WEISS HIGH-END AUDIO

MAN301
Operating Manual

V 1.2.1

CHAPTER 1

Welcome and first steps

Congratulations on the purchase of the MAN301! I am sure you will enjoy the ergonomics and sonic quality of the Weiss MAN301 Music Archive Network player system. It can be easily tailored to your exact needs.
This operating manual guides you through the setup and operation of the MAN301 on a step by step basis.
Enjoy! Daniel Weiss, President, Weiss Engineering Ltd.

System features and requirements

Note: Many of the words in bold typeface lead to a glossary entry when tapped.

The MAN301 system consist of the following items:

- the **MAN301 Base Station** (called MAN301 in this manual),
- an iPad with iOS 5.0 or higher with the free „Weiss MAN" app (available from the Apple app store),
- a storage device preferably a NAS unit (Network Attached Storage) for the storage of the music files. Or alternatively a USB drive.
- A quick start guide
- This manual, as an **iBooks** book

The MAN301 can be operated in two modes, one is the „normal" playback mode where music is played from a storage device. The other mode is the Pre-amplifier mode which is described in section 5 of this chapter.

The MAN301 itself does not have any internal storage facility for music files. Ad hoc storage devices (e.g. the memory stick brought by your guests) can be plugged into the USB port of the MAN301 for immediate playback.

The MAN301 fetches the music files from the NAS (many formats supported) and feeds the data to the built-in D/A converter (option) and also to the digital output interfaces (AES/EBU, S/PDIF, USB, FireWire). In addition external digital audio signals can be fed to the MAN301 for playback via the built-in D/A converter. The MAN301 has a volume control built in (which even works for external digital sources) and thus can be directly connected to a power amplifier or active speakers.

The „Weiss MAN" iPad app is used to control the MAN301. The features include:

- playback of a plethora of **audio formats** including DSD file formats
- maintaining the **music library**
- ripping of Albums in a variety of formats
- editing of Album metadata (artist names, album names etc.)
- fetching of Album **artwork**
- generating and maintaining **playlists**
- listening to Internet radio stations
- listening to all kinds of Internet based streaming services

- broadcasting the played files via the local network to other playback devices
- searching the music library according to various criteria
- supporting several **users**, each with individual playlists etc.
- supporting several NAS units
- supporting several MAN301 units

The NAS unit is used to store the music files, cover artwork files and more, like e.g. accompanying text files.

The playlists generated are stored within the MAN301 unit. The iPad itself is not used for any storage. Thus it is easily possible to use any iPad with the Weiss MAN app installed and control a MAN301 system right away.

Using the MAN301 as a Album Player only

Maybe you have bought the MAN301 just for high quality Album playback with no intention (yet) to use its capabilities as a network player.

In that case the setup is fairly simple: Connect the iPad directly to the WiFi of the MAN301, no need to connect the MAN301 to a network (except you would like to see Album track information the MAN301 gets from the Internet), no need to connect a NAS storage unit. Just read these sections of this manual:

Chapter 1, Section 2, Configuration 6

Chapter 4, Section 1

The frontpanel LED and power switch operation

The LED on the MAN301's front panel is a three color LED which shows the following:

- After switching on the unit via the power switch the LED lights blue and stays like this throughout the operation

- After switching off the unit via the power switch the LED flashes green and eventually turns off. During the green flashing phase the MAN301 is closed down. During that phase the mains supply to the MAN301 must not be interrupted.

- If the MAN301 has crashed, i.e. is not responsive to any commands anymore, even the green LED does not stop flashing when trying to switch off the unit. In this case the unit can be forced to switch off by pressing and holding the power switch for a few seconds. During that phase the LED flashes green and red and eventually will turn off. The MAN301 then also is turned off.

The next pages show the content of the MAN301 Quick Start guide.

MAN301 Quick Start Guide

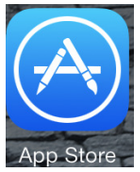
Congratulations on purchasing the MAN301 Music Archive Network Player!

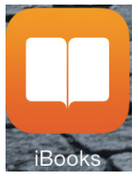
Here are the first steps to set up the MAN301 system. For all the powerful features of the MAN301 refer the MAN301 manual mentioned below.

Check the last page of this guide for some iPad tips.

1.) Download the free iBooks app from the Apple app store to your iPad.

Tapping on the App Store icon connects the iPad to the app store.
Search for iBooks to find the appropriate app quickly. Note, you need to have an app store account in order to access the apps. This is the case even if you do only get free apps.





2.) Download the free Weiss MAN app from the Apple app store to your iPad.

3.) Download the MAN301 manual from this link:

http://www.weiss.ch/downloads/man301/WeissMAN.ibooks
with the help of the Safari browser on your iPad.
Open it in the iBooks app.
Note, the download will not work if the iBooks app is not installed.

Alternatively you may download the PDF version of the manual from this link:
http://www.weiss.ch/downloads/man301/WeissMAN.pdf

4.) Setting up the MAN301 hardware

Carefully unpack the MAN301 unit. The following items should be included:

- The MAN301 unit
- This quick start guide with a warranty card
- The WiFi antenna

After unpacking the MAN301, screw on the antenna onto the appropriate socket on the back of the unit.
The antenna can be rotated to the position you like best. Usually it is not critical in terms of signal reception.

5.) Mains power on / off switching

The MAN301 will automatically accommodate for the mains voltage, so there is no mains voltage selector to set. The fuse rating is the same for all mains voltages.

To switch on power to the MAN301 press the "on" switch on the front panel. The blue LED will light. After about a minute or so the MAN301 has booted and is ready to connect to the iPad and the NAS. (But wait with switching on the MAN301 right now).

The MAN301 can be switched off from within the iPad app or via the power switch on the front panel. If switched off from the front panel, the LED turns green and starts to flash until the MAN301 has shut down and switches off itself. If the green LED does not stop flashing for more than 5 minutes you may force a power down by pressing and holding the power switch (LED toggles between red and green) until the LED goes off.

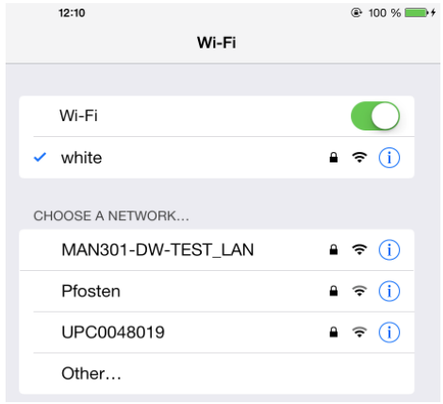
NOTE: Never switch off the MAN301 by cutting power, always switch it off via either the Weiss MAN app or via the front panel power switch.

6.) Connections

There are different system architectures possible, e.g. with or without an Ethernet connection to the MAN301 or with music stored on a USB hard disk or on a NAS (Network Attached Storage, i.e. a bunch of hard disks) etc. (Note, the MAN301 requires an external device to store music on. It has no internal storage for music.)
First connect the MAN301 according to your requirements, e.g. connect it to the Ethernet network you may have (where you may have a NAS connected to as well), and/or connect a USB or Firewire hard disk to the MAN301. Also connect the audio outputs, lower the volume on your amplifier to be on the safe side for a start.
It is also possible to have the MAN301 operated "standalone", i.e. not connected to an Ethernet network, just having connected a USB disk and the iPad talking to the WiFi in the MAN301 directly.

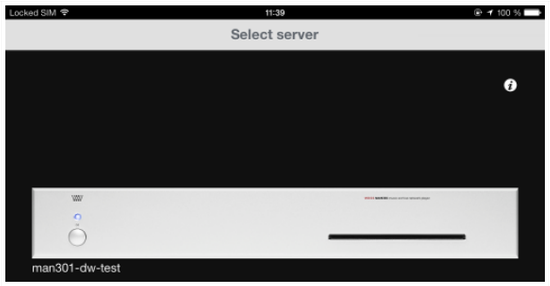
7.) Booting, WiFi

After having connected all necessary devices to the MAN301 (including the power cord), switch on the MAN301 and wait about a minute until it has booted. Make sure the iPad is connected to the WiFi network (either your own local WiFi or the WiFi of the MAN301, its SSID password is WeissMAN301).



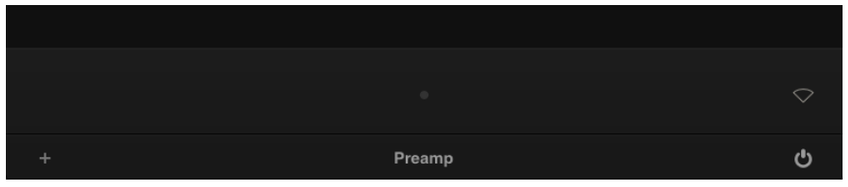
8.) Connecting to the MAN301

Then start the Weiss MAN app on the iPad. It now should show an icon of your MAN301 device. Tap on that icon which leads you to the page where user accounts are shown. This page is empty yet.



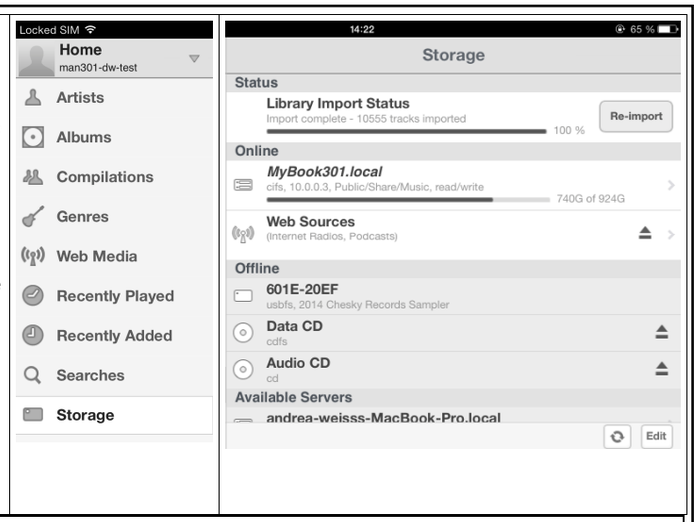
9.) User setup

Set up a user account by tapping on the + pad in the lower left. Enter user name and password as you like plus the administrator password at the bottom which is wh10admin.



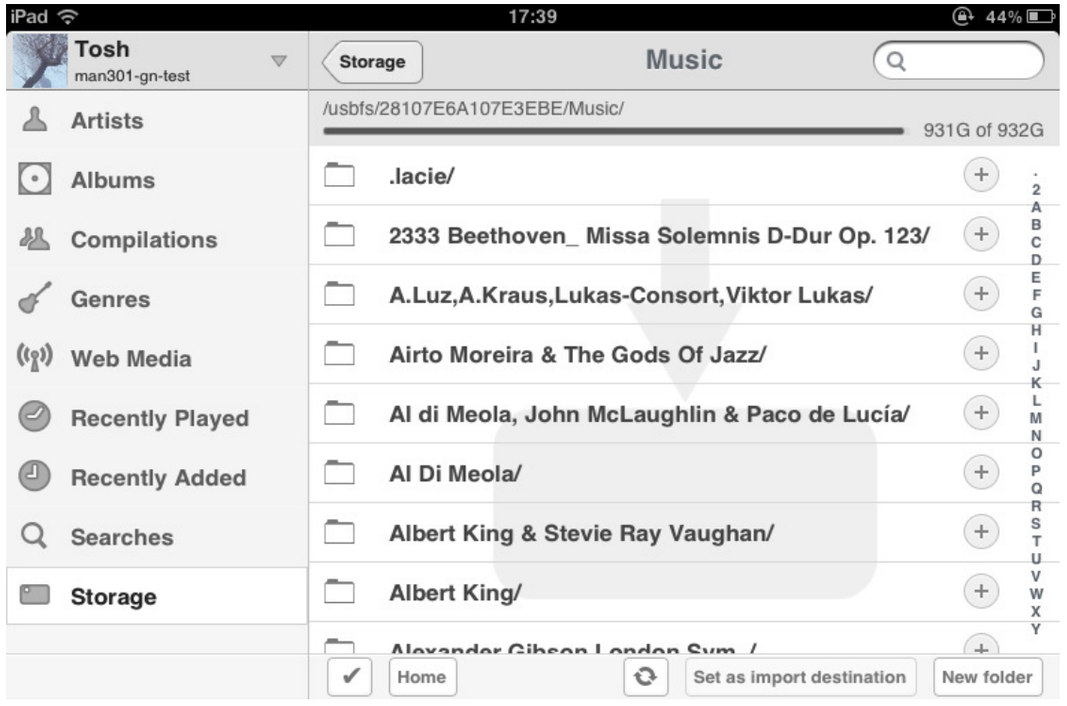
10.) NAS

Tap on the newly created user avatar, enter the user password you just generated. This leads to the main screen of the app. In the menu list on the left there is an entry “Storage”. Tap on this and wait a while for the “Available Servers” to show up. Your NAS (or your hard disk) should show in the list under the title “Available Servers”. Tap on the entry of your NAS.



11.) Music folder mounting

There may be a window shown which asks for a user name and password. If your NAS has user accounts set up, you may need to enter the credentials here. If you use just a guest account on your NAS or if you have a new, yet unused NAS you may leave both Username and Password fields empty and proceed with tapping on OK. Now the folder structure on the NAS shows. Navigate to the folder where your music is (or will be) stored. Navigate until the folders with the artist names are shown, then tap on the “Add mount” pad. Next a larger window shows asking whether that folder should also be the destination for ripping CDs. You may want to tap on OK here.

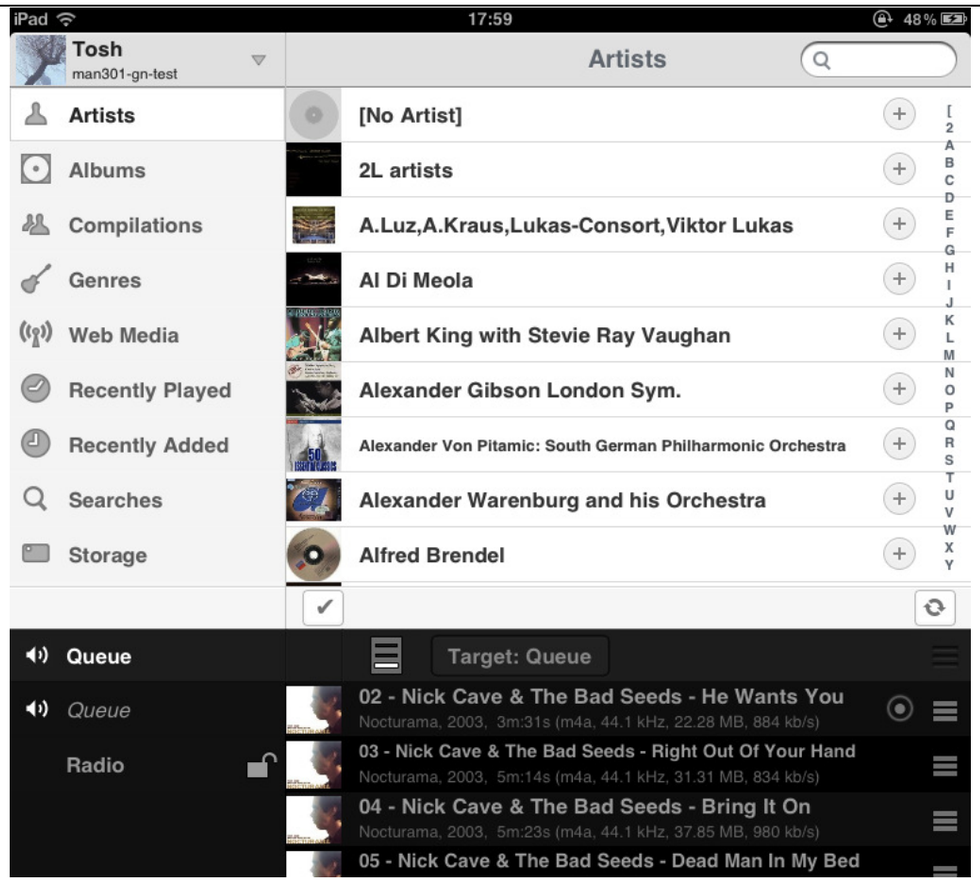


12.) Library importing

Now the music is added to the library database of the MAN301. This may take minutes to hours, depending on the size of your library. Tap on the Artists entry in the upper left to view the first artists added to the library.

13.) Playlists

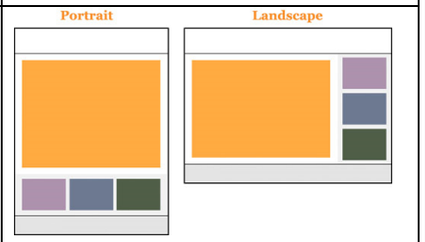
Tap on one of the album cover arts. This puts that album into the default playlist and starts playing right away. Be careful with the volume control in the lower right corner on the iPad. The album may not yet be complete (all tracks), but once the whole library is read in it will be complete. Also cover artwork may lack at first.
The dividing line between the white (upper) and the black section of the screen can be moved up and down. The upper section shows the library, the lower section shows the playlists. Tap and hold your finger on the upper edge of the black section and move it up to reveal the playlists.



This is it for a start. There are many more functions to discover. Remember, the MAN301 manual is your friend.

Enjoy! Daniel Weiss

Some notes on the iPad:

In iBooks it is easy to get back to the contents list with the help of the pinch gesture:	
The Weiss MAN app is designed for the Portrait mode of the iPad display. Thus when the Weiss MAN app is started, the iPad display is automatically rotated to Portrait mode. The iBooks manual on the other hand is written in Landscape mode and thus the iPad display is automatically rotated to Landscape mode when the manual in the iBooks app is started. These rotations work independently of the "Lock Rotation" switch setting of the iPad.	
When putting the iPad in standby mode (with the switch in the upper right corner) then the connection to the MAN301 is maintained for about 10 minutes. Thus when re-activating the iPad again within 10 minutes, the connection to the MAN301 is active immediately. If re-activation of the iPad happens after more than 10 minutes (or if the iPad has been switched off completely) one has to tap on the Weiss MAN app and select the server. After that the currently logged in user is automatically logged in again. The music continues to play in any case. The automatic standby mode of the iPad can be switched off in settings / General / Auto-Lock.	Standby switch
Double click on the home button allows to switch between tasks quickly.	Home button at the bottom

System architectures

There are a few different MAN301 **system configurations** possible. Which one is preferred depends on your existing computer and Internet setup or the setup you would like to implement. An Internet connection is recommended / required if:

- Albums are going to be ripped via the MAN301
- You would like to do maintenance on existing Album **metadata**
- The iPad and/or the MAN301 software should be updated

Basically an Internet connection is highly recommended. Of the configurations on the following pages, configuration 1 may be the most common, but others work equally well. In terms of sonic performance there isn't any configuration preferred over the other ones.

WiFi: This denotes a wireless network connection

Ethernet: This denotes a wired network connection

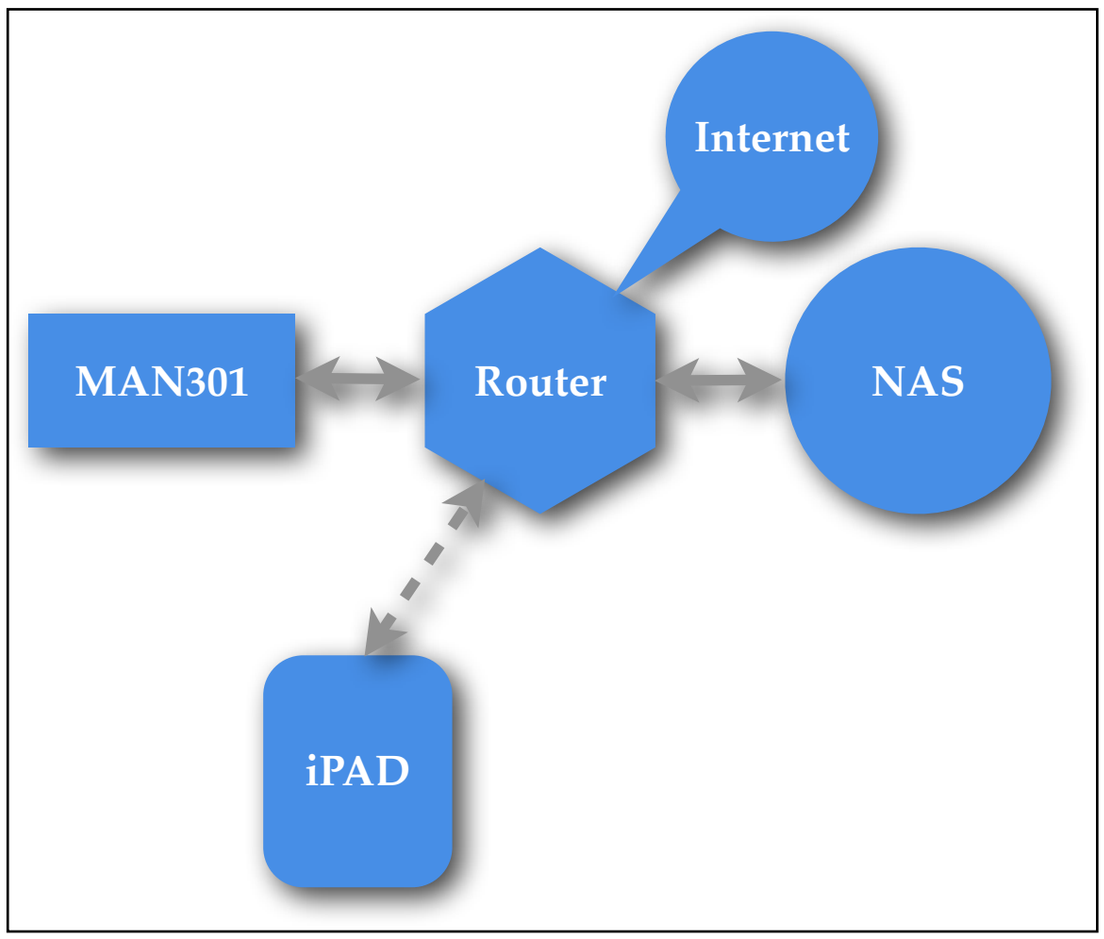
Select your preferred configuration from the following pages.

Typical system configurations are:

(Note: **Ethernet** link: ⟷ WiFi link: ⟷)

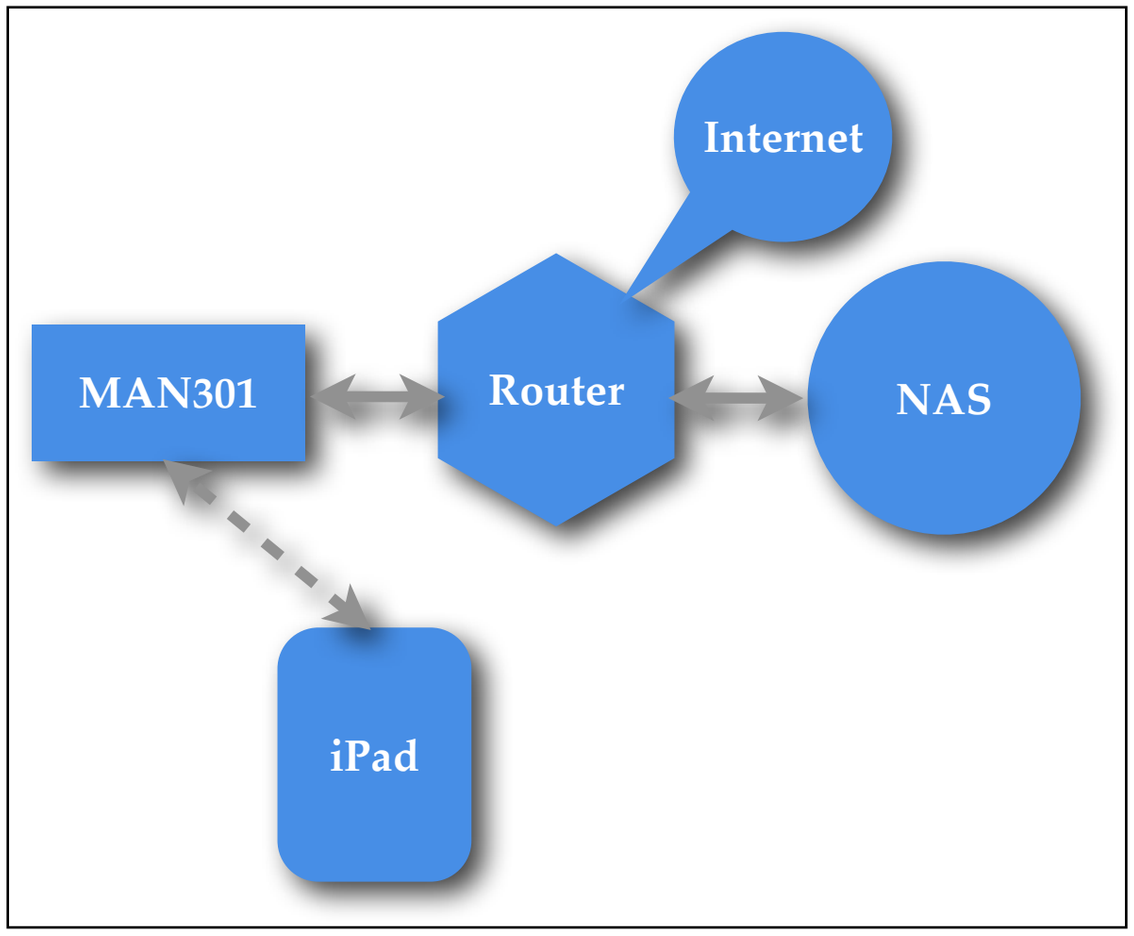
Configuration 1:

You use a WiFi **Router** with Internet access. The iPad is connected to the WiFi Router: **Proceed to Section 3**.



Configuration 2:

You have a Router with Internet access, but no WiFi. The iPad is connected to the MAN301 access point: **Proceed to Section 4.**

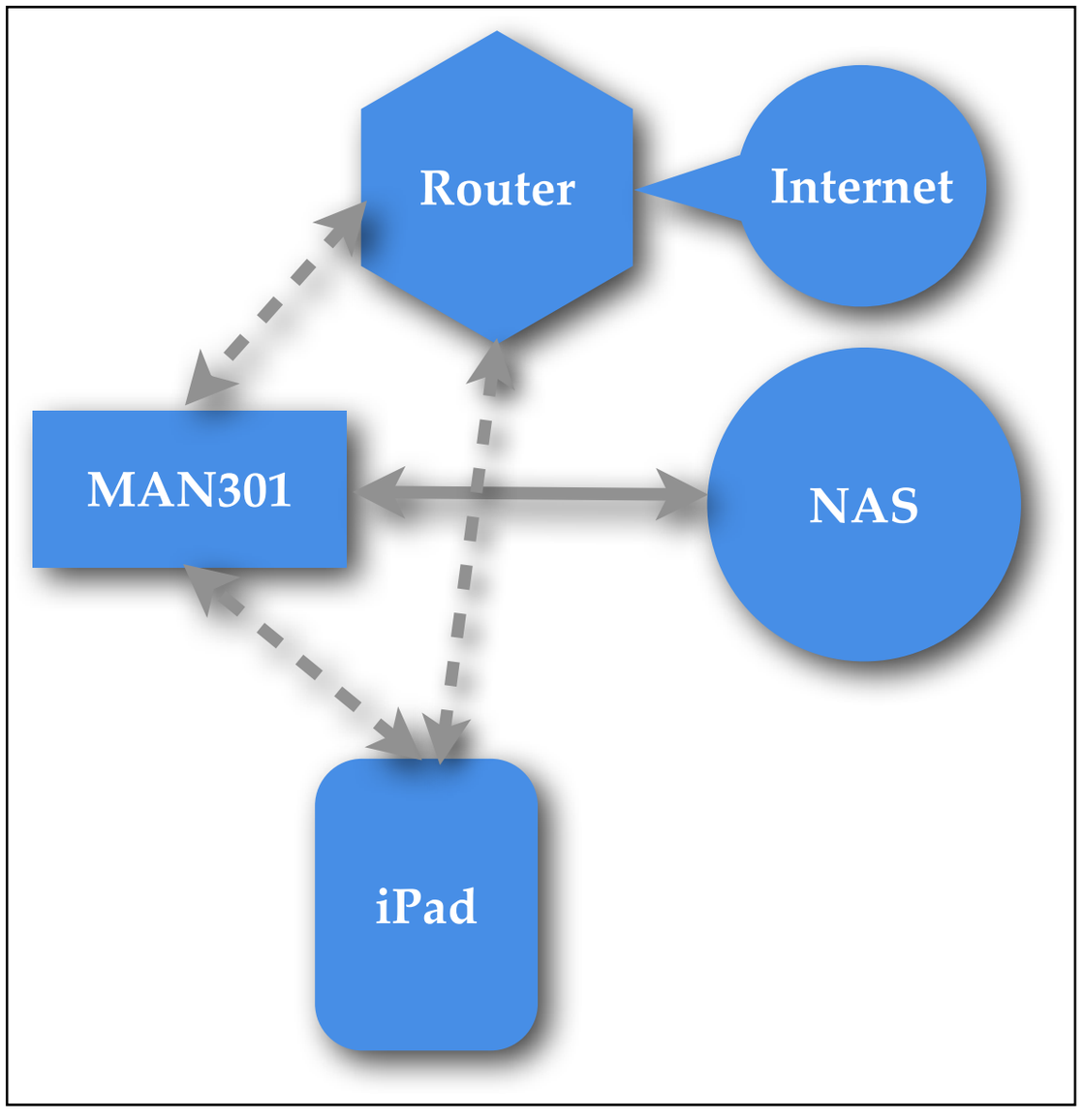


Configuration 3:

You do not have any (WiFi) Router but you have got Internet access: In this case add a Router (or a WiFi Router) to your system to get a configuration as in Configuration 1 or Configuration 2 above.

Configuration 4:

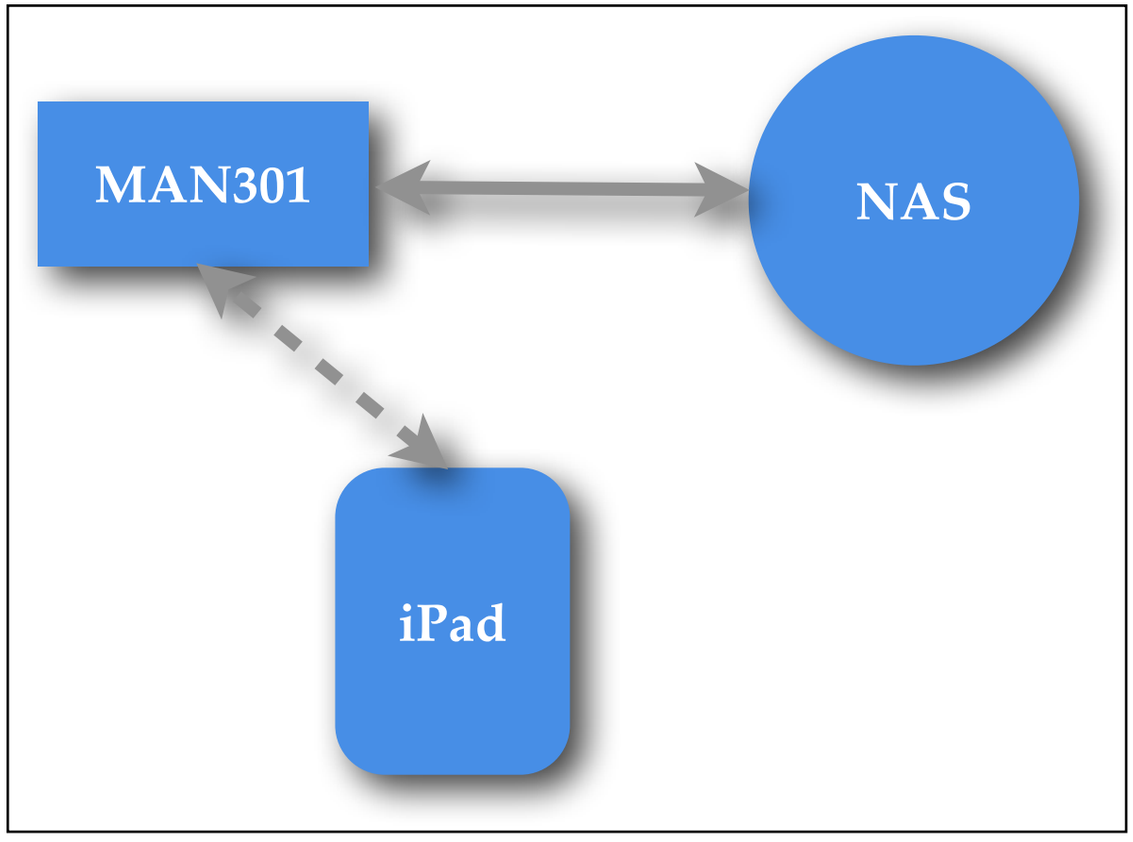
You have a WiFi Router with Internet access, but you would not like to connect the MAN301 system via Ethernet to the Router, but rather via a WiFi connection. The iPad is connected to the MAN301‘s access point (or to the WiFi Router) and the MAN301‘s uplink is connected to the WiFi Router: **Proceed to Section 5.**



Configuration 5:

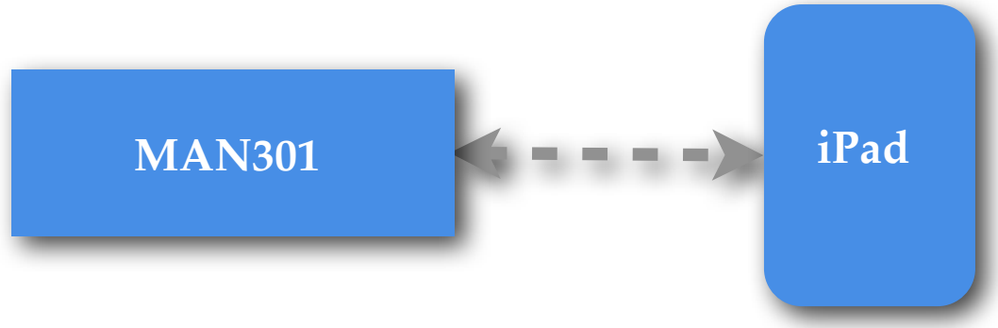
You do not have any Router or Internet access:

Proceed to Section 6.



Configuration 6:

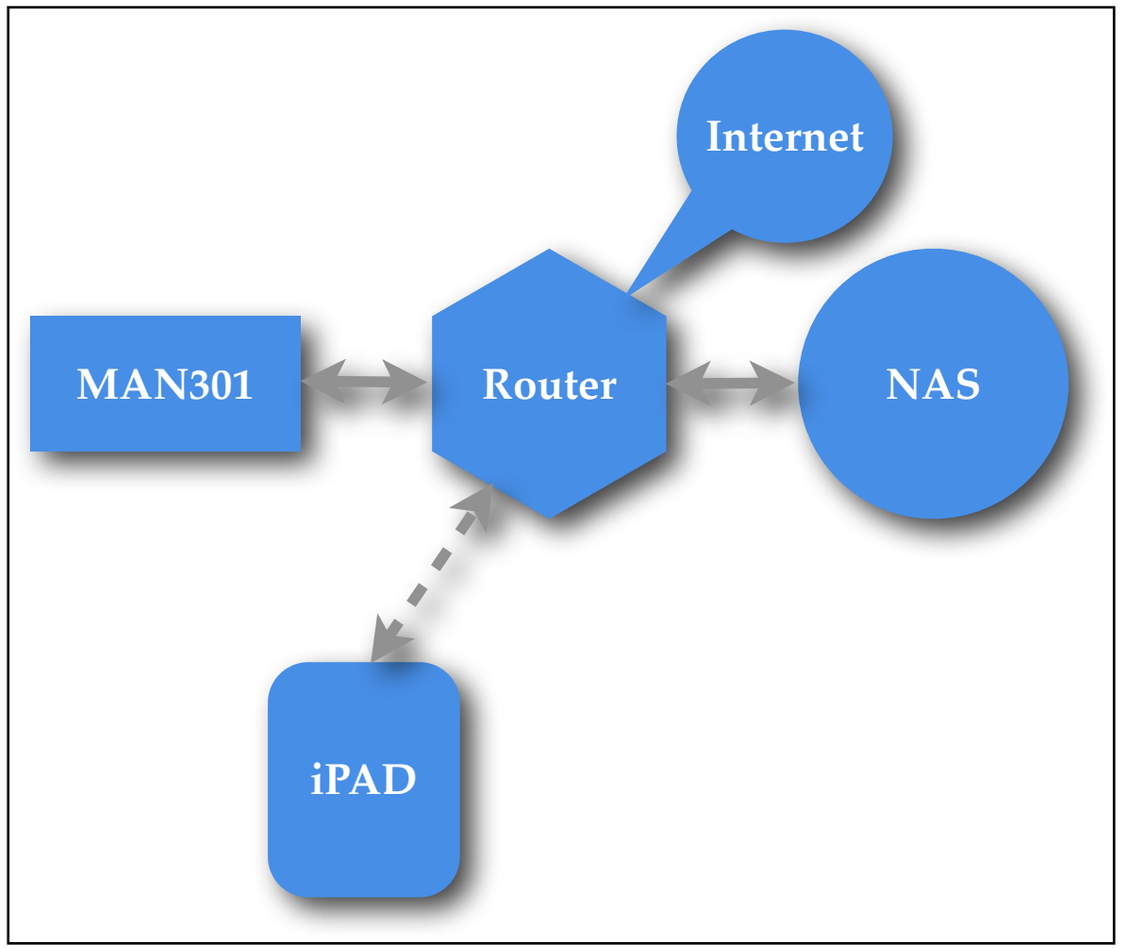
You use the MAN301 for Album Playback only:



This configuration can be as simple as shown above, but optionally it can be used with an Internet connection for fetching the metadata of the Album played. I.e. it then shows the track information and cover art of the Album you are playing.

Select one of the Configurations 1 through 5 which resembles your setup most closely. Then read Chapter 4 / Section 1.

System setup, Configuration 1

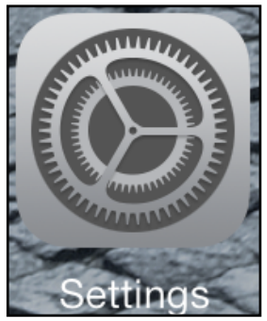


Configuration 1 connects the MAN301 to the Router via an Ethernet connection. The NAS also is connected to the Router. (You could also use e.g. a USB hard-drive connected to the MAN301‘s USB port instead of or in conjunction with the NAS). The iPad is WiFi connected to the Router. The iPad could also be WiFi connected to the MAN301 if this is more convenient, e.g. because of limited WiFi reach. That then would be Configuration 2, i.e. proceed to Section 4 in that case.

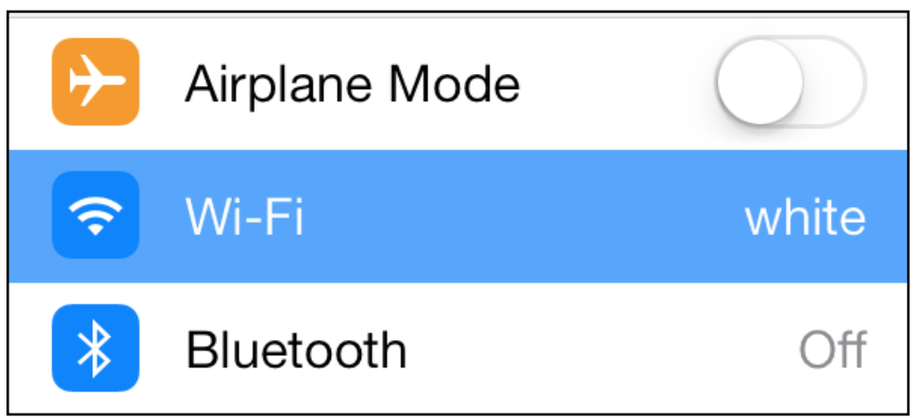
After you have wired the system as shown on the left and all units are powered, the next task is to establish a connection between the iPad and the MAN301 unit.

As you see in the configuration picture on the left, the iPad talks to the WiFi router. So if not already done:

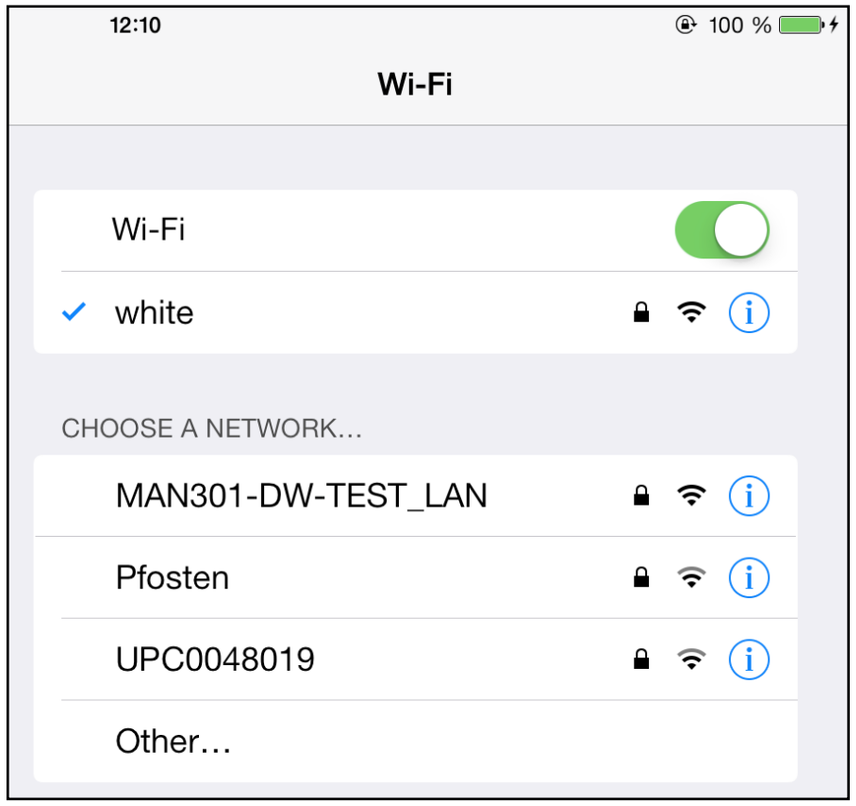
Open the „Settings” app on your iPad



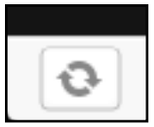
and select the WiFi Settings.



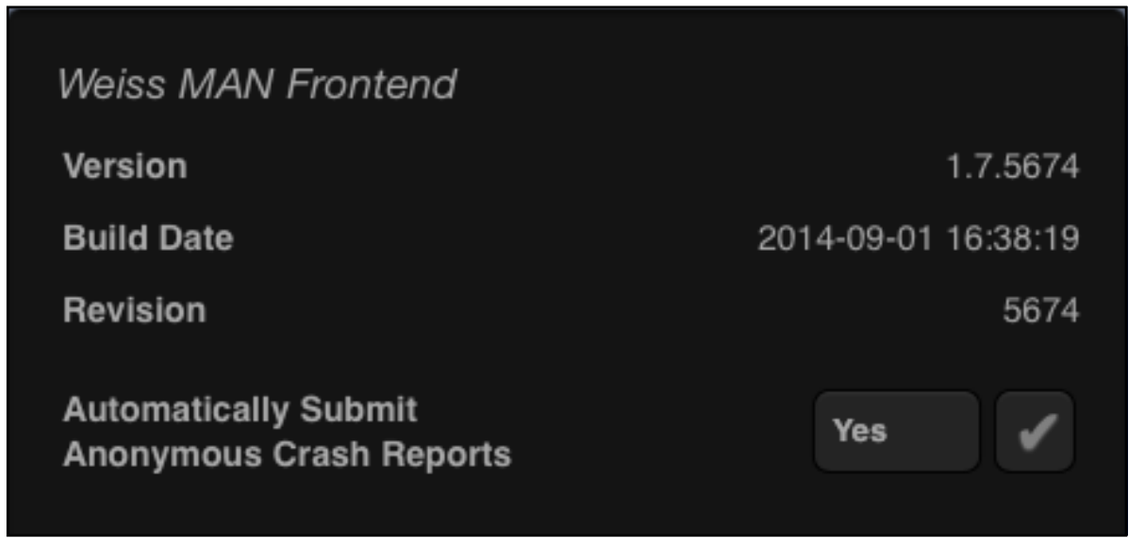
A screen with some resemblance to the one below shows up. Make sure the Wi-Fi is set to the ON position. If you have a WiFi router working, then you should see its **SSID** in the table. (The SSID of the WiFi router in this example is „white“). Connect to that network. You will need to know the password for the router‘s SSID to connect.



Once the iPad is connected to the WiFi you are ready to start the Weiss MAN app. At first startup a screen showing the MAN301 unit(s) on your network should appear. It looks like this:

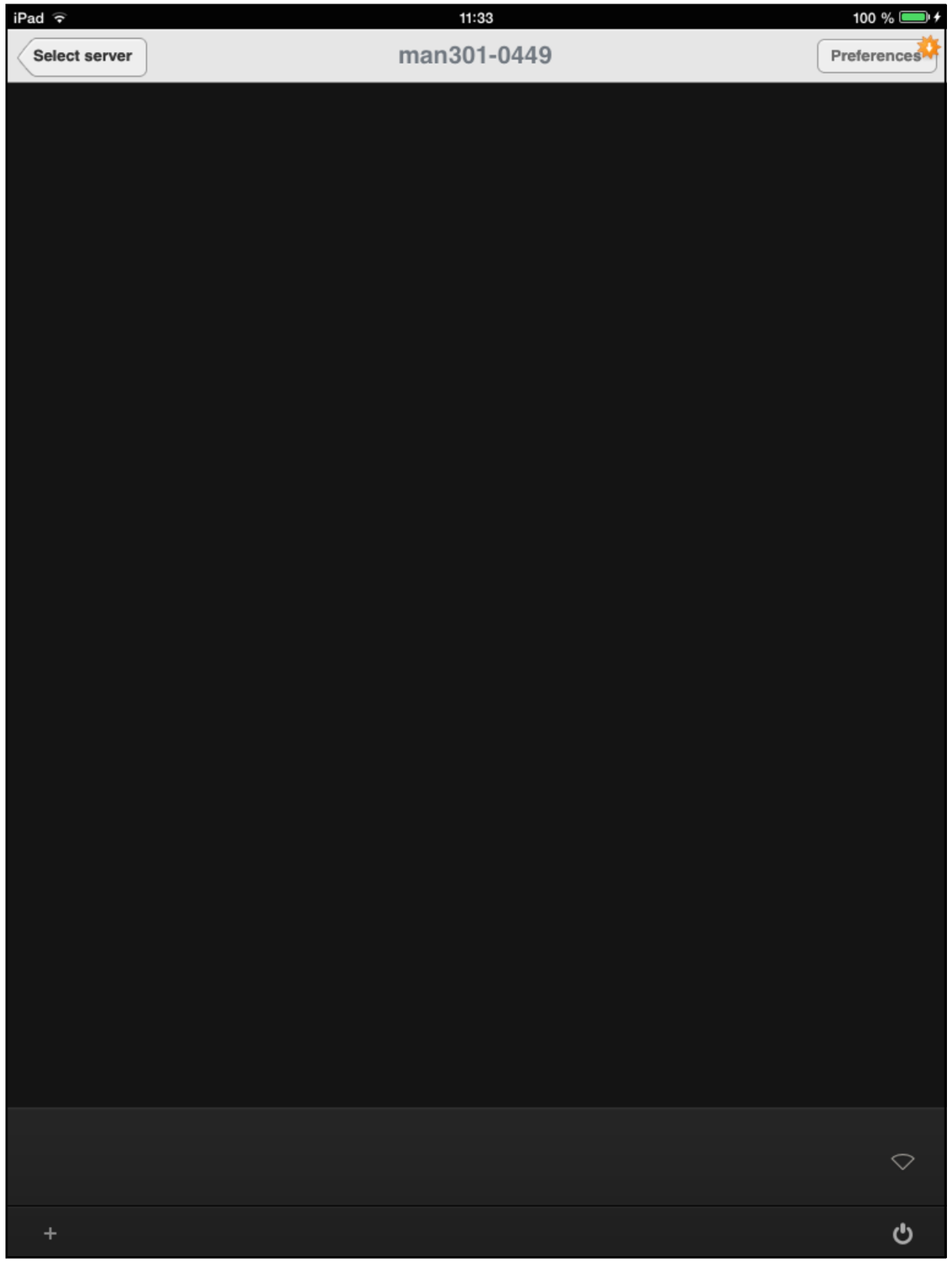
If you have more than one MAN301 unit on the network they will all be shown on the screen above (provided they are connected to the same network). If you do not see any MAN301 then tap on the  pad in the lower right corner of the screen to refresh the screen. Eventually the MAN301 unit(s) should show up with its appropriate serial number. If your MAN301 unit still does not show up try to close the iPad Weiss MAN app and restart it. (Closing is done via a double click on the iPad's Home button and then tap and hold the finger on the Weiss MAN icon until the icon wiggles. Then close the app.)
By tapping and holding the finger on one of the MAN301 icons that unit can be made the preferred unit.

If you tap on the pad the following screen shows up:

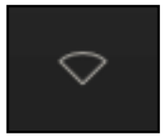


This shows the current version of the „Weiss MAN **Frontend**" (this is the Weiss MAN app). You may also chose to automatically submit any crash reports of the Weiss MAN app to us at Weiss Engineering. These reports do not contain any personal data from your iPad, they contain data from the Weiss MAN app at the time of the app crashing and thus help us to solve the problem which has led to the crash. We suggest to allow your Weiss MAN app to send that information to us.

Now tap on the MAN301 symbol to select that unit for playback etc.
This will show an empty screen like this:



The shut down pad in the lower right corner lets you switch off the MAN301 from within the app, switching on the MAN301 has to be done via its front panel switch though.

The  indicator in the lower right shows whether there is any uplink to a WiFi network active. The uplink is disabled in Configuration 1 as the MAN301 is connected to the Router via an Ethernet cable.

The

pad enters a setup page for a few very basic setup items.

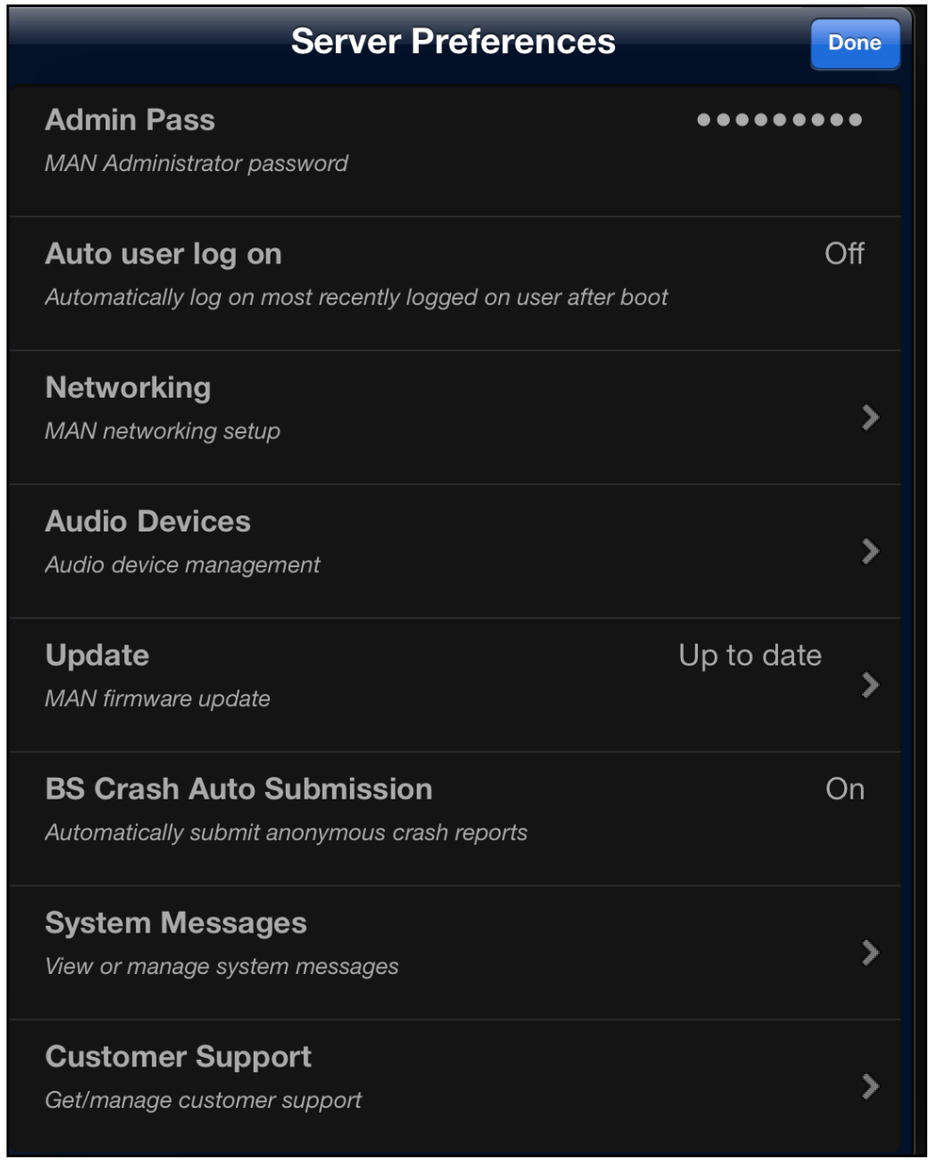
If the Preferences pad looks like this:

then there is a new firmware for the MAN301 available for download.

Tap on the Preferences pad and then enter the Admin password which is wh10admin.

NOTE: MAN301 Admin default password: wh10admin

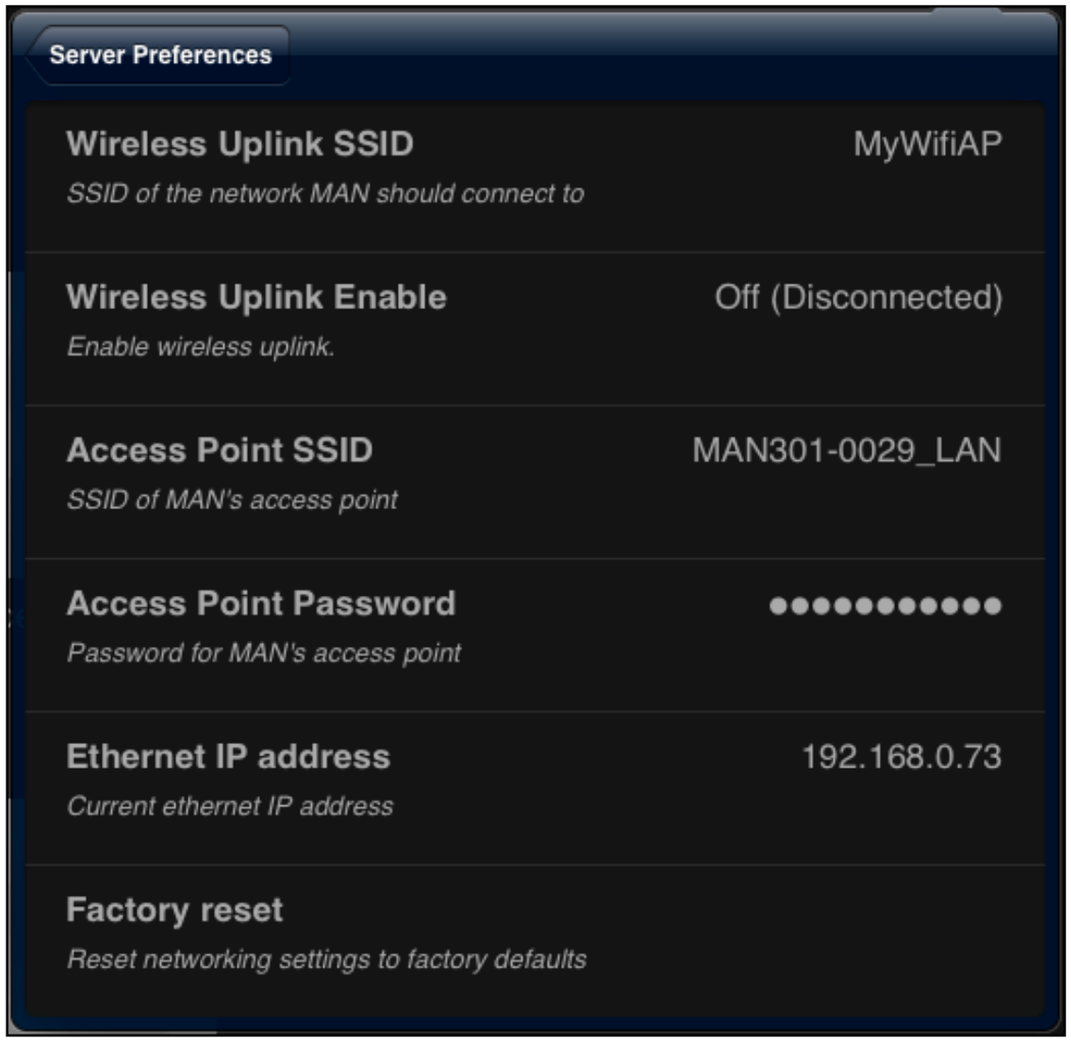
This brings up a screen as follows:



- The **„Admin Pass"** lets you select a different **administrator** password. **Note: If you decide to change the administrator password, make sure not to forget it!**

- The **„Auto user log on"** allows to set the MAN301 such that it logs on the most recent user automatically. This comes handy if there is only one user set up. The main advantage is, that the library / playlist display is refreshing quicker if auto user log on is enabled.

- The **„Networking"** entry allows to set up the MAN301 depending on the system architecture you have chosen in Section 2. Tapping on Networking reveals a page similar to this:



Usually you do not need to change anything on this page. The Uplink is disabled in Configuration 1, it can not be enabled. Here are the details to this page:

1. The „Wireless Uplink" entries are explained in the sections where the Configurations with Uplink enabled are described.

2. The „Access Point" entries show the SSID and password of the MAN301 access point. You need those if you set up the system such that the iPad is connected to the MAN301 directly. The entries are described in the appropriate sections.

3. The „Ethernet IP address" shows the IP address the MAN301 has got from the DHCP server, i.e. typically this is the router it is connected to.

4. The „factory reset" resets all network settings to the original settings when the MAN301 left the factory.

The next entry in the Server Preferences is the **„Audio Devices"** pad. Tapping on it reveals a screen similar to this:

Here the firmware of the audio device can be updated. „Audio device" means the currently active audio interface for playback from the MAN301. This normally is the audio interface internal to the MAN301 with its AES/EBU and S/PDIF and (optionally) analog connections. But it could also be e.g. a Weiss DAC202 D/A converter connected to the MAN301 via Firewire. This DAC202 would show up in the window above and could thus be updated with new firmware via the MAN301. The window „Latest Release" on the right hand side above reflects the currently available firmware on our web server. I.e. the MAN301 has to be connected to the Internet to be able to fetch the firmware. With the release of a new MAN301 base station software, any possible change in the firmware for the MAN301 internal audio device will be automatically installed. But a firmware update can also be

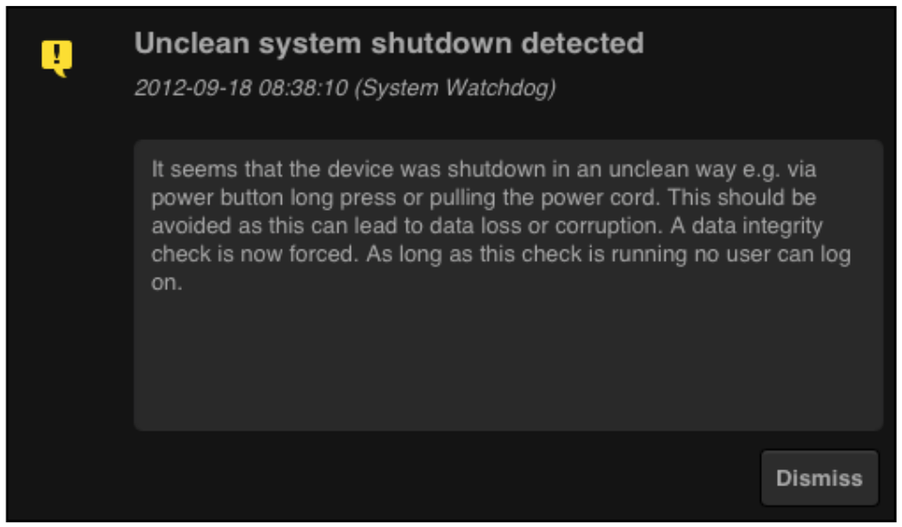
done manually by tapping on the Update pad. After updating, the MAN301 has to be rebooted in order to reflect the new firmware version.

- The next entry in the Server Preferences is the **„Update"** pad. Tapping on it reveals a screen similar to this:

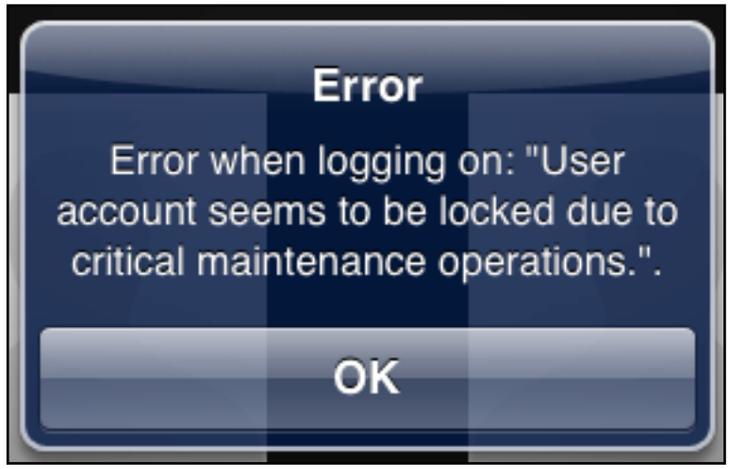
This allows you to update the MAN301 software via a download from the Weiss server. See Chapter 6, Section 1 for details. Do not proceed with updating before you have read Chapter 6, Section 1.

- The next entry in the Server Preferences is the **„BS Crash Auto Submission"**.
  This allows the BS (Base Station = MAN301) to report any program bugs to us at Weiss. These reports do not contain any personal data from your iPad or MAN301, they contain data from the MAN301 at the time of the occurrence of the software crashing and thus help us to solve the problem which has led to the crash. We suggest to allow your Weiss MAN app to send that information to us.

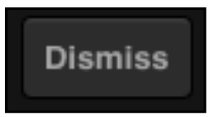
- The next entry is the **„System Messages"**, where system messages are shown in case there was a severe error detected. Such a message can look like this:



In this case the MAN301 was not closed properly and thus the databases may be corrupted. The MAN301 then restores the data bases automatically. No user can log in until the databases are restored. The restoring process may take a few minutes. If an attempt to log in is made before the restoring has finished, this message is shown:

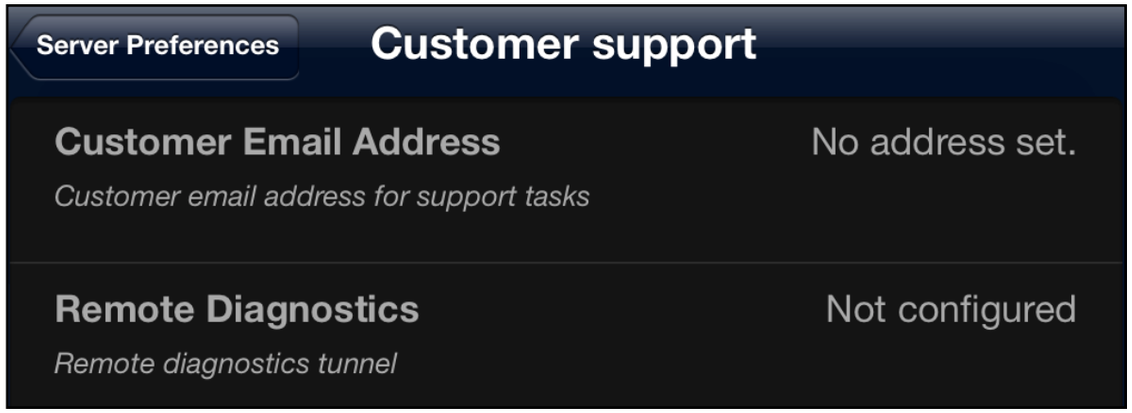


Simply wait and try again later.

The 

pad allows to delete the system message.

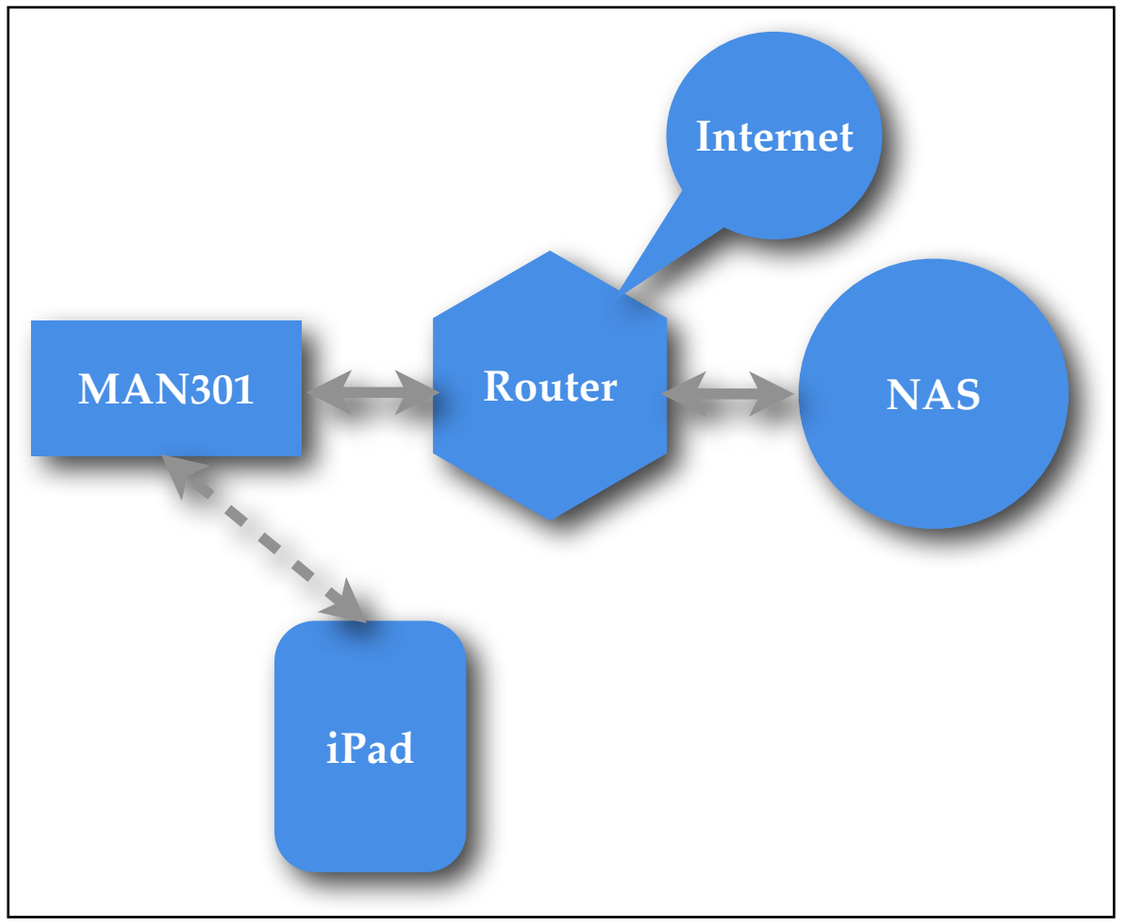
- The last entry is the **„Customer Support“**, where it is possible to set up a support channel to Weiss Engineering via the Internet. Such a channel allows us to analyze your MAN301 and the associated system in order to trouble shoot the setup. This feature is meant for use with severe problems which cannot be solved via email or phone communication. The associated window looks like this:



The configuration of the customer support is straightforward once required.

Now that we have done the basic system configuration, user accounts can be added. This is described in Section 7.

System setup, Configuration 2

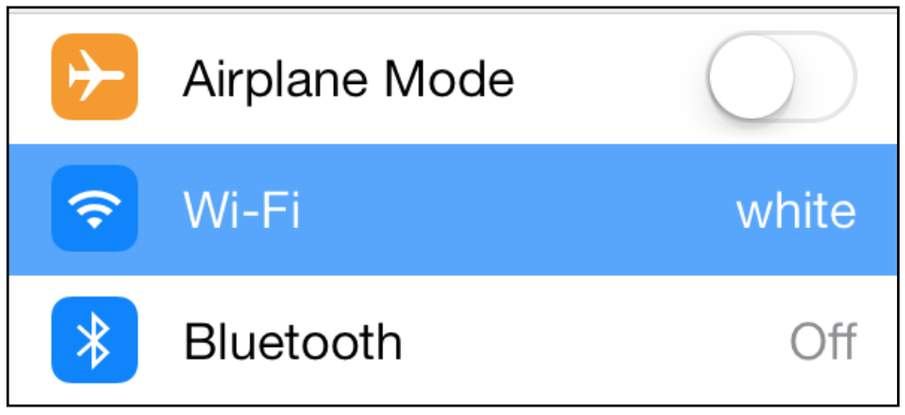


Configuration 2 connects the MAN301 to the Router via an Ethernet connection. The iPad is WiFi connected to the MAN301 access point.

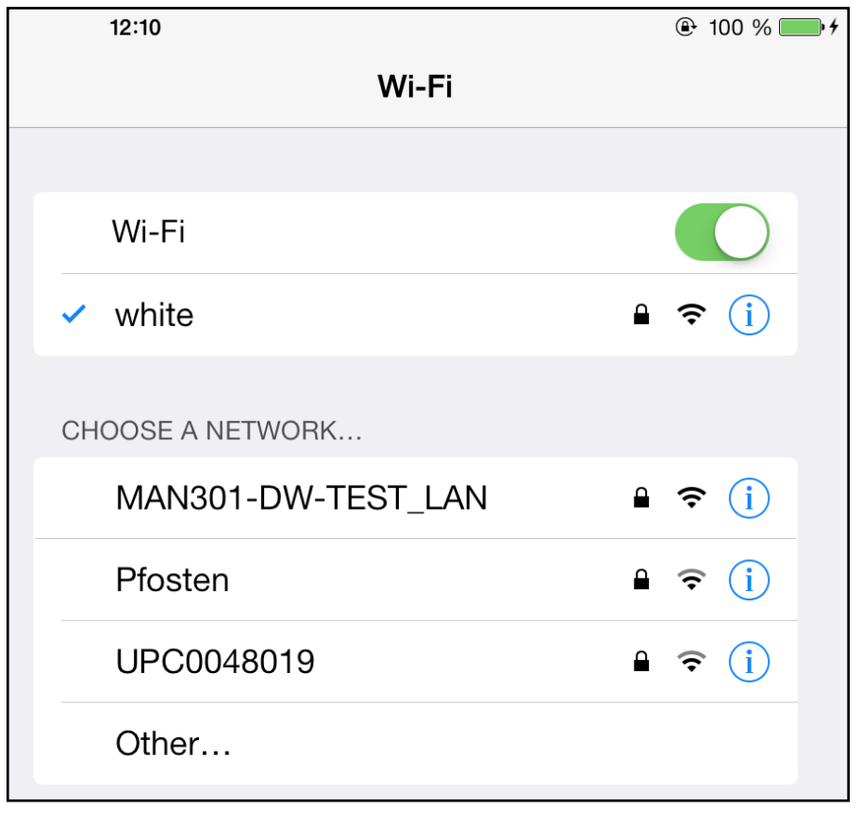
After you have wired the system as shown on the left and all units are powered, the next task is to establish a connection between the iPad and the MAN301 unit.
As you see in the configuration picture on the left, the iPad talks to the MAN301. So:

Open the „Settings" app on your iPad

and select the WiFi Settings.

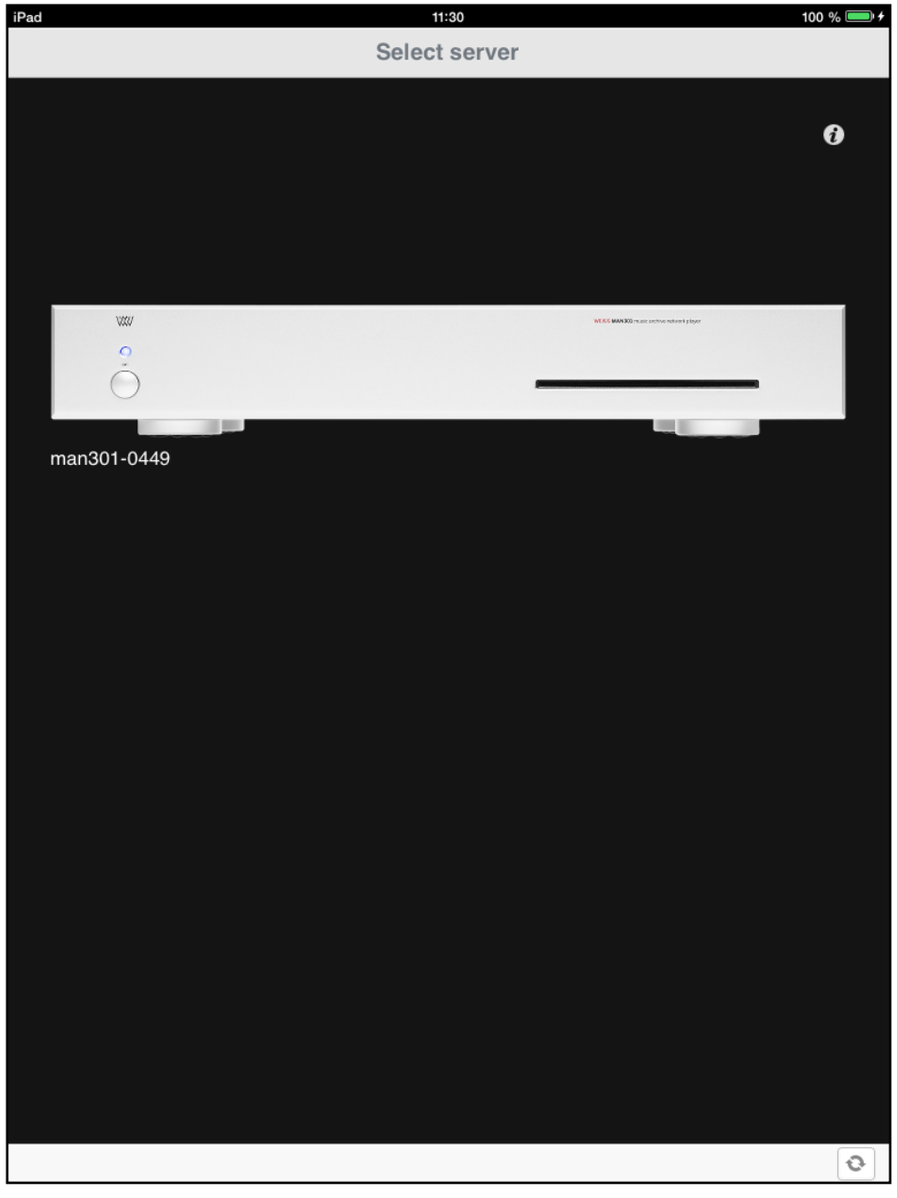


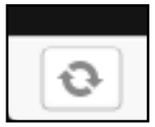
A screen with some resemblance to the one below shows up. Make sure the Wi-Fi is set to the ON position.
To connect the iPad to the MAN301 directly, tap on the MAN301 entry in the table. In the example below it is the MAN301-DW-TEST_LAN entry. (The SSID of your MAN301 you can set on a setup page described further down if you prefer to have another SSID for the MAN301). The default SSID is MAN301-xxxx_LAN, the xxxx denotes the serial number of your MAN301 unit minus 1000. Of course the MAN301 unit has to be switched on in order to appear in the list. You will be asked for the password, which is factory set to **WeissMAN301**. Make sure to type in this password exactly as given, including proper upper/lower case.



