

Qnet Radio Automation Suite, ver. 1.70, Jun 10 2002
Reference manual

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1. Description of Database fields

1.1 Songs database

The songs database has the following descriptive text fields: **Artist**, **Title**, **Compilation**, **Music** (author), **Lyrics** (author), **Comments**, **Misc. info**, **Type**, **Genre**, **State**, **Archive**, **Original**, **Misc. 2**. The underlined fields have some relevance to the software. The other can contain whatever field without influencing the behavior of the software. The **Artist** fields is used for the **Artist distance** function. **Type** is the key for automatic song selection. **Archive** is used in **Music manager** for music archives labeling. **Type** and **Genre** can be chosen from a drop-down list, which is filled from the same field of all the records in the database.

In the same group there are still two fields: **Period** and **Vote**. The first, which is a date field, contains the approximate date of the song issue. **Vote** is used for songs selection and is a number between 0 and 100.

Some attributes can be given to the song: **Attr.1** to **Attr.4**, which are numbers between 0 and 100, can be used to express some numerical attributes of the song, **Bpm** is the number of beats per minute of the song. **Fast start** means, that the song has no fade at the beginning and starts immediately at full volume. **Fast end** has the same meaning for the end of the song. **NEWHIT** means that the song has been released recently. **POWERHIT** means that the song is in promotion and should be played more frequently. Songs among the newhits and powerhits can be selected with a special command. **COPY** means that the song is already present in database as another file and that the other file should be used.

File name is the name of the file of the song. **Media** is the media type of the song. If it is a letter, it means, that the song is on a file, but if the letter is a capital 'B', it means that the song is on an audio CD. Other characters mean, that the song stays on another media not managed by Qnet. **Volume** is the volume applied to the song. If nothing is specified, the value 75 is assumed. Volume values are explained in the Chapter about Settings.

Song start (0 default) is the song start point from the beginning of the file. **Song end** (song length default) is the song end point from the beginning of the file. **Fade in** (0 default) is the fade in length. **Fade out** (default as from settings) is the fade out length. **Intro** (0 default) is the point in the song (from the beginning of the file), when the vocals start. **Voice out** (song length default) is the point in the song when vocals end. **Hot start** (0 default) is another possible start point for the song. **Mix in** (default as from settings) is the point in the song, when the following event should be started. **Loop start** (no default) is the point in the song when the song should be restarted in loop mode (not yet implemented). **Loop end** is the end of the loop period. **Refrain start** (no default) is the start of the song refrain, which is used by the **Play song refrain** function (not yet implemented). **Refrain end** is the end of the song refrain.

Other fields are not editable: **File location** is the location of the song file in the file system. **File length** is the total length of the file. **File format** is the audio format of the file. **Kbps** is the bitrate in kilobit/second if the file is in the MPEG format. **Last time played** is the time, when the file was last played in Qnet Studio. **Last type modif.** is the date, when the **Type** field was last modified in Qnet Database. **Selectable** is checked if the file can be selected automatically as the next song.

1.2 Jingles database

The fields with the same name as in the songs database, have the same meaning as in the songs database. The field **Group** is used by grouping jingles in categories for search purposes and automatic jingle selection purposes.

1.3 Spots database

The **Contents** field is used to describe the spot. The **Category** field is used to describe the merchandising category of the spot and is used by Qnet to keep spots with different categories apart. The **Speaker** field indicates the speakers that realized the spot. The **Spot type** indicates the type of spot production. **Customer** indicates the spot customer. **Contract** indicates the contract, where the spot production has been ordered. **Text file** indicates the file, where the text of the spot is present. **Week days** are the days, when the spot is usually played. **Start date** and **End date** indicate the period of spot programming. The read-only field **Entered** indicates the time of record creation, the read-only field **Sent** indicates when the spot has been sent to a remote station (if applicable).

1.4 Backgrounds database

Backgrounds are used in conjunction with speeches, which are mixed over the backgrounds. The background initially starts with **Initial volume**, then, in the **Decay position** it fades to the **Sustain volume** with the fade lasting **Decay time**. The first speech is inserted in the **Mix in** position. After the last speech, the background fades to zero with the fade lasting **Release time**.

1.5 Blocks database

There are two kinds of blocks: **Timed** and **Special**. Special blocks are used for inserting in other blocks. Timed blocks are usually automatically scheduled, even if they can be scheduled only manually. If they have to be scheduled automatically, they must have a scheduling **Time**. If a **Date** is present, the block will be scheduled only in that date. The block has still two flags: **Start at exact time (soft fade)** means, that the block will trigger a soft fade in order to play it at its exact scheduling time. If **Block contains spots** is checked, it will be visualized in media plans and managed by **Spot manager**. A block has then three special blocks specified for it: the **Pre-spot block**, the **Mid-spot block** and the **End-spot block**. They are automatically inserted in the block before the first spot, between every spot and after the last spot, respectively.

Every block contains an events database.

1.6 Events database

Event databases are present in blocks, manually created playlists and jingle buttons. An event can be one of these types: **Song, Jingle, Spot, Block, Background, Background end, Pause, Speech, File, Command, Playlist start, Playlist end, Time, Report, News, Playlist, Song type, Calc type, Advices, Advice, Jingle type, Execute, TA ON, TA OFF**. Events have a **Description** and **File** name. Events are scheduled only between the **Start date** and **End date** and during the specified **Week days**. If Start date is not specified, the event will be played always before End date. If End date is not specified, the spot will be played indefinitely. If Week days is not specified, the event will be played every day during the week. Week days can be a list of week days (from 0 to 6) or **'even'** or **'odd'**, where in this latter case it refers to the day in the month. If **Pre-event** is checked, the relative event will be played only if the next one will be played too (recursively for a series of pre-events).

If **Mid-event** is checked, the relative event will be played only if both the previous and the subsequent event, which has to be a spot, a report, a speech or news, will be present. Mid-event overwhelms Mid-spot, if present. If **Never remove** is checked, the relative event will not be deleted from the blocks database, if it will be expired (the current date will be higher than its end date), it will be a spot and the **Remove old spots from blocks** command will be issued. **Start edited** and **End edited** are flags which mean, that the event has been edited with the mix editor at the beginning or at the end of the file and that those parts should not be touched by automatic routines such as the Speech-on-intro function.

The following items have a meaning only for spot events: **Category** is the merchandising category of the spot. **Speaker** is the speaker that realized the spot. **Contract** is the contract, where spot programming has been ordered. If **First in block** is checked, the spot will be forced to the beginning. If **Last in block** is checked, the spot will be forced to the end. If **Fixed in block** is checked, the spot won't be removed from the block by automatic procedures.

Refrain, which exists only for songs, means that the song refrain should be played instead of the song itself. Song refrain starts at **Refrain start** (as entered in the songs database) and ends at **Refrain end**, if present, or at an offset from start, as specified in settings.

1.7 Live reports database

When Qnet Studio finds a file in the **Live reports** folder, it looks at the live reports database and inserts the live report in the playlist as from the indications in the database. The **Code** field is the file name without extension that must match the file found. Before the live report Qnet Studio can insert a jingle (**Start jingle**). The report can be mixed over the **Background**. After the live report Qnet Studio can insert a jingle (**End jingle**). All three are optional. If **Start block** is checked, a special block is inserted before the live report instead of a jingle. If **End block** is checked, a special block is inserted after the live report instead of a jingle. The live report can be of three types: if **Regular**, it is inserted as soon as the file is found and it is fully accessible, i.e., it has been closed; it is inserted always after a song or a block (never after a speech); if **Live-in**, it is inserted even if it is still being recorded, provided that it is at least 20 seconds long; **Live in with fade** is the same as **Live-in**, but a playing song, if any, is faded.

1.8 Contributions database

Contributions can be used for various services (such as interviews, for example) and other type of transmissions prepared in advance. **Title, Author, Editor, Speaker, Department, Type, Transmission** and **Comments** are descriptive texts of the contribution. **Prepared on** and **at** are automatically filled as the contribution is prepared. **Scheduled for** and **at** is the date and hour of planned transmission. **Validity till** is the date of the contribution expiration, i.e., the date, when the contribution is not used anymore and should be archived. **Archived on** is the date of archiving (saving on CD-ROM or other media), **Archive** is the archive media label. The music manager can be used with contributions, too.

1.9 Manually created Playlists

Manually created playlists have a series of options. The speeches inserted in the playlist by default can be one of these types: **Deleted after playing, Deleted next day, Deleted after one week** or **Never deleted**. The behavior depends only on file extension of the speeches, which will be **.s1', '.sd', '.sw',** or **.s'**. If the playlists manages blocks (**Blocks management (blocks will not be played unless specified)** checked), Qnet Studio will not insert blocks inside the playlist, but the user, who creates the playlist, has the responsibility to insert the blocks in appropriate positions. **Start at exact time (soft fade)** enforces soft fade in

order to play the playlist at the programmed time. If **Playlist must be completely played** is checked, other playlists will not delete the last events of the currently playing playlist in the case that they have not been played. The next playlist will be inserted after the current playlist even if it means violating its programmed time. **Randomize events on insert** has sense for playlists of only songs, because it puts the events in random order. Playlists usually delete the current playlist. If **Insert playlist instead of replace** is checked, the playlist will be inserted and the currently waiting vents will be moved to the end. If **Speech on intro** is selected, the speeches in the playlist will be mixed over the songs with the **Speech on intro** function and all the events in the playlist will be marked as 'MIX EDITED', which means that all the mixing parameters are contained in the playlist and other mixing settings in Qnet Studio will have no effect. **Faded level offset** gives an additional adjustment to the level of the song during the speech. The level offset is in volume units as the Faded level in Speech-on-intro settings. **Ignore "song type"** and **Calculate "song type"** are usually used together and in conjunction with **Blocks management**. The first forces Qnet Studio to ignore every **Song type** command present in the blocks inside the playlist. The latter forces Qnet Database to calculate and insert in the playlist the songs as from the Song type command present in blocks inside the playlist. **Selector type** is used to choose the algorithm that will be used to conserve song selection history and to automatically select songs. **Day** means, that the songs will be selected from the songs that are to be played during the day, **Night** means, that the songs will be selected from night songs and **Day replay** means that the songs (meant to be played during the night) will be selected from the songs played during the same day.

1.10 Playlist sequences database (Automatic playlist)

Playlists are created automatically by a sequence of song types or jingle groups. Apart that every sequence has additional attributes (database fields): **Playlist number**, which is used to identify the playlist sequence and is a sequential number; **Name**, which is another way to identify the playlist sequence; **Time** is the time when the playlist sequence should be selected; if **Days** is present, the playlist sequence will be selected only in the specified days of week (from '0' to '6'); if **Date** is present, the playlist sequence will be selected only in the specified date (it has precedence over **Days**). **Min vote** is the minimum vote for the songs selected by the specified sequence. Its use is highly discouraged, because it turns over the songs selection algorithm logic. **Selector type** is used to choose the algorithm that will be used to automatically select songs. **Day** means, that the songs will be selected from the songs that are to be played during the day, **Night** means, that the songs will be selected from night songs and **Day replay** means that the songs (meant to be played during the night) will be selected from the songs played during the same day.

2. Description of Database and Studio settings

2.1 Files tab

The locations of the main folders and files used by the suite can be selected here. All the database and auxiliary files are located in the **Default folder for data files**. The songs, jingles, spots, backgrounds, blocks and live reports databases can be optionally located in a different folder. If the corresponding check marks are checked, the files are located in the **Master data bases location** instead. This option is useful, if the program is used on that computer only for doing particular jobs and it needs master databases only for those jobs. If the computer is used for spots entry, for example, it needs access to the main database for spots and blocks, but it does not need to access the main songs database, which can be very large and long to load from the network. The computer can be set to load everything from the local disk and only the needed databases, such as spots and blocks, from the main location on the network.

