BEATNIK™
RHYTHMIC ANALYZERS

Model RA1200P
User Guide

Designed and manufactured by

ONBOARD™
RESEARCH
CORPORATION

Manual Revision 098-00002-007
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Quick Start Guide

1. Remove Beatnik from its packaging and remove the rear battery door cover.
2. Install six AA batteries (provided) using the correct orientation indicated inside the battery compartment. Then replace the battery door cover.
3. Set the Power Switch, located on the rear panel above "Settings," to **On**.
4. Set the Backlight Switch, located on the rear panel above "Metro," to the desired position (**On** or **Off**).

Using the Default Settings

To start your session, simply press the **Start/Pause** button. The built-in metronome sounds sixteenth notes at 60 beats per minute. The four vertical dotted lines on the display represent the four 16th notes in a quarter note.

To test your skills, play the 16th notes with the metronome. When you strike the drum pad, Beatnik displays a real-time view of your stroke timing and calculates a running score of your performance accuracy. When you stop striking the drum pad, Beatnik automatically switches to its History1 summary view that represents each stroke as a single dot so that you can see the history of every note you played.

To pause your session, press the **Start/Pause** button again.

To reset your score to zero and clear your history, press the **Reset** button.

Changing Default Settings

To change settings for the tempo, note, volume, etc., press and hold down the button of the setting you want to change. When the button lights, the selector (round knob) is active for that parameter. Turn the selector until the desired setting appears at the top of the display.

Notes

Product Specifications

Timing Precision:	Accurate to the nearest 512th note
Metronome Range:	25 – 250 beats per minute
Battery Type:	AA Size, 6 required, included
Battery Life:	Approximately 40 hours
Power Supply:	9 Volts, 300mA
Headphone Jack:	3.5mm, headphones included
Weight:	2.8 pounds (1.27kg)
Shipping Weight:	3.7 pounds (1.68kg)
Dimensions:	9.75” (76mm) x 13”(330mm) x 2.75” (69mm)
Stand Screw Thread Size:	8mm screw, stand not included

Copyright

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Trademarks

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The Beatnik Design Team
Mark Wilson, Niru Nirumandrad, Rusty Membreno, Jim Dulaney

Recommended Practice Stands

This product can be attached to any percussion practice pad or bell stand equipped with a standard 8-millimeter screw.

Warranty

OnBoard Research Corporation extends this warranty to the first consumer-purchaser, and guarantees this product to be free from defects in material and workmanship for a period of one (1) year from the date of purchase. In the event of a defect we will, at our option, repair or replace the defective product with a new or reconditioned product. This warranty does not cover batteries or damage caused by accident or misuse. Retain a copy of this warranty and your sales receipt.

Procedure for warranty:
1. Contact OnBoard Research by telephone or email.
2. Speak with a Customer Service representative.
3. Follow the simple instructions given.

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Introduction

The Beatnik™ RA1200P Rhythmic Analyzer for Percussion from OnBoard Research helps you improve your rhythmic accuracy in ways never before imagined or possible. Whether you're an experienced player who wants some fine-tuning or a promising new talent interested in developing solid rhythmic fundamentals, Beatnik answers the call.

Beatnik is more than a fancy metronome. With its five interactive, practical and intuitive built-in analyzers, Beatnik provides instant visual and audio feedback on your timing and rhythmic accuracy. This lets you immediately analyze your technical precision and assess your strengths and weaknesses to help you speed up your progress toward rhythmic perfection.

After you set the desired rhythm, simply start the rhythm playback and strike the touch-sensitive practice pad. Beatnik's large, backlighted display shows a visual representation of each stroke in real time and records every stroke for a history view, which lets you see exactly where your strokes occurred in relation to the actual beat with accuracy to the nearest 512th note!

Never before has there been anything like Beatnik. If you have ever wished you knew how your rhythmic and timing skills stack up, Beatnik has all the answers.

Layout

- Current Settings Display
- Real-time and History Data Display
- Settings Panel
- Metronome Panel
- Selector
- Speaker
- Drum Pad
- Power On/Off Switch
- Backlight On/Off Switch
- Phones / Speaker Jack
- AC Jack

Permutation — a rhythmic variation that allows you to create more complex rhythms by replacing subdivided notes with rests.

Phrase Analyzer — an analyzer that lets you set up a rhythmic phrase of up to 8 quarter notes in duration.

Real-time — a view option that displays a single, touch-sensitive, vertical stroke indicator each time you strike the drum pad.

Selector — a speed-sensitive control that lets you set values for various Beatnik functions.

Current Settings Display — shows a combination of current settings, including the selected skill level, note, volume and tempo settings, and measured tempo and performance score that adjust as you play.

Set Tempo — the metronome marking for the quarter note beat.

Stroke — a single strike of the drum pad.

Subdivision Analyzer— an accuracy analyzer that shows a separate vertical click marker for each subdivision of the beat, based on the selected note. For example, if the selected note is an 8^{th} note, two vertical click markers appear on the data display.

Subdivision — a rhythmic fraction of the main quarter note beat (for example, 8^{th} notes and 16^{th} notes).

Tap Tempo — sets the tempo based on strokes on the drum pad, allowing you to manually start a practice session later.

Tap Start — sets the tempo and automatically starts a practice session based on a number of count-off beats, allowing you to start a practice session "on the fly."

Tracking Analyzer — an analyzer that lets you freely switch between quarter notes, eighth notes, eighth-note triplets, sixteenth notes, 5 over 1, sixteenth-note triplets, 7 over 1, and thirty-second notes, to practice transitioning between different subdivisions without any manual setup or selector changes.

Glossary

Auto Switch — a view option that switches automatically between Real-time view and a History view.

Beat — the fundamental quarter note beat that Beatnik uses as a basis for determining note subdivisions, phrases, and tempo settings.

