TerraTec

M3Po go

Portable MP3/CD Player

Manual (English)

12.04.01

CE Declaration of conformity

This product is in conformity with prevailing EU guidelines. A valuation of conformity has been carried out, as stipulated in EU guidelines.

Company: **TerraTec Electronic GmbH · Herrenpfad 38 · D-41334 Nettetal · Germany**

Product: **MP3-CD-Player M3PO go**

According to Low-Voltage Guideline 73/23/EU The following norm has been observed:
EN 60 065: 1993

According to Electromagnetic Sociability Guideline 89/336/EU, the following norms have been observed: **EN 55 013: 1990 · EN 55 020-1: 1995**

(incorporating EN 55 013: 1991 + 1995)

The company holds the following documentation available on request:
Manual
Testing documents
Other technical documentation

Nettelal, 1.04.2001

Table of Contents

The Package Contents.

Before we go into detail please check the contents of the package. The following items should be in the package:

- The M3PO go player
- Foldable headset – model: “Neck held Head set”
- Batteries (two AA)
- A comfortable, soft protective bag
- A plug-in adaptor (5V/600 mA)
- This manual
- A service form
- A registration card
- A CD with a various MP3 titles from BeSonic and Musicmatch Jukebox 6.0

Should something be missing, please contact us. Contact information can be found in the section “The Service from TerraTec “ on page 28.

Welcome aboard! Ready to (PO)go?!

Good to see you have chosen the TerraTec M3PO go. The device you have before you belongs to a completely new generation of mobile MP3 CD players. Chances are you have already used a portable CD player, so the basic functions are probably familiar. The M3PO go though goes a whole step further and unites the possibilities of up-to-date computer and internet technology with the requirements and wishes that you have about a modern “on the road” device.

In the presented manual we would like to introduce this device to you in an informative and entertaining way.

As mentioned before, many functions will seem familiar to you. The depth of this concept, though, and the truly special features of the M3PO go are described for you in this manual. Furthermore, you will learn interesting details concerning MP3 and the Internet, as well as tips & tricks how to archive music in MP3 format yourself.

Thank you and enjoy the reading

... Your TerraTec team.

Key features

Here again the most important technical features and details in overview...

- Portable player for MP3 and audio CDs
- Bit rates: 8 - 320 kbit/s, 8 - 48 kHz
- Support of variable bit-rates (VBR)
- Display of ID3 tags (title, artist, album etc.)
- Large, comprehensive graphic LC-Display with scrolling feature
- Various playback modes
    - Bookmark – separate playlist with up to 50 titles/CD; up to 10 CDs
    - Repeat, Random play, and Intro scan
- Mediums: CD-A, CD-R, CD-RW
- Formats: ISO9660/Joliet, Multi-session, MP3, ID3, Redbook (CD audio)
- File management system
    - EDA System (Easy Directory Access)
    - Quick access to files and folders
    - JOG Dial navigation with quick search and choice function
    - 256 folders, 32 folder levels and up to 999 MP3 files per CD
- Electronic Shock Protection (ESP)
    - 50 sec. anti-shock buffer in MP3 mode
    - 10 sec. anti-shock buffer in CD audio mode
- Sound adjustment for bass and treble
- Energy saving function that switches off the CD motor as soon as the buffer is filled with enough data for MP3 playback.
- Foldable neck held headphones

The batteries.

Not hard to guess and discernable from the package content, the M3PO go runs on batteries, to be exact, on 2 of the type AA (Mignon). You can use disposable as well as rechargeable batteries. Freshly stocked up, the M3PO go offers up to 7 hours continuous playback, using rechargeable batteries reduces the playtime a bit.

When you know you are not going to use the player over a longer time period or you run it with the included power supply adaptor cable, you should pay attention to take the batteries out of the device. Rechargeable batteries can't be recharged over the power supply.

Please never throw a battery into an open fire or expose them to extreme heat. There is danger of leaking and explosion. When they are empty, please pay attention to only use approved disposal methods.

Energy Use.

Very important for mobile devices like the M3PO go: playtime when using batteries. Basically you can say that the playback of MP3 CDs is not only more comfortable than that of audio CDs, but also uses less electricity.

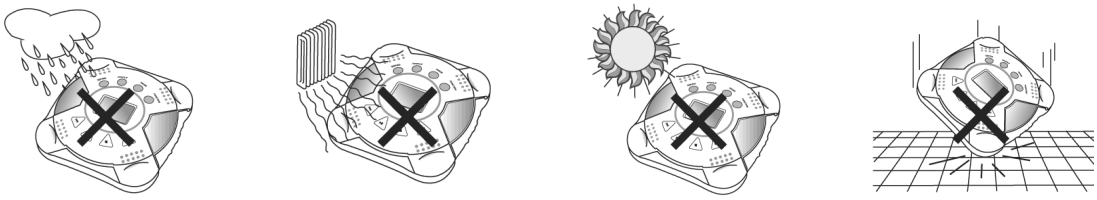
For playback of MP3 CDs the M3PO go - as you can see for yourself when it's running - takes the following form: after pressing PLAY, the CD runs for a short time and a part of the MP3 file gets read into the anti-shock buffer. When the memory is sufficiently filled, the CD stops and the data gets read out of the memory. If the data stored in the memory comes close to running out, or the title gets changed, the CD kicks on again and the game starts over. So the drive motor turns only from time to time, which noticeably reduces the energy usage. This simple but efficient tactic not only saves energy, but also protects against unwanted skips, because shaking the player doesn't affect the playback out of the memory.

