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Special thanks to the Beta Test Team, who were invaluable not just in tracking down bugs, but in making this a better product.
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1 Welcome to DISCOVERY SERIES: MIDDLE EAST

Thank you for purchasing DISCOVERY SERIES: MIDDLE EAST. On behalf of the Native Instruments team, we hope this new KONTAKT library truly inspires you.

DISCOVERY SERIES: MIDDLE EAST adds a selection of exclusively sampled percussion and melodic instruments that integrate into the latest versions of KONTAKT 5 or the free KONTAKT PLAYER. These instruments have been carefully crafted to be both authentic and easy to use. Creating the atmosphere of a Middle Eastern musical ensemble is now as easy as it gets, even if you are not deeply familiar with the musical style.

This manual will introduce you to the different instruments that have been sampled for this collection, and explain how to use the KONTAKT instruments.

1.1 What is DISCOVER SERIES: MIDDLE EAST?

Continuing Native Instruments' Discovery Series of sounds from around the world, DISCOVERY SERIES: MIDDLE EAST is a collection of multi-sampled instruments from the respective region. Based on traditional techniques, this library is designed to add authentic Middle Eastern flavors to your music productions.

1.2 Document Conventions

This document uses particular formatting to point out special facts and to warn you of potential issues. The icons introducing the following notes let you see what kind of information can be expected:

- The speech bubble icon indicates a useful tip that may often help you to solve a task more efficiently.
- The exclamation mark icon highlights important information that is essential for the given context.
The red cross icon warns you of serious issues and potential risks that require your full attention.

Furthermore, the following formatting is used:

- Text appearing in (drop-down) menus (such as Open…, Save as… etc.) in the software and paths to locations on your hard disk or other storage devices is printed in *italics*.

- Text appearing elsewhere (labels of buttons, controls, text next to checkboxes etc.) in the software is printed in blue. Whenever you see this formatting applied, you will find the same text appearing somewhere on the screen.

- Important names and concepts are printed in **bold**.

- References to keys on your computer’s keyboard you’ll find put in square brackets (e.g., “Press [Shift] + [Enter]”).

▶ Single instructions are introduced by this play button type arrow.

→ Results of actions are introduced by this smaller arrow.
2 The DISCOVERY SERIES: MIDDLE EAST Library

The DISCOVERY SERIES: MIDDLE EAST library is split into three main sections:

**Ensembles**

The Ensembles are single KONTAKT Instruments that contain a number of percussion or melodic instruments that produce the sound of a full traditional Middle Eastern musical ensemble.

Three ensembles are included: an ensemble featuring five melodic instruments, a percussion ensemble, and an ensemble featuring a complete string group.

**Percussion**

The Percussion Instruments each contain a single Middle Eastern percussion instrument, mapped in more detail than the Percussion Ensemble. These instruments contain patterns, fills, rolls, and single hits.

**Melodic**

The Melodic Instruments each contain a single Middle Eastern melodic instrument. These instruments can be played normally, and include a number of key-switches for ornaments as well as authentic patterns.

2.1 Included Instruments

2.1.1 Percussion

The following percussion instruments are included in this library:

**Goblet drums**

**Darbuka**: A small goblet drum, made from aluminium and used often in Turkish music.
**Doumbek**: A single-headed goblet drum made of metal. This collection features two Egyptian-style doumbeks – one slightly larger drum, usually referred to as sombaty, and a classic doumbek.

**Dohola**: A large goblet drum similar to the darbuka and doumbek, but capable of producing deeper tones because of its larger size.

**Tombak**: A wooden goblet drum – the primary drum used in Persian music. The tombak has a more pronounced goblet shape than the other drums in this collection, with a head that stretches over the rim.

**Frame drums**

**Bendir**: A large frame drum used in both Arabic and Turkish music. The instrument in this collection is made with natural skin and without snares.

