



GigSystem

orchestral supporting system

User manual

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05/21/2018 Szeged, Hungary

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1. General introduction

GigSystem's orchestral information system is intended to provide entertainer performances, gigs and live music concerts, mainly for dancing bands. With the help of the system, selecting the right songs during the concert, **displaying lyrics, chord sequences can be done simply**, quickly and accurately. **The title and performer of the songs will also be visible on the stage screen.** During a gig, the consecutive songs are usually noteworthy for members of the band. With GigSystem, this is very simple: a clearly visible central display shows everything, so you do not have to speak word or voice through the song's title, key, and do not have to print any setlists.





Defining the right tempo is a critical element of dance music. The badly chosen launch of a song may result in the disintegration, neglect and discomfort of dancers. **With the system, you can start the preset tempo** at the same time as the songs and lyrics are displayed. Through a tablet, especially the metronome installed for the drummer, the beat signal can be intercepted to the end of the song or intro character for a set amount of time. Using an ear monitor system, it can also be available to other band members.

In a live concert, songs are usually played on a setlist depending on the mood or on demand. Sometimes by combining them. Setlists can be edited in advance, but any song can be played any time during the program. This can be done through a variety of simple search, selection based on the pre-recorded repertoire. These **songs can simply be grouped**, but **they can even form a profile** for the character of the performance. With this system, **you can manage multiple orchestral repertoires** simultaneously. This can be beneficial if one of the members is playing in several bands.

1.1 Devices, operation of the system

The GigSystem system is a suite of applications of four apps on phones, tablets, smartsticks on Android platforms.

Parts of the system:

-  **GigServer** (server) is a server program to which it is linked
-  **GigChooser** (selector) special control and song selection application
-  **GigReader** (reader) that displays the texts
-  **GigBeater** (metronome) is the metronome of the system and
- created **PDF files** that contain the lyrics or chords of the songs

These applications can run on arbitrary devices. Server is advisable to select at least one dual-core 9-10" tablet if the target is stage visibility. It is possible to have an orchestral lineup such as a duo or a trio, where no matter of stage view of the songs but only the system. In this case the server may even be a 4-5 "mobile phone. GigServer is the engine of the system, the central core server. Its basic function is to store and edit the datas of the orchestra system and to read the songs at all times.

Among the applications connected to the server, the song selection program is GigChooser. The recommended size is a 7 "tablet, or a larger tablet (Phablet). Using the GigReader PDF Viewer, it is recommended that you choose 9-10" tablets running at least Android 5.0 (Lollipop), so you can take advantage of built-in PDF reader. Even use an external one. If more than one GigReader is participating in the system, multiple PDF files with different content can be used simultaneously. For example, if the song is important to the singer, the bass player is the chord, then these different PDF files can appear on both devices simultaneously at the same time.

All apps also work on phones and tablets. GigServer can be connected to multiple clients at a time, with more than one GigReader and GigChooser, but only one GigBeater recommended, because of more than one metronome can be started asynchronously. Otherwise the metronome's sound can be distributed in other analogue ways.

The devices are connected to the stage on a local wifi network. To do this, it is advisable to obtain a min (N) 300 Mb or faster (AC) router, because the system elements keep in touch with each other and communicate in real time, so speed is a critical factor. A hotspot shared on a phone - on which the GigServer runs - may also be suitable, but the radio signal can be significantly lower than the desired strength.

If routers and devices are operating at the standard 2.4 GHz frequency, **think of other scenic devices that cause harmful interference** - wireless guitar transmitter (Line6 Relay 30), microport - because they **can cause serious system malfunction**. Eliminating such defects is difficult, typically requiring high-quality and more expensive devices with advanced audio protection.

Data can be edited and stored directly in GigServer or a **free Windows downloadable desktop program** called GigEditor. Data exchange online - in real-time, running on the same network - or offline, can be exchanged between the two platforms by copying the required export / import files.

Web editing and cloud storage of the database is also possible. It has the advantage that you can download it directly from the Internet at any time. During the programs of the Android system, the data exchange can be initiated automatically, but at any time on demand.

Minimum orchestral installation: a GigServer is a GigChooser and a GigReader. This can be supplemented with more GigChooser, GigReader and GigBeater as needed. During the performance, the selection of the songs is usually a question of a band agreement, even if several band members can choose a song, there may be more GigChoosers. By default, each task (server, reader, chooser, metronome) requires a single device. However, these **features can be interchanged**, so an application can be installed on any tablet. Certain - by Android version constraints - the **devices can replace each other**, so the same device can be a reader, sometimes a metronome or a chooser. It is, however, advisable to avoid duplication of data, so it is **strongly recommended that only one of the servers be used at same time**. (Naturally, there may be more of a backup system.)

The essence of the system's operation is the publication of the song as an orchestra information, the display of PDF-based text files as lyrics and the efficient selection of songs. The system includes the orchestral repertoire, songs, setlists etc. However, the **songs must match the names of the PDF file**, and the contents of the songs with their lyrics and chords. Typically, the song selected in GigChooser will be displayed on GigServer, and the GigReader will have render the lyrics of the song, and GigBeater will start the metronome sound according to the song's preset tempo.

Text files of songs in PDF format must be stored on the device on which the GigReader is running. These files can be found on a pre-configured path, but they can be stored on a remote FTP server from which you can download them at any time. For this, Internet access is essential at the time of download.

If you need to restart an application for any reason, after connecting, you will receive the details of the last song selected from the server. Programs can be started automatically after the devices are turned on. In the system, device authentication either MAC address or IP address based, but the **server for the sake of simplicity is highly recommended to assign a fixed IP address**. It is visible in the portrait orientation in addition to the GigServer's action bar above the name of the selected band. In GigBeater, connectivity can be done with a dedicated button. The advantage of MAC address-based authentication is that the device appears in a name on the server tool bar.

The system includes a central PDF paging feature. You can initiate this in the "GigChooser" application, the system adapts to the pages of the PDF files that are opened in the "GigReader" currently connected. The pages can be paged either manually on the screen or by using a connected paging machine (eg iRig BlueTurn). You can also use this volume button to perform this option with a special 4-foot (TRRS) 3.5 jack plug. (<https://source.android.com/devices/accessories/headset/plug-headset-spec>) The max / current page number is shown below.

2. GigServer

GigServer (Minimum Level: Android 5.0 Lollipop) is the central management of the orchestra system and the current readable display of the current song, as well as central data storage and data editing. After launch, the „Control” main screen will be displayed. At the top, you can see connected devices that are displayed in green and horizontal motion. On the left is exit, while on the right is an refresh key. This allows all connections to be interrupted and restarted.

When use a setlist, the name and location of the programme will be displayed in the top bar. In this case, you can see a red indicator strip that displays the approximate music time of the presentation proportionally to the horizontal plane of the screen. At the bottom of the screen, the song code, key, tempo, and other text information are located from left to right. At the bottom right of the screen there is a three-way selectable clock that indicates either the real time, the length of the song or the remaining time of the setlist's songs in hours:minutes, depending on your selection.

The menu items for more options can only be selected in portrait mode!

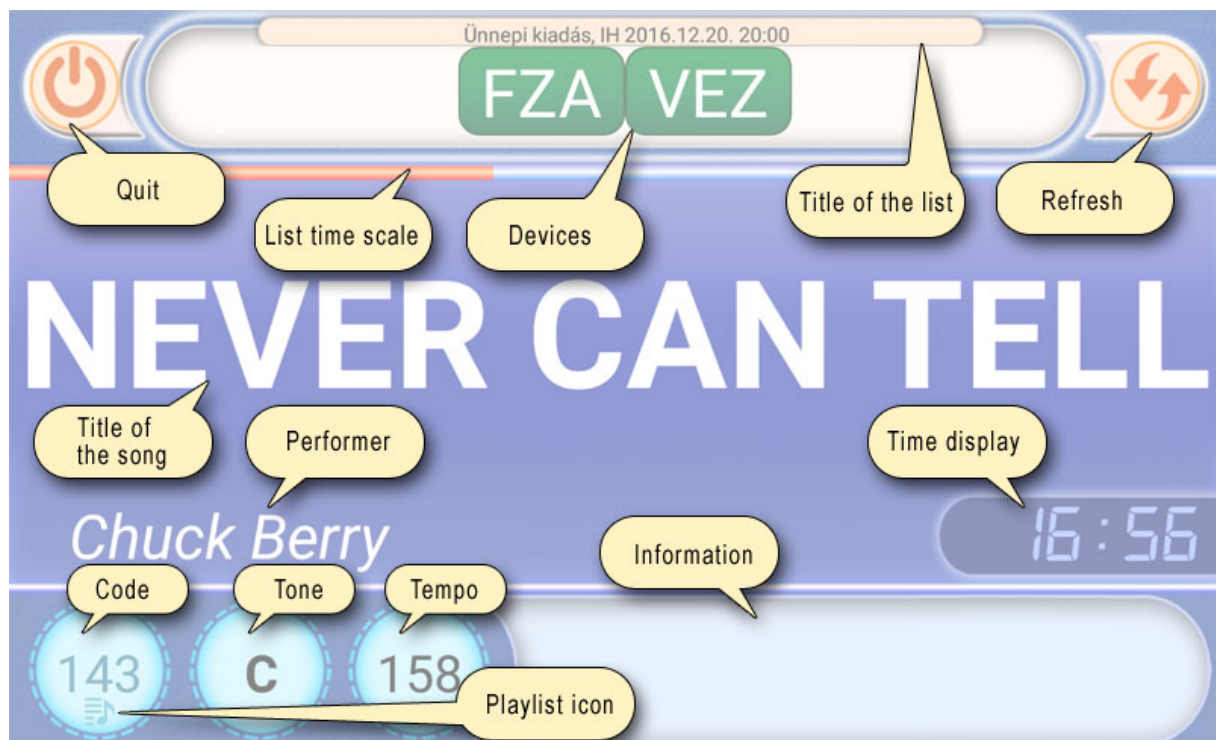


Figure 1 „Control” main screen

Proposed order of post the empty database:

- Adding the band (mandatory first)
- Add members (required)
- Adding devices (optional)
- Create songs (required)
- Add songs to the repertoire (required)
- Create setlists (optional)
- Create profiles (optional)
- Create repertoire configurations (Optional)

2.1. Settings

In the action bar of the screen in the "Settings" menu, **the bands can be selected from a dropdown list**. Next to the import and export functions: you can save the data to the cloud by pressing it shortly, save locally by pressing long on that icon.

The file location is limited to "Internal storage/Android/data/GigSystem/GigServerExport" folder. Next to it - with a multi-function button - you can operate the selected topic of the selected screen. The four possible screens can be swapped by right-to-left dragging.

2.1.1 Settings

2.1.1.1. "Port number": is the TCP port through which the devices are connected to the server on the LAN.

2.1.1.2. "Autostart application": if activated, the GigServer will start immediately after turn on the device.

2.1.1.3. "Moving display of devices": If the number of devices exceeds the number of icons that can be displayed on the basic „Control” screen, the associated devices will be moved when this function is checked, otherwise fixed in their position.

2.1.1.4 " Use a Web service for data exchange": this is a mandatory confirmation to start web service-based data exchange. Here, you have to complete the information you need for the service. (Namespace, link)

2.1.1.5 "Key translations": In the GigSystem a musical key signature may use in English or it may use the German key notation.

