



RadioSTAT

Portable Emergency Advisory Radio Station



During public health and safety emergencies, take a RadioSTAT Portable Emergency Advisory Radio Station into critical areas and speak directly to citizens via standard radio receivers.

RadioSTAT can be a lifesaver, allowing the broadcast of critical instructions and information regarding . . .

- Disasters/Evacuations.
- Medical Emergencies (hospital surge, points of distribution field information, quarantine isolation, decontamination).
- Terrorist/Shooter Incidents.
- HAZMAT and Traffic Information.
- Critical Public Safety Instructions.
- Road Construction/Infrastructure Failures.
- AMBER Alerts.

RadioSTAT is built for speed and portability. All electronics are housed in an easy-to-transport, high-impact, weather-resistant case. The quick-erect antenna system folds down for transportability. The entire system may be set up in 10 minutes by one person.

RadioSTAT is a FCC-licensed service. Operate one or more RadioSTAT units within a specified territory such as a city, county or state. The signal is typically announced to the public by FASTrack or other portable signs, positioned at the periphery of the coverage area.

RadioSTAT broadcasts may be received on standard vehicle radios over a 3-5 mile range (25-75 square miles).

The stations are priced affordably so that multiple units can be deployed simultaneously at different locations during an emergency as required.

During nonemergency times, RadioSTAT operators may operate from a fixed location using an optional Vertical Profile Antenna



System. This helps familiarize citizens with the frequency as well as affording added protection for the frequency. The broadcast of allowable travelers information messages is allowed during nonemergency times.

RadioSTAT's portability becomes an instant asset during emergencies, allowing reestablishment of the signal from a new location quickly. RadioSTAT's portability also makes it especially useful at large public gatherings for broadcasting key information, such as: schedules, traffic, parking, safety and critical instructions for patrons approaching or exiting.

RadioSTAT programming may be controlled using flash drives through its USB port and may also be uploaded via Ethernet from a network or a laptop computer. If you operate RadioSTAT at a fixed location when it is not required in the field, the network capability makes this asset all the more valuable.

Key Advantages

1. Station operators are in full control of the communications medium and do not need to pay any third-party companies continuing service, carrier or activation fees. Importantly, this eliminates any third-party reliability issues during emergencies when the service is required.
2. When the AC grid goes down, RadioSTAT can still be working. Most RadioSTAT stations are operated on a generator or battery pack, and most receivers are in vehicles that have batteries.
3. AM radio methodology has been active for 80 years and is not likely to be supplanted by newer technology in the near future. RadioSTAT should function for many, many years for the public benefit.
4. Citizens do not need to purchase special devices to receive RadioSTAT messages.
5. RadioSTAT stations allow public officials to speak directly to drivers without distracting them with text-messages on portable devices.
6. Radio messages vastly supersede text services in the sheer amount of information and level of detail that may be delivered efficiently. The verbal medium also allows officials to speak to the public in a natural, person-to-person way, which may be comforting during an emergency.
7. RadioSTAT stations may operate at fixed locations and/or be deployed to emergencies on a temporary basis.

When it really counts, put public health and safety information on the air stat . . . with RadioSTAT.

The RadioSTAT package includes . . .

- Transmitter/Message Player/Test Equipment in Portable Shock Case.
- Portable Antenna System and Stand with Stabilizing Sand Bags, Coaxial Cable and Setup Tools.
- 6 Flash Drives in Carrying Case.
- Live Microphone/Cable.
- Equipment Pouches & Stowing Bags for Mics, Cables and Antennas.
- Customizable Equipment Management Tags.
- Illustrated Instructions/Training DVD.
- Setup Tools.



Options

- ... PowerSTAT - portable power source for RadioSTAT.
 - ... Audio Management Software & Recording Headset/Mic.
 - ... Additional Flash Drives.
 - ... FCC Licensing Service.
 - ... Fixed Antenna System.
 - ... Antenna Height Extender.
 - ... Onsite Training.
 - ... Professional Message Recording Service (complimentary to AAIRO members for general messages and commissioned for event-oriented messages; see www.AAIRO.org regarding free membership in the nonprofit American Association of Information Radio Operators).
 - ... FASTrack Quick-Erect Sign.
- Free 24/7 Remote Technical Support for the Life of the Product.

"We tested our system,...and it exceeded our expectations. It had a solid 5-mile range and an intermittent 10-mile range.... We intentionally located the antenna in a non-ideal area for the...test. Thanks for a great product."