Qnet Studio is able to receive files from the network and automatically move them to the right location. This function is very useful in conjunction with **Qnet Transfer**, which is able, if correctly instructed, to automatically set the **Incoming files folder (receive folder)** for Qnet Studio. If Transfer is not used, the user can set manually the **Incoming files folder (receive folder)**. Qnet Studio checks periodically this folder, once every 5 seconds. If it finds the file **OK.inf** in this folder, it moves all the files found, according to this table, wiping off the header if present:

File type	File header (has precedence over extension)	File extension (if header not present)	Destination
Database	D_	.db	Default folder for data files
Playlist	P_	.pl	Default playlists folder
Song	M_	.mpg	Songs folder
Jingle	J_	.j, .jin	Jingles folder
Spot	S_	.spt	Spots folder
Background	B_	.bkg, .b	Backgrounds folder
Speech	O_	.mp?, .s, .s1, .sd, .sw	MiscAudio folder
Report	R_	.r, .rw, .rd, .r1	Reports folder
Live report	L_	.l	Live reports folder
News	N_	.m, .f, .n, .n1	News folder
Advice	A_	.adv	Advices folder
Songs list	O_	.rpl	RPL subfolder in default folder for data files

All the playlists that Qnet Studio automatically inserts, are found in the **Default playlists folder**. Also, when a user manually inserts a playlist, the first folder presented to the user is the **Default playlists folder**.

Automatic playlist insertion

In the first 30 seconds of every minute, the program searches the **Default playlists folder** for a valid playlist to insert. If it finds a valid playlist, the playlist is inserted. A valid playlist name for automatic insertion has one of these three structures:

YYYYMMDD-hhmm*.pl	* can be everything
-YYYYMMDD-hhmm.pl	* can be everything
nnn-hhmm*.pl	nnn is a sequence of maximum 7 digits, * can be everything
hhmm*.pl	* can be everything, but the first character cannot be a digit and the second character cannot be a digit, if the first character is a dash ('-')

YYYYMMDD represents the date, hhmm the time, nnn represents valid days of week between 0 (Sunday) and 6 (Saturday). A playlist is inserted 9 minutes before its time (e.g., 1400-topten.pl is inserted everyday at 13:51). Playlists with date have precedence over playlists with days of week. Playlists with days of week have precedence over playlists with time only. If two playlists with the same date and time exist, the latest modified one will be inserted first, unless its name ends with the string **"-Unedited"** (default name given by Qnet Database to automatically generated playlists).

Every time a user requests a generic audio file, the system presents the **Default folder for audio files importing**. Reports are always found in the **Reports folder**. A special case are Live reports, which are found in **Live reports folder**. Live reports are a special type of reports, which are inserted in the playlist as soon as the system finds them. They can be inserted with an initial jingle, with a background and a final jingle. All of these are optional and are set in the Live reports database. Once a live report has been played, the file is automatically deleted (it is not deleted if file deleting is disabled in the settings). News are always found in the **News folder**. Advices are found in the **Advices folder**. They are played with the **Play advices** function. This function plays all the files present in the **Advices folder** that meet some requirements. Advices playing is depicted in the section on Advices settings. Qnet Studio is able to announce the current time. The relevant files must be present in the **Time files folder**. Here or in a subfolder three subfolders must be present: **HOURL**, **FULLHOUR** and **MINUTE**. In the HOURL and FULLHOUR folders 24 files must be present, named '00' to '23', without extension. In the MINUTE folder 59 files must be present, named '01' to '59', without extension. At full hours the program plays the relevant file in the FULLHOUR folder. At non full hours the program plays the relevant file in the FULLHOUR, followed by the relevant file in the MINUTE folder. If more versions of time announcement are desired, they can be put in different subfolders of the **Time files folder**.

Music manager is a function for managing the songs files on the hard disks of the system. Typically the songs are archived on CD-ROMs. When the user wants to copy on the system some new songs, the Music manager searches the locations specified in the **Mman** tab, and if it doesn't find them there, it searches the **Archives folder for music manager**. This special folder is usually a CD-ROM and the music manager can drive its supplemental functions (like eject). Usually the Music manager assumes that all the songs present on a CD-ROM have the same **Archive** number (a field present in the songs database).

Qnet manager is a program for moving and renaming files on the network and is usually used in a complicated environment, typically at studios that manage more than one radio station. Used in conjunction with **Transfer**, it manages these stations. Its configuration file must be defined in **Qnet Manager configuration file** in order for Qnet Database to interface correctly with it.

Qnet Database has an integrated recorder and player with very simple editing capabilities. An external audio editor can be defined in **External audio editor**.

Users file folder is the folder where the **Users** file is located. If given, Qnet security will be turned on. **Qnet Users Manager** should be used to create the **Users** file and to assign privileges to users.

Diary files path (Qtable) is the path of the diary file, created with the program **Qtable**. The diary is used to create alarms, which behave similarly to the **Qnet Studio Reminder** function. The difference is that the Diary can be edited with a more powerful external program present anywhere in the network and the editing can be done concurrently by different users. It can be used to send messages to the technician in the studio.

If **Playlists backup send folder** is specified, the **Send** operation in Database will send backup copies of playlists and speeches to this folder.

2.2 Folder tabs

The folder tabs are **Songs, Jingles, Spots, Backgrounds, MiscAudio, Contributions** and **Mman**. They are used to specify the folders and computers, where the audio files should be searched for. The window is divided in two zones. The zone below is a detail of the zone above. The zone above shows all the computers (hosts) and folders that should be searched. The zone below shows all the disks of a computer that has been selected in the zone above. The computer **(Local)** is always present. The **Default folder name** of the local and remote computers are searched for the files. If a folder is specified in the zone above, that is the folder searched. When remote computers are used, they must share their disks with the share name corresponding to the disk letter. For example, if **Default folder name** is Songs and a remote computer named Romeo shares the disks, the following folders are searched C:\Songs, D:\Songs, E:\Songs, ... Z:\Songs, \\Romeo\C\Songs, \\Romeo\D\Songs, \\Romeo\E\Songs, ... \\Romeo\Z\Songs.

The user can add additional folders with **Add** or **Browse**. Additional computers can be added only with **Add**. The items (hosts or folders) in the zone above can be removed with **Remove**. The local computer cannot be removed, but can be disabled with a double click on the relative line. A green V indicates that the relative item is present and enabled. A red X indicates that the relative item is disabled (and not checked for presence). A red circle with a crossing bar indicates that the relative item has not been found.

For every host the number of files found is indicated, as the number of units for that host, the number of megabytes that the found files occupy and the number of megabytes free for the entire host. In the zone below, the details are showed for every unit on that host. For every folder the number of files found is indicated, as the number of megabytes that the found files occupy and the number of megabytes free on the unit, where that folder is located.

The button **Check files** performs the check for that particular set of files. This operation (and every check operation) finds only the files present in the database. If, for example, there are two files in the Songs folder, but there is only one song in the database, the system finds only one song file. This rule is not applicable for **MiscAudio**. There is no database for MiscAudio items (typically speeches) and therefore the system finds all the files present in the relative folders.

The system will never create these folders automatically. The user has the responsibility to create these folders by himself.

2.3 Audio tab

Qnet Studio supports two audio devices. Qnet Database supports only one audio device. The **main audio device** is used for main playback in Qnet Studio. The **pre-listening audio device** is used for pre-listening in Qnet Database and Qnet Studio. The audio engine of Qnet supports three different kinds of audio devices: audio cards produced by Digigram, which use proprietary drivers, called NP drivers, audio cards with standard Windows drivers, that present the Wave interface, and audio cards with DirectSound (a part of DirectX) interface. Digigram NP drivers offer extended functionalities (such as hardware MPEG layer 2 compression and decompression) and higher performance. Digigram cards should be used with this interface, always. If non-Digigram devices are used, they should use DirectSound interface for Qnet Studio main device, because of improved mixing capabilities and latency. For the pre-listening device, the Wave interface is advised, because of better Qnet support for fast access (winding and rewinding).

When a mix has to be performed, the position in the file, where the next file starts is called mix in position. The mix in position can be defined for songs and jingles in the database. For the other files, a default mix in is used. Also for songs and jingles, when no data is present in the database, a default mix in has to be specified. The **Default mix ins** are always specified from the end and can be independently specified for different kinds of files: **Songs, Jingles, Spots, Speeches (Reports, Live reports and News), Contributions** and **Other** files. **Backgrounds** have no default mix in, because the precise mix curve has to be entered in the database. Since it is not unusual that some errors are present in the database, a **Maximum songs mix in (from end)** setting is present, to avoid strange and unexpected mixes. **Volumes** in Qnet are entered in a strange way. This derives from historical reasons, because Qnet had to be compatible with **VMDSS**, a DOS program, that used Digigram cards with old PCX drivers. The default volume has the value **75** and corresponds to **0 dB**. Every volume unit corresponds to **0.75 dB**. A volume of 79 is therefore +3 dB and a volume of 71 is -3 dB. The volumes are entered in the database, but they can be corrected in the settings for different categories of files. The corrections are always relative and therefore 0 means 0 dB, 1 means +0.75 dB and -1 means -0.75 dB.

If nothing is entered in the database for the fade of the songs, the **Default songs fade out** is applied. It is specified in seconds.

Qnet Studio has two buttons for fading. The **Fade** button starts immediately the following song and fades the playing one with the fade length **Default songs fade out**. If the **Soft fade** button is pressed, the fade length is **Soft fade length** and the following song is started only **Soft fade mix in** seconds after the fade has started.

There are still four settings present in this category:

Vu meter slow decay - the vu-meter decays slowly as the level decays. It is only a visual effect and has no impact on the audio output or program performance.

Generate debug file - enables the generation of two files (studio.l1 and studio.l2), that are used for debugging purposes. Has no serious performance impact on the program.

Adjust wrong file lengths - if the program encounters files, whose lengths are different from those reported in the databases, it tries to adjust the parameters for mixing and ignores everything present in the database. E.g., a song is present in the database, which should be 3 minutes long, but the program finds the file to be long 3 minutes and 30 seconds. It assumes, that the file is not the right one and overwhelms every data in the database (such as the song length, fade out, mix in position, etc.) and uses the default values. If this option were not selected, only the first 3 minutes of the song would be played, since the other 30 seconds are beyond the song length as present in the database.

Group jingle with next song - If checked, the program assumes that the jingles are used to present the songs that follow and therefore nothing can be inserted automatically between them (blocks, live reports, playlists).

2.4 Appearance tab

The appearance of the program can be changed here. The program uses four different fonts for display: the **View font** is used for showing all the records (songs, jingles, playlists, etc.) at once on the screen; the **Edit font** is used when opening dialogs for editing purposes; the **Display font** is used in Qnet Studio for displaying the currently playing event and the following one; the **Times font** is used for displaying times on the display.

The colors can be changed by double-clicking on the relevant item. A brief description of the items follows:

Present file - jingles, spots, etc. (all but songs) present on the hard disk

Not present file - the songs, jingles, spots, etc. not present on the hard disk

Selectable or not recently played song - see later

Not selectable or recently played song - see later

Never played song - a song that has never been played

Song type signed as copy - a song which has the **COPY** flag set; usually this color refers only to the **type** field. If **Color entire record if copy set** is set, the entire record will assume this color.

