SYNPHONOS



HOW TO USE

Version 1.1.0

About this manual

Synphonos plays your songs and sends timecode that is locked to them, so a lighting console fires every cue at the same moment, every night. This manual covers version 1.1.0.

How it is laid out

The manual has five parts. Read as far as you need.

Part	What it is for
Start here	Timecode out of your computer in a few minutes, then a tour of the window.
Running a show	Songs, outputs, the set list, keys and the lock: what a playback tech does.
Programming a console	Program mode: sequences, cues, tempo, cue times, and the export to grandMA2 and grandMA3.
Reference	Every window, control, key, limit and file, in tables. Timecode itself. The macros, line by line.
Help	Troubleshooting by symptom, known issues, questions and answers, a glossary and the index.

Finding something

- The contents on the next pages list every section.
- The index at the back lists every control, window and term.
- Page numbers are the PDF's own. The cover is page 1. Type a number from the contents or the index into your reader's page box and you are there.
- Your reader's search finds a control by its name: the manual uses the names the window uses.
- Bookmarks in the PDF follow the contents.

How things are written

You see	It means
Starts at	A name exactly as the window shows it: a button, a field, a tab, a window.
Space	A key on the keyboard.
07:10:00:00	Something you type, a file name, or a command for a console.
page 3	A page to turn to. Click it to go there.

> The words the window uses
>
> Synphonos calls a console's cue list or button a sequence, a point in a song a mark, and one audio file of a song a stem. The glossary on page 127 has the rest.

> Untried on a console
>
> Boxes like this one say what has not been tried on a real console. The export to grandMA2 and grandMA3 has been tried on MA's onPC software, not on a console. Each box says exactly what was tried, and how.

About the pictures

Every screenshot was taken from Synphonos 1.1.0 as it runs. The show in them, Winter Gala 2026, and its songs are made up for this manual.

The art on the cover and at the head of each chapter is the program's own start-up animation, frame by frame.

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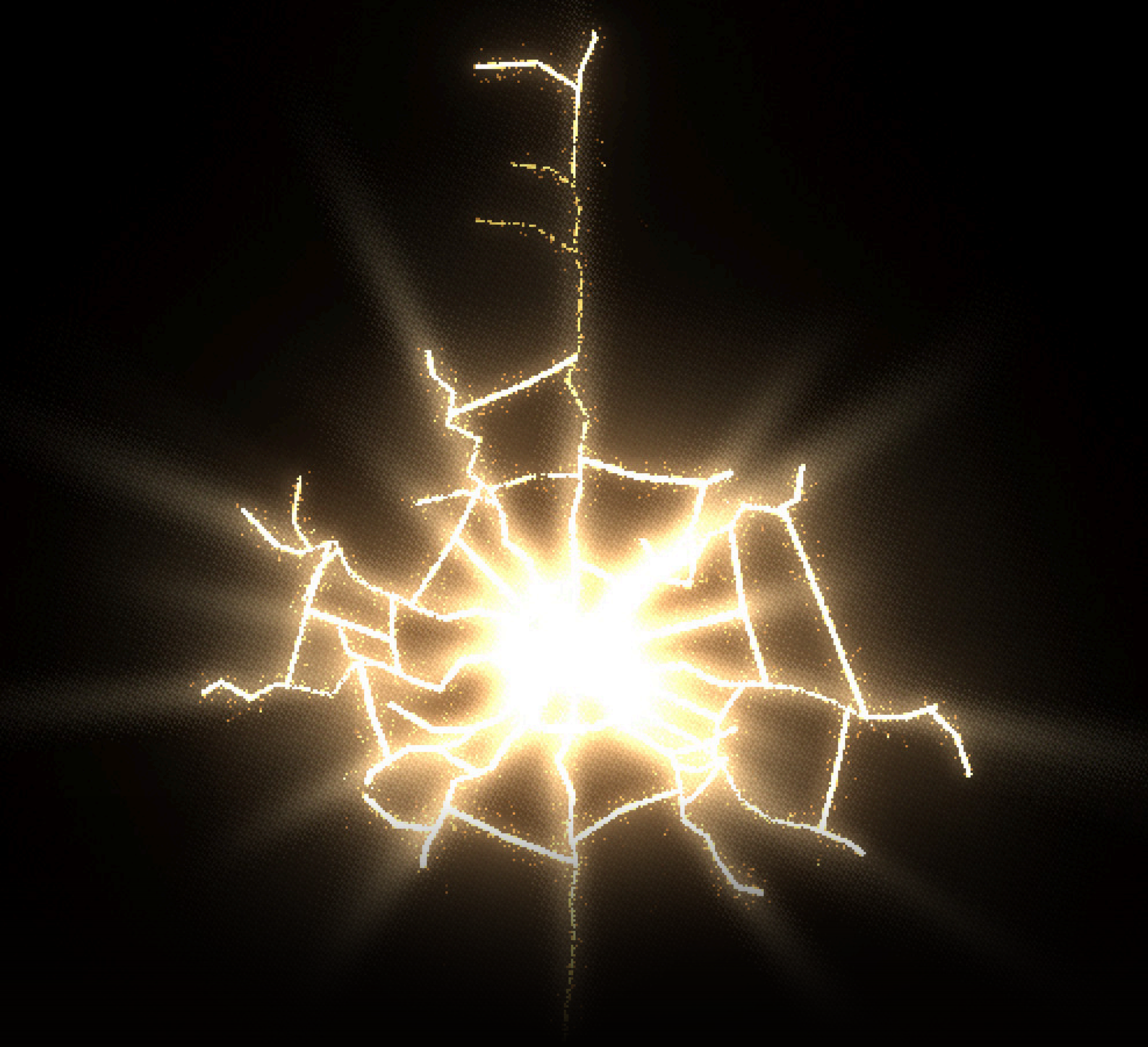
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PART ONE

Start here

Timecode out of your computer in a few minutes. Then a tour of the window, so you know where everything is before the chapters that follow.

1 Quick start 7

2 The window at a glance 11



CHAPTER 1

Quick start

Ten steps from the download to timecode leaving your computer. You need a Windows PC, one audio file, and somewhere for the sound to go.

What Synphonos does

Synphonos plays a song and sends timecode with it. Timecode is a clock that says where in the song you are: hours, minutes, seconds and frames.

A lighting console that listens to that clock fires its cues at the same moment every time the song plays. Video, pyro and other playback can follow the same clock.

The timecode is worked out from the audio itself, sample by sample. It cannot drift away from the song.

Synphonos sends it in two forms at once. You can use either, or both.

	LTC	MTC
What it is	Timecode as sound, on one output channel of your audio interface.	Timecode as MIDI messages, through a MIDI port.
You need	A spare output channel and an audio cable to the console's timecode input.	A MIDI interface, or on one PC a virtual MIDI port (page 23).
More	page 22	page 22

Ten steps to timecode

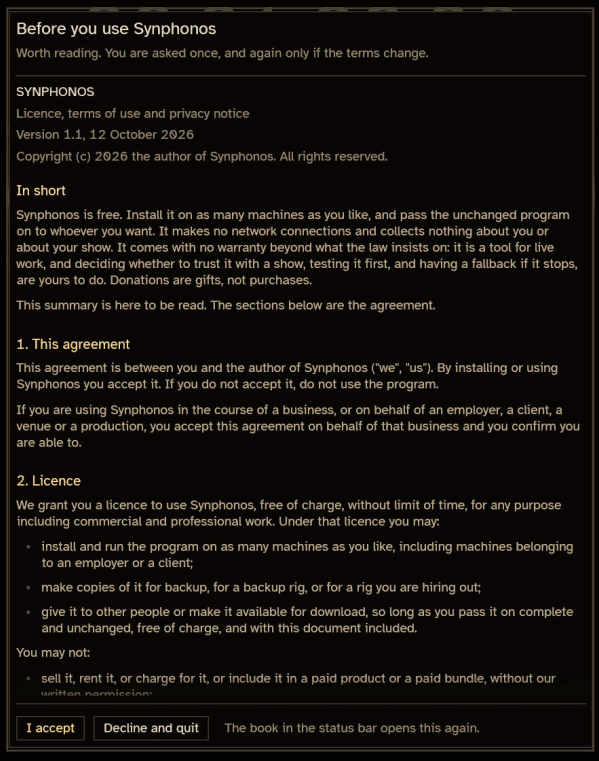
1 Unzip the download into a folder of its own. It holds synphonos.exe, this manual and the licence. There is nothing to install.

2 Double-click synphonos.exe. The program is not code-signed yet, so Windows may warn you the first time. See page 101.

3 **Click anywhere to begin.** The start-up animation plays, then waits with Click to begin under it. A click burns it away into the window.



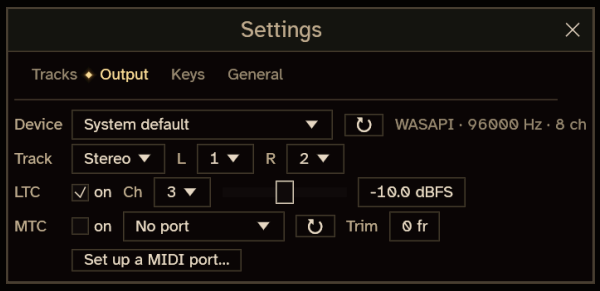
4 **The first time only, read and accept the terms.** Press I accept. You are asked once, and again only if a later version changes the terms. The book in the bottom right corner opens the text again.



5 **Drop an audio file on the window.** Or press Load… and choose it. Its waveform appears, and its name on the line under the readout.



6 **Open the output settings.** Click the cog in the bottom right corner, then **Output**.



7 **Choose where the sound goes.** Pick your audio interface under **Device**. Leave **LTC** ticked to send timecode as sound.

On a two-channel device the song plays on channel 1 and LTC on channel 2. On a device with more channels the song plays on 1 and 2 and LTC on 3.

8 **For MTC, tick MTC on and choose a port.** No port in the list? Press **Set up a MIDI port...** for the steps. Skip this if you only want LTC.

9 **Set the frame rate and the start.** **Rate** must match the console's. **Starts at** is the timecode at the first sample of the song: `01:00:00:00` is a common choice. Press Enter after typing it.



10 Press Play, or Space. The readout turns gold and runs. Timecode is leaving your computer.



> LTC is loud
>
> LTC is a harsh buzzing sound. Keep its channel out of the PA and out of your headphones. Plug it only into a timecode input. To listen to a song without it, see page 22.

Check that it arrives

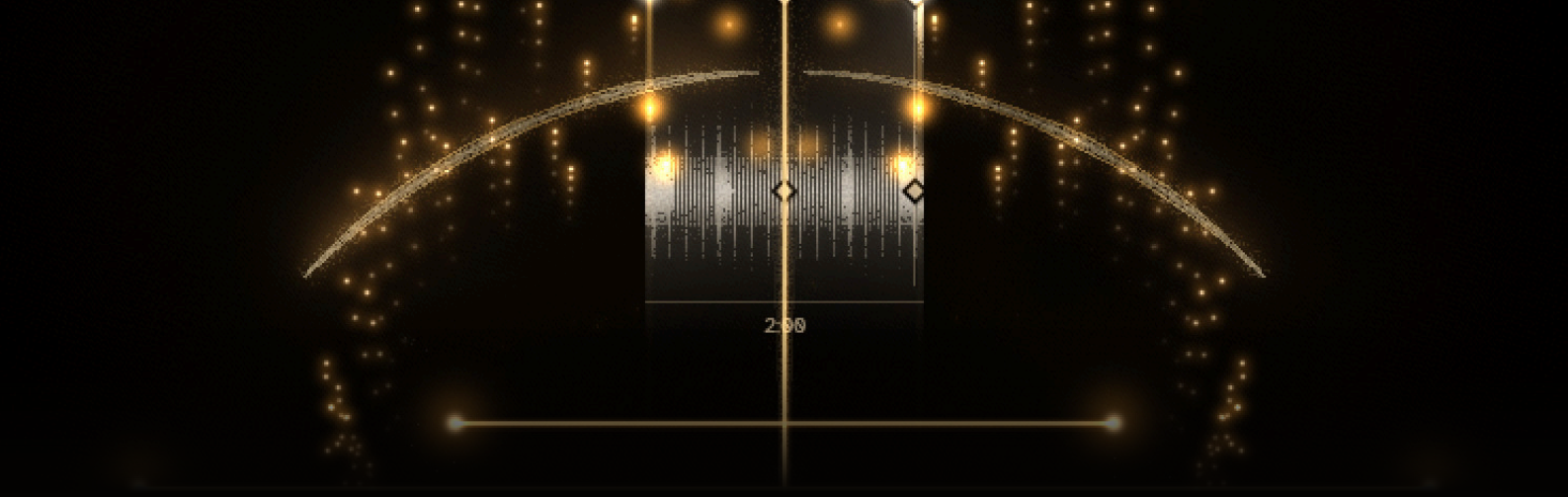
Look at the receiving end, not at Synphonos. The console's timecode display should show the same numbers as the readout, and run when you press Play.

- **Nothing arrives by LTC:** check the cable goes from the LTC channel's output to the console's timecode input, and that **LTC** is ticked. Then see page 116.
- **Nothing arrives by MTC:** look at the second diamond in the bottom left corner. Green means a port is open. Red means MTC is on with no port. See page 116.
- **The numbers arrive but are wrong:** the frame rate on the console must be the same as **Rate**. See page 106.

How each console is told where its timecode comes from is in the console's own manual. What Synphonos can tell you about grandMA2 and grandMA3 is in page 73 and page 78.

Where to go next

You want to	Read
Know what everything in the window is	page 11
Play several stems as one song	page 17
Run a whole set	page 31
Start and stop from the console's keyboard	page 35
Make sure nothing changes during the show	page 38
Place cues and export them to a console	page 44



CHAPTER 2

The window at a glance

One window does everything. This chapter names its parts, so the rest of the manual can point at them.

Two modes

The switch Show | Program beside the file line picks the mode. The window opens in the mode it was closed in.

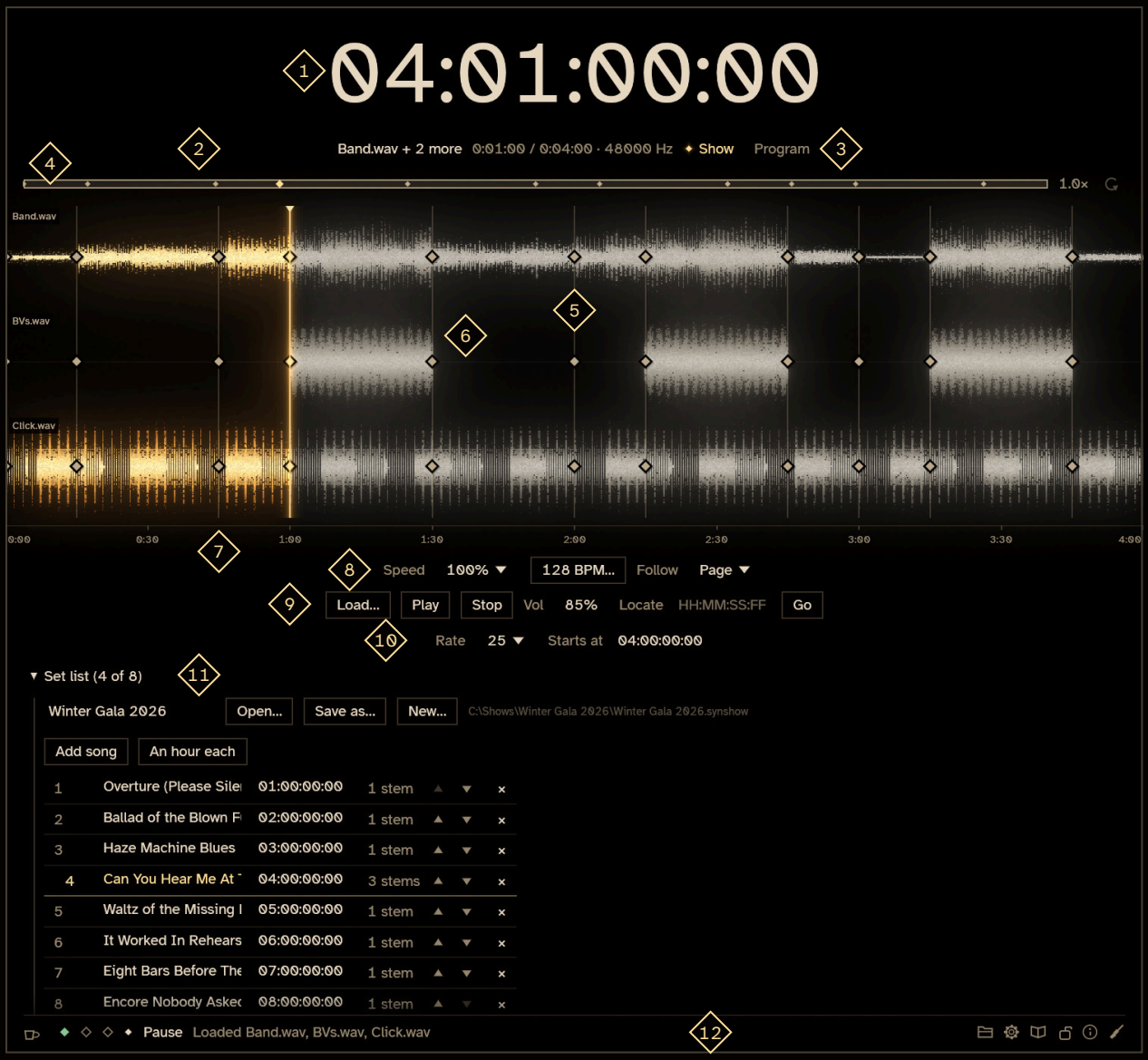
Mode	What it is for
Show	Running the show: the set list, your own marks to find your way, the transport.
Program	Placing the marks a console fires as cues, in sequences, and exporting them.

Both modes share the readout, the stems, the transport and the status bar. Timecode goes out the same way in both.

What the window remembers

- ◇ Its size and place, and whether it was maximised. If its screen is gone, it opens on one that is there.
- ◇ The mode, Show or Program.
- ◇ The show, the loaded song and the playhead.
- ◇ Every setting. There is no Save button for settings: a change is saved within a second.

Show mode



Show mode, with a song of three stems loaded and paused one minute in.

	Part	What it is
1	Readout	The timecode at the playhead. Gold while playing, ivory when paused, dim when stopped.
2	File line	The first stem's file, how many more there are, the position, the song's length and the file's sample rate.
3	Show | Program	The mode switch.
4	Zoom bar	The part of the song in view. Drag it, drag its ends to zoom, double-click for the whole song. page 28
5	Stems	Each audio file of the song as a waveform. Gold is what has played. Click to move the playhead.
6	Mark	A diamond on each stem at each of your marks. page 29

	Part	What it is
7	Ruler	Minutes and seconds from the start of the song.
8	Speed, Set BPM, Follow	Playback speed, the song's tempo, and what a zoomed-in view does while playing.
9	Transport	Load..., Play, Stop, Vol, Locate and Go. page 26
10	Rate, Starts at	The frame rate, and the timecode at the song's first sample.
11	Set list, Marks	Two sections that fold open. Marks is under the set list, below the foot of this picture. page 31 and page 29
12	Status bar	Indicators, the transport's state, the latest message, and six small buttons.

The status bar



The left end: the coffee cup, three indicators, the transport's state and the latest message.

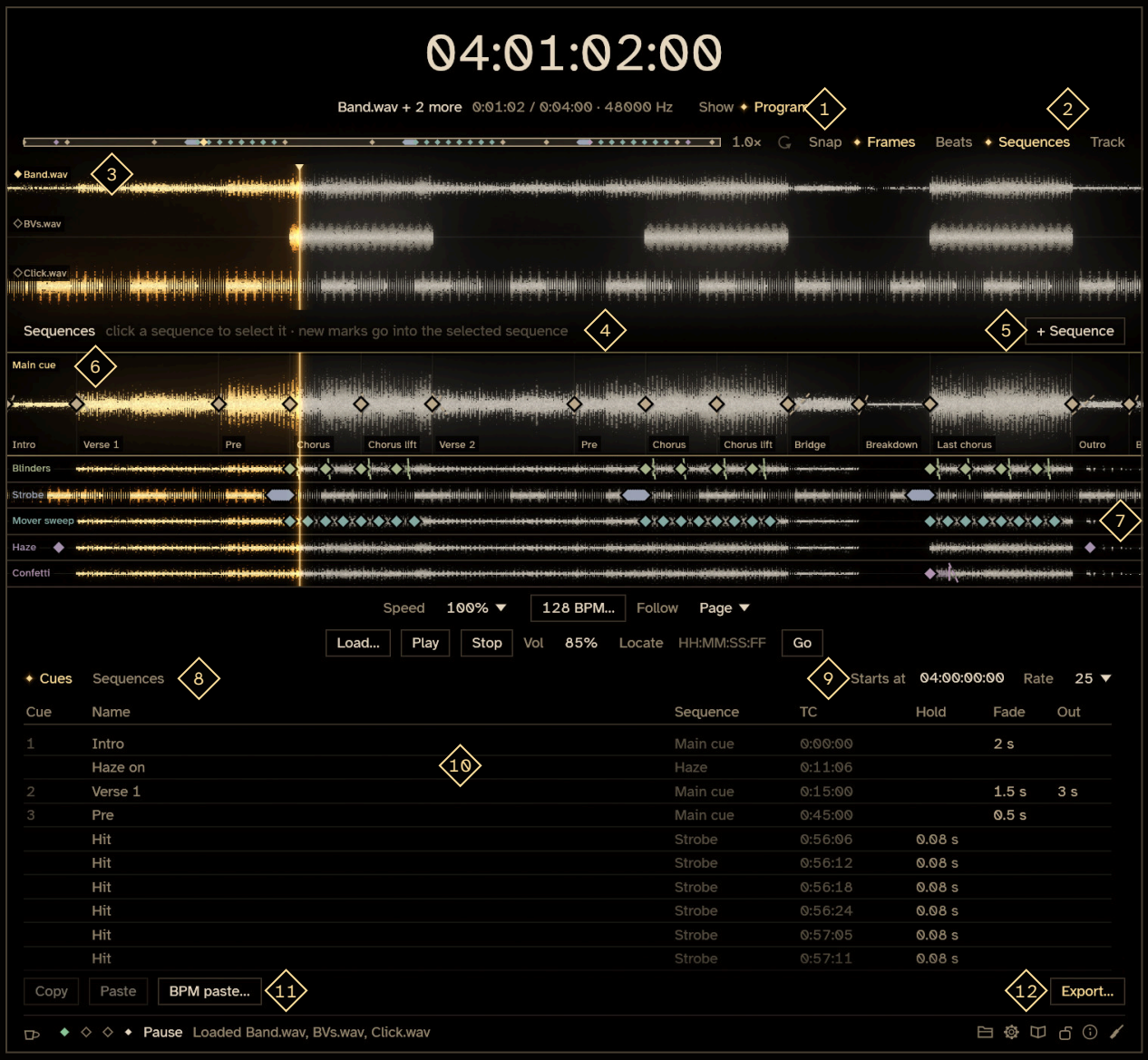


The right end: six small buttons.

Hold the pointer over anything in the status bar to read what it is, or what state it is in. The table lists its parts from left to right.

	Part	What it tells you, or opens
1	Coffee cup	Opens the page where you can buy the author a coffee. Synphonos is free.
2	Audio	Green: an audio device is open. Red: no audio device.
3	MTC	Outlined: MTC is off. Green: sending to a port, and pulsing while timecode goes out. Red: MTC is on but no MIDI port is open. Click the red one for the steps.
4	Keys	Outlined: no keys work from other programs. Green: they do, and the hover text lists them. Red: a key could not be taken. Rose: a key is being recorded.
5	Transport	Play in gold, Pause in ivory, or Stop. A speed other than 100% is shown after it.
6	Message	The latest message. Grey is information, rose is a warning, red is an error.
7	Folder	Files: where the show and the settings are kept. page 33
8	Cog	Settings: tracks, output, keys, general. page 87
9	Book	The licence, terms and privacy notice.
10	Padlock	Locks and unlocks the show. Rose while locked. page 38
11	i	About: version, file locations, licences. page 88
12	Brush	Appearance: colours, glow, scale, the start-up animation. page 40

Program mode



Program mode at the medium size. The selected sequence, Main cue, is open.

	Part	What it is
1	Snap	Frames or Beats: where a dragged or double-clicked mark lands. page 55
2	Sequences | Track	Sequence rows under the stems, or the marks as flags over bigger stems. page 51
3	Stem picker	The diamond before a stem's name. The filled one is drawn behind the selected sequence.
4	Sequences row	Names what is below it. + Sequence at its right adds one.
5	+ Sequence	A new sequence at the bottom of the list.
6	Open sequence	The selected sequence, between two gold lines, with its marks named along the foot.
7	Other sequences	One thin row each. Click one to select it.

