



**WHELEN<sup>®</sup>**

**MANUFACTURED IN AMERICA**

# **MASS NOTIFICATION PRODUCTS**

**MASS NOTIFICATION WARNING PRODUCTS**

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*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 is:

**A.I.D.™...ALERT, INFORM & DIRECT**

Which will eliminate confusion, restore order, and most importantly, save lives. 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.

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

**WARNING:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, visit [whelen.com/regulatory](http://whelen.com/regulatory).

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

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

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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



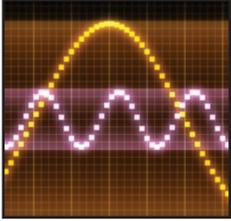
Military and Port Protection

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## A SINGLE SOURCE FOR DESIGN AND MANUFACTURE

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



## 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.



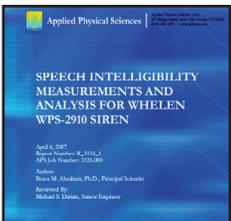
## ONLY FROM WHELEN, A LOW FREQUENCY SPEAKER DRIVER

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.



## 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.

## 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.

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FIND A DISTRIBUTOR

SEARCH  

**WHELEN MASS NOTIFICATION**

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? 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.



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**WPS-2900 SERIES**

The WPS2900 Series omni-directional voice product delivers clear, powerful voice communication.



**VORTEX™ SERIES**

The VORTEX™ provides an economical alternative for powerful tone communication without compromising quality.



**OMNI-ALERT™ SERIES**

The Battery Operated OMNI-ALERT™ Series siren system consists of a speaker assembly and electronics cabinet.

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## DETAILED PRODUCT INFORMATION

Visit [www.whelenmassnotification.com](http://www.whelenmassnotification.com) for more information.

## 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.whelenmassnotification.com](http://www.whelenmassnotification.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.

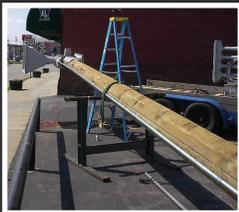
## CORPORATE CAPABILITIES

Available at [www.whelenmassnotification.com](http://www.whelenmassnotification.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.

## WARRANTY

Two-year, no-charge repair or replacement, and three-year extended flat-rate repair or replacement warranty are standard with all Mass Notification Products. To view our full warranty statement, visit [www.whelenmassnotification.com](http://www.whelenmassnotification.com).

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

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**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
- UL Listed

**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

Ten models serve a wide variety of applications as shown here in ratio to a person's size.



**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 28 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**

**E1000**

- 6 row by 40 character backlit LCD display
- 20 “HOT” call keys
- 4 time of day call key activations
- 2 remote input call keys
- Automatic system polling
- Base radio interface
- Channel grant input for trunking radio system
- Super Capacitor backup for time and date
- Rugged membrane keyboard
- Microphone for live public address
- Computer interface USB
- Speaker driver/amplifier status availability
- 28 RDVM message capacity
- 24 hour clock, day of the week, month, date, year, and standby message displayed when encoder is not in use
- May be used for mobile applications
- 18 function capability



