

Acutron Electroacústica Lda.

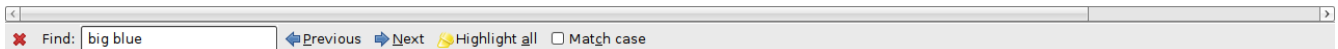
NetPA IP Public Address System

	Programa correspondente à coluna			Programa												
	Configurar	Repor	Microfone	Mensagem	CD	Sintonizador	Configurar	Repor	Microfone	Mensagem	CD	Sintonizador	Configurar	Repor	Microfone	Me
1	1	1	1	2	3	4	9	9	1	2	3	4	17	17	1	
2	2	1	1	2	3	4	10	10	1	2	3	4	18	18	1	
3	3	1	1	2	3	4	11	11	1	2	3	4	19	19	1	
4	4	1	1	2	3	4	12	12	1	2	3	4	20	20	1	
5	5	1	1	2	3	4	13	13	1	2	3	4	21	21	1	
6	6	1	1	2	3	4	14	14	1	2	3	4	22	22	1	
7	7	1	1	2	3	4	15	15	1	2	3	4	23	23	1	
8	8	1	1	2	3	4	16	16	1	2	3	4				

NetPA v1.24 de 2009-07-13, utilizador corrente = ajoliveira@Unknown-00-13-f7-eb-3b-8b.lan

Configurar

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The new Acutron NetPA distributed IP public address system

Acutron had developed a new IP distributed sound system (NetPA) in which any source, any operator microphone or any covered zone may be at any distance from the virtual Central, even geographically miles away.

Up-to-date technology aiming easy implementation

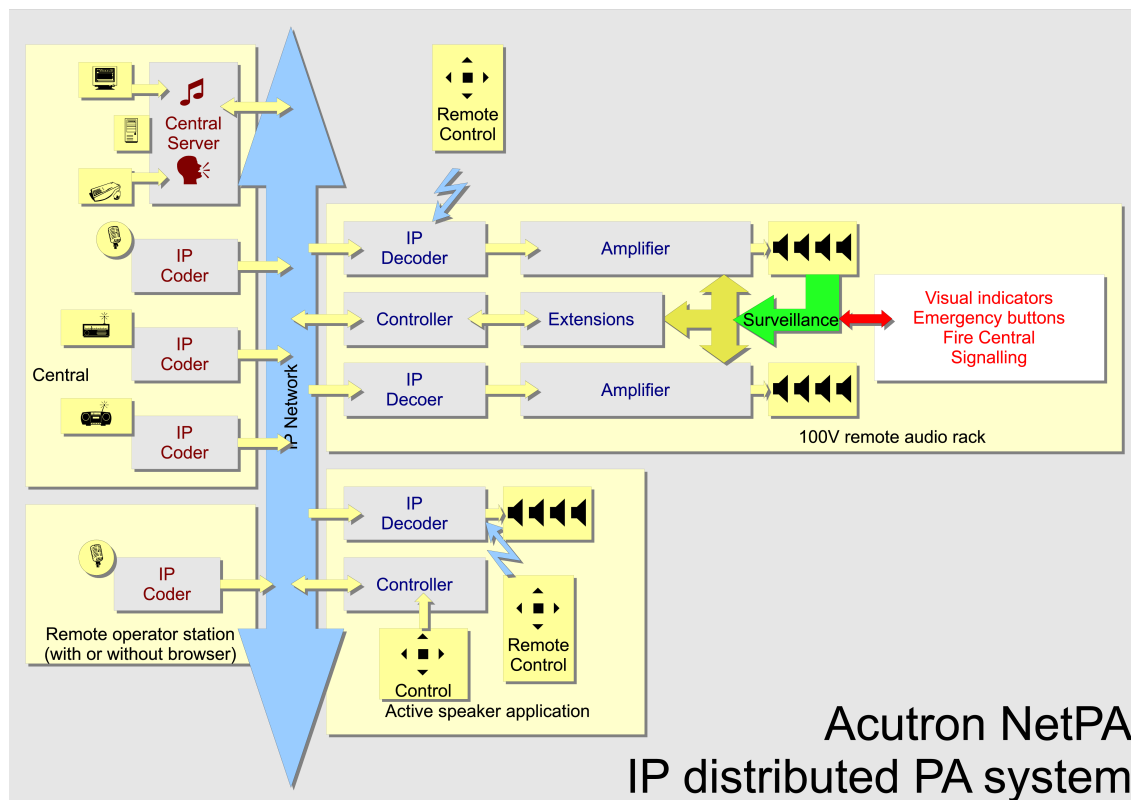
Based on Acutron and Barix hardware, and featuring Acutron firmware and software, the system uses any pre-installed Ethernet network, not needing expensive fiber-optics or dedicated networks, and is able to co-exist in the same infra-structure with other systems. It is capable of partially or fully fulfill EN60849 and BS5839-8 (emergency-use sound system standards), depending on the level of the used options.

Can the system be standard-compliant?

