

**Audio over IP from BARIX**

**vol. I**

**Keep in touch with your guests at all times  
with intelligent sound systems from BARIX.**

**Three success stories from ski resorts  
in Central Switzerland, the Canton of Wallis  
and the Czech Republic.**



82 kilometres of ski slopes, 35 cable car stations, 5 cross-country ski tracks and all of the ski lodges have tuned in to the BARIX sound solution for the Titlis ski resort

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Innovative communications technology from BARIX for greater efficiency and safety on the Bellwald cable railway in the Swiss Canton of Wallis

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A concert hall extending over 175,000 square metres, with box seats in ten lift installations. BARIX networks the Klinovec-Nord ski resort in the Czech Erz Mountains

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**You'll be hearing a lot more from us in future: BARIX provides networking solutions for entire ski resorts, offering improved service, increased safety and a wonderful atmosphere.**

Hosts can keep in touch with their guests at all times with innovative sound systems from BARIX. These systems offer so many features and benefits that this reliable and competitively priced technology will soon become the norm in many regions. BARIX technology provides the perfect solution for virtually every application: music can be broadcast throughout the entire ski resort or can be targeted at individual locations, with hip-hop in the half-pipe and traditional music in the ski lodge. Announcements and safety instructions can also be broadcast at the click of a mouse throughout the entire resort or to specifically targeted stations, with a ski race commentary in one area and an invitation to the happy hour in another.

BARIX delivers leading-edge technology, providing flexible sound coverage, even for more extensive areas, with this affordable, low-maintenance solution. Using IP (Internet Protocol) technology, BARIX systems can often be integrated into existing computer networks.



### **Just listen to this!**

**82 kilometres of ski slopes, 35 cable car stations,  
5 cross-country ski tracks and all of the ski lodges have tuned  
in to the BARIX sound solution for the Titlis ski resort.**

Centrally controlled perfection in Central Switzerland. The simple reason why virtually all of the guests in the popular winter sport and tourist region of Titlis are swaying to the same rhythm is that they are all listening to the same tune. This is no pipe dream, but just one of the countless real solutions offered by the networked sound systems from BARIX.

Titlis is reaping the benefits of innovative technology, deployed in a highly flexible and cost-effective solution. The single BARIX system replaces a number of diverse sound and music systems in the stations and lodges, using leading-edge technology under central control, interworking with the existing computer network. A PC has been installed in a valley station belonging to the Engelberg-Trübsee-Titlis mountain railway company to network all stations, lodges, slopes and tracks, and a BARIX computer processes audio data for customised distribution to meet individual requests and requirements.

Music can be broadcast throughout the entire resort or individual sounds can be transmitted to targeted locations. Every station and lodge can control its own output volume as required. Important announcements can be broadcast to all stations simultaneously, automatically interrupting any music that is playing at the time. The system not only provides this vital warning announcement facility to ensure greater safety, it also offers a flexible choice of programs and target locations, so that, for example, one selected area can listen to a ski racing commentary while another soaks

up the atmosphere of the half-pipe techno-rhythms, providing a high-quality audio experience.

The BARIX system is astonishingly simple and user-friendly. The entire ski resort is controlled by the central PC. The entire coverage area is mapped out via the on-screen graphics display, from which targeted locations and connected equipment can be selected and separately controlled with a click of the mouse. The system is highly resilient, with backup functions to ensure that announcements can continue to be made and music played even if the central computer fails.

The BARIX system was installed by inroi AG, who preconfigured the components for use in Titlis in such a way that they were delivered ready for connection to the network. The system enables direct communication between the stations and ski lodges, offering modular expansion to cover extensive areas. Additional features include an intercom system and remote barrier control. The versatile expansion capability of the BARIX will ensure that future growth can easily be accommodated.



Graphic user interface

**1001 functions, 1 control point:  
Innovative communications technology from BARIX for  
greater efficiency and safety on the Bellwald cable railway  
in the Swiss Canton of Wallis.**

It takes a lot to keep a mountain railway working smoothly and efficiently on a daily basis, especially in the high season, with a huge number of gear wheels meshing with precision and an entire team of specialists and assistants working together in perfect harmony. Trouble-free communications are indispensable for ensuring reliable system operation, even under adverse conditions.

