218387	Joseph Cooper	PCU Tripoli (LH7)	Andrew Zalewski	San Diego CA
EM1218372	Eli Cureton-Moment	Veterans Assemble electronics	Zachary Barrett	Providence RI
EM1218381	Camden Davis	Shelby Co College Career Cntr	James Hill	Columbiana AL
EM1217963	Patrick DeValcolout	TN College of Applied Technology	S Brown-Harrison	Hohenwald TN
EM1218596	Garrison Drake	Rockbridge Co HS/Floyd S Kay YTC	Alton T Jarvis	Lexington VA
EM1216762	Austin Foster	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM1218469	Armando Gonzalez	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM1219897	Quentin Guhr	WSU Tech	Joseph Varrientos	Wichita KS
EM1216764	Tyler Halpern	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM1218585	Isaiah Hanvy	TN College of Applied Technology	S Brown-Harrison	Hohenwald TN
EM1220049	Dennis Harris	Nichols Career Center	Travis W Plume	Jefferson City MO
EM1216569	John Harvey	TN College of Applied Technology	S Brown-Harrison	Hohenwald TN
EM1220048	Cody Haymaker	Nichols Career Center	Travis W Plume	Jefferson City MO
EM1219895	Texas Headley	WSU Tech	Joseph Varrientos	Wichita KS
EM1216746	Lever Hemenex	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM1218446	Gabriel Henneberger	Enterprise High School	Joshua L King	Enterprise AL
EM1218657	Caleb Henshaw	Northeast AL Community College	Julie George	Rainsville AL
EM1220044	John Hesser	Nichols Career Center	Travis W Plume	Jefferson City MO
EM1218661	Derek Hinkle	Northeast AL Community College	Julie George	Rainsville AL
EM1218315	Richard Hitz	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM1220053	Willow Hutton	Nichols Career Center	Travis W Plume	Jefferson City MO
EM1218457	Craig Jackson	Veterans Assembled electronics	Michael H Aubee	Providence RI
EM1216570	V Jacques-Louis	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM1217870	Ronald Jenkins	Veterans Assembled electronics	D Abrassart-White	Hartford CT
EM1220043	Quinlan Kippthut	Nichols Career Center	Travis W Plume	Jefferson City MO
EM1219900	Zachary Kirkbride	WSU Tech	Joseph Varrientos	Wichita KS
EM1218379	Michael Lansford	Shelby Co Coll Career Cntr	James Hill	Columbiana AL
EM1218454	Nathaniel LaVoy	Enterprise High School	Joshua L King	Enterprise AL
EM1217871	Roy Lee	Veterans Assembled electronics	D Abrassart-White	Hartford CT
EM1220046	Kesten Marsh	Nichols Career Center	Travis W Plume	Jefferson City MO
EM1217965	C Martinez Carranza	Veterans Assembled electronics	Jimmy W McCracken	Fl Bragg NC
EM1218603	Berrit Mason	Rockbridge Co HS/Floyd S Kay YTC	Alton T Jarvis	Lexington VA
EM1218445	Savannah Mathes	Enterprise High School	Joshua L King	Enterprise AL
EM1216627	Noah McCravy	The Career Academy	Gary A Thomas	Flat Rock NC
EM1218374	Thomas McDonald	Shelby Co Coll Career Cntr	James Hill	Columbiana AL
EM1218289	Timothy McDonald	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM1216724	Joshua McKissack	TN College of Applied Technology	John Laubach	Hohenwald TN
EM1218602	Hunter McMichael	Rockbridge Co HS/Floyd S Kay YTC	Alton T Jarvis	Lexington VA
EM1218599	Jonathan Morales	Rockbridge Co HS/Floyd S Kay YTC	Alton T Jarvis	Lexington VA
EM1218604	Chance Myers	Rockbridge Co HS/Floyd S Kay YTC	Alton T Jarvis	Lexington VA

NEW ETA CERTIFIED TECHNICIANS

The following is a list of professionals who have earned new certifications between February 1 and March 31, 2019 under one or more of ETA International's 80+ certification programs. Names of these highly qualified technicians have earned ETA's formal endorsement and approval.

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
EM1218658	Jordan Neiner	Northeast AL Community College	Julie George	Rainsville AL
EM1218598	Liesel Nelson	Rockbridge Co HS/Floyd S Kay VTC	Alton T Jarvis	Lexington VA
EM1219899	Silas Osburn	WSU Tech	Joseph Varrientos	Wichita KS
EM1218728	Chris Oxenreider	Hennepin Technical College	Damodar A Ramanuj	Brooklyn NY
EM1218656	Brendan Parker	Northeast AL Community College	Julie George	Rainsville AL
EM1218582	Ryan Parrott	Enterprise High School	Joshua L King	Enterprise AL
EM1218455	Andrew Pasquarella	Enterprise High School	Joshua L King	Enterprise AL
EM1218380	Juddson Raia	Shelby Co Coll Career Cntr	James Hill	Columbiana AL
EM1217872	Philip Rees	Veterans Assembled electronics	Jimmy W McCracken Jr	Fayetteville NC
EM1219924	Matthew Reynolds	Bishop St Community College	Joseph Williams	Mobile AL
EM1218440	Brendan Rivera	Enterprise High School	Joshua L King	Enterprise AL
EM1218154	Charles Robinson	Veterans Assembled electronics	D Abrassart-White	Hartford CT
EM1218648	Fernando Rosales	Northeast AL Community College	Julie George	Rainsville AL
EM1219892	Nathan Scheopner	WSU Tech	Joseph Varrientos	Wichita KS
EM1218597	Charles Scherrf	Rockbridge Co HS/Floyd S Kay VTC	Alton T Jarvis	Lexington VA
EM1219898	Daniel Severson	WSU Tech	Joseph Varrientos	Wichita KS
EM1218297	Dwight Sliger	Veterans Assembled electronics	Clyde Dolly	Melbourne FL
EM1218377	Christopher Smith	Shelby Co Coll Career Cntr	James Hill	Columbiana AL
EM1219928	Tracy Smith	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM1219926	William Tew	Bishop St Community College	Joseph Williams	Mobile AL
EM1218314	Kevin Toole	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM1219893	Shane Voyles	WSU Tech	Joseph Varrientos	Wichita KS
EM1219947	Anthony Washington	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL

Electronics Modules - AC (EM2)

EM2218069	Noor Ayyla	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218078	Victor Agurto	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2216629	Edward Allen	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM2218091	Alan Azevedo	Institute of Innovation	Clint Swafford	Gaffney SC
EM2218074	Bryan Balda	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218081	Ian Barragan	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218070	Ananna Bhuiyan	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218068	Upoma Bhuiyan	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218819	Alex Rafael Boscan	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2216626	Paul Bradshaw	Veterans Assembled electronics	Jimmy W McCracken	Fayetteville NC
EM2218364	Joshua Butterworth	Veterans Assembled electronics	Zachary Barrett	Providence RI
EM2218246	Daniel Camacho	Veterans Assembled electronic	Michael S Hagedorn	Orlando FL
EM2219945	Joshua Carey	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM2218076	Billy Chan	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218050	James Close	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM2218432	Kevin Cobb	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM2219882	Eli Cureton-Moment	Veterans Assembled electronics	Michael H Aubee	Providence RI
EM2218821	Marcus Durand-Blochli	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2219826	Julio Echarte-Araujo	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2219823	Matthew Lee Ellis	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2216735	Tamara Faustin	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM2219887	Jabari Ferguson	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2220036	Jamani Ferguson	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2219943	Rose Fils-Aime	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2217964	Shelly Flores	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218062	Erik Fonseca Banegas	Queens Vo Tech HS	Trisha Ramdeo	Queens Vo Tech HS
EM2220151	Ilimer Garcidaleon	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2220033	Marvin Gisset	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2219820	Kevin Gonzalez	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2219822	J Dominique Guignard	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2220130	Trevor Hemenez	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM2218064	Natalia Higuera	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218823	Richard Hitz	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM2220063	Craig Jackson	Veterans Assembled electronics	Michael H Aubee	Providence RI
EM2219824	Luis Mario Jara	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2218155	Ronald Jenkins	Veterans Assembled electronics	D Abrassart-White	Hartford CT
EM2218071	Edwin Jimbo	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218061	Shivem Kumar	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2219942	Roy Lee	Veterans Assembled electronics	Zachary Barrett	Hartford CT
EM2216736	William Lemly	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM2220034	Jack Manny Leser	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2218820	Daniel Lopez	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2218080	Israa Maarouf	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218434	C Martinez Carranza	Veterans Assembled electronics	Jimmy W McCracken	Ft Bragg NC
EM2218818	Timothy McDonald	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM2219881	Sebastian Merino	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2219886	Jonathan Metellus	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2218366	Chester Montague	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM2218088	Peter Nettles	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM2219825	Carmi Osias	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2218075	Brandon Palencia	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218065	Alex Pasato	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218077	Ranelisy Pena	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218067	Ingrid Perez Avila	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2219818	Sunnie Le Pham	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2218063	Junaly Quezada	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218082	Tanha Rani	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218089	Philip Rees	Veterans Assembled electronics	Jimmy W McCracken	Ft Bragg NC
EM2218073	Muaz Rehman	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218083	Aldo Reyes	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218079	Vianey Rivera	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
EM2218574	Dwight Sliger	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM22180606	Gael Tellez	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2219817	Zarah Thompson	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2219821	Kevin Toole	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM2218072	Ezekiel Vargas	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218066	Ronald Vanzaca	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY
EM2218085	Michael Yanza	Queens Vo Tech HS	Trisha Ramdeo	Long Island NY

Electronics Modules - Analog (EM3)