The memory of the M3PO go isn't unlimited, however, and with a little math you can see that for MP3 files with high bit-rates (more data), the memory has to be “refilled” more often compared to low bit-rates, because for the same play time a lot more data is present. That means that the drive mechanism has to work more, which raises the energy usage and reduces the total playtime. This should be taken into consideration when you create (encode) your MP3 files. Here again, less is more.

An equally energy saving function is the lack of background light when running on batteries. This only works with when using the power supply. Furthermore, the player shuts off automatically after ca. 1 minute when nothing is played and no button is pressed.

Treatment.

As you have already heard, the M3PO go is very shock resistant, but despite this, it puts high value on being treated respectfully. It will thank you with uncountable hours of musical enjoyment. A picture says more than a 1000 words...



... Long story, short message: just treat the thing “reasonably”. Damage of the device due to mistreatment is not covered by the guaranty. Thank you

Please note.
In the M3PO go, a CD drive which works with invisible class 1 laser beams is used.

That's what it looks like: set up/structure and connection.

Before we give you an introduction into the functionality of the device, we would like to give you a short geographical overview, where to find what, and the meanings behind it all.

Behind this “hidden” wheel are various functions – according to the state of the device configuration.

During playback, you adjust the volume by back and forward turning, if you press the wheel button once, you can adjust the bass, after a second time the treble, accordingly shown on the display. If you press it another time now, you can define the frequency range of the EQ for the bass, after pressing it once more, the frequency range of the treble.

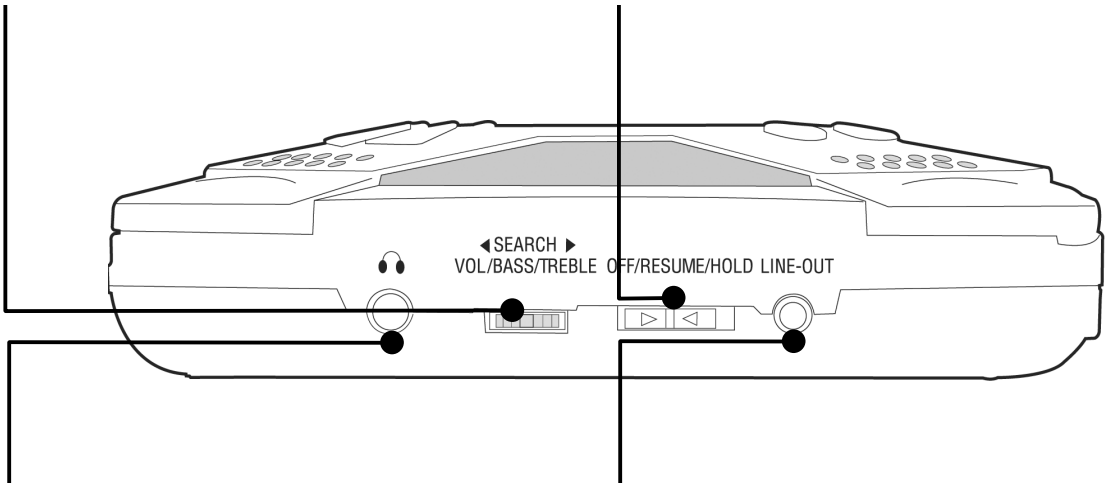
The JOG Dial

This button activates the player's RESUME function. If the player gets turned off during playback, at turning it on again, the last played title starts up. (Position RESUME)

To deactivate this function, select the option OFF.

In the position HOLD, the player ignores every button movement, to prevent accidental interruption of the playback and protect the player from being activated during transport.

OFF / RESUME / HOLD



The headphone output.

Over this mini-jack you can attach the included headphones. The output has a level of 100 mW.

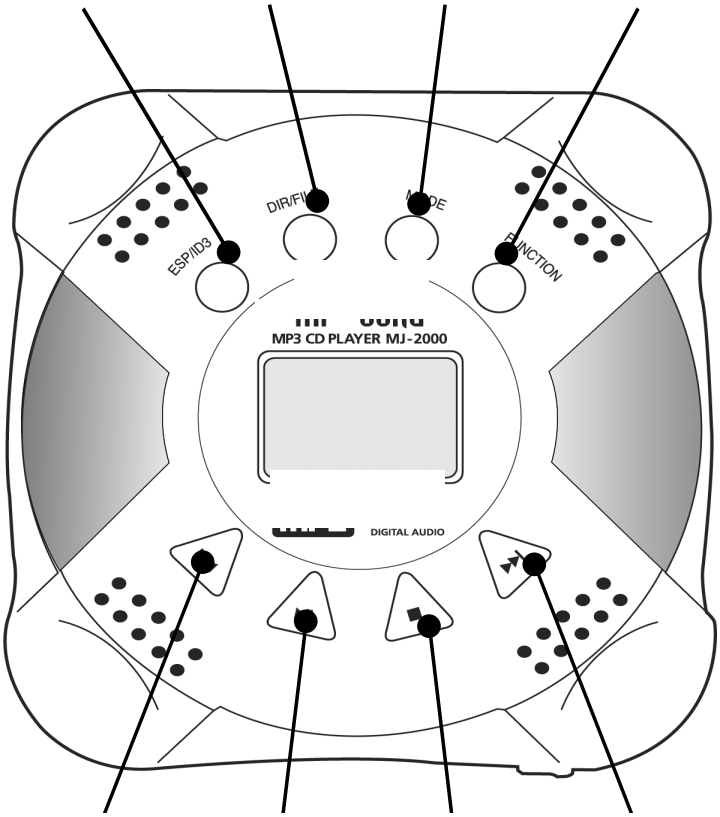
Note. Please use the headphones or the line output, alternatively, not simultaneously.

