



Mass Notification Products

NON-DISCRIMINATING
AUDIBLE WARNING
PRODUCTS THAT
A.I.D. IN RESPONSE
TO MAN-MADE OR
NATURAL EVENTS THAT
REQUIRE WARNING
THE PUBLIC FOR
COMMUNITY AND
INDUSTRIAL APPLICATIONS

Q. What is the quickest, most effective way for warning the public of man-made or natural events such as tornado, flash flood, severe weather, campus safety issue or chemical release?

A. The most effective way for warning the public is to issue a tone and follow it with clear, intelligible voice instructions. Whelen's three step approach, **A.I.D.[™] ...ALERT, INFORM & DIRECT** will eliminate confusion, restore order and, most importantly, save lives.

Two US-based manufacturing plants in Connecticut and New Hampshire employ almost 1,500 workers.



Corporate Headquarters in Chester, Connecticut



Charlestown, New Hampshire Division

Whelen Engineering has engineered, designed and manufactured more electronic sirens than any other manufacturer in the world.



Type II Siren Cabinet



Testing Siren Cabinets



WPS2900 sirens ready to ship



IPS400 and IPS800 Cabinet (Type 1)



Training Center



Vortex and WPS4000 siren arrays

A.I.D.[™] ...ALERT, INFORM & DIRECT

Whelen Mass Notification Systems warn the outdoor public. Some of the applications where Whelen systems are used are listed below:

- Tornado Warning
- Emergency Management County/Municipal public warning
- College/University campus
- Tsunami warning
- Flood/downstream warning
- Fire House siren
- Chemical/Refinery plant
- Employee alarms

Whelen produced the first reliable electronic Mass Notification Products over thirty years ago - The first major innovation in public warning in many decades.

Today, Whelen offers a family of products that integrates outdoor and indoor warning into a single unified system. Whelen is the first name in Mass Notification, with more products installed worldwide than any other manufacturer.

All Whelen Mass Notification Systems are Proudly Engineered, Designed and Manufactured in the U.S.A.



Typical installations for:



Campus/Student Alert



Tornado Warning



Hurricane Warning



Tsunami Alert



Chemical & Industrial Facilities



Nuclear Plant Protection



Community Firehouse Alert



Military and Port Protection

A single source for Design and Manufacture

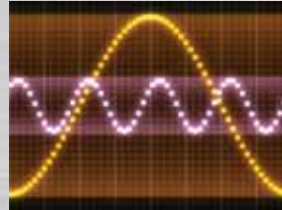
Whelen manufactures every electronic assembly used in its final assembly of its products, truly a "manufactured in America" product line. No other manufacturer in the industry can state that.



Whelen Engineering is staffed with highly trained employees to achieve a high standard of quality control.

Low frequency tones are the most effective

At Whelen, we use low frequency (300 hz to 700hz) warning tones because tones in this range penetrate most background noise and carry to greater distances than higher frequency tones.



Only from Whelen, a low frequency speaker driver

Designed exclusively for Whelen Engineering for outdoor warning applications, Whelen's 400 watt speaker driver is the most rugged, durable and reliable speaker driver in the industry. The only 400 watt speaker driver in the industry, certified to a minimum twenty year life cycle for the Government of Denmark.



Component testing



Electronics assembly department



Electronics cabinet assembly



Speaker driver assembly



Repair facility

The Electronics

Within this document you will find an in-depth look into our electronics, all made by Whelen Engineering. Modular for easy maintenance, each assembly is invented, constructed to match the other components for reliability and longevity. Relying upon commercial components for use in the manufacturing of a siren is for the competition, not Whelen.



Speech Intelligibility Index

Speech Intelligibility Index, or "STI". Ask for a speech intelligibility report from other manufacturers. Whelen's voice clarity is the best in the industry. Our STI report supports this.

Detailed product information

Visit www.whelen.com for more information.



Whelen's 2900 Series have a removable driver for easy in the field maintenance.



It's as easy as...



1 - grip the handle...



2 - lift out driver...



3 - perform maintenance.

Professional Sales and Design team

Whelen's Authorized Managing Sales Representatives are available to recommend a product, design a system, and develop a bill of material and specification to match your needs. Visit www.whelen.com for the up to date contact list for your area. Click on "Where to Buy", this will lead you to the Where to Buy (Mass Notification) section.

Warranty

Limited Five (5) year warranty standard. The best in the industry, email us at iowserv@whelen.com for a copy of our warranty.

Corporate Capabilities

Available at www.whelen.com, is a brochure on the corporate capabilities of Whelen Engineering. No other manufacturer has the infrastructure in place to design, build, service and maintain your Whelen product not only for now, but 20 years from now.

WEPlan™

Available at www.whelen.com, this is a fun, easy to use sales tool available for use in designing a Whelen system. WEPlan will give you a general idea of the coverage of our products.