Paul Davis
Citrus County Health Department
Lecanto, Florida

Quote

Bill Baker (bill@theRADIOsource.com, phone 616.772.2300, extension 102) can provide a formal quote based on your application(s). An illustrated instruction manual comes with the product, and ISS offers technical support for the life of the product 24/7 at no extra charge. Visit www.theRADIOsource.com or scan the below QR tag with your phone to go directly to our webpage.



Planning Steps

Step 1: Order a frequency search.

Contact ISS to order a frequency search. Just provide the geographic area where the system might be operated. This no-charge service includes the license-application work, as well, once you decide to move forward. ISS will develop a list of available AM frequencies and send it to you with our suggestions and instructions on how to monitor them.

Step 2: Survey onsite listening.

Survey the highways where listening is required with an automobile digital AM radio tuned to your candidate frequencies. Monitor all of the candidate frequencies throughout the listening areas at least once during daylight hours and at least once after dark. Report your results to ISS, using the short form provided.

Step 3: Choose an operating site for coverage.

For best coverage, the immediate location should be free of tall objects that will “crowd” or overshadow the antenna. This includes tall buildings, trees, terrain features, lighting, power and communication poles and towers, overpasses and highway signs. Make certain that there is a 20'-by-20' area of open ground to set up the station's antenna and deploy the portable groundplane.

NOTE: Steps 3 & 4 apply also to planning a fixed, semi-permanent location for operation of the RadioSTAT station during non-emergency times.

An optional Vertical Profile Antenna System (VP9000) is available if you'd like the station to be in a fixed location all or part of the time. Only one square foot of open-ground area is needed for installation. All wiring is inside the pole. The VP9000 is aesthetically pleasing, highly secure, and is the only antenna solution that meets hurricane wind standards in all parts of the United States. It can be installed near a building or in isolation. Requirements: There should be no underground obstacles or structures taller than 25 feet in the immediate vicinity of the antenna. 120 volts of AC power and telephone service or, if remote control via a network is desired, make certain that network service is also available. (Note: although RadioSTAT can operate via Ethernet connection, it may also be programmed locally through its USB port. In that case, no network lines would be required at the site.)

Step 4: Choose a specific location for your RadioSTAT station.

For best coverage, the immediate location should be free of tall objects that will “crowd” or overshadow the antenna. This includes tall buildings, trees, terrain features, lighting, power and communication poles and towers, overpasses and highway signs. Make certain that there is a 20'-by-20' area of open ground to set up the station's antenna and deploy the portable groundplane.

Note: Steps 3 and 4 apply also to planning a fixed, semi-permanent location for operating the RadioSTAT station during non-emergency times.

Step 5: Complete a FCC License Application.

Request from ISS the RadioSTAT FCC License Questionnaire, which gives ISS the information needed to prepare and submit the 10-year FCC license application on your behalf. On the questionnaire, you are asked to provide information on your antenna operating territory and any fixed locations, your frequency choice and required names and addresses. The FCC typically takes 3 to 6 months to process it and grant the authorization. While waiting for the 10-year license to be granted, you may procure the equipment, if you wish.

IMPORTANT: You must have a FCC license in hand to operate. Special Temporary Licenses (STA) might also be available from the FCC, if immediate operation is required. ISS will assist you in requesting it. The FCC grants these licenses as secondary to standard AM broadcast stations.

Step 6: Consider equipment, options and services.

Contact Bill Baker (bill@theRADIOsource.com), if you need prices or submit the following information to obtain a quotation.

Checklist for Receiving a Quotation:

Provide to ISS the following details, so a precise quotation can be provided:

- ✓ Your name, agency, phone and fax numbers; email address, if desired.
- ✓ Review options on the pricing sheets and include them, as desired.



