



PROFESSIONAL AUTOMATION WITHIN EVERYONE'S REACH

# AEQ AudioPlus

## System Presentation

## General Description

**AUDIO PLUS** is the most advanced automation, management and emission system for professional broadcasting. It is the latest generation of automation systems developed by AEQ, collecting the experience of thousands of workstations of MarSystem (1992-1999), Mar4win (1998-2009) and Mar Suite PRO (2008-2012).

It consists a set of applications and services that provides the necessary tools in order to perform any regular work at a radio station, as well as a series of works for storage, editing and audio broadcasting in television stations.

The basic need for automation in radio stations is the management, scheduling and sound storage. This is its specialty, gathering in **AEQ AUDIOPLUS** the answer to all needs reported to us by the users of our previous automation systems and of other brands, creating a synergistic process in its development.

It is essential to perform the broadcasting in an unattended and occasionally centralized way, preparing data in remote stations and remotely controlling from a master station the program broadcasting that incorporate local disconnections with different schedules.

Through these pages we will refer most extensively to the core modules of the **AEQ AUDIOPLUS** system and its operation. Data Management, Manual and Automatic Broadcasting, Automatic Scheduling, Internet, Audio converter, Audio extraction from CD's and the Musical classification, still providing a detailed description of the many possibilities offered by its features to automate, in its whole, the radio workflow.



AEQ+AudioPlus  
Radio Automation

# Hardware and Software Requirements/Installation

**AEQ AudioPlus** is a self-installed software that provides a set of applications and services developed on the Microsoft Windows platform, on its client and server versions. The system relies, for its operation, on the Microsoft SQL Server database engine.



Microsoft®  
**SQL Server® 2008**

The operating systems currently supported for the operation of **AEQ AudioPlus** are: Microsoft Windows 2003 Server, Windows 2008 Server, Windows XP Professional and Microsoft Windows 7 Professional in 32 and 64 bits\* versions. The supported database engine is the Microsoft SQL server in its 2000, 2005 and 2008 versions, from the Express (MSDE version 2000) Edition as in the above versions (Workgroup, Standard and Enterprise).



**AEQ AudioPlus** can be executed from common computers up to high-performance workstations. Its minimum requirements are:

- ✓ Double-core processor
- ✓ 4 GB RAM
- ✓ 250 GB HDD
- ✓ Gigabit network card
- ✓ Parallel Port (only required for disconnections by external devices, such as remote control and fader start)

For the better integration of the various applications in the work schema of the end user, the implementation of two or four monitors is now possible to allow the simultaneous and independent view of the applications, optimizing response times and operators' performance.

In the section of the supported audio hardware, **AEQ AudioPlus** works with sound cards of any manufacturer, with the own multimedia cards already incorporated as standard on current motherboards, even with those of USB and Firewire format.\*\*



In any case, non-professional audio cards, embedded on the computers and laptops motherboards, allow pre-listening in all kinds of stations, and in editorial, or similar, positions and, also, allow light editing and playback.

It is also possible to use **AEQ AudioPlus** with a series of modern Audio consoles, such as **AEQ CAPITOL** and **AEQ FORUM**, without the need for audio cards. Using USB connections as interfaces, the console's hardware provides the sound cards. The consoles can also link through IP for Fader Start functions.



## Installation and Licensing:

**AEQ AudioPlus** is installed with great simplicity and flexibility by a self-installing software, and in addition to integrating a wizard that allows the user to configure the system and start working immediately.

**AEQ AudioPlus** does not require any license dongle hardware. Its security scheme enables independent installation, avoiding costs associated with the license hardware.

**AEQ AudioPlus** allows temporary license generation.

(\*) Parallel port option and virtual-multimedia cards not available.

(\*\*) Consult with your AEQ dealer first to validate and confirm the operation of the selected audio card.

# AEQ AudioPlus Scheme

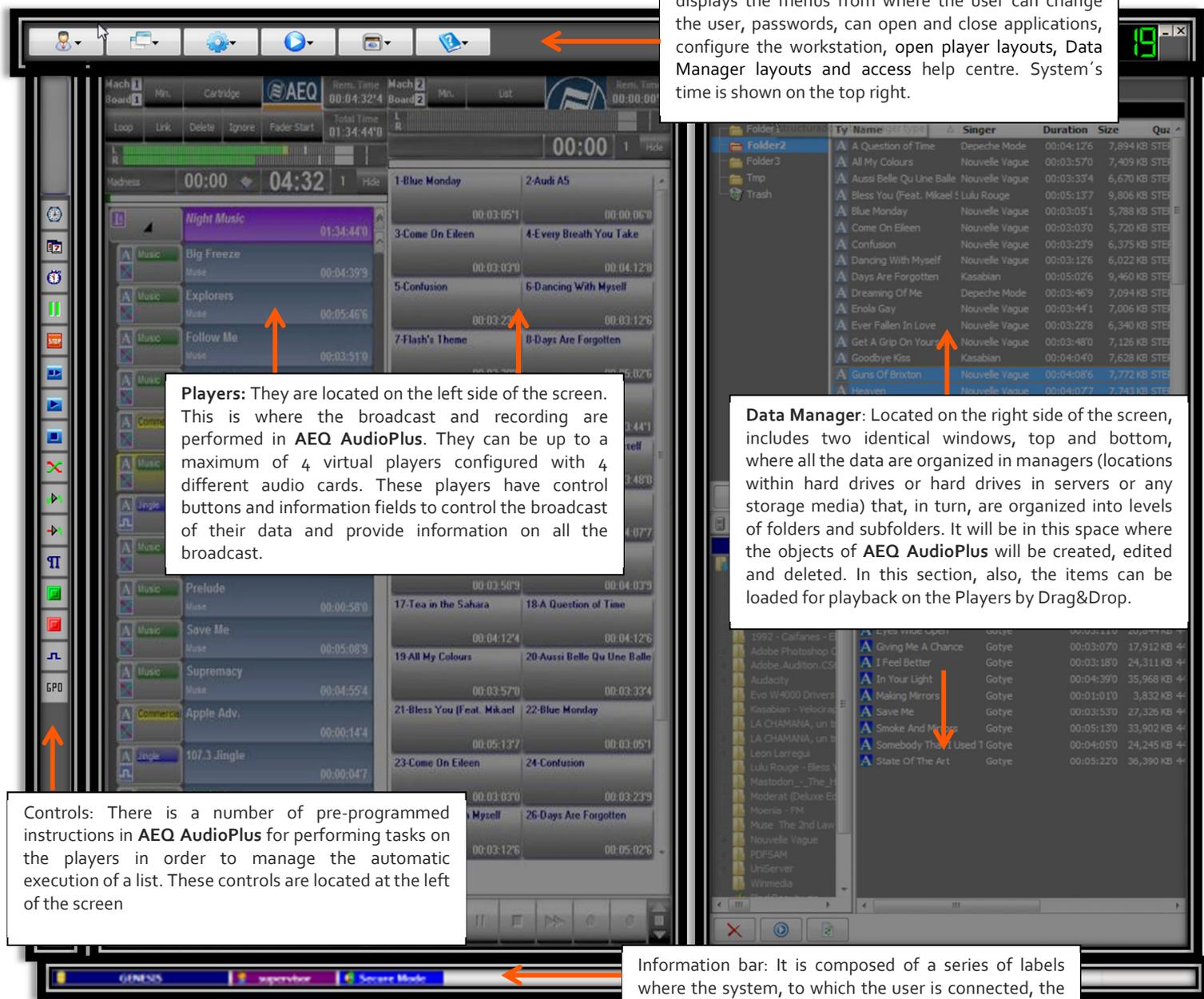
**Menu bar:** It appears at the top of the application and displays the menus from where the user can change the user, passwords, can open and close applications, configure the workstation, open player layouts, Data Manager layouts and access help centre. System's time is shown on the top right.

