

Using BandHelper for a Duo

Version 3 2023-08-27 (Edits made to section **FOLLOW Layout** and the image in **Song Selection Strategy**)

This paper describes the use of the [BandHelper](#) ('BH') app by a duo, authored by the guitarist in the duo, mostly to suggest some interesting options to someone adopting the app for gigging.

It outlines just one of many possible strategies for using BandHelper, but one that works well for our band's objectives after several years of fine-tuning. The author is not affiliated with BandHelper or its developer.

First, some background to provide context before covering the details of BandHelper.

The Duo

Guitarist and keyboardist, sharing vocal leads and harmonies.

Music is classic rock & pop covers, spanning 70s through about 2010.

Backing tracks for all songs, which we self-produce with a DAW generating stereo .mp4 files.

Automated lighting system, synchronized with the backing tracks.

Even though we are 'just a duo', we aspire to create a full band sound, with any and all kinds of instruments in the backing tracks, but always carefully emphasizing the back beat (kick / snare / bass) and live vocals.

We are more about the complete sound and fun for the audience than about individual musicianship. We are not shy about recording a third vocal harmony or adding a rhythm guitar during a live lead in the backing track if a song calls for it.

Our market is small venues and events where we are expected to supply our own sound system, and no FOH engineer.

Equipment

[Behringer X32 Rack](#) mixes to FOH (i.e. our own PA) and two custom mixes for stereo IEMs (silent stage).

DIY PA, running stereo (EV cabs and subwoofers, front fill monitors if needed).

[Axe FX III](#) for guitar, same output signal direct to FOH and IEM mix.

Guitar pedal board consists of simply:

Volume pedal ([EV1](#) rarely used, since volume changes are automated by BandHelper)

Expression pedal ([EV2](#) for wah, dive bombs, etc.)

[Tuner](#) (so it's up front, fed by Axe OUT 3 for all gigging presets)

Homebrew LED [volume indicator](#)

No need for other Axe FX control switches or pedals, thanks to BandHelper automation!

Yamaha keyboard for live keys.

Each musician has an iPad mounted to their mic stand for displaying BandHelper content.

A third iPad is dedicated to lighting control (running the [Luminair](#) app, translating MIDI to DMX).

A fourth iPad is used for pre-gig sound checks (running [Mixing Station](#) to control the X32), and also serves as a backup (running BandHelper) in case another iPad fails (which has never happened).

WiFi AP (not connected to the internet) used for lighting connections along with a DMX / Internet interface.

The 'lead iPad' used by the guitarist generates backing track audio out and MIDI out from BandHelper, carried through a lightning connection to a [iConnectAUDIO2+](#) interface, with audio flowing to the X32 and MIDI distributed to the Axe, Yamaha keyboard, X32, and lighting subsystem for automation.

The 'following' iPad used by the keyboardist mimics the screen of the master iPad to show the same content on the screen (lyrics, chords, etc.).

A stereo mic pointed at the audience feeds into the X32 to provide ambient sounds into the IEM system between songs (so we can more easily hear / converse with the audience).

Lighting consist of back washes, front washes and two pin spots on the performers; not extensive, but enough to provide 'interest and movement' while playing. Each song gets custom light programming, e.g. spots come on only when a performer is singing or soloing, appropriate colors and transitions for the song mood, beat synchronized wash changes, all songs end with lower intensity 'banter lights' for talking between songs, etc.

BandHelper Functions & Benefits

In summary the primary BandHelper benefits for our duo involve hands-free automation of equipment during a gig:

1. **Song Automation:** Playback of backing tracks with synchronized scrolling lyric sheets, MIDI control of equipment (presets, effects, mix levels), and lighting system throughout each song. No need to tap dance on a pedal board during the song.
2. **Getting Ready:** As each song ends, all equipment presets are automatically readied for the next song in the setlist while lighting and PA vocal effects are set for interacting with the audience between songs. No need to fuss with settings to get ready for the next song. A single tap will then start the next song.

Following are more details about BandHelper's functions and benefits:

- Automatic synchronization of all BH database changes (songs, lyrics, setlists, settings, etc.) across all users and devices (multiple iPads and computers). You make changes on one device, and it automatically gets distributed everywhere.
- Creation of setlists. We do most setlist prep work on a Mac with keyboard and mouse.
- Playback of backing tracks.
- Playback of synchronized MIDI signals sent to the Axe, Yamaha keyboard, X32 mixer, and lighting system.

- Display of song lyrics (and chords if we add them), auto-scrolling in sync with the backing tracks.
- Start the next song in the setlist with one tap. (Could also be done with a foot-switch, but we just tap the main iPad).
- Full automation of all Axe settings during a song including:
 - Selection of initial preset / scene / volume while waiting for the song to start.
 - Preset / scene changes throughout the song
 - Changes in guitar volume (in 2dB increments from -6dB to +6dB as we've set it up), to properly blend with the total mix. (This involved a lot of iterative prep work, but once done the guitarist doesn't even need to use a volume pedal during a gig.)
 - Convenience soft buttons on the iPad for things like muted tuning, change to neutral clean patch, switch to Axe IN 2 for the 'backup guitar' (in case of string break), etc.
- Full automation of keyboard settings during a song including:
 - Selection of initial preset / transpose while waiting for the song to start.
 - Preset / scene changes throughout the song
- Automation of a few X32 mixer settings including:
 - Bypass vox reverb / delay between songs. (We think it's cheesy to have reverb / delay on if you're just talking.)
 - Changes to reverb / delay for some specific songs (e.g. slap back or deep verb)
 - Automatically start / stop the X32 multitrack recording of each song when we play, so we'll have a multitrack record for critique after the gig.
 - Muting of the ambient mic when a song starts; unmute when song ends so we can hear the audience between songs.
- Automation of lighting system:
 - We program lights as a MIDI channel with the DAW project for the backing track. That MIDI channel is exported as a MIDI file. That MIDI file is then 'attached' in BandHelper to the backing track so it is automatically played as the song plays.
- Transitions from song end to banter (i.e. talking to audience) to song start:
 - As each song ends the following occurs automatically:
 - Lights go to banter mode (i.e., for talking to the audience)
 - Vox reverb & delay off (which actually occurs after last sung part of the song)
 - Turn on ambient mic (into our IEMs only)
 - Halt recording of previous song on X32

- Prep for the next song:
 - Select initial Axe scene / preset
 - Set initial Axe volume
 - Set keyboard preset (and transposition if any)
 - Advance BandHelper display to show the lyrics, etc. for the next song (which often has notes about what guitar PuP settings to use, etc.)
- At this point we can talk to the audience as desired. Our instruments are already set (presets, volume, transposition, etc.) for the next song.
- A single tap on the control iPad¹ starts the next song, which automatically:
 - Starts the backing track playback (most have a few stick or hi-hat clicks to count us in, like a drummer would do)
 - Starts the synchronized MIDI lighting control file playback
 - Starts the X32 multitrack recording of this song
 - Enables vox reverb / delay (which typically occurs just before the first sung phrase, in case we want to talk over the song intro).
- When playing the song, we can focus exclusively on playing and singing, with all presets and volume changes automatically handled through BandHelper. Also the lyrics scroll automatically as the song is played so the current verse / chorus / etc. is always visible.
- Practice Tracks
 - For every song we create three backing track versions maintained in separate songs in BandHelper:
 1. The live version we use at a gig
 2. Guitarist practice version, with a recording of the keyboardist's playing and vocals added to the backing track
 3. Keyboardist practice version, with a recording of the guitarist's playing and vocals added to the backing track
 - This scheme (which makes use of BandHelper's song 'Smart Copy' feature) allows us each to rehearse with an authentic full band mix without having to physically practice together.

¹ As noted this could instead be done with a wireless pedal to keep it more discrete.