**Daire**: A medium-sized frame drum with jingles, used in Arabic and Turkish music. Similar to a riq, but larger.

**Daf**: A large Persian frame drum with jingles attached to the inside of the shell.

**Davul**: A large Turkish double-headed drum, similar to an Indian dhol, and played with mallets.

**Duff**: A simple Arabic frame drum with a larger shell and without jingles.

**Katem**: An Arabic frame drum, without jingles. This collection includes two katem with different diameters.

**Kudüm**: A pair of small Turkish kettle drums, played with mallets.

**Riq**: A small, tambourine-like frame drum with jingles. This instrument collection features two different riq models.

**Zil**: A pair of Arabic finger cymbals (these are only available in the percussion ensemble).

### 2.1.2 Melodic

The following melodic instruments are included in this library:

**Kanun**: A Turkish zither, used mostly in classical music.

**Kemençe**: A small, bowed three-string Turkish fiddle. The instrument in this collection is a pear-shaped kemençe, used in classical music.
**Ney:** A long end-blown flute, used in all kinds of middle-eastern music.

**Oud:** A short-necked fretless lute used in Turkish and Arabic music and one of the main melodic instruments in the Middle East.

**Saz:** A long-necked fretted lute, used in Turkish folk music. This collection features three different saz models, the medium sized tambura, the smaller cura and the large divan saz.

**Tanbur:** A long-necked fretted Turkish lute, used in Turkish classical music.

**Zurna:** A medium-sized Turkish oboe, used in folk music.

**String Ensemble:** A string group with two violins, viola, and cello; recorded by a renowned Turkish ensemble.
3 Using the Instruments

Although the exact features of the included instruments differ, there are many common elements that will be found in most, if not all, of the instruments. As such the controls of the instruments will be covered as one, with exceptions being pointed out along the way.

3.1 Navigation

All instruments contain four control pages, which are accessible from the tabs at the bottom of the instruments interface:

- **Perform**: Contains the instrument options, a key-map, and the pattern controls.
- **Mixer**: Contains the mixer controls and effects.
- **Mapping**: Displays the key mapping for the Instrument.
- **Options**: Contains a number of performance and MIDI customization options.

► To open a control page, click on the respective tab.

3.2 Sound Presets

To the top right of all of the interfaces, you will see the Sound Preset menu.

From here, you can browse through presets that affect the mix of the Instrument.

You can select a Sound Preset in one of two ways:
From the Menu

1. Click on the menu to view all available Sound Presets.

2. Click on a Sound Preset.

→ The Preset will be loaded and the sound of the Instrument will change.

From the Cycle Buttons

► Click on the buttons to the left of the menu to cycle through the Sound Presets one at a time.

3.3 ModWheel

The function of the MIDI ModWheel is relative to the Instrument type you have loaded:

- **Percussion Ensemble**: The ModWheel controls the balance between the low instruments and the high instruments.

- **Percussion**: The ModWheel controls the speed of the fills.

- **Melodic**: The ModWheel adjusts the automatic ornaments.
For all Instrument types, the ModWheel has a display in the top left corner of the interface.

![ModWheel Control of the Percussion Ensemble](image)

This area not only shows the current value of the ModWheel, but can also be used to control the ModWheel from the interface, in case you are working without a MIDI controller.

Note that MIDI control of the ModWheel parameter can be turned on or off from the Options Page.

### 3.4 Mapping

- Click on the **Mapping** navigation tab to open the Mapping Page.

The Mapping Page shows how the various articulations and patterns are arranged on the MIDI keyboard.
Percussion

The Mapping Page of a Percussion Instrument

For the Percussion Instruments and the Percussion Ensemble Instrument, this page will show a full breakdown of how the different elements are mapped to the keyboard.

Below the keyboard is a small window that displays the name of the last played Instrument and Articulation.

The last played key will also be highlighted with a red dot on the virtual keyboard.
Melodic

For the Melodic Instruments and Ensemble Instruments (other than the Percussion Ensemble), this page displays a rough guide to where the phrases, key switches, and the main playable range are mapped, as well as a detailed view of which articulations are mapped to the key switches.

A breakdown of the full keyboard is not required as these instruments are played melodically, with each key playing a different note of the same articulation.

The melodic playback of these instruments does not have to be chromatic, you can use the KEY MODE menu on the Options Page to define whether or not the notes on the keyboard should be chromatic or constrained to a scale. For more information, please refer to 3.7.1, Melodic Options and 3.5.5, Selecting and Editing Scales.
3.5 Patterns and Phrases

For all Instruments the lowest mapped octave (marked in red on the KONTAKT virtual keyboard) contains a selection of 12 Patterns/Phrases. These are MIDI sequences of authentic phrases which can be loaded and manipulated by the Discovery Series engine.