Click — the audible metronomic click that indicates the playing tempo, as well as rhythmic permutations. Beatnik provides clicks in different tones (high and low) to distinguish between the main beat and subdivisions of the beat.

Click Marker —vertical dotted line(s) in the data display that denotes the location of the metronome's clicks.

Data Display — the bottom portion of the LCD that shows when you strike the drum pad, how hard you strike the pad, and a cumulative representation of all strikes during a practice session in the form of individual pixels.

Dynamic Analyzer — an accuracy analyzer that shows one vertical click marker for all subdivisions of the beat, superimposing all subdivisions of the beat over each other, based on the selected note. For example, if the selected note is a 16^{th} note, a single vertical click marker will represent all four notes on the data display.

Groove Analyzer— an accuracy analyzer that tests your ability to play with consistent tempo, regardless whether it is ahead of or behind the beat of the metronome.

History 1 — a view option that depicts each stroke as a single pixel within the data display for each vertical click marker.

History 2 — a view option that shows a horizontal click marker and a scrolling display that represents the latest 128 consecutive beats. When all strokes in a beat have been played, Beatnik "connects the dots" into a solid vertical line that represents the historical performance of that beat, with the earliest stroke at the top and the latest stroke at the bottom of the vertical note indicator.

Measured Tempo — the tempo of your strokes as they correspond to a measurement in beats per minute.

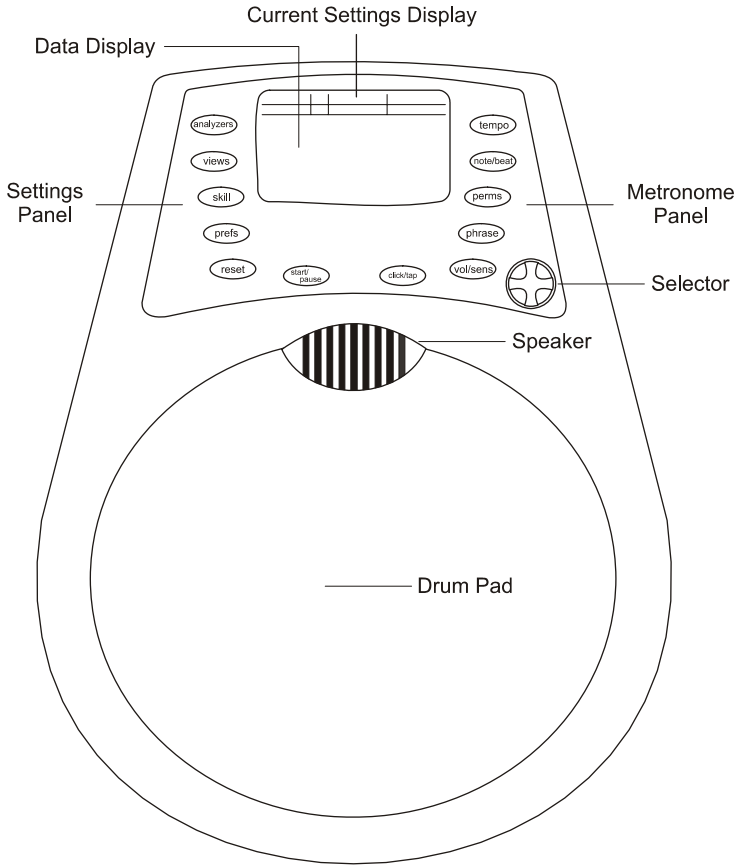


Figure 1. Top View

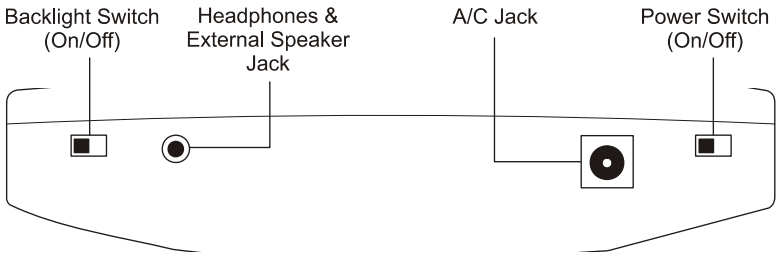


Figure 2. Rear View

Current Settings Display

The current settings display shows a combination of current settings, including the selected accuracy analyzer, view, skill level, volume and tempo settings, and measured tempo and performance score that adjust as you play.

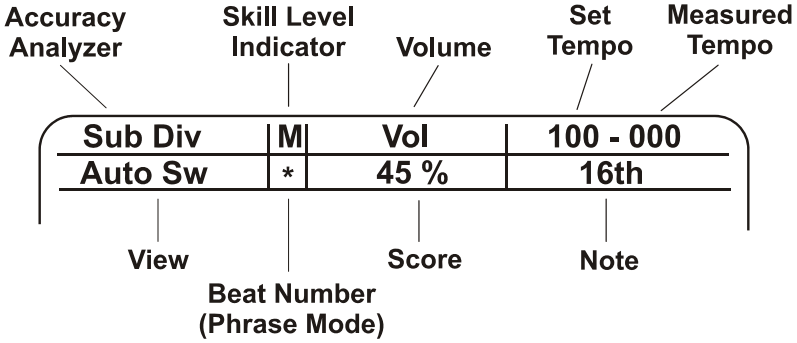


Figure 3. Current Settings Display

Data Display

The data display is 48 x 128 pixels. Each time you strike the drum pad, Beatnik records the timing of the stroke and represents it as one or more pixels in the data display. You can use the view options to show your timing and rhythmic accuracy in a variety of ways to help you better understand your performance strengths and weaknesses.