BandHelper Implementation

This section describes the technical configuration of BandHelper to achieve the functions described above. **It is not a guide on how to use BandHelper, which would be too much and duplicate the online documentation and videos provided by BandHelper.** Instead it just highlights some of the configurations and workflows we used to achieve the results described above.

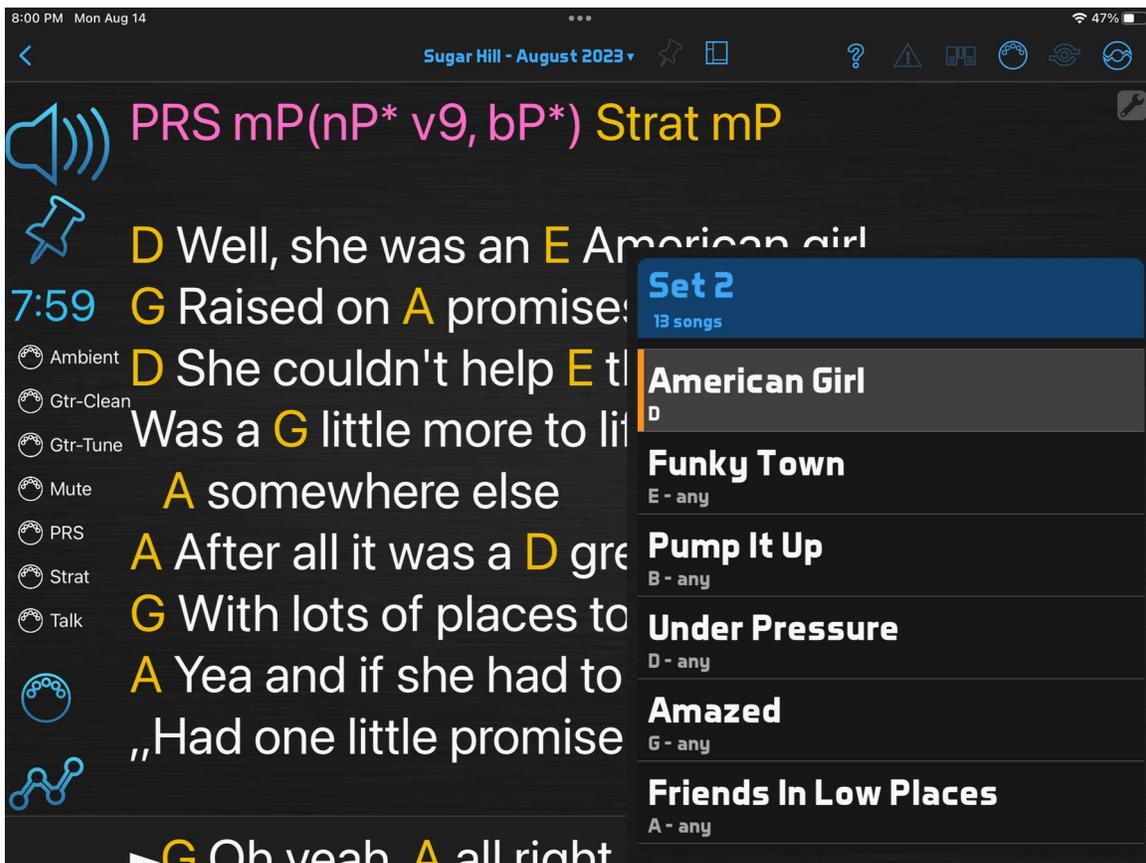
BandHelper calls any MIDI sequence defined and named by the user a *MIDI Preset*, so this term is likewise used below. A MIDI Preset can be a Program Change, CC value, or even an arbitrary hex string (such as for sysex). A BandHelper MIDI Preset can also include other MIDI Presets, to multiple levels, which is a powerful construct for keeping things organized.

Layouts

We use two layouts, one for playing and one for programming MIDI automation for a song. Both layouts were created by starting with one of the default layouts provided by BandHelper, and modifying them for our needs and preferences.

LIVE Layout

The LIVE layout looks like the following when paused between songs.



The setlist is shown on the right, with the next queued song lyrics appearing in the background. The top of the setlist is positioned slightly below the underlying lyrics, to avoid obscuring the first few lines

which typically have useful 'getting ready' notes, such as the pickup settings for either a PRS or Strat shown in the example.

A set of soft buttons appear on the left in case needed during a gig (which is rare, since most of this is also automated), each generating a MIDI Preset.

Ambient – Toggle the mute state of the ambient (audience) mic

Gtr-Clean – Switch the Axe to a clean preset. (Handy if getting high gain buzz)

Gtr-Tune – Mute the Axe output while tuning

Mute – Mutes mics & dims lights (if working some tech issue; Awkwardness Reduction Button)

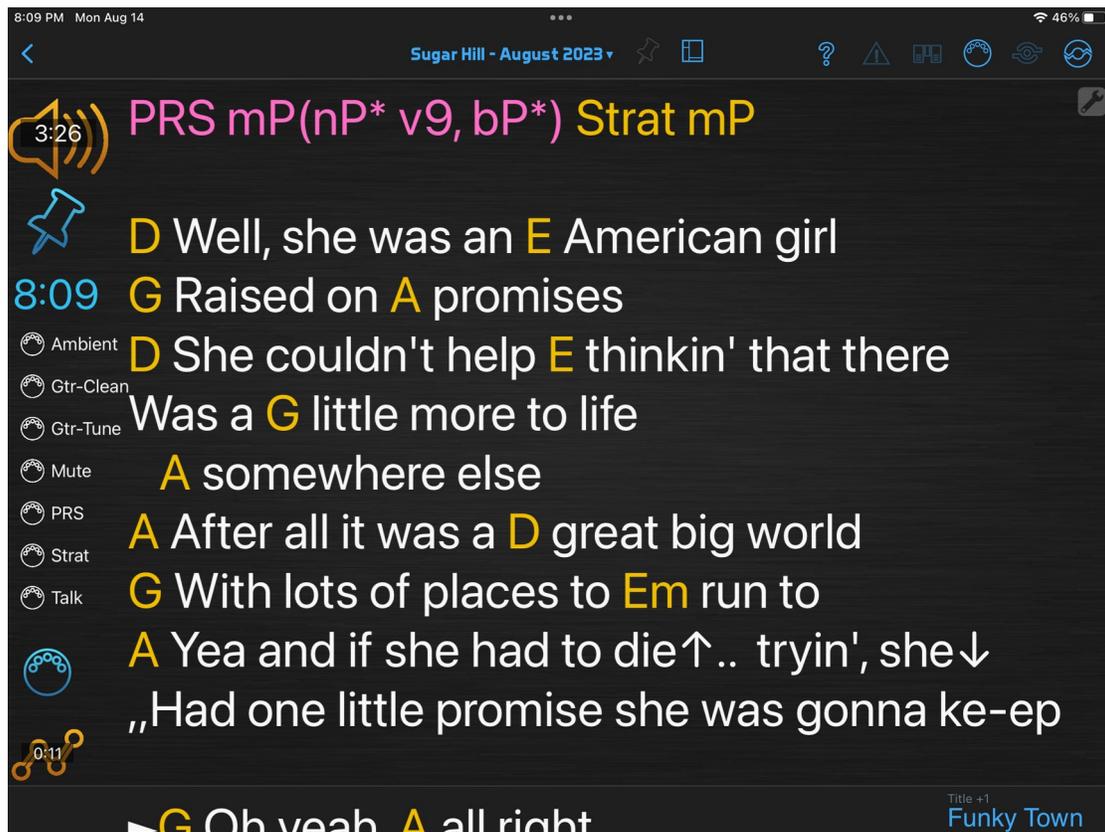
PRS – Change the Axe to Input 1, in which the PRS is connected.