The controls for the Patterns are accessed from the Perform page.

In the rest of this document the terms Pattern and Phrase may be used interchangeably, but within the context of the Instruments, Pattern will refer to rhythmic patterns, and Phrase will refer to a melodic phrase.

3.5.1 Pattern Selection and Playback

The pattern selection is displayed in the central window in the lower section of the interface.

The Pattern Selection Controls for a Percussion Instrument

Melodic Instruments have additional Scale and Root controls, but these will be described in 3.5.5, Selecting and Editing Scales

1. Patterns can be selected by using the lowest mapped octave of MIDI keys (marked in red on the virtual keyboard).

2. Alternatively, they can be selected by clicking on the arrow buttons to the right of the pattern name display.
The main options for pattern playback are located in the area to the left of the pattern selection display.

The Pattern Playback Controls

Here you will find a number of options that allow you to tailor how the patterns are played:

- **Sync**: Synchronizes the pattern to the host tempo.
- **1/2 and x2**: Alter the playback speed relative to the selected tempo.
- **Play**: The play button can always be used to start and stop pattern playback.
- **Tempo**: The bottom right section, beside the play button, contains the tempo selector. If **Sync** is off, you can click and drag here to set the tempo.

For Percussion Instruments it is possible to change the way pattern playback is triggered via the **TRIGGER PATTERN** controls on the Options Page (for more information see ↑3.7.2, Percussion Options)

**Tempo and Snapshots**

The sync setting is not saved with Snapshots, so you can browse Snapshots without losing these settings. The tempo setting is stored in Snapshots, so if Sync is off when you load a Snapshot, the tempo will update to the setting saved in that Snapshot.

All of the Snapshots in this library have been saved with a tempo that best matches the patterns included in the Snapshot.
3.5.2 MIDI Export

It is possible to export the selected pattern as MIDI via drag and drop:

1. Click on the icon to the left of the Edit button.

2. While holding down the mouse button, drag the pattern to your file system or DAW.

3. Release the mouse button to copy the MIDI to the specified location.

→ The MIDI file of the selected pattern will appear in your file system or DAW.

Groove, Feel, Intensity, and the solos and mutes are always written into the MIDI file, so the pattern you hear will always be the pattern you export.
3.5.3 Performance Controls

To the right of the pattern display there are controls that allow you to define the way the selected pattern is played. The controls are different depending on whether you have a Melodic Instrument or a Percussion Instrument loaded.

Melodic

![Performance Controls for the Melodic Instruments]

- **Tuning**: Adjusts the tuning of the notes in the Phrase and played notes. When turned all the way down, no additional tuning is applied; in the middle position the tuning will be as it is defined in the selected scale; at the maximum position the tuning will be double the tuning amount specified by the scale.

- **Feel**: Controls the precision of the performance. Settings to the left will be more rigid sounding, and settings to the right will sound more relaxed.

- **Intensity**: Controls the dynamic level of the performance.

Percussion

![Performance Controls for the Percussion Instruments]

- **Groove**: Controls the complexity of the pattern. At its lowest setting, only the main beats will be heard. At its highest setting, all of the additional embellishments in the pattern will be heard.

- **Feel**: Controls the precision of the performance. Settings to the left will be more rigid sounding, and settings to the right will sound more relaxed.
- **Intensity**: Controls the dynamic level of the performance.

The Kudūm Instrument has a slightly different control set, since it is a tuned percussion instrument.

Its three controls are:
- **Tune Low**: Sets the note to be played by the low drum.
- **Tune High**: Sets the note to be played by the high drum.
- **Intensity**: This is the same control as found in the other Percussion Instruments.

### 3.5.4 Browsing and Editing Patterns

► Click on the **Edit** button in the main pattern display.

→ The Pattern Browser and Editor window will open over the instrument/ensemble picture.

The Pattern Editor will have a slightly different layout depending on the Instrument you have loaded. The Melodic Instruments all have the same layout, whereas the Percussion Instruments will have slightly different layouts, but with the same general control set.