Song on CD - the songs that have Media type 'B'; not used in Qnet

Archived song - songs present in the database, whose media type is not a letter; typically used for archiving songs in Qnet Database; these songs will however not be used by Qnet; if the text present in the file field has the .DAT or .TAP extension, icons representing a DAT and a TAPE will be used for representing those records

Present event - events present in playlists and blocks, that are present on the hard disk and that will be played in the current day

Not present event - events present in a playlist not present on the hard disk

Not played event - events present in a playlist, but that will not be played in the current day; they will be played in some successive days, however

Expired event - events present in a playlist, but that will not be played anymore

Current event in playlist - the currently playing event in Qnet Studio

Played or opened event in playlist - an event, that has been just played in Qnet Studio or that is about to be played

Waiting event in playlist - a waiting event in Qnet Studio playlist

Block in playlist - a block and its contents in Qnet Studio playlist

Waiting file in playlist - a waiting event in Qnet Studio playlist of type **File**

Current event on display - the currently played event in Qnet Studio, in the display window

Waiting event on display - the waiting event in Qnet Studio, in the display window

Times on display - times on the display

Newhit song type - a song with the **NEWHIT** flag set; this color refers only to the **type** field

Powerhit song type - a song with the **POWERHIT** flag set; this color refers only to the **type** field

The term *Present* refers to an item that is physically present on some hard disks on the network, if the currently visualized database is local. If it is remote, the presence refers to the presence in the remote location. The physical presence on the local network (or computer) is always indicated by an exclamation mark, which is showed when the file is missing.

If **Color songs played more than x days ago** is specified and a positive number is entered, the songs, which have been last played more than x days ago will be colored **Selectable or not recently played song**, the other, recently played songs, will be colored **Not selectable or recently played song**. If the field is specified with a negative number, the color will be something intermediate between the two for songs last played between x days ago and the current day. If this field is not specified, the songs with the **Selectable** flag set will be colored with **Selectable or not recently played song**, the other with **Not selectable or recently played song**.

In the field **Hide songs of these types** a list of types can be entered. These types won't be shown in the MPEG and Present songs view.

2.5 Misc tab

This is a collection of miscellaneous settings. The first set of settings is used to define the action that the program has to perform, when the user wishes to delete a single file, typically by pressing the F5 key. The program can physically **Remove the file**, **Send the file to the recycle bin**, **Move the file to a folder** or **Copy the file to a folder**. The folder is chosen in the settings.

The second set of settings refers to the behavior of the **Make** function of the **Music manager**. By default, the Music manager **Make** assumes, that when a song is not found, the user is missing the CD-ROM with that song and therefore does not attempt to locate other songs on the same CD-ROM. Since CD-ROMs are identified by the **Archive number**, it skips all the songs that have the same **Archive** field of the missing song. This behavior can be overwhelmed by checking the option **Don't skip archive on file not found**. By default the program processes all the **Archives** from the first one to the last in the sort order. Checking **Process from end to beginning**, the archives are processed from the last one to the first one. By default, the **Music manager** fills the first disks first (from 'C' to 'Z'). Selecting **Fill last disks first**, the disks are filled in the reverse order, starting from the last one to the first one.

Another set of settings refers to files presence reporting. Qnet Databases uses list files (files with the .lst extension) to know about the presence of files present at remote stations. Qnet Studio generates them automatically at every **Files check**. Sometimes the list files are not up to date. It is therefore useful to assume that certain kinds of files are present, because they are actually present, but as from list files, they are not. This assumption can be forced for **Spot** files and **Jingles** files.

The Qnet system does not use a centralized database management system (like SQL engines) for database processing. Every time a database is used, it is loaded into memory in its entirety and there is no guarantee that the file will not be edited by another user at the same time. As a simple protection, Qnet Database can lock files against writing by other users. Every time a user starts to work with a database, it asks the user about its intentions. If the user wants to edit the file, the file will be locked, otherwise it will be opened in **READ-ONLY** mode. This question can be very annoying for the user, so a default answer can be forced. If **Don't lock files** is checked, the files will not be locked and the user will be given a chance to edit them, but no guarantee will be given, that the files are not edited by other users and neither that it will be possible to save them, as other users could have locked them in the meantime. On the contrary, if **Auto lock files** is checked, the files will be automatically locked as the user accesses them.

There are other four options in this view. They have very different uses. The first two refer to the behavior of the media plan interface. Normally, the selection in the media plan follows the mouse and the media plan is automatically scrolled with the selection. If **Disable auto scroll in media plan** is checked, the selection continues to follow the mouse, but the window is not scrolled, if the selection reaches the window borders. If **Disable auto select in media plan** is checked, too, the selection does not follow the mouse even.

Qnet Database can copy all the modified databases, playlists and recorder speeches, when the button **Save and send** is pressed. If **Send only playlists** is checked, the databases will not be copied in this case, but only the playlists with the relative speeches.

Enable autocompletion enables automatic suggestion of entered text. **Search after Fkey** automatically performs search after a function key has been pressed in the **Find** dialog box. If **Mixeditor autoplay** is checked, the mix editor starts playing as opened.

Normally Qnet Database gives automatically a name to a playlist, which should be played at a determined date. The **Set name** button gives such a name, too. This name is composed in this way: [STATION-]YYYYMMDD-hhmm-XXX-NNN-000.pl, where STATION is the station name ("STATION-" is missing for the local station), YYYY is the year, MM the month, DD the day, hh the hour and mm the minute for playlist scheduling, XXX are three random letters, and NNN is the number of speeches present in the playlist. If **No automatic playlist name** is checked, no such name will be given, but only YYYYMMDD-hhmm will be inserted before the file name, if the **Set name** button is pressed. **Automatically merge comments** enables automatic merging of the file **songs-comments.db**, whenever **songs.db** is loaded.

2.6 Misc2 tab

This is another collection of miscellaneous settings. **Process priority class** is the priority class assigned to Qnet Studio (the settings have no effect for Qnet Database). It has no noticeable effect in Windows 95/98/Me, but it can considerably affect the performance of the program in Windows NT and Windows 2000, especially when other applications are used concurrently. If audio dropouts are experienced, a risen priority can avoid them.

Qnet Studio deletes automatically some files once a day. There are three behaviors for files deletion. Some files are deleted as soon as they have been played, others are deleted if they are older of a predefined number of hours, and others if they are older of six days. The files that are deleted are all those present in the **Live reports** folder, those present in the **Reports** folder, those present in the **News** folder and those present in the **MiscAudio** folders.

The files are deleted according to their extension. The extensions are given in the table:

Extension	Deletion type
.l, .r1, .n1, .s1	as played
.m, .f, .n, .rd, .sd	after the predefined number of hours
.w, .sw, .rw	after six days

The files are deleted at the hour indicated in the **Automatic delete at hour** setting. The files that have to be deleted after a predefined number of hours are deleted, if they are older of the number of hours indicated in the **Delete files older of** setting. Every kind of deletion is disabled, if **Disable automatic delete** is checked.

Automatic songs selection can be performed by two different algorithms. Both of them can do independent choices for night and day, if **Night sacks** has **Enable** checked. The night starts at the indicated **Start** hour and terminates at the indicated **End** hour. In order for the algorithm to work, the night must start before midnight and end after midnight. If **Replay day songs** is checked, the songs played during the day will be selected during the night. If they lack, the usual algorithm will be used.

When logging songs playing, the fields written in the log are **Artist, Title** and **File**. The **File** fields is sufficient for the program **Logworks** to retrieve all the other fields present in the database. If Logworks is not used, it can be useful to log an additional field: the **Music** field is logged if the **Write Music field in log** is checked.

The log dates and log items are showed in increasing time order. If **Reversed order for log dates** is checked the dates are showed in decreasing time order. If **Reversed order for log items** is checked the log items are showed in decreasing time order. These two settings have effect for all the programs of the Qnet Suite.

Some functions of the program (**Table driven playlist editor**) assume that a certain mean number of songs are played in one hour. This number is entered in the field **Average songs per hour**.

When the user in Qnet Studio deselects the **Auto** button, it expects, that the last event played is that currently playing. This assumption is normally true, but when the playing event is at its end, it is possible for the next event to have already been sent to the audio device. In this case it will be played, too. If **Auto->manual warning message** is checked, a warning message will be presented to the user, when this occurs.

If something is playing in Qnet Studio and a scheduled block is the next waiting event, when the fade button is pressed, the block will be played, even if its scheduling time is not already arrived. Checking **Reposition blocks on fade**, the block will be moved forward and the event after the block will be played instead of the block.

Normally users cannot delete single events in blocks in the Qnet Studio playlist or move them. If **Allow editing events in blocks** is checked, they can.

If **Distribute categories (global)** is checked, spots are automatically reordered in a block in order to distribute categories, when the block is edited with automation functions in Qnet Database. If **Distribute categories (on the fly)** is checked, spots are reordered when the block is first inserted in the playlist in Qnet Studio.

Qnet Database permits only one spot to be forced as **First** or **Last** in a block. If **Allow multiple first and last spots** is selected, more than one spot can be forced to the beginning or ending of the block.

Automatic songs selection can be performed by two different algorithms. Starting from version **1.52**, the new algorithm, called **Songs selector** has been introduced and is used by default. It is superior to the older algorithm named **Sacks** algorithm. If **Use sacks algorithm for songs** is checked, the old, **sacks** algorithm will be used.

Sometimes, when the program is in manual mode and a song is waiting to be played, a block is waiting just after the song and as the time advances, the block can move before the song, confounding the user, which expects the song to be played. This behavior can be modified and the waiting song can be kept always before the block. The song can be moved after the block with the mouse. This alternative behavior can be activated checking **Don't move blocks to top**.

If **Don't force blocks position** is set, blocks will be still inserted in the correct scheduled position, but their position won't be forced there and their position in time will change as the playlist is edited.

If **Auto logout after xx minutes** is entered, the program will perform an automatic logout after the number of minutes given.

2.7 Audio 2 tab

The **play advices** function plays all the files in the **Advices folder** that meet some requirements. Between every advice, Qnet Studio can put a **pause** or a **special block**. The pause time inserted in the **Pause** field is given in seconds.

Advices

The advices present in the Advices folder must have their file name formatted in one of these four ways:

YYYYMMDD-XXXX.adv

YYYYMMDD- YYYYMMDD-XXXX.adv

_CATEGORY_YYYYMMDD-XXXX.adv

_CATEGORY_YYYYMMDD- YYYYMMDD-XXXX.adv

YYYY is a year, MM a month and DD a day. XXXX is a 4 digit number and has the unique aim to differentiate different advices with same dates and category.

CATEGORY is a string used to differentiate between different kinds of advices. When giving the **Play advices** command, the user can indicate a category, in which case, Qnet Studio will play the advices of that category. If no category is given in the command, Qnet Studio will play the advices that have no category in the file name.

If two dates are given, Qnet Studio will play the corresponding file only if the current date is between the first date and the second date present in the file name (extremes included). If only one date is given in the file name, Qnet Studio will play that file only if the current date is equal or inferior to the date present in the file name.

Qnet has a function, which plays song refrains instead of the songs themselves. Song refrains start at the **Refrain start** position, as specified in the songs database. If a **Refrain end** position is specified, too, it will be used, otherwise a default offset from **Refrain start** will be taken. It is specified here as **Default length**. The refrain fade length is specified, too, as **Fade out length**. The next event will be mixed in **Mixin from end** seconds before the refrain end.

