AEQ

with

Broadcast Pix

Visual Radio Systems

Maximize your channels possibilities revenue

Turn your listeners into viewers

Not all Visual Radio systems are born equal!

AEQ / Broadcast Pix solution is based on a high-performance video switcher, as the ones used in TV studios.

The integration of AEQ consoles and interfaces automate camera control and simplifies video broadcast production.

Integration provides an automatic video production and broadcasting system coordinated with the radio program, without the need for a producer and avoiding loading the control technician with extra job.

General description of the provided solution

How does it work?

Visual Radio generates visual contents accompanying the radio program, to be broadcasted mainly over the Internet. The generation of these contents is getting more and more demanding, to the extent that it is becoming similar to the production of a TV program.

Broadcast Pix is a solution offering a great deal of resources for the production of such contents. In fact, this system is currently being used by small to medium-sized TV station for the generation of its broadcast signal.

The main difference between TV and radio production is that, in the later case, it is not common to count on enough staff to produce the customized video signal. Through its control software, Broadcast Pix allows for the creation of automated scheduling macros based on external events, which generate automatic production of the video signal to be broadcasted.

Broadcast Pix automatic video production systems are integrated into AEQ sound mixing consoles, that indicate the IP server what microphones are open and their level, as well as the instructions the control technician wants to provide to the video production system through the programmable keys. This way, the video production control system is integrated into the sound console itself, so the control technician sends commands to the system without interacting with a different piece of equipment.

If an AEQ digital mixing console with IP control output is not available, the controller can use an AEQ Netbox 32 AD V AoIP interface to provide open microphone and level instructions and commands to the video switcher.
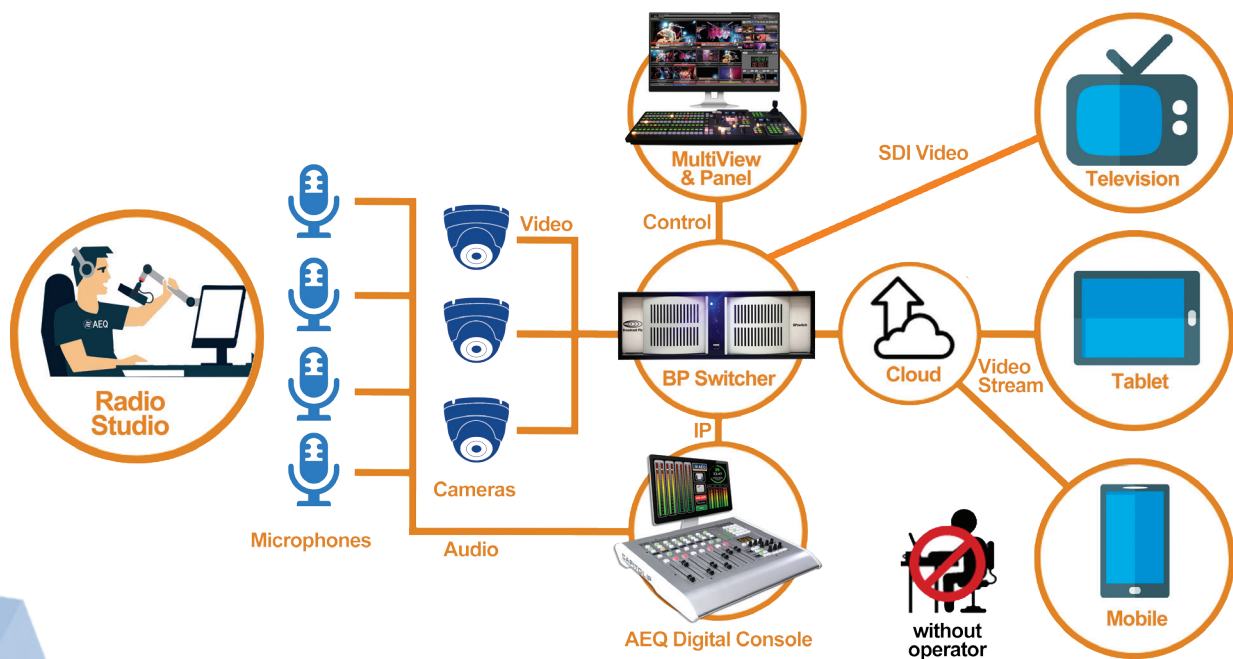
Broadcast Pix's Visual Radio system is based on a video server/processor, which manages the signals and performs their switching and mixing, delivering the final product to be broadcast, both in SDI and in streaming format. It can also record its own generated signal.

It features SDI, HDMI and analog inputs. The PTZ HD cameras are connected to these same inputs.

It controls the camera robotics in an automated way, following the implemented schedule basing on the microphone signals, as the system must focus on the different radio commentators for the video production, but establishing some priority levels.

Here is where the AEQ consoles or IP interface themselves play their role, as they receive information from the microphones and send information via IP to the Broadcast Pix server about which ones are active, so the realization is based on the scheduling, priorities, explanation times, etc.

Apart from this information, AEQ sound mixing consoles can send different commands using their Function Keys or their own faders in order to play clips, insert logos, display messages using the character generator, switch between cameras or even change the whole schedule, which was created for an specific radio program, to give pass to a different program with modified schedule. This is crucial to integrate the systems' operation within the traditional radio technical operation.

When the media has both radio and TV channels, sometimes the video signals produced in the radio studio turn into very valuable contents for the TV station itself. In these cases, the signal production requirements may be more sophisticated. AEQ / Broadcast Pix system allows for the connection of an external Mixing Control Panel that can be operated in the traditional way by the video producer, obtaining a more creative result that makes the Visual Radio generated signal usable in the TV channel.