**Players:** They are located on the left side of the screen. This is where the broadcast and recording are performed in **AEQ AudioPlus**. They can be up to a maximum of 4 virtual players configured with 4 different audio cards. These players have control buttons and information fields to control the broadcast of their data and provide information on all the broadcast.

**Data Manager:** Located on the right side of the screen, includes two identical windows, top and bottom, where all the data are organized in managers (locations within hard drives or hard drives in servers or any storage media) that, in turn, are organized into levels of folders and subfolders. It will be in this space where the objects of **AEQ AudioPlus** will be created, edited and deleted. In this section, also, the items can be loaded for playback on the Players by Drag&Drop.

**Controls:** There is a number of pre-programmed instructions in **AEQ AudioPlus** for performing tasks on the players in order to manage the automatic execution of a list. These controls are located at the left of the screen

**Information bar:** It is composed of a series of labels where the system, to which the user is connected, the active user, and sometimes, messages related to audio cards, information data of objects and modes of work are displayed.



Data manager module is the "main storage" of the System Files. Any audio file, playlists, or texts stored in the system that we need to use, (either on local disk or remote disk or network storage), will be classified within this application.

It is critical to **AEQ AudioPlus**, since this functionality is responsible for converting files into the standard format, on which they internally work, and keeps all the data associated to each "object" saved in its storage.

There are different types of managers, which will be used to access different types of objects according to their use or where they come from.

The process of self-installation of the product provides a wizard that allows the creation and configuration of managers that are most often used, with the possibility to create later another type of more specific managers.

The Managers most commonly used are:

- ✓ **NETWORK Manager.** It is where all the files are stored, shared by all the users. Users who have access to each Network Manager can be differentiated according to their access level and user key (if this function is active).
- ✓ **REFERENCE Manager.** It is specially designed for the creation of broadcast lists with data from different managers.
- ✓ **LOCAL Manager.** It corresponds to the file storage on the hard disk of the PC. These files are not shared with other users (in case a network of several workstations has been set up).
- ✓ **ON FLY Manager.** They provide access to audio type files in compatible format with **AEQ AudioPlus** (MPEGII, MP3, WMA,...), that reside in external drives (CD-

ROM, Pen-Drive...), allowing the data transfer between them and the structured managers.

- ✓ **FTP Manager.** It is used for distribution or exchange of files between remote servers or between different applications that are not related to **AEQ AudioPlus**.
- ✓ **Autoloader Manager.** Its content, which can come from different managers, is loaded automatically on the players for automatic and remotely controlled broadcast.
- ✓ **Favourites Manager.** They provide a way to select objects, so they can be quickly located later.
- ✓ **Search Manager.** It is possible to search for objects in a manager or in the whole system. The result of this searching is displayed as a manager, something that allows the user to interact with it, the same way as with the rest of the managers.

All the above mentioned managers are divided into folders and subfolders. It is possible to create as many folders as necessary for the correct classification of the data and these folders can be divided, in turn, into subfolders and levels of subfolders, according to the needs.

The presentation of these folders and subfolders is made in a typical Windows format (for better understanding) and can be organized as required for the type of operation to be performed.

These managers and folders may be visible only by authorized users, not showing those that are not of interest for that type of user.