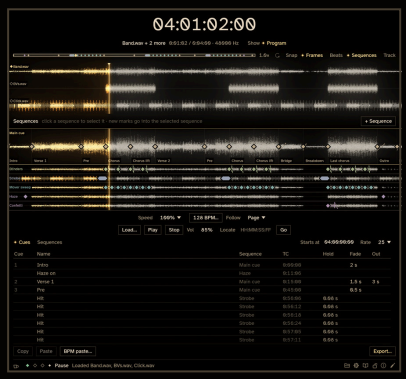
	Part	What it is
8	Cues | Sequences	The cue table, or the list of sequences. page 49 and page 45
9	Starts at, Rate	The same two fields as in Show mode.
10	Cue table	Every mark of the song in time order. What has played is dimmed.
11	Copy, Paste, BPM paste…	page 56 and page 56
12	Export…	Writes the song out for a console. page 62

Three sizes

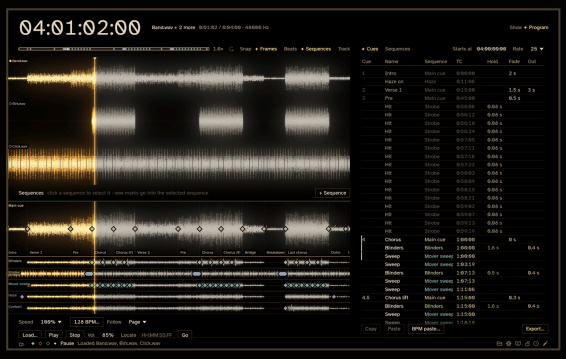
The layout follows the window's width. Narrow windows fold things away. Wide ones spread them out.



Small: under 600 points wide.



Medium.



Large: 1100 points or more.

Size	Show mode	Program mode
Small	A smaller readout.	One transport row. Load…, Vol, Follow, Rate and Starts at move into the … menu. The cue table shows Cue and Name, and a triangle opens the other columns.
Medium	The reference layout.	The reference layout.
Large	The biggest readout. Speed, transport, rate and start are one line. Show | Program sits in the top right corner.	Readout at the top left with the file line beside it. Stems and sequences on the left, the cue table or sequence list on the right.

A point is one pixel at 100% Scale (page 40). The window can be no smaller than 440 by 400 points.



PART TWO

Running a show

What a playback tech does: load the songs, send them and their timecode where they must go, build the set, and keep it safe while it runs.

3 Songs and stems 17

4 Sending timecode 21

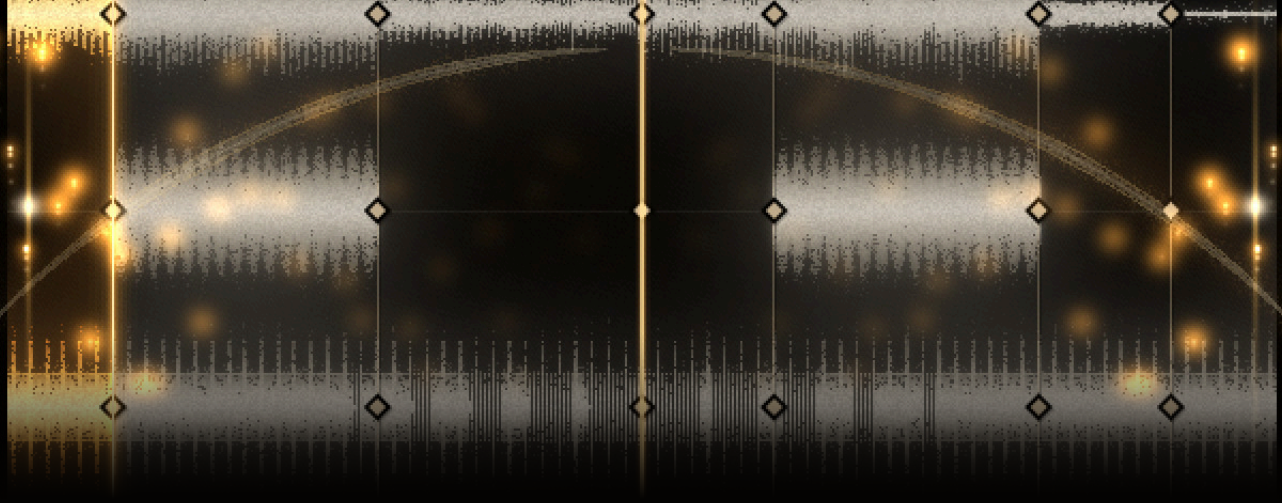
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7 Keys 35

8 Locking the show 38

9 The look 40



CHAPTER 3

Songs and stems

A song is up to eight audio files that play together. Synphonos calls each file a stem. This chapter loads them, mixes them and sends them to the right outputs.

Loading a song

1 Drop one or more audio files on the window. While you hold them over it, the window says Drop to load. They are added to the loaded song and play together.



2 Or press Load... and choose them. Load... replaces the song's stems with the files you choose. Use it to start a song again from scratch.

3 Or add them in Settings. Click the cog, then Tracks, then Add.... This adds to the song, as dropping does.

The first stem gives the song its name, if the song has none yet. The file line shows the first stem's file and how many more there are: 04 Can You Hear Me At The Back (Band).wav + 2 more.

A file already in the song is ignored if you drop it again. A song holds at most eight stems.

> Stems, tracks
>
> The window says stem on the waveforms and in the set list, and track in the Settings box. They are the same thing: one audio file of the song.

Which files it plays

The file picker offers these: wav wave aif aiff flac mp3 m4a mp4 aac ogg oga mkv mka webm.

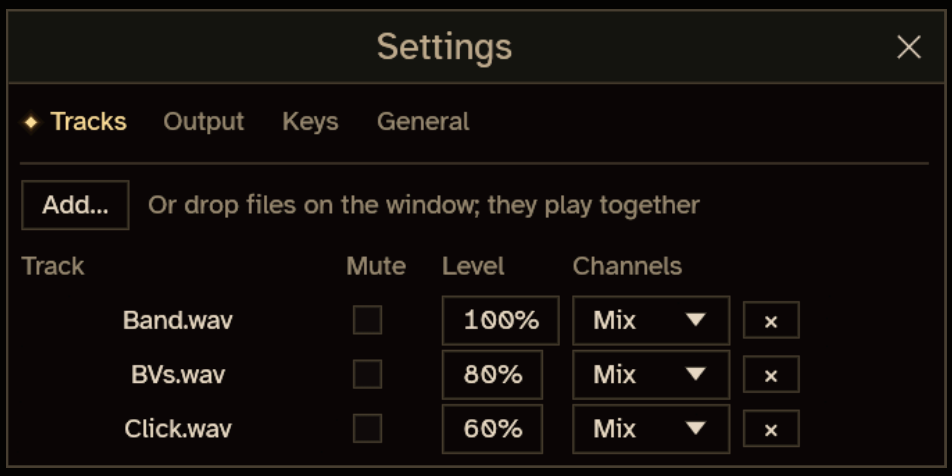
Each file is checked as it loads: Synphonos decodes the start of it before accepting it. A file it cannot play is refused, and the status bar says why: Cannot load and the file's name and the reason.

Files of any sample rate from 8 kHz to 768 kHz can be mixed in one song. Each is converted to the audio device's rate as it plays. A file whose header claims a rate outside that range is refused.

The song is as long as its longest stem. A shorter stem is simply silent after it ends.

Mixing the stems

Click the cog in the bottom right corner and choose Tracks.



Settings, Tracks: one row for each stem of the loaded song.

Column	What it does
Track	The stem's file name. Hold the pointer over it for the whole name.
Mute	Tick to silence the stem. It stays loaded and in step.
Level	The stem's level in the mix, 0% to 100%. Drag it, or double-click and type.
Channels	Where the stem is heard. Mix sends it to the channels on the Track row of the Output tab, with every other stem set to Mix. A pair such as 3+4 sends it to those two outputs alone.
×	Removes the stem from the song. The file is not touched.

Vol on the transport row is the level of all the stems together. It does not change LTC, which has a level of its own.

Levels, mutes and channels still work while the show is locked. Adding, replacing and removing stems do not.

Sending stems to different outputs

A click track must reach the band and never the PA. Give it outputs of its own.

1. Open Settings, Tracks.
2. In the click stem's Channels, choose a pair that the PA does not use, such as 3+4.
3. Leave the other stems on Mix.

The pairs offered are the ones your audio device has. A stem can share channels with another stem. No stem can use the LTC channel: timecode needs a channel to itself, and Synphonos refuses the change and says so.

If you change to a device with fewer channels, stems whose channels are gone go back to Mix. The status bar says channels reset for track and which.

Sizing the stems on screen

- One stem: hold Alt and scroll over it, or drag the thin line under it. Each stem can be 16 to 400 points tall.
- All stems: the brush in the corner, then Waveform. This also clears any stems sized on their own.
- When the stems need more room than they have, they scroll on their own and the rest of the window stays put.

When a file is missing

A show remembers where each stem is in two ways: its full path, and its path from the show file. The second is tried first. So a show folder with its audio inside it can be copied to another drive or another PC and still finds its audio.

If a stem cannot be found when a show opens, the status bar says Opened and the show's name and how many files are missing. When the song loads, it plays with the stems that were found.

The show keeps a stem it could not open, with its level, its mute and its channels, in its place among the others. Nothing is lost by opening a show before its audio is copied across, or with the audio drive on another letter.



The Tracks tab with one stem's file missing.

1 See which. Settings, Tracks lists the stem under the ones that loaded, in rose, as not found. Hold the pointer over its name for the full path it was looked for at.

2 Put the file back where it was, then press Look again under the list. The song loads again from its start, and the stem comes back where it was, at its level. Opening the show again, or coming back to the song from another, looks again too.

3 Or take it out of the show. Press × on its row if the file is gone for good.

Load... replaces all of a song's stems, the missing ones too. Add... and × on another stem leave them in the show.

Files a show may not name

A show file is something people send each other, so Synphonos does not open whatever one names. Audio on another computer (a path beginning \\) is opened only for a show that is itself kept on that same shared folder, and a path that names a device rather than a file is never opened. Such a stem is left out, and the status bar says how many were: left out: this show names files on another computer or on a device. If the files are yours, add them again with Add....



CHAPTER 4

Sending timecode

Timecode leaves Synphonos as sound, as MIDI, or both. This chapter sets up each, and the two numbers that must match the receiving end: the frame rate and the start.

The Output tab

Click the cog in the bottom right corner and choose Output.



Settings, Output: the audio device, where the stems go, LTC and MTC.

Row	What it sets
Device	The audio device. System default follows Windows. The ↻ button looks for devices again and reopens the one chosen. The words after it are the device's driver type, sample rate and number of channels.
Track	Where every stem goes unless it has channels of its own: Stereo on two channels, or Mono on one.
LTC	Timecode as sound: on or off, its channel, and its level.
MTC	Timecode as MIDI: on or off, the port, ↻ to look for ports again, and Trim.

If the device you chose is not there when Synphonos opens it, the system default is opened instead. The status bar says audio device not found; using default with both names, and the Device row shows your choice as (not available). Check this row before a show: the default device may be the wrong speakers.

LTC: timecode as sound

LTC is an audio signal. It needs one output channel that nothing else uses, and a cable from that output to the timecode input of whatever listens.

Setting	What it does
on	Sends LTC while the song plays. Ticked when Synphonos is new.
Ch	The output channel LTC goes on. No stem may use it.
Level	How loud, from -20 to 0 dBFS in steps of 0.5. It starts at -10 dBFS.

Where it starts. On a device with two channels, the stems play in mono on channel 1 and LTC is on channel 2. With three or more, the stems are on 1 and 2 and LTC is on 3.

How loud. Start at -10 dBFS. If the console loses lock, raise it. If LTC bleeds into nearby audio channels, lower it. Vol does not change it.

When it is there. LTC is sent only while the song plays. Paused or stopped, the LTC channel is silent.

If there is no free channel. If every channel is taken, or the device has only one, Synphonos turns LTC off and says LTC turned off and the device's name in the status bar.

Hearing a song without the timecode

On headphones or laptop speakers LTC is a loud buzz in one ear. To listen without it:

1. Open Settings, Output.
2. Untick on in the LTC row.
3. In the Track row choose Stereo, with L 1 and R 2.

Tick LTC again before the show, and move the stems off its channel first.

MTC: timecode as MIDI

MTC goes through a MIDI port: a hardware MIDI interface, or a virtual port to another program on the same PC.

Setting	What it does
on	Sends MTC. Off when Synphonos is new.
Port	The MIDI port. No port sends nowhere.
↻	Looks for MIDI ports again. Press it after plugging in an interface.
Trim	Adds whole frames to the timecode MTC carries, from -8 to +8. See below.

The second diamond in the status bar shows the state: outlined when MTC is off, green when a port is open, red when MTC is on with no port. Hold the pointer over it to read which port.

While the song plays, Synphonos sends quarter-frame messages, four to a frame. When you pause, stop or move the playhead, it sends one full-frame message, so the receiver shows the new time at once.

Trim

Trim makes up for delay between Synphonos and the receiver. At +2, MTC reads two frames ahead of the readout, so the receiver acts two frames sooner. At -2 it acts two frames later.

Trim changes MTC only. LTC, the readout and exported cue times stay as they are. Leave it at 0 unless you have measured a steady delay.

A MIDI port on Windows

Windows has no virtual MIDI ports of its own. To send MTC to another program on the same PC, such as grandMA onPC, you need one from loopMIDI or a similar driver. A hardware MIDI interface needs none of this: its ports are already in the list.

Press Set up a MIDI port… under the MTC row, or click the red diamond, for these steps in the window:



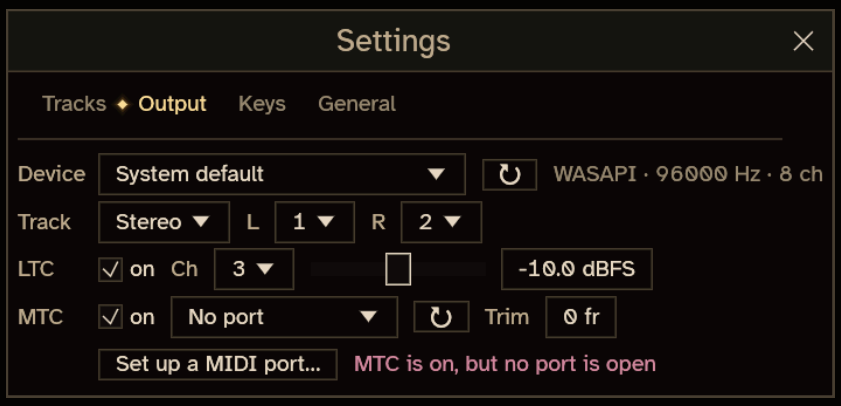
Setting up a MIDI port: the program's own steps.

1. Download and install loopMIDI. It is free, from Tobias Erichsen. The window has a link to the page.

2 Open loopMIDI, type a name into the box at the bottom, and press +. The port appears in its list and stays there, including after a restart.

3 Back in Synphonos, press ↻ beside the port list, then choose the new port.

4 In the program that is to receive timecode, choose the same port as its MIDI timecode input.



MTC on with no port chosen. The row says so, and the second diamond in the status bar is red.

The frame rate

Rate is the number of frames in a second of timecode. It must be the same in Synphonos and in everything that listens. Choose the rate your console and the rest of the rig are set to.

Rate	What it is
24	24 frames a second.
25	25 frames a second. A new show starts at 25.
29.97 NDF	29.97 frames a second, counted 0 to 29 without skipping. Over MTC it is announced as 30, which is what receivers expect.
29.97 DF	29.97 frames a second with drop-frame counting. The export to a console refuses it: see page 107.
30	30 frames a second.

There is one rate for the whole show. It cannot be changed while a song is playing or while the show is locked.

Changing the rate does not move your marks. A mark is stored as a time in the song, so it stays on the same moment of the music. page 106 explains the rates in full.

Where a song starts

Starts at is the timecode at the first sample of the song. Type it as HH:MM:SS:FF and press Enter.



Rate and Starts at, under the transport in Show mode.

Give every song a start of its own, an hour apart: 01:00:00:00, 02:00:00:00 and so on. Then no two songs share a timecode, and a console can tell from the time alone which song is playing. An hour each in the set list does this for the whole show (page 32).

You can also type a time with units: 7h10m, 1h, 90m. It becomes HH:MM:SS:FF when you press Enter. See page 50.

When the speed is not 100%

At 50% speed the song plays at half speed and an octave lower, and timecode runs at half speed with it. A cue at 01:00:14:00 still fires on the same beat of the music. This is what makes slow speeds useful for programming.

The status bar shows the speed in rose whenever it is not 100%, so it is not left on by mistake.

Checking the output without a console

- ◇ The status diamonds tell you a device is open and a MIDI port is open. They do not tell you a cable is plugged in.
- ◇ Any timecode reader will do: a meter, a recorder, or another program that shows incoming LTC or MTC.
- ◇ An LTC test file. From a command prompt, synphonos --render-ltc test.wav 01:00:00:00 25 60 writes one minute of LTC from that time at 25 frames. Play it into the input you are testing. See page 105.
- ◇ The self-test. synphonos --selftest checks the timecode maths against known-good data and prints the result.

CHAPTER 5

Playing and finding your way

Start, stop, jump, slow down, zoom in. Everything in this chapter works the same in Show mode and Program mode, and all of it has keys.

Play, pause and stop



The transport row. While a song plays, Play reads Pause and is lit.

Button	Key	What it does
Play	Space	Plays from the playhead. The place you pressed it becomes the play start, marked by a small diamond on the top edge of the stems.
Pause	Space	Stops where it is. The readout turns ivory.
Stop	Esc	Stops and goes back to the start of the song. The readout goes dim.

The readout tells you the state at a glance, and so does the word in the status bar.



Playing: gold, glowing.



Paused: ivory.



Stopped: dim.

At the end of the song Synphonos stops on the last frame and the status bar says End of file. Pressing Play there starts the song again from the top.

Pause that goes back to where you started

For rehearsing one section over and over, open Settings, General and tick Pause returns to play start. Each pause then puts the playhead back where you last pressed Play.

Backspace goes back to the play start at any time, with or without that tick.

Moving the playhead

To	Do this
Go anywhere	Click or drag in the stems. The timecode under the pointer is shown as you move over them.
Jump back or forward	← and →. Each press moves by the Jump time, 5 seconds at first. Hold the key to repeat.
Step one frame	, back and . forward. Hold to repeat.
Go to the start	Home
Go back to the play start	Backspace
Go to a mark	Page Up and Page Down for the mark before and after. Or Go in the Marks list.
Go to a timecode	Locate, below.

Moving the playhead while a song plays does not stop it: playback jumps and carries on from the new place.

Set how far a jump goes in Settings, General, Jump: from 0.1 to 600 seconds. A jump is counted in seconds of the song, so at half speed a 5 second jump still moves 5 seconds of music.

Locate

Type a timecode into Locate and press Enter or Go.



A time typed with units. On Enter it becomes 04:01:30:00 and the playhead goes there.

Type it in full, 04:01:30:00, or with units, 4h1m30s. A timecode outside the song is refused, and the status bar says which times the song covers.

Speed

Speed plays the song slower or faster: 10%, 25%, 50%, 75%, 100%, 125%, 150% or 200%. The list scrolls: 200% is below 150%.

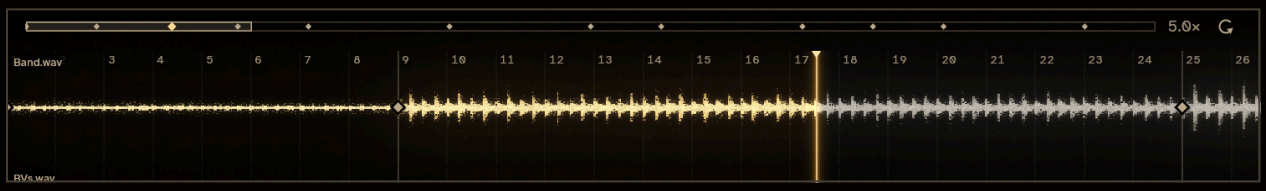


The pitch changes with the speed, as on a tape machine. Timecode keeps to the song: every frame still goes out on the same moment of the music, only slower or faster.

A speed your audio device cannot play exactly at its sample rate is greyed out.

The status bar shows any speed other than 100% in rose, so it is not left on by mistake.

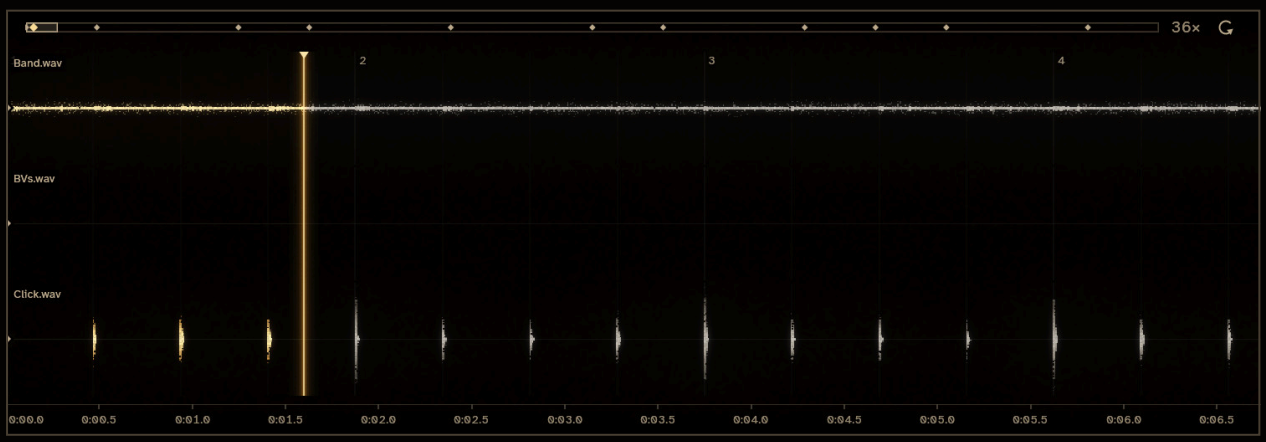
Zooming



The zoom bar, zoomed in. The outlined thumb is the part of the song in view, the gold diamond the playhead. The zoom level and the whole-song button are at the right.

To	Do this
Zoom in or out	Hold Ctrl and scroll over the stems. The zoom stays on the pointer. Or drag either end of the thumb in the zoom bar.
Move along the song	Hold Shift and scroll. Or drag the thumb. Or click beside it to jump there.
See the whole song	Double-click the zoom bar, or press the circling arrow at its right.

Zoomed in far enough, frame boundaries appear as small ticks along the top and bottom edges of the stems, longer on whole seconds. At the deepest zoom one frame is 24 points wide.



Zoomed in to single frames. Each tick on the edge is a frame. The longer ones are whole seconds.

Follow

Follow says what a zoomed-in view does while the song plays.

Follow	What the view does
Page	When the playhead leaves the view, the view jumps a screen ahead.
Smooth	The view scrolls, keeping the playhead in the middle.
Stay put	The view never moves by itself.

When you move the view yourself, following waits. It starts again at the next Play, or when the whole song is in view.

Marks in Show mode

A mark is a named place in a song: Verse 2, Guitar solo. Show mode's marks are for you, to find your way round while the show runs. They are not cues, and nothing about them is sent to a console.



The Marks list. The mark the playhead is at is gold. Marks already passed are dimmed.

Control	What it does
Add at playhead	Adds a mark where the playhead is. M does the same. It is named Mark 1, Mark 2 and so on.
The name	Click it and type to rename the mark.
The timecode	Where the mark is.
Go	Moves the playhead to the mark.
Set	Moves the mark to the playhead.
The key	A key that goes to this mark. See page 37.
Delete	Removes the mark.

In the stems each mark is a diamond in the middle of every stem, with a faint line through it.

Marks belong to their song and are saved in the show file. A mark is stored as a time in the song, so changing the frame rate, the speed or Starts at never moves it off the music.

> Two kinds of mark
>
> Show mode's marks and Program mode's marks are separate. Each mode shows only its own. Program mode's marks sit in sequences and are exported to a console (page 44).

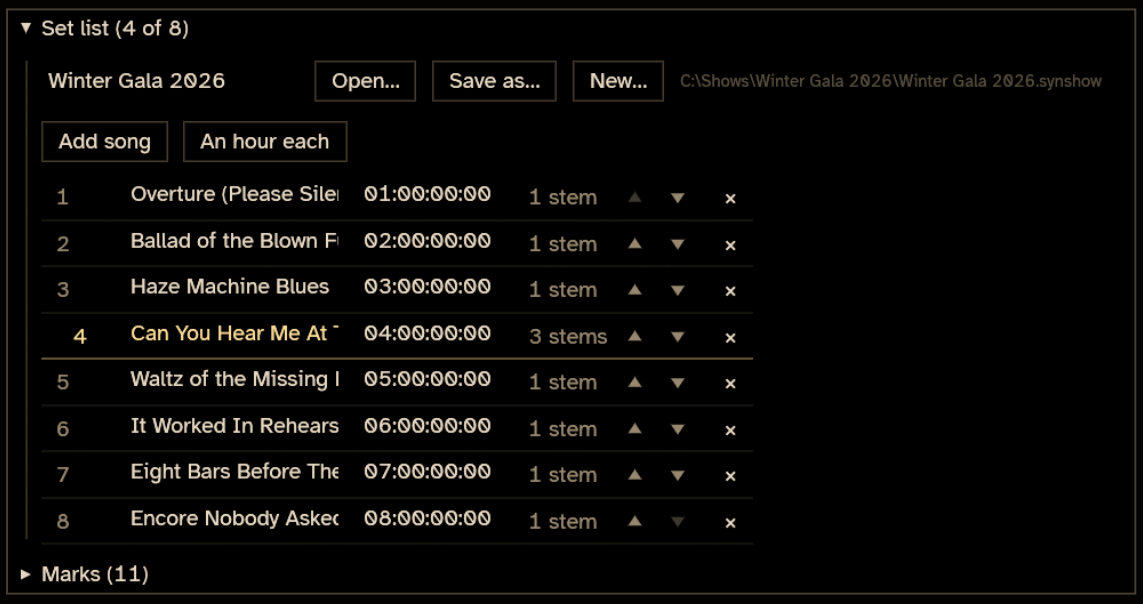
CHAPTER 6

The set list and show files

A show is a list of songs in running order, each with its stems, its start and its marks. It lives in one file, which you can copy to another machine.