Settings Panel

The Settings panel includes the following controls:

- **Accuracy Analyzers** – Lets you select from five accuracy analyzers: Groove, Dynamic, Subdivision, Tracking and Phrase. See "Accuracy Analyzers."
- **Views** – Lets you select from four different views of the timing performance: Real-time, History 1, History 2, or Auto Switch. See "View Options."

Setting up a Phrase

The phrase setup function is a powerful feature that lets you configure a repeating rhythmic phrase that can consist of any combination of notes, including rests, and can be up to 8 quarter note beats in duration. This function is ideal for practicing longer, more difficult rhythmic patterns.

To set up a phrase:

1. Press the **Phrase Setup** button. The data display shows a Beat column and a Note column for up to eight beats.
2. Turn the selector until the arrow appears next to the desired beat number.
3. Press the selector.

   The underline indicates that the beat is active and ready for a note selection.
4. Turn the selector to display the desired note subdivision or rest.
5. To save the note setting, press the selector.
6. Repeat steps 2-5 to select notes for the remaining beats in the phrase.

   ***Note**: The phrase does not have to contain all eight beats. To save a shorter phrase, simply proceed to step 7 after you select the note for the last beat.*
7. When you finish setting up the notes in the phrase, press the **Phrase Setup** button to exit Phrase Setup. You can then press the **Perms** button to finish setting up the phrase by substituting rests for desired notes in the beats, or you can press the **Start** button to begin the Phrase practice session.

***Note**: Each beat in the phrase has its own history. When you pause Beatnik in the Phrase analyzer, repeatedly press the Note/Beat button or turn the selector to step through the History 1 view for each beat in the phrase.*

Setting the Volume and Pad Sensitivity

The Vol/Sens function lets you adjust the volume of a playback session and the sensitivity (dynamic level) of the drum pad.

The sensitivity control lets you select the level of impact required for Beatnik to detect a stroke on the drum pad. A lower sensitivity requires you to strike the drum pad with more force for Beatnik to detect the strokes. A higher sensitivity requires less force.

The **Vol/Sens** button toggles between volume and sensitivity.

To set the volume:

1. Press the **Start/Pause** button to start a practice session.
2. Press the **Vol/Sens** button once or until **Vol** appears on the current settings display.

   The **Vol** button illuminates to indicate the selector is controlling volume.
3. Turn the selector to the desired volume. The progress bar changes in the current settings display as you turn the selector.

To set the sensitivity:

1. Press the **Vol/Sens** button twice or until **Sens** appears on the current settings display.
2. Press the **Start** button to begin a practice session.
3. Strike the drum pad at the dynamic level at which you intend to practice.

   The height of the vertical stroke indicator corresponds to the dynamic level.
4. Turn the selector to the desired level of sensitivity.

   As you turn the selector, the progress bar changes in the current settings display.

- **Skill** – Lets you select the skill level for the practice session: Low, Medium, High, or Expert. See "Skill Levels and Scoring."
- **Prefs** – Lets you set the operational preferences: Current Setup (Save), Click Subdivisions, Vertical Grid, Groove Buzzer, Auto Switch History, and Restore Defaults. See "Preferences Setup."
- **Reset** – Lets you erase all practice session scores and stroke history from memory.
- **Start/Pause** – Lets you start or pause the current practice session.

Metronome Panel

The Metronome panel includes the following controls:

- **Tempo** – Lets you change the metronome's tempo (quarter note beat).
- **Note/Beat** – In Groove, Dynamic and Subdivision Analyzers, lets you set the note (for example, 8^{th} or 16^{th}) you intend to play. When Beatnik RA1200P is paused in the Phrase analyzer, lets you select between beat numbers one through eight for reviewing of stroke history.
- **Perms** – Lets you replace subdivided notes with rests to create a wide variety of rhythmic variations, or *permutations*, of the main beat.
- **Phrase Setup** – Lets you set up a rhythmic phrase for longer, more complex rhythmic patterns.
- **Vol/Sens** – The Vol (volume) control lets you adjust the volume of the metronome click. The Sens (sensitivity) control lets you adjust the dynamic level of the drum pad. See "Setting the Volume and Pad Sensitivity."
- **Click/Tap** – The Click control adjusts the "depth" or frequency of the subdivided metronome clicks. The Tap Set control lets you set the metronome tempo simply by striking the drum pad. The Tap Start control lets you tap a count off

and automatically start a practice session on the fly at the detected tempo. See “Click/Tap.”

Selector

The selector lets you select settings for the currently active function. When you press a button, the button illuminates , indicating that the selector controls that function.

Note: All buttons work this way except the Reset, Start/Pause and Click/Tap buttons.

To scroll between options or values, turn the selector clockwise or counterclockwise. The changes to options or values appear in the current settings display (or in the data display during preferences setup, phrase setup, and tap start).

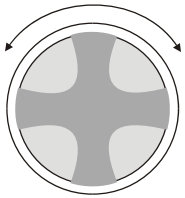


Figure 4. Selector

The selector is speed-sensitive, which means you can advance more quickly the faster you turn the control. For example, if you wanted to change the tempo from 60 to 240, quickly turn the selector clockwise to cover a wider range in less time. For smaller ranges, turn the selector more slowly.

The selector is also a pushbutton. In Phrase Setup, Tap Start and Prefs, the selector pushbutton makes changes to current settings. See “Setting up a Phrase,” “Tap Start,” and “Preferences Setup.”

Power On/Off Switch

Beatnik provides a simple two-position on/off switch. The left position is Off and the right position is On.