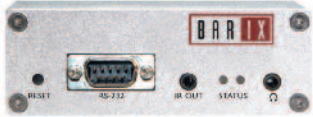
IP communications technology from BARIX, which is in full control of the Bellwald cable railway communications systems in the Swiss Canton of Wallis, shows how a vast array of controls and functions can be harmonised and synchronised using minimal resources. It controls the dialogue between the main and secondary stations, the public address system, audible safety monitoring and opening and closing of barriers. The system incorporates all the functions of sophisticated intercom systems. It establishes open two-way communications, and data and images can also be transmitted between stations.

The system meets the most stringent quality and safety requirements and is compliant with industry standards. In the event of system failure, backup functions automatically kick in to maintain the flow of sound. Typical product features include outstanding audio clarity and authentic sound. A further strength is its user-friendliness, enabling reliable operation with minimal specialist knowledge. To guarantee the highest levels of reliability, BARIX components offer completely maintenance-free



operation and, thanks to their modular design, are capable of virtually unlimited system expansion.

The trump card and decisive winning argument in favour of BARIX, which was put forward by the project managers in the Canton of Wallis was that the communications system could be connected directly to the Bellwald cable railway's existing Ethernet LAN network, using standard TCP/IP protocols to perform its functions. Combining existing resources with BARIX expertise, the system was implemented with minimal technical installation costs. In practice, this means that innovative technologies from BARIX make communications systems more affordable, and technology and installation costs can be recovered over shorter periods of time.



### BARIX Instreamer 100

The BARIX Instreamer 100 or MP3 audio encoder is an intelligent streaming component that converts analog and digital audio into MP3, which it then transmits into the network. This is a great way to bring your analog audio into your network audio distribution setup. Think of the Instreamer IP audio encoder as a counterpart to the Exstreamer since it brings the sound into the network, rather than bringing the sound out!

- Has inputs for all sound sources for IP audio encoding from tuners to record, tape, MD and CD players
- Monitors and controls the directly attached equipment
- Is easily controlled using your standard web browser (PC, palm, etc.) or IR remote control (BARIX accessory)



### BARIX Exstreamer 100

With BARIX, networks get a voice. The Exstreamer 100 is an intelligent audio decoder that can pull your digital audio from the network while converting it into music or voice.

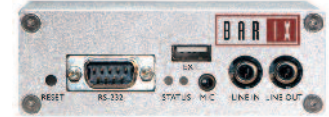
- 10/100 Mbit/s ethernet connection
- Streams from PC, Web, Shoutcast, Icecast and RTP servers in MP3 format
- Separate firmware for WMA and MP3 streaming (http, UDP, RTP) with automatic failover and USB playback available
- Is easily controlled over standard web browser (PC, palm, etc.), IR remote control or API (serial, TCP, UDP, cgi)



### BARIX Exstreamer 200

With BARIX you have an opportunity to find the right components to build your IP audio distribution system. The Exstreamer 200 is an intelligent MP3 player that can pull your digital audio from the network while converting it into music or voice. This device is the top of the line Exstreamer including its own built-in amplifier and speaker output for powerful sound. This unit is great when you want to connect the device to your speakers directly.

- Plays MP3 files and streams from computers, web, Shoutcast, Icecast and RTP servers
- 10/100 Mbit/s Ethernet connection
- Control via standard web browser, IR remote control, API (serial, TCP, UDP, CGI)
- Separate firmware for WMA and MP3 streaming (HTTP, UDP, RTP) with automatic failover and USB playback available
- Fully programmable ABCL (BASIC dialect) firmware available on request



### BARIX Annunicom 100

Network intercom and PA component for commercial, industrial and security applications.

At BARIX, the sky is the limit when it comes to communication. BARIX Annunicom is an interface that bridges audio to Ethernet to allow people to communicate with each other and to inform others. You could call it an IP intercom and IP paging system.