**The Percussion Pattern Editor**
The Percussion Pattern Editor has two main sections:

- In the top section is a selection of tracks (the exact number will depend on the loaded instrument). You can edit the pattern in this area.
- In the lower section is the Pattern Browser where you can browse and load patterns.

These sections will be described in more detail later in the chapter.

**The Melodic Phrase Editor**

Like the Percussion Pattern Editor, the lower section of the Melodic Phrase Editor is the Phrase Browser.

Above the Pattern Browser are four controls which define some general playback options for the phrase:

- **Start**: Adjusts the phrase start position.
- **End**: Adjusts the phrase end position.
- **Volume**: Controls the volume of the phrase.
- **Transpose**: Shifts the notes of the phrase up or down within the selected scale.
Above those controls is a single track representing the phrase (Melodic Instruments will not have multiple tracks like the Percussion Instruments).

At the top of the page are two tabs for changing the contents of the page. By default the Phrase Editor will be selected. Clicking on the Scale tab will display the Scale Editor, which is described in more detail here: ↑3.5.5, Selecting and Editing Scales

**Loading Pattern Presets**

In all Instrument types the lower part of the Pattern Editor window is the Pattern Browser. You can use this to browse through an extensive collection of patterns.

To load a pattern:

1. Browse through the folder system until you find the *.mid file you wish to load.
2. Double-click on the file name.

→ The pattern will be loaded into the currently selected pattern slot.

There are six variations for each pattern included with the library. Generally the first pattern is the main version, and the patterns get progressively busier with each variation.

**Editing Patterns**

You can edit the pattern from the upper half of the window, in the Pattern Editor.

The patterns can be quite complex, so for ease of use, their representation has been simplified to a series of dots, each one representing a beat in the pattern.

- If a dot is black, it contains no information.
- If a dot is light grey, it does contain pattern data.
1. Click on a grey dot to deactivate the pattern data for that beat.

2. Click on the dot again to re-activate that data.

Some of the patterns will allow you to edit 8th notes rather than just full beats. You can see the resolution of the Pattern Editor by looking at the note at the top of the Pattern Editor.

Snapshots

All of the included patterns have been saved as Snapshots, with different pattern variations assigned to each of the pattern keys.

The Snapshots included with the library are all saved with the tempo that works best with the included patterns.

3.5.5 Selecting and Editing Scales

All Melodic Instruments have controls for selecting scales. These controls are located under the Phrase selection controls.

- You can select from a selection of scales with the Scale menu.
- The root note of the scale can then be defined by the Root control.

The Scale and Root selections will define the notes and tunings used when playing back a Phrase.
The selections can also remap the MIDI of the playback range of the keyboard, depending on the setting of the **KEY MODE** menu on the Options Page (for more details see: ↑3.7.1, Melodic Options)

**The Scale Editor**

To open the Scale Editor

1. Open the Phrase Editor by clicking on the **Edit** button in the Phrase selection area.
2. At the top of the Phrase Editor, click on the **Scale** tab.

Each scale has eight degrees (or slots), which you can define in the top section of the Scale Editor.
To select a scale degree to edit, click on the Roman numeral representing that degree.

For each degree you can define the following parameters:

- **Note**: Using the **Select Note** menu you can define the Western note for the scale degree. Note that the first degree must be the root note.

- **Ornament**: Each degree can have an assigned ornament. This is used when automatic ornaments are activated with the ModWheel (for additional information see: ↑3.3, **ModWheel**)

- **Tuning**: Each degree can be tuned in cent via the **Scale Tuning** control. The tuning is represented as its deviation from the Western Equal Temperament.

Below the Scale Degree Editor is an area labelled **Root**.

![The Root Menus](image)

This area contains two menus for defining more than just the root note of the scale.

In the top menu you have two options:

- **Global**: The Scale will use the root note defined by the Root control in the Phrase Selector.
- **Scale**: The Scale will use its own root note as specified by the bottom menu, ignoring the global root setting.

In Middle Eastern music it is common for the scale and root note to change during a musical performance, this is called “modulation from one maqam to another” and is not unlike tonal modulation as we know it in classical western music. Selecting the **Scale** option in the top menu will allow you to achieve this effect.