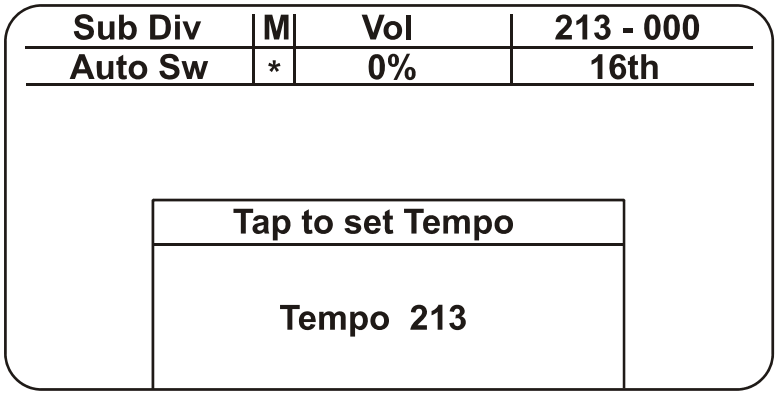


Figure 14. Tap Tempo

To use the Tap Start function:

1. With Beatnik paused, press the Click/Tab button twice.
2. Turn the selector to set the desired number of count-off beats.
3. Strike the set number of count-off beats on the drum pad at the desired tempo. Beatnik assumes your taps are quarter notes. Beatnik starts automatically at the tempo of the count-off beats.
4. To stop a practice session started with Tap Start, press the **Start/Pause** button.

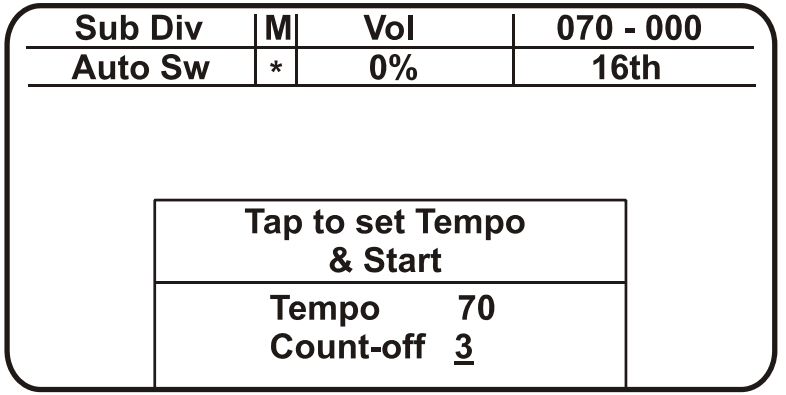


Figure 15. Tap Start

Click/Tap

The Click/Tap button works two ways. If the practice session is started and running, the button functions as the Click Depth control. If the practice session is paused, the button functions as the Tap Tempo or Tap Start control.

Click Depth Control

During a practice session, the Click Depth control adjusts the "depth," or frequency, of the subdivided metronome clicks. For example, if the subdivision is 32nd notes at a quick tempo, you might want to reduce the clicks to a lower subdivision such as 16th notes, 8th notes, or quarter notes. At faster tempos, this can make it easier to distinguish your strokes from the audible metronome clicks. Each time you press the Click/Tap button, you reduce the click depth by half until only the quarter note beat sounds. Even if you reduce the click depth, Beatnik still records all strokes for the selected note subdivision.

To change the click depth:

1. Press the **Start/Pause** button to start playback.
2. Press the **Click/Tap** button to adjust the click depth.

Tap Tempo / Tap Start Control

The Tap control works as either a Tap Tempo control or a Tap Start control. The Tap Tempo control simply sets the tempo based on strokes on the drum pad, allowing you to manually start a practice session later. The Tap Start control sets the tempo and automatically starts a practice session based on a number of count-off beats that you specify, allowing you to start a practice session "on the fly."

To use the Tap Tempo function:

1. With Beatnik paused, press the Click/Tab button once.
2. Strike the drum pad twice and view the resulting tempo.

   ***Note**: The tempo displayed assumes you are playing quarter notes.*

Backlight On/Off Switch

The backlight increases the contrast on the current settings and data display, which makes it easier to view the display in lower lighting conditions.

Headphones (or external speaker) Jack

The headphones jack lets you listen to Beatnik clicks in headphones when you connect standard headphones equipped with a 3.5mm plug. The output speaker is disconnected when a headphone plug is inserted in the Beatnik's headphone jack. External speakers such as computer speakers can also be used if equipped with a 3.5mm plug.

AC Jack

The AC jack lets you power Beatnik from a standard AC outlet using an optional AC adapter.

Drum Pad

The drum pad resembles a standard drum practice pad. This special pad is made of a resilient polymer that stands up to the most rigorous practice demands.

Powering Beatnik

You can power Beatnik using six AA batteries or an optional AC adapter. The AC Adapter output specifications are as follows: 9V, DC300mA with the Tip plug connector in the Positive position. (Reference: Radio Shack AC Adapter, Catalog No. 273-1767)

Attaching the AC Adapter

To save battery power, you can power Beatnik using the optional AC adapter.

To attach the AC adapter:

1. Plug the adapter's barrel plug into the AC jack on the back of Beatnik.
2. Plug the other end of the adapter into a standard AC outlet.

Inserting Batteries

If AC power is not available, you can power Beatnik using six AA batteries.

To insert batteries:

1. Remove the battery compartment cover by pressing the two flexible tabs and lifting off the cover.
2. Insert six AA batteries so that their positive (+) and negative (-) ends are correctly positioned, as shown below.

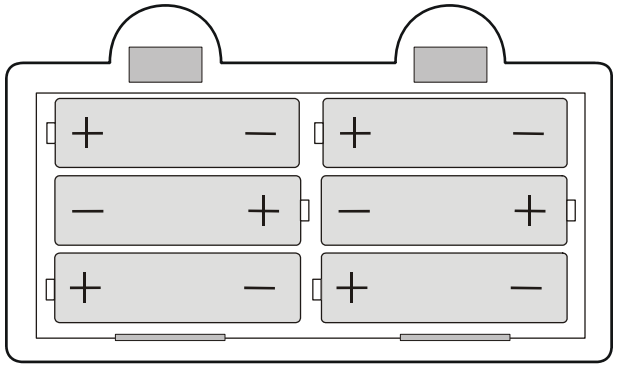


Figure 5. Battery Position

3. Replace the battery compartment cover by inserting the cover's two fixed tabs in the tab slots. When changing batteries, it is strongly recommended to change all six batteries at once with new fresh batteries of the same brand. Please refer to your battery manufacturer's instructions for using batteries and disposing of old batteries.