The line output.

Here you can connect e.g. active (amplified) speakers or your stereo system. You can use the included audio cable, as you probably already know it from your soundcard: on one end a 3,5 mm mini-jack for the port on the M3PO go, on the other end two male plugs for contact to an amplifier / active speakers. You can't connect headphones here, because the signal level is not configured for the impedance demanded by headphones.

Please note. Please use the headphones or the line output, alternatively, not simultaneously.

ESP / ID3 DIR / FILE MODE FUNCTION



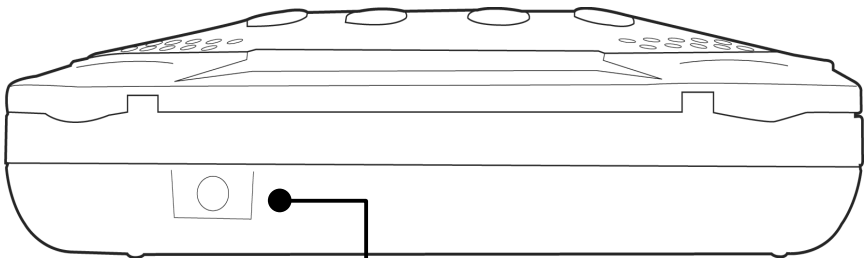
Previous Play / Pause Stop Next

Length	131 mm
Width	135 mm
Height	34 mm
Weight	275 g (Without batteries)

Running over the plug-in adaptor.

As soon as you run the M3PO go over the plug-in adaptor, the background on the display is illuminated. If it isn't active, you should check the connections again.

And here you find the connection for your adaptor...



Plug for the electricity adaptor cable (DC 5 V/600 mA).

Put it in and start up.

The most important first: on and off. First put the included batteries into the device and then press the PLAY button for ca. 4 seconds to turn the device on.

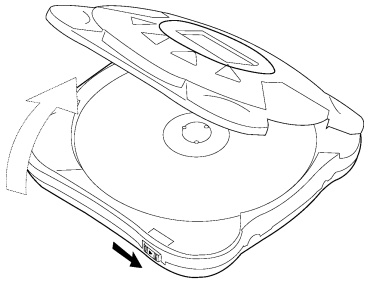
This is what you should see on the display after turning it on...

If you want to turn the device off again, press the STOP button for more than 4 seconds. If nothing is being played or no button gets pushed for ca. 60 seconds, the player shuts off automatically.

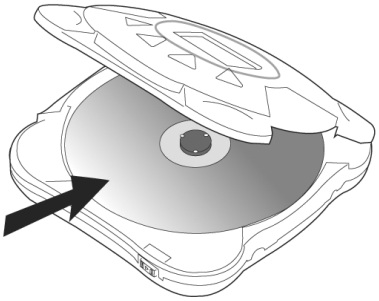
The M3PO go can basically play 2 different types of CDs: audio CDs, used in conventional CD players, and MP3 CDs, so-called data CDs with MP3 files written on them. It doesn't matter if there are other files on the CD besides the MP3 files, the M3PO go searches the CD by itself for files with the ending .mp3. Pay attention not to use files with the ending .mp3 that aren't really MP3 files. And you cannot play MP3 files that don't have the correct ending.

Another word about CD formats. Basically, besides bought CD ROMs, CD Rs and CD RWs, single session as well multi-session CDs can be read. From mixed mode CDs, those are CDs that compile audio as well as data tracks, only the audio tracks can be played.

And this is how you put a CD into the M3PO go...



Open the lid...



... and stick it in. (label up)

After inserting the CD, it first gets read and then searched for MP3 files/ audio tracks. The display should resemble the following.

An audio CD with 12 titles was found.

If you press the play button now, the playback starts with Track01.

A MP3 CD was found.

The CD is in ISO format and contains 5 folders with 130 titles in all.

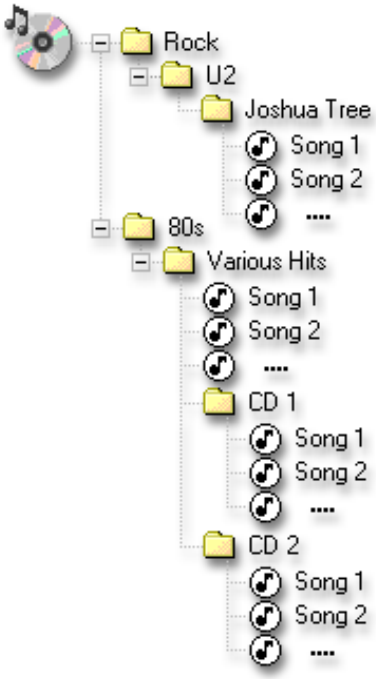
Better not lose the overview: the EDA system.

Already this example makes clear, how fast you can lose the overview dealing with MP3 CDs. To prevent you from going crazy with quite possibly more sub-directories and titles, the EDA system was developed.

EDA stands for “Easy Directory Access”. To de-tangle a complex and before all deeply branching directory trees, the EDA system reduces the navigation to the essential: different file formats as well as folders that don't contain MP3 titles, are simply hidden.