**Browsing and Loading Scales**

To the right of the Root menus is the Scale Browser where you can brose and load preset scales.
The Scale Browser

To load a scale:

1. Browse through the folder system until you find the *.nka file you wish to load.
2. Double-click on the file name.

→ The scale will be loaded into the currently selected slot.
3.6 Mixer

The Mixer Page is where you alter the sound of the Instrument by controlling volume levels and effect parameters.

Although each Instrument will contain different channels in the Mixer, the functionality will remain the same.

3.6.1 Instrument Channels

The Melodic and Percussion Instruments will have two Instrument Channels, the Ensemble Instruments will have more.
**Navigation**

If the Ensemble contains more than 5 channels, the channels are spread over two pages. Navigation for these pages is available as tabs above the main body of the mixer.

- Click on the tabs to change the displayed channels.

**Channel Strip**

The controls for each of the channel strips are as follows:

- **Send**: Controls the auxiliary send level to the reverb effect.
- **Pan**: Controls the instruments position in the stereo field.
- **S (Solo)**: Mutes all the other channels that do not have solo active so that you can hear only a specific selection of instruments.
- **M (Mute)**: Mutes the channel so no audio can be heard.
- **Level fader**: Controls the output level.
Effects and Options

► Click on the channel name to display the effects and options for that channel.

→ The channel effects and options will appear below the mixer.

There are 3 effects available for each channel:

- **EQ:** A 4-band fixed EQ. You can set the gain for each band by using the 4 available knobs.
- **Drive:** Controls the saturation amount.
- **Sound:** Applies a lowpass filter when turned to the left, and a highpass filter when turned to the right.

To the right of the effects is the channel output option:

- **Output:** Sets the output of the selected channel. Routing the channel to anything other than Default will cause the channel to bypass the Master Bus effects and settings.

The Output setting is not saved with Snapshots.

3.6.2 Reverb

The Reverb channel is a convolution based reverb effect. It accurately simulates real spaces (or equipment) by using an impulse response sample, which is kind of like a sonic fingerprint.
The Reverb channel lacks the Send and Pan controls of the instrument channels, but works in the same way in every other regard.

► Click on the Reverb button to display the Reverb selection options.

→ The lower section of the Mixer will display a series of images, each representing a different reverb type.

The Reverb Selection

For the DISCOVERY SERIES: MIDDLE EAST library there are five different spaces available.

► Click on an image to select the respective reverb.

→ The reverb character will change to the selected space.
3.6.3 Master

The channel strip on the far right is the Master Bus. It is the final stage of the mixer before the sound reaches the main Instrument output.

Channel Strip

The Master Bus Strip

The Master Bus strip has four main controls:

- **Send**: Controls the amount of signal sent from the Master Bus to the Reverb effect.
- **Width**: Controls the stereo width of the Master Bus, i.e. how far to the left or right an instrument can be panned.
- **Stereo Invert**: Activating this button will switch the left and right channels, effectively changing the listener position.
- **Level fader**: Controls the output level.
Master Effects

Click on the Master button to display the Master Effects controls.

The lower section of the Mixer will display the Master Effects.

There are 5 Master Effects:

- **EQ**: A 4-band fixed EQ. You can set the gain for each band by using the 4 available knobs.
- **Ambience**: Controls the level of a very small reverb effect, this can be used to add distance to the sound but without making it sound like it is in as large a space as the Reverb effect.
- **Punch**: Turning this knob to the right will emphasize the transient peaks in the sound, making it more percussive and punchy.
- **Comp**: Controls the amount of compression applied to the Master Bus.
- **Tape**: Controls the amount of Tape saturation applied to the Master Bus.
3.7 Options

The Options Page contains a number of performance and MIDI customization options. The controls available on this page will differ depending whether you have a melodic instrument/ensemble loaded, or a percussion instrument/ensemble.

3.7.1 Melodic Options

The Options Page of a Melodic Instrument

The Melodic Options Page is split into three sections. Each section is described below.
Controller

In the **CONTROLLER** section you can define how certain common MIDI controller should interact with the instrument.