Turning On Beatnik

To turn on Beatnik:

Set the Power Switch on the rear panel to **On**. The liquid crystal display shows an introductory startup screen for two seconds, then sets up according to the saved preferences.

To turn off Beatnik: Set the Power Switch to **Off**.

To create a permutation:

1. Press the **Perms** button. The button illuminates, indicating the selector is controlling permutations. Note that Beatnik switches to the Subdivision analyzer.
2. Turn the selector to move the cursor to the subdivision you want to replace with a rest. Then press the selector to insert the rest. The click marker for that note disappears.
3. Repeat step 3 to replace additional subdivisions with rests, as desired.
4. To change a rest back into a played subdivision, position the cursor as before and press the **Perms** button again.

Starting and Pausing a Practice Session

Using the Start/Pause button

The **Start/Pause** button lets you start and pause a practice session.

To start a practice session based on the current settings, press the **Start/Pause** button. When you press this button, Beatnik plays the current rhythm indefinitely or until you press the Start/Pause button again. During playback, Beatnik records any strokes that occur.

To pause a practice session, press the **Start/Pause** button during playback. You can view the results of the session using the View button to select the History 1 or History 2 view.

***Note**: If the View is set to Auto Switch and you stop playing while the metronome continues to sound, Beatnik automatically switches to the History view selected in Preferences. This lets you immediately view practice results without pausing the session or manually changing views. As soon as you resume playing, Beatnik automatically switches to Real-time view and continues to record your playing history. See "View Options" for more information.*

Using the Tap Start Control

You can also use the Tap Start function to start a practice session. See "Click/Tap" below.

Selecting a Note

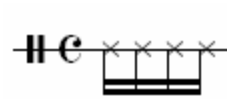
Beatnik uses a quarter note as its fundamental beat. The note selection function lets you select a subdivided note for the quarter note. For example, you can select a quarter note, 8th note, 8th note triplet, 16th note, 5 over 1, 16th note triplet, 7 over 1, and 32nd note. When you start a session, Beatnik plays the subdivided note. You can create almost unlimited permutations of a beat by replacing any note, including specific notes within a triplet or 5/1 or 7/1 subdivision, with a rest using the **Perm** (permutations) button. See "Setting Permutations."

To select a note value:

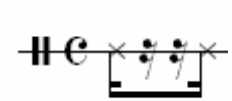
1. Press the **Note/Beat** button once. The button illuminates to indicate the selector is controlling the note or beat.
2. Turn the selector until you see the desired note value in the current settings display.

Setting Permutations

After you select a note subdivision and start a practice session, Beatnik plays the quarter note beat as a high pitch and the different subdivided notes as varied lower pitches. To create more complex rhythms, you can create *permutations* of a beat by replacing subdivided notes with rests. For example, if you selected a 16th note as the subdivided note, each quarter note beat contains four 16th notes, or:



Suppose you wanted to create the following rhythm:



To do so, you would replace the 2nd and 3rd notes with rests.

***Note**: The permutations cannot be active in the Tracking analyzer, but it is useful in the Groove, Dynamic, Subdivision, and Phrase analyzers.*

Preferences Setup

To view the preferences display, press the **Prefs** button.

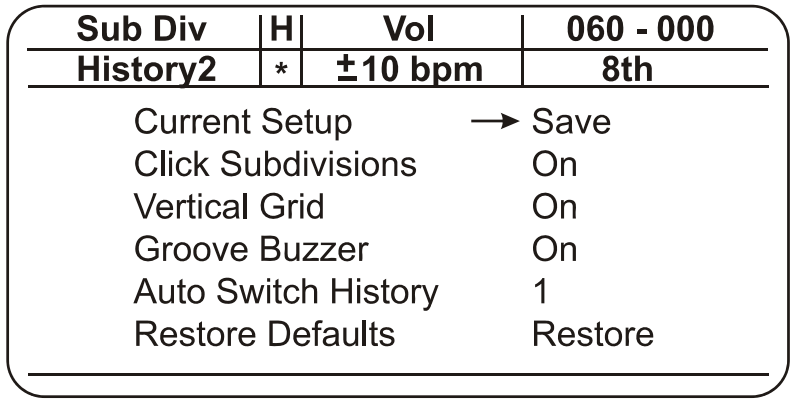


Figure 6. Preferences Setup

The preferences setup function lets you preset the following operational parameters.

Current Setup (Save) – Saves the current setup as the default startup settings the next time you turn on Beatnik. Beatnik automatically returns to normal operation after saving.

Click Subdivisions (**On** or **Off**) – When **On** is selected, Beatnik clicks all subdivisions in addition to the fundamental quarter note beat. For example, if the selected note is set to 16th , Beatnik clicks each sixteenth note in addition to the quarter note beat. When **Off** is selected, Beatnik suppresses the subdivisions and clicks only the quarter note beat.

Vertical Grid – (**On** or **Off**) – In real-time view, Beatnik indicates the dynamic level of the stroke in the form of a horizontal dotted line attached to the vertical stroke indicator and a vertical grid along the right side of the data display. When the stroke is louder, the horizontal line appears higher on the display. When the stroke is softer, the horizontal line appears lower on the display. The vertical comparison scale on the right side of the data area shows the relationship between strokes.

Groove Buzzer (**On** or **Off**) – Turns the warning buzzer on or off.