Safe professional installation through Whelen factory-certified distributors is available throughout the world. Trust local distributors familiar with local codes and soil conditions.



Fort Worth Installation



Ohio Valley Installation



Installation of VisuAlert™ on siren



Electronic cabinet installation



Whelen website home page



Whelen Mass Notification home page



WEPlan system design program



Whelen Corporate Capabilities Brochure

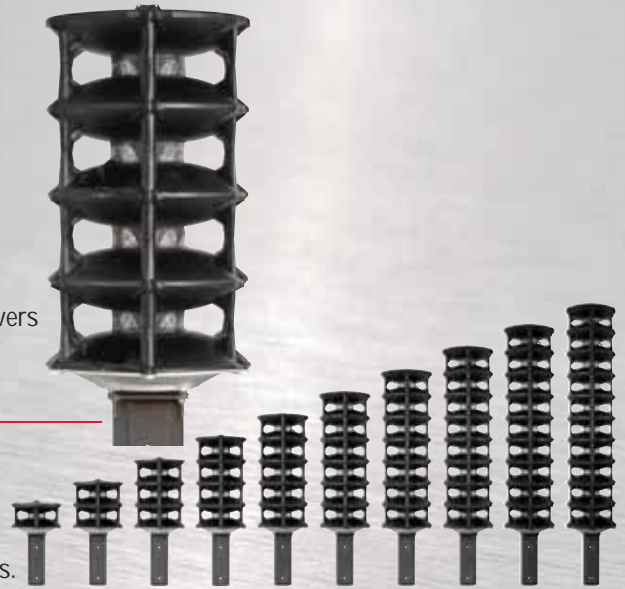
Mass Notification Products

All Whelen Mass Notification Products feature the following:

- Battery operation.
- Six warning tones: Wail, Whoop, Attack, Hi/Lo, Alert and Airhorn.
- Local controlled or radio controlled.
- SI TEST® (patented by Whelen) confirms the operation of AC power, partial or full operation of both the power amplifiers and speaker drivers as well as rotor operation of the rotating models.

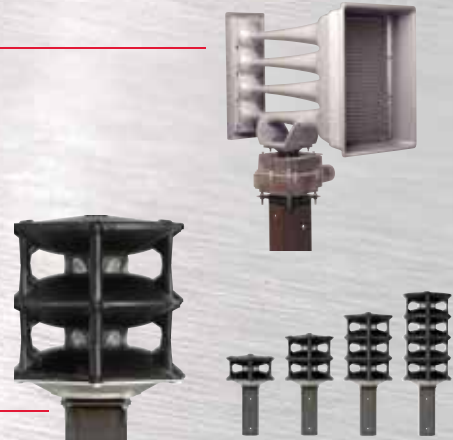
WPS2900 Series

- Ten models to choose from.
- Field-serviceable 400 watt EZ-PULL™ speaker driver.
- Speaker array, electronics cabinet and cabling all included, all assembled and tested prior to shipping.
- **VOICE CAPABLE** through pre-recorded messages and live public address.



WPS4000 Series

- Rotating sirens.
- Speaker array, electronics cabinet and cabling all included, all assembled and tested prior to shipping.
- **VOICE CAPABLE** through pre-recorded messages and live public address.
- "Long throw" warning at output power levels sending tones and voice to distances beyond one mile.
- Heavy-duty, gear-driven rotor and high-torque motor.
- Public Address Quadrant Control. The WPS4000 speaker can be commanded by radio control to eight compass points for public address messages.



Omni-Alert™ Series

- Economical alternative to the WPS2900 series.
- **TONE ONLY** – voice messaging not available.
- Field-serviceable 400 watt EZ-PULL™ speaker driver.
- Speaker array, electronics cabinet and cabling all included, all assembled and tested prior to shipping.



VORTEX™ Series

- Economical alternative to the WPS4000 series.
- **TONE ONLY** – voice messaging not available.
- Speaker array, electronics cabinet and cabling all included, all assembled and tested prior to shipping.



HORNET™ Series

- Economical rotating product.
- **TONE ONLY** – voice messaging not available.
- Speaker array, electronics cabinet and cabling all included, all assembled and tested prior to shipping.



Firehouse Series

- Designed around the Omni-Alert™ platform, specifically for the Firehouse market.
- Same rugged design, built for years of service.
- Whelen lighting products available for both the top and bottom of the speaker array.
- **TONE ONLY** – voice messaging not available.

IPS[™] Series

- Same features as our WPS series products, but in a compact design.
- Indoor cabinet but designed around our rugged outdoor cabinet.
- Unique 400 watt amplifier features 100 watt "channels" for distributed audio.
- Sold with Whelen's family of indoor speakers (15, 30, 60 and 100 watt).
- **VOICE CAPABLE** through pre-recorded messages and live public address.