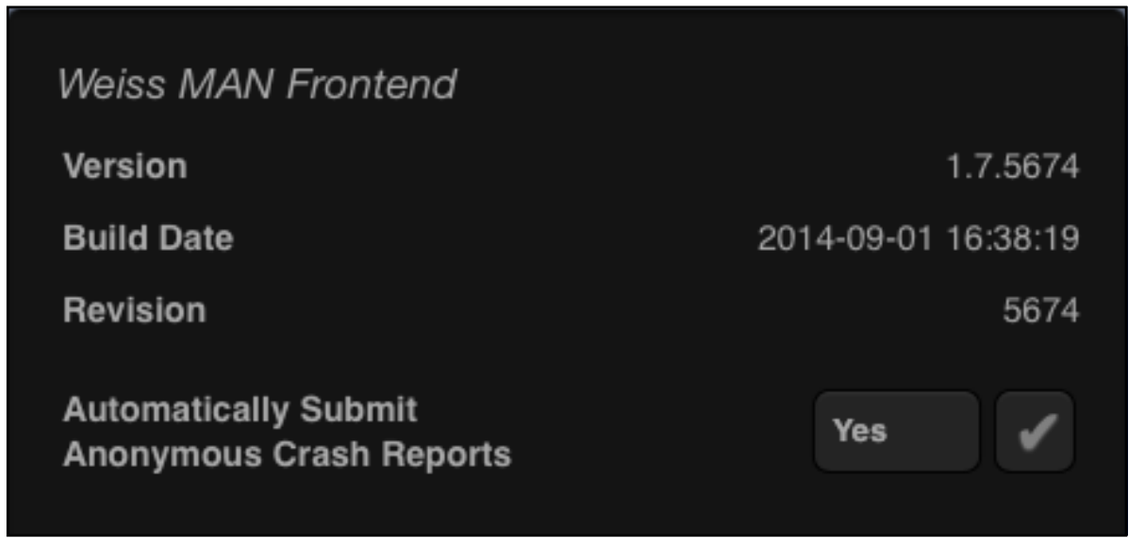
NOTE: MAN301 default SSID: MAN301-xxxx_LAN
default password: WeissMAN301

Once the iPad is connected to the proper WiFi you are ready to start the Weiss MAN app. At first startup a screen showing the MAN301 unit(s) on your network should appear. It looks like this:



If you have more than one MAN301 unit on the network they will all be shown on the screen above (provided they are connected to the same network). If you do not see any MAN301 then tap on the  pad in the lower right corner of the screen to refresh the screen. Eventually the MAN301 unit(s) should show up with its appropriate serial number. If your MAN301 unit still does not show up try to close the iPad Weiss MAN app and restart it. (Closing is done via a double click on the iPad's Home button and then tap and hold the finger on the Weiss MAN icon until the icon wiggles. Then close the app.)
By tapping and holding the finger on one of the MAN301 icons that unit can be made the preferred unit.

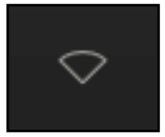
If you tap on the pad the following screen shows up:



This shows the current version of the „Weiss MAN Frontend" (this is the Weiss MAN app). You may also chose to automatically submit any crash reports of the Weiss MAN app to us at Weiss Engineering. These reports do not contain any personal data from your iPad, they contain data from the Weiss MAN app at the time of the app crashing and thus help us to solve the problem which has led to the crash. We suggest to allow your Weiss MAN app to send that information to us.

Now tap on the MAN301 symbol to select that unit for playback etc.
This will show an empty screen like this:

The shut down pad in the lower right corner lets you switch off the MAN301 from within the app, switching on the MAN301 has to be done via its front panel switch though.

The  indicator in the lower right shows whether there is any uplink to a WiFi network active. The uplink is disabled in Configuration 2 as the MAN301 is connected to the Router via an Ethernet cable.

The

pad enters a setup page for a few very basic setup items.

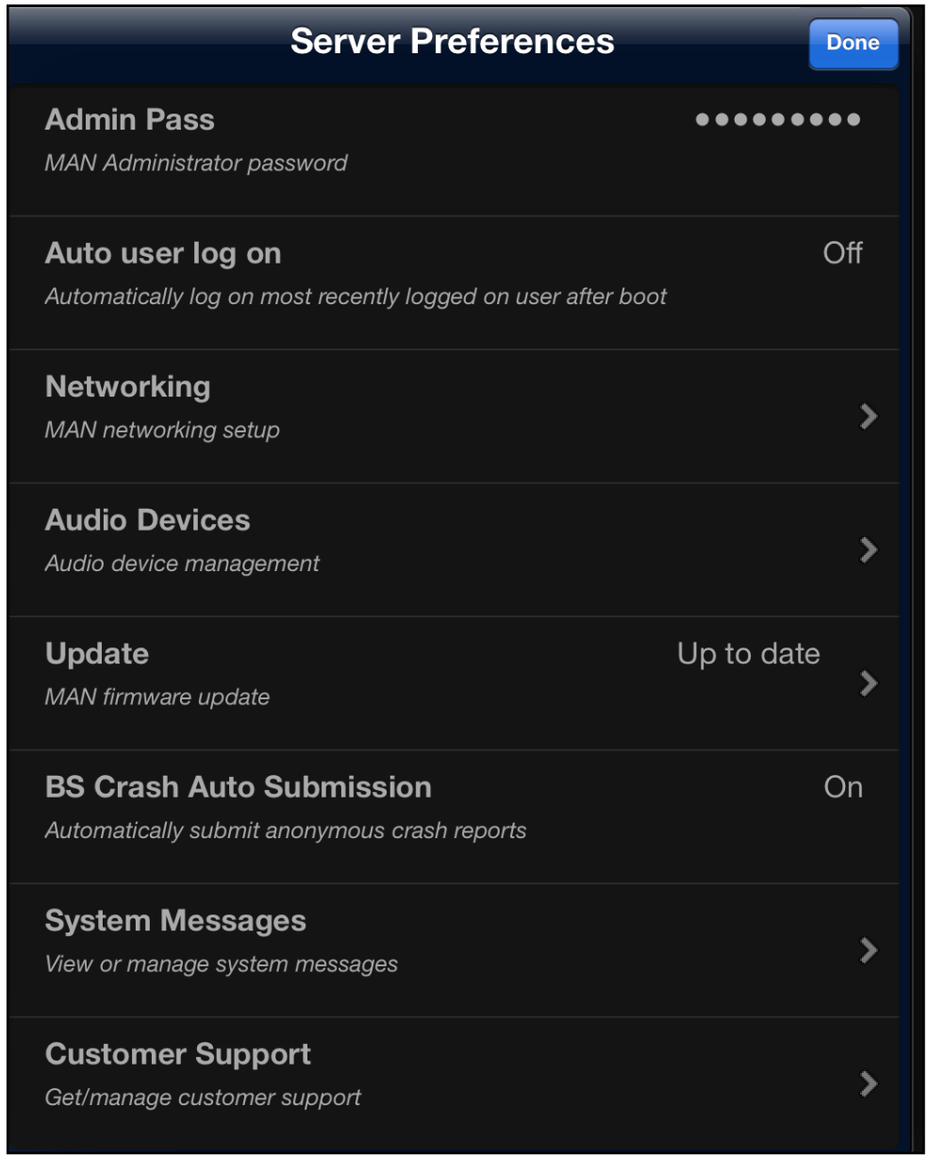
If the Preferences pad looks like this:

then there is a new firmware for the MAN301 available for download.

Tap on the Preferences pad and then enter the Admin password which is wh10admin.

NOTE: MAN301 Admin default password: wh10admin

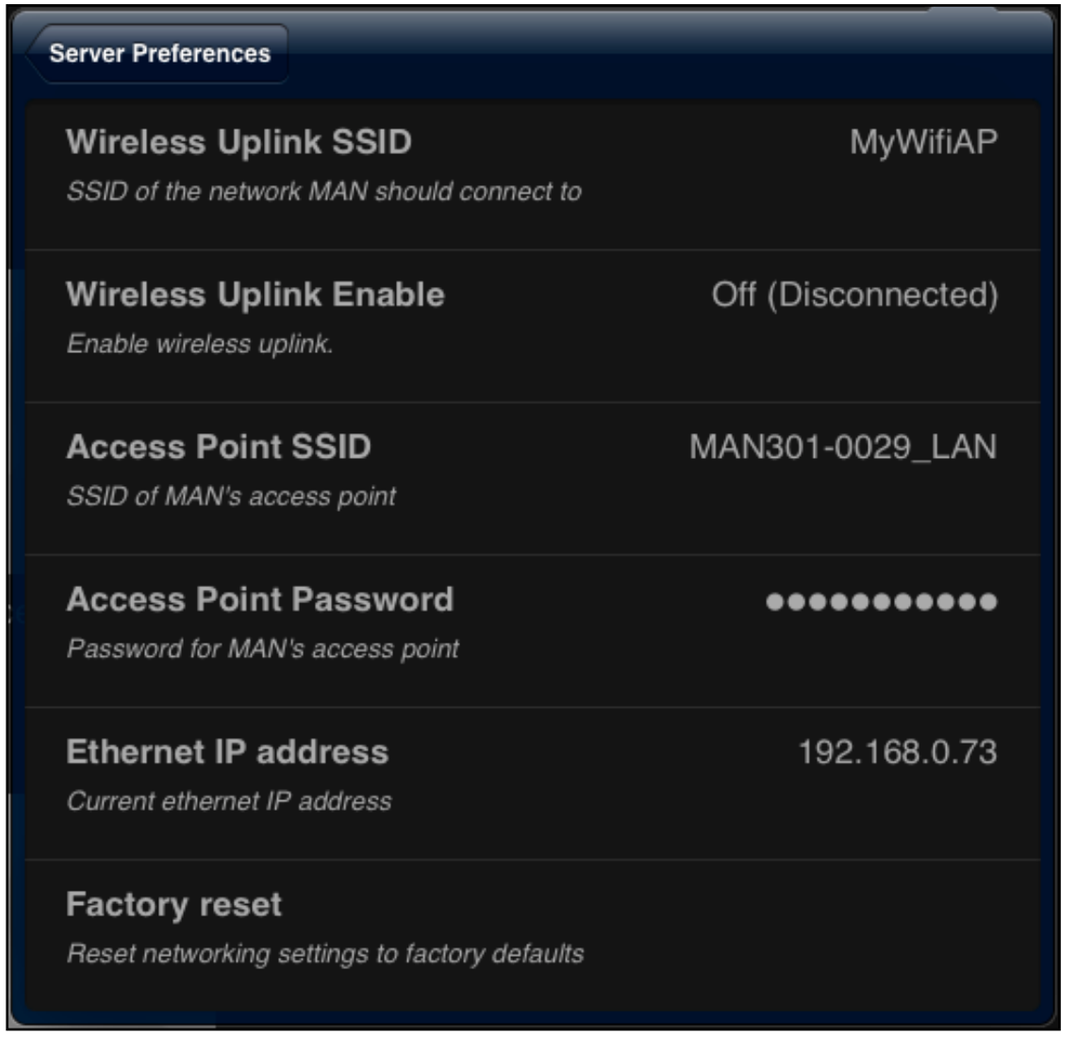
This brings up a screen as follows:



- The **„Admin Pass”** lets you select a different administrator password. **Note: If you decide to change the administrator password, make sure not to forget it!**

- The **„Auto user log on”** allows to set the MAN301 such that it logs on the most recent user automatically. This comes handy if there is only one user set up. The main advantage is, that the library / playlist display is refreshing quicker if auto user log on is enabled.

- The **„Networking”** entry allows to set up the MAN301 depending on the system architecture you have chosen in Section 2. Tapping on Networking reveals this page:



Usually you do not need to change anything on this page. The Wireless Uplink is disabled in Configuration 2, it can not be enabled.
Here are the details to this page:

1. The „Wireless Uplink" entries are explained in the sections where the Configurations with Uplink enabled are described.

2. The „Access Point" entries show the SSID and password of the MAN301 access point. Both SSID and password can be changed if preferred.

3. The „Ethernet IP address" shows the IP address the MAN301 has got from the DHCP server, i.e. typically this is the router it is connected to.

4. The „factory reset" resets all network settings to the original settings when the MAN301 left the factory.

- The next entry in the Server Preferences is the **„Audio Devices"** pad. Tapping on it reveals a screen similar to this:

Here the firmware of the audio device can be updated. „Audio device" means the currently active audio interface for playback from the MAN301. This normally is the audio interface internal to the MAN301 with its AES/EBU and S/PDIF and (optionally) analog connections. But it could also be e.g. a Weiss DAC202 D/A converter connected to the MAN301 via Firewire. This DAC202 would show up in the window above and could thus be updated with new firmware via the MAN301. The window „Latest Release" on the right hand side above reflects the currently available firmware on our web server. I.e. the MAN301 has to be connected to the Internet to be able to fetch the firmware. With the release of a new MAN301 base station software, any possible change in the firmware for the MAN301 internal audio device will

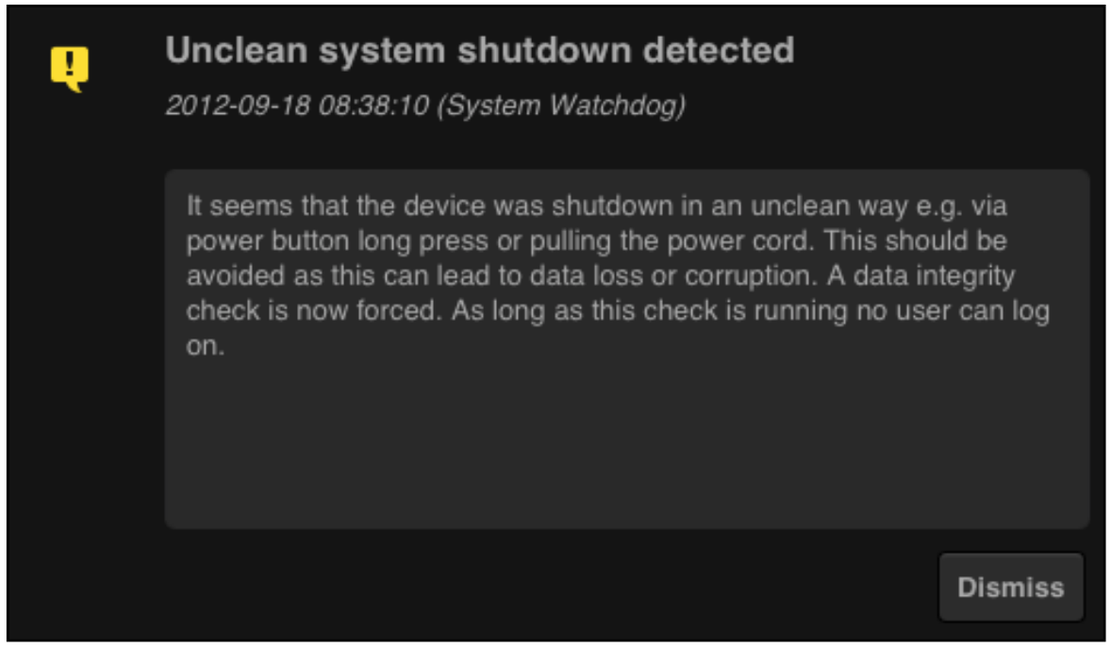
be automatically installed. But a firmware update can also be done manually by tapping on the Update pad. After updating, the MAN301 has to be rebooted in order to reflect the new firmware version.

- The next entry in the Server Preferences is the **„Update"** pad. Tapping on it reveals a screen similar to this:

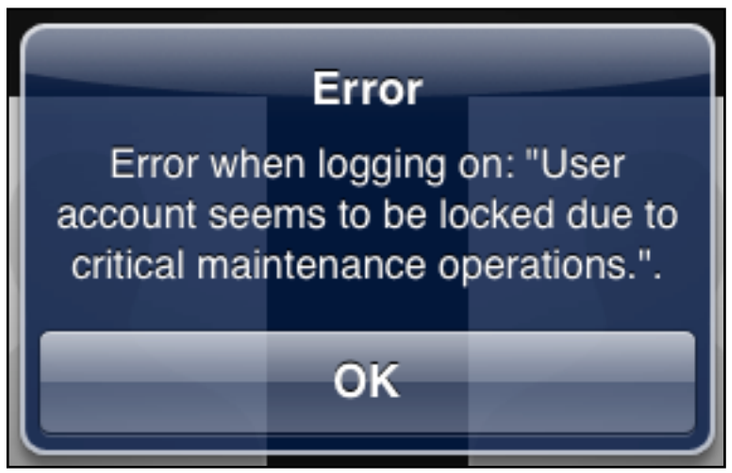
This allows you to update the MAN301 software via a download from the Weiss server. See Chapter 6, Section 1 for details. Do not proceed with updating before you have read Chapter 6, Section 1.

- The next entry in the Server Preferences is the **„BS Crash Auto Submission"**.
  This allows the BS (Base Station = MAN301) to report any program bugs to us at Weiss. These reports do not contain any personal data from your iPad or MAN301, they contain data from the MAN301 at the time of the occurrence of the software crashing and thus help us to solve the problem which has led to the crash. We suggest to allow your Weiss MAN app to send that information to us.

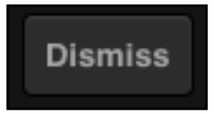
- The next entry is the **„System Messages"**, where system messages are shown in case there was a severe error detected. Such a message can look like this:



In this case the MAN301 was not closed properly and thus the databases may be corrupted. The MAN301 then restores the data bases. No user can log in until the databases are restored. The restoring process may take a few minutes. If an attempt to log in is made before the restoring has finished, this message is shown:

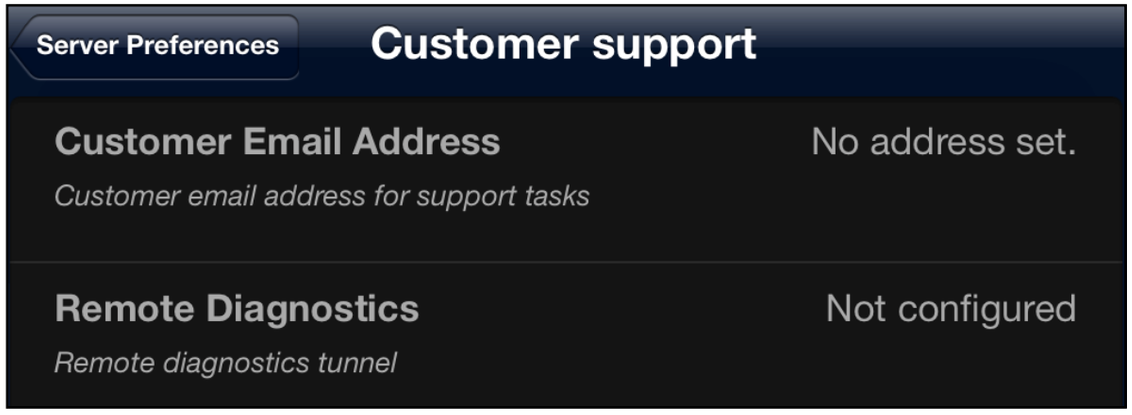


Simply wait and try again later.

The 

pad allows to delete the system message.

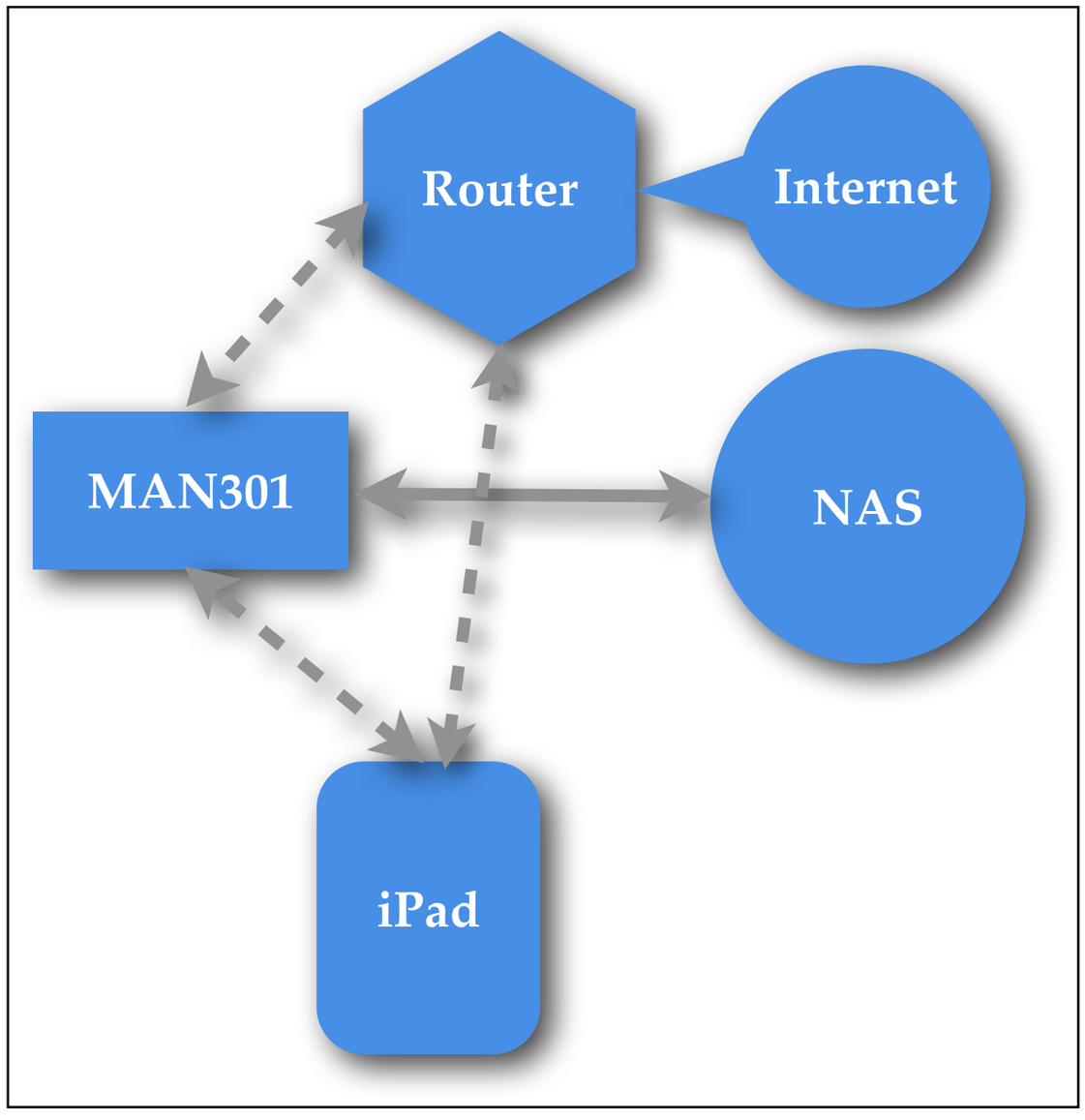
- The last entry is the **„Customer Support“**, where it is possible to set up a support channel to Weiss Engineering via the Internet. Such a channel allows us to analyze your MAN301 and the associated system in order to trouble shoot the setup. This feature is meant for use with severe problems which cannot be solved via email or phone communication. The associated window looks like this:



The configuration of the customer support is straightforward once required.

Now that we have done the basic system configuration, user accounts can be added. This is described in Section 7.

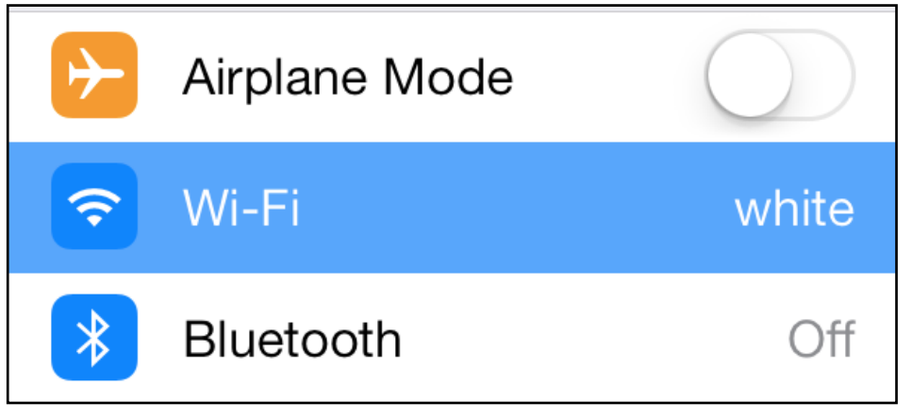
System setup, Configuration 4



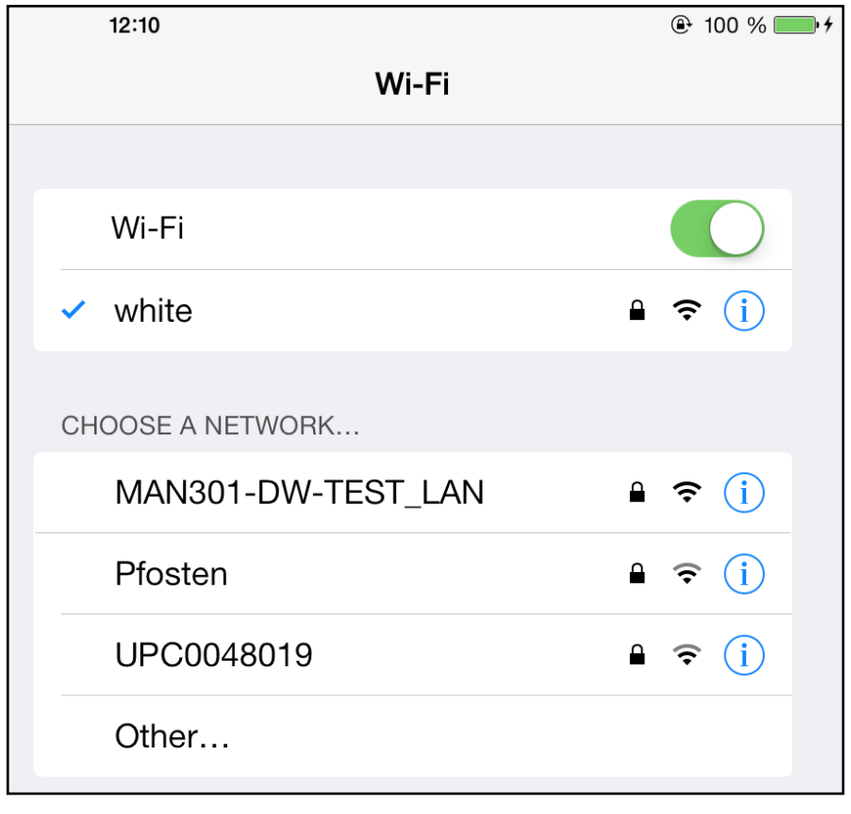
Configuration 4 connects the MAN301 to the Router via a WiFi uplink. The iPad is WiFi connected to the MAN301 access point or also to the WiFi Router.

After you have wired the system as shown on the left and all units are powered, the next task is to establish a connection between the iPad and the MAN301 unit. The iPad can later be connected directly to the WiFi Router if you prefer, but for setting up the MAN301 uplink to the WiFi Router the iPad needs to be connected to the MAN301 at first. **(Note: If the iPad is connected to the MAN301 as shown, the iPad won‘t be able to connect to the Internet, so after setting up the system you may prefer to connect the iPad to the WiFi Router in order to be able to connect to the Internet with the iPad.)** So:
Open the „Settings" app on your iPad

and select the WiFi Settings.

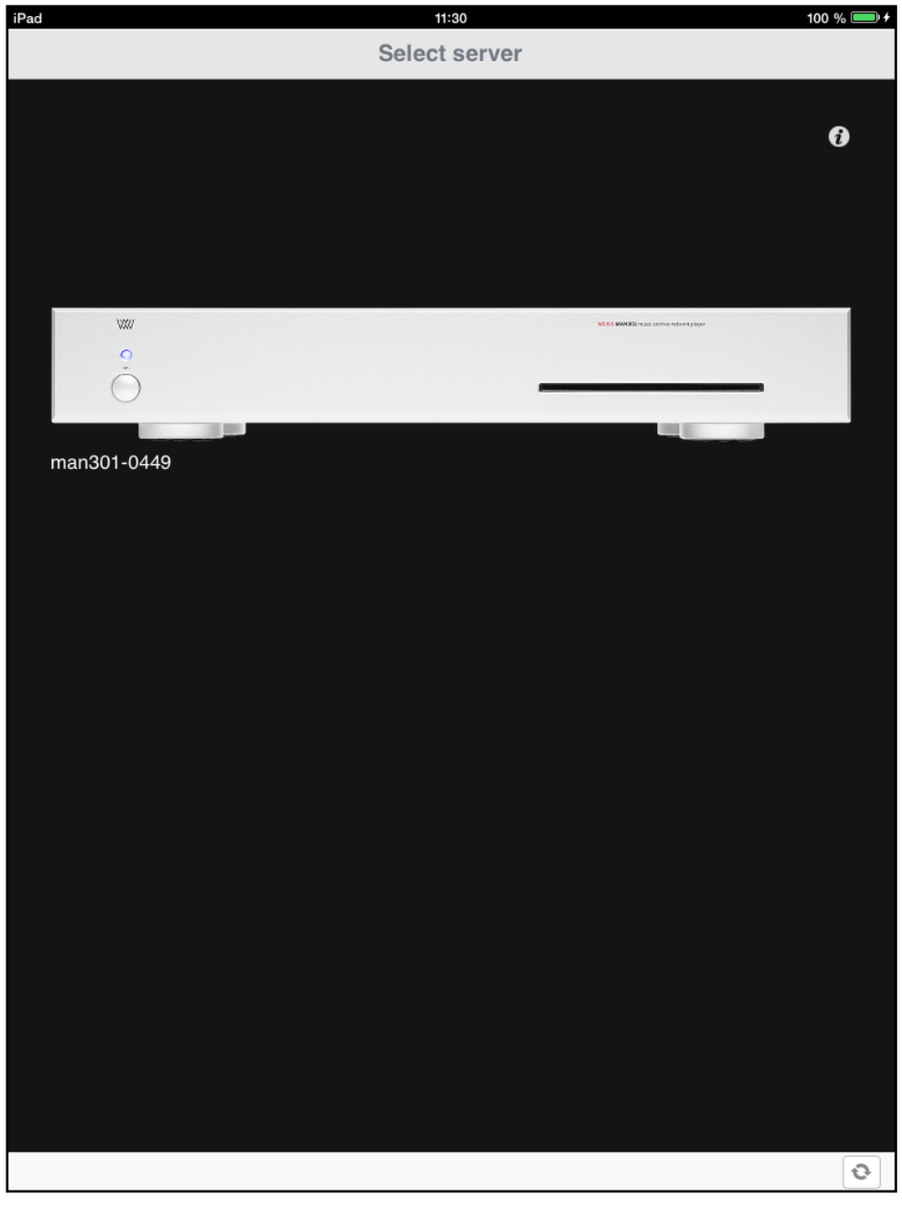


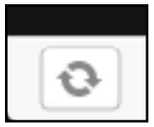
A screen with some resemblance to the one below shows up. Make sure the Wi-Fi is set to the ON position.
To connect the iPad to the MAN301 directly, tap on the MAN301 entry in the table. In the example below it is the MAN301-DW-TEST_LAN entry. (The SSID of your MAN301 you can set on a setup page described further down if you prefer to have another SSID for the MAN301). The default SSID is MAN301-xxxx_LAN, the xxxx denotes the serial number of your MAN301 unit minus 1000. Of course the MAN301 unit has to be switched on in order to appear in the list. You will be asked for the password, which is factory set to **WeissMAN301**. Make sure to type in this password exactly as given, including proper upper/lower case.



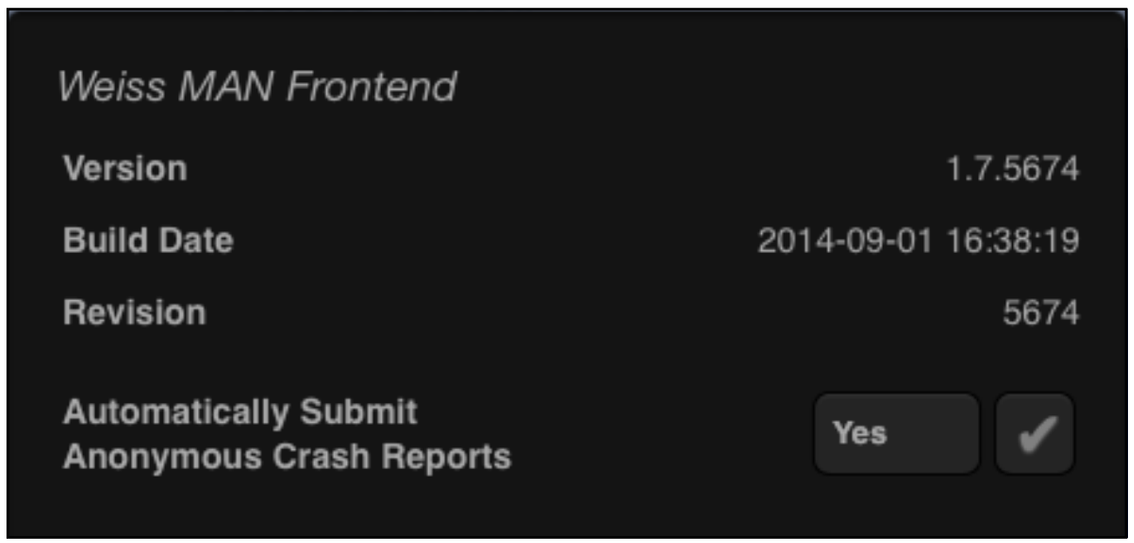
NOTE: MAN301 default SSID: MAN301-xxxx_LAN
default password: WeissMAN301

Once the iPad is connected to the proper WiFi you are ready to start the Weiss MAN app. At first startup a screen showing the MAN301 unit(s) on your network should appear. It looks like this:



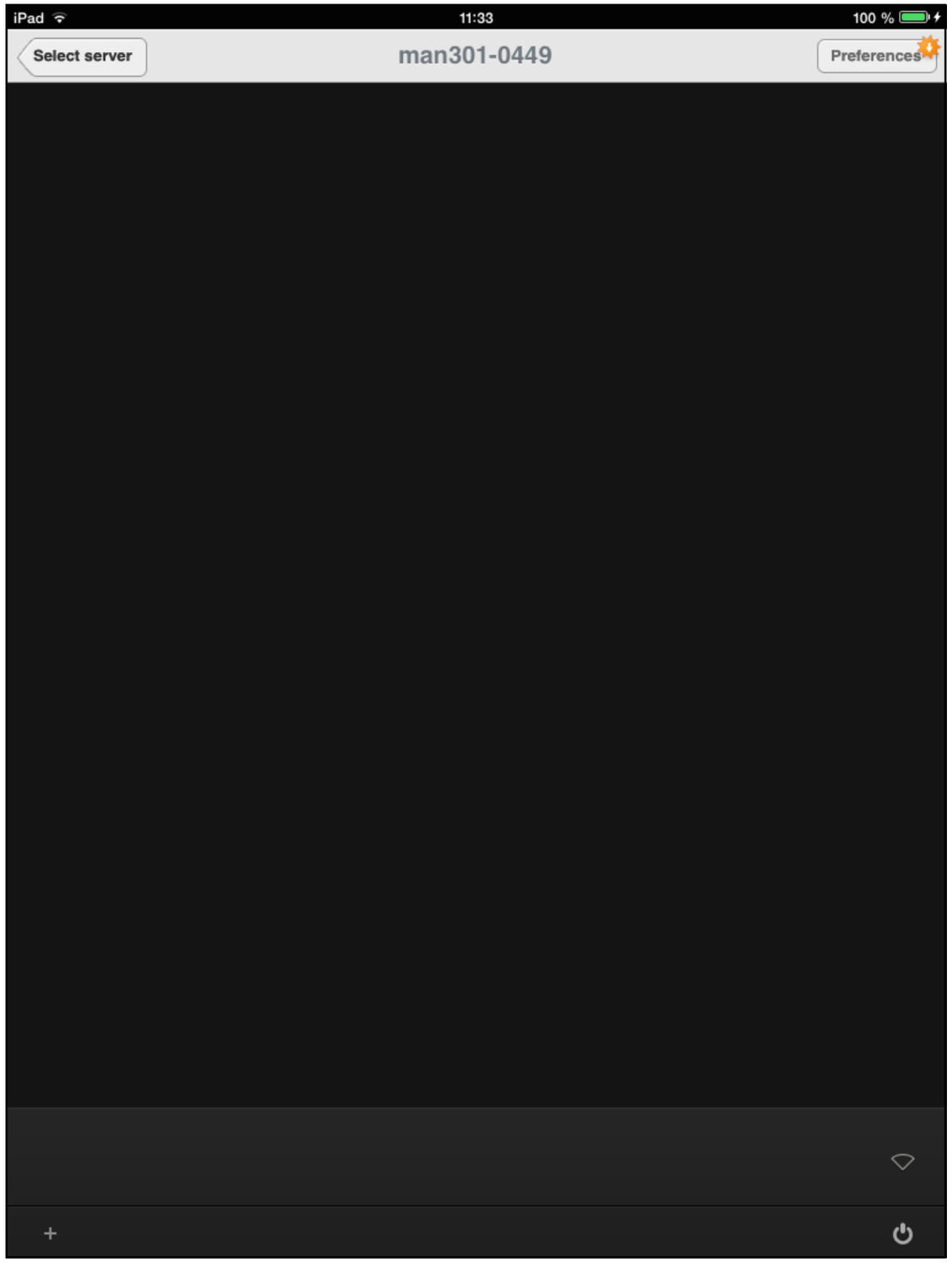
If you have more than one MAN301 unit on the network they will all be shown on the screen above (provided they are connected to the same network). If you do not see any MAN301 then tap on the  pad in the lower right corner of the screen to refresh the screen. Eventually the MAN301 unit(s) should show up with its appropriate serial number. If your MAN301 unit still does not show up try to close the iPad Weiss MAN app and restart it. (Closing is done via a double click on the iPad's Home button and then tap and hold the finger on the Weiss MAN icon until the icon wiggles. Then close the app). And / or switch off the iPad WiFi and then switch it on again.
By tapping and holding the finger on one of the MAN301 icons that unit can be made the preferred unit.

If you tap on the pad the following screen shows up:

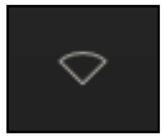


This shows the current version of the „Weiss MAN Frontend" (this is the Weiss MAN app). You may also chose to automatically submit any crash reports of the Weiss MAN app to us at Weiss Engineering. These reports do not contain any personal data from your iPad, they contain data from the Weiss MAN app at the time of the app crashing and thus help us to solve the problem which has led to the crash. We suggest to allow your Weiss MAN app to send that information to us.

Now tap on the MAN301 symbol to select that unit for playback etc.
This will show an empty screen like this:



The shut down pad in the lower right corner lets you switch off the MAN301 from within the app, switching on the MAN301 has to be done via its front panel switch though.

The  indicator in the lower right shows whether there is any uplink to a WiFi network active. To activate the uplink enter the Preferences menu as described below. The uplink will be activated for this Configuration 4.

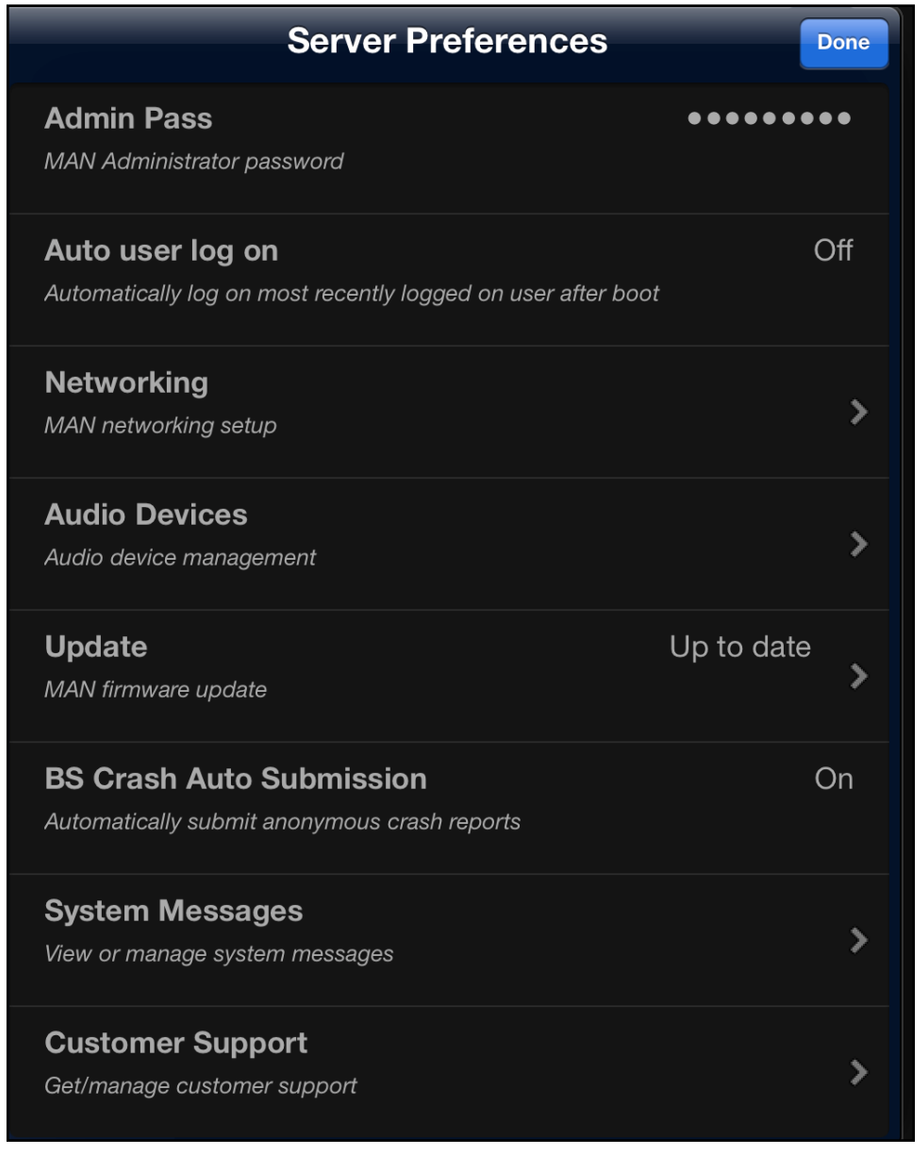
The pad enters a setup page for a few very basic setup items.

If the Preferences pad looks like this: then there is a new firmware for the MAN301 available for download.

Tap on the Preferences pad and then enter the Admin password which is wh10admin.

NOTE: MAN301 Admin default password: wh10admin

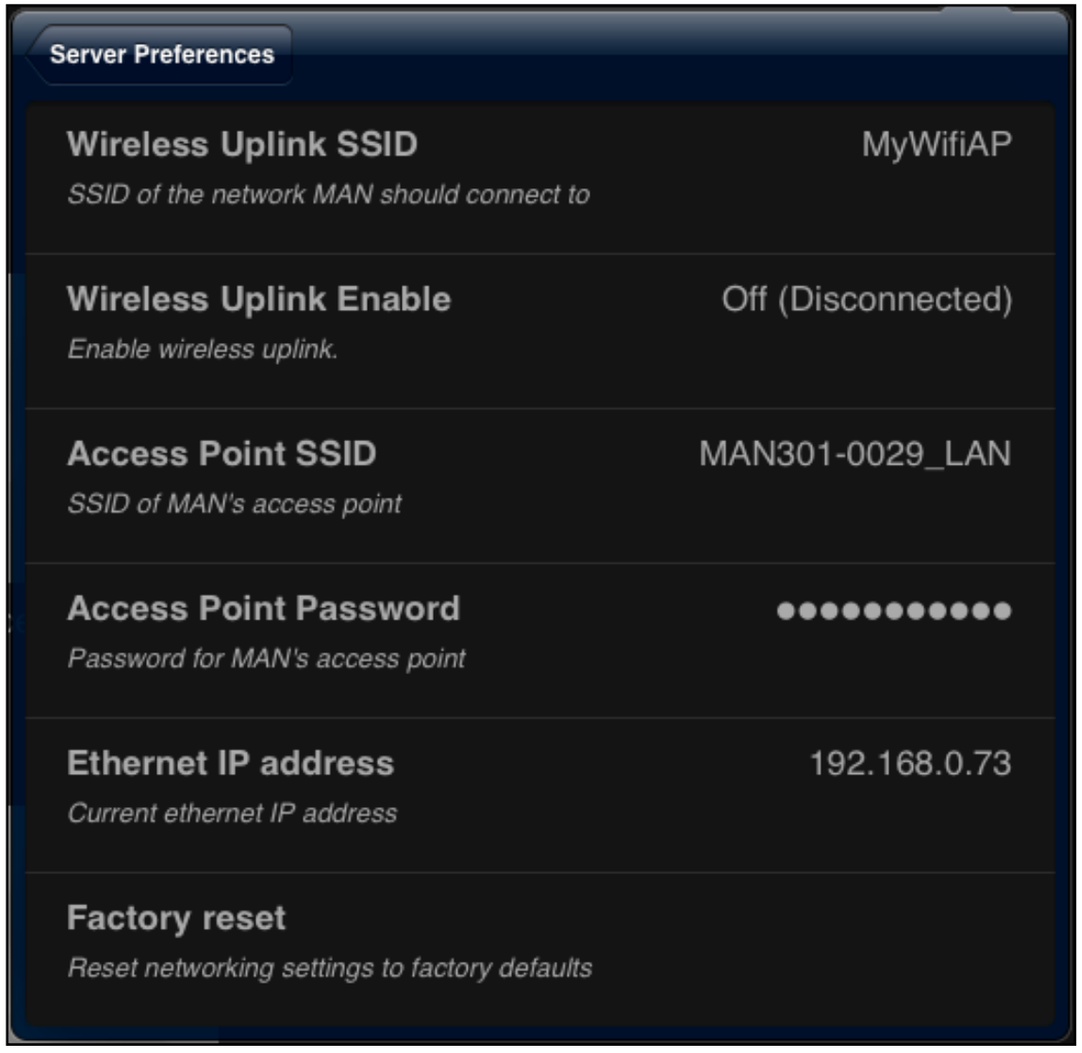
This brings up a screen as follows:



- The **„Admin Pass”** lets you select a different administrator password. **Note: If you decide to change the administrator password, make sure not to forget it!**

- The **„Auto user log on”** allows to set the MAN301 such that it logs on the most recent user automatically. This comes handy if there is only one user set up. The main advantage is, that the library / playlist display is refreshing quicker if auto user log on is enabled.

- The **„Networking”** entry allows to set up the MAN301 depending on the system architecture you have chosen in Section 2. Tapping on Networking reveals this page:



1. The „Wireless Uplink" entries you need for the Configuration 4 setup. **(Note, the uplink only works if the MAN301 is <u>not</u> connected to the network via an Ethernet cable):** To set up the uplink proceed as follows:
   - first enable the uplink by tapping on „Wireless Uplink Enable" and then select „on". It now scans for the available SSIDs. This may take some time (up to minutes), just wait until On (Scanning) is shown.
   - tap on „Wireless Uplink SSID" and select the SSID of your WiFi network (you may have to select Wireless Uplink SSID several times until your WiFi network SSID appears in the list); then enter the password for the WiFi network (SSID) you have selected.
   - Now wait until the connection is established. Enabling the uplink may temporarily switch off the access point, so the iPad may get disconnected. Simply reconnect it to the MAN301 in the Wi-Fi Networks page of the iPad Settings on the iPad. It may help to switch off the Wi-Fi on the iPad and then switch it on again. Note, it takes some time until the uplink is established for the first time (up to minutes). After establishing the uplink it is advisable to reboot the MAN301 unit.
   - **Note, if it is not possible to establish an uplink it may help to change the WiFi channel number in the access point (e.g. router) you try the MAN301 to connect to. Channels 12 or 13 may not work with the MAN301 at all. Chose a channel between 1 and 11.**

2. The „Access Point" entries show the SSID and password of the MAN301 access point. Both SSID and password can be changed if preferred. (This does not yet work in the current version).

3. The „Ethernet IP address" shows the IP address the MAN301 has got from the DHCP server.

4. The „factory reset" resets all network settings to the original settings when the MAN301 left the factory.

- The next entry in the Server Preferences is the **„Audio Devices"** pad. Tapping on it reveals a screen similar to this:

Here the firmware of the audio device can be updated. „Audio device" means the currently active audio interface for playback

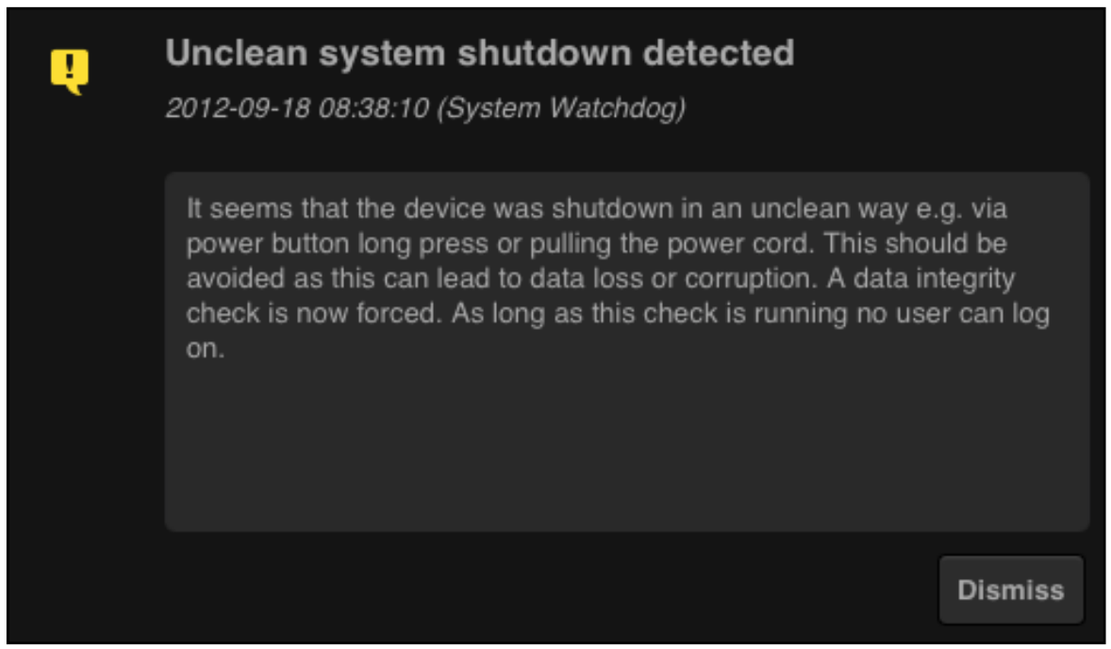
from the MAN301. This normally is the audio interface internal to the MAN301 with its AES/EBU and S/PDIF and (optionally) analog connections. But it could also be e.g. a Weiss DAC202 D/A converter connected to the MAN301 via Firewire. This DAC202 would show up in the window above and could thus be updated with new firmware via the MAN301. The window „Latest Release“ on the right hand side above reflects the currently available firmware on our web server. I.e. the MAN301 has to be connected to the Internet to be able to fetch the firmware. With the release of a new MAN301 base station software, any possible change in the firmware for the MAN301 internal audio device will be automatically installed. But a firmware update can also be done manually by tapping on the Update pad. After updating, the MAN301 has to be rebooted in order to reflect the new firmware version.

- The next entry in the Server Preferences is the **„Update”** pad. Tapping on it reveals a screen similar to this:

This allows you to update the MAN301 software via a download from the Weiss server. See Chapter 6, Section 1 for details. Do not proceed with updating before you have read Chapter 6, Section 1.

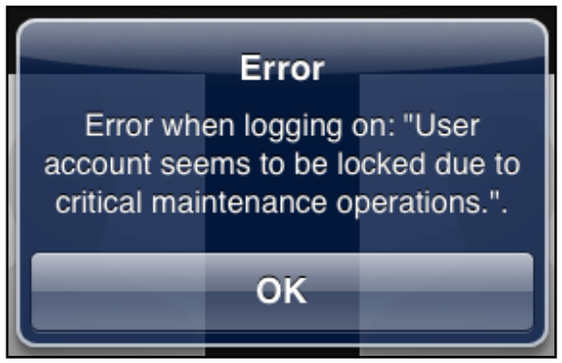
- The next entry in the Server Preferences is the **„BS Crash Auto Submission"**.
  This allows the BS (Base Station = MAN301) to report any program bugs to us at Weiss. These reports do not contain any personal data from your iPad or MAN301, they contain data from the MAN301 at the time of the occurrence of the software crashing and thus help us to solve the problem which has led to the crash. We suggest to allow your Weiss MAN app to send that information to us.

- The next entry is the **„System Messages"**, where system messages are shown in case there was a severe error detected. Such a message can look like this:

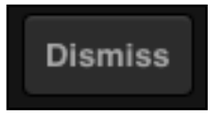


In this case the MAN301 was not closed properly and thus the databases may be corrupted. The MAN301 then restores the data bases. No user can log in until the databases are restored.

The restoring process may take a few minutes. If an attempt to log in is made before the restoring has finished, this message is shown:

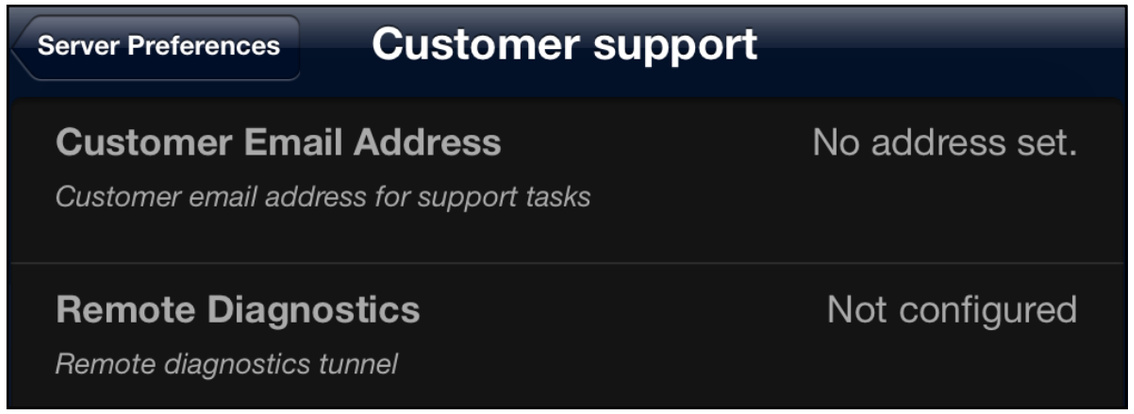


Simply wait and try again later.

The 

pad allows to delete the system message.

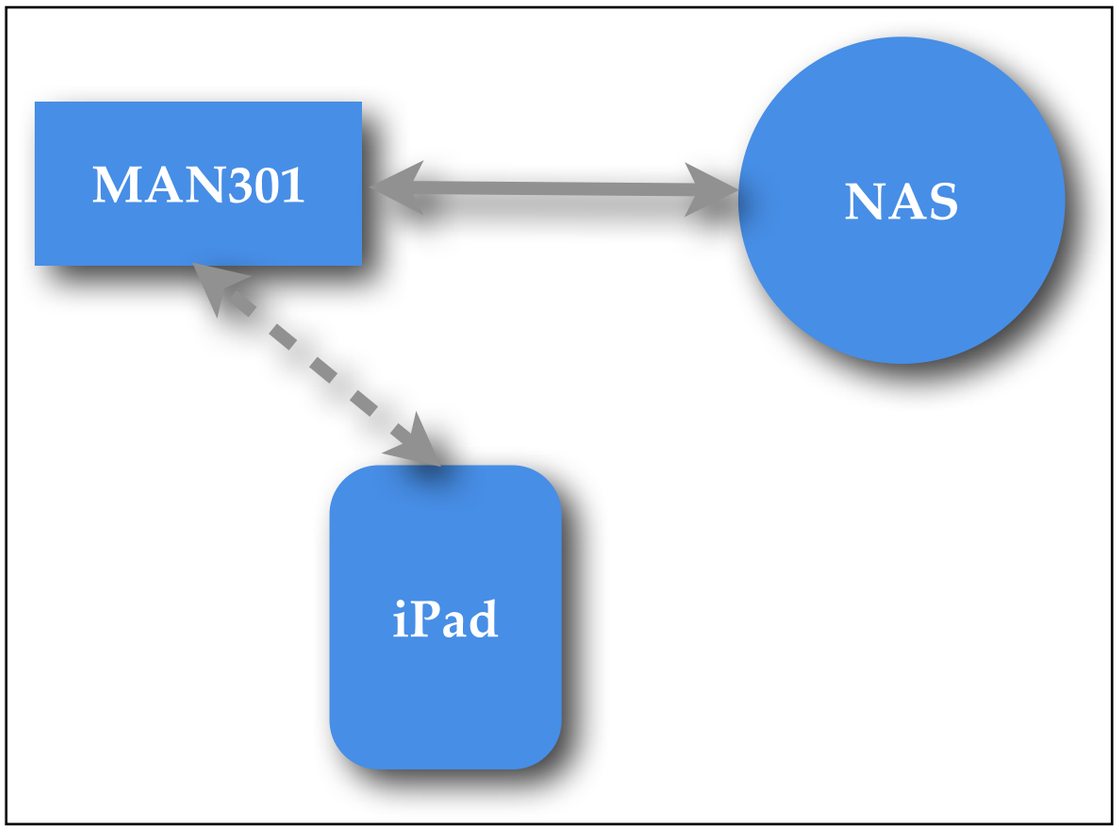
- The last entry is the **„Customer Support"**, where it is possible to set up a support channel to Weiss Engineering via the Internet. Such a channel allows us to analyze your MAN301 and the associated system in order to trouble shoot the setup. This feature is meant for use with severe problems which cannot be solved via email or phone communication. The associated window looks like this:



The configuration of the customer support is straightforward once required.

Now that we have done the basic system configuration, user accounts can be added. This is described in Section 7.

System setup, Configuration 5

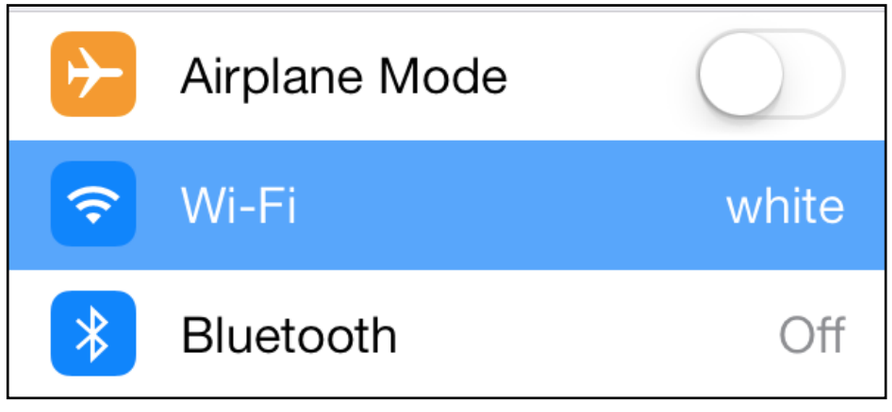


Configuration 5 connects the MAN301 directly to the NAS (or simply to a USB or Firewire hard-disk). The iPad is WiFi connected to the MAN301.

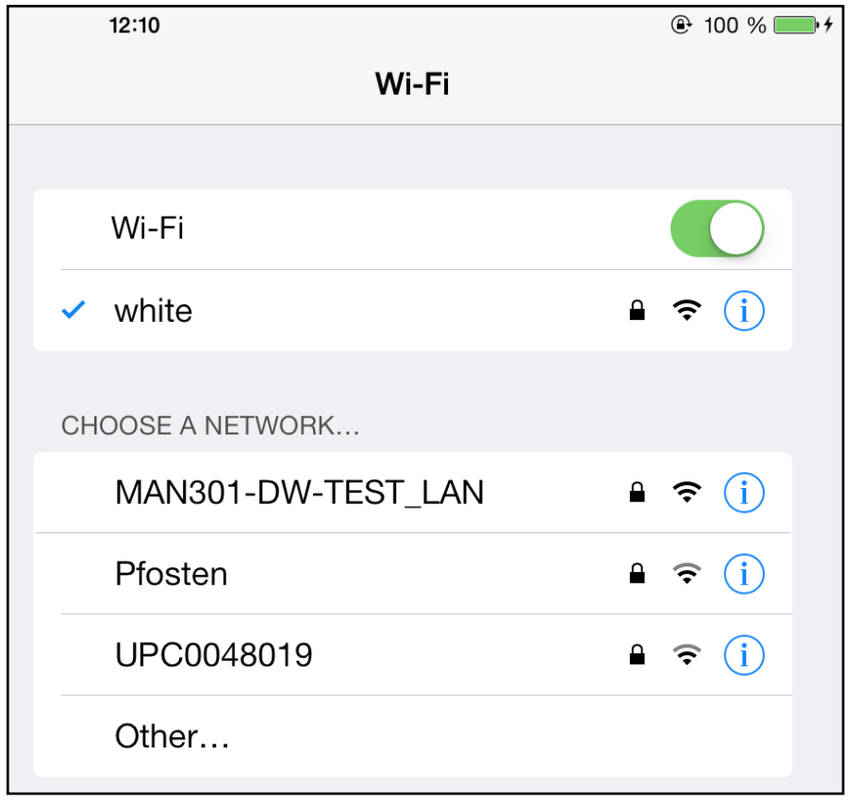
After you have wired the system as shown on the left and all units are powered, the next task is to establish a connection between the iPad and the MAN301 unit.
As you see in the configuration picture on the left, the iPad talks to the MAN301. So:

Open the „Settings" app on your iPad

and select the WiFi Settings.

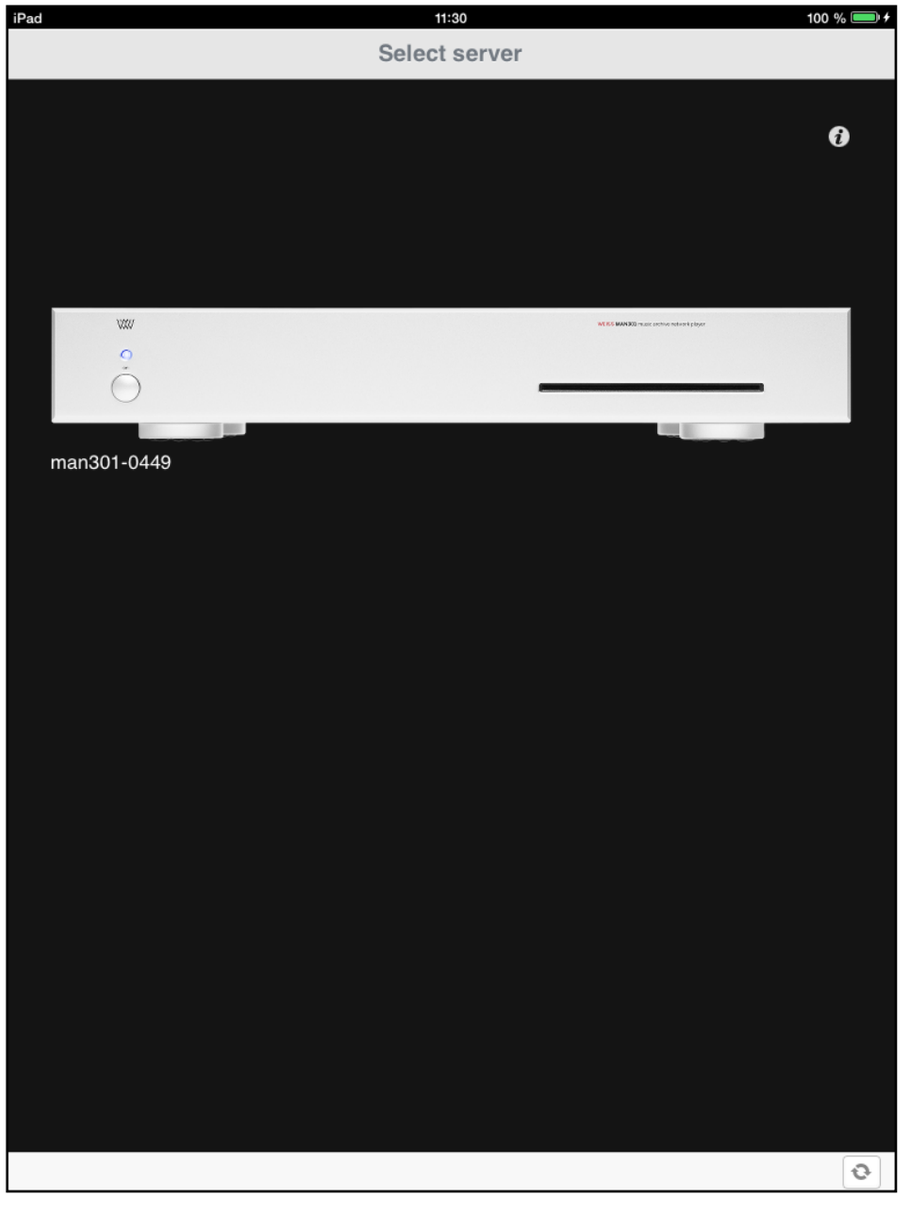


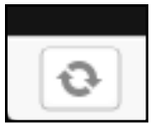
A screen with some resemblance to the one below shows up. Make sure the Wi-Fi is set to the ON position.
To connect the iPad to the MAN301 directly, tap on the MAN301 entry in the table. In the example below it is the MAN301-DW-TEST_LAN entry. (The SSID of your MAN301 you can set on a setup page described further down if you prefer to have another SSID for the MAN301). The default SSID is MAN301-xxxx_LAN, the xxxx denotes the serial number of your MAN301 unit minus 1000. Of course the MAN301 unit has to be switched on in order to appear in the list. You will be asked for the password, which is factory set to **WeissMAN301**. Make sure to type in this password exactly as given, including proper upper/lower case.



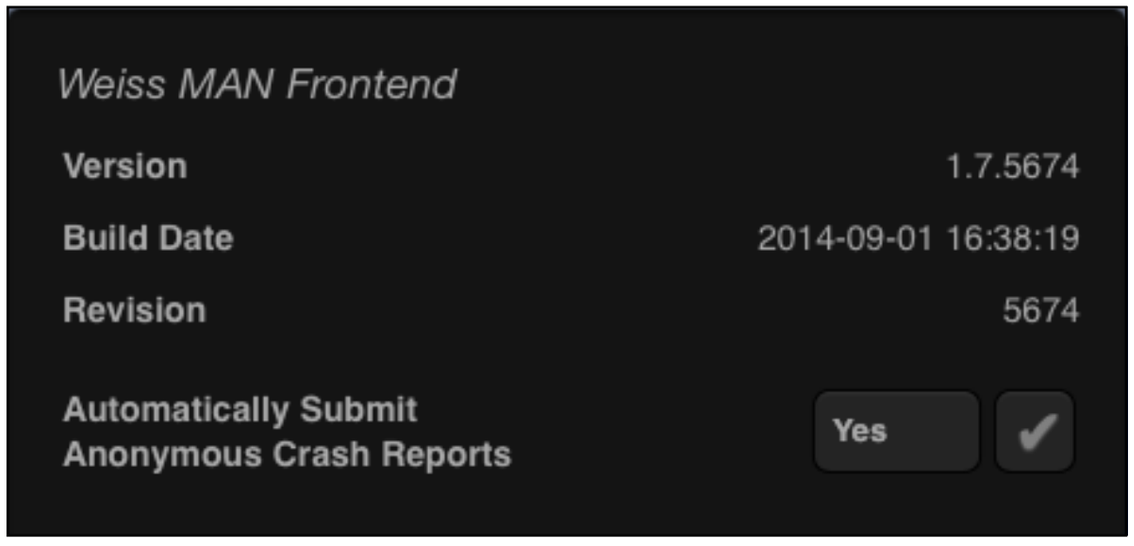
NOTE: MAN301 default SSID: MAN301-xxxx_LAN
default password: WeissMAN301

Once the iPad is connected to the proper WiFi you are ready to start the Weiss MAN app. At first startup a screen showing the MAN301 unit(s) on your network should appear. It looks like this:



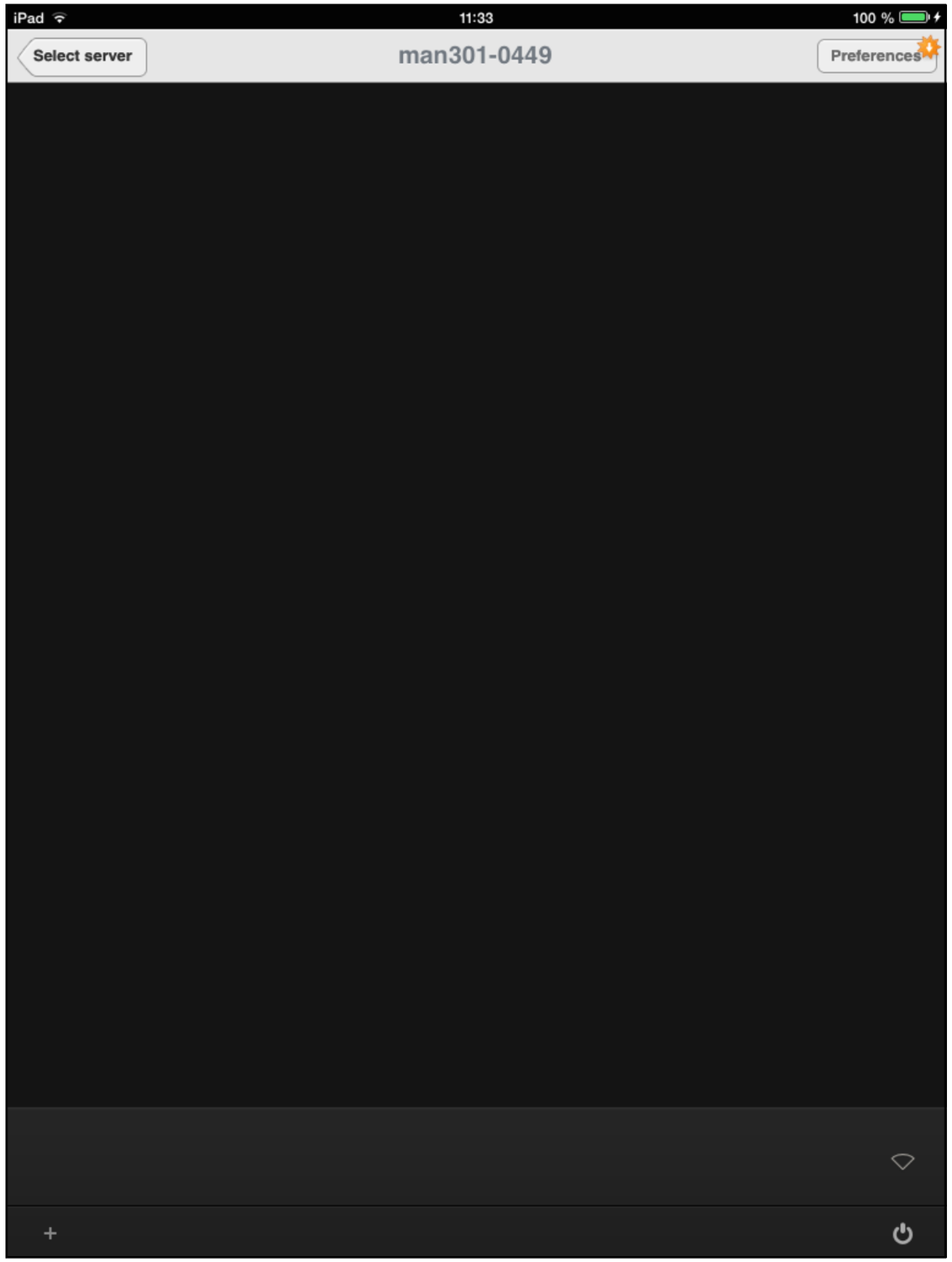
If you have more than one MAN301 unit on the network they will all be shown on the screen above (provided they are connected to the same network). If you do not see any MAN301 then tap on the  pad in the lower right corner of the screen to refresh the screen. Eventually the MAN301 unit(s) should show up with its appropriate serial number. If your MAN301 unit still does not show up try to close the iPad Weiss MAN app and restart it. (Closing is done via a double click on the iPad's Home button and then tap and hold the finger on the Weiss MAN icon until the icon wiggles. Then close the app.)
By tapping and holding the finger on one of the MAN301 icons that unit can be made the preferred unit.

If you tap on the pad the following screen shows up:

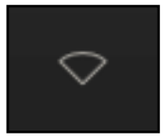


This shows the current version of the „Weiss MAN Frontend" (this is the Weiss MAN app). You may also chose to automatically submit any crash reports of the Weiss MAN app to us at Weiss Engineering. These reports do not contain any personal data from your iPad, they contain data from the Weiss MAN app at the time of the app crashing and thus help us to solve the problem which has led to the crash. We suggest to allow your Weiss MAN app to send that information to us.

Now tap on the MAN301 symbol to select that unit for playback etc.
This will show an empty screen like this:



The shut down pad in the lower right corner lets you switch off the MAN301 from within the app, switching on the MAN301 has to be done via its front panel switch though.

The  indicator in the lower right shows whether there is any uplink to a WiFi network active. In Configuration 5 the uplink will not be activated.

The

pad enters a setup page for a few very basic setup items.

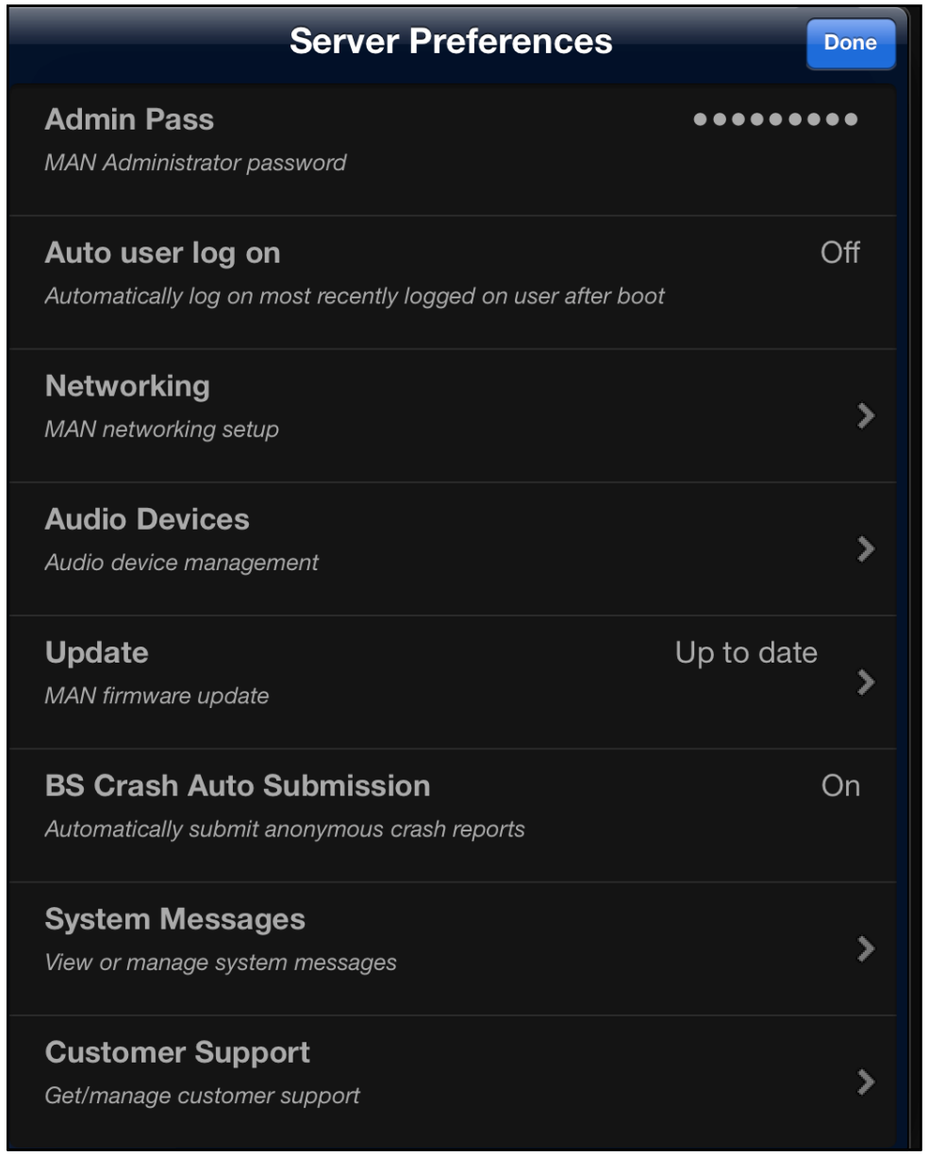
If the Preferences pad looks like this:

then there is a new firmware for the MAN301 available for download.

Tap on the Preferences pad and then enter the Admin password which is wh10admin.

