

## NOW ITS EASY TO GET IN THE LOOP

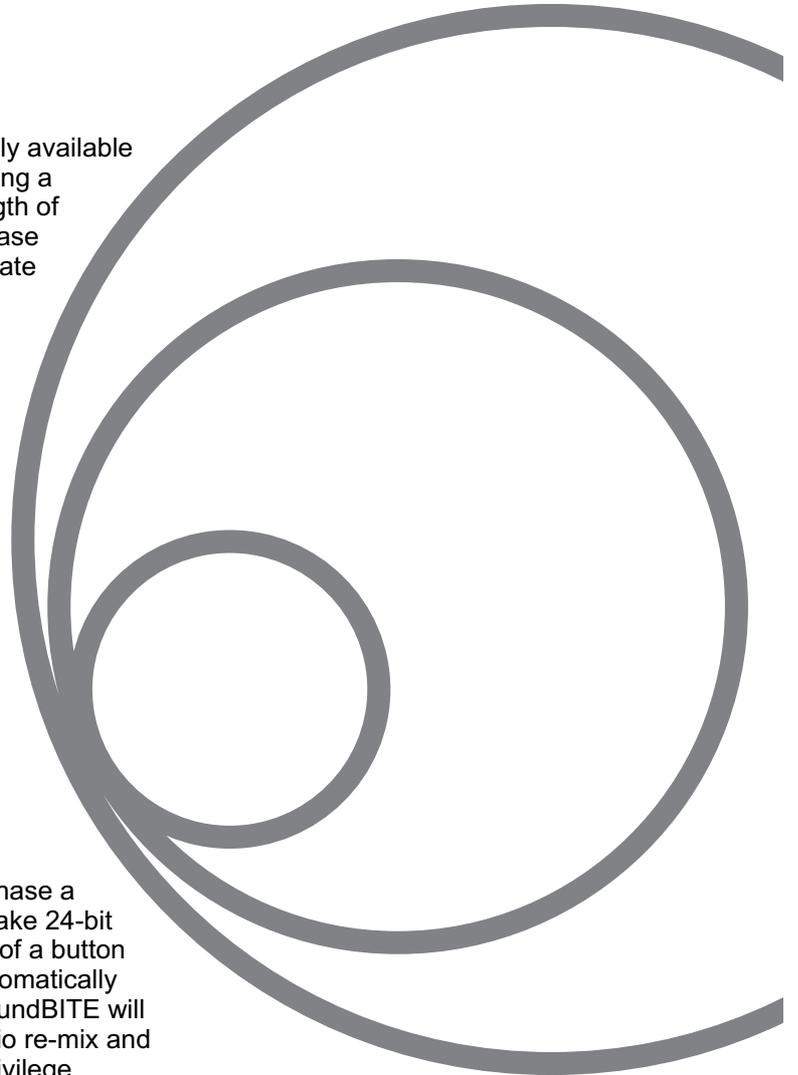
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In the twenty-five years since the first commercially available sampler hit the market (namely the Fairlight, costing a cool £25,000), the increase in the quality and length of sampling available has been matched by a decrease in the amount of time required to process and create loops from this sampled material.

In 1977, an 8kB 8-bit at 8kHz sample sounded dreadful, lasted about half a second and took about half an hour to get a poor quality loop with (on a £25,000 machine). In 1987, a 256kB 12-bit sample at 32kHz sounded a fair bit better, lasted 3 or 4 seconds and could be looped by an expert in about five minutes (and only cost a couple of thousand pounds). By 1992, things were a lot better; a 1MB16-bit stereo sample at 44.1kHz sounded pretty damn good, lasted 6 seconds and only took a couple of minutes to loop well (although the machine to do it on was now three thousand pounds). 5 years ago, major price breakthroughs brought the cost of a similar machine to around the thousand pound mark and DJs & producers used them by the thousands in studios to re-mix tracks in just a few hours.

