



SACOM Mission-Critical Reliability

SACOM Mission-Critical Audio takes reliability to the next level. It means systems redundancy, automatic scheduled maintenance and monitoring and real-time system-fault alerts. It is the belt and suspenders method that makes certain your system works when you need it, and it is only available from SACOM.

Hardware Redundancy: Whether it is an awards ceremony, the annual stockholders address, or any other critical meeting, assign two system channels as a redundant pair for Mission-Critical Reliability. Simply assign two independent receiver channels as a redundant pair using SACOM Remote. Sync a transmitter to each redundant receiver and then double-mic the presenter. That's it. The system now automatically monitors the two independent channels and seamlessly switches if the active channel experiences a bad battery, broken cable, RF interference, or any other fault. The system sends an email notifying the technician which system failed and why.

Automatic Reliability Monitoring and Email Alerts: SACOM receivers connect to any PC computer via Ethernet, USB or RS232 to run the SACOM Remote Software included with every system. One feature of the software automatically sends an email alert whenever there is a system fault or when scheduled maintenance is required. In one typical case, the person in charge of a campus building would receive this email: "SACOM Alert: The batteries in transmitter 11, in Swanson Hall, Room 327, are expected to fail at 13:30." The software gives the tech office full control over which alerts are sent and who receives them.

Batteries: The least reliable component of any wireless microphone system is the batteries. Mission-Critical Audio solves battery vulnerability five ways:

- 1. Standard Off-The-Shelf Batteries:** Many conference room systems use built-in lithium batteries that cannot be replaced in the field. When these batteries reach their end of life, the transmitters have to be shipped back to an authorized service center for expensive replacements. You do not have to accept postponed meetings or the extra cost to fly in emergency replacements. Mission-Critical Audio means the transmitters work today, all day, no matter what.

SACOM transmitters operate with standard AA batteries available at every corner convenience store or hotel gift shop. The transmitters are designed around rechargeable NiMH batteries, however standard, non-rechargeable alkaline batteries work just as well (but not better).

You don't need a service center to change the batteries. Just open the battery door and pop in a fresh set.

- 2. Automatic Scheduled Maintenance:** SACOM Remote software automatically monitors the performance of the batteries and emails alerts to technicians when the batteries are approaching their end-of-life, but before they fail.
- 3. Docking Station:** Hand-held, belt-pack and table top transmitters recharge in the SACOM docking station. Transmitters typically recharge over night, but they can remain in the dock, fully charged,

until the next time they are needed. Gooseneck microphones use an external power supply. The system will not try to charge alkaline batteries if they are accidentally set in the docking station.

- 4. External Power Supplies (PSU):** Some microphones, like podium mics, are fixed in place. In these cases, take the batteries out and power SACOM transmitters with the PSU to eliminate the audio cable.

The PSU can be used to recharge the batteries in lieu of the docking station, and the transmitter still works while it is being charged. You can even power a SACOM transmitter with a laptop computer connected via the USB port during long meetings.

- 5. Battery Run-Time Hours Display:** SACOM systems displays a battery voltage indicator typical of most wireless microphones, but these displays only give an approximation of the expected battery life. The voltage of some batteries stays constant about 80% of their life, so a display showing full voltage does not tell you if the battery is brand new or about to start the last hour of its life.

For Mission-Critical Audio, SACOM transmitters also display the number of hours of use since the last time the battery was recharged. The run-time clock resets every time the transmitter is fully recharged, and it records usage whenever the transmitter is on. This display gives users a dependable method of estimating the remaining battery life.

Antenna replacements: Beltpack transmitter antennas can fail when they are dropped or bent repeatedly. Many transmitters have built-in antennas and therefore must be returned to a service center when an antenna breaks. SACOM belt-pack antennas are threaded on so they are field replaceable. (NOTE, some local governmental agencies do not permit field replaceable antennas. Check with SACOM for details.)

Receiver Modules: One of the advantages of digital audio is that the receivers are very small. SACOM's 1-unit rack holds up to eight independent receivers. Receiver modules are usually very reliable, but if one should fail, anyone capable of changing a toner cartridge can replace a defective module in a few minutes for Mission-Critical Audio.

Programmable Power Switch: Every sound engineer has a horror story about the talent accidentally turning off the transmitter just before walking on stage. SACOM transmitters solve this problem by making the external switch programmable. Set it so that it toggles the transmitter on and off, on and mute, on and logic mute (GPIO for automated mixers), or on in both positions to assure the talent's mic cannot be accidentally turned off.

Extension Antenna Kits: Extension antennas reduce dropouts by improving diversity, eliminating obstructions, and by effectively bringing the receiver closer to the transmitters. SACOM offers extension antenna kits that include plenum-rated antenna cables with soldered connectors and extension antennas adjusted to match the actual cable loss and the performance space. They arrive at the jobsite ready to install. Antenna extension kits reduce installation time and guarantee that the cables and antennas are adjusted for optimal performance.

SACOM Remote Scan displays the RF levels received by each antenna so you can see if both antennas are both wired and adjusted correctly. The antenna has an LED to confirm the phantom power.

Headset microphones: Single-ear headphone microphones are becoming more popular. The most vulnerable part of a head-set microphone is the very thin wire connecting the microphone to the

transmitter. Many headset microphones have to be replaced when the cable breaks, but SACOM headset microphones have connector jacks so that damaged cables can be replaced in the field to save the cost of a new microphone.

Field Upgradeable Firmware and Software: SACOM microphone systems use state-of-the-art embedded micro-computers to encode, transmit, receive and decrypt the signal. New features and improvements to the firmware are made available free for the life of the products as they are developed. Both transmitters and receivers can be upgraded in the field.

SACOM Remote software includes a step-by-step wizard that walks ordinary computer users through the process of upgrading the firmware and software. SACOM Remote is your gateway to everything SACOM including the User's Guide, FAQ, and an array of articles and "white papers."

If your system simply has to work, SACOM is the solution.