NOTE: MAN301 Admin default password: wh10admin

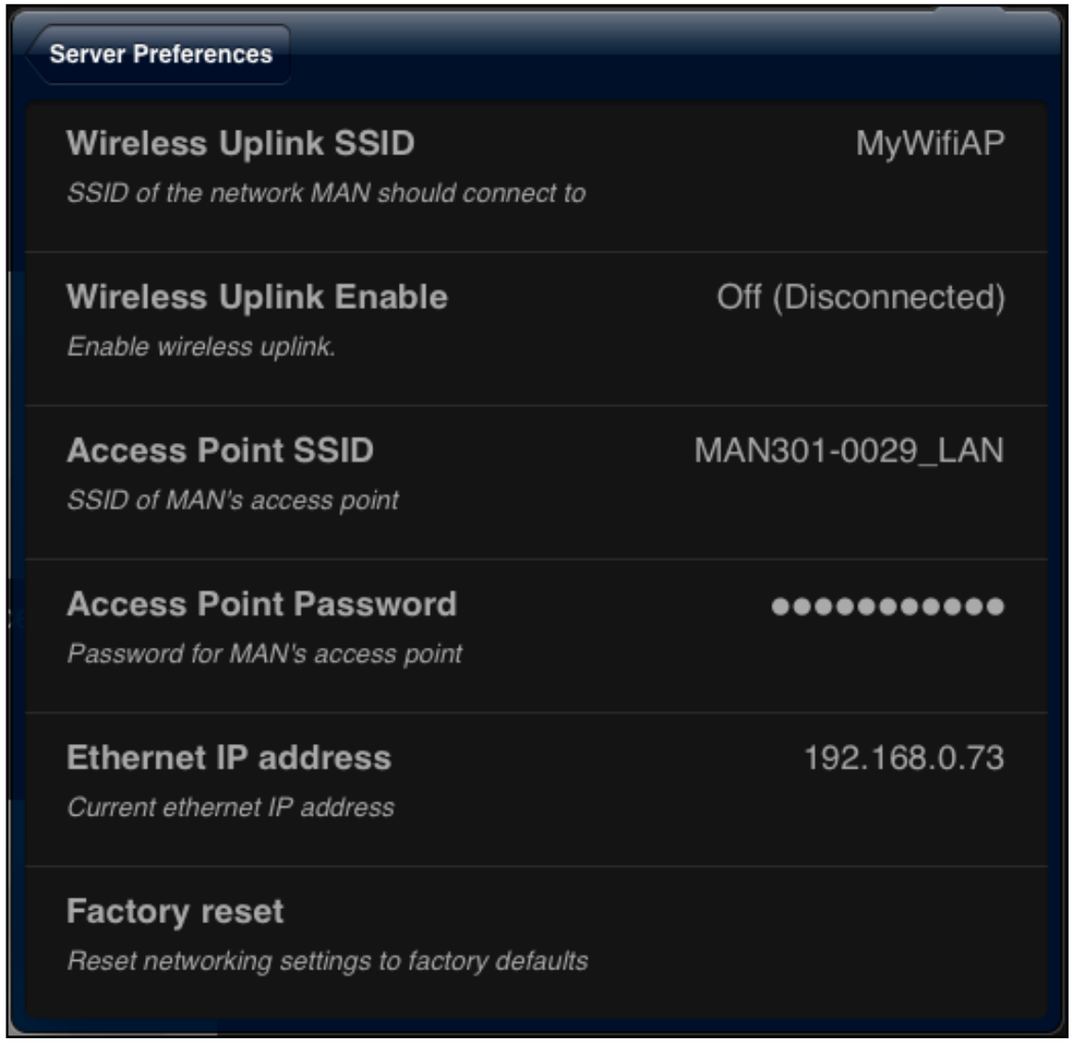
This brings up a screen as follows:



- The **„Admin Pass”** lets you select a different administrator password. **Note: If you decide to change the administrator password, make sure not to forget it!**

- The **„Auto user log on”** allows to set the MAN301 such that it logs on the most recent user automatically. This comes handy if there is only one user set up. The main advantage is, that the library / playlist display is refreshing quicker if auto user log on is enabled.

- The **„Networking”** entry allows to set up the MAN301 depending on the system architecture you have chosen in Section 2. Tapping on Networking reveals this page:



Usually you do not need to change anything on this page. The Wireless Uplink is disabled in Configuration 5, it does not need to be enabled.
Here are the details to this page:

1. The „Wireless Uplink" entries are explained in the sections where the Configurations with Uplink enabled are described.

2. The „Access Point" entries show the SSID and password of the MAN301 access point. Both SSID and password can be changed if preferred.

3. The „Ethernet IP address" shows the IP address the MAN301 has got from the DHCP server. In Configuration 5 the MAN301 enables its own DHCP server to supply the NAS with an appropriate IP address.

4. The „factory reset" resets all network settings to the original settings when the MAN301 left the factory.

- The next entry in the Server Preferences is the **„Audio Devices"** pad. Tapping on it reveals a screen similar to this:

Here the firmware of the audio device can be updated. „Audio device" means the currently active audio interface for playback from the MAN301. This normally is the audio interface internal to the MAN301 with its AES/EBU and S/PDIF and (optionally) analog connections. But it could also be e.g. a Weiss DAC202 D/A converter connected to the MAN301 via Firewire. This DAC202 would show up in the window above and could thus be updated with new firmware via the MAN301. The window „Latest Release" on the right hand side above reflects the currently available firmware on our web server. I.e. the MAN301 has to be connected to the Internet to be able to fetch the firmware. With the release of a new MAN301 base station software, any possible change in the firmware for the MAN301 internal audio device will

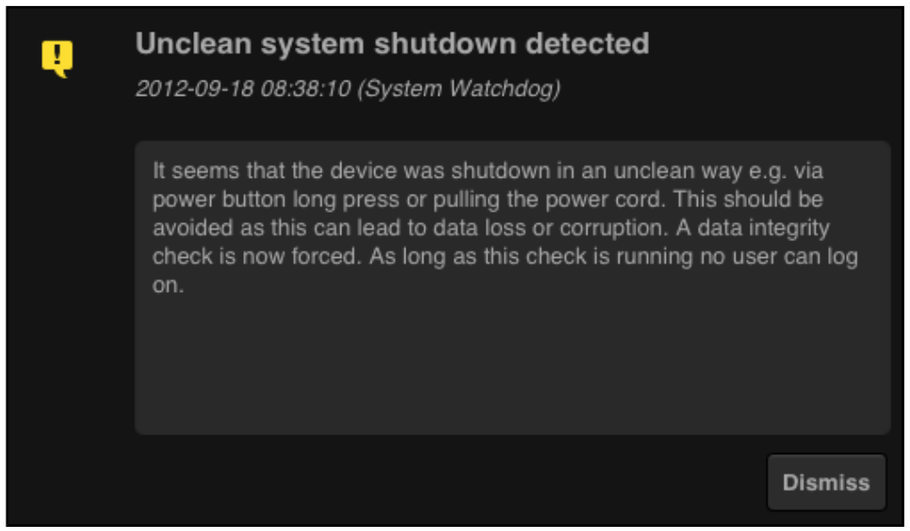
be automatically installed. But a firmware update can also be done manually by tapping on the Update pad. After updating, the MAN301 has to be rebooted in order to reflect the new firmware version.

- The next entry in the Server Preferences is the **„Update"** pad. Tapping on it reveals a screen similar to this:

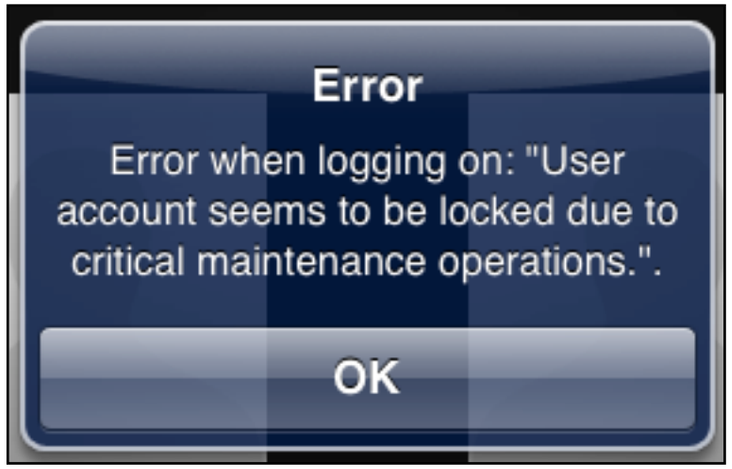
This allows you to update the MAN301 software via a download from the Weiss server. See Chapter 6, Section 1 for details. Do not proceed with updating before you have read Chapter 6, Section 1.

- The next entry in the Server Preferences is the **„BS Crash Auto Submission"**.
  This allows the BS (Base Station = MAN301) to report any program bugs to us at Weiss. These reports do not contain any personal data from your iPad or MAN301, they contain data from the MAN301 at the time of the occurrence of the software crashing and thus help us to solve the problem which has led to the crash. We suggest to allow your Weiss MAN app to send that information to us.

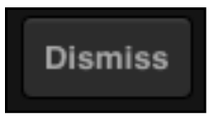
- The next entry is the **„System Messages"**, where system messages are shown in case there was a severe error detected. Such a message can look like this:



In this case the MAN301 was not closed properly and thus the databases may be corrupted. The MAN301 then restores the data bases. No user can log in until the databases are restored. The restoring process may take a few minutes. If an attempt to log in is made before the restoring has finished, this message is shown:

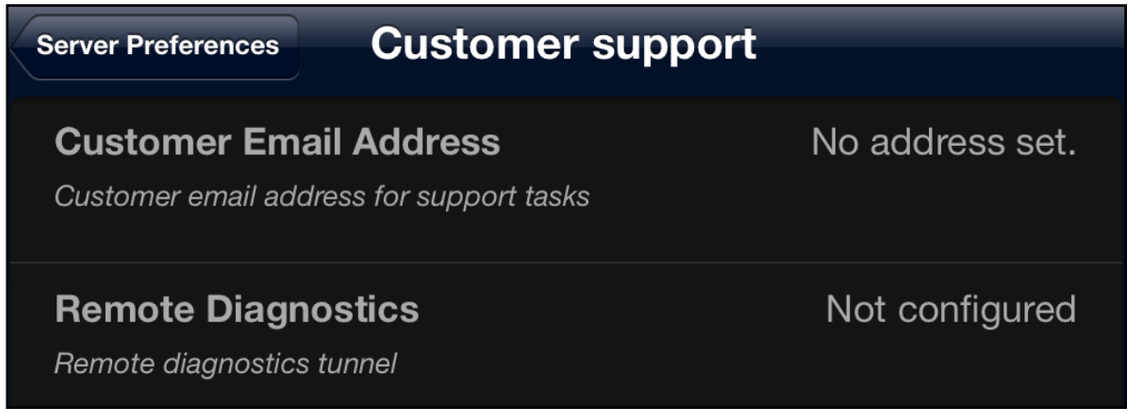


Simply wait and try again later.

The 

pad allows to delete the system message.

- The last entry is the **„Customer Support“**, where it is possible to set up a support channel to Weiss Engineering via the Internet. Such a channel allows us to analyze your MAN301 and the associated system in order to trouble shoot the setup. This feature is meant for use with severe problems which cannot be solved via email or phone communication. The associated window looks like this:



The configuration of the customer support is straightforward once required.

Now that we have done the basic system configuration, user accounts can be added. This is described in Section 7.

User Accounts

Several MAN301 units can be connected to a network. I.e. the NAS unit(s) can be shared by all the MAN301 on the network. Upon launching of the Weiss MAN iPad app, all the MAN301 units available are shown. Anyone can then be selected to be controlled from the iPad. Each MAN301 unit can have its own set of users with their individual libraries and/or their individual NAS units. Here are a few scenarios on how such setups could work:

A) There is a single MAN301 unit, each family member has his/her account, the music on the NAS is in a single library which can be accessed by all family members, the family members generate their individual playlists out of the single library.

B) There is a single MAN301 unit, each family member has his/her account, the music on the NAS is put in different folders, e.g. one folder per family member. This would make sure that the father's huge classical music collection would not show up in the library of the son who happens to be a hip-hop fan. Still, any family member could add the folders of other members to his/her library, i.e. the father could still enjoy the son's hip-hop music by adding the son's folder to his library.

C) There are more than one MAN301 unit, the same scenarios as depicted above apply with the difference that family members can enjoy their own music selection at any time.

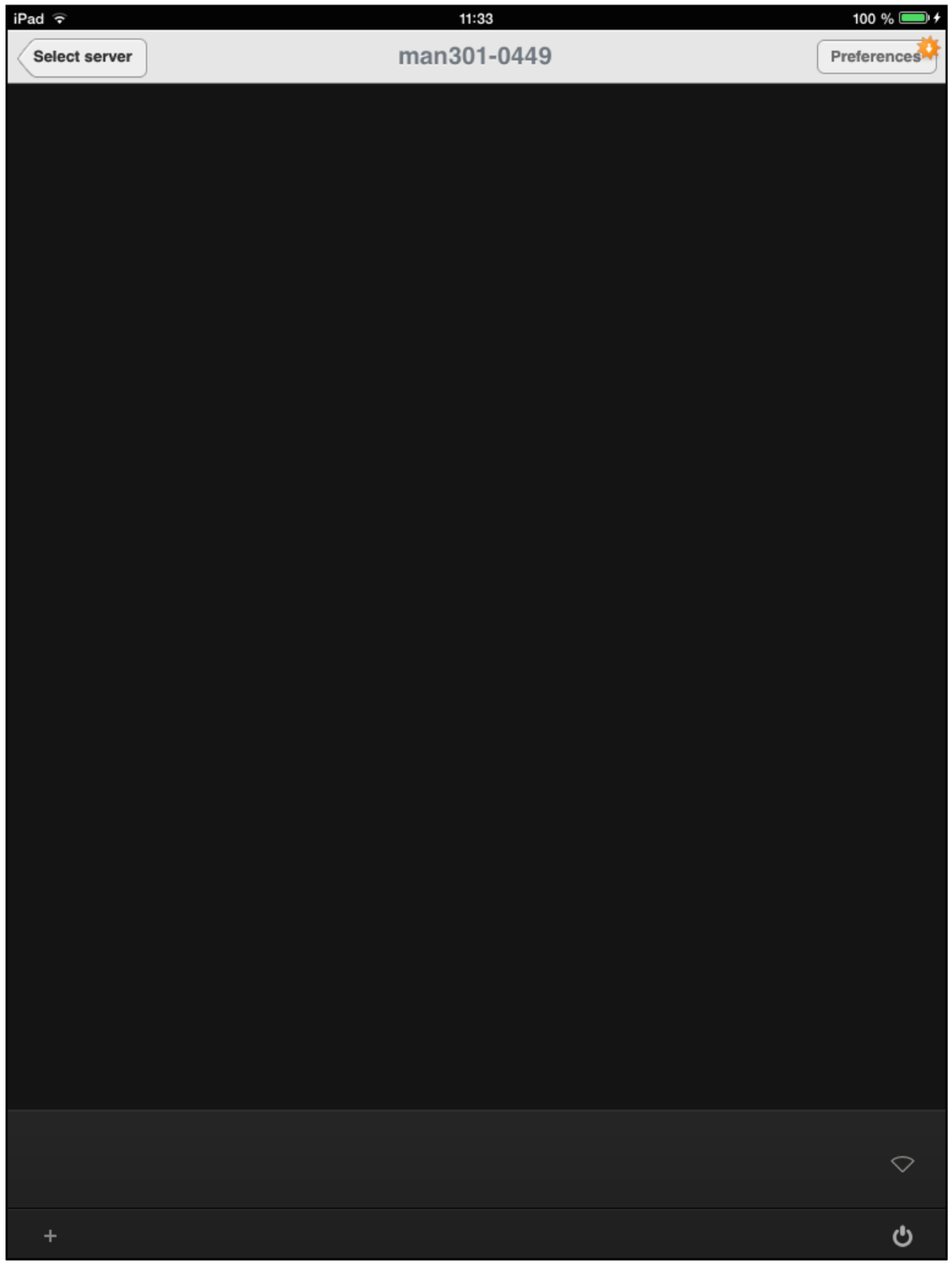
As mentioned above, the MAN301 supports several user accounts, i.e. is multi user capable. This results in interesting advantages / features like:

- All users may have their own individual library, playlists, searches etc. independent from other users. They even can use different NAS units.

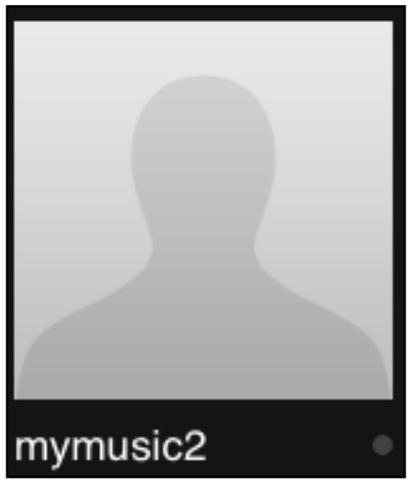
- Users can have different rights for the music library, e.g. a „party guest“ or „kids“ account can be denied to have the right to erase files. These rights are set up via specific user accounts on the NAS unit(s).

- An user account can also be used to divide the music library into various sub libraries, e.g. one could set up a user „classical" which means that the library of that user is made up of all the classical music on the NAS. Another user could be named „pop" etc. Such a strategy can be useful for very large music collections where the library browsing could become impractical. The files on the NAS would then have to be organized accordingly, e.g. the folder „classical" would hold all the classical music. Or one could even use separate NAS units for different music styles.

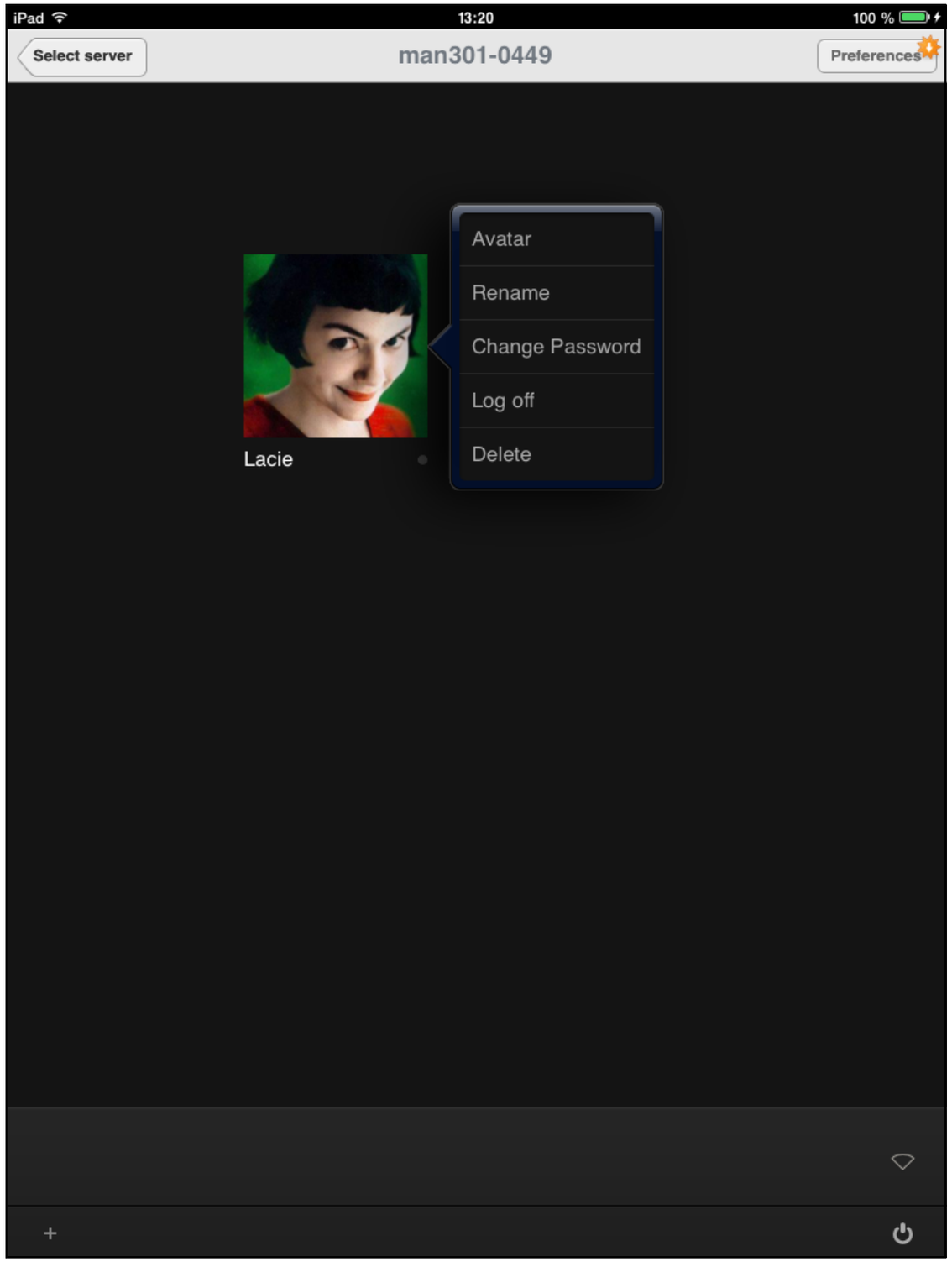
- To set up a user, navigate back to the empty screen:



and tap on the pad in the lower left corner. This opens a window where you can enter a user name and user password for a new user. The default Admin password is wh10admin. After you have added the user, a default Avatar (picture):

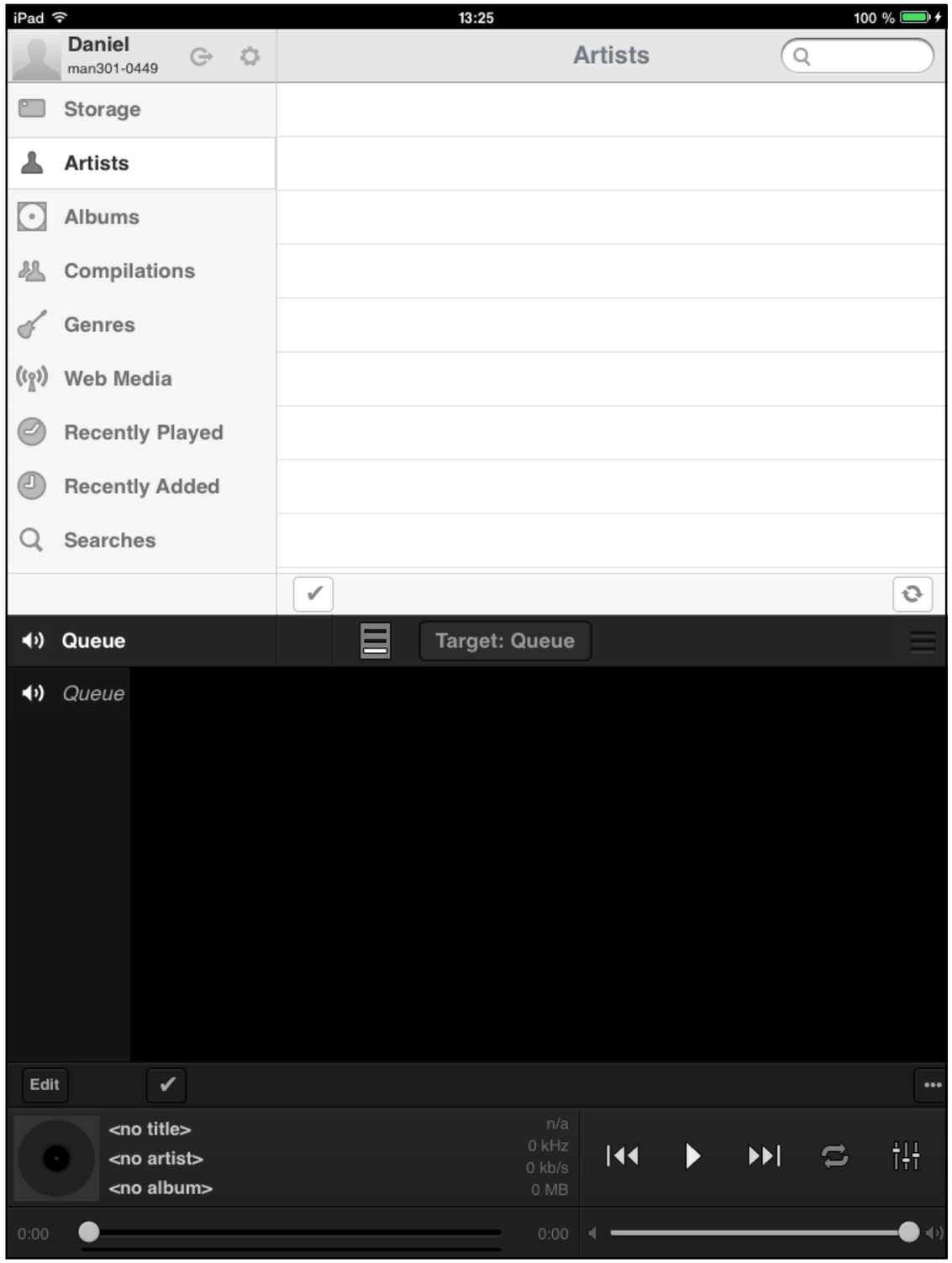


along with the user name you have selected is shown. You may add more users any time and also change the user settings at any time. To change the settings tap and hold on the Avatar. A screen like this is shown (note the Avatar in this example has already been changed)



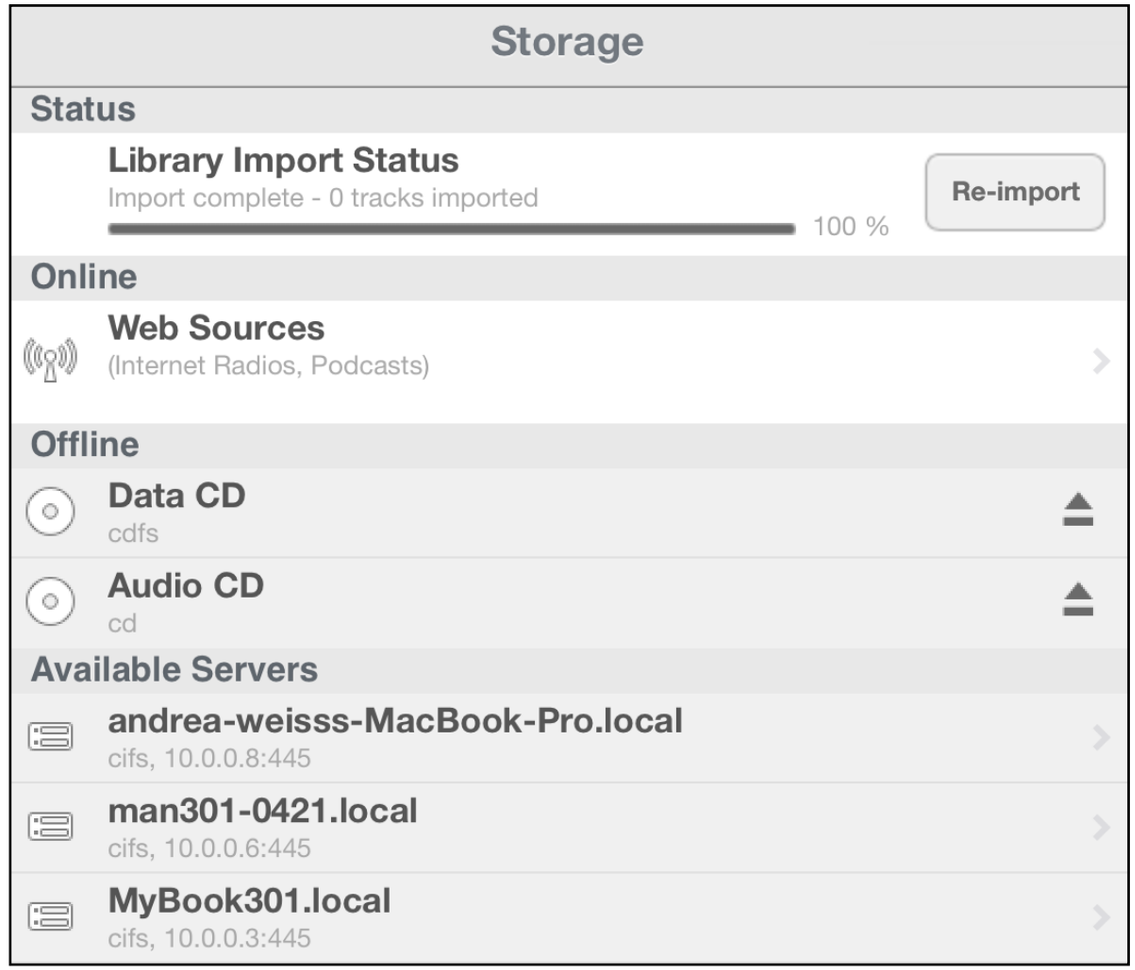
Selecting Avatar from the menu lets you change the picture, you can select one from your photo roll of the iPad and then scale it such that it fits into the Avatar picture size. If there are no photos in the photo roll then you may take some pictures with the built-in camera (not available on the first generation iPad). Those are automatically put into the photo roll. The other menu items are self-explanatory.
(Note: A user password can be changed by using that user‘s old password or by using the administrator password which is wh10admin by default.)

Now you are ready to log onto the MAN301 by tapping on the Avatar. At first a screen like this appears:



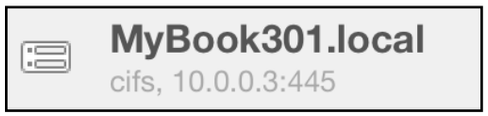
The next step now is to mount the NAS (Network Attached Storage) unit. The NAS holds the music files. An alternative to the NAS would be e.g. a USB hard disk connected via USB to the MAN301. We highly recommend to use a NAS unit, though, with 2 or more drives for data safety. Also see Chapter 5.

For that purpose tap on the Storage pad, this will show a screen like this:

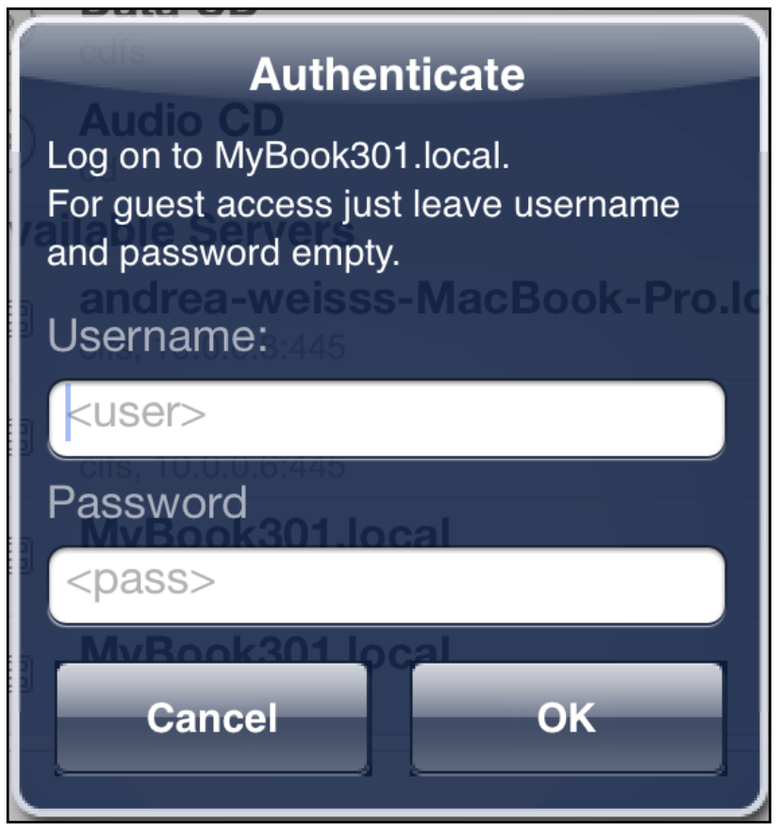


The „Available Servers" entries in the list will look differently, as they show the NAS, computers etc. on your network and it also shows any USB or FireWire drive you may have connected. To re-fetch the list or if your NAS does not appear press on the

pad.

The 

entry in this example is a NAS. If I tap on it, a window opens:



Here you enter the username / password required by your NAS in order to access the files on it. If there is a guest account available on your NAS you may use that by leaving both username and password empty.

Note, a NAS may require a separate setup procedure before it is ready to be used as a storage medium for your music files. This procedure is described in the operating manual for your NAS. Usually there are a lot of different items which can be managed with a NAS, but for the purpose of using the NAS as a storage medium for the MAN301 typically only a few basic settings need to be done in the NAS setup:

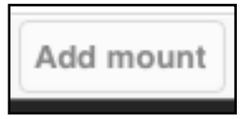
- The IP address shall be supplied by the DHCP server in the network, i.e. set „DHCP = Yes".

- If the NAS has 2 or more hard discs, then it usually comes pre-configured as a RAID array for best data security. Check whether this is really the case with your NAS. Otherwise you need to specify what kind of array it should build. Also see Chapter 5.

- Usually you do not need to set up user accounts on your music NAS except you want to prevent other people to access your music. So usually you may set up a share folder for your music to be put in. The MAN301 then does not need any username / password to access the data (see lefthand side on that screen).

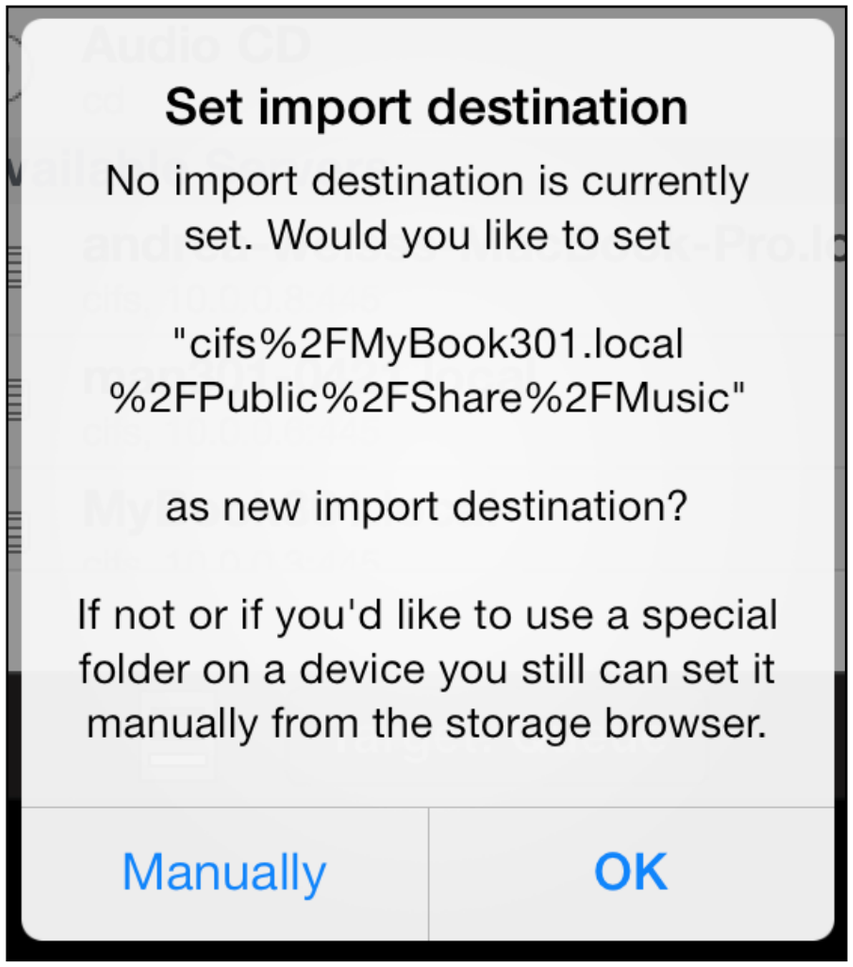
- The power management you may also want to check. The NAS may switch off itself when not in use - this poses no problem to the MAN301, as it will wake up the NAS when required.

- You may also configure a backup procedure for your NAS.

Once access to the NAS is gained, the folder structure on the NAS is displayed. Navigate to the folder which holds your music, say this folder is called MYMUSIC, then tap on MYMUSIC and now the folders (typically the artist folders) are shown. Tap on the 

pad to add the MYMUSIC folder to the Music Library of the MAN301. Of course it is possible to add just a selection of folders or just the „classical music" folder on your NAS etc.
You may also add several different folders on a NAS in several „Add mount" procedures. This allows to assemble the music added to the library for a given user. Of course in such a case the music files have to be organized in an appropriate way on the NAS. For instance it would allow to have folders for different music genres and each family member adds the folders of interest to his or her MAN301 user account.
It is also possible to mount several different NAS units. This allows to add more NAS units in case you run out of space, making the system virtually unlimited in terms of storage space.

After tapping the „Add mount" pad after a short while a screen similar to this shows up:

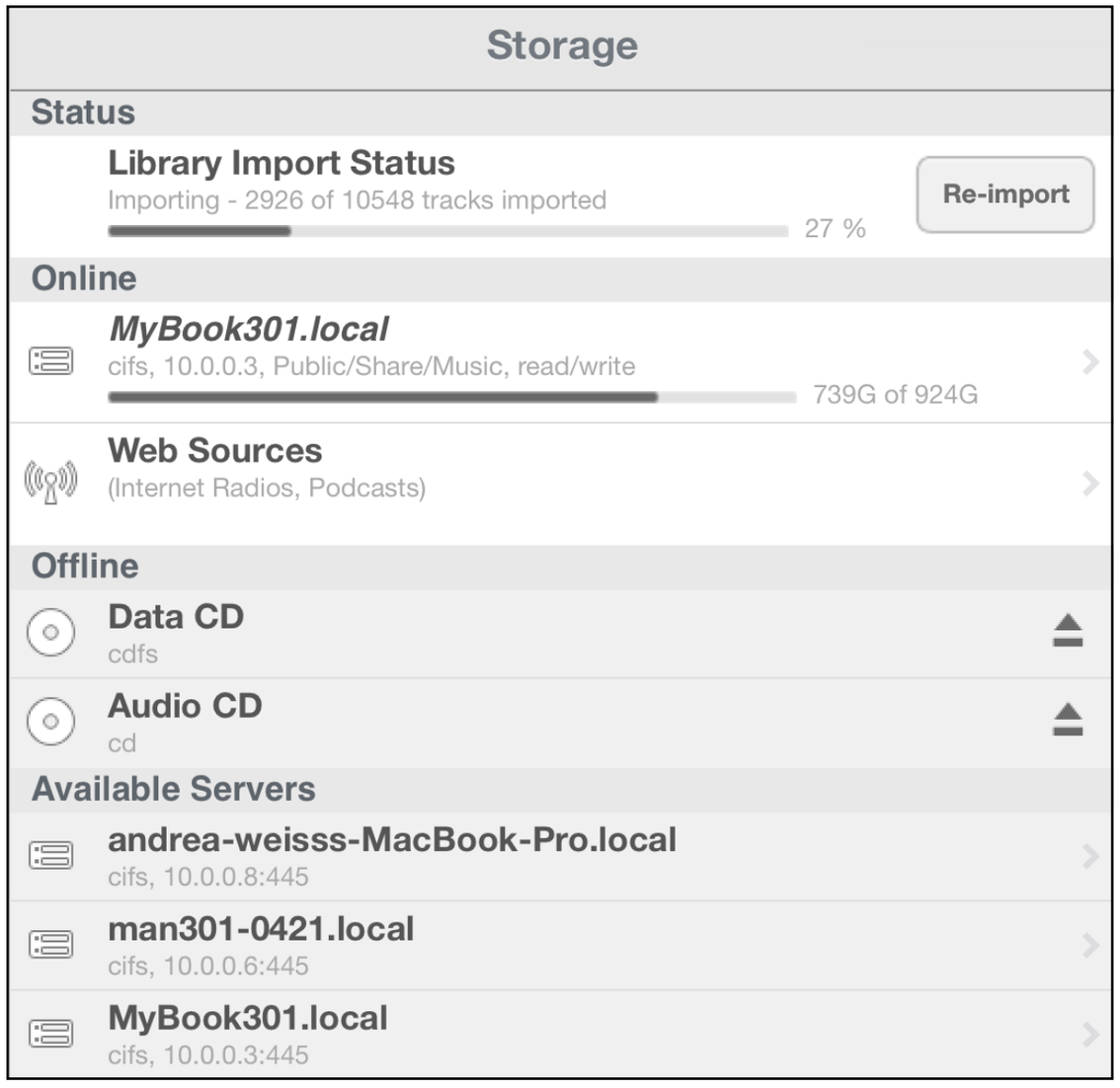


This question refers to the folder where newly ripped Albums should be put. Usually this is the folder you just did an „Add mount" for, so press OK if that is the case.

In the Available Servers list above there is also a MacBook-Pro unit. It would be possible to share music files on that computer on the network and access them from within the MAN301.

If there are two NAS entries with the same NAS name, select the one which has a „cifs" in the second line of the entry.

Once the NAS is mounted it appears in the „Online" list:



In the entry of the Online NAS the size of the folder mounted is given, along with the total size of the NAS. In addition the IP address of that NAS on the network (10.0.0.3 in that case) and the path of the folder mounted are given.

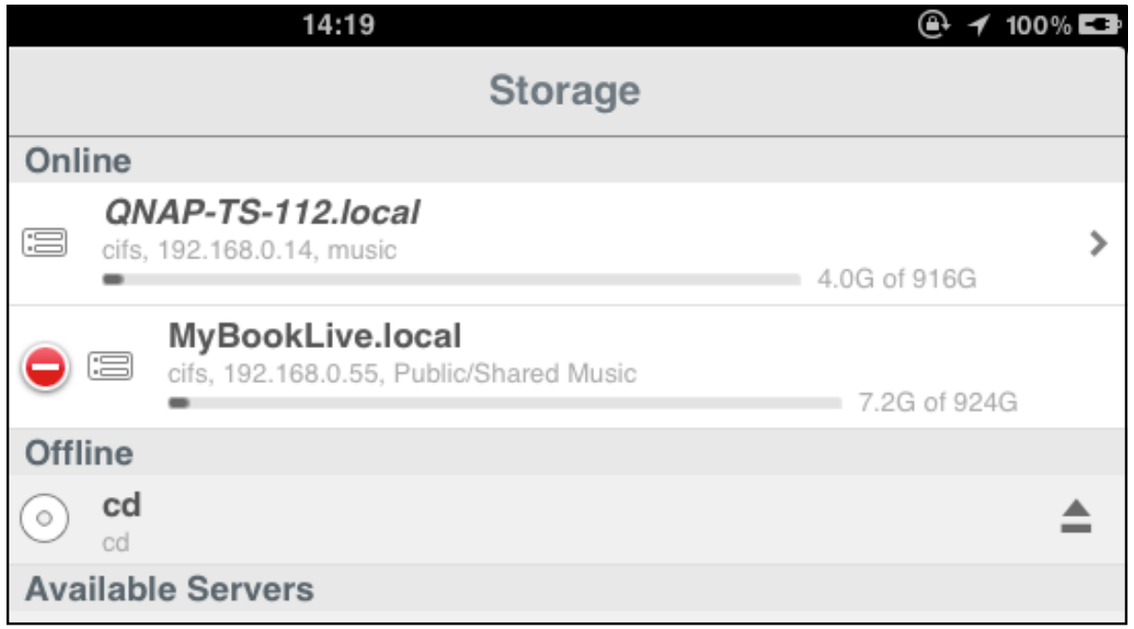
The Album drives (Data Album / Audio Album) shown in the list is the Album drive of the MAN301. Once a Album is inserted, one of those drives goes online. More about this in chapter 4.
If I tap on the MyBook301 NAS which is online, I can browse the folders on that NAS and also play tracks directly from within the folders. It is also possible to browse NAS units which are on the network, but not mounted.

If you would like to dismount a NAS or a folder on a NAS from the list of online NAS units you may do so with the

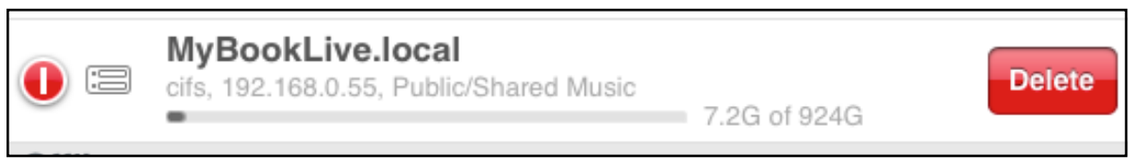
pad.

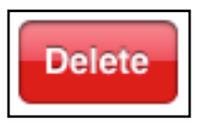
Tapping on the

pad reveals a screen entry like:

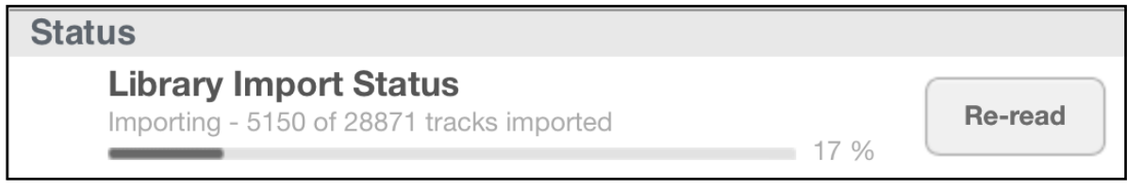


The entry with the can be removed from the list by tapping on the pad, this yields to this screen:



Tapping on  removes that NAS from the list. Note, that no files whatsoever are erased from the NAS by doing that, it is just removed from the list of mounted NAS units. Also note that the NAS holding the ripping destination folder cannot be removed. If you would like to start over with a clean slate then remove that user's account completely (delete the user on the page where the user Avatars are shown) and set up a new user account.

The MAN301 now scans the NAS and adds all tracks etc. to its library. This may take some time, minutes up to hours, depending on the size of your music collection. The progress of the importation can be viewed in the Status Bar:

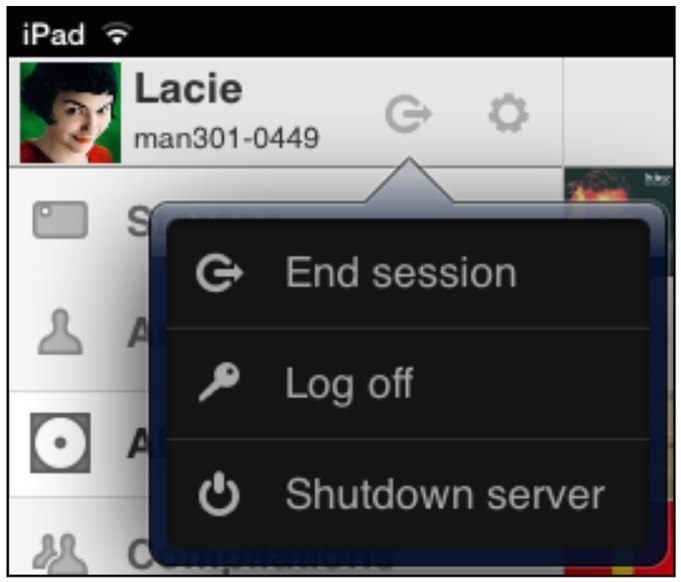


The pad allows to start over the library building. This can be useful if many substantial changes have to be done to the folders on the NAS, like e.g. folders have been moved around, erased, renamed etc. The MAN301 system eventually notices all those changes, but the Re-read may speed up the process.

You can play tracks which are already visible in the library right away, but be aware that the reaction of the system is slower during the setup of the library.

If you tap on the arrow in the upper left corner:

a menu like this opens up:



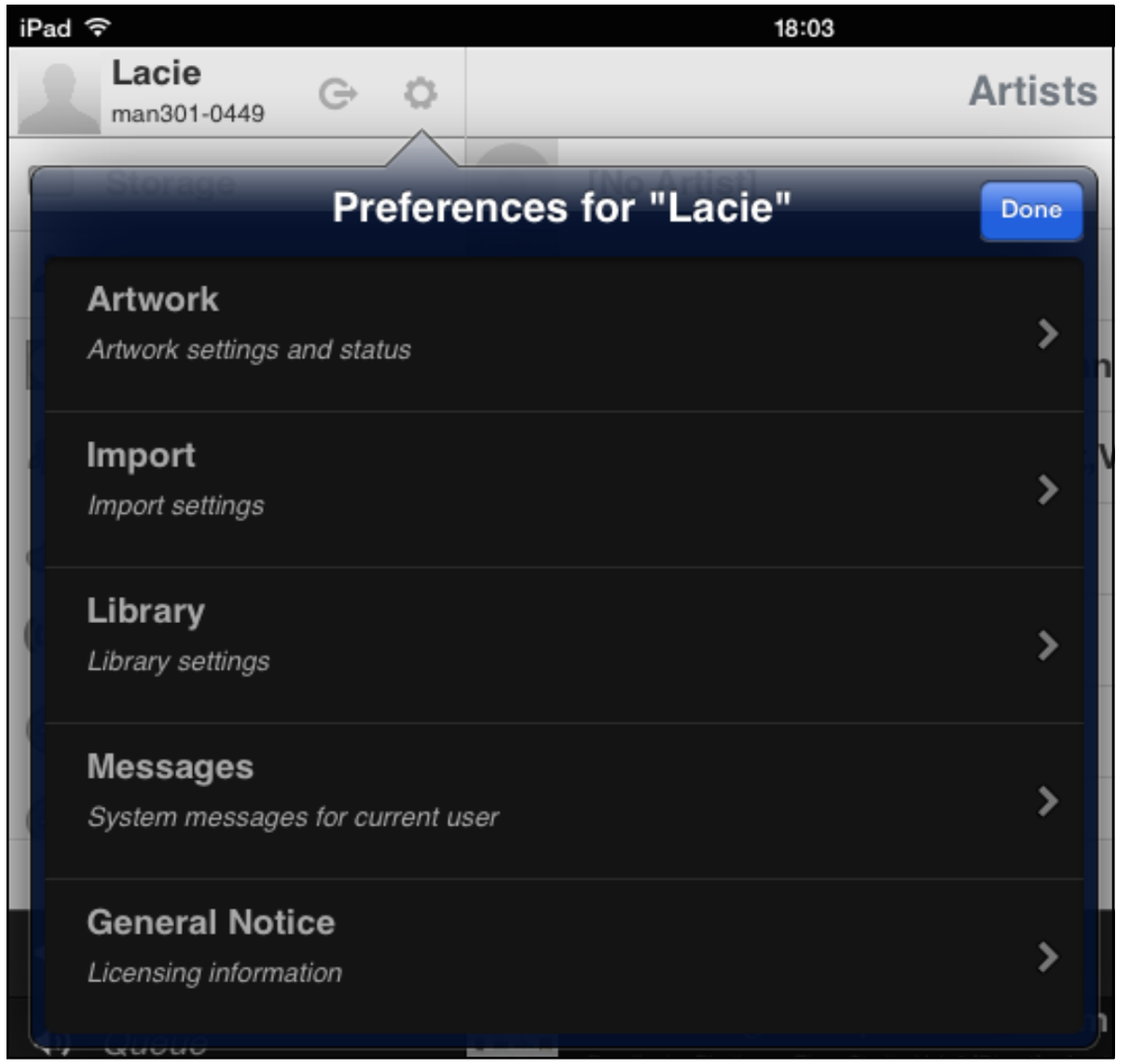
- **„End session“** leaves the library screen, but the user stays logged in and the music keeps playing. This is useful e.g. if a user would like to log onto a different MAN301 without stopping the playback.

- **„Log off“**, stops the music playing and logs off the user

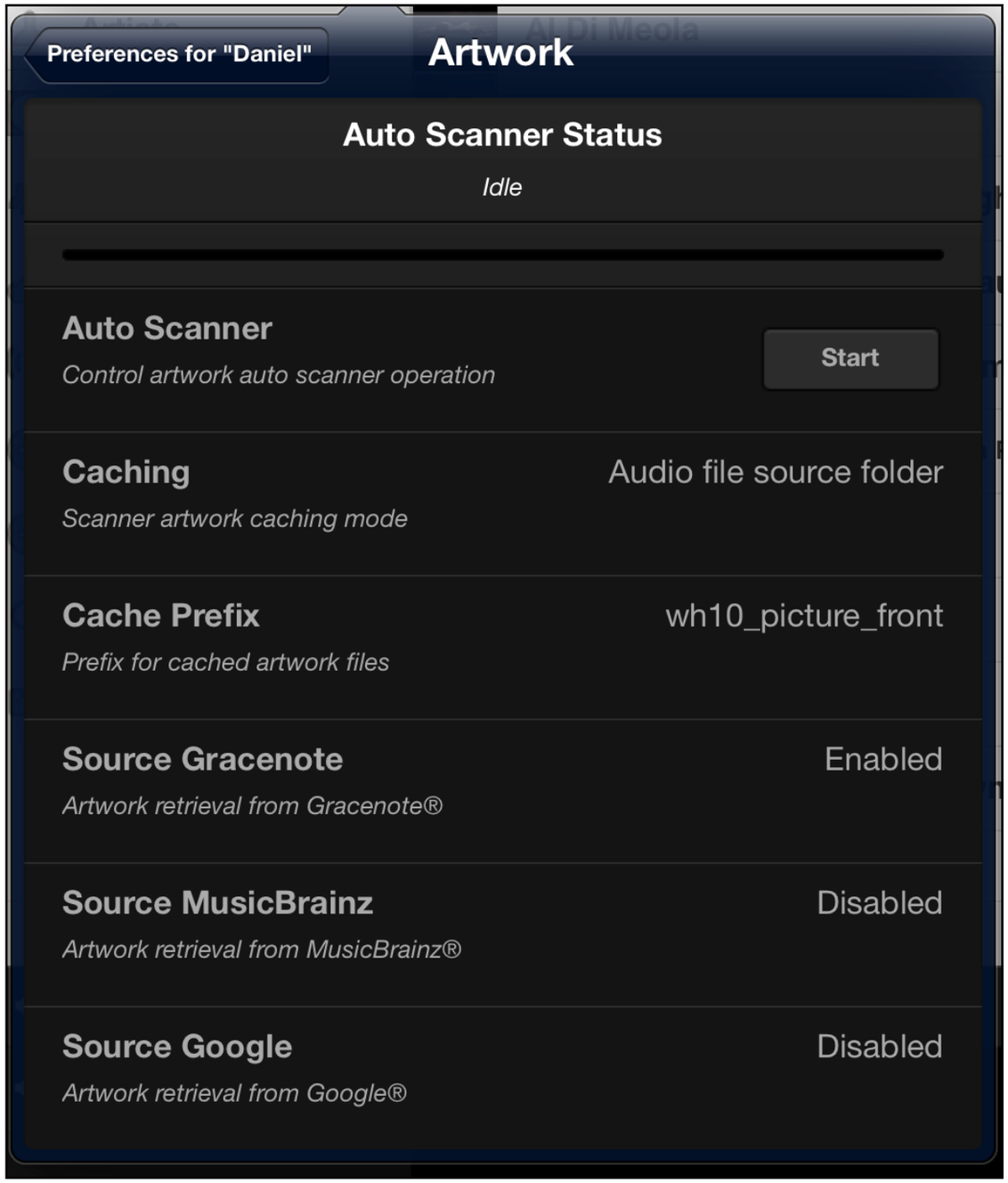
- **„Shutdown server“**, stops the music playing, logs the user off and switches off the MAN301 unit in use. The MAN301 has to be switched on again via the power switch on the front panel, it can not be switched on via the Weiss MAN app.
  The switch on the MAN301‘s front panel has the same effect.

If you tap on the wheel in the upper left corner:

a menu like this opens up:



1. The **„Artwork”** when tapped reveals a screen like shown on the next page.



The **„Auto Scanner“** when started scans all folders on the NAS and detects folders with lacking artwork. If artwork is lacking the scanner attempts to get artwork from the Internet automatically. This is a quick way to complete lacking artwork. Existing artwork will be left untouched.

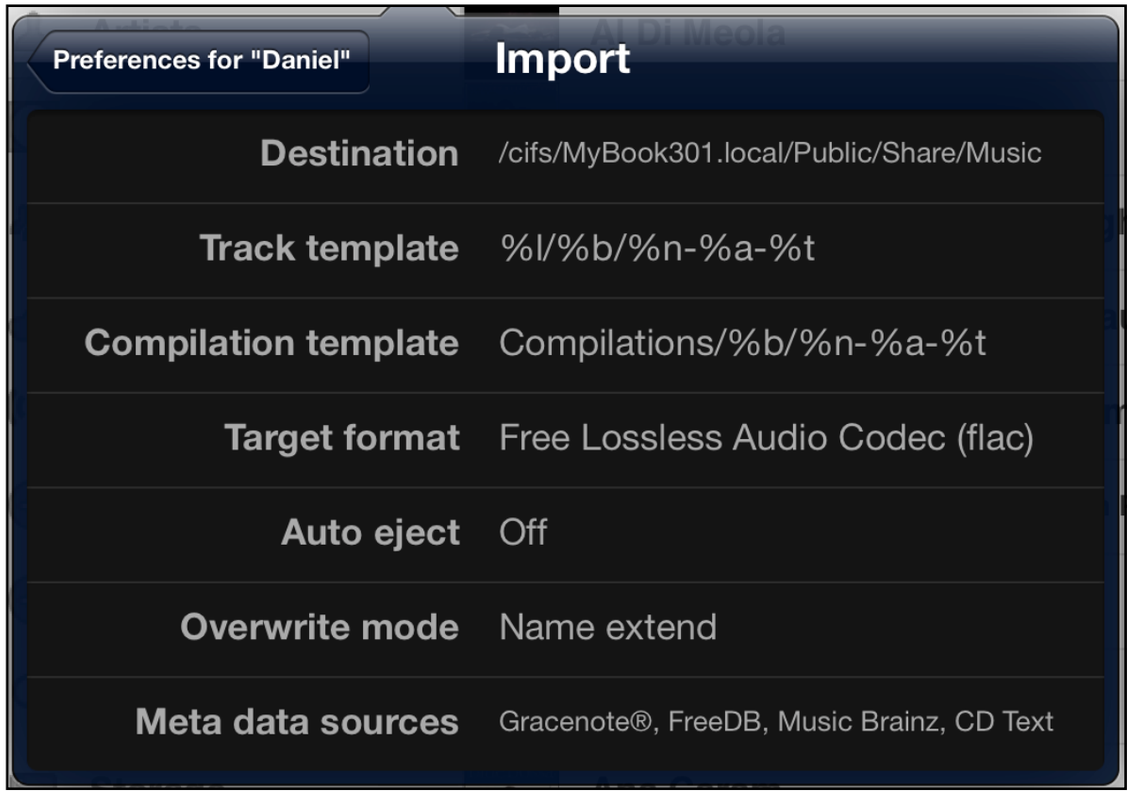
This art work scanning is executed automatically:
- After the setup of a new user with the setup of the music library.
- After a user log-on in order to add new music to the library. E.g. music which has been put on the NAS via a computer.
- If newly added tracks are detected.

„Caching“ allows to select the folder where the artwork selected as the proper artwork is stored. Typically this is the same folder as the folder which holds the music of the Album, i.e. the „Audio file source folder“.

„Cache Prefix“ defines the name of the artwork file in the cache storage mentioned above.

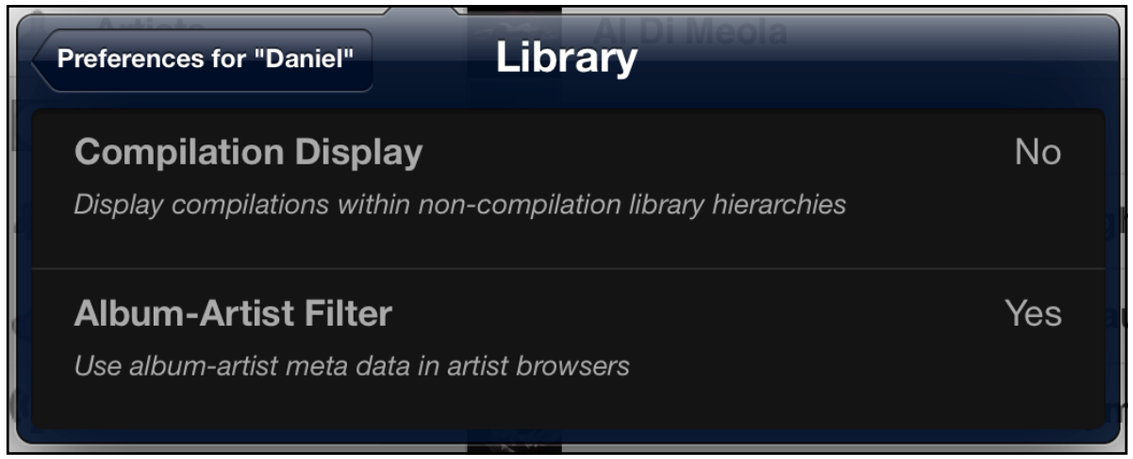
The three following entries (**„Source Gracenote“, „Source MusicBrainz“, „Source Google“**) allow to select where artwork is fetched from during the „Auto Scanner“ process: Gracenote, MusicBrainz and Google™. If your library lacks a lot of artwork we recommend to limit the sources to Gracenote for a first attempt. After a first scan you then can disable Gracenote scanning and enable MusicBrainz and Google™ and run the scan again.
The default setting has Gracenote enabled only.

2. The **„Import“** when tapped reveals a screen like this



The details for this screen are given in Chapter 4 on Album ripping.

3. The **„Library“** pad leads to this screen:

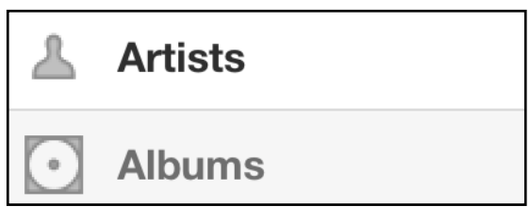


These two switches control the display of certain albums in the Library:

The „Compilation Display“ switch works as follows:

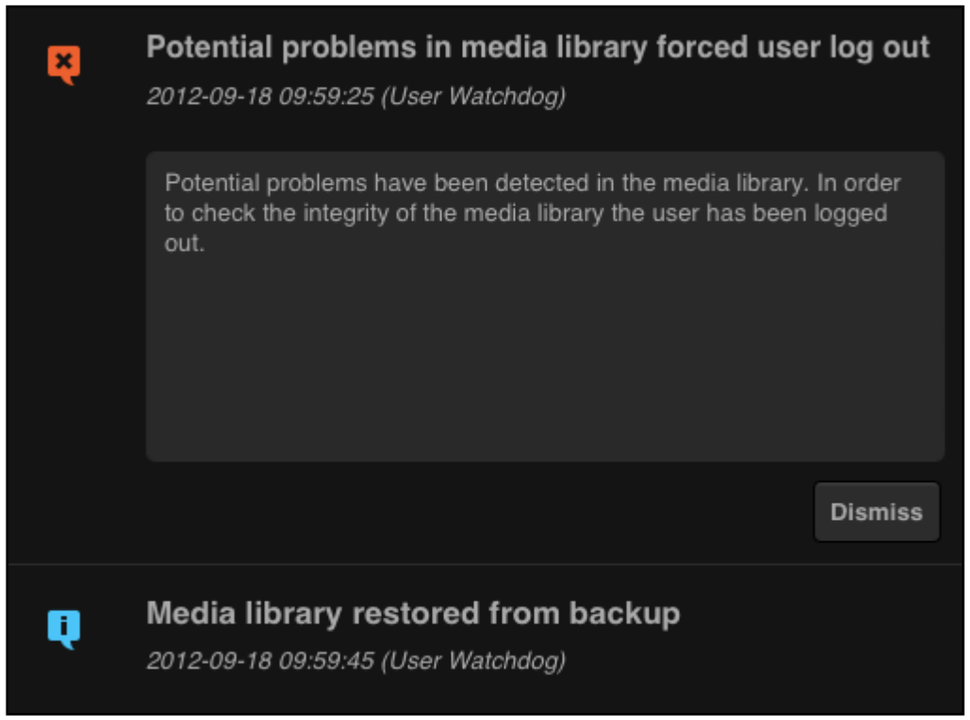
No: The albums tagged as „Compilation“, i.e. listed in

do not appear in the Artists or Albums lists



Yes: The albums tagged as „Compilation“ also appear in the Albums list. The artists involved in the Compilations also appear in the Artists list. This depends on the „Album-Artist Filter“ switch though: If this switch is set to **No**, the names tagged in the Artists tags appear in the Artists list. If the switch is set to **Yes**, then the names tagged in the Album Artist tags appear in the Artists list.

4. The **„Messages“** allows to view user specific error messages, for instance if some error with the library happened a message could look like this:



The „Dismiss“ pad allows to clear the „Potential problem....“ information and then leaves the „Media library restored from backup“ message like this:

Again, use the „Dismiss“ pad to clear the message.
If all is ok, the „User Messages“ window is just empty.

5. The **„General Notice“** pad reveals a message on various licensing and legal items.

Now see Chapter 2 for information on the Library, Playlists etc.

CHAPTER 2

Library, Playlists, Views

The music library holds all music files and presents them in an easily accessible way. Newly ripped or copied files are automatically added to the library.

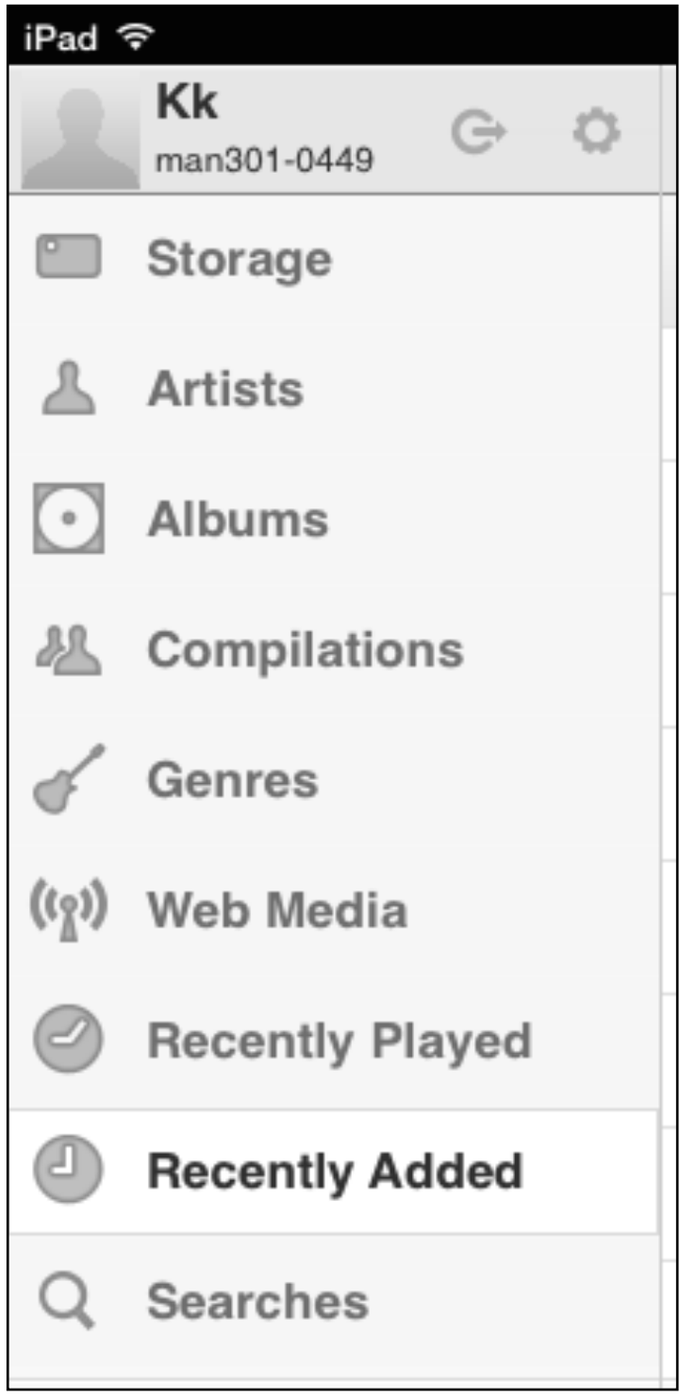
Playlists are user defined extracts of the Library for quick access to those favorite tracks.

The Library View display shows a selection of the library as well as the Playlists for simple assembly and editing of Playlists and much more.

The Show View display presents the currently selected playlist and playing track in a big, nice picture.

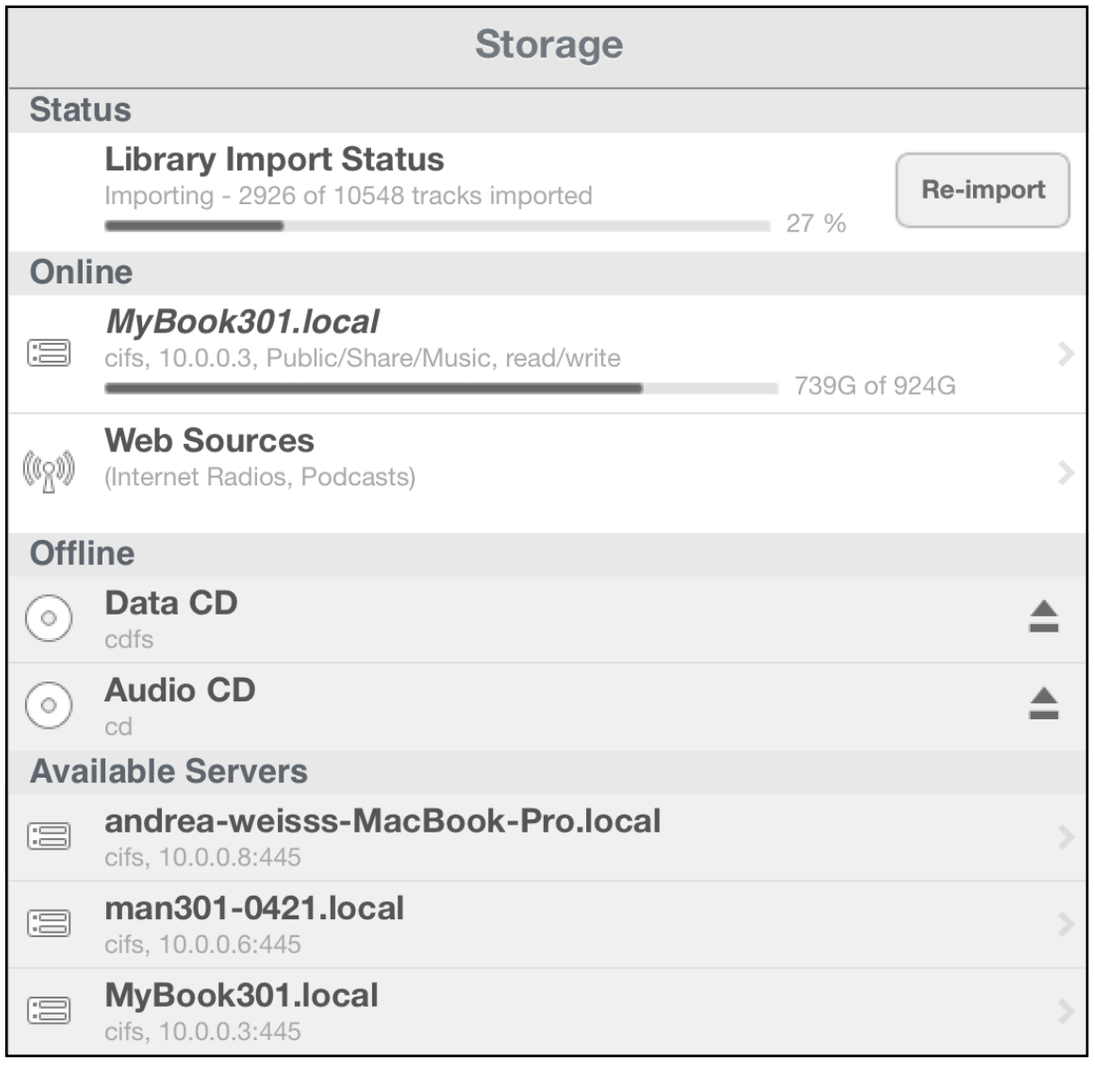
Library

As mentioned in the previous paragraph, the building of the library from the files on the NAS can take some time. With larger collections it is best to let the unit run through the night. During library building it can happen that the wrong album artwork is displayed. Don't worry, in the end it will all be fine. Also the response to player commands may be very slow - just wait until the library building process has finished.
Once this is the case, tap on the Artists, Albums, ... pads on the left hand side. At first it may take some time until the library entries are shown on the right hand side.
You may also want to start the artwork scan in the User Preferences menu in order to bring up all the cover artwork.
See Chapter 1, end of Section 7 for details about how this is done.
Note, the screen division between library (upper section) and playlists (lower section) can be moved by moving the black bar on top of the playlist section with your finger.



Here is a rundown of the available menu items:

- **Storage**, shows the NAS units (Network Attached Storage units) or USB disks or FireWire disks or computer folders or Web Sources which are „Online“ or „Offline“ or which are „Available Servers“ for mounting.



The meanings are:

- Status: The status of the library building process.

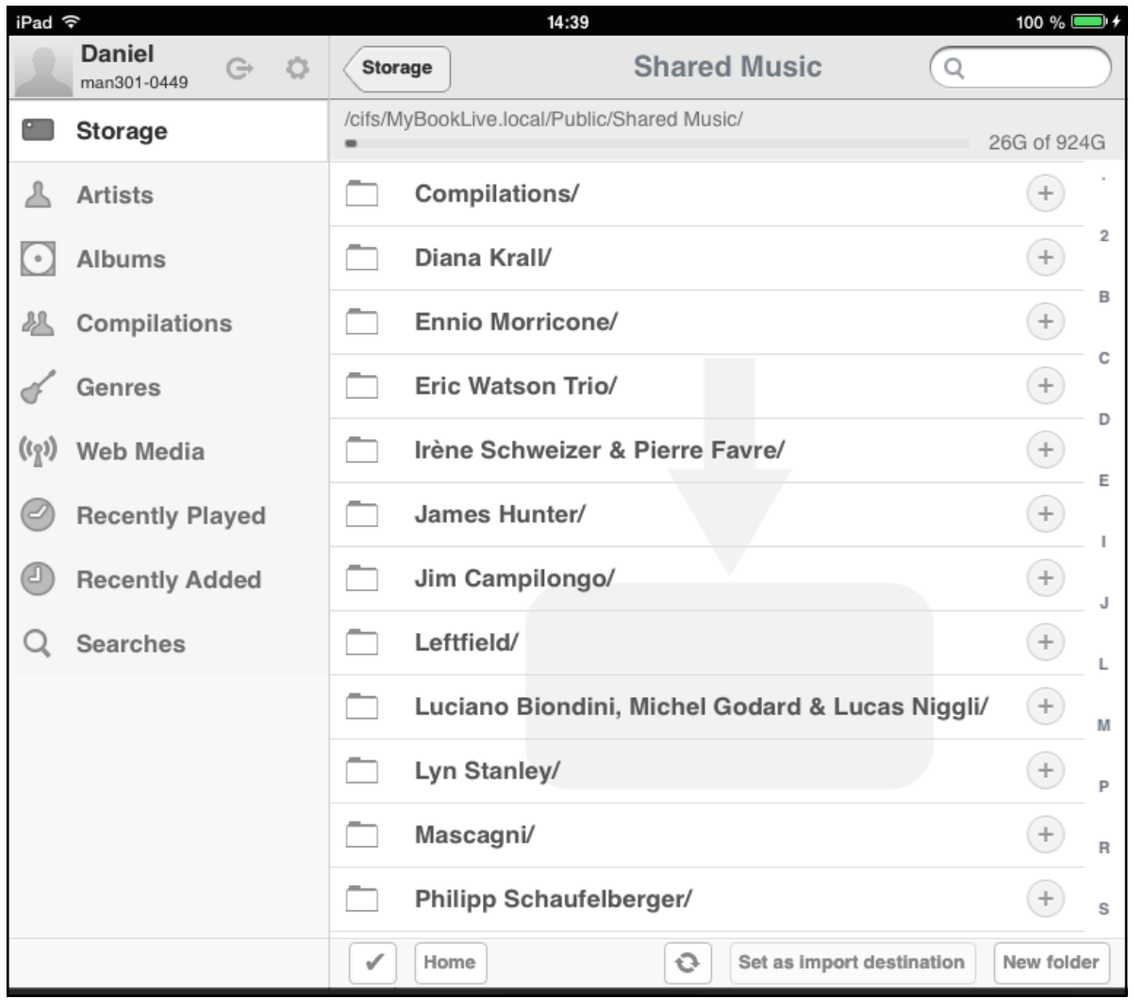
- Online: Mounted for the MAN301‘s use and available for usage.

- Offline: Mounted for the MAN301‘s use but currently not (yet) available for usage.

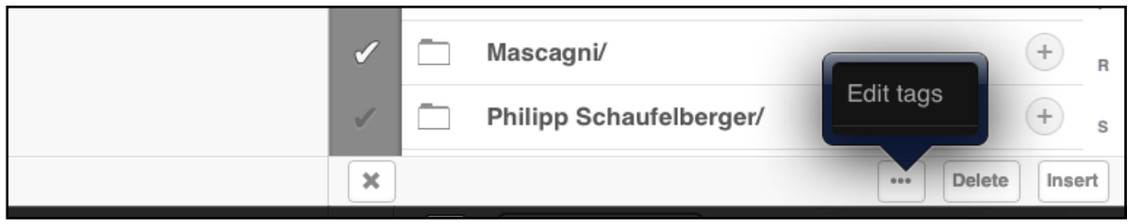
- Available Servers: Storage resources which may be available to be mounted for the MAN301‘s use.