Auto Switch History (**1** or **2**) – Lets you select which history view appears when you use the auto switch function.

Restore Defaults (**Restore**) – Restores settings to factory defaults.

Saving Preferences

To save the preferences, press **Prefs** and then press the selector. Beatnik saves the settings and exits the Preferences setup screen.

To exit the Preferences setup without saving, press **Prefs** again or press the **Note**, **Tempo**, **Skill**, **Analyzer** or **Start/Pause** button.

Setting up a Practice Session

Setting up a typical practice can be as simple as 3 steps:

1. Turn on Beatnik using the **Power Switch**.
2. Press the **Start** button to begin a practice session.
3. Practice . . .(using the existing saved Setup)

Additional steps or settings changes can include:

4. Setting desired preferences, using the **Prefs** button.
5. Setting the desired accuracy analyzer, using the **Analyzers** button.
6. Setting the desired view option, using the **Views** button.
7. Setting the desired skill level, using the **Skill** button.
8. Setting the desired tempo, using the **Tempo** button.
9. Setting the desired note subdivision, using the **Note** button.
10. Setting any desired permutations, using the **Perms** button.
11. Setting the desired volume and pad sensitivity, using the **Vol/Sens** button.
12. Pausing the practice session using the **Pause** button to review your results.

Setting the Tempo

Set Tempo

The *set tempo* is the metronome marking that you set for the quarter note beat. For example, if the current settings display shows a set tempo of "120," Beatnik is set to play 120 quarter note beats per minute.

To set the tempo using the selector:

3. Press the Tempo button. The button illuminates, indicating the selector is controlling the tempo.
4. Turn the selector to display the desired tempo.
5. Press the Start button to start a practice session.

To set the tempo using the Tap Tempo function:

1. With Beatnik paused, press the Click/Tap button once.
2. Strike the drum pad at least two times to set a tempo.
3. Press the Start button to start a practice session.

   Note: *See "Click/Tap" for more information.*

To set the tempo using the Tap Start function:

1. With Beatnik paused, press the Click/Tap button twice.
2. Turn the selector until the desired count-off number is displayed.
3. Strike the drum pad to start the count-off, set the tempo, and start a practice session automatically.

   Note: *See "Click/Tap" for more information.*

Measured Tempo

The *measured tempo* is the tempo of your strokes as Beatnik measures them. For example, if the set tempo is "120" and the measured tempo is on or around "130," your strokes are occurring at a faster tempo than Beatnik, which means you're playing ahead of the beat (i.e., rushing).

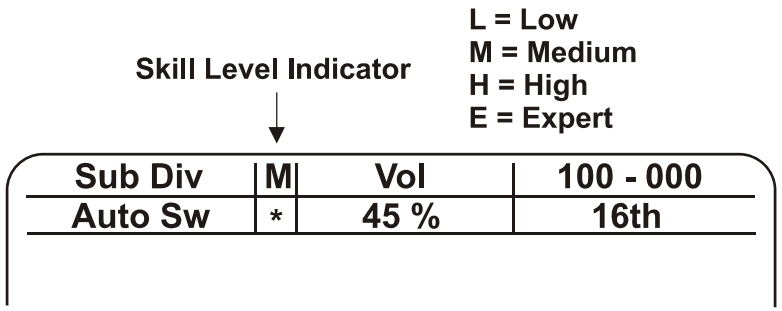


Figure 13. Skill Level Indicator

To set the skill level using the selector:

1. Press the **Skill** button. The button illuminates, indicating the selector is controlling the skill level.
2. Turn the selector to display the desired skill level.

Scoring

The score reflects the accuracy of all notes in the rhythmic pattern based on the selected skill level. The score area on the current settings display represents the score as a percentage, with a lower percentage indicating less accuracy and a higher percentage indicating more accuracy. During the practice session, the score changes dynamically to indicate the cumulative score for all notes that have been played thus far.

The Accuracy Analyzers

Beatnik features five accuracy analyzers, each of which lets you analyze your performance skills in a unique way.

Groove Analyzer

Groove Analyzer is intended to help you improve your ability to create and play in a "groove." This analyzer tests your ability to play with consistent tempo, regardless whether it is ahead of or behind the beat of the metronome.

Groove features a horizontal tempo range with the set tempo displayed in the center, a moving arrow that shows your measured tempo as the practice session progresses, and buzzers to warn you of drifting tempo.

If your measured tempo remains within the limits of the skill tolerance range, Beatnik remains silent. If your measured tempo slows down below the skill tolerance range, Beatnik sounds a low warning buzzer. If your measured tempo speeds up and exceeds the skill tolerance range, Beatnik sounds a high warning buzzer. The four skill button tolerances are +/- 5bpm, +/-10bpm, +/-20bpm and +/-25bpm.

You can avoid the warning buzzers as long as you maintain a steady rhythm relative to the click.

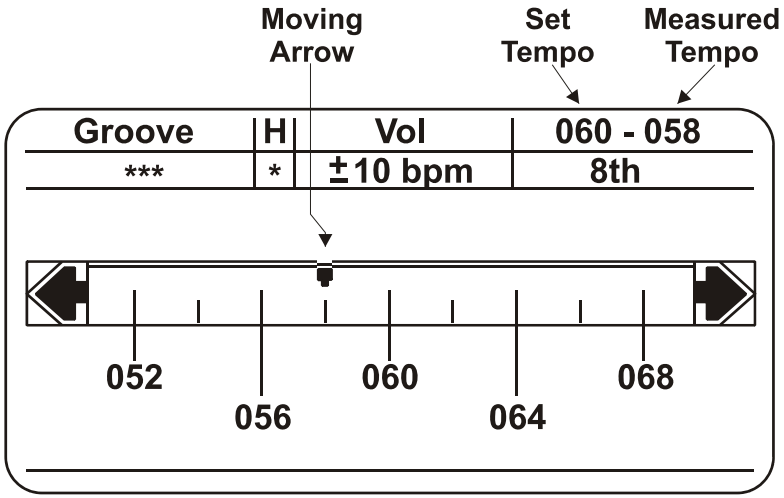


Figure 7. Groove Analyzer

Dynamic Analyzer

Dynamic Analyzer is intended to help you improve your dynamic control and the evenness of stroke velocity between your two hands while measuring your ability to play exactly with the clicks. Dynamic Analyzer features a single, dotted vertical click marker in the middle of the data area that represents all of the subdivision clicks. The height of the stroke indicator represents the dynamic level (loud or soft) of the stroke, making the indicator appear taller for louder strokes and shorter for softer strokes.