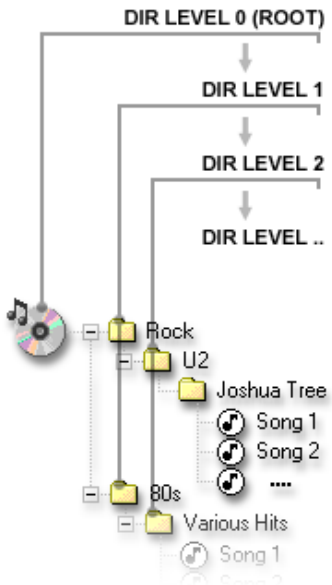
For better understanding of the tactic you find some illustrations further down.

An example.



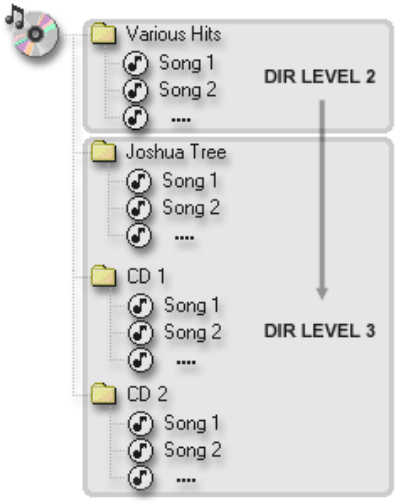
This is what an MP3 CD would look like in the Windows Explorer. At first glance appearing simple and clearly structured.

On the PC the directory depth offers a clear overview, in the mobile reality it means - besides additional “button pressing” - usage of limited memory.



To simplify the overview and introduce a level hierarchy, one folder depth (DIR LEVEL) after the other is searched for MP3 files.

The folder levels are also important for displaying the info on the M3PO go: After the first (here zero - ROOT), the complete level 1 is searched, catalogued, then level 2, etc.

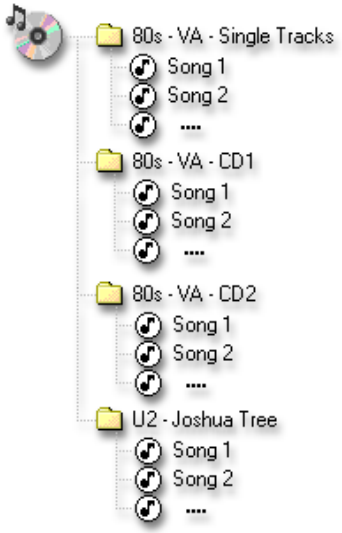


And this is what the PC directory tree shown above would look like using EDA - where all folders that contain MP3 titles are displayed in one level.

Like we mentioned and here to see: if a folder contains no useable title it is completely left out. The advantage: short, fast, and requires little memory.

The bummer: The directory structure e.g. from album to artist is lost

(Who is “Joshua Tree” from?)!



That's why you should pay attention to label the directories clearly so that they can be effectively used by the EDA function. Comprehensively titled, your desired songs are quickly and easily found with a minimum of button pushing necessary.

Please note. When creating your own CDs please follow these guidelines,

- a maximum of 999 files
- in no more than 255 folders are allowed.

Another Tip.

Normally standard CD burning software sorts the folders to be burned alphabetically. If you want to influence the order of appearance of the folders in the M3PO go simply insert a number at the beginning of the folder names – like “1 {folder name}”, “2 {folder name}”, “3 {folder name}”, etc. .

But now let's get back to our display example from the beginning ...

We are now in the first of five folders.

If PLAY is pressed now the folder CLASSIC is chosen.

And now the titles (130) in the directory are displayed.

If the PLAY button is pressed now the song GUITAR is played.

Soothing classical guitar.

The display during playback.

Next we move on to the various buttons and their meanings, and on to the next chapter...

Print Me – the Buttons and their Functions

In this chapter we'd like to take a look at each individual button and explore its function.

ESP / ID3

When an audio CD is playing, the electronic shock buffer (ESP) can be activated or disabled using this button.

If an MP3 CD is in the player this button switches the display of ID3 tag information on or off. If you want to view the ID3 tag info please choose this option before you start the playback.

DIR / FILE

With this button you can switch between the Directory (DIR) and the File (FILE) mode. In the Directory mode pushing the NEXT button will not jump to the next title, but to the next directory. And if you have the File mode activated, you can jump to the next file in the path. If no sub-folders are found on the CD the navigation will remain in the File mode.

MODE

This button switches between the available selection functions.

ALL

The playback of all titles on the CD,
(Audio CD) (MP3 CD)

DIR

All the titles in the actual directory,
(MP3 CD)

1♫

Only the actual title (playback in a loop),
(Audio CD) (MP3 CD)

B♫

Or a title that is bookmarked. If no title is bookmarked yet, this function is not offered. How to mark a title is described on page 18.
(MP3 CD)

FUNCTION

This button switches between the various playback modes.

The titles are played exactly one time in order.

The titles are played in an endless loop.

RND

The titles are played randomly
(This function is not possible inside of a bookmark list).

INT

Only the first 10 seconds of the titles are played

 ***Play/Pause***

Press this button once to start the playback, press it again and the song playing is paused until you press the PLAY button again.

Further Functions:

POWER ON.

If the player is off and this button is held pressed for over three seconds the player is switched on.

BOOKMARK.

In order to bookmark a song simply hold the PLAY button pressed for more than three. To remove a bookmark hold the PLAY button pressed again for more than three seconds.