The mounting of NAS units or folders on computers is discussed in chapter 1, section 7. The mounting of Web Sources is discussed in Section 4 of this chapter.

Entering the mounted NAS by tapping on its list entry reveals the folder structure as in the example below. Tapping on an entry navigates further down the tree. Again, it is possible to play tracks directly from within the file structure (tap on the pad left to the track) or add tracks to the playlist by tapping on the pad.



The ✔ pad on the lower left allows to select files or folders for subsequent editing. Be careful, with the Delete pad, the selected files will be erased from the NAS! The ••• pad allows to select the metadata editor for the selected files. The Insert pad allows to insert the selected files (tracks) in a playlist.



The Home pad navigates back to the Storage display.

The Set as import destination sets the selected folder as the folder where the music ripped from Album is put. The large grey symbol indicates that the currently selected folder is the one where newly ripped music is put:

The New folder allows to create a new folder.

- **Artists**, shows the library content sorted by artist names. Scroll through the list by swiping your finger vertically on the list or by tapping on the alphabet at the right hand edge. Tap on any of the names to show the albums of that particular artist. Tap on any of the albums to show the tracks of the album. You may play back a track immediately by tapping on the cover artwork to the left of the track. That track is then put into the default „Queue" playlist and playback starts immediately. The **Queue playlist** is the default playlist for immediate playback. It can not be erased. If you would like to add another track for subsequent playback tap on the pad at the righthand side of the track. This adds that track to the Queue. Tapping on the artwork replaces the Queue content with that track and starts playback.

  You can now navigate back with the

pad in the top bar. Here you can now add the whole album to the Queue, the same way you did it with the individual tracks.
Then you can navigate one step back again to the initial Artists display. Here again, add the whole oeuvre of an artist to the Queue.

  The search field in the upper right corner allows for a quick search within the Artists list.

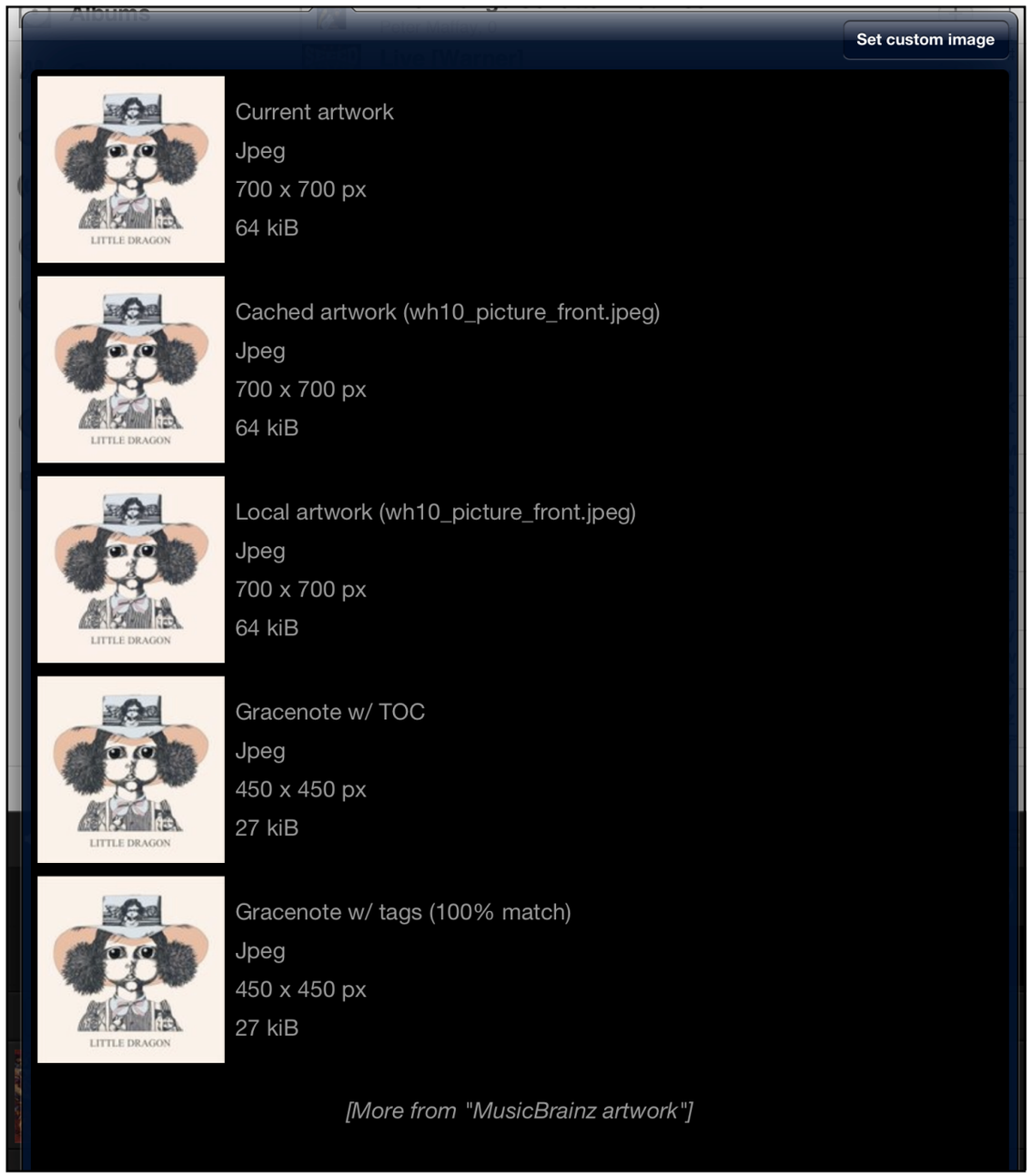
- **Albums**, shows the library content sorted by album names. The functionality is the same as with the Artists. By the way, if you do not like a particular artwork, tap and hold on the artwork. This opens a window which shows the available artwork and also some more artwork from an Internet artwork fetch. For details on this feature see Chapter 4, Section 3.
  This procedure of tapping / holding the finger on the artwork, by the way, works anywhere where cover art is visible. Just tap and hold on the cover art in order to fetch new cover art from the Internet. E.g. you even may change cover art for an album while a track of another album is playing.

You may see entries like:

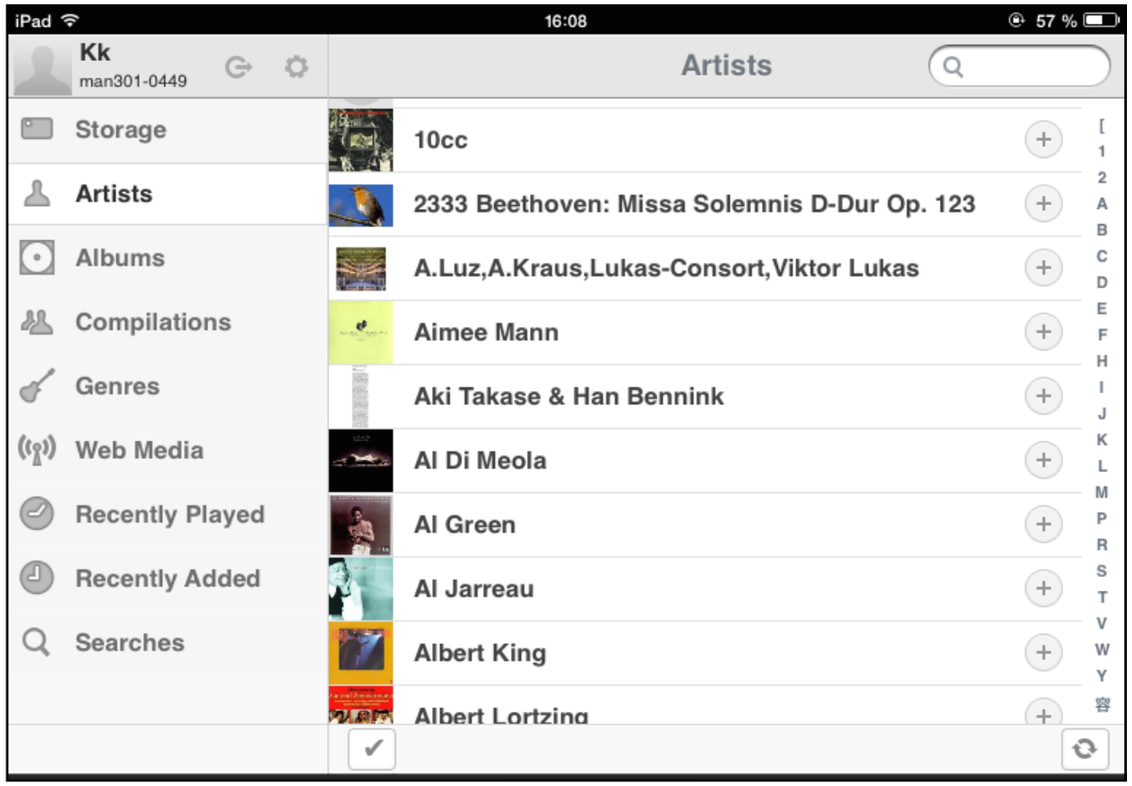
and / or:

in your library listings. These entries lead to music files which are incompletely tagged and thus are a means to identify those albums and subsequently complete their metadata via the metadata editor. Details about this are given in Chapter 4 / Section 3.

Example of a cover art search:



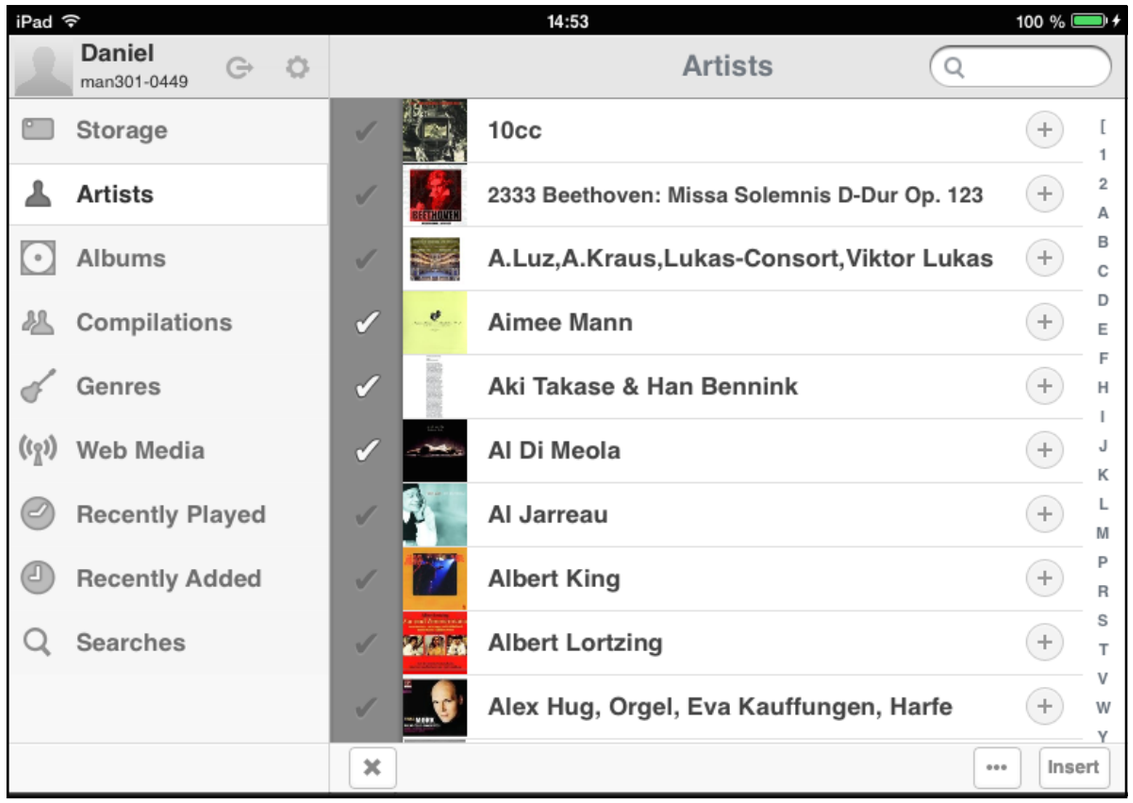
Example of a Artists display:



The pad in the lower right corner allows to refresh the list. This can be useful when reading a Album just ripped.

The pad in the lower left corner reveals a vertical bar where you can select a particular album (or multiple albums) for tag editing (metadata editing via the pad, see Chapter 4 Section 2) or for inserting into a playlist via the pad. The selection of albums can be done by tapping on the vertical

bar or by swiping the finger across the bar to select a bunch of albums at once. De-selecting works the same way. Double tap on the vertical bar to select / deselect all tracks shown.



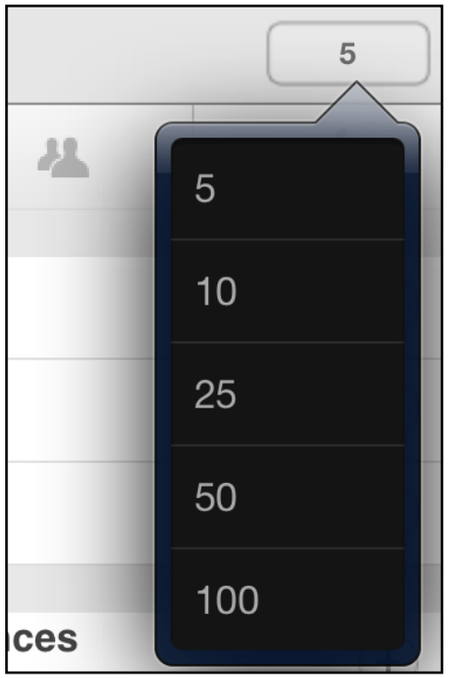
- **Compilations**, we implemented this to have a separate folder for all those albums where several artists are present, like in movie soundtracks, label samplers etc. These albums have the **„Compilation“** flag set in the metadata. The metadata will be explained in chapter 4.
-

- **Genres**, the metadata also contains a **Genre** entry. All the Genre entries in your library are listed here. You may be surprised that there are so many different genres. With the metadata editor built into the MAN301 you are able to change all metadata including the Genres in case you are not happy with certain Genre assignments.

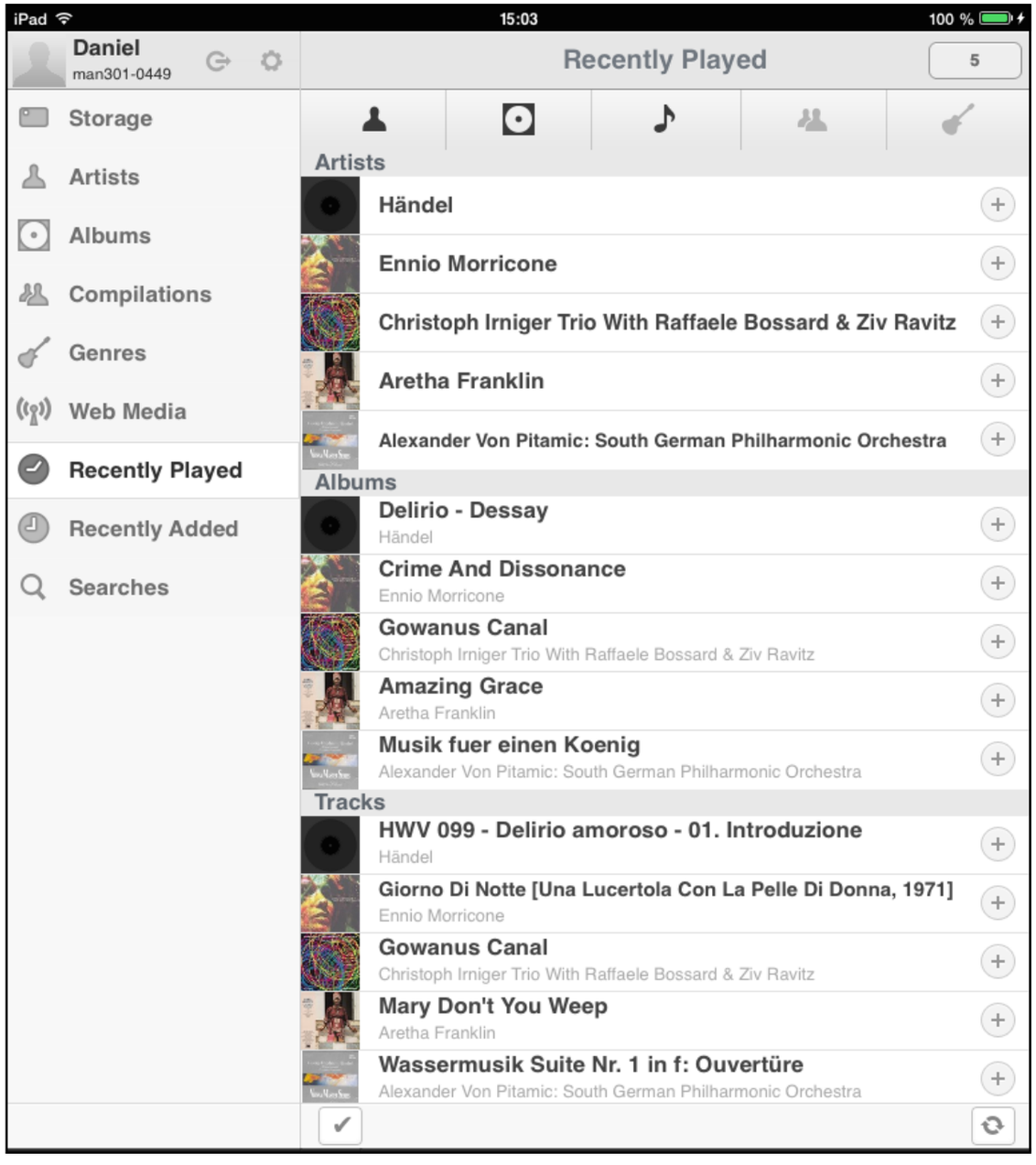
- **Web Media**, here all links to web based streams (radio, podcasts) can be found. The streams have to be added to the library first, as described in Chapter 2 / Section 4.

- **Recently Played**, generates a list of music you recently played on the MAN301. You can select the items to be displayed with the icons in the top bar.

From left to right:
Artists, Albums, Tracks, Compilations, Genres. This is a very convenient way to find that great track you recently played again. The numerical field in the upper right corner allows to select the (maximum) number of entries to be displayed in each category:

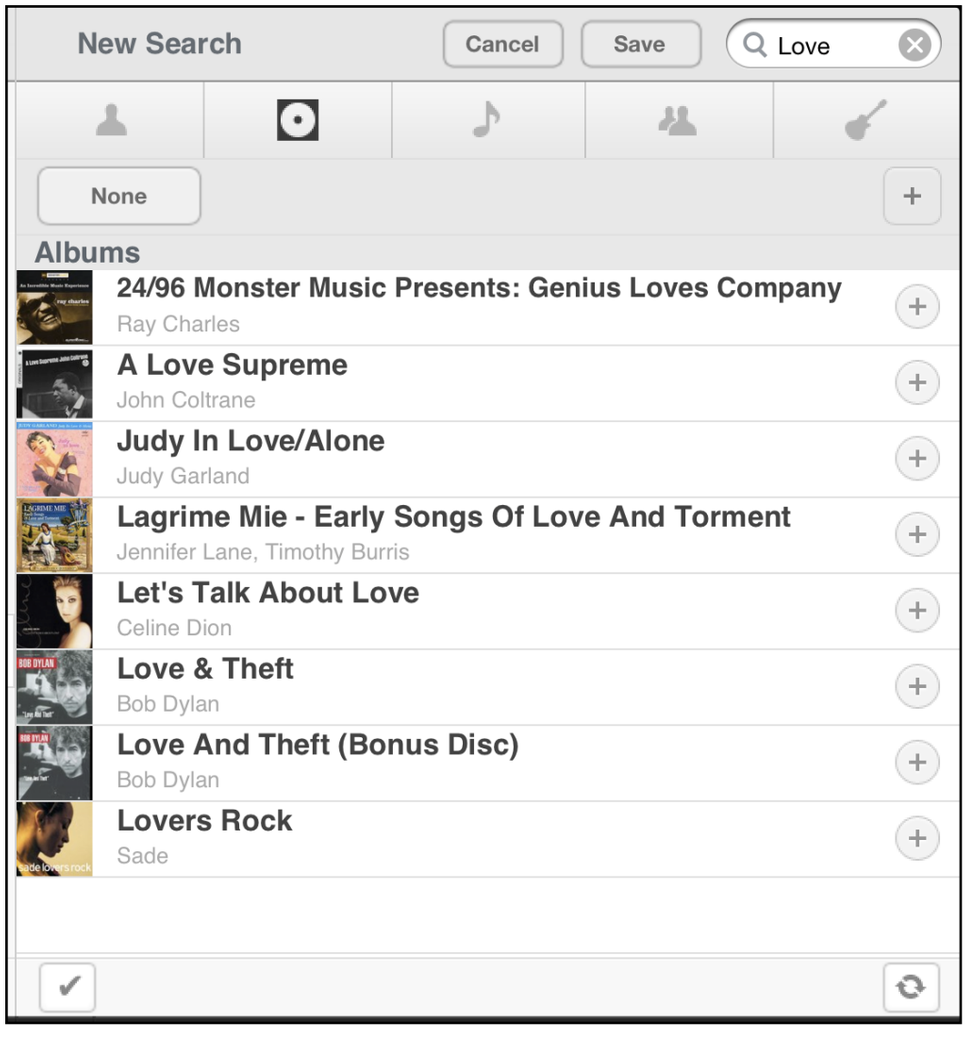


Example of a Recently Played list with Artists, Albums, Tracks selected for display:



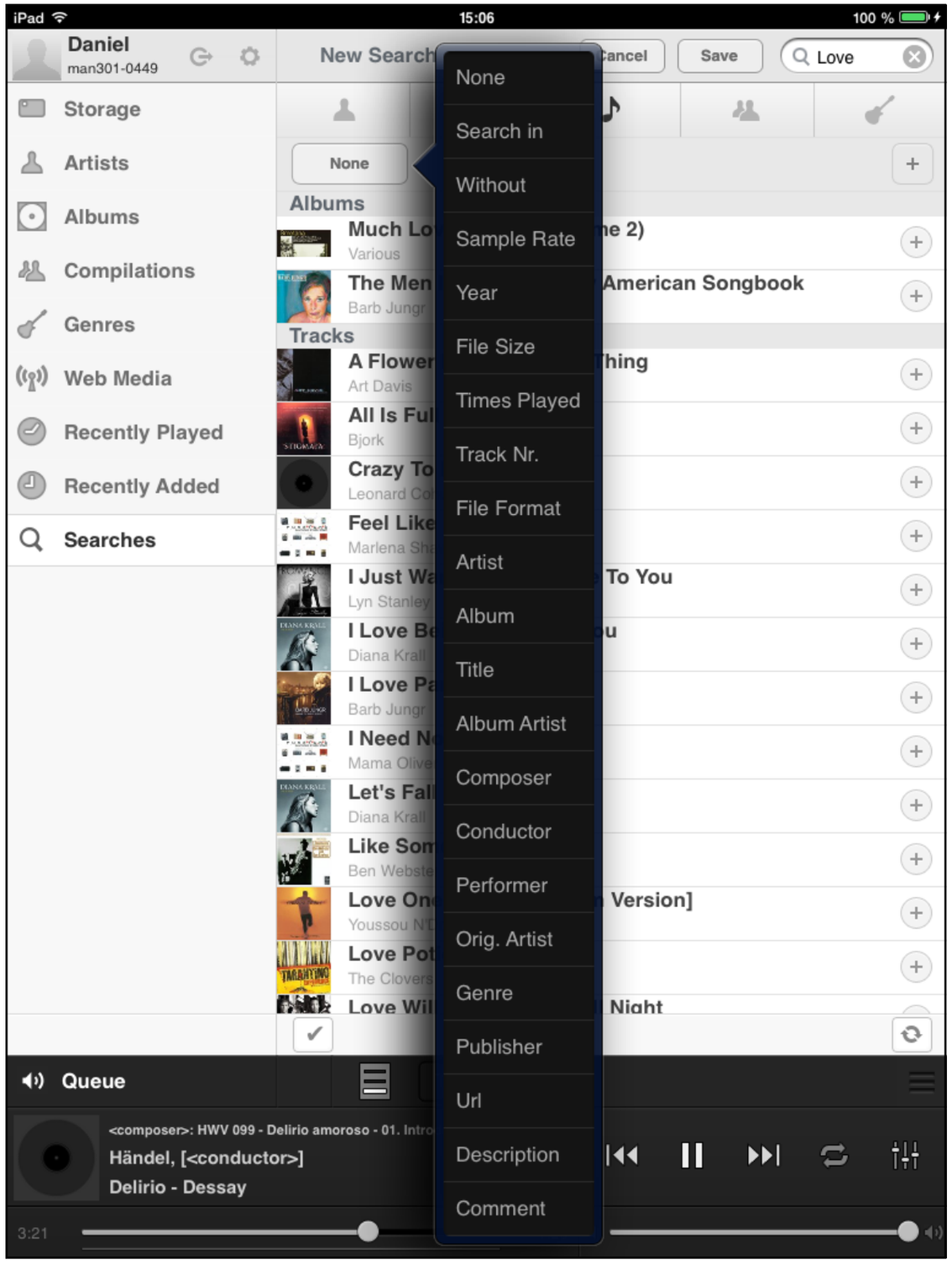
- **Recently Added**, this shows the Artists, Albums etc. you recently added to the library or which recently have been edited e.g. via the metadata editor.

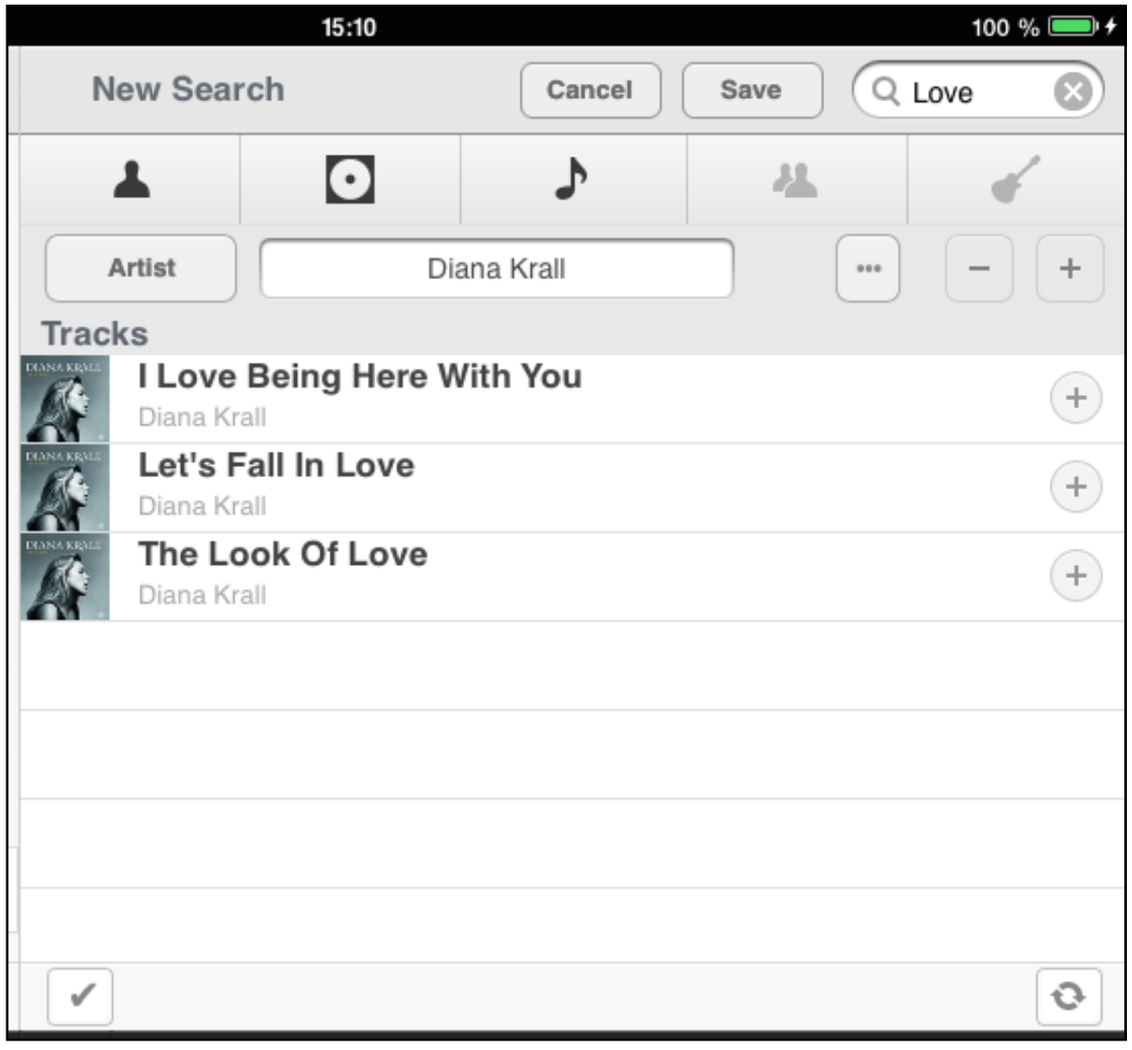
- **Searches**, a powerful tool to extract music from your library upon certain criteria. This feature can be viewed as a playlist generator based on given criteria. Thus the „playlist" generated changes whenever the library is extended with music matching the criteria in a given search.



At first you may enter any word which describes what you are looking for, e.g. enter „Love" in the search field in the upper right corner. The display then changes to a similar view as we have seen it with Recently Added, the concept of selecting Artists, Albums etc. is the same.
Say we have selected the Albums display, now all albums containing the word Love in the album title are displayed. This may be too many and not exactly what we were looking for. So we can refine the search by tapping on the „None" pad. This opens a list of additional criteria, let's select the „Artist" and enter Bob Dylan, see the following page.

(Note, it is not necessary to enter anything into the search field in the upper right corner, you may actually skip that and tap on the pad in the lower right to start a new search.)

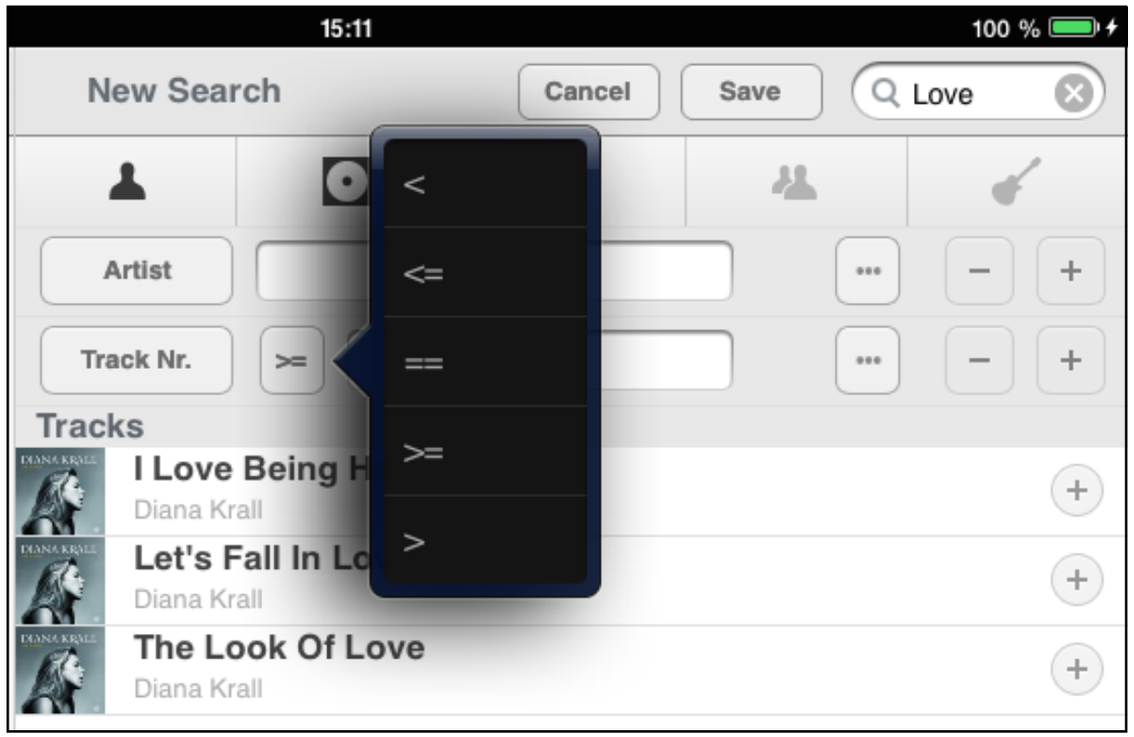




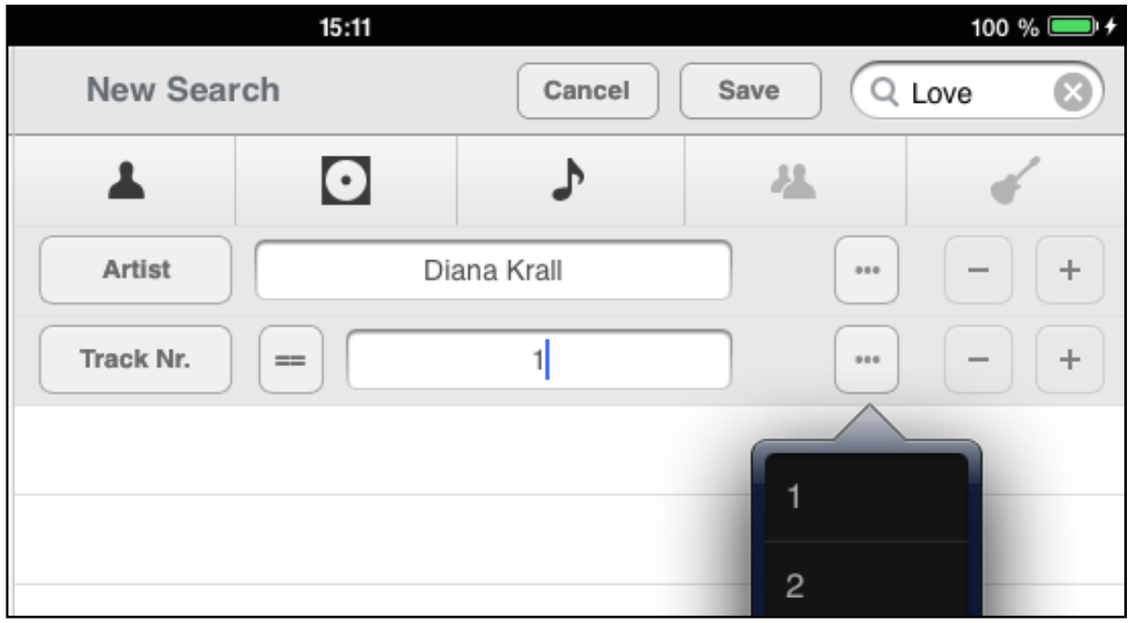
This returns the list of all Albums where Diana Krall is the artist and which have the word Love in the tracks title. Note that the name has to be exactly written as it appears in the artist meta-data. One could also write Bob* which returns all artists starting with Bob in their name. Very useful if the spelling is not remem-bered or if the metadata contains spelling errors.

The pad deletes the current criterium while the

pad adds another one. Let's add another one and select the Track Nr. criterium. The pad to the right of the Track Nr. pad allows to set the selection criterium (less than, equal, larger than, etc.).

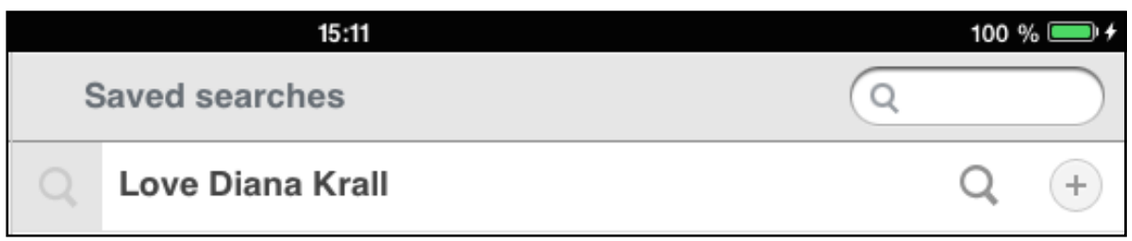


The ••• pad now reveals the list of track numbers available in the library. Let's select the 1. Now the list only contains the first tracks of the albums performed by Diana Krall.

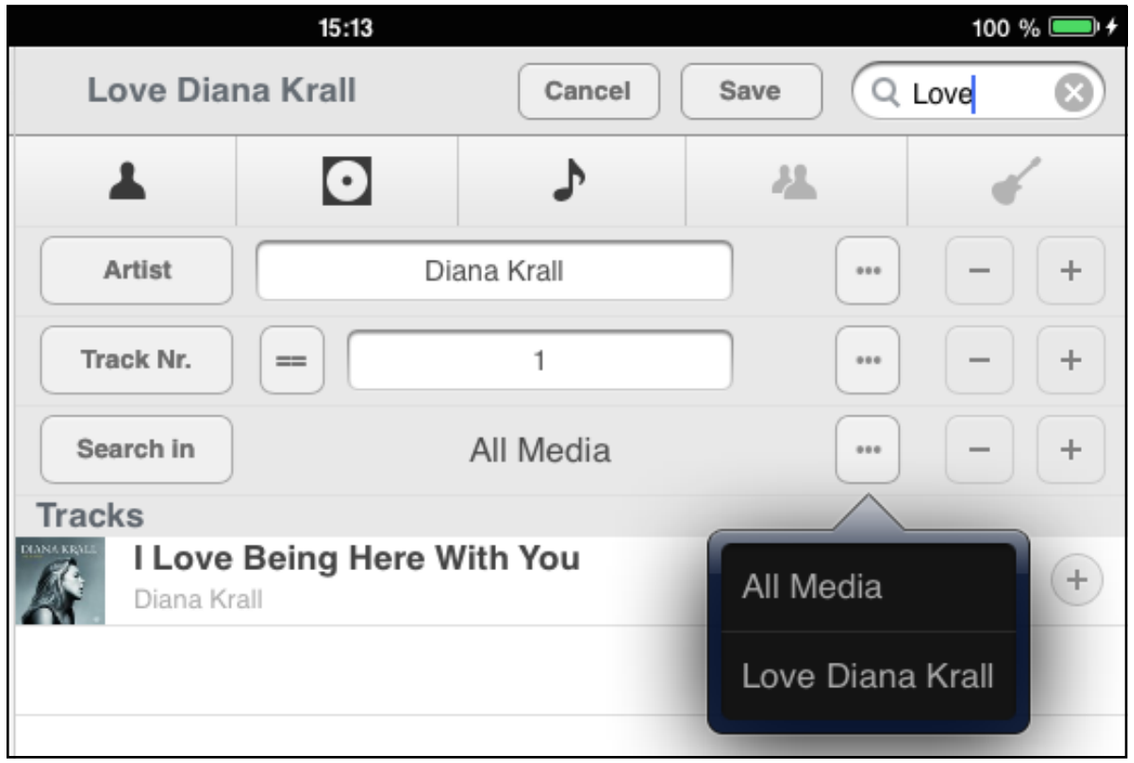


This search can now be stored via the Save pad in the top bar. The stored search now shows in the list whenever we select Searches from the menu on the left. Just tap on a listed search

to get the results. Tapping on the + adds the search results to the target playlist.

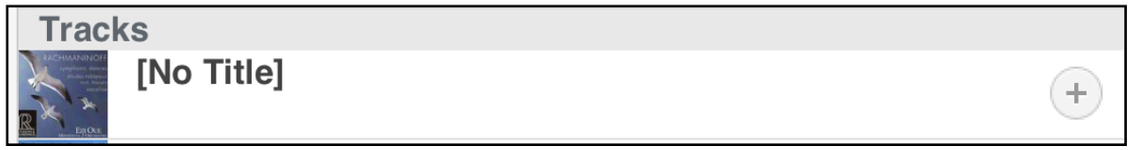


Tapping on the magnifying glass allows to do another search within the „Love Diana Krall“ search results as shown below. So it is possible to nest searches.



Obviously the searching features are only useful if the tracks are properly and completely tagged (metadata applied). If that is the case, then it is possible to extract e.g. all tracks with conductor X, orchestra Y on label Z. A very powerful feature.

If the track display is enabled ( ) and if you do a search with a completely empty search field ( ) then you may see an entry which looks similar to this:

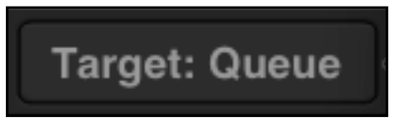


This entry leads to music files which are incompletely tagged and thus are a means to identify those tracks and subsequently complete their metadata via the metadata editor. Details about this are given in Chapter 4 / Section 3.

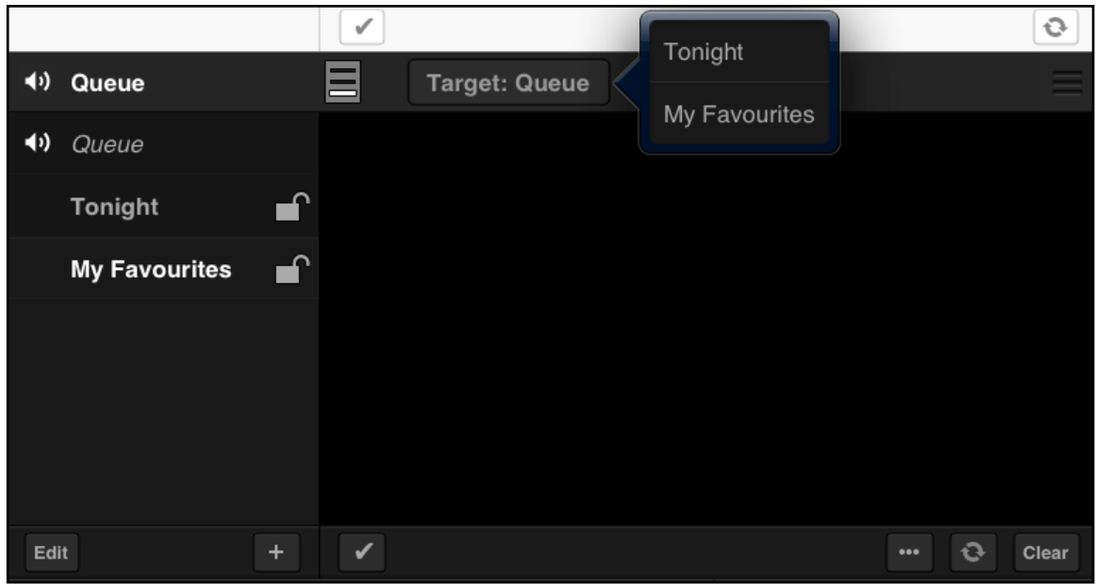
Playlists

One thing first - do not fear from deleting or clearing tracks and lists etc. There won't be any tracks deleted, it is only lists of tracks which can be edited. Your music is always safe. The only place where actual music tracks can be deleted is the „Storage" as described in section 1 of this chapter.

As mentioned in the previous section, the Queue playlist is the default playlist for immediate playback of tracks selected in the library. Queue should not be used to assemble a playlist, as it can be easily overwritten. The Queue playlist is always there, it can not be deleted.

For setting up your own playlists simply tap on the pad at the bottom of the playlist window and enter a name for the playlist. If you now tap on the newly generated playlist an empty window is shown. In order to fill the playlist you first have to set the Target to the new playlist. Tap on the 

pad at the top of the playlist window. This opens a window which lets you select the playlist where you would like to add tracks.



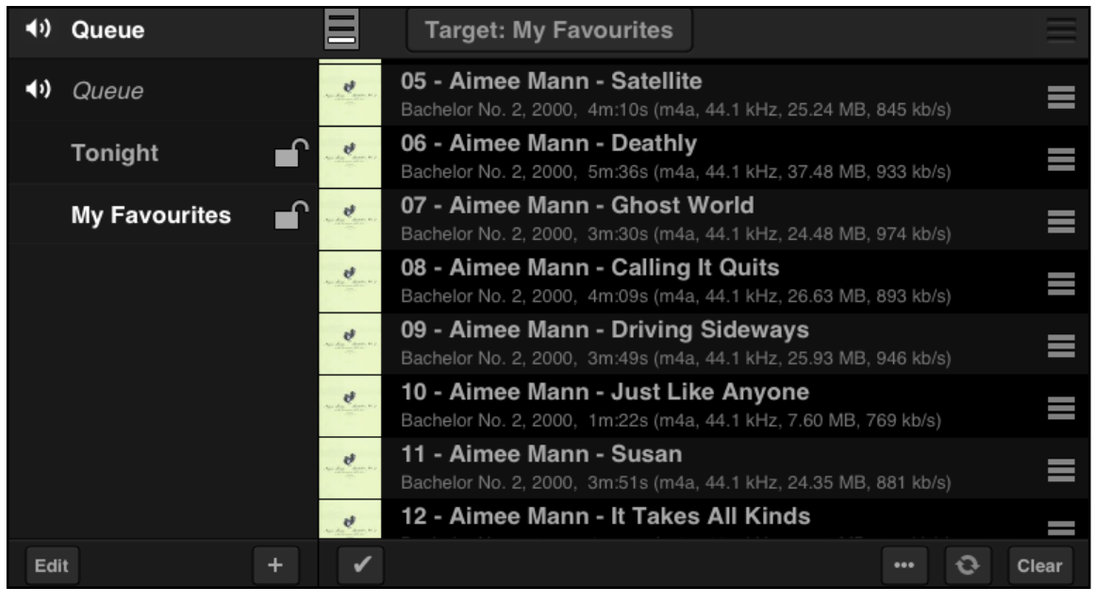
Now select albums or tracks from the library and add them by tapping the pad.

With the pad you can select how the newly added tracks are appended, either at the *bottom* of the list:

At the *top* of the list:

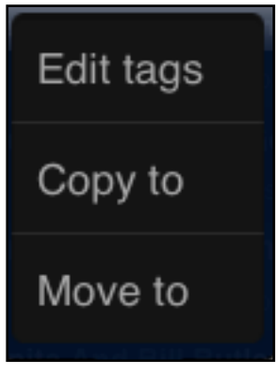
Or with this selection the tracks in the playlist get *replaced* by the newly selected ones:

You may change the order of the tracks by tapping on the handle of a track and moving it up or down.

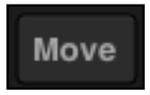
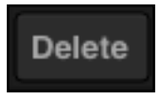


With the pad it again is possible to select tracks for subsequent editing (note, swiping on the playlist entry to the right or the left is the same as tapping on the pad or the pad respectively):

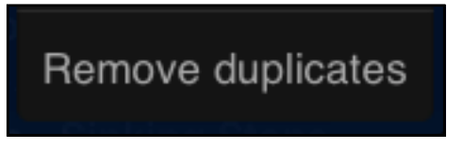
With a track or several tracks selected, the pad reveals this list:



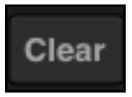
„Edit tags“ enters the metadata editor,
„Copy to“ allows to copy the selected tracks to another playlist,
„Move to“ allows to move the selected tracks to another playlist.

The  pad allows to move one or several tracks within the playlist, the  pad deletes the selected tracks from the playlist. (The tracks are not deleted from the library, no worries).

If the track selection mode is exited again (tap on the pad), there are more features available: The pad shows this menu:



The „Remove Duplicates“ removes duplicate tracks from the Playlist.

The  pad allows to empty the playlist and fill it from anew.

The pad refreshes the Playlist.

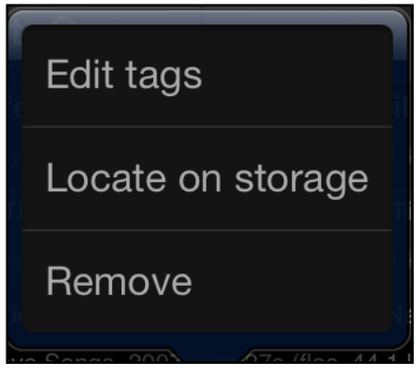
The pad in the lower left corner is for editing whole playlists, i.e. if editing is activated, playlists can be rearranged or deleted. Only those playlists which are not set safe (with the lock pad) can be deleted.

Note that if the current Target playlist is set safe, the Target playlist is automatically set to Queue, as a playlist set safe does not take tracks anymore.

The icon to the left of a playlist indicates which playlist is currently playing.

The or pad in the upper right of the playlist window, allows to return to the currently playing track after scrolling through the playlist.

Tapping and holding the finger on a track in the playlist reveals this window:



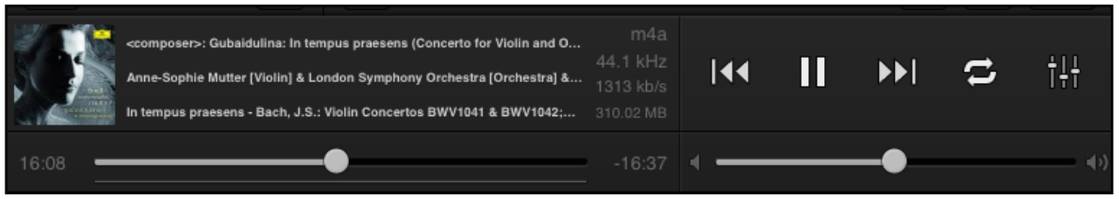
Edit tags enters the tag editor with the selected track.

Locate on storage shows the directory on the storage device where the track in question is stored.

Remove removes the track from the playlist.

Show View, Player Bar

The bottom of the library view screen shows the player bar with controls to start and stop the music and to skip tracks.



The progress bar on the lower left allows to scroll back and forth in a track. The thin line below the progress bar indicates the filling of the audio buffer internal to the MAN301.

The volume control fader on the lower right can also be moved by tapping on the speaker pads at the left and the right of the faders.

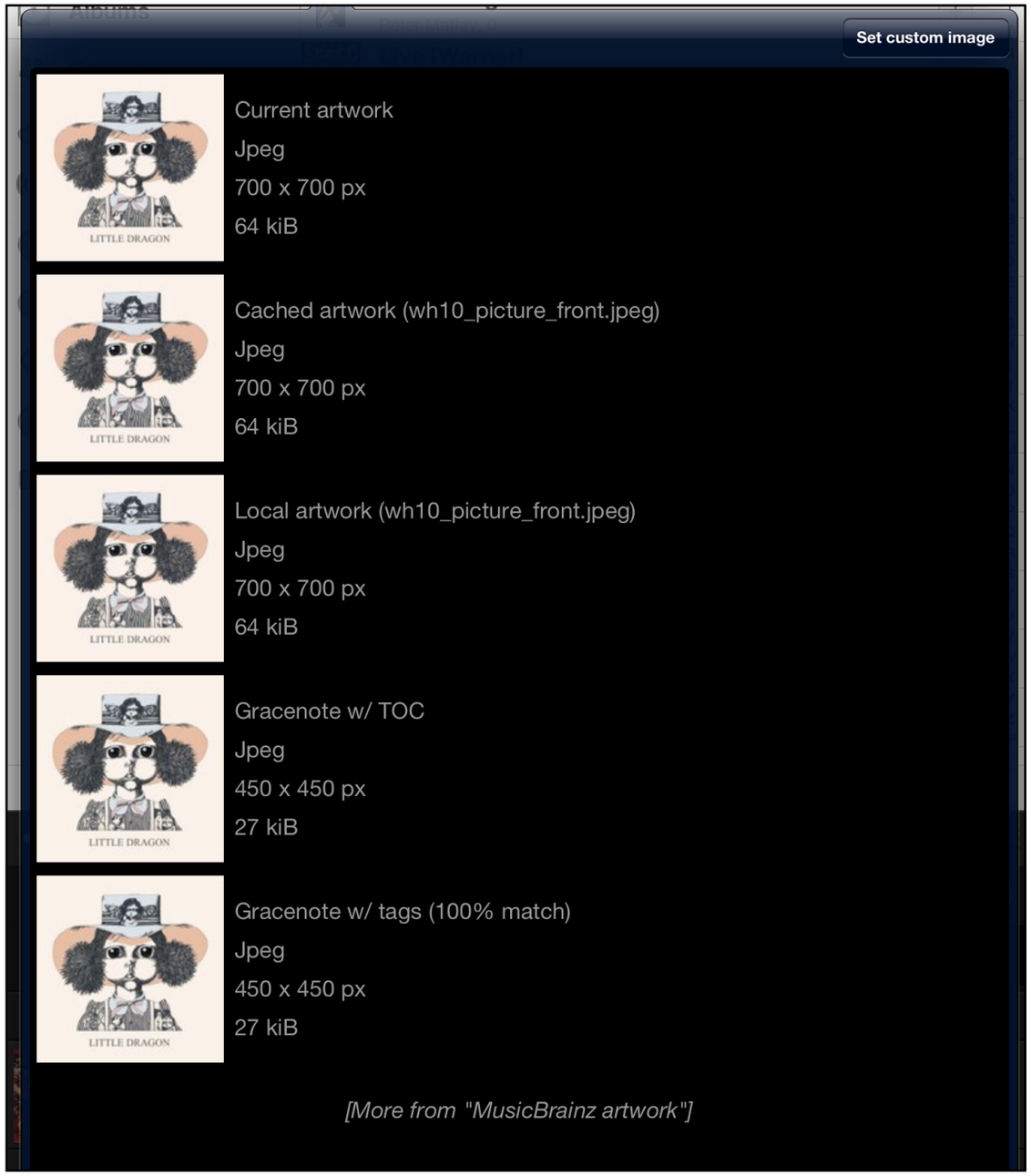
The pad allows to repeat the whole playlist or just a single track.

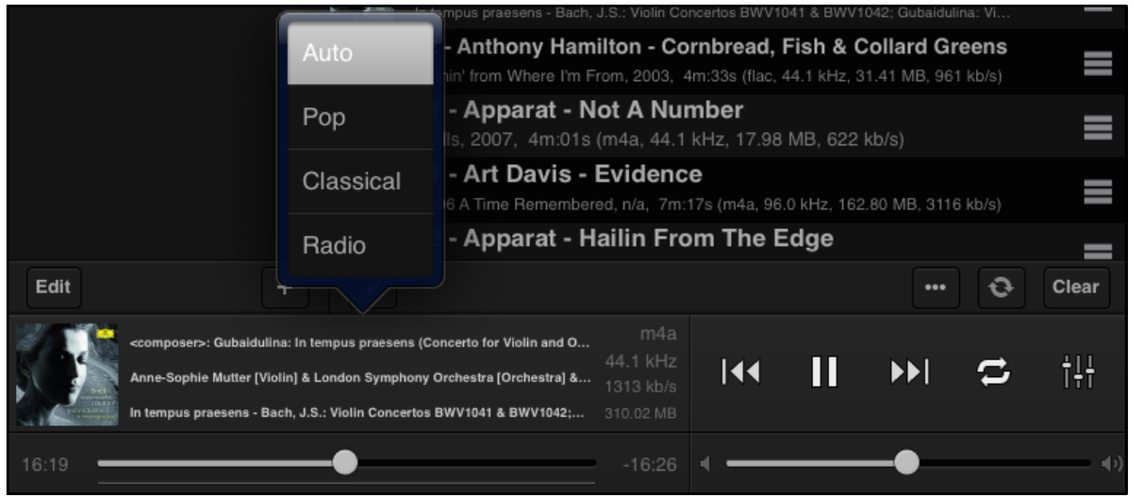
Tapping on the cover art on the left enters the Show View screen with the player bar still there and the currently playing playlist shown as a cover stream which can be scrolled left / right.

Tap on a cover to play the particular track. Tapping on the dot in the center above the cover stream readjusts the cover stream to the track playing. The playback can be controlled by tapping on the large cover art (start / stop) or by swiping left / right on the large cover art (skip backwards / skip forwards).

Tapping and holding the finger on the artwork opens a window which shows the available artwork and also some more artwork from an Internet artwork fetch. For details on this feature see Chapter 4, Section 3.
This procedure of tapping / holding the finger on the artwork, by the way, works anywhere where cover art is visible. Just tap and hold on the cover art in order to fetch new cover art from the Internet. E.g. you even may change cover art for an album while a track of another album is playing.

Example of a cover art search:



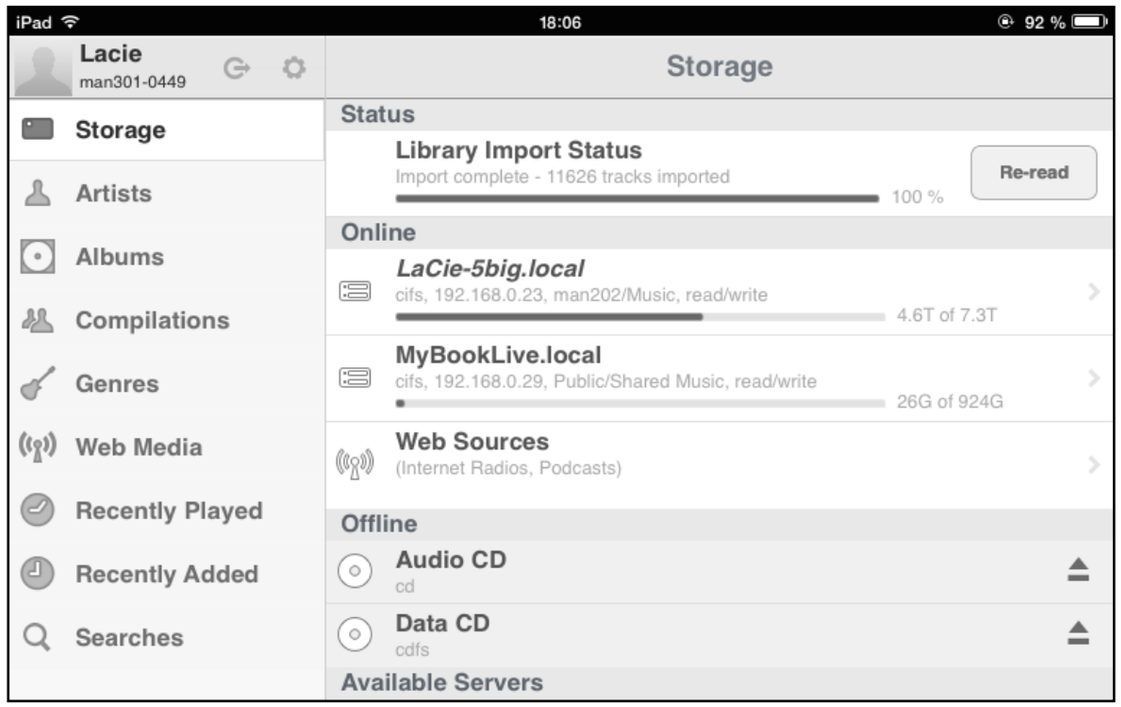


Tapping on the text to the right of the cover art, opens a menu as shown above. This allows to select how the three lines of text are built.

Web Media

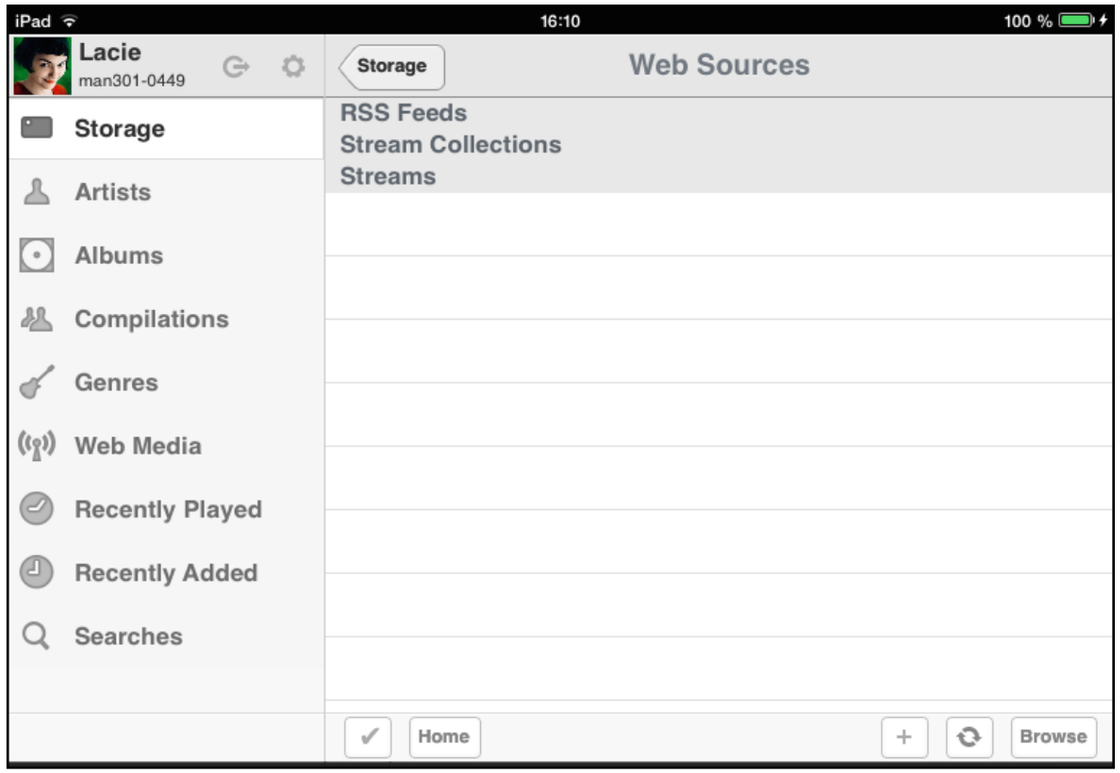
This section describes how to add links to web radios or podcasts to the MAN301's playlists.

Tapping on the Storage menu reveals a screen similar to this:



Further tapping on the

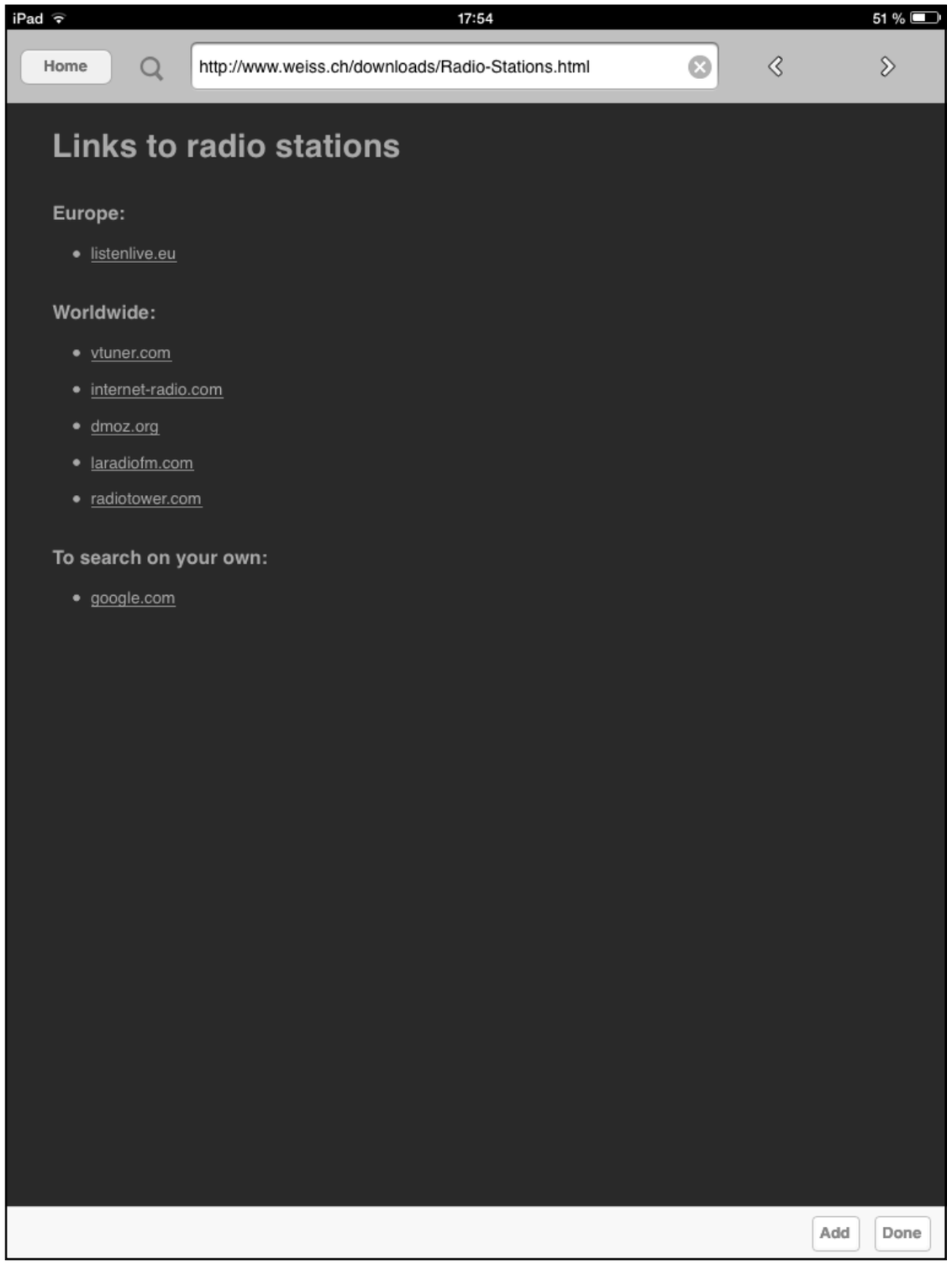
reveals a screen like this:



The pad in the lower right allows to enter the URL of a web stream if the URL is known already or if it has been copied e.g. from an email message or from a Safari window.

The pad opens a web browser window which allows to search for radio streams, podcasts etc.

That looks like this:



This is a webpage on our web server. We can easily update it for further links.

Note: The browser will not work if the MAN301 system is configured according to Configuration 4 and the iPad is connected to the WiFi access point of the MAN301. The iPad has to be connected to the access point of the WiFi Router instead (as indicated on the Configuration 4 graphics in Chapter 1 / Section 2).

The top bar:

is basically self-explanatory. The home pad opens the window on the left. The arrow pads allow to browse between web pages. The magnifying glass opens a Google™ search page.

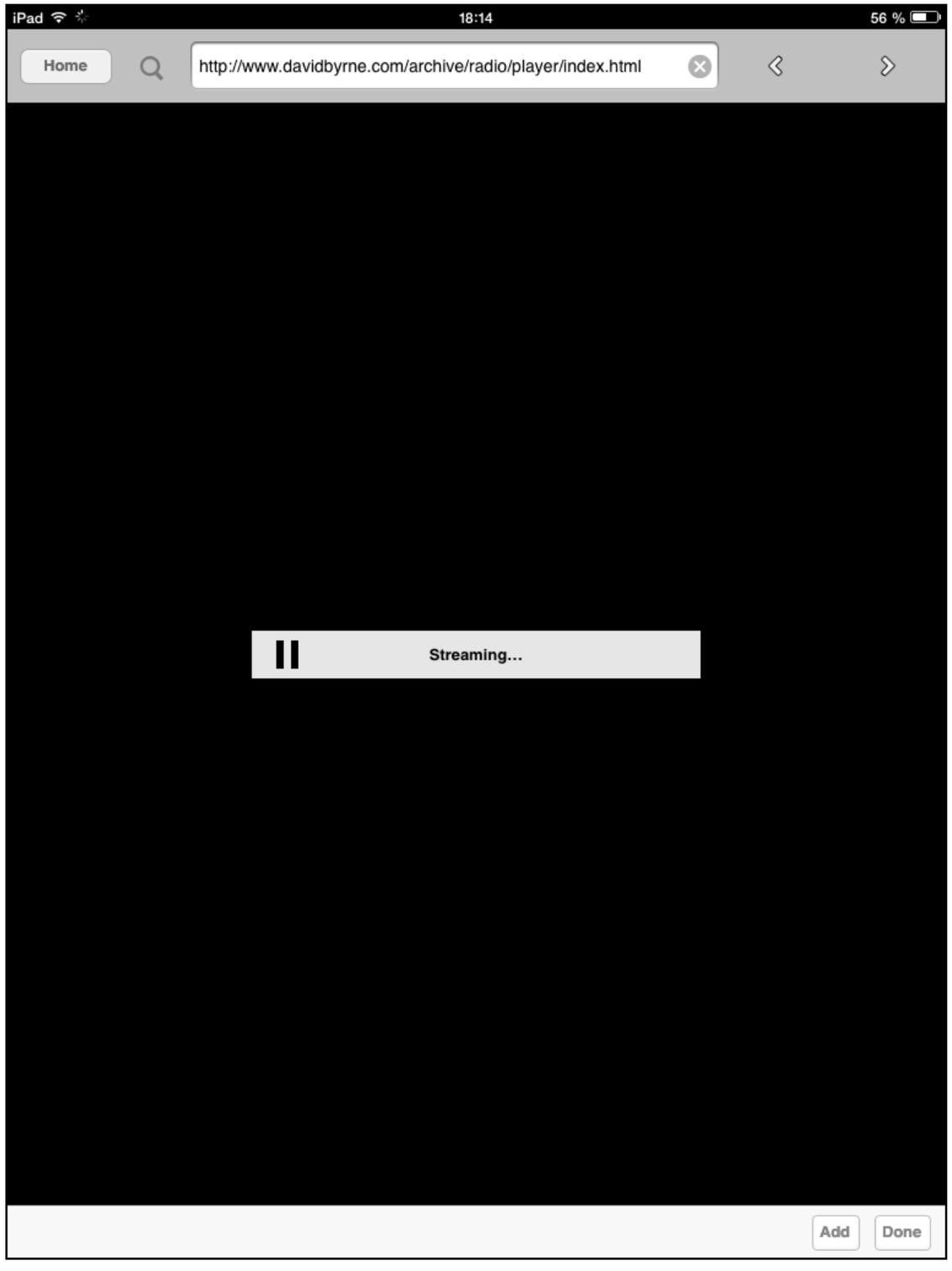
The bottom bar:

Allows to

a link (i.e. the URL shown in the top bar window) to the MAN301 Web Media list. This means with the help of the links on the Home page or with the Google™ window one searches for web streams. For instance you may Google™ for your favorite radio stations.

As an example let‘s Google™ for: David Byrne Radio and then enter his website:

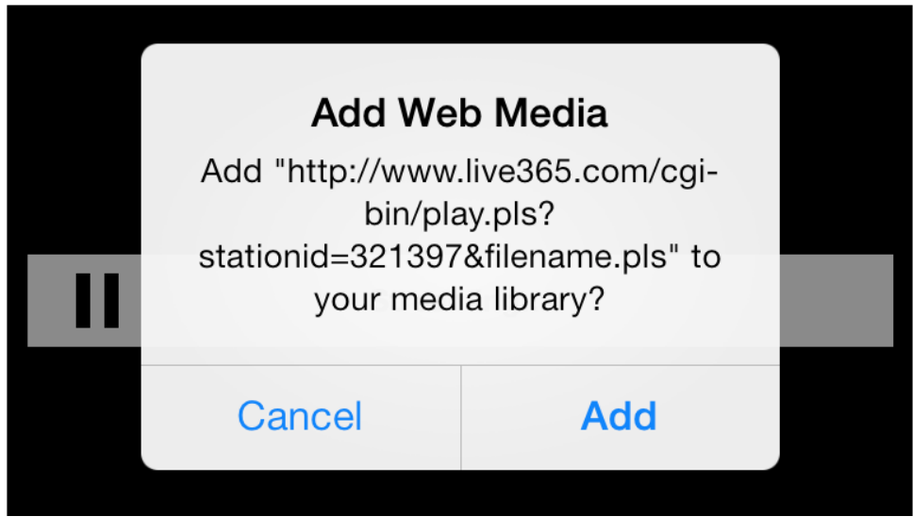
There tap on the PLAY MP3 STREAM link. This opens this window:



I.e. the radio is now streamed via the iPad and you may hear it

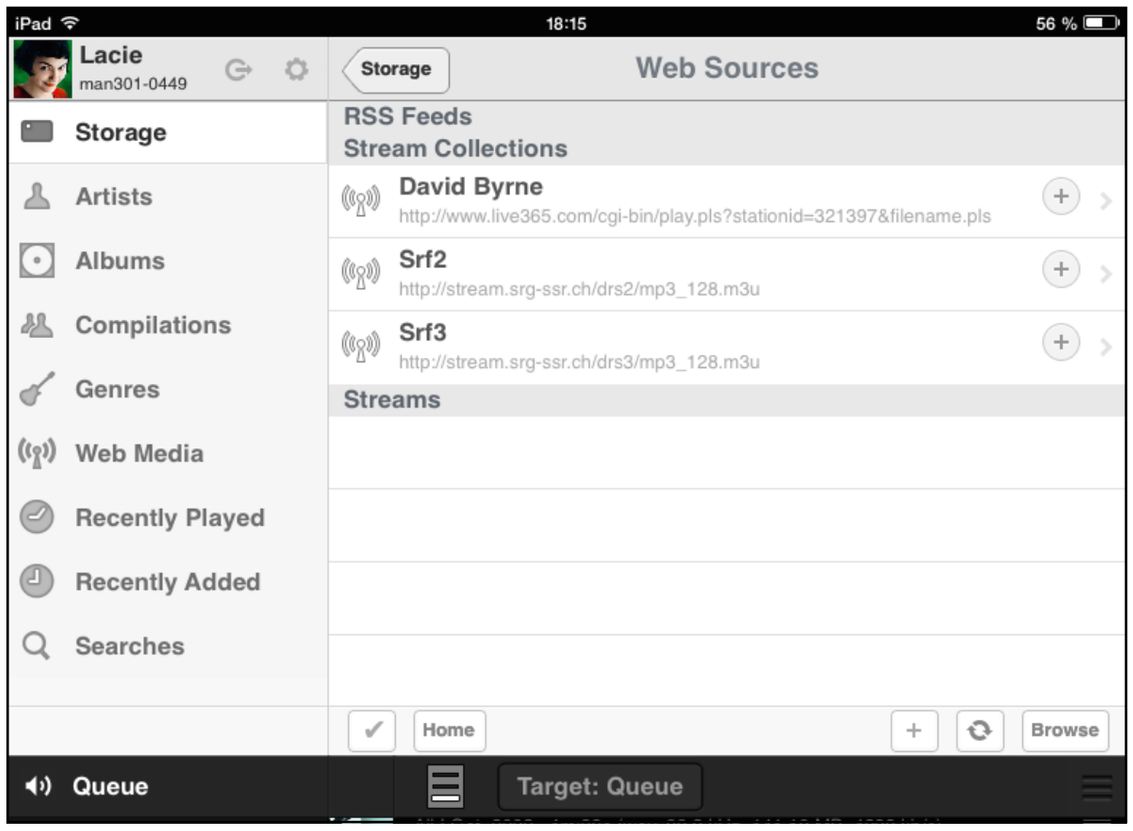
through the iPad speaker.

Now tap on the Add button in the lower right. This opens a window like this:



By tapping on the Add pad this stream (i.e. the URL of the stream) is added to the MAN301 Web Media list. If the URL is not a valid web media format then an error message will tell you about that. If on the other hand it is a valid media format, this screen is shown (allow for a while until it shows up):

Here you can enter a name for the media link to be added, e.g. in that case we enter e.g. „David Byrne“ which then shows in the list as shown below. (Note, this label always can be changed if necessary.)



David Byrne is shown in the „Stream Collections“ department.

The same list is shown in the Web Media menu where the stream now can be added (+) to a playlist in a similar way as one would add an album track.
Note, adding a Stream Collection to a playlist may result in several similar entries. To get rid of the duplicates simply tap on the

pad in the lower right of the playlist window and select „Remove duplicates“.

The stream can now be played in a similar way as an album track. Note, the progress bar does not move in the case of a stream, as the duration of the stream is not known.

There are three different sections as seen above:

- RSS Feeds for audio podcasts, typically with an .xml extension.

- Stream Collections, here go the playlist files with extensions like m3u, pls,.... Playlist files contain a list of e.g. mp3 streams. Radio stations often use such files for their streams.

- Streams, here go the streams with extensions like mp3, ...

The media links you add via the web browser are automatically put into the proper section.

There are sites on the Internet where collections of radio stations are shown. Here are some examples:

Stations in Europe: http://www.listenlive.eu

Worldwide: http://www.vtuner.com (enter exactliy like this, then tap on the „check out our huge station list!“ pad in the upper right of their website)

Worldwide: http://www.internet-radio.com

Directory of directories:
http://www.dmoz.org/Arts/Radio/Internet/Directories/

Note, not all kinds of streams work with the MAN301. Try the streams with these icons first:

, ,

CHAPTER 3

Audio I / O, Sync I / O

The MAN301 sports a number of digital audio inputs and outputs as well as **word-clock** synchronization facilities. The DAC version of the MAN301 in addition has analog outputs on XLR and RCA connectors.