EM3218351	Paul Bradshaw	Veterans Assembled electronics	Jimmy W McCracken	Ft Bragg NC
EM3219977	Scott Bronner	ECPI University	John Bowerman	Charlotte NC
EM3216628	John Carter	Veterans Assembled electronics	Zachary Barrett	Providence RI
EM3219972	Shon Clemens	ECPI University	John Bowerman	Charlotte NC
EM3219971	Erick Corado	ECPI University	John Bowerman	Charlotte NC
EM3219976	Kyle Cremeens	ECPI University	John Bowerman	Charlotte NC
EM3216725	Jeremy Jweinat	Veterans Assembled electronics	D Abrassart-White	Hartford CT
EM3218577	William Lemly	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM3220180	C Martinez Carranza	Veterans Assembled electronics	Jimmy W McCracken	Ft Bragg NC
EM3220024	Chester Montague	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM3220064	Peter Nettles	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM3218360	Philip Rees	Veterans Assembled electronics	Jimmy W McCracken	Ft Bragg NC
EM3219973	Renee Rossignol	ECPI University	John Bowerman	Charlotte NC
EM3220023	Dwight Sliger	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM3219974	Connell Sneed	ECPI University	John Bowerman	Charlotte NC

Electronics Modules - Digital (EM4)

EM4220018	Christopher Andino	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM4218718	Paul Bradshaw	Veterans Assembled electronics	Jimmy W McCracken	Ft Bragg NC
EM4220016	Joel Cartagena	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM4218576	John Carter	Veterans Assembled electronics	Michael H Aubee	Providence RI
EM4219968	Pedro Delafe	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM4220155	Thales Espanhol	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM4220154	Giovanny Hernandez	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM4216625	Deborah Jarvis	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM4220157	Ronald Jenkins	Veterans Assembled electronics	Michael H Aubee	Providence RI
EM4218363	Jeremy Jweinat	Veterans Assembled electronics	D Abrassart-White	Hartford CT
EM4220014	William Lemly	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM4220019	Maylord Lopez	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM4220017	Christopher Marquez	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM4219969	Brian Montesino	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM4218578	Philip Rees	Veterans Assembled electronics	Jimmy W McCracken	Ft Bragg NC
EM4218361	Jessiah Stout	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM4220012	Andres Torres	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM4216847	Jose Venegas	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL

Electronics Modules - Comprehensive (EM5)

EM5220067	Paul Bradshaw	Veterans Assembled electronics	Jimmy W McCracken	Ft Bragg NC
EM5219934	John Carter	Veterans Assembled electronics	Michael H Aubee	Providence RI
EM5218150	Marcus Hopkins	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM5218051	Deborah Jarvis	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM5216845	Sasha Johnson	Bishop St Community College	Joseph Williams	Mobile AL
EM5218540	Jeremy Jweinat	Veterans Assembled electronics	D Abrassart-White	Hartford CT
EM5220158	William Lemly	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM5220021	Philip Rees	Veterans Assembled electronics	Jimmy W McCracken	Ft Bragg NC
EM5219889	Jessiah Stout	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM5219828	Jose Venegas	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL

Fiber Optics Designer (FOD)

FOD218755	Amanda McCarthy	Advanced Solutions Technical Inst	Jason Monseguie	Trinida WI
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Fiber Optics Installer (FOI)