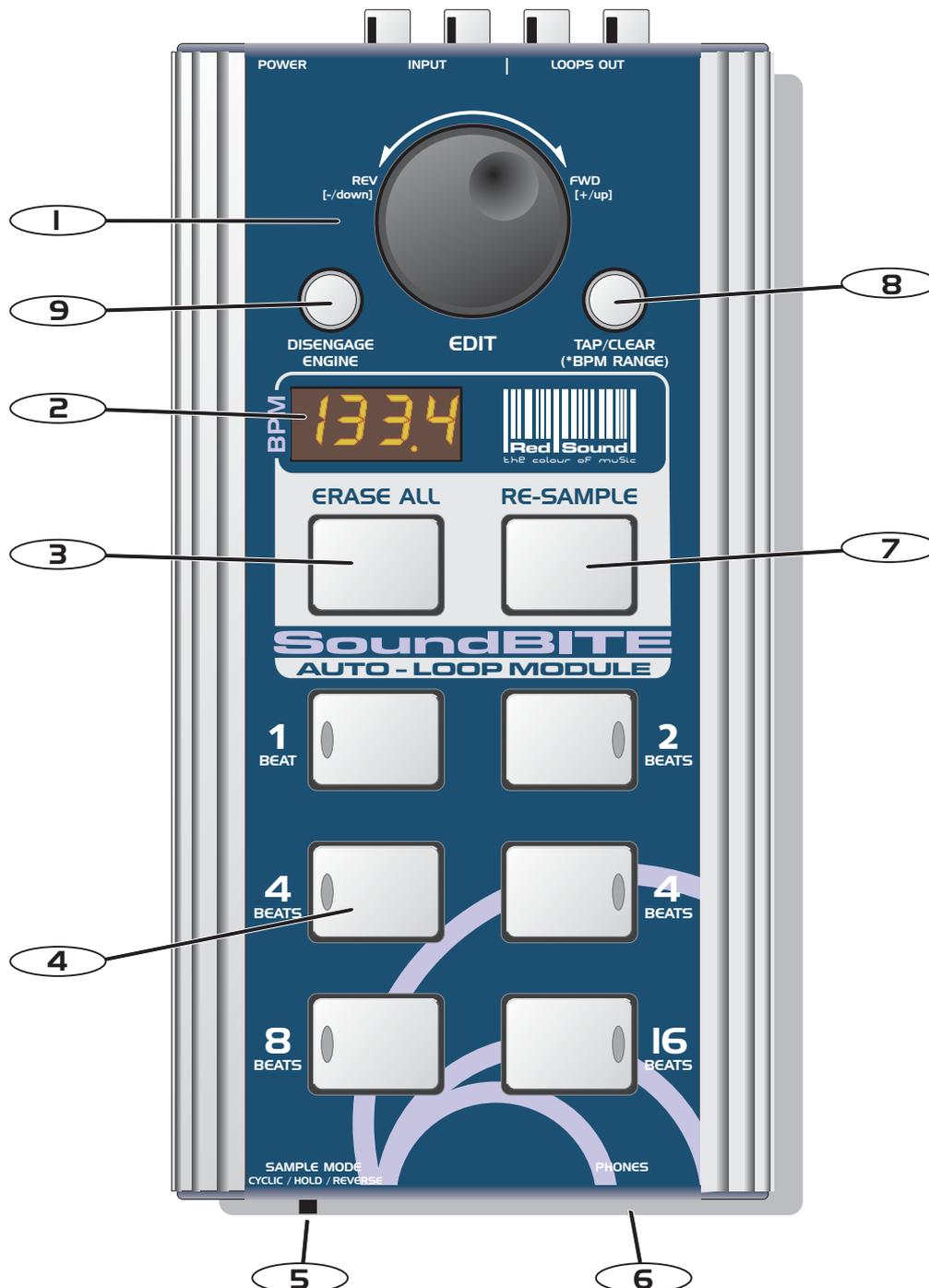
Today however, because of your decision to purchase a RED SoundBITE LITE, you are in a position to make 24-bit loop samples (at 96kHz) in real-time at the touch of a button without missing a beat! What's more, you can automatically sync together up to six loops with equal ease. SoundBITE will definitely transform your live performance or studio re-mix and you paid less than two hundred pounds for the privilege.