2.1.1.6 "Repertoire Configuration": The basic features of the repertoire songs - singer, voice, beat, tempo, information - can be configured based on arbitrary sets, but can be selected here. **The selection also means activating the configuration, so during the performance the songs will appear with the corresponding data!** The configuration can also be selected from the "GigChooser" program, but the selection on the server is stronger.

2.1.1.7 "Registration Account": The system normally runs in a limited (DEMO) mode. This means that only five songs can be used and displayed with a name of 1-5 (code). In addition, apps can only connect to the server in one copy (GigReader, GigChooser, GigBeater). For the full functionality of the system, you need to purchase the applications of the system, only through a "Pay Pal" payment. The email address must be a real "Pay Pal" email address. The password is related to the registration of the orchestral system -min. It can be 6 characters long, arbitrary words. Attention! You do not need to enter a password for the Pay Pal account here!

The registration account will be created on the first successful purchase. With an account, **GigServer max. 4, the rest of the app is max. Available in 16 copies**. From the purchased applications, the server must be activated with the "**Activate**" button. Then the number of copies of apps purchased is displayed above the button, and they can be connected to the control screen as desired.

If the server should be used on another device, it must first be **deactivated from the device**. Then activate it again on the other device. **When deactivated, the server switches to DEMO mode**. Your system will be notified by e-mail of a successful purchase. If inactivation is not possible because eg. the device is gone, destroyed, contact support (info@gigsystem.hu).

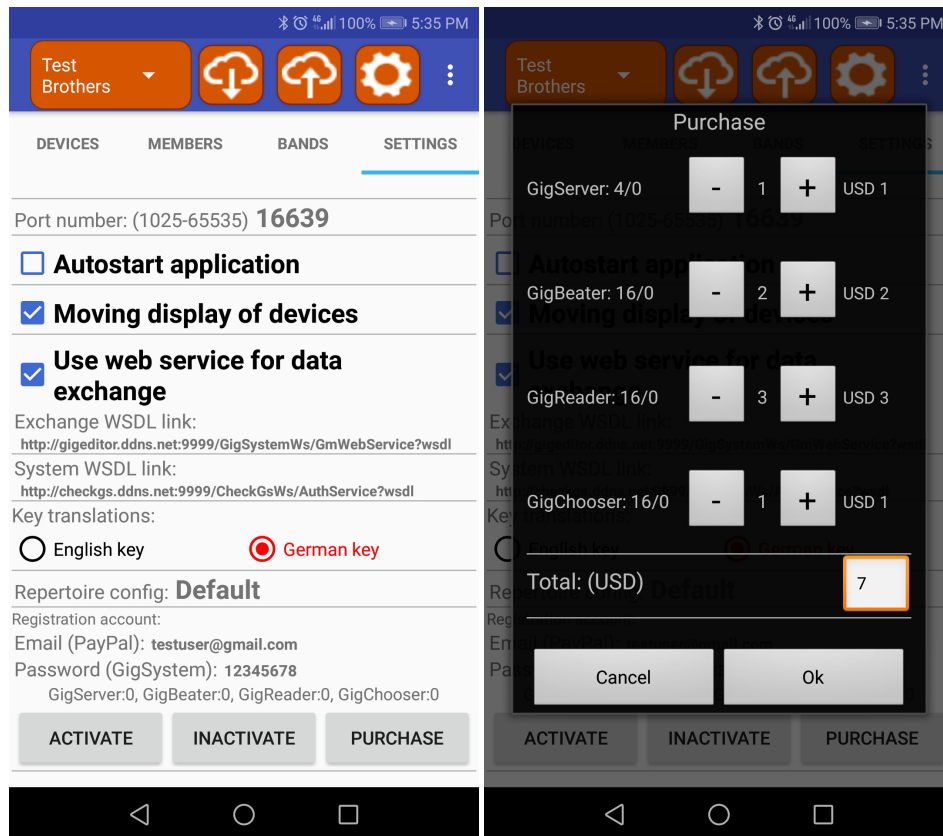


Figure 2 Settings, purchase

2.1.2 You can add, edit, or delete a band on the **"Bands"** page. The change can be initiated by pressing and holding the selected list item. Deleting a band will result in the deletion of the entire repertoire, profiles, setlists, members, and devices except for songs and performers!


2.1.3. On the **"Members"** page, you can edit the members of the band that you selected at the top. With the **"Other Members"** feature, you can add a new member to the current band from the recorded members of the saved bands.

2.1.4. On the "Devices" tab, you can edit the member's name devices of the selected band.

If the device is registered, it will be displayed with the saved name after connecting to the main screen. Of course, any Android device can participate in the system and connect, but the name of the unregistered device will be the last octet of the IP address of the **current IP address**. For example, if the address now is 192.168.0.127 then the name will be "127".

Figure 3 Add a device

2.2. Songs

In the "Songs" menu, you can edit songs that are the basis of the repertoire. Add it with the icon  on the right side of the action line, while modifying or deleting it on the selected list item can be pushed long press. In the "Add" dialog box, you can edit and select the performers.

It is mandatory to specify the duration of the song in minutes per second. The web link is optional. This can be a YouTube link that can be accessed from the list from the selected song to the desired webpage.

In the search box, the criteria of the searching object are songs, or the name of the performer or the song codes, is available. The symbol for the left search icon is the sorting base for the list.



Figure 4 Songs screen

2.3. Repertoire

In the action bar of the screen in the "**Repertoire**" menu, the search bar and the selector can also be found from the left. Songs belonging to the repertoire can be additional property, which can be added using the 🎵 icon.

In the dialog window the title of a song can be searched in the normal box, the song group selection is mandatory with the blue 🎵 icon. The song tempo can be set between 20-280 or zero as a special value. If a song contains a rhythm change or a valid tempo can not be set, a zero value must be recorded. In this case, when selecting a song, the GigBeater metronome stops and will not start during playback. The measure is 4/4, 3/4 and 6/8. You have to set up the singer who is outside the members "instr." as an instrumental, "duet" or "guest". You must also enter the key and set the status of the song.

If status is inactive, this song will not belong the setlists and can not be selected from GigChooser! This may be useful if a song is suspended by the band, but you do not want to erase it from the repertoire for later use. The information message is optional, a "service announcement" that includes an important reminder for the song on the stage device live. On the item selected from the list, the "**Delete all**" function, initiated by the long-press window, will result in the **complete deletion of the repertoire!**

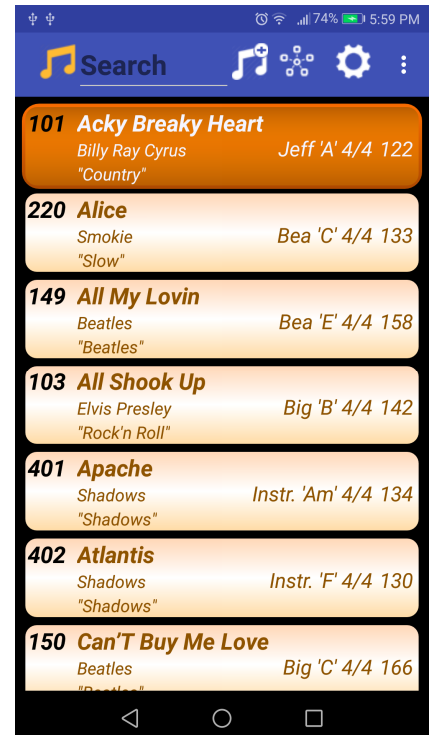

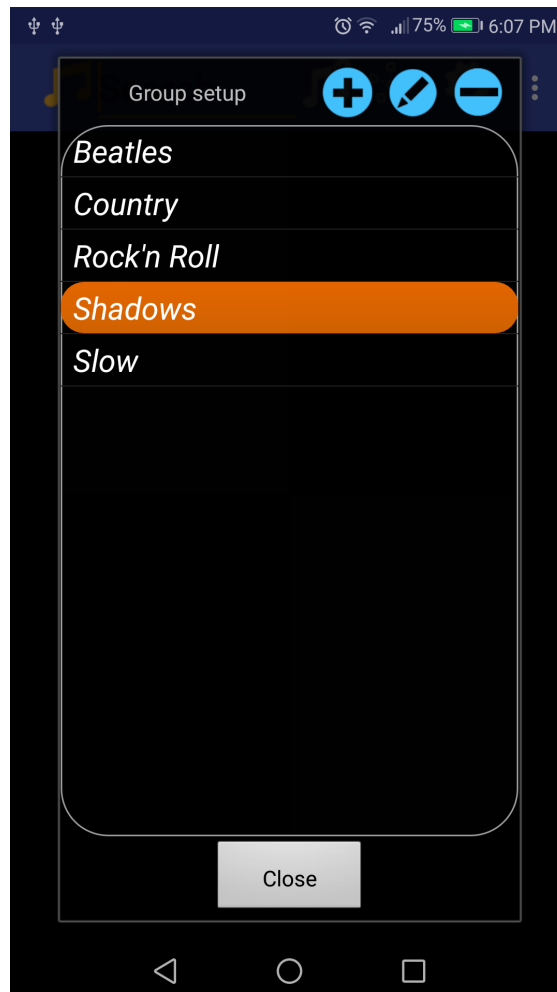



Figure 5. Edit repertoire



To include songs in a mandatory song group, which can be edited with the  icon. The song group name may be arbitrary, but it is also worth choosing the name you want to add to the songs to include: "Rock", "Latin", "Guitar Music" etc... **One song can only belong to one song group at one time.**



The basic features of the songs for the repertoire are singer, tone, beat, tempo, information - based on arbitrary sets. The basic configuration is created by adding the band. It can be renamed, but can not be deleted. You can add additional configurations to the repertoire by selecting the "Repertoire Configuration"  icon.

For example, the band will include a song in the repertoire of key C, sung by one orchestra member. In the event of his replacement, the guest's voice will be transposed into key D. In this case, a new configuration (Guest) can be added in which the song's tone is configured accordingly. This configuration is also selected in the "GigChooser" program, and the server will display the song data on that basis.

2.4. Setlists

In the "Setlists" menu, a special expandable list view is displayed. Selecting an element of the list below shows the orderly content of the setlist. There are three icons in addition to the action bar. To edit a setlist's header on the selected item with the  icon and delete whole setlist with the  icon.



Duplicating this setlist over the action bar can be initiated with the left  icon. You can only open one at a time for viewing and editing.



Figure 6 Setlist screen

You can create a new setlist with the right-hand  icon by specifying the name, date / time and location.

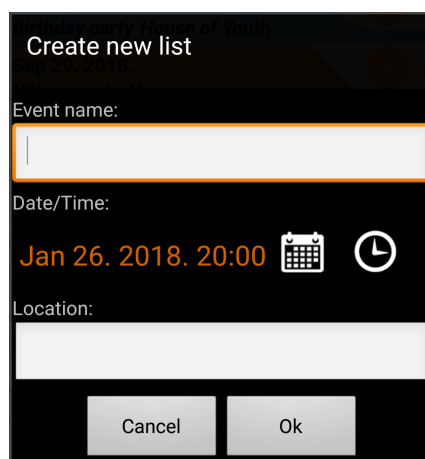



 The screenshot shows a 'Create new list' dialog box. It has a dark background with white text. The title is 'Create new list'. Below the title, there are three input fields: 'Event name:', 'Date/Time:', and 'Location:'. The 'Date/Time' field is pre-filled with 'Jan 26. 2018. 20:00' and has calendar and clock icons next to it. At the bottom, there are two buttons: 'Cancel' and 'Ok'.