## Functionality: Data Manager

# Data Manager: The Manager Window: The Information Repository

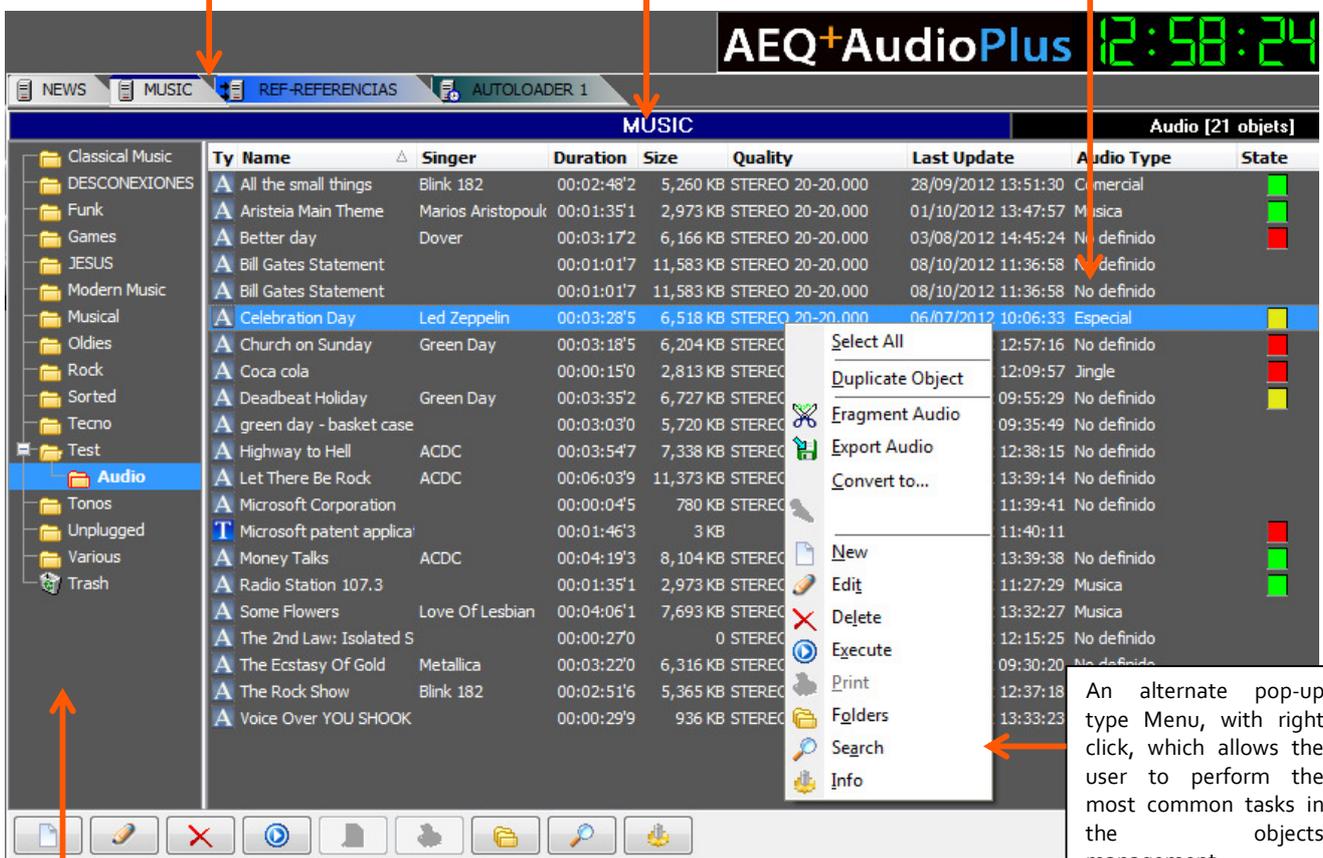
As we mentioned at the beginning, the flexibility and multiplicity of supports the managers may have, give to the system, and therefore to the radio station, an unlimited capacity in terms of the number of stored data and the way to save them.

The **windows** representing the managers of information consist of:

A tabs at the top of each window, which represent the managers available to the user.

Most of this window is occupied by the representation of the stored objects, together with the information concerning each one of them.

A horizontal bar in dark colour contains the name of the selected manager



The folders form a tab on the left side. The colour of the folder opened by the user is lighter than the others. This functionality can be altered for more flexibility.

The bottom of the window manager displays a series of buttons to work on managers and its objects: New, Edit, Delete, Run, Preview, Print, Folders, Search and Info.

An alternate pop-up type Menu, with right click, which allows the user to perform the most common tasks in the objects management.



## Functionality: Broadcast Player

- **Rem. Time:** Indicates the audio time value selected on the player. This time is updated in real time during playback.
- **Loop:** Selected on an object, it makes it restart automatically when it is over. Selected on a list, and if "link" mode is enabled, when the whole list to be produced is completed, it restarts automatically.
- **Link:** When an object from the list is completed, it continues with the next objects, until the list is over.
- **Delete:** Eliminates an object from the player, when the reproduction is completed.
- **Ignore:** Deactivates the playback of the selected object.
- **Fader Start:** Enables the starting of the players from the mixer.

The Broadcast player is composed with a set of virtual players of playback / recording, constituting the support of the system broadcasts.

The user can create up to four virtual players per workstation. In each one of these, it is possible to select, at any time, the data to be presented as a List, with its associated configuration data, or as an Audio Cartridge (direct play buttons) that gives instant access to the audio broadcast by pressing on it. This is very useful for not predefined playback of audio intros, tunes, jingles and others with the help, or not, of a touch monitor.

The way to load or carry the objects to be broadcast on the virtual player is very simple. Select with the mouse the objects stored in the managers and drag them, holding down the left button of the mouse, up onto the player.

The configuration of each one of these players is very flexible and is linked to the user, in a way that, when changing a workstation, the format and the method of work can be carried along.

### Upper Control on Broadcast Players

At the top of each one of the broadcast players, the following controls and information are displayed:



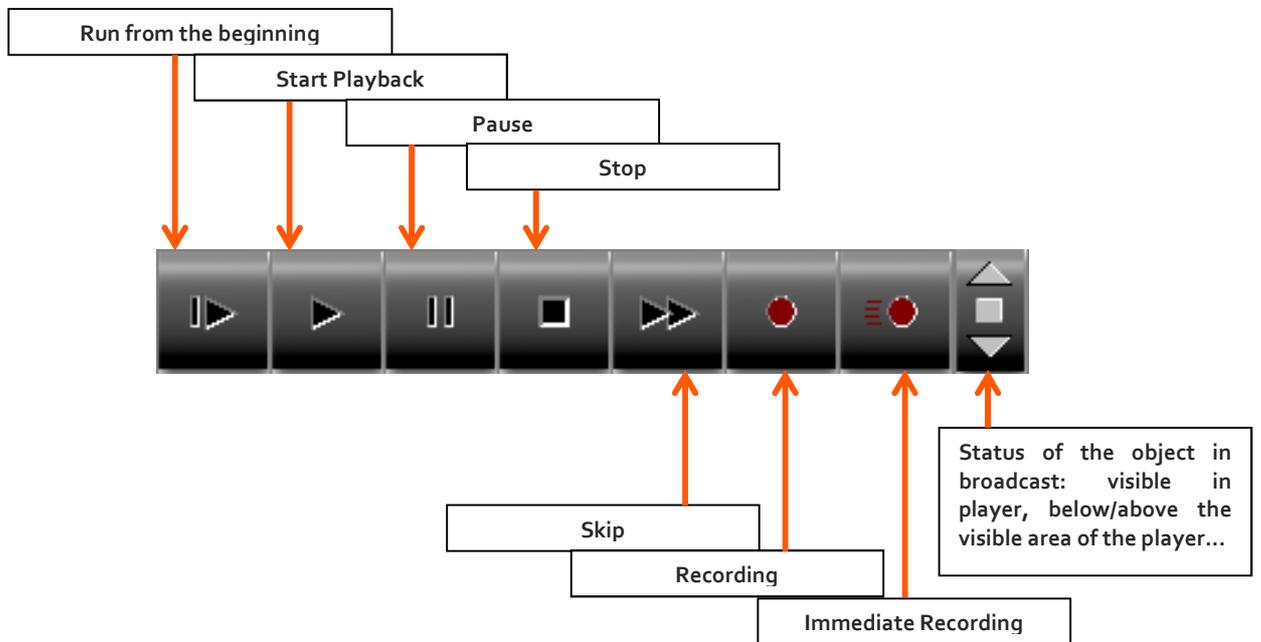
- **Mach-Board:** Number of player and number of the associated sound card indicator.
- **Min.:** Through a single press on this button, the size of the player can be reduced to allow more room on the screen.
- **Cartridge/List:** A single keystroke can change the List format to the Audio Cartridge format.
- **Audit:** The broadcast registration carried out through this player.

