

# Mine Safety

## Leaky Feeder Systems

## COMMUNICATION CHALLENGES

In the mining sector, having robust, reliable communications at your fingertips is safety critical. The irregular terrain in mines, coupled with dense earth and rock create a unique set of challenges for adequate radio signal propagation throughout the mine. The use of a leaky feeder system can help to overcome these challenges.

### OVERVIEW

A Leaky Feeder system is effectively a long cable antenna that runs the length of the underground mine or tunnel, connected to a traditional radio repeater or radio system. To keep the radio signal strong and consistent across the entire length of the cable run, amplifiers are added at certain intervals to boost the radio signal. This allows for the radio signal to run even 100's of km's of cable length in extreme situations.

## HOW DOES IT WORK?

The leaky feeder systems' cable is designed with various slots or gaps on its outer conductor - which allows radio signals to emit along its length. After a leaky feeder cable is installed throughout an underground mine or tunnel, radio signal travels throughout the cable, and radiates into the surrounding environment, providing reliable, clear communications.

### FEATURES & FUNCTIONALITY

- Bi-directional amplifiers provide flexible installation
- Supply Voltage Range 6VdVc to 24dVc
- Complete Remote Systems Diagnostics
- Highly scalable, easy to extend the system as your mine grows
- System can support data transport, as well as traditional voice radio traffic

### Voice & Data

Experience multiple, simultaneous, noise-free voice and data radio channels throughout your underground mine or tunnel in either analog or digital

### Automation Options

Sensor data for underground equipment can be transported over the leaky feeder system if required.

### System Compatibility

We can work with your existing leaky feeder system, and expand your underground coverage.

01

### System Design

Using the mine or tunnel layout provided by the client, Westcan will provide a system design and material list for the client.

02

### System Installation

Westcan can provide on-site assistance of Installation of the leaky feeder cable, bi-directional amplifiers and head-end radio system.

03

### Radio Configuration

Radios are programmed to the proper frequency or frequencies of the leaky feeder system

04

### Testing & Calibration

Thorough testing and calibration will be performed to ensure optimal coverage and functionality

05

### Training

The Westcan ACS team will train your personnel on the proper methods for adding additional splitters and bi-directional amplifiers as the mine grows over time

06

### Monitoring & Support

We can establish a routine maintenance schedule to make sure your system stays in perfect condition!

## The End Result

Every mine and tunnel is different. They come with their own unique challenges and specific requirements. Selecting an experienced integrator is critical to ensuring your leaky feeder system performs at its optimal level.

With Leaky Feeder Systems, Westcan can help ensure your mine stays safe, secure, and connected.



### **Maintenance**

At Westcan, our job doesn't end after the deployment of your system. Our team can put you on a maintenance schedule to make sure your system always functions at peak efficiency.



### **Service**

We're available for customer support 24 hours a day, 7 days a week, 365 days a year. Our award winning service department will help keep you connected.



## Contact Westcan

Reach out to Westcan via our website, or toll free at **1.800.794.3926** to speak with one of our experienced account managers to learn how a leaky feeder system can keep you connected!

**westcan-acs.com**