Unlike what is seldom advertised, there is no such thing as emergency-standard compatible equipment. In fact only the full system may be evaluated for compatibility, and everything counts, from of course the capability of the equipment to be integrated into a compatible system to things as cabling topology, redundancy, the way installation was conducted and even the way operators are supposed to operate the system. Acutron NetPA may be compatible if a suitable system layout is deployed.

Flexible architecture

The system adapts itself quite well to any number of sources and destination zones, being applicable to shopping malls, hotels, congress centers, railway and bus stations, airports and other installations where public information is sought but with the flexibility of adding destination zones, operators, sources, and move operators without re-cabling. The system adapts itself to fulfill unusual requirements, such as audio surveillance, and is completely modular and expandable, in order to meet the real-life user needs.



Robust and modular

The core of the system is a central server, which is physically a PC running the highly-reliable and open Linux operating system (it may run on any usual operating system, if needed). The server steers the entire system, using compiled php scripts and a transactional Mysql/InnoDB database to form a robust html server to which all network terminals are connected. To be noted is the availability of a server bypass module allowing for high availability announcements in an impaired system where the server is off-service.

An essentially distributed system

The browser-based operator terminals may reside on any network machine, either in the local network or over the Internet. Access security is ensured by an hierarchical, encrypted username/password pair structure.

Remote operators may this way access either all or a subset of the system available functions. The scope is always controlled by the system administrator.

The administrator will identify and set-up all the sources and programs that may be routed into the system, implementing an huge geographically-distributed crosspoint switcher, if needed. Sources may be microphones, conventional CD players and tuners, digitized by a Barix Instreamer coder, or a multi-channel streamer either setup in the main server or running in a separate machine. The system will take Internet-radio streams as well.

Restriction-free planning

Programs are routed to remote destination zones by IP, occupying typical 128kb/s bandwidths, in stereo. At the target zones, one or more Barix Extreamer decoders (according to the number of zones) will decode the audio signals. Their output will typically be delivered to an 100V Acutron AI-series amplifier in order to deliver audio to a number of 100V speakers in the zone. Alternatively a balanced line will deliver signal to a number of Acutron SIR5P6A active speakers. Control of volume and selection of local program in the latter case can be made via an infrared remote control.

If the target area is an entire amplifier rack, a Barix Barionet controller and their Barix IO12 extensions will watch the operation of Acutron amplifiers in real time and possibly the state of the speaker lines connected to those in the case the line is used for critical calls (overload and disconnected section check). The same controller enables automatic bypass of existing speaker attenuators in the event of emergency calls, and the acquisition of the state of external contacts used, for example, to manage a PC-less microphone operator terminal or to trigger evacuations messages from emergency buttons or a central fire dispatch.

A security-oriented hierarchical structure

All operations are recorded in a remotely-accessible text file, with 2 logging levels and automatic backup after it reaches a pre-determined size.

The system works using administrator-controlled locks and priorities. Being so, it will not be allowed to insert certain programs on certain zones, and if a high-priority program tries to get to some destination where a low-priority program was previously routed, it will override it. The converse is of course not true. Priority levels are freely programmable and unlimited in practical number. The system distinguishes standard from priority calls adjusting the volume accordingly between two zone-by-zone programmed levels. In the very same way, zone tone control may be remotely controlled.

Where has the system been applied.

In big shopping malls like the Colombo in Lisbon, in big hotel resorts like Porto Santo's Colombo's Resort, on private hospitals like one in Faro. On the configuration side, there is a concentrated 29 zone solution on the Colombo shopping mall, with 2 remote operator terminals one of which is PC-less, background music and evacuation messages.

Colombo's Resort uses 23 zones distributed by 4 different equipment racks with 100V local distribution, and the Faro hospital uses active speakers and infra-red controls for local control. This latter architecture is well suited to spas and health-clubs as well. In the hospital environment, the system is often interfaced to the nurse calling one, thus the same patient control is common to both, speeding up the learning curve.

All mentioned systems are remotely managed using the Internet either by their administrators or by Acutron for maintenance and upgrade purposes.

Non-standard uses for NetPA

Always ready to solve off-the-track challenges, Acutron designed a system allowing the capture of the sound resulting from one of the several wide cages existing at the National Iberian Lynx assisted reproduction center in Silves, Portugal. Sounds are brought to a central dispatch using IP and analyzed against thresholds. If an animal is in stress and the sound pressure level is excessive, an alarm will be triggered and the operator may use NetPA to hear what is going on and point a camera to the right place. In this case the system has one destination for several sources, againsts few sources to a lot of destinations in a typical sound system.

Even if the Center is equipped with surveillance cameras, the Lynx is known by its camouflage ability, rendering pure visual observation difficult. Acutron system bridges the gap and provides the most adequate way for first-line surveillance and stressed animal detection.

Similar applications are being developed in order to use the NetPA system as an intrusion validation and dissuasion one, and it is already in use in the prison environment for secure messaging with assurance of final message delivery.

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