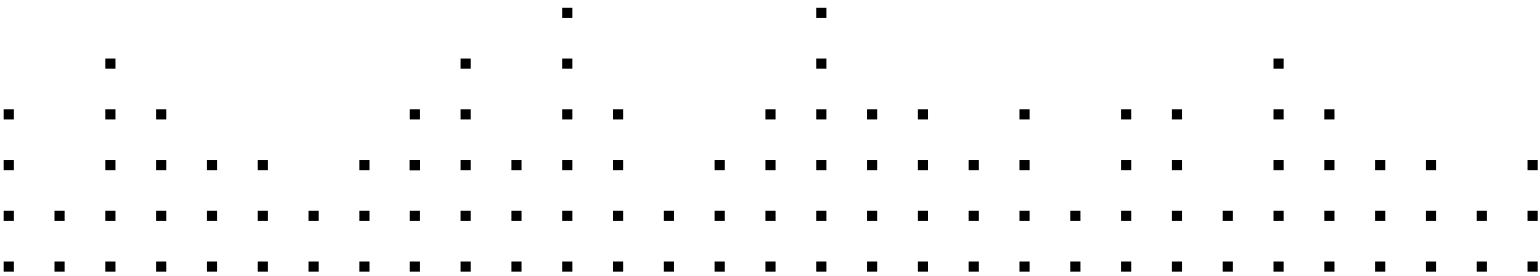




AbbeyRoad | 60s Drums

USER'S MANUAL



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1 Introduction

Abbey Road Studios, the world's first dedicated recording studios, were opened on November 12 1931. The building is an iconic symbol of the international music industry. The studios have been at the heart of the UK music industry for more than 75 years and have been the location of countless landmark recordings and have pioneered new recording techniques and technology. Today, Abbey Road Studios is one of the most technically advanced recording, mixing and post-production complexes in the world.

For many years, Abbey Road benefited from the talents of EMI's research and development division, which custom-built mixing consoles and outboard gear to meet the demands and ambitions of the studio engineers and the artists they worked with. Most of this equipment was only available to EMI studios and was never sold commercially. This equipment, combined with the expertise of our engineers and the unique acoustic properties of the studios, enabled what has come to be known as the "Abbey Road Sound". This sound can be heard on some of the most popular recordings of all time.

Abbey Road and Native Instruments joined forces in 2009 to create outstanding musical instruments based on Abbey Road's legendary equipment, engineering expertise, and studio acoustics. Combined with the development and design expertise of Native Instruments, musicians can experience a new level of versatility and musicality.

About this manual

In this manual, distinctive formatting has been applied in order to let you recognize certain elements in the text at a glance:

- Text appearing on the screen (labels of buttons, controls, menus etc.) is printed in **grey**.
- Important names and concepts are printed in **bold**.

2 What's New in Version 1.1?

2.1 Background Loading

The 4.1 update to Kontakt and Kontakt Player includes a new Background Loading feature, which allows an instrument to be opened very quickly while the samples continue to load in the background. The kits included with this update have been saved with the Background Loading feature enabled. This allows the Abbey Road drum kits to open in a matter of seconds, allowing you to work with the kits shortly after opening them. This also allows you to open and work with projects in your DAW without having to wait for the full kits to load. In addition, the drums which are used in a project are automatically given priority loading, so that you can immediately play back your projects without having to wait for the rest of the kit to load. As the kit loads in the background, more and more of the kit is playable until the full kit is loaded.

Please Note: On some PCs, the background loading will not work the first time you load the kits. If this is the case, you have to load the kits one time and then resave them in order to use this feature. You can also perform a “Batch Resave” on the folder with the kits (from the Files dropdown on the main Kontakt view). After doing this once, you will not have to do it again.

2.2 Drum Loading and Unloading

You can now load and unload each drum contained within a kit. Unloading a drum will purge it from your computer's memory, freeing up more resources. You can load and unload the drums by selecting the drum and using the Load/Unload button at the upper right corner of the Drum Page. Once you have customized the setup of your kit, you can save it for later use. An additional “Template” kit is provided for each kit that has no drums loaded, which can be used to add the various drums in the kit from scratch.

2.3 Essential Kits

There is a new version of each kit called “Essential”, which contains only the most common articulations of the drums. There are also no additional right and left hand mappings in the upper keyboard ranges, nor separated open hihat mappings. These kits are useful if you only want to use the basic types of sounds played by a drummer. For example, the toms have the center hits, but no rimshots or rim only hits.

2.4 Cymbal Choking with V-Drums and Aftertouch

You can now choke the cymbals using V-Drums and other electronic drum pads which support the choking feature. You can also choke the cymbals by using aftertouch on MIDI keyboards.

2.5 Additional Mapping Presets

There is now an additional MAP menu which has a selection of presets based on popular software and electronic drum setups. Entries in this menu include General MIDI, V-Drums™, DrumIt Five™, EZplayer®, BFD, iMap™, and Addictive Drums™.

