

All Hazard High-Power Siren System

The TWS290 Series is a highly reliable warning system with clear and intelligible voice capability that ensures excellent warning during any emergency.

SYSTEM FEATURES

- TWS 291 One **WHELEN** Omni-Directional Speaker Cell Assembled in a Vertical Column
- Aluminum Cabinet With Separate Battery Compartment
- 109dB(C) @ 100'
- TWS 291 Speaker Includes One High Efficiency 400 Watt **WHELEN** Speaker Driver
- 15 m Speaker Cable Included
- Battery Powered, Minimum of 30 Minutes of Full Power Output with Batteries of Our Recommendation
- AC Temperature Compensated 5 Amp Battery Charger
- Local Controls or Remote Controls
- One 400 W Power Amplifier
- Electronic Siren Controller
- Tone Generator
- Timer
- Local Control Push Buttons
- SI TEST®
- Low Battery Alarm
- Battery Tray
- Lightning Arrestor
- Six Standard Public Warning Tones - Wail, Whoop, Attack, Hi-Lo, Alert, Airhorn

SYSTEM OPTIONS

- **SBC80** - Solar Power#
- **TWSBATT** - TWS Approved Batteries
- Alternate Tone Set

NOTES:

Solar power option includes 2 x 80 watt panels, cables, mounting bracket and 24VDC solar regulator.

SIREN ACTIVATION CONTROLS

Our VHF High and UHF wireless siren activation control packages include the following:

- Radio
- Radio Interface
- Tone Squelch
- 0dB Gain Omni-Directional Antenna with Bracket
- 15 m of RG213 Antenna Cable Included
- Polyphaser
- Power Supply

Other features are dependent upon one or two way controls. TWS equipment can be interfaced with many different types of two-way communications products and systems including 800Mhz trunking, Motorola's MOSCAD, FSK, Narrow-Band and VHF Low Band Radio, GSM, and Fiber Optics. The following is available as standard options. Please contact manufacturer for special applications.

ONE WAY CONTROLS

- **AUXIN** - Auxiliary Board for Contact Closure Activation
- **D2020LL** - 10 Digit DTMF Landline Activation
- **TWSTT** - Two Tone Sequential Option

TWO WAY CONTROLS

- **AUXCS** - Two-Way Contact Closure Activation and Status Board
- **GV-LLM** - Giant Voice® Two-Way Landline Activation
- **GM340 VHF** - 10 Digit DTMF VHF: 136-174 Mhz
- **GM340 UHF** - 10 Digit DTMF UHF: 403-470 Mhz

OPTIONS:

- **FSKXMOD** - Converts the Siren Activation Controls to FSK Format
- **STATUS** - Cabinet Window LED Status Indicator
- **GV-PGINT** - Giant Voice® Paging Interface to Interface Whelen Tones with Existing Paging Systems
- **INTRU** - Intrusion Alarm (available with two-way only)



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Two Compartment
Electronics Cabinet



TWS 291

Component	Height cm (inches)	Width cm (inches)	Depth cm (inches)	Weight kg (lbs.)
TWS 291 Speaker	51,8 (20,4)	84,8 (33,4)		48,6 (107)
Electronics Cabinet	85,0 (33,5)	58,0 (22,8)	32,0 (12,6)	53,1 (117)*

*Less batteries. Two batteries: 12V, sealed, lead-calcium, add 24 kg pr. battery

Electrical

- Battery Charger Input: option of 120 VAC 60Hz 7A fuse or 240 VAC 50Hz 5A fuse
 - Battery Charger Output: 28VDC, 5A#
 - Batteries: 2-12V, AGM sealed (not included)
 - Standby Current: 40mA,
 - Operating Current: 22A, 24VDC
 - Power Amplifier Output Power: 400 watts during tone / 500 watts during voice
- # U.L. Recognized Component

Environmental

- Operating Temperature: -35C to +60C
- Storage Temperature: -65C to +125C
- Humidity, Non-Condensing: 0 to 95%

Ordering Information

BASIC SYSTEM INCLUDES ALL OF THE FOLLOWING:

- **TWS 291** - Speaker Assembly & Electronics Cabinet.
- OPTIONS:
- **AUXIN** - Auxiliary Board for Contact Closure Activation
 - **AUXCS** - Auxiliary / Status Control Board for Contact Closure Activation and Status
 - **D2020LL** - One Way Landline Control
 - **GV-LLM** - Giant Voice® Two Way Landline Control / Status Monitoring
 - **GM340 UHF, GM340 VHF** - Two Way Radio Control / Status Monitoring, COMM/STAT™
 - **TWSTT** - Two Tone Sequential
 - **FSKXMOD** - FSK Format
 - **STATUS** - Cabinet Window LED Status Indicator
 - **GV-PGINT** - Giant Voice® Paging Interface to Interface Whelen Tones with Existing Paging Systems
 - **INTRU** - Intrusion Alarm
 - **SBC80** - Solar Power*
 - **TWSBATT** - One Pair of Batteries

NOTES

10 digit DTMF Controls • Landline • VHF wireless link: 136-174 Mhz • UHF wireless link: 403-470 Mhz. Our VHF and UHF siren activation control packages include tone squelch, radio, radio interface, power supply, polyphaser, 0dB gain omni-directional antenna with bracket, and 15 m of RG213 antenna cable.

* Solar power option includes 2 x 80 watt panels, feed cables, mounting bracket and 24VDC regulator.

Acoustic Performance

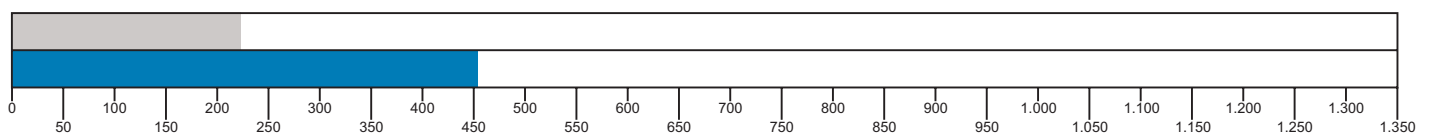
SPL @ 30 m: 109dB(C)

Estimated 80dB range: 228 m

Estimated 70dB range: 457 m

Note: 30 m performance levels listed represent repeatable results within +/-2dB to stated levels.

Estimated 80dB perimeter is based on the Federal Emergency Management Agency's (FEMA) -10dB per distance doubled path model.



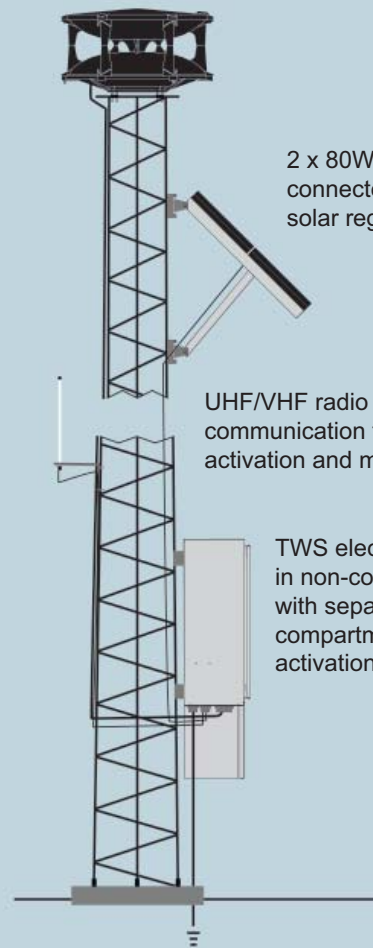
PUBLIC WARNING PRODUCTS

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HSS Engineering is the Master Distributor for
Whelen

Speaker array in
non-corrosive and
non-conducting
polycarbonate



2 x 80W solar panels
connected to 24VDC
solar regulator

UHF/VHF radio
communication for system
activation and monitoring

TWS electronics cabinet
in non-corrosive aluminum
with separate battery
compartment and local
activation touch pad

**TWS291 SIREN WITH
SOLAR POWER AND RADIO LINK**