 ***Next***

During playback this button allows you to jump forward to the next title. If an audio CD is playing holding this button pressed will fast forward in the song. This function does not work for MP3 titles.

If no song is playing this button can be used to navigate through the CD directory structure. If you choose the Directory mode using the DIR / FILE button you can switch to the next folder, i.e. in File mode to the next file. The integrated Jog Dial is more comfortable to use, more about that on page 8.

 *Previous*

During playback this button can be used to jump back to the previous title. If an audio CD is playing holding this button pressed will rewind in the song. This function does not work for MP3 titles.

If no song is playing this button can be used to navigate through the CD directory structure. If you choose the Directory mode using the DIR / FILE button you can switch to the previous folder, i.e. in File mode to the previous file The integrated Jog Dial is more comfortable to use, more about that on page 8.

 *Stop*

Which function could be hidden behind this button? Correct. Like the name says. Stop – to stop the playback.

Further Functions:

POWER OFF.

If the player is on and this button is held pressed for over four seconds the player is shut off.

The various playback modes... a few examples.

For Audio CDs ...

The complete audio CD is played once, and then the playback is stopped.

The complete audio CD is played in an endless loop.

In File Mode (FILE) ...

One title from the complete CD is chosen randomly and played. After the song is finished playing a new one is chosen randomly ...

All titles on the CD are played in order one time, and then the playback is stopped.

ALL
FILE

All titles on the CD are played in an endless loop.

In Directory Mode DIR) ...

ALL
DIR

All titles in the actual folder are played in order one time, and then the playback is stopped.

ALL
DIR

All titles in the actual folder are played in an endless loop.

An Added Treat: the Bookmarks.

Like we mentioned above, with the M3PO go you have the option bookmark the MP3 titles of your choice. This allows you a special play mode that delivers your chosen favorite songs selectively. In order to bookmark a song simply hold the PLAY button pressed for more than three seconds. As confirmation the message ‚BOOKMARK' appears at the bottom of the display. To remove a bookmark hold the PLAY button pressed again for more than three seconds.

When you want to play the marked songs press the MODE button until the symbol BOOKMARK appears. The bookmarked titles are now available to choose from as if in their own directory.

Such a list would appear like this for example...

Of course this function offers the option of collecting all your favorites from a CD in one list, comparable to a playlist in the PC – but with the advantage that the list can be changed anytime. The trick: the M3PO go is capable of remembering up to 10 CDs, each with 50 bookmarks.

The Display: Symbols and their Meaning

Accompanying the symbols we have already discussed, two other symbols are shown on the display.

This symbol shows the battery load status.

If the plug-in symbol is shown the player is receiving its electricity from the power supply.

From Audio CD to MP3 CD.

Creating your own MP3 CDs to play in the M3PO go is incredibly simple. You need a computer with a CD burner, software to read the audio CDs, software to convert (encode) the audio tracks into MP3 format and again software to burn the MP3 files to CD.

One software package that combines al these functions into one interface is included in the bundle: the full version of MusicMatch Jukebox. The principle method used to create an MP3 CD of your favorites is as follows:

- Start Musicmatch Jukebox
- If you can, you should connect to the Internet so that Musicmatch Jukebox can access CDDB (CompactDisc Database) – then the titles, artist, and album info are automatically saved as ID tags in the MP3 file(s). Otherwise handwork is required, but even that is incredibly easy.
- Insert the audio CD in the CD ROM drive
- Stop the automatic CD playback should it start
- Press the red REC button in the player to start the recorder
- Choose the title(s) that you wish to encode - by default all titles are selected
- Start the read and encode process by clicking on the record button in the recorder
- Burning to CD: In the playlist window select “CD-R”, choose your titles over “Add Song” and then click on “Create CD”.
- That's it. Put it in the M3PO go, and have fun.

A few further remarks:

A soundcard is not necessary to transfer the files to PC, as the data is sent directly over the IDE cable in data form.

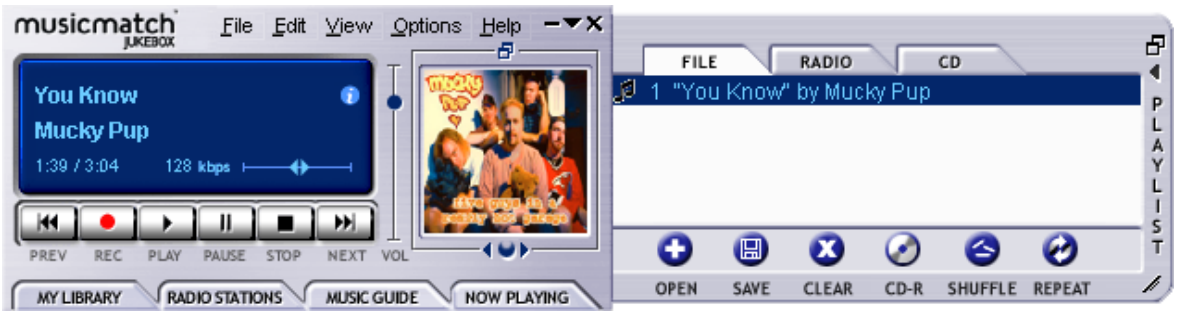
Keep in mind: In order to use the M3PO go comfortably and easily navigate through your MP3 CD's, before you burn a CD you should take a second look at the functionality of the EDA system (Chapter “Better not lose the overview: the EDA system.” on page 11). Dedicated burner software is also recommended, as Musicmatch Jukebox doesn't offer any option to create folders.

