

Case Study

Organization: Sun Valley Heli Ski 
Featured Solution: MT-4E Series 

Location: Sun Valley, Idaho
Market: Adventure Travel, Public Safety



A Mountainous Need for Reliable Communications

Reliable communications network plays vital role in delivering one-of-a-kind ski adventures and supporting public safety missions.

Challenge

When your business involves helicoptering skiers in and out of isolated Idaho mountain peaks, communications are essential to delivering a thrilling adventure for guests while keeping them safe. That's why Sun Valley Heli Ski (SVHS) puts a high priority on having reliable communications that keep radio dispatchers, pilots, ski guides and guests in constant contact. So, when SVHS's existing network began experiencing outages, noise and coverage issues, it quickly hired a radio communications expert to evaluate the problem and find a solution.

Solution

A comprehensive equipment audit and system evaluation uncovered a myriad of issues impacting communications reliability. The issues ranged from poor coverage to incorrect

cabling, lack of power shields and potentially dangerous code violations. The decision was made to decommission the entire system and install Zetron MT Series equipment. The MT Series is designed specifically to provide reliable coverage in challenging terrains – ranging from freezing, snow-filled mountaintops to scorching deserts.

Result

SVHS no longer worries about the reliability of the communications network it uses to improve the overall experience. In fact, the company uses the system to improve the overall experience and safety of its guests and provide life-saving rescue services in partnership with local public safety agencies. Today, SVHS is confident that it has one of the best communications systems in the business.

“Flying in the mountains, the weather can change pretty quickly. And we’re doing backcountry skiing in potential avalanche terrain. So, there’s a lot going on. That’s why reliable radio communications are important. We operate in a way that provides our clients an incredible safe and secure experience like no other.”

Jay Levine, owner and general manager of Sun Valley Heli Ski



A One-Of-A-Kind Experience

Picture this: You’re 10,000 feet in the air over the backcountry of Idaho, gazing out the helicopter window at majestic, snow-filled peaks across the Soldier, Smoky, Boulder and Pioneer Mountain ranges below. You’ll soon be dropped off on a mountaintop. Then you’ll ski down untouched powder, accompanied by a few friends and an experienced guide from Sun Valley Heli Ski. You’ll be carrying an air-pack and an avalanche transceiver along with a two-way radio that allows you to communicate with other skiers, your guide, the helicopter crew and those back at home base. And you’re going to have the adventure of a lifetime.

One of The Most Experienced Heli-Ski Operations in the Business

During ski season, SVHS gives up to 16 clients a day an experience like the one described above. SVHS began its helicopter ski operations in 1965, making it the oldest and one of the most experienced heli-ski operations in the United States. SVHS has exclusive U.S. Forest Service helicopter rights to more than 750,000 square acres – the largest heli-skiing area in the contiguous 48 states.

“Flying in the mountains, the weather can change pretty quickly. And we’re doing backcountry skiing in potential avalanche terrain. So, there’s a lot going on,” says Jay Levine, owner and general manager of SVHS. “That’s why reliable radio communications are important. We operate in a way that provides our clients an incredible safe and secure experience like no other.”

When Communications are Critical

With such a large operating area, SVHS knows that good communications are critical to both the guest’s experience and safety.

“We need to be able to communicate with each other for 100 different reasons. We have regular check-ins. When our crew changes location, they communicate that from the field to the dispatcher. Skiers and guides also have to communicate between themselves while they are skiing,” Levine says. “Plus, there are the

logistics. Are they ready for a pick-up, or are they still getting their gear together? When are we meeting for lunch? Who will be the first group to leave the field?”

SVHS guides also check weather and snow conditions as they ski down the mountains – including using sophisticated avalanche risk evaluation methods, such as building snow pits – and radio headquarters to report what they discover.

“Communications are huge. You wouldn’t be able to operate without communications. And that’s exceptionally challenging in regions where you don’t have a lot of direct ability to communicate because of the terrain,” Levine adds.

Rip and Replace

That’s why when SVHS began experiencing outages, noise and coverage issues with its system a few years ago, it hired Tajkowski Technical Planning to diagnose the problem and find a solution. Tajkowski did a complete system audit and found signal transmission/reception issues, improperly installed equipment and dangerous code violations across the network. As a result, they urged SVHS to replace its entire network – and recommended installing the MT Series LMR communications equipment.

