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## WIRELESS MIC

# Azden's 500UDR Wireless System

by Carl Mrozek

For many professional videographers, it's not enough simply to have a wireless mic system. Clients expect you to have a decent UHF system and some even expect you to have a few of them on hand for their projects.

Unless you are quite a busy soundperson, it is difficult to justify owning several top-shelf UHF wireless systems in addition to the latest camera package with extra lenses, lighting kits and all the accessories. When it comes to wireless microphone systems, as with many other elements of your production toolbox, "does this gear serve my purposes and will it give me enough bang for my buck?" become key questions. Azden has built a reputation on an affirmative response to both these concerns.

I was interested in testing a wireless package in the company's performance series of UHF systems, built around the compact 500UDR receiver.

### FEATURES

Azden's UHF performance series of diversity wireless microphone systems comprises several key components, including a portable diversity receiver and two basic types of transmitters: a



Photo: Kathy Beck

*The author used the Azden 500UDR and associated transmitter to capture the sound of wild deer.*

compact bodypack transmitter that clips onto a belt and a standalone capsule that plugs into the base of a handheld microphone. The latter can be used with any microphones that have a standard three-pin XLR plug, while the former comes with a Sony omni-directional lavalier microphone with a minifour-pin plug.

The 500UDR is a very compact, rugged UHF diversity tuner/receiver. The

unit features a crystal-controlled, PLL-synthesized mixer/local oscillator and a diversity front-end with twin antennas that reduces multipath distortion and minimizes dropouts. With the 500UDR, one of nine channels can be selected from each of seven groups of frequencies using either a special key supplied with the unit, a small screwdriver or blunt-tipped pocketknife.

The 500UDR measures about four inches square by about 1.5 inches thick and is encased in a sturdy, black all-metal chassis, with BNC-mount antennas. The unit can be powered for more than eight hours by six AA batteries, run from a camera's DC power supply or a separate 12 V source. An LED power indicator glows bright red when fully powered and flashes when battery level begins to drop.

There is also a minijack for a headset with its own volume control for monitoring transmitter output before feeding the camera. An adjacent LED glows bright red if the incoming signal exceeds unity. A separate LED glows green to indicate a clean signal and identifies the active antenna.

At 4x2 inches, the 41BT bodypack transmitter is half the size of the receiver. With a molded-plastic body, it is also lighter than the all-metal 500UDR receiver—a belt clip keeps it safe from most hazards. The 41BT is powered by a

standard 9 V battery, the life of which can be extended by frequent use of the standby switch.

A Sony ECM-44 omni-directional lav is supplied with the 41BT. The input volume control dial is hidden inside a tiny, half-moon hole on the upper side panel and requires a supplied tool to adjust.

The 41XT mic adapter/transmitter is a smooth-edged rectangular block, nearly four inches long, with a female XLR jack protruding at one end that transforms low-impedance mics into wireless mics. As with the body pack, it features 63 user-selectable channels, with LED indicators for peaking and a power on/off switch.

There is also a volume control dial to attenuate and boost input audio levels as needed. The 41XT also supplies phantom power to condenser mics and is powered by a single 9 V battery.

#### IN USE

I used the Azden 500 series wireless system with both the 41BT bodypack transmitter and the 41XT microphone adapter/transmitter in two different situations. I used the bodypack in a typical indoor/outdoor setting while covering a wedding at a banquet hall, where there were other RF devices in use.

I also used it to record ambient audio outdoors at considerably greater distances to grab audio for video shot with a telephoto lens. In some of these outdoor situations, extraneous noise levels

ruled out using a camera-mounted shotgun microphone.

At the wedding, I used the 41BT with the Sony lav with a JVC JY-HD10, HDV-format camcorder to record critical audio including the vows, receiving line, photo session, cake cutting and after-dinner socializing.

The vows posed the greatest challenge, as I had to shoot from a position nearly 100 feet away from the bride and groom, at best through a forest of heads and at worst through a dense crowd between the wired couple and myself. Nevertheless, I generally got relatively dropout-free reception, which was cleanest when I had the clearest line-of-

ing of leaves or the grunt of a deer, even with a highly sensitive shotgun mic.

With the 41XT, I was able to record the subtle chattering of mallard ducks and their dabbling in the water for weeds from nearly a football field away, even in a light drizzle. I got only sporadic dropouts at the furthest distance, more than 200 feet away, when the ducks were down a short embankment and behind a wall of boulders from the camera and receiver. By moving closer to the 41XT and reducing the obstruction by the boulders, the dropouts ceased.

The most impressive thing was being able to virtually eliminate the drone of a nearby expressway with the 41XT partly

by reducing the input volume somewhat, then placing it on the ground, behind a hefty log facing away from the highway. The result was that I was able to get fairly clean, useable detailed audio which would have been imbued with highway noise had I used a camera-mounted shotgun mic.

In another situation, barely one-quarter mile upriver from one of America's busiest border crossings (clogged with two lanes of irritated drivers caught in the middle of a Code Orange customs/security crackdown), I was able to obtain virtually dropout-free ambient audio of water rumbling over rocks intermingled with the occasional cry of a herring gull or honk of a goose—while more than a football field away! Moreover, the audio quality was clear and crisp, perfect for ambient audio.

The only dropouts occurred when I blocked the line-of-sight to the transmitter, adjusting the lens in front of the camera.

I was equally impressed by the range of subtle, detailed sounds picked up with an older-style Electro-Voice lav transmitted via the 41XT when placed on the ground amidst a herd of grazing white-tailed deer. I could clearly hear the crunch of hooves on icy snow, heavy breathing and even the unmistakable clacking of antler against antler as two bucks sparred in the thickening dusk. All came through loud and clear, even when more than 100 yards

**I was impressed with its range  
and quality under challenging conditions,  
including being stepped on by deer  
a couple of times!**

sight transmission path from the wired groom to the 500UDR on the camera. The worst reception occurred when the guests crowded around the newlyweds as they walked down the aisle after the ceremony. But, as I had a shotgun mike plugged into Channel 1 at all times, the occasional dropouts didn't mar the final audio track.

I experienced only sporadic dropouts the rest of the wedding day, as I stayed fairly close to the wired groom and worked to keep a fairly clear line-of-sight angle on him at all times. Naturally, there were times when people obstructed him and the transmitter momentarily, before I could reposition myself for a clean shot and to preempt dropouts. All things considered, dropouts were few and far between throughout the wedding.

I used the 41XT module outdoors under different circumstances to capture ambient audio under conditions where a shotgun or other camera-mounted microphone would pick up undesirable extraneous sounds. When shooting at full telephoto, the distance was too great to record subtle sounds like the crunch-

## FAST FACTS

#### Application

EFP and ENG

#### Key Features

Diversity reception; 63 channels; UHF

#### Price

\$480 (500UDR); \$200 (41BT);  
\$280 (41XT)

#### Contact

Azden  
516-328-7500  
www.azden.com