Strat – Change the Axe to Input 2, in which the (backup) Strat is connected.

Talk – Set the lighting to the 'talk' scene (appropriate for between songs).

Also on the left are some useful info such as a pushpin to display additional Notes about the song if needed (e.g., unusual chord fingerings), time of day, and a button to access all the MIDI Presets used for the song.

Once a song is started by tapping the song name in the setlist, the setlist panel is automatically dismissed and the display looks like the following as the song starts playing.



The icon at the top right counts down the song recording duration, which can be helpful near the end when wondering “are we there yet?”. The icon at the bottom right counts up (most useful for rehearsal / editing).

The next song up in the setlist appears at the bottom right.

As the song plays, the lyrics scroll according to automation that we’ve programmed for the song.

For most songs we use the convention of sprinkling chords within the lyrics, with chord letters appearing default yellow. We also use text color conventions to distinguish who sings what parts, extra notes about song structure, etc.

FOLLOW Layout

We also use a slight variation of the LIVE Layout for the following iPad, so it will properly mimic the lead iPad when wirelessly sharing screens. For technical reasons, the FOLLOW layout has the layout setting *Edit Details*> *Select Next Song on Song Completion* set OFF, whereas all other layouts have this setting set ON.

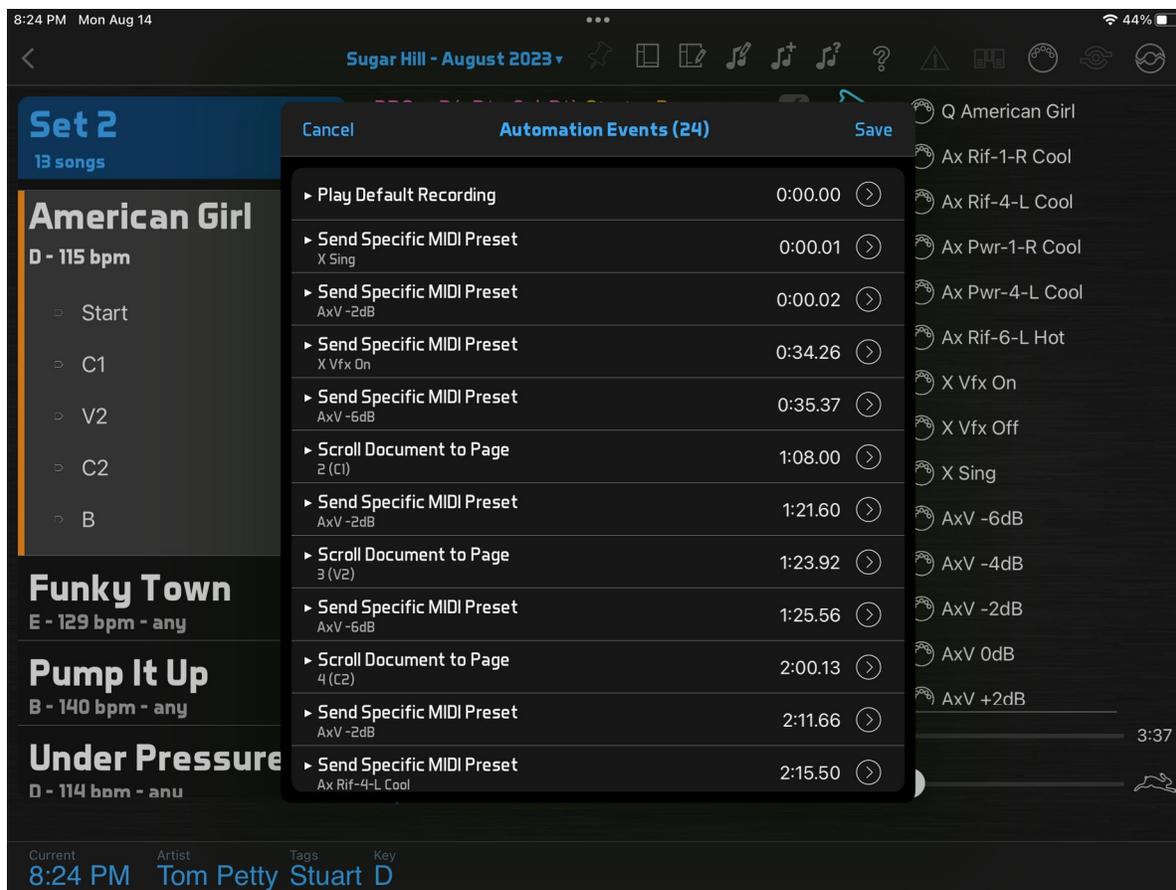
EDIT Layout

The EDIT Layout is used only when programming the automation for a song, and provides fast access to the MIDI Presets associated with the song (see list on right of screen), as well as access to recording transport controls and a representation of Markers that have been inserted in the lyrics.



This layout is most often used to add MIDI Presets to change Axe, keyboard, and X32 settings during the song, by placing the song automation in record mode, and tapping the presets while listening to the song.

Later the list of automation events can easily be edited to shift events around at 10 millisecond accuracy as illustrated in the following view.



Song Selection Strategy

BandHelper is very flexible in configuring how and when it advances from song to song and what kind of events are triggered at each step of a transition. To achieve our primary benefit of ‘getting ready’ described under **BandHelper Functions & Benefits** and **Transitions from song end to banter** earlier in this document, we have adopted BH’s First Song Selection to ‘arm’ the next song for play (so all instrument presets are ready to go, while we banter with the audience), and Second Song Selection to actually start the song (start playing backing track, etc.).

This involves assigning *Settings > App Control* for the following Actions to the values in the partial screen grab shown on the next page, with all other Actions (not shown in this view) left at their default (which is usually nothing).

A few of these actions are more for convenience in case some ‘manual override’ is needed, and aren’t technically required to achieve the automated song to song flow we desire:

Show/Hide Song List – Two-Fingered Tap

Reselect Current Song – Three-Fingered Tap

Actions	
	Common Active All
Send MIDI	Song Selection >
Start Automation	Song Second Selection >
Show/Hide Song List	Two-Fingered Tap >
Show Song List	Song Completion >
Hide Song List	Song Second Selection >
Reselect Current Song	Three-Fingered Tap >

Note: The previous v2 version of this document showed *Start Automation* also triggered by *Song Auto-Selection* which was an error. It is corrected in the image above.

On the ‘following’ iPad that wirelessly mimics the screen of the lead iPad during a gig, the FOLLOW layout is used which has identical action settings as above, but with the layout action difference described above in **FOLLOW Layout**. (This is a technical requirement to prevent the following device from starting the next song automatically before the lead device starts it.)

BandHelper MIDI Presets

Defining and organizing MIDI Presets is key to using BandHelper’s automation features. Over time we have accumulated over 280 MIDI Preset definitions, some of which are just collections of other more primitive MIDI Presets. Our MIDI Presets are listed at the end of this document in **Example MIDI Preset List**.

Some tips for MIDI Presets:

- BandHelper lets you name each MIDI preset, so plan your naming convention. For example identify what groups of presets you’ll need (target equipment type, class of automation, etc.) and define some prefixes for use in the names of the related MIDI Presets. This will make it much easier to hunt down a particular preset in a long alphabetical list of presets. Examples of a few name prefixes we use:
 - Ax – Select an Axe Preset/Scene
 - AxF – Makes some change to an AxeFX effects block.
 - AxS – Send a sequence of multiple MIDI messages for a part of a specific song
 - X – Controls something in the X32 mixer.
 - Q – Contains a collection of presets used to cue a song start.
- To create a new preset, make use of the BandHelper *Copy* function while viewing a similar preset, since most are just variations of a MIDI message value.
- A MIDI Preset can contain a list of other MIDI Preset; and those can also contain other MIDI Presets. This is a powerful organizational tool for sequences you frequently use together.