Audio Input / Output

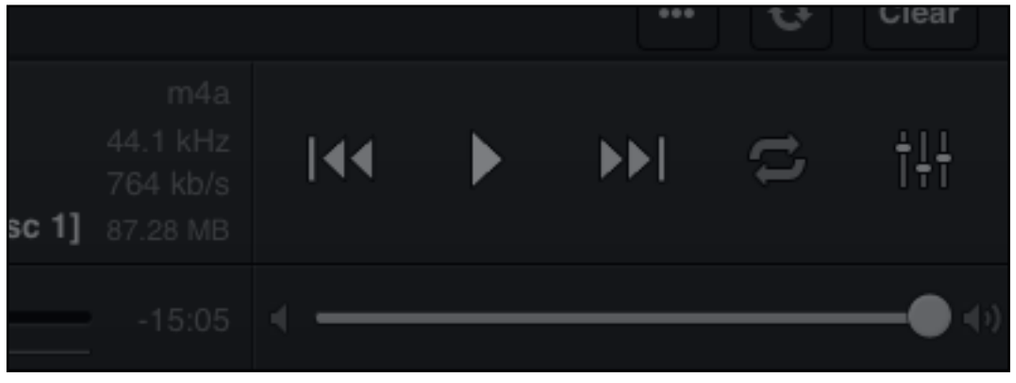
The MAN301DAC version (the one with the built-in D/A converter) has appropriate analog output connectors at the back, a pair of XLR and a pair of RCA connectors. Connect either one to your amplifier (or pre-amplifier) and set the basic output voltage as described below. Note, both RCA and XLR outputs of the DAC may be used simultaneously.

If you decided to have the MAN301SERVER version then you connect your external D/A converter via one of the digital outputs, namely AES/EBU on XLR, S/PDIF on RCA, USB, FireWire.
Note: Connect your external D/A Converter to the MAN301 before proceeding. Power up the external D/A Converter first and then power up the MAN301 unit.
The fader volume control works in that case as well. This volume control which obviously is implemented in the digital domain is a properly dithered volume control and thus is as good or even better than a volume control in the analog domain. The actual quality of such a digital volume control also depends on the D/A converter used. If the linearity of that D/A converter is compromised, the volume control will also be compromised.

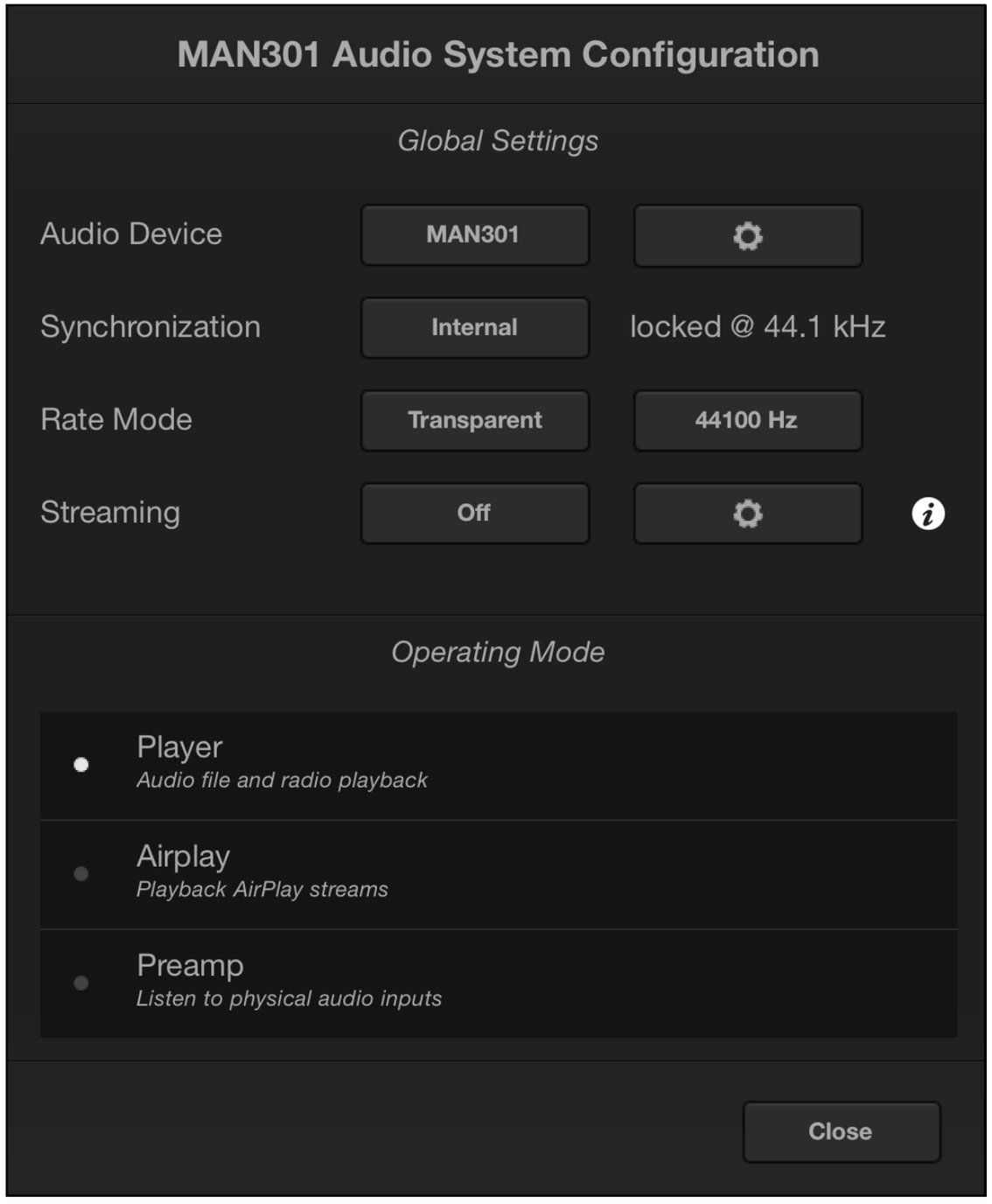
With the internal D/A converter of the MAN301 DAC unit, the quality of the volume control is extremely high. Indistinguishable from a state of the art analog volume control.

More on the digital volume control topic can be read in Chapter 7, Section 2.

When logged in with a user account, the tapping on this pad in the lower right of the display:



opens a menu like this:



This window is the interface for the MAN301 audio input / output configuration.

In the lower half (the „Operating Mode“ menu) the main operating mode of the MAN301 can be selected:

- The **„Player“** is the standard network player mode.

- The **„Airplay“** allows the MAN301 to play any audio stream submitted to the MAN301 from a third party device.

- The **„Preamp“** is the pre-amplifier mode which is now selected from here.

In the upper half (the „Global Settings“ menu) these parameters can be chosen:

- The **„Audio Device“** used for playback. This can be the built in D/A Converter or any external D/A converter device. If you have connected an external D/A Converter via USB or Firewire to the MAN301 you may need to select that one instead of the MAN301 Audio Device. Tap on the MAN301 pad to select.

- The **„Synchronization“** and „**Rate Mode“** allow to set the sampling frequency either from an internal source or from an external source. The synchronization frequency can be set such that it changes according to the track played or such that it is at a fixed frequency and the audio is converted to that frequency as necessary.

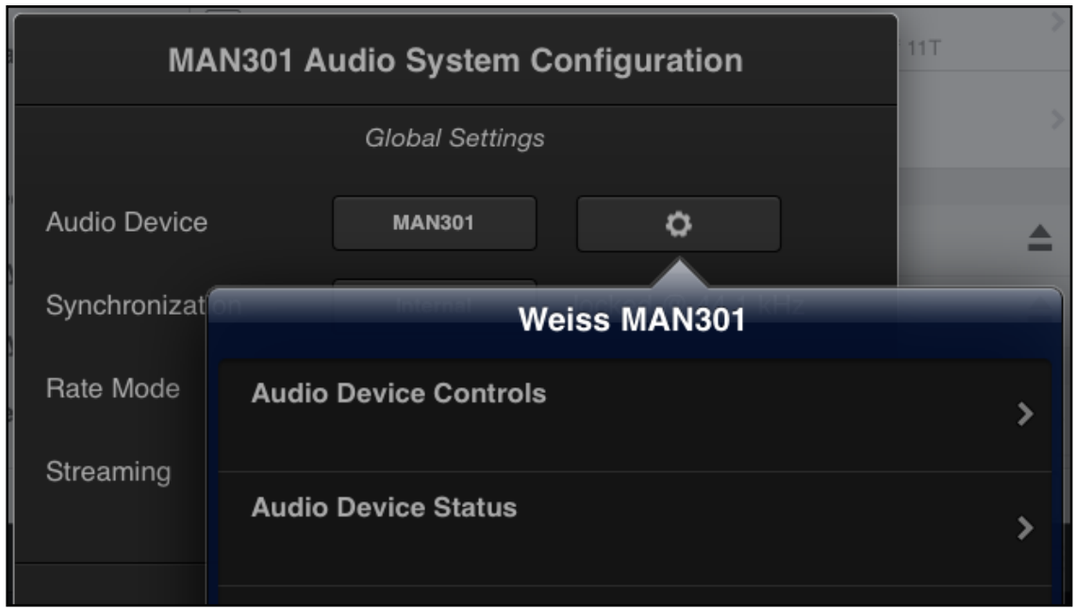
- The **„Streaming“** is a broadcast stream of the music played on the MAN301 via the network. This allows to play the MAN301

music program via any broadcast streaming capable device, like e.g. a cell phone or a computer etc.

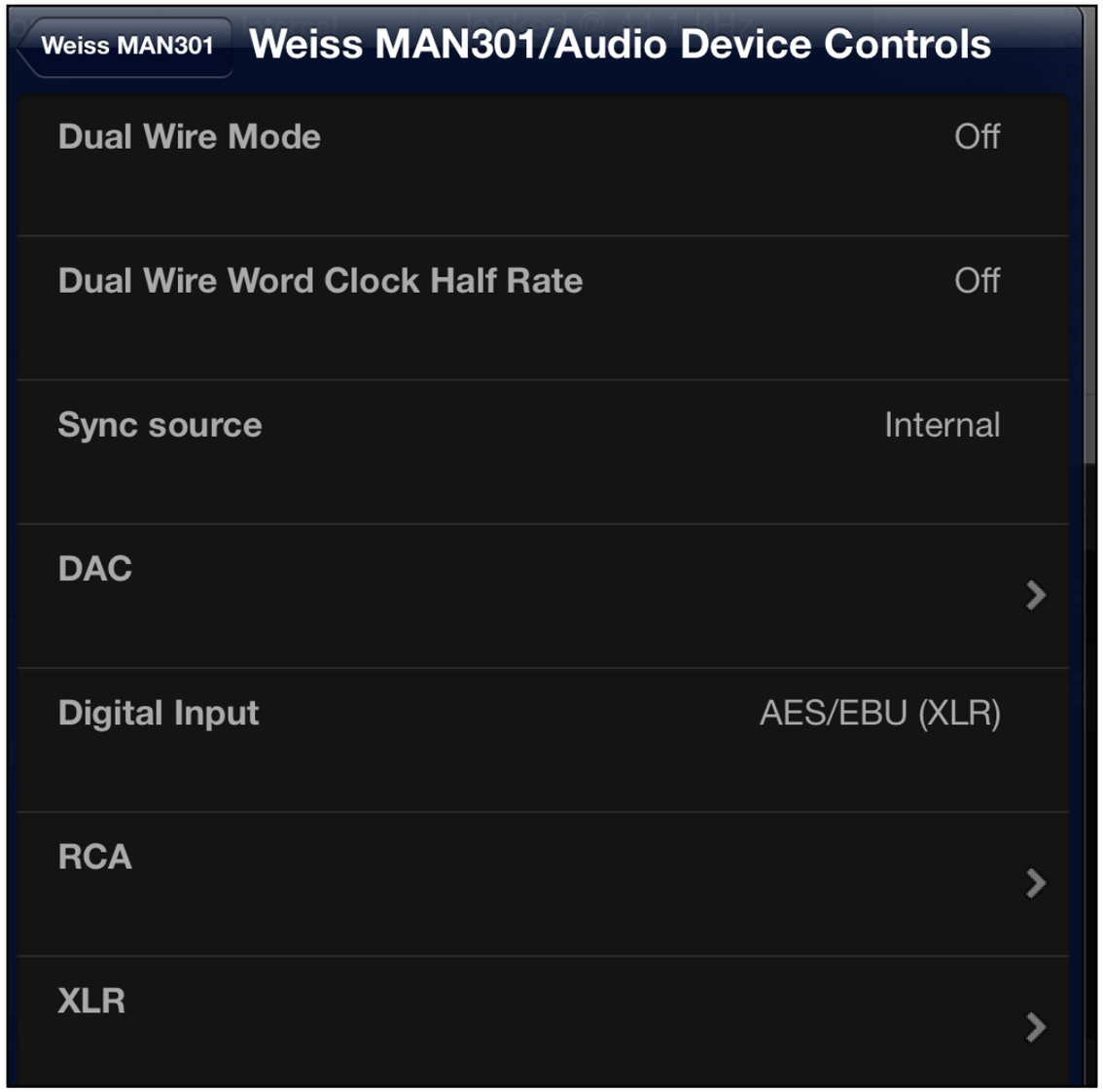
Let‘s start with the **Audio Device**. The first pad (MAN301) shows the currently selected device for the music playback. If an external D/A Converter is connected, e.g. via the USB connector, that converter can be selected alternatively to the internal MAN301 audio interface.

(Note, **if you connect an external D/A Converter via Firewire or USB**, make sure to always adhere to this power up / power down sequence:
Power up: Switch on the external DAC, switch on the MAN301.
Power down: Switch off the MAN301, switch off the external DAC. Once both external DAC and MAN301 are switched on, the connected device will show up in the list. After having selected a new output device the first time, log off from the network player mode and then log on again.)

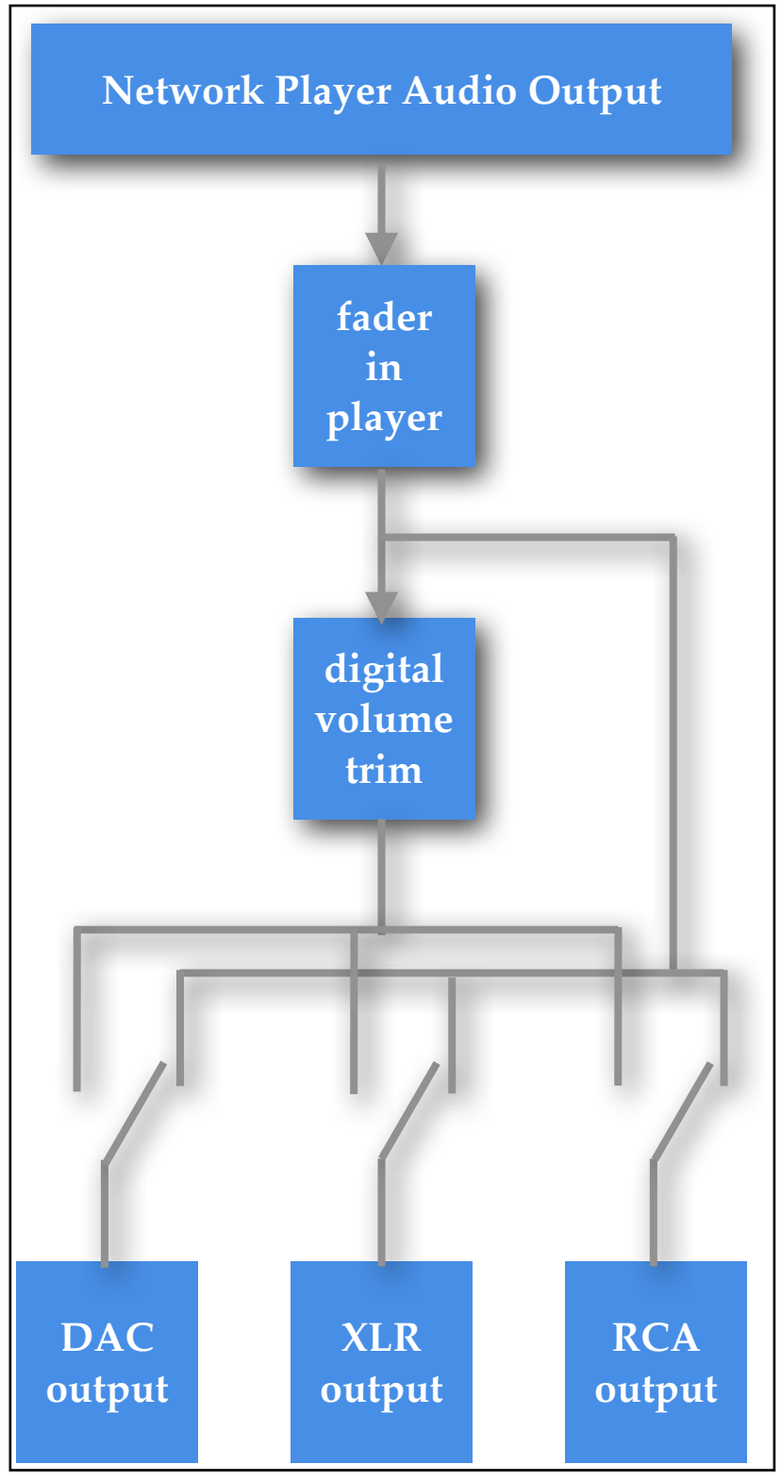
The „wheel - pad“ opens this window:



The „Audio Device Controls“ opens this (in case of the MAN301 audio device, i.e. the MAN301 internal audio interface):



In order to understand the MAN301's output structure, this block diagram is helpful:



The main volume fader in the lower right of the network player window is always active as can be seen in the block diagram.

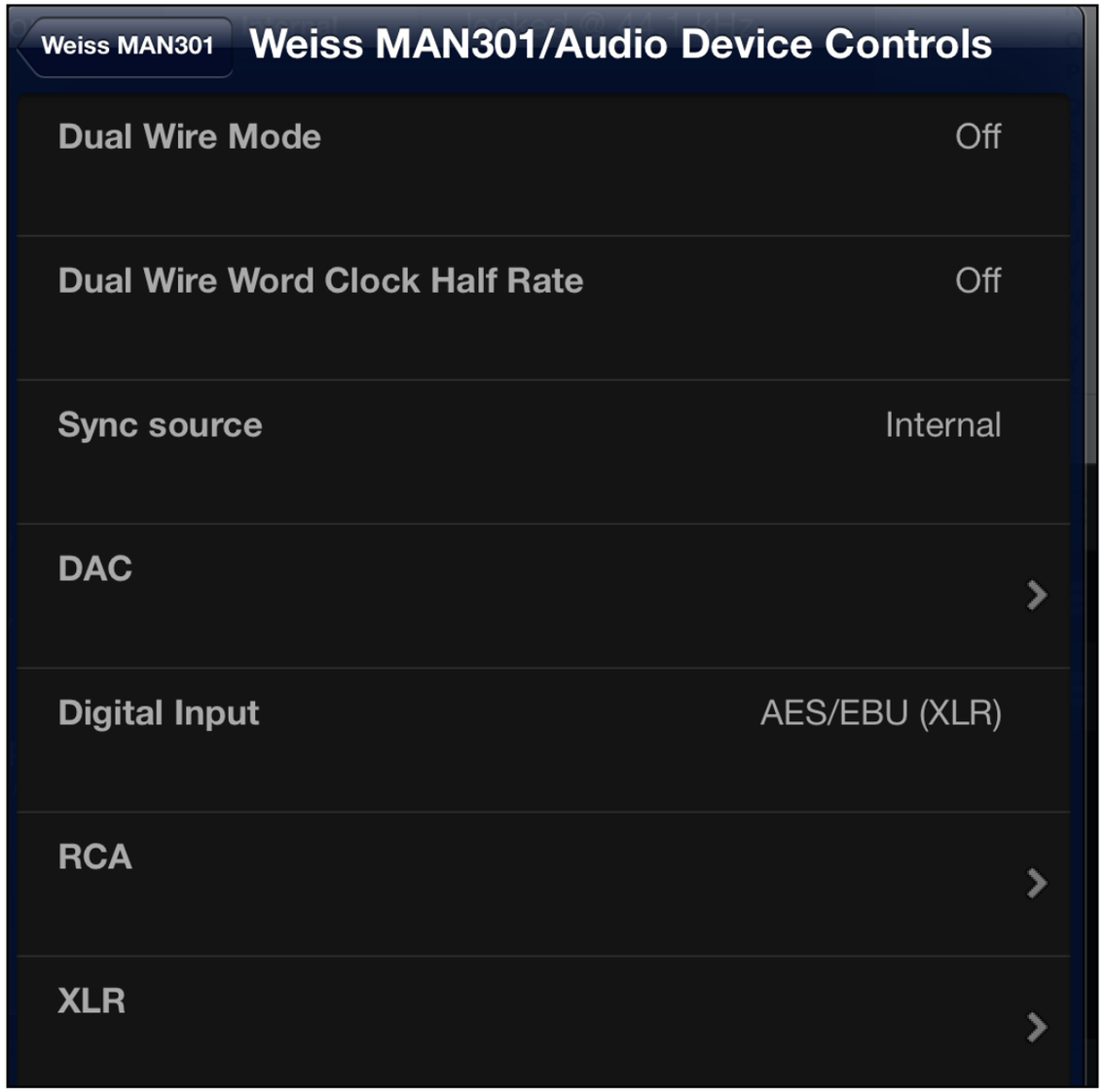
The digital volume trim can be enabled individually for each output. The DAC output in addition has a 4 level analog output attenuator (not shown in the diagram). This, in conjunction with the digital volume trim, allows to set the output voltage to any level requirement imposed by the subsequent amplifier.

The best procedure to set the DAC output level is to first have the digital volume trim and the player fader at maximum and then set the analog attenuator such that the level is a bit at the high side of the volume you would like to get at maximum. Then change the digital volume trim to get the level you would like to have at the maximum player fader setting. Bear in mind to allow for some headroom in case a recording is very low level.

All level controls in the MAN301 are properly dithered. See Chapter 7, Section 2 for an in-depth treatment of the digital level control topic.

Note: in MAN301 software versions 1.2.0 and 1.2.1 the digital volume trimmers are not available.

Let's get back to this screen:



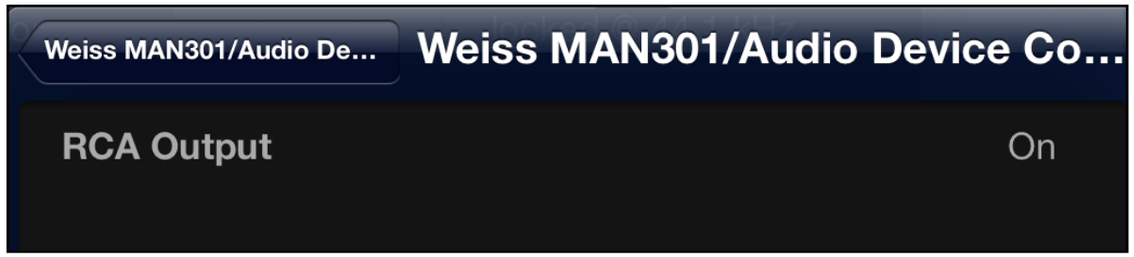
The **„Dual Wire Mode switch“** allows to set the XLR and RCA digital outputs to the dual wire mode. In this mode the XLR output becomes the left audio channel and the RCA output becomes the right channel. This mode is useful e.g. for older D/A Converters which support higher sampling rates in dual wire mode only. The dual wire mode (when selected) is active only for sampling rates of 176.4 kHz or 192 kHz. For all other sampling rates the MAN301 stays at single wire mode. The settings for the RCA output (i.e. the volume trim and the mute on/off) are not relevant in dual wire mode. The settings for the XLR output (volume trim, mute) are relevant for both XLR and RCA outputs.

The **„Dual Wire Word Clock Half Rate Switch“** pad selects the sampling frequency at the BNC word-clock output connector if the Dual Wire Mode is enabled. If the switch is set to Off, the sampling frequency at the BNC always reflects the currently active sampling frequency. If the switch is set to On, then in dual wire mode 176.4kHz, the sampling frequency at the BNC is 88.2kHz. And for dual wire mode 192kHz, it will be 96kHz.

The **„Sync source switch“** selects the source for the sampling frequency. The „Internal“ setting as to be selected if no external sync source is connected.

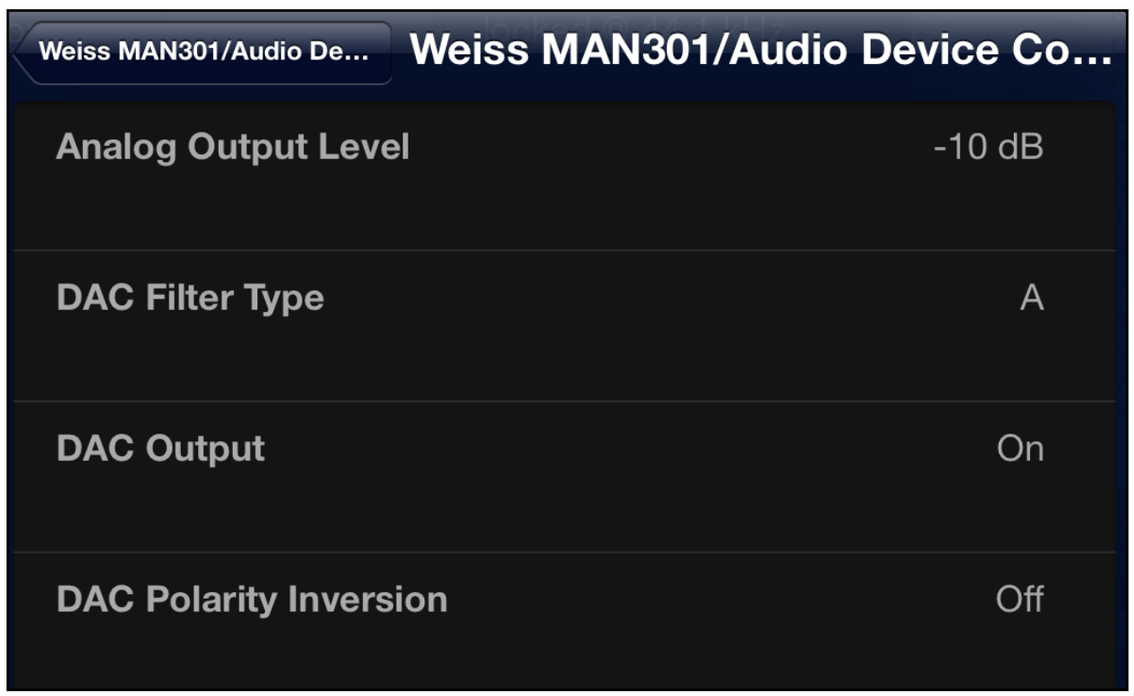
The **„Digital Input switch“** selects the input to the audio device. This feature is currently not used. (The input source when the Pre-amp mode is selected is set elsewhere.)

The **„RCA“ or „XLR“** entries reveal a window like this:



Here the two outputs can be individually muted.

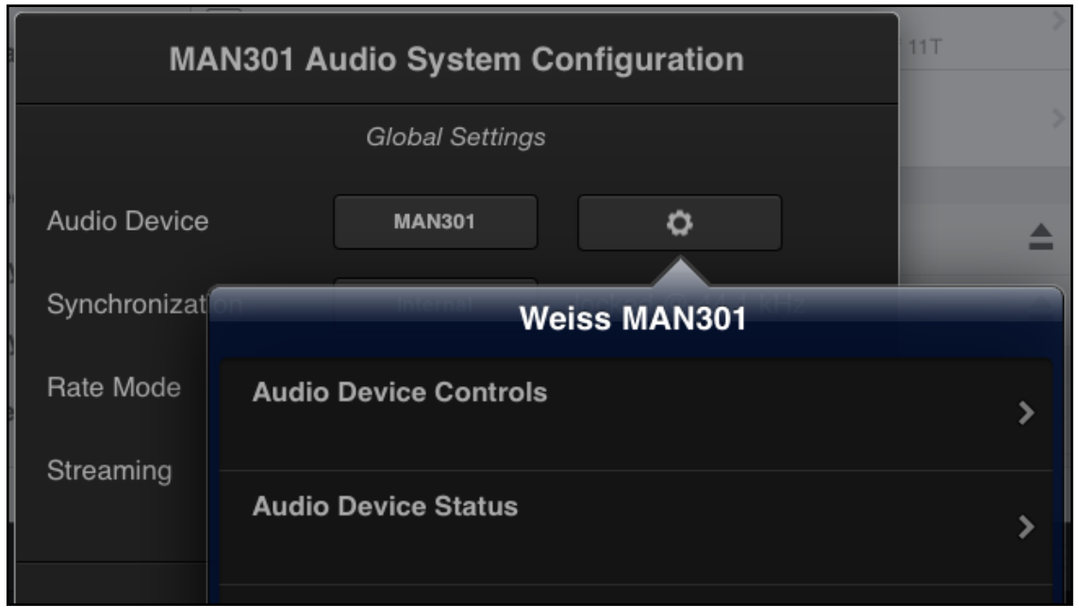
The **„DAC“** entry reveals this window:



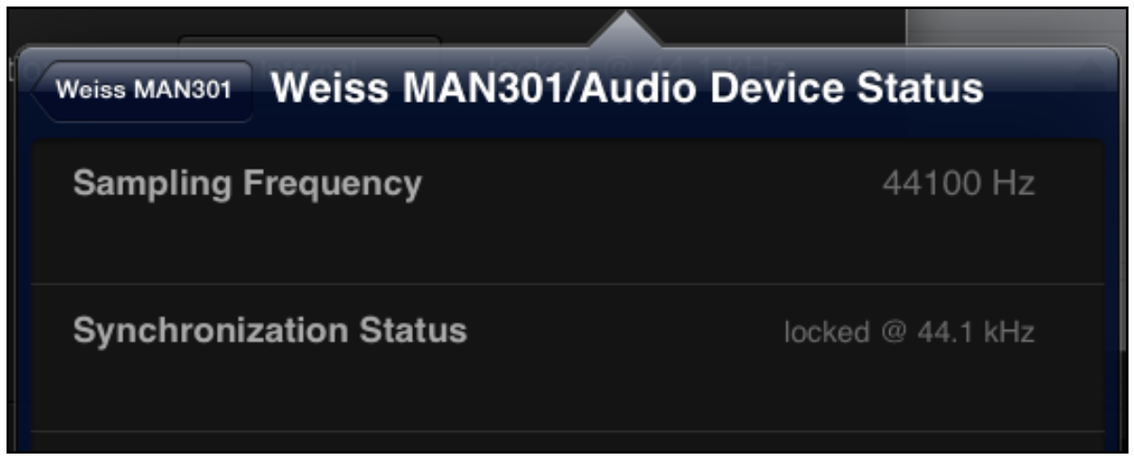
- The „Analog Output Level” control sets the analog output level of the D/A Converter in four steps (0, -10, -20, -30 dB). Set the analog output level such that the volume can be conveniently controlled with the digital faders. I.e. if the faders are set to the maximum, the volume should be at the maximum volume you care to listen at.

- The „DAC Filter Type” control selects the oversampling filter type in the D/A Converter.The A type is a steeper filter with less aliasing effects and higher pre-echo while the B filter has a gentler slope with more aliasing and less pre-echo. Chose whichever filter you prefer.
- The „DAC Output” switches on or off the D/A Converter output.
- The „ DAC Polarity Inversion” allows to invert the polarity at the D/A Converter output. This can be handy if a recording does not sound „quite right” - it could be that the polarity of that recording is wrong. „On“ means the output polarity is inverted.

Now back to the menu:

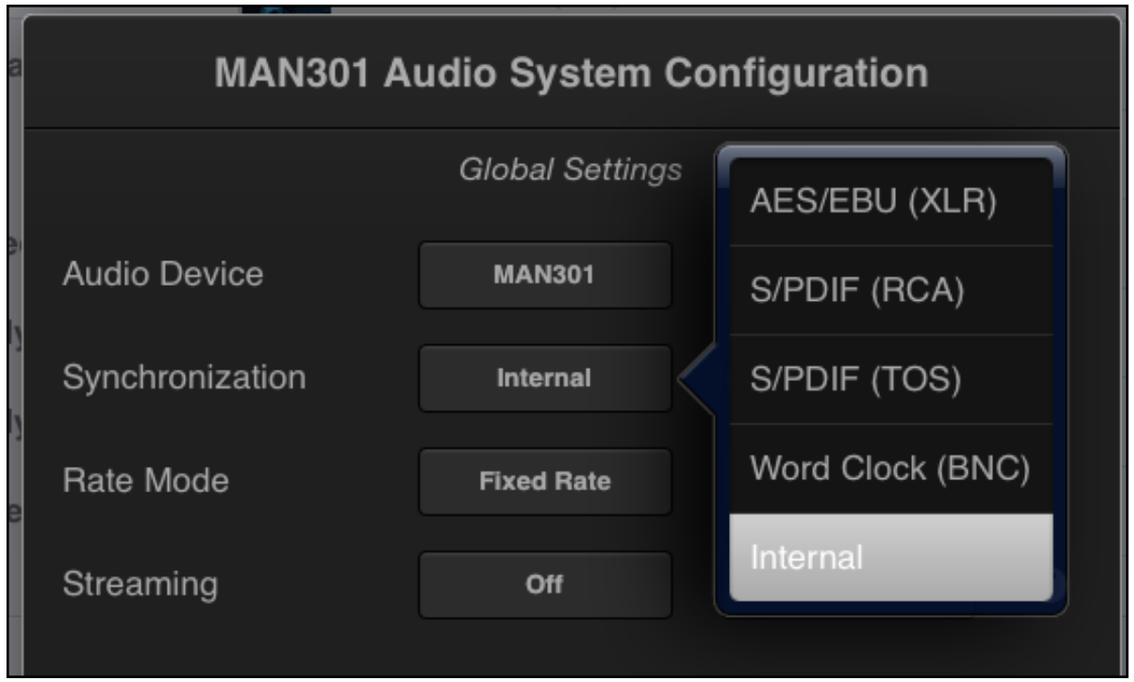


The „Audio Device Status“ opens a window like this:



This shows the current sampling frequency and synchronization status.

Now we move to the „Synchronization“ and „Rate Mode“ menus as shown on the following page.



Tapping on the „Internal“ pad opens the window to select the source for the sampling frequency synchronization. The choice is all the digital inputs, the Word Clock input (BNC connector) and the internal generator. Note that the standard configuration is the Internal generator. The external sources must only be chosen if there is an appropriate clock generator connected.

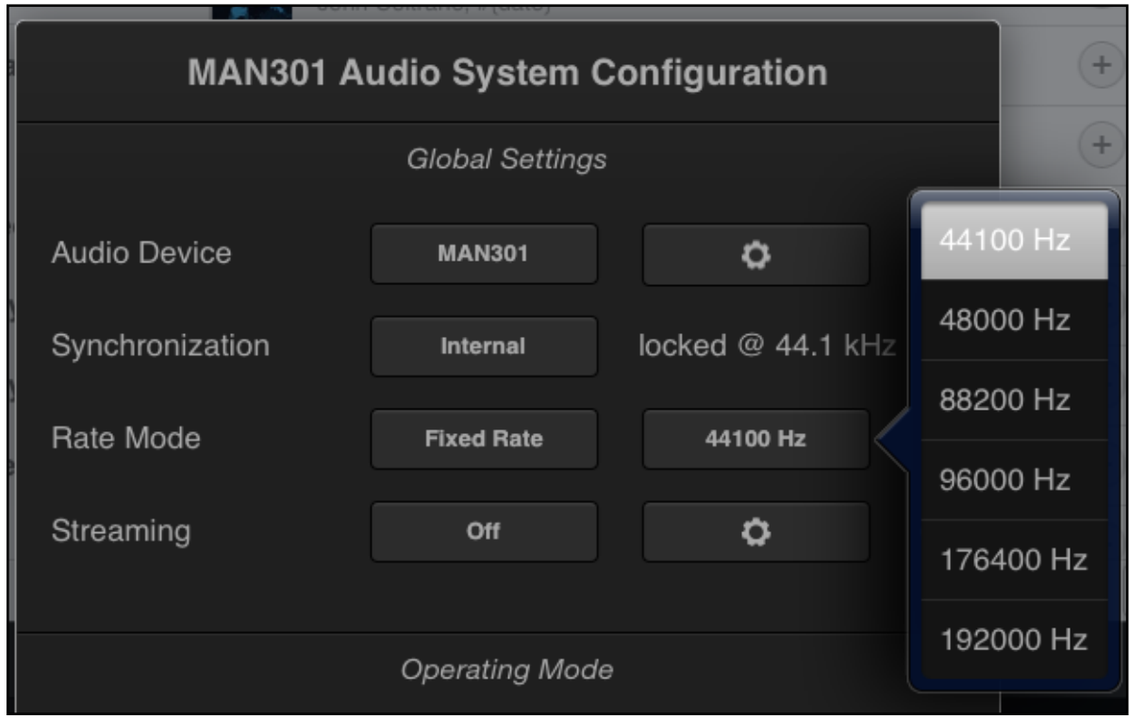
The entry to the right of the „Internal“ pad shows the currently active sampling frequency and whether the unit is locked to the frequency. The „locked @ 44.1 kHz“ entry in the current example.

The „Rate Mode“ entry allows to select either the „Transparent“ mode or a „Fixed Rate“:

The „Transparent“ mode is the standard mode, i.e. the sampling frequency of the MAN301 unit follows the sampling frequency of the played track. The „Fixed Rate“ mode allows to set a specific sampling frequency as required. All the played tracks are then

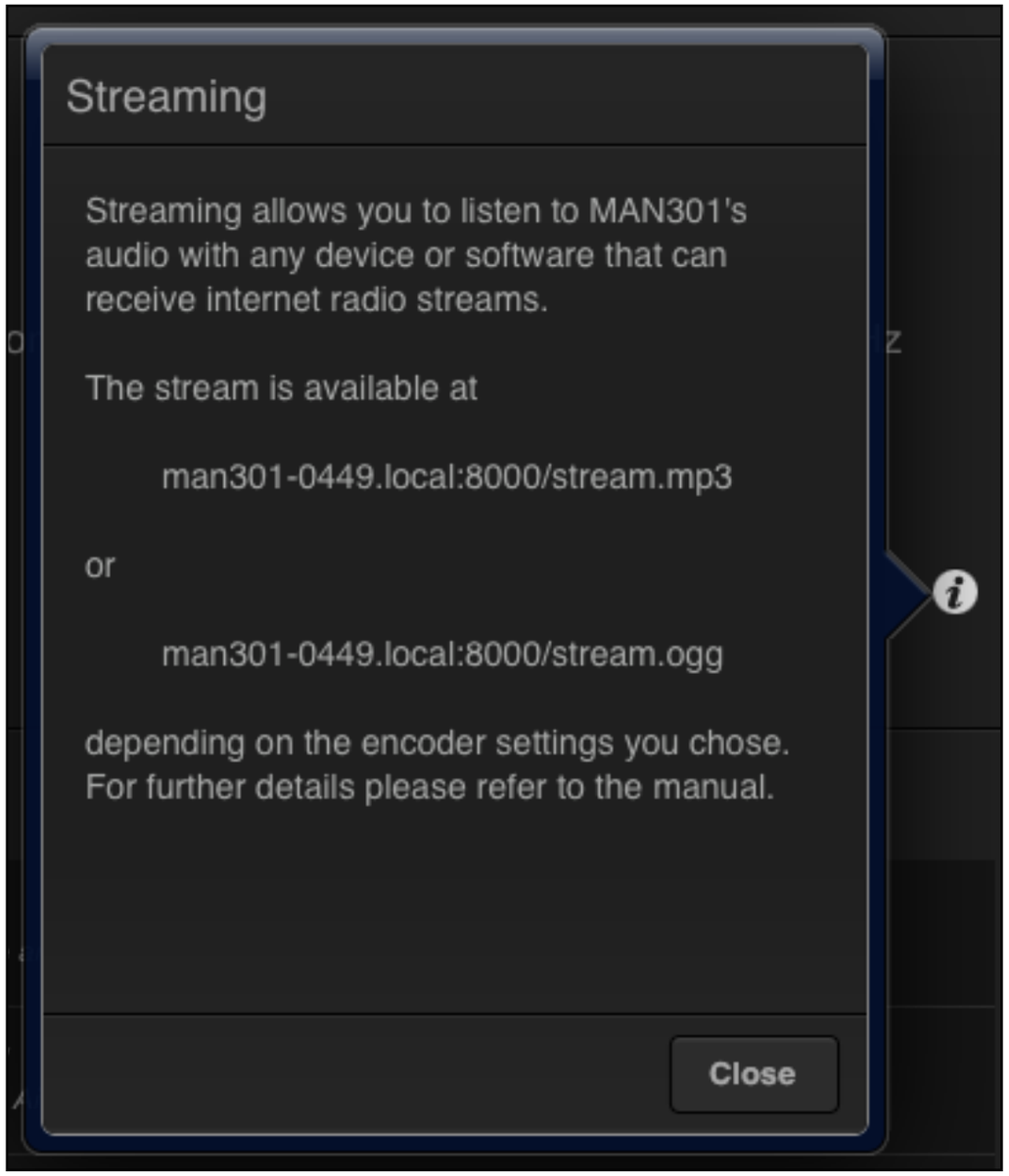
converted to that selected sampling frequency. This has an advantage for e.g. older D/A converters which may work up to 96kHz and which then can be used in that mode to play back tracks with sampling frequencies even higher than 96kHz

Here are the selectable sampling frequencies:



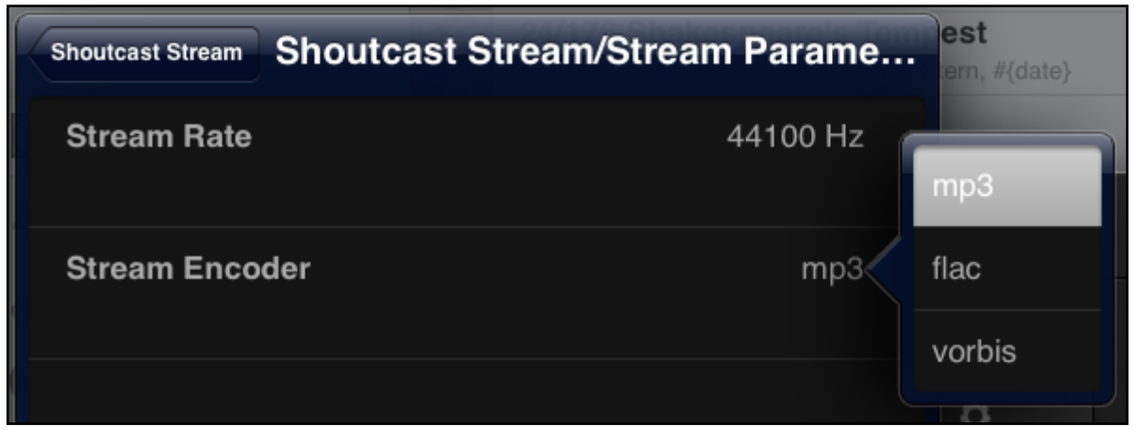
Note - use the external sampling frequency generator or the fixed rate sampling frequency generator carefully. If in doubt do not change the settings from the default ones.

The next entry is the „Streaming“ one. This allows to stream the music which is played on the MAN301 to other devices on the network at home.
The information screen to the Streaming mode looks like this:



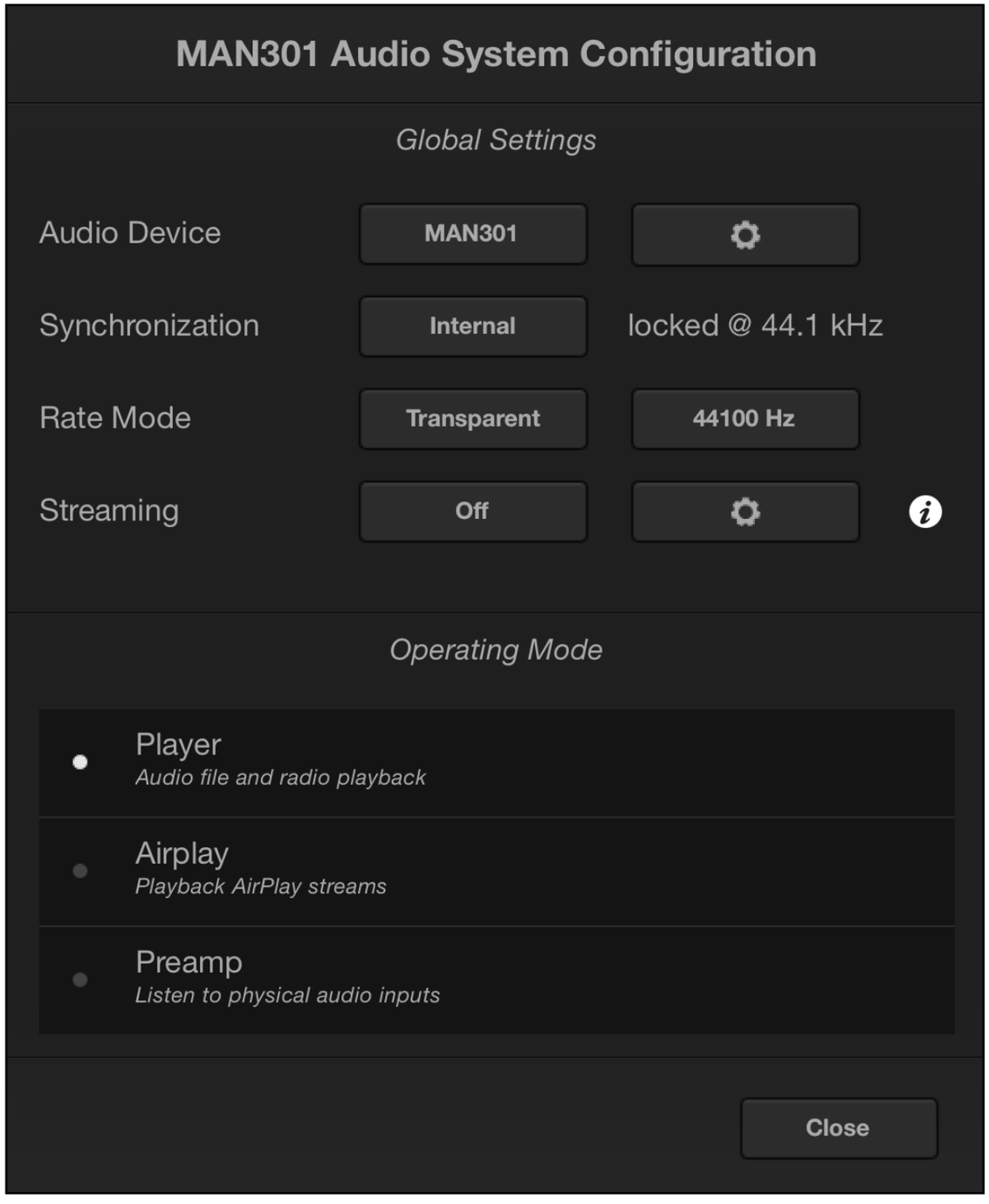
The 0449 figure given above reflects the serial number of your unit, so that will be different. I.e. the receiving device (e.g. a cell

phone or an internet radio station etc.) can be set to the stream address to play back the music played on the MAN301.



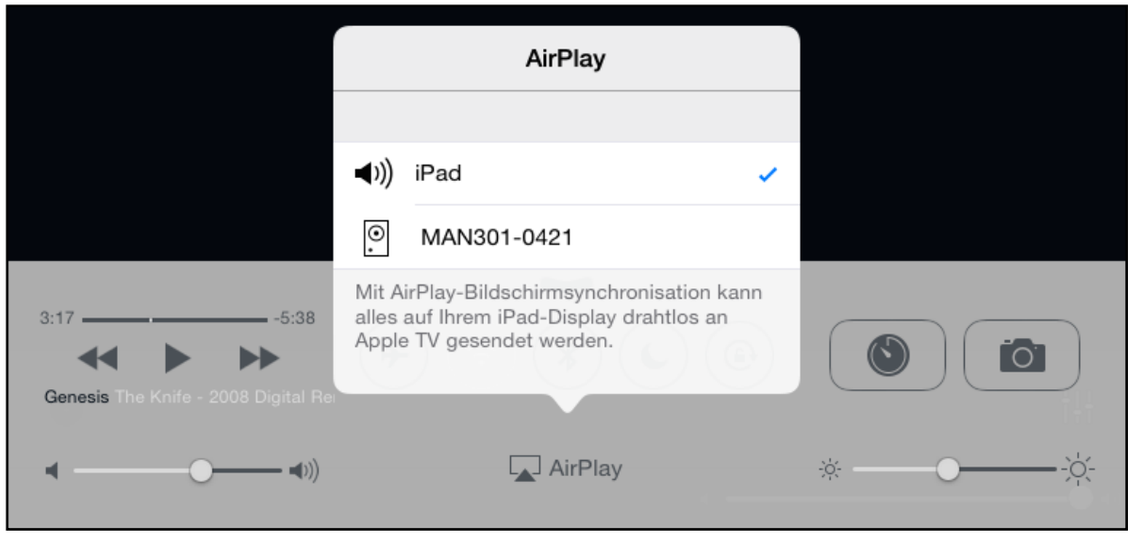
The window above shows the parameters for the Streaming service. The Stream Rate can be set to 44.1kHz or 48kHz. The Stream Encoder can be set to mp3 (lossy encoding for lowest bit rate) or flac (lossless encoding for best quality but higher bit-rate) or to vorbis (i.e. ogg vorbis) for lossy encoding with the lowest bit rate.

Let us now get back to the „Operating Modes“:



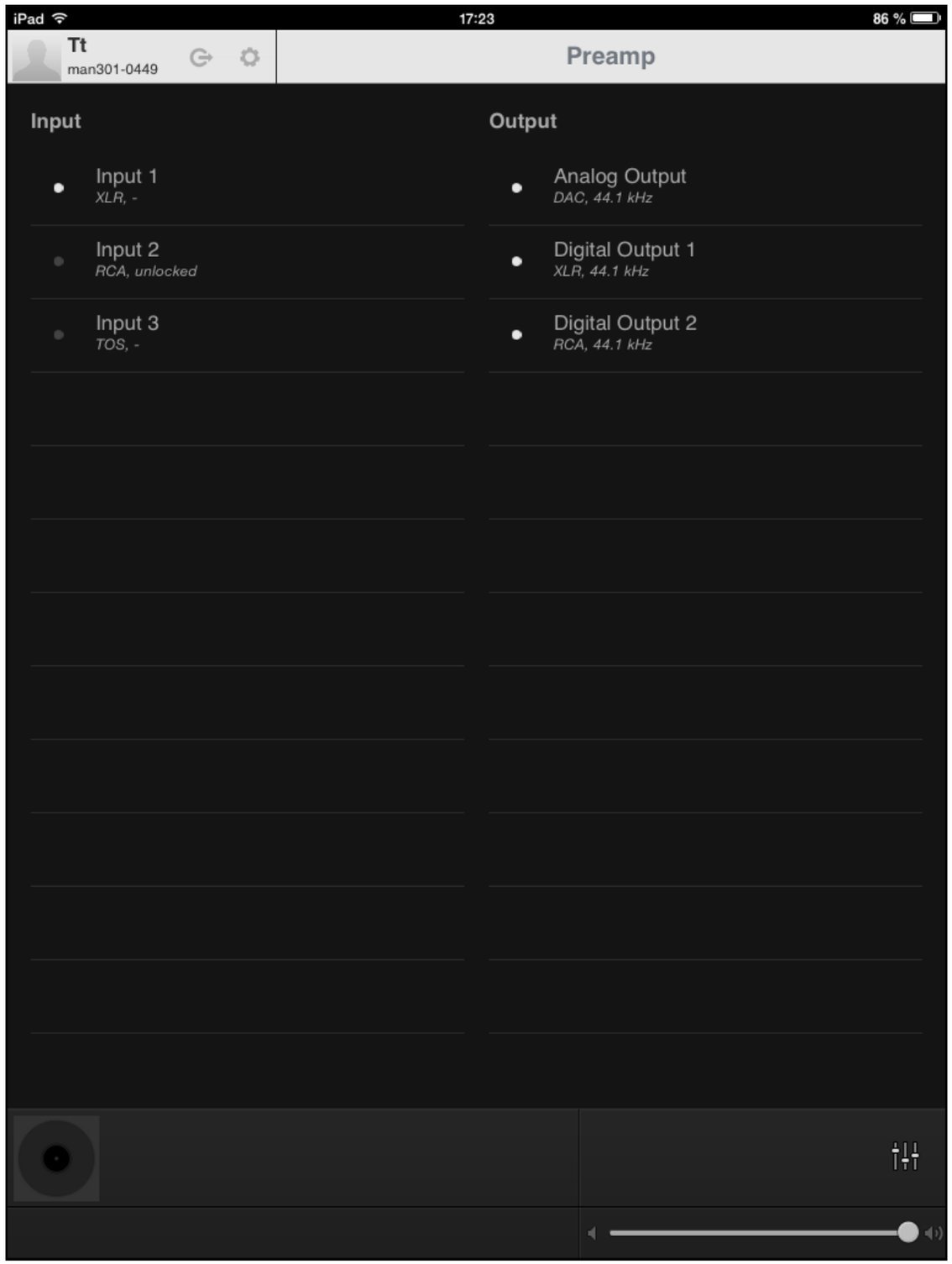
The „Player“ mode allows to play the music tracks stored on the NAS. The „Airplay“ mode, when activated, shows this screen:

The volume control is in the lower right. Now connect e.g. the iPad (or any other Airplay capable device) to the MAN301. With the iPad it looks like this:

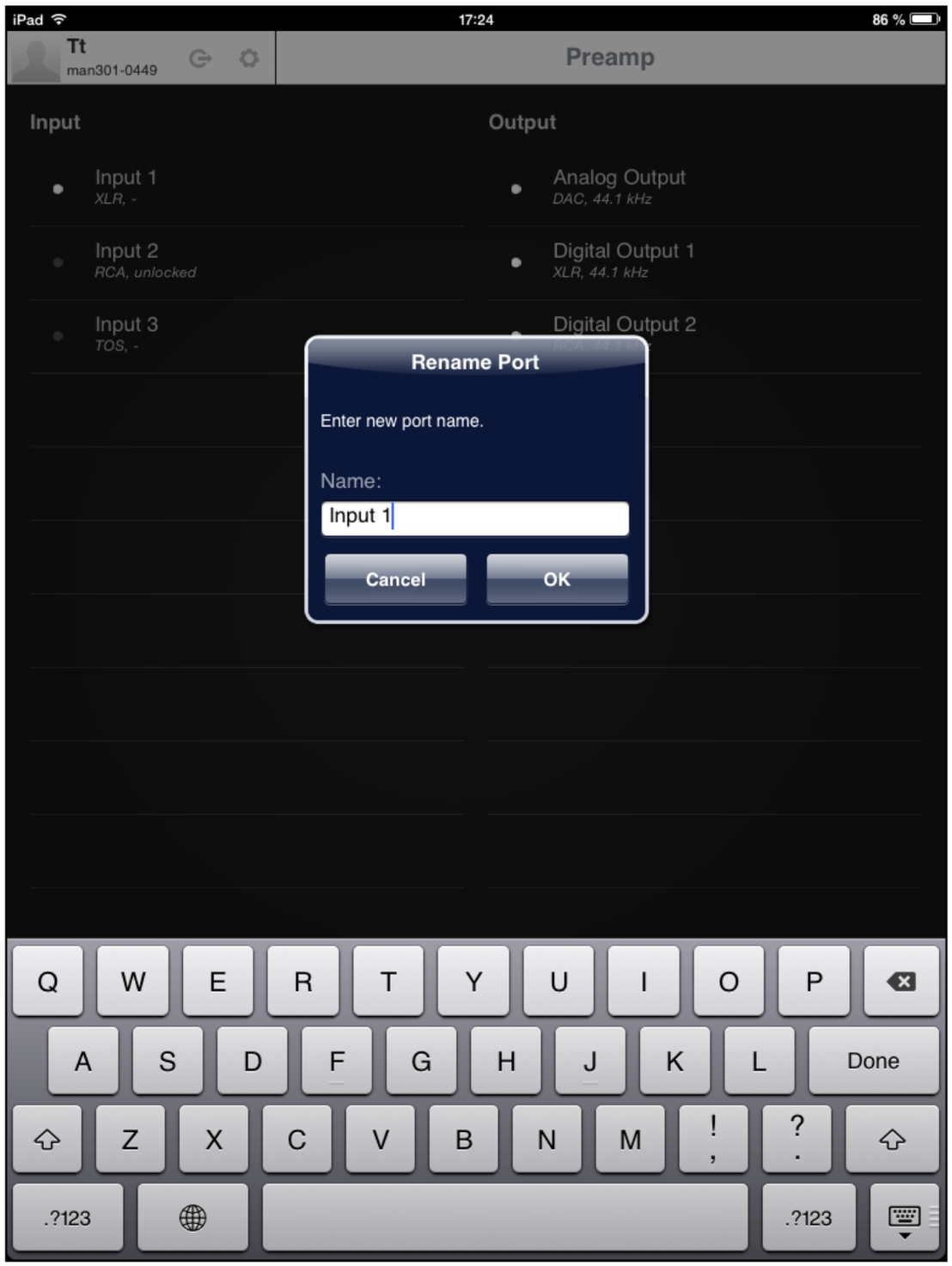


(Swipe from the bottom edge of the display upwards to open the dialogue). Set the blue arrow to the MAN301 on the display in order to transmit the music to the MAN301. Now play any music source on the iPad via the MAN301. The iPad‘s volume control works with that playback path.

Finally the „Preamp“ selection opens the screen which controls the pre-amplifier mode shown on the next page. The volume control again is in the lower right.



The input source can be selected by tapping on the appropriate input. The designation of the input can be changed by tapping and holding on one of the inputs:



This allows to change the input source to e.g. Album-Player or TV-Player etc. The same applies to the output port.

Tapping on an output port allows to mute / unmute the outputs individually. MAN301 devices which have the internal D/A Converter section not installed, show the „Analog Output“ entry as disabled, i.e. the white dot is not in the bright state.

Note, the synchronization source settings can be different depending on whether the „Player“ mode or the „Preamp“ mode or the „Airplay“ mode is selected.

The default settings are as follows, in most cases these do not need to be changed:

„Player“ mode: „Internal“ Synchronization, „Transparent“ Rate Mode.

„Preamp“ mode: „S/PDIF (RCA)“ Synchronization (this is the default input selected), „Fixed Rate“ Rate Mode (this can not be changed due to the MAN301‘s hardware architecture).

„Airplay“ mode: „Internal“ Synchronization, „Transparent“ Rate Mode.

Hints to connect external D/A Converters:

D/A CONVERTER TYPE	CONNECT VIA
Weiss DAC202	FireWire (select the Weiss DAC202 device as described above). Note, there is a special DAC202 Firmware required if connected via FireWire to the MAN301 (see our website, downloads page)
Weiss DAC202U	USB (select the Weiss DAC202 device as described above)
Weiss DAC202 or DAC202U or DAC2 or Minerva or Medea or Medea+ or DAC1	Can also be connected via AES/EBU or S/PDIF.
Weiss DAC2 or Minerva	Firewire (select the Weiss Minerva device as described above)
Weiss DAC1 or Medea or Medea+ with Firewire option	Firewire (select the Weiss INT202 device as described above)
Weiss INT202 or INT203	Connecting these interfaces does not make much sense, as the MAN301 has them built in

Synchronization Input / Output

The MAN301 has an internal clock generator for the sampling rate generation. Depending on the track played, this generator is automatically set to the appropriate sampling rate. This is the recommended operating mode.

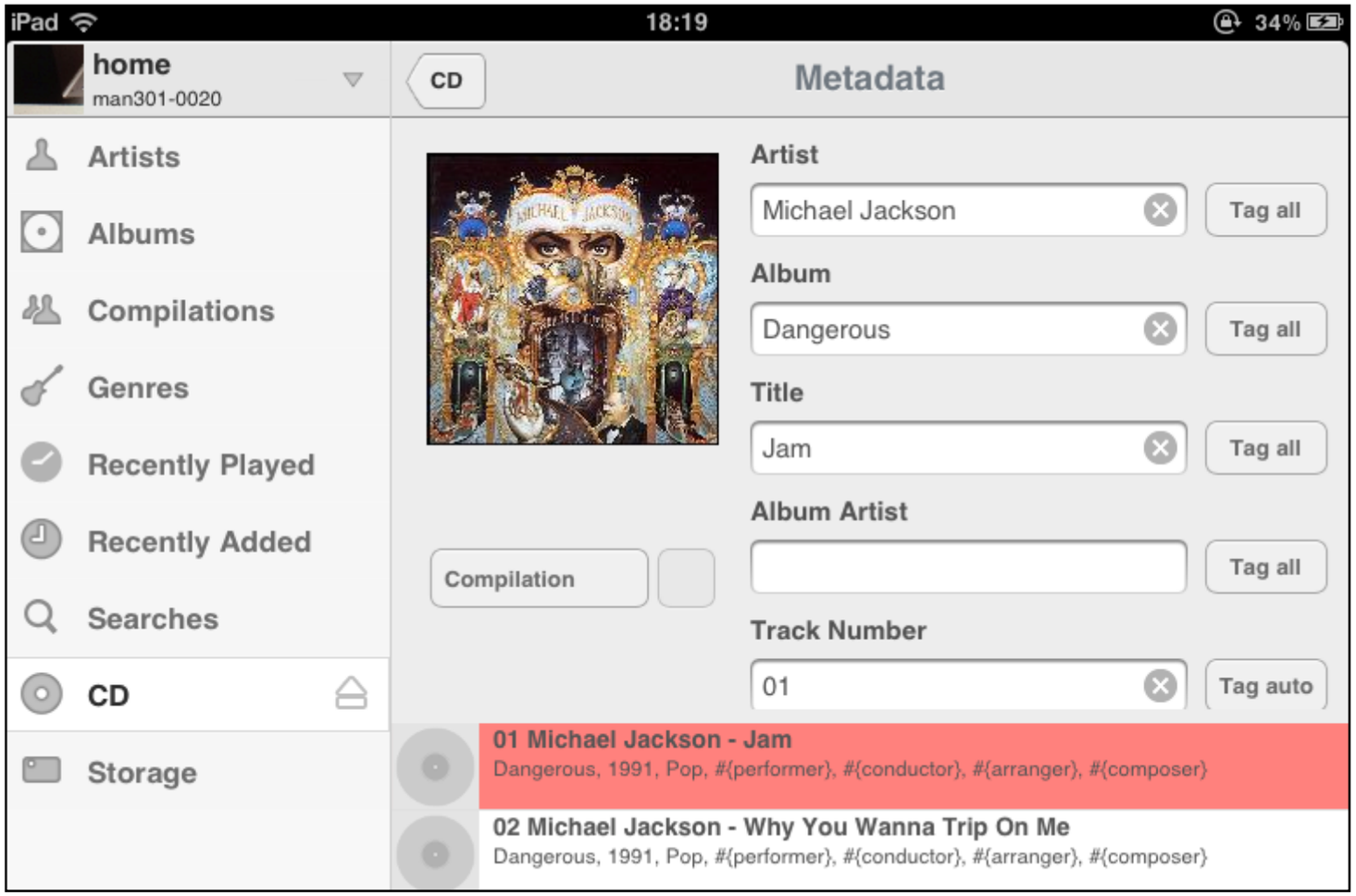
The MAN301 can also be externally synchronized via a word-clock input on a BNC connector. One has to make sure that the external clock source matches the sampling rate of the track played - except for the Fixed Rate mode where a fixed sampling frequency is given by an external generator.

The word-clock output on a second BNC connector can be used to clock e.g. an external D/A converter.

For details about the synchronization mode refer to the Chapter 3, section 2.

CHAPTER 4

Album Ripping, Playback, Meta Data



The MAN301 allows to rip Albums in a high quality manner with automatic metadata and cover art fetching and with extensive error reporting. A full fledged metadata editor allows to take care of those cases where metadata isn't as perfect as it should be. Albums can also be played back without any ripping, i.e. the MAN301 is a Album player as well.

Direct Album Playback

When a Album is slipped into the Album slot on the MAN301 (artwork facing upwards) a new entry in the menu list shows up:

The pad allows to eject the Album.
If the Album entry does not show up in the menu list, then either the Album can not be read by the MAN301 or it is a Album holding files which can not be read. In that case you can always eject the Album via the „Storage" entry in the menu list. Tapping on the pad reveals this:

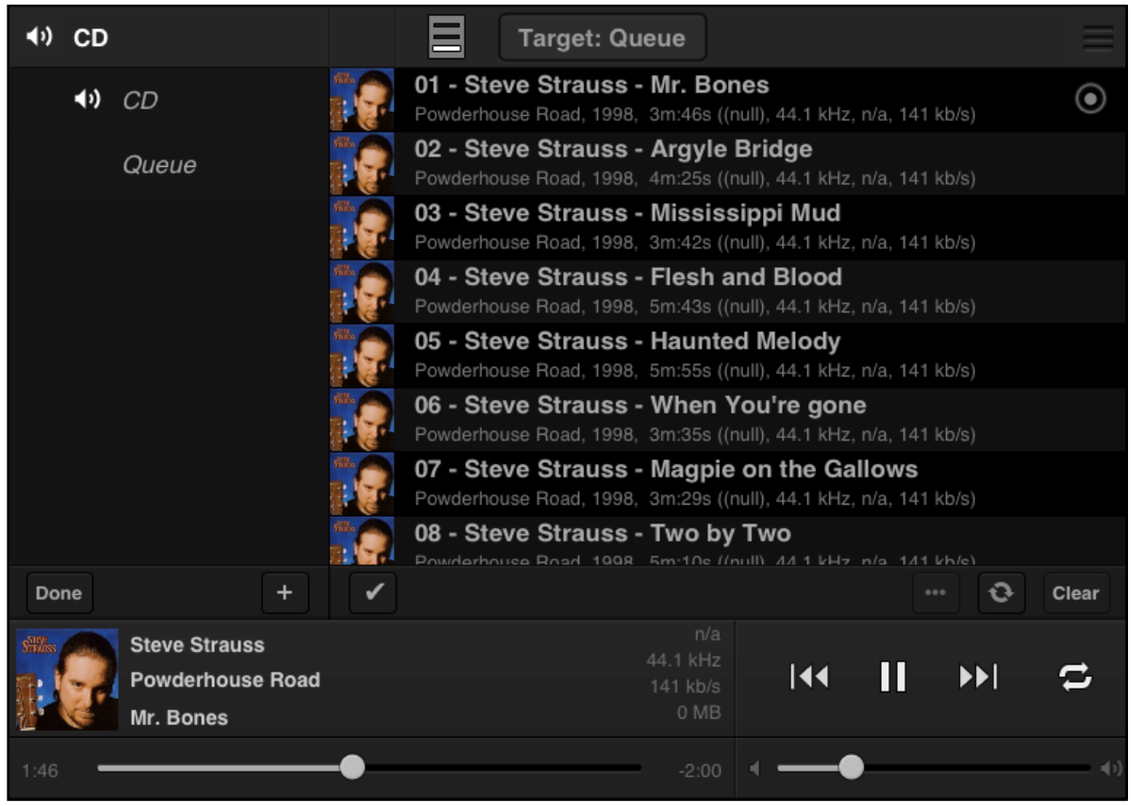
Tap on the pad on the right hand side to release the Album.

If the Album can be read, then it is either recognized as a Album holding files (e.g. MP3 files) or as a standard Audio Album. In the case of a Album holding files, the „Data Album" entry will come Online and will be shown as seen below (including a label the Album may have, (FIESTA_CALIENTE in that case)).

Such a Album can not (yet) be ripped with the MAN301, but the files on the Album can be played by tapping on the Album entry above which shows the audio files on the Album. These files then can be added to a playlist and played from there.

If on the other hand the Album entry has shown up in the menu list like this

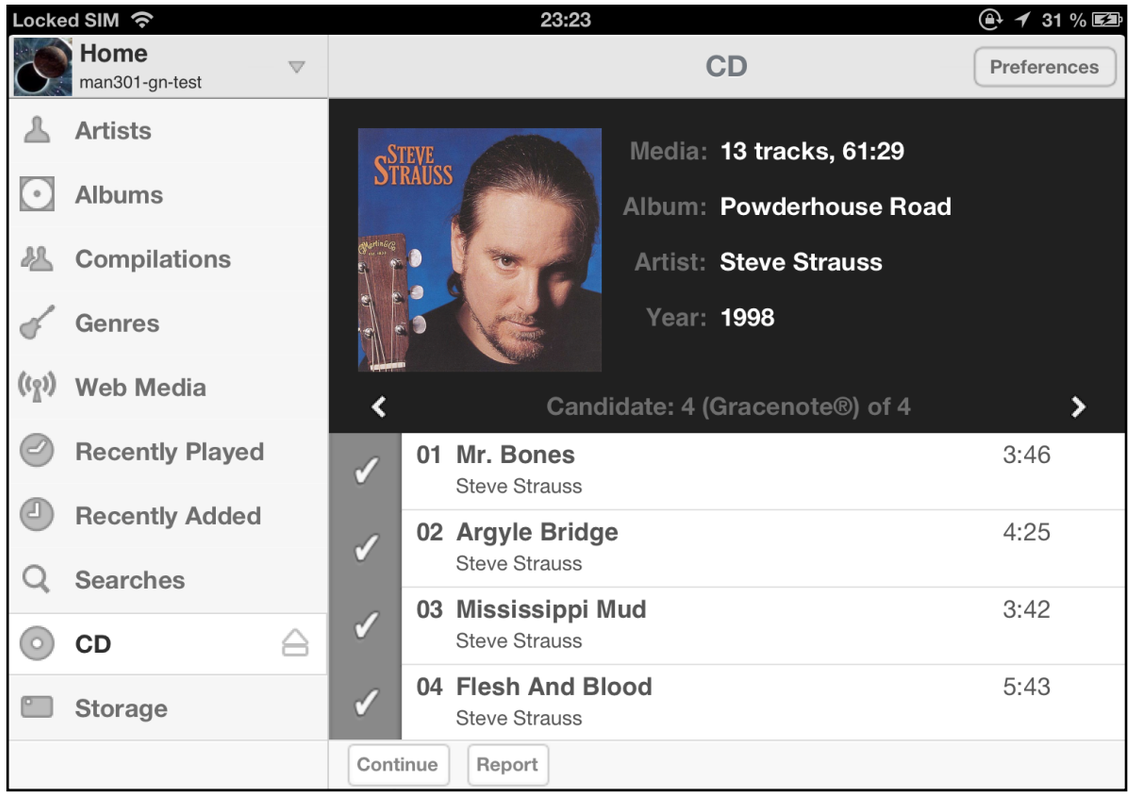
then after a while it also will show up in the Playlist section like this:



Select the Album entry on the left hand side and then randomly select the track number to be played. During playback data is read from the Album and buffered in the MAN301 for subsequent playback via the MAN301's digital and analog outputs.

If you would like to rip the Album tap on the

pad to reveal the Album ripping page as follows:



Here you can scroll through the track names and also see the cover artwork. Actual Album ripping is described in the next section.

To release the Album from the Album slot press on the pad in the

menu list entry.

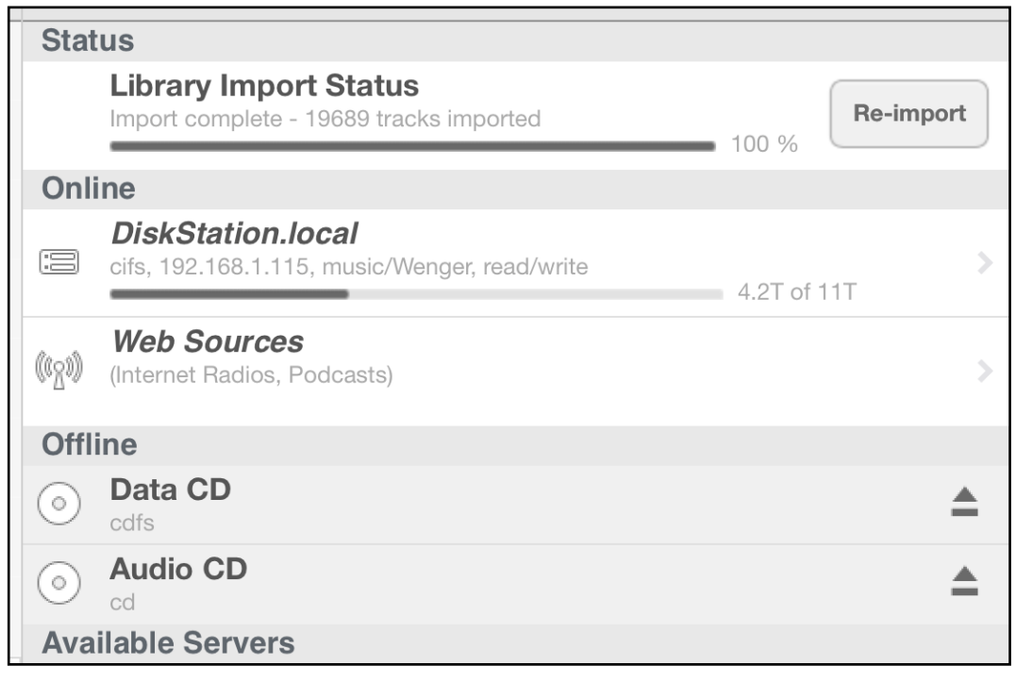
Do not attempt to play back and rip a Album simultaneously as this leads to interrupted playback and / or compromised files.

Note, the so called slot-in drive used in the MAN301 actually is a DVD drive, as Album drives in that technology are not manufactured anymore. It handles the Album with great care.

Album Ripping

When a Album is slipped into the slot on the MAN301 (artwork facing upwards) a new entry in the menu list shows up:

The pad allows to eject the Album.
If the Album entry does not show up in the menu list, then either the Album can not be read by the MAN301 or it is a Album holding files which can not be read.. In that case you can always eject the Album via the „Storage" entry in the menu list. Tapping on the pad reveals this:

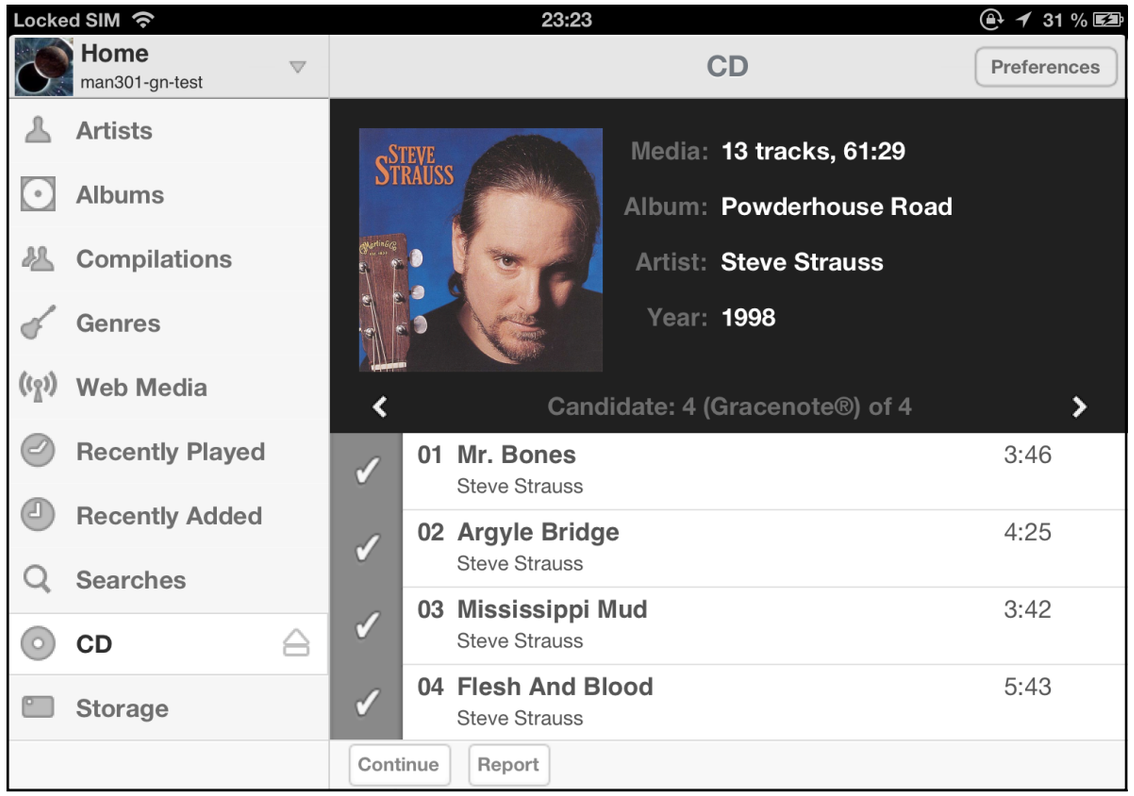


Tap on the pad on the right hand side to release the Album.