Technical Specifications

Broadcast Control Electronics



Transmitter

- 0-10-watt operation, Class D, high efficiency output; internal components rated to 3 times operating wattage, utilizing 2 output devices.
- Federal Communications Commission certified for Travelers Information Service in the United States under Part 90.242., Certification Number B7MTR-6000TIS-WB.
- Approved for military use on 510-530 kHz, 1610-1700 kHz - Certification: J/F 12/07677.
- Single-board design with all RF, power and audio circuitry.
- Integral LED wattage and VU reference meters.
- Remote broadcast monitoring control.
- Synthesized frequency selection, compander-style audio processing.
- Defeat-able LED operation to save power.
- 24 VDC, fully regulated power supply.
- 530 to 1700 kHz AM frequency range.
- Frequency stability +/-20 Hz.
- Continuously adjustable power and audio modulation controls, externally accessible on front panel.
- Tune-able series filter on RF output.
- Audio distortion: less than 1.2%, 100 Hz to 3 kHz.
- Noise level: 70 dB below 95% modulation level, 100 Hz to 3 kHz.
- Modulation: 99%, -40 dB to +20 dB.
- Temperature: -40 to +85 degrees Celsius.
- Humidity: 95 percent (non-condensing).
- External audio, power and synchronization inputs.
- External PL-259 UHF style RF output and 1/4-inch audio headphone output driven by detector circuit to provide positive modulation indication.
- Rack, panel or shelf-mountable cabinet.
- Slim-line design (1.75 inches high by 17 inches wide by 9 inches deep); 4 pounds.
- Mean time between failure: in excess of 60 years.
- Estimated product life: in excess of 30 years.
- Power surge arrester: high speed, high capacity.
- IPC-610 certified.
- Manufactured in compliance with Class-3 wavesolder standards.

Test Equipment

- Wattmeter and dummy load for antenna tuning and system diagnosis.

Digital Message Player

- Memory format: "Flash" – no battery backup required.
- Audio outputs: 8 or 600 ohms.
- File format: MP3. (64-128 kbps recommended).
- Auto reboot on power outage.
- Optional audio management software, PC microphone and headset (software not required for message transfer function).
- Compatibility: Windows or Mac-based computer.
- Power: 12VDC/800 ma.
- Local operation via USB:
 - Memory storage: external – limited by flash drive capacity.
 - Message loading: removable USB flash drives; 6 provided; drag-and-drop MP3 messages from PC USB port.
 - Up to 1,023 messages, auto rotation.
 - Message sizes: variable.
 - Message order: continuous sequential message play based on file loading order.
- Remote operation via a network:
 - Ethernet (RJ-45 Port).
 - Audio upload via LAN/WAN.
 - Memory storage: internal – single 20MB (21 minute) message.
 - Built in GUI allows audio file upload, assignment of static IP settings.
- Weight: 3 lbs (boxed).
- Dimensions: 2"x7"x4" wall unit; 2"x19"x4" rack unit.

Live Mic

- Shure vocal microphone, 20-foot cable, XLR connectors.
- Live mic jack/switch.

Portable Shock Case

- Shock and Mil-spec certified waterproof.
- Indoor or outdoor use.
- Weather-resistant power and coaxial ports.
- Key lockable.
- Low-profile, retractable pull handle.
- Built-in wheels.
- Gasket-protected front and rear doors.
- Snap-down, trigger latches.
- Electronics pre-installed, rack mounted (front).
- Internal black Cadura Nylon microphone/cable/flash drive pouches (rear).
- External AC and coaxial connectors.
- Size: 23" high by 28.25" wide by 30.5" deep (doors on) or 21" deep (doors off); 68 pounds.



Antenna and Groundplane System

Antenna

- Whip-style antenna, between 15 and 25 feet long; maximum 2.0-inch OD, tapering to 0.5 inch.
- Aluminum construction, black finish color to discourage ice buildup; UV resistant finish; architectural anodization process #801.
- Stainless-steel tuning tip and assembly hardware.
- Wind rating: antennas 1230 kHz and above 100 MPH; 80 MPH with 1/4 radial ice; antennas 1220 kHz and below 80 MPH; 50 MPH with 1/4 radial ice.

- Total antenna system weight: 18-20 pounds depending upon antenna needed for frequency.
- Stowed size: 1-by-1-by-6-foot area.

Portable Antenna Stand and Arrestor

- Antenna stand: folding, quick-erect, aluminum; 26 pounds, 65 by 11 by 9 inches.
- Antenna mounts and hardware.
- 4 empty sandbags for weighting the antenna stand.
- Integrated RF lightning arrestor:
- Capacity: 50,000-amps surge.
- Clamping speed: fewer than 2.5 nS.
- 2 UHF connectors.
- Aluminum flange ground connection.

Groundplane

- Patented, factory-assembled, flexible antenna groundplane (30 elements, 10-foot radius).

Coaxial Cable

- 2 sections 50' each, 50 ohm with joining connector.

Carrying Sleeves

- 2 black Cadura Nylon carrying bags with straps: 1 for antenna, 1 for coaxial cable and groundplane.

Setup Tools

- Includes 10-inch crescent wrench, 12-inch crescent wrench, 1/8-inch hex wrench, 7/16-nut driver, slotted screwdriver.