Welcome to the brand-new world of "cyclic sampling", now you're really on top of synchronized looping and one last thing: don't worry, you can't go wrong...SoundBITE won't let you!



# Top/Front Panels

## TOP/FRONT PANEL FEATURES



**I. EDIT:** This knob can be used to manually set a BPM value if no beat information is detected and also to adjust the synchronisation point of all the recorded loops relative to the audio input source. In [LOOP EDIT] mode this knob can be used to adjust the synchronisation point of *individual* recorded loops relative to the audio input source and also set the output level of each loop [+6/-20dB].

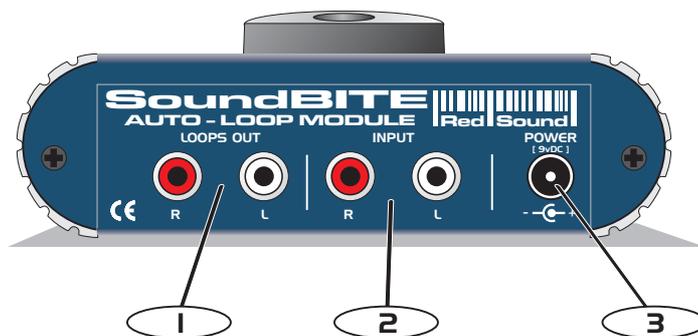
# Top/Front Panel Features

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- 2. BPM DISPLAY:** The four digit BPM reading of the audio input signal will be displayed here. Also, information will be displayed in [LOOP EDIT] and [BPM EDIT] modes.
- 3. ERASE ALL:** This button is used to erase ALL six loops simultaneously.
- 4. LOOPS:** These six buttons are used to record and playback the loop samples. Each button has a pre-determined sample length in musical 'beats' - 1, 2, 4, 8 and 16 beat loops are available.
- 5. SAMPLE MODE:** This switch selects the three sample modes. CYCLIC mode automatically creates the loop and plays it around continuously, HOLD mode re-starts the sample each time the button is pressed which allows you to play short bursts of audio whilst REVERSE mode plays the sample backwards when the button is pressed.
- 6. HEADPHONE OUTPUT:** SoundBITE uses the headphone output on your mixing desk for its' audio input source so connect your headphones to this socket for normal DJ monitoring purposes.
- 7. RE-SAMPLE:** This button is used to over-record any pre-recorded loop samples.
- 8. TAP/CLEAR [BPM RANGE]:** This button is used to clear the BPM reading and tap in a tempo if there is no defined beat information available. Also, when pressed and held down, the [EDIT] jog dial selects the active range for the BPM engine - 60 to 120, 90 to 180 and 115 to 230BPM range settings are available.
- 9. DISENGAGE ENGINE:** This button is used to disengage and re-engage the BPM engine.