If the Album can be read, then it is either recognized as a Album holding files (e.g. MP3 files) or as a standard Audio Album. In the case of a Album holding files, the „Data Album" entry will come Online and will be shown as seen below (including a label the Album may have, (FIESTA_CALIENTE in that case)).

Such a Album can not (yet) be ripped with the MAN301, but the files on the Album can be played by tapping on the Album entry above which shows the audio files on the Album. These files then can be added to a playlist and played from there.

If on the other hand the Album entry has shown up in the menu list like this then after a while it also will show up in the Playlist section like this:



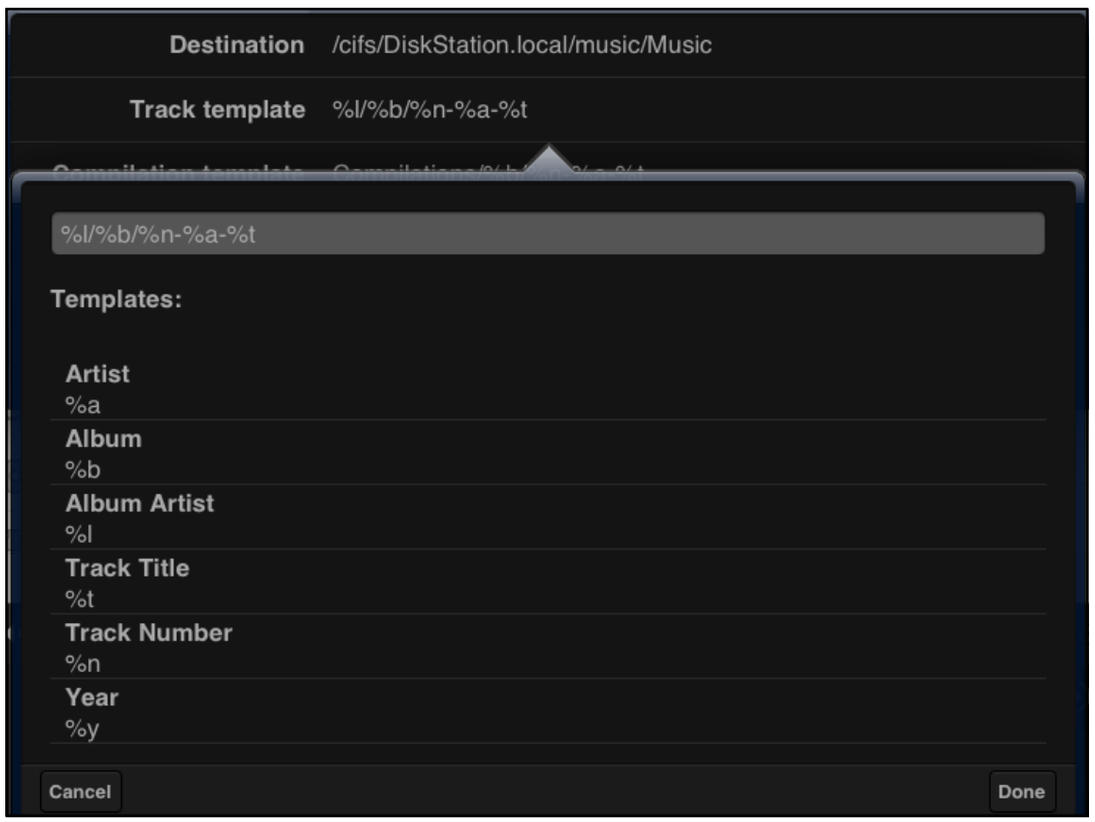
The pad in the upper right corner shows a few basic settings which are very important and which you should check in detail the first time you rip a Album:

Destination	/cifs/DiskStation.local/music/Music
Track template	%l/%b/%n-%a-%t
Compilation template	Compilations/%b/%n-%a-%t
Target format	Apple Lossless Audio Codec (alac)
Auto eject	Off
Overwrite mode	Name extend
Meta data sources	Gracenote®, FreeDB, Music Brainz, CD Text

- „**Destination“**, this is the path on the NAS where the ripped music is stored. It contains the name of the NAS and probably a folder name if you have ever set that path before (usually this is set when mounting the NAS for the first time). If you tap on the entry to the right of the Destination the Storage view is opened. Here you can select the main folder where all ripped music is put.
  Once you have navigated to the folder tap the

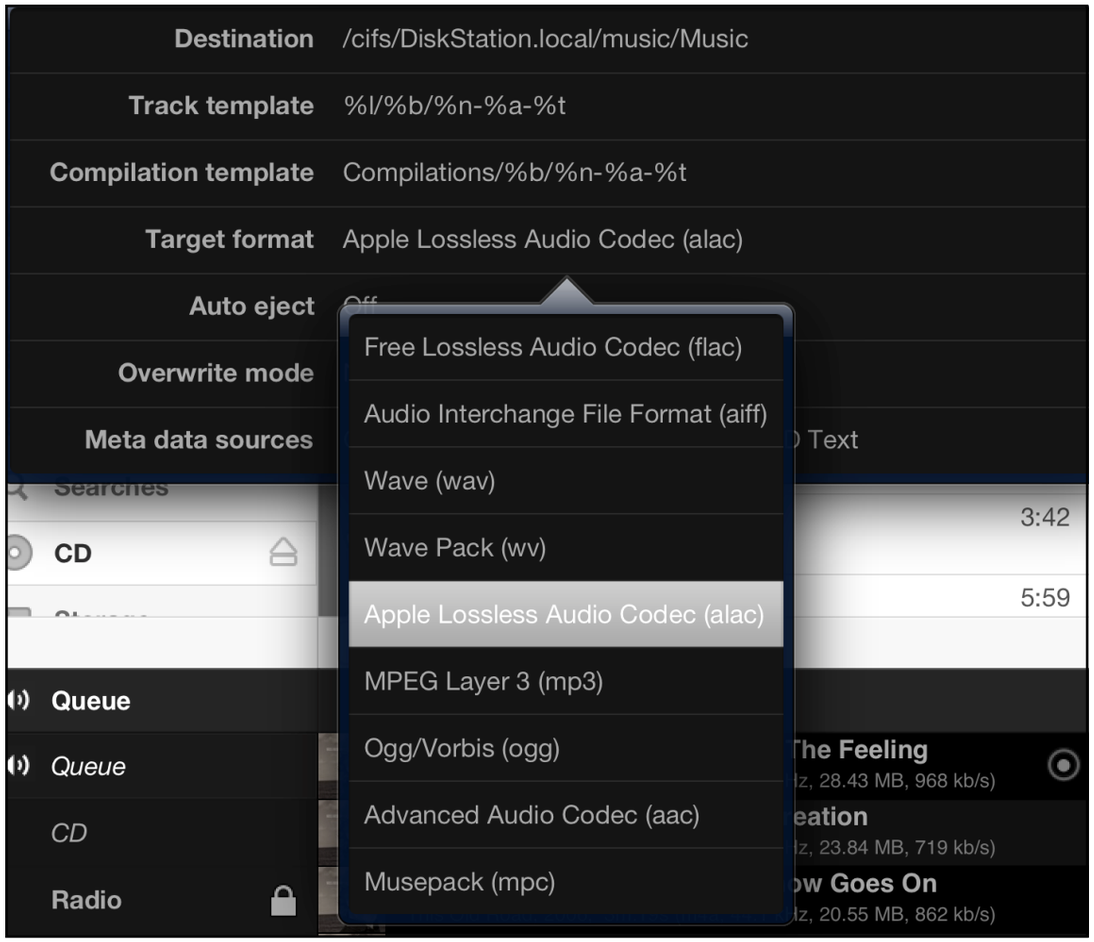
  pad. The large grey symbol as shown below indicates that this folder is the import destination.

- „**Track template**“, this shows how the folder structure for the audio tracks is built. The default generates a folder for the artist, then a sub folder for the album and then single files for each track. This structure can be edited by tapping on the entry to the right of the Track template. Now tap into the top bar of the newly opened window. Delete the entries and reassemble a new one by tapping on the Templates for Artist, Album etc. as necessary. Also add / to designate folders.
  Do this editing only if you know what you are doing. In most cases the default entry for the Track template is just fine.



- „**Compilation template“**, this is similar to the Track template, but meant for those Albums designated to be compilations (like e.g. movie soundtracks, label samplers etc.). The default folder for the tracks tagged as Compilations is the „Compilation“ folder.

- „**Target format“**, select the audio format you would like the Album to be ripped in. We recommend the **flac** format or, if you like to play the tracks in iTunes as well, then chose the Apple Lossless (**alac**) format.
  The following formats are lossy and thus not recommended for High-End quality ripping: **mp3**, **ogg**, **aac**, **mpc**. Their advantage though is that they take up about one tenth of the space an aiff or wav file would take.
  Aiff or **wav** are not recommended because they take up about twice the storage space compared to flac or alac but do not generate better sounding playback.



- „**Auto eject**“, if on, the Album is automatically ejected after ripping.

- „**Overwrite mode**“, if on Overwrite, duplicate Albums will overwrite the existing files. Name extend allows to have duplicates. Note if a Album is ripped subsequently with two different audio formats the files will co-exist independent of the „Overwrite mode“ settings.

- „**Meta data sources**“, when a Album is slipped into the Album slot the MAN301 automatically scans a few sources for metadata and artwork of the specific Album. More on this on the next pages. With the „Metadata sources“ pad one can select the sources which should scanned when a Album is inserted.

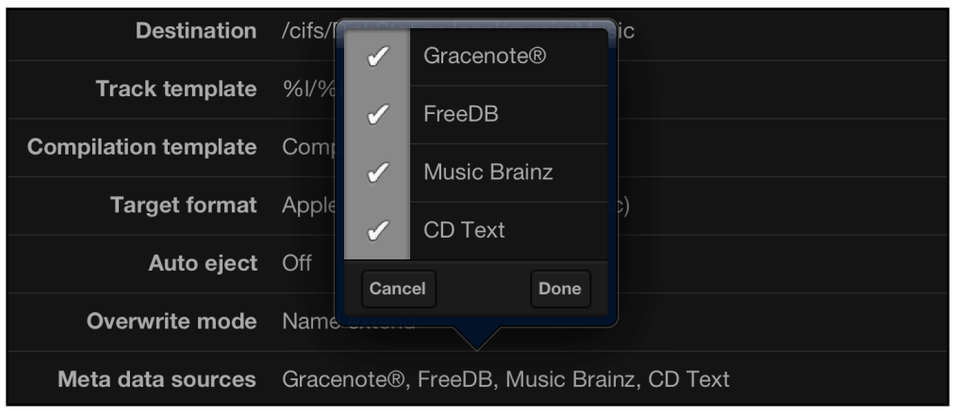
  The available sources are:

  Gracenote: This is the most comprehensive and professionally maintained database of Album metadata worldwide. Apple‘s iTunes also uses Gracenote. Weiss Engineering is a Gracenote licensee.

  FreeDB: A database maintained by voluntary contributors.

  MusicBrainz: Also a database maintained by voluntary contributors.

  CD Text: Some Albums contain metadata in kind of a text file format and thus that data comes handy to be used.



In the „Steve Strauss, Powderhouse Road“ example shown on the righthand side 4 different metadata entries have been found as it is indicated by the line „Candidate: 4 (Gracenote) of 4“. The other candidates may come from MusicBrainz or FreeDB or Gracenote or CDText. Note that there may be several candidates for a given database as a Album may have been put in several different versions into the database.

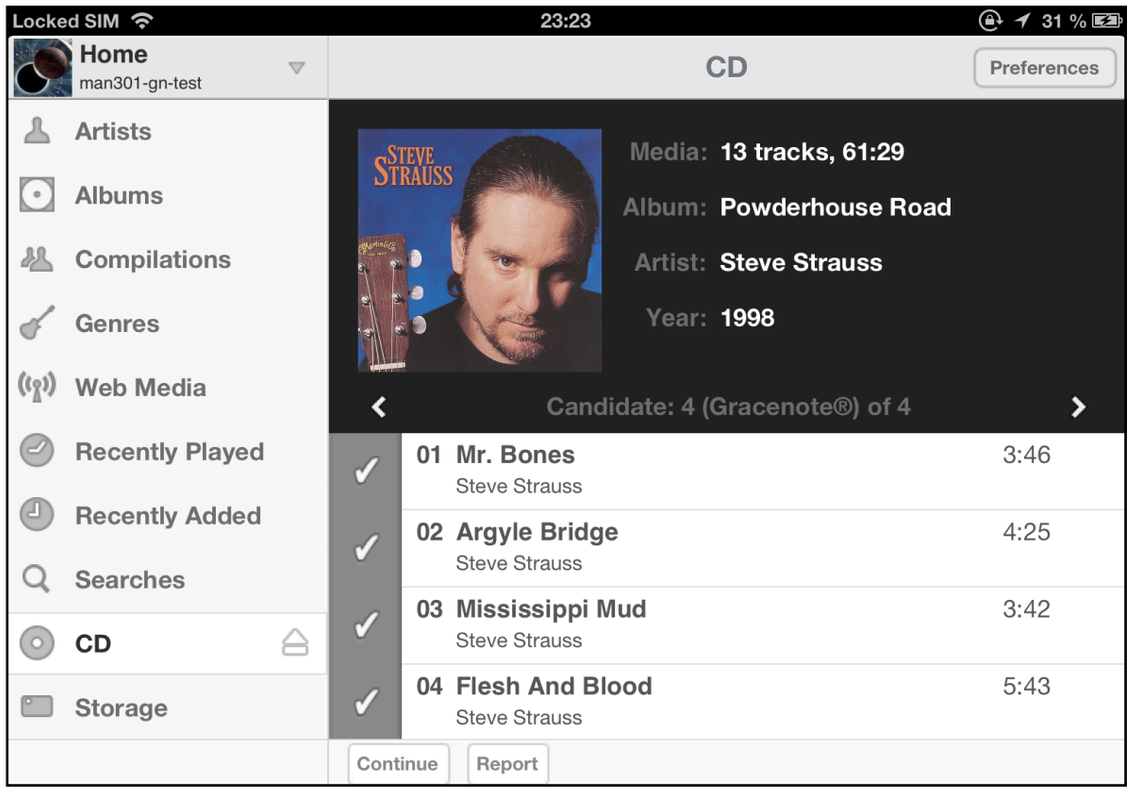
With the and arrows the different versions can be viewed and the most appropriate one selected. In some cases it may be difficult to judge which one is the best candidate. In such cases tap on the

pad to enter the next screen and check the metadata entries in detail.

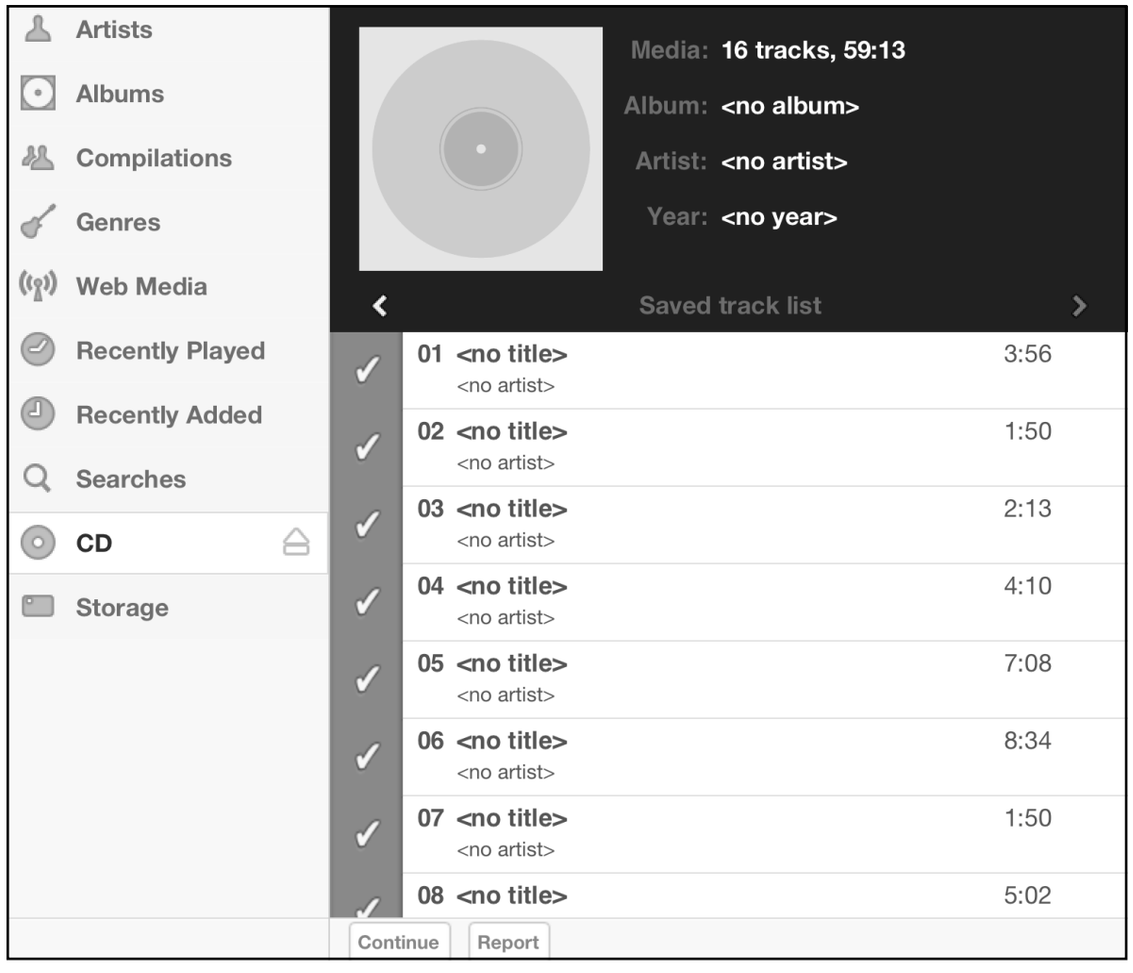
Tap on the

pad in the upper left corner to go back one screen if you like to select a different candidate. Usually the Gracenote entries yield very good results.

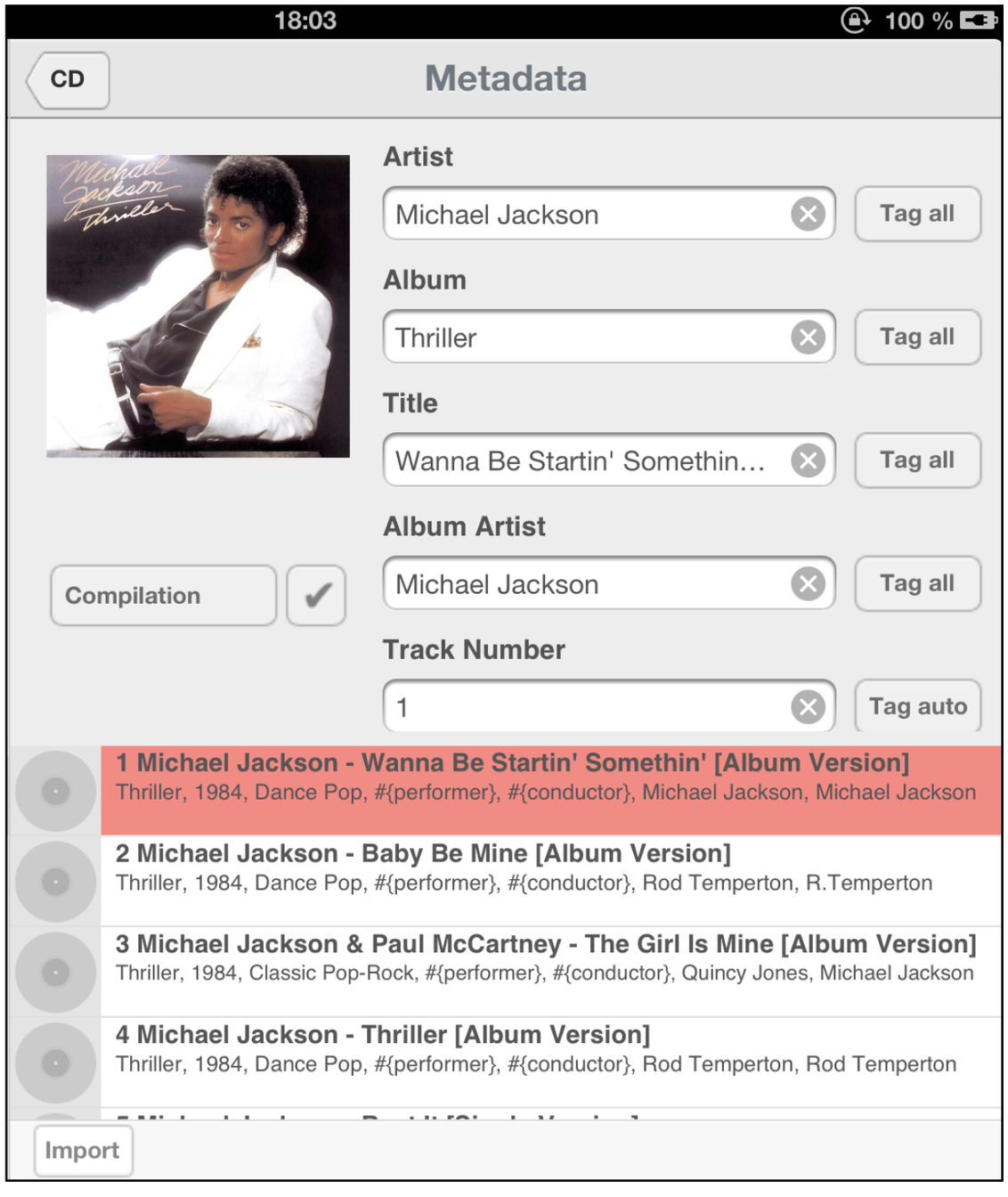
Note that the cover artwork shown in the screen on the righthand side may not indicate the actual artwork of the candidate you end up of choosing for ripping. The artwork can always be set later as we will discuss. **So to judge for the best candidate concentrate on the text metadata only.**



If you tap on the › arrow beyond the last candidate an empty template is shown as seen below. This template is also shown if no metadata has been found in the databases at all. This template allows to enter all the metadata manually.



Now the tracks to be ripped can be selected with the ✓ pads, usually all of them are ripped and thus the default has all of them selected. Tapping on the Continue pad moves to the next window where the metadata can be edited. Details on metadata editing are found in the next section. Below is an example with a Michael Jackson Album.



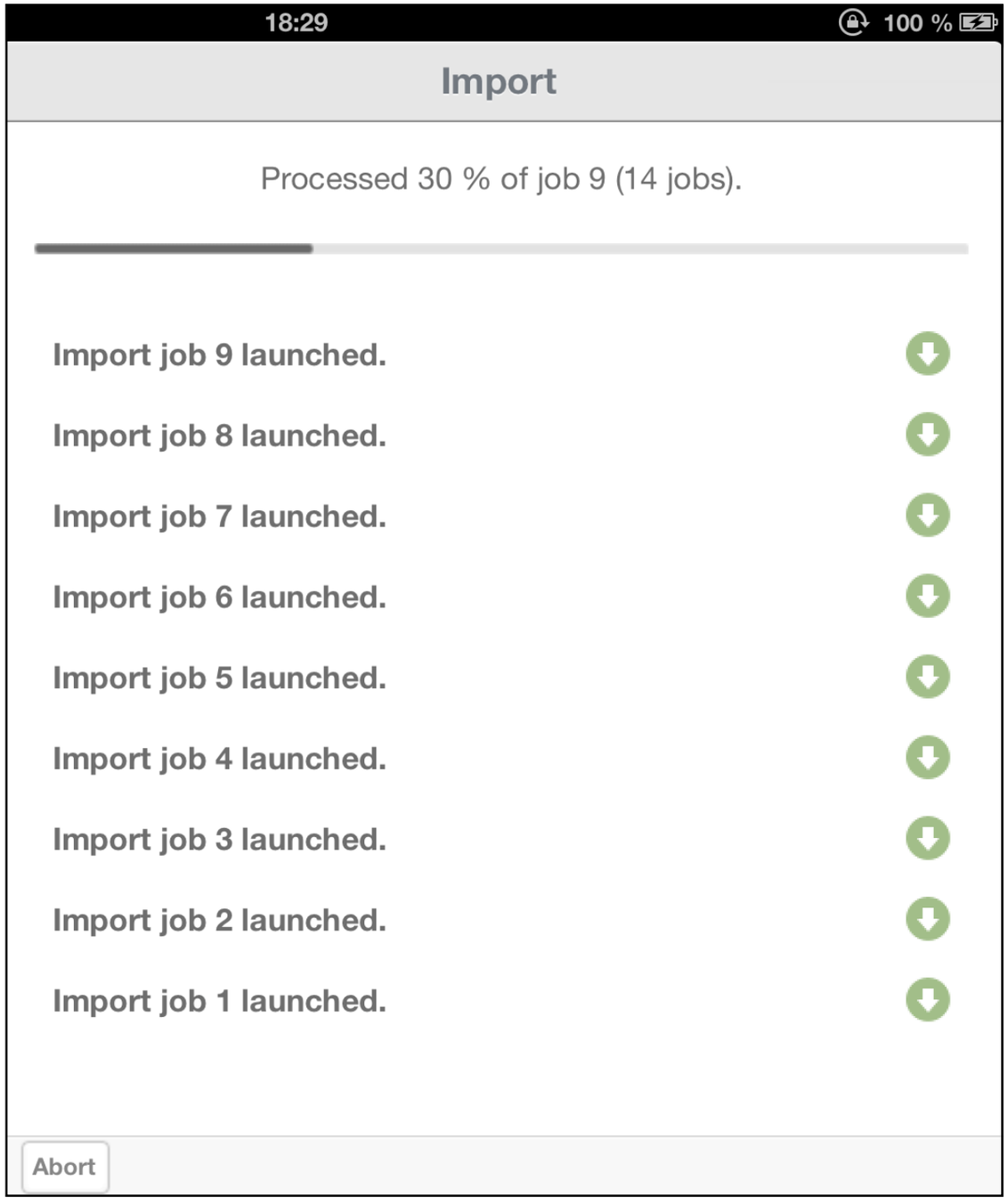
Tapping on the cover art allows to select a different or better one from an Internet search. Of course this can always be done later on, after ripping, as well.

Tapping then on the

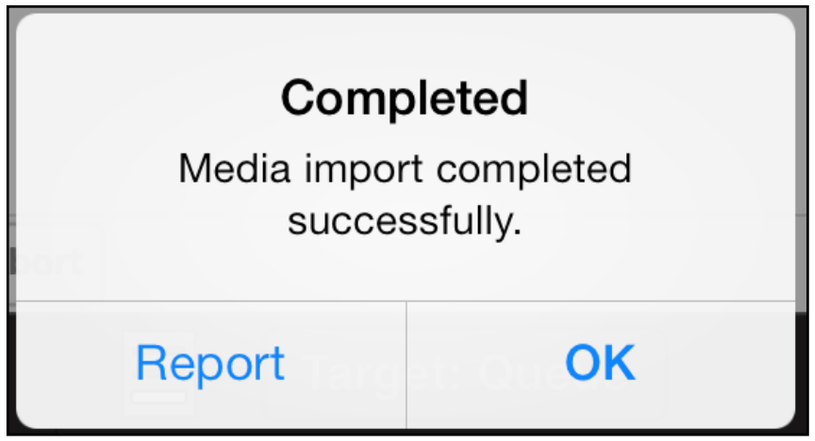
pad starts the ripping process. The ripping may take some time, also depending on the physical quality of the Album.

The MAN301 uses the Cdparanoia ripping software which takes care that the Album is ripped in the best way possible. After ripping a report is generated which lists any severe ripping errors for each track and with time stamps. The ripping reports can be stored in files and retrieved later on for reference.

The screen during Album ripping. Each track on the Album is a „Import job":



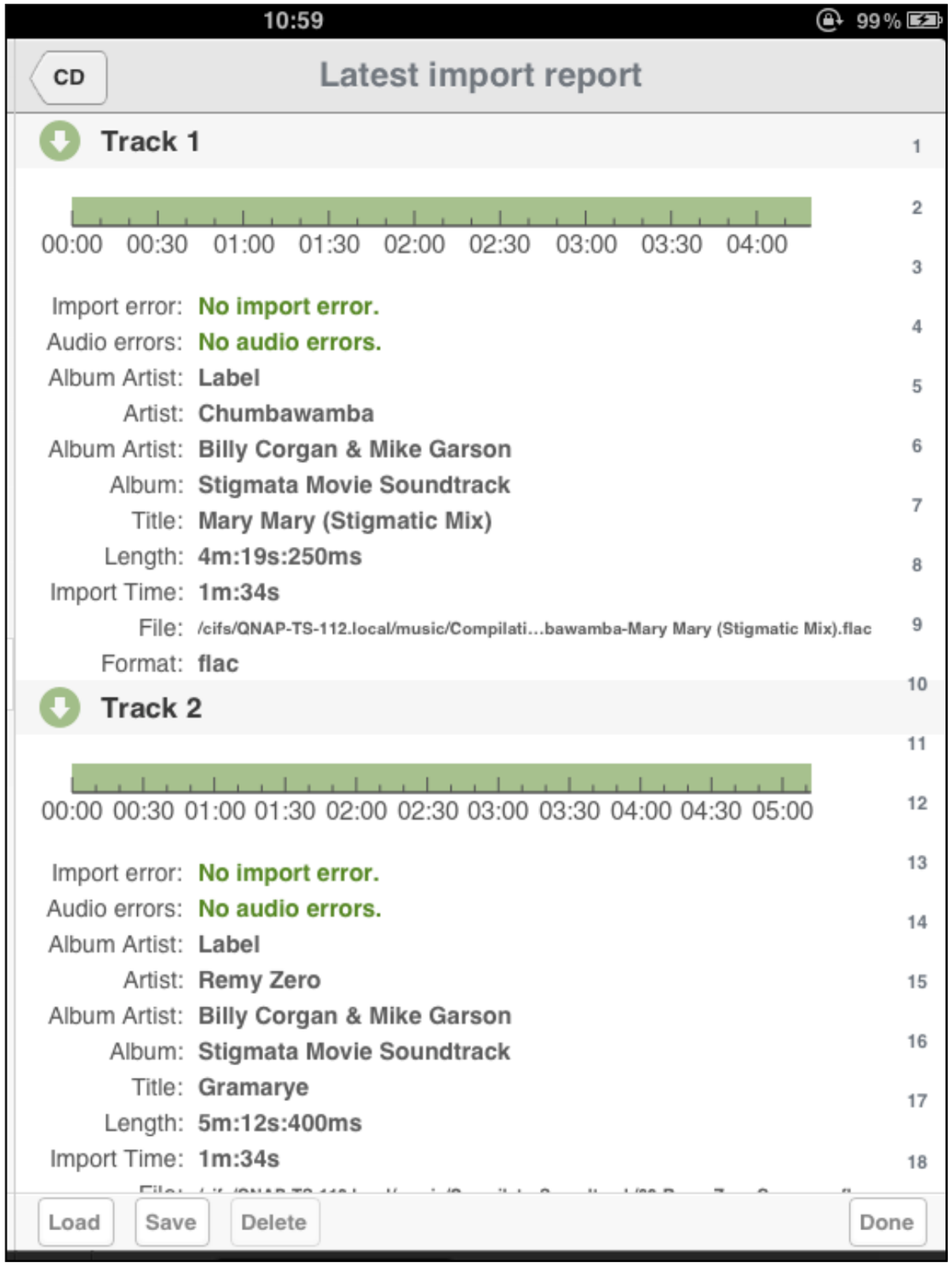
Once the importing has finished this message shows up:



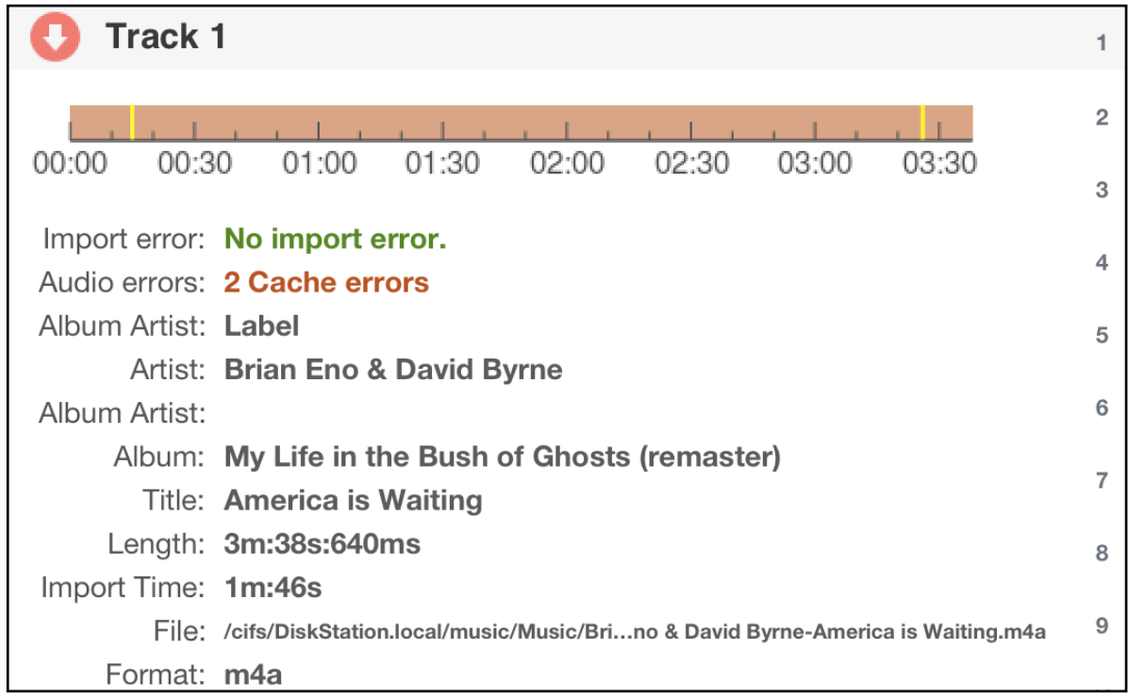
Tapping on the Report pad shows a report similar to the one shown to the right. The report can be saved for later retrieval via the Save pad.

Note, it may happen that the ripping progress bar ends at 99% and does not go to 100%. This is fine, the Album will be ripped completely.

Also note that after the last track has been ripped it may take some time until the „Completed“ message above shows. If the last track is long it may take some time to do the encoding and hence the „Completed“ message may be delayed somewhat.



A note on „Cache Errors“: This special kind of errors often are harmless. A cache error screen may look like the one shown below. The two yellow dashes indicate the position of the cache errors during the ripping process. This allows to easily check for the integrity of the audio by listening to the sections around the error locations.



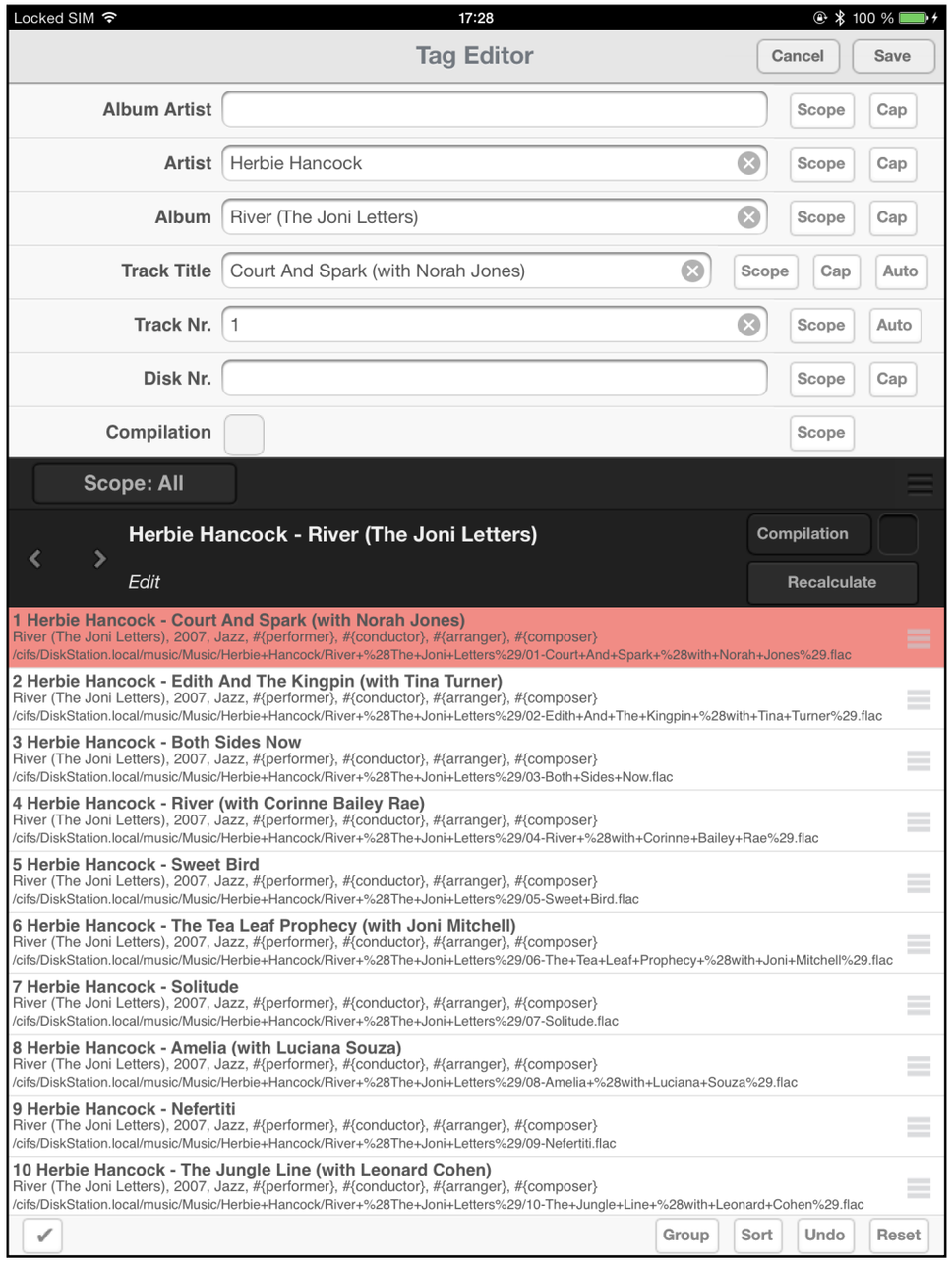
Meta Data Editing (Tagging)

The metadata editor (or tag editor) can be entered from a number of places, for instance where the pad is shown, often the „Edit tags" can be selected. Or before or after ripping of a Album the Edit tags can be entered as well. Or by tapping and holding the finger on a track or album entry, the tag editor can be entered quickly.
The MAN301 tag editor is very powerful yet easy to manage. It accesses the Gracenote database to get metadata. Thus incompletely tagged or completely untagged tracks can be easily tagged with high quality metadata. Manual tagging is possible as well of course.
The operation of the tag editor is explained in the following few tagging examples.

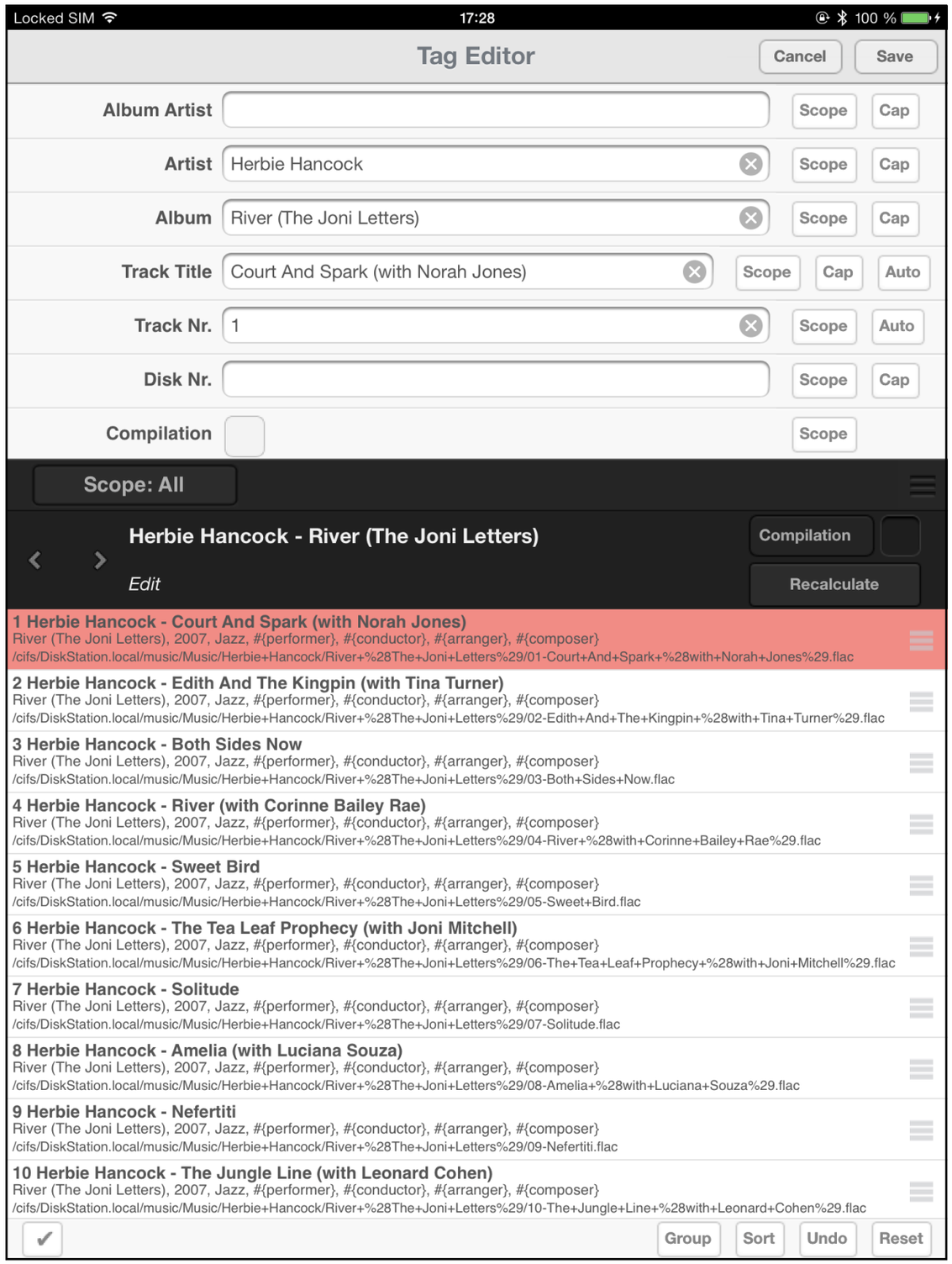
Example 1

The tag editor loaded with a tagging example, a complete album, looks like shown on the right:

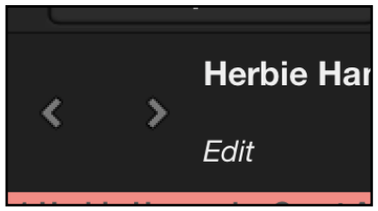
The upper and lower sections can be scrolled to view more tags or tracks. The black division bar between upper and lower section can be moved up or down. The lower section lists the tracks of the album (or several albums). It is possible to tag just a single track, say if the track name was misspelled, or to tag all tracks at once, say if the artists name needs to be changed. Or one can overwrite all tags of a particular album completely because the Gracenote tags seem to make more sense.



First lets do a simple example:



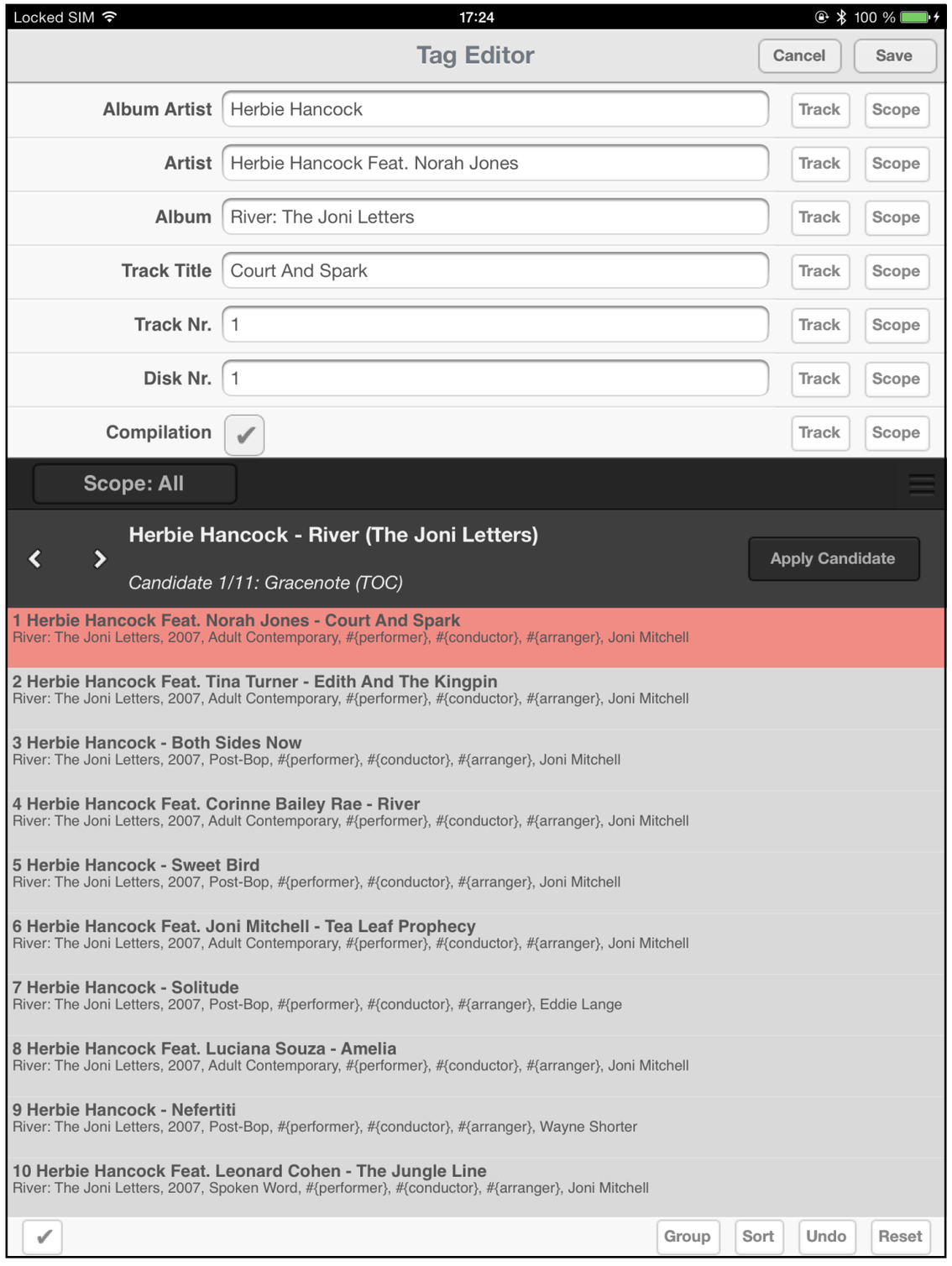
The upper window shows the data of the track selected in the lower window (red bar).

This section on the division bar: 

shows the word „Edit“ which means that the display currently shows the Edit buffer. This is where all changes are made before they can be written to the storage via the

pad in the upper right.

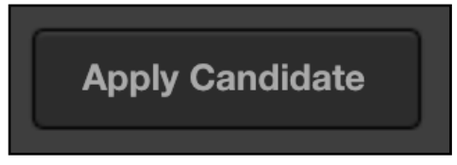
The left / right pointing arrows are grey, which means there are no candidates for different metadata available right now. But if we wait for a few seconds, the MAN301 will find data on Gracenote (during that process the screen flickers a few times) and then the arrows turn like this . This invites to tap on the right pointing arrow which then reveals the first Candidate found on Gracenote as seen on the next page.



We now see that the lower window has a grey background and the middle bar reads

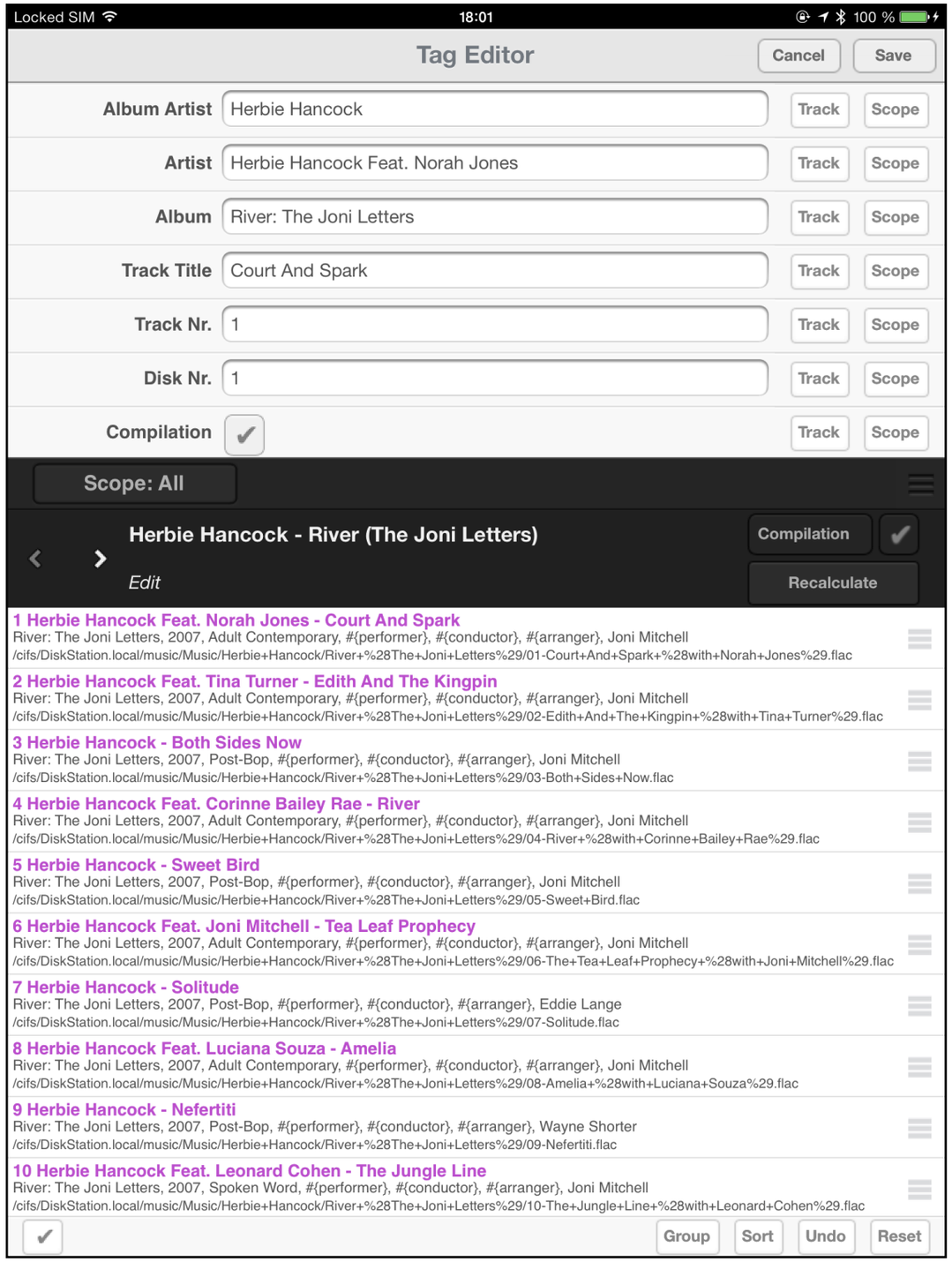
The „Candidate 1/11: Gracenote (TOC)“ means that 11 Candidates for that album have been found on Gracenote. The first one is being displayed right now. The right pointing arrow allows to scroll through the candidates. The TOC means that this candidate is based on the TOC, i.e. the „Table Of Contents“. It is important to know that whenever a TOC candidate shows up, this candidate is very likely to reflect exactly the album we are looking to tag. For a TOC candidate to appear, all tracks of the album must be present with their proper start / end times etc. So TOC candidates are preferred over „Tags“ candidates (which we will see later).

If we tap on the first track of the candidate the tags of that first track are displayed in the upper window as shown on the left. We now can inspect that data to see whether they fit our expectations. We can scroll through the other candidates similarly (always tap on one of the tracks in the lower window to see the contents of a candidate). There are several TOC candidates available, some have the „Compilation“ flag set because that Herbie Hancock album has several guest musicians and thus one could call it a Compilation. If you now found a candidate which fits your needs you tap on the



pad which

copies that candidate into the Edit buffer and the Edit buffer is now displayed again, with the colour of the tracks changed, indicating that the tags for those tracks have changed.



If all the tags are now as expected we can tap on the

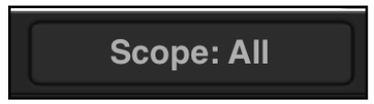
pad to write them to the Herbie Hancock tracks and to close the tag editor.

Note, the Save pad always writes the Edit buffer, so the candidate has to be copied to the edit buffer via the Apply Candidate pad first. As described above.

But if we like to change some entries, like e.g. the Genre, then we scroll the upper window to the Genre entry, tap into the Genre bar to have the keyboard showing up and type in a new Genre. **(Note, this editing only works in the Edit buffer, candidates can not be edited).**

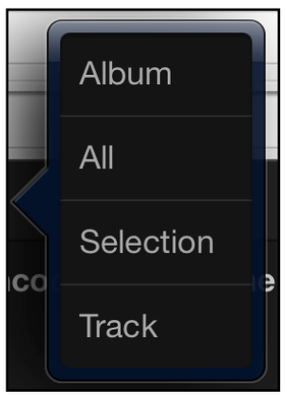
Then we tap either on

, to write that Genre for the selected track only, or on

to write that Genre to those tracks we have defined with the Scope: 

in the middle bar.

This is a good opportunity to explain the Scope concept. If we tap on the Scope pad, this window opens:



This lets us define the Scope as follows:

- **Album:** This means all tracks of the album are affected. There can be several albums visible in the lower window, e.g. the disks of a multi-disk release (separated with black bars). The scope Album then means the one Album which is selected via the red bar

- **All:** This means all tracks visible in the lower window.

- **Selection:** A selection of tracks which can be done by either tapping on the pad in the lower left or by doing a right swipe in the lower window.
This reveals a vertical bar on the left:

Tapping on the selects / de-selects all tracks at once,

tapping on the selects / de-selects that track.

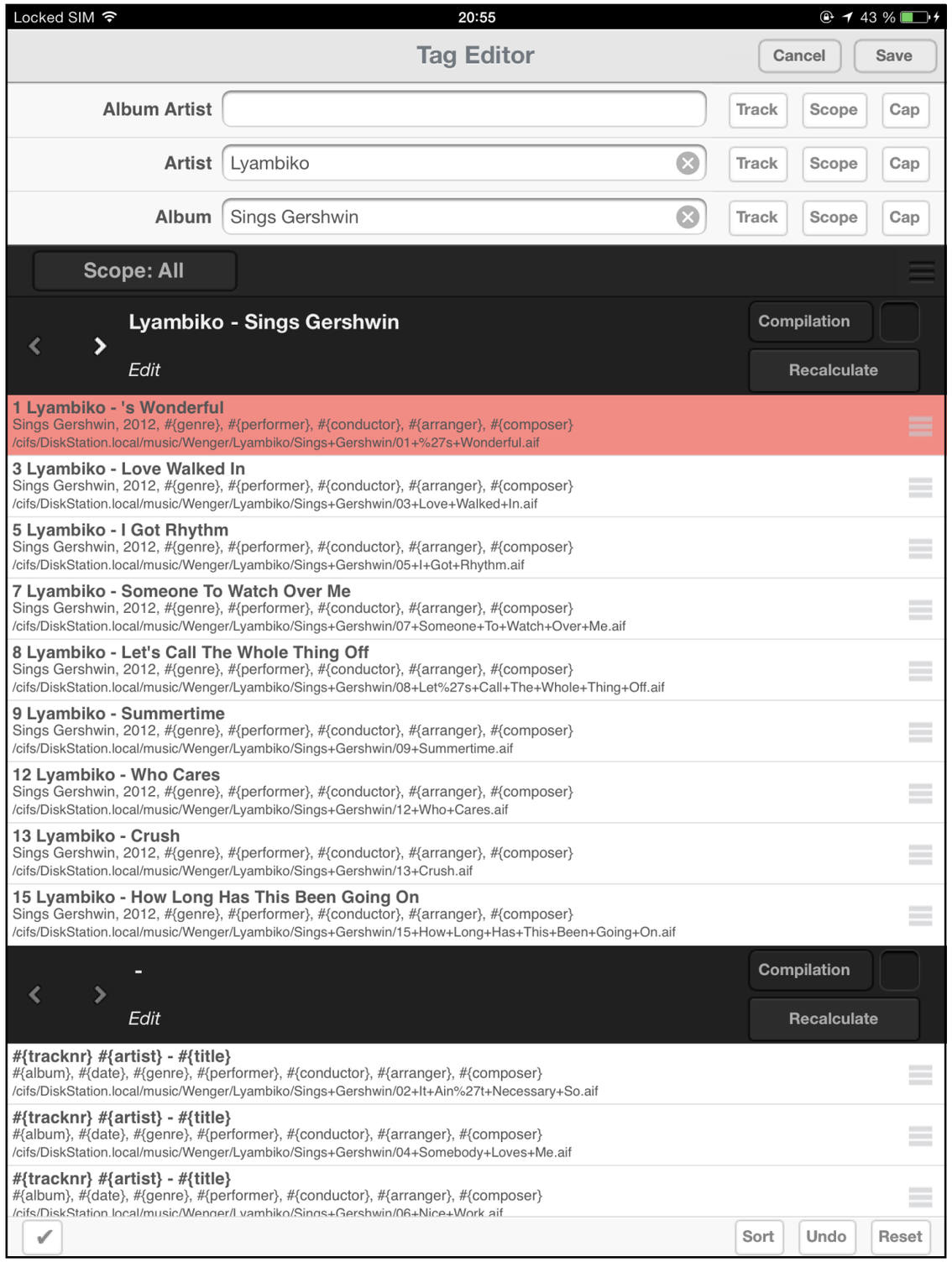
- **Track:** Just one single track, i.e. the one with the red bar.

Always make sure to have selected the proper Scope for your editing activities.

By the way, if you did a wrong edit you can undo that with the pad in the lower right, or use the pad to start over completely.

Example 2

Now let‘s do a more demanding example. The next pages shows an example of a album with some untagged tracks.



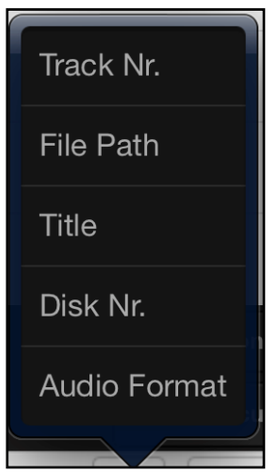
The untagged tracks appear in the bottom window (three tracks visible). We also notice that the middle window shows tracks 1, 3, 5, 7, 8, 9, 12, 13, 15, so obviously some tracks are missing. We now move the untagged tracks from the bottom window up to the middle window by dragging one track at a time with the handle:

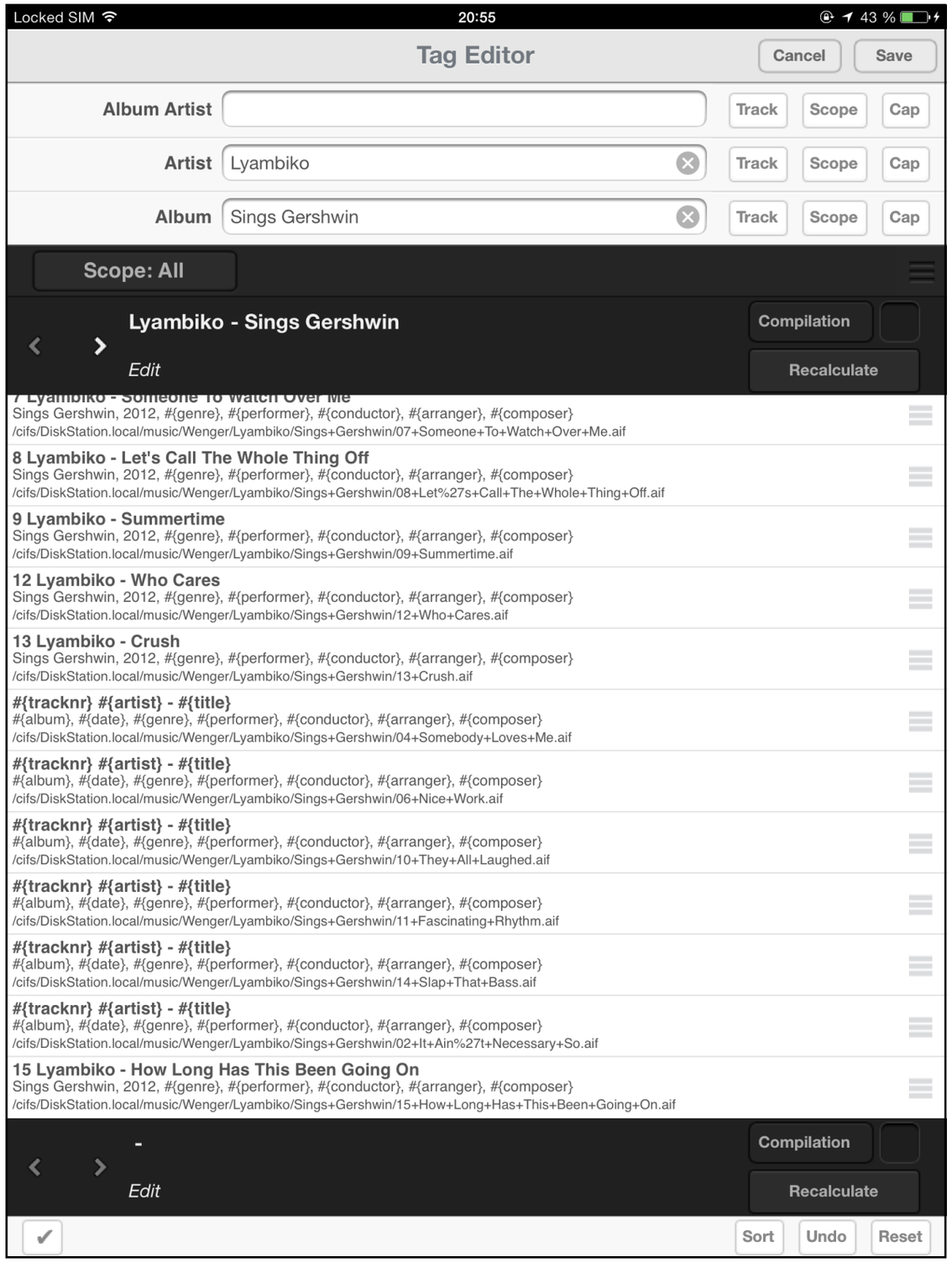
on the right edge of the display. The tracks can be moved to any position in the middle window, we will later sort them in the proper sequence.
An alternative way to move the tracks is to select the tracks in the bottom window as described above and then tap on the

pad at the bottom and select the „Lyambiko - Sings Gershwin...“ entry to move all the selected tracks in the middle window.

Now we have all tracks in the middle window. Tap now on the

pad at the bottom. This opens this selection:

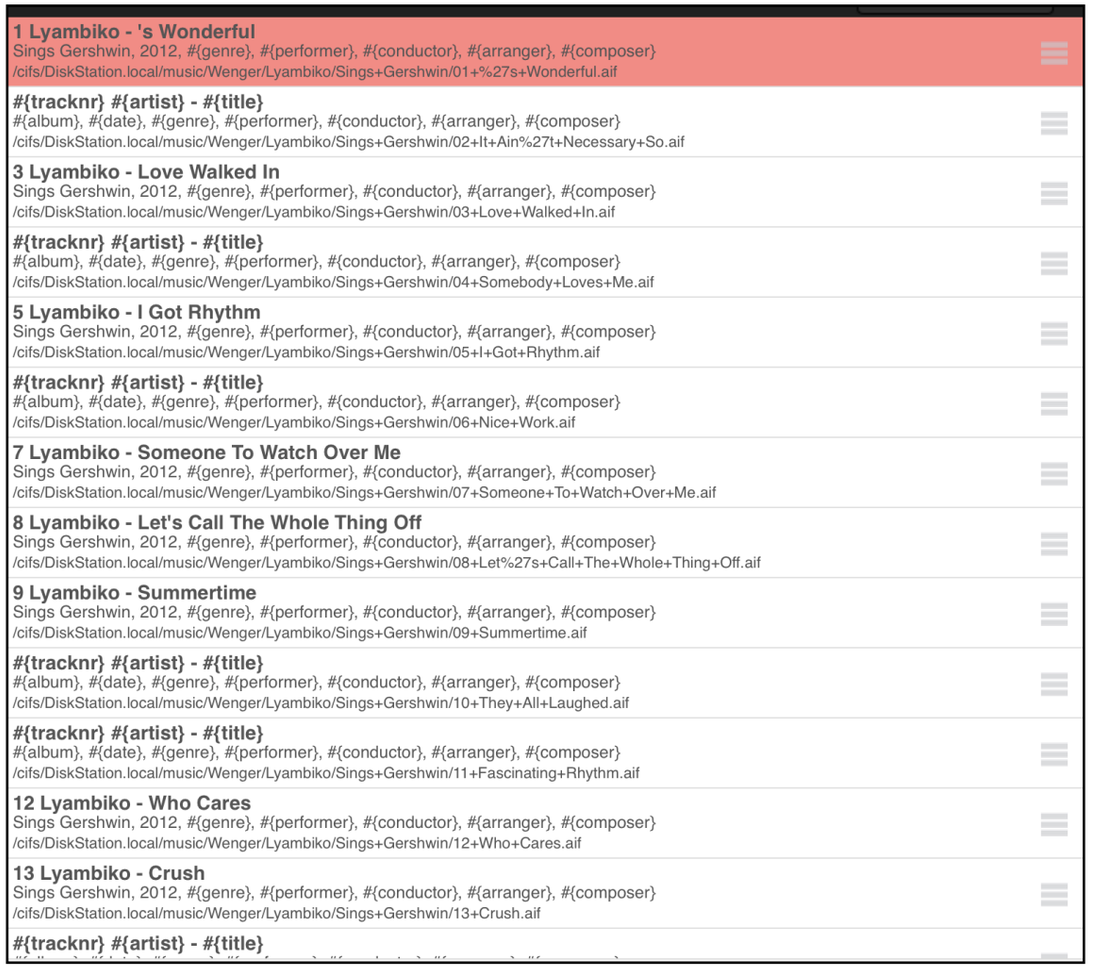




For our example at hand we select the „File Path“ choice which sorts the tracks according to the file path on the storage device. This works in that case because the track number is part of the file path as can be seen when we inspect the file pathes in the middle window, e.g. this one:

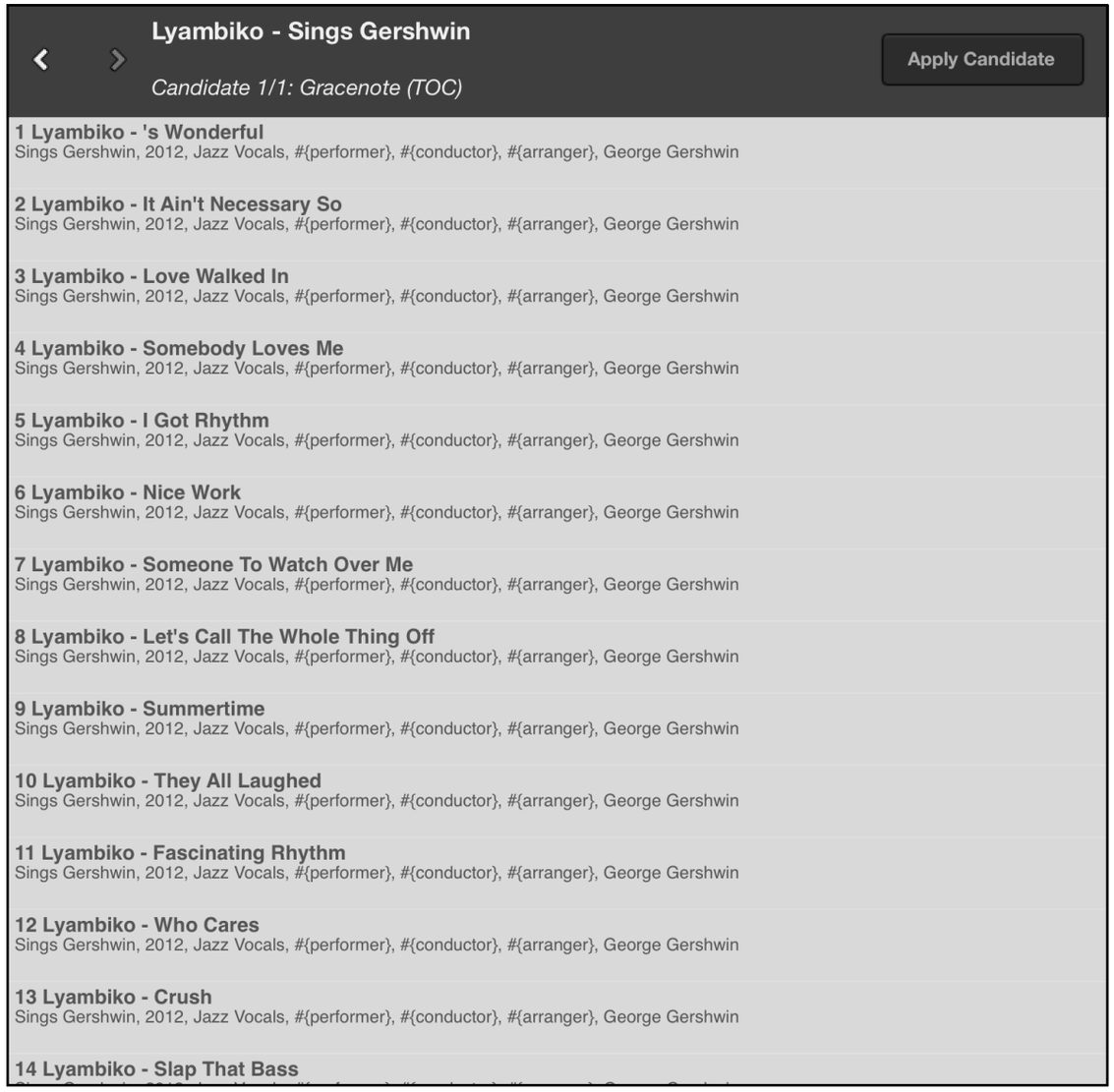
r/Lyambiko/Sings+Gershwin/04+Somebody+Loves+Me.aif

I.e. the „04“ is indicating the track number 4. The track number often is encoded in the file path, so this is a convenient way to sort untagged tracks in the proper order.
Now the display looks like shown below

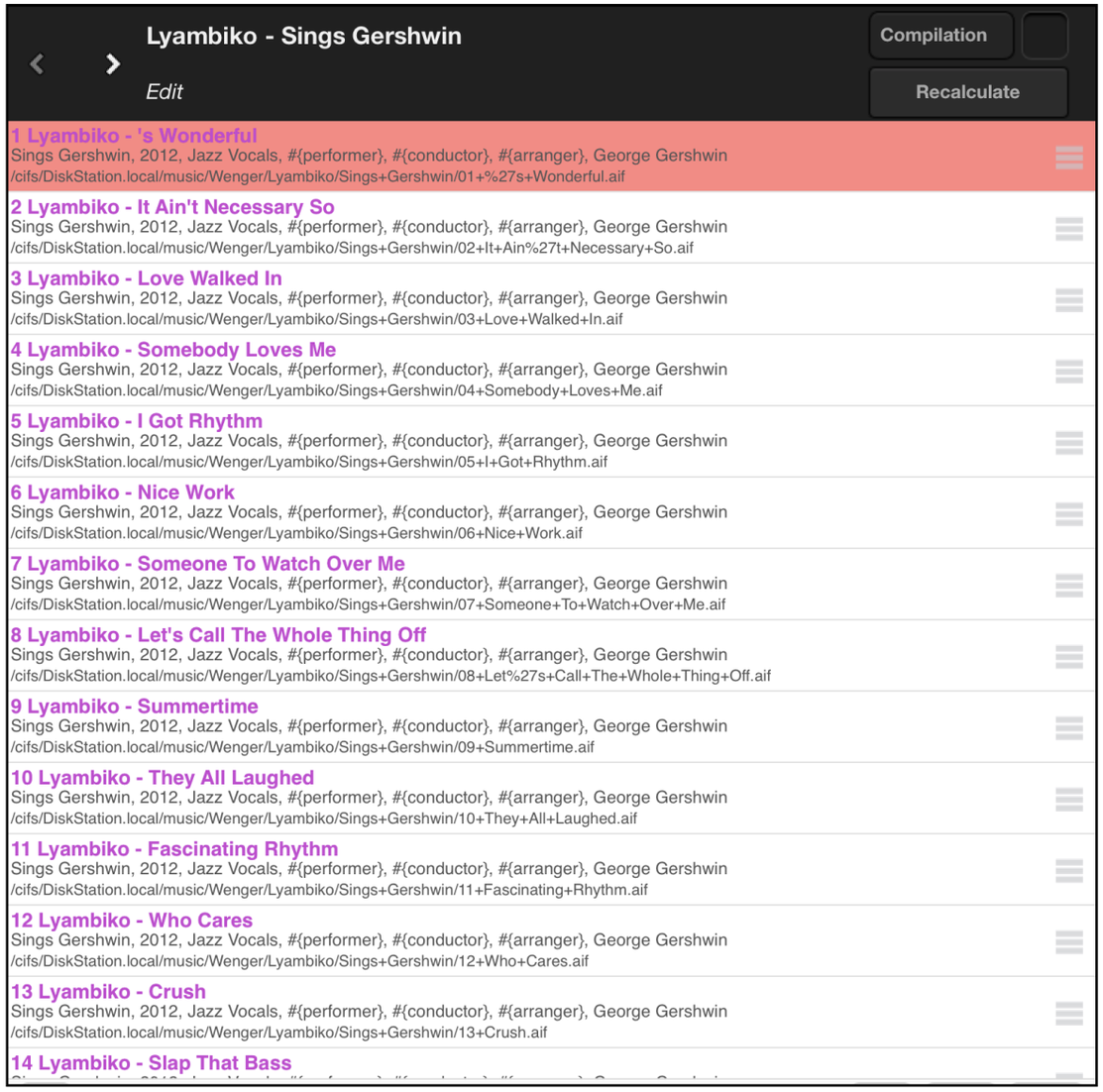


We see that the tracks are in the proper order by inspecting the file path entries.

Now we tap on the Recalculate pad in the middle bar. This causes the MAN301 to submit the data of all tracks in the window to Gracenote, which then returns a candidate as seen here:



We see that it has properly identified all tracks and indicates that this data is based on the TOC (because we have submitted the data of all tracks of that album), i.e. it is very likely that the candidate is correct for the album at hand. So we tap on Apply Candidate and subsequently get the Edit window filled with the new data:



Ready to be written to the storage device via the

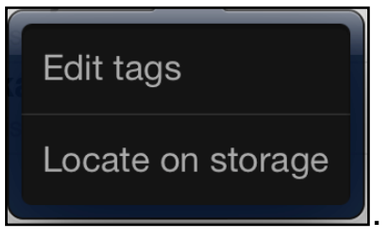
pad.