FOI218241	Sergio Acevedo	ETA International	Joe D Smith	El Paso TX
FOI220132	Joseph Adderley	Light Brigade	Jeffrey A Noble	Orlando FL
FOI217908	Christianah Adesida	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait
FOI216599	Joshua Aguilar		Sean M Sheedy	Elko NV
FOI216600	Tyler Ahrens	Light Brigade	Sean M Sheedy	Elko NV
FOI219907	Stephen Alderete	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI216866	Michael Alexander	FiberOptic.com	Chris I LaBonge	Dallas TX
FOI217991	Colby Ali	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait
FOI216726	Jamie Alie-Hamilton	The Splicer Lease School	Marcus T Williams	Houston TX
FOI200286	Jay Alston	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI219866	Sean Anderson	Courage University, G6 I Corps	Jason L Brumet	Ft Lewis WA
FOI216588	Brian Arcidiacono	Light Brigade	Mark P Kazes	Middletown DE
FOI217909	Gary Arens	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait
FOI218795	Hunter Arndt	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI218474	Samantha Asuncion	Guam Community College	Terry F Kuper	Mangilao GU
FOI217910	Anoh Attienbonon	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait
FOI216589	Bryan Austin	Light Brigade	Mark P Kazes	Middletown DE
FOI217902	Ryan Baguley	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait
FOI220131	Peter Balassy	Light Brigade	Jeffrey A Noble	Orlando FL
FOI218756	Kern Baptiste	Advanced Solutions Technical Inst	Jason Monseguie	Trinida WI
FOI220119	sorel Barajas	Light Brigade	Sean M Sheedy	Elko NV
FOI218133	Christopher Barnard	Light Brigade	John C Dron	San Diego CA
FOI216836	Leonard Barrientes	Signal University	Chad A Kelly	Ft Hood TX
FOI216631	Antonio Barron	CECOM - DVSU	Rt Riley KS	
FOI217900	Benjamin Barrows	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
FOI216601	Derek Beck	Light Brigade	Sean M Sheedy	Elko NV	FOI216630	David Downs	CECOM - DVSU	Brandon T Peterson	FT Riley KS
FOI218301	Austin Bejosano	OEMTD	Brandon K Parnell	FT Gordon GA	FOI218127	Sean Dunham	Light Brigade	John C Dron	San Diego CA
FOI219868	Daniel Bell	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA	FOI3218392	Emily Dwyer	Light Brigade	Mark P Kazes	Atlanta GA
FOI216840	Julian Benavides	Signal University	Chad A Kelly	FT Hood TX	FOI218159	Joshua Eckenrodt	OEMTD	Brandon K Parnell	FT Gordon GA
FOI218628	Jose Benique Morales	Universidad Metropolitana	Jonathan S Friedman	San Juan PR	FOI217933	Chivory Edwards	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait
FOI216745	Patrick Bennett	364TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOI217984	Elan Elisio	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI216888	Glenn Bentley	Apex Optics	Greyson O Knapp	Bluff City TN	FOI216844	Dominick Ellison	Signal University	Chad A Kelly	FT Hood TX
FOI217893	Vernon Bernard	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218796	James Fearney	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI219911	George Bernardo	Light Brigade	Cameron L Karch	Kent WA	FOI216591	Kyle Fedorkowicz	Light Brigade	Mark P Kazes	Middletown DE
FOI216824	Brendan Berry	Signal University	Jeffrey M Jones	FT Hood TX	FOI218404	Donald Fisher	Light Brigade	Phil J Shoemaker	Dallas TX
FOI218210	Dennis Bishop	OEMTD	Kenneth G Evans	FT Gordon GA	FOI217901	Zanilla Flores	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait
FOI217996	Markendrick Black	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait	FOI218405	Skyler Ford	Light Brigade	Phil J Shoemaker	Dallas TX
FOI220109	Matthew Blackman	Light Brigade	Sean M Sheedy	Kershaw SC	FOI218182	James Francka	Light Brigade	Mark P Kazes	Columbus OH
FOI217912	Patrick Blackmon	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI217934	Austin Frazier	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait
FOI216771	Anthony Blexrude	Light Brigade	Mark P Kazes	Huntsville AL	FOI218776	Kelvan Fulcher	Light Brigade	Sean M Sheedy	Anchorage AK
FOI218782	Emma Boff	Light Brigade	Phil J Shoemaker	Colorado Springs CO	FOI220136	Danica Galusova	Light Brigade	Gregory N Lambrecht	Vancouver BC
FOI218493	Michael Bolton	The Splicer Lease School	Marcus T Williams	Houston TX	FOI219914	Roberto Galvan	Light Brigade	Cameron L Karch	Kent WA
FOI220104	Peter Bos	Light Brigade	Balazs Kinszler	Eemshaven L	FOI218787	Brent Gamble	Light Brigade	Phil J Shoemaker	Colorado Springs CO
FOI18168	Adam Boshard	Light Brigade	John C Dron	Salt Lake City UT	FOI218797	Desiree Garcia	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI217988	Johnny Box	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI218183	Robert Garland	Light Brigade	Mark P Kazes	Columbus OH
FOI218219	William Boyd	OEMTD	Kenneth G Evans	FT Gordon GA	FOI218184	Brian Georg	Light Brigade	Mark P Kazes	Columbus OH
FOI218390	Aaron Bradley	Light Brigade	Mark P Kazes	Atlanta GA	FOI218788	Curtiss Gimlin	Light Brigade	Phil J Shoemaker	Colorado Springs CO
FOI216590	Kenny Branner	Light Brigade	Mark P Kazes	Middletown DE	FOI219909	Tristan Goering	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI220118	Scott Breschini	Light Brigade	Sean M Sheedy	Elko NV	FOI218126	Zackary Goncalves	Light Brigade	John C Dron	San Diego CA
FOI217983	Lassen Brizuela	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI216606	Alejandro Gonzalez	Light Brigade	Sean M Sheedy	Elko NV
FOI218131	Shaun Brooks	Light Brigade	John C Dron	San Diego CA	FOI217985	U Gonzalez Perez	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI217896	Devonte Brown	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait	FOI218484	Jesse Gordon	Apex Optics	Greyson O Knapp	Monroe NC
FOI217915	Jerrell Brown	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218393	William Gorman	Light Brigade	Mark P Kazes	Atlanta GA
FOI217981	Riley Brown	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI219915	Omar Gorospe	Light Brigade	Cameron L Karch	Kent WA
FOI218130	Chris Brueggeman	Light Brigade	John C Dron	San Diego CA	FOI216830	Calvin Graham	Signal University	Jeffrey M Jones	FT Hood TX
FOI218129	James Bruegger	Light Brigade	John C Dron	San Diego CA	FOI216834	Derrick Gray	Signal University	Chad A Kelly	FT Hood TX
FOI218401	Lucas Bruster	Light Brigade	Phil J Shoemaker	Dallas TX	FOI217979	Shane Gray	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI216710	Kanhai Bryan	Apex Optics	Greyson O Knapp	Orlando FL	FOI219916	Bernard Green	Light Brigade	Cameron L Karch	Kent WA
FOI218783	Anthio Buccieri	Light Brigade	Phil J Shoemaker	Colorado Springs CO	FOI218169	Chad Greer	Light Brigade	John C Dron	Salt Lake City UT
FOI218475	Brendan Budano	Guam Community College	Terry F Kuper	Mangilao GU	FOI217892	D'Angelo Griffin	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait
FOI219864	Zachary Bueford	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA	FOI220117	Lee Griswold	Light Brigade	Sean M Sheedy	Elko NV
FOI219870	Moses Burgos	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA	FOI216713	Kenneth Gritt	Apex Optics	Greyson O Knapp	Orlando FL
FOI216889	James Burrell	Apex Optics	Greyson O Knapp	Bluff City TN	FOI218501	Alejandro Guizar	APT College	Aradeshir Daneshmand	Santa Rosa CA
FOI216827	Hentavious Burse	Signal University	Jeffrey M Jones	FT Hood TX	FOI216772	Arthur Gutierrez	Light Brigade	Mark P Kazes	Huntsville AL
FOI216831	Austin Bustos	Signal University	Chad A Kelly	FT Hood TX	FOI218481	Michael Hall	Apex Optics	Greyson O Knapp	Monroe NC
FOI217919	Dameon Cain	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218185	Steven Halterman	Light Brigade	Mark P Kazes	Columbus OH
FOI219912	Brian Campbell	Light Brigade	Cameron L Karch	Kent WA	FOI216695	Rachel Hammond	OEMTD	Kenneth G Evans	FT Gordon GA
FOI216743	James Canterbury	364TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOI219861	Michael Hardman	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA
FOI216770	James Carbalaj	Light Brigade	Phil J Shoemaker	Selma TX	FOI216773	Drevin Harris	Light Brigade	Mark P Kazes	Huntsville AL
FOI218053	Clifford Caron	Iron Horse Signal University	John P Enos	FT Carson CO	FOI217989	Deamus Harron	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI217922	Tanner Carr	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI217914	Danny Hart	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait
FOI216727	Kelton Carroll	The Splicer Lease School	Marcus T Williams	Houston TX	FOI218161	Jacob Hemenway	OEMTD	Brandon K Parnell	FT Gordon GA
FOI217925	Christopher Carty	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218482	David Henderson	Apex Optics	Greyson O Knapp	Monroe NC
FOI218509	Ricardo Castro	APT College	Aradeshir Daneshmand	Santa Rosa CA	FOI216774	Jason Henderson	Light Brigade	Mark P Kazes	Huntsville AL
FOI218774	Joel Cavanaugh	Light Brigade	Sean M Sheedy	Anchorage AK	FOI220127	William Hendricks	Light Brigade	Jeffrey A Noble	Orlando FL
FOI218180	Dalton Cavins	Light Brigade	Mark P Kazes	Columbus OH	FOI220116	Richard Henman	Light Brigade	Sean M Sheedy	Elko NV
FOI217975	Donovan Chea	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait	FOI216868	Melvin Henry	FiberOptic.com	Chris I LaBonge	Dallas TX
FOI219867	Jacob Chelfe	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA	FOI218239	Alonso Hernandez	ETA International	Joe D Smith	El Paso TX
FOI216711	Samuel Christopher	Apex Optics	Greyson O Knapp	Orlando FL	FOI218238	Reyes Hernandez	ETA International	Joe D Smith	El Paso TX
FOI216699	Alan Clark	OEMTD	Kenneth G Evans	FT Gordon GA	FOI216632	Daniel Herrera	CECOM - DVSU	Brandon T Peterson	FT Riley KS
FOI216895	Jerry Clark	Apex Optics	Greyson O Knapp	Bluff City TN	FOI218162	Amy Herron	OEMTD	Brandon K Parnell	FT Gordon GA
FOI218784	Michael Clark	Light Brigade	Phil J Shoemaker	Colorado Springs CO	FOI220115	Brandon Hiler	Light Brigade	Sean M Sheedy	Elko NV
FOI216890	Steven Clarke	Apex Optics	Greyson O Knapp	Bluff City TN	FOI216739	Jeremy Holman	364TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI216602	William Collins	Light Brigade	Sean M Sheedy	Elko NV	FOI216607	Anthony Howard	Light Brigade	Sean M Sheedy	Elko NV
FOI217928	Brett Comardelle	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218495	Gerald Howk	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI218785	Shannon Connelly	Light Brigade	Phil J Shoemaker	Colorado Springs CO	FOI216769	Caylen Howland	Light Brigade	Phil J Shoemaker	Selma TX
FOI216835	J Constantine-Ortiz	Signal University	Chad A Kelly	FT Hood TX	FOI220126	Shelly Huffman	Light Brigade	Jeffrey A Noble	Orlando FL
FOI219913	Dale Cook	Light Brigade	Cameron L Karch	Kent WA	FOI217916	Kenneth Hughes	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait
FOI216603	Anthony Cooney	Light Brigade	Sean M Sheedy	Elko NV	FOI218125	Norman Illescas	Light Brigade	John C Dron	San Diego CA
FOI218626	Ivan Cruz	Universidad Metropolitana	Jonathan S Friedman	San Juan PR	FOI220134	Kara Imhof	Light Brigade	Gregory N Lambrecht	Vancouver BC
FOI216698	Aldrich Cubangbang	OEMTD	Kenneth G Evans	FT Gordon GA	FOI218778	Walter Ingalls	Light Brigade	Sean M Sheedy	Anchorage AK
FOI218242	Phillip Cummings	The Splicer Lease School	Marcus T Williams	Houston TX	FOI218217	Joshua Insull	OEMTD	Kenneth G Evans	FT Gordon GA
FOI218402	Curtis Cunningham	Light Brigade	Phil J Shoemaker	Dallas TX	FOI217936	Willie Jackson	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait
FOI217997	Markeisha Daniels	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait	FOI218496	Jerrid Jacobs	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI217990	Andy Davis	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI218497	Thomas Jara	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI220108	Brian Davis	Light Brigade	Sean M Sheedy	Kershaw SC	FOI220125	Joshua Jeffries	Light Brigade	Jeffrey A Noble	Orlando FL
FOI220129	Christine Davis	Light Brigade	Jeffrey A Noble	Orlando FL	FOI217907	Craig Jenkins	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait
FOI216604	Jeff Davis	Light Brigade	Sean M Sheedy	Elko NV	FOI218503	Robon Jennings	APT College	Aradeshir Daneshmand	Santa Rosa CA
FOI218786	Kevin Davis	Light Brigade	Phil J Shoemaker	Colorado Springs CO	FOI218170	Benjamin Jensen	Light Brigade	John C Dron	Salt Lake City UT
FOI217931	Kristopher Davis	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218058	Jakya Johnson	Iron Horse Signal University	John P Enos	FT Carson CO
FOI219911	Zachary DeCicco	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait	FOI217917	John Johnson	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait
FOI218181	Michael DeCroix	Light Brigade	Mark P Kazes	Columbus OH	FOI218491	Ramoris Johnson	The Splicer Lease School	Marcus T Williams	Houston TX
FOI218403	Ryan Defoe	Light Brigade	Phil J Shoemaker	Dallas TX	FOI216891	Scott Johnson	Apex Optics	Greyson O Knapp	Bluff City TN
FOI218494	Theresa Delane	The Splicer Lease School	Marcus T Williams	Houston TX	FOI218789	Zachary Johnson	Light Brigade	Phil J Shoemaker	Colorado Springs CO
FOI218245	Joshua DeWald	OEMTD	Brandon K Parnell	FT Gordon GA	FOI216688	Matthew Jones	OEMTD	Kenneth G Evans	FT Gordon GA
FOI220137	Taranjeet Dhugga	Light Brigade	Gregory N Lambrecht	Vancouver BC	FOI220124	Kervans Joseph	Light Brigade	Jeffrey A Noble	Orlando FL
FOI216605	Dominic Diaz	Light Brigade	Sean M Sheedy	Elko NV	FOI218186	Cody Judy	Light Brigade	Mark P Kazes	Columbus OH
FOI217913	Omar Diaz-Colon	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait	FOI217904	Kenneth Juhan	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI218160	Carson Dockery	OEMTD	Brandon K Parnell	FT Gordon GA	FOI216595	Tomas Karez	Light Brigade	Sean M Sheedy	St Louis MO
FOI216712	Cory Douglas	Apex Optics	Greyson O Knapp	Orlando FL	FOI218123	Quentin Kindschy	Light Brigade	John C Dron	San Diego CA
FOI217972	Kathryn Dowley	335th SIG CMD	Manuel A Flores	Camp Arifjan, Kuwait	FOI218485	Daniel King	Apex Optics	Greyson O Knapp	Monroe NC

NEW ETA CERTIFIED TECHNICIANS

The following is a list of professionals who have earned new certifications between February 1 and March 31, 2019 under one or more of ETA International's 80+ certification programs. Names of these highly qualified technicians have earned ETA's formal endorsement and approval.