## REAR PANEL FEATURES

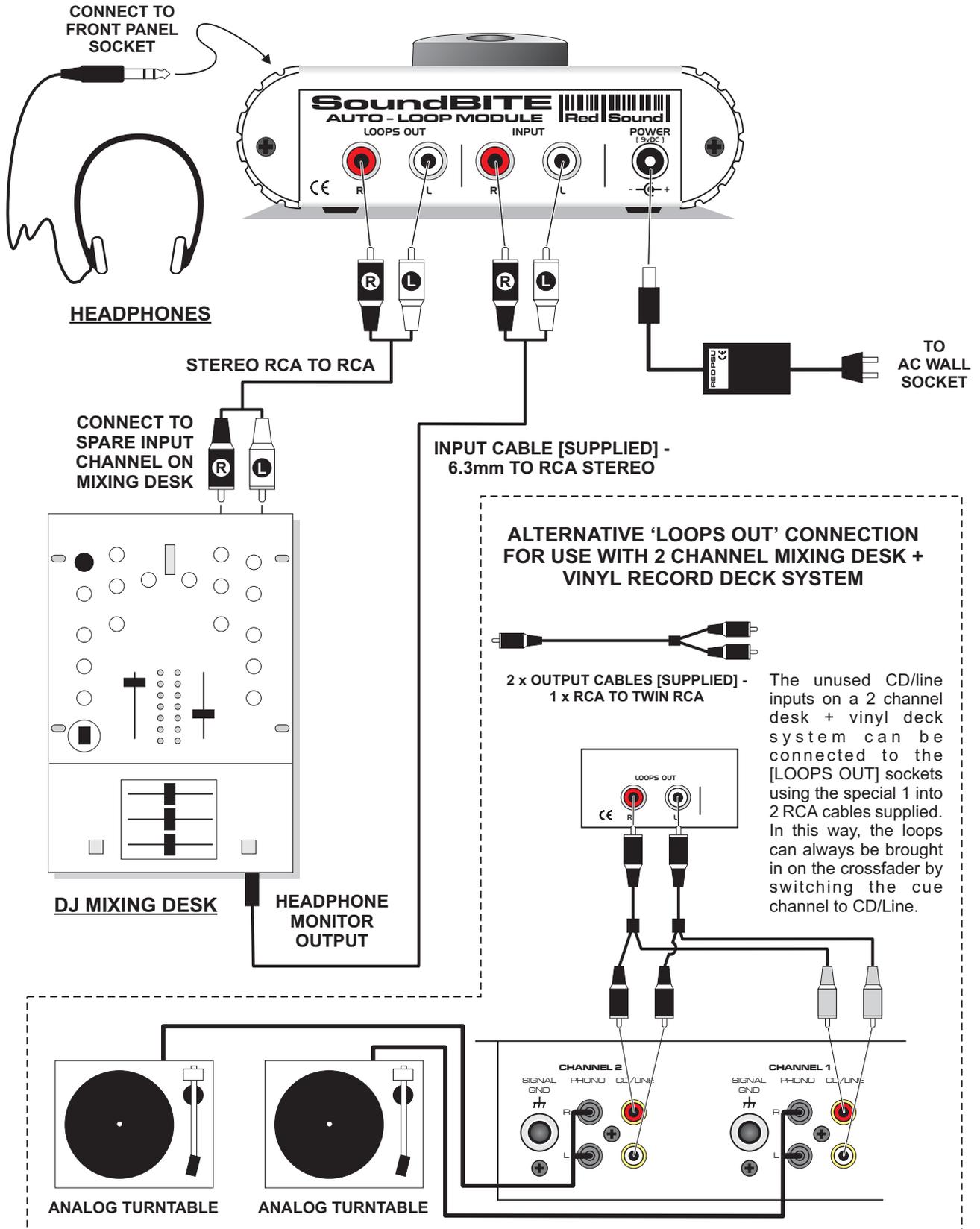
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- 1. LOOPS OUT:** Use the supplied cables [1 into 2 RCA] to connect SoundBITE's output to a spare input channel on your mixing desk.
- 2. INPUT:** Use the supplied cable [1/4 jack to RCA] to connect the headphone monitor output from your mixing desk to SoundBITE's audio input.
- 3. 9vDC POWER IN:** Only use the RED Sound PSU supplied with SoundBITE to power the unit.