2.6 Automation IDs

The kits now have pre-assigned automation IDs to easily use automation within your DAW.

2.7 Preset Kits

In addition to the new kits mentioned above, there is also a small selection of preset kits, each with a unique sound for various styles of production.

3 About Abbey Road 60s Drums

In this chapter, you will find out about Studio Two, the team involved, the drum kits used, and the equipment employed to record Abbey Road 60s Drums.

3.1 The Studio

Studio Two, arguably the most famous studio in the world, has a unique design, acoustic and an unparalleled history of recording. The thick solid wood floor, irregularly laid painted bricks, hanging quilts, bass traps and false dropped ceiling make Studio Two sound like no other. The studio is so good at handling any style of music, from rock and roll sessions through to mid sized orchestras, that the room has remained unchanged since the early sixties.



Artists who have recorded in Studio Two include: Fiona Apple, Kate Bush, The Beatles, Nick Cave and the Bad Seeds, Cliff Richard and The Shadows, David Gilmour, Dido, Green Day, Groove Armada, Idlewild, Muse, Oasis, Underworld, U2, Radiohead, Kanye West, and a wealth of film scores.

Studio Statistics



Height	24ft / 7.31m
Width	38ft 3in / 11.65m
Length	60ft 2in / 18.35m
Floor Area	2131sq ft / 198sq m
Reverberation Time	1.2 sec

3.2 The Team

Abbey Road 60s Drums was recorded by Mirek Stiles and executively produced by Director of Engineering, Peter Cobbin.

Mirek has been at Abbey Road since 1997 and has worked as an engineer on a multitude of pop/rock sessions as well as many different film scores. Projects include: Fiona Apple, Jon Brion, The Beatles: Yellow Submarine Song Track, The Beatles Anthology 5.1 Remix, The Beatles Love, Nick Cave and the Bad Seeds, Mick Jagger, John Lennon back catalogue remix albums (x5), Muse, Paul McCartney, Dave Stewart, Kanye West and The Lord of the Rings trilogy.

Peter is Abbey Road's Director of Engineering and is one of the world's top recording engineers. He has been responsible for the remixing of the Beatles Yellow Submarine, Anthology and the John Lennon back catalogue. Other artists Peter has recorded/mixed for include Air, Keane, U2, Panic at the Disco, Amy Winehouse and Kanye West. Peter also works with many of the film industry's celebrated directors and composers and has produced film scores such as Lord of the Rings Trilogy, Shrek the Third, Harry Potter (Order of Phoenix and Half-blood Prince) American Gangster, Hell Boy 2 and Terminator Salvation.

A keen user of vintage equipment, Peter is responsible for introducing some of Abbey Road's best loved equipment to the audio products community in the form of Abbey Road Plug-ins.

Drumming duties were performed by Ralph Salmins, one of London's top musicians. Ralph has worked for the likes of Tori Amos, Burt Bacharach, Elvis Costello, Sheryl Crow, Macy Gray, Elton John, Tom Jones, Madonna, George Martin, Alanis Morissette, Mike Oldfield and Kelly Rowlands.

3.3 The Kits

Two vintage kits were chosen for the Abbey Road 60s drum project:

The first kit is a Gretsch Round badge White Marine Pearl (Jasper Shell) from the early 1960s. The size of the drums recorded were 24", 13" and 16". Gretsch has been making drums since 1883 with the round badge series being made up until 1971, whereupon the octagon-shaped badge was introduced.





The second kit is a Ludwig Hollywood from 1967. The size of the drums recorded were 22", 12", 13" and 16". Ludwig has been making drum products since 1909. The Hollywood kit was dubbed the "latest in twin tom tom design" and was first introduced in 1962. It incorporated top quality features such as triple flanged hoops, self aligning tension casting and sure-action snare strainer. A popular recording technique at this time was to cover the snare and toms with tea towels, so samples of this technique are included with this kit.

Snare drums used on this project include:

- Ludwig chrome Supra-Phonic 400 (1966) – probably the most recorded snare drum in the history of music. These snare drums have been in production since 1959 and the Supra-Phonic is still being manufactured today.
- Ludwig wooden Jazz Festival (1966) – this 5" drum was originally designed with jazz musicians in mind but soon found its way on many pop and rock recordings thanks to its snappy, crisp sound.
- Ludwig Mahogany (1959) – This "Auditorium" model was designed as a high quality concert snare drum. Its 6 ½" depth provides a big, warm sound.
- Singerland Radio King (1964) – dubbed as the "long term favorite of our nations top dance drummers" in a vintage Singerland catalogue. This 5 ½" deep snare drum is made of a solid 1-ply maple shell.

A selection of vintage Zildjian cymbals were used from the early and late 1960s, including a rivet cymbal dating from 1963.