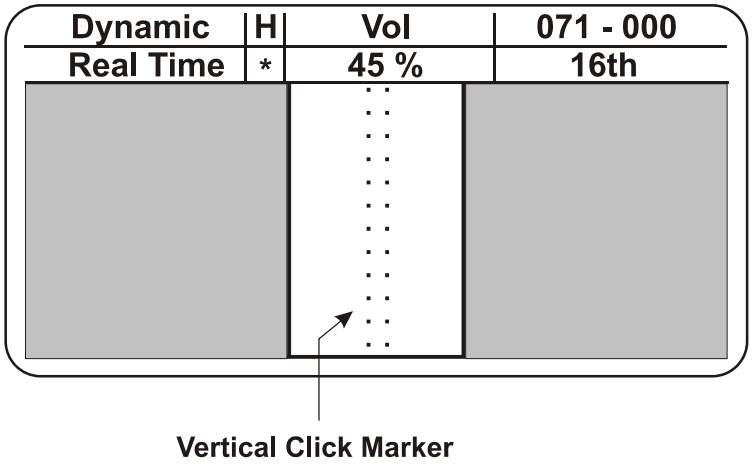


Figure 8. Dynamic Analyzer

All strokes that occur during the session appear on or around the click marker to give an at-a-glance indication where strokes occurred in relation to the metronome clicks. The score is based on the timing precision of each stroke in relation to the metronome setting and selected skill level.

Subdivision Analyzer

Subdivision Analyzer is intended to help you improve the timing of each subdivision within the fundamental quarter note beat. Unlike the Dynamic Analyzer, which shows a single vertical click marker representing every note played, the Subdivision Analyzer shows a separate vertical click marker for each subdivision of the beat. The data display's total width represents one complete quarter note beat,

Skill Levels and Scoring

Skill Levels

Beatnik lets you adjust the skill level to allow a wider margin of tolerance for timing accuracy. You can select from the following levels:

- Low
- Medium
- High
- Expert

Beatnik calculates the margin of tolerance in 512^{th} notes. For example, the Expert level allows a margin of a single 512^{th} note to determine a "perfect" stroke. That is, to obtain a perfect score of 100% at the Expert level, your stroke must be within one 512^{th} note of the actual beat. Most professional level drummers can do this consistently.

The margins of tolerance for the different skill levels are as follows:

Low – within seven 512^{th} notes

Medium – within five 512^{th} notes

High – within three 512^{th} notes

Expert – within one 512^{th} note

The skill level can significantly affect the score. The Low skill level is the most forgiving and typically results in the highest scores. Conversely, the Expert level allows a very narrow margin for error, which can result in much lower scores. You can change the skill level when Beatnik is paused and instantly see the change in score. The current settings display indicates the skill level as shown below.

History 2 – This view features a horizontal click marker and a scrolling display that represents the latest 128 consecutive beats. The rightmost beat is the most recent note, and the leftmost beat is the oldest beat. New beats "push" the older beats off the left side of the view. Beatnik represents timing accuracy by placing the vertical stroke indicator higher or lower in the data area. When all strokes in a beat have been played, Beatnik "connects the dots" into a solid vertical line that represents the historical performance of that beat, with the earliest stroke at the top and the latest stroke at the bottom of the note indicator.

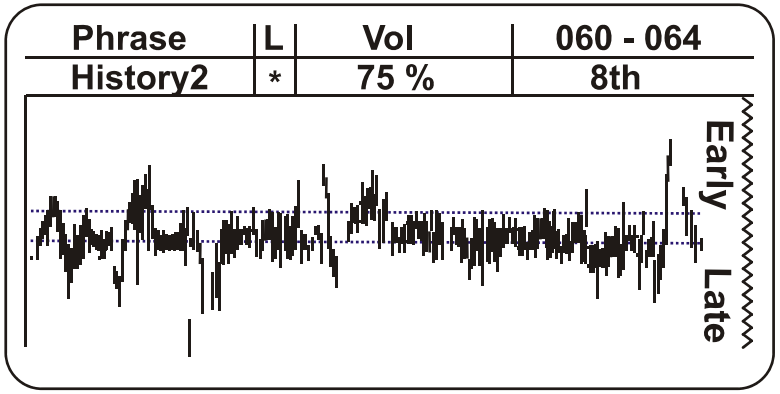


Figure 12. History 2 View

Auto Switch – This view automatically switches between Real-time view and a History view, depending on whether you are striking the drum pad. In Auto Switch view, Beatnik automatically displays a History view after it detects no drum pad activity for one complete beat. Beatnik automatically switches to Real-time view when you resume striking the drum pad. This provides added convenience by showing practice results as soon as possible without your having to manually change views.

You can set Beatnik to default to History 1 or History 2 view by setting the Auto Switch History preference. See "Preferences Setup."

and each of the 128-pixel columns represents one 512th note. The score is based on the timing precision of each note in relation to the metronome, as well as the selected skill level.