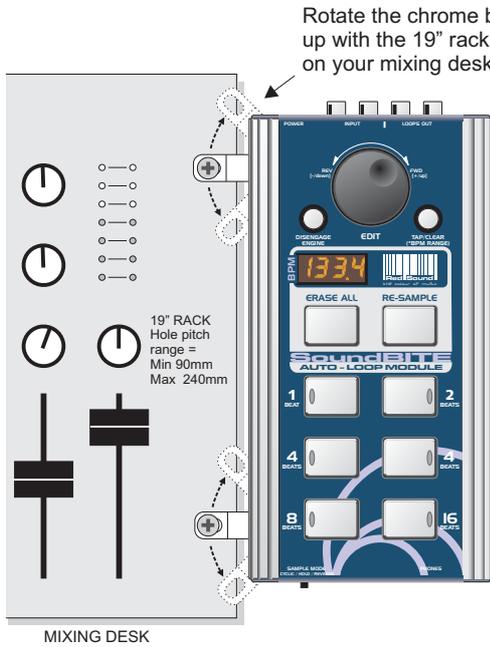
# Connections

## CONNECTIONS

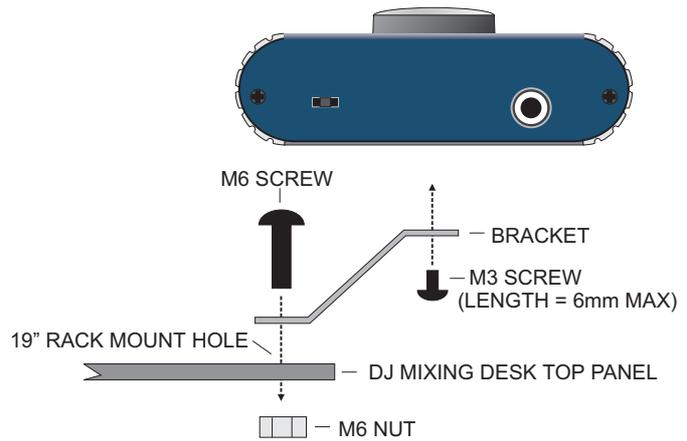


# Mounting Options

## MOUNTING OPTIONS



PLAN VIEW



END VIEW

Alternatively, you can use the supplied rubber feet or double-sided sticky pads to flat-mount SoundBITE in any convenient location.

# Operation

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## QUICK START

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If you want to quickly try out the basic performance of SoundBITE, please read the following points carefully:

**CONNECTIONS:** Before making any connections, make sure that the power on all your equipment is turned OFF. Connect the audio cables for a basic system setup as shown on page 4.

**TURNING ON THE POWER:** Make sure all connections have been made correctly and that the volume controls on the mixing desk and amplifier system are completely turned down. Connect the power supply (included) to the 'power in' socket on the rear panel of SoundBITE and plug it into a suitable AC outlet. Turn on the power of the mixing desk and then turn on the power to the amplifier system.

**START UP INDICATIONS:** When SoundBITE is powered up, the BPM display will briefly show the current BPM range setting (as defined by the position of the [BPM RANGE] switch) and then show four illuminated centre bars. If this does not happen, check the power supply is of the correct type and the unit is connected as above.

**SETTING UP:** Select a suitable audio track (dance orientated music with defined beat information), start the playback on the connected sound source and route this signal to the headphone monitor output on the mixing desk [check this using the headphones now connected to the monitor output on SoundBITE]. The input level is automatically set by SoundBITE's AGC (automatic gain control). The main BPM display should now show the BPM reading of the audio track.

**RECORDING/PLAYING BACK THE LOOPS:** Set the [SAMPLE MODE] switch to the [CYCLIC] position. Now simply press one of the six loop buttons when you want to start recording - the display will show 'rEC' and count down the number of beats as the loop is sampled. If for instance, you pressed the [4 BEATS] loop button, the display would count down 4-3-2-1 and then instantly playback the 4 beat loop. To mute the loop, simply press the same loop button again [this button now switches the loop on/off].