So much for theory, now to the practical application and the next chapter: The Musicmatch Jukebox Crash Course.

Crash Course in Musicmatch Jukebox.

With the program Musicmatch Jukebox from the firm Musicmatch, you can not only play various formats, but also create your own MP3 files, archive them and burn them to CD. Actually, the program and its cleverly designed graphic interface are by and large self-explanatory, but still, we would like to give you a brief introduction so that you can achieve your goals quickly and efficiently.

The Player



Whether MP3 or Windows Media files - simply “drag n' drop” them into the playlist or player window or over “File” -› “Open”. For playback on the PC a soundcard is of course required. Coincidentally, TerraTec can also help you in this regard.

The Recorder

Clicking on the record button in the player will bring you to the recorder. With the recorder you can for example read audio CDs and directly save them in MP3 format onto your hard disk. In the recorder options you can adjust the quality (bit-rate), activate the support for variable bit-rates and make other configuration changes. Important for insiders: Obviously, the original Fraunhofer MP3 algorithm is used to ensure the best possible quality. You can also record a signal from your soundcard (for example the Line In signal) into MP3 format directly in real time. These and more settings can be found in the “Options” menu (see photo above, the player).

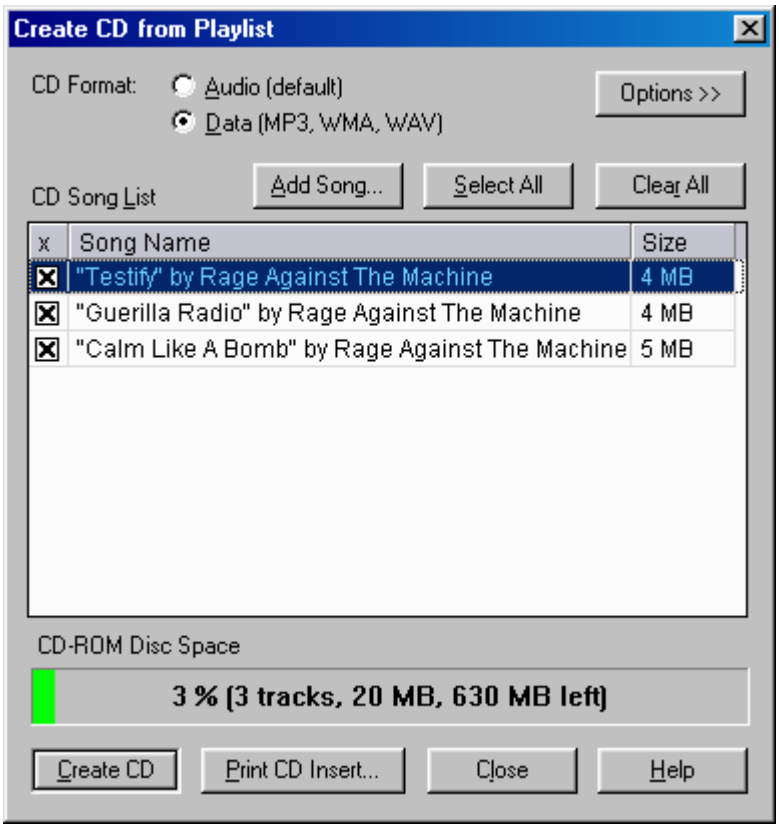
If you want to transform an audio CD into MP3 format then follow these steps:

If you can, you should connect to the Internet so that Musicmatch Jukebox can access CDDB (CompactDisc Database) – then the titles, artist, and album info are automatically saved as ID tags in the MP3 file. Otherwise handwork is required, but even that is incredibly easy. Load a MP3 file per drag n' drop into the playlist window of the player. A simple right mouse click on

the title and the familiar context menu appears. Choose “Edit Track Tags” and enter the info. But now let's get back to our audio CD.

Insert an audio CD in the CD ROM drive of your PC, stop the automatic playback if it starts. When the CDDB request was successful you should already have artist and title info displayed. Click on the red record button in the player to start the recording process. Choose the title(s) that you wish to encode – by default all titles are selected. Start the read and encode process by clicking on the record button in the recorder. And now you need a little patience or a fast PC. When the read and encode process is finished you will find a freshly ripped MP3 file(s) on your hard disk. Should you belong to the group of people without Internet access, you can edit the ID3 tags manually like mentioned previously. Information as to the exact location of the file(s) can be found under “Options” --› “Recorder” --› “Settings” --› “Songs Directory “. Afterwards you are ready for the MP3 CD recording and the next chapter.

Burn Baby, Burn!



With the integrated CD burning program you can easily capture your personal favorites on one CD. One good feature: Clear display of the amount of space remaining on the CD. In the playlist window select “CD-R” and choose “Create CD from Playlist”. Pay attention to select “Data (MP3, WMA, WAV)” for MP3 files and then click on “Add Song”, maneuver to the song path location determined as stated in the previous chapter and click on “Create CD”. That's it – really.

Must burners are supported straight from the factory, a comprehensive and up-to-date list of the models that have been checked can be found on the Musicmatch web page under **http://www.musicmatch.com/jukebox/player/cdr.cgi** .

Keep in mind: In order to use the M3PO go comfortably and easily navigate through your MP3 CD's, before you burn a CD you should take a second look at the functionality of the EDA system (Chapter “Better not lose the overview: the EDA system.” on page 11). Dedicated burner software is also recommended, as Musicmatch Jukebox doesn't offer any option to create folders.