Figure 7 Create new header of a setlist

When the "OK" button is pressed, a new edit window is displayed immediately which contains two split fields. The left is the source, ie the repertoire, and the right target field, the new list. Between source and destination fields, drag and drop allows you to drag songs in both directions.

Deleting a song means it is dragged from the destination list to the source list. The songs of the repertoire can be filtered both groups and word fragments (title). The beer  icon below the destination list inserts a pause under the selected item. If no selected item pause is inserted to the second position. The pause can also be canceled by dragging to left direction. Next to the complete erase list  icon. Top of the list is the time of all songs, the duration is displayed.

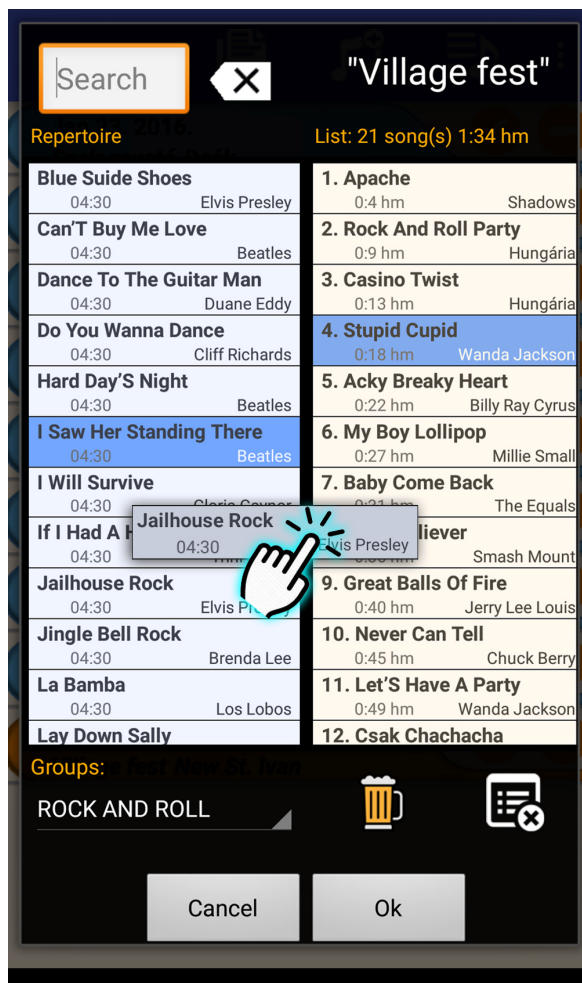




Figure 8 Edit setlist

The setlists can be selected, switched on or off in the GigChooser program. On the main screen, the status of the list is displayed in the first code-marked circle. The  icon appears to turn on.

2.5. Profiles

In the "Profiles" menu, you can create unique collections of songs from the repertoire called profile. This content is explicitly included in the GigChooser application using the selection and search functions. If a setlist was created before the profile was created, but not the songs in the profile, will be displayed. By default, **if a song is not included in the profile loaded, GigChooser will not search** even if the song is otherwise active in the repertoire. The profile may be relevant when a repertoire of a band contain songs for different performance types of occasions. If the songs of repertoire contain instrumental compositions typically played during dinner or at a special festival, they should not be included in school party or village festival revelry if they are unlikely to be the occasion. **So you can create a profile that is a group of songs that characterize the performance.** Of course, these songs are also elements of the repertoire. You can create any number of profiles and one song may be in multiple profiles.

You can add a profile in the list in the window that appears with the  icon, by selecting the songs. The selection can be inverted or terminated. The profiles can be selected, switched ON or OFF in the GigChooser program. Only songs from the selected and activated profile will be included in the search lists!

On the bottom of the basic „Control” screen, the status of the profile above the first code mark circle is shown below the bottom left. The  icon appears to turn on. If no profile is in use, all the repertoire will be available.

ATTENTION! If the program lost focus and step back, -is not the top of a screen – all the connections will be lost and then re-connected once the focus has been returned! After any data changes, with reconnection, data synchronization starts automatically in a few seconds.

3. GigChooser

With GigChooser (minimum level Android 4.1 Jelly Bean), songs can be selected effectively according to different search methods. GigServer processes the request and sends it to GigBeater, Gigreader, and further GigChoosers.

The application consists of three tabbed screens:

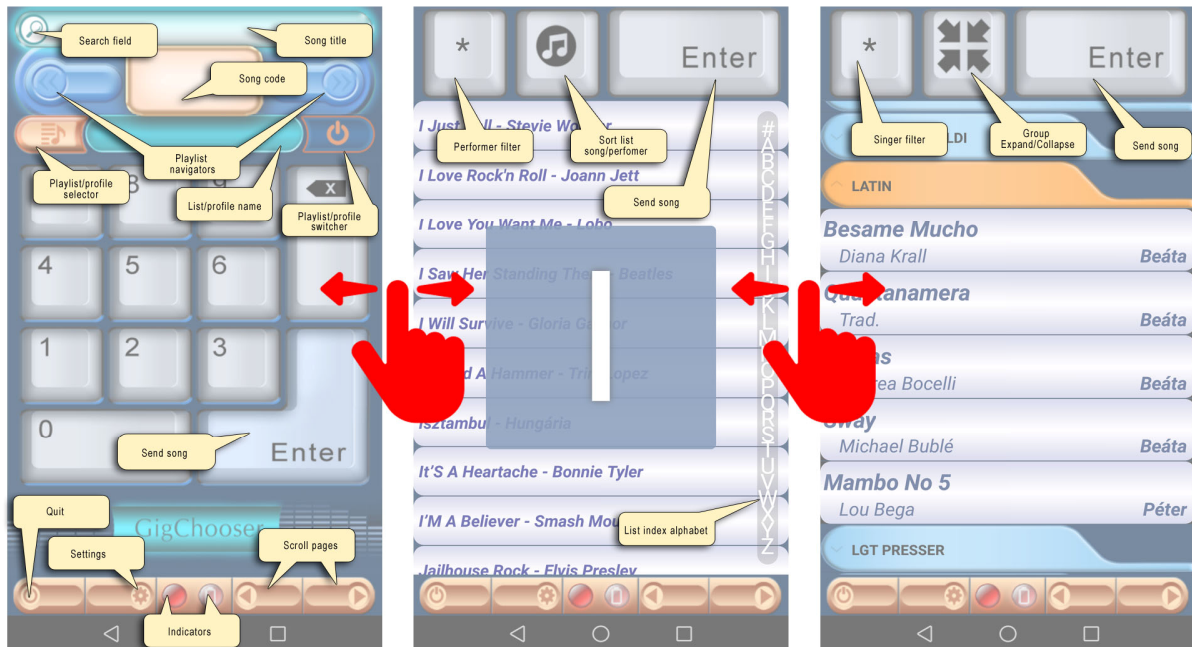


Figure 9 The code, the index, and the groups screen

3.1 The song code with setlist

The first screen is a multi-functional page that allows you to select songs by code, title, and/or setlists. At the top of the page is the title of the song, below its code is displayed. After entering the song code on a numeric pad, the title appears on the GigServer screen with red on a gray background, in the other programs in an orange bar. **ENTER gets flash to indicate that it is waiting for confirmation.** The top title box also serves as a search field. By entering this, the icon changes and typing the initial letters underneath it offers a list of filtered results for the song titles. You can go back to a repeat click but automatically reset after 4 seconds. **Search is independent of the current setlist, but depends on the current profile.**

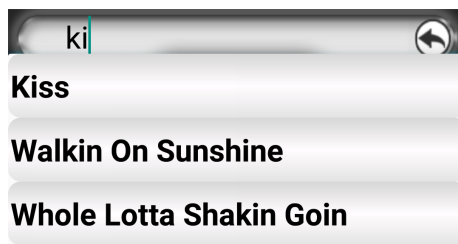


Figure 10 Searching field

When selected, the song becomes ready, ENTER flashes, **but the program will only be sent after pressing ENTER.** To cancel the selection, use the BACKSPACE button. The long press on BACKSPACE screen cleaning will result. On each side of this screen, a navigation key is displayed (left/right arrows), which in the setlists control will jump to the first and last position of the list in a forward-backward, long-pressed manner.

Below the navigator on the left is a setlist/profile/configuration selector. The selector selects the status of the switch button on the right side according to the setlist, profile or configuration. To load these items, the right-hand switch can be pressed for a long press if there is a saved setlist, profile or configuration in the current (selected) band. The green text box between these buttons indicates the name of the selected list/profile/

configuration according to state of the left side selector. The configuration can not be turned off in the "default configuration" that is shown by default.



Figure 11 Default configuration

For setlist play, click on the code to display the songs of the setlist in which you can optionally jump, otherwise the next song can be changed by pressing ENTER.



Figure 12 Jump into the setlist

After a minute when the song is selected and sent normally, both the GigServer screen and the other programs will display the title of the song next to the setlist.

If a profile is turned on and loaded, only the songs in the profile will be hit by typing the code or selecting the other pages. (Index and groups) Otherwise, you can sort out the songs of the entire repertoire. If at the same time a setlist is listed, any song recorded in the list will appear regardless of the content of the profile being turned on and loaded.

Pressing a long press of BACKSPACE will normally send a cancelling request to the server. In case of setlist, this has no effect. After the song has been successfully transmitted, the song's title is completed with a * sign.

3.2 Indexed list

Dragging to the right displays the second screen. Its content is an indexed search list that can be navigated quickly under the alphabetic start value of the slider on the right hand side. Then, the press ENTER button on the top of the screen can be sent to the song selected. The enter will start flashing long by pressing the selected song. The server will not send this request, it will only be ready. To confirm sending press ENTER again.

You can cancel the standby by pressing ENTER long. With the left button you can filter to performers. Filtering can be stopped by pressing the button or by *. Next to it is a song/performer sorting selector. By default, the song is sorted by title, but this selector can be changed quickly. The song that has been successfully sent is turned blue and a * appears in the title.

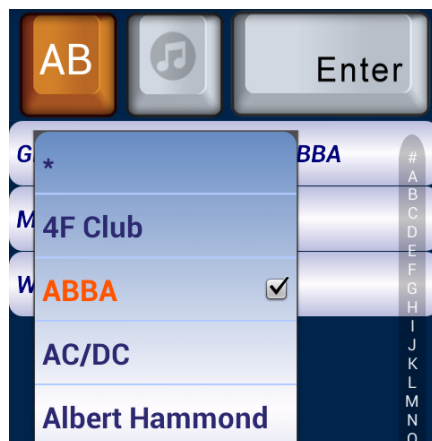


Figure 13 Index list filtering by performer

3.3 Group list

Dragging again to the right, on the third screen, one or more expandable drop-down lists are displayed in alphabetical order according to the created songs group. You can only open one group at a time in which the songs of the selected group appear. The name of the singer is shown on the right of the songs. This can be filtered by the top left button *. In each group there are only songs singled by the selected singer. Long press of the button will suppress the filter. Next to the group's expanding and collapsing icon.