- **Total Time:** Indicates the time value of the total number of files loaded on the player.
- **Vumeter:** Represents the audio level playback or recording.
- **Information Bar of the playing object:** indicates the name of the object and intro time. The counter indicates the remaining time or the elapse of the audio.
- **Hide:** Allows the user to hide the play buttons of the player.

# Playback Controls

## Playback Controls

Located at the bottom of the player, they allow manual control of the playback functions and access to the recording. They are the typical controls of a tape recorder to which additional controls are added:



## Functionality: Control Bar



The elements displayed at the left of the screen, once dragged onto the virtual player, contribute in optimizing the playback.

- ✓  The start of the player at a specific time.
- ✓  The start of the player at a specific day.
- ✓  A visible counter on screen.
- ✓  The temporary or definitive stop of the playback.
- ✓  The jump, start or stop of a player inside or outside the same terminal.
- ✓  The mixing edition, progressive level's fade out at the end and at the beginning of playback.
- ✓  The Sound card's Bypass.
- ✓  The inclusion of the theme's presentation.



## Functionality: Automatic Broadcast

AEQ AudioPlus allows automatic broadcast of generated data in order to avoid the need for constant human presence at the time of broadcasting.

Its operation consists of managing automated broadcast schemes, using a time control, which can be scheduled from a broadcast station or on other stations connected on the local network.

The automatic broadcast scheduling can be configured to any time zone that the user wishes to, it can be even scheduled for several days, weeks, months or years.

Playlist can be viewed in screenplay form, in such a way that it is possible to know at what exact moment of time each object, loaded on the player, is played, for a period of a few hours or even several days.

While the player is not in playback mode, there is a Bypass on the card that enables sending the card's input signal towards its output, protecting this way the availability of the radio station: in case of a lack of specific data, the data received at the card's input will be reproduced.

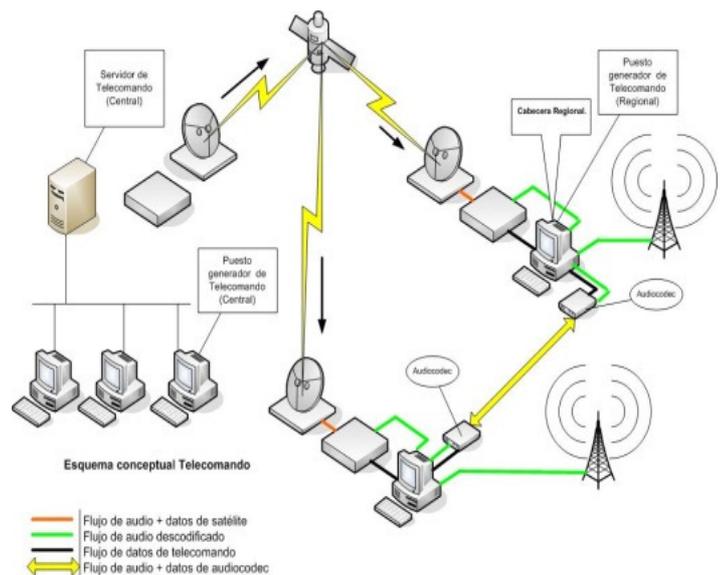
## Functionality: Remote control

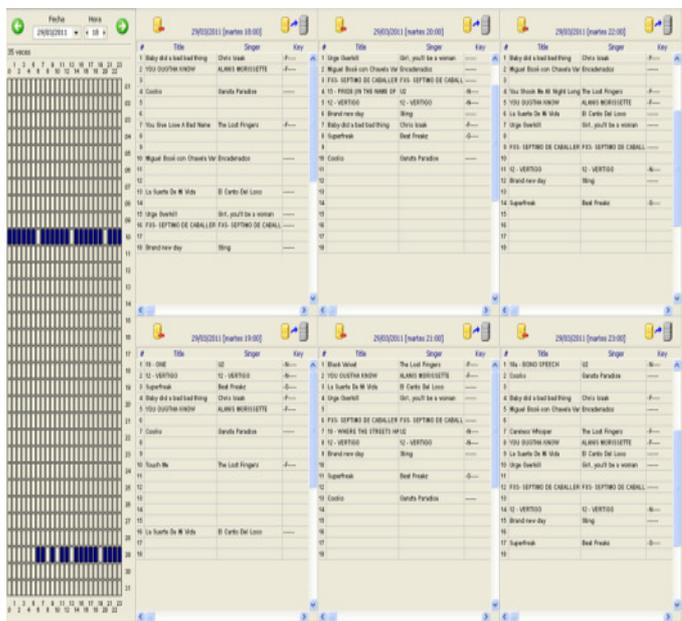
AEQ AudioPlus identifies disconnections through decentralized orders via satellite or by data channels.

On the radio stations, and especially in the large broadcasting chains, it is required to act on automation systems located in each one of the localities without the physical presence of an operator.

It is common in radio stations that broadcast only one program, generated in the central header, combining it with the need to broadcast at each station, in certain periods of limited duration, a different program that affects basically the advertisement or information of local interest. Once the program of each station is broadcast, it comes back to the broadcast of the central header.

Depending on the particular needs of each client, AEQ and its authorized distributors will perform free of charge the consulting required to define the most appropriate system of remote control according to the needs of each radio station.





## Functionality: Automatic Generation of Broadcast Lists

This **AEQ AudioPlus** module allows the classification and processing of the music available on a station, automatically generating lists of broadcast, based on sorting criteria.

It is possible to integrate the inventory of music that a station possesses, according to different classification criteria: Nationality, Type, Rhythm, Speed, BPM, Priority and Version.

The information managers of **AEQ AudioPlus** store the objects that compose the broadcast lists and compose the broadcast guidelines generated by the application.