2.8 Extras tab (Qnet Studio only)

Qnet Studio supports a watchdog card, that resets the computer when something goes wrong. **Address** specifies the I/O location of the card. Since the watchdog card has a temperature sensor inside, Qnet Studio can report the temperature sensed. When no card is present, its I/O address is not correct, or its driver is not loaded (Windows NT and 2000 only), the system reports **Temperature unknown**. The watchdog can be enabled checking **Enable**.

If Qnet Studio is administered remotely, the vu-meters and centiseconds can be disabled in order to prevent an excessive amount of screen refresh data moving across the network connection. They can be switched off independently with the **Disable Vu-meter** and **No centiseconds** check marks. Qnet Studio optionally shows the current date on the display, if **Show date** is checked.

Qnet Studio can drive an external **RDS controller** via the serial port, which can be **COM1** or **COM2**. If the RDS controller is connected to another computer, it can be driven nonetheless, via the **Qnet RDS** utility. In this case, the user has to specify the name of the host, where RDS is present in the **On host** field. The serial port must be specified even in this case, because two RDS controllers can be operated by the same computer.

The changes made to the songs database in Qnet Studio cannot be saved and there is no danger in doing them, but if the administrator does not want the users to edit the songs records neither temporarily, **Don't allow songs editing** must be checked.

When **diary** messages are shown on display, they can be deleted once read. **Delete read diary** should be checked for this.

Digigram NP drivers have some software errors (bugs), which can prevent the program from working properly. These errors don't come out often in Windows NT/2000, but can come out often in Windows 95/98/Me. If **Restart Windows (only PCX driver on NT) on PCX fatal errors** is checked, Qnet Studio automatically resets the computer, when some of these errors are encountered. Thanks to a superior driver model on Windows NT, only the PCX driver is restarted under this operating system. This is not possible under Windows 95/98/Me and neither on Windows 2000.

Sometimes it is useful to monitor some directories on the system for new files. Up to three directory monitors can be installed in Qnet Studio. The number of files present in those directories are showed on the display above the clock.

If **Alternative keys for fade** is checked, instead of the keys F and O, the keys between zero and backspace will be used instead for fade and soft fade.

If **Start telnet server** is checked, Qnet Studio will accept incoming telnet connections. **Password** will be used for authentication. The program can be remotely controlled in this mode. Help on built-in commands is available online. This setting will take effect only when the program will be restarted.

2.9 Speech tab

The data inserted in these fields are used for the **Speech on intro** function. This function is used in manually created playlists and consists in the speech that is automatically mixed over two songs and terminated on the intro position of the second song. The mixing parameters must be inserted in these settings. **Fade out** is the time that the song uses to fade from the normal level to the faded level. **Mix in** is the time between the starting of the song fading and the speech start. **Fade in** is the time that the next song uses to rise its volume from the faded level to the normal level. **Mix out** is the time between the end of the speech and the end of the level rising of the second song. **Faded level** is the level of the two songs when faded. **75** means **0 dB**. This level will be corrected further with **Faded**

level offset in the playlist settings. These settings are applied in Qnet Database in the playlist editor and not in Qnet Studio.

2.10 Messaging tab (Qnet Studio only)

Qnet Studio can receive and send e-mails. **E-mail sending** and **E-mail receiving** boxes contain standard settings present in most e-mail programs: **SMTP-server** is the IP address or name of the server used for sending e-mails. **From: e-mail address** is the address of the sender (the e-mail address of Qnet Studio) and **To: e-mail address** is the e-mail address of the destination, when it is not given (some functions send e-mail automatically to a predetermined e-mail address). **POP3 server** is the server used for receiving e-mail. **Username** and **Password** are used for authentication when receiving e-mail. The incoming mailbox is checked with the interval given in **Check interval (minutes)**.

Radar settings are used for the Radar function (recalled by the **Radar** button on the jingles panel). **Events** are the possible events presented in the Radar dialog box. The data entered in the Radar dialog box will be sent via e-mail, but it is sent to the software for managing RDS, if **Send also to RDS** is checked. In this case the **Separator** will be put between different lines. The time won't be sent to RDS, if **Send time to RDS** isn't checked. The **Text before time** will be put before the time, if the time is sent. **Validity (minutes)** is the validity time of the information. After the given amount of time the message will be deleted from RDS.

3. Database functions

3.1 File menu

New creates a new database. The database can be one of these: Songs, Jingles, Spots, Backgrounds, Blocks, Live reports, Contributions. Other types of databases (such as automatic playlists are created elsewhere).

Open opens an existing database of the types listed above. Qnet Database can open databases in Qnet .db format, VMDSS .db format and in tab delimited text (each field is delimited by the ASCII TAB character and each record is ended with a CR-LF sequence; the fields have to be in the same order as in Qnet Database).

Merge merges the current opened database with another loaded from disk. The database to be loaded can be only in the Qnet or VMDSS .db format. Records are considered the same (and duplicates won't be made) if the key field is the same. The key field is always the **Filename** field. Blocks databases, which have no filename field, are always joined and no merging of records will be done. Merging of two records (which have the same **filename** field) consists in taking all the data from the currently opened database. This is done differently, if advanced merging is used. Databases of different versions cannot be merged; they have to be converted first.

Merge advanced, which is available only for the songs database, performs merging differently. Instead of taking the data from the currently opened database, the user can decide, separately for each field, which is the database to be used to take the data. If the relevant field in the dialog **Use data from the second database for** is checked, the data will be taken from the database, which is being opened, otherwise the currently opened database will be used. One more option is given, if the relevant field is empty in one of the two databases, the non-empty one can be used, if it is checked in the next dialog, **Field merging (take the non-empty field) for**. Only in the case that in both databases it is non-empty, the first selection will be relevant. Times set to zero can be considered as empty fields, if **Consider time fields at zero as empty** is checked.

Convert DB version converts the database to the latest version adding new fields in the case.

Import songs automatically imports existing files in the songs database. They can be copied to one of the songs folders, if **Copy files** is checked. The **Artist**, **Compilation** and **Title** fields can be filled automatically if they are present in file names. The user has to specify the formatting of the file name in the **Format** field using the special characters **A** (Artist), **C** (Compilation), **T** (Title) and **I** (Ignore). The format string has to be terminated by the dot (.) character, since it terminates the filename (the extension will be ignored). If the filename is e.g. "Artist - Compilation - Track number - Title.mp3", the format string has to be "A - C - I - T.", since the track number has to be ignored.

Import jingles automatically imports existing files in the jingles database. The **group** field can be entered once for all the jingles imported.

Import intros automatically imports the **intro** field in the songs database. The file has to be a sequence of CR-LF separated records, with only two fields, the filename and the intro, separated by a TAB character. Such a file is automatically created by **Qnet Studio** if the operator uses its **Save-intro** function.

Import ID3 data imports ID3 data usually present in MP3 files updating some fields in the songs database. This function can be very dangerous, because the currently present data is destroyed. **Qnet** does not use ID3, which is never saved in MP3 files.

Import playlist imports an existing playlist (.pl file) in the playlist under editing. The user can choose, which records have to be imported. Available choices are **Only songs**, **Songs and speeches**, **All but blocks** and **All**.

Save all saves all the modified databases to disk with the default filenames - only modified databases will be saved.

Save as saves the currently opened database to disk. The user can choose the filename to give to the file and the file format: **Qnet**, **VMDSS** (only for songs) or **Tab delimited text**.

Save current view saves the currently opened database to disk, but only the records present in the current view. The format can be chosen between **Qnet**, **VMDSS** (only for songs) or **Tab delimited text**.

The **Sync spot manager** function present in versions prior to 1.68 has been suppressed. Synchronization with Spot manager is performed by an external program (**DB Manager**).

Print CD covers is used to print the covers of Audio CD-s, if they are entered in the database as filenames with the **.CD** extension and the **Media** field '**B**'. The filenames in the database have to be formatted as **CD NUMBER-TRACK NUMBER.CD**. In this case this function asks for the first and last CD number and the **Name** to be given to the CD.

Stations is used to create new stations (folders present in the Data\Stations folder) and to give the destination folder for the **Send** operation (which sends all the relevant data - databases and audio files - to the given folder).

Select database presents the main menu for database selection.

Delete old spots deletes all the audio files pertaining to spots, which won't be played anymore (which have the End date beyond the current date in the spots database).

Delete unused files searches for all the files present in folders used for audio files, but not present in the databases. They are presented to the user, who can play them, select them individually or in group. The selected files can then be deleted.

Exit exits the program.

3.2 Edit menu

New record creates a new record.

Copy to new record creates a new record with initial data equal to the current record.

Delete record deletes the current record.

Find opens a **Find** dialog, which has several options to search the database. **Case sensitive** enables letter case sensitivity - capital and lower case letters are considered different. If **At beginning** is checked, the searched string must be present at the beginning of the field. If **Exact match** is checked, the field has to contain exactly that string. If **Among present** (only for songs) is checked, the present view of the database is searched. If **Among all** (only for songs) is checked, all the records are searched. All **fields** (only for songs) searches the string among all the fields. Only for songs, the last ten search strings are available for quick selection.

Replace opens a **Replace** dialog, which is used to replace fields, which match the search criteria, with the given string.

Sort sorts the current view in a different way. Only the **All view** is saved to disk, so the sort operation is not permanent, unless it is performed on the **All view**.

Select/deselect selects or deselects a record. Records selection is useful to create custom views.

Show selected shows only the selected records.

Select all selects all the records in the current view.

Deselect all deselects all the records in the current view.

Invert selection inverts the selection status of the records in the current view.

Selections can be performed with the TAB key on the keyboard. Multiple selections can be performed with the mouse and the SHIFT key. Multiple deselections can be performed with the mouse and the CONTROL key.

Delete file deletes the audio file of the current record. The file is not necessarily deleted. The effectively executed operation can be set in the settings (Misc tab).

Edit mode enables or disables the Edit mode. When in edit mode, fields can be edited directly without opening the editing dialog.

Remove old spots from blocks deletes the expired spots (the spots with the end date beyond the current date) from blocks.

Delete dates of old spots deletes the fields "Start date", "End date" and "Week days" of the expired spots.

3.3 View menu

All shows all the records.

MPEG (only for songs) shows only the songs with the Media type "A" or "C" to "Z".

Present shows only the records, whose files are present on disk.

Found shows only the records found by a previous Find operation.

Spots to realize (only for spots) shows only the spots signed to be still realized.

Songs, Jingles, Spots, Backgrounds, Contributions, Live records and **Blocks** goes directly to the chosen database.

Spots blocks (only for blocks) shows all the "regular blocks" (which are usually timed).

Special blocks (only for blocks) shows all the "helper blocks", used for Pre-Mid-End spots.

3.4 Songs menu

Find from list shows all the songs present in a .LST file.

Find copy songs searches for all the songs, which have similar artists and titles and that can therefore be the same song. During the search, the words THE, A, AN and all the

characters that are not letters or digits, are ignored. 1, 2, 3, ... and ONE, TWO, THREE... are considered the same word. Words ending with IN' and ING are considered the same word. The words FT, FEAT and FEATURING and everything that follows, is ignored in the artist field. The words RMX, REMIX and everything that follows, is ignored. The bracket '(' and everything that follows, is ignored, if the bracket is not at the beginning of the field. The same is for the dot (.), if it is followed by a digit.

Propose copy songs puts the copy flags to all the songs found before, but for every unique song leaves one record without the copy flag. The record chosen is that, which has the lowest filename (supposing that it is the first entered in the database).

Find similar songs searches for all the songs that have the same artist and type as the current song in the playlist editor.

Find wrong mix-in songs searches for all the songs that have an improbable mix-in.

Song types shows all the song types with the number of present songs for that type, divided by vote.

Global field modify opens the songs dialog and every field entered will be copied to the same field in all the records in the current view.