Siren Speakers for IPS Series

A choice of siren speakers ranging from 30 to 100 watts is available for the IPS Series.

Voice Option and Live Public Address

- The WPS2900, WPS4000 and IPS product lines offer digital voice capability and live public address, standard.
- Store up to 16 messages with 60 minutes of on-board voice capability.
- Custom messages or messages selected from Whelen's message library are available.

Winter Weather • Severe Weather • Tornado • Hurricane • Severe Thunderstorm • Flash Flood • Test • Post Test • Chemical Release • Evacuation • Hazardous Materials • Terrorist Alert • All Clear • General Emergency • Post Disaster • General Announcement • Custom Developed

Base Station Equipment E2010

- Two-way controls.
- Supports all the features available in the product line.
- Control your sirens individually, in groups, or altogether.
- Every transaction is logged with time and date stamp.
- Hard drive archive all activity.
- Selective information relative to status accessed by date or location.
- Automatic system polling.
- A variety of call keys available, programmable to any scenario.
- Four remote input call keys.
- Two time of day call key activators and two contact closure outputs for alarms.
- Security key lock.
- Printer port.
- Battery back-up for time and date features.
- Desktop and rack mounted configurations available.



E969

- One-way control.
- Control your sirens individually, in groups, or all together.
- 35 function capability.
- Four "Call Keys" on keyboard provide simple and fast two-step activation of most warning scenarios (Select "Call Key", Press Send).



E747

- One-way control.
- Control your sirens individually, in groups, or altogether.
- 18 function capability.
- May be used for mobile applications.