Not just for hunters, for collectors too

Organize your music archive and sort according to a wide range of categories, including album, artists, title, genre or mood. If you want you can add your own. The “Find Music” function enables you to find your favorites quickly and easily (CTRL+F).

Always the same, yet different.

Another feature of this software is its option of providing the interface with a new skin – they like to use the word skins. In the VIEW menu under VISUALISATIONS and SELECT VISUALISATION you can switch between installed skins.

If you want to download other skins or find out more information, we recommend the MusicMatch homepage. The address (it couldn't be simpler): http://www.musicmatch.com.

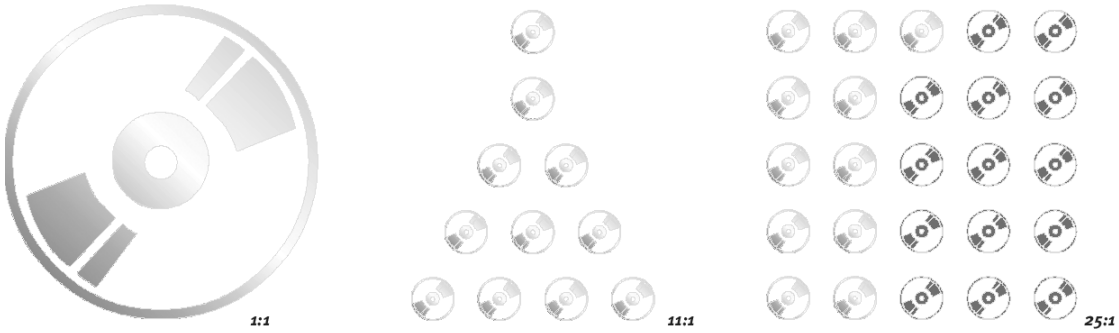
Useful information on MP3.

Her we have compiled some general information on MP3, its origin and software to convert your own music and, most important, what is allowed and what is not?

What is MP3?

MP3 is an abbreviation for MPEG Layer 3, which in turn contains another abbreviation: MPEG = Motion Picture Experts Group, which is governed by a group of competent experts from the film production industry. MPEG is basically a storage format for audio- and video data, which has been in constant development for years. The basics for today's popular third layer of the MPEG2.5 audio specification were developed in the late eighties by the Fraunhofer Institute for Integrated Circuits (Fraunhofer IIS - Germany).

Its main advantage is the small size of its audio files, as described in the following example: If you record a standard audio CD on your home PC, then this will use about 650 Megabyte (MB) of hard disk space. Converting this into MP3 files, you are presented with only 1/11 of its original size, roughly 60MB. If the files contain nothing but speech (i.e. language courses), the size of the file can be reduced to 1/25 of its original size, without losing too much of its sound quality. This is quite useful, as you can see:



CD-Audio ***MP3 128kBit/s*** ***MP3 56kBit/s***

How come?

"Layer 3" is a clever combination of data compression and data reduction. This means that digital data is being compressed (The PC calls this 'packing', for example when converting to the .ZIP format). In the process, the data will be scanned for repeat data. To save space, this data will only be saved once and tagged with information, where it needs to re-appear. This can account for massive reduction in storage space and means that the data will be identical to the original, once 'unpacked' (i.e. decompressed).

In order to achieve a decrease of 1:11 or more, another process will be required – data reduction. You may have guessed by its name, that some data will actually be cancelled in this pro-

cess. As the most important aspect is what you are left with, we will take a quick look at the actual process:

The applied data reduction is based on algorithms, which cancel out inaudible data. For example, the brain can hardly hear very quiet sounds, which occur immediately after (a few milliseconds) after a loud signal.

If the sounds are outside the frequency spectrum of the human hearing, it becomes literally impossible. Canceling this data in the recording process leads to another significant reduction in data. This data has now been permanently erased from the original file. This shouldn't be too much of a problem. Reducing data to one eleventh of its original size (128kBit/s) in this manner, does lead to an audible difference to CD, but the quality should not really be the issue here. .MP3 was never developed in competition to CD, but to offer an alternative option of storing your audio data. And .MP3 is a great alternative, which is a great benefit to the user.

Legal or not?

The issue of legality will be on many people's mind. What is allowed and what is not? A very complex issue with fuel for more than just discussion.

There is a , possibly, quite legitimate objection from the music industry against the use of this technology: The Internet is being used to distribute copyright-protected art forms (music in this case).

This cannot be questioned, as, given enough time, you can find loads of information on the Internet, which really doesn't belong there. At this point, we would like to ask you to handle this issue responsibly, because it is not only the industry, which can be damaged from the Internet, but also the artists themselves, espe-cially those ones, who have no alternative of marketing their product.

The private use of this technology with legally purchased material, has not been a problem so far – enough for us to develop and supply machines, which make the most of this new me-dium. So how do you use your player so that no one goes empty-handed? The best way, of course, is to have direct access to your vast amount of music on a HD. Therefore, you need to have purchased the music legally, usually on CD. You can save these CDs to HD, convert them to .MP3 files and use them in your m3po player – as you have always done with conventional CDs. In the private sphere no problem like mentioned (whereby up till now no-one has com-plained about any rockin' grill parties with the neighbors;-). At this point, we would like to draw a comparison with copying to tape (for your car stereo), or minidisk – everything OK.

