TV STUDIOS
From application-specific microphones to advanced wireless systems. Conquer your toughest spectrum challenges in the studio and capture it all with confidence.
In the studio, the last thing you want is unreliable wireless audio. World-class sound. Simplified setup. Flawless operation. Always.
For professional productions that demand flawless execution, Axient Digital offers unprecedented signal stability and audio clarity, plus flexible hardware options, advanced connectivity, and comprehensive control. Up to 184 MHz tuning bandwidth across all receivers and transmitters. Transmitter form factors include handheld, bodypack, and micro-bodypack.
Roam the studio while monitoring key Shure wireless system parameters from your iOS iPad or iPhone.

**ULX-D® DIGITAL WIRELESS SYSTEMS**

Extremely efficient RF performance, networked control, Dante™ and AES67 digital audio, and AES-256 encryption for professional broadcast applications.

**SHUREPLUS™ CHANNELS**

Roam the studio while monitoring key Shure wireless system parameters from your iOS iPad or iPhone.
SUPPORTING SOFTWARE

A rich user interface and robust features help to manage and monitor wireless system performance over the network, from pre-show planning through post-performance analysis.

WIRELESS WORKBENCH®
Capture sounds near and far. Shure shotgun microphones feature state-of-the-art preamplifiers and outstanding off-axis rejection to bring out all the environmental details.
VP82
END-ADDRESS SHOTGUN CONDENSER MICROPHONE
Compact and lightweight with a wide aperture and excellent off-axis rejection, the VP82 is the affordable and reliable choice for camera-mounted production.

VP89L 30° pickup angle. For targeting sound sources over longer distances such as sporting events and wildlife.

VP89M 50° pickup angle. Capture greater degree of ambience such as audience response and talk shows.

VP89S 70° pickup angle. Best for near-field, wide-aperture capture including interviews and field recording.

Designed with interchangeable long, medium, and short capsules, the VP89 provides scalable, superior off-axis rejection for focus and flexibility in a wide variety of production types.

Capture sounds near and far. Shure shotgun microphones feature state-of-the-art preamplifiers and outstanding off-axis rejection to bring out all the environmental details.

VP89S
Designed with interchangeable long, medium, and short capsules, the VP89 provides scalable, superior off-axis rejection for focus and flexibility in a wide variety of production types.

VP89L

VP89M
TH53 Comfortable, lightweight, and fully adjustable headset for use in theater, broadcast, and speech applications.

TwinPlex stands up to the toughest conditions to make every word a clear statement of quality. Natural audio at high or low frequency, the innovative dual-diaphragm captures the complete weight of your voice.

SHURE.COM/TWINPLEX
### LAVALIERS

<table>
<thead>
<tr>
<th>POLAR PATTERN</th>
<th>TL45</th>
<th>TL46</th>
<th>TL47</th>
<th>TL48</th>
<th>TH53</th>
</tr>
</thead>
<tbody>
<tr>
<td>CABLE DIAMETER</td>
<td>1.1 mm</td>
<td>1.6 mm</td>
<td>1.6 mm</td>
<td>1.6 mm</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>LEMO</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>MTQG / TA4F</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>MICRODOT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XLR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO CONNECTOR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COLOR OPTIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOW SENSITIVITY</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HIGH SENSITIVITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOUND SIGNATURE</td>
<td>Natural</td>
<td>Natural</td>
<td>Natural</td>
<td>Speech Tailored</td>
<td>Natural</td>
</tr>
<tr>
<td>ACCESSORIES (-A)</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**TL47**
Ideal for nearly any application, with a variety of colors and connectors.

**TL45**
Ideal for use in theater settings with a 1.1 mm cable and LEMO connector only.

**TL46**
Ideal for a variety of theater, film, broadcast, and live TV applications when additional output is required.

**TL48**
Ideal for film and TV with a fixed frequency cap and mid-band boost that accentuates dialogue.
Omnidirectional interview microphone designed for professional applications where performance and appearance are critical.

**VP64A/AL**

INTERVIEW MICROPHONE

Omnidirectional handheld interview microphone with tailored frequency response for speech and water-resistant mesh grille. 7.9” and 9.6” lengths.

**SM63**

Omnidirectional interview microphone designed for professional applications where performance and appearance are critical.

- **SM63** 5.7” length.
  - Champagne finish.
- **SM63L** 9” length.
  - Champagne finish.
- **SM63LB** 9” length.
  - Black finish.
INTERVIEW & PRESS MICS

LONG MICROPHONE HANDLE (WIRED)

Get the best sound for on-camera interviews and news gathering. Add your choice of RPW mic cartridges to the top of VPH and connect to camera or recording device using your mic cable. Seize every moment.