Implementation: Based on a layout that collects audio broadcasting every hour, the user can select the type of audio to be introduced in each one of the positions. Linking the layouts, the user will obtain the daily schedule of the station with the possibility to edit the auto-generated data.

## Functionality: Exchange (External Editors Integration)

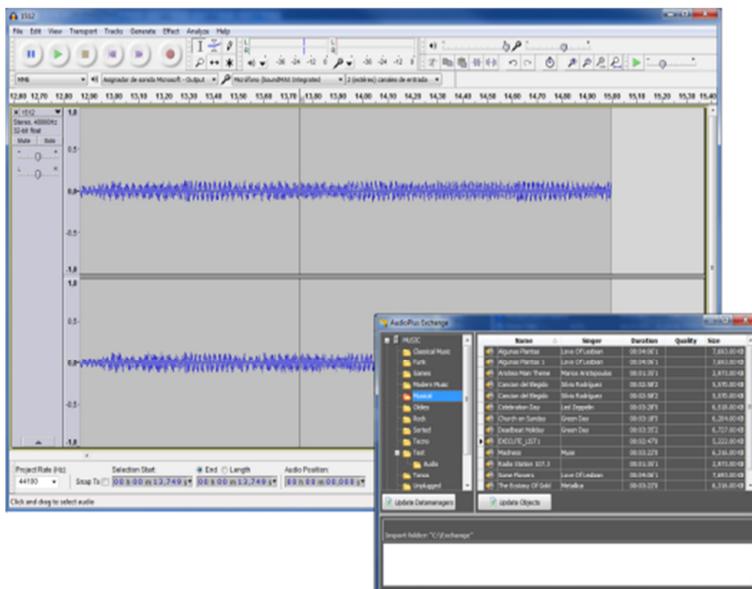
In the integration of an external Editor to AEQ AudioPlus, the Exchange allows the user to import from different Data Manager module objects, regardless of which folder or which Manager they come from. It also incorporates a module for automatic import of audio objects in different formats towards the system.

In this way, the user can integrate the external editor of their choice; from the free (Audacity), to the more common and specialized of the market (Adobe Audition).

Editor Audacity is included in series in AEQ AudioPlus.

Some of its main features are:

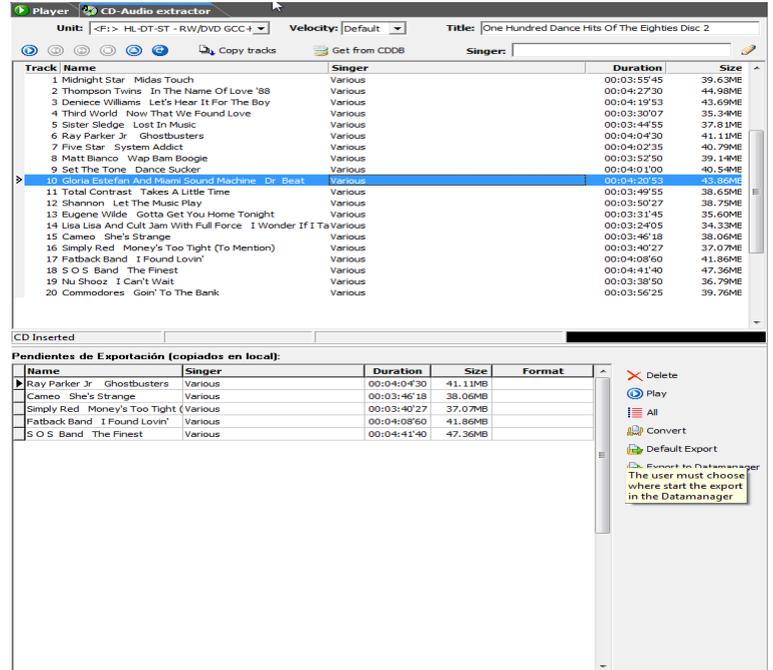
- ✓ Multichannel Editor
- ✓ Recording from microphone, input line and external devices
- ✓ Remix on tracks to create multi-track recordings
- ✓ Import/export in multiple format
- ✓ A large variety of effects available
- ✓ Spectrogram view modes for frequency display.



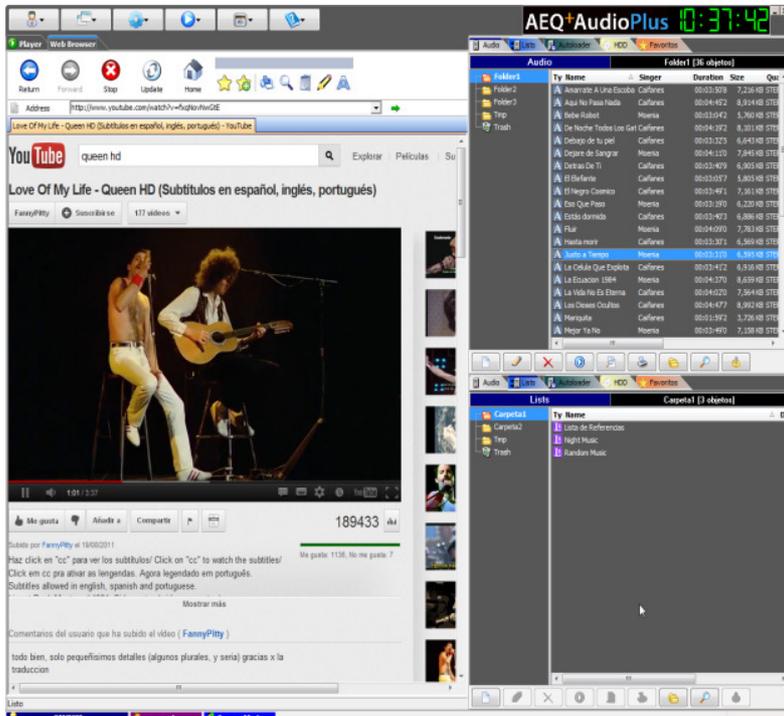
# Functionality: Extraction CD-Audio

This module allows the user to extract cuts from audio CDs for direct importation into the **AEQ AudioPlus** system. When the user inserts a recorded CD, its content is represented in the same format as in the rest of the application managers. By dragging the file with the mouse to a Network or Local manager, the file is automatically exported, changing its audio format to the default one of the application.

In addition, it allows the connection to various web pages, such as [www.Cddb.org](http://www.Cddb.org), which enables the automatic downloading of the interpreters name, themes and the CD duration, aiming to perform a more agile importation process.