- Transmits voice, pre-recorded announcements, alarm messages and music over the network to any specific location
- Two way communication is possible just like an ordinary intercom
- Communicates over a standard network connection (10/100 Mbit/s) and supports TCP/IP-Protocol
- Incorporates an integrated Web server for control and configuration
- Works in combination with other BARIX Annunicoms as an autonomous IP Intercom, IP Paging system or can be used by itself with a PC controlled solution



### Volume Source Control VSC

Universal wall mountable control accessory for the BARIX audio product range



### Multifunctional digital desktop paging station PSI6

Master or Paging/Intercom station for use in security, paging and intercom system, targeting industrial, transportation, retail, pro audio and commercial applications. Features a flexible gooseneck microphone, a speaker (1W), 2x24 character backlit LCD and 16 user definable push buttons, each with LED indicators all housed in an impact and break resistant ABS plastic enclosure.



**A concert hall extending over 175,000 square metres, with box seats in ten lift installations. BARIX networks the Klinovec-Nord ski resort in the Czech Erz Mountains.**

Enjoy an amazing sound experience in the largest ski centre in the Erz Mountains not far from the German border. Despite the modest investment in technical and financial resources for such a large-scale project, BARIX has installed a sound system covering a vast area and offering outstanding audio quality. BARIX technology ticks all the boxes and guarantees immaculate sound transmission: Authentic sound quality, independent equalisation of high and low tones geared towards the various target locations, combined with outstanding clarity, including spoken announcements.

Having the right sound for their favourite sport is a vital part of the “cool scene” that young visitors expect to enjoy at their holiday resort. This doesn’t involve them being in a world of their own with an MP3 player and earphones – it means tuning in to the same rhythm on the mogul slopes or in the half-pipe. BARIX sound systems offer maximum flexibility and tailored programs for every requirement and location. Traditional music in the ski lodge, magical sounds in the ski kindergarten and crystal-clear sports commentary around the slope where the ski race is taking place. In addition, locally targeted service promotions can be advertised, or safety warning announcements can be broadcast for all to hear.

The outstanding features of the sound system installed in Klinovec are its simple central control, completely stable operation and user-friendly handling, requiring minimal technical expertise. Despite covering a large area, the innovative BARIX technology does not require substantial in-



vestment, working on the basic principle that quality – not quantity – counts.

A brief glimpse at the technology deployed reveals that the entire area, covering 17.5 hectares, is interconnected via a conventional Ethernet TCP-IP network. The IP sound system uses this network, adding only a few further components of its own. The system installation comprises only one Instreamer and six Exstreamers, distributed over individual endpoints between 300 and 1,800 metres apart. The Instreamer converts the audio input (e.g. from a DVD, tuner or hard disk) at a central point into streams which it transmits via the network to the target locations, where the Exstreamers convert these streams back into audio files for broadcasting via the connected loudspeakers.

However, it is the end result that matters, rather than the cause. Contact BARIX to discuss your individual requirements, and let us provide you with the perfect, tailored solution.