“For an application like this, you need a high tech system that can support special applications. You need a product that can withstand extreme weather,” Sean Tajkowski says. “You need to understand the impact of batteries and solar power. The MT-Series was my first choice because I knew it would work in this type of terrain and extreme conditions.”

A Network that Exceeds Expectations

To support SVHS’s communications needs, Tajkowski installed MT-4E repeaters on the mountaintop to support person-to-person communications between all parties involved in the heli-skiing adventure – including the helicopter crew, those back at headquarters, guests and SVHS guides on the ground.

The main radio/repeater is located in a shelter that sits at 10,000 feet and is powered by a DC solar power plant. The shelter contains the radio as well as scientific instruments and a cellular

modem to enable remote monitoring and maintenance. The equipment must be robust enough to withstand both extremely cold weather and high heat. Temperatures commonly drop to -40°F.

“That radio has been up there in a shelter for years now,” says Tajkowski. “It’s still tuned and working well. It’s never failed. The network is performing far beyond our expectations.”

A Tactical Approach to Extending Coverage

SVHS also uses “tactical radios” at various locations to extend coverage when needed. The tactical radios/repeaters are flown via helicopter to the top of peaks and placed in areas that support the broadest possible coverage range. Sites are determined by performing in-depth network planning analysis that uses radio propagation tools and even Google Earth to determine the best location.

“Where you put the repeaters is very strategic. It needs to be dynamic enough to reach all desired areas. You don’t want shadows,” says Tajkowski. “We’ve learned a lot over the years, working within the terrain, about how to overcome the coverage challenges. That’s what the tactical systems really do for us.”

A Big Investment in Public Safety

SVHS’s network is so robust that it plays a dual role. It’s used both for SVHS operations and also for search and rescue. The system was built to meet public safety specifications so that SVHS can assist public safety organizations – from the local level all the way to the state level – with air support.

“We wanted a public safety grade network so we can assist government agencies with life-saving missions,” says Tajkowski. “Using the MT-4E series,” he continues, “when there is an emergency, we have full radio interoperability with public safety teams and because of our state-of-the-art helicopters, we are often the first choice when transporting responders to the scene.” In addition, each person on the SVHS helicopter crew has medical training and certifications.

“We are experts in safety and avalanche control, so we try to get as close as we can to the victim, provide first responder services, and then evacuate the victim to a waiting ambulance or life flight helicopter that has more medical equipment but isn’t designed to go into the backcountry and land,” says SVHS’s Levine. “We often transport the paramedics – because they don’t have the avalanche equipment and other items needed for a rescue.”

“SVHS invests money into other people’s safety,” said Tajkowski. “No one believes in the importance of a radio more than this organization.” And that’s a big part of why Tajkowski believed that MT-4E equipment was the best choice to support SVHS.

“This equipment is tried and true. It was my first choice,” says Tajkowski. “Zetron sells solutions, not products. My business isn’t about building standard radio systems. I design mission critical special application radio systems. And when I talk to Zetron, I’m talking to engineers who help me find multiple ways to overcome network challenges.”

“It works great,” SVHS’s Levine says. “I can tell you that I’ve been told that we have created one of the best communications systems in the heli-ski business.”

“For an application like this, you need a high-tech system that can support special applications. You need a product that can withstand extreme weather. You need to understand the impact of batteries and solar power. The MT-4E Series was my first choice because I knew it would work in this type of terrain and extreme conditions.”

Sean Tajkowski, Tajkowski Technical Planning



ZETRON

ZETRON AMERICAS
PO Box 97004,
Redmond, WA 98073-9704
(P) +1 425 820 6363
(F) +1 425 820 7031
(E) zetron@zetron.com

ZETRON EMEA
27-29 Campbell Court, Bramley,
Hampshire RG26 5EG, UK
(P) +44 1256 880663
(F) +44 1256 880491
(E) uk@zetron.com

ZETRON ASIA PACIFIC
PO Box 3045, Stafford Mail Centre,
Stafford QLD 4053, Australia
(P) +61 7 3856 4888
(F) +61 7 3356 6877
(E) au@zetron.com

www.zetron.com



The Power to Respond™

©Zetron, a Codan Company. All rights reserved. Zetron and the Zetron logo are registered trademarks of Zetron, a Codan Company. All other trademarks are properties of their respective owners. See Zetron price list for option pricing.

Specifications subject to change without notice.

005-XXXX