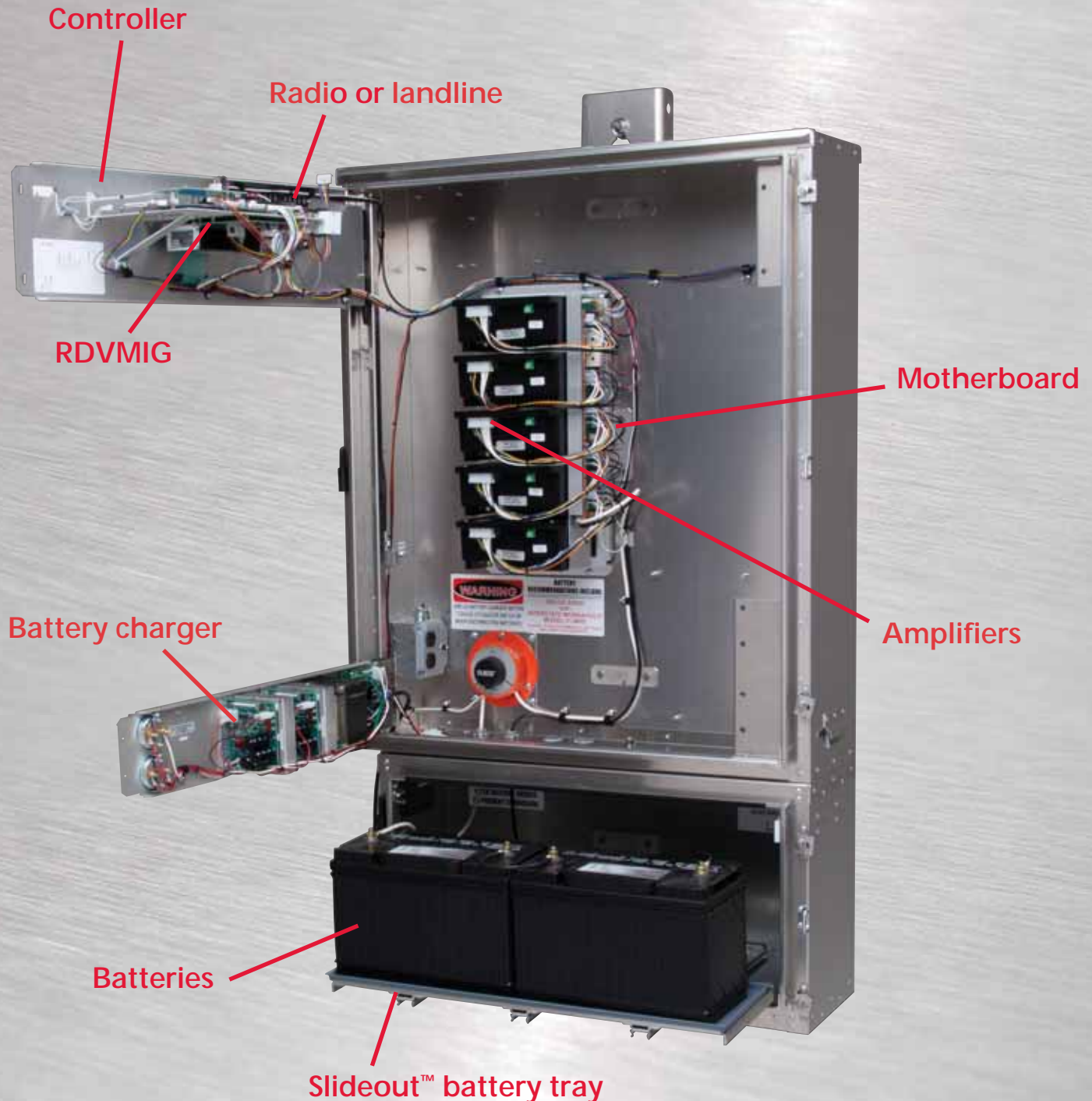
Alert Monitor VA2000

- Extends the reach of the Whelen system.
- Addressable similar to a siren, it will react when receiving the DTMF signal just as a siren would.
- Upon activation, it will sound a piercing alarm, flash an LED and display one of 60 pre-programmed messages.



Electronic Cabinet Features and Options

Each Whelen siren comes with a completely manufactured and tested cabinet. We manufacture our own cabinet by bending, coring, punching and riveting a raw piece of "5052" aluminum alloy or "304" stainless steel. Our cabinet can be painted, and engraving services are available as well.



Electronic Assemblies

All major electronic assemblies used in our cabinets are manufactured by WHELEN, as is the cabinet itself.

Whelen Controller

Our controller is the heart of every WHELEN cabinet. The controller controls the key functions of every WHELEN siren, including the following:

- Tone Generation
- Event Timing
- Remote Station Status Reporting (encoding)
- System Diagnostics (including SI TEST®)
- Remote Activation
- Rotor Control (for WPS4000, VORTEX™ and HORNET™ Series)
- Local Control (push-button inside the cabinet)
- The controller contains a microphone jack for public address and a serial port to allow connection of our Siren Diagnostic Programming Tool Software (hereafter referred to as SDPTS) to the siren. The controller is also the location of the diagnostic LEDs.

Whelen Power Amplifiers

- Each cabinet includes one to ten power amps, depending on the model.
- The amplifier receives the desired tone or message generated by the control board, amplifies it, and delivers it to the siren driver.
- Whelen-manufactured with a die-cast cover, short circuit protection, current limiting, fuse protected.
- LED service indicators verify completion of the circuit between the 400 watt amplifier and 400 watt speaker siren driver. The basis for our high speech intelligibility lies within these amplifiers, increasing their output by 25% when in the voice mode of operation.

Whelen Battery Charger

- Each cabinet contains a temperature-compensated battery charger.
- The battery charger maintains the batteries in a stand-by power mode.
- Temperature-compensated to ensure that the batteries are charged to 100% of capacity in all regions and climates around the world, from “the frozen tundra of Greenland to the deserts of Kuwait”.

Motherboard

- This component (located on the inside of the upper cabinet door) distributes battery voltage and signals to system components.
- This component also contains fusing for system components.
- A second motherboard is used in the WPS2906 thru WPS2910.
- The Motherboard also distributes signals between the amplifiers and the control board and is the link to most components in the siren.

Radio and Interface Board

- The radio component receives an RF signal and delivers them to the controller via DTMF protocol for processing.
- Through the use of the feedback radio or feedback landline board, the siren is also capable of transmitting status information back to the control center.

Landline Board

- Whelen Siren products may be remotely controlled by landline.
- This board communicates via DTMF protocol as well.
- When using the landline option, this allows an AC 600ohm wire to replace the radio link. A 2-wire line is used for one-way activation and a 4-wire line is used for two-way activation and feedback systems.
- While the name “landline” implies a hard wire line, the landline may be any hardware that can emulate a dedicated AC grade phone line at both the control and siren ends of the system.

A sampling of installations



WPS2909 with solar panel



Omni-Alert™ 3 cell siren



WPS2909 nine cell speaker array



Mid-State Communications installation in Malta, NY



Vortex™ with solar panel

Options

Auxiliary Input Board

The Whelen Siren product may be equipped with an optional module that can activate siren functions via an external auxiliary input contact closure from a nearby location. For external controls, the "closure" must be at least 1/2 second in duration. The "closure" must be made to ground. A ground contact is supplied at the terminal strip for this purpose. The following Whelen Commands are supported: Cancel (or Clear), Wail, Attack, Alert, Air Horn, Hi-Low, Whoop, Noon Test, DVM1, DVM 2, DVM 3, DVM 4.

Auxiliary Control/Status Board

The Whelen Siren product may be equipped with an optional module that allows the user to remotely control siren functions and to remotely collect siren status information from a nearby location. All Whelen commands are supported, depending upon product. In addition to commands and status functions, the Auxiliary Control/Status Option has transformer coupled circuits for accepting audio. One circuit is active in conjunction with the Public Address command, while the other circuit is used for local audio, such as a local microphone or paging system. The local audio must have a "Push To Talk" contact closure for operation. In either case the audio is broadcast over the system.