Global field delete deletes all the selected fields in all the records in the current view. If **Delete only time fields which are zero** is checked, time fields will be deleted only if zero.

Columns operations can **Move**, **Copy** or **Swap** fields of all the records in the current view.

Music manager opens the **Music manager**, which is used to manager song and contribution files.

Delete dup songs deletes all the duplicated audio files relative to songs, if the same files are found in different folders.

Automatically adjust volume tries to set the volume field in such a way, that all the songs will sound equally loud. **Unprocessed only** works only on records with the volume field empty, while **All** works on all the records.

3.5 Options menu

Check files performs a file presence check. The audio files are checked for presence. If their data is not present in database (file format and length), the files are opened and analyzed. Since the songs database can arrive from a remote computer and its data can be incomplete, a cache file (**Songs.fmt**) will be used, if the data is not present in the database, avoiding to analyze (and therefore open - with all the overhead) the file.

Thorough check analyzes the audio files for file format and length. **Only wrong** checks only the records, whose data is inconsistent with the file length. **Unconditional** checks all the records. In every case, the cache file **Songs.fmt** will be deleted first.

Files length check checks to see, if the files on disk are correct. Its function is complementary to the previous one. It supposes that the database is correct and it checks for errors in files on disk. It reports the number of files analyzed, the number of files, which are not recognized by the program (**Invalid format**), the number of **Not found** files (should be zero if files haven't been deleted since last **Check files**) and the number of files of **Wrong length**. It shows all the files of **Wrong length**.

Automatic playlist opens the **Automatic playlist generation** dialog box, which is used to set the parameters for automatic songs selection and to perform such a selection.

Settings opens the settings dialog box.

Volume is used to set the volume for files pre-listening.

Music format is used to set the file format of music files (songs, jingles, spots, backgrounds and contributions).

Speech format is used to set the file format of speech files (reports, news, advices and speeches).

The sampling frequency can be chosen between **8, 16, 32, 44.1** and **48 kHz**. 8 and 16 kHz are good only for **WAV PCM** files. **WAV PCM** indicates no compression (16 bit linear, little endian, WAV header), **MPEG L2** indicates MPEG-1 Layer 2, **MPEG L3** indicates MPEG-1 Layer 3, **MPEG L3 LQ** indicates MPEG-1 Layer 3 with a simplified encoding routine, which uses less processor power and is therefore useful for slower machines. The quality will be lower than regular Layer 3, but fully compliant. The bitrate can be chosen between all the standard bitrates for MPEG-1 Layer 2 and Layer 3. **Stereo** indicates a 2-channel file and **Joint** indicates that the Joint-stereo MPEG encoding algorithm will be used, which privileges sound quality instead of channel separation.

3.6 Main menu dialog box

Songs shows the songs database.

Jingles shows the jingles database.

Spots shows the spots database.

Backgrounds shows the backgrounds database.

Blocks shows the blocks database.

Live reports shows the live reports database.

Contributions shows the contributions database.

Playlists opens the playlists submenu dialog box, which has seven options:

New template creates a new template. Templates (which have the .tpl extension) are used to prepare general playlists to use as starting points for creating particular playlists.

New playlist creates a new playlist. The user will be asked for the playlist settings and playlist times (mandatory only for playlists that contain blocks, i.e., playlists with Blocks management activated).

New playlist from template asks for a playlist template file, which will be used as the starting point for a new playlist.

Edit existing template asks for a playlist template to edit.

Edit existing playlist asks for a playlist to edit.

DB menu returns to the main menu.

Edit schedule opens the schedule editing dialog box. It is described in the **Automatic playlist generation** section.

Check station checks the files present at a remote station. The lists of files present in other stations are saved in LST files and retrieved directly, if present in LAN, or via **Qnet Transfer**, if present in remote locations. LST files retrieving is managed via **Qnet Manager**, which should be set up in order for this function to work.

Save and send saves all the databases on hard disk and sends everything to be sent to other stations. The destination folder to be used as destination is different for every station and is chosen in the **File/Stations** menu.

Stations selects another station to edit.

Logout logs out and asks login for another user. User manager should be installed for this to work.

Exit exits the program.

3.7 Main tool bar (not when editing blocks or playlists)

The main tool bar contains only shortcuts to the menus or keyboard:

Open data base	File/Open
Save all	File/Save all
New record	Edit/New record
Delete record	Edit/Delete record
Find record	Edit/Find
Sort data base	Edit/Sort
Edit mode	Edit/Edit mode
All records view	View/All
All songs view	View/MPEG
Present files view	View/Present
Found records view	View/Found
Play	Keyboard space key
Select data base	File/Select data base

Only for blocks database:

Go to spots database	File/Select database and then Spots
Spots blocks	View/Spot blocks
Special (Pre/Mid/End) blocks	View/Special blocks

Only for spots database:

Go to blocks database	File/Select database and then Blocks
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3.8 Main tool bar (when editing blocks or playlists)

Some functions are the same as before:

Find record	Edit/Find
Sort data base	Edit/Sort
All records view	View/All
All songs view	View/MPEG
Present files view	View/Present
Found records view	View/Found
Play	Keyboard space key
Select data base	File/Select data base

Others are new:

Calculate songs	Turns all the "Song type to calculate" events into the "Song" event, using the automatic songs selection algorithm.
Delete all speech texts	Deletes all the text files associated to the speeches present in the block or playlist
Mark all the speeches to be sent again	All the speeches present in the playlist are marked to be sent again by the Save and send function . Actually, the Attribute flag of the associated files is turned on.
Calculate playlist automatically	Options/Automatic playlist

3.9 Side tool bar (when editing blocks and playlists)

Some functions are only shortcuts to the View menu, other not:

Songs data base	View/Songs
Jingles data base	View/Jingles
Spots data base	View/Spots
Backgrounds data base	View/Backgrounds
Contributions data base	View/Contributions
Files	Opens the Files explorer
Special blocks data base	View/Blocks, then View/Special blocks
Blocks data base	View/Blocks, then View/Spot blocks

3.10 Bottom tool bar (when editing blocks and playlists)

Only for blocks:

Previous block	Saves the current block and moves to the previous block in database
Next block	Saves the current block and moves to the next block in database
OK	Saves the current block

For blocks and playlists:

Save playlist	Opens the dialog box for entering a name for the current playlist and saves it.
Cancel changes	Returns to the blocks database or the main menu without saving changes
Settings	Opens the block parameters or playlist settings dialog box (fields are described in the relative chapter)
Test block	Schedules every event as if it would be played by Qnet Studio, shows the obtained playlist and plays it. The user can only jump to another event in the playlist with the left mouse button or stop playing with the right mouse button or the ESC key.
Delete event	Deletes an event from the block/playlist
End background	Inserts an end background event. Backgrounds should be always terminated by this event
Insert pause	Inserts a pause event. The pause is given in seconds
Insert speech	Asks for a file name and inserts a speech event. The file will be saved in the MiscAudio folder
Insert report	Asks for a file name and inserts a report event. The file will be saved in the Reports folder.

Insert news	Asks for a file name and inserts a news event. The file will be saved in the News folder.
Record speech now	Generates a file name for a speech, inserts the speech event and starts recording immediately.
Insert file	Opens the files browser and inserts a file event.
Insert a song by type to calculate	Asks for a song type and inserts a "Song type to calculate" event. This event will be turned to a song when the user presses Calculate songs on the main tool bar.
Insert a song by type	Asks for a song type and inserts a "Song type" event. This event will be turned to a song by Qnet Studio, as this block or playlist will be inserted.
Insert a playlist change	Asks for a types sequence name or number and inserts such a command in the playlist. When this playlist will be inserted, the current automatic playlist generation types sequence will be changed.
Insert advices	Inserts an advices play command. Advices playing is depicted in the relative box.
Insert time	Inserts a time play command.
Insert jingle group	Inserts a "Jingle group" event, which will be turned in a jingle by Qnet Studio at block or playlist insertion.
Insert execute	Inserts an execute command. When this event will have its time for playing, a file will be executed instead.
Toggle song refrain flag	Toggles the Refrain flag for a song event. If this flag is set, the song refrain will be played instead of the song.
Insert Traffic Announcement	Inserts a traffic announcement ON command, or a traffic announcement OFF command, if a TA ON command is already present in block.

3.11 Files explorer

The files explorer has two windows. The left window is used to choose the folder to visualize. The right folder shows the files present in the selected folder. The files in the right folder can be played with the **'O'** key and the playing controlled with the player command keys. The left folder is initially empty. Folders can be inserted inside pressing the right mouse button and choosing **"Add folder"**. Folders can be deleted from the list with **"Delete folder"**. Lists can saved to disk and reloaded. The standard extension for folders list is **".FOL"**. At program loading the default list is retrieved. The default list is located in the **Default folder for data files** (usually **\Qnet\Data**) and its name is **default.fol**. A list can be saved under this name directly, with the **Save list as default** command. Folders can be expanded or shrunk with a double click.

3.12 Records editing

When a songs, jingle, spot or other type of record is double-clicked, all its fields are shown and are available for editing. Beyond the fields to edit, other buttons and controls are present in the dialog box:

New	Saves this record, creates another one and starts its editing.
Copy to new	Saves this record, creates another one with all the fields copied from the previous and starts editing.
Adjust counter (for songs and contributions)	Changes the starting point for automatic files naming.

Import	Asks for a file and copies it to the relevant folder, renaming it giving a sequential name for songs and contributions.
Audio	Opens Qnet Recorder in edit mode for the current file. Qnet Recorder has an extended interface to allow the editing of specific fields, which vary with file type.
Editor	Opens the file in an audio editor. The audio editor is set in Settings.
Previous	Saves the current record and moves to the previous one.
Next	Saves the current record and moves to the next one.
Save	Updates the last modification time and date of the file and sets its archive attribute in order for the file to be eligible for sending.
Cancel	Terminates editing losing all the changes to the current record.
OK	Saves the changes and terminates editing.
Audio control	Allows playing of the file. It is controlled with the standard keyboard keys. The function keys from F1 to F12 can be used to edit various parameters for songs. The keys for winding and rewinding change their steps in this case.
Mixin file (only for songs)	Chooses the file to be used for mix-in tests. The given file will be played at the mix-in position, when mix-in will be tested.

These are only for spots:

Media plan	Shows the media plan .
Add	Allows adding of the current spot to one or more blocks. The spot can be optionally forced at the beginning or end of the block.
Remove	Removes the spot from the selected block.
Update days and dates	Copies the Start date , End date and Week days from the spot fields to the event fields of the spot in the shown blocks. These fields are not relevant for scheduling in the spot database. They are only used when inserting spots into blocks. The fields used in the events of the block will be used for scheduling.
Remove old spots	Removes the spot from every listed block, when the End date of the spot in that block is beyond the current date.

3.13 Media plan

The media plan is used to decide accurately in which block and in which days to insert a predetermined spot. Every cell of the media plan contains the length of the block in the relative day. The can have different colorizations:

Gray	The spot is not present in the cell.
Dark blue	The spot is present in the cell under another contract.
Light blue	The spot is present in the cell under current contract.
Upper half red	The spot is not present in the cell; the cell contains two or more spots of the same category, which may not be the category of the current spot.
Lower half red	The spot is not present in the cell; the cell already contains one spot of the same category as the category of the current spot. Inserting the spot here would produce a category duplication in the same cell.
Upper half magenta	The spot is present in the cell; the cell contains two or more spots of the same category, which may not be the category of the current spot.