# Functionality: Internet Browser



The current needs in the data generation for radio stations require greater versatility with the integration on the Internet, where a large amount of information is available.

**AEQ AudioPlus** integrates a web browser 100% compatible with all available communication components (Java, Flash) to generate easy, automated way to generate texts, as well as the possibility of generating audios that are played within the browser, broadening this way the diversification of the information sources that can generate data in **AEQ AudioPlus**.

# The Player on Playback Mode (1)

The central part of the virtual player provides lots of information about the objects that are ready for broadcast. At the top, it is possible to view an example of a virtual player with objects:

Each broadcast object is distinguished from other objects in two ways: by colour and by an icon associated with each one of the files.

The screenshot displays the AEQ AudioPlus interface in playback mode. At the top, it shows 'Mach 1', 'Board 1', 'Min.', 'Cartridge', 'AEQ', and 'Rem. Time 01:23:34'7'. Below this are buttons for 'Loop', 'Link', 'Delete', 'Ignore', and 'Fader Start'. A progress bar shows 'Follow Me' at 00:00 of a 03:03 track. The main list contains items like 'Night Music', 'Big Freeze', 'Explorers', 'Wait', 'Follow Me', 'Liquid State', 'Audi A5', 'Madness', 'RadioStation 107.3', 'Panic Station', 'Start Player', 'Prelude', 'Save Me', 'Wait', 'Supremacy', 'Apple Adv.', '107.3 Jingle', and 'Survival'. Callouts provide details: 'The audio that is playing is "Follow Me"', 'There is a scheduled list.', 'A standby control of 5 seconds will give way to the next objects scheduled in broadcast player', 'There is a Control that will start the player number 2 automatically.', 'There are various types of objects in broadcast: music, commercials and jingles', 'The remaining time to complete the broadcast list is 01:23:34'7, while the total duration of the whole list is 01:34:54'0', 'The object on broadcast indicates that there is a classification of type Music, with an associated Fade control, as well as an intro time of 10 seconds.', and 'All objects in broadcast display the name of the theme and the interpreter, as well as their exact duration.'

# The Player on Playback Mode (2)

## Audio Playback

Audio files playback is performed in a very simple way. The audios are selected from the window of the Data Manager and dragged onto the player. The selection may be one by one, or there can be a multiple selection. Once this audio is on the player, just select it and press **PLAY**.



If the user wishes to play straight all the files loaded on the player, they must click the button **Link** at the top.



If the user wishes to play an audio indefinitely, they must press the **Loop** button at the top.

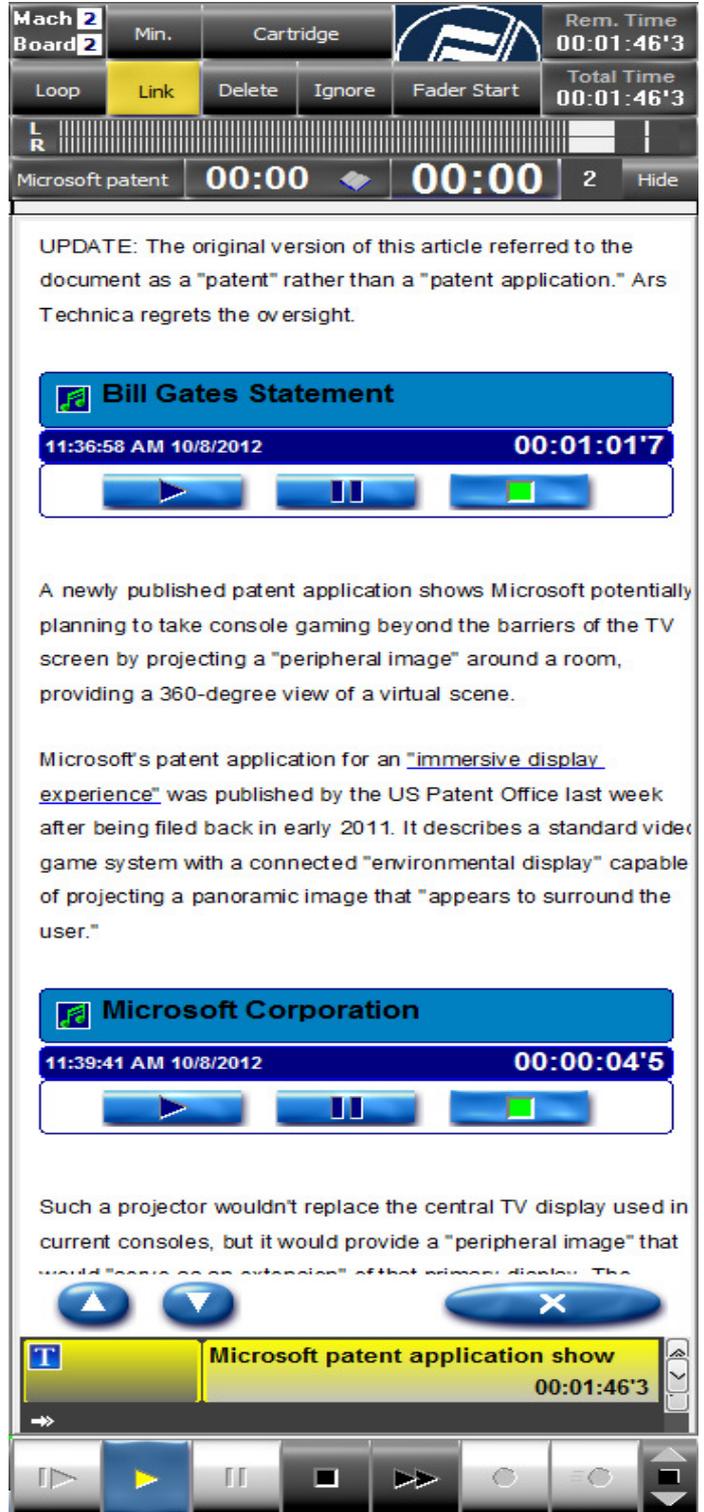


## Texts Reproduction

There are some particularities in broadcasting texts in the Virtual player: if the way of loading the player is always the same (select, drag and drop), in the case of texts the difference starts when the users clicks **<PLAY>**

At that moment, a text reading window, with some vertically scrolling arrows and a button to close the window, so you can proceed in loading other data or stop broadcasting. It is the user who must close that window to order the player to continue playing.