LED / Strobe Control Board

This component is a device that controls a pole-mounted LED or strobe light. This light can be configured to activate during specific conditions (example: when any tone or message is generated).

Intrusion Alarm

This sensor detects the opening of the cabinet door. If the station is equipped with this option, the alarm is configured to transmit a signal back to the control center.

Solar Option

This component uses electrical energy collected by pole-mounted solar panels to maintain the station batteries at their proper voltages. This regulator is temperature compensated.

VisuAlert™

The VisuAlert option provides a ring of Whelen Super-LED® M6 lights mounted under any WPS2900 or OMNI-ALERT™ siren system.

VisuAlert will illuminate with a designed flash pattern when the siren is activated adding an additional layer of warning.

Status Option

If a siren is equipped with the STATUS option, full power station activation can be visually confirmed from outside the siren cabinet. This diagnostic display, located on the right side of the cabinet, will indicate the following:

- Presence of AC power (if equipped with an AC Battery Charger).
- Presence of DC power at minimum operating level (at least 19VDC)
- Partial amplifier/driver function
- Full amplifier/driver function
- Rotor operation (WPS-4000 Systems only)

Batteries

Available for purchase through Whelen or your local source. Battery recommendations available on www.whelen.com



WHELEN® MASS NOTIFICATION PRODUCTS

Over 20,000 sirens have been manufactured by Whelen over the last 35 years. Our products are in all 50 States, 52 different countries and almost 200 college and university campuses. Here is a sample of some of the end users that have purchased Whelen products over the years.....