The set list

In Show mode, click Set list to fold it open. Its title says which song is loaded: Set list (4 of 8).



The set list. The loaded song is gold.

Control	What it does
The number	Click it to load that song.
The name	Click and type to rename the song. A song with no name shows its first stem's file name.
The start	The timecode the song starts at. Type it and press Enter.
1 stem, 3 stems	How many stems the song has.

Control	What it does
▲▼	Move the song up or down the running order.
×	Removes the song from the show. The audio files are not touched.
Add song	Adds an empty song after the loaded one, and loads it. Drop its audio on the window.
An hour each	Puts song 1 at 01:00:00:00, song 2 at 02:00:00:00 and so on.

A show holds up to 200 songs. It always has at least one: removing the last song empties it instead.

Changing song

Click a song's number. Synphonos pauses, loads the song's stems and start, and waits at the song's first frame. Press Play.

Next song and Previous song can be given keys (page 35), so a set can be run from the keyboard, or from the console's keyboard. They stop at the ends of the list: the last song does not wrap round to the first.

An hour each

Giving each song its own hour is the usual way to keep one song's cues from matching another's. An hour each types all the starts for you.

It works for up to 23 songs, and not while a song is playing or the show is locked. Any song's start can still be typed by hand afterwards.

The show file

A show is saved in one file ending .synshow. You never press Save: every change is written within a second of being made.

In the show file	In the settings, on the machine
The show's name and frame rate	The audio device and where LTC and the stems go by default
The songs, in order, and which is loaded	The MIDI port and Trim
Each song's stems, levels, mutes and channels	Keys
Each song's start, tempo and marks	The look, and the window's size and place
The sequences, and each song's export numbers	The lock, the mode, the playhead, recent shows

The split is deliberate. A backup machine has different audio hardware. The show carries what belongs to the show and leaves the machine's own settings alone.

Until you save a show somewhere, it lives beside the settings as default.synshow.

The show line

The first line of the set list is the show itself.

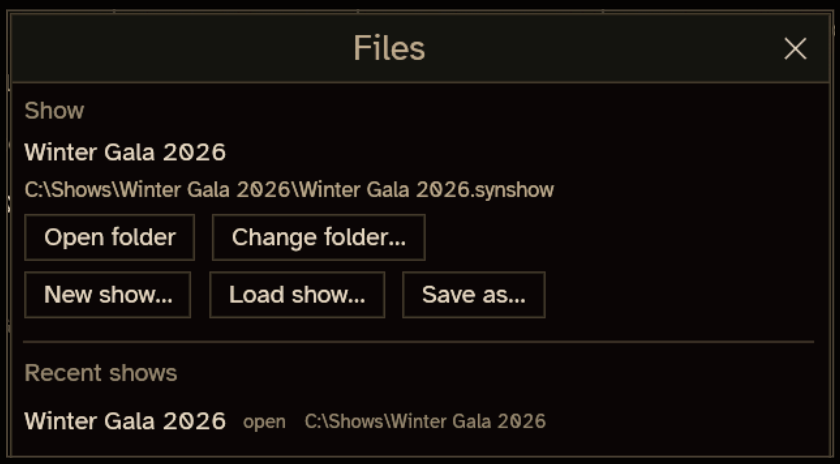


The show line: its name, three buttons, and the file it is saved in.

Control	What it does
The name	The show's name. Click and type.
Open...	Opens another show file.
Save as...	Saves this show as another file and carries on working in that one. Use it to put a show in a folder of its own.
New...	Starts an empty show. It asks for a file first, so the show you were in stays saved where it was.

The Files window

The folder in the bottom right corner opens Files, in both modes.



The top of the Files window: the show, then the shows used lately. Below these it gives the folder the settings are in, with its own buttons.

Control	What it does
Open folder (Show)	Opens the show's folder in Explorer, with the file picked out.
Change folder... (Show)	Moves the show file to another folder and carries on working there.
New show...	The same as New... on the show line.
Load show...	The same as Open....
Save as...	The same as on the show line.

Control	What it does
Recent shows	The last eight shows opened, started or saved. Click one to load it. × takes it off the list and leaves the file alone. A show whose file has gone is greyed.
Open folder (Settings)	Opens the folder that holds settings.toml.
Change folder... (Settings)	Keeps the settings in another folder, such as one that is backed up. The crash log moves with them.
Use default	Shown once the settings have been moved. Puts them back in the default folder.

Anything that would replace a file that is already there asks first.

While the show is locked, New show..., Load show... and the recent list are greyed out. Moving the files is not.

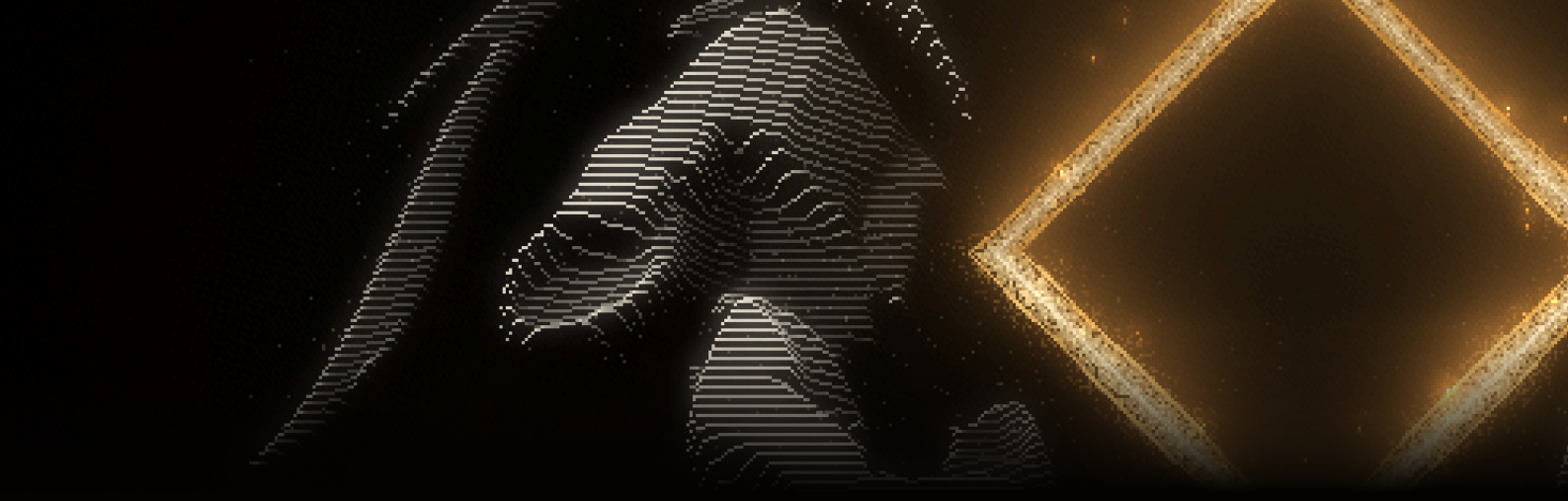
If the settings were moved to a folder that is missing when Synphonos starts, such as a drive that is not plugged in, the default folder is used for that run, and the status bar and this window say so.

Taking a show to another machine

1. Put the show and its audio in one folder. Use Save as... to save the show into a folder, and keep the audio in that folder or a folder inside it.
2. Copy the whole folder to the other machine, anywhere.
3. Open the show there with Load show... or Open.... It finds its audio by its place beside the show file.
4. Set up that machine's own outputs in Settings, Output: its audio device, LTC channel and MIDI port. These are never carried in the show.
5. Check the keys. Keys belong to the machine too, except a mark's key, which comes with the show. If any of a show's mark keys work from other programs here, the status bar says how many as it opens. See page 35.

Audio is found beside the show when it is in the show's folder, in a folder inside it, or up to two folders above it. Audio on a different drive is remembered by its full path only, and must be at that path on the other machine.

> Use the same version on every machine
>
> Synphonos 1.0 cannot open a show saved by 1.1: it says the file is not readable and runs without it. Update every machine to 1.1 first, the backup included. See page 104.



CHAPTER 7

Keys

Every transport action has a key. Each can have two, and any of them can be made to work while another program has the keyboard: a console's onPC software, for one.

The keys Synphonos starts with

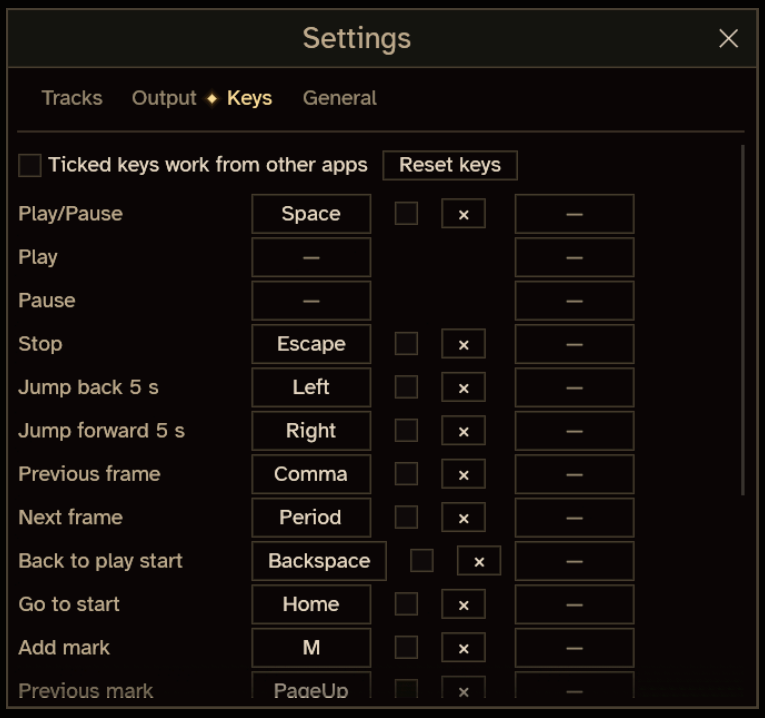
Key	What it does
Space	Play or pause
Esc	Stop
← →	Jump back, jump forward
, .	Previous frame, next frame
Backspace	Back to the play start
Home	Go to the start
M	Add a mark
Page Up Page Down	Previous mark, next mark

These have no key until you give them one: Play, Pause, Speed down, Speed up, Return on pause on/off, Previous song, Next song, and Lock the show on/off.

Program mode adds editing keys of its own, which cannot be changed (page 96). Every key, in one table, is on page 95.

Changing a key

Click the cog and choose Keys.



Settings, Keys. Each action has two places for a key. A dash is an empty place.

1 Click the key's button. It reads Press a key.

2 Press the key you want, with any of Ctrl, Alt and Shift held. Any key can be used, Esc included. To cancel, click anywhere.

3 To remove a key, press the × after it.

A key belongs to one thing only. If you give an action a key that something else had, it is taken from there, and the status bar says what it was taken from.

Reset keys puts every action's keys back to the ones Synphonos starts with.

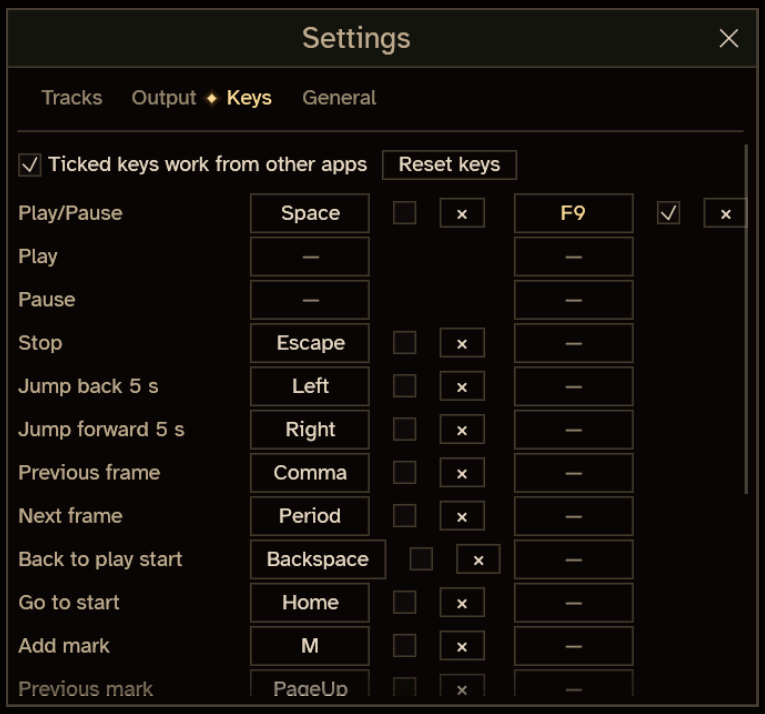
Keys are saved on the machine, not in the show.

Keys that work from other programs

Normally a key works only while the Synphonos window has the keyboard. A key can be made to work whatever program is in front.

1 In Settings, Keys, tick Ticked keys work from other apps at the top.

2 Tick the small box after each key that should work everywhere.



Play/Pause on F9, ticked to work from other programs. Such keys are shown in gold.

While this is on, those keys are taken from every other program: pressing one in another program does only what Synphonos does with it. Synphonos hands them back whenever its own window has the keyboard, so you can still type in its fields.

Which keys can. Letters, digits, the function keys, Space, Enter, Backspace, Tab, Esc, the arrows, Home, End, Page Up, Page Down, Insert, Delete, and punctuation keys, each with or without Ctrl, Alt and Shift. A key that cannot has its box greyed.

The third diamond in the status bar shows the state. Outlined: off, or no key is ticked. Green: working, and its hover text lists the keys. Red: Windows refused a key, usually because another program holds it. The status bar says **Key not working from other apps** and why.

> Choose keys nothing else needs
>
> A plain Space taken from every program means you cannot type a space anywhere else while Synphonos runs. Function keys, or keys with Ctrl and Alt, are safer.

A key for a mark

In Show mode, each row of the Marks list has a key button. Click it and press a key. That key then moves the playhead to the mark.

Mark keys work like the others: they can be ticked to work from other programs, and each key belongs to one thing. They are saved with the mark, in the show. Only Show mode's marks have keys.

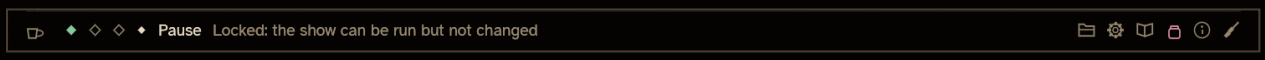
CHAPTER 8

Locking the show

The lock freezes the show and leaves the transport alone. Lock it when programming is done, and nothing can be changed by a stray click during the performance.

Locking and unlocking

Click the padlock in the bottom right corner. It closes and turns rose, and the status bar says Locked: the show can be run but not changed. Click it again to unlock.



Locked. The padlock is closed and rose.

Lock the show on/off can be given a key (page 35). The lock is remembered: a show locked when Synphonos closes is locked when it opens.

What the lock freezes

Still works	Frozen
Play, pause, stop, jumps, frame steps, Locate	Adding, replacing and removing stems
Going to a mark, previous and next mark	Adding, renaming, moving and deleting marks
Loading another song from the set list, next and previous song	Adding, removing, renaming and reordering songs; the show's name
Vol, and each stem's level, mute and channels	The frame rate and Starts at
The audio device, LTC and MTC on and off, the MIDI port and Trim	The Track row and the LTC channel in Output
Speed, zoom, Follow, Appearance	The song's tempo
Selecting marks in Program mode, and looking at everything	Every edit in Program mode, and undo

Still works	Frozen
Export	Keys and Reset keys
Opening Files, moving the show file or the settings	New show..., Load show... and the recent list

A frozen control is greyed out. If a key or a dropped file tries a frozen change, the status bar says Locked and what was refused, so nothing fails silently.

Stop asks twice

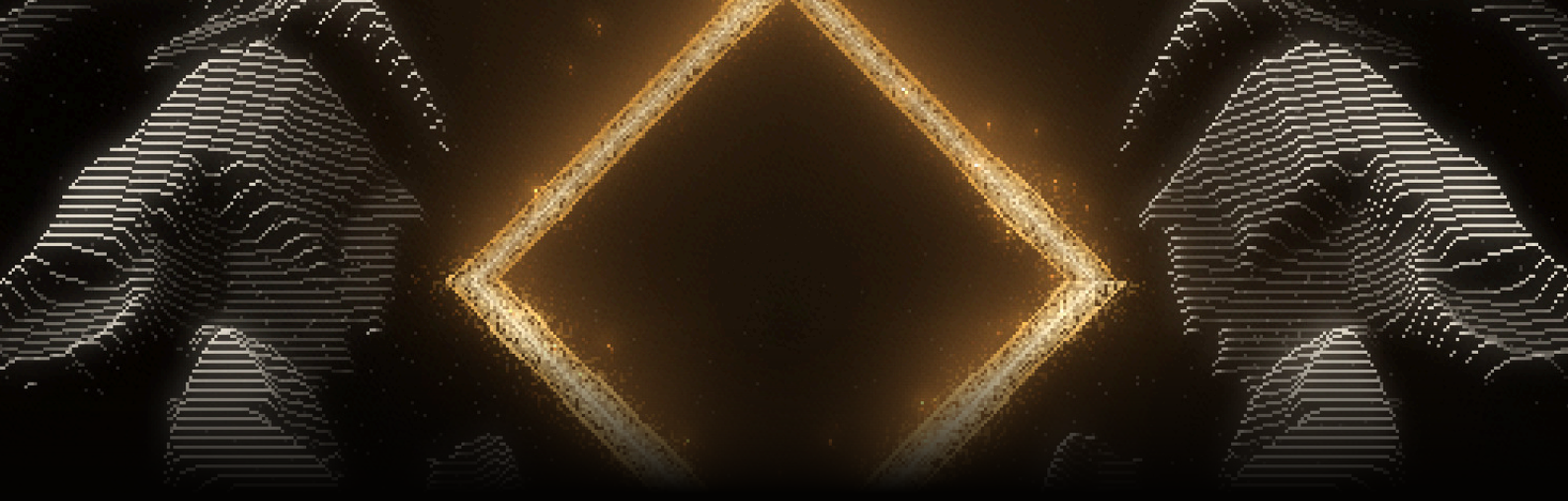
Esc is the key a hand reaches for by reflex, and a stopped song in the middle of a show is the expensive mistake. So while the show is locked, Stop needs two presses.



The first press arms Stop. The button reads Stop again for two seconds.

The first press does nothing but arm it: the button reads Stop again and the status bar says Press Stop again to stop. A second press within two seconds stops. If you wait longer, the first press is forgotten.

Pause is not guarded. Space pauses at once, locked or not.



CHAPTER 9

The look

The colours, the glow, the size of everything, and whether the start-up animation plays. All of it is one click away and changes as you move the controls.

The Appearance window

Click the brush in the bottom right corner.



Appearance. The list scrolls: below these are Show the name, Follow the accent colour, Preview and Reset to defaults. This manual's pictures were taken at 150% Scale; a new copy is at 100%.

Control	What it does
Gold, Ember, Rose, Verdant, Moonlight, Mono	Six ready-made looks. Each sets the three colours below.
Accent	The colour of what is lit and live: the readout while playing, the playhead, what is selected. The start-up animation follows it.
Ground	The window's background. Panels, outlines and rules follow it.
Text	Values and body text. The quieter greys follow it.
Good, Warning, Error	The three status colours.
Glow	How strongly lit things glow, from 0% to 200%. It also sets the haze round the waveform.
Scale	The size of everything in the window, from 80% to 150%.
Waveform	The height of every stem, from 40 to 400. Changing it clears stems sized one by one.
Density	Compact, Normal or Roomy: how much space rows and buttons have.
Reset to defaults	Puts the whole look back as it was when Synphonos was new.

You pick three colours, and every other shade is worked out from them. Colours too dark or too bright to read are pulled back into range, so no choice can make the window unusable.



Gold



Ember



Rose



Verdant



Moonlight



Mono

> A dense, loud song
>
> On a song that is loud all the way through, the waveform's haze can fill the stem. Turn Glow down.

The start-up animation

Each time Synphonos opens, the dark cracks, breaks, and leaves the mark of the program glowing with Click to begin under it. A click burns it away into the window.

The program is already running behind it. A key you have set to work from other programs works during it, and counts as the click. So does dropping a file on the window.

Under Start-up animation	What it does
Play when the window opens	Untick it and the window is there straight away.
Play the 5 s intro	Untick it and the animation opens already waiting for the click.
Show the name	Shows or hides Synphonos above the animation.
Follow the accent colour	Tints the animation to your accent colour. Unticked, it stays gold.
Preview	Plays it now, whatever the ticks say.



PART THREE

Programming a console

Program mode turns a song into cues. Place marks where things should happen, in sequences that stand for the console's own, then export them to a grandMA2 or a grandMA3 as a macro and the timecode it imports.

10 Sequences and marks 44

11 Tempo, copy and BPM paste 54

12 Cue times 58

13 The Export window 62

14 grandMA2, end to end 73

15 grandMA3, end to end 78



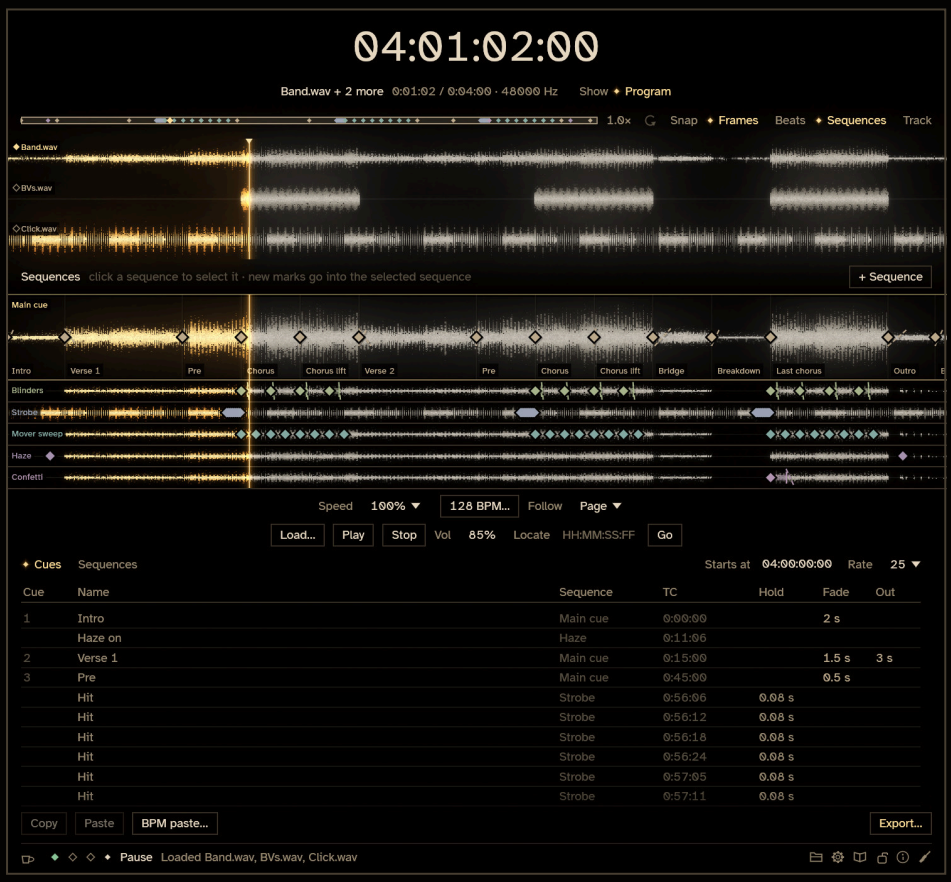
CHAPTER 10

Sequences and marks

In Program mode a mark is something the console does at that moment of the song: go to a cue, flash a button, start a chase. Marks sit in sequences. Each sequence stands for one sequence on the console.

Into Program mode

Click Program in the Show | Program switch. The readout, the stems and the transport stay. The lower part of the window becomes sequences, a cue table and editing buttons.



Program mode. Six sequences under the stems, the selected one open, and the cue table below.

Nothing you do here changes what is sent while the song plays: timecode goes out exactly as in Show mode. The marks reach a console only when you export them (page 62).

Sequences

A sequence here is a sequence on the console: the main cue list on a fader, a strobe on a button, a confetti cannon on another. Each row under the stems is one.

Sequences belong to the show. Every song has the same ones, so Blinders is the same button all night.

- A new show starts with one, Main cue: a cue list on executor 1.
- + Sequence adds one at the bottom. It starts as a Temp button, Sequence 2, on executor 101 with a hold of half a second.
- A show holds up to 32, and always keeps at least one.

Click a row to select it. The selected sequence opens to a stem's height, between two gold lines, and its marks' names appear along its foot. New marks go into the selected sequence.

Every sequence has a waveform behind its marks. The small diamond before each stem's name, up in the stems, picks which stem is drawn behind the selected sequence: a click track for the strobe, the band for the main cues.

To size one row, hold Alt and scroll over it, or drag the line under it. When the rows need more room than there is, they scroll.

The Sequences tab

Under the transport, switch Cues | Sequences to Sequences.