**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**

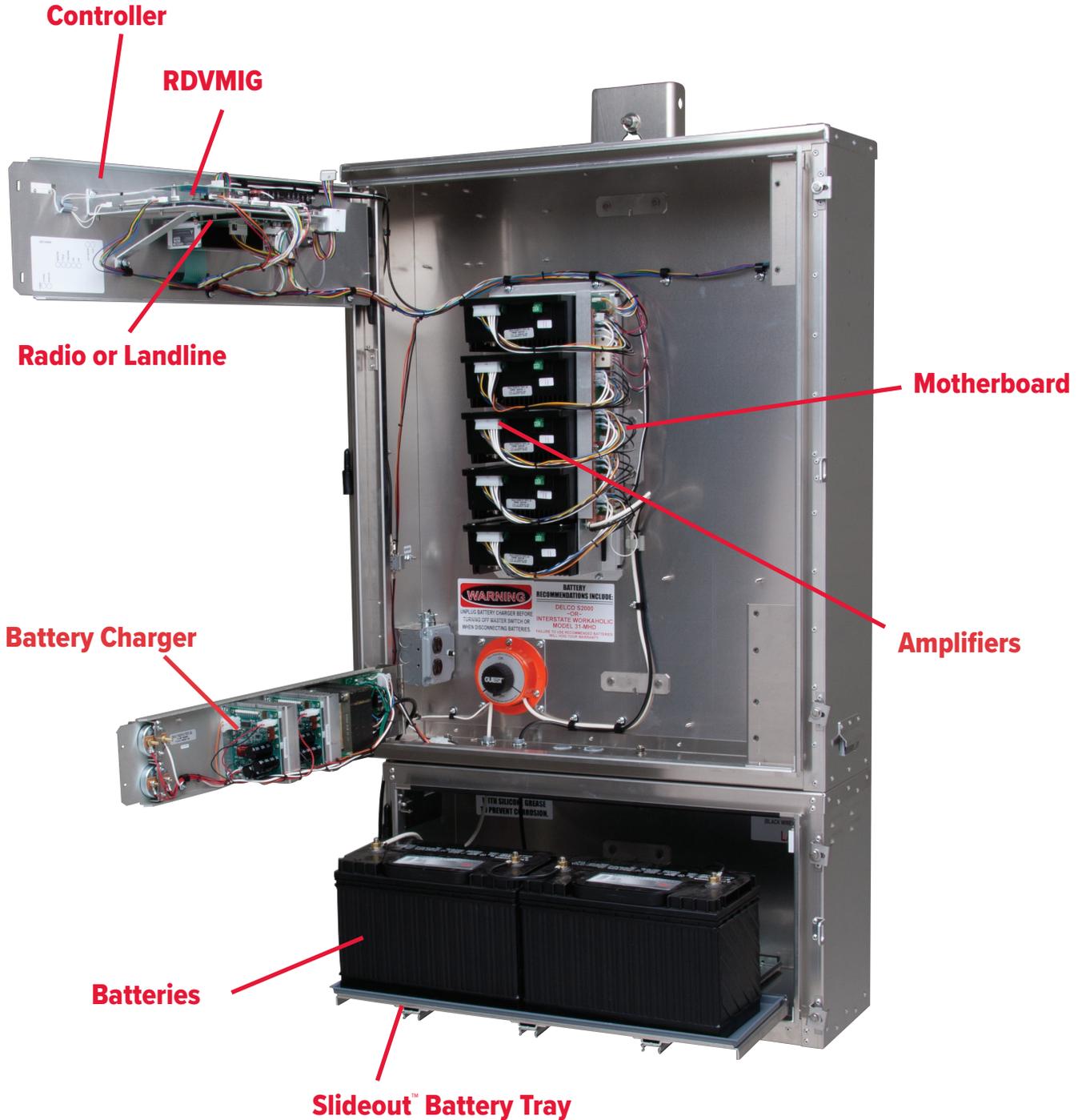
- Extends the reach of the Whelen system
- Addressable similar to a siren, it will react when receiving the DTMF signal just as a siren would
- Upon activation, it will sound a piercing alarm, flash an LED, and display one of 60 pre-programmed messages



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# 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.



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## 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

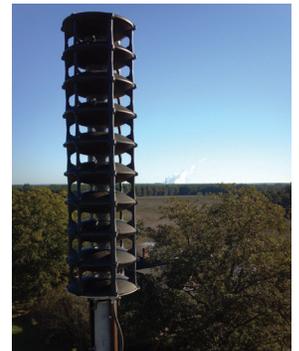
A sampling of installations



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](http://www.whelen.com) or your local source.