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
FOI218480	Jason King	Apex Optics	Greyson O Knapp	Monroe NC	FOI218158	Anna Purkhiser	OEMTD	Brandon Parnell	FT Gordon GA
FOI218171	Robert King	Light Brigade	John C Dron	Salt Lake City UT	FOI2182234	Javier Ramirez	ETA International	Joe D Smith	El Paso TX
FOI219871	Jared Kirsch	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA	FOI217994	Brett Ramos	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI217974	Bradford Kohler	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI217978	Jesus Ramos	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI218059	Daniil Krasnopolskiy	Iron Horse Signal University	John P Enos	FT Carson CO	FOI218627	W Ramos Menendez	Universidad Metropolitana	Jonathan S Friedman	San Juan PR
FOI218187	Jacob Kuberski	Light Brigade	Mark P Kazes	Columbus OH	FOI216730	Jesse Rawls	The Splicer Lease School	Marcus T Williams	Houston TX
FOI218279	Ngersiou Kulas	OEMTD	Brandon K Parnell	FT Gordon GA	FOI216842	Trenton Rayson	Signal University	Chad A Kelly	FT Hood TX
FOI217918	Chanel Kung	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait	FOI218258	Janampalli Reddy	FiberOptic.com	David J Cameron	Las Vegas NV
FOI218165	Tayza Kyaw	OEMTD	Kenneth G Evans	FT Gordon GA	FOI219863	Eric Rees	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA
FOI218237	Jorge Laboy	ETA International	Joe D Smith	El Paso TX	FOI218233	Paul Reyes	ETA International	Joe D Smith	El Paso TX
FOI217920	Kristofer Lee	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait	FOI217987	Justin Rigney	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI216608	Ian Lehman	Light Brigade	Sean M Sheedy	Elko NV	FOI218759	Lance Roberts	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOI216609	Rebekah Lehman	Light Brigade	Sean M Sheedy	Elko NV	FOI217982	Mark Robertson	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI218122	Amarin Lim	Light Brigade	John C Dron	San Diego CA	FOI219910	Wayne Robertson	Light Brigade	Phil J Shoemaker	Colorado Springs CO
FOI218617	Jose Limery Donos	Universidad Metropolitana	Jonathan S Friedman	San Juan PR	FOI216828	Benjamin Robinson	Signal University	Jeffrey M Jones	FT Hood TX
FOI216729	Gary Lofton	The Splicer Lease School	Marcus T Williams	Houston TX	FOI218244	Ed Rodriguez-Roman	OEMTD	Brandon K Parnell	FT Gordon GA
FOI217903	Brenda Lopez	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI219899	Juan Roman	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI217945	Christopher Lopez	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218397	Tristan Rue	Light Brigade	Mark P Kazes	Atlanta GA
FOI218394	Oneil Lopez Rosado	Light Brigade	Mark P Kazes	Atlanta GA	FOI218407	Daniel Ruiz	Light Brigade	Phil J Shoemaker	Dallas TX
FOI216839	Jacquille Lot	Signal University	Chad A Kelly	FT Hood TX	FOI217898	Tayvin Salas	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI220114	Matthew Loup	Light Brigade	Sean M Sheedy	Elko NV	FOI216611	Cason Salter	Light Brigade	Sean M Sheedy	Elko NV
FOI218172	Michael Lyman	Light Brigade	John C Dron	Salt Lake City UT	FOI216612	Alexis Sandoval	Light Brigade	Sean M Sheedy	Elko NV
FOI218121	Chris Macadangdang	Light Brigade	John C Dron	San Diego CA	FOI216613	Diego Sandoval	Light Brigade	Sean M Sheedy	Elko NV
FOI219872	Rquan Mack	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA	FOI218188	Michael Sansom	Light Brigade	Mark P Kazes	Columbus OH
FOI216714	Steve Mack	Apex Optics	Greyson O Knapp	Orlando FL	FOI217966	Sammy Santiago-Ruiz	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait
FOI218164	Nicole Mahon	OEMTD	Kenneth G Evans	FT Gordon GA	FOI218616	Marcos Santini Diaz	Universidad Metropolitana	Jonathan S Friedman	San Juan PR
FOI218120	Casey Malloy	Light Brigade	John C Dron	San Diego CA	FOI217895	Deevon Scarbrough	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI218499	Joseph Marks	APT College	Ardeshir Daneshmand	Santa Rosa CA	FOI219953	David Schaeffling	Light Brigade	Cameron L Karch	Kent WA
FOI217955	Randall Martin	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218211	Thomas Schermerhorn	OEMTD	Kenneth G Evans	FT Gordon GA
FOI218236	Andres Martinez	ETA International	Joe D Smith	El Paso TX	FOI217926	Donovan Schofield	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait
FOI216865	Brian Martinez	FiberOptic.com	Chris I LaBonge	Dallas TX	FOI216843	Russell Schulz	Signal University	Chad A Kelly	FT Hood TX
FOI218406	Miguel Martinez	Light Brigade	Phil J Shoemaker	Dallas TX	FOI218247	Michael Schwartz	OEMTD	Brandon K Parnell	FT Gordon GA
FOI218055	Sylvia Martinez	Iron Horse Signal University	John P Enos	FT Carson CO	FOI218174	Kyle Sellers	Light Brigade	John C Dron	Salt Lake City UT
FOI216742	Joseph Matthews	364TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOI218232	Eric Serrano	ETA International	Joe D Smith	El Paso TX
FOI218119	Jason Mauro	Light Brigade	John C Dron	San Diego CA	FOI218757	Aadesh Seyagat	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOI217921	Skyler Maurs	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait	FOI218282	Jacob Sharp	OEMTD	Brandon K Parnell	FT Gordon GA
FOI216829	Henry McDonald	Fort Hood Signal University	Jeffrey M Jones	FT Hood TX	FOI216614	Matthew Shine	Light Brigade	Sean M Sheedy	Elko NV
FOI219865	David McNeal	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA	FOI218792	Alyssa Shomion	Light Brigade	Phil J Shoemaker	Colorado Springs CO
FOI217957	Beverly McPeters	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI220112	Rod Sidwell	Light Brigade	Sean M Sheedy	Elko NV
FOI216715	John Meade	Apex Optics	Greyson O Knapp	Orlando FL	FOI216767	Leandra Silvas	Light Brigade	Phil J Shoemaker	Selma TX
FOI217958	Tamika Mebane	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI216728	Jordan Simon	The Splicer Lease School	Marcus T Williams	Houston TX
FOI216731	Jesus Medina	The Splicer Lease School	Marcus T Williams	Houston TX	FOI216893	Jeffery Sluss	Apex Optics	Greyson O Knapp	Bluff City TN
FOI218173	Spencer Meeks	Light Brigade	John C Dron	Salt Lake City UT	FOI217992	James Smith	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI219869	Keysh Mejias Martinez	Courage University, G6 I Corps	Jason L Brumet	FT Lewis WA	FOI217894	Willard Smith	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI217959	Marc Mendez	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218116	Jessie Sneed	Light Brigade	John C Dron	San Diego CA
FOI216768	Jose Mendoza	Light Brigade	Phil J Shoemaker	Selma TX	FOI216883	Dylan Sock	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI217905	Jamie Merchant	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI218408	Brandon Soto	Light Brigade	Phil J Shoemaker	Dallas TX
FOI216596	Brian Meyers	Light Brigade	Sean M Sheedy	St Louis MO	FOI219917	Jesse Steele	Light Brigade	Cameron L Karch	Kent WA
FOI217980	Jason Mierly	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI218507	John Steiner	APT College	Ardeshir Daneshmand	Santa Rosa CA
FOI216592	Randall Miller	Light Brigade	Mark P Kazes	Middletown DE	FOI217927	Adam Stern	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait
FOI216740	Robert Miller	364TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOI218793	Ashton Strobridge	Light Brigade	Phil J Shoemaker	Colorado Springs CO
FOI217960	Abdul Moeen	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI220106	Milos Terzic	Light Brigade	Balazs Kinszler	Eemshaven NL
FOI218229	Wycliffe Mogueche	OEMTD	Kenneth G Evans	FT Gordon GA	FOI218115	David Thiessen	Light Brigade	John C Dron	San Diego CA
FOI216826	Ally Monsivais	Fort Hood Signal University	Jeffrey M Jones	FT Hood TX	FOI216597	Seth Thomas	Guam	Sean M Sheedy	St Louis MO
FOI217923	Ryan Moreland	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait	FOI218478	Anthony Thompson	Guam Community College	Terry F Kuper	Mangilao GU
FOI218498	Bobby Moreno	364 TRS/TTKMS Sheppard AFB	Steven G Baker	Sheppard AFB TX	FOI216615	Dillon Thompson	Light Brigade	Sean M Sheedy	Elko NV
FOI217961	Krystopher Morrison	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI216766	Ronnie Thompson	Light Brigade	Phil J Shoemaker	Selma TX
FOI218790	Mehrgan Mostowi	Light Brigade	Phil J Shoemaker	Colorado Springs CO	FOI218398	Thomas Thompson	Light Brigade	Mark P Kazes	Atlanta GA
FOI218511	Shawn Murphy	APT College	Ardeshir Daneshmand	Santa Rosa CA	FOI218175	David Thorne	Light Brigade	John C Dron	Salt Lake City UT
FOI216869	Jagadeesh MV	Light Brigade	Saaju Joseph	Cochin India	FOI218166	Kevin Thornhill	Light Brigade	John C Dron	Salt Lake City UT
FOI218794	David Nadeau	364 TRS/TTKMS Sheppard AFB	Steven G Baker	Sheppard AFB TX	FOI218399	Bud Tipton	Light Brigade	Mark P Kazes	Atlanta GA
FOI216610	Burgandy Nelson	Light Brigade	Sean M Sheedy	Elko NV	FOI216701	Jose Toribio	OEMTD	Kenneth G Evans	FT Gordon GA
FOI220113	Clifford Nichols	Light Brigade	Sean M Sheedy	Elko NV	FOI218103	Daniel Tovar Ortiz	Wharton Co Junior College	JB Groves III	Richard TX
FOI217993	Kendall Nobles	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI218779	Jantz Tracy	Light Brigade	Sean M Sheedy	Anchorage AK
FOI216870	Tim Norman	FiberOptic.com	Chris I LaBonge	Dallas TX	FOI218176	Kevin Trappett	Light Brigade	John C Dron	Salt Lake City UT
FOI218220	Joel North	OEMTD	Kenneth G Evans	FT Gordon GA	FOI216616	James Trujillo	Light Brigade	Sean M Sheedy	Elko NV
FOI217977	Bryan Ochoa	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI218409	Gunnar Trulsrud	Light Brigade	Phil J Shoemaker	Dallas TX
FOI218476	Francis Olivares	Guam Community College	Terry F Kuper	Mangilao GU	FOI216765	Dennis Tull	Light Brigade	Phil J Shoemaker	Selma TX
FOI216737	Tyler O'Shea	364TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOI217929	John Valles	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait
FOI220133	Ryan Ouellet	Light Brigade	Gregory N Lambrecht	Vancouver BC	FOI220105	Bjorn Van Den Akker	Light Brigade	Balazs Kinszler	Eemshaven NL
FOI218477	Juan Angelo Pabunan	Guam Community College	Terry F Kuper	Mangilao GU	FOI216894	Cody Vance	Apex Optics	Greyson O Knapp	Bluff City TN
FOI220122	Dario Pardo Salgado	Light Brigade	Jeffrey A Noble	Orlando FL	FOI217973	Maricruz Veciana	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait
FOI220107	Cameron Pearce	Light Brigade	Balazs Kinszler	Eemshaven NL	FOI220111	Jorge Vega	Light Brigade	Sean M Sheedy	Elko NV
FOI216833	Chad Pearlstein	FT Hood Signal University	Chad A Kelly	FT Hood TX	FOI218410	Les Velasquez	Light Brigade	Phil J Shoemaker	Dallas TX
FOI217924	Nile Perez	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait	FOI218228	Marco Velazquez	ETA International	Joe D Smith	El Paso TX
FOI218235	Robert Perez	ETA International	Joe D Smith	El Paso TX	FOI220121	David Vickers	Light Brigade	Jeffrey A Noble	Orlando FL
FOI218492	Don Perry	The Splicer Lease School	Marcus T Williams	Houston TX	FOI218479	Orin Victor	Apex Optics	Greyson O Knapp	Orlando FL
FOI216892	David Persinger	Apex Optics	Greyson O Knapp	Bluff City TN	FOI216598	Nathanael Vinson	Light Brigade	Sean M Sheedy	St Louis MO
FOI218791	Miriam Piper	Light Brigade	Phil J Shoemaker	Colorado Springs CO	FOI218227	Michael Viramontes	ETA International	Joe D Smith	El Paso TX
FOI216838	Kanon Pittman	Signal University	Chad A Kelly	FT Hood TX	FOI220135	Mark Von Hagen	Light Brigade	Gregory N Lambrecht	Vancouver BC
FOI218230	Emry Ponder	OEMTD	Brandon K Parnell	FT Gordon GA	FOI217930	Laci Wahnhoff	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait
FOI216593	Stephen Porter	Light Brigade	Mark P Kazes	Middletown DE	FOI218177	John Wakefield	Light Brigade	John C Dron	Salt Lake City UT
FOI217906	Terica Powell	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI218411	Justin Wallace	Light Brigade	Phil J Shoemaker	Dallas TX
FOI218163	Joseph Price	OEMTD	Kenneth G Evans	FT Gordon GA	FOI216716	Ryan Wallace	Apex Optics	Greyson O Knapp	Orlando FL
FOI217995	Jefferson Prince	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI218057	Philip Wallis	Iron Horse Signal University	John P Enos	FT Carson CO
FOI220123	Ryan Puckett	Light Brigade	Jeffrey A Noble	Orlando FL	FOI218400	Roderick Ware	Light Brigade	Mark P Kazes	Atlanta GA