Iowa Electric Florida Power & Light Point Pleasant Consumers Power Dillsboro Fort Osage FD City of Ankeny St Louis, MO Gasport FD Salem ESDA Fort Galati Covitz County Massapequa Fire Mount Washington Detroit Edison Deep River, CT North East Utilities Time Electronics Norwich, CT Windsor, MO City of Batavia Commonwealth Edison City of Morgan Towansville City of Long Lake Linn County City of Norway City of Chetek City of Wayne Harrison Township City of Mount Clemens West Coast Transmission Saline County Poncianna Volunteer Fire Fullton Contracting City of Pack City of Amery City of Saginaw City of Staples O'Fallon City of Jefferson City of McGeehee Portland General Electric Palos Park Sutgart Louisiana Power & Light Owensville Olmstead County Russellville Sauget Waste Treatment Lafayette North Mankato Village of Dresser Clements Sanborn South Lake Minnetonka Winona City of Brahm Lake Benton Fairmont Public Utilities UNC Nuclear Limestone County Prison Putnam Lake FD Lexington Fayette Ann Arbor Township of Almont Western Mich. Univ Village of MetaMora Millwood Fire Pennsylvania Power & Light + Light Village of Reese Edinburg Village of Columbiana Camp Westdale City of Linn City of Jackson City of Tacoma Montana Power Village of Livingston City of Menemomie City of Jefferson Ross Township Fire Torrington Proctor and Gamble Cheyenne County Ackerman South Lake Minnetonka City of Louisville City of Brecksville Village of Manchester City of Saline City of Lake Charles Tesoro Alaska City of Centralia Green River Sandia National Labs City of Levelland Bellevue Multiguard Corp Town of Monroe City of Libertyville City of Saginaw City of Sullivan City of Dallas Wheatland American Cyanamid Oskaloosa Jackson Mchord AFB Harrison Township Allen County Nottoway State of Connecticut	Dundee Township Lake Charles City of Lamont City of Mount Vernon River Falls City of Johnson Tyler Texas City of Sherburn Kenai Alaska Independence Hill . . . City of Blue Earth . . . Seabrook Nuclear Duane Arnold Nuclear Chehalis Firestone Campbell County Fort Ben Harris Oskaloosa Fairmont Hamburg Windsor Dublin Middlefield, CT Coplay Cement Clatskanie Ottumwa, IA New Haven I C I Americas Cofax 5 City of Sinton Tulsa, OK Libertyville Southern Methodist University University Park Myrtle Beach Fanwood Union Camp Newark Township Harlen Saint Paul Fairbury Union Carbide Korea Washington Public Power Monsanto University of Colorado Schoolcraft LaBarge Lakewood Georgia Power Aurora, CO Turbitrol Penwalt Seymour Rush City Canon Beach, OR Consolidated Edison White Plains, NY LaPorte Marquette Heights Olin Corp. E I Dupont Allen County Howell Hobbs, NM S C Johnson Kentronics El Dorado Springs Himont St James Parish Exxon Shelby Township Savage Sterling Heights Goodfellow AFB Walco Chemical Westfield Foni Misquamicut, RI Fire Dept Allied Fibers US Dept of Energy Westinghouse Brighton Branson, MO Livonia, MI Miner Canton Washington Township Vernon Hills Primghar Columbus East Peoria Westport Lyondell South Africa Minot Fairbury River Falls Ciba Geigy Oxy GC Lincoln Park Himont Woodville Iceland England Dearborn, MI Truman Alcoa Phillips Denmark Israel Clinton Twp Johnson Mundelein Lohman Rollins Mora	Hoechst Victoria Sauk Rapids Farmington Farmland Industries MacDill AFB Clinton Prescott Maine Yankee Alabama Power Rickenbacker AFB Marsh Electric Kenia Firestone Sikeston North Liberty Iowa City Fairmont Hamburg Windsor Dublin Middlefield, CT Coplay Cement Clatskanie Ottumwa, IA Dear Park, TX Broken Arrow, OK Texaco Saint James Parish Cain Chemical Farmington Colton Millstadt Savage Shakopee SCHW Chemical Randolph AFB Weyerhaeuser James River Corp Finland Sahlberg Columbiana Attica Kaufman and Broad Glenfalls Lovington Pak Tank Georgi Arabia Capital City Naval Weapons Apple Valley, MN South Central Wastewater Byron Health Center Conoco Arco Branson Galesburg Unocal Elliington British Petroleum Rollins Prot Services Howell Bondurant Hammermill Washington Stolt Glenfalls Soltex Navajo Savage Waite Park Winkelman Olin Tapoco Rohm and Haas US Navy Glastonbury, CT Benton Utilities Shell Oil Petersburg Coastal Javalina Sigourney Shell Western Carberus Pyrotechnics International Paper Carmel Fire Consumers Power Madison Township Little Rock, AR Diamond Intercontinental Terminals Lake St Louis Wauconda, IL Nixa Clive Urbandale Diaz Hoechst Woodville Oxy Chemical Amoco Oil Junction City Yoder Montgomery, AL University of Houston Inter Provincial Vepco Youngstown Saint Joseph Provo Spartanburg Belco Ontario Hydro Star Enterprises	Westchester Station Houston Wharton Police Akzo Chemical Mortongrove Boeing Gibsonburg Singapore Laughlin AFB Georgia Gulf Fort Orange Paper Fargo Windsor Locks, CT Keyenta Mobil Mining Formosa Plastics Reynoldsburg Hamilton Gahanna Multi Metals Golden Foods Oxford ICI Americas Elie, KS Longmont, CO Stone Container Petroleum Services Petroleum Services Oak Brook Terrace Washington Public Power Whitewater Pottlatch Coldwater Damar, KS North Canton Codel Miamiville Palco Zurich Woodston Stockton Marshfield Petro United Terminals Kayenta Boarding School Central Maine Power Liqi-Dri Spartanburg Lowell Troyer Labelle Mound Valley Oswego Marathon Oil Mobile County University of California-Berkeley Syracuse Junction City Genoa Coolidge Newton Falls Kendall Allied Arcadian Union Texas Petroleum Lyndhurst, NJ Osage City Tampa Vassar Carbondale Overbrook Koch Wallace College Virgin Islands Reycoc International B F Goodrich Fredonia Fort Rucker Union Camp Lafayette Greenland Commanche Fire Rhone Poulenc Chevron Independence, KS Lusk Avalon Fire Texas Brine Angus Arkansas Nuclear One Johnson City Huls America Seattle, WA Rye, NY Fire Dept Scandia Eaillville New Hartford Centerville Caroga Lake FD 94 Tampere Aristech Norfolk Naval Shipyard Signco Hiles Fire Dept Fort Rucker Mobil Chemical Abu Dhabi Baird - Maguire Agnes Scott College Dillwyn Correction Center JunctionCity Interprovincial Pipeline Ozark Fort McClellan Lyondel Polymers	Wellington Texaco Winnetka Marshall Port Alberni, BC Collinsville Osage City Pueblo Rico Moble County Detroit Tiger Stadium Graet Northern Paper James River Corporation Weston County Knoxville, TN Theodore Park Dexter Verndale Anniston, AL Mount Prospect WPS Carpenter Biron Pella, IA Mansquan Elie, KS Petroleum Services Exxon Hammermill Paper Citrus County North Spartanburg Formosa Plastics Madisonville Clive East Peoria, IL St John Fire Dept West Glens Fire Dept Rossmont Fire Dept Arlington Heights Fox Lake Fire American Maize Bolivar Trading Putnam Junction City Barking Sands Missile Range Rhone Poulenc Westchester Putnam Fire Dept Wauville Kelly AFB Tooele, UT Brush Camp Springs Holloman AFB Bexley Cabot Corp Pasadena B P Exploration East Baton Rouge Tesco Franklin Park Buckley ANG Lyondel Petrochemical Federal Paper Board Arco Chemical Georgia Gulf Tippy Hydro Clive Stolt, NJ Fort Morgan Aramada Township Transamerican Refining W R Grace Tuba City Bahrain Waldport Mexico, MO Arcadian Fertilizer Manzanita Powell Duffryn Occidental Chemical Ellsworth Newton, KS Baldwin Towers FD Harrisville, WV Georgiersville New Hartford Centerville Caroga Lake FD 94 Tampere Aristech Norfolk Naval Shipyard Signco Hiles Fire Dept Fort Rucker Mobil Chemical Abu Dhabi Baird - Maguire Agnes Scott College Dillwyn Correction Center JunctionCity Interprovincial Pipeline Ozark Fort McClellan Lyondel Polymers	Millford, CT FD Fossil Georgia Pacific West Des Moines, IA Boulder, CO Kentville Montgomery Adrian Township Buckley ANG Jicarillo Apache Applecrack Falcon AFB Colebrook, CT Umattila Brownsville Norfolk Shipyard Harrison Fire Dept Bighorn Basin Project University of Michigan Saint Charles County Scott Paper Groveport West Hanover Jewett FD Oatar TSI Controls Triad Chemical Page Co Caer Group Maraven Windsor Fort Rucker Mexico, MO Milton FD Meridian FD Camfield Minot, ND Sunnyvale Southern OH Correction Facility Andes FD Cape Vincent Scales Mound NASA Wadsworth FD Eastman Chemical Little Rock AFB Frontier Chemical Pine Ridge Hospital Rankin County Junction City Zeneca Litchfield Rankin County Mamaronck, NY Carlyle United States Enrichment Piedmont Honda Fina Oil - Chemical Rumball, IA Crofton Saudi Euro Petroleum West Stafford Lafayette, CO US Army Corp of Engineers 5Mount Prospect Fort McClellan Minot AFB North Branford East Peoria Dow Chemical Pleasant Hope Miami, OK Moody AFB Central Soya Amoco Las Vegas Water Pollution Mont Belvieu Pickaway Township Honda DSM Chemical Grace Davison Tuba City Bahrain Waldport Mexico, MO Arcadian Fertilizer Manzanita Powell Duffryn Occidental Chemical Ellsworth Newton, KS Baldwin Towers FD Harrisville, WV Georgiersville New Hartford Centerville Caroga Lake FD 94 Tampere Aristech Norfolk Naval Shipyard Signco Hiles Fire Dept Fort Rucker Mobil Chemical Abu Dhabi Baird - Maguire Agnes Scott College Dillwyn Correction Center JunctionCity Interprovincial Pipeline Ozark Fort McClellan Lyondel Polymers	Palisades Park Sidney, NE Talladega County Georgia Gulf Johnston, IA Oswego, IL Pelham - Batesville FD Beale AFB Oakwood, IL River Rouge Fire Dept St Johnsville Borden Chemical Saline County, AR Ball State University Newton Falls Corrugating Medium Mill American Axle Paxon Polymer Columbia County Wichita Falls Conrail, OH Charleston, MO American Axle Wilton Golden Bear Patrick AFB Mason County Hartland Park Reichold Chemical Carbide Graphite Great Falls Air National Guard Plaza Fire Dept Amoco Chemical Etowah County Aneth Boarding School Prince Sultan Air Base Barksdale AFB Nantahala Power & Light Bedford Fire Dept Coosa Valley United States Marine Corp. Forney, TX Northern Navajo Medical Center Hornel Foods Dry Ridge Fire Dept Grissom AFB Basis Petroleum F B Peck Hock Co Carthage, MO Altamont, KS St Clair County Selfridge ANGB Inland Paperboard & Packing Mustang, OK Dyess AFB York, AL Peoria County Bryan, OH North East Ohio Correctional Facility Pensian Gulf West Des Moines, IA Hutchinson Park Youngville FD Iberville Parish Northwestern State University Dassel Farmersville Hope Oil City Foley, MN St Louis, MI Elizabethtown Delano Seminole Tribe of Florida Rainbow Desloge Park Hills Tidoute Congersville Alsey Nepera Hewlett Bay FD Camp Tecumseh Carberus Pyrotechnics Rock Springs Nassau Co Dept of Corrections Nazline Boarding School Mississippi Chemical Norwood Park Fire Dept Carrollton Molten Metal Flour Daniel MacDill AFB Whiteford Fire Dept Ottawa Lake Fire Dept Northrop Grumman Soyanggang Dam Daechong Dam Choojngoo Hopkinton Fire Dept Carthage Lake Forest Allegheny County Costa Rica Grand Forks AFB Searcy, AR
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AMERICAN EMPLOYEES - AMERICAN MANUFACTURING - AMERICAN PRIDE!