The Sequences tab: one row for each sequence in the show.

Column	What it sets
The diamond	The sequence's colour. Click it to choose from six.
Sequence	Its name. The console's sequence is named from it.
Function	What its marks do on the console. See the next table.

Column	What it sets
Executor	Its executor on each song's page: 1 is executor 4.1 for a song on page 4. The Export window can move it for one song (page 66).
Hold	For Temp, Flash and Swop: how long after the press the release comes, from 0.04 to 600 seconds. A dash for the other functions.
Off	Its Off time: how long it takes to fade out when it goes off (page 60). Empty leaves the console's own.
Waveform	The stem drawn behind it.
Marks	How many marks it has. Hold the pointer over it for the count in this song and in the whole show.
×	Deletes the sequence. If it has marks, you are asked which sequence takes them. The last sequence cannot be deleted.

Right-click a row for the rest of its cue times (page 58).

What a sequence's marks do

Function	At each mark the console	The mark has
Goto	Fires that mark's own cue.	A cue number
Go+	Goes to the next cue on the executor.	
Go-	Goes to the cue before.	
Top	Goes back to the first cue.	
Pause	Pauses the executor.	
Temp	Is on while held, off at the release.	A hold
Flash	Is at full while held, off at the release.	A hold
Swop	Swops while held, off at the release.	A hold
Toggle	Switches the executor on, or off if it was on.	
On	Switches the executor on.	
Off	Switches the executor off.	

Use Goto for a cue list. Every mark is then a cue with a number and a name, and jumping around the song during rehearsal always lands the console on the right cue.

Adding marks

To	Do this
Add a mark at the playhead	Press M. It goes into the selected sequence.
Add a mark anywhere	Double-click in a sequence, at the place.
Add on the beat	Set the song's tempo and switch Snap to Beats first (page 55).

A mark is a diamond on the centre line of its row, in its sequence's colour. In the open sequence its name is written at the foot.

Marks land exactly on timecode frames. A mark can never sit between two frames, so what you see is what the console gets.

Selecting, moving and deleting

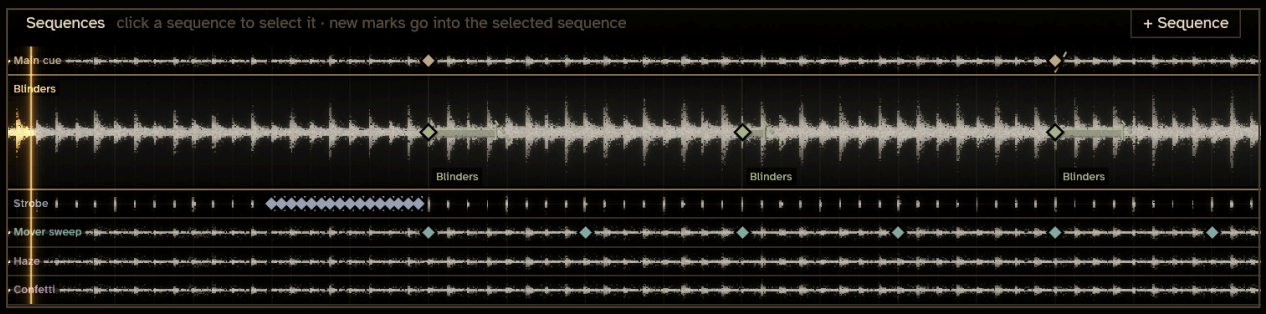
To	Do this
Select a mark	Click its diamond, or its row in the cue table.
Select several	Drag a box round them in the sequences. Or Shift-click to add, Ctrl-click to add or take away one.
Select every mark in the selected sequence	Ctrl + A
Move	Drag a diamond. Every selected mark moves with it.
Move to whole seconds	Hold Alt while dragging.
Nudge by a frame	Ctrl + ← and Ctrl + →
Nudge by a second	Ctrl + Shift + ← and Ctrl + Shift + →
Go to a mark	Double-click its diamond, or its row in the cue table.
Delete	Delete
Undo, redo	Ctrl + Z, and Ctrl + Y or Ctrl + Shift + Z

Clicking an empty place in a sequence selects that sequence and moves the playhead there.

Selected marks are gold. These keys work when you are not typing in a field. If you have given one of them to an action in Settings, Keys, the action wins.

Holds

A Temp, Flash or Swop mark is a press and, a hold later, a release. The hold is drawn as a bar from the diamond to a small handle at the release.



Zoomed in on a chorus. Blinders are held for a bar or so. The strobe's flashes are a few frames each.

- ◇ A new mark takes its sequence's hold, set in the Sequences tab.
- ◇ Drag the handle to give one mark a hold of its own. If the mark is one of several selected, every selected release moves by as much.
- ◇ Or type it in the Hold column of the cue table.

A release never comes before its press. A hold can be 0.04 to 600 seconds.

Cue numbers

In a Goto sequence every mark is a cue with a number.

- ◇ A new mark takes the next whole number after the highest in its sequence.
- ◇ A mark placed between two cues takes a number between them: 2.5 between 2 and 3, then 2.25 between 2 and 2.5.
- ◇ Numbers never change by themselves. Moving a cue does not renumber it or any other.
- ◇ Type over any number in the cue table to change it.

Numbers can have up to three decimals and go up to 9999.999. Each song numbers its own cues, in each sequence.

Going back to an earlier cue

A second chorus usually wants the first chorus's look. Give its mark the first one's number.

1. Add the mark at the second chorus. It gets a new number.
2. In the cue table, click its number and type the number of the first chorus's cue. Press Enter.

The mark now fires that cue again instead of being a cue of its own. It takes the cue's name, and a small return arrow appears after its number. Hold the pointer over the number to see which mark fires the cue first.

Cue	Name	Sequence	TC	Hold	Fade	Out
5	Verse 2	Main cue	1:30:00		2 s	3 s
3 ↲	Pre	Main cue	2:00:00		0.5 s	
	Hit	Strobe	2:11:06	0.08 s		
	Hit	Strobe	2:11:12	0.08 s		
	Hit	Strobe	2:11:18	0.08 s		
	Hit	Strobe	2:11:24	0.08 s		
	Hit	Strobe	2:12:05	0.08 s		
	Hit	Strobe	2:12:11	0.08 s		
	Hit	Strobe	2:12:16	0.08 s		
	Hit	Strobe	2:12:22	0.08 s		
	Hit	Strobe	2:13:03	0.08 s		
	Hit	Strobe	2:13:09	0.08 s		
	Hit	Strobe	2:13:15	0.08 s		
	Hit	Strobe	2:13:21	0.08 s		
	Hit	Strobe	2:14:02	0.08 s		
	Hit	Strobe	2:14:07	0.08 s		
	Hit	Strobe	2:14:13	0.08 s		
	Hit	Strobe	2:14:19	0.08 s		
4 ↲	Chorus	Main cue	2:15:00		0 s	
	Blinders	Blinders	2:15:00	1.6 s		0.4 s
	Sweep	Mover sweep	2:15:00			
	Sweep	Mover sweep	2:18:19			
	Blinders	Blinders	2:22:12	0.5 s		0.4 s
	Sweep	Mover sweep	2:22:12			
	Sweep	Mover sweep	2:26:06			
4.5 ↲	Chorus lift	Main cue	2:30:00		0.3 s	
	Blinders	Blinders	2:30:00	1.6 s		0.4 s

The cue table in a Large window, from the second verse on. Cues 3, 4 and 4.5 come round again: the arrow after each number marks a repeat.

On the console the cue is stored once. Every mark that uses it fires it.

The cue table

The Cues tab lists every mark of the song in time order, from every sequence.



The cue table with one row selected. Its fields can be typed into where they are.

Column	What it shows
Cue	The cue number, in a Goto sequence.
Name	The mark's name. On the console it labels the cue.
Sequence	Which sequence the mark is in. Change it to move the mark to another.
TC	The time from the song's start, as minutes, seconds and frames: 0:14:00. In the selected row, hold the pointer over the time for the full timecode the console sees.
Hold	The hold, for Temp, Flash and Swop.
Fade, Out	The cue's fade in and fade out (page 58).

- ◇ Click a row to select it. Shift-click selects a range. Ctrl-click adds or takes away one row.
- ◇ Double-click a row to move the playhead to its mark.
- ◇ The selected row can be edited where it is: click a value and type.
- ◇ With several rows selected, a change to the name, the sequence or the hold changes every one of them. A new time moves them all by the same amount. A cue number changes only its own row.
- ◇ Rows the playhead has passed are dimmed, so the table reads as a running order. The row the playhead is at has a bar at its left.

In a narrow window the table shows Cue and Name. A small triangle in the title row opens the other columns.

Typing a time

In the TC column a time counts from the song's start. In a song that starts at 04:00:00:00, the cue at 04:00:14:00 reads 0:14:00.

You type	It means
0:14:00	14 seconds from the song's start.
14:00	The same.
04:00:14:00	That timecode exactly. A full timecode is taken as it is.
1m30s	A minute and a half from the song's start.
14s5f	14 seconds and 5 frames from the start.
4h0m14s	With hours, it is a whole timecode: 04:00:14:00.

Units work in every timecode field: Starts at, the set list, Locate, and the Export window's Offset and Length. There a time is always a whole timecode: 7h10m is 07:10:00:00, 90m is 01:30:00:00, and a number after the last unit is the next unit down, so 7h10 is 07:10:00:00 too.

The mark's menu

Right-click a mark, in a sequence, on a Track view flag or in the cue table.



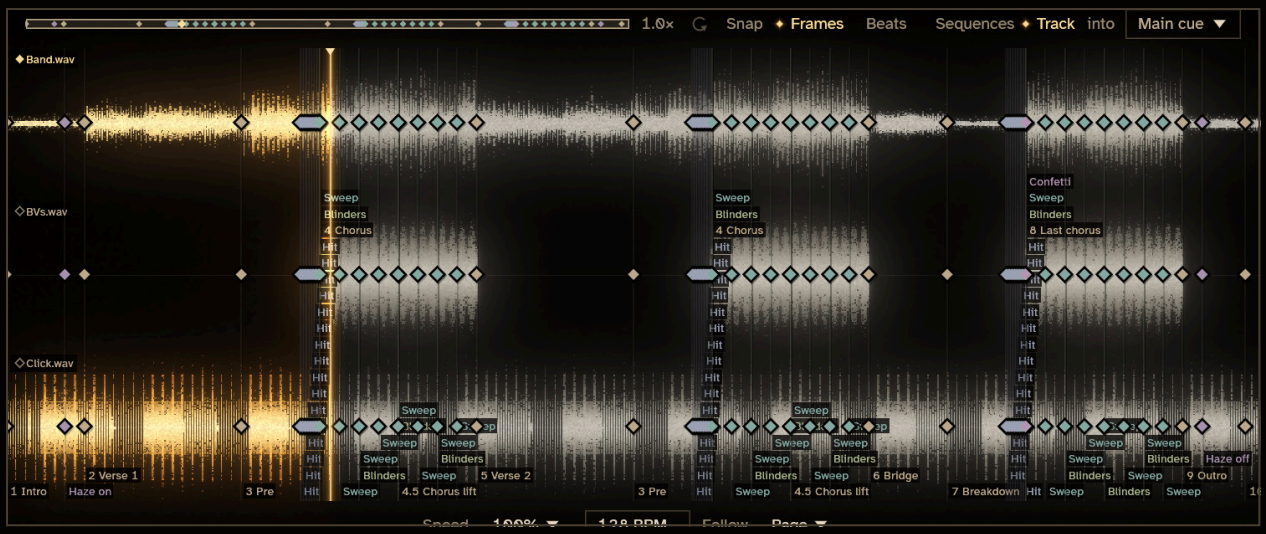
A mark's menu: everything about one mark in one place.

It holds the mark's Name, Sequence, Cue, the time (At) and Hold, then its cue's times and its sequence's Off time (page 58), with Go to, Copy and Delete. Click away from it or press Esc to close it.

In the lower half of the window the menu opens upwards.

Track view

Switch Sequences | Track to Track. The sequence rows go, the stems take their room, and the marks are drawn as flags over the stems in their sequences' colours, each with its cue number and name.



Track view. New marks go into the sequence named after into.

Flags can be clicked, dragged, right-clicked and added by double-click, as diamonds can. New marks go into the sequence chosen in into, at the top right.

Seeing cues fire

Play the song. As the playhead passes a mark, its row in the cue table flashes and the table follows it down. In the Sequences tab the sequence's row flashes too, and stays lit while a Temp or Flash is held.

Jumping fires nothing. Only marks the playhead plays through are shown as fired.

This is Synphonos showing you its own marks. It is not the console reporting back.

Undo

Ctrl + Z undoes. Ctrl + Y or Ctrl + Shift + Z redoes.

- 200 steps, one for each thing you did: a drag, a paste, a delete. Typing into one field is one step.
- It covers marks and sequences, and Show mode's marks too.
- It does not cover the tempo or keys given to marks.
- The history is cleared when you change song, or add, remove or reorder songs.

Keeping the selected mark in view

In Settings, General, tick Pin the selected mark. A Small window then shows the selected mark's details in a line above the table, where its folded columns would be. A Large window shows them in a panel under the table, with fields to type into. A Medium window needs neither: the selected row is edited where it is.

Locked in Program mode

With the show locked you can look, play and select marks. Nothing can be changed or undone. Exporting still works, because it only writes files.

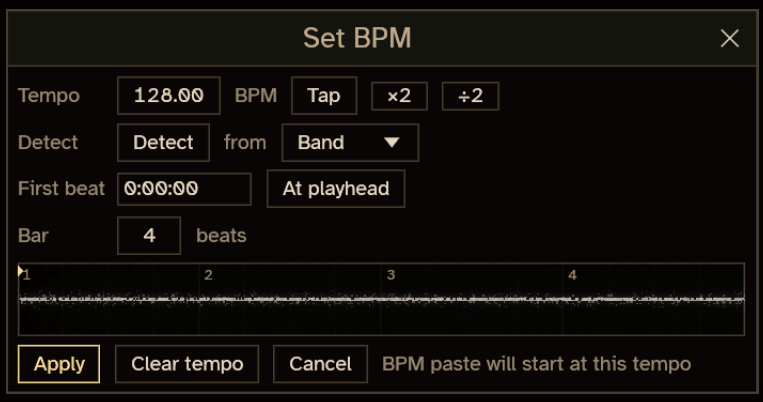
CHAPTER 11

Tempo, copy and BPM paste

Give a song its tempo and Synphonos draws its beats and bars. Marks then land on the beat, and one hit can be repeated across a whole chorus in three clicks.

Setting a song's tempo

Press Set BPM… next to Speed. Once a song has a tempo the button shows it: 128 BPM….



Set BPM. The picture at the bottom shows four bars round the first beat, with the grid as it would be drawn.

Control	What it does
BPM	The tempo, from 20 to 400. Type it.
Tap	Tap along with the song, four times or more. The tempo follows the last few taps. If the song is playing, the taps also place the first beat.
×2, ÷2	Twice as fast, or half as fast.
Detect, from	Listens to the chosen stem and finds the tempo and the first beat.
First beat	Where bar 1 starts, from the song's start. Type it as M:SS:FF.
At playhead	Bar 1 starts where the playhead is.

Control	What it does
Bar	How many beats make a bar, from 1 to 16. It starts at 4.
Apply	Sets the tempo. It is saved with the song.
Clear tempo	Removes the tempo and the grid.

How good is Detect? On a click stem it gives an exact answer. On a full mix it is a first guess to check. It finds tempos from 50 to 220 BPM. Afterwards it says what it measured and whether the tempo held steady. If it says not steady: check the lines, look at the picture before pressing Apply.

Typing and tapping always have the last word over Detect.

The beat grid

Once a song has a tempo, faint lines run through the stems and the sequences: one for every beat, a brighter one for every bar, and bar numbers along the top.



The beat grid. Bar lines are brighter than beat lines. Zooming out drops the beats first, then the bars.

The grid is a guide for you. It is not sent anywhere.

Snap to beats

Snap is at the top of the window, beside the zoom bar.

Snap	Where a dragged or double-clicked mark lands
Frames	On the frame under the pointer.
Beats	On the nearest beat of the song's tempo. The song needs a tempo first.

Either way the mark ends up on a whole frame: the frame that holds the beat. Holding Alt while dragging lands on whole seconds instead.

Copy and paste

1. Select the marks to copy. They can be in several sequences.
2. Press Copy, or Ctrl + C. Ctrl + X cuts.
3. Put the playhead where the first mark should land, and select the sequence it should land in.
4. Press Paste, or Ctrl + V.

The first copied mark lands at the playhead in the selected sequence. The others keep their distance from it, in time and in sequences: a mark that was two rows down and one bar later is pasted two rows down and one bar later.

- Hold the pointer over Paste and outlined diamonds show where every mark will land, before anything is pasted.
- Names, holds and cue times are kept. Pasted cues get new numbers.
- It works from one song to another.
- A paste that does not fit is refused whole, and says why: it would reach above the top sequence, below the bottom one, or past the end of the song. Nothing is half-pasted.

BPM paste

BPM paste repeats the copied marks at a tempo.



BPM paste, with one Strobe hit copied. The outlined diamonds in the Strobe sequence show where the copies will land: here, one a beat for 16 bars from the playhead.

Control	What it does
Copied	What was copied: one mark, or a pattern of several.
Into	The selected sequence, where the first mark of each copy lands.
Tempo, Tap	The tempo to repeat at. It opens on the song's own.
Every	How often: ¼ beat, ½ beat, 1 beat, 2 beats, 1 bar, 2 bars or 4 bars.
Starting	At the playhead, or at the selected mark.
For	How long: a number of beats, bars or seconds, or up to a mark you choose.
Paste	Pastes, and says how many copies. One undo takes them all back.

Each copy is placed from the start, never from the copy before it. Bar 64 is as exact as bar 1.

A copy that would land exactly on a mark already there is skipped. One paste makes up to 4000 copies. If the song had no tempo, it takes the one you pasted at.

A strobe on every eighth note for two bars

1. Select the Strobe sequence and put the playhead on the first hit. With Snap on Beats, a click in the sequence near the beat is enough.
2. Press M to add one mark.
3. Click the mark, then press Copy.
4. Press BPM paste…
5. Set Every to ½ beat, Starting to the mark, and For to 2 bars. The line under them says how many copies there will be, and from when to when.
6. Press Paste.

A copy that would land on the mark you copied is skipped, so nothing is doubled.



CHAPTER 12

Cue times

A cue's fade, its delay, whether it releases, and how long a sequence takes to go off: the things you would set in the console's sequence sheet can be set here, seen against the music, and sent with the export.

What can be set

Setting	What it is
Fade	Seconds for the cue to fade in.
Out fade	Seconds for dimmers going down. Empty: the same as the fade, as on the console.
Delay	Seconds before the fade in starts.
Out delay	Seconds before the out fade starts. Empty: the same as the delay.
Mode	Normal, Assert, X-Assert or Release. See below.
Command	A command line the console runs as the cue fires.
Info	A note on the cue: its info on grandMA2, its note on grandMA3.
Off time	For a whole sequence: seconds it takes to fade out when it goes off.

Leave a field empty and the console keeps its own value. The export writes only what you set.

Type a time as seconds, 2 or 2.5 or 2s, or as minutes and seconds, 1:30. Times are kept to hundredths of a second and can be up to an hour.

A command cannot contain a quotation mark, a semicolon or round brackets: the macro cannot carry them.

The modes

Mode	What the cue does besides its fade
Normal	Nothing special.
Assert	Brings back the sequence's tracked state, in the timing it was stored with.
X-Assert	Brings back the sequence's tracked state, in this cue's timing.
Release	Turns the sequence off once the cue's fade is done, over its Off time.
—	Leaves the mode as it is on the console.

Where to set them

Place	What it has
The cue table's Fade and Out columns	A cue's fade in and fade out, typed in the selected row without opening anything.
A mark's right-click menu	Every setting of its cue, and its sequence's Off time.
A sequence's right-click menu	The sequence's Off time, and the times its cues take unless they have their own.
The Off column of the Sequences tab	The sequence's Off time.



The lower part of a mark's menu: its cue's times and mode.



A sequence's menu. Right-click anywhere in a sequence that is not a mark, or its row in the Sequences tab.

Whose times they are

In a Goto sequence each cue has times of its own. The sequence can also have times: every cue takes those unless it has its own. A time a cue takes from its sequence is shown greyed in the cue's empty field.

In any other sequence every press fires the same cue. Its times belong to the sequence, and so the Out column there shows the sequence's Off time: the fade after each release. One Temp press cannot have times different from the next. If some presses need other times, put them in a sequence of their own.

A repeat is the same cue, so it shares its times. Change them on one mark and every mark that fires that cue shows the change.

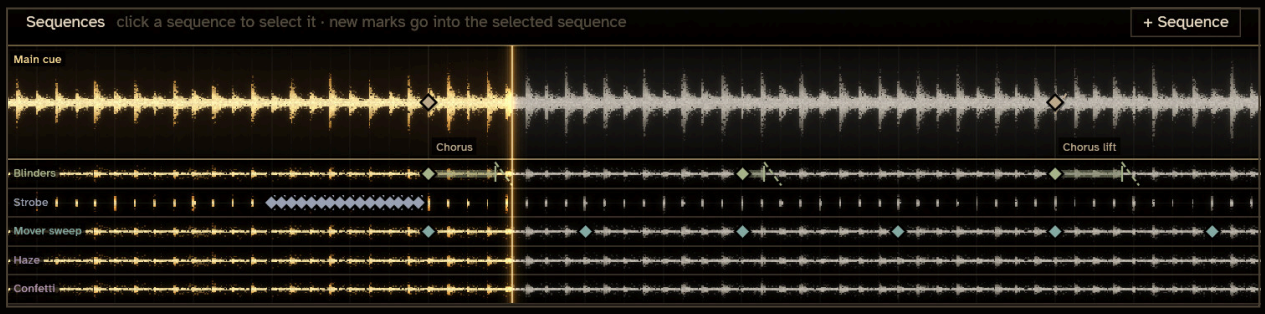
The Off time

A sequence's Off time is how long it takes to fade out when it goes off: at the release of a Temp or Flash, at an Off, or after a Release cue.

Set a Temp's press, its release and its Off time, and you can see where the light is gone.

The dashed lines

Fades are drawn in the sequences as dashed lines.



A dashed line rises from each press over its fade in, and falls over its fade out.

- ◇ Up from the press, after any delay, over the fade in.
- ◇ Down after a release, over the sequence's Off time.
- ◇ Down after a Release cue's fade, over the Off time.
- ◇ Down over a cue's own out fade, where it has one.

The lines draw the times as you set them. They are not measured from a console.

How they reach the console

Setting	grandMA2	grandMA3
Fade	Assign Fade 2 Sequence 401 Cue 2	The cue's CueInFade
Out fade	Assign OutFade …	CueOutFade
Delay, Out delay	Assign Delay …, Assign OutDelay …	CueInDelay, CueOutDelay
Mode	/cue_mode= on the cue	The cue's Release and Assert
Command	/cmd= on the cue	Command
Info	/info= on the cue	Note
Off time	/offtime= on the sequence's executor	The fade of the sequence's OffCue

grandMA3 has no Off time of its own. Its OffCue's fade does the same job, and MA's own notes on moving grandMA2 shows to grandMA3 do the same.

On grandMA2 the Off time belongs to the executor. It is written only where the export puts the sequence on its executor, or an earlier export did. Otherwise the console's Off time stays.

> Untried on a console
>
> On grandMA3, every one of these was imported on onPC 2.4.2 and 2.5.1 and read back as set. On grandMA2 none has been tried, on a console or on onPC: the lines follow MA's own help and macros. The least certain is setting a cue's mode back to Normal. Check the first export of a song's times in the console's sequence sheet. See page 120.

What is not offered

- **Trig and Trig time.** A Follow or Time trigger would fight the timecode, which fires every cue itself.
- **MIB and Snap.**
- **grandMA2's Break and X-Break modes.** grandMA3 has no such mode.
- **Other sequence options:** tracking, wrap around, restart, protect and priority.

Set these on the console. An export does not touch them.



CHAPTER 13

The Export window

An export writes one song's marks out as two files for the console: a macro, and the timecode it imports. This chapter is the window itself. The two chapters after it walk each console through from start to finish.

What an export is

Press Export… at the bottom right of Program mode.



The Export window. Each part is one line saying what it is set to. Click a line to open it.

- ◇ **One export is one song:** the loaded one.
- ◇ **It writes two files:** a macro, and a timecode file.
- ◇ **Nothing reaches the console until you run the macro there.** You type two or three commands on the console; the window shows them after the export.
- ◇ **Exporting only writes files.** It works while the show is locked and while a song plays.

The macro makes the sequences and their cues, names them, puts them on executors, and imports the timecode. The timecode holds a track for each sequence with an event at every mark.

Choosing the console

grandMA2 | grandMA3 at the top picks the console. The window's title and its parts follow it. The show remembers the console last picked.

Each console keeps its own numbers for each song, and its own record of what it holds. Exporting to one never changes what the other is given.

The first time a song is opened for grandMA3 it starts from its grandMA2 numbers, with the executors moved to grandMA3's numbering (page 79).

The parts

Part	What it sets
Destination	Where the two files go, and what they are called.
Timecode	The timecode's pool number, slot, offset and length. The gear opens the rest of its options.
Page	The executor page for this song, the places on it, and whether sequences are created.
Sequences	Each sequence's number and executor, and which marks go.
Macro	The macro's number, whether it clears the programmer, and whether it deletes itself.
Names	What the sequences, the timecode and the macro are called on the console.
Colours	What colour they are given.

The window opens with every part folded and remembers which you opened for as long as Synphonos runs. A part with a problem shows it on its line in rose.

Under the parts, always in sight: the cues' commands when any cue has one (page 69), what the export comes to, anything stopping it, and Export.

Every number is kept with the song as soon as you change it, exported or not. A song can be set up days ahead. While the show is locked, numbers are kept only by exporting.

Destination



Destination, open.

Setting	What it does
Where	Where the files are written. The list offers MA's onPC software on this PC, any USB drive plugged in, the folder used last, and A folder... to choose one. The place used last is offered first.
Files	The name of the two files. Type baptised and they are baptised_macro.xml and baptised_tc.xml. Left empty, the name is made from the show and the song: syn_winter_gala_2026_s04.

In a file name, letters, digits, - and _ are kept, anything else becomes _, and a .xml typed on the end is taken off. Two songs cannot share a name: each would replace the other's files.

Where	grandMA2	grandMA3
onPC on this PC	onPC's own data folder. Each installed version is listed, newest first.	grandMA3's library, which every installed onPC version reads.
A USB drive	The gma2 folder on the stick.	grandMA3\gma3_library on the stick.
A folder	macros and importexport folders, to copy into the console's own.	A datapools folder, to copy into the console's library.

Timecode



Timecode, open.

Setting	What it is
Pool	The timecode's number in the console's timecode pool. A timecode already at that number is replaced.
Slot	Which of the console's timecode slots this timecode listens to: 1 to 8, the selected one, or the console's own clock.
Offset	Where the timecode starts: the song's Starts at unless you change it here. Events count from it.
Length	How long it runs: the song's length unless you change it here.

Pool starts as the song's place in the set list. Offset and Length follow the song until you give them values of their own.

Events that fall after the end of the timecode are counted in a warning. Lengthen it.

The gear beside Timecode opens the console's full list of options: Timecode Options for grandMA2 (page 91) and Timecode Settings for grandMA3 (page 93).

Page



Page, open, with places typed for the faders and the buttons.

Setting	What it does
Page	The executor page this song's sequences sit on. It starts as the song's place in the set list.
Create sequences	Ticks assign on every sequence being exported: each is made in the console's pool and put on its executor. A dash means only some are ticked.
Create page	grandMA3 only. Makes the page first. See page 79.
Places: Faders	Where on a page cue lists may go, for the whole show. Type 6-10 or 6 7 8.
Places: Buttons	Where the other sequences may go. Type 107-113 or 107 108 111.

Keeping off your fixed executors

Most pages have executors that stay the same for every song: a master, a blackout, a hazer. Places tells the export which executors it may use, so it never touches the rest.

Down the list, each sequence that has marks in the song takes the next place of its kind: Goto sequences on the Faders, the others on the Buttons. A sequence past the last place is shown as none and the export is refused until there is room.

Leave a kind empty and those sequences stay on the executors the Sequences tab gives them.

Sequences



Sequences, open, with Main cue unfolded to its marks.

Setting	What it does
Numbers from	Where the show's sequences start in the console's sequence pool. Type 500 and this song's sequences take the next numbers no other song of the show holds. Kept for the whole show.
Renumber	Gives this song its free numbers again, in order down the list.
All, None	Tick or untick every mark.
The tick on a line	Exports the whole sequence. A dash means only some of its marks are ticked. A sequence with nothing ticked is left out.
Seq	The sequence's number in the console's pool, for this song.
Exec	Its executor on this song's page. A number typed here is this song's own and stays when Places change.
assign	Puts the sequence on its executor when the macro runs.

Click a sequence's triangle or name to open it to its marks. Each mark has a tick, its cue number, its name and the timecode the console fires it at.

Sequence numbers start from the page: 401, 402 and so on for page 4. Synphonos knows only the numbers its own songs hold. It cannot see sequences made on the console by hand, so choose a range that is free there.

assign

assign is ticked until an export has put the sequence on its executor. It comes back ticked if you change the sequence number, the executor or the page.

Whatever is on that executor is replaced. The window says which executors before you export.

Untick it when the executor already holds the sequence you want fired, one you made on the console yourself. A tick you turn off stays off.

Macro

Setting	What it does
Number	The macro's number in the console's macro pool. Whatever is there is replaced.
Clear the programmer first (ClearAll)	New cues are stored from the programmer. With this ticked the macro starts with ClearAll, so they are stored empty for you to fill. It is added only when there is something to store.
Delete the macro when it has run	The macro's last line deletes it, so the macro pool keeps only what you made. Untick to keep it.
Store every cue again	Shown once the song has been exported. For when the console never took an export: see page 71. For this export only.

> If you untick ClearAll
> Whatever is in the console's programmer goes into every new cue. The window says so in rose.

Names

Names sets what things are called on the console, for the whole show. Each is a pattern, and each row shows what it comes to for the loaded song.

For	Pattern at first	Comes to
Sequences	{sequence} - {song}	Main cue - Can You Hear Me At The Back
Timecode	{song}	Can You Hear Me At The Back
Macro	Synphonos {song}	Synphonos Can You Hear Me At The Back

The fill-ins are {sequence}, {song}, {show}, {number}, {page}, {exec} and {function}. Defaults puts the three patterns back.

Cues are labelled with their marks' names. A few characters are taken out of every name, because a macro would trip over them: quotation marks, $, ; and round brackets. A song called Tag (Demo) is labelled Tag Demo.

Colours

Choice	What it does
Leave	The console's colours are left as they are.
One for all	One colour for the sequences, the timecode and the macro.
Each its own	A colour each, or none. The sequences can take each one's own colour from Synphonos.
Appearances from	grandMA3 only: the first Appearance number the colours use, 901 at first.

A macro that deletes itself keeps no colour.

Cue commands

A cue's Command (page 58) is a command line the console runs each time that cue fires. It is kept in the show file, and a show file is something people send each other: one from someone else can carry commands nobody at your desk has read.

So the Export window never writes a command you have not been shown. When a ticked mark's cue has one, every command is listed in full under the parts, each with its sequence and cue number, and above them is the tick Write cue commands, with how many there are.



Two cue commands, listed before they go. Unticked, the export leaves them out.

The tick	What the export does
Unticked	Writes the cues without their commands. It is unticked every time the window opens, and again when you change console.
Ticked	Writes them into the macro. The lines turn rose.

Read them before you tick. The list shows the first twelve and counts the rest: each is also under Command in its mark's menu, or in its sequence's.

Exporting again

Synphonos remembers which cues it has stored in each sequence. The next export of the song:

- stores only the new cues, and leaves the looks you programmed alone;
- relabels the rest, and writes their times again;
- updates every event's time;
- drops the event of a mark you deleted or unticked, and leaves its cue on the console.

When there is nothing new to store, the macro does not clear the programmer.

When the console never took an export

Synphonos notes cues as stored when it writes the files, not when the macro runs: it cannot see the console. If the macro stopped on an error, or was never run, the next export would leave those cues out, and the sequence would never get them.

1 Open the Export window for the song and unfold Macro.

2 Tick Store every cue again. The summary now counts every cue as new, and assign is ticked again on every sequence you had not unticked by hand.



3 Export, and run the macro on the console as before.

Every cue is stored and every sequence put on its executor, as on a first export. The macro clears the programmer first, whatever Clear the programmer first was set to, so a cue the console already has is left as it is, with the look you stored in it. That makes the tick safe when you are not sure how far the macro got. It turns itself off after the export.

When an export is refused

The window says why, on the line of the part it is about.

It says	Do this
no drop-frame timecode	Change Rate to 29.97, 30, 25 or 24, here and on the console. See page 107.
has no cue number	Give the Goto mark a number in the cue table.
are both sequence …	Give each sequence a Seq of its own.
are both on executor …	Give each an Exec of its own.
has no place left on the page	Add places to Faders or Buttons, or type an Exec for it.
is on executor …, which … does not have	Give it an executor the console has. grandMA3's are 101 to 490.
is not an executor … or a run of them	Fix what is typed in Faders or Buttons.

It says	Do this
the timecode would run past 24:00:00:00	Start it earlier, or shorten it.
the timecode needs a length	Type a Length.
writes files called … too	Give each song its own Files name.
nothing to export: no mark is ticked	Tick some marks.
Choose where the files go first	Pick a Destination.

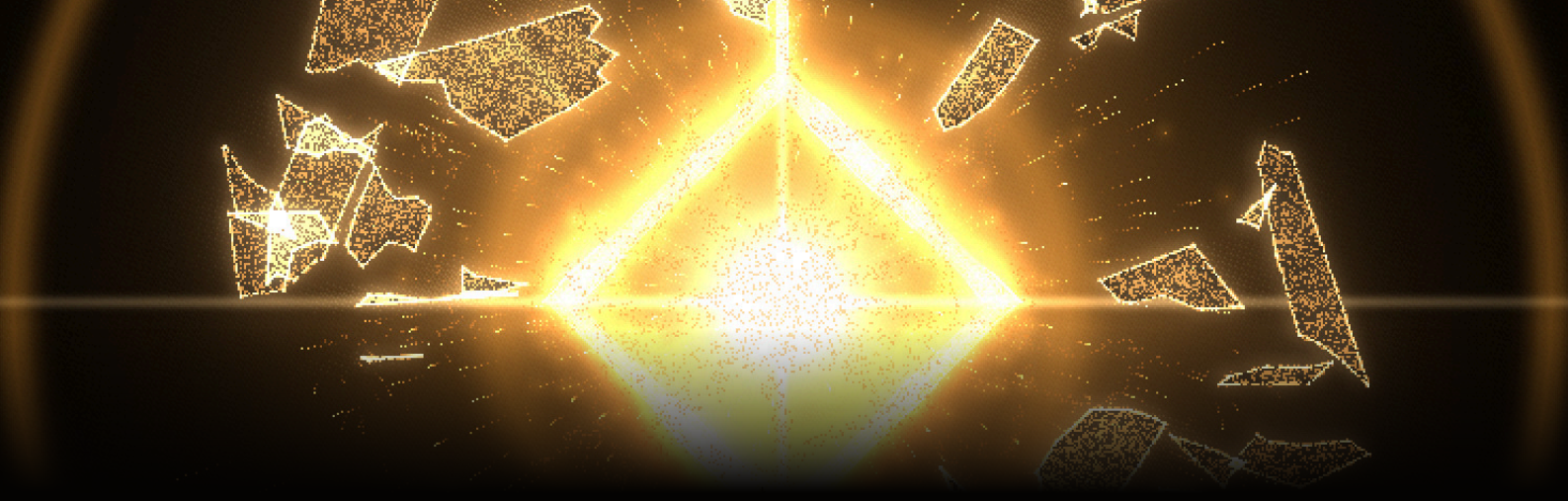
Export is also unavailable while the song's audio has not loaded.

After the export



Exported: where the files went, and what to type on the console.

Button	What it does
Copy commands	Copies the commands as one line, parted by ;. One paste into the console's command line and one Enter run them all.
Open folder	Opens the folder that holds the macro file.
Back	Back to the numbers and the marks.
Done	Closes the window.



CHAPTER 14

grandMA2, end to end

From a programmed song to cues firing on a grandMA2: what to set up, what to press, what to type, and what the console then holds.

> Untried on a console
>
> The export has been tried on grandMA2 onPC 3.9.63, never on a real console. The import works there. Much of the rest is still to be checked: the list is on page 76. Try a song on your own console before you depend on it, and check the result against this chapter.

What you need

- ◇ A grandMA2 on version 3.9.60 or later, or grandMA2 onPC.
- ◇ Timecode reaching the console from Synphonos, by LTC or MTC (page 21).
- ◇ The same frame rate on both. grandMA2 has no drop-frame timecode, so a show at 29.97 DF cannot be exported. A show at 29.97 NDF is exported as 30.
- ◇ A song with marks, in sequences (page 44).

Timecode into the console

A grandMA2 listens for timecode on numbered timecode slots. Each timecode in its pool is set to follow one slot, and the export writes that setting for you: Slot in the Export window, TC Slot 1 at first.

Slot	The exported timecode follows
TC Slot 1 to 8	That slot. Choose the slot the console receives Synphonos's timecode on.
Link Selected	Whichever slot is selected on the console.
Intern	The console's own clock, not Synphonos.

How a slot is tied to the console's LTC or MIDI input is set on the console, and is in MA's manual. Synphonos cannot set it.

On one PC with onPC: send MTC through a virtual MIDI port (page 23), and choose that port as onPC's MIDI timecode input.

With AutoStart on, as it is at first, the timecode starts by itself when its slot's time runs.

Export the song

1 Load the song and switch to Program.

2 Press Export... and choose grandMA2 at the top.



3 Open Destination and choose where. onPC on this PC, a USB stick, or a folder.

4 Check the numbers. Page, timecode pool, sequence numbers and macro number must be free on the console, or hold what you mean to replace. The line under the parts says which executors will be taken.

5 Press Export. The Exported window shows the two files and the commands.



Get the files to the console

You exported to	Then
onPC on this PC	Nothing to do. The files are in onPC's own folders.
A USB drive	Put the stick in the console. The files are in its gma2 folder, in macros and importexport.
A folder	Copy the macros and importexport folders into the console's own folder, so the two files join the ones already there.

Type the commands

Type these in the console's command line, or press Copy commands and paste them as one line.

From onPC, or from a folder you copied over:

```
Delete Macro 101 /nc
Import "syn_winter_gala_2026_s04_macro" At Macro 101 /nc
Go Macro 101
```

From a USB stick, select the stick first:

```
SelectDrive 4
Delete Macro 101 /nc
Import "syn_winter_gala_2026_s04_macro" At Macro 101 /nc
Go Macro 101
```

Command	Why
SelectDrive 4	4 is the first USB stick on a console. The macro goes back to the console's own disk when it is done, so the next save of the show does not land on the stick.
Delete Macro 101 /nc	An import does not replace a macro that is already there. The old one goes first.
Import "..._macro" At Macro 101 /nc	Brings in the macro. The file is named without .xml.
Go Macro 101	Runs it.

The macro's number and the file's name are the ones in your Export window.
What each line of the macro does is on page 110.

> Not mid-show
>
> Importing on a console in the middle of a show changes the running show.

What the console now holds

For the song in this manual's pictures, exported with the numbers it opens on:

On the console	What it is
Sequence 401	Main cue - Can You Hear Me At The Back: eleven empty cues, 1 to 10 and 4.5, each labelled with its mark's name, with the fades, modes and info set in Synphonos. On executor 4.1.
Sequences 402 to 406	Blinders, Strobe, Mover sweep, Haze and Confetti, each with one empty cue, on executors 4.101 to 4.105. Each button is set to its function: Temp, Flash, Go, Toggle, Temp.
Timecode 4	Can You Hear Me At The Back: offset 04:00:00:00, length four minutes, following TC Slot 1, with a track for each sequence and 101 events.
Macro 101	Gone: it deleted itself.

Now fill the cues. The cues are empty on purpose. Program each look and store it into its cue, as you would any cue.

Then play the song in Synphonos. As timecode arrives, the timecode on the console follows it and fires each event at its time.

Change the song and export again

Move marks, add cues, rename things, then export and type the commands again. Cues already stored keep their looks: only new cues are stored (page 70).

> Add and delete cues in Synphonos, not on the console
>
> On grandMA2 a timecode event finds its cue by its place in the sequence, not by its number. If a cue is added or deleted on the console, the events after it land on the wrong cues, and Synphonos cannot know. Add the mark in Synphonos and export again.

What has and has not been tried

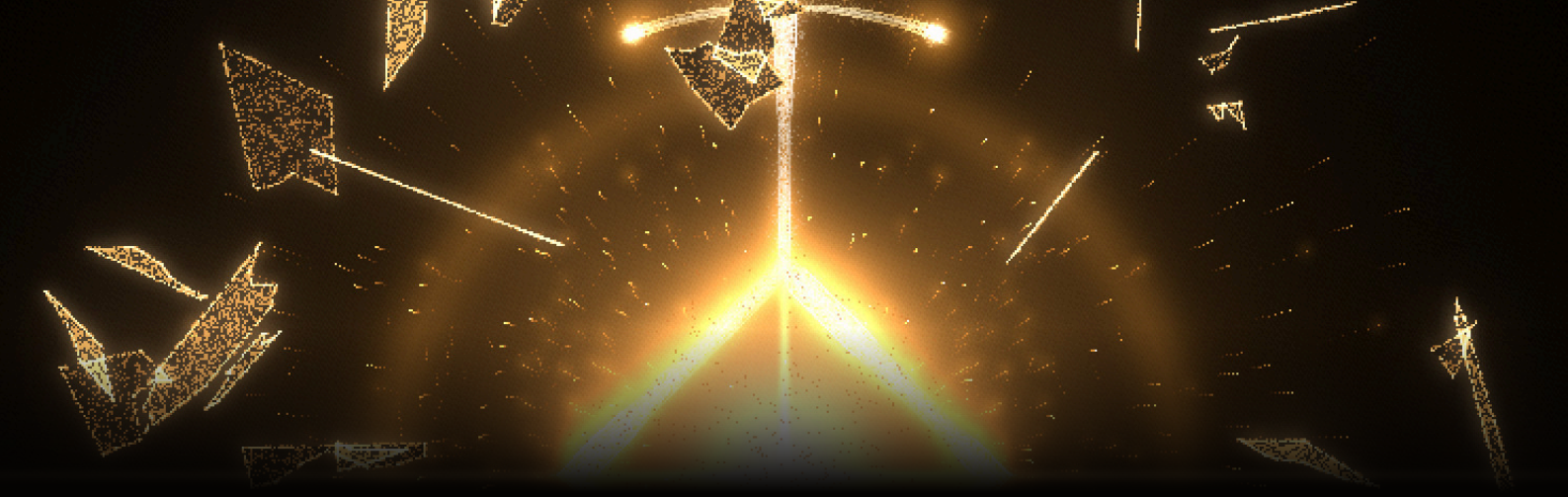
Tried, on onPC 3.9.63: the import. The macro arrives with its name and lines, and the timecode with its tracks and events.

Checked against onPC, but not imported since: the timecode's offset and length. The first files tried gave them wrongly. They are now written the way onPC itself saved them, in a show corrected there by hand. The new files have not been imported again.

Not tried on a real console at all. And still to check, on onPC or a console:

- the macro runs to its end with no error in the command line, and deletes itself;
- events sit at the right timecode at your frame rate, counted from the offset. Times are written in 30ths of a second, which is how the console counts them at 24, 25 and 30 frames alike;
- a Goto fires the cue it names, also after a cue has been added between two others (2.5);
- a Temp, Flash or Swop mark presses and releases its executor, and the button is the sequence's function;
- the Timecode Options other than the slot and AutoStart;
- colours and Info;
- cue times, the cue mode, command and info, and the Off time (page 61);
- a track aimed at an executor with nothing on it is kept.

The full list, with dates, is in page 120.



CHAPTER 15

grandMA3, end to end

The same export, for a grandMA3. The window and the steps are the same. This chapter follows them through and marks every place grandMA3 differs.

> Untried on a console
> The export was tried from end to end on grandMA3 onPC 2.4.2 and 2.5.1: every macro line was accepted, what the console made was read back, and played from a timecode slot every cue, press and release fired at its time. With Synphonos's own MTC arriving it was tried on onPC 2.4.2 (page 80). It has never been tried on a real console or from a USB stick. See page 83.

What you need

- A grandMA3, or grandMA3 onPC. The export was tried on versions 2.4.2 and 2.5.1.
- Timecode reaching the console from Synphonos (page 21).
- The same frame rate on both. grandMA3's timecode has no drop-frame rate, so a show at 29.97 DF cannot be exported.
- A show that uses the Default data pool, the one a new show uses. Other data pools are not covered.

Where grandMA3 differs

	grandMA2	grandMA3
Executors	1 to 90 have faders, 101 to 190 are buttons.	201 to 290 have faders, 101 to 190 are buttons.
A page that is not there	—	Nothing can be put on it. Tick Create page once.
Importing over something	Refused: the macro and the timecode are deleted first.	Replaces what is there. Nothing is deleted first.

	grandMA2	grandMA3
A Goto finds its cue	By its place in the sequence.	By its number. A cue added on the console moves nothing.
Colours	Set on each object.	Appearances, made by the macro.
The gear	Timecode Options	Timecode Settings
Off time	On the executor.	The fade of the sequence's OffCue.
Typed commands	Three	Two

Executors

On a grandMA3 page the executors are numbered `101` to `490`.

Numbers	What they are
`101` to `190`	Buttons only
`201` to `290`	With a fader
`301` to `390`, `401` to `490`	With a knob
`191` to `198`, `291` to `298`	The X-keys

When a song is first opened for grandMA3, its grandMA2 executors are moved across: faders `1` to `90` become `201` to `290`, and buttons `101` to `190` stay `101` to `190`. Places move the same way: `6-10` becomes `206-210`.

Pages

grandMA3 puts nothing on a page it does not have, and says nothing when it fails. So the Export window warns when a page may be missing: Page 4 must already be on the console.

Tick Create page under Page the first time you export to a new page. The macro then makes the page before anything is put on it.

Making a page that is already there is an error on the console. So the tick is off until you tick it, and is not kept: leave it off when you export the song again.

Timecode into the console

Each grandMA3 timecode follows one TC slot, and the export writes which: Slot in the Export window, TCSlot 1 at first.

Slot	The exported timecode follows
TCSlot 1 to 8	That slot. Choose the slot the console receives Synphonos's timecode on.
<Selected>	Whichever slot is selected on the console.
<Internal>	The console's own clock, not Synphonos.

How a slot is tied to the console's timecode input is set on the console, and is in MA's manual. For onPC on the same PC as Synphonos, see below.

With Auto Start on, as it is at first, the timecode starts by itself when time arrives within its range.

MTC into grandMA3 onPC on the same PC

Synphonos sends MTC to a MIDI port (page 23), and onPC listens to the same port. Three of onPC's local settings decide whether the timecode arrives. These are their names on onPC's command line:

onPC's setting	What it must be
OnPCMidiInDeviceName	The MIDI port Synphonos sends to.
OnPCMidiFromWing	No. While it is Yes, onPC takes MIDI from a command wing, nothing arrives from the PC's own ports, and the slot stays at zero.
OnPCMidiTimecodeSlot	The slot the exported timecode follows: Slot 1 at first.

This command, typed on onPC's command line, sets the second:

```
Set Root "StationSettings"."LocalSettings" Property "OnPCMidiFromWing" "No"
```

This was tried on onPC 2.4.2 with a loopMIDI port. The song was played from its start: the slot followed Synphonos, the imported timecode started by itself, every Goto fired its own cue, every press and release fired, each within two frames of its time, and the playbacks went off when Synphonos paused, as Switch Off was exported. The cue at the very start of the song fired five frames in, once onPC was following the timecode.

Export the song

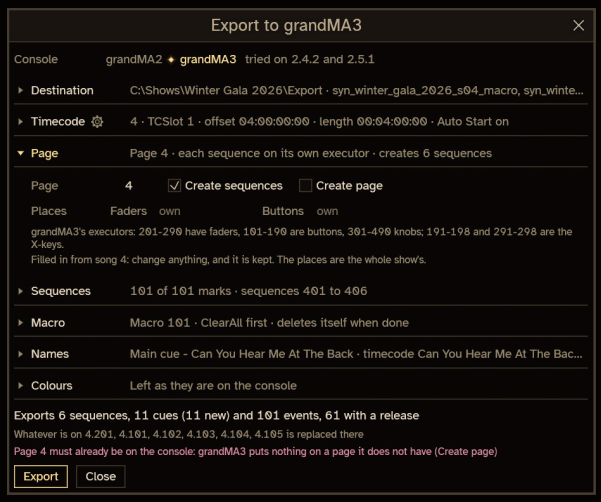
1 Load the song and switch to Program.

2 Press Export... and choose grandMA3 at the top.



3 Open Destination and choose where.

4 Open Page. Check the page number. If the console has no such page yet, tick Create page.



5 Check the numbers. Timecode pool, sequence numbers, executors and macro number must be free on the console, or hold what you mean to replace.

6 Press Export.



Get the files to the console

You exported to	Then
onPC on this PC	Nothing to do. The files are in grandMA3's library.
A USB drive	Put the stick in the console. The files are in grandMA3\gma3_library\datapools, in macros and timecodes.
A folder	Copy the datapools folder into the console's gma3_library, so the two files join the ones already there.

Type the commands

From a folder you copied into the console's library:

```
Import Macro Library "syn_winter_gala_2026_s04_macro" At Macro 101 /NC
Go+ Macro 101
```

From onPC on this PC, the import names the drive:

```
Import Macro Library "syn_winter_gala_2026_s04_macro" At Macro 101 If Drive 1 /NC
Go+ Macro 101
```

From a USB stick, select the stick first:

```
Select Drive 2
Import Macro Library "syn_winter_gala_2026_s04_macro" At Macro 101 /NC
Go+ Macro 101
```

Command	Why
Select Drive 2	2 is the first USB stick on onPC and on most consoles. List Drive shows them. The macro goes back to drive 1 when it is done.
Import Macro Library "..." At Macro 101 /NC	Brings in the macro. It replaces whatever macro is at that number.
Go+ Macro 101	Runs it.

What each line of the macro does is on page 112.