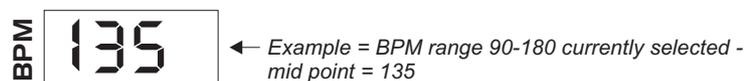
Now try recording some of the other loops and playing them back in combination. To clear all the loops press the [ERASE ALL] button once. To replace a single loop, press the [RE-SAMPLE] button once, then press the desired loop button to start the re-sample recording process. Try changing the [SAMPLE MODE] setting to see the effect this has on the sample playback.

Please read the following "OPERATION" section fully to appreciate the range of features and facilities SoundBITE has to offer.

## BPM DISPLAY & CONTROLS

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After connecting SoundBITE to your system as detailed on page 4, plug in the power connector on the rear panel to turn the power on. The centre value of the default BPM range will now be shown briefly on the main display:



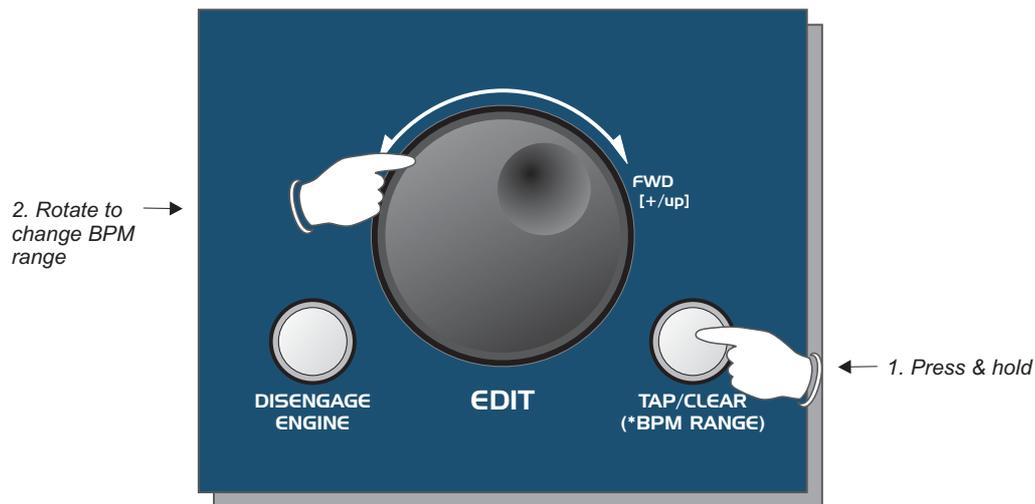
Afterwards, the four centre bars will illuminate to indicate the 'IDLE' status of the BPM engine.



SoundBITE is now ready to use!

## BPM RANGE

This is where you set the working range of the BPM engine. There are three individual operating ranges covering a total range of 60 - 230 BPM. This allows SoundBITE to work with most current dance music styles, from the slowest Soul to the fastest Drum & Bass. The range setting can be changed at any time using the front panel [TAP/CLEAR] button and the [EDIT] jog dial, as shown in the following example:



The display will scroll through the three range settings as follows:

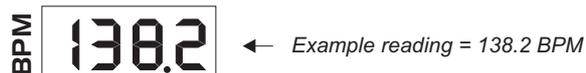
RANGE	DISPLAY
60-120BPM	90 BPM
90-180BPM	135 BPM
115-230BPM	172.5 BPM

If the BPM engine is active [displaying a value] it will be automatically cleared when the [TAP/CLEAR] button is held and the [EDIT] jog dial moved. The BPM engine will then re-calculate the value within the new range, provided that beat information is present.