3.4 The Recording Equipment: Mixing Desks and Recorders



The Gretsch kit from the early 1960s was recorded through a REDD.17 mixing desk built in 1958. The REDD stands for Record Engineering Development Department. It was this department based at EMI Hayes that catered to the technical demands of the recording engineers at Abbey Road Studios. The whole desk is powered by a series of Siemens v72 valve amplifiers.

The Gretsch mono Overhead and Kick Out channels were recorded through a valve Studer J37 4 track 1" tape machine from 1964. The J37 was in use at Abbey Road from 1965 and was responsible for pushing the concept of multitrack recording to its limits. Many pioneering techniques at Abbey Road, such as ADT, involved the use of the J37. Abbey Road had 4 J37's throughout the sixties; the machine used on this project has J37 no.1 stamped on the front of it.

The Ludwig kit was recorded through an EMI TG mkII mixing desk. The TG was the very first transistor desk, developed by EMI, to replace the valve REDD desks. The first TG consol was in use at Abbey Road from 1967. Eight channels of the Ludwig kit were also recorded through a Studer A80 8 track 1" tape machine.

All analogue to digital conversion was completed via Prism ADA-8 interfaces.

3.5 Microphones



Abbey Road has arguably the largest working microphone collection in the world. A variety of classic vintage microphones from the extensive collection were used to capture the two drum kits. Find a list of which microphones were used for recording the individual drums in chapters [2.5.1](#) and [2.5.2](#).

3.5.1 Recording the Gretsch

Microphones used for recording the Gretsch kit:

- **Mono Overhead:** STC 4038 – A classic microphone that has been in the Abbey Road Studios collection since the mid 1950s. This is a figure of eight ribbon microphone and is still in use on an almost daily basis at Abbey Road.
- **Kick Out:** STC 4033 – This ribbon model has been in the Abbey Road Studios collection since the 1950s. It was a firm favorite in the early 1960s for low end applications such as kick drum. The microphone has both omni and figure of eight capsules designed to be used simultaneously to create a cardioid response (due to phase cancellation).
- **Stereo Overhead:** STC 4038
- **Hi-hat:** Neumann KM 56 – This microphone was introduced to the world in 1956 and is still a popular choice at Abbey Road. A selection of three polar patterns makes it an extremely versatile valve condenser microphone.

- **Kick In:** AKG D 20 – A dynamic cardioid microphone that has been in use at Abbey Road since the early 1960s. This was a very popular bass drum microphone.
- **Snare Top:** AKG D 19 – this dynamic cardioid microphone was first brought into the Abbey Road Studios collection in 1963. The microphones are still in use today. At the time they were very cheap and considered a bit of a work horse, being used on many applications from drums to piano and almost everything between.
- **Snare Bottom:** Neumann KM 56
- **Toms:** AKG D 19
- **Stereo Room:** Neumann U 47 – The legendary Abbey Road U 47 has been in use at the studios since 1951. The U 47 is probably the most sought after and recognisable microphone in the world. This valve condenser microphone has both omni and cardioid polar patterns.

3.5.2 Recording the Ludwig

Microphones used for recording the Ludwig kit:

- **Mono Overhead:** AKG D 19
- **Kick Out:** Sony C-38A – popular at Abbey Road for low frequency application in the late 1960s. It's a condenser microphone both capable of cardioid and omni polar patterns.
- **Stereo Overhead:** Neumann KM 56
- **Hi-hat:** Neumann KM 56
- **Kick In:** AKG D 20
- **Snare Top:** AKG D 19
- **Snare Bottom:** Neumann KM 56
- **Toms:** AKG D 19
- **Stereo Room:** Neumann U 47

4 Quickstart

In this chapter, you will find a quick guide to navigating the controls of the Abbey Road 60s Drums, as well as step by step guides to certain functions.

4.1 Basic Navigation

Upon opening any of the instruments, you will notice three tabs at the bottom of the instrument interface. These allow you to navigate the three main areas of control for the drum kits.



The three navigation tabs for Abbey Road 60s Drums.

4.2 Altering the Kit Options

- To alter general performance options for the entire kit, click on the Options tab. This will give you control over MIDI velocity curves, key range and randomization amounts, among other features.

4.3 Editing the Drums

1. For more fine control over the individual drums and their various articulations, click on the Drums tab.
2. To edit the settings for a certain drum, just click on its picture. Percussion is selected from a sub-menu of buttons after clicking on the main percussion image in the kit (a tambourine).

3. To alter the tuning and overhead and room amount for each drum, turn the corresponding **TUNE**, **OVERHEAD** and **ROOM** controls to the top right of the interface.



A typical drum's control panel.

The separate articulations for the drums are selected from the dropdown menu located below the tuning and overhead controls. Please note that this does not alter the drum mapping, but only selects the articulation for editing. To alter mapping, use the controls below the volume AHD envelope. If “Select by MIDI” (located to the top right of the drum kit image) is turned on, it is possible to select an articulation just by playing its respective MIDI note.