MIDI Devices

As with any MIDI system, we need each controlled device to listen to a unique MIDI channel, and to define the corresponding 'MIDI Device' in BandHelper. For our rig, the X32 has some fixed channels (1, 2, and 7) so we are forced to use those for the X32. We furthermore assign channels, 11, 12, and 15 to the keyboard, Axe, and lighting system, respectively.

Song Cue MIDI Presets

BandHelper supports a construct whereby a single MIDI Preset, unique for each song, is automatically broadcast when the song is selected but before it plays (i.e., during First Song Selection). We use this for the 'getting ready' MIDI sequences.

For every song, we define a MIDI Preset with the naming convention *Q <songname>*. This MIDI Preset is a collection of the MIDI Presets we want sent for the song when that song is queued up for play, including MIDI Presets to:

- Select the first Axe Preset / Scene for the song
- Set the initial Axe volume for the song
- Set the initial keyboard preset for the song
- Set transposition for the keyboard (or to none, if no transposition)
- Send a MIDI Preset that itself is a collection of MIDI Presets for some utility tasks and appropriate for talking to the audience before the next song is started:
 - Direct the X32 to halt the multitrack recording of the previous song
 - Reset X32 reverb style to nominal (in case changed in previous song)
 - Set X32 vocal gains to nominal (in case changed in previous song)
 - Turn off X32 vocal reverb and delay
 - Unmute ambient mic (so we can hear the audience in our IEMs)

Every song gets its *Q <songname>* included in the song's MIDI Presets as the first MIDI Preset in the list. (There will likely be a number of other MIDI Presets in the list for use while the song is playing, but the *Q <songname>* preset is always the first in the list.)

With the layout Action *Send MIDI* set to *Song Selection* (see **Song Selection Strategy**), BandHelper will automatically send the first (and only the first) MIDI Preset in the song's list of MIDI Presets when the song is automatically selected the first time as the previous song in the setlist ends. *Settings > Audio & MIDI > MIDI Options > Send MIDI Presets Together* for the layout must not be turned on, else it will send all the presets in the list when the song is selected.

MIDI Presets During Song Play

Everything except lighting that is controlled by MIDI while a song plays is managed with BandHelper's 'automation' list for each song. Including the necessary MIDI Presets is straightforward following BandHelper documentation.

A few special cases:

- We typically wait to enable vox reverb & delay (via MIDI Presets to the X32) until just before the first vocal phrase in the song, so any talking over the start of the song is 'dry'. Likewise, we disable vox reverb & delay just after the last sung phrase so any talking over the end of the song is also dry.
- If Axe changes involve a lot of special changes to FX blocks and/or bypass/enabling that might leave a scene in a non-standard state, as the song ends we'll send a MIDI change to a generic clean preset/scene just so that last used song preset will be back to default if it is used again in the next song.

Global MIDI Presets

A few MIDI Presets are useful as buttons on the BandHelper iPad screen at any time during a gig, mostly for 'emergency' use, as described in **LIVE Layout**. These 'global presets' are selected in BandHelper by toggling the *Pinned to All Songs* setting on for these MIDI Presets.

Standard MIDI File

Unlike all the other MIDI automation that is sent using BandHelper automation lists, the lighting system is automated through a MIDI file exported from the DAW used to produce the backing tracks. This file is 'attached' to the corresponding backing track (aka 'recording') using BandHelper's web interface when preparing the song.

We have found that this is a more efficient workflow than entering the lighting MIDI Presets in BandHelper's automation event list. (In contrast, we have found the other MIDI Presets such as for the Axe, keyboard, and X32 are easier to manage in BandHelper automation than as part of the DAW file.)

Thus during playback, BandHelper is simultaneously broadcasting these three synchronized elements.

1. Backing track audio
2. Standard MIDI File, driving the lighting system
3. BandHelper Automation, driving the Axe, keyboard, and X32 (as well as lyrics scrolling)

Axe Configuration

Following are some Axe configuration details related to control by BandHelper.

Preset / Scene Selections

I use PC Mapping (Program Change Mapping), wherein each PC maps to a combo of Preset+Scene. I found this to be less glitchy when transitioning scenes than sending separate Preset then Scene for direct addressing. This restricts the number of selectable scenes to 128, but that is plenty given the number of scenes I use for gigging is about 30 scenes spread over 7 presets.

Those presets / scenes that need to be addressable through MIDI are assigned MIDI program numbers on the Axe, and equivalent MIDI Presets are defined within BandHelper.

Some related Axe settings:

PC Mapping = ON. Using Program Changes mapped to a Preset + Scene.

Scene Revert is turned OFF (default), which means that when a Scene is left for another Scene within the same Preset, and then reslected via MIDI, any 'manual' changes made to that Scene will be retained (unless and until a different preset is visited).

Effect Bypass Mode = VALUE. As opposed to TOGGLE. Specific CC value ranges will change Bypass.

Program Change = ON. Axe will not ignore Program Change messages.

Ignore Redundant PC = ON. Axe should ignore a Program Change for the current preset rather than re-processing it. (Though this doesn't really work as expected.)

Effects Block Bypass & Channel Selections

MIDI CC's and corresponding BH MIDI Presets are set up for Block Bypass control using the *Axe Setup* > *MIDI/Remote* > *Bypass* for the following blocks, thus allowing these blocks to be toggled between enabled and bypassed in certain scenes where that is useful:

- Delay 1
- Reverb 1
- Chorus 1
- Rotary 1
- Pitch 1
- PanTrm 1
- Wah 1
- VolPan 1
- Filter 1
- Drive 2

Likewise, these same blocks also have MIDI CC's defined to select one of the four channels available in each block, so different variations to an effect can be called up as needed.

Arbitrarily, we start numbering the MIDI CC's for bypass control with 16, and the MIDI CC's for channel selection with 80.

As some specific examples, Axe block Delay 1 is assigned MIDI CC 16 for bypass control, and MIDI CC 80 for channel selection. Therefore:

Sending MIDI CC 16, Value 127 will enable Delay 1

Sending MIDI CC 80, Value 2 will select Channel C in the Delay 1 block
(which happens to be a long delay in most of my presets)

Sending MIDI CC 16, Value 0 will bypass Delay 1

These messages above are defined in BandHelper with names *AxFX DelayOn*, *AxFx DelayLong*, and *AXFxDelayOff* so they can be conveniently be inserted in song automation lists wherever needed.

Though not technically related to BandHelper, I use External #1 / Expression Pedal 1 to control the wah, whammy, etc. (with an EV-2).

Volume Control

Axe volume control is a rather special case, since we wanted to be able to change Axe output volume in 2dB steps from -6dB to +6dB (where 0dB is a kind of ‘nominal in the mix’ volume). To do this I have a PEQ block in every gigging preset wherein an External controller mapped to MIDI CC 33 controls the *Level* parameter of the block. Various predetermined values sent with MIDI CC 33 will therefore change the volume of PEQ 4. Within BandHelper, MIDI Presets are defined with the following names so they can be easily added to BandHelper automation event lists as needed:

AxV +6dB
AxV +4dB
AxV +2dB
AxV 0dB
AxV -2dB
AxV -4dB
AxV -6dB

(Let the author know if you want more info about this volume control scheme, since Axe details are a little beyond the scope of BandHelper usage; also described in this [forum post](#).)

Guitar Input Selection

My main guitar is a PRS plugged into Axe IN 1, but I also gig with a Strat which stays plugged into Axe IN 2 (e.g., in case of broken string, or just for kicks). The signal paths have slightly different EQ on the front end so the Strat will sound reasonable with presets designed for the PRS. These two inputs feed into an M-Plex block that selects one of these inputs (by default, In 1 for the PRS). The M-Plex block is assigned a MIDI CC and an External controller such that sending CC value 127 will select In 1 (PRS) and value 0 will select In 2 (Strat).