What the console now holds

For the song in this manual's pictures:

On the console	What it is
Sequence 401	Main cue - Can You Hear Me At The Back: eleven empty cues with their names, fades, notes, Release and Assert as set in Synphonos. On page 4, executor 201, with a Go+ button.
Sequences 402 to 406	The five button sequences, each with one empty cue, on executors 101 to 105 of page 4, their buttons set to Temp, Flash, Go+, Toggle and Temp.
Timecode 4	Offset TC Slot 04:00:00:00, Duration four minutes, following TCSlot 1, a track aimed at each sequence, 101 events.
Macro 101	Gone: it deleted itself.

Fill the cues, then play the song in Synphonos.

What has and has not been tried

Tried, on onPC 2.4.2 and 2.5.1: the macro runs to its end with every line accepted and deletes itself. Sequences, cues, labels, pages, buttons, Appearances, cue times and the timecode's settings arrive as set. Played from a timecode slot, every Goto fires its own cue and every Temp, Flash and Swap presses and releases at its time after the offset.

Tried, on onPC 2.4.2, with Synphonos's own MTC arriving through a loopMIDI port: the same, each within two frames of its time (page 80).

Not tried:

- a real console, and a USB stick;
- Synphonos's timecode arriving as LTC, and as MTC on 2.5.1;
- an installed grandMA3 2.5: it was tried as a copy unpacked from MA's installer;
- a show working in a data pool other than Default.

Whatever is at the Appearance numbers is given Synphonos's colours.



PART FOUR

Reference

Everything in tables: each window and control, every key, every limit, the files Synphonos keeps, timecode itself, and the exported macros line by line.

16 Every window and control 85

17 Keys and mouse 95

18 Limits and ranges 98

19 Files and the command line 101

20 Timecode explained 106

21 The macros, line by line 110



CHAPTER 16

Every window and control

Each control, by the window it is in, with the page that explains it. Names are the window's own.

The main window, both modes

Control	What it does	More
Readout	The timecode at the playhead. Gold while playing, ivory when paused, dim when stopped.	page 26
File line	The first stem's file, how many more, position, length, sample rate. In a narrow window the position moves into the name's hover text.	page 17
Show | Program	Switches mode.	page 11
Zoom bar	The part of the song in view. Drag, drag its ends, click beside it, double-click.	page 28
Zoom level	How far in the view is: 1.0× is the whole song.	
Whole-song button	The circling arrow: shows the whole song.	page 28
Stems	The waveforms. Click or drag to move the playhead.	page 27
Speed	10% to 200% in eight steps.	page 28
Set BPM...	Opens Set BPM. Shows the tempo once the song has one.	page 54
Follow	Page, Smooth or Stay put.	page 29
Load...	Replaces the song's stems.	page 17
Play / Pause	Plays from the playhead, or pauses.	page 26
Stop	Stops and returns to the start. Twice while locked.	page 39
Vol	The level of all stems, 0 to 100%. Not LTC.	page 18
Locate, Go	Moves the playhead to a typed timecode.	page 27

Control	What it does	More
Rate	The frame rate, for the whole show.	page 24
Starts at	The timecode at the song's first sample.	page 24

Show mode

Control	What it does	More
Ruler	Minutes and seconds along the foot of the stems.	
Set list	Folds open to the show line and the songs.	page 31
Show name	The show's name.	page 33
Open..., Save as..., New...	Open a show, save as another file, start an empty one.	page 33
Add song	An empty song after the loaded one.	page 31
An hour each	Starts every song on its own hour.	page 32
Song row	Number to load, name, start, stems, ▲▼, ×.	page 31
Marks	Folds open to the song's Show marks.	page 29
Add at playhead	A new Show mark.	page 29
Mark row	Name, timecode, Go, Set, key, Delete.	page 29

Program mode

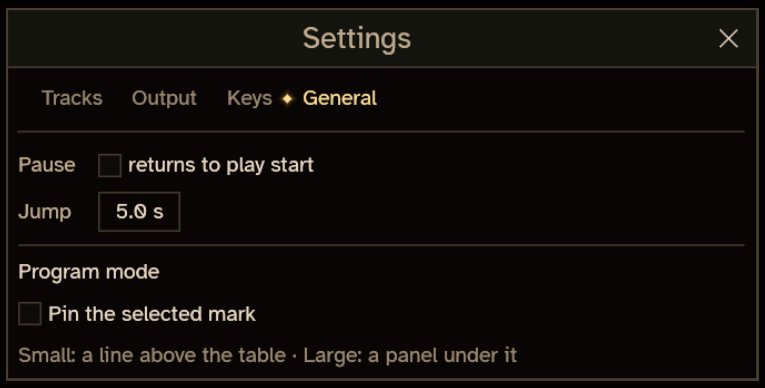
Control	What it does	More
Snap	Frames or Beats.	page 55
Sequences | Track	Sequence rows, or flags over the stems.	page 51
into	Track view: the sequence new marks go into.	page 51
Stem picker	The diamond before a stem's name: the stem behind the selected sequence, and the one Detect listens to.	page 45
+ Sequence	A new sequence at the bottom.	page 45
Sequence row	Click to select; double-click to add a mark; right-click for its times.	page 47
Cues | Sequences	The cue table or the sequence list.	page 49
Cue table	Cue, Name, Sequence, TC, Hold, Fade, Out.	page 49
+ Add sequence	In the Sequences tab: a new sequence.	page 45
Copy, Paste	Copy the selected marks; paste at the playhead.	page 56

Control	What it does	More
BPM paste…	Repeat the copied marks at a tempo.	page 56
Export…	Opens the Export window.	page 62
…	Small windows only: Load, Vol, Follow, Rate and Starts at.	page 15

Settings

Opened by the cog in the bottom right corner. Four tabs.

Tab and control	What it does	More
Tracks: Add…	Adds stems to the song.	page 17
Tracks: Mute, Level, Channels, ×	Each stem's mute, level, outputs, and remove.	page 18
Tracks: not found, Look again	A stem whose file is missing, kept by the show; load the song again to look for it.	page 19
Output: Device, ↻	The audio device; look again.	page 21
Output: Track	Stereo or Mono, and the channels stems go to by default.	page 21
Output: LTC	On, channel, level from -20 to 0 dBFS.	page 22
Output: MTC	On, port, ↻, Trim from -8 to +8 frames.	page 22
Output: Set up a MIDI port…	The steps for a virtual MIDI port.	page 23
Keys: Ticked keys work from other apps	Lets ticked keys work in any program.	page 36
Keys: Reset keys	Every action back to its first keys.	page 35
Keys: the two buttons by each action	Its keys. Click one and press a key. The box after it: works from other apps. ×: remove.	page 35
General: Pause returns to play start	Each pause goes back to where Play was pressed.	page 26
General: Jump	How far the jump keys move, 0.1 to 600 s.	page 27
General: Pin the selected mark	Program mode: keeps the selected mark's details in view.	page 53

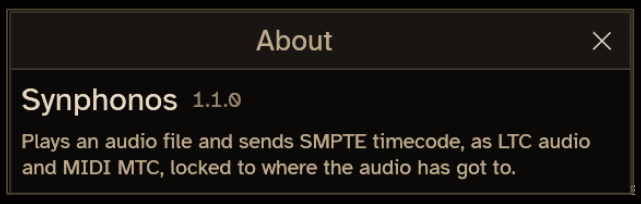


Settings, General.

Files, Appearance, About and the licence

Window and control	What it does	More
Files	The show's file and folder, recent shows, the settings' folder.	page 33
Appearance	Colours, glow, scale, waveform height, density, the start-up animation.	page 40
About	The version and what Synphonos is.	page 88
About: Settings, Crash log	Where those two files are, as text you can select and copy.	
About: Copy diagnostics	Copies a few lines for a bug report.	page 119
About: links	loopMIDI, the audio decoder's source, the licence, and the licences of everything built in.	
Licence, terms and privacy	The text accepted on the first run. Opened by the book.	page 101

About



The top of the About window: the name, the version and what the program is.

Below this the window lists where the settings file and the crash log are, the Copy diagnostics button, links, and the licences of every component built into the program.

Set BPM and BPM paste

Window and control	What it does	More
Set BPM: BPM, Tap, ×2, ÷2	The tempo: typed, tapped, doubled, halved.	page 54
Set BPM: Detect, from	Finds the tempo and first beat in a stem.	page 54
Set BPM: First beat, At playhead	Where bar 1 starts.	page 54
Set BPM: Bar	Beats in a bar, 1 to 16.	page 54
Set BPM: Apply, Clear tempo, Cancel	Set it, remove it, or leave.	page 54
BPM paste: Tempo, Tap	The tempo to repeat at.	page 56
BPM paste: Every	¼ beat to 4 bars.	page 56
BPM paste: Starting	The playhead or the selected mark.	page 56
BPM paste: For	Beats, bars, seconds, or up to a mark.	page 56
BPM paste: Paste, Cancel	Make the copies, or leave.	page 56

The menus

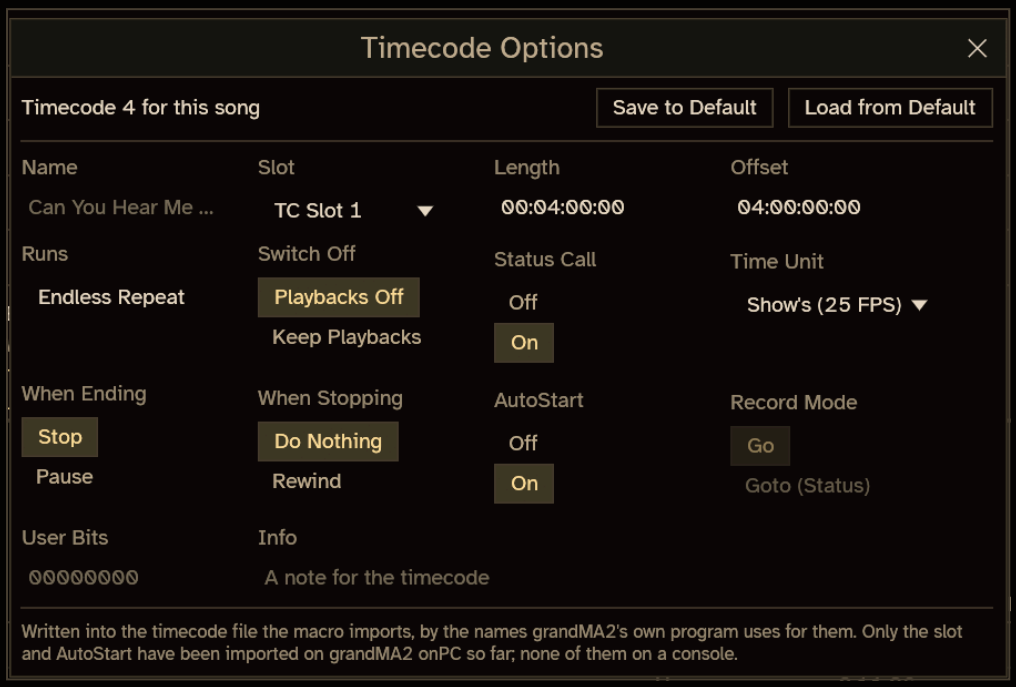
Menu and control	What it does	More
A mark's menu: Name, Sequence, Cue, At, Hold	The mark itself.	page 51
Mark's menu: Fade, Out fade, Delay, Out delay, Mode, Command, Info	Its cue's times and mode.	page 58
Mark's menu: Off time	Its sequence's Off time.	page 60
Mark's menu: Go to, Copy, Delete	Go there, copy the selection, delete the selection.	page 51
A sequence's menu: Off time	How long the sequence takes to go off.	page 60
Sequence's menu: Fade to Info	The times its cues take unless they have their own; or, for a sequence without cue numbers, its one cue's.	page 60
Sequence's menu: Close	Closes it.	

Export

Part and control	What it does	More
Console	grandMA2 or grandMA3.	page 63
Destination: Where, Files	Where the files go; their name.	page 64
Timecode: Pool, Slot, Offset, Length	The timecode's number, source, start and length.	page 65
Timecode: the gear	Timecode Options, or Timecode Settings.	Below
Page: Page	The song's executor page.	page 66
Page: Create sequences	Ticks assign on every exported sequence.	page 66
Page: Create page	grandMA3: makes the page first.	page 79
Page: Faders, Buttons	The places on a page the export may use.	page 66
Sequences: Numbers from, Renumber	Where sequence numbers start; give them out again.	page 67
Sequences: All, None	Tick or untick every mark.	page 67
Sequences: tick, Seq, Exec, assign	For each sequence: export it, its number, its executor, put it there.	page 68
Macro: Number	The macro's pool number.	page 68
Macro: Clear the programmer first (ClearAll)	New cues are stored empty.	page 68
Macro: Delete the macro when it has run	The macro removes itself.	page 68
Macro: Store every cue again	For when the console never took an export.	page 71
Write cue commands	Lets the listed cue commands into the macro, for this export.	page 69
Names: Sequences, Timecode, Macro, Defaults	Name patterns.	page 68
Colours: Leave, One for all, Each its own	Colours on the console.	page 69
Colours: Appearances from	grandMA3: the first Appearance number.	page 69
Export, Close	Write the files, or leave. The numbers stay with the song.	page 62
Exported: Copy commands, Open folder, Back, Done	After an export.	page 72

Timecode Options, for grandMA2

The gear beside Timecode opens this window when the console is grandMA2. It has everything the console's own Timecode Options window has, laid out the same way.



Timecode Options, for grandMA2.

Option	What it is	Choices; at first
Name	This song's name for its timecode. Empty: the Names pattern names it.	
Slot	The time source it follows.	TC Slot 1 to 8, Link Selected, Intern; TC Slot 1
Length	How long it runs.	The song's length
Offset	Where it starts. Events count from it.	The song's start
Runs	For the console's own clock: how many times it plays.	Endless Repeat, No Repeat, or a number; Endless Repeat
Switch Off	What happens to what it started when the timecode is turned off.	Playbacks Off, Keep Playbacks; Playbacks Off
Status Call	On: the console catches up with the running show at once when timecode arrives mid-song.	Off, On; On
Time Unit	How the console shows the timecode's times. It reads the same times whichever is chosen.	The show's rate, 24, 25 or 30 FPS, 1/100 Seconds; the show's rate
When Ending	What the timecode does when it runs out of time.	Stop, Pause; Stop
When Stopping	What happens when the timecode is stopped.	Do Nothing, Rewind; Do Nothing

Option	What it is	Choices; at first
AutoStart	Starts the timecode by itself when its time source runs.	Off, On; On
Record Mode	Shown greyed. It cannot be exported: set it on the console.	Go, Goto (Status)
User Bits	Up to eight hex digits the timecode must carry to run.	Empty: all zero
Info	A note for the timecode, set by the macro.	

Save to Default makes these the options of every song not given its own. Load from Default brings them back. Neither touches the name. This is how the console's own two buttons work.

Only an option that differs from the console's default is written into the file. The slot, the time unit and AutoStart are always written.

> Untried on a console
> Only the slot and AutoStart have been read by onPC from an exported file. The offset and the length are written as onPC saved them in a show of its own, and have not been imported since. The file uses the names onPC's own program has for the rest, but nothing has read them yet.

Timecode Settings, for grandMA3

The gear opens this window when the console is grandMA3, grouped as the console groups them.



Timecode Settings, for grandMA3.

Setting	What it is	Choices; at first
Time: Name	This song's name for its timecode.	
TC Slot	The time source it follows.	TCSlot 1 to 8, <Selected>, <Internal>; TCSlot 1
Offset TC Slot	Where it starts in the incoming time. Events count from it.	The song's start
Duration	How long it runs.	The song's length
Playback: Auto Start	Starts by itself when time arrives within its range.	No, Yes; Yes
Auto Stop	Stops by itself when the time signal stops.	No, Yes; Yes
Loop Mode	For the console's own clock: repeat, pause at the end, or neither.	Off, Loop, Pause; Off
Loop Count	How many times it loops; 0 is without end.	0

Setting	What it is	Choices; at first
Switch Off	What happens to what it started when the timecode is switched off.	Playbacks Off, Keep Playbacks; Playbacks Off
Assert Previous Events	Yes: events before the cursor are asserted when the timecode starts mid-song.	No, Yes; Yes
Display: Time Display Format	How the console shows the times. Default follows the user profile.	Default and four formats; Default
Frame Readout	How the console shows frames. It reads the same times whichever is chosen.	The show's rate, Default, Seconds, 24, 25, 30 or 60 fps; the show's rate
Record: Record Go	How Go presses recorded on the console are kept.	as Go, as Goto (Status); as Goto (Status)
Playback and Record	Which events the timecode records and plays back.	Manual Events, All Events; Manual Events
Other: User Bits	Up to eight hex digits the timecode carries.	Empty: all zero
Restart Option	Where it starts again when restarted.	Reset, Continue; Reset
Note	The timecode's note.	

Save to Default and Load from Default work as for grandMA2, with a default of grandMA3's own. Every setting is written into the timecode file, every time.

The first-run window and the MIDI help

Window and control	What it does
Before you use Synphonos: I accept	Accepts the licence, terms and privacy notice. Asked once, on the first run.
Before you use Synphonos: Decline and quit	Closes the program. Nothing is kept, so you are asked again next time.
The terms have changed: I accept	The same window, shown once more when a version comes with changed terms. It says first what is different. Coming from 1.0, you see it the first time 1.1 opens.
Setting up a MIDI port: Open the loopMIDI download page	Opens that page in your browser.
Setting up a MIDI port: Rescan ports	Looks for MIDI ports again, and says how many were found.



CHAPTER 17

Keys and mouse

Every key and every mouse gesture, in three tables.

Keys you can change

Set in Settings, Keys (page 35). Each action has room for two keys.

Action	Key at first	Notes
Play/Pause	Space	
Play	—	
Pause	—	
Stop	Esc	Twice while locked.
Jump back	←	By the Jump time. Repeats while held.
Jump forward	→	Repeats while held.
Previous frame	,	Repeats while held.
Next frame	.	Repeats while held.
Back to play start	Backspace	
Go to start	Home	
Add mark	M	A Show mark in Show mode; a mark in the selected sequence in Program mode.
Previous mark	Page Up	The mode's own marks.
Next mark	Page Down	
Speed down	—	The next slower speed the device can play.
Speed up	—	
Return on pause on/off	—	
Previous song	—	Stops at the first song.

Action	Key at first	Notes
Next song	—	Stops at the last song.
Lock the show on/off	—	

A Show mark can have a key too, set in the Marks list (page 37).

Program mode's editing keys

These are fixed. They work in Program mode when you are not typing in a field. A key you have given to an action above wins over them.

Key	What it does
Ctrl + C , Ctrl + X , Ctrl + V	Copy, cut, paste
Ctrl + Z	Undo. In Show mode too.
Ctrl + Y or Ctrl + Shift + Z	Redo
Delete	Delete the selected marks
Ctrl + ← , Ctrl + →	Nudge the selection one frame
Ctrl + Shift + ← , Ctrl + Shift + →	Nudge it one second
Ctrl + A	Select every mark in the selected sequence
Esc	Closes a right-click menu. Otherwise it is Stop.

The mouse

Where	Do this	And this happens
Stems	Click or drag	The playhead moves there.
Stems	Ctrl +scroll	Zoom, about the pointer.
Stems	Shift +scroll	Move along the song.
A stem	Alt +scroll, or drag the line under it	That stem gets taller or shorter.
A stem's name	Click its diamond (Program mode)	That stem is drawn behind the selected sequence.
Zoom bar	Drag the thumb; drag an end; click beside it; double-click	Move; zoom; jump there; whole song.
A sequence	Click	Selects it, and moves the playhead there.
A sequence	Double-click	Adds a mark there.
A sequence	Drag from an empty place	A box that selects the marks inside it.
A sequence	Right-click, not on a mark	Its menu.

Where	Do this	And this happens
A sequence	Alt +scroll, or drag the line under it	That row gets taller or shorter.
A mark	Click; Shift -click; Ctrl -click	Select; add to the selection; add or take away.
A mark	Drag; Alt +drag	Move the selection; to whole seconds.
A mark	Double-click	The playhead goes to it.
A mark	Right-click	Its menu.
A release handle	Drag	Changes the hold.
Cue table row	Click; Shift -click; Ctrl -click; double-click; right-click	Select; a range; one more or less; go to; menu.
Paste	Hold the pointer over it	Shows where the paste will land.
Anything in the status bar	Hold the pointer over it	Says what it is, or what state it is in.
A file from Explorer	Drop it on the window	Adds it to the loaded song.



CHAPTER 18

Limits and ranges

How many, how long, how far. Everything Synphonos puts a number on.

The show

Thing	Limit
Songs in a show	200
Stems in a song	8
Sequences in a show	32, and never fewer than 1
Marks in a song	20,000 Show marks and 20,000 Program marks. More in a file are dropped as it opens.
A name, a cue's command or its info	256 characters
A show file	16 MB. A larger file is not opened.
A stem's sample rate	8 kHz to 768 kHz
Recent shows listed	8
Songs An hour each can number	23
Timecode	Wraps at 24 hours. An exported timecode may not run past 24:00:00:00.
Frame rates	24, 25, 29.97 NDF, 29.97 DF, 30

Playing

Thing	Range; at first
Speed	10, 25, 50, 75, 100, 125, 150, 200%; 100%
Vol and a stem's Level	0 to 100%; 100%
LTC level	-20 to 0 dBFS in steps of 0.5; -10 dBFS

Thing	Range; at first
Trim	-8 to +8 frames; 0
Jump	0.1 to 600 seconds; 5 seconds
Stop's second press, while locked	Within 2 seconds
Deepest zoom	One frame 24 points wide

Programming

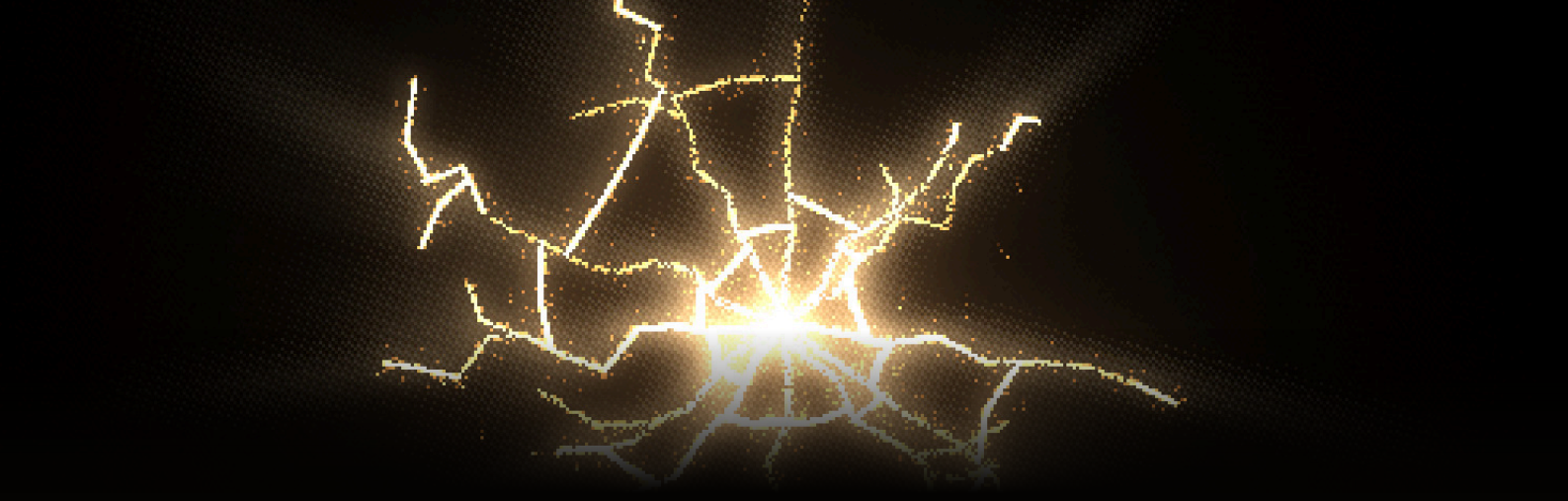
Thing	Range; at first
Cue number	Above 0, up to 9999.999, three decimals at most
Hold	0.04 to 600 seconds; 0.5 seconds for a new sequence
Fade, delay, Off time	0 seconds to 1 hour, in hundredths of a second; empty
Tempo	20 to 400 BPM. Detect finds 50 to 220.
Beats in a bar	1 to 16; 4
Copies in one BPM paste	4000
Undo	200 steps
A new mark's place	On a whole frame

Exporting

Thing	Range; at first
Page, timecode pool, sequence, macro and Appearance numbers	1 to 9999
grandMA2 executor	1 to 999
grandMA3 executor	101 to 490
Timecode pool and page	The song's place in the set list
Sequence numbers	From the page: 401, 402… on page 4
Macro	101
Appearances from (grandMA3)	901
User Bits	Up to eight hex digits
grandMA2 version	3.9.60 or later
grandMA3 version	Tried on 2.4.2 and 2.5.1

The window

Thing	Range; at first
Smallest window	440 by 400 points
Small, Medium, Large	Under 600 points wide; between; 1100 points or more
Scale	80% to 150%; 100%
Glow	0% to 200%; 100%
Waveform (every stem's height)	40 to 400; 90
One stem's own height	16 to 400 points
Keys for each action	2



CHAPTER 19

Files and the command line

What is in the download, the two files Synphonos keeps, where they are, what is inside them, and what the program does from a command prompt.

The download

File	What it is
synphonos.exe	The program. It needs nothing installed and can be run from any folder.
Synphonos - How to use.pdf	This manual.
LICENCE.txt	The licence, terms of use and privacy notice. The same text the first run asks you to accept.