Overall Station Specifics

Total System Weight

- 120.5 pounds.

Utilities Required

- 110 VAC, single-phase/50/60 Hz, less than 1 amp AC operating current (20-Amp breaker).

Training Materials

- Illustrated instructions.
- Training DVD.

System Options



Audio Management Software

- Audio management software with these system requirements for customer-provided PC or laptop.
 - Intel Pentium 4 (1.4 GHz for DV, 3.4 GHz for HDV); Intel

Centrino; Intel Xeon (dual Xeon 2.8 GHz processors for HD); or Intel Core Duo or compatible processor (SSE2-enabled processor required for AMD systems).

- Microsoft Windows XP Pro or Home Edition with Service Pack 2 or Windows Vista Home Premium, Business, Ultimate, or Enterprise (certified support for 32-bit editions only).
- 512 MB of RAM (1 GB for DV playback, 2 GB for HDV and HD playback).
- 10 GB of available hard-disk space (when used with Loopology DVD).
- DVD drive.
- 1280-by-900 monitor resolution with 32-bit video card and 16 MB of VRAM.
- Microsoft DirectX- or ASIO-compatible sound card.

Mic/Headset for recording.

- USB behind-the-head stereo headset, compatible with Microsoft Windows and Macintosh:
 - Speaker driver size: 36 mm diameter.
 - Speaker frequency response: 20 Hz-20kHz.
 - Microphone frequency response: 100 Hz to 8 kHz.
 - Cable length: 9.5 feet (3.5 mm plugs).
 - Plug into sound card.



Optional Fixed, Vertical Profile Antenna System

- Space requirement: less than 1 square foot.
- RF grounding element: 4-foot length; integral to support pole.
- Lightning ground: 8-foot groundrod, copper clad.
- Support pole composition: aluminum, 6-inch OD, .3125-inch wall thickness.
- Support pole length: 24 feet.
- Support pole finish: powder coat, silver/gray.
- Support standing height: 18 feet above grade; 6 feet below grade.
- Wind: hurricane rated. 1400-1700 kHz, support pole exceeds Florida Dade/Broward County windload requirements with attached antenna, greater than 146 mph/3-second gusts. 530-1390 kHz, support pole meets and exceeds Florida windload requirements with attached antenna, 130 mph/3-second gusts. (Florida Building Code – 2001).
- Internal components: RF lightning arrestor, grounding bus, coaxial feedline.
- External components: threaded attachment for antenna mount, weatherproof service hatch with tamperproof hardware, crane hook.
- Frequencies: 530-1700 kHz.
- Compliant with ANSI/TIA-222-G-2005 standard (Class III, Category 4, Exposure D) 130 mph/3-second gust for 1400-1700 kHz when installed in soil types per Annex F of the standard.



- **Optional Additional Audio Management Software**
- **Optional Recording Services**

Optional Companion Product



Optional PowerSTAT Portable Power Source

- Modes of operation: inline power supply and rechargeable battery/inverter system.
- Weight: 210 lbs.
- Case size: 23" high by 28.25" wide by 30.5" deep (doors on); 21" deep (doors off).
- Vibration: shock resistant.
- Mechanisms for portability: 2 handles require 2 persons minimum to lift; 1 retractable tow handle and wheels require one person to pull.
- 2 security doors: 4 TSA latches each lockable.
- Moisture tightness: water resistant.
- Max electrical wattage/amperage output: continuous 2.0kW/15A @ 40° C max ambient; surge 4.5kW/37A for 5s.
- Electrical wattage/amperage input when charging and when idle (no load): max 840W/7A; idle 60W/.5A.
- Battery capacity in AH: 160AH.
- Number and style of batteries: 2 - M24 gel.
- Recharge time with fully discharged batteries: 10 hours.
- Information available on display: AC voltages and amps in and out; DC voltage and amps in and out; configuration details.
- Breakers and fuses: output powers 15A; battery breaker 300A; display panel fuse 1A AGC.
- Inverter/charger: CSA/NRTL approved to CSA 107.1, UL458 (including Marine Supplement) and UL1741; complies with ABYC recommended practices E-8, 9, A-20 and A-25 for marine use; compliance to KKK-A-1822D for use in 'Star-of-Life' ambulances, available on request.
- Certification: all components are UL listed.
- Electrical charge modes: AC input; operating voltage range = 90-135 VAC; nominal current = 15AAC @ 100A charge 120VAC in; power factor (100A charge, 120VAC in) = ≥ 0.98 on sine input.; nominal frequency = 60Hz.
- AC output; outlet = duplex (1) medical grade.
- DC Output: nominal voltage = 12.0 VDC; min battery charging voltage = 0.0VDC; max output voltage = 17.5VDC; nominal output current = 50A @ ≤ 15.0 VDC; equalize mode max current = $\geq 10A$ @ ≤ 17.5 VDC; charger current derating = automatically lower charger current as internal temp exceeds 80°C, input VAC approaches low transfer and AC input current approaches 80% of breaker setting; efficiency at nominal output = $\geq 84\%$.
- Other: battery type settings = gel, flooded, AGM, Pb-Ca; battery size settings = 50-2000 Ahr; charge algorithms = custom 3-stage with factory default set points. Custom 2-stage as above; manually engaged, equalize, with factory defaults. CV/CC. user programmable set points; independent battery banks = 1; temperature range = -20C to +60C - operating*; -40C to +60C - storage; *derating above 40C; battery life = 4 to 5 years (750 to 1000 cycles).