Finally, what this has to do with BandHelper... In BandHelper corresponding MIDI Presets are defined to send these CC sequences so that buttons on the iPad can be used to quickly select either guitar for input.

Work Flows

BandHelper Web versus iPad

All BandHelper data is maintained in a cloud database by BandHelper, automatically syncing to any device using it (when it is connected to the internet).

When first approaching BandHelper it can be confusing determining what do do using the BandHelper web interface versus within the native app (e.g. on an iPad). Some editing capabilities (e.g., layout details and recording automation lists) are only available on the iPad. However, other types of editing possible on both platforms is much easier (to me) if performed on a computer with mouse and keyboard through the web interface.

In general I do all editing through the web interface, except:

- Editing layouts (screen layouts and configuration), which is mostly a one-time task.
- Recording and editing song automation lists (MIDI Presets and Lyrics scrolling timing).

BandHelper is very fast at syncing between the cloud and a device, so you can easily work with both a web interface and the iPad app open at the same time, making changes wherever it is most convenient.

Adding a New Song

We generally follow these steps when adding a new song:

- Generate the backing track in a DAW, producing a ‘mastered’ audio file for gigging. (We use .m4a files but BandHelper will deal with pretty much any common format).
- Along with the backing track in the DAW, also generate a lighting automation track consisting of MIDI commands to control lights (details will vary widely depending on lighting system used), and export this as a MIDI file (.mid).
- From the BandHelper web interface:
 - Create a new song, give it a name and other parameters.
 - Enter whatever we’d like to see in the lyrics page. (We often also insert chord reminders inline with the lyrics, which BH will automatically highlight in a different color.)
 - In the lyrics page, add ‘Markers’ for each chunk of lyrics we want to scroll to to the top as we play through the song (e.g. a verse, a chorus, etc.). These will be useful later when we add automation.
 - Assign the audio backing track to the song (BH calls this a ‘recording’).
 - Assign the lighting MIDI file to the recording (from the BH *Recordings* tab).
 - Create a Song Cue MIDI Presets for this song, and add it as the first MIDI Preset for this song.
 - Add additional MIDI Presets anticipated as necessary during song play to the list for this song.
 - Add this new song to a preset (I usually add it to an *All Songs* setlist to make it easy to find later on the iPad).
- From the BH app on an iPad:
 - Go to the setlist containing the new song, and open the song using the LIVE layout.
 - Initialize the song automation to play the backing track (recording) by:
 - Press / hold the Automation icon and select *Edit*
 - Select *Add an Event*, then *Play Default Recording*.
 - If necessary make sure this event is at time 0.00.00 in the automation list by editing it’s Time.
 - Now the basic automation list will play the backing track when the song is played.

- Next, we record when we want the lyrics to advance to the next marker, while listening to the song:
 - Press / hold the Automation icon and select *Record*
 - The song backing track is played. Each time I want the lyrics to scroll up to the next marker (that I inserted earlier using the web interface), I tap in the bottom third of the screen.
 - Once I have scrolled as many times as needed, I tap the Automation icon to stop recording automation.
- Next, record MIDI Presets where needed while listening to the backing track play.
 - For this step it is most convenient to use the EDIT layout. (There is a small icon at the top of the BH screen that can be tapped to select a different layout.)
 - Press / hold the Automation icon and select *Record*
 - The song backing track is played. Each time I want to send a MIDI Preset, I tap the icon next to the preset from the list of song MIDI Presets shown in the layout.
 - Once I have finished recording through the song, I tap the Automation icon to stop recording automation.
 - I may need to perform these MIDI Preset recording steps a few times to get them all incorporated. (Recording automation does not erase or alter any events previously recorded in the automation list.)
- Usually I will now play the song along with my instrument (and the Axe) and check for event timing (e.g., do Axe presets occur at just the right timing), appropriate volumes, etc. It almost always involves a few small tweaks to timing or insertion of some more Axe volume change MIDI messages, all of which can be done through the automation Edit screen.

Editing a Song

It's not uncommon to update the backing track for a song, to add improvements, tweak the mix, etc. To do this, we simply replace the 'Recording' for the song in the BandHelper web interface with the new audio file exported from the DAW.

Making changes to presets (selections, timing, etc.) is easily done from the iPad app in the Automation Edit screens.

Practice Songs

To create a version of a song for personal rehearsals:

- Create a version of the DAW backing track that includes recordings of the other musician playing and singing their parts, and export this audio file.
- In the BandHelper web interface, edit the main song, and select *Smart Copy*. This will create a new song that is identical to the main song, except for any changes that are subsequently applied to it.

- Change the Title of the new Smart Copy to something indicating its purpose for rehearsal (e.g. *American Girl – SC Practice*).
- Add the new practice recording (using *Add Recording*) to the Smart Copy, saving the recording but not yet the song.
- Delete the original Recording associated with the Smart Copy (select minus icon by this recording).
- Save the song.

We maintain a pair of setlists that include all the practice songs for each musician. We also usually create similar ‘practice setlists’ before a gig that mimic the planned gig setlist, but with practice songs.

Adding a Setlist

We do nothing different when creating setlists than what is covered in the BandHelper online documentation.

Live Play

To support iPad screen sharing, the following one-time BandHelper configurations are performed:

On the ‘lead’ iPad, from *Settings > Live Sharing*, turn on the *Broadcast Actions* settings.

On the ‘following’ iPad, from *Settings > Live Sharing*, turn on all the *Follow xxx* buttons.

At gig time, we follow these procedures to set up the lead (guitarist) and following (keyboardist) iPads for live BandHelper use:

- Connect the lead iPad to the lightning cable that feeds output (audio and MIDI) to the rest of the rack.
- Connect both iPads to the WiFi AP in our rack. (This AP is not connected to the internet)
- Turn the volume of the following iPad all the way down (otherwise it will play a backing track out of its internal speaker during the gig).
- Launch BandHelper on both iPads, and open the setlist for the gig.
- On the following iPad, change the layout to FOLLOW (can use the small layout icon at the top of the BandHelper screen).
- On the following iPad, press the Live Sharing icon in the top right of the BandHelper screen, and then *Follow Actions from...*
- You should see a list of identified iPads (likely just one corresponding to the lead iPad). Select this entry, and they should connect.
- Now whenever the lead iPad changes to a song, starts a song, etc., the following iPad will do the same, so both iPads will show scrolling lyrics sheets in sync.

Other Considerations, Tips, Suggestions

Break Start & Break End 'Songs'

We have found it useful to create mock 'songs' that we can insert into setlists at the end of a set (*Break Start*) and the start of each set (*Break End*) to invoke some appropriate automation:

Break Start Song:

On first selection (automatic after previous song ends), same as any other song cue:

Vox verb & delay off

X32 stop recording

Unmute some X32 channels for playing of break music

On second select (manual tap, usually after you've said a few words and ready to exit the stage)

Sets lights for break (dimmed)

Sets guitar and keys to generic presets (no high gain buzz)

Mutes our vocal mics (after 30 seconds) (Drunken Mic Commandeering Prevention)

Break End Song:

On first selection of this song it will:

Unmute our vocal mics

Turn off vox reverb/delay (just in case still on)

Set lights for talking (same as between songs)

On second select (manual tap):

Mute some channels on the X32 used to play break music

Soundcheck 'Song'

We also have a mock song *Soundcheck* that is added to the top of all setlists to simplify some automation in preparation for an X32 'virtual soundcheck' (which involves the playback of multitrack recordings made during previous gigs, from an SD card in the X32).