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
FOI216617	Kevin Warren	Light Brigade	Sean M Sheedy	Elko NV	FOI218502	Alejandro Guizar	APT College	Ardeshir Daneshmand	Santa Rosa CA
FOI218281	Demetrius Washington	OEMTD	Brandon K Parnell	Ft Gordon GA	FOI217962	Rachel Hammond	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI219862	Johnny Watts	Courage University, G6 I Corps	Jason L Brumet	Ft Lewis WA	FOI218265	Amy Herron	OEMTD	Brandon K Parnell	Ft Gordon GA
FOI218178	Rodger Weitzel	Light Brigade	John C Dron	Salt Lake City UT	FOI218356	Joshua Insull	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI216717	Jeffrey Welch	Apex Optics	Greyson O Knapp	Orlando FL	FOI218504	Robon Jennings	APT College	Ardeshir Daneshmand	Santa Rosa CA
FOI217986	Derrick White	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI216900	Matthew Jones	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI216618	Braxton Williams	Light Brigade	Sean M Sheedy	Elko NV	FOI218468	Ngersiou Kulas	OEMTD	Brandon K Parnell	Ft Gordon GA
FOI218056	DeAndre Williams	Iron Horse Signal University	John P Enos	Ft Carson CO	FOI218352	Tayza Kyaw	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI216832	Delana Williams	Signal University	Chad A Kelly	Ft Hood TX	FOI218355	Nicole Mahon	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI217968	Eric Williams	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218500	Joseph Marks	APT College	Ardeshir Daneshmand	Santa Rosa CA
FOI216841	JaQuan Williams	Signal University	Chad A Kelly	Ft Hood TX	FOI218359	Wycliffe Mogueche	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI218483	Primus Williams	Apex Optics	Greyson O Knapp	Monroe NC	FOI218512	Shawn Murphy	APT College	Ardeshir Daneshmand	Santa Rosa CA
FOI216837	Ramon Williams	Signal University	Chad A Kelly	Ft Hood TX	FOI218358	Joel North	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI217969	Daniel Williamson	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218262	Emry Ponder	OEMTD	Brandon K Parnell	Ft Gordon GA
FOI216867	Thomas Williford	FiberOptic.com	Chris I LaBonge	Dallas TX	FOI218357	Joseph Price	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI218179	Thomas Wishman	Light Brigade	John C Dron	Salt Lake City UT	FOI218269	Anna Purkhiser	OEMTD	Brandon K Parnell	Ft Gordon GA
FOI217970	Connor Wong	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218266	Ed Rodriguez-Roman	OEMTD	Brandon K Parnell	Ft Gordon GA
FOI218167	Michael Wood	Light Brigade	John C Dron	Salt Lake City UT	FOI216586	Patrick Ryan	Infotec	Charles E Casbeer Jr	Virginia Beach VA
FOI217932	Leon Woodstock	Arcent Signal University	Jess W Alexander	Camp Arifjan Kuwait	FOI218353	Thomas Schermerhorn	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI217971	Kadeem Worley	Arcent Signal University	Jess W Alexander	Camp Arifjan, Kuwait	FOI220271	Michael Schwartz	OEMTD	Brandon K Parnell	Ft Gordon GA
FOI218298	Eric Yorgason	Light Brigade	John C Dron	Salt Lake City UT	FOI218508	John Steiner	APT College	Ardeshir Daneshmand	Santa Rosa CA
FOI217976	Emily Young	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI216904	Jason Thomas	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI217897	Michael Young	335th SIG CMD	Manuel A Flores	Camp Arifjan Kuwait	FOI216901	Jose Toribio	OEMTD	Kenneth G Evans	Ft Gordon GA
FOI219918	Timothy Yount	Light Brigade	Cameron L Karch	Kent WA	FOI216587	Lorie Vela	Infotec	Charles A Casbeer	Virginia Beach VA
FOI218114	Joseph Zimmerman	Light Brigade	John C Dron	San Diego CA	FOI216414	James Young	OEMTD	Brandon K Parnell	Ft Gordon GA
FOI216594	Craig Zorn	Light Brigade	Mark P Kazes	Middletown DE					

Fiber Optics Technician - Outside Plant (FOSP)

FOSP218189	Cody Agee	Light Brigade	Jeffrey A Noble	Milan TN
FOSP218142	Mustafa Aldohan	Light Brigade	Sandeep A Desai	Dubai VAE
FOSP218143	Ali Al-Dohan	Light Brigade	Sandeep A Desai	Dubai VAE
FOSP218190	Richard Alexander	Light Brigade	Jeffrey A Noble	Milan TN
FOSP220080	Wendell Alexander	Advanced Solutions Technical Insti	Jason Monsegue	Trinidad WI
FOSP216676	Shalana Ali	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOSP218144	Murtadha Al-Musawi	Light Brigade	Sandeep A Desai	Dubai VAE
FOSP216887	Eugene Alvarado	Apex Optics	Greyson O Knapp	Houston TX
FOSP216023	Orjee Archie	Advanced Solutions Technical Ins	Ancil M Peters	Triinidad WI
FOSP218145	Mario Atwon	Light Brigade	Sandeep A Desai	Dubai VAE
FOSP220082	Richie Bannister	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOSP220077	Nigel Beharrysingh	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOSP218140	James Butrlakorn	Light Brigade	Cameron L Karch	Kent WA
FOSP216784	Harrison Cain	Light Brigade	John C Dron	Cordova AK
FOSP218388	Blaine Callison	Light Brigade	John C Dron	Anchorage AK
FOSP216786	Jesse Carter	Light Brigade	John C Dron	Cordova AK
FOSP216674	Jamila De Sormeaux	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOSP216886	Arturo DeHoyos	Apex Optics	Greyson O Knapp	Houston TX
FOSP220081	John DeSilva	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOSP216283	William Ewert	Inst for Career Development	William V Ewert	Fayetteville NC
FOSP216787	Jason Fischer	Light Brigade	John C Dron	Cordova AK
FOSP218139	Marciano Gonzalez	Light Brigade	Cameron L Karch	Kent WA
FOSP219903	Nicholas Gray	Light Brigade	Mark P Kazes	Kansas City MO
FOSP218191	Joseph Gregory	Light Brigade	Jeffrey A Noble	Milan TN
FOSP216022	Akim Hutchinson	Advanced Solutions Technical Inst	Ancil M Peters	Trinidad WI
FOSP216788	Robert Jewell	Light Brigade	John C Dron	Cordova AK
FOSP219904	Andy Koehn	Light Brigade	Mark P Kazes	Kansas City MO
FOSP219905	Ryan Long	Light Brigade	Mark P Kazes	Kansas City MO
FOSP216885	Shiloh Luck	Apex Optics	Greyson O Knapp	Houston TX
FOSP218137	Craig Lusk	Light Brigade	Cameron L Karch	Kent WA
FOSP216675	Keston Moses	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOSP216673	Donnell Nurse	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOSP218136	Jesse Patch	Light Brigade	Cameron L Karch	Kent WA
FOSP218389	Mike Phillips	Light Brigade	John C Dron	Achorage AK
FOSP219906	Joel Reed	Light Brigade	Mark P Kazes	Kanasa City MO
FOSP218193	Dennis Reiter	Light Brigade	Jeffrey A Noble	Milan TN
FOSP216789	John Reyes-Maygard	Light Brigade	John C Dron	Cordova AK
FOSP220083	Nigel Ross	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOSP219908	Christopher Shelton	Light Brigade	Mark P Kazes	Kanasa City MO
FOSP220079	Roger Simmons	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI
FOSP218194	Gary Singleton	Light Brigade	Jeffrey A Noble	Milan TN
FOSP216790	Adrian Smith	Light Brigade	John C Dron	Cordova AK
FOSP216791	Shane Songer	Light Brigade	John C Dron	Cordova AK
FOSP218134	Ben Traina	Light Brigade	Cameron L Karch	Kent WA
FOSP220078	Garth Warwick	Advanced Solutions Technical Inst	Jason Monsegue	Trinidad WI