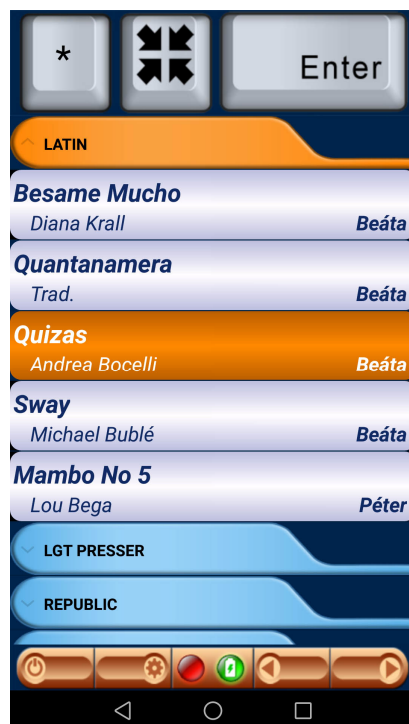


Figure 14 Group list

The selected song can be sent using the ENTER button. Standby and its withdrawal can be handled as described on the previous page. The song that has been successfully sent changes to a blue color and a * appears in the end of title of the song.

You can navigate and select songs between the three screens, but the **song that is in standby and not transmitted will be canceled when you switch the screen**. The standby song on the server screen is red on a gray background, while in other apps an orange background appears in white.



The bottom control bar appears on all pages. Press and hold the left button to quit the application. (Quitting means the app steps back and loses focus but does not close)

Next to pressing the "Settings" icon, the GigServer can be set up and selected in the "Settings" panel above the dialog box that appears. You must specify the IP address and port number of the server. Any number of server entries can be created. "Autostart application" after turn on the device launches the application.

"Synchronize after close" initiates a forced update of the data when the device is re-connected. After the data exchange is switched on, it also starts automatically when a data server changes on the server. The effect of this update will result in the mandatory direct overwriting of the data. Use the two navigation buttons on the right to scroll through the three screens. Bottom of the link indicators are visible. The red LED on the left will connect to green when the connection is successful and the continuous connection is checked by a yellow blink. If the program steps back on the stack, the device is disconnected and reconnected to the server only when the focus is re-gained.

3.4 Central paging

In the GigSystem system, two different concurrent central paging can be implemented.

3.4.1. In one case, this means that the pages of PDF files with the same code, matching or different pages scanned in the connected GigReader apps can be scrolled back and forth simultaneously with the   buttons at the same time.

The paging can be handled not only by hand, but also with the "iRig BlueTurn" and other "page turning" tools connected to the GigChooser device via Bluetooth.

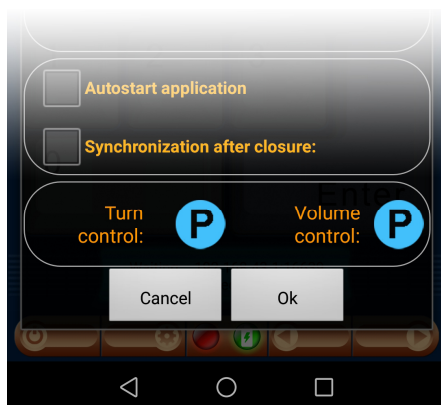
Paging works with all three of these tools:

- left foot switch: UP arrow, right foot switch: DOWN arrow
- left foot switch: PAGE up, right foot switch: PAGE down
- left foot switch: LEFT arrow, right foot switch: RIGHT arrow

3.4.2. The paging can also be performed on the special "channel" by the "up" and "down" volume buttons, so a small D.I.Y. You can also make cheap pagers by doing this:

<https://source.android.com/devices/accessories/headset/plug-headset-spec>

Both types of paging can be set to scroll through playlists or PDF pages. You can select this option at any time through the "Turn Control" and "Volume Control" options: L = List P = PDF



4. GigReader

GigReader (Minimum Level: Android 4.1 Jelly Bean) allows you to display the contents of a PDF file for a song selected by GigChooser. **The names of files can be any number between 1 and 999 and the "pdf" extension**, which is case sensitive, for example. "1.pdf".

An external or built-in internal reader must be used during display. Internal reader is available from Android Lollipop 5.0. For older devices, only an external PDF reader can be installed. Based on the experience it is recommended to install the free APV PDF Reader. For pre-Lollipop versions, "apv-0.3.4.6-all.apk", otherwise "cx.hell.android.apv_pdfview_lollipop.apk" is recommended. **The other (free) PDF readers** either do not handle the full screen view correctly or experience that they **do not work properly**. Internal or external use can be selected from the program.

The inner content of the song can not only be the song's lyrics, but also a chord. The PDF file can be freely created with Adobe or Microsoft products, PDF printers, the preparation of which is not part of the GigSystem system. PDF files are loaded from a local folder and the path can be configured with a mandatory part of "Internal Storage/Android/data/GigSystem/Lyrics", but any number of folders can be created below.

For example, when a duet is performed, the same song may be displayed by both singers but distinct in its content, distinct from any font or color. Moreover, it may contain musical instructions. PDF files with the same code (named) are displayed simultaneously on the device at a time.

The PDF path must be local and optionally remote. All compulsory local paths may be replaced by another local reference path. If a file is not located in the local path of the selected entry and a reference entry is set, the file will be searched for in the local path (folder) of this entry. If this is not the case, the file can not be found for the program and it is indicated by a red icon that appears. If no reference is set, the value should be "N/A". This option is closely related to the repertoire configuration. The path to the base repertoire should be the original base. If another configuration is included in the system and there is another path for it - with PDF files with different content - then this reference is the entry for the base repertoire. Naturally, only the different files should be put here.



Figure 16 GigReader screens

This program also **includes a built-in FTP client** that allows files to be synchronized at any time from an arbitrary host via an Internet connection. During synchronization and in case of deviation, files that are no longer in the remote folder will not be removed locally, **only adding and overwritten new ones that are identical in both locations**. It has the advantage that you can manage PDFs in one place and do not have to copy them manually.

There are two indicators below the main screen on the left side below. The red LED on the left will turn to green after a successful connection, and it will check the continuous connection by flashing in yellow. The label caption above indicates the status of the connection.

On the right side below, you can use the 📡 icon to let the reader participate in the central paging system. Local paging can be performed with the various paging machines (iRig BlueTurn, etc.) or the volume UP and DOWN buttons regardless of the button position. Participation in central paging is **only possible with the use of an internal reader**.

Next to the button, 📄 you can start downloading PDF files.

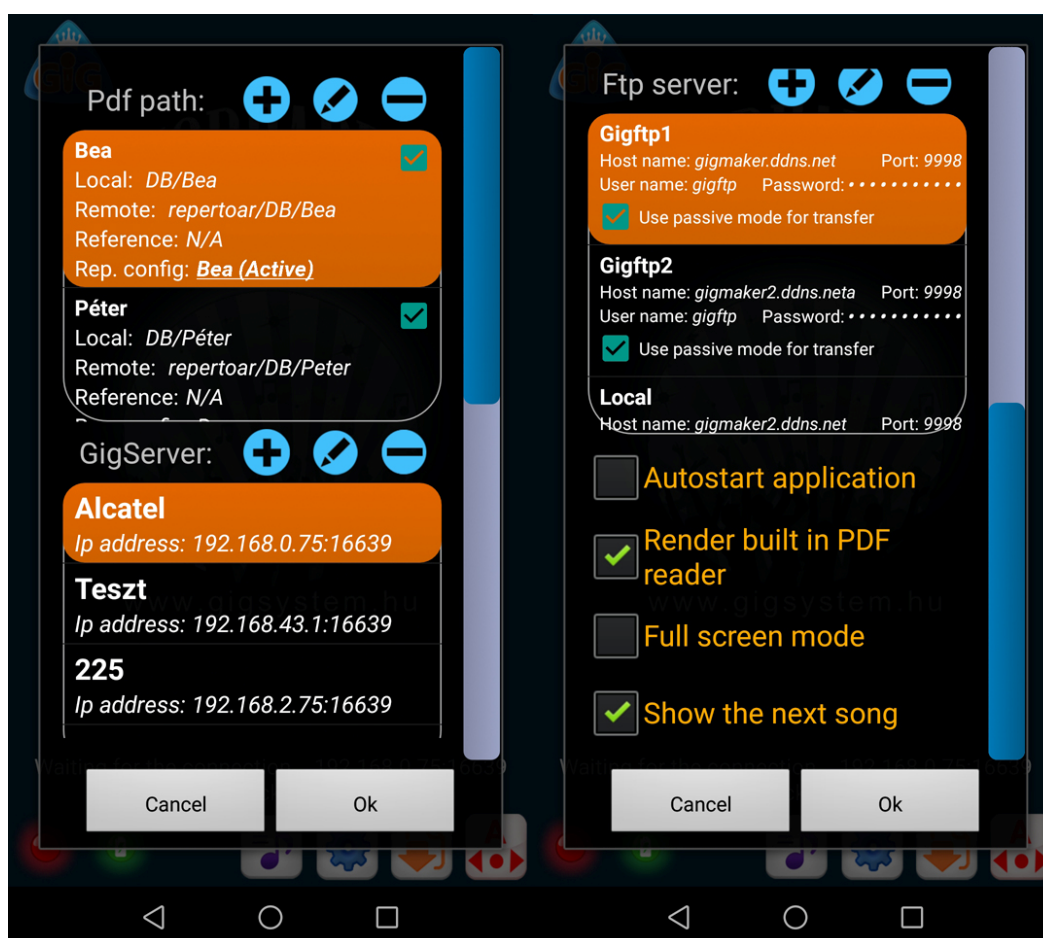



Figure 17 GigReader settings

Along the middle of the button ⚙️, the dialog box appears only in portrait orientation where:

- you can **create multiple PDF paths** for the editable part of the local path, while the remote path can be used for FTP synchronization. The checkbox can be set to either download or not
- you must enter the IP address and port number of the GigServer device to connect. Multiple server entries can be created, but at the same time they are only linked to the selected server
- optionally specify the address, port number, username and password of the FTP server. Or use passive mode. You can also **specify multiple FTP servers** and select the appropriate one.
- Using "Autostart application", the app starts immediately after the device is turned on.
- The "Render built-in PDF reader" feature allows you to **choose between internal or external PDF readers**.

- In "Full Screen" mode, only the contents of the PDF file are visible in the entire area of the display
- The "Show next song" box displays the title of the next song that appears above, depending on its configuration.

Click on the left button  to switch between the PDF reader and the GigReader main screen. During operation, above the main screen, the control will show the content of the PDF file corresponding to the song code. You can then return to the main screen with the default - < (back) function on the device. Then the PDF file can be displayed again with this button.

When using the built-in PDF reader, two indicators are displayed next to the current song title on the header. One shows the charging of the device and the other the state of connection to the server. If a PDF file consists of several pages, each page can be scrolled forward or backward with the navigator below. Zoom in with thumb finger gestures.

For external PDF readers, drag the pages vertically to move them. In either case, the next song in standby appears in the orange box at the top of the page.

5. GigBeater

GigBeater (the minimum level of Android 4.1 Jelly Bean) application is a controllable metronome of the GigSystem system that can deliver songs at an exact tempo even without any connection. This solution can be useful when **you can play the songs precisely from a pre-made setlist on a stand alone device**. Whether you're practicing an orchestral test for a very useful playing with metronome, it's fast available on the phone.