Choose from a wide variety of RPW cartridges to match your situational needs. VPH shown left-to-right with RPW124 (VP68), RPW112 (SM58), and RPW174 (KSM8).
STUDIO MICROPHONE
Smooth, flat, wide-range frequency response. Found in radio studios all over the globe. Professional audio and close-talk applications. This is your microphone.

SM7B

Your voice and show is everything. Large diaphragm studio microphones from Shure connect you to your audience.

SHURE.COM/SM7B
KSM32 Embossed single-diaphragm, side-address microphone for highly critical vocal productions. Cardioid.

KSM42 Premium condenser microphone with capsule ideal for world-class vocal performance. Cardioid.

KSM44A Premium, large-diaphragm, side-address condenser microphone with multiple polar pattern options. Cardioid, omnidirectional, bidirectional.
BRH440 Dual-sided circumaural with flexible boom microphone.

BRH441 Single-sided circumaural with flexible boom microphone.

BRH31M Lightweight, single-sided supra-aural with boom microphone.
Shure Broadcast Headsets combine the pristine audio reproduction of our critical-listening and monitoring headphones with dynamic microphones developed especially for broadcast.

VISIT SHURE.COM TO SEE CABLE AND CONNECTOR OPTIONS
Getting the right sound means hearing the sound right. Shure Professional Headphones deliver studio-quality accuracy across an extended range and provide a comfortable fit that lets you keep going until your audio is every bit as good as, if not better than, your video.
SRH440

Used everywhere, they were built to last. Enhanced frequency response delivers accurate audio across an extended range.

SRH1540 Superior acoustic performance with clear, extended highs and warm bass.

SRH940 Accurate high-end extension with tight bass and superior transient response.

SRH840 Tailored frequency response delivers rich bass, clear mid-range, and extended highs.
Shure Sound Isolating Earphones provide award-winning sound in a secure, over-the-ear design for long-lasting comfort and immersive audio.
**SE215**

Single dynamic driver produces clear sound with deep bass in a convenient and portable package.

**SE425**

Dual high-definition drivers (dedicated tweeter and woofer) deliver accurate and natural sound.

**SE535**

Triple high-definition drivers deliver spacious sound and rich bass for cinematic audio.

**SE846**

Four high-definition drivers for extended high-end clarity and a groundbreaking low-pass filter for true subwoofer performance.

**Sound Isolating**

Detachable cable system enables long-term device compatibility, upgrades, and ease of maintenance.
NOW TRENDING IN BROADCAST:

PSM® 1000, THE ULTIMATE WIRELESS IFB

As a market development specialist for Shure, part of my role is to expose influential end users to our state-of-the-art products. In essence, I travel the U.S. and meet with power users in broadcast, production, and related fields, demonstrating Shure solutions to some of the most vexing of pro audio problems. I take a hands-on approach that allows potential customers to prove to themselves what works best in their situation. When you’ve got the right products, it works like a charm!

One product that has been enthusiastically embraced is the PSM 1000 wireless in-ear monitor system. With its true diversity bodypack receiver and resulting ability to operate reliably in the most challenging stage environments, this product has proven itself to be a reliable performer even on stages full of competing RF signals from microphones, moving lights, and video walls. As a result, it has become the unquestioned go-to IEM system in touring sound, to the point where it is routinely specified at major live broadcast events like the GRAMMY®s and the Academy Awards.

One trend that we’ve noticed over the past several years is that the PSM 1000 has been selling in large quantities into the world of broadcasting, including major news, sports, and network production facilities. Literally hundreds of channels. It’s been great to see this pro music product gain acceptance into the broadcast world, but we wanted to know why.

What’s interesting is that a lot of these systems are not being used for in-ear monitoring. Because, as it turns out, the PSM 1000 is being embraced as the ultimate wireless system for interruptible foldback (IFB) applications as well.
“...the design of the PSM 1000 meets (and exceeds) all the requirements of a traditional IFB system...”

IFB is essentially a one-way transport system for bringing audio from a production’s intercom system to the talent. It’s what feeds the little curlicue earpieces you see on-air hosts wearing. Typically, the default audio is the program feed, but its real function is to allow key production personnel to cut off that feed and speak directly to the talent.

Traditionally, IFB systems have been bandwidth-limited to focus on speech, with both the wireless transmission and the earpiece being notorious for having high RF reliability (usually through high transmitter power) but relatively poor fidelity (voice-band audio with high noise floor). As it turns out, the design of the PSM 1000 meets (and exceeds) all the requirements of a traditional IFB system, but with fantastic fidelity.

As a result, broadcasting has become a new and vibrant vertical market for in-ear monitors. Here are some of the key design features that make the PSM 1000 the ultimate IFB system.