How to Change the Snare

Each kit in Abbey Road 60s Drums has two snares to chose from. To change the snare:

1. Go to the Drums page and click on the picture of the snare.
2. Click on the grayed out number to the top right, beside the drum name.



The Snare control panel, where you can select the snare drum for the kit.

Both the image and the drum name will change depending on which snare is currently loaded.

4.4 Creating a Mix

- ▶ To make a mix of the kit, click on the Mixer tab. This will give you a virtual mixing console with each of the main channels for the drums and percussion. Here you can control the volume, pan, mute and solo of the tracks you want in order to get the drum sound you need.
- ▶ To fine tune the mix, you can adjust overhead and room levels of individual drums on the Drums page. For the kicks and snares you can also adjust the in/out and top/bottom microphone mixes respectively.



The Kick Drum control panel with In/Out microphone balance control (**MIC BALANCE**).

For extra realism, there is a **SNARE MIC BLEED** control in the Options page. This allows you to include the sound from the kick, hi-hat and toms that bleeds into the snare microphone. This will add more snare rattle with these hits, as well as subtly coloring the sound.



The **SNARE MIC BLEED** control from the Options page.

4.5 Adding and Removing Drums

To add or remove drums from a kit:

1. Click on the Drums tab.
 2. Select the drum you want to add or remove.
 3. Click on the Load/Unload button located next to the drum name.
- When a drum is unloaded, it will appear as a darkened version of the drum in the kit.



5 The User Interface

This chapter describes the Abbey Road 60s Drums user interface. Learn about its three control pages, the knobs, buttons, and sliders, and how to use them.

5.1 Drum Page

The Drum Page has a view of the drum kit where you can select each drum and adjust:

- tuning
- volume envelope
- overhead and room microphone mixes for each drum

You can also assign each articulation of each drum to your own custom MIDI mapping.



Each drum can be selected by clicking on it with the mouse. This will also play the sound of that drum, giving you a quick preview of the sound. After selecting a drum, the name and controls for that drum will appear in the panels on the right. The **upper control panel** (with the **MIC BALANCE** slider) holds the controls for all of the sounds of a selected drum. The **lower control panel** holds controls for separate articulations of a selected drum.



If the **SELECT BY MIDI** function (top right of the instrument graphic) is activated, the drums will be selected depending on the notes played with your MIDI input device.

The **upper control panel** shows the name of the selected drum. If the snare drum is selected, you can choose between two different snares using the **1** and **2** buttons next to the name, which will also change the graphic for the snare drum. These buttons light up red when selected. You can add or remove the selected drum using the Load/Unload button on the right. A drum that has been removed turns dark after it has been unloaded.

Each drum has a **TUNE** knob, which can shift the pitch of that drum and all associated microphones for that drum up or down. There are also **OVERHEAD** and **ROOM** knobs to control the volume level in the overhead mix and the room mix, allowing you to adjust the relative volume of each drum in those microphones.

The kick drum, snare drum, and percussion have additional controls in the top panel:

- When the kick drum is selected, a fader appears that allows you to adjust the balance between the microphones inside and outside of the kick drum.
- When the snare drum is selected, you can adjust the balance between the snare top and snare bottom microphones.
- When the percussion is selected (represented by a tambourine in the drum kit view), three icons appear allowing you to choose the tambourine, clap, and stick hit sounds.

The **lower control panel** allows you to select each articulation for the selected drum. For example, selecting the snare drum will give an articulation menu showing the different types of snare hits such as center, halfway, rimshot, flam, roll, etc. (see chapter 4 for a list of all drums and articulations). Each articulation has its own volume envelope, with knobs for **ATTACK**, **HOLD**, and **DECAY**.

You can also assign each articulation to any MIDI note, allowing you to customize your kit mapping. This is very useful for adjusting the mapping to the way that feels best when playing the drums with a MIDI keyboard, or for adjusting the mapping to a custom electronic drum

setup. You can assign the MIDI notes manually by entering the notes in the **NOTE** field and clicking on the **APPLY** button next to it. You can also assign the notes by selecting the **LEARN** button and then playing the MIDI note for which you want to assign that articulation.

Using this method, it is fast and easy to create your own custom drum map. To keep this drum map, you must save the NKL after making the mapping changes.

There is also an additional MAP menu which has a selection of presets based on popular software and electronic drum setups. Entries in this menu include General MIDI, V-Drums™, DrumIt Five™, EZplayer®, BFD, iMap™, and Addictive Drums™. If you intend to use these drums with one of these setups, or if you simply prefer one of the drum maps in this menu, then you should select it from this list and save the NKL so that it will be the same when you open the kit again. If you select one of these presets and then make a mapping change, the menu will jump to the Custom entry, preventing any changes to the original mapping presets.



This will overwrite the preset currently stored in the Custom entry.