The program can **download data either from the server or from the cloud**, so it can only be imported.

Export is prohibited in order to prevent circular data generation. The scope of the data is incomplete, there is no editing option for members and their devices. Any modification or creation is only local and does not affect the server or the cloud data! Data editing in this program is case-specific and limited to that device. This is mostly suitable for some quick-performing correction when it is not possible to use the entire system.


Optionally, the program also **includes a visual metronome**. There is an empty square series that fills the current square with a metronome stroke according to the measure and subdivision. But it is not just a metronome that can hear, but also a backing track. These may be MP3 audio files whose names must match the song code (eg: 1.mp3) These can be played by simply launching them manually in the "Loop" or "Line" folders on that path. The path : „Internal storage\Android\data\GigSystem\Tracks\Name of the band\Loop and ~\Line" folders.




You just have to copy the files here. The application starts the metronome / backing track as a result of the "Volume Up" button and stops by pressing the "Volume DOWN" button. Supports paging devices (eg iRig BlueTurn) with all three standard settings.



Figure 18 GigBeater main screen

After starting the program, the initial screen appears and reads the connection setting saved at the last exit. Pressing the "GS" button displays the information bar, otherwise the menu bar.

The  icon next to the "GS" button displays the title of the next song from the server in the lower information bar when connected.

Next to it, the icon from the left will automatically launch the metronome / music base after the command received from the server , or both will wait for manual startup , or manually launch the music base while the metronome will be started automatically .

The main screen displays a volume control at the top. This is the interval between the physical settings of the system, which can play the tempo with the smallest and highest volume, but does not change the general settings of the device.

Below it, you can set a scroll pad between 20 and 280 bpm to the desired tempo. On the left and right, you can use two buttons to reduce or increase the value one by one, pressed for a long press for ten units, and the slider bar below it at any time.

Press the START button in the middle to start, and press it again to stop the metronome. The left button will play the tempo with either infinite or preset time. You can switch between them at any time. The right-hand button is a built-in tap meter that outputs the measured value between two clicks and within the above limits.

Below the left, the beat selector is located at 3/4, 4/4, and 6/8 values. The selection may seem scarce and does not cover all the possibilities of measuring, but in entertainment music it suffices. The basic metronome tick can be represented in any music resolution, which is just a matter of comparison.

Pressing the button long will allow you to set different sound effects. Alternatively, it is possible to *subdivision* the beat and to play the *beat accent* signal by accentuated. The sounds can also be configured with a long press.

Below the are two indicators on the left (connection, charging), the GigServer switch button on the right is "GS", you should initiate the online connection. When turned off, press and hold the button to configure the server as usual.



Figure 19 Quick settings

If "Synchronization after closure" is checked, the system will automatically updates the data after connecting to the server if they have changed there.

At the bottom of the screen, either the menu bar or an information bar can be seen by the status of the "GS" button. If enabled, the program will search the connection for the selected server. If successful, the title of the current song will appear based on the latest state of the server. Then the metronome of the song with the selected sounds starts immediately. **At 6/8-second speed, the subdivision must be switched on at other beats only if this have been activated (turned on) beforehand.**

If the application steps back from top level, it will be disconnected and will only be re-connected to the server in focus again. If "GS" is off, it will not connect. You can then choose from the four basic functions in the menu bar. These are the same as described in the GigServer program, with minor differences.

5.1 Settings

On the "Settings" screen above, the metronome sounds in the setlist can be configured using the 3/4, 4/4, 6/8, or basic tick, accent, and subdivision sounds using the checkboxes. The labels on the button reflect the individual sounds. Under it, you can select the current band, change it or delete it with a long press.

The deletion removes all the orchestral setlists and the repertoire.

- Using the "*Start application on autostart*" application will start immediately after the device is turned on.
- "*Using backing tracks*" allows you to play MP3 audio files in either single or loop mode. The file name can only be the song code. (eg 1.mp3) The playing mode depends on which subfolder of the file is placed between "Loop" and "Line" folders. The path: „Internal storage\Android\data\GigSystem\Tracks\Name of the band\Loop or ~\Line" folders.
- Using "*Force play metronome when missing backing track*" metronome starts when there are no audio files in both of the folders.
- If "*Display visual metronome*" is selected, a sequence of squares will appear at the top of the main screen, according to the selected measure and subdivision. Then the metronome of the sound will not start, only the squares alternate according to the right tempo



Figure 20 Settings, visual metronome

Use the bottom right button of the bottom navigator to add a band. Beside it, the song groups of the orchestral songs can be edited. In the dialog box that appears after pressing, you can add and edit the usual blue buttons and delete the selected group.

Using the bottom left button you can import data from the cloud using web services.

Data import from cloud

WSDL link:
<http://gigeditor.ddns.net:9999/GigSy>

User name:
testuser

Password:
.....

Database schema:
gigeditor

CANCEL OK

Figure 21 Data import

5.2 Songs

In the "Songs" screen, you can edit songs in the same way as described above.

5.3 Repertoire

The "Repertoire" screen is so much more that you can listen to the tempo of the selected song by pressing the play button with my metronome.

5.4 Setlists



The "Setlists" screen is also the same as the structure and function of the setlist detailed in the server section. Here, however, there is a special way to play the list metronome with the  play button. The metronome sounds can be selected on the "Settings" screen per beat.



Figure 22 Special metronome with setlist

A screen appears where the setlist of songs in the list above can be scrolled in any way. Top of the list is the name, time and place of the list. The launcher you want to start or stop is displayed with the start button.

Left and right arrows can move one back or forward. Below it, the info panel displays the details of the song, the next song title and the back button. When you return to the selected setlist previous, a blue arrow appears  at the position of the list.

6. GigEditor desktop application

With the free and downloadable GigEditor win32 desktop application, you can edit important information for an orchestral system in an x86 environment. **The program, in its role, is exactly the same as the editable features described in the GigServer application.** The data can be created using the icons and combined list boxes on each of the main screens as you would in Windows, or by using the dialog boxes that appear.

Editing screens can be accessed from the top icon row and menu:

-  Songs
-  Repertoire
-  Setlists
-  Profiles
-  Settings

6.1 Songs

The bar above the table contains an optional song search box, a performer filter, and the edit buttons.

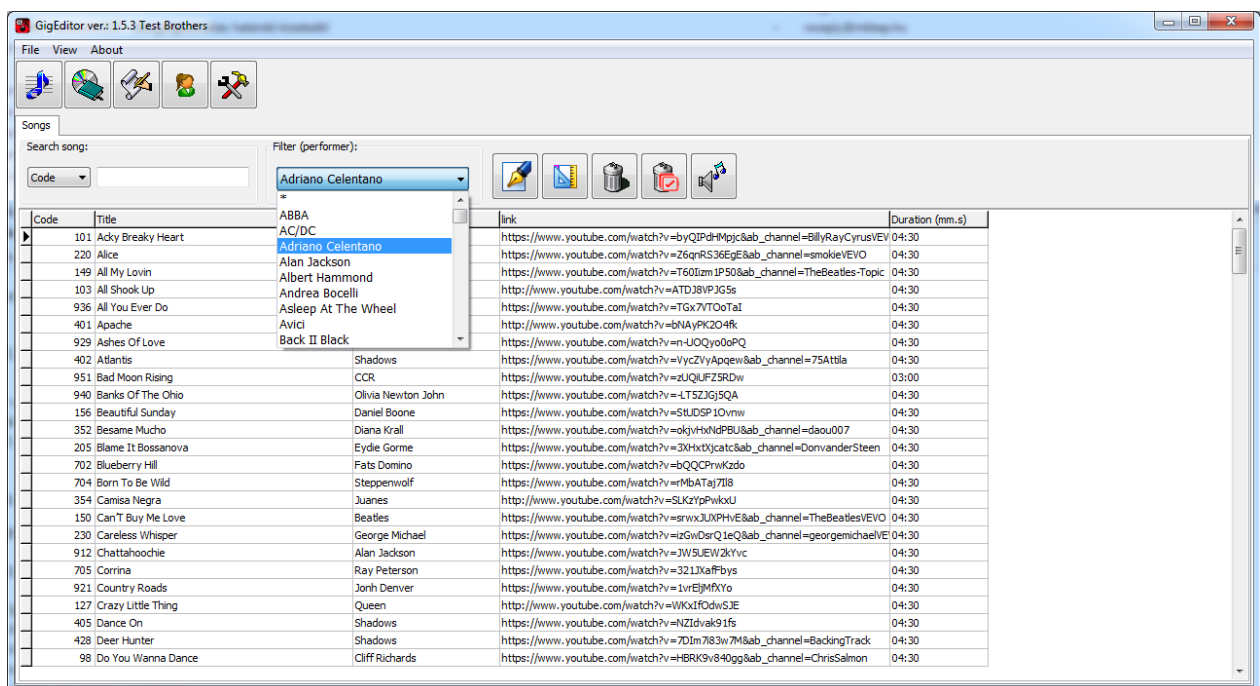

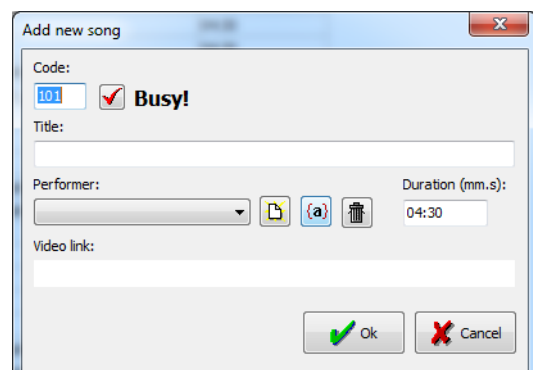


Figure 23 Gigeditor window

In the "New Song" dialog box, the code field can be manually edited, but it must be checked whether the entered code is free or busy. To select your performer, you can quickly jump to the name you want in the drop-down list box by entering the initial letter. If that's missing, it's just easy to add.

The video link for the song - eg Youtube link - can be started and can be viewed in a new window using the default browser by clicking  on the icon.




6.2 Repertoire

The repertoire is edited like the songs. In the dialog window, after selecting the song, you must specify the group to which the song is to be added. Existing groups can only be deleted if they do not contain songs.

Inactive songs in the list are displayed in red. They will **not be included in the GigChooser** program selection and will not find them.

You can export the repertoire to Excel if you have the Microsoft Office suite installed on your computer.