Fiber Optics Technician (FOT)

FOT216584	Demetrius Ashford	Infotec	Charles E Casbeer Jr	Virginia Beach VA
FOT218464	Austin Bejosano	OEMTD	Brandon K Parnell	Ft Gordon GA
FOT218354	Dennis Bishop	OEMTD	Kenneth G Evans	Ft Gordon GA
FOT218350	William Boyd	OEMTD	Kenneth G Evans	Ft Gordon GA
FOT218510	Ricardo Castro	APT College	Ardeshir Daneshmand	Santa Rosa CA
FOT216902	Alan Clark	OEMTD	Kenneth G Evans	Ft Gordon GA
FOT216903	Aldrich Cubangbang	OEMTD	Kenneth G Evans	Ft Gordon GA
FOT218263	Joshua DeWald	OEMTD	Brandon K Parnell	Ft Gordon GA

Fiber To The Antenna (FTTA)

FTTA216777	Tyler Barrall	Light Brigade	Phil J Shoemaker	Dallas TX
FTTA216782	Chris Jamieson Pagan	Light Brigade	Phil J Shoemaker	Dallas TX
FTTA216778	Francisco Lopez Colon	Light Brigade	Phil J Shoemaker	Dallas TX
FTTA216781	Miguel Montanez	Light Brigade	Phil J Shoemaker	Dallas TX
FTTA216783	Robin Wesley	Light Brigade	Phil J Shoemaker	Dallas TX

General Communications Technician, Level 1 (GCT1)

GCT1218690	Shawn Bishop	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218261	Derrick Brown	Headquarters Lbry Fleming Island	Kelly Bohannon	Fleming Island FL
GCT12184126	Larry Canright	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218681	Pawel Charkiewicz	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218420	Charles Cox	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1219777	Jason Cruz	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218677	Ty Darapiza	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218685	Luis Donato	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218680	Daniel Foster	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218430	Lisa Gary	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218687	Josue Gonzalez	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218428	Jeremy Hensley	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218673	Tyler Kerik	ETA International	Bryan Allen	Las Vegas NV
GCT1218427	Jeffrey Lawhorn	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218693	Kevin Mailloux	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218692	John McElfresh	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218676	Jordan Morton	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218316	Sean Myrick	Pride Enterprises	Jessica Driggers	Brandon FL
GCT1218672	Ricardo Navarro	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218683	Greg Pibal	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218679	Christopher Ranieri	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218424	Luis Ranzo	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218423	Dagoberto Rodriguez	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218674	Karl Rudolf	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218425	Rhonda Shipp	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218686	David SiFuentes	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218691	Christopher Stevens	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218422	Amalia Tanguma	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218429	Travis Trevino	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218421	Betty Wafer	IWA Technical Svcs Inc	Ira M Wiesenfeld	Ft Worth TX
GCT1218671	Blaine Warman	Zapped Communications	Colin G Zapalac	Las Vegas NV
GCT1218851	Colin Zapalac	ETA International	Bryan Allen	Las Vegas NV

Information Technology Specialist (ITS)

ITS218856	Pawel Charkiewicz	ETA International	David Weaver	Las Vegas NV
ITS218854	Raymond Coulombe	ETA International	David Weaver	Las Vegas NV
ITS218859	Cassey Lawson	ETA International	David Weaver	Las Vegas NV
ITS218858	Adam Scroggins	ETA International	David Weaver	Las Vegas NV
ITS218862	Fahim Adnan Siddique	ETA International	David Weaver	Las Vegas NC
ITS218857	John Stevenson	ETA International	David Weaver	Las Vegas NV

Line and Antenna Sweep (LAS)

LAS218665	Eric Alvarez-Medrano	ETA International	David Weaver	Las Vegas NV
LAS218636	Farrell Anderson	ETA International	David Weaver	Las Vegas NV
LAS218653	Thomas Brinkoetter	ETA International	David Weaver	Las Vegas NV
LAS218654	James Cole	TACitcal RF	Jay Thompson	Las Vegas NV
LAS218652	Daniel DeGirolamo	ETA International	David Weaver	Las Vegas NV
LAS218668	Emmanuel Lopez	ETA International	David Weaver	Las Vegas NV
LAS218637	Joseph Medina	ETA International	David Weaver	Las Vegas NV

NEW ETA CERTIFIED TECHNICIANS

The following is a list of professionals who have earned new certifications between February 1 and March 31, 2019 under one or more of ETA International's 80+ certification programs. Names of these highly qualified technicians have earned ETA's formal endorsement and approval.

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
LAS218663	Arun Orn	ETA International	David Weaver	Las Vegas NV
LAS218642	Vance Parker	ETA International	David Weaver	Las Vegas NV
LAS218664	Ken Prado	ETA International	David Weaver	Las Vegas NV
LAS218666	Kyle Robinson	ETA International	David Weaver	Las Vegas NV
LAS218643	Anthony Sparks	ETA International	David Weaver	Las Vegas NV
LAS218667	Ken Waszkiewicz	ETA International	David Weaver	Las Vegas NV
LAS218670	Chris Williams	ETA International	David Weaver	Las Vegas NV
LAS218645	Aaron Wunderlich	ETA International	David Weaver	Las Vegas NV
LAS218632	Daniel Zackey	ETA International	David Weaver	Las Vegas NV
LAS218641	John Zwosta	ETA International	David Weaver	Las Vegas NV

Mobile Communications Electronics Installer (MCEI)

MCEI218571	Michael Everett	Pride Enterprises	Jessica Driggers	Brandon FL
MCEI219998	Gilberto Quintela	Rollover	ETA International	Greencastle IN

Microwave Radio Technician (MRT)

MRT218833	Michael Green	ETA International	Bryan Allen	Las Vegas NV
MRT218832	Daniel Hinz	ETA International	Bryan Allen	Las Vegas NV
MRT218826	Jeremiah Johnson	ETA International	Bryan Allen	Las Vegas NV
MRT218827	Daniel Mattiucci	ETA International	Bryan Allen	Las Vegas NV
MRT218829	Zachary Mills	ETA International	Bryan Allen	Las Vegas NV
MRT218824	Jeremy Prime	ETA International	Bryan Allen	Las Vegas NV
MRT218834	Alan Pugh	ETA International	Bryan Allen	Las Vegas NV
MRT218825	Richard Reed	ETA International	Bryan Allen	Las Vegas NV
MRT218835	Alyssa Roszel	ETA International	Bryan Allen	Las Vegas NV
MRT218836	Brian Shields	ETA International	Bryan Allen	Las Vegas NV
MRT219768	John Stevenson	ETA International	Bryan Allen	Las Vegas NV
MRT218828	Steven Trujillo	ETA International	Bryan Allen	Las Vegas NV
MRT218837	Christopher Wehnt	ETA International	Bryan Allen	Las Vegas NV
MRT218839	Matthew Wescott	ETA International	Bryan Allen	Las Vegas NV
MRT218830	Brad Wilkus	ETA International	Bryan Allen	Las Vegas NV

Network Systems Technician (NST)

NST218345	Matias Gonzalez	Rollover	ETA International	Greencastle IN
NST218285	James Gow	Rollover	ETA International	Greencastle IN
NST218488	Lamar McNair	Rollover	ETA International	Greencastle IN
NST219841	Louis Patrizi	Rollover	ETA International	Greencastle IN

Passive Intermodulation Testing (PIM)

PIM218706	Johannes Bakkeren	ETA International	David Weaver	Las Vegas NV
PIM218715	Timothy Cahaney	ETA International	David Weaver	Las Vegas NV
PIM218712	James Cole	ETA International	David Weaver	Las Vegas NV
PIM218719	Elden Erickson	ETA International	David Weaver	Las Vegas NV
PIM218725	Zachary Figoli	ETA International	David Weaver	Las Vegas NV
PIM218708	Matt Greenwood	ETA International	David Weaver	Las Vegas NV
PIM218722	Brandon Matice	ETA International	David Weaver	Las Vegas NV
PIM218709	Joseph Medina	ETA International	David Weaver	Las Vegas NV
PIM218710	James Mulford	ETA International	David Weaver	Las Vegas NV
PIM218717	Holger Schwarz	ETA International	David Weaver	Las Vegas NV
PIM218705	Wayne Shwanke	ETA International	David Weaver	Las Vegas NV
PIM218707	Christopher Stevens	ETA International	David Weaver	Las Vegas NV

Photovoltaic Installer - Level 1 (PVI1)

PVI1220217	Michael Burkons	Blue Rock Station	Jay Warmke	Zanesville OH
PVI1218618	Donald Crites	The Ohio St Univ, Ag Tech Inst	Frederick C Michel	Wooster OH
PVI1220218	James Davison	Blue Rock Station	Jay Warmke	Zanesville OH
PVI1218621	Andrew Geraci	The Ohio St Univ, Ag Tech Inst	Frederick C Michel	Wooster OH
PVI1218619	Zachariah Keen	The Ohio St Univ, Ag Tech Inst	Frederick C Michel	Wooster OH
PVI220214	Adam McClintock	Blue Rock Station	Jay Warmke	Zanesville OH
PVI1218624	John Ruffing	The Ohio St Univ Ag Tech Inst	Frederick C Michel	Wooster OH
PVI1220215	Samuel Stephens	Blue Rock Station	Jay Warmke	Zanesville OH
PVI1220216	David Sturtevant	Blue Rock Station	Jay Warmke	Zanesville OH
PVI1218622	Damon Wright	The Ohio St Univ, Ag Tech Inst	Frederick C Michel	Wooster OH

Photovoltaic Installer - Level 2 (PVI2)

