

### Pro64 IFB Setup For Remote Broadcast

This document explains how to interface a broadcast truck, intercom system, and IFB system with a bidirectional digital snake in a live production environment. While the focus of this paper is on a broadcast application, this system may be adapted for use in other environments as well.

#### REMOTE BROADCAST SETUP

At the heart of the system is the Pro64® digital snake used to transmit audio bidirectionally between the remote location(s) and the broadcast truck where the audio and video control rooms are located. The remote location could be an announcer's booth, studio, temporary set, stage, or an on-field location.

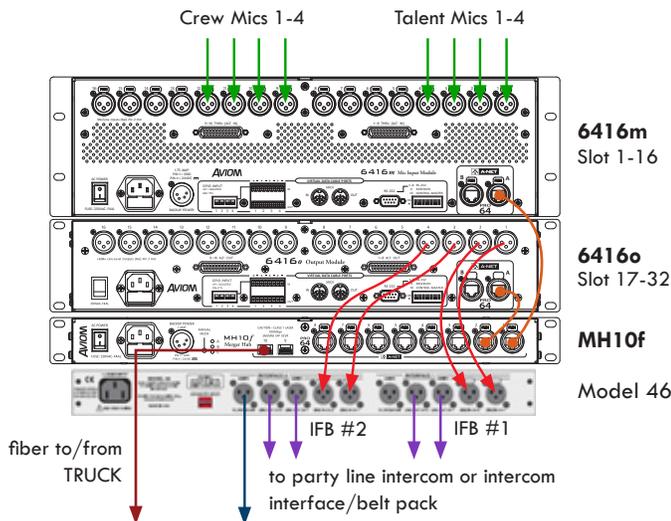
The audio components include:

- Signals sent from the broadcast truck that need to be monitored via IFB in the remote area
- Talent mics in the remote area going to the broadcast truck for processing and mixing
- Mic signals from the crew used to communicate with other members of the production staff in the truck

#### BASIC SNAKE SETUP

For illustration purposes, we will look at a 16x16 Pro64 digital snake with two IFB feeds. The concepts shown here can be scaled to higher channel counts and to include multiple remote locations and/or multiple trucks.

The I/O at the remote location consists of a 6416m Mic Input Module and a 6416o or 6416o v.2 Output Module. The 6416m collects all mic signals and sends them to the truck; the 6416o allows signals sent from the truck to be patched into the talent's ear pieces and the crew's IFB headsets.



Rear elevation of the I/O rack at the remote location, showing audio signal flow.



The remote location rack with Pro64 I/O and the Studio Technologies devices.

In the truck there is a second 6416o or 6416o v.2 Output Module receiving the remote mic signals, which are patched into the truck's audio mixing console. An RCI Remote Control Interface and MCS Mic Control Surface allow the engineers in the truck to control gain settings on the 6416m mic preamps at the remote location.

Line-level signals from the mixing console and intercom system that need to be sent down to the remote location for monitoring are patched into a 6416i Input Module in the truck.

Finally, each location includes an MH10f Merger Hub, which provides a fiber interface for the long distance cable run between the remote location and truck.

#### INTEGRATING IFB

To patch audio signals from the Pro64 digital snake into the IFB system, it is common to use devices such as the Model 41 and Model 46 from Studio Technologies. These units take two discrete audio outputs from the digital snake and combine them onto a single cable for connecting to standard two- or four-wire party-line intercom headset interfaces.

At the remote location, plug all mics into the 6416m inputs, and assign the 6416m to A-Net® Slot range 1-16. This will include both talent mics and talkback mics. These signals will all be output in the truck, via the Pro64 Output Module (set to A-Net Slot range 1-116), and connected to the console for mixing or patched into the intercom system as needed.

In the truck, connect signals from the matrix intercom system, program mix, etc., to the 6416i. Set the 6416i to A-Net Slot range 17-32.

With the output module at the remote location also set to A-Net

(cont.)

# Application Note

Slot range 17-32, these signals are available to be monitored through the talent's ear pieces and crew members' headsets. Signals from the 6416o or 6416o v.2 at the remote location are

connected to the IFB module (such as the Studio Technologies Model 41 or 46), which sends the signals to the various user's headsets or intercom base stations as the application requires.