Over 26,000 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	Dundee Township	Hoechst	Star Enterprises	Glendale	Fort McClellan	Norwalk, IA
Florida Power & Light	Lake Charles	Westchester Station	Westchester Station	Bureau of Reclamation	Lyondel Polymers	Paducah Gaseous Diffusion
Point Pleasant	City of Lamont	Houston	Houston	Wellington	Milford, CT FD	Salem, WV
Consumers Power	City of Mount Vernon	Sauk Rapids	Wharton Police	Texaco	Fossil	VA Medical Center
Dillsboro	River Falls	Farmington	Akzo Chemical	Winnetka	Georgia Pacific	Palisades Park
Fort Osage FD	City of Johnson	Farmland Industries	Mortongrove	Marshall	West Des Moines, IA	Sidney, NE
City of Ankeny	Tyler Texas	MacDill AFB	Boeing	Port Alberni, BC	Boulder, CO	Talladega County
St Louis, MO	City of Sherburn	Clinton	Gibsonburg	Collinsville	Kentville	Georgia Gulf
Gasport FD	Kenai Alaska	Prescott	Singapore	Osage City	Montgomery	Johnston, IA
Salem ESDA	Independence Hill . . .	Maine Yankee	Laughlin AFB	Puerto Rico	Adrian Township	Oswego, IL
Fort Gatrot	City of Blue Earth . . .	Alabama Power	Georgia Gulf	Mobile County	Buckley ANG	Pelham - Batesville FD
Cowitiz County	Seabrook Nuclear	Rickenbacker AFB	Fort Orange Paper	Detroit Tiger Stadium	Jcarillo Apache	Beale AFB
Massapequa Fire	Duane Arnold Nuclear	Main Electric	Fargo	Great Northern Paper	Applecreek	Oakwood, IL
Mount Washington	Chehalis	Firestone	Windsor Locks, CT	James River Corporation	Falcon AFB	River Rouge Fire Dept
Detroit Edison	Campbell County	Sikeston	Kayenta	Weston County	Colebrook, CT	St Johnsville
Deep River, CT	Fort Ben Harris	North Liberty	Mobil Mining	Knoxville, TN	Umatilla	Borden Chemical
North East Utilities	Oskaloosa	Iowa City	Formosa Plastics	Theodore Park	Brownsville	Saline County, AR
Time Electronics	Foley	Fairmont	Reynoldsburg	Dexter	Norfolk Shipyard	Ball State University
Norwich, CT	Clovis	Hamburg	Hamilton	Verndale	Harrison Fire Dept	Newton Falls
Windsor, MO	Debacca County	J I Case	Gahanna	Anniston, AL	Bighorn Basin Project	Corrugating Medium Mill
City of Batavia	University Park	Southbury	Windsor	Mount Prospect WPS	University of Michigan	American Axle
Commonwealth Edison	Myrtle Beach	Dublin	Dublin	Carpenter	Saint Charles County	Paxon Polymer
City of Morgan	Polk County	Middlefield, CT	Oxford	Bliron	Scott Paper	Columbia County
Town of Guilford WS	Town of Guilford	Coplay Cement	ICI Americas	Bella, IA	Greenville	Wichita Falls
City of Long Lake	New Haven	Marshal	ERIE, KS	Manasquan	West Hanover	Conrail, OH
Linn County	I C I Americas	Ottumwa, IA	Longmont, CO	Opal	Jewett FD	Charleston, MO
City of Norway	Colfax 5	Deer Park, TX	Stone Container	Petroleum Services	Qatar	American Axle
City of Chetek	City of Sinton	Broken Arrow, OK	Petroleum Services	Exxon	TSI Controls	Witco Golden Bear
City of Wayne	Tulsa, OK	Texaco	Oak Brook Terrace	Hammermill Paper	Triad Chemical	Patrick AFB
Harrison Township	Libertyville	Saint James Parish	Washington Public Power	Citrus County	Page Co	Mason County
City of Mount Clemens	Southern Methodist	Cain Chemical	Whitewater	North Spartanburg	Caer Group	Hartland Park
West Coast Transmission	University	Farmington	Pottlatch	Formosa Plastics	Maraven	Reichold Chemical
Saline County	University Park	Colton	Coldwater	Madisonville	Windsor	Carbide Graphite
Poncianna Volunteer Fire	Myrtle Beach	Millstade	Damar, KS	Clive	Fort Rucker	Great Falls Air National Guard
Fulton Contracting	Fairwood	Savage	North Canton	East Peoria, IL	Mexico, MO	Plaza Fire Dept
City of Peck	Union Camp	Shah Tank	Lowell	St John Fire Dept	Minon FD	Amoco Chemical
City of Amery	Newark Township	SCM Chemical	Plainville	West Glens Fire Dept	Meridian FD	Etowah County