WHELEN CORPORATE CAPABILITIES

DESIGN & ENGINEERING

The largest staff of Design Engineers in the industry! Many of our Engineers are Fire Volunteers and EMTs so they know first hand the critical need for life saving, innovative products.



3-D Product Design



Whelen's Professional Design Engineers



INJECTION AND VACUUM MOLDING

1600 molds, 38 molding machines from 30 to 2000 tons, 20 million parts produced every year. Vacuum machines produce irregularly shaped components not suitable for injection molding.



Injection Mold Making



3-D Tool Designs



1700 Ton Molding



3 Trimming Formed Parts Machines



5 Over Molding Electronics



38 Robotic Molding Machines



Die-Cast Tool Making



Aircraft Lens Mold Making

ELECTRONICS MANUFACTURING

Surface mount and through-hole circuit boards are manufactured, assembled and tested In-circuit.



14 Transformer Winding Machines



15 Cable & Wire Machines



5 Electronic Board Assemblies



12 Electronic Board Testing Machines



Electronic Assemblies



SMT Assemblies



Lightbar Production



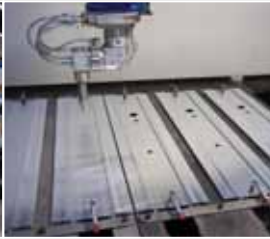
Automatic Robotic Cable Assembly

FABRICATION

Robotic and laser cutting and drilling, Robotic Bending Cells for stand-alone operation. All machine parts are produced and maintained by automated production machine shops in New Hampshire and Connecticut.



Five-Axis Laser



Cutting Center



4 Laser Cut Punch & Tapping Centers



8 Metal Forming Machines



Transformer Manufacturing



8 Wire Cutting, Stripping & Terminals Machines



Inventory



Automatic Kit Bagging

FINISHING PROCESSES

Hard coating of lenses and powder coating housings make them resistant to weather and abrasion. Metallizing reflectors adds reflectivity and helps prevent corrosion and oxidation.



Powder Coating



Moisture Proof Coatings



Silicone Hard Coating



5 Vacuum Metalizing Reflector Machines

PRODUCTION MACHINE SHOP

The production machine shop uses state-of-the-art milling machines, CNC lathes and screw machines to make the precision parts required for our products.



2 High Speed Screw Machines



Robotic Five-Axis 48 Pallet Milling Center



15 Milling and Turning Centers

AMERICAN EMPLOYEES, AMERICAN MANUFACTURING, AMERICAN PRIDE!



QUALITY CONTROL AND TESTING

Quality Control is maintained throughout the manufacturing process. Certified test labs on site facilitate product development and shorten lead times.



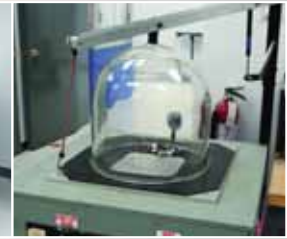
EMI



RF



Corrosion



Atmospheric



Rain



Vibration



Dust



Environmental



Photometric Chamber



Acoustic Chambers



Quality Control & Reliability Testing



REPAIR, SERVICE AND TRAINING

Whelen's Repair Goal is to get product repaired and back out the door to you within 24 hours. Authorized Service facilities are located around the globe. Training is available not only at the Chester Training Facility but at sites around the country. All Whelen Authorized Managing Sales Representatives and technicians return to the plant several times a year for new product introduction and advanced training.



Repair Service Technician



Electronics Technician



Technical Support



Chester Corporate Training Facility

2011 and 2012 were devastating years in terms of loss of life and property damage as a result of over 2,300 confirmed tornadoes throughout the United States. Billions of dollars worth of property damage and over 600 fatalities in all were reported.

In places like Joplin, MO; Smithville, MS and Henryville, IN, it was complete destruction. But in those areas as well as others, outdoor warning sirens were credited with saving thousands of lives.

From the Clarion Ledger Newspaper - April 28, 2011

Pam Hodges (from right) of Brandon and her son Brian Hodges of Smithville walk along U.S. 25 surveying damage from the EF-5 tornado that wiped out parts of the small Monroe County community Wednesday. Although Brian Hodges' home is a total loss, he glances up at an old tornado siren nearby, saying "That's what saved most of these people. That right there. The siren that talked."



Calhoun County, AL - April, 2011

A Whelen siren still stands after a devastating tornado.



Joplin, MO - May 23, 2011

Whelen Master Distributor Washington Electronics in Joplin, MO.





51 Winthrop Road,
Chester, Connecticut 06412-0684
860-526-9504 • 1-800-637-4736
Fax: 860-526-4784
www.whelen.com
iowsales@whelen.com

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