The tempo of the repertoire songs can be heard with the built-in metronome, which can be started and stopped by the  icon. This can be useful to practice. **Songs of the repertoire can be added, modified, or deleted in the selected repertoire configuration!**

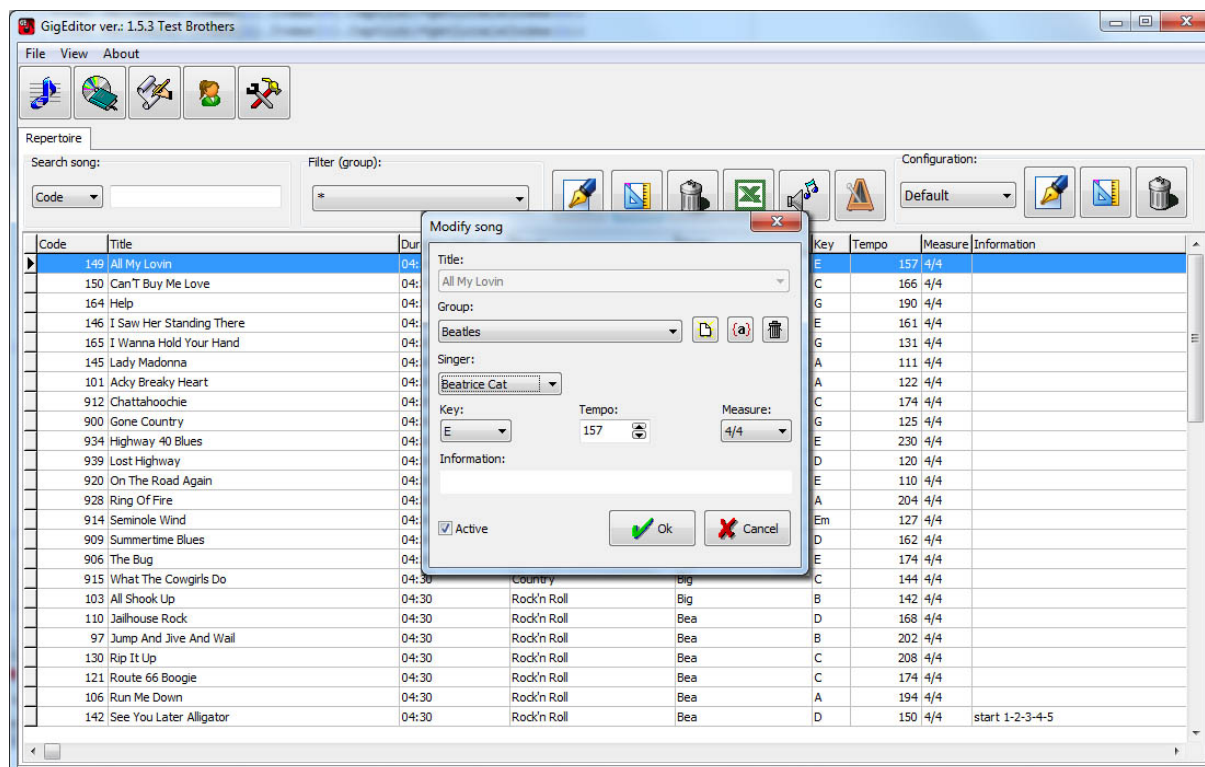


Figure 24 Edit repertoire

6.3 Setlists

A new setlist can be created or the existing can be modified, deleted on this page. In the dialog that appears, you need to edit the title of the list or select one from the existing one. The full contents of the new setlist can be loaded from any previous list, but the ☒ button and a confirmation are required.

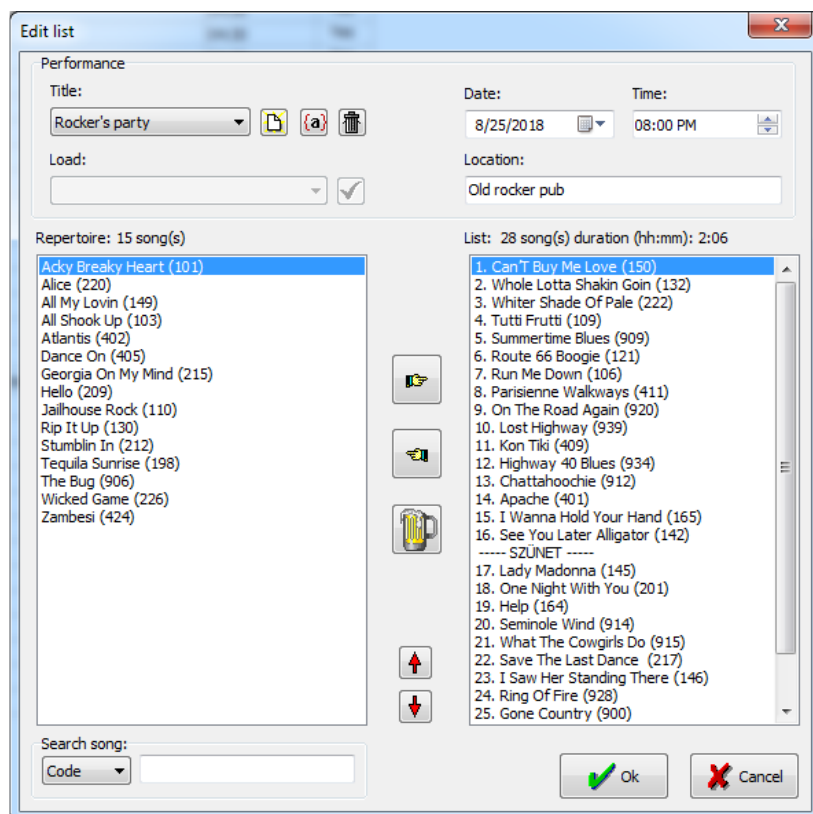





Figure 25 Edit setlist

The repertoire on the left side of the editing window and the selected songs on the right of the new list are displayed.

You can add or grab these with the left and right hand icons. You can insert a break with the beer  icon. The selected song can be dragged down to the correct position or left mouse button directly, or dragged down with red arrows and up arrows.

The setlist can also be exported to Excel or printed. Song's link can be viewed  in the default browser by pressing the button on the specified video link. With the metronome  icon, the selected song can be heard. **Printing content of songs of a setlist depends on the selected repertoire configuration on the repertoire page!**

6.4 Settings

You can edit the bands, theirs members and devices on this page. The selection of the band is valid for the repertoire, setlists, profiles and members. Modifying a member is only possible after it is selected!

Deleting a band will delete the entire repertoire, setlists, profiles, members, and devices!

To add devices, you first have to select the member, then the short name, description, and MAC address in the dialog box that appears. **The device name may consist of exactly three characters.**

Not mandatory to register the device, without it is being fully functional. This is just an excellent opportunity to identify the device.

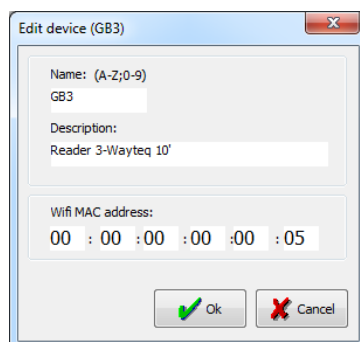


Figure 26 Edit devices

The 🎵 icon allows you to set the subdivision and the beat accent to use the built-in metronome. It can be listened to on the pages of songs, repertoire and setlists using the selected track.

The export/import functions use the 📁 and 📁 buttons to change the database between different platforms on different channels. If the database exists in at least two locations, you must be kept in mind for the validity of the data. If the desktop program is the primary editing tool, this is the source of information for the Android device. Updates and upgrades should be stored and archived on this personal computer, and backups are handled.

If your web system is the primary one, you should only use this program as a backup. If a data has been modified on the Android server (device) if necessary, it must be exported either to the desktop or to the web to store and manage data centrally.

Recommended use:

1. Desktop and Android server.
2. Web application and Android server

Third, mixed use of desktop, web, and Android platforms requires more attention. **You must always know which platform is the default source of data** and what is exactly the right direction of information!

There are three ways to change data the desktop program:

- Local file system. This solution should be used for archiving and saving. At certain intervals, once a week or once a month, it is advisable to export the database to a text file, because the program can be quickly restored from the previous backup when reinstalled. Simultaneously, the export file can be copied to the GigServer via the USB connection connected to the machine.

On Android device the data files must be in the "InternalStorage/Android/data/GigSystem/GigServerExport" folder. Import to GigServer can be made on the Settings screen. Of course, the opposite is just the same in reverse.

-Web service. Data can be uploaded and downloaded to the web (cloud) via the Internet. When using a mixed system, the program checks before upload that the data is needed to download if cloud data is newer. If yes and will not be downloaded immediately, the upload will be rejected. First you have to download data before upload but the downloading, all previous changes are lost, so you should take the warning seriously. The required

parameter is the wsdl namespace and the wsdl link, the associated username/password pair, and the name of the database schema.

- Network Data Exchange. If the Android device running GigServer and GigReader runs simultaneously on a local wifi network, then it is possible to directly exchange data. In this case, the local IP address of the Android server will be displayed on the main screen orientation. This and the configured port number must be entered for data exchange. The result of the processing is posted by both devices.

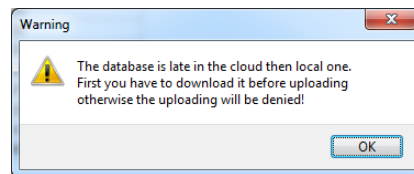


Figure 27 Warning for different data

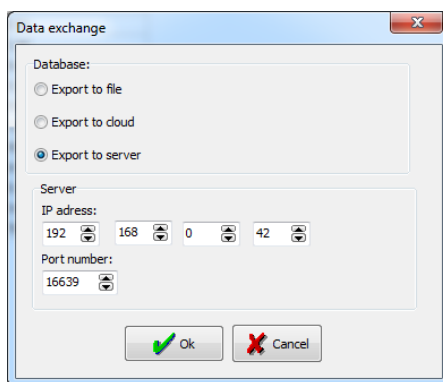


Figure 28 Data export

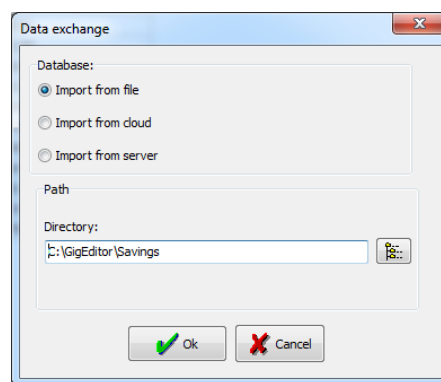


Figure 29 Data import

7. GigEditor web site

With the web-based application, you can easily and conveniently edit the information you need anywhere in the web, regardless of location. The full functionality of the data system is ensured. While in the case of a desktop application, the data owner is the dedicated orchestral member who owns and uses the computer running the program, while the web application is available to any member at any time. View and edit your data online, so you can download and upload them to GigServer and download them only to GigBeater. Login from a particular computer at the same time is possible in one copy at a time. Closing your browser closes the running session.

For secure and responsible data editing, access can be divided into four roles:

- **Root:** the special "super user" who is responsible for the data of the respective bands. Only he can create bands and their administrators. You can change or delete all data. Subordinate roles that he can create: administrator, editor, visitor.

- **Administrator:** As an administrator you can create additional roles: editor, visitor. You can edit all of the bands belonging to it. You can download and upload the entire data system from the GigServer application.

- **Editor:** As a limited user, you can edit songs, repertoire, profiles, setlists, and handle lyrics, but not members and devices. You can upload that portion of the associated bands data, but you can download all the data from the assigned bands from the GigServer application.

- **Visitor:** Data can not be edited at all, only viewing permission is available. You can only download it for GigServer and GigBeater applications.

The web application link is currently located at <http://gigeditor.ddns.net:9999/GigSystem/?db=gigeditor>. Log in is possible with a "visitor" role. The username "testuser", the password "tu*123456". The database schema is called "gigeditor".