Lower half magenta	The spot is present in the cell; the cell already contains another spot of the same category as the category of the current spot.
Two red bars on every side	The spot is fixed in the block: no automatic function will move the spot from that block.
One red bar at cell ceiling	The spot is forced to stay at the beginning of the block.
One red bar at cell floor	The spot is forced to stay at the end of the block.

Clicking on a cell, the spot is inserted in that cell or taken away. Right-clicking on a cell, a menu appears. These functions are available:

Show spots	Shows the spots present in that cell.
Fix here	Fixes the spot in that cell: no automatic function will move the spot from that block.
Unfix	Unfixes the spot from that cell.
First in block	Forces the spot to stay at the beginning of that block.
Last in block	Forces the spot to stay at the end of that block.
Random	Takes away spot position enforcement: the spot can be anywhere in the block.

Some functions may not be available, e.g., Fix here/Unfix are alternatives, or "First in block" is present only if no other spot is already forced in that cell at the beginning.

The media plan dialog box has some buttons: **OK** confirms the changes, **Cancel** leaves editing losing all the changes, **View present** shows only the blocks and dates, where the spot is present, **View all** shows all the blocks and dates, **Export** exports the media plan as a Qnet **MPP** file or as a Tab delimited text suitable to be imported in other programs, **Import** imports MPP files into the media plan, **Print** prints the media plan.

4. Studio functions

4.1 File menu

Open songs database opens an alternative songs database (songs.db is the standard one).

New buttons group creates a new buttons group. It will be available in the drop-down list of jingle groups.

Simulate station simulates a station loading alternative databases files, which are located in the Stations subfolder of the data folder.

Logout logs out and asks login for another user. User manager should be installed for this to work.

Exit exits the program.

4.2 Edit menu

Open songs database opens an alternative songs database (songs.db is the standard one).

Insert inserts the currently selected song into the playlist.

Delete deletes an event from the playlist.

Find opens the find dialog for songs searching.

Find similar songs looks for songs of the same artist and same type as the one selected in the playlist.

Sort opens the songs sort dialog.

Find from list asks for a list file with the **.DEL** extension and shows all the songs listed in that file.

Unedit mix takes the default mix parameters of the currently selected event in the playlist undoing every change done with the mix editor.

4.3 View menu

All shows all the songs.

MPEG shows only the songs with the Media type "A" or "C" to "Z".

Present shows only the songs present on disk.

Found shows only the songs found by a previous Find operation.

Show everything in playlist shows the complete playlist.

Don't show subblocks contents shows every event in playlist, but leaves the third level events out. The records on second level are prespot subblocks, midspot subblocks and endspot subblocks.

Don't show blocks contents shows only the first level records, i.e., the blocks contents won't be showed.

Show only start events in log shows only the events in log that contain the sequence "tarted" ("Started" and "started" both contain the sequence "tarted").

Hide vumeter and centiseconds hides the vumeter and centiseconds from the display. The same can be done in settings, but if changed here, it is not saved in the configuration file for the next time.

4.4 Options menu

Check files performs a file presence check. The audio files are checked for presence. If their data is not present in database (file format and length), the files are opened and analyzed. Since the songs database can arrive from a remote computer and its data can be incomplete, a cache file (**Songs.fmt**) will be used, if the data is not present in the database, avoiding to analyze (and therefore open - with all the overhead) the file.

Automatic playlist opens the **Automatic playlist generation** dialog box, which is used to set the parameters for automatic songs selection and to perform such a selection.

Table-driven playlist opens the **Table-driven playlist editor**.

Settings opens the settings dialog box.

Volume is used to set the volume and balance for the main device and the pre-listening device.

Effects opens the effects control dialog box. Effects are used to change the playback-rate and playback pitch. Not all the effects are always available. The control has no effect if the audio device does not support the effect. Wave-type audio devices don't support effects of any kind. DirectSound-type audio devices support only the Scrub effect. NP-type audio devices (Digigram audio cards) can support one or more of these effects, depending on the audio card. **Scrub** changes both the pitch and playback rate, as if the speed of a record is being changed. **Time-stretching** changes the playback rate without affecting pitch. **Pitch** changes the playback rate without affecting the playback rate. **Reset** resets everything to standard conditions (100%).

Song types opens the song types dialog, which lists all the types of present songs and shows the number of songs for each type, divided by vote.

Reminder opens the reminder dialog box. The reminder is used to leave messages for the technician. Creating a new reminder entry with the **New** button, the user can enter the name of the reminder entry, the time, when it should be visualized (the date is optional) and the text to show. An entry can be edited with a double-click on it. Once the time of a reminder entry arrives, the program changes its background color to red, blinks the clock and lights the **REMINDER** indicator on display. The user has then to click on the **REMINDER** indicator to show the message and turn off the visual effect. Already shown reminder entries are signed as disabled.

Error delete deletes the **ERR** label on display, which is only an alarm that indicates that an error occurred.

Generate debug.zip is used for debugging purposes and generates a file named **Debug.zip** in the C:\ folder, which is useful for the developer of the software to find errors in the software.

4.5 Right-side panel

Auto enables or disables automatic playing mode. In automatic playing mode the program automatically generates songs to insert into the playlist and plays everything present in the playlist.

HS (Hot Start) enables the waiting song in the playlist to start from its hot start position instead of its regular start position. Pressing the button again, the song is rescheduled to start at its regular position.

Loop starts looping of the currently playing song from the Loop start position to the Loop end position.

Go next schedules the next not already scheduled event in the playlist, to be automatically played even in manual mode. Pressing the button more times, more and more events are scheduled to be automatically played. To unschedule their playing some event in the playlist has to be moved before the scheduled events.

Fade fades the currently playing event with a fade length of 4 seconds and immediately starts the next waiting event.

Soft fade fades the currently playing event and starts the next waiting event. The fade length and the time to next start are defined in settings.

Jingles shows the **jingles panel**.

Songs shows the songs database.

Blocks shows the blocks database.

Files shows the **files explorer** (same as in Qnet Database).

Contributions shows the contributions database.

Log shows the regular log. It contains the event starts, event ends, and other more significant events.

Errors shows the errors log.

Work log shows the work log. The work log contains all the events contained in the regular and error logs, plus other less significant events.

Reload DBs forces the reloading of all databases. Since all the databases are automatically reloaded, as the program finds a new version on disk, this function isn't really necessary. The only case, where it is useful is in reloading of blocks database, because it resets the memory of the program of already played blocks, reinserting the blocks, that have to be played, if they have been accidentally deleted. This does not occur in automatic reloading.

Log ? searches an expression in the log.

Next searches the next occurrence of an expression in the log.

Panic immediately stops every playing process and restarts playing from the next not already started event, if the program was in automatic mode.

4.6 Jingles panel

The jingles panel contains 10 banks of 12 jingles each. The banks can be selected with the mouse or with the keys 1 to 0 on keyboard. The first five banks are fixed, the next five can be chosen from an unlimited number of bank groups via the drop-down list. The groups are created with the menu command **File/New jingles group**. At first installation two groups exist: the **system** group and the **default** group. The system group is permanently assigned to the first five banks, while the **default** group is selected for the second bank of jingles at program startup.

The jingles are scheduled with mouse or with the keys F1 to F12 on keyboard. Normally jingles are put immediately after the playing event and scheduled to be played automatically. If the program is in manual mode and nothing is currently playing, the jingle automatically starts playing. Starting another jingle button has always the effect of stopping the currently playing jingle and restart with the new one. If the jingle is still waiting, the old one is substituted by the new one. If **Insert jingle** is pressed (checked, because it is actually a check button), the behavior will be different, because the jingle will be inserted before the currently selected event in the playlist and it won't be automatically scheduled for playing. If **Mix over** is pressed, the jingle will start immediately even if something else is playing and it will be mixed with the other events in playlist. The jingle contents can be edited pressing the **Edit** button. Each jingle has a name and an associated playlist of events. These types of events can be inserted in a jingle playlist: a **jingle**, a **file**, **time announcement**, **program execution** and **traffic announcement on RDS**. If **TA ON (Traffic Announcement ON)** is put before a jingle or file, and **TA OFF** is put after that jingle, the **Traffic Announcement** signal on RDS will be activated before the jingle and deactivated after the jingle. Since the response time of the RDS is not zero, the signal will be activated in advance and deactivated after a delay interval. This times can be set double-clicking on the **TA ON** and **TA OFF** events.

Insert file inserts a file in the playlist at the current position. **Insert playlist** inserts a prepared playlist (.pl extension) into the playlist, at the current position. **Del** deletes an event from the playlist (same as the **Del** key on keyboard or **Edit/Delete** menu item). **PFL** sends the jingles to the pre-listening device instead of the main device, when played. They can be stopped with another jingle or with the **ESC** key. **Intro**, when pressed, activates the **Jingle/file on intro** function. It means, that whenever a jingle or file is inserted between two songs, the jingle or file are mixed over the two songs, and the song levels are lowered during all the jingle or file duration. The jingle or file are inserted in such a position, that they end playing at the second song intro position, if their duration is lower than the intro time.

TA manually activates or deactivates the **Traffic Announcement** signal on the connected **RDS** (the RDS equipment can be connected to another computer in the network, as explained in the chapter about settings).

RDS and the associated text field are used to send messages to the **RDS** program. The text entered will be shown on RDS as the **Fasttext** function of the RDS program. This function is only available, if **On host** is enabled and a host specified in settings.

Radar will open another window for entering radar information (police controls announcements). Three lines of information can be entered and sent via e-mail or to the RDS program. **Time** is the time of the event, **Event** is the type of event and **Text** is free text entered as information. **Clear** clears an entire line. Under the three lines, the text as it will be sent to RDS, is shown. **Send** sends the text via e-mail and to RSD, if activated in the settings. **New** opens another window for entering another line. **Close** closes the window. The number of characters, which would be sent to RDS, is always shown.

Find searches a jingle name in all the jingle groups. **Next** searches for the next occurrence of that name. **DJ Log** inserts a song log entry in the log and in the **lastsong.txt** file (which is used for SMS and RDS announcing of currently playing song). It must be used, when a song is played through an external player (such as a CD or tape). The song artist and title have to be entered directly, if the relative fields are present on the screen. They are present only if sufficient space is available on screen. If there is no space (because of a lower resolution), a dialog box is presented.

4.7 Songs tool bar

These are shortcuts to the main menu or other useful functions:

To playlist	Edit/Insert
Delete event	Edit/Delete
Find song	Edit/Find
Sort data base	Edit/Sort
All songs view	View/All
MPEG songs view	View/MPEG
Present songs view	View/Present
Found songs view	View/Found
Pre-listening	If selected, a double click on a song plays it on the pre-listening device instead of inserting it in the playlist. If depressed, stops playing on the pre-listening device.
Log selected song	Logs the currently selected song as being played. It is used for songs present in the database, which are not files, but only records about a CD or tape. It is written into the lastsong.txt file, too.

5. Recorder functions

5.1 File menu

Open opens an audio file for playing or editing.

Save as saves the currently opened file. If no editing has been done, copies the file to another filename.

Timers opens the timers dialog box. Timers can be edited through a double click on an item. New timers can be created pressing the **New** button and removed pressing the **Remove** button. Timers are used to automatically start recordings: the recording can start every day at a fixed hour, only on certain days during the week (0=Sunday, 6=Saturday) or only in a fixed date. The **Start on date** and **Week days** fields are optional. If they are not entered, the recording will start every day. **Duration** defines the length of the recording and **File name** the name to give to the recorded file.

Exit exits from the program.

5.2 Edit menu

Join appends a new file to the currently opened file.

Split divides the currently opened file in two pieces. The file will be cut at the current pause position and the remaining part will be saved under another name.