On second selection of this song it will:

Unmute our vocal mics

Mute X32 channels for playing break music

Set lights same as for set break

Enable vocal reverb & delay (need to be on during virtual sound check)

(Typically follow this song with BREAK START when done with sound check)

Appendix

Example MIDI Preset List

This is an export of the MIDI Preset list used by the duo. The [details](#) won't be useful to anyone else, but it may provide some ideas about naming and grouping of presets.

```
NAME PROGRAM CHANGES CONTROL CHANGES RAW MIDI DEVICE RAW MIDI SEND ADDITIONAL PRESETS
PAIR WITH PRESET
Ambient X32 Mute Snip|14|127
Ax Arc-1-R Cool AxeFX|||32
Ax Arc-2-R Mid AxeFX|||33
Ax Arc-3-R Hot AxeFX|||34
Ax Arc-4-L Cool AxeFX|||35
Ax Arc-5-L Mid AxeFX|||36
Ax Arc-6-L Hot AxeFX|||37
Ax Arc-6-L Hot AxeFX|||37
Ax Arc-7-L Scream AxeFX|||38
Ax Capn-1-R Cool AxeFX|||64
Ax Capn-2-R Mid AxeFX|||65
Ax Capn-3-R Hot AxeFX|||66
Ax Cln-1-R Cool AxeFX|||0
Ax Cln-2-R Mid AxeFX|||1
Ax Cln-3-R Hot AxeFX|||2
Ax Cln-4-L Cool AxeFX|||3
Ax Cln-5-L Mid AxeFX|||4
Ax Cln-6-L Hot AxeFX|||5
Ax Cln-7-L Scream AxeFX|||6
Ax Dum-4-L Cool AxeFX|||43
Ax Dum-5-L Mid AxeFX|||44
Ax EVH-Pretty-Rhy AxeFX|||70
Ax EVH-Pretty-Riff AxeFX|||69
Ax EVH-Pretty-Riff bomb AxeFX|||68
Ax EVH-Pretty-Riff-trill AxeFX|||67
Ax Pwr-1-R Cool AxeFX|||8
Ax Pwr-2-R Mid AxeFX|||9
Ax Pwr-3-R Hot AxeFX|||10
Ax Pwr-4-L Cool AxeFX|||11
Ax Pwr-5-L Mid AxeFX|||12
Ax Pwr-6-L Hot AxeFX|||13
Ax Rif-1-R Cool AxeFX|||16
Ax Rif-2-R Mid AxeFX|||17
Ax Rif-3-R Hot AxeFX|||18
Ax Rif-4-L Cool AxeFX|||19
Ax Rif-5-L Mid AxeFX|||20
Ax Rif-6-L Hot AxeFX|||21
Ax Rif-7-L HotDelay AxeFX|||22
Ax Rok-1-R Cool AxeFX|||24
Ax Rok-2-R Mid AxeFX|||25
Ax Rok-3-R Hot AxeFX|||26
Ax Rok-4-L Cool AxeFX|||27
Ax Rok-5-L Mid AxeFX|||28
Ax Rok-6-L Hot AxeFX|||29
Ax Scn1 AxeFX|14|0
Ax Scn2 AxeFX|14|1
Ax Scn3 AxeFX|14|2
Ax Scn4 AxeFX|14|3
Ax Scn5 AxeFX|14|4
Ax Scn6 AxeFX|14|5
Ax Scn7 AxeFX|14|6
```

Ax Scn8 AxeFX|14|7
 Ax Silver-1-Rhy AxeFX|||71
 Ax Silver-2-Solo AxeFX|||72
 AxEQ Flat AxeFX|33|127
 AxEQ HPF AxeFX|33|0
 AxFx Capo AxeFX|84|0
 AxFx ChorOff AxeFX|18|0
 AxFx ChorOn AxeFX|18|127
 AxFx DelayCust AxeFX|80|3
 AxFx DelayLong AxeFX|80|2
 AxFx DelayMid AxeFX|80|1
 AxFx DelayOff AxeFX|16|0
 AxFx DelayOn AxeFX|16|127
 AxFx DelaySlap AxeFX|80|0
 AxFx DriveKlon AxeFX|89|0
 AxFx DriveOff AxeFX|25|0
 AxFx DriveOn AxeFX|25|127
 AxFx FilterOff AxeFX|24|0
 AxFx FilterOn AxeFX|24|127
 AxFx PanTrmOff AxeFX|21|0
 AxFx PanTrmOn AxeFX|21|127
 AxFx PitchOff AxeFX|20|0
 AxFx PitchOn AxeFX|20|127
 AxFx RevA AxeFX|81|0
 AxFx RevB AxeFX|81|1
 AxFx RevC AxeFX|81|2
 AxFx RevD AxeFX|81|3
 AxFx RevOff AxeFX|17|0
 AxFx RevOn AxeFX|17|127
 AxFx RotOff AxeFX|19|0
 AxFx RotOn AxeFX|19|127
 AxFx SwellFast AxeFX|87|0
 AxFx SwellMed AxeFX|87|1
 AxFx SwellOff AxeFX|23|0
 AxFx SwellOn AxeFX|23|127
 AxFx SwellSlow AxeFX|87|2
 AxFx SwellVerySlow AxeFX|87|3
 AxFx TrmA AxeFX|85|0
 AxFx TrmB AxeFX|85|1
 AxFx WahCust AxeFX|86|2
 AxFx WahNo AxeFX|86|0
 AxFx WahNorm AxeFX|86|1
 AxFx WahOff AxeFX|22|0
 AxFx WahOn AxeFX|22|127
 AxFx WamDive AxeFX|84|1
 AxFx WamNo AxeFX|84|0
 AxFx WamUp AxeFX|84|2
 AxS Beginnings Ax Cln-2-R Mid, AxFx ChorOn, AxV 0dB
 AxS Boogie Shoes Ax Cln-2-R Mid, AxFx DelayOn, AxV -2dB
 AxS Born To Be Wild Ax Rif-6-L Hot, AxV 0dB
 AxS Crazy Little Thing - intro Ax Cln-2-R Mid, AxV +2dB
 AxS Easy To Be Hard Ax Cln-1-R Cool, AxFx ChorOn, AxFx PanTrmOn, AxV 0dB
 AxS Friends In Low - Clean Ax Cln-2-R Mid, AxFx ChorOn, AxV 0dB
 AxS Funky Town - intro Ax Pwr-6-L Hot, AxV 0dB
 AxS Get Together - Intro Ax Cln-2-R Mid, AxFx ChorOn, AxV +2dB
 AxS Gimme 3 - Intro Ax Rif-3-R Hot, AxFx DelayOn, AxFx DelayCust, AxFx RevOff, AxV +2dB
 AxS Harder To Breathe - Intro Ax Pwr-6-L Hot, AxFx DelayOff, AxV -2dB
 AxS Heart & Soul clean Ax Cln-1-R Cool, AxFx ChorOn, AxV 0dB
 AxS Heart & Soul grit C Ax Rif-3-R Hot, AxFx ChorOn, AxV 0dB
 AxS Heart & Soul grit FM7 Ax Rif-3-R Hot, AxFx ChorOn, AxV -4dB
 AxS Heart & Soul lead Ax Rif-4-L Cool, AxV +2dB
 AxS Heart & Soul power Ax Rif-5-L Mid, AxFx DriveOff, AxV +2dB