The main features of web application are the same as both mobile and desktop applications. After entering, the base page will be the frequently used "Setlist". You can navigate to the right page in the top menu bar.

Below you select the band you want to edit, except for "Songs", because they are common parts for each band.

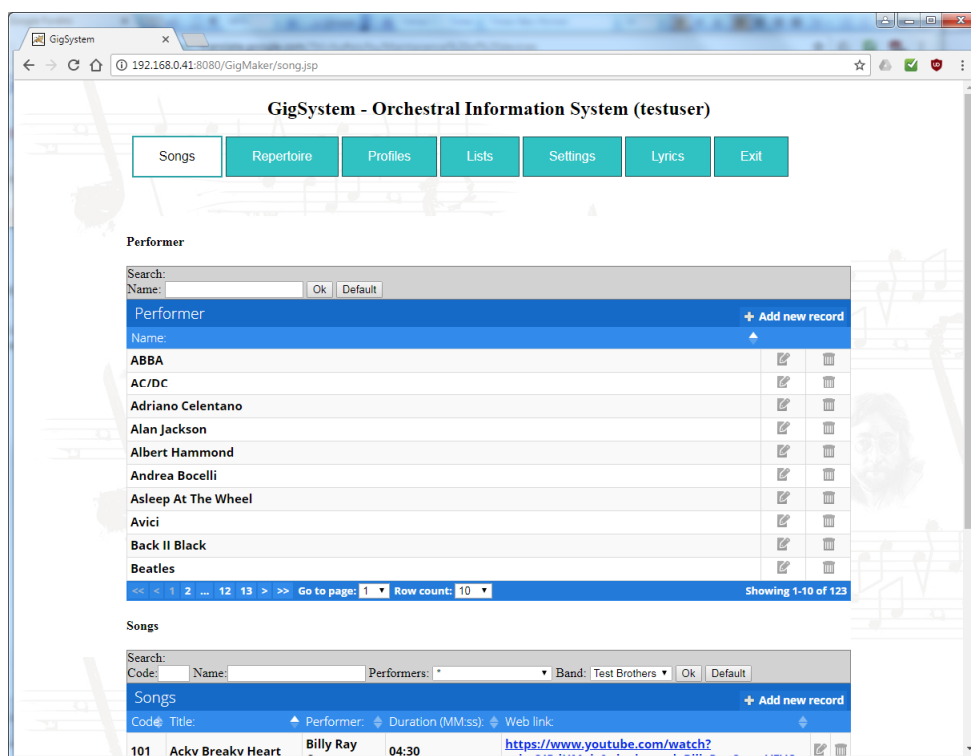


Figure 30 Add songs and performers

Data is edited using the tables displayed on each page. Multiple tables can be embedded, their common feature is the modification and deletion function for a particular record. Adding a new record can be done by clicking the "Add new record" button and filling out the data. Above each table, the topic filters and fields can be used for quick search.

Navigate in the navigator that appears below each table and jump between the results. If there is no such bar, it is first necessary to select a row.

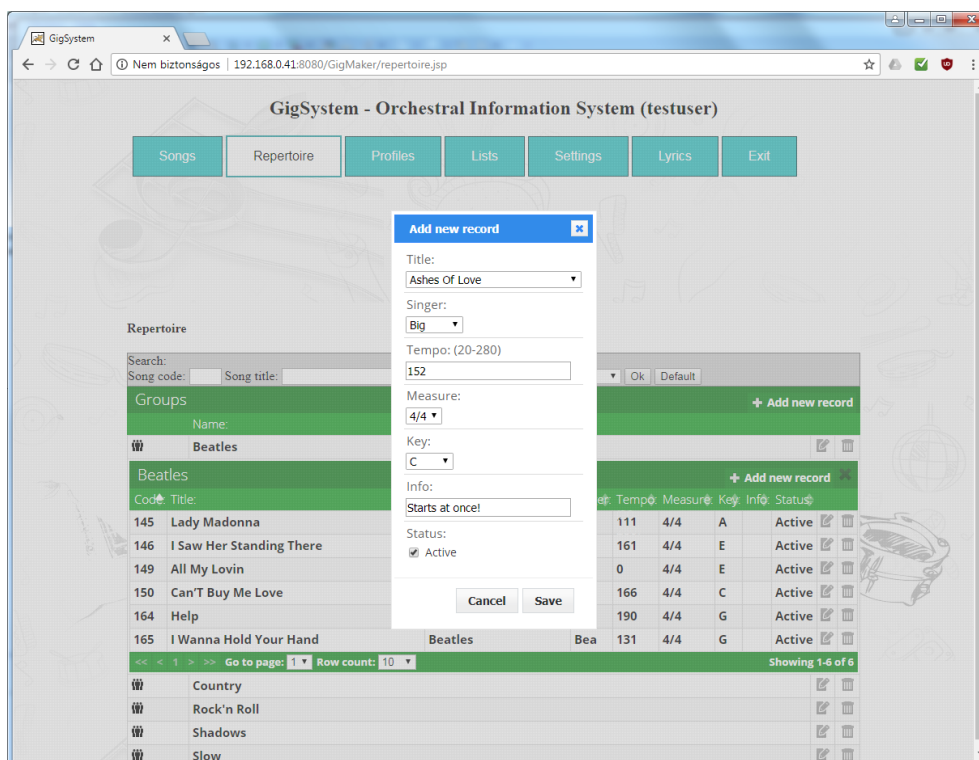



Figure 31 Edit repertoire

On the "Repertoire" page, songs are to be added to a group. It is desirable to enter a group with a name that is specific to the songs, but at least one group is mandatory. You can view the songs for this group by clicking on the left icon. 🎵

On the "Setlists" page, you can see the setlists of selected band. To edit this list or select from the filter, or click the left icon on each row.

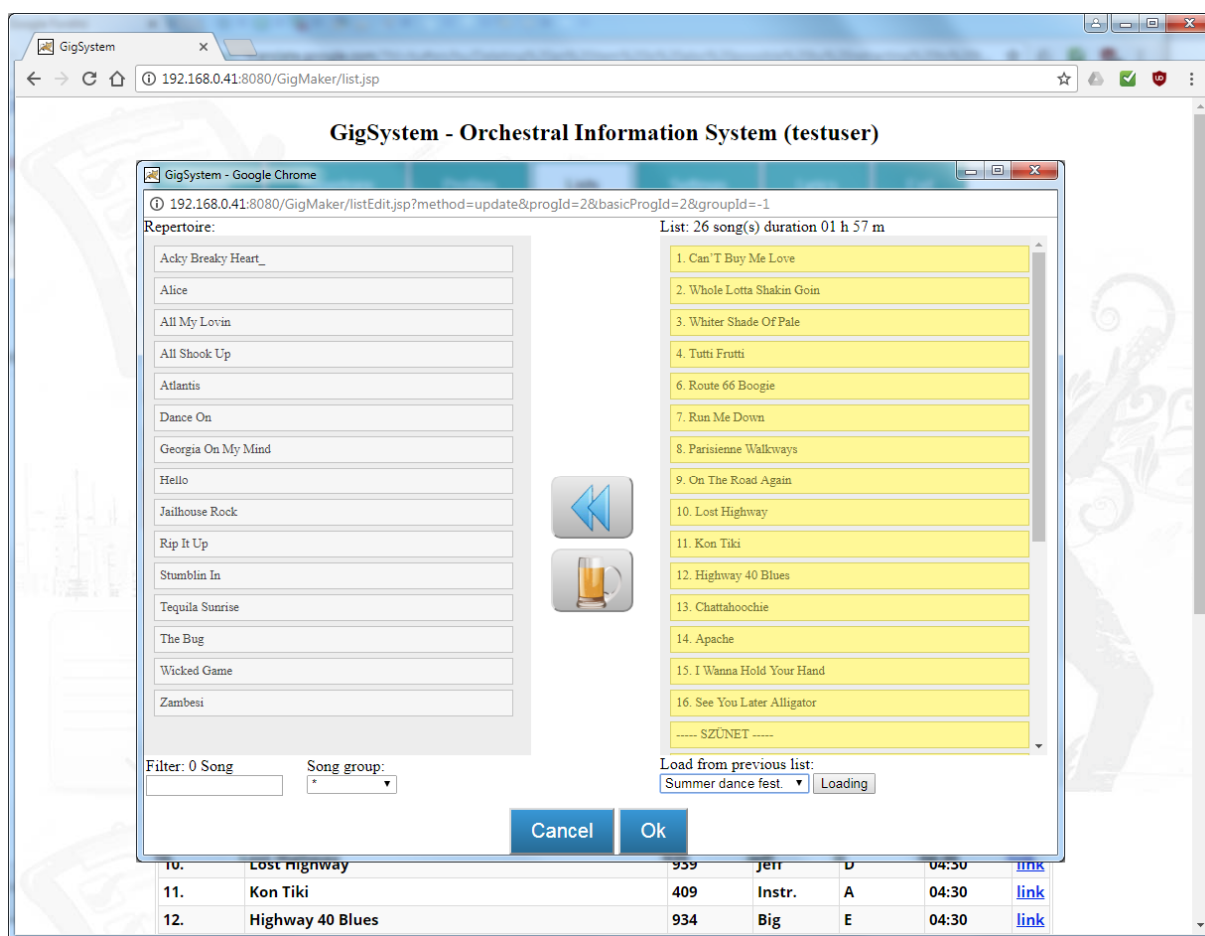
To create a new setlist, press the "Add new record" button and enter the main listings in the popup window. **The date editor box will appear when you use Chrome and Edge browsers, not in Firefox!**

There are two lists in the new window that pops up. The left is the repertoire, the right one will be the new list with the "drag and drop" method from the left-hand list to drag the songs to the right. The order can also be altered in the same way. **Deleting an item is also possible by retracting to the repertoire.**

By pressing the beer  button, a pause will be placed at the end of the list, which must be dragged to any location. The Back button completely erases the new edited setlist. You can load a previously saved setlist, under the repertoire, you can filter the group and song name. The top of the list shows the duration and the number of songs.

Add new record

Name:
 Date:
 Location:



GigSystem - Orchestral Information System (testuser)

Repertoire:

- Acky Breaky Heart_
- Alice
- All My Lovin
- All Shook Up
- Atlantis
- Dance On
- Georgia On My Mind
- Hello
- Jailhouse Rock
- Rip It Up
- Stumblin In
- Tequila Sunrise
- The Bug
- Wicked Game
- Zambesi

Filter: 0 Song Song group: *

List: 26 song(s) duration 01 h 57 m

1. Can't Buy Me Love
2. Whole Lotta Shakin Goin
3. Whiter Shade Of Pale
4. Tutti Frutti
6. Route 66 Boogie
7. Run Me Down
8. Parisienne Walkways
9. On The Road Again
10. Lost Highway
11. Kon Tiki
12. Highway 40 Blues
13. Chattahoochie
14. Apache
15. I Wanna Hold Your Hand
16. See You Later Alligator
- SZUNET -----

Load from previous list: Summer dance fest.

10.	Lost Highway	939	Jen	D	04:30	link
11.	Kon Tiki	409	Instr.	A	04:30	link
12.	Highway 40 Blues	934	Big	E	04:30	link

Figure 32 Create a setlist

On the "Devices" page, you can edit the orchestras, members, and users of the portal. After the band has been added, it is necessary to choose the above dropdown box.