In case of texts that have embedded sound, something similar happens: it must be the user to order when they want to start the sound present in the text, by clicking with the mouse on the cartridge that represents it, which will be blue if the audio is stopped and red if it is running. The user must also close the reading window when they want to pass to the next object



# The Player on Playback Mode (3)



## Playlists

The operation with the lists has some peculiarities. The lists have two possible Statuses: expanded or collapsed.

In collapsed mode, the representative icon of the list object, its name in italics and the total duration, are displayed on the virtual player. What will not be displayed is its content, nor will it be possible to enable the marks in order to display the text associated information and the countdown.

In expanded mode, the lists title and its content will be immediately displayed next to the icon. A bar with the inscription "End of List" under the last object will inform about its end.

In the case of the broadcast list, the user can make changes on the fly when the list is already loaded on the player. They can drag new objects, alter the existing order, delete objects, or copy them from one player to another, etc. However, if the user wants these changes to remain stored, they must edit the list or create a new object list as a temporary object. To broadcast the list, just drag it onto the player, keep the **Link** button enabled and press **<PLAY>**



## Audio Mixing Edition

Within the broadcast modifier controls, special mention should be made in the mounting of an audio mixing edition list. Through the control edition of the modifier "Fade", it is possible to access the mixing editing window between each two sounds from the list and decide whether they are mixed or not, how do they fade out at the end, how do they fade in at the beginning and how is the audio presentation superimposed on the transition. All with the aim of giving greater naturalness to an automated broadcast, pre-editing the mix of its theme components



# Creating and Editing Objects (1)

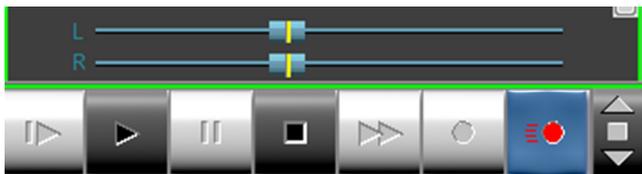
To create and modify objects, the user must follow, first, some similar steps: Click on the New or Edit button, located on the lower part of the window, select the type of the object to create or modify and fill in the corresponding information. The information data has various fields to classify files, giving them additional information and determining their status at its possible broadcast.

These are some processes of creating/editing objects:

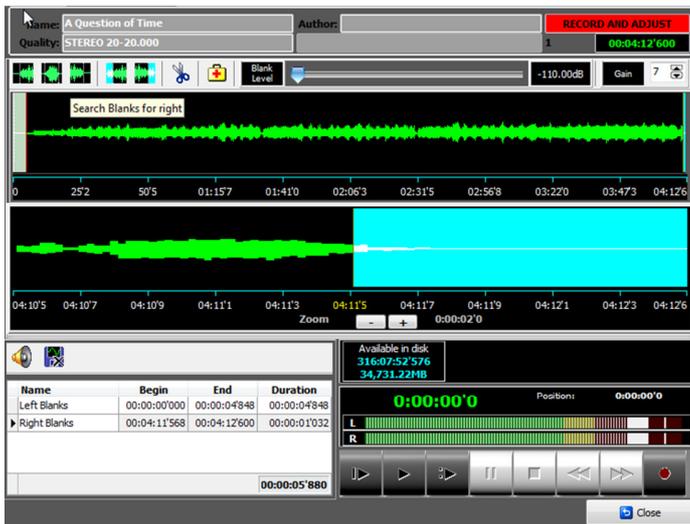
✓ **Only Record / Quick Recording:**



To save the sound, by monitoring it via the console, there is an option for instant recording that allows the user to start recording without entering any data in the information area.



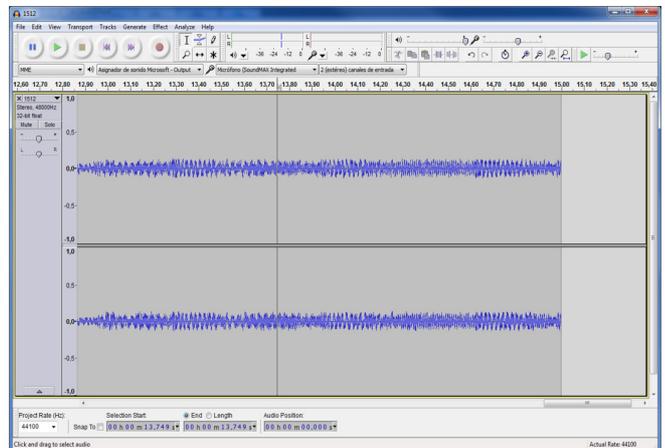
✓ **Record and Adjust:** with a simple editor that allows, in addition to eliminating blanks (silences), the creation of a new audio, by selecting fragments of recorded audio.



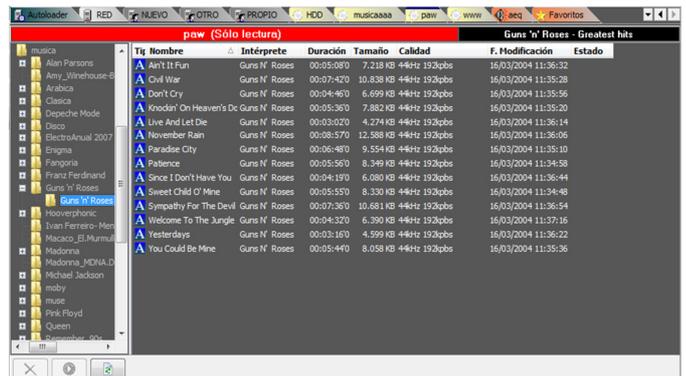
The screen has a track where, once the recording is completed, the audio will be represented in a waveform.

Using the buttons at the top of the window, the user can choose the level of discrimination of blanks, look for blanks at the beginning and at the end of the wave, delete them, adjust audio level of the file, preview and make fine adjustments on the audio.

✓ **External editor:** Establishes a link with your favourite editor from which the user can record or edit audio. By default, the Audacity editor, incorporated in the installation of AEQ AudioPlus, can be installed.



✓ **Convert objects:** Enables the import of different types of objects to the system by Drag&Drop, from On Fly or FTP managers.