Example 3

Now for another tricky example:

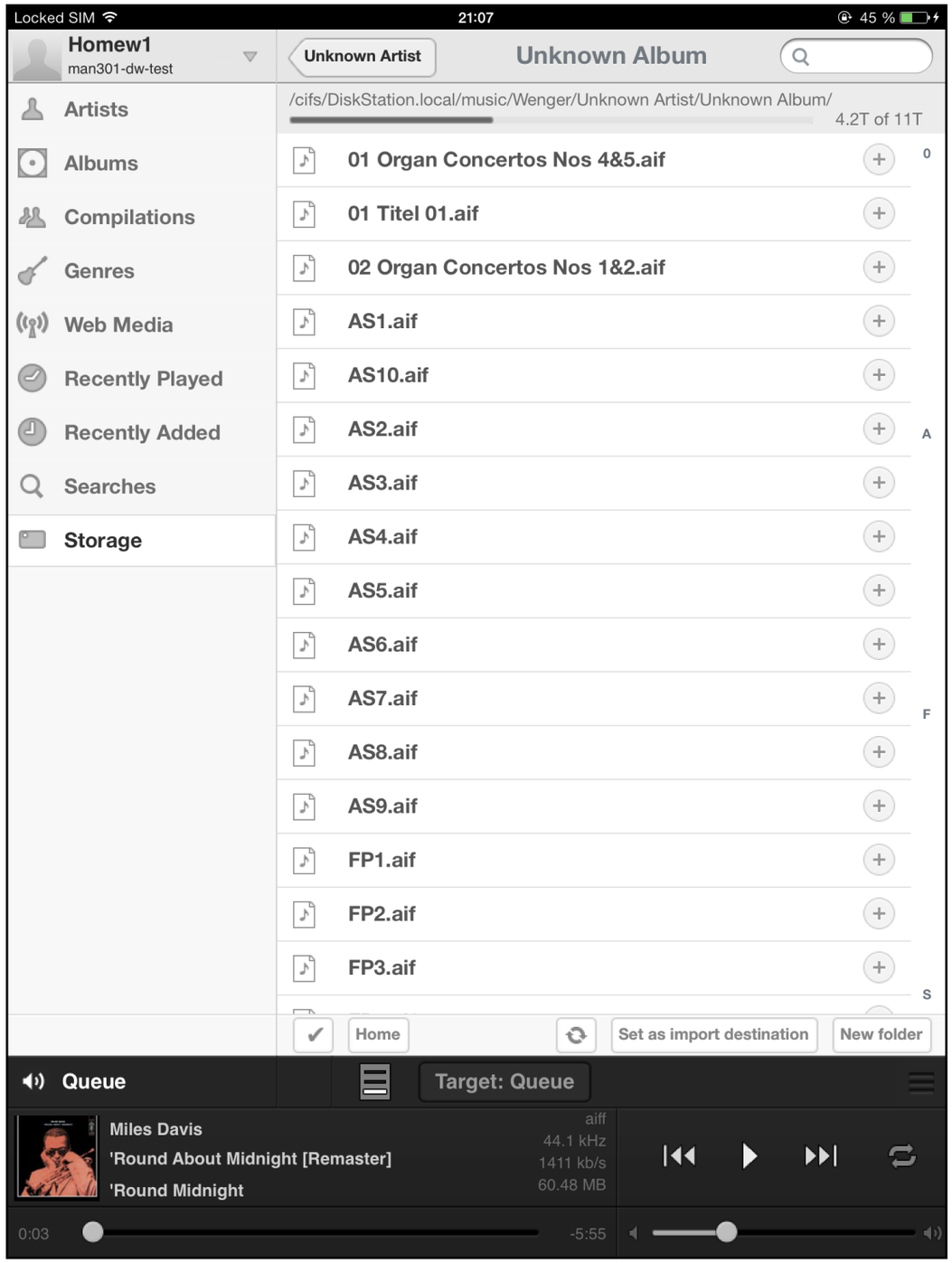
In the Artists and Albums display you may notice entries like this:

or this:

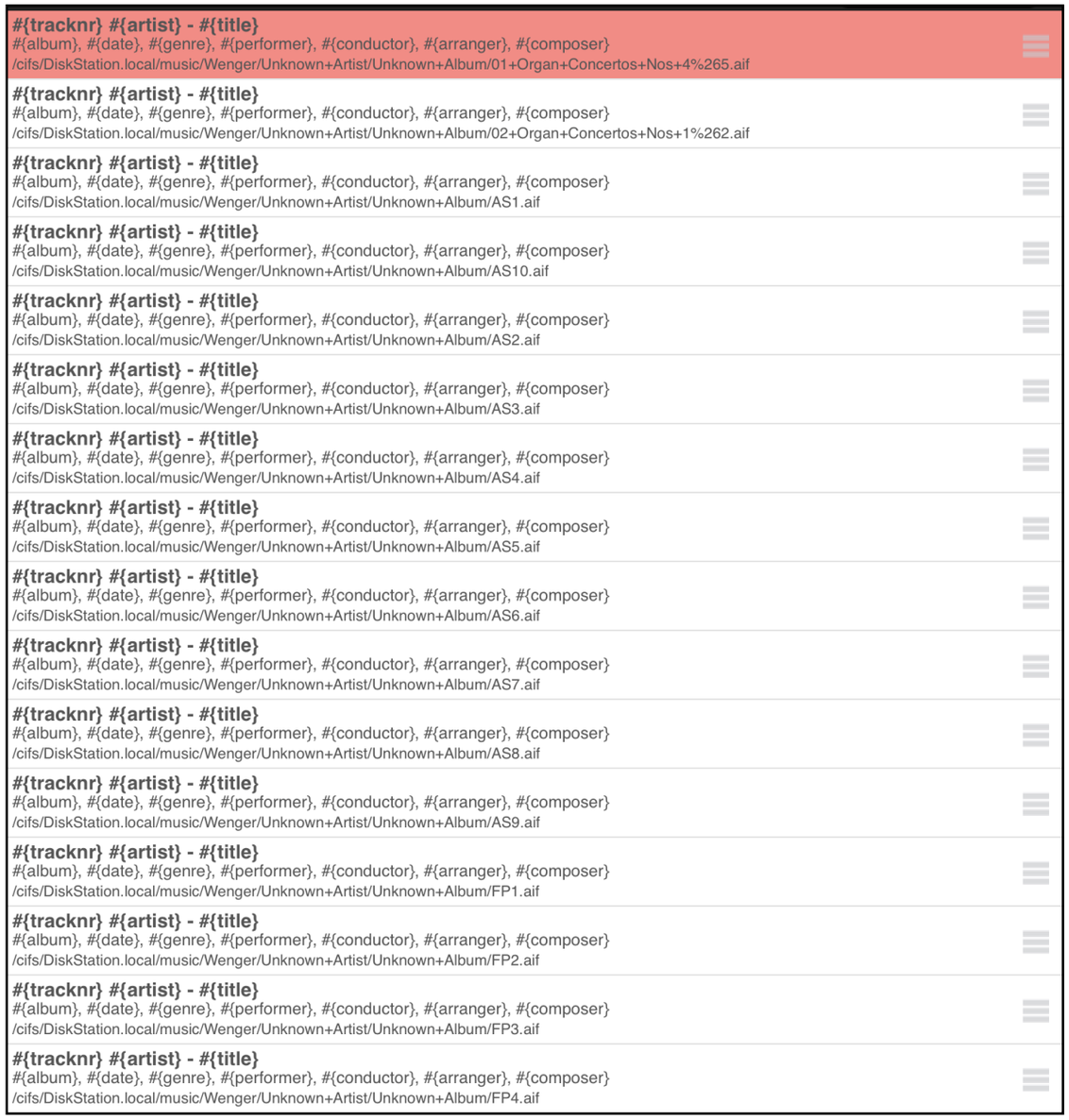
These entries lead to (partially) untagged tracks and are a good starting point to clean up those untagged tracks. For this navigate to the [No Album] entry and tap and hold the finger on it until this window appears 

. Then tap on „Locate on storage“. This leads to the untagged tracks of one of the albums in the storage browser. Memorize the folder name where those tracks are stored and navigate one folder up in order to show that folder name. Now do a right swipe (or tap on the
pad) to select the folder with the untagged tracks. Example:

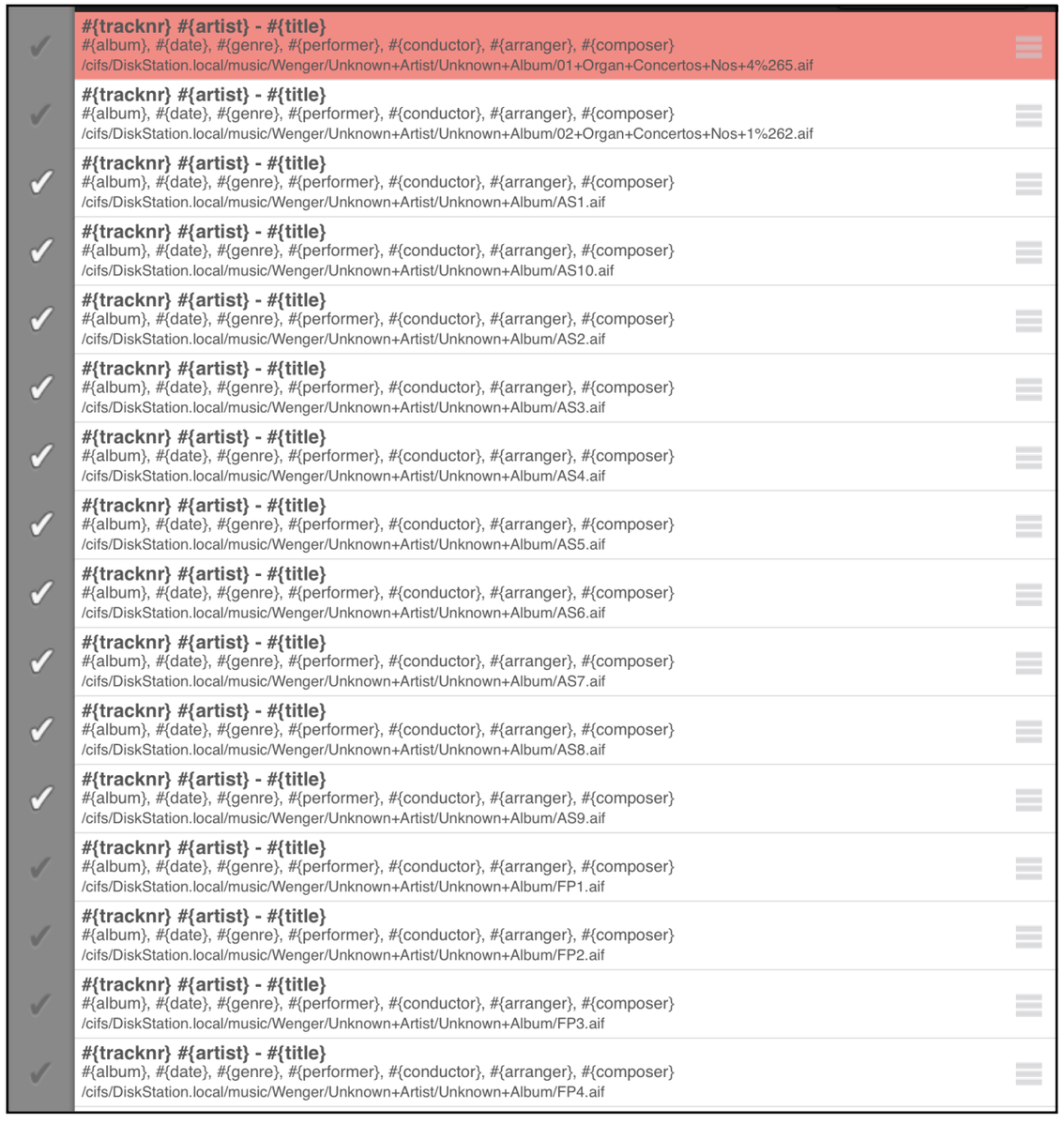
Now tap on the
pad to enter the tag editor.
In the following example I have chosen a folder with as it seems tracks from multiple albums:



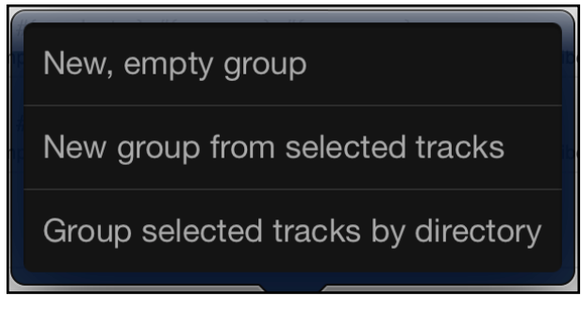
The folder names / track names do not reflect any information on the track contents, i.e. this is a worst case example. In the tag editor it looks like this:



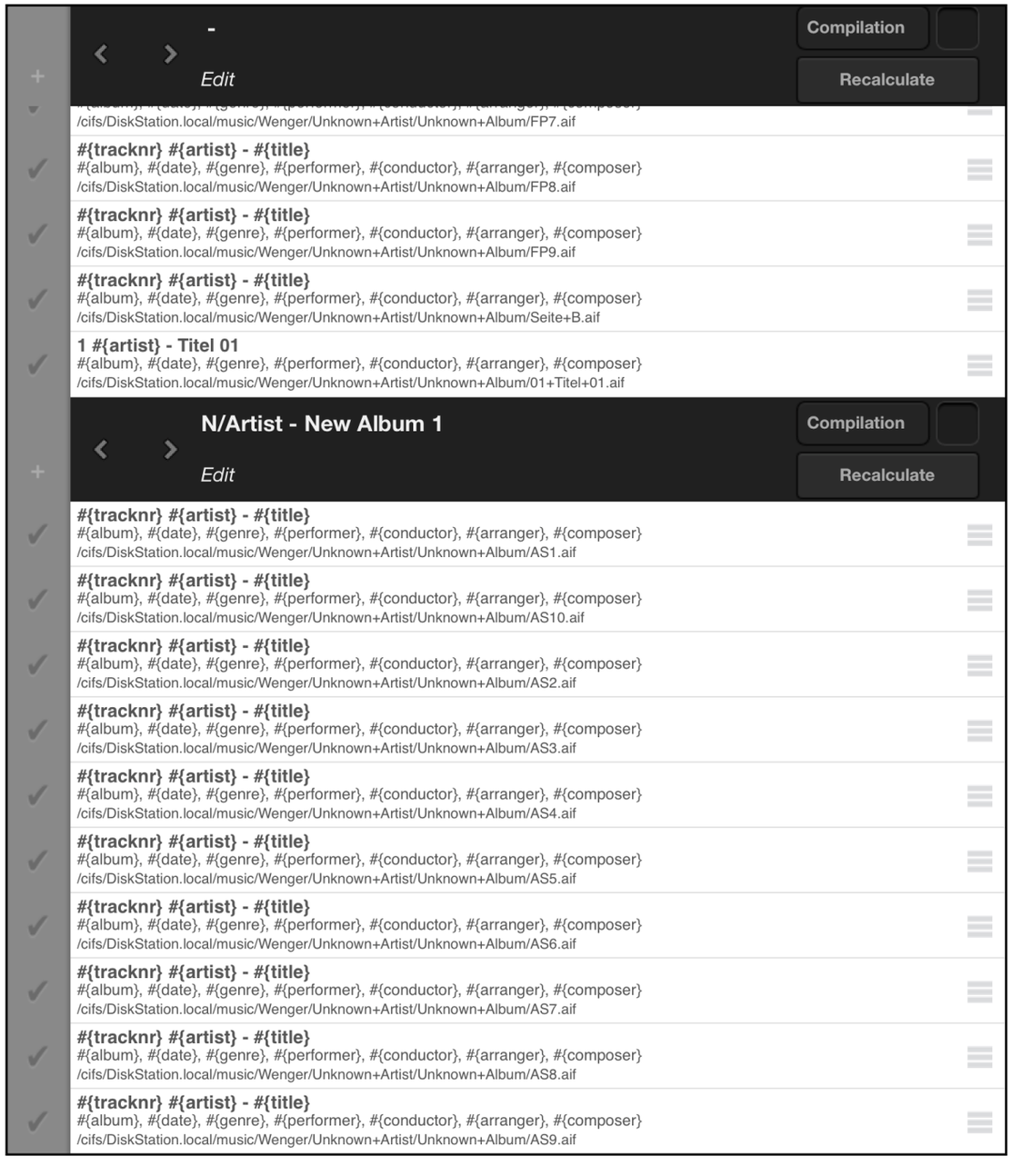
Up to now we are completely clueless what those tracks could be. We now try to isolate tracks which could be from the same album, like e.g. the ones having names starting with AS or FP. This we can do by selecting e.g. all tracks starting with AS as seen here:



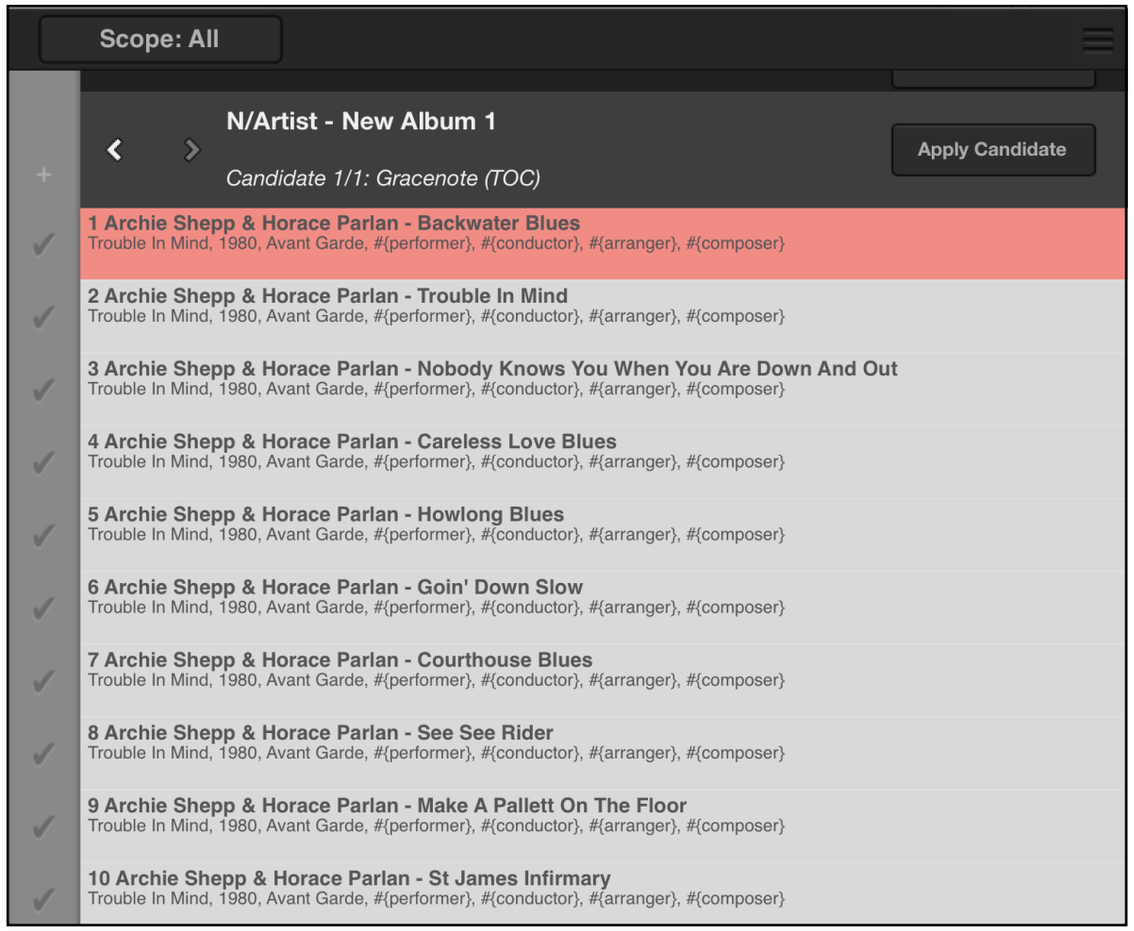
Now we tap on the Group pad which reveals a menu like this:



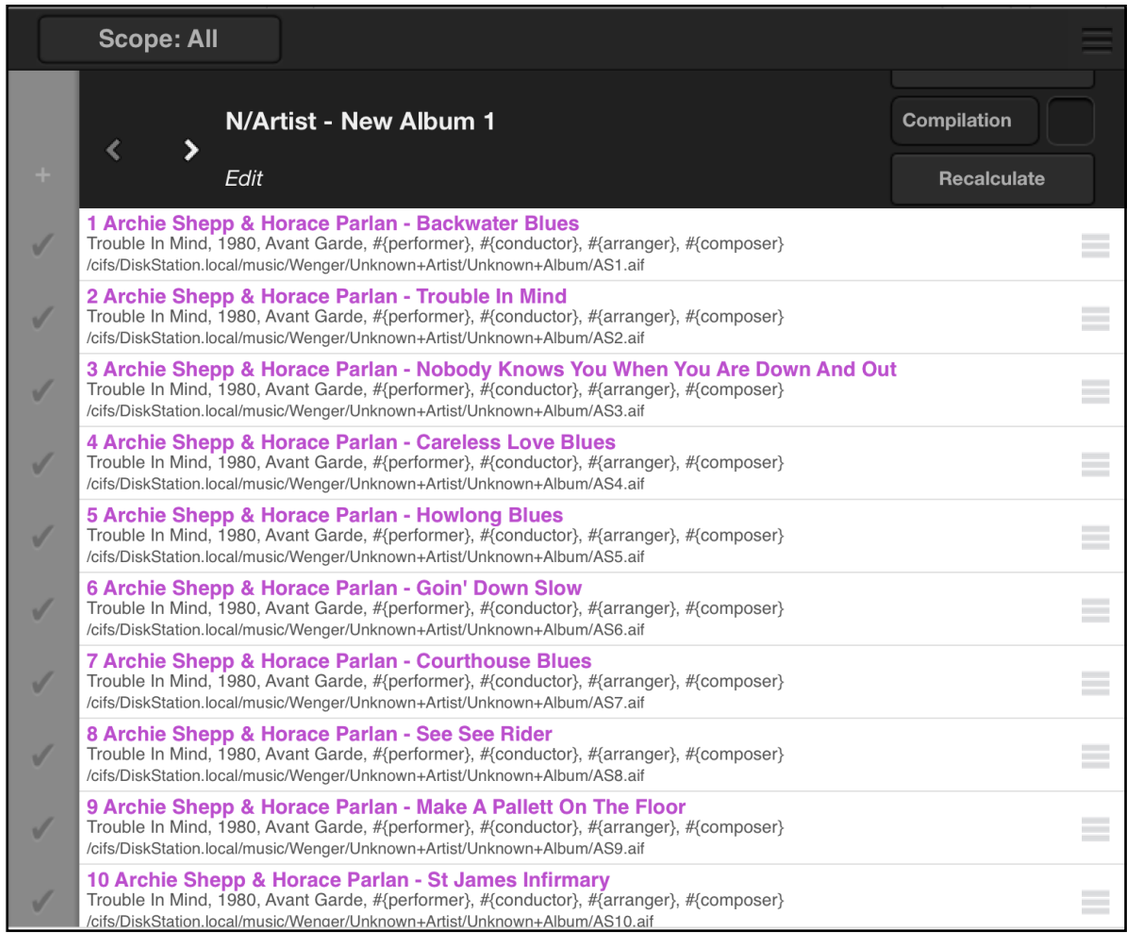
We can now select „New group from selected tracks“ to get the tracks we just selected into a separate group. (Note, if the tracks we are about to tag are in separate folders then we can select „Group selected tracks by directory“ and have all folders separated in a snap). But for this example we chose „New group from selected tracks“ and get this as a result:



We see that all the tracks we have selected are now in the bottom window. Now we tap on Recalculate in the lower window to do a new query with Gracenote based on that selection of tracks. This yields a candidate like this:



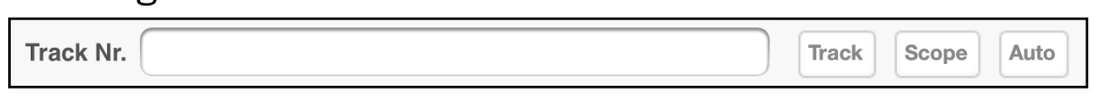
So we have been lucky that there were all tracks of that particular album complete and thus Gracenote found a TOC entry, which very likely is the album at hand. We now tap on Apply Candidate to have the data written to the Edit buffer as seen on the next page.



Now we tap on Save to write that data onto our storage device and thus have the tracks properly tagged. The same procedure we can now do with the other tracks in that directory.

Occasionally it is not that simple, i.e. maybe there isn‘t anything found via Gracenote, particularly if a track is missing, then the TOC entries can not be found. In those cases we can support the process by:

1) Entering the track numbers via the



field in the top window. The Auto pad allows to automatically

number the tracks from 1 upwards. For that purpose make sure the tracks are arranged in the proper sequence, i.e. check the file names for hints regarding the track number. In the example before we could arrange the tracks (with the handles) such that there is AS1 first, then AS2, AS3 etc.

2) If known, we can enter the Artist name or the Album name in the appropriate fields in the upper memory.

After these entries we tap on the

pad to fetch data from Gracenote. It now very likely finds data based on the tags we have entered and designates those entries with e.g.

, meaning that the data returned by Gracenote is based on the tags we just have entered. The candidates based on Tags have to be carefully scrutinized because it can be that a completely wrong album shows up as a Tags candidate. So be careful with the Tags candidates.

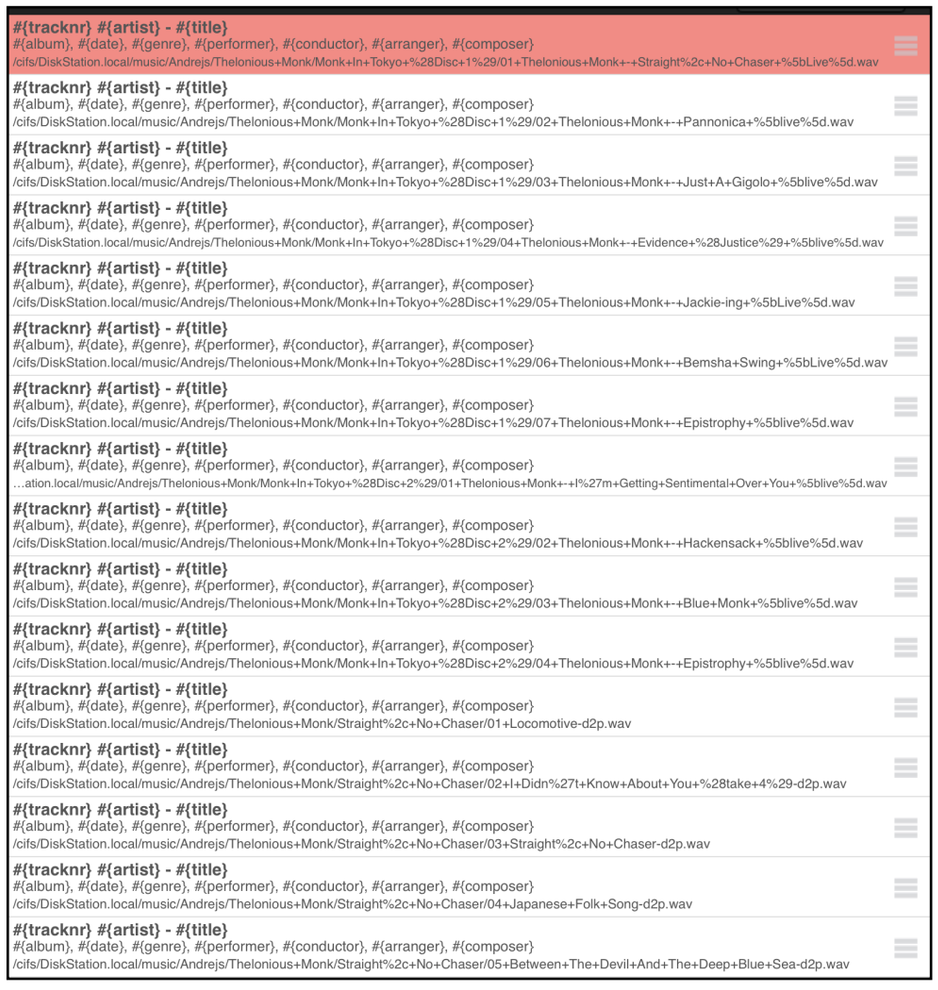
It can happen that the tracks of a single album are scattered over several different folders. In the Storage browser all the folders affected can be marked for tagging and thus all tracks of an album can be brought to the tagging editor, despite that they are in different folders. In the tagging editor they then can be reassembled into a single group for subsequent tagging of the complete album at once.

Example 4

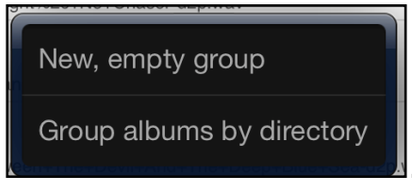
Let‘s do another example on the next page.

Here we have three albums by Thelonios Monk, none of them is tagged:

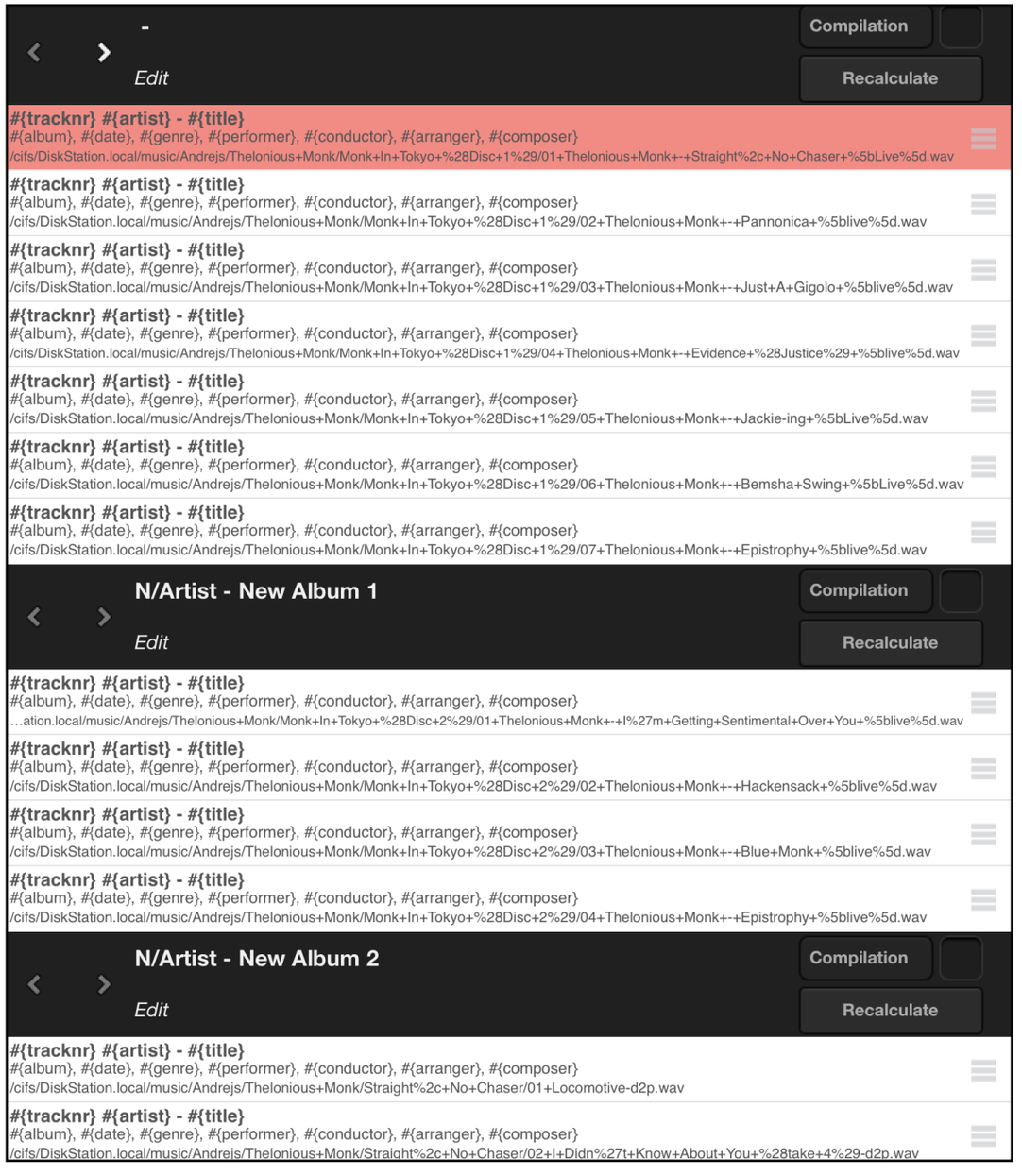
We mark all three for tagging and enter the tagging editor which shows this.



I.e. all tracks of all three albums in a single window. Now the magic grouping function comes to rescue:



. „The Group albums by directory“ re-groups the three albums into three groups:



After tapping on Recalculate for each group we end up with nice candidates in each group:

-

Candidate 1/3: Gracenote (TOC)

Apply Candidate

1 Thelonious Monk - Straight, No Chaser
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, T.S. Monk

2 Thelonious Monk - Pannonica
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk

3 Thelonious Monk - Just A Gigolo
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Irving Caesar

4 Thelonious Monk - Evidence
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk

5 Thelonious Monk - Jackie-Ing
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk

6 Thelonious Monk - Bemsha Swing
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, T.S. Monk

7 Thelonious Monk - Epistrophy
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk

N/Artist - New Album 1

Candidate 1/5: Gracenote (TOC)

Apply Candidate

1 Thelonious Monk - I'm Getting Sentimental Over You
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, George Bassman

2 Thelonious Monk - Hackensack
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk

3 Thelonious Monk - Blue Monk
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk

4 Thelonious Monk - Epistrophy
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Kenneth Clarke

N/Artist - New Album 2

Candidate 1/6: Gracenote (TOC)

Apply Candidate

1 Thelonious Monk - Locomotive
Straight, No Chaser, 1966, Bebop, #{performer}, #{conductor}, #{arranger}, T.S. Monk

2 Thelonious Monk - I Didn't Know About You [Take 4]
Straight, No Chaser, 1966, Bebop, #{performer}, #{conductor}, #{arranger}, Duke Ellington

Writing them to the Edit buffers via Apply Candidate gets this:

-

Edit

Compilation

Recalculate

1 Thelonious Monk - Straight, No Chaser
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, T.S. Monk
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+1%29/01+Thelonious+Monk+-+Straight%2c+No+Chaser+%5bLive%5d.wav

2 Thelonious Monk - Pannonica
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+1%29/02+Thelonious+Monk+-+Pannonica+%5blive%5d.wav

3 Thelonious Monk - Just A Gigolo
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Irving Caesar
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+1%29/03+Thelonious+Monk+-+Just+A+Gigolo+%5blive%5d.wav

4 Thelonious Monk - Evidence
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+1%29/04+Thelonious+Monk+-+Evidence+%28Justice%29+%5blive%5d.wav

5 Thelonious Monk - Jackie-Ing
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+1%29/05+Thelonious+Monk+-+Jackie-ing+%5bLive%5d.wav

6 Thelonious Monk - Bemsha Swing
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, T.S. Monk
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+1%29/06+Thelonious+Monk+-+Bemsha+Swing+%5bLive%5d.wav

7 Thelonious Monk - Epistrophy
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+1%29/07+Thelonious+Monk+-+Epistrophy+%5blive%5d.wav

N/Artist - New Album 1

Edit

Compilation

Recalculate

1 Thelonious Monk - I'm Getting Sentimental Over You
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, George Bassman
…ation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+2%29/01+Thelonious+Monk+-+I%27m+Getting+Sentimental+Over+You+%5blive%5d.wav

2 Thelonious Monk - Hackensack
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+2%29/02+Thelonious+Monk+-+Hackensack+%5blive%5d.wav

3 Thelonious Monk - Blue Monk
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Thelonious Monk
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+2%29/03+Thelonious+Monk+-+Blue+Monk+%5blive%5d.wav

4 Thelonious Monk - Epistrophy
Monk In Tokyo [Live], 1963, Bebop, #{performer}, #{conductor}, #{arranger}, Kenneth Clarke
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Monk+In+Tokyo+%28Disc+2%29/04+Thelonious+Monk+-+Epistrophy+%5blive%5d.wav

N/Artist - New Album 2

Edit

Compilation

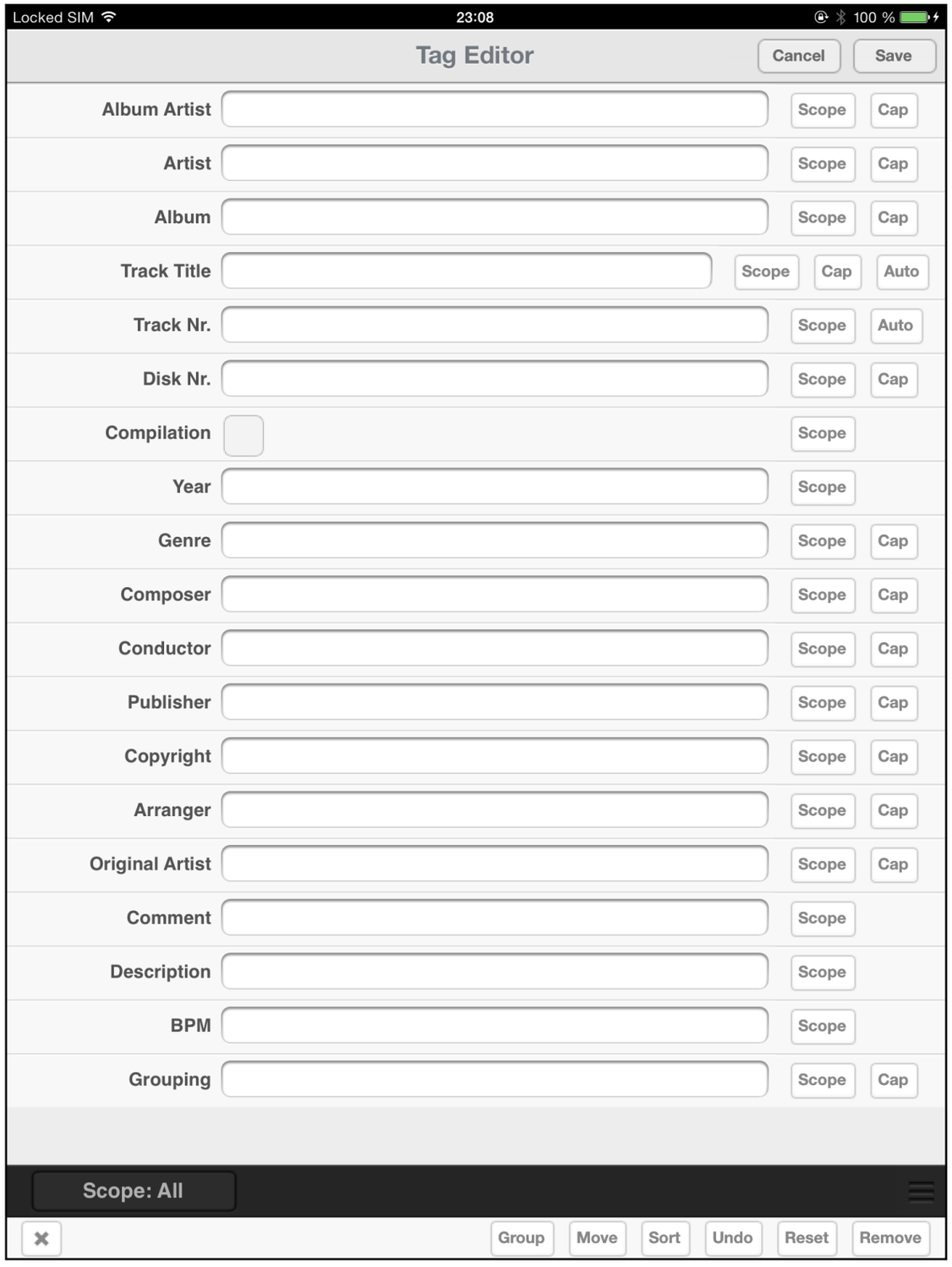
Recalculate

1 Thelonious Monk - Locomotive
Straight, No Chaser, 1966, Bebop, #{performer}, #{conductor}, #{arranger}, T.S. Monk
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Straight%2c+No+Chaser/01+Locomotive-d2p.wav

2 Thelonious Monk - I Didn't Know About You [Take 4]
Straight, No Chaser, 1966, Bebop, #{performer}, #{conductor}, #{arranger}, Duke Ellington
/cifs/DiskStation.local/music/Andrejs/Thelonious+Monk/Straight%2c+No+Chaser/02+I+Didn%27t+Know+About+You+%28take+4%29-d2p.wav

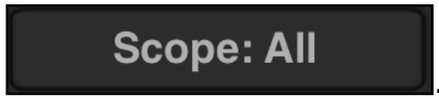
And subsequent tapping on Save writes all three to the

storage device at once. The tagging of these three albums has been a piece of cake.
Now for some words on the fields in the top window. An extensive tagging page looks like this (Edit buffer):



The number of entries may vary with the audio file format at hand.

The

pad writes the tag to the left to the Scope set in the middle black bar 

. (See further up for the explanation of the Scope).
For example if I have entered an Album Artist then I can write that entry to all other tracks by tapping on Scope and have the Scope set to All or Album.

The

pad cleans up the string, i.e. it capitalizes the first character in each word, e.g. thelonius monk becomes Thelonius Monk. THELONIUS MONK stays as THELONIUS MONK though.

The

pad fills in that field automatically, e.g. the Track Number is automatically filled in 1, 2, 3, etc. for subsequent tracks. Same with the Track Title, which can be useful if there is no metadata whatsoever available for a particular album, then we can at least number the track titles. To have different Track Titles within a single album is very important, else the tracks do not get displayed in the Album view.

In the Candidate window the right hand side of the screen looks a bit different:

The Scope works the same as in the Edit window, but here we have Track in addition, i.e. tapping on Track writes that data from the Candidate to the Edit buffer, only for that particular track. This can be useful e.g. if there are just a few track names we would like to change and don‘t want to apply the whole candidate to the Edit buffer.

In the middle black bar there is also the

pad which shows whether an album is tagged as a Compilation (or which allows to tag an album as a Compilation).
Albums tagged as compilation (i.e. the film music samplers, label samplers, etc.) appear under the

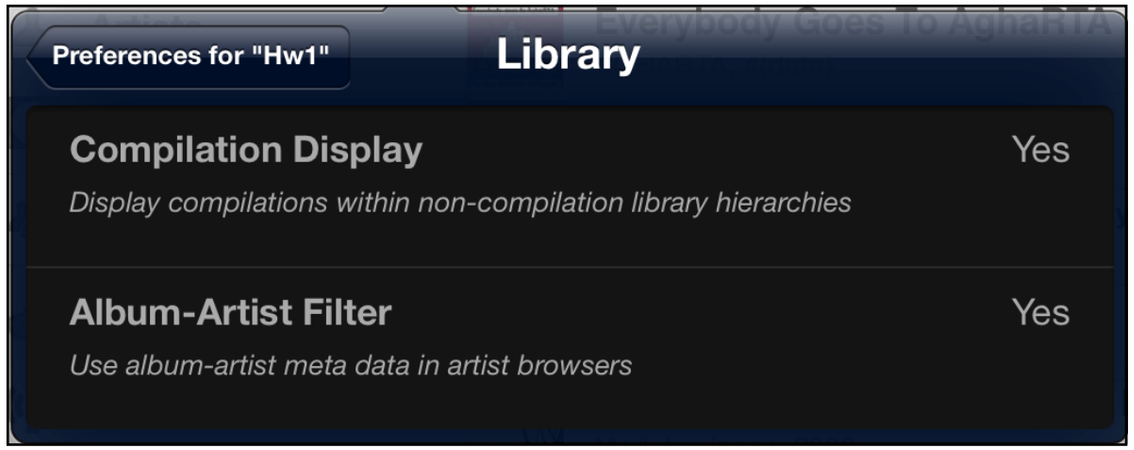
menu.

Example 5

The next example shows an album which should have been tagged as Compilation, but it hadn‘t been done so. This causes several separate entries in the Artists list for that album, because for several tracks there are different artists. These additional entries in the Artists list can be annoying. By tagging the album as a Compilation it can be found in the

list as a complete album.

If we still would like the album to appear in the Artists and Albums lists, then we can set in User Preferences / Library, the „Compilation Display“ to „Yes“:

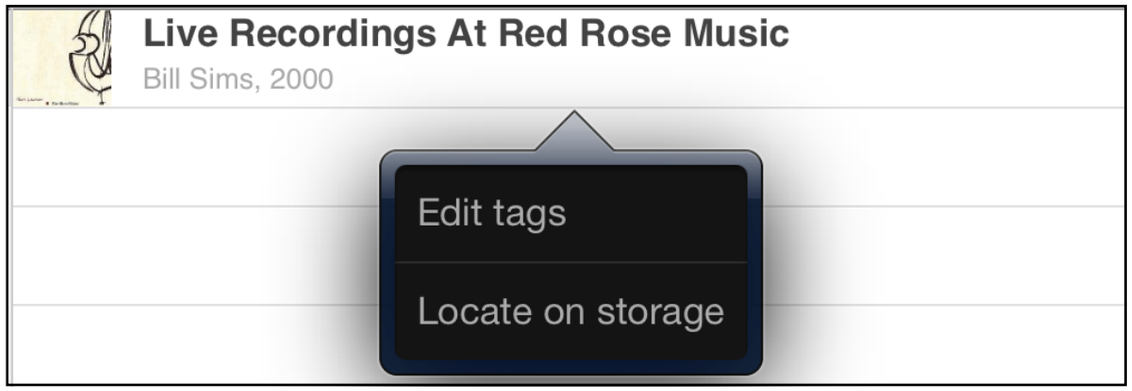


The „Album-Artist Filter“ controls the entries in the Artists list (for the Compilations). If set to „Yes“, then the „Album Artist“ tags will be listed in the Artists list. If set to No, then the „Artists“ tags will be listed in the Artists list.

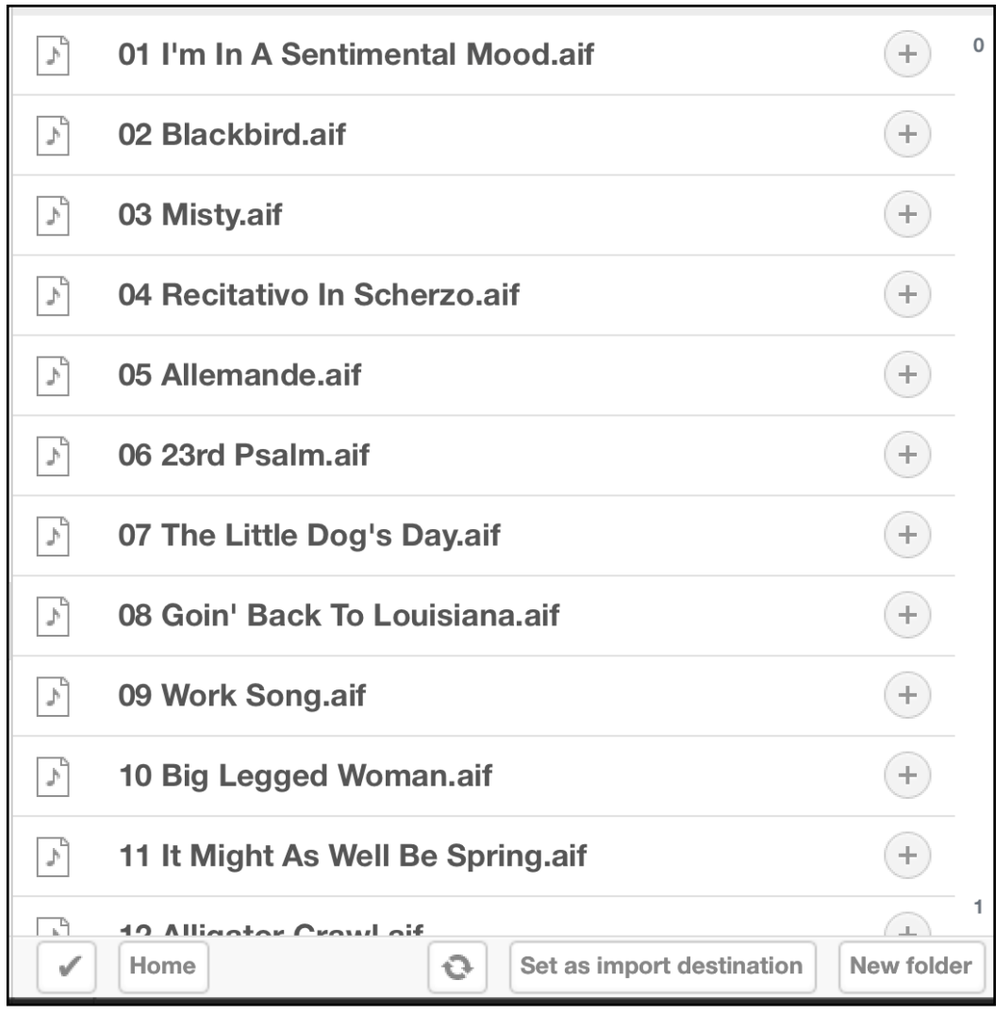
Now for the example. In the Artists list we find entries like this:

Such a sequence may point to an album which is not tagged as a Compilation (provided the „Compilation Display“ mentioned above is set to No).
If we tap on one of the entries we get this display:

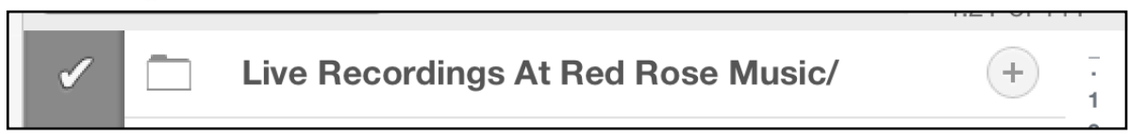
Now we tap and hold on the entry to get the menu and select „Locate on storage“,



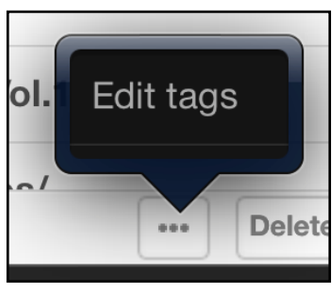
which opens this, i.e. the tracks of that album are visible:



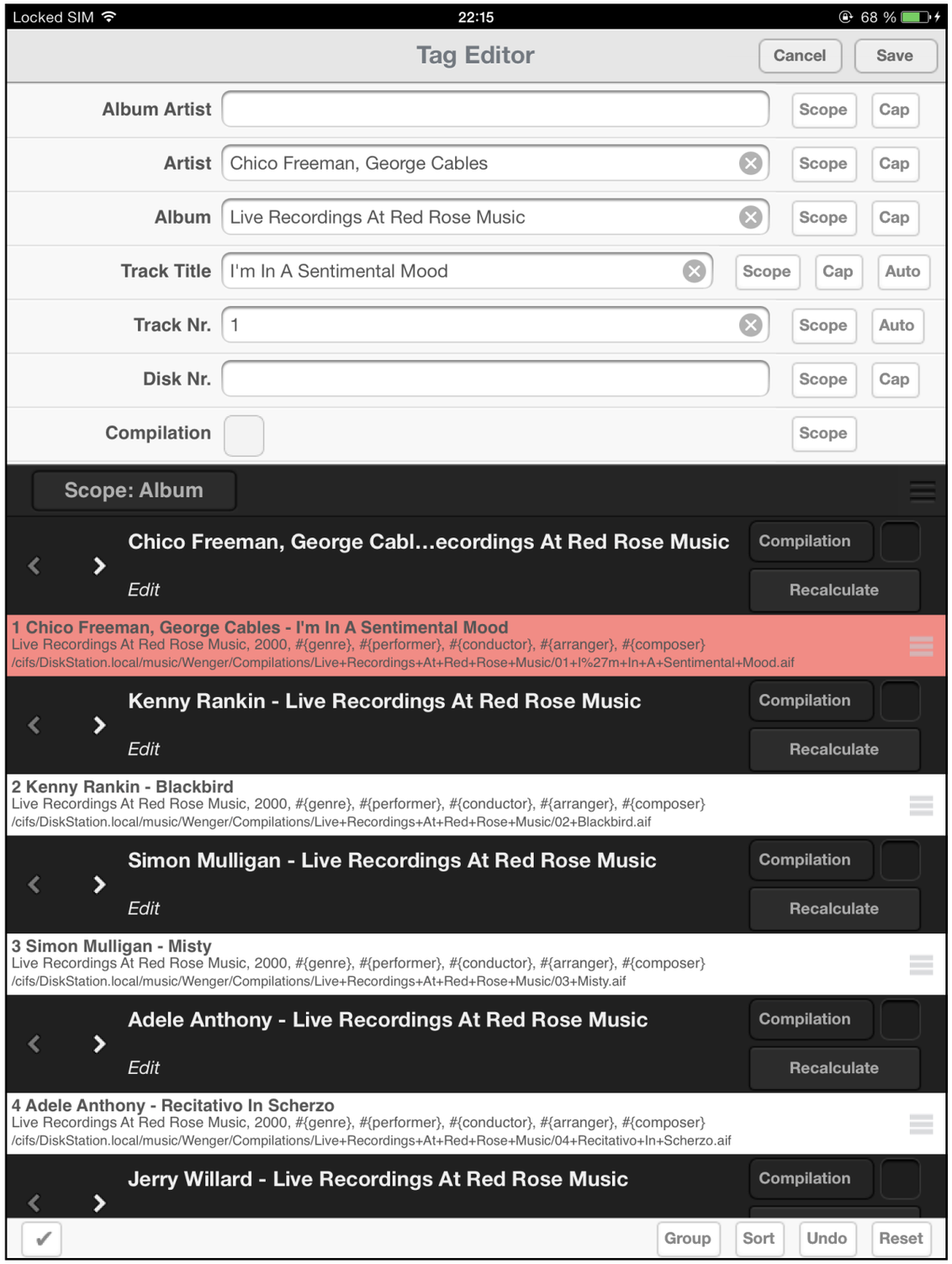
We navigate back to the album folder:



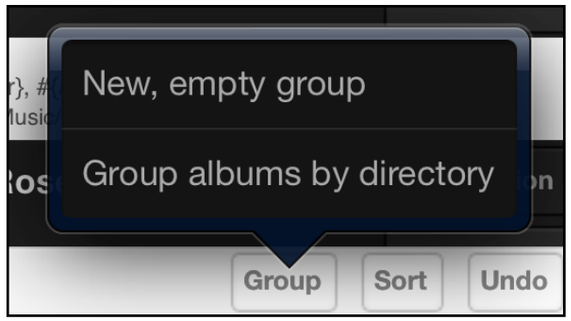
and select the folder for tagging:



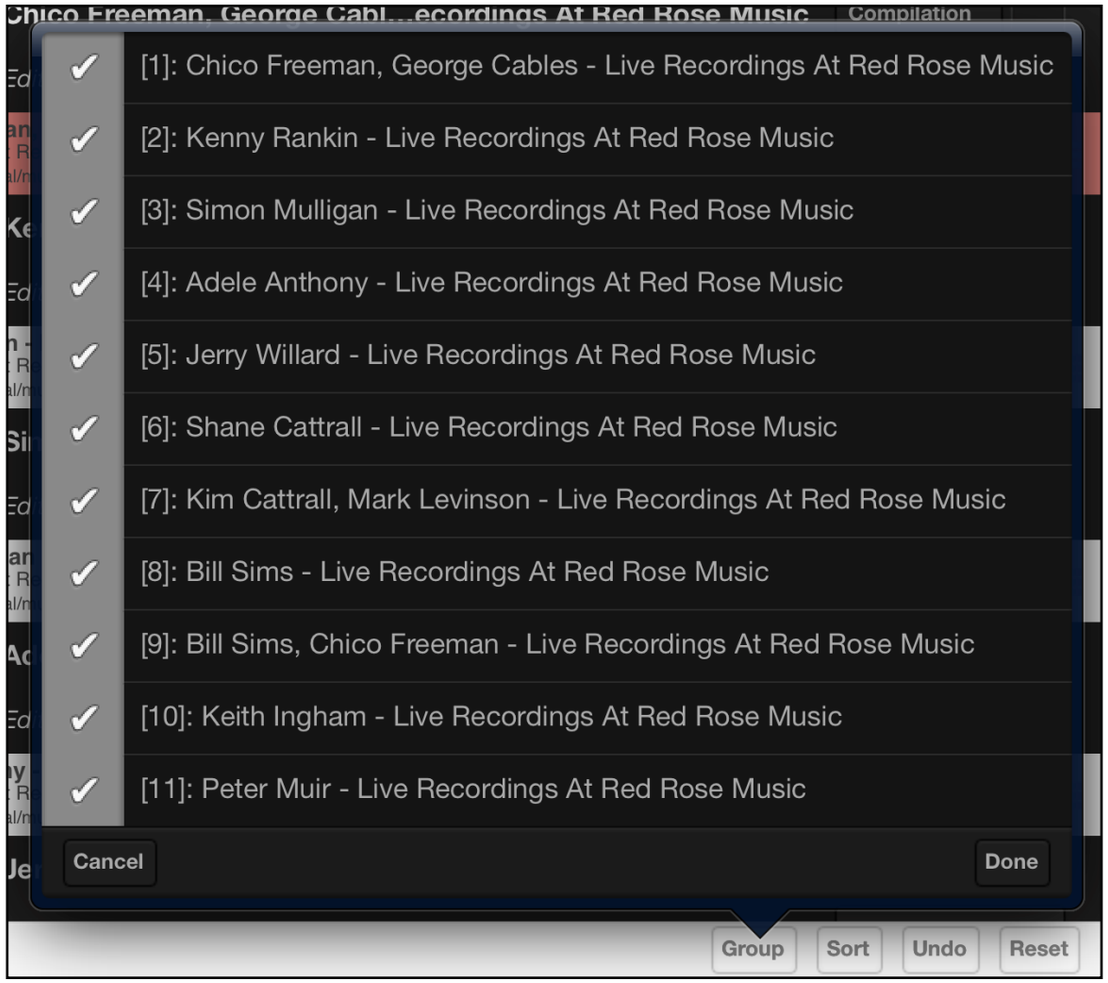
This opens the tag editor:

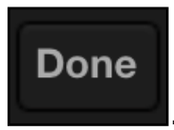


We see that there is a separate entry for each track. This is because the Artist tags differ between the tracks - a clear candidate for a Compilation tagging. For this tap on Group at the bottom:



And select „Group albums by directory“. This opens this window:

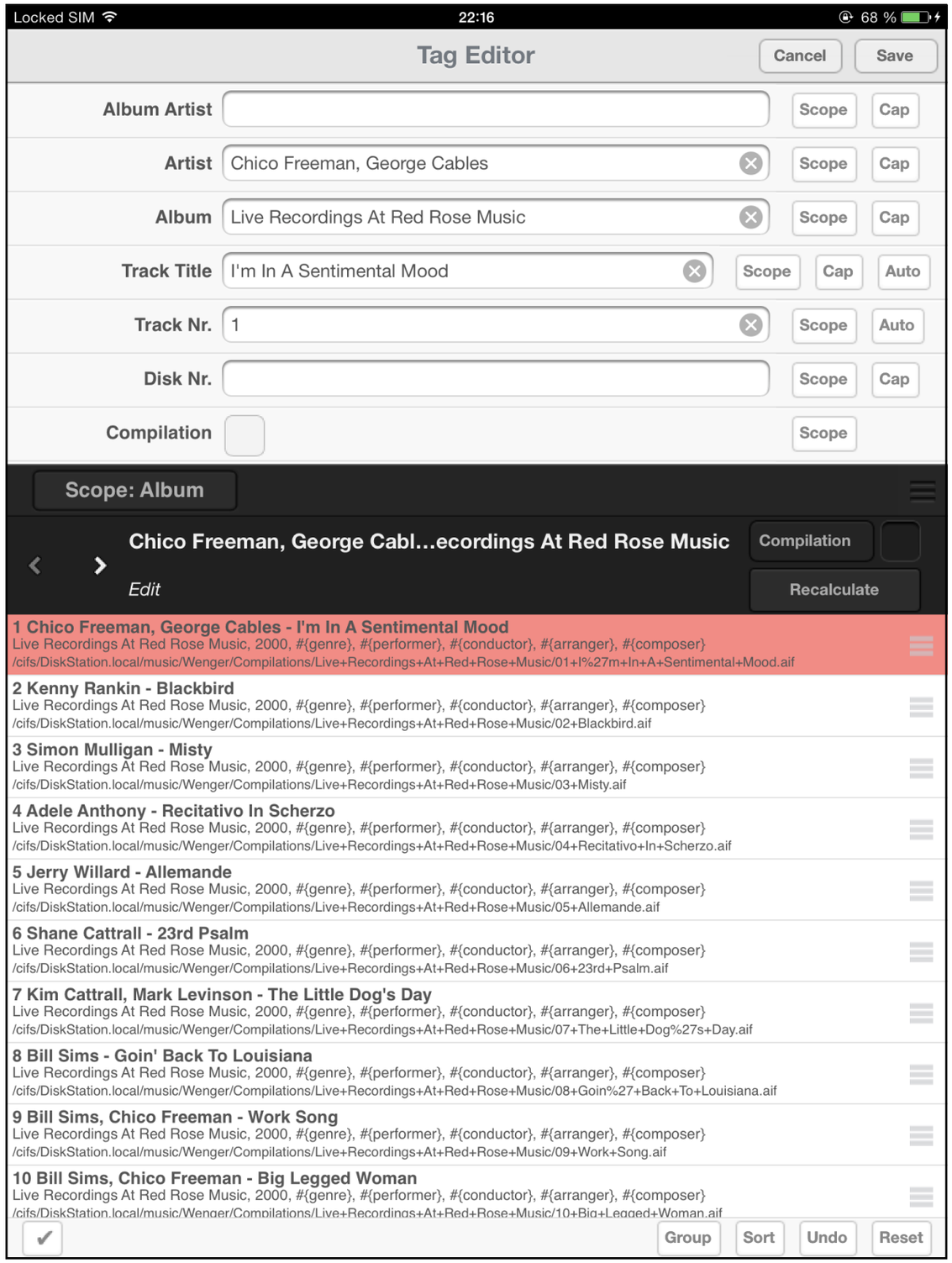


Here we can select which ones of the separate tracks we would like to get into the common group. In our example we need all of them, so we do not change anything, we just tap on 

.

This causes the following display (a

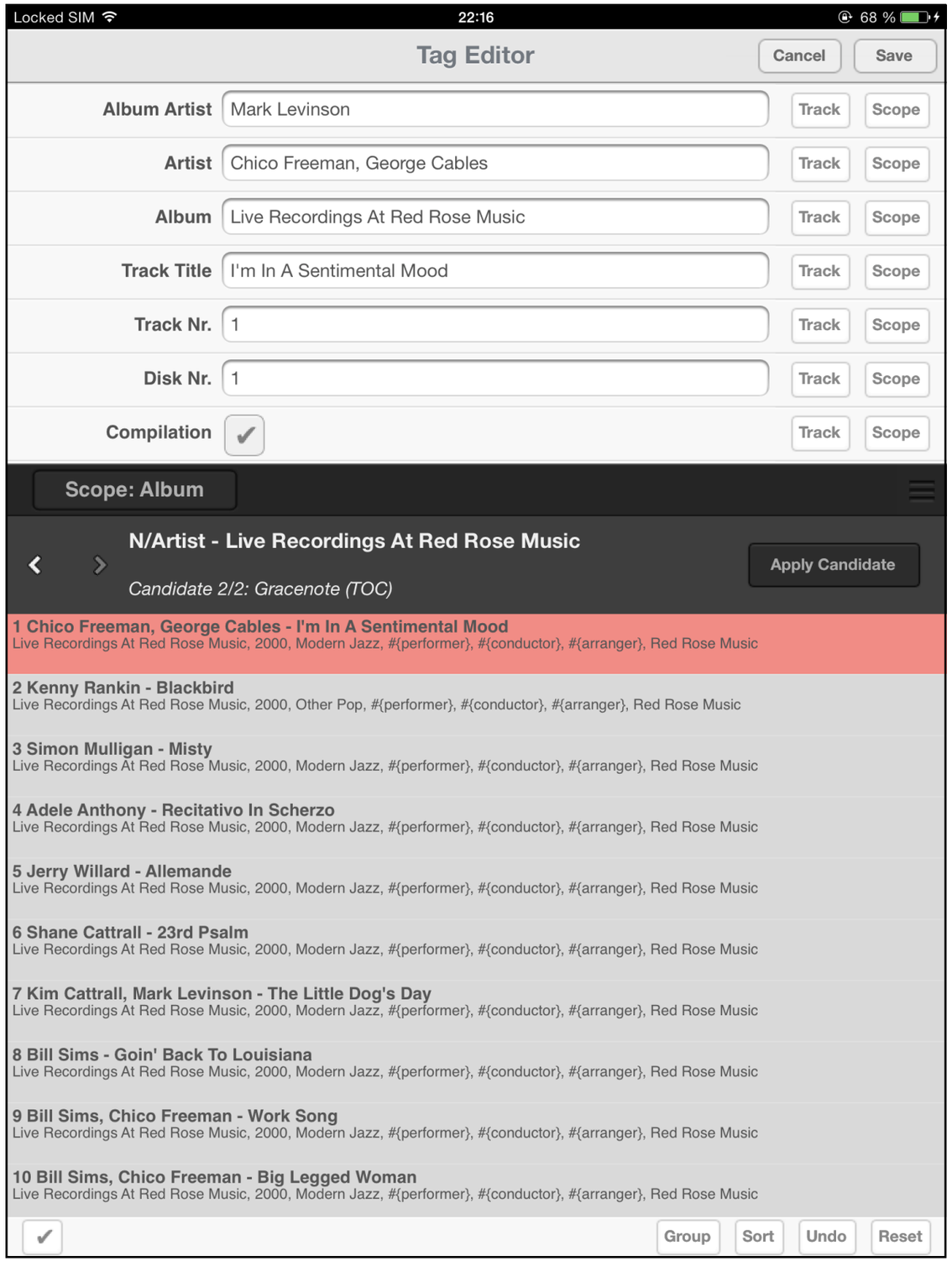
may be necessary to get all the tracks in the proper sequence):

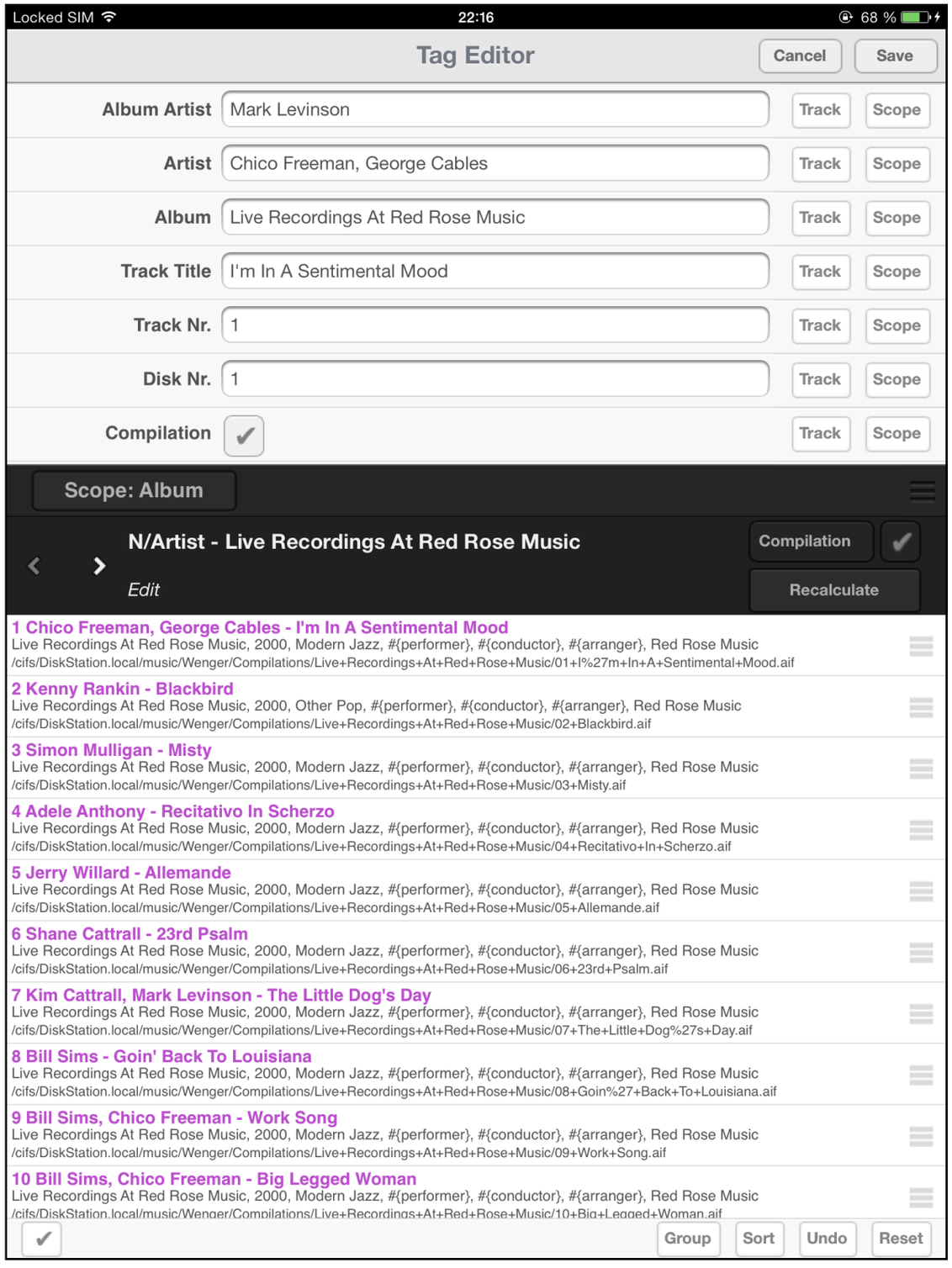


We now have all the tracks in one group and can check for candidates from Gracenote by tapping on Recalculate

The album is found based on the TOC as seen on the right. As we can see, the candidate has set the Compilation flag (as expected) and the Album Artist tag is filled in with Mark Levinson.

So we tap on Apply Candidate to get the candidate into the Edit buffer.



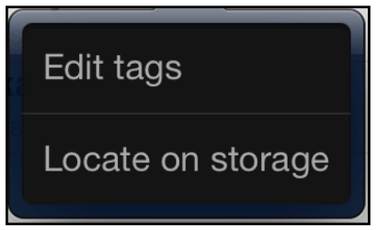


Candidate applied and viewed in Edit buffer, ready to be saved.

Some more hints regarding tagging

1.) In the middle black bar it is easy to navigate between the Edit window and the last candidate displayed with a two finger swipe to the left (candidate) or to the right (Edit window). This simplifies the comparison between the edit buffer and a particular candidate. A one finger swipe scrolls through the candidates (like tapping on the arrows).

2.) Tapping on the middle black bar anywhere outside of a pad makes the window associated with the black bar to disappear / reappear. This is useful if there are several separate windows cluttering the display.

3.) Untagged files can be found via the [No Artist] or [No Album] entries in the Library, as described above.
It can also happen that an album shows only a single track when viewed in the Album display. If you know or suspect that the other tracks are to be there as well, tap on the Album name and hold the finger until the 

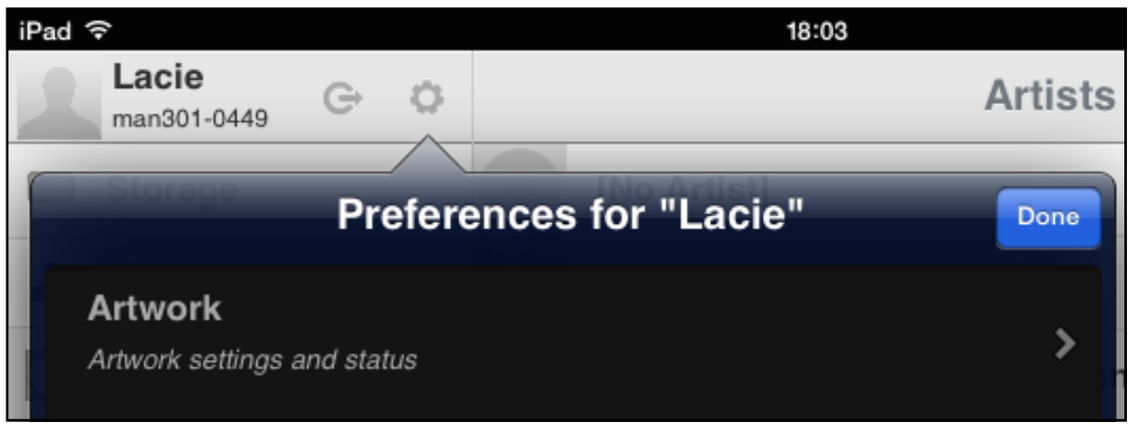
window appears and then select „Locate on storage“ to see all tracks of that album. Then tag the complete album as described above. This happens if the Album name and Artist name are tagged, but the track titles are empty or all have the same entry. Note, if you select the „Edit tags“ in that example then only that single track is shown in the tag editor. So always select „Locate on storage“ in these cases.

4.) If there are tracks of different albums in the same folder then it may make sense to first clean up the folders such that there is one folder per album. This makes tagging easier.

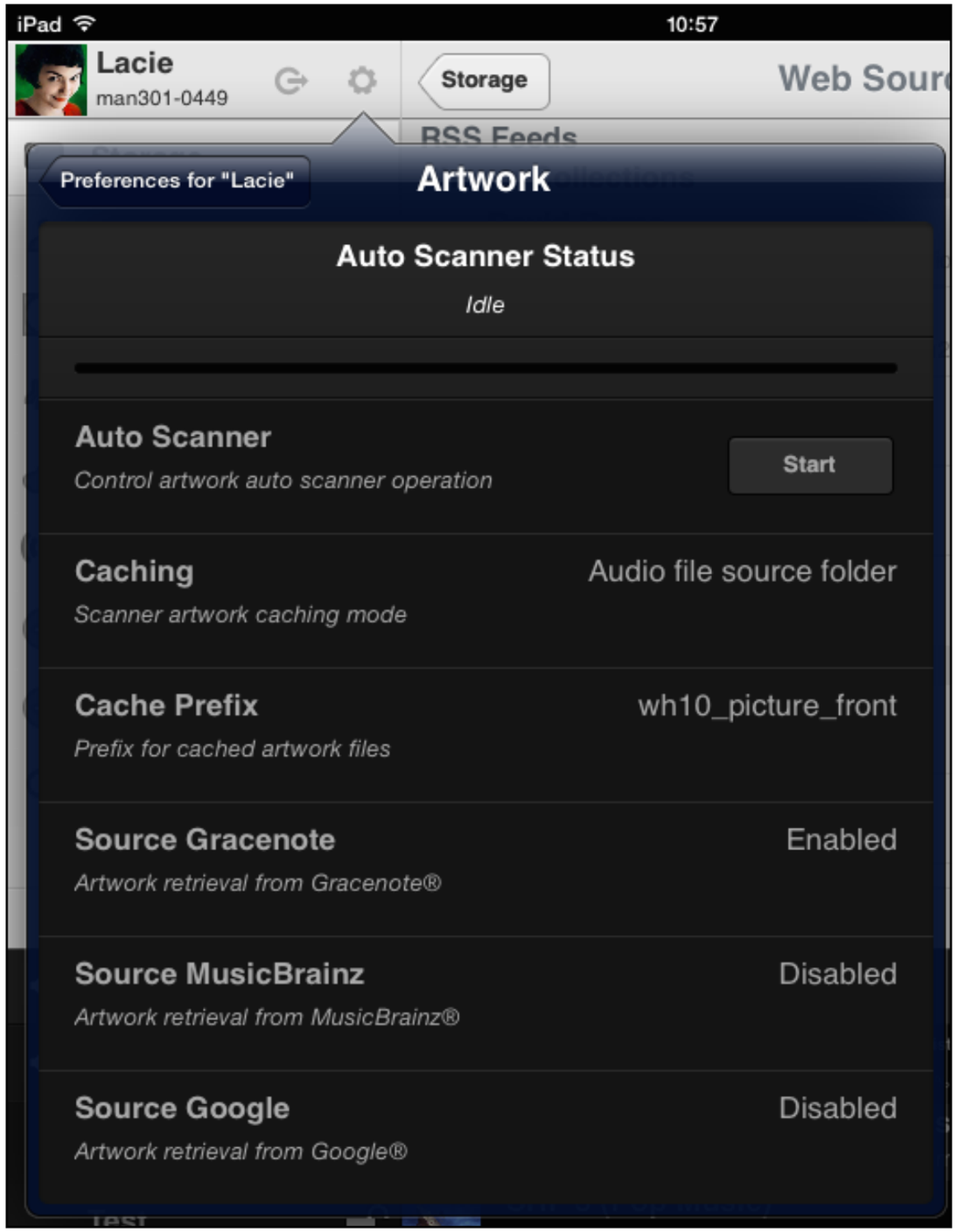
Some more hints to find artwork

The artwork search is not (yet) implemented in the tagging editor, but there are other means to find the proper artwork. Here is a summary:

1.) To scan the whole library for missing artwork and update where necessary (i.e. where no artwork file is in the library) start the Artwork Scanner from here:

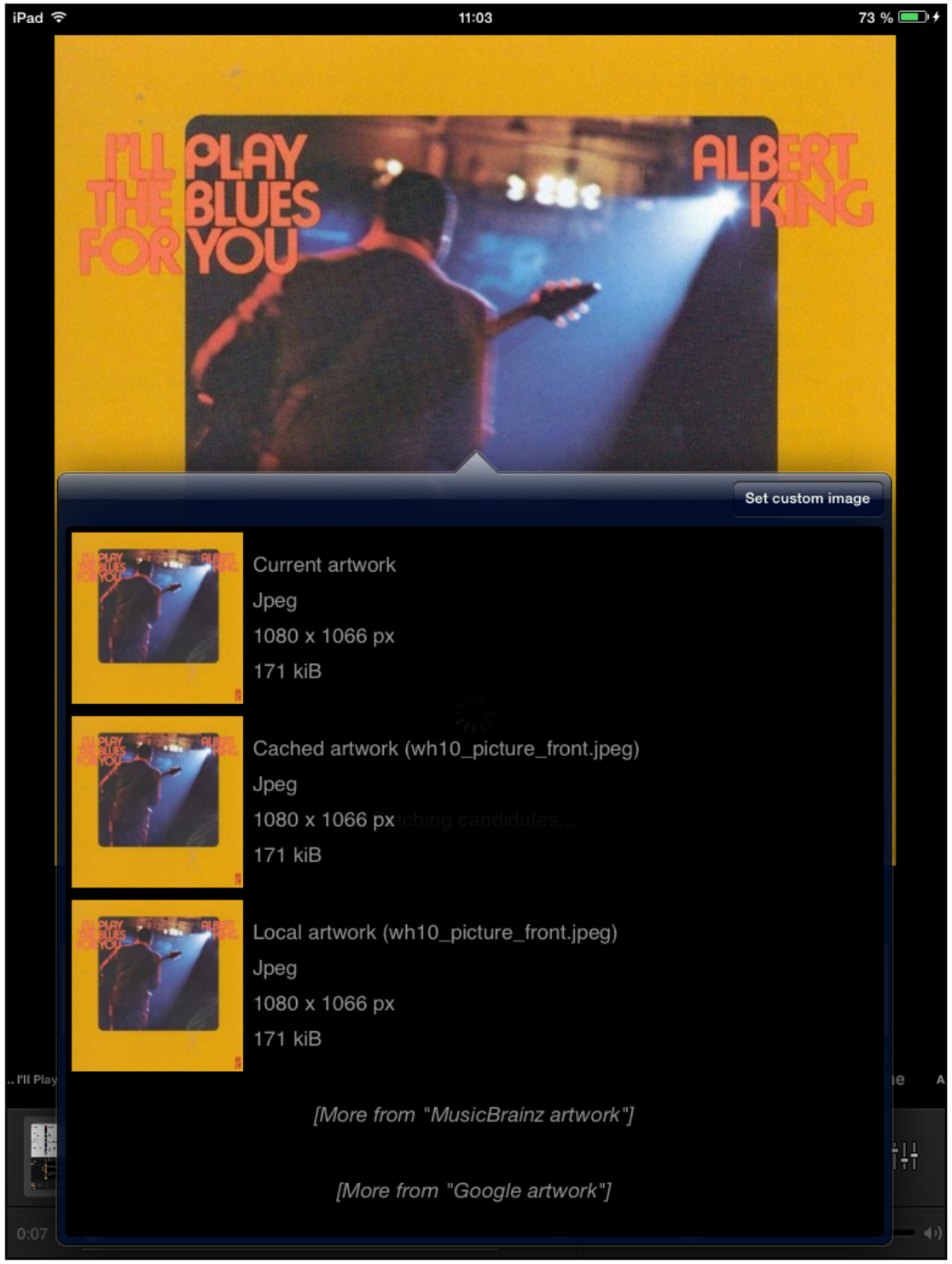


Tap on the Artwork entry to go to here:



where the scanning can be started. Details are given in Chapter 1 / Section 7.