You must first add a member to the band, and then optionally the device. The names of the devices can be exactly three characters. Then, for each device, you must enter the MAC address of the device's wifi. This is usually found in your phone/tablet settings. **Registration is not required, the server will contact it with any device!**

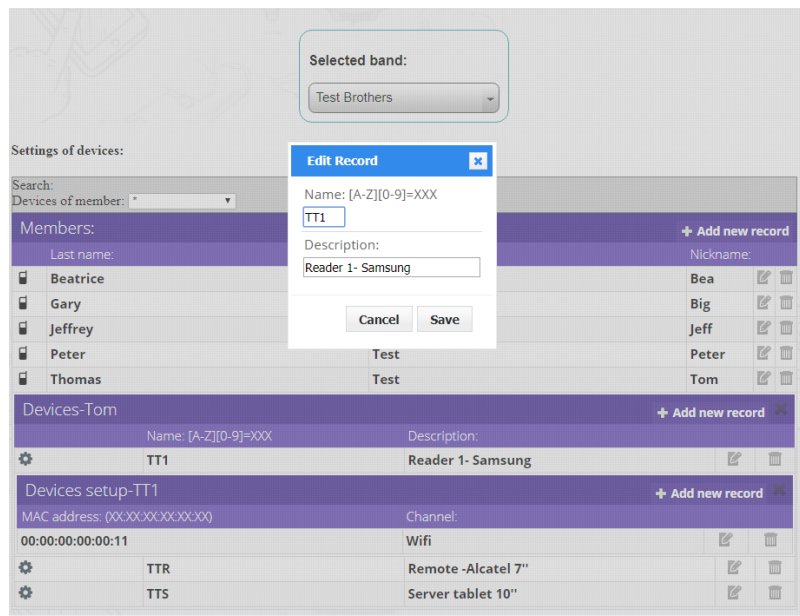


Figure 33 Maintenance of devices

If a user logs in with a "root" or "administrator" role, they can create any number of bands and users. For bands, you always have to specify a folder name where the PDF files will be placed, but it can be edited "root". You must specify the path that will be the remote directory of the selected FTP server connection in GigReader.

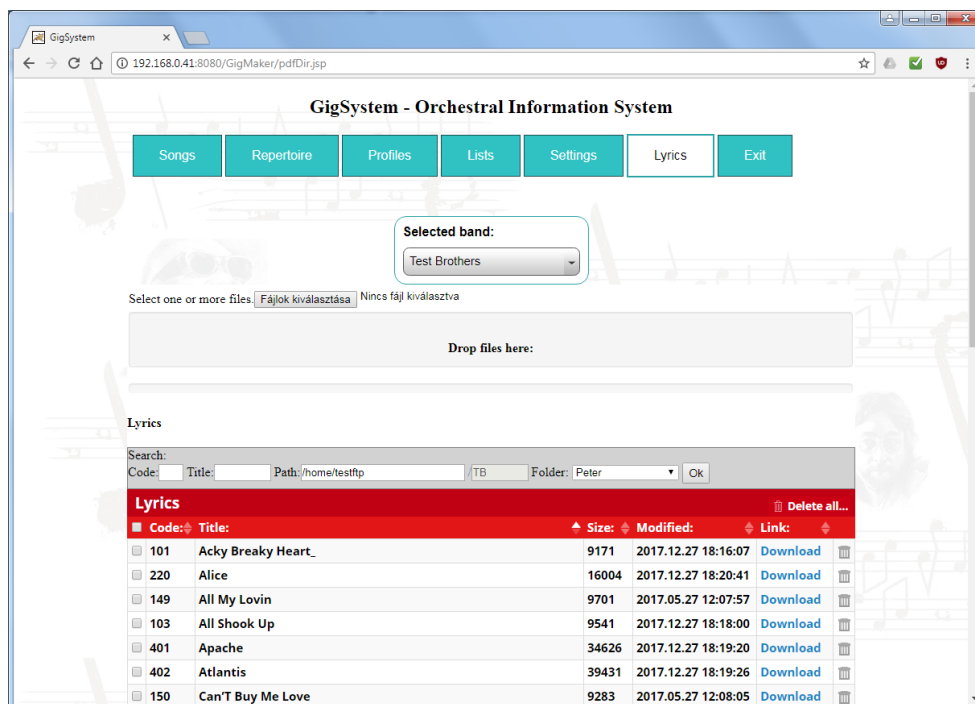


Figure 34 Manage PDF lyrics files


8. Installation and editing suggestions

Some applications for Android devices can be downloaded from the Google Marketplace, while GigEditor's installer is free of charge at <http://www.gigsystem.hu/en/letoltesek/>. You can also find more information about accessing the web interface here. After downloading and installing, the GigEditor program starts with blank data.

Minimum system setup: one server, one controller, and one reader.

It is highly recommended to static the IP address assigned to the server when wifi router is connected - eg. 192.168.0.75, because it does not have to be rewritten permanently in other devices. Then install the GigServer application on this device.

8.1 Test database.

To test and view the program system, a test database is available that can be downloaded both for GigEditor and GigServer. In the GigEditor desktop program on the "Settings" tab you can import by clicking the  icon.

In the "Data Exchange" window that appears, the test data are:


- selecting "Import from cloud" after confirmation, you can download directly from the "gigeditor" database with the *username* "testuser" and *password* "tu*123456".


Data required for download:

Wsdllink: <http://gigeditor.ddns.net:9999/GigSystemWs/GmWebService?wsdl>

or

- you can load from the list provided by selecting "Import from file".

In the GigServer Android app, you can also download the database from the cloud by clicking on the  icon in the "Settings" page by entering the information above.

The test database can also be sent from the GigEditor desktop application via a local wifi network to the GigServer if the sending desktop computer and the server - mobile, tablet - are simultaneously logged on to the same LAN network. By clicking on the  icon in the "Data Exchange" window that appears, on the "Export server" option the data exchange is done after the connection has been established.

The test database contains an invented "Test Brothers" band with its own songs, repertoire, setlists, members.

After installation, each application will search for the GigServer at the preset IP address. (eg 192.168.0.75) **You will need to download the configured data from GigEditor to GigServer as mentioned above.** After launching the programs, successful connections will be made to the server the communication will start, and after a few seconds automatic data updates also will be started for GigChoooser and GigBeater.

Only the installation of PDF text files is required. These must be copied to the correct place in the GigReader programs. **The destination folder is mandatory for internal storage - NOT the SD card (!). This can be a subfolder within the "Android/data/GigSystem/Lyrics/" folder.** It is advisable to insert the lyrics file into an additional subfolder referring to the orchestra and the member's name.

For example, the lyrics of "Thomas Test" should be in the "~ TB/Thomas" folder, "Peter Test" lyrics should be in the "~ TB/Peter" folder and "Gary Basserman" lyrics should be in the "~ TB/Gary" folder. **It should be noted that the Android system is case sensitive!**

GigReader application naturally creates the configured folder structure, but for simplicity. PDF files can be downloaded via an FTP server for an Internet connection (!). Or else you have to manually copy them to the right places. After that, the program system is ready for full use and trial. Test data can be deleted in the GigServer by deleting the orchestra except for songs and performers. These can be done by deleting all songs.

So briefly summed up:

- Apply the devices involved in the system.
- GigEditor desktop and / or GigServer android programs must be installed.
- Devices must be connected to a common router.
- Configure the server's fixed IP address.
- When using GigEditor, the data must be downloaded to GigServer.
- You need to download or copy - test PDF files.

The test PDF files can be downloaded from <http://www.gigsystem.hu/en/letoltesek/>

Using the test system is, of course, not mandatory, you can start editing real data right away.

9. Tips & Troubleshooting.

- The router is a critical element of the orchestral system. It is worth to choose among the best quality products of well-known brands. Main aspects of speed, signal strength and stability. It is strongly recommended to purchase a TP-Link, LinkSys or similar category of a "n" (IEEE 802.11n standard) 300/450 Mbit speed device. The emerging Chinese brands are well-proven and are currently being systematized by the Xiaomi Nano router. In this case, two are used for the main stage, one of the routers, the other one is configured in repeater mode and is in contact with each other. Small clubs and restaurants are just enough for the router. The devices are located on the stage arbitrarily, with the routers in the back. By default, devices will connect to the stronger signal. Routers are in constant contact so the signals can reach the right strength. It is useful to download a wifi analyzer to any phone and keep track of signal strength as a function of position. Preferably, the signal strength will be greater than -40 dbm, where appropriate -40 to -60 dbm, while -70 dbm below is uncertain. Communication will then be disrupted and the system will be constantly reconnected. Idle time, dense and repeated loss can be 10 to 30 seconds, so it can be said that this is already the category of malfunction.

- Based on practical experience it can be stated that there are no two identical locations where the radiation conditions would be the same. Guests on shows and concerts usually have a phone with a hot-spotted bluetooth transmitter. There can be free wifi points on site. Electromogic is often the extent to which routers and attached devices are pressurized to maintain a stable connection. This load is boosted by wireless orchestral radio devices, which are often capable of completely defeating the built-in secure communication. It is advisable to always consider these manufacturers' recommendations. For example, do not place the guitar transmitter and the read / control tablet directly next to each other or within a certain distance. High-performance speakers create a strong magnetic field within a certain distance, so you should avoid electromagnetic disturbances.

- Applets installed on devices contain two indicators. The left side always indicates the connection. If it is constantly red, the connection has not been established. Make sure that they are connected to the correct router. This can often be misleading due to the switchover of home/orchestra routers, so this should always be checked. A common mistake may be that a previously saved connection is invalid or corrupted. You may want to remove the wifi connection and re-establish it. An additional source of error may be the switched off wifi status of the device. It is also desirable to provide router and connectivity with password protection, which is of course required to be routinely monitored for both the router and the devices. To use this system, you need to connect to the router and then to the Gigserver!

- In a server/phone running GigServer, the band router is recommended to set a static IP address during connection. The gateway value is recommended to be 192.168.0.1 and DNS1 to default 8.8.8.8. In the router configuration, you should set the domain allocation to 0 to use the 192.168.0.X range.

- When using profiles, always keep in mind that songs outside the loaded profile are unavailable!

- In the case of GigReader, you always have to choose the desired local path. PDF files are synchronized only for checked paths! Be aware of the match between the right lyrics path of tablet and the singer. Of course, downloading PDFs from any FTP server, but downloading requires an active internet connection!

- In the case of songs that require rhythm change, unbound rhythm or free play mode, the tempo must be set to "0" in which case the metronome will not start.

-System applications have been installed and successfully tested for the following devices:

- Phones : LG-D315, LG-P710, LG-D505, LG-H440N, Huawei Ascend Y300, **HUAWEI P10 Lite**, Samsung Galaxy E5;A6+, Xiaomi MI4C
- Tablets: Overmax TB-09B, Op3n Dott, BluePanther Voyager, WayteQ XTAB 7Q, WayteQ xTAB-100QCR, **Alcatel Pixi3, Alcatel Pixi4, Samsung Galaxy Tab E T560**, BeeX E2, Chuwi Hi10

According to the tests, Alcatel, Samsung and Huawei devices have proven to be the most trusted.