5.2 Mixer Page

The Mixer Page is where you can control the levels of the microphones, with the same level controls that you would use if using a real mixing board. You can also set the panning or stereo field of the mics, solo/mute the tracks, and change the output routing for each channel. The **lighter coloured channels** on the left side of the mixer represent the direct microphones, and the **darker coloured channels** on the right side represent the overhead and room microphones.



Each of the faders controls the volume level of the various microphones. The levels of each drum within the overhead and room mixes can be adjusted separately, but this is done on the **Drum Page** (see chapter 3.1). The faders on the Mixer Page are the standard “real life” level controls that you would have on an actual mixer.

The direct and the mono overhead microphone channels (**OH Mono**) have their own **PAN** control. The stereo overhead (**OH Stereo**) and room microphone (**Room**) channels have width controls, which determine the spread of the stereo field for those microphone pairs. **STEREO** is the standard setting where the right and left channels are independent on the left and right side.

MONO combines the two stereo channels into a single central sound source, and **WIDE** uses the KONTAKT stereo modeling to perceptually go beyond the stereo field.

Each track can be soloed with the little black button to the right of the **S** (solo) and multiple tracks can be soloed together. Tracks can also be muted with the little black button to the left to the **M** (mute).

Each track can also be routed to several outputs using the drop-down menu below each fader, depending on your soundcard and your output settings in KONTAKT. This is useful for applying your own separate effects on each track, such as compression or equalization. There is also an option in this drop-down menu to disable the track. This will purge the samples used for that track from your computer's memory, which is very useful if you are not going to use certain microphones in your production. If you decide to add the samples back later, simply reroute the track to an output (keep in mind that you will have to wait for the samples for that track to load again).

The buttons **DRUMS** and **PERCUSSION** at the top-right of the Mixer Page switch the direct mic controls from the regular drums (kick, snare, hi-hat and toms) to the additional percussion instruments (tambourine, claps and stick hits). The overhead and room controls remain on the right side in each view.



If you only want to use the genuine vintage setup for the Early 60s Kit, use only the Overhead Mono and Kick Direct Out microphones. This was the typical setup for an early 60s drum recording, and using these microphones recreates this sound. The typical setup for the late 60s included additional direct mics, so for a vintage setup of the Late 60s Kit, use only the Overhead Mono, Kick Direct Out, Snare Direct Bottom, and Tom Direct mics.

5.3 Options Page

The Options Page includes various parameters, which apply to the entire drum kit. On this page, you can randomize several parameters of the drum output and adjust the volume of the bleed from the snare bottom microphone. You can also make adjustments to the MIDI velocity curves and playing ranges.



The **KEY RANGE** area dictates the range of MIDI notes in which the Kontakt instrument will allow input. The default range is the full range from C-2 to G8. With the **LEARN** button selected, you can select the range of the MIDI input by playing the lowest and highest values. In the **TRANPOSE** area, you can transpose all incoming MIDI notes up or down by both semitones (**SEMI**) and octaves (**OCTAVE**).

In the **VELOCITY** control area, you can select the general velocity curve of the incoming MIDI notes with the buttons above the relevant label. The default is a linear curve, but many MIDI input devices have different levels of sensitivity, making a convex or concave curve more appropriate. There is also an option to select a constant velocity (represented by a horizontal line). You can customize the relationship between velocity and volume with the **VEL → VOL** knob.

The higher the knob value, the more that velocity will relate to the volume of the played sound. Finally, you can change the lowest and highest velocity values with fields above **RANGE**. This is useful for preventing the quietest and/or the loudest sounds from playing, and instead be limited to the specified minimum and maximum.

The **SNARE MIC BLEED** knob controls the overall level of the bleed from the snare bottom microphone. Snare mic bleed is a common sound in acoustic drum recordings, but sometimes it can add additional unwanted sound. With this control, you can adjust the volume of this bleed, as well as turn these snare bleed samples off if not desired (thus purging the samples from your computer's memory).

The controls in the **RANDOMIZE** area add custom levels of humanization and variation in the sound output. The higher the values of the knobs, the higher the range of randomization for each control. The randomized parameters are:

- **VOLUME:** The volume level of the played drum increases or decreases by a random amount with each hit.
- **VELOCITY:** The velocity of the played drum will increase or decrease slightly, which can trigger different samples above or below the one at the original velocity.
- **TIME:** This will add a slight random amount of delay to each hit.
- **PITCH:** The pitch of the played drum will be higher or lower by a slight amount with each hit.
- **EQ:** This will slightly change the frequency curve of each hit. Different drums have different frequency ranges, specific to the sound of each drum.

The **EXCLUDE DIRECT MICS** option allows the samples of the direct mics to be excluded/included with the Volume, Pitch and EQ randomization parameters. Randomizing the sound of direct mics is often more obvious than randomizing the sound of overhead or room mics, so it can be desirable to exclude them while still applying randomization to other mics.



A good way to add even more subtle variation to the sounds in the kit is to change the randomization parameters just slightly, especially the Pitch, EQ and Volume knobs. For all knobs, turning them a maximum or a quarter of the way up will allow the effect to remain subtle. Turning these knobs up to a high value can be used for a more experimental sound.