City of Saginaw	Harlen	Randolph AFB	Palco	Rosemont Fire Dept	Canfield	Aneth Boarding School
City of Staples	Saint Paul	Weyerhaeuser	Zurich	Arlington Heights	Minot, ND	Prince Sultan Air Base
O'Fallon	Fairbury	James River Corp	Woodston	Fox Lake Fire	Sunnyvale	Barksdale AFB
City of Jefferson	Union Carbide	Finland	Stockton	American Maize	Southern OH Correction	Nantahala Power & Light
City of McGeehee	Korea	Sahlberg	Shelfield	Bolivar Trading	Facility	Bedford Fire Dept
Portland General Electric	Washington Public Power	Columbiana	Petro United Terminals	Putnam	Andes FD	Coosa Valley
Palos Park	Monsanto	Attica	Kayenta Boarding School	Junction City	Cape Vincent	United States Marine Corp.
Lutgart	University of Colorado	Kaufman and Broad	Central Maine Power	Barking Sands Missile Range	Scales Mount	Forney, TX
Louisiana Power & Light	Schoolcraft	Glensfalls	Liqi-Dri	Rhone Poulenc	NASA	Northern Navajo Medical
Cleveland Electric	LaBarge	Lovington	Spartanburg	Westchester	Wadsworth FD	Center
Owensville	Lakewood	Elkington	Lowell	Eastman Fire Dept	Hartman Chemical	Harmel Foods
Olmstead County	Georgia Power	Saudi Arabia	Treynor	Maumelle	Little Rock AFB	Dry Ridge Fire Dept
Russellville	Aurora, CO	Capital City	Labette	Kelly AFB	Frontier Chemical	Grisson AFB
Sauget Waste Treatment	Turbitrol	Naval Weapons	Mound Valley	Tooele, UT	Pine Ridge Hospital	Basis Petroleum
Lafayette	Penwalt	Apple Valley, MN	Oswego	Brush	Rankin County	F B Peck Hose Co
North Mankato	Seymour	South Central Wastewater	Marathon Oil	Camp Springs	Junction City	Carthage, MO
Village of Dresser	Rush City	Byron Health Center	Mobile County	Holloman AFB	Zeneca	Altamont, KS
Clements	Cannon Beach, OR	Conoco	University of California-	Bexley	Litchfield	St Clair County
Sanborn	Consolidated Edison	Arco	Berkeley	Cabot Corp	Rankin County	Selfridge ANGB
South Lake Minnetonka	White Plains, NY	Branson	Syracuse	Padadena	Mamaroneck, NY	Inland Paperboard & Packing
Winona	LaPorte	Galesburg	Junction City	B P Exploration	Carlyle	Mustang, OK
City of Braham	Marquette Heights	Unocal	Genoa	East Baton Rouge	United States Enrichment	Dyess AFB
Lake Benton	Olin Corp	Ellington	Goodidge	Tesco	Piedmont	York, AL
Fairmont Public Utilities	E I Dupont	British Petroleum	Newton Falls	Franklin Park	Honda	Peoria County
UNC Nuclear	Allen County	Rollins Prot Services	Kendall	Buckley ANG	Fina Oil + Chemical	Bryan, OH
Limestone County Prison	Hobbs, NM	Howell	Allied	Lyondel Petrochemical	Rutland, IA	North East Ohio Correctional
Putnam Lake FD	S C Johnson	Bondurant	Arcadian	Federal Paper Board	Crofton	Facility
Lexington Fayette	Kentronics	Hammermill	Union Texas Petroleum	Arco Chemical	Saudi Euro Petroleum	Persian Gulf
Ann Arbor	El Dorado Springs	Washington	Lyndhurst, NJ	Georgia Gulf	West Stafford	West Des Moines, IA
Township of Almont	Himont	Stolt	Osage City	Tippy Hydro	Lafayette, CO	Hutchinson Park
Western Mich. Univ	St James Parish	Glensfalls	Tampa	US Army Corp of Engineers	Youngsville FD	Youngsville FD
Village of MetaMora	Exxon	Soltex	Vassar	Stolt, NJ	5MOUNT Prospect	Iberville Parish
Millwood Fire	Shelby Township	Navajo	Carbondale	Fort Morgan	Fort McClellan	Northwestern State University
Pennsylvania Power & Light	Sterling Heights	Savage	Olin	Aramada Township	Minot AFB	Dassel
Village of Reese	Light Park	Goodrich Park	Overbrook	Transamerican Refining	North Branford	Farmersville
Edinburg	Nalco Chemical	Winkelman	Koch	W R Grace	East Peoria	Hope
Village of Columbiana	Westfield	Olin	Wallace College	Zeneca	Dow Chemical	Oil City
Camp Westdale	Foni	Tapoco	Virgin Islands	Cirleville	Pleasant Hope	Foley, MN
City of Linn	Misquamicut, RI Fire Dept	Rohm and Haas	Reyco International	Kuwait	Miami, OK	St Louis, MI