The Visual Radio system proposed by AEQ is based on the Broadcast Pix Flint switcher, a compact system integrating absolutely all the required features for the generation of professional video signals. These are the particular features of this system, which are well above the capabilities of most Visual Radio systems. (Nevertheless, for systems used in combination with traditional TV production, Broadcast Pix switches with even more advanced features can be used).

Broadcast Pix LX Flint Switcher. Configuration

- The multi-format Flint LX switcher is built on a PC platform with specific hardware installed, admitting HD and SD cameras simultaneously, as well as video files and cloud-based contents using the integrated BPNet system. Flint also features three overlapping layers (Keys), two clip channels with an storage capacity of up to 60 hours, and 6 graphics channels supporting the internal Character Generator (Inscriber).

- Flint LX provides:
    - up to 4 SDI and 4 HDMI inputs.
    - up to 4 network inputs (NDI ™, RTSP).
    - 8 clip and graphics channels and 7 simultaneous outputs (SDI, IP, analogue and HDMI).
    - Internal generation of HD streaming, recording, audio mixing and a CG graphics system.

- 3 keyers, each one with DVE's and Virtual Studios with ClearKey™ chromakeyer.
- Cloud video contribution with BPNet, outputs and device management.
- BPView™ customizable multi-screen manager.

LX Flint Visual Radio Control Screen

LX Flint Front Panel

LX Flint Rear Panel

Broadcast Pix Flint Switcher. Detailed functions

TV engineers will appreciate why AEQ / Broadcast Pix solution provides the best production in a simple way in light of the following functional details:

Multiple Cameras: Mixing capability for up to 4 SDI, HDMI and analog cameras, as well as up to 4 IP inputs (RTSP o NDI ™). It can also mix 1080i, 720p and SD formats.

Social Networks option: information flows from Twitter and RSS automatically feeding the program or passing through the Preview signal. Graphics can be automatically updated from the Daktronics and OES markers.

Multi-format device: includes 4 SDI or HDMI inputs, as well as 4 IP inputs and 8 incorporated clips and graphics channels. Mixes 1080i, 720p and SD video sources. 3 layers (key), each one featuring customizable DVE for Picture in Picture and flying keys.

Multi-screen generation: All its inputs/outputs, as well as each Key layer, file libraries, clocks counters, safe areas, files from watch-folders and more, can be displayed in high resolution. Fully customizable, as all windows are resizable, re-locatable and may be replicated to create an optimal appearance.

Device Control: Each control surface has a device panel in order to control these devices, let them be internal or external. The device is selected and then any file, macro, pre-adjustments of the robotic camera, etc. are associated to it. Available controls also include joystick, knobs and display. Provides quick control of all the contents.

Dual-channel Clip Server: Plays back up to 60 hours of clips and animations with audio. Clips can be individually configured so they are initiated automatically when put on air, in automatic transition, rewind or loop mode, etc.

Character Generator: Includes 8 graphics channels and an incorporated broadcast quality CG (character generator). As opposed to other integrated systems, the CG may continue operating during the show.

Video Outputs: Up to 7 available video output formats: HD SDI, SD SDI, HDMI, IP (NDI ™), analogue components. Integrated audio output in SDI / HDMI, plus 4 balanced analog and 2 AES / EBU audio channels.

Direct Streaming output: Includes the FLV format using Adobe Media Live Encoder and resolution up to 720p, or WMV using Windows Expression Encoder with SD resolution. Keeps Lip-Sync no matter what the device's load is, thanks to a special processor. Direct integration to Ustream, Livestream, Facebook Live and more systems.

Recording: allows for the recording of the output program at the same time it is being generated to an AVI Motion JPEG file with 1920 x 1080i resolution and audio.

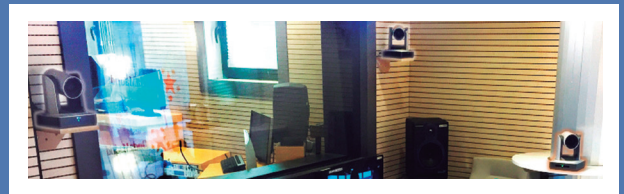# Components and Configuration

Control Interfaces

There is a wide variety of available interfaces for manual production: external panels as model-500, touch screens, tablet or SmartPhone as well as the "Commander Interface", which is simple to use for non-technical operators.
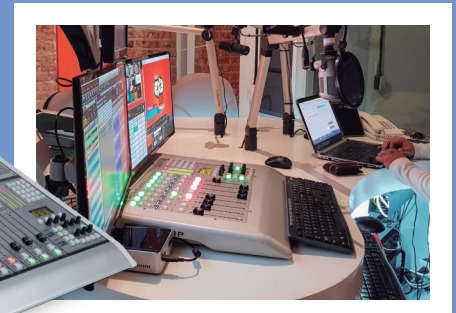
Cameras

Any PTZ (Pan, Tilt & Zoom controlled) camera can be used.

AEQ Consoles as voice-operated camera control equipment

AEQ Capitol, Forum and ARENA consoles, in all their versions, can be provided with a voice control license activated. The existing ones may be upgraded -under the supervision of the technical assistance service- so they admit this license.

AEQ AoIP Interfaces as voice operated camera control equipment

A copy of each separate microphone signal can be sent to a Netbox 32 AD V interface in order to integrate with third-party consoles or AEQ non-digital consoles such as Opera or BC 2500. It can measure the signals and deliver the values to the Broadcast Pix Flint switcher.

Configuration

Visual Radio projects require some customization and integration in order to provide a level of performance in accordance to the investment. Proposals will be customized basing on the requirements. In some cases, this has been combined with Video Walls so as to render the studio with more "life or activity", making it visually atractive.