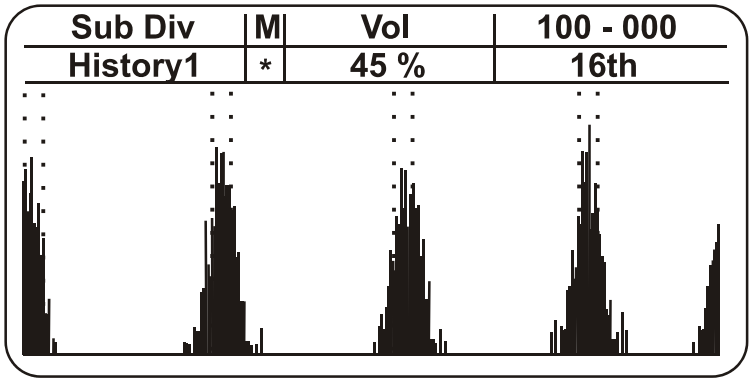


Figure 9. Subdivision Analyzer with a History 1 View

Tracking Analyzer

Tracking Analyzer is intended to help you improve the transitions between changing notes while maintaining correct timing at a constant tempo. Tracking features the ability to let you switch "on the fly" between any notes you choose to play, including quarter notes, 8th notes, eighth-note triplets, 16th notes, 5 over 1, sixteenth-note triplets, 7 over 1, and 32nd notes, without any manual setup or selector changes.

The metronome only clicks quarter notes in the Tracking Analyzer, regardless of the preferences for click or click/tap control settings.

Tracking Analyzer counts the number strokes you play within each quarter note beat and changes its note setting and vertical click markers accordingly. For example, if you intended to play eight 32nd notes but only get seven played before the next click sounds, Beatnik switches its note setting to 7-over-1. You must be able to transition accurately to score well in Tracking Analyzer.

When you pause Beatnik after a Tracking analyzer practice session, press the **Note** button and turn the selector to step through an historical analysis of each note you played during the session.

Phrase Analyzer

Phrase Analyzer is intended to help you improve your accuracy of more extended, and potentially very complicated, phrases. This analyzer lets you set up a rhythmic phrase of any combination of notes (up to eight quarter note beats in duration). When you start the session, Beatnik continuously repeats the phrase, measuring and recording the history of every stroke you make. During the practice session, the current settings display shows the number of the current beat within the phrase as it plays back. For all other analyzers, an asterisk (*) appears in this area of the display.

When paused, you can turn the selector to scroll through each beat within the phrase and examine the timing accuracy of each individual beat in the Phrase. This lets you view how accurate you were for each stroke in each note of the phrase. This is great for identifying weaknesses in specific parts of a longer phrase.

View Options

Beatnik features four different ways to view the results of your practice session:

Real-time – This view displays a single, touch-sensitive, vertical stroke indicator each time you strike the drum pad. In Real-time view, Beatnik records the history but displays only the stroke indicator for the most recent stroke, allowing you to concentrate on each stroke as you make it.

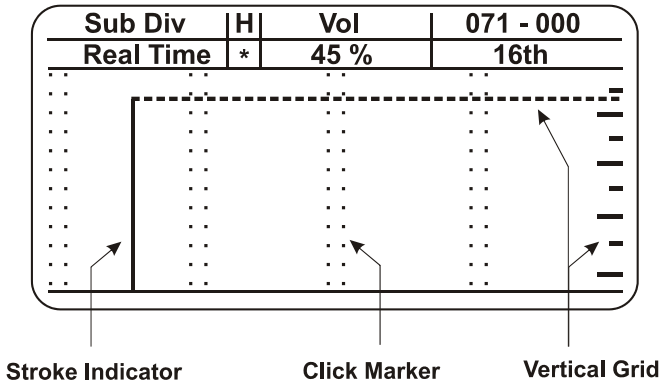


Figure 10. Real-time View

The height of the stroke indicator represents the dynamic level (loud or soft) of the stroke, making the indicator appear taller for louder strokes and shorter for softer strokes.

Note: You can turn on Vertical Grid option in Preferences for an extra indicator of the dynamic level of each stroke as you make it.

Each time you strike the drum pad, the stroke indicator appears before, after, or directly on the click marker, showing where your stroke occurred in relation to the metronome click.

History 1 – This view depicts each stroke as a single pixel within the data display. Over the course of the entire practice session, the pixels accumulate from the bottom up to provide, at a glance, a clear picture of your timing tendencies. For example, a History 1 view that shows the majority of the strokes (pixels) near a click marker means that you were very accurate. On the other hand, if the history view shows several pixels that are before and after the click marker, as well as some on the click marker, your timing needs work.

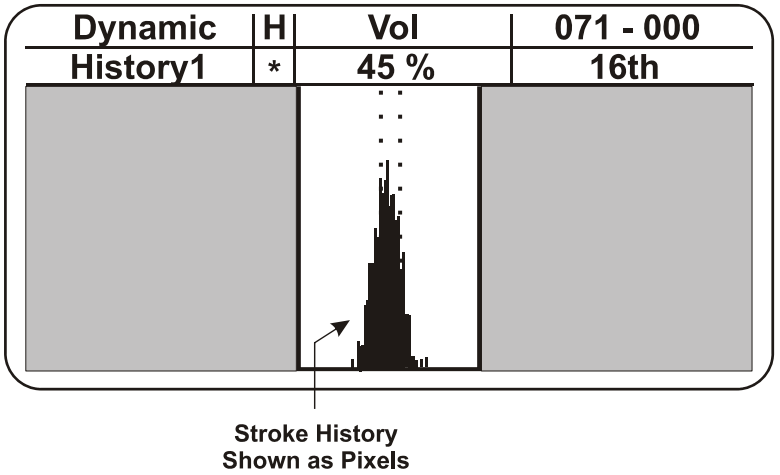


Figure 11. History 1 View