City of Jackson	Allied Fibers	US Navy	B F Goodrich	J R Simplot	Moody AFB	Elizabethtown
City of Tacoma	US Dept of Energy	Glastonbury, CT	Fredonia	Argenta-Oreana	Central Soya	Delano
Montana Power	Westinghouse	Benton Utilities	Fort Rucker	Arizona Chemical	Amoco	Seminole Tribe of Florida
Village of Livingston	Brighton	Shell Oil	Union Camp	Cowlitz Power Plant	Las Vegas Water Pollution	Rainbow
City of Menemomie	Branson, MO	Petersburg	Lafayette	Pickaway Township	Mont Belvieu	Desloge
City of Jefferson	Livonia, MI	Coastal Javalina	Greenland	Honda	St Charles County	Park Hills
Ross Township Fire	Miner	Sigourney	Commanche Fire	DSM Chemical	Terra Nitrogen	Tidloute
Torrington	Canton	Shell Western	Rhone Poulenc	Grace Davison	Boulder, CO	Congerville
Proctor and Gamble	Washington Township	Cerberus Pyrotronics	Chevron	Tuba City	Moore's Park Dam	Alsey
Cheyenne County	Vernon Hills	International Paper	Independence, KS	Bahrain	Great Falls ANG	Nepera
Ackerman	Primghar	Carmel Fire	Lusk	Waldport	Frisco, TX	Hewlett Bay FD
South Lake Minnetonka	Columbus	Comsumers Power	Avalon Fire	Mexico, MO	National Trail Fire Dept	Camp Tecumseh
City of Louisville	East Peoria	Madison Township	Texas Brine	Arcadian Fertilizer	Kentucky Medium Mill	Cerberus Pyrotronics
City of Brecksville	Westport	Little Rock, AR	Angus	Manzanita	Standard Fire Protection	Rock Springs
Village of Manchester	Lyondell	Diamond	Arkansas Nuclear One	Powell Duffryn	District	Nassau Co Dept of Cor-
City of Saline	South Africa	Intercontinental Terminals	Johnson City	Occidental Chemical	San Diego Naval Sub Base	rections
City of Lake Charles	Minot	Lake St Louis	Huis America	Ellsworth	McCConnell AFB	Nazlini Boarding School
Tesoro Alaska	Fairbury	Wauconda, IL	Seattle, WA	Newton, KS	Avon Borough, NJ	Mississippi Chemical
City of Centralia	River Falls	Nixa	Rye, NY Fire Dept	Baldwin Towers FD	Brownsville, TN	Norwood Park Fire Dept
Green River	City of Gealy	Ciba Geigy	Belville	Harrisville, WV	Goodsville, TX	Carrilton
Sandia National Labs	Oxy NGL	Urbandale	Diaz	Gouglersville	Southern College	Molten Metal
City of Levelland	Lincoln Park	Himont	Belville	New Hartford	Carolina Eastman	Fluor Daniel
Multiguard Corp	Himont	Bellevue	Eka Nobel	Centerville	Spearhead Envotech	MacDill AFB
Town of Monroe	Woodville	Iceland	Seminole	Caroga Lake FD 94	Trumbull Correctional	Whiteford Fire Dept
City of Libertyville	Oxy Chemical	England	Newton Falls	Tampere	Exxon Chemical	Ottawa Lake Fire Dept
City of Saginaw	Amoco Oil	Dearborn, MI	Kiowa	Aristech	Quantum Chemical	Northrop Grumman
City of Sullivan	Junction City	Truman	Conway Springs	Norfolk Naval Shipyard	PPG Industries WPS-2800-2	Soyangkang Dam
City of Dallas	Yoder	Alcoa	Cessna Aircraft	Signco	, 3/11/96	Daechong Dam
Wheatland	Montgomery, AL	Phillips	Neodesha	Hiles Fire Dept	Nelson County	Choonjoo
American Cyanamid	University of Houston	Denmark	Indelpro	Fort Rucker	Farmers Branch, TX	Hopkinton Fire Dept
Oskaloosa	Inter Provincial	Israel	Long Lake	Mobile Chemical	St Marys Parish	Carthage
Jackson	Venco	Clinton Twp	Seba Daikai Boarding School	Abu Dhabi	Yulan Forest	Lake Forest
Mchord AFB	Youngstown	Johnson	Farmington, MO	Baird + Maguire	Midway Fire	Allegheny County
Harrison Township	Saint Joseph	Mundelein	Truro Township	Agnes Scott College	Grand Bayou	Costa Rica
Allen County	Provo	Spandanburg	Canal Winchester, OH	Dillwyn Correction Center	Metamora, IL	Grand Forks AFB
Nottoway	Spandanburg	Belco	Gabx Terminals	JunctionCity	North Richland Hills	Searcy, AR
State of Connecticut	Rollins	Mora	LaPorte	Interprovincial Pipeline	Cal Farleys Boys Ranch	
	Ontario Hydro		Stockton	Ozark	Selma, AL	