Synphonos is made for 64-bit Windows. To remove it, delete the folder. To remove its settings too, delete the settings folder below.

The Windows warning

The program is not code-signed yet. The first time you open it, Windows may show a warning before it runs. This is Windows saying it does not recognise the publisher. It is not a finding about the program.

The licence, and what it says in short

The first run asks you to accept the licence, the terms of use and the privacy notice. The book in the bottom right corner opens them again at any time. Read them: they are short, and they are the agreement.

Version 1.1 of the terms came with Synphonos 1.1. Its privacy notice lists every file this version writes, the export files among them. If you accepted the terms in 1.0, you are shown them once more, with what changed at the top.

In short, in the document's own words:

- ◇ Synphonos is free. Install it on as many machines as you like, and pass the unchanged program on to whoever you want.
- ◇ It makes no network connections and collects nothing about you or about your show.
- ◇ It comes with no warranty beyond what the law insists on. It is a tool for live work, and deciding whether to trust it with a show, testing it first, and having a fallback if it stops, are yours to do.
- ◇ Donations are gifts, not purchases.

The coffee cup in the bottom left corner opens the donation page in your web browser. So do the links in the About window. Synphonos itself connects to nothing.

Where things are kept

Synphonos keeps its own files in one folder in your Windows user profile:

```
%APPDATA%\tcgen\config
```

Paste that into Explorer's address bar to go there. Or open Files and press Open folder under Settings.

File	What it is
settings.toml	This machine's settings.
default.synshow	The show, until you save it somewhere else.
crash.log	Written only if the program ever fails. It holds what happened, for a bug report.
settings-folder.txt	There only if you moved the settings: one line naming the folder they went to.

The folder is called tcgen, not Synphonos, on purpose: it is the name the program's settings have always been kept under, and keeping it means settings saved by earlier versions still load.

A show you save with Save as… lives wherever you put it.

The exported files

	grandMA2	grandMA3
Macro	macros\NAME_macro.xml	datapools\macros\NAME_macro.xml
Timecode	importexport\NAME_tc.xml	datapools\timecodes\NAME_tc.xml

NAME is what you typed in Files, or syn_ then the show's name then _s and the song's number: syn_winter_gala_2026_s04. What is inside them is on page 110.

The show file

A show file is plain text, in a format called TOML. You can open it in a text editor to see what it holds. It is safest to change it only from the program.

In the file	What it is
version, format	The first two lines. version is a sentence for older versions to stop at (page 104). format is the file format: 1.1 writes format 2.
name, frame_rate, current	The show's name, its rate, and which song is loaded.
[[songs]]	One for each song: name, start_offset, and once set bpm, beat_offset and beats_per_bar.
[[songs.tracks]]	One for each stem, loaded or not found: path, relative (its path from the show file), gain, muted, and channels if it has its own.
[[songs.show_marks]]	Show mode's marks: name, seconds, and a key if it has one.
[[songs.marks]]	Program mode's marks: name, seconds, lane (its sequence), and where it has them cue, hold and timing.
[songs.export], [songs.export_ma3]	The song's export numbers for each console, and what each sequence holds there.
[[lanes]]	One for each sequence: name, colour, function, executor, hold, stem, and where set off_time and timing.
export_...	Show-wide export settings: the macro number, places, names, colours, the console last picked.

The file says lane where the window says sequence. They are the same thing.

A mark's seconds is its time in the song. It does not depend on the frame rate, the speed or Starts at.

Every change is saved within a second, to a temporary file that then replaces the old one. A save that is interrupted cannot leave half a show behind.

If a show file cannot be read when Synphonos starts, it is left untouched. Synphonos starts an empty show beside it in a file ending .synshow.recovered, and the status bar says what was wrong.

Versions of the show file

Synphonos 1.1 saves shows in a new format, format 2, which Synphonos 1.0 cannot open.

You have	What happens
A show saved by 1.0, opened in 1.1	It opens as it was. Its marks stay Show mode's marks. Program mode starts empty, with one sequence, Main cue. From then on it is saved in the new format, and 1.0 can no longer open it. Keep a copy of the 1.0 file for any machine still on 1.0.
A show saved by 1.1, opened in 1.0	1.0 refuses it. It says the file is not a readable show file and leaves it exactly as it was. Hold the pointer over the message in 1.0 to read all of it, with the line This show needs Synphonos 1.1 or later. 1.0 carries on with an empty show if it was starting up, or with the show it already had if you used Open....
The same show, back in 1.1 afterwards	It opens as before. Nothing in it has changed. If you did some work in 1.0 while it had the empty show, 1.1 opens that work instead: it is in a file beside your show, ending .synshow.recovered. Use Load show... to go back to your show.
A show from a version newer than yours	It opens and runs. The status bar says Changes are not being saved, and the file is left untouched. Save as... to a new file still works.

A 1.1 show file begins with the line version = "This show needs Synphonos 1.1 or later". That line is what 1.0 stops at. This was proven with 1.0's own code on copies of real shows. It has not yet been watched in 1.0's window.

> Update every machine before sharing a 1.1 show
> A machine still on Synphonos 1.0, the backup machine included, will say the show is not readable and run without it. Two more things can go wrong when 1.0 and 1.1 are both used on one machine: see page 120.

The settings file

settings.toml is plain text too. Everything in it can be set from the window, so there is rarely a reason to open it.

In the file	Set in the window by
show_path, recent_shows	Opening and saving shows.
device, [channels]	Settings, Output: Device, and the Track and LTC channels.
ltc_enabled, ltc_level_dbfs	The LTC row.
mtc_enabled, midi_port, mtc_trim	The MTC row.
volume	Vol.
return_on_pause, jump_seconds	Settings, General.
global_keys, [keys]	Settings, Keys.
locked, mode	The padlock, and Show | Program.

In the file	Set in the window by
playhead_samples, playhead_rate	Where the playhead was.
terms_accepted, terms_version	I accept, and the version of the terms it was given to. Delete the file and you are asked again.
[appearance]	Appearance, each stem's and sequence's height, and Pin the selected mark.
[window], [export]	The window's size and place, and where the last export went.

A value typed by hand that is out of range is pulled back into range when the file is read.

The command line

Run with no arguments, synphonos.exe opens the window. With one of these it does a job at the command prompt and never opens a window, an audio device or a MIDI port.

Command	What it does
synphonos --version	Prints the name and version: Synphonos 1.1.0.
synphonos --help	Prints these commands.
synphonos --selftest	Checks the timecode maths: eleven checks of LTC, MTC and frame counting against known answers. Prints PASS or FAIL for each.
synphonos --render-ltc OUT.wav TC FPS SECONDS	Writes LTC to a WAV file: 48 kHz, 16-bit, one channel, at -10 dBFS. TC is the timecode to start at, as HH:MM:SS:FF. FPS is 24, 25, 29.97, 29.97df or 30. SECONDS is how long, decimals allowed, up to 12 hours.
synphonos --tempo FILE	Prints what Detect would find in an audio file.

Two of them, as they run, each with what it prints:

```
synphonos --render-ltc test.wav 01:00:00:00 25 10
wrote test.wav: 480000 samples at 48000 Hz, 25 fps, 01:00:00:00 to 01:00:09:24 (last frame), peak 0.3162
synphonos --tempo "04 Can You Hear Me At The Back (Click).wav"
128.00 BPM (measured 128.000), first beat at 0.467 s, steady
```



CHAPTER 20

Timecode explained

What the numbers mean, how they travel as sound and as MIDI, what the frame rates are, and why Synphonos's timecode cannot drift from the song.

The four numbers

Timecode names every moment as hours, minutes, seconds and frames: `04:01:30:12`. A frame is a slice of a second: a 24th, 25th or 30th of one, depending on the frame rate.

In Synphonos the timecode at any moment is Starts at plus how far into the song the playhead is. A song that starts at `04:00:00:00` reaches `04:01:30:12` one and a half minutes and twelve frames in.

Timecode runs from `00:00:00:00` to `23:59:59` and its last frame, then wraps to zero.

Frame rates

Rate	Frames in a second	Counting
24	24	0 to 23
25	25	0 to 24
29.97 NDF	30000/1001, about 29.97	0 to 29, none skipped. Timecode runs a little slow against a real clock.
29.97 DF	30000/1001	0 to 29, with some numbers skipped so it keeps up with a real clock.
30	30	0 to 29

Both ends must be set to the same rate. If they are not, the receiver shows numbers that jump or run at the wrong speed, and cues fire at the wrong time or not at all.

Synphonos has one rate for the whole show, because a console is set to one rate for the night.

Drop-frame

At 29.97 frames a second, counting 30 frames to every second makes timecode fall behind a real clock by about 3.6 seconds an hour. Drop-frame fixes the count, not the picture or the sound: it skips two frame numbers, 00 and 01, at the start of every minute, except every tenth minute. So 00:00:59;29 is followed by 00:01:00;02.

No frame of audio is dropped. Only the labels skip. Synphonos writes drop-frame timecode with a semicolon before the frames, 01:00:00;00, and accepts either a colon or a semicolon when you type one.

Use 29.97 DF only if something in the rig demands it.

> Neither console export takes drop-frame
> grandMA2 has no drop-frame timecode, and grandMA3's timecode has no drop-frame rate. Synphonos refuses to export a 29.97 DF show, because the cues could not be exact. Change Rate to 29.97 NDF, 30, 25 or 24, in Synphonos and on the console. Your marks stay on the same moments of the music.

LTC

LTC, linear timecode, is timecode as an audio signal. It travels down an audio cable like any other sound.

- ◇ Each frame is 80 bits. The time is in the first 64, as separate digits. The last 16 are a fixed pattern, the sync word, that tells a reader where a frame ends and which way it is running.
- ◇ The bits are sent as a square wave that changes level at the start of every bit, and once more in the middle of a bit that is a 1. A reader finds the bits from where the signal crosses zero.
- ◇ It sounds like a harsh buzz. That is normal.

What Synphonos sends:

Thing	Value
Level	-20 to 0 dBFS, as you set it; -10 dBFS at first. This is the peak of the square wave.
Edges	Shaped to a rise time of 25 microseconds, the standard's own figure, so the signal is not a perfect square.
User bits	All zero.
Drop-frame flag	Set at 29.97 DF, clear otherwise.
Speed	At a playback speed other than 100%, LTC runs at that speed with the song.

Thing	Value
When stopped	Silence. LTC is sent only while the song plays.

LTC is made in the same step that plays the audio, sample by sample. A given sample of the song always goes out with the same piece of timecode.

MTC

MTC, MIDI timecode, is the same time sent as MIDI messages.

- While the song plays, MTC sends quarter-frame messages: four in every frame. Each carries one small piece of the time, and it takes eight of them, two frames, to send a whole timecode. A receiver puts the pieces together and allows for the two frames.
- When the playhead stops or jumps, MTC sends one full-frame message with the whole time in it, so the receiver shows the new position at once.
- The frame rate is carried in the messages. MTC has codes for 24, 25, 29.97 drop-frame and 30. It has none for 29.97 non-drop, so that is announced as 30, which is what receivers expect.

MIDI is not sample-accurate the way audio is. Synphonos times each quarter-frame against the audio device's own clock, on a thread of its own, and a message that would be late is dropped and the sequence started again rather than sent at the wrong moment.

Trim shifts the time MTC carries by whole frames (page 23).

LTC or MTC?

	LTC	MTC
Travels as	Audio, on any audio cable	MIDI, through a MIDI port
You need	A spare output on the audio interface	A MIDI interface, or a virtual port on the same PC
Locked to the audio	Exactly: it is audio	Closely: it is timed against the audio clock
While stopped	Silent	Sends the position once
Same PC as the console software	Needs an audio loop	Needs only a virtual MIDI port

Both can be on together. Many rigs send LTC to the console and MTC to something else.

Why it cannot drift

Some players run a clock for timecode beside the audio and hope the two stay together. Synphonos has one clock: the audio itself.

- The timecode for any sample is worked out from that sample's number in the song, exactly, with whole-number arithmetic. Nothing is added up along the way, so there is nothing that can creep.
- Jump anywhere, change speed, play for an hour: the same sample always carries the same timecode.
- A mark is stored as a time in the song, and its timecode is the frame that holds that time. The readout, the cue table and the exported event all come from the same sum.

Levels and cables, in short

- Give LTC its own output and its own cable. Never mix it into a channel that carries music.
- If the receiver loses lock, raise Level. If LTC can be heard in other channels, lower it.
- Check the whole chain before doors: play a song and watch the console's timecode display run.



CHAPTER 21

The macros, line by line

What the two exported files hold, and what each line of the macro does on the console. The examples are the files Synphonos wrote for the song in this manual's pictures.

grandMA2: the macro

The lines run in this order. Lines in the first column are from the real file.

Line	What it does
ClearAll	Empties the programmer, so the cues stored next are empty. Only there when there is a cue to store and the tick is on.
Store Sequence 401 Cue 4.5 /merge /nc	Stores one new cue of a Goto sequence. One line for each cue not stored by an earlier export.
Label Sequence 401 Cue 4 "Chorus"	Names a cue after its first mark. One line for each cue fired.
Label Sequence 401 "Main cue - Can You Hear Me At The Back"	Names the sequence, by the Names pattern.
Assign Fade 2 Sequence 401 Cue 1	A cue's fade. Likewise OutFade, Delay and OutDelay. Only for times you set.
Assign Sequence 401 Cue 8 /cue_mode=assert	A cue's mode: assert, xassert, release or normal.
Assign Sequence 401 Cue 4 /info="..."	A cue's info. A command is written the same way with /cmd=.
Assign Sequence 401 At Executor 4.1	Puts the sequence on its executor. Only where assign is ticked.
Store Sequence 402 Cue 1 /merge /nc	For a sequence that is not a cue list: one empty cue, so the sequence exists to be put on its executor.
Assign Temp ExecButton1 4.101	Sets the executor's button to the sequence's function: Temp, Flash, Swop, Toggle, On, Off, Go, GoBack, Top or Pause. For button sequences the export put there, now or before.
Assign Executor 4.101 /offtime=0.4	The sequence's Off time, on its executor.

Line	What it does
Appearance Sequence 401 /red= /green= /blue=	A colour, when Colours says to. Likewise for the timecode and the macro.
SelectDrive 1	When the files went to onPC: read the timecode from the console's own disk.
Delete Timecode 4 /nc	Removes the timecode at that number. An import cannot replace one.
Import "syn_winter_gala_2026_s04_tc" At Timecode 4 /nc	Brings in the timecode file, named without .xml.
Label Timecode 4 "Can You Hear Me At The Back"	Names the timecode.
Info Timecode 4 "..."	The timecode's Info, if you typed one.
SelectDrive 1	After an import from a USB stick: back to the console's own disk.
Delete Macro 101 /nc	The last line. The macro deletes itself, unless you chose to keep it.

Names in these lines have quotation marks, $, ; and round brackets taken out: in a macro, round brackets ask the operator to type something.

grandMA2: the timecode file

```
<Timecode index="0" name="Can You Hear Me At The Back" lenght="7200" offset="432000"
        slot="TC Slot 1" frame_format="25 FPS" m_autostart="true">
```

In the file	What it is
offset="432000"	The song's start, in 30ths of a second: 04:00:00:00 is 4 × 3600 × 30.
lenght="7200"	The length, in 30ths: four minutes. The console spells it this way.
slot, frame_format, m_autostart	The slot, the time unit and AutoStart, always written. Other options are written only when they differ from the console's default.
A track for each sequence	Aimed at the sequence's executor: page 4, executor 1.
An event for each mark	Its time, in 30ths of a second from the offset. Cue 2 at 15 seconds is 450.
A Goto event	Names its cue by sequence and by the cue's place in the sequence, counted from 1.
A Temp, Flash or Swop mark	Two events: one pressed, and one a hold later, not pressed.

Times are in 30ths of a second at every frame rate. That is how the console counts them at 24, 25 and 30 frames alike, and the frame format only sets how it shows them.

Because a Goto names its cue by place, Synphonos keeps a list in the show file of every cue each sequence holds on the console, including cues whose marks you have since deleted.

grandMA3: the macro

Plain commands only: no plugin and no Lua.

Line	What it does
ClearAll	Empties the programmer, as on grandMA2.
Store Appearance 901 /NC, Label Appearance 901 "Synphonos RRGGBB", Set Appearance 901 Property "BackR" …	Makes an Appearance for each colour used, when Colours says to.
Store Sequence 401 Cue 4.5 /Merge /NC	Stores one new cue.
Label Sequence 401 Cue 4 "Chorus"	Names a cue.
Label Sequence 401 "Main cue - Can You Hear Me At The Back"	Names the sequence.
Set Sequence 401 Cue 1 Property "CueInFade" 2	A cue's fade in. Likewise CueOutFade, CueInDelay and CueOutDelay.
Set Sequence 401 Cue 10 Property "Release" "Yes"	A Release cue. Any other mode writes "" here.
Set Sequence 401 Cue 8 Property "Assert" "Assert"	The cue's Assert: None, Assert or X-Assert.
Set Sequence 401 Cue 4 Property "Note" "…"	A cue's info. A command is written to Command.
Set Sequence 402 Cue "OffCue" Property "CueInFade" 0.4	The sequence's Off time, as the fade of its OffCue. CueOutFade is set to the same.
Store Page 4 "Can You Hear Me At The Back" /NC	Makes the page. Only when Create page is ticked.
Assign Sequence 401 At Page 4.201	Puts the sequence on its executor.
Set Page 4.201 Property "Key" "Go+"	Sets the executor's button: Go+ for a cue list, otherwise the function. Written every time, because grandMA3 keeps an executor's old button when a sequence is put on it.
Import Timecode Library "syn_winter_gala_2026_s04_tc" At Timecode 4 /NC	Brings in the timecode. It replaces what is at that number. From onPC it adds If Drive 1.
Label Timecode 4 "Can You Hear Me At The Back"	Names the timecode.
Assign Appearance 901 At Sequence 401	Gives a sequence, the timecode or a kept macro its colour.
Select Drive 1	After an import from a USB stick: back to drive 1.
Delete Macro 101 /NC	The last line. The macro deletes itself, unless you chose to keep it.

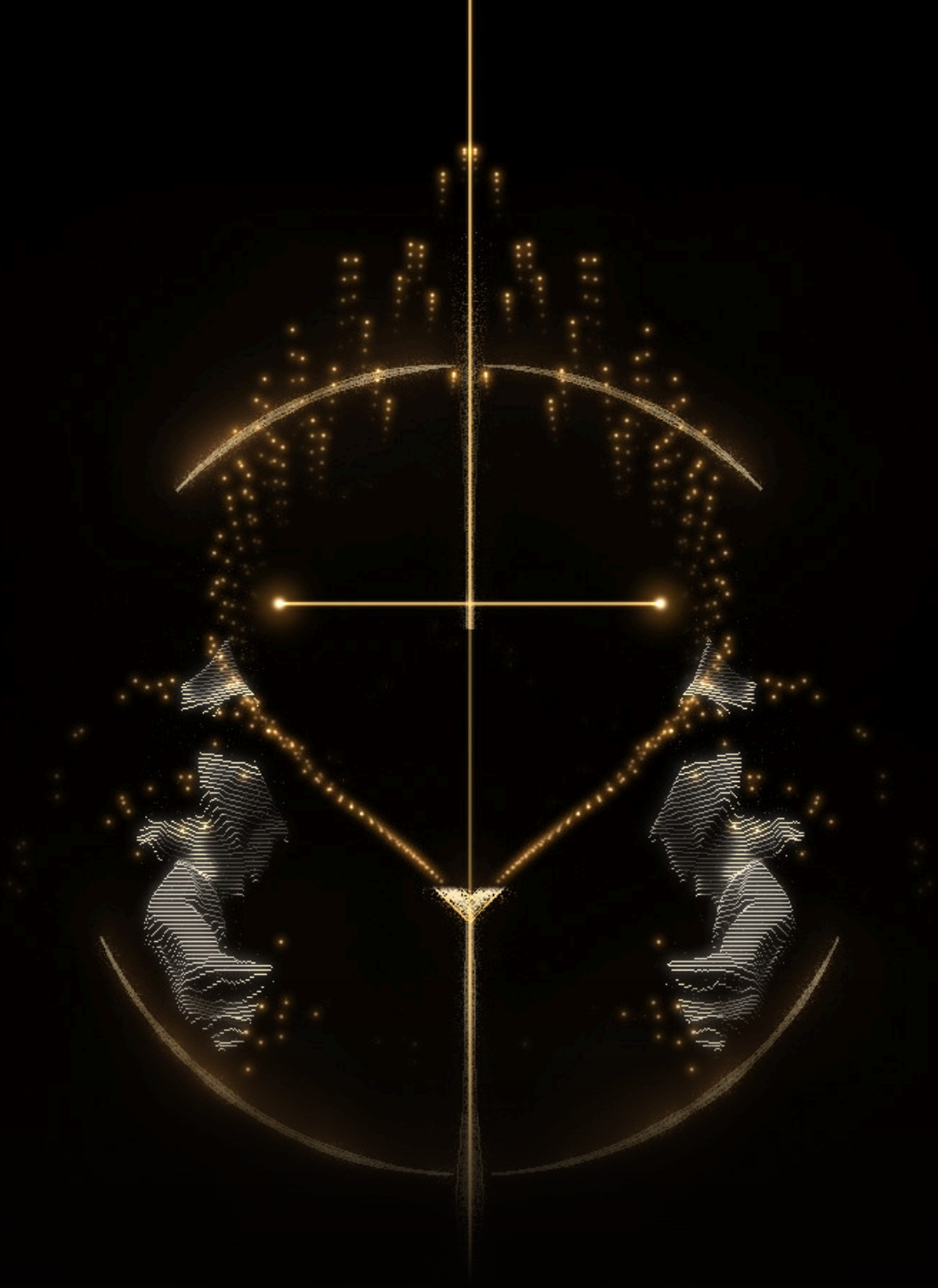
The sequences are stored before the timecode is imported. A track whose sequence does not exist yet would be left aimed at nothing.

grandMA3: the timecode file

```
<Timecode Name="Can You Hear Me At The Back" Duration="240.000000"
        OffsetTCSlot="14400.000000" TCSlot="1" AutoStart="Yes" AutoStop="Yes" ...>
  <Track Target="ShowData.DataPools.Default.Sequences.401">
    <CmdEvent Name="Goto" Time="75.000000">
      <RealtimeCmd Type="Key" Status="On" ExecToken="Goto"
              ValCueDestination="0.Sequences.400.4500"/>
```

In the file	What it is
OffsetTCSlot="14400.000000"	The song's start in seconds: 04:00:00:00.
Duration="240.000000"	The length in seconds.
Every setting	Written as an attribute, every time.
Target="...Sequences.401"	Each track is aimed at its sequence, by number, in the Default data pool.
Time="75.000000"	Each event's time in seconds from the offset, cut to the microsecond.
ValCueDestination="0.Sequences.400.4500"	A Goto's cue: the sequence, counted from 0, and the cue number times 1000. Cue 4.5 of sequence 401.
Name="Temp(Release)", Status="Off"	The release of a Temp, Flash or Swop mark: a second event.

Because a Goto names its cue by number, a cue stored between two others later, such as 2.5, leaves every other Goto on its own cue.



PART FIVE

Help

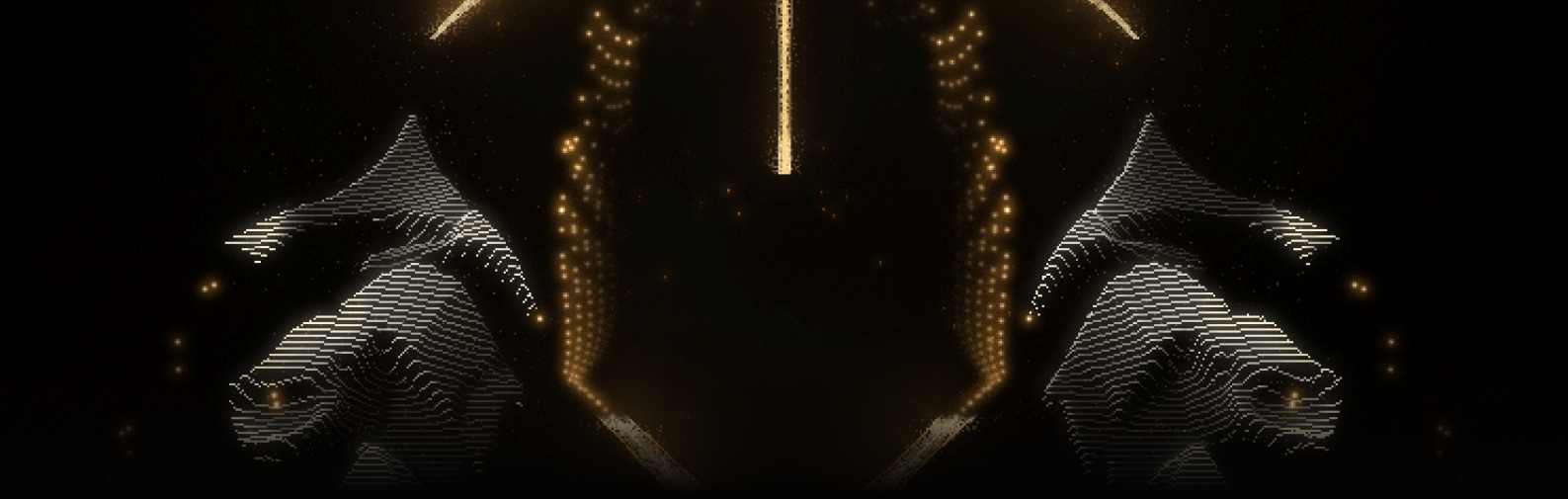
When something is not doing what you expect: look it up by what you see. Then what is known to be wrong or untried, the questions people ask, and the words the manual uses.