# BARP – the Barix Paging solution

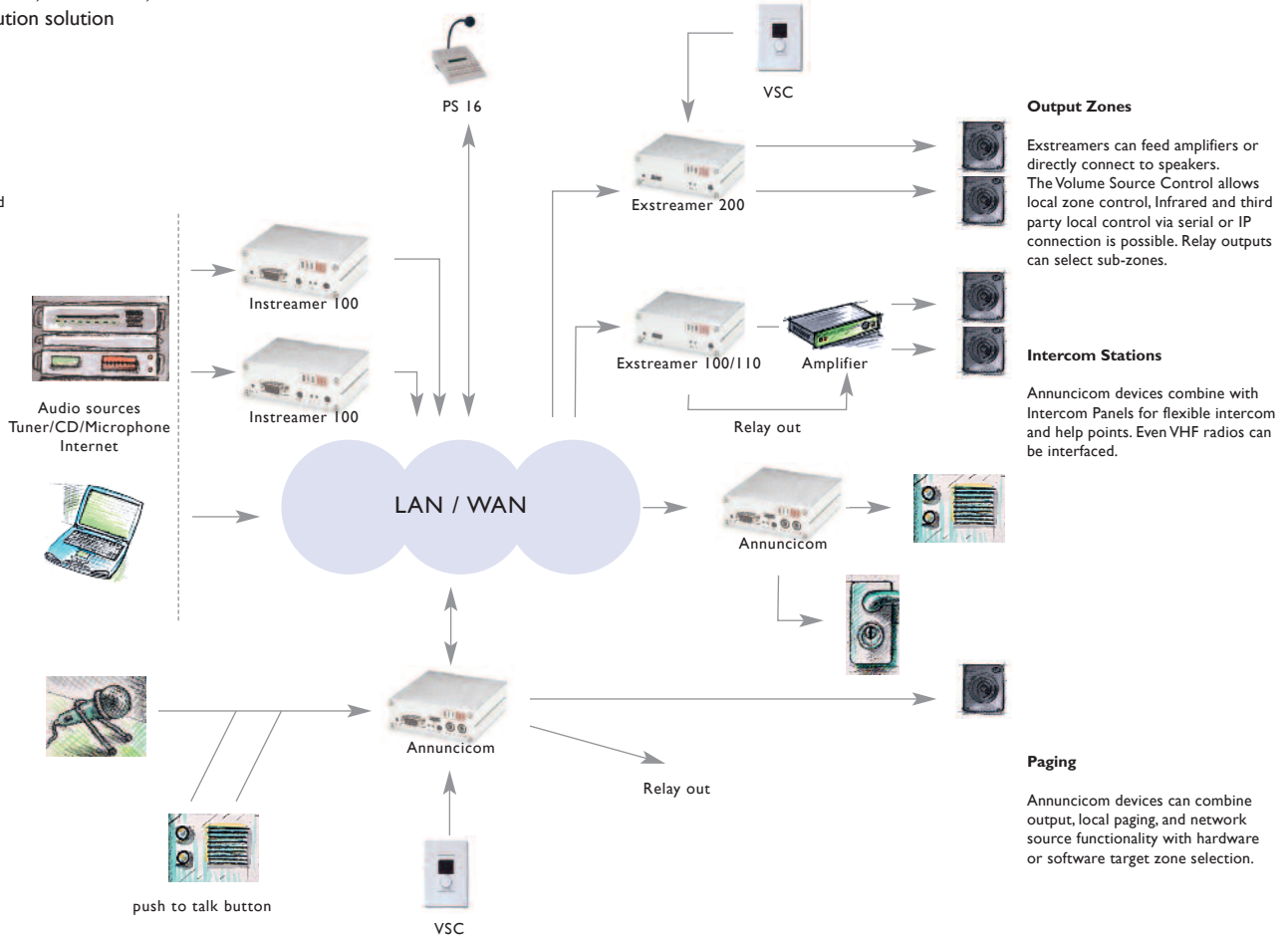
IP Standards based multizone, multisource, high quality audio distribution solution

## Paging Sources

Paging can be done with PS16 Stations, software solutions and other sources, even SIP capable phone systems can be connected using Annunicom devices or software.

## Music Sources

Background Music channels can be generated on PCs from playlists, internet radio, and on Annunicom devices from USB content. Live sources can be fed using Instreamers.





**Control, monitor, communicate.**

**BARIX AG.**

BARIX is a skills-based company offering expertise in leading-edge, IP-based communications and control technology. The company is based in Zurich/Switzerland and specialises in the research, development and production of system components.

Typical BARIX products include a range of devices which can be connected locally via standard networks or via the Internet, offering innovative, low-cost solutions for audio over IP applications (transmission and monitoring of audio signals), communications (intercom) and automation tasks (decentralised control, monitoring and maintenance operations). The wide range of available applications includes in-store music, supermarket advertising, religious service broadcasts, distance learning programs, audio transmissions in hotels, offices, museums and hospitals, intercom and PA systems, solutions for radio and studio broadcasting, M2M machine communications, lighting and door automation and security solutions such as surveillance and access control systems. BARIX AG provides its customers and partners with the latest technology in the form of standard or customised products, private labelling, licensing and OEM developments.

# Audio over IP from BARIX



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