5.4 Kit Selection

There are a total of ten instrument NKIs included with Abbey Road 60s Drums:

- **Abbey Road – Early 60s Kit Full:** This is the full version of the Early 60s Kit with all samples and microphones included.
- **Abbey Road – Late 60s Kit Full:** This is the full version of the Late 60s Kit with all samples and microphones included.
- **Abbey Road – Early 60s Kit Vintage:** This is a special version of the Early 60s Kit which only uses the samples of the mics which were used in a genuine early 60s vintage setup. These samples include the Overhead Mono and Kick Direct Out microphone samples. All other microphone channels are disabled.
- **Abbey Road – Late 60s Kit Vintage:** This is a special version of the Late 60s Kit which only uses the samples of the mics which were used in a genuine late 60s vintage setup. These samples include the Overhead Mono, Kick Direct Out, Snare Direct Bottom, and Tom Direct microphone samples. All other microphone channels are disabled.
- **Abbey Road – Early 60s Kit Lite:** This is a version of the Early 60s Kit which includes all velocity layers, but has no sound variations for same velocity hits. This kit has a smaller memory footprint as well as a faster loading time than the full kit.
- **Abbey Road – Late 60s Kit Lite:** This is a version of the Late 60s Kit which includes all velocity layers, but has no sound variations for same velocity hits. This kit has a smaller memory footprint as well as a faster loading time than the full kit.
- **Abbey Road – Early 60s Kit Essential:** This is a version of the Early 60s Kit which includes only the most common drum articulations, and removes the additional separate right and left hand key mappings and separated open hihat mappings.
- **Abbey Road – Late 60s Kit Essential:** This is a version of the Late 60s Kit which includes only the most common drum articulations, and removes the additional separate right and left hand key mappings and separated open hihat mappings.
- **Abbey Road – Early 60s Kit Template:** This is a version of the Early 60s Kit with all drums unloaded from memory. You can load the drums you need within that kit by using the Load/Unload button at the top right of the Drum Page.

- **Abbey Road – Late 60s Kit Template:** This is a version of the Late 60s Kit with all drums unloaded from memory. You can load the drums you need within that kit by using the Load/Unload button at the top right of the Drum Page.

In addition to the standard kits above, there is also a selection of preset kits, each with a unique sound for various styles of production. These presets can be found in the “Preset Kits” folder within the main instruments folder.

6 Drum Articulations

Here is a comprehensive list of all drums and articulations included with each kit.

6.1 Early 60s Kit

Drum	Articulation
Kick Drum	Felt Beater Rubber Beater
Snare Drum 1 & 2	Center Left Hand Center Right Hand Center Right/Left Alternating * Halfway Left Hand Halfway Right Hand Halfway Right/Left Alternating * Rimshot Sidestick Flam Roll Wires Off Rim Only
Hihat	Closed Tight Tip Right Hand Closed Tight Tip Left Hand Closed Tight Tip Right/Left Alternating * Closed Tip Right Hand Closed Tip Left Hand Closed Tip Right/Left Alternating * Closed Shank Right Hand Closed Shank Left Hand

Hihat	Closed Shank Right/Left Alternating * Closed Pedal Open Pedal Open Quarter Open Half Open Three-Quarters Open Loose Open Full Open Controller **
Rack Tom	Center Right Hand Center Left Hand Center Right/Left Alternating * Rimshot Rim Only
Floor Tom	Center Right Hand Center Left Hand Center Right/Left Alternating * Rimshot Rim Only
High Crash	Edge Tip Bell Choke***
Low Crash	Edge Tip Bell Choke***

Ride	Tip Bell Edge Choke***
Sizzle Ride	Tip Bell Edge Choke***
Tambourine	Tap Shake
Clap	Solo Multi
Stick Hit	Hit

6.2 Late 60s Kit

Drum	Articulation
Kick Drum	Felt Beater Rubber Beater

Snare Drum 1 & 2	Center Left Hand Center Right Hand Center Right/Left Alternating * Halfway Left Hand Halfway Right Hand Halfway Right/Left Alternating * Rimshot Sidestick Flam Roll Tea Towel Wires Off Rim Only
Hihat	Closed Tight Tip Right Hand Closed Tight Tip Left Hand Closed Tight Tip Right/Left Alternating *
Hihat	Closed Tip Right Hand Closed Tip Left Hand Closed Tip Right/Left Alternating * Closed Shank Right Hand Closed Shank Left Hand Closed Shank Right/Left Alternating * Closed Pedal Open Pedal Open Quarter Open Half Open Three-Quarters Open Loose Open Full Open Controller **