However, it is generally not allowed to copy complete CDs for public (non-private) use.

In connection with this, the Internet should not be branded a nest of illegal activities. The web is already the information source No. 1 and as a result, your first point of contact for purchas-ing .MP3 software, or simply for learning more about the .MP3 format. Also, more and more record labels appear in the web and offer hundreds of thousands of songs form newcomers, as well as more established artists like: Alanis Morissette, Tori Amos, David Bowie, Beastie Boys, Billy Idol, Peter Townshend, Dionne Warwick, George Clinton, den Toten Hosen - the list will most certainly be completely expanded within a short time.

The 50 MP3 titles on the M3PO go CD come, by the way, from such an online label – BeSonic. If you want to know more about BeSonic click on the corresponding button in the autostarter menu of the M3PO go CD.

This is just the beginning of a really big movement, that for up to a couple of years ago was powered primarily by artists (and few of these prophesied what has come) and is now taking its course ever further.

How does it all work?

So how do you create an .MP3 file and how do you get it into your player? An important question, and we would like to answer it right here. As described above, the .MP3 format differs greatly from the data you find on an audio CD. .MP3 files are data-reduced, which means that they are manipulated by computer software. This shrinking process is called encoding. This is very time-consuming, as the data is being scanned for repeat data, which can be filtered out. The encoding process itself can be achieved easily given the right software – the only other thing you'll need is a fast PC or lots of time.

The most common practice these days is the reading of audio files and the subsequent encoding in the .MP3 format. During this process the contents of the audio CD are copied to the hard disk – this is commonly known as "ripping". Providing you are using a high-quality CD drive, the copy will be identical to the original – even though minor errors can occur, they are usually inaudible .

Once the data is on HD, you can start the encoding process. Here you can usually choose the amount of data compression you want to apply to the data. This compression (next to data reduction) is measured in kilobits per second (kBit/s), for example 96kBit/s. The smaller the value, the smaller the size of the .MP3 file. But also the bigger the deterioration in sound quality. Music in stereo CD quality requires a value of no smaller than 112-128kBit/s. Speech (mono) is usually being compressed to a value of 32-56kBit/s . The following table will show you a few applications:

Sound Quality	kBit/s	Reduction
Telephone	8	96:1
Better than short wave radio	16	48:1
Good general quality	32	24:1
Radio quality (stereo)	56...64	26...24:1
Near CD quality (stereo)	96	16:1
CD quality (stereo)	112...160	14...8:1

The m3po processes bit rates of up to 320 kBit per second.

The coded data can be burned to CD and played back by your M3Po go. As simple as that.

What are ID Tags?

ID Tags are additional information contained within the .MP3 file. A small part in the header of the .MP3 file is reserved for the track name (which need not be identical to the file name), artist and album.

In addition, you could store information on the year of release and music style. This information is not however displayed by the player due to space limitations.

Please note that only ID3V1 information is displayed. Furthermore the display of ID Tags can be switched on and off over the ESP / ID3 button. See page 9 regarding the Function button.

Internet Links.

Further information about MP3, as well as music can be found most easily in the Internet. The following addresses should be sufficient to get started.

Source	Description	http://
TerraTec	Your manufacturer.	www.terratec.net
TerraTec	Big brother.	www.m3po.net
Fraunhofer Institute	Where it all began.	www.iis.fhg.de/amm/techinf/layer3/index.html
Fraunhofer Institute	FAQ from the Fraunhofer Institute.	www.iis.fhg.de/amm/techinf/layer3/layer3faq/
mp3.com	THE international site for MP3 music.	www.mp3.com
mp3.de	A German language site concerned with MP3 themes.	www.mp3.de
mpex.net	A German language site concerned with MP3 themes.	www.mpex.net
Layer3.org	One of the oldest sites with a large selection of software to choose from.	www.layer3.org
Winamp	One of the most common MP3 players.	www.winamp.com
Maccast	A common MP3 player for MacOS (vormals Macamp).	www.macamp.net
XMMS	A common MP3 player for Linux.	www.xmms.org
BeSonic	A record company.	www.besonic.com
callasong.de	A record company.	www.callasong.de
Kepton / Deutschlandfunk	Day-long radio shows on CD.	www.kepton.de

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The Service from TerraTec.

“I Followed the instructions 'to the letter' but …” is not pleasant, but can occur even in the best system. In such cases the TerraTec team is available for info and help.

Hotline, Mailbox, Internet.

If you have a difficult problem that the handbook, you, or your neighbor or salesman can't solve - then please contact us directly.

The first method - if an option - is the internet: at **http://www.m3po.net** you will find the answers to frequently asked questions (FAQ) as well as the newest software. All this is also reachable over our mailbox system. The mailbox numbers are: **+49(0)2157-8179-24** (Analog) und **+49(0)2157-8179-42** (ISDN).

If you have no Internet access, send a self-addressed, 3 DM stamped envelope on the Terra-Tec Support Department (product name and the registrations number included). Please refrain from sending written requests for help per post, fax, or passenger pigeon. These cannot be answered out of organizational grounds.

If the above mentioned options don't help you then contact our telephone support hotline.
We can also be contacted online per email. Call up
http://www.terratec.net/support.htm.

In both cases you will need to have the following information at hand:

Your registration number

This documentation,

Of course it is helpful for our technicians when you call with the device at hand, so that various options and tricks can be directly tested. Please take note of the support team co-workers name.
You will need it in the case that you have to send the device to us for testing or replacement.