2.) Almost everywhere where the artwork is visible one can tap and hold the finger on the artwork to get to this menu:

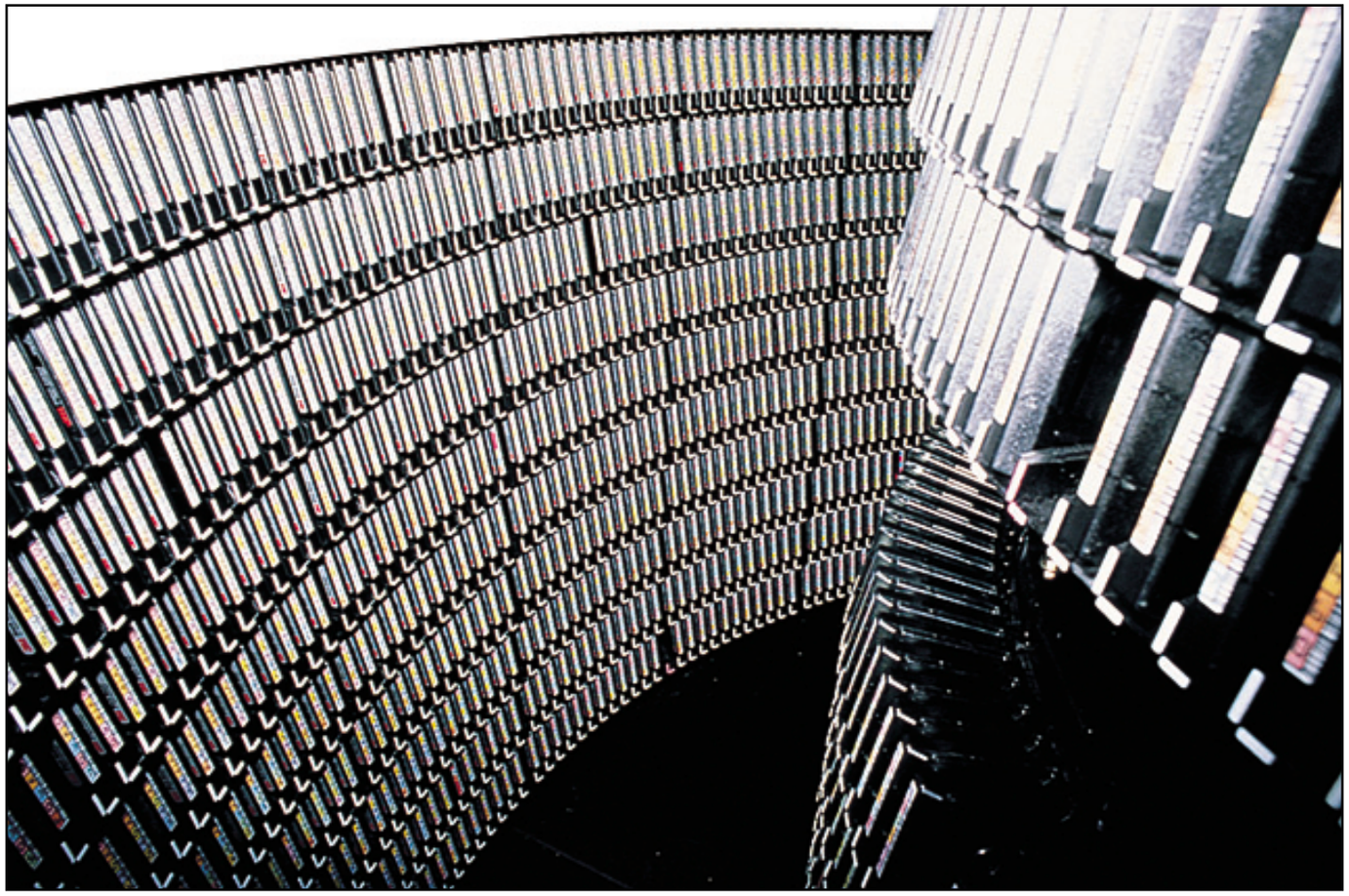


Here you can search for artwork on Gracenote or MusicBrainz or Google™. Or take a photo of the Album cover with the iPad camera and integrate that in the artwork file.

If all these options do not get the proper artwork you may browse the internet via Google™ by defining your own set of search criteria. This can help in a fairly big extent.

CHAPTER 5

Mass Storage



A few words on the selection of a Network Attached Storage (NAS) device or a USB hard drive.

Mass Storage

The storage device for holding the music files is a main component of the system and should be chosen with the utmost security for your precious music files in mind.

The MAN301 system supports various storage devices such as:

- NAS units (Network Attached Storage, connected via the network) which can be typical NASes as pictured above but can also be public folders on any computer on the network.
- DAS units (Direct Attached Storage) like USB or FireWire hard disks, USB memory sticks, Apple devices (iPad, iPhone, iPod)

A proper source for the audio files is mandatory, i.e. do not use storage devices which are connected wirelessly and use a pristine link between the MAN301 and the NAS, i.e. use **Gigabit** type routers and switches.

Note: *Maybe you consider to use a USB hard drive as the storage medium. The problem with simple USB drives is that they often use just a single hard disk and thus do not offer any inherent security for your audio data. In such a case it is strongly recommended to back up your USB drive on a regular basis, unless you do not mind to lose the audio files due to a hard disk crash.*

If you plan to build a decent music library we strongly suggest to use a NAS type mass storage solution.

Weiss Engineering can not be made responsible for data losses due to hard disk crashes or MAN301 software inadequacies.

With mass storage devices there are two security measures to be taken: The protection against hard disk crashes and the protection against damages caused by accidental erasing, theft, fire, water etc.

A NAS is the preferred device for a MAN301 system, as most NAS units have some security measures already built in.
NAS devices are available in several configurations, like e.g.:

1) With a single hard disk. This configuration should only be considered if a periodic backup of the data on the hard disk is made. We do not suggest to use such a solution. The useable capacity of such a NAS is the size of the disk.

2) Two hard disks. This configuration can be operated in the RAID1 mode which is highly recommended. (RAID = Redundant Array of Independent Disks). RAID1 means that one of the hard disks holds a copy of the other one, thus one of the disks can fail without the risk of loosing any data. The useable capacity of such a NAS is the size of a single disk.

3) Four or five hard disks. This configuration usually can be operated in the RAID5 mode, which means that any one of the hard disks can fail without the risk of loosing any data. The useable capacity of such a NAS is the size of all disks combined minus the size of one disk. E.g. a NAS with four 1TB disks offers a capacity of 3TB.

4) Six to ten hard disks. This configuration usually can be operated in the RAID6 mode, which means that any two of the hard disks can fail at the same time without the risk of loosing any data. The useable capacity of such a NAS is the size of all disks combined minus the size of two disks.

The RAID configurations above take care that it becomes very unlikely to loose any data because of hard disk crashes. For further safety (prevention from accidental erasing, theft, fire, water etc.) the data has to be copied to a different storage device which is put to a different place, preferably in a different house. Alternatively a cloud storage service can be used, where the data on the NAS is automatically uploaded to a storage service on the Internet. This happens in the background without user interaction. Such services cost a few Dollars per month with virtually unlimited storage capacity.

Another concern regarding NAS devices is the acoustic noise they generate. There are smaller NAS devices available which are very quiet and thus can be put in the listening room. Larger NAS units often have a fan which can be noisy. Such NAS units have to be stored outside the listening room.

To estimate the necessary size of the NAS these figures may help:

A 1TB (1 Terabyte = 1’000GByte = 1’000’000 MByte) harddisk holds approximately:

- number of albums in an uncompressed format (AIFF, WAV): more than 1000

- number of albums in a losslessly compressed format (FLAC, ALAC): more than 2000
- hours of music in 96/24 (stereo), losslessly compressed: approx. 480
- hours of music in 192/24 (stereo), losslessly compressed: approx. 240

With the MAN301 system one can always add another NAS if space runs out.
It is advisable to think about the data structure on the NAS before setting it up and copying music. The following factors may determine whether it is better to have several main folders or just a single „music" folder:

- number of persons using the same NAS
- music tastes between the persons
- size of the collection

If several persons access the NAS it may be advisable to organize the collection in several folders, e.g. one folder for each person or folders with different music styles. It is still possible for all persons to access all files via the MAN301, but with such a structure it is easy to exclude some folders from a persons library.
If the collection is large it may also be advisable to divide it into a few folders. This would allow to set up a few users in the MAN301, each accessing a part of the whole collection, like e.g. one user for the Classical section, one for Pop etc. This can make a large collection easier manageable.

A few of the most popular NAS manufacturers:

Western Digital
Synology
QNAP
D-Link
Acer
LaCie
Netgear
Buffalo
Seagate/Maxtor
Certon

Certon is offering a special NAS for High-End audio applications. Its name is Integrita. See http://integrita.de

Details on supported file protocols in the MAN301

Mount types:

A) NAS ('network-attached storage'); supported protocols are:

- **CIFS** (Common Internet File System, a.k.a. 'SMB'/'Samba'/'Microsoft-DS'), TCP-port 445

- **NFS** (Network File System), TCP-port 2049

- **AFP** (Apple Filing Protocol), TCP-port 548, (not yet supported by the MAN301)

B) DAS ('direct-attached storage'); attached via USB or FireWire, supported file systems are:

- **FAT** (File Allocation Table)

- **NTFS** (New Technology File System)

- **HFS+** (a.k.a. 'Mac OS Extended') **Note**: 'Journaling' should be disabled in order for the MAN301 to access with write permissions (Journaling can be changed in the 'programs / utilities / disk utilities' program). Also for HFS+ the music folder and all sub-folders have to be allowed to be accessed by ALL users with read / write rights.

- **iOS** based devices (Apple iPad, iPhone, iPod, etc.)
Hint: the iTunes music is normally located under <iTunes_Control/Music>, randomly scattered among a set of directories. Note: only mountable as 'read-only'.

C) Data CD/DVD; supported files systems (read-only) are:

- **ISO9660** (a.k.a. 'CDFS')

- **UDF** (Universal Disk Format)

CHAPTER 6

System Maintenance

Updating the MAN301 software, connecting other storage devices, a word about routers and switches, FAQ and more.

System Maintenance

Software updating

Both the Weiss MAN app and the MAN301 firmware can be updated by the user.

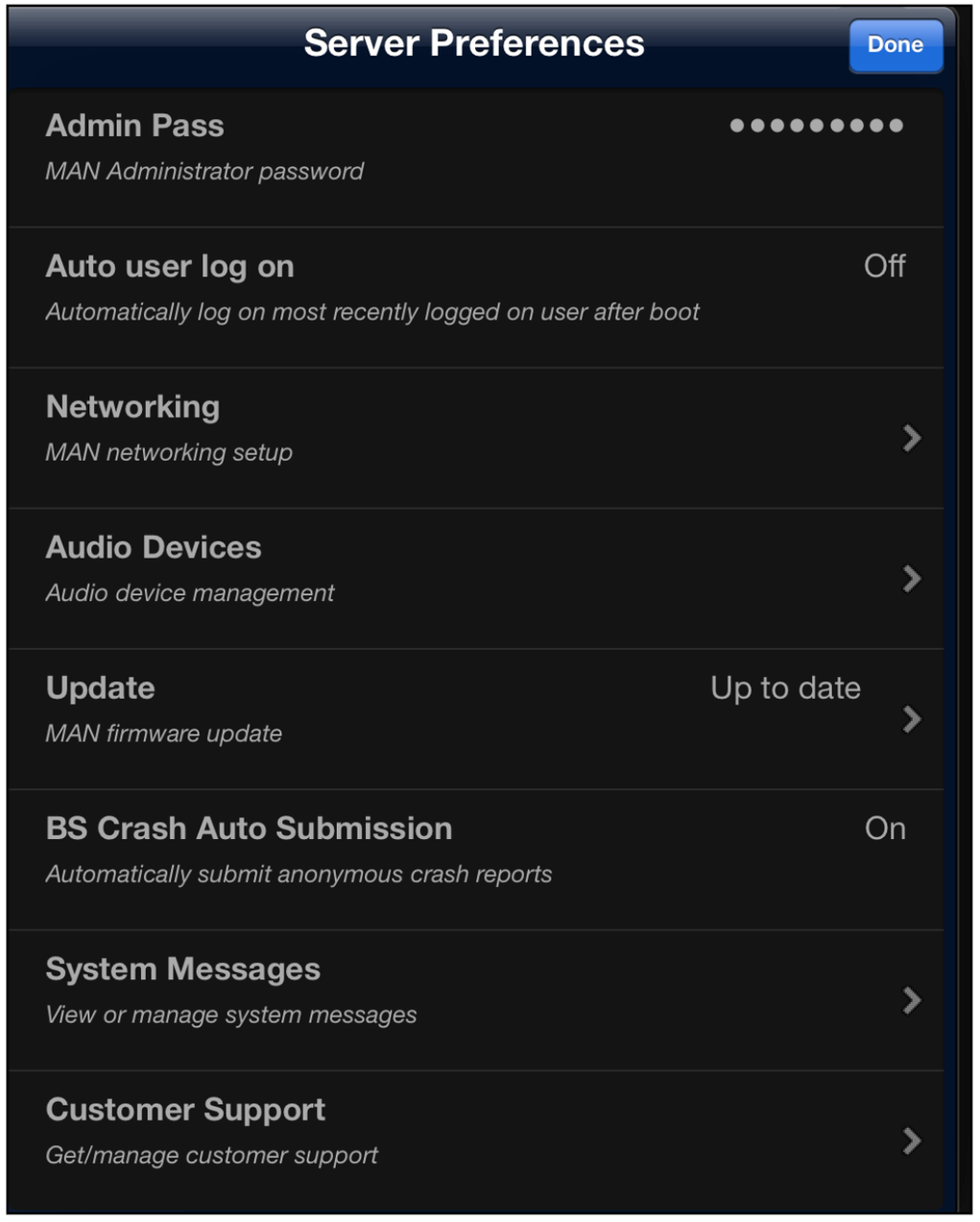
Note: If the Apple app store alerts you of a new Weiss MAN app, then only update it if you can also update the MAN301 base station, i.e. the MAN301 is connected to the Internet. It may be that with a new Weiss MAN app the MAN301 base station also requires to be updated!

The Weiss MAN app needs to be downloaded from the app store, Tap on this icon on your iPad:

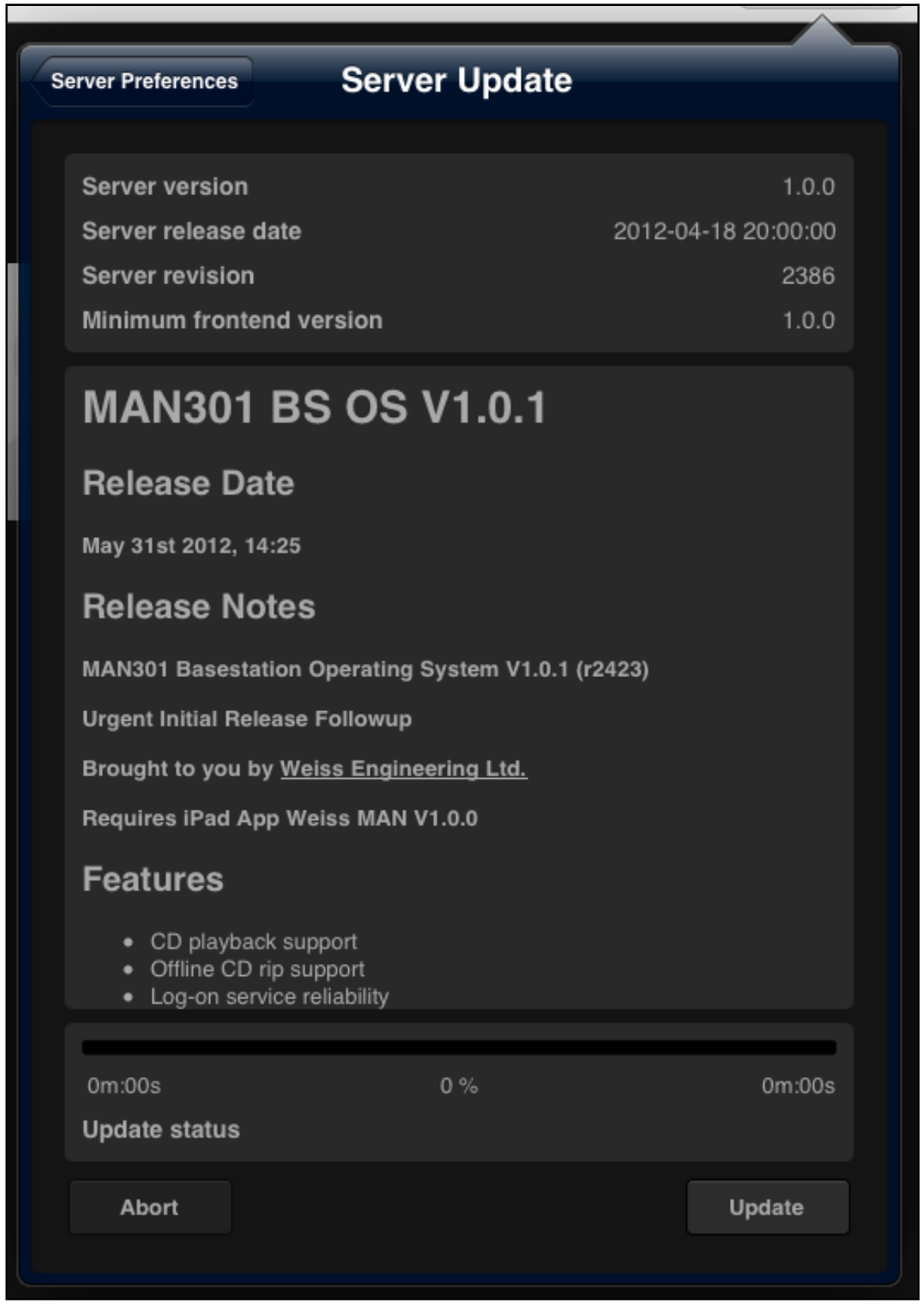
This connects to the Apple app store. Search for Weiss MAN to get the latest version of the app.

The MAN301 firmware can be updated via the Server Preferences page. If there is a new firmware available for download, the Preferences pad looks like this:

Tap on the Preferences pad and enter the administrator password (default is wh10admin). After that this display is shown:



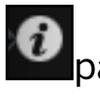
Tap on the „Update" pad to get here:

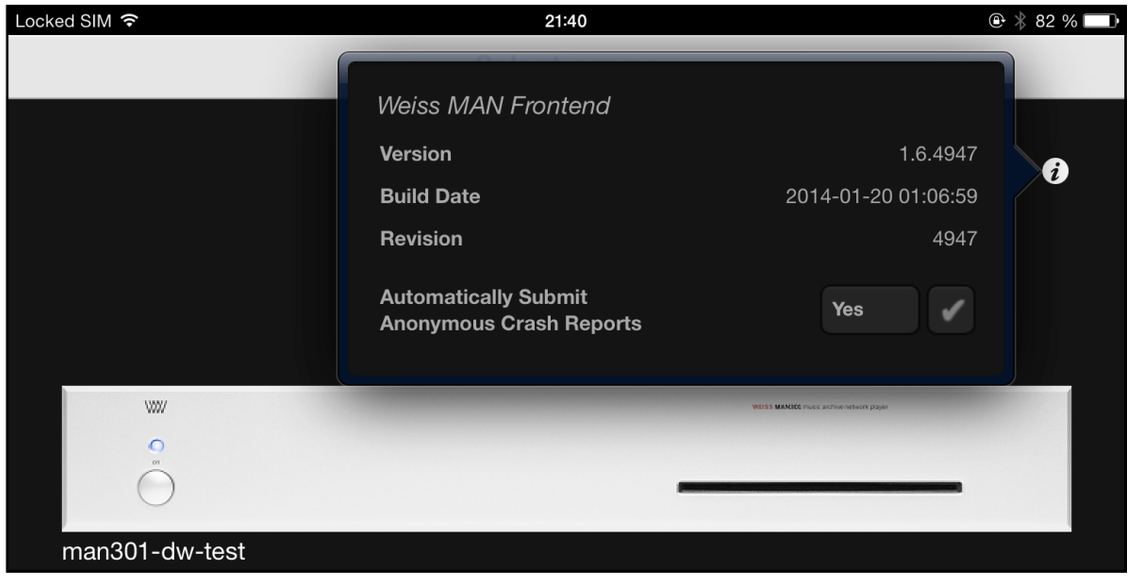


Before starting the update make sure that you are also able to update the Weiss MAN app on your iPad in case this has to be updated after the update of the MAN301 base station has been done.

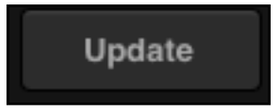
As a side note: The **Minimum frontend version** entry shows which version of the Weiss MAN app is required to control the new MAN301 firmware.You may then check the currently installed Weiss MAN app (Weiss MAN app = frontend) as follows:

Tap on

to get back on the server select page and tap on the  pad :



Now start the download of the MAN301 firmware via the

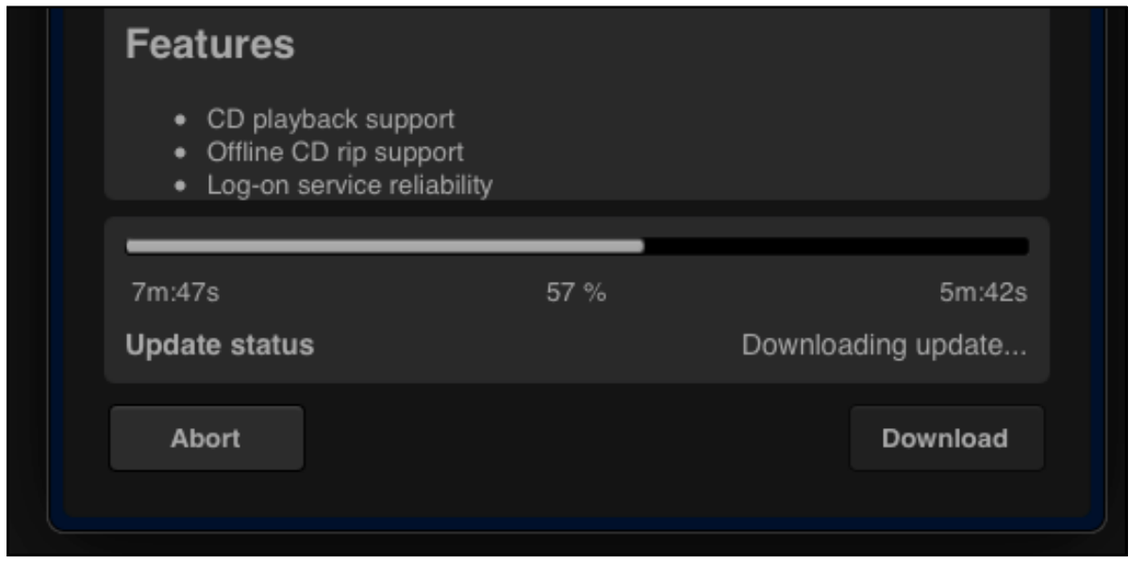


pad. You may start that even if the Weiss MAN app is not at the latest version. You always can update the Weiss MAN app after the update of the MAN301 base station.

Note, the download may take quite long depending on the speed of your internet link. The MAN301 firmware size is several 100 MByte.

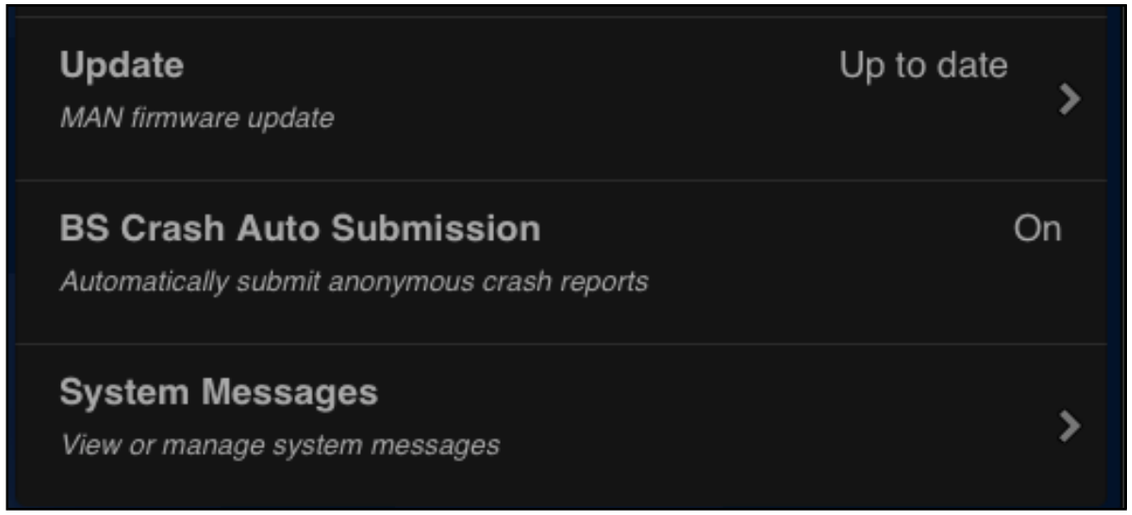
All your library entries, playlists and user accounts will remain intact.

The download progress is shown with a progress bar:



The bar may move from the left to the right more than once. After updating, extracting etc. the MAN301 will reboot. Just wait until it has finished.

After rebooting you can check again the Server Preferences, it will show that the firmware is up to date:



A word on routers and switches

Most of the configurations mentioned in Chapter 1 / Section 2 use a Router device. This device can fulfill many tasks, some of them can be:
- routes the Ethernet data between sources and destinations as required
- assigns IP addresses (network addresses) to the various devices connected to the network
- connects to a wireless network (WiFi) in the case of a WiFi router
- connects to a modem device to gain access to the Internet
- establishes a Firewall to protect from intruders

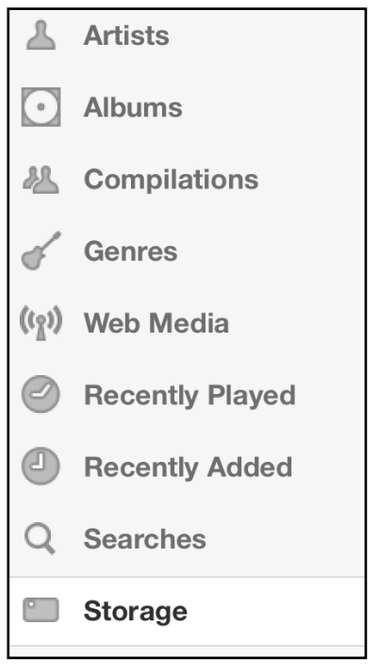
A Switch device looks similar to a Router, but has a very limited functionality in that it simply acts as an Ethernet port „extender“ in order to be able to connect additional devices to the network.

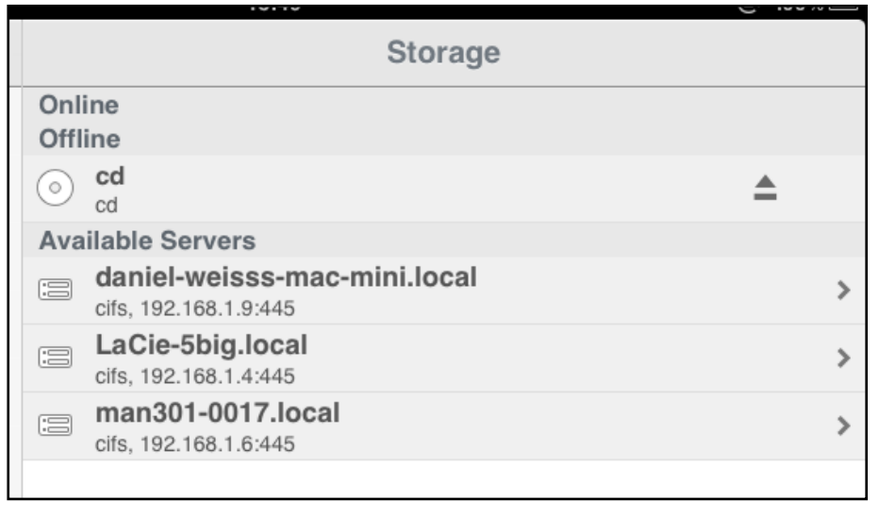
The performance of a setup in terms of data throughput, latency etc. mainly depends on the NAS and the Router / Switches used.

It is **highly recommended** to use devices (Router, Switch (if any), NAS) with Gigabit ports. Sometimes also denoted 1000M ports, as compared to the much slower 100M or 10M ports. Do not use devices which sport 10M only, those are too slow for the purpose of listening to high resolution music. A 100M port may work in most cases, but the processors in those devices may not be able to sustain the necessary data rate in worst case situations (lots of network traffic, WiFi traffic). This then can result in interrupted music playback.

Frequently Asked Questions

Q1: A Album is stuck in the Album slot, how can I remove it?
A1: Navigate to the Storage menu:





and tap on the pad to release the Album. If this does not work then log off the user and switch off the MAN301 unit. If the unit‘s green LED does not stop flashing then press on the power switch for a few seconds until the LED goes off. Now power up the MAN301 again and wait until it has booted and shows up on the iPad. This may take several minutes under these circumstances, just be patient. Once it is about to boot successfully, the Album will be ejected.

Q2: I can’t log onto the server (the MAN301 unit), it says „could not connect to logon service”.

A2: On the iPad WiFi setup page navigate into the network the iPad is connected to and tap on „forget this network”. After that reconnect the iPad to that network again. (Note you may need to know the password for that network to be able to login again).

If this does not help switch off the iPad completely (power down) and then switch it on again and try again to connect.

If this does not help try rebooting the MAN301. Allow for some time (one to two minutes) to boot the MAN301.

Q3: I have forgotten the password of my account.

A3: You can change the password of any user via the administrator password by tapping on the user avatar for 2 seconds or so and then select the „change password" menu. There you enter the administrator password instead of the old user password and enter the new password as required. The default administrator password (if it has not been changed) is wh10admin.

Contact us if you have changed and forgotten the administrator password (email to weiss@weiss.ch).

Q4: I connect my Medea D/A Converter to the MAN301 via Firewire but it does not seem to work correctly.

A4: Make sure to have the Medea Firewire interface software updated to the latest version. Done via the Weiss Firewire I/O window from a MAC or Windows computer.

Q5: I experience occasional interrupts when playing music.

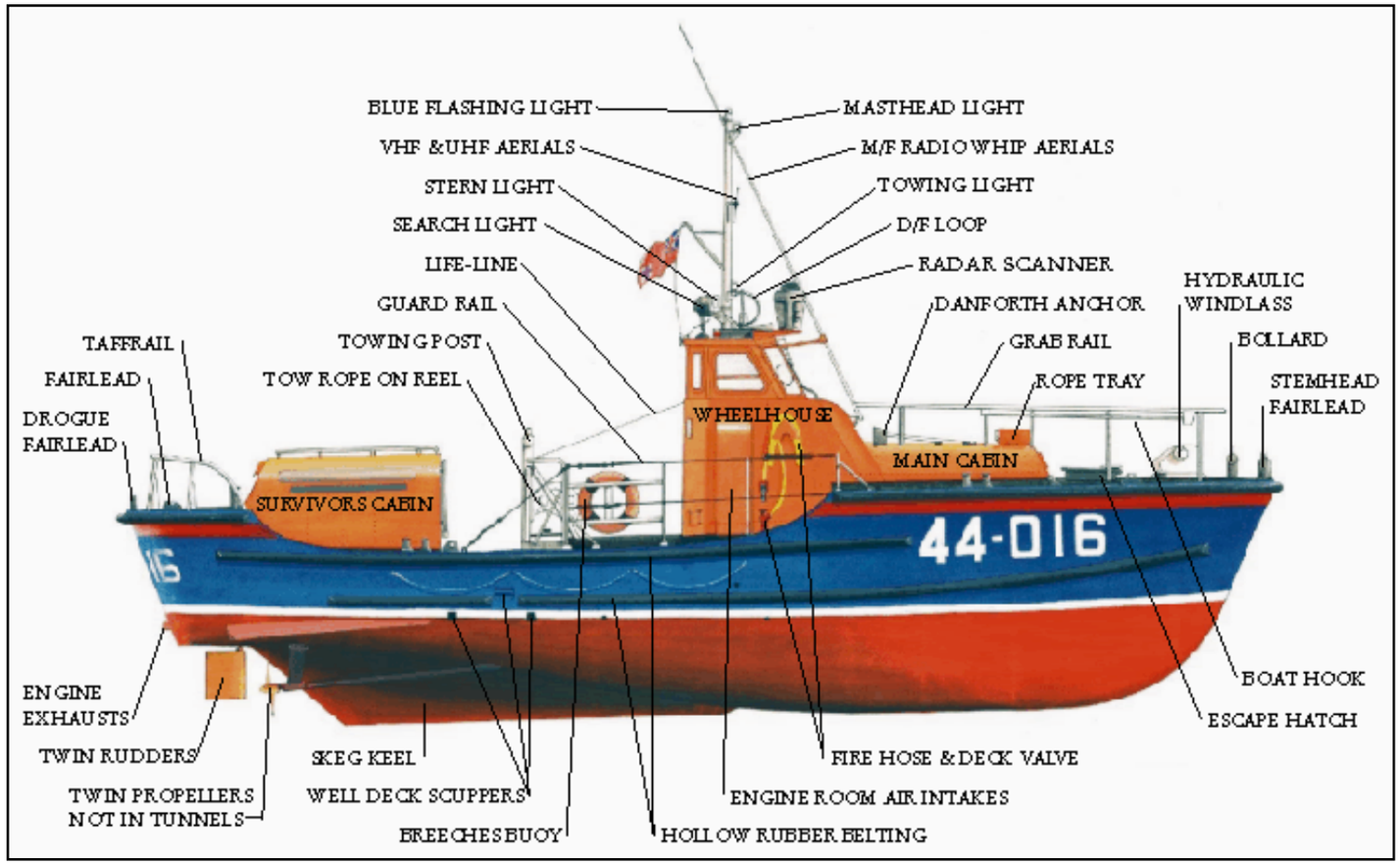
A5: Make sure to use Gigabit (1000M) devices for NAS, Router, Switch. Update the firmware of the NAS, Router, Switch if available.

Q6: If I switch off the iPad when using the MAN301, what happens?

A6: If the iPad is put into standby mode (switch in the upper right of the iPad) then the connection to the MAN301 is maintained for a maximum of 10 minutes. After 10 minutes the connection to the MAN301 is closed. If switching off the iPad completely the connection to the MAN301 is closed immediately. In all cases the MAN301 continues to play.
After re-powering the iPad and entering the Weiss MAN app, the MAN301 to connect to has to be selected. After that the currently logged in user is automatically selected and its library view displayed.

CHAPTER 7

Technical Data, Articles



This chapter informs on technical data of the MAN301 and also gives in depth information on various topics

MAN301 Technical Data

Digital Inputs

(1) XLR connector, (1) RCA connector, (1) Toslink connector (optical), (2) Firewire 800 connectors. All inputs accept professional or consumer standard, i.e. accept AES/EBU or S/PDIF signals.

Supported sampling frequencies are 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4 kHz or 192 kHz on any of the inputs, except Toslink which handles 96 kHz maximum. The dual wire mode can be activated for sampling rates of 176.4 kHz or 192 kHz exclusively. Maximum input wordlength is 24 bit.

Digital Outputs

(1) XLR connector, (1) RCA connector, (2) Firewire connectors, (1) USB connector. Professional channel status data on the XLR and RCA outputs. The dual wire mode can be activated for sampling rates of 176.4 kHz or 192 kHz exclusively.

Main Analog Outputs

(2) XLR connectors (hot on pin 2), DC coupled, short circuit proof output circuitry, output impedance 44 Ω. (2) RCA connectors, DC coupled, short circuit proof output circuitry, output impedance 22 Ω. The output level is selectable via the iPad; 4 settings are provided as shown below.

XLR Output

7.5 Vrms, +19.7 dBu, with a 0 dBFS sinewave input
2.3 Vrms, +9.7 dBu, with a 0 dBFS sinewave input
0.75 Vrms, -0.3 dBu, with a 0 dBFS sinewave input
0.23 Vrms, -10.3 dBu, with a 0 dBFS sinewave input
These levels are achieved with all faders / gain trims set to maximum level.

RCA Output

3.75 Vrms, +13.7dBu, with a 0 dBFS sinewave input
1.15 Vrms, +3.7dBu, with a 0 dBFS sinewave input
0.375 Vrms, -6.3dBu, with a 0 dBFS sinewave input
0.115 Vrms, -16.3dBu, with a 0 dBFS sinewave input
These levels are achieved with all faders / gain trims set to maximum level.

Synchronization

Synchronized via the input signal, the internal oscillator or via a wordclock signal (TTL level/75 Ω) on the BNC input. Sampling frequencies: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz and

192 kHz. Wordclock output (TTL level/75 Ω) on BNC for synchronization of other equipment.

Power

Mains voltage: 100–240 V, the mains voltage is automatically switched.
Fuse rating: 4 A slow blow for all mains voltages
Power consumption: 50 W max.
Power consumption in standby: 0.5 W max.

Measurements (internal DAC option installed)

The measurements below have been taken at the following conditions (unless noted otherwise): 1 kHz measurement frequency, maximum selectable output level, 192kHz sampling frequency (Fs), 22kHz measurement bandwidth, unweighted, 0 dBr equals the output level at 0 dBFS input.

Frequency Response

Fs = 44.1 kHz, Filter A, 0Hz-20kHz: within +- 0.25dB
Fs = 44.1 kHz, Filter B, 0Hz-20kHz: within +- 1.3dB
Fs = 88.2 kHz, Filter A, 0Hz-20kHz: within +- 0.25dB
Fs = 88.2 kHz, Filter A, 0Hz-40kHz: within +- 0.8dB
Fs = 88.2 kHz, Filter B, 0Hz-20kHz: within +- 0.25dB
Fs = 88.2 kHz, Filter B, 0Hz-40kHz: within +- 1.5dB
Fs = 176.4 kHz, Filter A, 0Hz-20kHz: within +- 0.25dB
Fs = 176.4 kHz, Filter A, 0Hz-40kHz: within +- 0.8dB
Fs = 176.4 kHz, Filter A, 0Hz-80kHz: within +- 2.5dB
Fs = 176.4 kHz, Filter B, 0Hz-20kHz: within +- 0.25dB
Fs = 176.4 kHz, Filter B, 0Hz-40kHz: within +- 0.8dB
Fs = 176.4 kHz, Filter B, 0Hz-80kHz: within +- 3.5dB

Total Harmonic Distortion plus Noise (THD+N)

–116 dBr (0.00016 %) at –3 dBFS input level
–125 dBr (0.000056 %) at –40 dBFS input level
–125 dBr (0.000056 %) at –70 dBFS input level

Linearity

At 0 dBFS to –120 dBFS input level: less than ffl0.4 dB deviation from ideal

Spurious components (including harmonics)

At 0 dBFS input level, maximum output level, 1 kHz, all components at less than –120 dBr
At 0 dBFS input level, maximum output level, 4 kHz, all components at less than –115 dBr

Crosstalk

Better than 120 dB, 20 Hz–20 kHz

Interchannel Phase Response

+- 0.05° 20 Hz–20 kHz
+- 0.30° 20 Hz–80 kHz

Supported file formats for playback

- wav 44.1-192 kHz, 8-32 bit, float, double
- aiff 44.1-192 kHz, 8-32 bit, float, double
- m4a/alac 44.1-192 kHz, 16-32 bit
- m4a/aac 44.1-96 kHz
- flac 44.1-192 kHz, 16-24 bit (32 not tested/unknown)
- ogg/vorbis
- wma 44.1-48 kHz
- wv (wavepack) 44.1-192 kHz, 8-32 bit
- dsf (dsd format) with 2.8224 Mbit/s or 5.6448 Mbit/s data rate
- dsdiff (dsd format) with 2.8224 Mbit/s or 5.6448 Mbit/s data rate

White paper on digital level control

Digital Level Control – done the right way

In high-end HiFi circles a level control done in the digital domain is often viewed as being inferior to one operating in the analog domain. Let's look on how a digital level control works and why it can be an excellent solution if it is properly implemented.

A level control is a multiplication of the audio signal with a constant, the „gain factor". The gain factor usually is in the range of zero (signal fully off) to one (signal untouched). A factor of 0.5 then means that the audio signal is attenuated to half of its amplitude.

What exactly happens when we multiply two numbers? If we e.g. multiply a 2 digit and a 3 digit number, the resulting number can be up to 5 digits long (the sum 2 plus 3). As an example: 30 times 500 equals 15000. 2 digits times 3 digits yields a 5 digit result.

In digital audio, the numbers are represented in the binary system, not the decimal system. A decimal number consists of digits 0 through 9, a binary number of digits 0 and 1. So a binary number may look like this: 1011 0011 0101 1101. This is a 16 digit or 16 bit binary number, the grouping into 4 bit chunks is for better readability. The audio samples on a Album are represented with such a binary number system with each sample value represented by 16 bits.

Now let's assume we have a 8 bit gain factor for a level control. If we apply that to a signal coming off a Album we multiply a 8 bit gain factor with a 16 bit sample value. The result is up to 24 bits long (the sum of the wordlengths of the two factors). An example:
0100 1001 x 1001 0110 0111 1011 = 0010 1010 1110 1001 0001 0011
The question now is what do we do with the 24 bit long result? The digital to analog converter which converts the samples after the level control may only be capable to handle 16 bit wide samples. Thus what should we do with the excessive 8 bits? The simplest solution is to truncate the 24 sample to 16 bits, i.e. to cut off the 8 less significant bits.

The truncated 24 bit result above then would look like this: 0010 1010 1110 1001 i.e. the first 16 bits of the 24 bit result above.
The remaining bits (0001 0011) are discarded. If these bits are

discarded a error is introduced. This error is called a quantization error, because the 24 bit result is re- quantized to 16 bits.

Unfortunately the quantization error is part of the audio signal – and if we take that part away from the signal, the signal undergoes some distortion, the so called quantization distortion.

The sound example at the link below shows how such a distortion sounds. In this music example a 16 bit signal is truncated to 8 bits. 8 bits in order to clearly show the effect. Notice how the noise (distortion) is modulated by the music signal.
http://www.weiss-highend.ch/computerplayback/nodither.mp3
This is how a badly implemented digital level control works....

Fortunately there is a better way to handle the re-quantizing. One solution would be to use a D/A converter with a higher word-length, e.g. a 24 bit converter, to accommodate for the 24 bit samples coming out of the level control. This of course would already help a lot, but there is another technique: dithering.

The idea about dithering is to de-correlate the quantization error from the audio signal. As we have seen in the example above, the quantization error depends on the audio signal (i.e. it is correlated with the audio signal). On the other hand, if dither noise is added to the 24 bit sample after the level control and before the re-quantization to 16 bits, the quantization error can be fully decorrelated from the signal. This means instead of distortion there is noise. The music is undistorted.

The audio example at the link below is again a 16 bit signal quantized to 8 bits, but with dither noise added. A much more pleasant experience. Notice how the noise stays untouched by the music, i.e. there is no noise modulation.
http://www.weiss-highend.ch/computerplayback/flatdither.mp3

Dithering does not stop here. More elaborate dithering schemes shape the noise such that it is mainly present at higher frequencies where the human ear is less sensitive. This means that the audible noise is much lower. The link below is again the 16 bit source quantized to 8 bits with noise-shaped dithering. Probably hard to believe that this is only an 8 bit system! Note that the music is not distorted at all, despite the 8 bit resolution. Remember, a 16 bit system has 65,536 quantization steps while a 8 bit system has only 256 quantization steps – a huge difference. And still, the properly dithered 8 bit system sounds great.
http://www.weiss-highend.ch/computerplayback/shapeddither.mp3

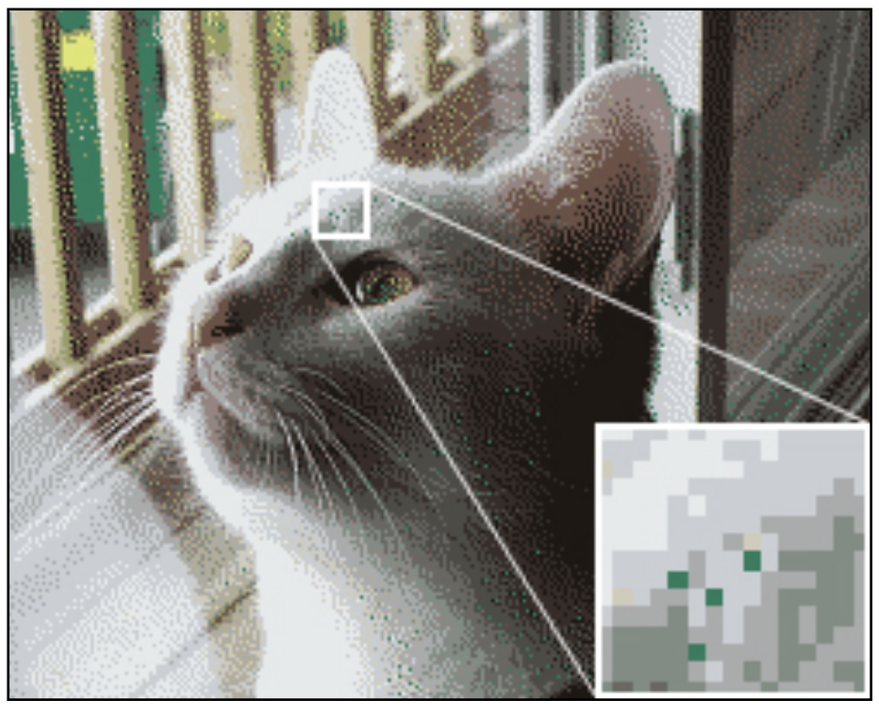
This is what a properly dithered level control is capable to do. You have heard the 8 bit version, imagine that with today's 24 bit converters – no question that a level control with a 24 bit word-length easily rivals the best analog level controls. By the way, 24 bits means 16,777,216 quantization steps.

The last example below toggles the noise-shaping dither on and off to give a good contrast between dither / no dither versions.

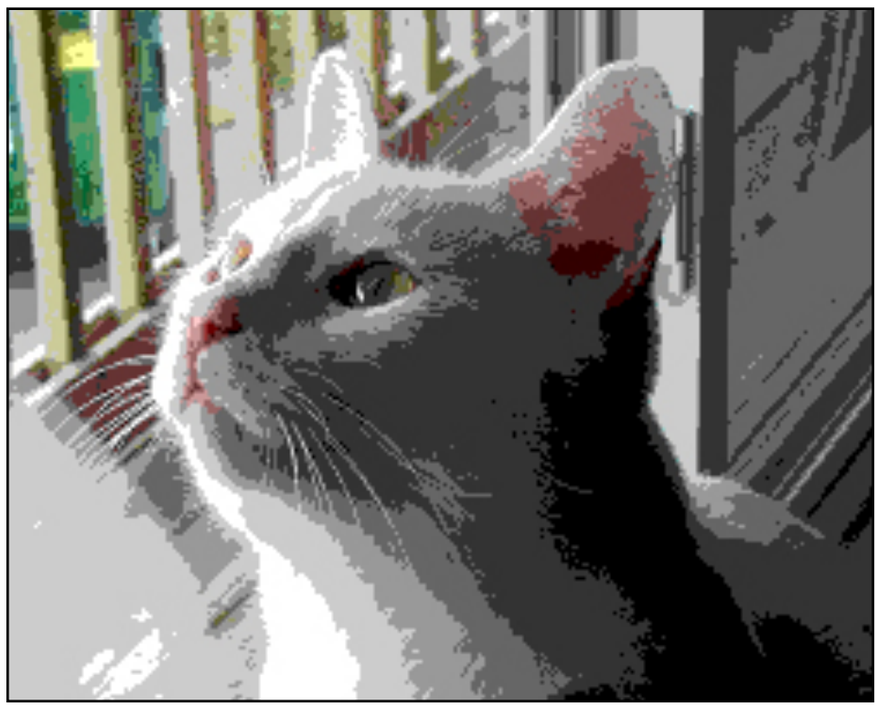
http://www.weiss-highend.ch/computerplayback/togglingdither.mp3

Dithering is used in many disciplines. The pictures below show dithering applied when quantizing picture data.

Original:



Quantized w/o dithering:



Quantized with dithering:

White paper on DSD

Some information on the DSD format – properties, caveats, uses

The DSD (Direct Stream Digital) Audio format is used with the well-known SACD disc. The SACD has some form of copy protection implemented, thus an SACD is not easily rip-able into a computer file.

Quantizing

DSD is a digital signal which uses a 1 bit quantization of the audio signal at a sampling rate of 64 times the sampling rate of a Album (64 x 44100 = 2.8224 MHz). The Album format uses a 16 Bit quantization at a 44.1 kHz sampling rate, thus the data rate of a DSD signal is 4 times the data rate of a Album, which gives the SACD the potential to represent the audio signal more precisely.

The noise floor of a signal at 44.1kHz /16 Bit is about 16 x 6 = 96dB below full scale. With the DSD signal the noise floor is 1 x 6dB below full scale, so obviously there have to be taken some measures to get down the noise floor, else a DSD recording would be very noisy.

Here the high sampling rate of DSD comes in handy. I.e. with special filtering techniques (noise-shaping) it is possible to move the noise in the audio band (0...20kHz) out to higher frequencies above 20kHz. Thus the noise floor in the audio band can be brought down to very low levels (well below the 16 Bit noise floor of a Album) at the cost that the noise is at a fairly high level at frequencies above 20kHz.

Filtering

This high level / high frequency noise has to be suppressed before the signal hits the amplifier and speakers, in order to avoid amplifier misbehaving and/or speaker blow-up. A low pass filter is used to suppress the noise. In a native DSD D/A Converter this low pass filter has to be implemented in the analog domain which can be problematic because the non-linear phase characteristics of such a filter. Alternatively this filter can be implemented in the digital domain where the DSD signal is converted to PCM (at e.g. 176.4 kHz / 24 Bit) and at the same time gets properly low pass filtered, e.g. with a linear phase filter which is easily achievable in the digital domain.

DSD uses

The DSD format initially was conceived for distribution and archiving. Later on it became more and more popular in music recording with its own set of problems as described below. DSD shows the state of the art of the 90ies. The 1 bit sigma-delta A/D and D/A converters were very popular at that time. Converter techniques have progressed though. Today the modern sigma-

delta converters are multi- bit designs with e.g. 6 bits instead of 1 bit. This for good reasons of course, the 1 bit technique has some inherent problems with dithering and idle tones. If the SACD was conceived today, it would use a 6 bit format.

Processing

If a recording made in DSD has to be processed, e.g. the loudness has to be adjusted or some equalizing is required, then the DSD signal has to be converted to PCM in order to be able to do the processing. In the PCM format the signal can be processed, i.e. “produced” as required in order to get a final version. In such a case it does not make sense to do a recording in DSD to start with. A PCM recording at e.g. 88.2kHz / 24 Bit would make much more sense. After the production process the file can always be converted to DSD if required.

What is better?

The discussion whether DSD is better than PCM is moot. DSD is another variant to store music, like PCM, MP3, magnetic tape, vinyl etc. All formats are fine as long as there are people preferring one over the other for whatever reasons. A matter of taste or practical reasons as with MP3 for instance.

The future

Technically speaking, PCM from like 88.2kHz /24 bit up, is definitively better than DSD. There are attempts to enhance DSD by rising the sampling rate from 2.8824 MHz to 5.6448 MHz or even 11.2896 MHz. Some problems of DSD may be reduced with such measures, but the 1 bit quantisation problem cannot be eliminated.

With the DSD downloads becoming more and more popular the DSD format is going to stay with us. A niche, but a growing one.

CHAPTER 8

Credits

The MAN301 has been brought to you by a great team:

Rolf Anderegg: base station software, audio controller software
Uli Franke: Weiss MAN iPad application, base station software
Samuel Groner: analogue hardware
Jakob Schiesser: mechanical design, PCB artwork, controller software
Daniel Weiss: digital hardware, manual
Barbara Elsener: manufacturing
Claude Gugolz: manufacturing, QC
Miriam Joos: manufacturing
Marcel Vogt: manufacturing, QC
Joschka Weiss: manufacturing, QC
Yves Marx of Clever & Son: iPad app concept and artwork

Contact:
Weiss Engineering Ltd.
Florastrasse 42
8610 Uster, Switzerland
Phone: +41 44 940 20 06
Fax: +41 44 940 22 14
Email: weiss@weiss.ch
Web: www.weiss-highend.com

CHAPTER 9

Software Revisions Information

```
ZSID    COM   10K | ZTRAN4  COM    4K
94 File(s), occupying 760K of 984K total capacity
130 directory entries and 992K bytes remain on A:
A>dir
A: CPMLDR   MAC : CPM3     SYS : DEFSB    LIB : LDRBIOS3 MAC : GENCPMNB DAT
A: SYSGENNB SUB : L80      COM : M80      COM : WM       HLP : WM       COM
A: SPEED    COM : FORMAT   COM : RMAC     COM : ASSIGN   SYS : DEVICE   COM
A: DUMP     COM : ED       COM : ERASE    COM : GET      COM : INITDIR  COM
A: DDTZ     COM : HIST     UTL : PATCH    COM : DDT      COM : BIOS3    MAC
A: LOAD     COM : ASM      COM : LDR      COM : PUT      COM : C        SUB
A: RENAME   COM : SAVE     COM : LINK     COM : SET      COM : SETDEF   COM
A: SHOW     COM : TRACE    UTL : TYPE     COM : XREF     COM : BNKBIOS3 SPR
A: CC       SUB : BOOT     COM : MCCL     SUB : BIOS3    SPR : BDOS3    SPR
A: COPYSYS  COM : DATE     COM : MCC      SUB : DIR      COM : GENCOM   COM
A: GENCPM   COM : HELP     COM : HELP     HLP : LIB      COM : HEXCOM   CPM
A: SID      COM : DO       COM : MC       SUB : PIP      COM : DEFSNB   LIB
A: R        COM : LIB80    COM : XFORMAT  COM : RESBDOS3 SPR : BNKBDOS3 SPR
A: SPLRTLB  REL : SCB      MAC : HDIR     COM : SPL      COM : ZTRAN4   COM
A: CREF80   COM : ZSID     COM : LU       COM : TIMER    COM : SYSCOPY  COM
A: SHOWSEC  COM : RSETSIMH COM : PROFILE  XXX : UNERA    MAC : UNERA    COM
A: DSKBOOT  COM : SYSGENB  SUB : DIF      COM : W        COM : BOOTGEN  COM
A: SUBMIT   COM : SPLERROR DAT : DPB      COM : GENCPMB  DAT : DD       COM
A: DEFSBO   LIB : DEFSB0   LIB : SYSGENB0 SUB : FM       ASM
SYSTEM FILE(S) EXIST
A>
```

Information on the various revisions of the MAN301 software, the Weiss MAN app and this manual. Information on new features planned.

MAN301 software revisions

MAN301 base station software: 1.0.0 compatible Weiss MAN app on iPad: V1.0.2373 applicable manual: 1.0.4

Release Date: May 1st 2012, 13:30

Release Notes: Official Initial Release

Features: Networking revision (one LAN Access Point), XMMS2 update (definitive support of WAVE/AIFF), Crash reports

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus.

MAN301 base station software: 1.0.1 compatible Weiss MAN app on iPad: V1.0.2373 applicable manual: 1.0.4

Release Date: May 31st 2012, 14:25

Release Notes: MAN301 Basestation Operating System V1.0.1 (r2423), Urgent Initial Release Followup

Features: CD playback support, Offline CD rip support, Log-on service reliability, Critical upgrade fix, various bug fixes

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior

Notice: Be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.0.2 compatible Weiss MAN app on iPad: V1.0.2373 applicable manual: 1.0.4

Release Date: June 20th 2012, 19:05

Release Notes: MAN301 Basestation Operating System V1.0.2 (r2463). Urgent Initial Release Followup.

Features: Critical DHCP detection fix. Enhanced hostname resolving. Various bug fixes.

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS: V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.0.3 compatible Weiss MAN app on iPad: V1.0.2373 applicable manual: 1.0.4

Release Date: July 10th 2012, 14:46

Release Notes: MAN301 Basestation Operating System V1.0.3 (r2488). Urgent Initial Release Followup.

Features: Enhanced DHCP discovery. Major WAV format fix. Major storage media import fix. Various bug fixes.

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Due to a WAV format fix, this upgrade may require re-importing users' media libraries. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-

panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.0.4 compatible Weiss MAN app on iPad: V1.1.2947 applicable manual: 1.0.5

Release Date: September 13th 2012, 23:52

Release Notes: MAN301 Basestation Operating System V1.0.4 (r2915). Urgent Release Followup.

Features: Media library sanity check & recovery. Permanent DAS mount support. HFS+ mount support. iPad/iPhone/iPod mount support. CDDB info in CD playlist. System status messages. Various major bug fixes.

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.0.5 compatible Weiss MAN app on iPad: V1.1.2947, 1.1.3092 applicable manual: 1.0.5

Release Date: October 25th 2012, 18:07

Release Notes: MAN301 Basestation Operating System V1.0.5 (r3110). Release Followup. Requires iPad App Weiss MAN ≥ V1.1.0

Features: Ext. USB DAC mixer. Media import speedup measures (skip hidden & other irrelevant files). Various fixes & stability measures

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.0.6 requires Weiss MAN app on iPad > V1.1.0 applicable manual: 1.0.6

Release Date: November 16th 2012, 16:50

Release Notes: MAN301 Basestation Operating System V1.0.6 (r3169). Release Followup. Requires iPad App Weiss MAN ≥ V1.1.0

Features: Various fixes & stability measures.

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.0.7 requires Weiss MAN app on iPad > V1.1.0 applicable manual: 1.0.7

Release Date: November 26th 2012, 18:56

Release Notes: MAN301 Basestation Operating System V1.0.7 (r3203). Release Followup. Requires iPad App Weiss MAN ≥ V1.1.0

Features: WAV/AIFF import fix, enhanced WiFi access point/uplink reliability, various fixes & stability measures.

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.0.8: not released

MAN301 base station software: 1.0.9 requires Weiss MAN app on iPad > V1.1.0, recommended > V1.4.0 applicable manual: 1.0.9

Release Date: January 8th 2013, 18:08

Release Notes: MAN301 Basestation Operating System V1.0.9 (r3394). Release Followup. Requires iPad App Weiss MAN ≥ V1.4.0

Features: Webmedia support: radio streams & playlists (m3u/pls/asx), podcasts (RSS feeds), various fixes & stability measures

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly

recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.1.0 requires Weiss MAN app on iPad > V1.5.0 applicable manual: 1.1.0

Release Date: March 28th 2013, 17:24

Release Notes: MAN301 Basestation Operating System V1.1.0 (r3946). Release Followup. Requires iPad App Weiss MAN ≥ V1.5.0

Features: Gracenote support: album artwork candidates, rip album candidates, auto artwork scan, various fixes & stability measures

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.1.1 requires Weiss MAN app on iPad > V1.5.0 applicable manual: 1.1.1

Release Date: June 4th 2013, 19:05

Release Notes: MAN301 Basestation Operating System V1.1.1 (r4083). Gracenote Feature Release. Requires iPad App Weiss MAN ≥ V1.5.0

Features: DSD playback support, various fixes & stability measures

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.1.2 requires Weiss MAN app on iPad > V1.6.0 applicable manual: 1.1.2

Release Date: Jan 21st 2014, 19:28

Release Notes: MAN301 Basestation Operating System V1.1.2 (r4962), Feature Release, Requires iPad App Weiss MAN ≥ V1.6.0

Features: Updated operating system, Database Assisted Tagging, Enhanced audio backend driver, Firmware update support for all Weiss Firewire products, Enhanced medialib management, Import progress display, Remote customer support added, Huge audio buffer for slow NAS, CPU management for better UI responsiveness, Mac OSX ≥ 10.7 CIFS mount fix, various fixes & stability measures

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to power down MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior

Notice: be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS

MAN301 base station software: 1.1.3 requires Weiss MAN app on iPad > V1.6.0 applicable manual: 1.1.3

Release Date: March 19th 2014, 14:44

Release Notes: MAN301 Basestation Operating System V1.1.3 (r5171), Feature Release, Requires iPad App Weiss MAN ≥ V1.6.0

Features: Updated operating system: Full realtime kernel, fixing occasional playback dropouts. Various fixes & stability measures.

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to power down MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior

Notice: be aware that this upgrade will reconfigure part of your device's OS. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device front-panel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.1.4 requires Weiss MAN app on iPad > V1.6.0 applicable manual: 1.1.3

Release Date: April 3rd 2014, 14:33

Release Notes: MAN301 Basestation Operating System V1.1.4 (r5257), Feature Release, Requires iPad App Weiss MAN ≥ V1.6.0

Features: Updated operating system: Various fixes & stability measures.

Known Issues: Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to powerdown MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. Recheck your audio device's output settings after upgrade, particularly DAC Output Level, which may have changed during upgrade. V1.0.0: the app's Reboot button does not react after successful OS upgrade/switch. You are required to shut down the device manually, via the app's shutdown button (within log-in screen) or on device frontpanel (short press button). After power on, this version will be available. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS

MAN301 base station software: 1.2.0 requires Weiss MAN app on iPad > V1.7.0 applicable manual: 1.2.0

Release Date: September 3rd 2014, 12:36

Release Notes: MAN301 Basestation Operating System V1.2.0 (r5690), Feature Release, Requires iPad App Weiss MAN ≥ V1.7.0

Features: New audio setup concept within user session. Playback setup: manage & playback imported media. AirPlay setup: use the MAN301 as an AirPlay sink. Preamp setup: use the MAN301 as a preamplifier. Audio output stream. External synchronization.

Known Issues: Preamp setup may autolock in a muted state. Manually switch to different sync rate and wait for autolock to switch back to locked state. Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to power down MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior.

Notice: Be aware that this upgrade will reconfigure part of your device's OS. Recheck your audio device's output settings after upgrade, particularly DAC Output Level, which may have changed during upgrade. Recheck your audio device's firmware version after upgrade (Preferences > Audio Devices), update manually if necessary. Device hot shut down (frontpanel long press button or power cut) is not recommended and may result in unrecoverable OS.

MAN301 base station software: 1.2.1 requires Weiss MAN app on iPad > V1.7.0 applicable manual: 1.2.1

Release Date: November 7th 2014, 15:52

Release Notes: MAN301 Basestation Operating System V1.2.1 (r5737), Feature Release, Requires iPad App Weiss MAN ≥ V1.7.0

Features: Audio backend followup, artwork scan revision, various fixes & stability measures.

Known Issues: Preamp setup may auto lock in a muted state. Manually switch to different sync rate and wait for auto lock to switch back to locked state. Wifi station may temporarily bring down LAN AP as long as it's scanning. Dis-/Connecting/powering Firewire bus devices during active user sessions can result in corrupted/unrecoverable user session (recreation of user profile may consequently be necessary). It is highly recommended to power down MAN301 device before connecting powered devices to Firewire bus. Simultaneous CD playback and ripping results in jumpy CD drive behavior

Notice: Be aware that this upgrade will reconfigure part of your device's OS. Recheck your audio device's output settings after upgrade, particularly DAC Output Level, which may have changed during upgrade. Recheck your audio device's firmware version after upgrade (Preferences > Audio Devices), update manually if necessary. Device hot shut down (front panel long press button or power cut) is not recommended and may result in unrecoverable OS

Features of the MAN301 in planning / implementation stage

- Various signal processing features.

AAC

Advanced Audio Coding, the lossy compression scheme used by Apple. Kind of similar to MP3. Not recommended for highend audio.

See http://en.wikipedia.org/wiki/Aac

Verwandte Glossarbegriffe

Audio format, MP3

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Chapter 4 - Album Ripping

Access point

The MAN301 can act as a WiFi access point, i.e. the iPad can log into the MAN301‘s WiFi directly. The default SSID of the MAN301 access point is MAN301-xxxx_LAN, where xxxx is the serial number of the MAN301 minus 1000. The default password of the MAN301 access point is WeissMAN301. Note, upper / lower case is important.

Verwandte Glossarbegriffe

SSID, Wireless Uplink

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Administrator

The person who manages the MAN301 accounts, NAS units etc. The default administrator password is wh10admin.

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Chapter 1 - System setup, Configuration 2
Chapter 1 - System setup, Configuration 4
Chapter 1 - System setup, Configuration 5

AIFF

Audio Interchange File Format. An uncompressed file format similar to WAV, but not compatible.

See http://en.wikipedia.org/wiki/Audio_Interchange_File_Format

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Verwandte Glossarbegriffe

Audio format, WAV

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Chapter 4 - Album Ripping

ALAC

Apple Lossless Audio Coding. The Apple variant of FLAC.

See: http://en.wikipedia.org/wiki/Alac

Verwandte Glossarbegriffe

Audio format, FLAC

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Chapter 4 - Album Ripping

Artwork

The CD cover artwork.

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Chapter 1 - System features and requirements
Chapter 1 - System architectures

Audio format

The musical information is stored in files on a storage medium. There are several different standardized ways to store the information in those files. General categories are uncompressed / losslessly compressed / lossy compressed. These terms refer to whether the musical information is stored completely unaltered (uncompressed), or compressed in such a way that the very same initial information can be extracted from the file (losslessly compressed), or compressed in such a way that the utmost of storage capacity is saved at the price of altering the musical information (lossy compressed). Compression is used to save storage space or save on necessary bandwidth when transferring the musical data e.g.via the Internet.

Some common audio file format names:

Uncompressed: WAV, AIFF

Losslessly compressed: FLAC, ALAC (about 50% less storage space required compared to an uncompressed format)

Lossy compressed: MP3, AAC (about 90% less storage space required compared to an uncompressed format)

Verwandte Glossarbegriffe

AAC, AIFF, ALAC, FLAC, MP3, MPC, OGG, WAV

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Chapter 1 - System features and requirements

Base station

The MAN301 hardware unit.

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Zugehörige Begriffe hierher ziehen

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CD ripping

Designates the process of copying the content of a CD to the storage medium by generating one file per track.

Verwandte Glossarbegriffe

Import destination

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Compilation

A CD which can not be assigned to a single artist because there are several artists tracks present on the CD. These can be e.g. film music or label sampler CDs.

Verwandte Glossarbegriffe

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Chapter 2 - Library

DHCP server

A software part in a unit connected to a network which assigns IP addresses to the various units connected to the network. There is only one unit on the network which acts as the DHCP server. In a MAN301 network the role of the DHCP server is taken by a router unit or if there is no router present, the MAN301 can act as a DHCP server.

Verwandte Glossarbegriffe

Ethernet, IP address, Router

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Dual Wire

In earlier days of higher sampling rates (88.2 kHz and upwards) there were no chips available for transmitting or receiving AES/EBU or S/PDIF audio data at those higher rates. The intermediate solution uses two chips (i.e connectors / cables) to transfer a stereo 96kHz signal, one channel per link. This format has been standardized by the AES (Audio Engineering Society). In short it is called dual wire format. Older D/A converters may still emply that format for high sample rates. The MAN301 can be set to dual wire mode for sampling rates of 176.4 or 192 kHz.

Verwandte Glossarbegriffe

Single Wire

Index Begriff suchen

Ethernet

This denotes a wired network connection.

Verwandte Glossarbegriffe

DHCP server, Router

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Chapter 1 - System architectures

Fader

Kind of a potentiometer but with a linear geometry. In the MAN301 used to control the audio volume.

Verwandte Glossarbegriffe

Zugehörige Begriffe hierher ziehen

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FLAC

Free Lossless Audio Codec. Similar to ALAC, but not compatible with ALAC.

See http://en.wikipedia.org/wiki/Flac

Verwandte Glossarbegriffe

ALAC, Audio format

Index Begriff suchen

Chapter 4 - Album Ripping

Frontend

The iPad with the Weiss MAN app installed. The iPad may be one of the first, second or third generation. The iOS version on the iPad needs to be 5.0 at least.

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Genre

A musical style.

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Chapter 2 - Library

Gracenote

A professionally maintained database for metadata, artwork and more. www.gracenote.com

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Verwandte Glossarbegriffe

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iBooks

An iPad application available for free in the Apple app store. iBooks allows to read various file formats, one of them being the iBooks format for electronic books. The MAN301 manual is available in ibooks format (preferred) or PDF format.

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Chapter 1 - System features and requirements

Import destination

The folder where newly ripped CD files are stored.

Verwandte Glossarbegriffe

CD ripping

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IP address

Each device connected to a network (like the MAN301, the NAS, the router etc.) has a unique device address such that data on the network can be routed to the proper destination. This address is called the IP address and is assigned to the devices on the network by the DHCP server. An IP address may look like: 192.168.0.1. The highest possible address is 255.255.255.255, the lowest 0.0.0.0. Thus the maximum number of devices on a network theoretically is 255 times 255 times 255 times 255. The internet addresses are also made up of IP addresses.

Verwandte Glossarbegriffe

DHCP server

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Chapter 1 - User Accounts

MAN301 Base Station

The actual MAN301 hardware device.

Verwandte Glossarbegriffe

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Chapter 1 - System features and requirements

Metadata

Also called tags, i.e. the data describing the content of a CD, like artist name, album name, track names, cover artwork etc.

Verwandte Glossarbegriffe

Tags

Index Begriff suchen

MP3

MPEG-2 Layer III lossy compression format. Not recommended for high-end audio.

See http://en.wikipedia.org/wiki/Mp3

Verwandte Glossarbegriffe

AAC, Audio format

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Chapter 4 - Album Ripping

MPC

Musepack lossy audio compression format. Not recommended for high-end audio.

See http://en.wikipedia.org/wiki/Musepack

Verwandte Glossarbegriffe

Audio format

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Chapter 4 - Album Ripping

Music library

The entire collection of music tracks stored on a single or multiple storage devices.

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Chapter 1 - System features and requirements

NAS

„Network Attached Storage“, a storage device, typically consisting of one to several hard-disks or SSDs, which connects to a computer network via one or more Ethernet interfaces.

Verwandte Glossarbegriffe

Ethernet, SSD

Index Begriff suchen

OGG

A multimedia container format, can contain lossy or lossless audio.

See http://en.wikipedia.org/wiki/Ogg

Verwandte Glossarbegriffe

Audio format

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Chapter 4 - Album Ripping

Playlist

A user generated list of music tracks which are subsequently being played by the MAN301 system.

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Chapter 1 - System features and requirements

Queue playlist

The default playlist in the MAN301. The Queue is used e.g. for immediate playback from the library.

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Chapter 2 - Library

Router

A hardware device with multiple Ethernet sockets to connect various network devices (MAN301, NAS) to. Kind of a star point to build a network. Often the router also connects to the Internet, offers wireless access (WiFi router) and acts as a DHCP server.

Verwandte Glossarbegriffe

DHCP server, Ethernet

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Chapter 1 - System architectures

Chapter 1 - System setup, Configuration 1

Single Wire

In earlier days of higher sampling rates (88.2 kHz and upwards) there were no chips available for transmitting or receiving AES/EBU or S/PDIF audio data at those higher rates. The intermediate solution uses two chips (i.e connectors / cables) to transfer a stereo 96kHz signal, one channel per link. This format has been standardized by the AES (Audio Engineering Society). In short it is called dual wire format. Older D/A converters may still emply that format for high sample rates. The MAN301 can be set to dual wire mode for sampling rates of 176.4 or 192 kHz.

All other „standard“ AES/EBU or S/PDIF connections which use a single link for a stereo signal are called a „single wire“ link.

Verwandte Glossarbegriffe

Dual Wire

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SSD

„Solid State Disk“, a storage device consisting of semiconductor storage chips, with an interface compatible with standard disk based magnetic storage devices (hard disk). The SSDs do not yet achieve the capacity of hard disks. The price per bit of storage capacity is higher than that of a hard disk by a fair amount.

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SSID

Service Set Identifier. The name of a WiFi access point. The default SSID of the MAN301 access point is MAN301-xxxx_LAN, where xxxx is the serial number of the MAN301 minus 1000. The default password of the MAN301 access point is WeissMAN301. Note, upper / lower case is important.

See http://en.wikipedia.org/wiki/SSID

Verwandte Glossarbegriffe

Access point

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Chapter 1 - System setup, Configuration 1

Swipe

The movement of a finger accross the iPad screen for scrolling etc.

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System configurations

Various system setups the MAN301 supports. See Chapter 1 section 2 of this manual.

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Chapter 1 - System architectures

Tags

Also called metadata, i.e. the data describing the content of a CD, like artist name, album name, track names, cover artwork etc.

Verwandte Glossarbegriffe

Metadata

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Users

The MAN301 allows for several user accounts, each having its own set of storage devices, library, playlists etc.

User accounts can be used to distinguish between actual users or different storage places or different music styles etc.

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Chapter 1 - System features and requirements

WAV

Waveform Audio File Format, an uncompressed file format, similar to the AIFF format but not compatible.

See http://en.wikipedia.org/wiki/Wav

Verwandte Glossarbegriffe

AIFF, Audio format

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Chapter 4 - Album Ripping

WiFi

This denotes a wireless network connection.

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Chapter 1 - System architectures

Wireless Uplink

The MAN301 is capable to connect to a WiFi access point in order to e.g. access the Internet.

Verwandte Glossarbegriffe

Access point

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Word-clock

An electrical square wave signal which has the frequency of the actual sampling rate. Used to synchronize external equipment to the MAN301 or to synchronize the MAN301 from an external word-clock source.

Verwandte Glossarbegriffe

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Chapter 3 - Audio I / O, Sync I / O