## 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.

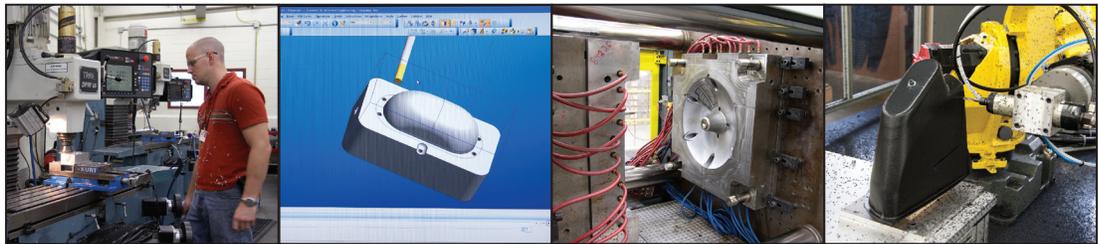


3-D Product Design

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.

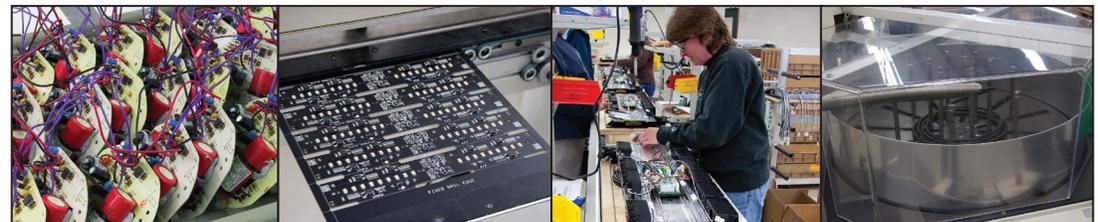


14 Transformer Winding Machines

15 Cable &amp; Wire Machines

5 Electronic Board Assemblies

12 Electronic Board Testing Machines



Electronic Assemblies

SMT Assemblies

Lightbar Production

Automatic Robotic Cable Assembly

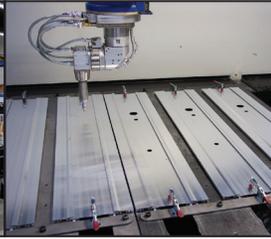
**WARNING:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, visit [whelen.com/regulatory](http://whelen.com/regulatory).

**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



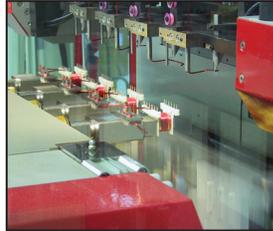
Cutting Center



4 Laser Cut Punch &amp; Tapping Centers



8 Metal Forming Machines



Transformer Manufacturing



8 Wire Cutting, Stripping &amp; Terminals Machines



Inventory



Automatic Kit Bagging

**FINISHING PROCESSES**

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



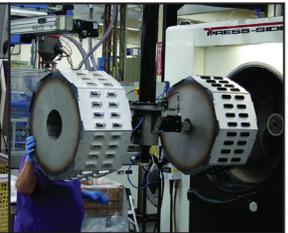
Powder Coating



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

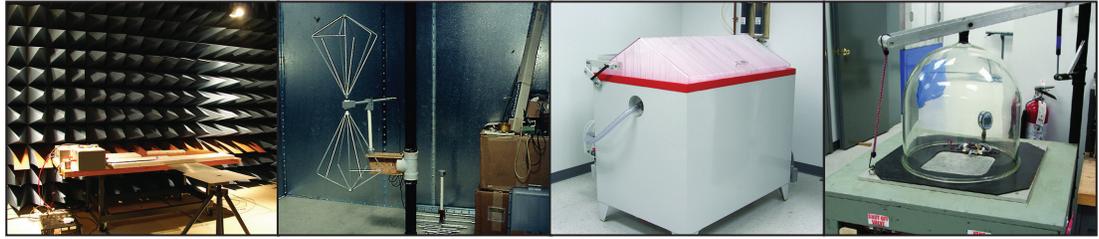


15 Milling and Turning Centers

**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 &amp; 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

**WARNING:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, visit [whelen.com/regulatory](http://whelen.com/regulatory).

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.



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# MASS NOTIFICATION PRODUCTS

## MASS NOTIFICATION WARNING PRODUCTS

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*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.*



@WhelenENG