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CHAPTER 22

Troubleshooting

Find what you see in the left column. The status bar is the first place to look: Synphonos says there what it refused and why, and the message stays until the next one.

Sound

You see or hear	Check
No sound, and the first diamond is red	No audio device is open. Settings, Output: choose a Device and press ↻.
Play is greyed	No song is loaded, no audio device is open, or the song is still loading.
No audio device: choose an output device	The same: choose a device.
Still loading…	Wait a moment.
Sound from the wrong speakers	The device you chose was not there, so the system default was opened. The Device row shows (not available). Plug it in and press ↻.
The song is only in the left speaker	On a two-channel device the stems are in mono on channel 1 and LTC is on channel 2. See page 22.
A loud buzz in one speaker	That is LTC. Keep its channel out of anything you listen to. See page 22.
One stem is silent	Settings, Tracks: is Mute ticked, is Level at 0, are its Channels outputs that go nowhere?
Audio device lost	The device was unplugged or stopped. Playback has stopped. Plug it back in and press ↻ in Output.
A speed is greyed in the menu	That speed cannot be played exactly at the device's sample rate.
speed reset to 100%	You changed to a device that cannot play the speed that was set.
channels reset for track… or channel assignment reset	The new device has fewer channels. Set them again.

You see or hear	Check
the audio ends … before its declared length	The file says it is longer than it is. Synphonos uses the real length. Nothing to do.
cannot seek at the very end of a song	A known fault when one stem is shorter than another. See page 120.
Cannot load and a file name	The reason follows the name. The file is not audio Synphonos can play, or cannot be opened.

No timecode by LTC

1. Is the song playing? LTC is sent only while it plays.
2. Is LTC ticked? Settings, Output, LTC, on.
3. Is it on the channel you think? Ch in the same row. On a two-channel device it starts on channel 2.
4. Does that output reach the console's timecode input? Follow the cable. LTC goes into a timecode input, not an audio input.
5. Is it loud enough? Raise Level from -10 dBFS towards 0.
6. Did Synphonos turn it off? LTC turned off in the status bar means the device had no channel free for it. Free a channel, or use a device with more.
7. Is the console listening to that input, at the same frame rate? That is set on the console.

No timecode by MTC

1. Look at the second diamond in the bottom left corner. Outlined: MTC is off. Red: it is on with no port. Green: a port is open.
2. Outlined? Tick MTC, on in Settings, Output.
3. Red? Choose a port. If the list is empty, press ↻. If it is still empty, you need a MIDI interface or a virtual port: see page 23.
4. Green, and still nothing? The receiver must listen to the same port, at the same frame rate.
5. MIDI send failed in the status bar: the port has gone. Press ↻ and choose it again.

Timecode arrives but is wrong

You see	Check
Numbers that jump about, or run at the wrong speed	The frame rate. **Rate** must be the same as the console's.
Every cue early or late by the same amount, on MTC	**Trim** in the MTC row. It should be `0` unless you set it on purpose.
Every cue early or late by the same amount, after an export	**Offset** in the Export window's **Timecode** part. It should be the song's **Starts at**. If you changed one and not the other, every event moves by the difference, and the window says so.
Cues at the wrong time after changing Rate	Export again. Marks stay on the music, but their timecodes change with the rate.
The right time, but the console does not follow	The exported timecode's **Slot** must be the slot the console receives on.
Timecode slower than a clock	A speed other than `100%`. The status bar shows it in rose.

Keys

You see	Check
A key does nothing	Are you typing in a field? Click elsewhere first. Was the key taken by something else? Look in **Settings**, **Keys**.
Locked: and what was refused	The show is locked. Click the padlock.
Keys do not work from other programs	**Ticked keys work from other apps** must be ticked, and the box after the key too. The third diamond should be green.
Key not working from other apps	Windows refused the key, usually because another program has it. The reason follows. Choose another key.
The box after a key is greyed	That key cannot be used from other programs.
A key stopped working in other programs	You ticked it in Synphonos, so Synphonos takes it everywhere. Untick it, or choose a key nothing else needs.
Stop needs two presses	The show is locked. See page 39.

Shows and files

You see	Check
file not found, or files are missing	A stem is not where the show expects it. The show keeps it: put the file back and press Look again in Settings, Tracks. See page 19.
stems were left out	The show names audio on another computer or on a device. See page 20.
A song says not found after its stems in the set list	The same missing stem. Settings, Tracks lists which.
Changes are not being saved	The show was saved by a newer Synphonos. Update, or use Save as... to work on a copy.
not saved	The same, when a save was tried. The file was left untouched.
An empty show where yours should be	The show file could not be read. Yours is untouched; the empty one is beside it, ending .synshow.recovered. The status bar said why.
The settings are back to how they were when new	The folder they were moved to is missing, so the default folder is in use for this run. Plug the drive in and restart.
New..., Open... greyed	The show is locked.
Synphonos 1.0 says a show is not a readable show file	The show was saved by 1.1. Update that machine to 1.1. See page 104.
1.1's recent shows, window place or mode were forgotten	Synphonos 1.0 was run on this machine. See page 120.

Program mode and the export

You see	Check
Nothing can be edited	The show is locked.
Beats will not switch on	The song has no tempo. Press Set BPM... first.
Not here when you hover Paste	The paste would not fit. The reason follows: move the playhead, or select a higher or lower sequence.
A new mark is not where you clicked	It landed on the nearest frame, or with Snap on Beats, the nearest beat.
A mark went into the wrong sequence	New marks go into the selected sequence. Click the sequence first.
Not exported and a reason	See page 71.
grandMA2: the macro arrives with no lines	Type the commands exactly as the Exported window shows them: delete the macro first, and name the file without .xml.
grandMA2: a Temp sequence is on a Flash button	The macro sets a button to its sequence's function only on executors the export put the sequence on, now or before. An executor you placed yourself, with assign unticked, is not touched: set its button on the console, or tick assign and export again.

You see	Check
grandMA2: a Goto fires the wrong cue	A cue was added or deleted on the console. See page 76.
grandMA3: nothing appears on the page	The page is not on the console. Tick Create page and export again.
grandMA3: an error at Store Page	The page is already there. Untick Create page.
grandMA3 onPC: the slot stays at zero while Synphonos plays	onPC is taking MIDI from a wing, or listening to another port. See page 80.
An import failed, and now new cues are not stored	Tick Store every cue again under Macro and export again. See page 71.
A cue's command did not reach the console	Commands are left out unless Write cue commands is ticked for that export. See page 69.
The Off time did not arrive on grandMA2	It is the executor's setting there, written only where the export puts the sequence on its executor.

The window

You see	Check
Everything is too small or too large	The brush, then Scale.
The waveform is lost in fog	The brush, then turn Glow down.
The cue table shows only Cue and Name	The window is narrow. Click the small triangle in the title row, or make the window wider.
The window opened on another screen	The screen it was on is not attached.
Start-up animation unavailable	The window opens without it. The reason follows.

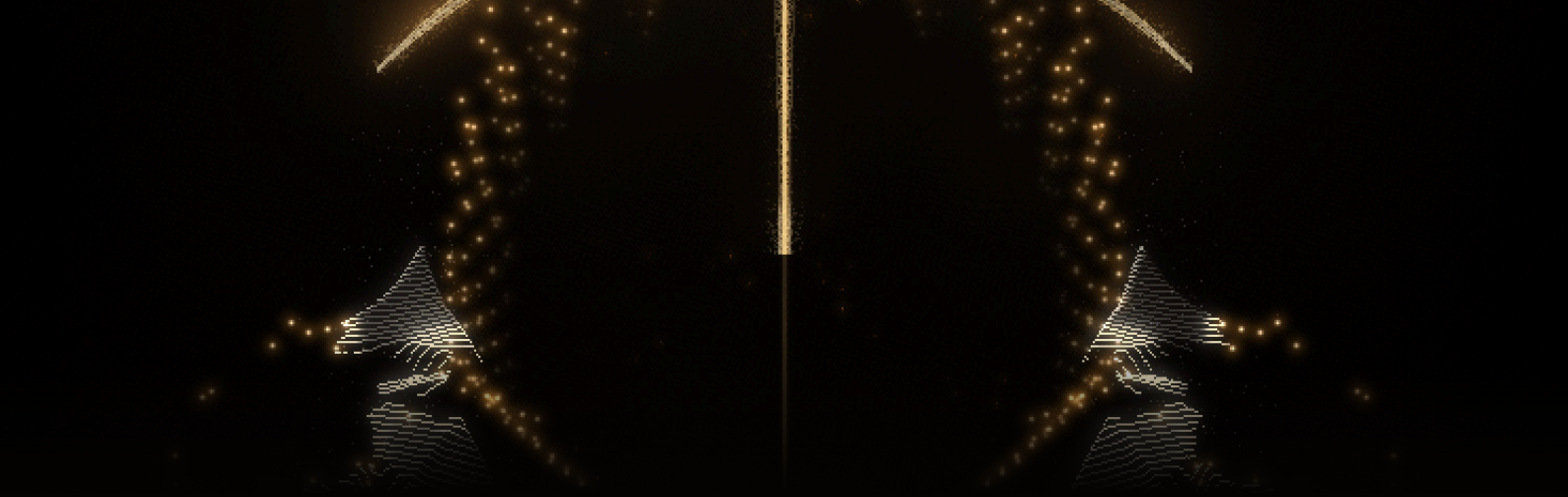
If it stops

If Synphonos ever fails, it writes what happened to crash.log beside its settings and tells you where.

To report a fault, send:

- ◇ What you did and what you expected.
- ◇ The diagnostics. Open About and press Copy diagnostics, then paste. It is a few lines: the version, the audio device, the MIDI port, the frame rate and start, where the settings file is, and the last message. The settings folder is written as %APPDATA%, not with your Windows account's name. Read it before you send it: it names your devices, and the last message may name a file.
- ◇ crash.log, if there is one.

Send it to contact@synphonos.com. The program and its news are at synphonos.com.



CHAPTER 23

Known issues and what is untried

What is known to be wrong in version 1.1.0, and what has not been tried on a real console. Read this before you rely on the export in front of an audience.

The export, at a glance

Nothing about a console in this manual has been tried on a real one. This is what has been tried, and on what.

The export	Tried on	Not tried
grandMA2: the import. The macro arrives with its lines, the timecode with its tracks and events.	onPC 3.9.63	A real console
grandMA2: the timecode's offset and length	Checked against a show onPC saved	Importing them
grandMA2: the macro running to its end, events firing on time, button functions, the other Timecode Options, colours	—	onPC and a console
grandMA2: cue times, modes, commands, info and the Off time	—	onPC and a console
grandMA3: the whole export, and playback from a timecode slot	onPC 2.4.2 and 2.5.1	A real console, a USB stick
grandMA3: playback with Synphonos's own MTC arriving	onPC 2.4.2, through a loopMIDI port	A real console, onPC 2.5.1, LTC

The details are in page 76 and page 83.

Shows and versions

Synphonos 1.0 cannot open a 1.1 show. It says the file is not a readable show file and leaves it alone (page 104). Update every machine to 1.1 before sharing a show.

Running Synphonos 1.0 beside 1.1 on one machine can still lose what 1.0 does not know about. Neither of these is a matter of 1.0 reading a show, so they can still happen:

- **The settings.** Both versions share one settings file, and 1.0 saves it with only what it knows. 1.1's recent shows, the window's size and place, Show or Program, each stem's and sequence's height, the pinned selected mark and the last export destination go back to how they start.
- **The default show. New** in 1.0 starts its empty show in the default show's file and saves over it, whichever version saved it. A show saved under a name of its own with **Save as...** is out of its reach.

The safe course is one version on a machine: remove 1.0 once 1.1 is in use, and keep every show in a file of its own.

Test builds of 1.1 from before its release. An older one drops cue times and Off times when it saves a show that has them: use the released 1.1 on every machine. A show last saved by a test build is also not yet closed to 1.0, which can still open it and save it back without its sequences, cue numbers, holds and tempo. Open the show once in the released 1.1: a second later it is saved with the new first line, and nothing else in it changes.

Seeking to the very end of a song that has a shorter stem shows **cannot seek.** This is in 1.0 as well.

Cue times

Cue times on grandMA2 are untried, on a console and on onPC. The macro's lines follow MA's own help and macros. The least certain is /cue_mode=normal, which takes a cue back from Release or Assert.

On grandMA2 the Off time needs the sequence on its executor. It is the executor's setting there. A sequence the export does not put on an executor keeps the console's Off time.

A Temp, Flash or Swop mark cannot have times of its own. Every press of such a sequence fires its one cue, so the times are the sequence's. Put presses that need other times in a sequence of their own.

Not offered: Trig and Trig time, MIB, Snap, grandMA2's Break and X-Break modes, and the other sequence options (page 61).

Export to grandMA2

Only partly checked. The files follow a real console's export, the style sheet onPC ships for timecode files, and onPC's own text, and their contents are tested. The import works on onPC 3.9.63. No real console has been used. What is still to check is listed on page 76.

Record Mode cannot be exported. The Timecode Options window shows it greyed. Set it on the console.

Synphonos cannot see whether the console took an export. It notes cues as stored when it writes the files. If an import fails, tick **Store every cue again** for the next export (page 71).

Cues added or deleted on the console are not known to Synphonos, and on grandMA2 they put Goto events on the wrong cue (page 76).

Export to grandMA3

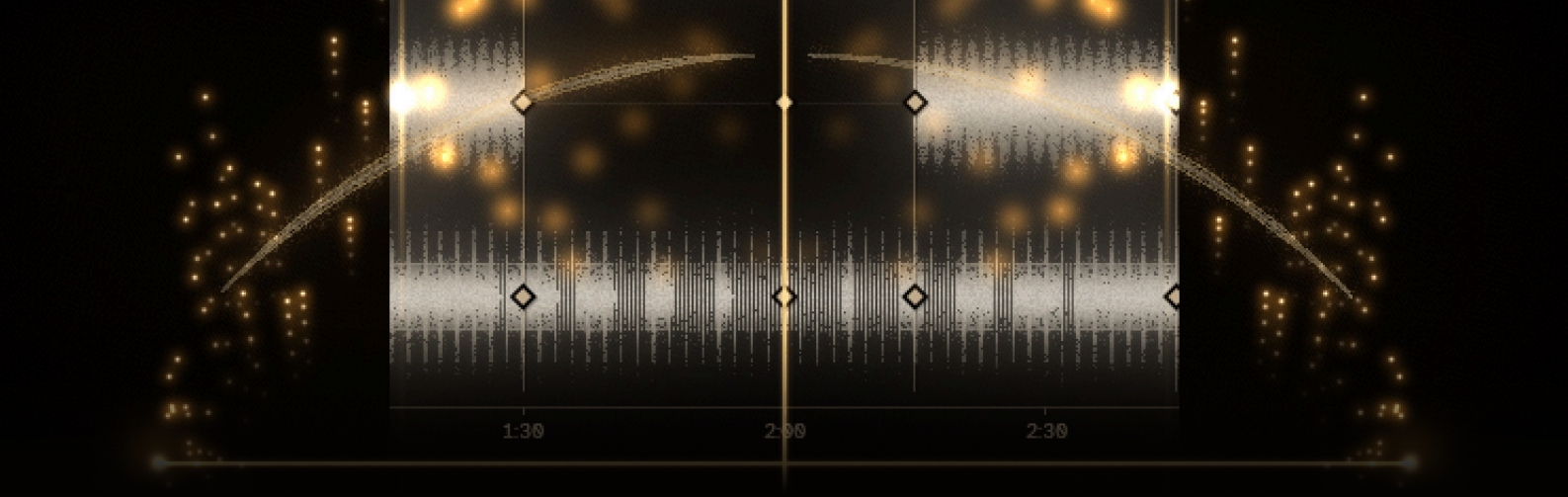
Tried on onPC 2.4.2 and 2.5.1, not on a console. What was checked and what was not is on page 83.

Only the Default data pool. A show working in another data pool is not covered.

Whatever is at the Appearance numbers is given Synphonos's colours. Choose a free range in **Appearances from**.

Not in this version

- Sending to a console over the network.
- Exporting every song at once. An export is one song.
- The program is not code-signed (page 101).



CHAPTER 24

Questions and answers

Short answers, each with the page that has the long one.

Getting started

Does it need installing?

No. Unzip it and run synphonos.exe. page 101

Is it free?

Yes, for any use, commercial work included. The coffee cup opens a page for donations, which are gifts. page 101

Does it send anything over the internet?

No. It makes no network connections and collects nothing. page 101

Which audio files does it play?

WAV, AIFF, FLAC, MP3, M4A, AAC, OGG and more. page 17

How many stems can a song have?

Eight. page 17

Can I turn the start-up animation off?

Yes: the brush, then untick Play when the window opens. page 42

Does it remember where I was?

Yes: the show, the song, the playhead, the window's size and place, and the mode. page 11

Is there a Save button?

No. Every change is saved within a second. page 32

Timecode

LTC or MTC?

LTC if you have a spare audio output and the console has a timecode input. MTC if you have a MIDI interface, or the console software runs on the same PC. Both can be on at once. page 108

Which frame rate?

The one your console is set to. Both ends must match. page 24

What happens to timecode when I pause?

LTC goes silent. MTC sends the position once. The readout turns ivory. page 22 and page 22

What happens when I jump while playing?

Playback and timecode jump together and carry on. MTC sends the new position at once. page 27

Can I slow a song down to program it?

Yes, down to 10%. The pitch drops and timecode slows with it, so every cue stays on its beat. page 28

Will it drift over a long show?

No. Timecode is worked out from the audio sample by sample. page 109

What is Trim for?

To make up for a steady delay to an MTC receiver, in whole frames. page 23

Can each song start at its own hour?

Yes. An hour each does it in one press. page 32

Running the show

How do I stop an accidental Escape ending the song?

Lock the show. Stop then needs two presses. page 39

What can still be changed while locked?

The transport, song changes, levels, mutes and outputs. Nothing about the show itself. page 38

Can I run it from the console's keyboard?

Yes, with keys ticked to work from other programs. page 36

How do I move a show to the backup machine?

Keep the audio in the show's folder, copy the folder, open the show there, and set that machine's outputs. page 34

What if the audio device is unplugged mid-song?

Playback stops and the status bar says Audio device lost. Plug it in and press ↻ in Output. page 115

Can Synphonos 1.0 open a show saved by 1.1?

No. 1.0 says the file is not readable and leaves it alone. Update every machine to 1.1. page 104

What if a stem is missing when I open the show?

The show opens, says how many files are missing, and keeps the stem until its file is back. page 19

Programming

What is the difference between Show mode's marks and Program mode's?

Show marks are for you, to find your way. Program marks are for the console. Neither mode shows the other's. page 29

How do I put a cue between cue 2 and cue 3?

Add a mark between them. It is numbered 2.5. page 48

How do I use the same cue for both choruses?

Type the first chorus's cue number on the second chorus's mark. page 48

How do I hit every beat of a bar?

Copy one mark and use BPM paste… page 56

How do I change several marks at once?

Select them, then change one in the cue table. page 49

What do the dashed lines mean?

Fades: up over a cue's fade in, down over its fade out or the sequence's Off time. page 60

How far back does undo go?

200 steps, until you change song. page 52

What is the TC column, and why is it not the timecode?

It counts from the song's start, so a cue 14 seconds in reads 0:14:00 wherever the song sits in timecode. The console sees Starts at plus that. page 50

The consoles

Which consoles can it export to?

grandMA2, version 3.9.60 or later, and grandMA3, tried on 2.4.2 and 2.5.1. page 62

Has it been tried on a real console?

No. On MA's onPC software only. page 76 and page 83

What do I type on the console?

Two or three commands, which the Exported window shows and can copy. page 75 and page 82

Will exporting again wipe the looks I stored?

No. Only new cues are stored. page 70

Can the export avoid my fixed executors?

Yes: type the free ones into Places. page 66

Why is the export refused at 29.97 DF?

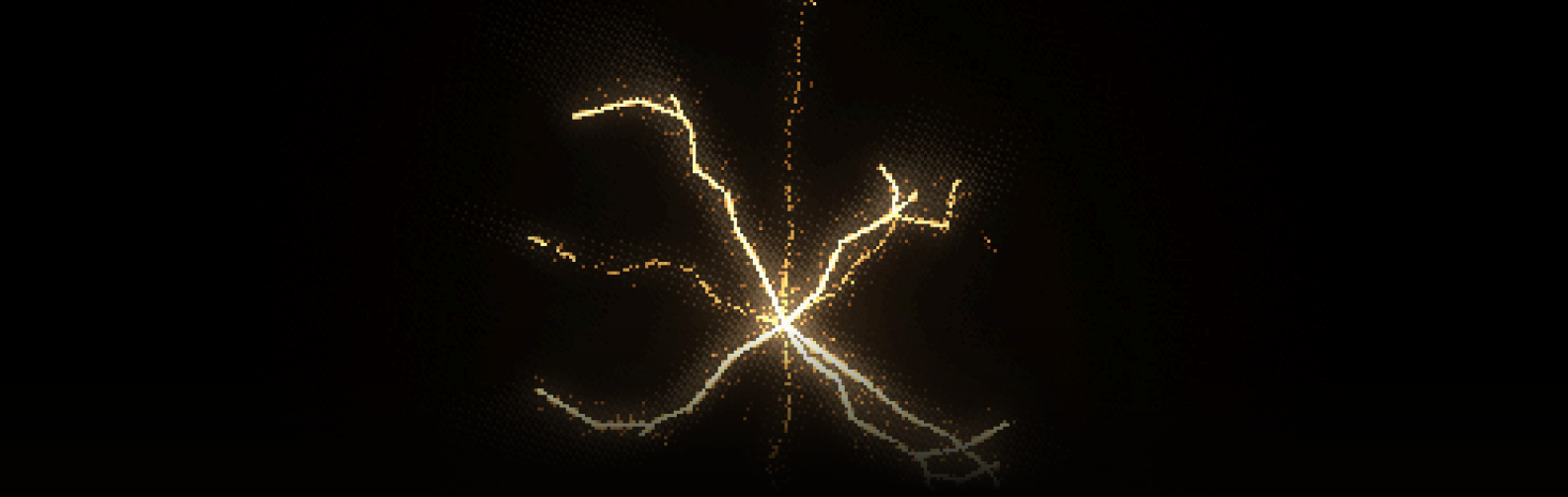
Neither console's timecode has drop-frame. page 107

Can it send to the console over the network?

Not in this version. Nor can it export every song at once. page 122

Does the console need Synphonos running to play the cues?

The console needs timecode. Synphonos is what sends it, along with the song.



CHAPTER 25

Glossary

The words this manual and the window use.

Word	Meaning
Accent	The colour of what is lit and live. Gold, unless you change it.
assign	In the Export window: put the sequence on its executor when the macro runs.
Beat grid	The lines Synphonos draws for a song's beats and bars once it has a tempo.
BPM paste	Repeating copied marks at a tempo.
Cue	One look in a console's sequence. In a Goto sequence every mark is a cue.
Cue number	A cue's number: 4, or 4.5 for one put between 4 and 5.
Cue table	The list of a song's marks in time order, in Program mode.
Drop-frame	A way of counting 29.97 frames a second that skips some frame numbers to keep up with a real clock.
Event	One thing a console's timecode does at one time. An export makes an event for each mark, and a second for each release.
Executor	A fader or button on the console that a sequence sits on, written page.number: 4.101.
Fade	The time a cue takes to arrive.
Frame	One slice of a second of timecode: a 24th, 25th or 30th.
Frame rate	How many frames make a second.
Function	What a sequence's marks do on the console: Goto, Temp, Flash and so on.
Goto	The function for a cue list: each mark fires its own cue.
Hold	The time between the press and the release of a Temp, Flash or Swop mark.
Lock	Freezes the show so it can be run but not changed.
LTC	Linear timecode: timecode as sound.
Macro	A list of commands the console runs. An export writes one.

Word	Meaning
Mark	A named place in a song. In Show mode, yours to find your way. In Program mode, something the console does.
MTC	MIDI timecode: timecode as MIDI messages.
Off time	How long a sequence takes to fade out when it goes off.
onPC	MA's software that runs a grandMA console on a PC.
Page	A page of executors on the console. Each song has one.
Play start	Where Play was last pressed.
Playhead	Where in the song you are: the gold line.
Pool	A numbered list on the console: the sequence pool, the timecode pool, the macro pool.
Program mode	The mode for placing marks a console fires.
Release	The end of a hold. Also a cue mode that turns the sequence off.
Repeat	A mark that fires a cue an earlier mark already fires.
Sequence	A row in Program mode that stands for one sequence on the console.
Set list	The show's songs in running order.
Show	A set list with everything that belongs to it, saved in one .synshow file.
Show mode	The mode for running the show.
Slot	One of the console's timecode inputs, as it numbers them.
Snap	Where a dragged mark lands: on frames or on beats.
Starts at	The timecode at a song's first sample.
Stem	One audio file of a song. The Settings box calls it a track.
Tempo	A song's speed in beats a minute.
Timecode	A clock, as hours, minutes, seconds and frames, that says where in a song you are.
Track view	Program mode with the marks drawn as flags over the stems.
Trim	Whole frames added to the time MTC carries.

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