PV2216898	Jay Warmke	ETA International	David Weaver	Greencastle IN
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NEW CERTIFIED SERVICE CENTERS

March Renewals:

Lorimar Group - El Cajon CA

Radio One - South Daytona FL

Skywave - Rochester NY

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
R56 Installer (R56)				
R56220000	Nysir Allen	Commdux Consulting	Michael C Barton	Norcross GA
R56218207	Gaganpreet Bains	Commdux Consulting	Michael C Barton	Plantation FL
R56220001	Steven Bullock	Commdux Consulting	Michael C Barton	Atlanta GA
R56218197	Charles Burkholder	Commdux Consulting	Michael C Barton	Plantation FL
R56218743	Juan Cabral	ETA International	David Weaver	Las Vegas NV
R56218204	Chuck Duke	Commdux Consulting	Michael C Barton	Plantation FL
R56218205	Joseph Eastman	Commdux Consulting	Michael C Barton	Plantation FL
R56218196	Ray Ennis	Commdux Consulting	Michael C Barton	Plantation FL
R56218735	David Gastelum	ETA International	David Weaver	Las Vegas NV
R56218738	Greg Glavich	ETA International	David Weaver	Las Vegas NV
R56218737	Alex Joe	ETA International	David Weaver	Las Vegas NV
R56208742	David Joseph	ETA International	David Weaver	Las Vegas NV
R56220003	Andrew King	Commdux Consulting	Michael C Barton	Atlanta GA
R56218741	Kyle Malidore	ETA International	David Weaver	Las Vegas NV
R56218745	Richard Miller	ETA International	David Weaver	Las Vegas NV
R56219766	Mike Mitchell	ETA International	David Weaver	Las Vegas NV
R56218739	Jesse Pester	ETA International	David Weaver	Las Vegas NV
R56218731	Michael Reusser	ETA International	David Weaver	Las Vegas NV
R56220004	Johnny Rice	Commdux Consulting	Michael C Barton	Atlanta GA
R56218153	Kent Sager	Laramie Co Cmnty College	Candace Ferrall	Cheyenne WY
R56220006	Michael Smith	Commdux Consulting	Michael C Barton	Norcross GA
R56218206	Chad Swords	Commdux Consulting	Michael C Barton	Plantation FL
R56220008	Jeffrey Wilson	Commdux Consulting	Michael C Barton	Norcross GA
R56218726	Scott Wilson	ETA International	David Weaver	Las Vegas NV

Student Electronics Technician (SET)

ST219932	Zach Appenzeller	Bucks Co Technical HS	James J Crotts	Fairless PA
ST219933	Benjamin Bratt	Bucks Co Technical HS	James J Crotts	Fairless PA
ST219930	Marisa-Jade Hannon	Bucks Co Technical HS	James J Crotts	Fairless Hills PA

SAE Fabricator (SFF)

SFF218767	Jeremy Chiuchiarelli	KITCO Fiber Optics	Mark M Myland	National City CA
SFF218323	David Civica	AvOptics	Geoff Proudley	Yeovil Somerset UK
SFF218770	John Garcia	KITCO Fiber Optics	Mark M Myland	National City CA
SFF218766	Paul Guevara	KITCO Fiber Optics	Mark M Myland	National City CA
SFF218765	Tony Huynh	KITCO Fiber Optics	Mark M Myland	National City CA
SFF218325	Sergiu-Stefanel Jitaru	AvOptics	Geoff Proudley	Yeovil Somerset UK
SFF218326	Samuel Jolley	AvOptics	Geoff Proudley	Yeovil Somerset UK
SFF218327	Connor Lazenbury	AvOptics	Geoff Proudley	Yeovil Somerset UK
SFF218330	Connor Marshall	AvOptics	Geoff Proudley	Yeovil Somerset UK
SFF218768	Thomas Reece	KITCO Fiber Optics	Mark M Myland	National City CA
SFF218331	Colin Thorne	AvOptics	Geoff Proudley	Yeovil Somerset UK
SFF218332	Liam Tinsley	AvOptics	Geoff Proudley	Yeovil Somerset UK

Smart Technology Systems (STS)

STS219812	JB Groves	ETA International	Bryan Allen	Las Vegas NV
STS219816	Roy Kluge	Wharton Co Junior College	JB Groves III	Las Vegas NV
STS219814	Balin Lee	Wharton Co Junior College	JB Groves III	Las Vegas NV
STS219813	Nelchor Permitez	Wharton Co Junior College	JB Groves III	Las Vegas NV

Small Wind Installer (SWI)

SWI1220204	Austin Burris	Blue Rock Station	Jay Warmke	Zanesville OH
SWI1220209	Jacob Cohen	Blue Rock Station	Jay Warmke	Zanesville OH
SWI1220212	Joseph Francis	Blue Rock Station	Jay Warmke	Zanesville OH
SWI1220207	Samuel Grubbs	Blue Rock Station	Jay Warmke	Zanesville OH
SWI1220213	Anthony Kerr	Blue Rock Station	Jay Warmke	Zanesville OH
SWI1220211	Daniel Mahon	Blue Rock Station	Jay Warmke	Zanesville OH
SWI1220203	Donald Meyer	Blue Rock Station	Jay Warmke	Zanesville OH
SWI1220206	Trevor Price	Blue Rock Station	Jay Warmke	Zanesville OH

Wireless Networking Technician (WNT)

WNT216537	Joshua Defries	APT college	Ardesir Daneshmand	Woodland CA
WNT216534	Kevin Gray	APT College	Ardesir Daneshmand	Woodland CA
WNT216536	Kevin Marcoux	APT College	Ardesir Daneshmand	Woodland CA
WNT218208	Matthew Ponder	Windsor Brnch Jefferson Co Lbry	Jason Phinney	Barnhart MO
WNT216535	Michael Webster	APT College	Ardesir Daneshmand	Woodland CA
WNT216539	Thomas Wells	APT College	Ardesir Daneshmand	Woodland CA

What does an electronic technician make for breakfast?

Ohmlettes!

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Larry Johnson

Fiber Chronicles

The Evolution of the Fiber Optic Connector - Part 2

In our last article, we covered what a fiber optic connector is and its evolution up to connectors using 2.5 mm ferrules. The second installment of this article will continue with the development of small form factor (SFF) connectors using the 1.25 mm ferrule.

New generations of optical products continue to evolve as technology changes. By the 1990s, fiber-to-the-desk (FTTD) installations using the ANSI X3T9 standardized 62.5/125 multimode fiber started to be designed and deployed. New connectors were developed by many companies to provide simple and low-cost termination techniques. These connectors would have smaller footprints, which were based on the RJ-45 telephone connector for wall-mounted media outlets. Known as small form-factor connectors, these connectors feature smaller profiles and are simple to mate. These include the Volition-VF45 (3M), Optijack (Panduit), and MT-RJ (Amp). All were designed for FTTD installations and have become obsolete over the years.

Most small form-factor connectors use the RJ-45 or SC connector footprint for industry compatibility. Although several still used a 2.5-millimeter ferrule, many others started using the smaller 1.25-millimeter ferrule, or even a V-groove alignment mechanism, allowing the connector to become significantly smaller.

Small form-factor connectors dense wavelength division multiplexing (DWDM) equipment started to be installed in massive numbers. Unlike conventional equipment with one input and one output, DWDM equipment needed to optically combine multiple lasers onto one fiber. A 32-channel DWDM system would require 32 fibers combined in one connector. Small form-factor connectors with their smaller footprint also needed to address single-mode fiber's precise alignment requirements, lower attenuation, and reflection values. In addition, these required angled physical contact (APC) polishes and, sometimes, even intrinsic dust caps to minimize surface contamination. Early versions of these connectors include the Lucent Technologies LC, the ADC's LX.5, and Diamond's E-2000 connectors.

Numerous standards were developed as the fiber optic industry

evolved. Of these, the Fiber Optic Intermateability standard (FOCIS) TIA/EIA 604 and the International Electrotechnical Commission (IEC) 61754 standards has evolved since 1993 to address each of the connector styles and their configuration options including keys, fiber counts, polishes, mounting options, descriptions and tolerances. The written objective is the minimum physical attributes of mating connector components so that any combination of plugs and adaptors from different manufacturers will mechanically inter-mate, and when mated, will meet a common level of performance.

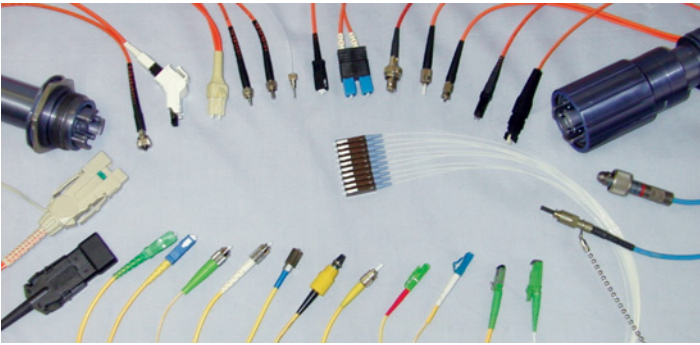
Of the newer connector styles, the LC connector developed by Norm Lampert while at AT&T has achieved the most success. Standardized in TIA 604-10 published in 1999, it has proven to be the most successful of the small form-factor connectors. Designed as a push-pull type connector, the LC uses the smaller 1.25-millimeter ferrule and an external clip-latch mechanism for a compact design. This single-fiber connector can be used for both multimode and single-mode applications and can be flat, PC, UPC, or APC polished.



LC Connectors
Courtesy Senko Advanced Products

The LC connector pair in the duplex-configuration occupies the same footprint as a single SC-type connector. The LC connector's small size is preferred by many system manufacturers, which allowed for smaller modules. The LC is a simplex connector, but it can be easily modified for duplex terminations by the use of a duplex latch clip. Today, the LC is the most common connector for modules and allowed in new data center designs along with the MPO.

Continued on page 21.



A collection of fiber optic connectors developed up to the 1.25 mm LC and E-3000 series. How many can you identify? Answers below.