High Rack Tom	Center Right Hand Center Left Hand Center Right/Left Alternating * Rimshot Towel Rim Only
Low Rack Tom	Center Right Hand Center Left Hand Center Right/Left Alternating * Rimshot Towel Rim Only
Floor Tom	Center Right Hand Center Left Hand Center Right/Left Alternating *
Floor Tom	Rimshot Towel Rim Only
High Crash	Edge Tip Bell Choke***
Low Crash	Edge Tip Bell Choke***
Ride	Tip Bell Edge Choke***

Sizzle Ride	Tip Bell Edge Choke***
Tambourine	Tap Shake
Clap	Solo Multi
Stick Hit	Hit

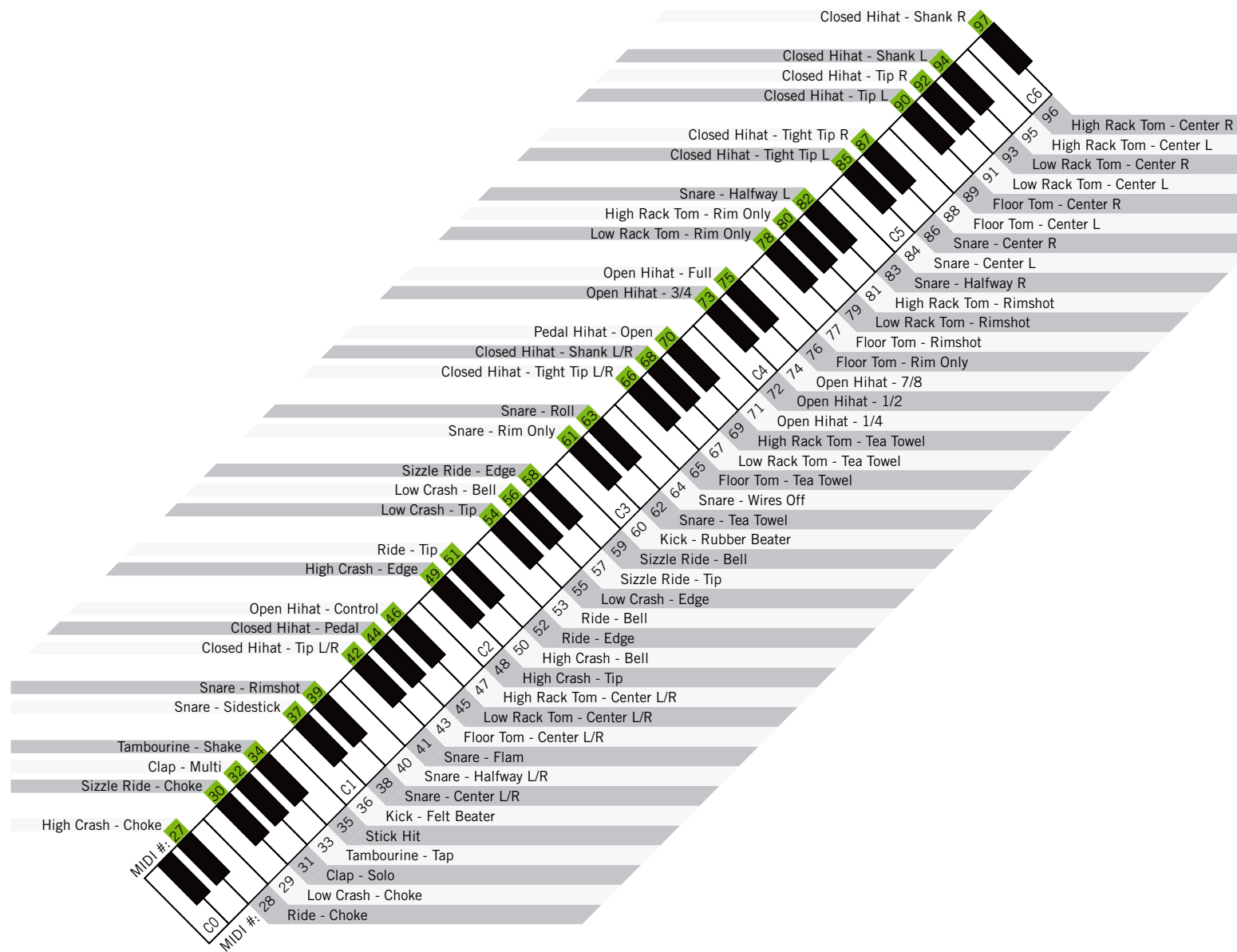
* There is a separate note assignment that alternates between the left and right hand samples of the center and halfway snare, center tom, and closed hihat articulations when playing faster than a certain speed. This adds a realistic sound to faster playing, as a drummer would also switch to using both hands at fast speeds.

** There is a separate note assignment for the open hihat that controls the amount of hihat openness depending on the position of the Modwheel controller (CC1) or a hihat foot controller (CC4). At the 0 position of the controller, the open hihat control key plays the fully open hihat. As the controller sends higher values, playing the open hihat control key will trigger hihat samples that gradually become more closed.