*NOTE: BPM values outside of the selected range limit cannot be accurately analysed. Always check the general tempo of the music you are playing falls within the selected BPM range. For most applications we recommend the MID BPM range of 90-180BPM.*

## BPM DISPLAY

Start the playback of a suitable audio track (containing definable beat information). The BPM display should now show the tempo of the track in beats per minute, as in the following example:



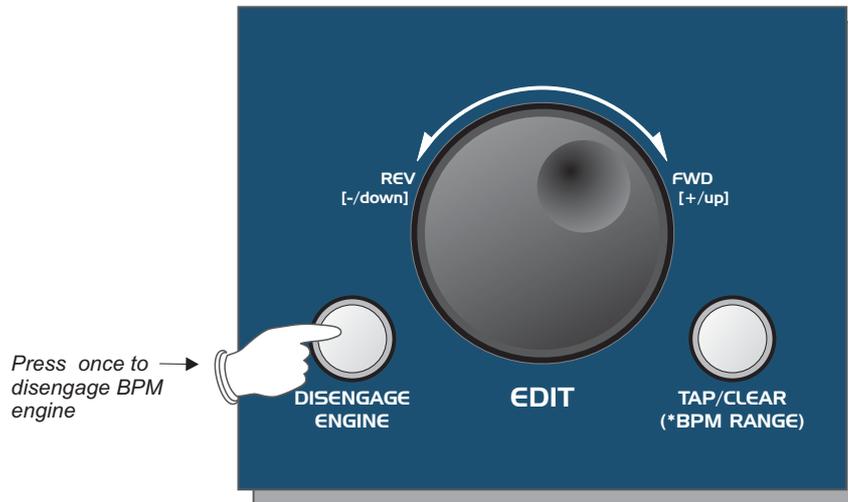
The indicators in the 6 [LOOP] buttons will now flash at the detected BPM rate. SoundBITE is now ready to record synchronised loops - see 'RECORDING AND PLAYING LOOPS' on page 9. During tempo analysis of the audio track, the right-hand digit in the display may fluctuate slightly as the BPM reading is constantly updated in real-time. Any progressive shift in tempo (slowly changing the audio playback speed using a CD/vinyl deck's pitch control) will be tracked and displayed by SoundBITE.

*IMPORTANT NOTE: The BPM engine will continue looping the samples indefinitely at the last detected BPM rate if the strong regular beats in the audio track become unavailable. This feature allows the loops to continue operating through quiet passages or at the end of the audio track.*

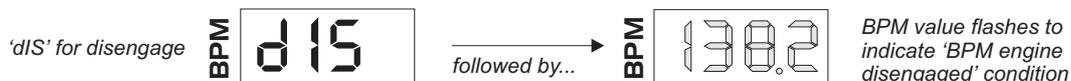
# Operation

## DISENGAGING THE BPM ENGINE

The BPM engine can be temporarily disengaged when there is a possibility of erratic audio input tempo (during cueing procedures etc) disrupting the playback speed of the pre-recorded loops. To disengage the BPM engine at any time press the [DISENGAGE] button once, as shown in the following example:



The display will now show the following:



The last detected BPM value will continue to flash on the display and any further beat information will be ignored by SoundBITE until such time as the BPM engine is re-engaged.

To re-engage the BPM engine simply press the [DISENGAGE] button again. The display will now show the following:



The BPM engine is now re-engaged and operating normally.