(Connectors from bottom left clockwise): Esccon, FSD-FDOL, Tactical, Optimate-SMA, Voition, OptiJack, SMA 906 and 905, TRW, SC, Duplex SC, Optiball, ST, Mini BNC, MT-RJ, Unknown, Tactical, DW 1000, HMS 001, E-3000, LX.5, LC, E-2000, ST, Bicom, D-4, FC, FC, SC/PC, SC/APC. I believe the middle connector is the MU designed by NTT.

A collection of fiber optic connectors developed up to the 1.25 mm LC and E-3000 series. How many can you identify? Answers below.

The approach to multimode terminations also changed during this time. Prior terminations were mostly performed using thermal cure epoxies, which was time and equipment intensive for field terminations. New bonding methods include anerobic, cleave and crimp, reusable, and ultra-violet (UV). The goal was to increase yield while lowering installation costs. Of these, the thermal cure bonding method is still the dominant method used for factory terminations to this day.

In the next installment of this series, we will address the impact of data centers and how third generation connectors, including the MPO/MTP™ array connectors, evolved. We will also introduce several new connector types designed for on-board optics and high density applications. //

LiFi as a Service - The Transfer of Monetary Funds via Light

by **Ange Balma** | CEO, Founder of LiFi LED CI and **JB Groves III** | FOI, ITS, Wharton County Junior College



LiFi LED technicians set a solar power LED LiFi technology-enabling pole.



Ange Frederick Balma is standing at the base of this solar powered LED LiFi transmission pole in Africa.

Not long ago, I had a conversation with the founder of LiFi LED cote Ivorire Frederick Balma based on the concept of light as a service. Frederick, as far as I know, is the first to market a LiFi service based product which he named LEAPFROG.

LEAPFROG, like the game we used to play as kids, is an analogy for a “radical evolution” of an application using light as a communication medium to provide financial services. In this case, it is used for the moving or transfer of currency for the people of Brahimakro, an Ivorian Coast city in Africa. Until this service, Orange deposits were done manually by hand on paper forms.

Thanks to the ingenuity of Ange Balma’s systems engineering and implementation of LiFi technology in Brahimarko, people’s lives are changing with investment monies coming to the city. With these investments come jobs for the people who now have a means of connecting to the outside world and becoming educated in the needed skills for the markets entering their country. These technological changes in monetary processes will enable remote

villages all over Africa to leap into the future through a light technology called LiFi. Basically, LEAPFROG has become the “digital postman” bringing very welcome mail.

The foundation of the LEAPFROG service is the implementation of the needed solar panels that provide the power for the satellite up/down link, LED transmitters/receivers, and smart phone interfaces for the LiFi system.

LEAPFROG is bringing new technologies to Brahimarko at the speed of light with what most would say was an initial delay in the typical steps required to new start-ups in the country, which is a very welcome advantage of this LiFi service. Cote d’Ivoire (the country of the Ivory Coast) has very little cell service and a majority of the villages do not have electric power or connectivity to the Internet. Thanks to LiFi’s very rich technology, the launch of LEAPFROG Version 1 (figures 1 and 2) will make the less rich counties seem richer. //

COMMITTEE CORNER UPDATE

Thank you to the ETA Committee members for making sure updates and standards were prepared in the competencies and examinations of the 11 courses we hosted during Education Forum 2019 in Las Vegas at the IWCE Expo . Many new suggestions and comments concerning certifications flowed from the week.

The Smart Technology Systems (STS) certifications (formerly RESI) committee members have developed a new competency and exam for the Smart Technology Systems Audio/Video Entertainment endorsement certification. The STS work on Environmental Controls is fast-tracking in committee now while the Computer Networking and Security-Surveillance are the next two endorsements to be reviewed. Welcome to new committee member, Paul Brinkmann from Salem County Vocational Technical School District, who joined this month.

A rough draft of the Certified Service Manager (CSM) updated competency was provided to the CSM committee, which is currently working to incorporate international committee suggestions and updates.

A new updated Information Technology Security (ITS) competency was circulated among committee members for their review/updates/changes/approval. The committee plans to review and update exam questions with in the next three weeks

The Distributed Antenna Systems (DAS) committee has new Emergency Radio Communication Enhancement Systems (ERCES) industry members. ETA welcomes Greg Glenn of SOLID

and Bryan Detro, CETsr of Motorola Solutions. The new Mission Critical Public Safety content, which includes the National Fire Protection Association (NFPA) standards and Institute of Electrical and Electronics Engineers (IEEE) best practices, discussed at Education Forum 2019 was sent to committee for review/updates.

The Electronic Security Networking Technician (ESNT) committee met to discuss a new section for the IEEE high-bandwidth Ethernet standards for 25, 40 Gbps and proper cable specifications along with adding a new Power over Ethernet (PoE) feature. PoE technology relies on the IEEE 802.3af and 802.3at standards.

Motorola Solutions, Inc Subject Matter Expert (SME) committees have been updating the Motorola-specific content of most of the Motorola-only certifications for administration at their April Arizona Training Conferences.

Again, ETA thanks the many members who have volunteered countless hours above and beyond their normal workday to participate as SMEs in the many certification programs active and/or being updated at this time.

If you have questions, please contact ETA for information. It is very exciting to be a part of the committees working on various aspects of ETA certification development and research. If you would like to join a committee or have suggestions, please contact David Weaver, CSS dweaver@eta-i.org and Ed Kirkpatrick, PV2, CSS ekirkpatrick@eta-i.org. //

Puzzle question on page 6

Answer: (B)

Technicians and the World of Tomorrow

What will employment forecasts look like in the next decade for electronics technicians? Techs can thrive in the future with careful thought and planning.

by Glen Spielbauer

The mid-1970s saw a surplus of four-year college graduates entering a diminishing job market. The 80s and 90s brought corporate restructurings, layoffs, bank failures, and a halt to rapid promotions. In 2000, The Dallas Morning News said the world we once knew is gone forever. Corporations are no longer loyal to employees. We no longer go from college to a 40-year-career with promotions and a retirement party. Pensions are almost non-existent. The costs of college and housing have risen much faster than inflation. The corporate ladder has fallen down.

Many Doctoral graduates were reported to be tending bar, pumping gas or driving taxicabs as the market for high-level college graduates dried up. Even computer science graduates faced a tough world as technology firms such as IBM and Amdahl went through a huge shakeout during the 1990s. The 2000s have also been very turbulent, especially after the 2008 crash of Wall Street, which impacted mainline industrial firms such as Ford Motor and General Electric, resulting in massive layoffs.

That trend holds steady today. Mergers, hostile takeovers, restructurings, and “right-sizing” have wreaked havoc on job stability for tens of thousands of people. Many firms have a large contingent workforce provided by temporary placement firms. We must now think and act as free agents in the new World.

Engineering has always been rent by numerous boom and bust cycles. Engineers out of school for a decade or more are often considered obsolete. This may be a myth, but the attitude persists. Computer software has reduced the need for engineers, with technicians taking over more of their roles. Layers of middle managers have been eliminated and Masters-level graduates continue to face a tough market. A four-year bachelor or graduate degree is no longer the ticket to success it was in the past.

All is NOT Doom and Gloom

The future can be bright - with the right strategy. Technicians must keep up with the latest technology, and can be the innovators. Most experts say we need more emphasis on the skilled trades and training programs in two-year community colleges, state technical schools, and apprenticeship programs. Many technicians, electricians, machinists, plumbers, and industrial machine repair people are in big demand, and can earn as much or even more than many four-year college graduates - with far less time and money invested.

A special issue of a 2017 City Journal, published by the Manhattan Institute, highlighted the following awesome trends:

- Robots now do surgery in many hospitals - while the doctors

watch and learn. Patients operated on by robots recover faster and with fewer complications.

- A Japanese venture capital firm has a robot on the board of directors that votes on investment strategy. Your next supervisor could be a robot!
- Lawyers, stockbrokers, and accountants are now being replaced by artificial intelligence software.

The Future for Technicians

Electronics technicians have been featured in the news media as the rising stars of our digital and analog world. We now command more respect and earn higher incomes. The future can be good - with careful planning.

The demand has shifted away from university educated professionals to technical knowledge workers with two-year degrees and certifications - especially in manufacturing, health care, and information technology. You can work toward earning multiple ETA certifications, which will attract the attention of hiring managers.

For some people, status is just going to have to be its own reward. The skilled trades may have less status, but they are now very high-tech and financially rewarding.

Some technicians work toward a four-year engineering degree, but it may be too narrowly specialized. A better strategy may be to aim for more flexibility and broader career options. Consider taking courses at the local community college in other areas of electronics or mechanical technology. Two growing fields to look at are mechatronics and nanotechnology, which are now offered in a growing number of community and technical colleges.

Today, some people are promoted upward, but the fast track of the past is gone. Corporate pyramids are now much steeper. The star employee of today is an individual contributor with high-level technical and project management skills. Career growth is no longer as much vertical as it is horizontal. Promotion now takes the form of technical development and pay hikes with increased demonstrated technical expertise.

While your career is important, work-life balance is essential to avoid burnout. Flexibility, teamwork, continued technical learning (both formal and informal), and understanding the business and economic issues of technology enterprises are key elements for success. With these strategies, today's electronics technicians will thrive in tomorrow's technologies. //



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Where Does ETA Certification Take You?



Jorge Rolando Recinos
Arevalo, CSS

Thanks to ETA, I now work as a Customer Service Specialist at a call center in Guatemala City in Central America. I have learned so much from the CSS study guide and I am grateful to ETA for putting together this very helpful manual. Being a CSS helps me offer our customers

the service they deserve and be a better team player. I have received recognition for my superior customer service skills and I love my job!

Help ETA spread the word about the many exciting and lucrative careers available in the electronics industry!

Your photos and job experiences will show the next generation that electronics can take you places most people only dream about. As a professional trade association, it is our duty to educate the public that there are many lucrative job openings just waiting to be filled by qualified technicians. With your help, ETA can raise the visibility of certified electronics technicians and show the world all of the varied job titles that make up this exciting industry.

You could win a free ETA stainless steel travel mug!

Just send ETA your on-the-job photo, your job title and a brief description of your job and how ETA certification has helped further your career. Thanks!