AxS Heart & Soul riff Ax Rif-5-L Mid, AxV +2dB, AxFx DriveKlon, AxFx DriveOn
 AxS Hounds clean AxV -2dB, Ax Cln-1-R Cool, AxFx ChorOn
 AxS Hounds power Ax Pwr-3-R Hot, AxFx DelayLong, AxFx DelayOn, AxV +2dB
 AxS I Can't Take My Eyes Ax Cln-1-R Cool, AxFx ChorOn, AxV 0dB
 AxS I'm Your Captain - intro Ax Capn-1-R Cool, AxFx WahOff, AxV -2dB
 AxS It's Alright Ax Cln-3-R Hot, AxFx DelayOn, AxV +2dB
 AxS Jet Airliner - rhythm Ax Cln-3-R Hot, AxFx DelayOff, AxV -4dB
 AxS Jet Airliner - riff Ax Cln-3-R Hot, AxFx DelayOn, AxV +2dB
 AxS Keep Playin - Rhythm Ax Cln-5-L Mid, AxFx DelayOff, AxV -2dB
 AxS Keep Playin - Riff Ax Rif-6-L Hot, AxV 0dB
 AxS No Matter What - intro Ax Rif-2-R Mid, AxFx DelayOn, AxV 0dB
 AxS Play That Funky Music Ax Cln-2-R Mid, AxFx DelayOn, AxV +2dB
 AxS Pump It Up - chords AxV -4dB, AxFx DelayOff
 AxS Pump It Up - intro Ax Rif-2-R Mid, AxFx DelayOn, AxV -2dB
 AxS Pump It Up - riff AxFx DelayOn, AxV 0dB
 AxS September Ax Cln-2-R Mid, AxFx DelayOn, AxV 0dB
 AxS Something Rhythm Ax Rif-2-R Mid, AxFx ChorOn, AxFx RotOn
 AxS Something Riff-Solo Ax Rif-4-L Cool, AxV +2dB
 AxS True Ax Cln-1-R Cool, AxFx ChorOn, AxV -2dB
 AxS Under Pressure Ax Cln-2-R Mid, AxFx ChorOn, AxFx RevB, AxV +2dB
 AxS Uptown Funk - Hallelujah Ax Cln-6-L Hot, AxV 0dB
 AxS Uptown Funk - intro Ax Cln-2-R Mid, AxFx DelayOn, AxFx ChorOn, AxV -2dB
 AxS Uptown Funk - Rhythm Ax Cln-2-R Mid, AxFx DelayOn, AxFx ChorOn, AxV 0dB
 AxS What I Like - intro Ax Cln-3-R Hot, AxFx DelayOn, AxV +2dB
 AxS What I Like - rhythm Ax Cln-3-R Hot, AxFx DelayOff, AxV -2dB
 AxV -2dB AxeFX|32|42
 AxV -4dB AxeFX|32|21
 AxV -6dB AxeFX|32|0
 AxV +2dB AxeFX|32|85
 AxV +4dB AxeFX|32|107
 AxV +6dB AxeFX|32|127
 AxV 0dB AxeFX|32|64
 AxxRESET-PRESET AxeFX|||127 AxV 0dB
 Gtr-Clean AxeFX|||127 AxV 0dB
 Gtr-Tune AxeFX|||126 AxV 0dB
 Lites-Blk Luminair 9E 25 50 9C 25 00
 Lites-BlkFd Luminair 9E 26 50 9C 26 00
 Lites-GlowFd Luminair 9E 27 50 9C 27 00
 Lt-Break Luminair 9E 27 50 9C 27 00
 Lt-Talk Luminair 9E 28 50 9C 28 00
 Mute X Vox Off, X Amb On, Lt-Break
 P [Default] P Rock Brite, P Trns 0
 P 2 Electrics Piano|63|1|102
 P 80s Piano|63|0|10
 P Aggressive Piano|63|0|5
 P All Bars Piano|63|0|97
 P Clean Piano|63|0|96
 P Full Concert Piano|63|10|12
 P Lots Brass Piano|63|3|100
 P Lucky Piano|63|4|45
 P Piano Str Piano|63|0|13
 P Poly Synth Piano|0|0|90
 P Rock Brite Piano|0|0|1
 P Rocky Piano|63|0|92
 P Strange Piano|63|1|73
 P Tenor Sax Piano|63|4|7
 P Trns -1 Piano F0 43 10 7F 14 00 00 07 3F F7
 P Trns -2 Piano F0 43 10 7F 14 00 00 07 3E F7
 P Trns -3 Piano F0 43 10 7F 14 00 00 07 3D F7
 P Trns -5 Piano F0 43 10 7F 14 00 00 07 3B F7
 P Trns +1 Piano F0 43 10 7F 14 00 00 07 41 F7
 P Trns 0 Piano F0 43 10 7F 14 00 00 07 40 F7
 P Wurlitzer Piano|63|0|26