Cut from start to end takes only the piece of the file from the **Start** to the **End** position. The remainder is lost. The start and end position can be edited in **Graph mode**.

Cut selection cuts away the currently selected piece of the file (only in **Graph mode**).

Undo cut selection undos a previous **Cut selection** operation.

5.3 Options menu

Audio devices permits to choose the preferred audio devices for playing and recording.

Format asks for the preferred recording format. The available formats are the same as in Qnet Database.

Levels asks for recording level and playing level. If **Mute** is selected, the input won't be heard during recording. For Wave-type devices, the **Recording source** can be selected.

Settings opens the settings dialog box. If **Default open folder** is specified, the file browser will start in that folder, when opening a file. If **Default save folder** is specified, the file browser will start in that folder, when saving a file. If **Default extension for WAVE/MPEG files** is specified, that extension will be appended when saving a WAVE/MPEG file, when no extension is specified. If **Use always** is checked, that extension will be always appended to the file name. **Start with graph window** forces the program to start in graph mode. **Start in record mode** forces the program to start in record mode (paused). If **LPT1 when recording** is checked, all the output bits of the LPT1 parallel port will be set to 1 when recording will be active (not in pause mode).

Effects opens the effects control dialog box. Effects are used to change the playback-rate and playback pitch. Not all the effects are always available. The control has no effect if the audio device does not support the effect. Wave-type audio devices don't support effects of any kind. DirectSound-type audio devices support only the Scrub effect. NP-type audio devices (Digigram audio cards) can support one or more of these effects, depending on the audio card. **Scrub** changes both the pitch and playback rate, as if the speed of a record is being changed. **Time-stretching** changes the playback rate without affecting pitch. **Pitch** changes the playback rate without affecting the playback rate. **Reset** resets everything to standard conditions (100%).

Show graph enters **Graph mode**.

Graph zoom sets the zoom level to 1:1, 1:2, 1:5, 1:10, 1:20, 1:50 or 1:100.

Mixin test file (only when opened in Qnet Database) is used to specify the file to use for mixin testing.

Program title permits to set a title for the program to show on the window bar.

5.4 Operation

File playing can be controlled with the available self-explaining controls (wind and rewind move 10 seconds forward or backward), with the keyboard (standard player keys explained in the section on players), with a click on the progress bar or with a click on the graph window (only in graph mode).

In **graph mode** a graph representing audio levels is shown. More controls are available. Selections of portions of the file can be done: a selected zone can be zoomed into (**In** button) or deleted (Edit/Cut selection or the scissors icon). **Out** zooms out to the next lower ratio from the list (1:1, 1:2, 1:5, 1:10, 1:20, 1:50 or 1:100). **All** shows all the file (zoom 1:1). In graph mode, parameters editing mode is available. In this mode all playing cursor move operation (winding, rewinding and absolute move with mouse click) change the parameter under editing instead of the playing position. Playing restarts at that parameter position (**Start**, **Hot start** and **Intro**) or two seconds before (**End** and **Mixin**). **Fade in**, **Fade out** and **Volume** (when applicable) must be entered manually.

6. Supplementary functions

6.1 Automatic playlist generation

Songs can be automatically selected with the automatic playlist generation function. Type sequences are edited in the automatic playlist generation dialog box. Every sequence can contain a series of song types or jingle groups. Double clicking on a song type or jingle group, it is inserted in the sequence. **.DEL** list files, even if not designed for this purpose, can be inserted in a sequence, too, which means, that songs will be randomly selected from those present in the list. **.DEL** files are created with the **Music manager**.

Distance between songs of the same **artist** can be imposed and the **minimum vote**, too. **Reset sacks** deletes all the selection history and should be used only in case of problems.

Playlists are selected automatically in Qnet Studio at the right time, and manually in Qnet Database. The starting times (and eventually date or week days) are entered for any single sequence, in the same way as for every other database record (the name of the database is **rulelist.db**).

To organize the scheduling better, a **Table-driven** editor is available. The playlists present in every time slot and day are presented in a table, with some data, if **Show data** is clicked. For every cell, the number or rotations of the playlist in that cell will be showed and the mean number of songs per hour in that cell (which can be changed - the default is set in the settings - Misc2 tab). For song types, the number of present songs of that type is showed, along with the number of days necessary to play all the songs of that type before repeating songs, the number of songs of that type played per day and per week. This data is mean data. For jingles, only the number of jingles of a particular group is indicated.

If playlists are prepared in Qnet Database in strict chronological order, the songs selection mechanism will keep track of selections made in the past and repetitions of the same song will be avoided in short time lapses. Usually it is not possible to edit the playlists in such chronological order, because more speakers are willing to edit different playlists at the same time and maybe the speakers are not located on the same LAN either. To manage such a situation, another kind of songs selection process is available, the **Remote playlist generator (RPL)**. It can be started choosing **Playlists** on the main menu and then **Edit schedule**.

The schedule is a table of seven days and one or more time slots. In every cell of the table a types sequence has to be inserted (the types sequence playlists are created in the **Automatic playlist generation** dialog box). Then, with the **Generate** button, the songs are selected for all those time slots, for a given number of days. These songs lists are saved in a **RPL** file. Slots are added with the **Add** button and deleted with the **Delete** button. Since not all the days are the same and in some days the slots have different lengths, cells can be joined together with the **Expand** button and divided with the **Shrink** button. This is important, because the effect is different, if the same types sequence is present in two vertically contiguous cells, or if those two cells are joined in one single cell. In the former case, the selection process will restart with the first type in the sequence, when the time at the cells boundary will be crossed. The entire table can be created and filled with the **Auto** key, if it is desired to create the table with the time boundaries given, when the types sequences have been created. The created table will be exactly the same of that in the **Table-driven** playlist editor.

Once a **RPL** file has been created, whenever a new playlist will be created, it will be automatically filled with the songs in the RPL file. If playlists are edited in different locations, the RPL file can be transmitted to that location. RPL files are created in the RPL subfolder of the default folder for data files (usually **\Qnet\Data\RPL**) and its name contains the name of the station it is dedicated for and the starting and ending date it refers to.

6.2 Music manager

The Music manager is used to delete unused audio files and to fill the disks with new audio files. It is applicable to the songs database and to the contributions database.

Every file can be marked for deletion, if present, or for addition. Records (files) can be marked with the keyboard (RETURN or ENTER key) or with the mouse (SHIFT and CONTROL can be used for multiple selections). The Music manager bar presents all the other functions:

VIEW+ shows all the files to be added.

VIEW- shows all the files to be deleted.

ALL+ selects all the files in current view for addition.

ALL- selects all the files in current view for deletion.

CLR+ clears (deselects) all the files in current view for addition.

CLR- clears (deselects) all the files in current view for deletion.

WIZ shows the wizard, which helps in searching the songs to add/delete. It works only for songs. The wizard searches for a fixed number of songs of a particular type, which have a vote between a given minimum and maximum (which are ignored, if left empty) and which have been copied to the hard disk before or after a given date (ignored, if empty). The songs are chosen in a random fashion, if more than requested are found.

STAT shows more information about the operations to be done. For every information given, it is given in items count, in time units and in megabytes. The information given contains the Present situation, the After make situation, the items to be deleted and those to be added, the current free space and the free space after make. If songs have to be added, which have no information in the database about their file format, they are considered to be 192 kbps for calculations.

Essential information is always shown on the Music manager bar. This information consists in the number of files to delete and the number of files to add, the space freed after deletion, the space filled after addition and free space after make.

MAKE deletes all the songs signed for deletion and copies all the songs signed for addition. The songs are taken from the backup unit (usually a CD-ROM unit) or from the Music manager folders defined in settings. Operations can be automatic (not user-attended), if the user wants to leave the computer working and not to bother about errors (such as file not found). **Automatic skip mode** should be confirmed in this case.

COPY is used to copy the files to be deleted in another location.

CORR is used to perform a songs corruption analysis. It thoroughly analyzes all the files for errors and signs corrupted files for deletion. If **Incremental check** is chosen, it checks only unchecked files (not corrupted files are annotated in **CheckOK.log**).

LOAD save the lists of songs to be deleted in a file with the .DEL extension and the songs to be added in a file with the .ADD extension. These two files are always saved and loaded in couple.

SAVE loads the lists of songs to be deleted and the songs to be added from the .DEL and .ADD files.

DONE exits from the Music manager.

6.3 Players

Files can be played in different ways in Qnet. Not always the player can be controlled by the mouse. It is controllable by the mouse only when it shows a progress bar or a sound graph. In these cases it is controllable only through keyboard. The keyboard commands are these:

- SPACE** Start playing from beginning, or stop, if playing
- 0** Start playing from beginning
- 2** Start playing from beginning of file (for songs, that have Songs start different from File start)
- 5** Play song refrain
- .** Stop
- 1, 4, 7** Rewind 1 second, 5 seconds, 25 seconds
- 1, 4, 7** Rewind 0.02 seconds, 0.5 seconds, 10 seconds, when editing a parameter and in Qnet Recorder
- 3, 6, 9** Wind 1 second, 5 seconds, 25 seconds
- 3, 6, 9** Wind 0.02 seconds, 0.5 seconds, 10 seconds, when editing a parameter and in Qnet Recorder
- 8** Move to the end less 10 seconds

These are available only when playing songs in Qnet Studio:

- *** Put the current playing position into a buffer
- /** Restart playing from the position currently in buffer
- Save the position currently in buffer to the file **Intro.txt**

6.4 Mix editor

The mix editor is accessible in Qnet Studio with a click on the right mouse button when an event is selected in the playlist. In Qnet Database the right-click opens a menu and Mix editor should be selected there. The mix editor is used to change the mixing of two or three events in the playlist. Three events can be edited in the same editor only in Qnet Database, when the first and third event to be edited are songs and the second event is a speech.

The start, stop and intermediate level positions are changed by moving the square boxes between the lines. If **Lock volume** is checked, the boxes can be moved only in the horizontal direction preventing changes in volume levels. The relative mix between files is changed by moving the entire bar (clicking somewhere on the bar - not on the square boxes). The first file cannot be moved. New boxes can be added and deleted with a right-click on the lines/boxes.

PFL initiates playing from the beginning of the window. Playing can be restarted from a different position clicking somewhere on the **FIRST** file or on the scales (clicking on the second or third file would trigger a mix in position change).

Zoom detail can be increased with the '+' button and decreased with the '-' button.

If **Show levels** is checked, the file will be loaded and its levels visualized. File loading is performed in background, so it won't harm normal operation and the user will be able to use the editor before the loading completes (if the program priority is set to Real-time under NT/2000, it will harm - it seems a bug in NT priorities management). This function is useful with MPEG layer-2 files recorder with the Digigram cards and NP-drivers, because such files contain volume information and no decoding of the files is necessary in order to calculate the graph. For other types of MPEG files, the decoding process can take a while (it depends on processor and file length), for WAV files, the loading process can be quite long, because WAV files are generally long.

7. Logworks

7.1 Operation

Logworks is a post-processing program for Qnet log files. It analyzes the log files and makes them more user-readable.

An easy readable file is generated with all the songs played with the starting time and playing time. At the end, a chart of the most played songs is outputted, with the chart position, total number of playings per song and number of partial playings (less than one minute) for every song.

For the spots, the number of playings for each spot is outputted, the total playing time and mean playing time of each spot. Optionally, the details of every playing can be outputted.

Logs folder has to be set to the folder, where the standard Qnet log files are located. **Output file for SPOTS** is the name of the generated file for spots data, while **Output file for SONGS** is the name of the generated file for songs data.