There are four options in this section, presented as menus:

- **ModWheel**: This menu is used to toggle the ModWheel control of the ornaments on or off.
- **Sustain Pedal**: Selects the sustain pedal behavior:
  - *Off*: The sustain pedal will control nothing.
  - *Sustain*: The sustain pedal will act like a traditional sustain pedal for the playable range of the instrument.
  - *Latch Phrase*: The sustain pedal can be used to latch the pattern trigger keys, but will not affect the main playable key range of the instrument.
- **Pitch Bend**: Selects the intensity of pitch modulation provided by the Pitch Bend controller.
- **Aftertouch**: Selects the intensity of pitch modulation provided by MIDI Aftertouch.

Perform

In the **PERFORM** section you can define the playing style for the instrument/ensemble.

There are four controls in this section:

- **Playing Style**: Defines the playing style of the main playable keyboard range:
  - *Polyphonic*: Multiple notes can be played simultaneously as chord, regardless of whether or not that is possible on the real instrument.
  - *Legato*: Notes can only be played one at a time. In certain instruments (like the Ney), sample variations will be used to create a more realistic performance. Note that this option is not available on all instruments.
- **Tightness**: Controls the sample start position to set the tightness (or responsiveness) of the sound. This control also controls the tightness of the various instruments playing together in the ensemble.
- **Randomize**: Controls the amount of randomness applied to parameters like tightness, velocity, and sample variation (i.e. round robin). The middle position will have a subtle natural sound, the full left position will potentially sound mechanical.

- **Decay**: Controls the decay time of the instrument. Turning this all the way up will play the full length of the recorded sample, and turning it down can be used to tighten the decay. This control is not available in all instruments.

**Key Mode**

The **KEY MODE** menu defines how the notes from your keyboard should be played according to the scale select on the Perform Page.

There are three options:

- **Guide**: The notes of the scale are highlighted on KONTAKT’s virtual keyboard, and on the KOMPLETE KONTROL light guide, but the notes you play will be unaffected.

- **Mapped**: Similar to the **Guide** setting, but notes you play that are outside of the scale will be transposed so that they are in the scale.

- **Easy**: You will be able to play the notes of the scale using the white keys of the keyboard, regardless of the scale selection.

For more information on defining scales, see [3.5.5, Selecting and Editing Scales](#).
3.7.2 Percussion Options

![Options Page of a Percussion Instrument]

The Percussion instruments have a different selection of Options controls, but like the Melodic instruments, the Options Page is split into three sections.

**Controller**

In the **CONTROLLER** section you can define how certain common MIDI controller should interact with the instrument.

There are four options in this section, presented as menus:

- **ModWheel**: This menu is used to toggle the ModWheel control on or off.
- **Sustain Pedal**: When *Latch Pattern* is selected, the sustain pedal can be used to latch the pattern trigger keys. Otherwise the sustain pedal will do nothing.

- **Pitch Bend**: Selects how the Pitch Bend controller should be used. In most instruments you can use the Pitch Bend controller to adjust the velocity of any rolls while they are playing.

- **Aftertouch**: Selects how Aftertouch should be used. In most instruments this can be assigned to roll velocity, like the Pitch Bend controller.

**Perform**

In the **PERFORM** section you can define the playing style for the instrument/ensemble.

There are four controls in this section:

- **Tightness**: Controls the sample start position to set the tightness (or responsiveness) of the sound. This control also controls the tightness of the various instruments playing together in the ensemble.

- **Randomize**: Controls the amount of randomness applied to parameters like tightness, velocity, and sample variation (i.e. round robin). The middle position will have a subtle natural sound, the full left position will potentially sound mechanical.

- **Decay**: Controls the decay time of the instrument. Turning this all the way up will play the full length of the recorded sample, and turning it down can be used to tighten the decay. This control is not available in all instruments.

- **Low Tune**: Adjusts the tuning of the low articulations. Note that this control is not available for all instruments.

**Trigger Pattern**

There are two options here for selecting how Patterns should be triggered:

- **Keys (C1 – B1)**: The lowest MIDI keys in the mapping will both select and trigger the patterns.

- **Host Transport**: The pattern will start and stop with the host transport, and stay in sync with the song position. The MIDI keys C1 – B1 are used only to select patterns.
4 Credits

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