- **Optional Antenna Height Extender**
- **Optional Additional Flash Drives**
- **Optional Additional Computer Mic/Headset**

FASTrack Quick-Erect, Portable Sign

- NCHRP-350 approved for use on rights-of-way and FHWA/NFPA approved for use at emergency scenes.
- Flexible vinyl, ultra-reflective (fluorescent pink, orange, yellow or green) sign panels.
- Custom lettering with changeable text overlays.
- Light-weight aircraft aluminum and coated steel stand, rated to withstand 60 MPH wind gusts.
- Carrying bag that holds assembled sign.
- Setup time: 20 seconds, no tools required.



Exclusive Features

Information Station Specialists (ISS) is the sole provider in the United States of the exclusive RadioSTAT Portable Emergency Advisory Radio Station. Other specific-area radio systems cannot perform any of the following important functions:

1. Only ISS provides strictly radio system components manufactured in the United States.
2. RadioSTAT is the only system of its kind that is comprised of a transmitter/audio system mounted in a weather-resistant shock case to allow maximum in portability (via handles/wheels) and flexibility (it may be used on the ground or on a building roof).
3. Only the RadioSTAT Portable Emergency Advisory Radio Station features black antennas that discourage ice build-up. Also, they are finished with a special UV-resistant, architectural-anodization process to prevent color fading.
4. Only the the RadioSTAT Portable Emergency Advisory Radio Station includes a USB/MP3-based Digital Message Player and includes audio editing software to allow message creation and management on any standard PC or laptop.
5. Only the the RadioSTAT Portable Emergency Advisory Radio Station features a quick-erect antenna stand to support the antenna and connected groundplane that collapses and can be deployed within 10 minutes.
6. Only RadioSTAT uses an AM transmitter with a modern synthesized frequency system, so that if a frequency change ever be necessary, it can be easily done without component changes or board-level work. RadioSTAT's TR6000 Transmitter utilizes an efficient Class D amplifier, comprised of only two driver devices for highest reliability. Moreover, TR6000 is the only such unit manufactured and type-accepted for Travelers Information Station (TIS) applications in the United States.
7. Only ISS offers no-charge message-recording services by professional announcers.
8. ISS electronic designs are nonproprietary, using standard 19" rack-mount hardware for ease of substitution and service. This means that in the future, you may change out components, as needed without the requirement to return to ISS; *i.e.*, simple wiring diagrams are provided, so you can service equipment yourself, if you choose, or have a third party assist – all with full ISS support.
9. Additionally, only Information Station Specialists offers technical assistance for the life of the product. ISS supports today radio stations that first went on the air in the 1980s. ISS' staff of engineers has more than 80 years of combined experience specifically in the kind of radio technology under which RadioSTAT operates (FCC Rules, Part 90.242). This experience level is more than double that of any other company in the business.

About Us



Founded in 1983, Information Station Specialists is the nation's sole domestically owned source for Information Radio Stations, Advisory Signs and associated power sources used to broadcast safety and service messages to motorists, and the only source providing a product entirely made in America. For a corporate overview, visit www.theRADIOsource.com.

More than Products . . .

- Project planning assistance.
- Searches for available frequencies.
- FCC field studies and licensing.
- System integration/customization.
- Installation.
- Training and operation instructions.
- 24-hour technical support.



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US Patents: PowerPlane "Flex" Factory-Assembled Groundplane (#5,495,261), Vertical Profile Antenna System (#7,027,008)
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