The log is analyzed from the **Start date** to the **End date**. Eventually a **Start time** and an **End time** can be specified in order to limit the analysis to that time slot. The created files can be opened at the end, if **Open files when done** is checked. **Spot details** outputs more details on spots, **Generate only top 10/1000/All** does not print out the entire songs log, but only the chart of the most played songs.

The folder, where the songs database is located has to be specified in the **Qnet Data folder** in order to write out additional information not present in the log. The only element present in the log is the **File** name, but the **Compilation, Music, Lyrics, Type** and **Misc** fields can be retrieved from the songs database and written in the output file. **Artist** and **Title** are always outputted.

8. MP2 Encoder

8.1 Operation

MP2 Encoder has the function to automatically convert all the files that it finds into MPEG Layer 2 format. The settings are accessible via the Options/Settings menu. **Input files location** is the name of the folder, where it searches for the files. **Output files location** is the name of the folder, where it puts the encoded files. The folder names can be entered manually or by pressing the **Browse** buttons. After conversion, the Archive flag of the files will be reset in order for the program to know, that the file has been already encoded and that it shouldn't be processed anymore. By checking **Delete original after conversion**, the original file will be deleted, too. The encoded file will maintain the same file name of the original, but optionally, the extension can be changed to the extension given in **Change extension to**. The other settings are only the destination bitrate, the number of channels (mono or stereo) and if the joint stereo mode should be used. The sampling frequency of the files won't be changed.

The program can also decode MPEG files and therefore MPEG layer 3 files (mp3) can be reencoded in MPEG layer 2.

9. Qcd

9.1 Operation

Qcd digitally extracts audio tracks from audio CD-s and puts them in a folder with the names D-TT.wav, where D is a sequential number for the disk and TT is the track number.

The settings are accessible with the **Settings** button. **CD Unit** specifies the CD-ROM drive to use, **Destination folder** specifies the folder where to put the extracted audio files, **Margin before (s)** and **Margin after (s)** allows to start extracting the song some seconds before its beginning and to stop some seconds after its end.

Auto start on CD insertion starts the process whenever a CD is found in the drive. Once the process has finished, the CD is ejected and the user has therefore only to switch CD-s, and no other action is requested. If this options isn't checked, the user has to press the **Start** button in order to start the process.

10. Convert

10.1 File menu

Open opens a file, asks for a profile for conversion and a destination filename and initiates conversion.

Stop conversion stops an ongoing conversion.

Exit exits from the program.

10.2 Options menu

Edit profiles opens the profiles editor. A new profile can be created pressing the **New** button, removed with the **Remove** button and edited with a double click. Each line in the list gives a short description of the profile: its name, the folder where files are looked at and the destination format.

Program title permits to set a title for the program to show on the window bar.

Find in log searches for an expression in the currently shown log.

Find next searches for the next occurrence of the expression.

10.3 Profiles

Each profile has a **Profile name** used to describe it. When a file is found in the **Input files location folder**, the conversion process starts and the result will be put in the **Output files location folder**. If **Takes only files older of _ minutes** is entered, only those files will be considered. This filter works only for the main folder, if recursion into folder is enabled. Optionally, an **Input files filter** can be given to look only for a certain type of files. A normal DOS-style wildcard expression must be given (e.g. *.WAV). The destination files will have the same name of the source files, unless an **Output files extension** is given, which will change or append the specified extension to the file names. **Minimum length allowed (s)** specifies the minimum length that the files must have in order to be processed. Shorter files will be deleted. With the **Multicopy** function, the created files can be copied to a number of different folders, beyond the regular one. Instead of using the same name of the source, the destination filename can be a sequential number with a prefix and an extension. **Give sequential number to output file name** must be checked for this. The given **Prefix** and the **Output files extension** will be used.

After the conversion, the archive attribute of the source file will be cleared, so that the same file won't be processed again. Alternatively, the file can be **Deleted after conversion**. If **Wait for Ok.inf to start** is checked, the program will always wait for a file with the name "Ok.inf" in the source folder before starting any conversion. If **Create Ok.inf in auto mode** is checked, a file with the name "Ok.inf" will be created in the destination folder, after all the files in the source folder will be processed.

The **Dynamics processor** is usually used to stabilize the volume of a file to certain level. Its settings can be regulated pressing the **DP Settings** button. Every signal above the **Threshold** level will be compressed to the 0 dB level and every signal below the threshold will be expanded away from the **Threshold** level. After that the signal will be attenuated or amplified by the **Gain** amount. **Attack time** gives the time-constant of the level sensing filter, when the input signal level is increasing. **Release time** gives the time-constant of the

level sensing filter, when the input signal level is decreasing, instead. **Look ahead** gives the time advance of the level sensing filter in respect to the signal itself.

The program will normally encode the files to MPEG with the Digigram audio cards. If **Use software MPEG encoder** is checked, the software encoder will be used. The dynamic link libraries MP2ENC.DLL and MP3ENC.DLL must be present in the system in order for this to work. **Lower quality fast encoding** encodes the files faster, but in lower quality. This setting has effect only for layer-3 encoding. **Cut the file in _ pieces** cuts the destination file in more pieces.

Playlists backup function, if enabled, gives the program another function. It moves the playlists and compresses the speeches to a backup folder. The destination path is **Output files location**\Station\Year\Month\Day, where these data are retrieved from the playlist name. On program startup and at midnight it deletes speeches older than the number of days specified (**delete files older of _ days**) located in the subfolders of **Output files location**.

If **Exclude filter from name** is checked and the **Input files filter** is in the form XXX*.*, the first part XXX will be cut from the destination file name. **Recurse into subfolders** processes also the files present in the subfolders of the main **Input files location**. **Recreate subfolders** also recreates these subfolders in the **Output files location**.

Join files together joins together the files with the names given, or all the files found, if no names have been given. The given names must be separated with the colon, semicolon or a blank space.

The program can encode the file in different formats. **Nothing** does nothing (but it deletes the files, if the relevant option has been checked). **Leave as is (copy only)** won't process the file and will leave it as is. **WAVE file/Layer 2 MPEG file/Layer 3 MPEG file/VOX/Mobitel** will create files of the respective formats. **VOX/Mobitel** is an ADPCM file used by **Mobitel**. **Stereo** creates a stereo file, while **Joint** (only for MPEG) creates a joint-stereo file. The sampling frequency can be left intact or changed to 8, 32, 44.1 or 48 kHz. Not all the conversions are supported. The hardware conversion with NP-drivers depends on the NP-driver or card, the allowed software conversions are 8->44.1, 8->48 and 44.1->8 kHz. The output bitrate for MPEG files can be decided between the standard MPEG bitrates.

If **Check at** is entered, the files are checked only at that time, and if **only in week days (0-6)** is entered, too, only in the given days (0 = Sunday, 6 = Saturday). Only when this timer is used, or only when **Takes only files older of _ minutes** is used, all the files can be considered if **Ignore archive flag**. In the other cases, only the files with this flag set are checked and converted.

If the input files are MPEG files, they are automatically decoded to WAVE format and then eventually re-encoded.

The program has another function, FTP. It can connect once a day at the **Check at** time, eventually only in the given days (**only in week days (0-6)**), to a given FTP server (**Host address**), move to a certain **directory** and download all the files found. Those files are then processed by the standard procedure. The FTP server needs a **User name** and a **Password**. The program can eventually make a **Dial-up** call to connect to the Internet.

11. Transfer

11.1 Main dialog buttons

Network check tries to check if the ISDN connection works by dialing to a the number 04022, which is supposed to be non-existent. If the switch responds with an error, such as "Number unassigned", it means, that the connection is okay.

Stop scanning stops to check for files in the folders under monitoring. Since it is an exceptional situation, which should not persist, a countdown starts. After a predefined time (which can be set by pressing **Options**) the program will restart normal operation. The default time is 30 minutes.

Options brings up the options (settings) window.

Quit exits the program.

Add new is used to add a new destination entry. **Delete** removes an existing entry. A double click on an existing entry brings up its settings.

Manual send is used to manually send one or a series of files to a destination. The program asks for the phone number/IP address, optionally it can be taken from the already prepared addresses, which are available in the list. **Callback** requests a callback in order to have the receiving party to pay for the call. Once chosen the destination (and OK pressed), the files to send can be dragged and dropped into the destination window and the files sent with the **Send** button.

Log ? and **Next** are used to search in the log. **View log/View status** switches between the destination entries with respective status view and the log view. **Abort** stops a proceeding call/transmission.

11.2 Destination entries

For each destination entry these settings are available:

Name is a name given to the entry. **Folder** is the folder to monitor. With **Quick send** checked, the transmission starts as a file is found in the folder under monitoring; if not, a file named Ok.inf has to be present in that folder. **Destination callback** requests a callback in order to have the receiving party to pay for the call (it works only for ISDN calls). **Only mark after send** does not delete the files transmitted, but only clears their Archive attribute. **Disabled** disables that entry. If **Start hour** and **End hour** are present, the transmission will be possible only in that time slot. It is useful, if the phone calls are less expensive in that slot. If **Start hour** is higher than **End hour**, it means that the valid slot will cross midnight. The hours have to be between 0 and 23. If **Minutes to wait** is entered, the files must be older for the given number of minutes in order for the transmission to start. This is useful, if the program is working as a backup line for another program. If **Timer** is checked, the entry will be called/connected to at least once during the interval specified by **Start hour** and **End hour**.

Phone number is the number to call. It is replaced with **[RAS entry%]IP address[:port]** in TCP/IP mode. In TCP/IP mode, the destination IP number or fully qualified domain name has to be entered. Optionally a port number can follow the address (with a colon between). If no port number is given, the default port number 11742 will be used. Optionally a RAS entry name can precede the address (with the percent sign between), in which case that RAS entry will be called before making the connection.

11.3 Options

Name is the name of this location. It is used to identify the location to the calling Transfer. The **Transport device** can be **CAPI 2.0**, the preferred method for ISDN, an installed modem, or **TCP/IP**. In **CAPI 2.0** mode the program can answer only calls made by another Transfer program and sign the made calls as "Made by Transfer". This option works only on certain networks and with certain ISDN adapters.

The received files will be stored in the **Received files are stored in** folder. The program will accept callback requests only if **Enable callback** is checked. **Qnet Studio configuration file** should contain the path of the **Qnet.cnf** file of the main Studio program. It is used by various synchronization functions with it.

Area code and **Phone number** are optional and should be filled to accept only calls made to a predefined number, if more numbers are installed on that ISDN lines. **Accept only from (phone)** is also optional and allows only the caller that has that phone number. These options work only in **CAPI 2.0** mode.

Retry after failure (minutes) gives the time to wait before making a new attempt, when five repeated calls failed. **Restart scanning after stop (minutes)** gives the time of the **Stop scanning** countdown timer.

For absolute reliability the program can operate a hardware watchdog timer (which resets the computer when it hangs), which can be enabled checking **Enable**. Its address is set via **Address**. This watchdog card has usually a temperature sensor on it. If the watchdog card is working properly, the temperature will be shown.

If **Enable LST files retrieving** is checked, Transfer will be enabled to retrieve LST files from Qnet Studio when requested by Qnet Database. The program that asks for LST files is the calling Transfer, that Transfer that usually sends files. In this case it will retrieve files. At the same point, **rules** files, **log** files and **lastplay.txt** will be retrieved if checked here.

Rules (rules.db and associated files in the Rules folder) are the files where all the types sequences are set. **Lastplay.txt** contains the times, when the songs were last played.

Restart Windows on errors restarts the system on severe errors (usually when symptoms of a hung ISDN driver are found).