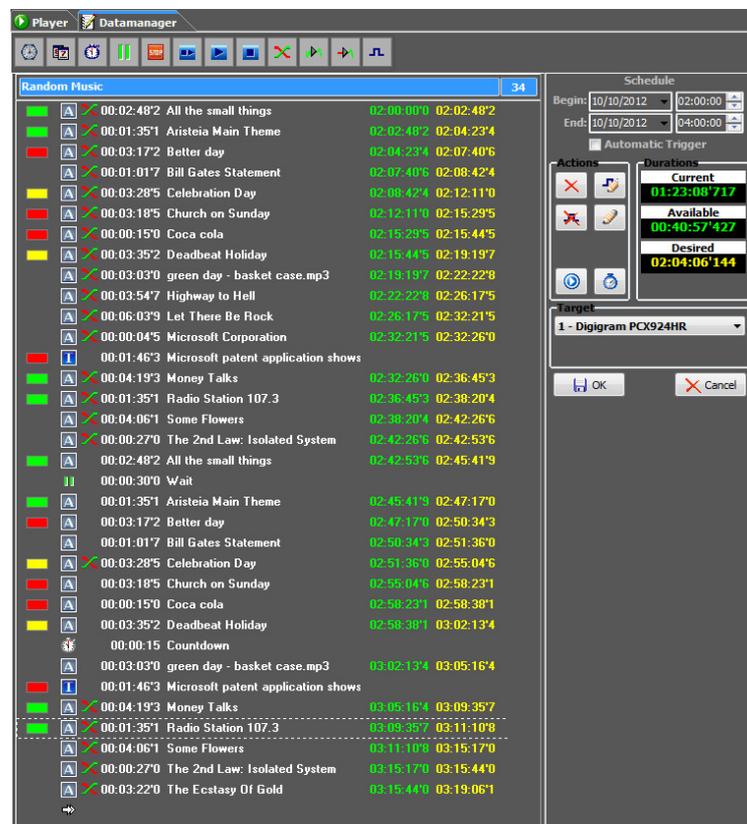
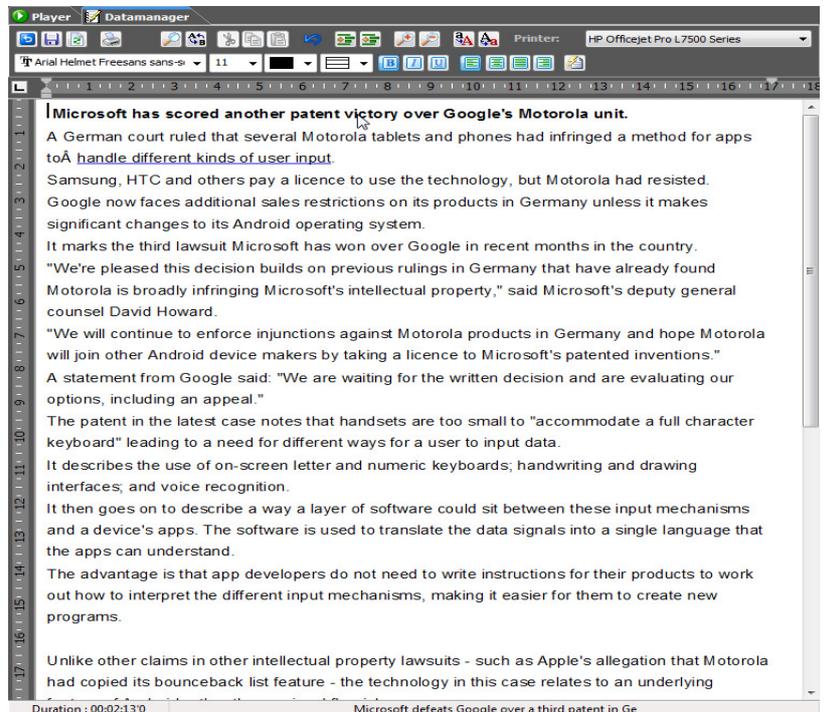


# Creating and editing Objects (2)

## Creating and Editing Objects

In Data Manager, click the button New and choose Create a text, or choose a text object and click Edit, so that an information data with the object's text appears. Activate Edit Text and access a text editor with the usual options on how to adjust the shape, type, size and letters colours, as well as close, print, undo, cut, copy, and paste. It is also possible to integrate an external and more powerful text editor. (Microsoft Word, OpenOffice, etc.).

A specific choice of the **AEQ AudioPlus** text editor, very important in the creation of newsletters, is to embed sound evidence in the text, by selecting the sound and by dragging it from the Manager window onto the text editor.



## Creating and editing playlists or broadcast guidelines

The properties of a list to be determined by the user are the name, expiry date, status, and associated text. Only the name is compulsory. Once the name field is completed, Edit List is enabled.

To make a list, load the objects by dragging them onto the 'List Editor'. It is possible to drag an existing list to the 'List Editor'. This will expand, behaving thereafter as a set of objects.

On the left of each one of the objects, that form the list on the left side of the screen, a red, green or yellow box is displayed. This colour code informs about the Status of an object and allows the user to follow a criterion of sorting or division of labour.

Red indicates the object in status 'Pending', the yellow colour, that the State is 'Prepared' and the Green that has been 'Supervised'.

Modifying the broadcast controls may also include broadcast lists accompanying the objects (audio or text).

If these broadcast lists are drawn up for the automatic broadcast, it will be possible to assign date and time of broadcast.

## AEQ AudioPlus adapts to your needs

Throughout the AEQ history, our company has been characterized by the adaptation of its products to the specific needs of each client. **AEQ AudioPlus** is no exception.

In order to facilitate integration with advertising managements, and continuity systems, **AEQ AudioPlus** has mechanisms of liaison and exchange of information with the market's standard applications, such as **Advertising Star of Microjisa**, **PC-Radio of Broadcast Partners**, **WinRadio of WinMedia**, **Key Radio of Activa3's**, as well as integration with **Total Recorder of High Criteria**, oriented to the Continuity Recording (Logger).

In addition, it is possible to bind **AEQ AudioPlus** with other applications of management and guidelines, such as **Music Master and Selector of RCS**.

If the **AEQ AudioPlus** benefits require any modification or any specific module is needed, please contact your sales representer to request information about your needs, and our Technical Department, together with the Research and Development Department will verify the feasibility of the requested solution, validating the proposed operation.

**AEQ AudioPlus** is supplied by default in English and Spanish. If you need it in another language, please contact us.



**REQUEST A DEMO LICENSE TO YOUR SALES REPRESENTER**



PROFESSIONAL AUTOMATION WITHIN EVERYONE'S REACH

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