PRS AxeFX|15|127 AxV 0dB
 PRS-Clean AxeFX|||127 AxV 0dB, PRS
 Q All Is Fair X Talk, P Rock Brite, P Trns -3, Gtr-Clean, AxV 0dB
 Q Amazed X Talk, P Rock Brite, P Trns -1, Ax Cln-1-R Cool, AxV 0dB
 Q American Girl X Talk, P Full Concert, P Trns 0, Ax Rif-1-R Cool, AxV -2dB
 Q Back In The USSR X Talk, P Full Concert, P Trns 0, Ax Cln-4-L Cool, AxV +2dB
 Q Beginnings X Talk, P Full Concert, P Trns 0, AxS Beginnings
 Q Birthday X Talk, P Rocky, P Trns 0, Ax Rif-4-L Cool, AxV 0dB
 Q Boogie Shoes X Talk, P Lots Brass, P Trns +1, AxS Boogie Shoes
 Q Born To Be Wild X Talk, P Rocky, P Trns 0, AxS Born To Be Wild
 Q Break End Lt-Talk, X Vfx Off, X Vox On
 Q Break Start X Talk, P [Default], P Trns 0, Gtr-Clean, AxV 0dB
 Q Breakdown X Talk, P Wurlitzer, P Trns 0, Ax Rif-4-L Cool, AxV 0dB
 Q Brown Eyed Girl X Talk, P Clean, P Trns 0, Ax Cln-2-R Mid, AxV 0dB AxV 0dB
 Q Brown Sugar X Talk, P Tenor Sax, P Trns 0, Ax Rif-1-R Cool, AxV +2dB
 Q Crazy Little Thing X Talk, P 80s, P Trns 0, AxS Crazy Little Thing - intro
 Q Dance To The Music X Talk, P Rocky, P Trns 0, Ax Cln-3-R Hot, AxV -2dB
 Q Dancing With Myself X Talk, P [Default], P Trns 0, Ax Pwr-3-R Hot, AxV 0dB
 Q Desperado X Talk, P Rock Brite, P Trns 0, Gtr-Clean, AxV 0dB
 Q Easy X Talk, P Rock Brite, P Trns 0, Ax Cln-1-R Cool, AxV 0dB
 Q Easy To Be Hard X Talk, P Rocky, P Trns 0, AxS Easy To Be Hard
 Q Everybody Wants To Rule X Talk, P [Default], P Trns 0, Ax Rif-1-R Cool, AxV 0dB
 Q Faith X Talk, P Strange, P Trns 0, Ax Cln-2-R Mid, AxV 0dB
 Q Fire X Talk, P Rocky, P Trns 0, Ax Rif-5-L Mid, AxV 0dB
 Q Friends In Low Places X Talk, P Rock Brite, P Trns 0, AxS Friends In Low - Clean
 Q Funky Town X Talk, P [Default], P Trns 0, AxS Funky Town - intro
 Q Get Together X Talk, P 80s, P Trns 0, AxS Get Together - Intro
 Q Gimme Three Steps X Talk, P Rock Brite, P Trns 0, AxS Gimme 3 - Intro
 Q Good Lovin X Talk, P Clean, P Trns 0, Ax Cln-2-R Mid, AxV 0dB
 Q Hard To Handle X Talk, P Rocky, P Trns -3, Ax Rif-5-L Mid, AxV +2dB
 Q Harder To Breathe X Talk, P Rocky, P Trns 0, AxS Harder To Breathe - Intro
 Q Heart And Soul X Talk, P Rock Brite, P Trns 0, AxS Heart & Soul clean
 Q Hit Me With Your Best Shot X Talk, P Aggressive, P Trns 0, Ax Pwr-1-R Cool, AxV -
 2dB
 Q Hounds Of Love X Talk, P 80s, P Trns 0, AxS Hounds clean
 Q I Can't Take My Eyes X Talk, P 80s, P Trns 0, AxS I Can't Take My Eyes
 Q I Can't Tell You Why X Talk, P 80s, P Trns 0, Ax Cln-3-R Hot, AxV 0dB
 Q I'm Your Captain X Talk, P Rocky, P Trns 0, AxS I'm Your Captain - intro
 Q It's Alright X Talk, P 80s, P Trns 0, AxS It's Alright
 Q Jet Airliner X Talk, P 80s, P Trns 0, AxS Jet Airliner - riff
 Q Just What I Needed X Talk, P [Default], P Trns 0, Ax Pwr-1-R Cool, AxV 0dB
 Q Keep Playin That Rock & Roll X Talk, P Rocky, P Trns 0, AxS Keep Playin - Rhythm
 Q Knock On Wood X Talk, P Lots Brass, P Trns 0, Ax Rif-1-R Cool, AxV 0dB
 Q LES PAUL X Talk, P [Default], P Trns 0, PRS-Clean
 Q Margaritaville X Talk, P Rock Brite, P Trns 0, Ax Cln-1-R Cool, AxV -2dB
 Q Maybe I'm Amazed X Talk, P Aggressive, P Trns -1, Ax Rif-2-R Mid, AxV -2dB
 Q Mony Mony X Talk, P Rocky, P Trns 0, Ax Cln-7-L Scream, AxV -2dB
 Q Mustang Sally X Talk, P Rock Brite, P Trns 0, Ax Cln-4-L Cool, AxV 0dB
 Q My Corona X Talk, P [Default], P Trns 0, Ax Rif-2-R Mid
 Q My Sharona X Talk, P [Default], P Trns 0, Ax Rif-2-R Mid
 Q Never Been Any Reason X Talk, P Trns -5, P Lucky, Ax Pwr-1-R Cool, AxV -2dB
 Q No Matter What X Talk, P Clean, P Trns -2, AxS No Matter What - intro
 Q Peace Love & Understanding X Talk, P Clean, P Trns 0, Ax Cln-3-R Hot, AxV 0dB
 Q Perfect X Talk, P Clean, P Trns 0, Ax Cln-1-R Cool, AxV 0dB
 Q Play That Funky Music X Talk, P Rock Brite, P Trns 0, AxS Play That Funky Music
 Q Pretty Woman X Talk, P Rock Brite, P Trns 0, Ax EVH-Pretty-Riff bomb, AxV +2dB
 Q PRS X Talk, P [Default], P Trns 0, PRS-Clean
 Q Psycho Killer X Talk, P 2 Electrics, P Trns 0, Ax Cln-3-R Hot, AxV +2dB
 Q Pump It Up X Talk, P Rocky, P Trns 0, AxS Pump It Up - intro
 Q Reelin' In The Years X Talk, P [Default], P Trns 0, Ax Pwr-5-L Mid, AxV 0dB
 Q Rockbrook Skit X Talk, P Rock Brite, P Trns 0, Gtr-Clean, AxV 0dB
 Q Saturday In The Park X Talk, P Rock Brite, P Trns 0, Ax Cln-3-R Hot, AxV -2dB
 Q Saturday Night X Talk, P Rock Brite, P Trns 0, Ax Pwr-3-R Hot, AxV +4dB

Q September X Talk, P [Default], P Trns 0, AxS September
 Q Silver Spring X Talk, P Clean, P Trns 0, Ax Silver-1-Rhy, AxFx SwellOn, AxFx SwellFast, AxFx ChorOn, AxV -2dB
 Q Some Kind Of Wonderful X Talk, P Rocky, P Trns 0, Ax Rif-1-R Cool, AxV 0dB
 Q Something X Talk, P 80s, P Trns 0, AxS Something Riff-Solo
 Q STRAT X Talk, P [Default], P Trns 0, Strat-Clean
 Q Suffragette City X Talk, P Rock Brite, P Trns 0, Ax Pwr-3-R Hot, AxV 0dB
 Q Sweet Caroline X Talk, P Rock Brite, P Trns 0, Ax Cln-1-R Cool, AxV 0dB
 Q Tequilla Sunrise X Talk, P Strange, P Trns 0, Ax Cln-3-R Hot, AxFx PanTrmOn, AxFx TrmB, AxV 0dB
 Q This Love X Talk, P Rock Brite, P Trns 0, Ax Cln-3-R Hot, AxV -2dB
 Q True X Talk, P 80s, P Trns 0, AxS True
 Q Twist and Shout X Talk, P Rock Brite, P Trns 0, Ax Cln-3-R Hot, AxV +2dB
 Q Under Pressure X Talk, P 80s, P Trns 0, AxS Under Pressure
 Q Uptown Funk X Talk, P [Default], P Trns 0, AxS Uptown Funk - intro
 Q What I Like About You X Talk, P Rock Brite, P Trns 0, AxS What I Like - intro
 Q Wild Wild West X Talk, P Lots Brass, P Trns 0, Ax Rif-4-L Cool, AxV -2dB
 Q Your Song X Talk, P Rock Brite, P Trns 0, Ax Cln-1-R Cool, AxV +2dB, AxFx Capo, AxFx PitchOn
 Strat AxeFX|15|0 AxV 0dB
 Strat-Clean AxeFX|||127 AxV 0dB, Strat
 Talk X Vox On, X Talk, Lt-Talk
 X Amb Off X32 Mute Snip|14|127
 X Amb On X32 Mute Snip|14|0
 X Card Rec Start X32 Card (7 enable)|107|127
 X Card Rec Stop X32 Card (7 enable)|104|127
 X House Verb Off X32 Mute Snip|44|127
 X House Verb On X32 Mute Snip|44|0
 X Sing X Vox On, X Amb Off, X Card Rec Start
 X Spotify Off X32 Mute Snip|36|127
 X Spotify On X32 Mute Snip|36|0
 X Talk X Vfx Off, X Vfx Normal, X Vol DBO Normal, X Vol SAC Normal, X Amb On, X Card Rec Stop
 X USB Off X32 Mute Snip|38|127
 X USB On X32 Mute Snip|38|0
 X Vfx Delay Off X32 Mute Snip|42|127
 X Vfx Delay On X32 Mute Snip|42|0
 X Vfx Idol X32 Mute Snip|||1
 X Vfx Long X32 Mute Snip|||2
 X Vfx Normal X32 Mute Snip|||0
 X Vfx Off X Vfx Verb Off, X Vfx Delay Off
 X Vfx On X Vfx Verb On, X Vfx Delay On
 X Vfx Verb Off X32 Mute Snip|40|127
 X Vfx Verb On X32 Mute Snip|40|0
 X Vol DBO Boost X32 Fader|0|103
 X Vol DBO Normal X32 Fader|0|96
 X Vol SAC Boost X32 Fader|1|103
 X Vol SAC Normal X32 Fader|1|96
 X Vox DBO Off X32 Mute Snip|0|127
 X Vox DBO On X32 Mute Snip|0|0
 X Vox Off X Vox DBO Off, X Vox SAC Off
 X Vox On X Vox DBO On, X Vox SAC On
 X Vox SAC Off X32 Mute Snip|1|127
 X Vox SAC On X32 Mute Snip|1|0