*** Cymbal choke samples are triggered by specific note assignments which play release samples. Choke samples can also be triggered with electronic drum pads which support the choking feature, as well as with keyboard aftertouch. When playing a cymbal sound, triggering the choke sample will play the sound of a choked cymbal which relates to the current volume of the played cymbal. If no cymbal sound is currently active, then the cymbal choke notes will do nothing.

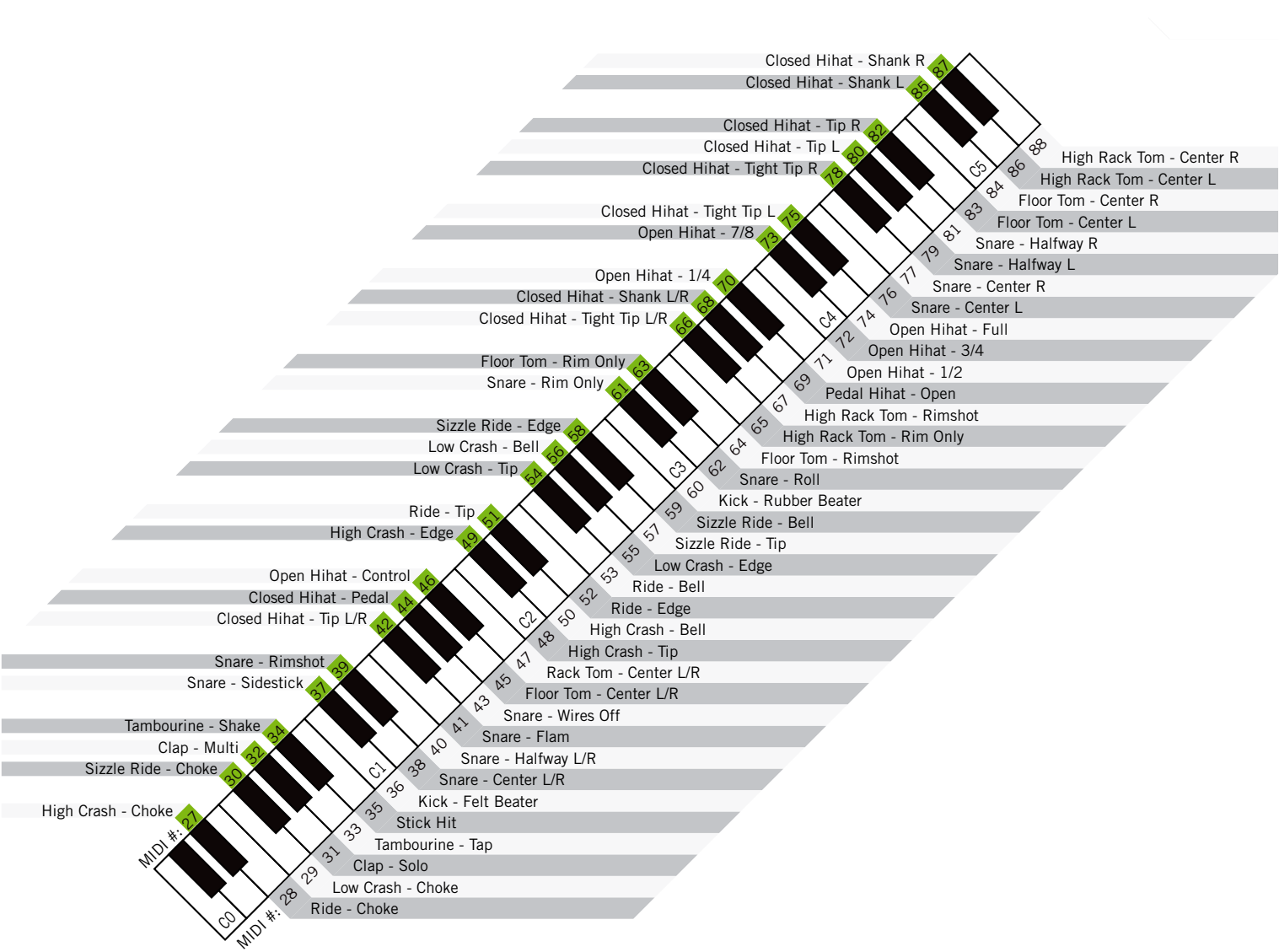
6.3 Default Drum Mapping: Early 60s Kit

This is the factory MIDI mapping for the Early 60s drum kit. You can customize the mapping on the Drum Page of each kit.



6.4 Default Drum Mapping: Late 60s Kit

This is the factory MIDI mapping for the Late 60s drum kit. You can customize the mapping on the Drum Page of each kit.



7 Credits

Product Design: Paul Maurer, Frank Elting

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Session and GUI photography: Richard Skidmore

All Drums Provided by:

The Vintage Drum Yard: <http://www.vintagedrumyard.co.uk/>

Harris Hire: <http://www.harris-hire.co.uk/>