**DIVERSITY RECEPTION UTILIZING TRUE ¼-WAVE ANTENNAS**

Other IEM systems (and traditional IFBs) use a single ¼-wave antenna or a combination of a ¼-wave antenna and the earphone cable as the secondary (diversity) antenna, but Shure engineers know better. An earphone cable never performs better than a true ¼-wave antenna. In predictive switching diversity scenarios, if the system switches to the earphone cable as the secondary antenna there is a high likelihood that side is receiving a highly degraded signal as compared to a true ¼-wave. This results in poor performance in high RF environments.

With its twin quarter-wave antennas, the P10R receiver still functions reliably even in high-noise environments. This explains why so many systems are being sold into RF-intensive markets like New York City.

CONTINUED ON PAGE 24
CONTINUED FROM PAGE 23

PSM® 1000, THE ULTIMATE WIRELESS IFB

SPECTRAL EFFICIENCY
PSM 1000 can fit 16 channels of stereo IEMs into a single TV channel (8 MHz) of bandwidth. Then it doubles down: With exceptional stereo separation/isolation, it’s possible to run two independent IFB feeds on a single PSM 1000 carrier, simply by feeding Left and Right inputs with IFB1 and IFB2 (respectively). Utilizing MixMode® on the receiver and panning hard L or R gives you isolated feeds. The result is that you halve the number of frequencies required, or you can cram twice as many IFBs in the same amount of spectrum that traditional IFB system use.

PROBLEM-SOLVING CIRCUITRY DESIGN
PSM 1000 receiver packs (P10R) feature RF AGC and Noise-Sensitive Squelch, both of which seamlessly prevent common wireless problems, and are compatible with “wet line” inputs from daisy-chained systems. The Automatic Gain Control for RF reduces signal fluctuations and prevents RF overload when getting too close to the transmitter antennas, while the squelch automatically detects and mutes RF noise before it becomes audible. Eliminating noise bursts in their ears makes talent very happy.
HIGH FIDELITY

Musicians require in-ear monitors with fantastic fidelity and negligible latency. This turns out to also be highly desirable in an IFB system. Studio technicians and talent may not require full-bandwidth response and low noise floor, but they sure do appreciate having it! More and more I am hearing from A1’s that talent wants to hear music during breaks. Giving broadcast talent the same quality that is afforded a world class musician on tour is something that is appreciated by both the talent and the mixers.

For the talent that need high isolation and high fidelity, Shure’s new EAC-IFB cable provides the perfect path for combining Shure’s award-winning SE Series earphone line with PSM 1000 in IFB applications.

“...by engineering the PSM 1000 to ensure flawless operation as a touring IEM, Shure has designed the perfect IFB system.”

Let’s face it, the curlicue acoustic tube driven by a remote transducer is less than desirable audio quality. Shure’s products provide hi-fidelity sound with reliability that is unsurpassed in our industry.

WIRELESS WORKBENCH® (WWB)

Another huge advantage of the PSM 1000 is that it is part of the Shure ecosystem, the centerpiece of which is our free Wireless Workbench software. WWB handles sophisticated frequency coordination and monitoring, plus set-up, calibration, and diagnostics – and not just for PSM 1000, but for the full range of wireless microphones as well.

Basically, by engineering the PSM 1000 to ensure flawless operation as a touring IEM, Shure has designed the perfect wireless IFB system. This extra layer of utility has resulted in significant sales – expanding the PSM 1000 into the broadcast market, and extending across the Shure ecosystem to include a host of network-friendly wireless products, including the original Axient®, the new Axient Digital, and ULX-D microphone systems.

I think it’s fair to say that the PSM 1000 really is that “better mousetrap,” and it’s exciting to see broadcasters beating a path to our door.
PERSONAL MONITOR SYSTEMS

PSM® TRANSMITTERS

P9RA+ Stereo bodypack receiver with unparalleled audio quality.

P10R+ Twin-antenna diversity bodypack receiver with advanced digital signal processing technology dramatically improves signal reception and range.

Legendary Shure audio quality. Pristine RF. More on-air channels and breakthrough automated features that vastly simplify setup and operation.
The EAC-IFB Accessory Cable is a single-sided mono 1/8" (3.5 mm)-to-MMCX cable for use with Sound Isolating Earphones in professional intercom and monitoring applications.

PSM 1000
- Single-channel, stereo.
- Up to 20 compatible frequencies per band.

PSM 900
- Single-channel, stereo.
- Up to 20 compatible frequencies per band.

PSM 900
- Dual-channel, networkable. Up to 49 compatible frequencies per band.
- Diversity bodypack.

EAC-IFB