## TAP/CLEAR BUTTON

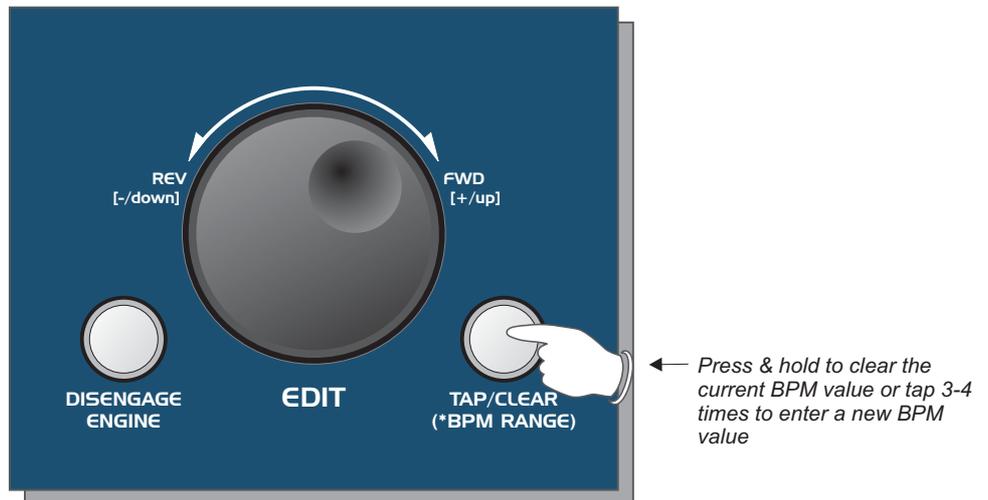
This multi-function button allows you to manually enter a tempo by hand or erase the current BPM reading. The TAP feature should be used to set the BPM rate if there is no audio signal present or when the beat information becomes unavailable during a quiet passage of the audio track (intro, middle eight etc). The CLEAR feature can be used to cancel the current BPM reading.

**TAP - Tempo Edit:** To enter a BPM rate from an 'IDLE' condition (no audio beat detected) use your finger to tap in a tempo on the TAP button (within the current BPM range). After 3-4 taps the tempo will be shown on the main BPM display.

The TAP feature can be used to override the BPM engine if it is in 'free-wheeling' mode only. Use a finger to tap in the new tempo. After 3-4 taps the updated tempo will be shown on the main BPM display and the loop playback will immediately change to the new BPM rate. The TAP function can also be used to assist the BPM engine as it

analyses more complex rhythm tracks. Tapping along with the tempo of the track can help the software recognise patterns within the music and so lock-in and adjust the BPM and/or synchronisation itself.

**NOTE:** Subsequent valid beat information detected by the BPM engine will override manual changes made with the TAP function.

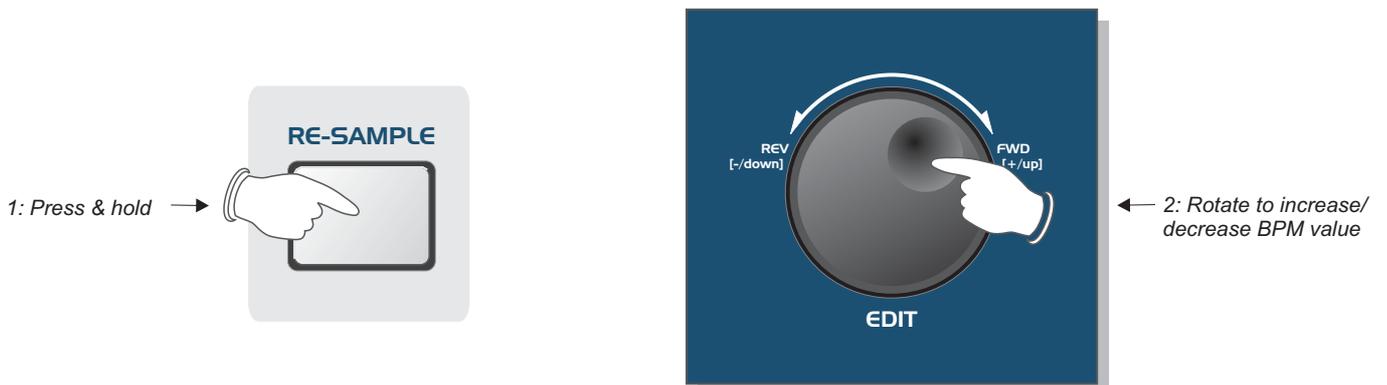


**CLEAR BPM:** The current BPM value can be cleared (erased) at any time to allow for tempo re-calculation. This feature can be useful if the audio playback tempo changes (major pitch adjustments/new track starting) or if any unusual beat information confuses the BPM engine. To clear the current BPM reading and reset SoundBITE to 'IDLE' status, press and *hold down* the [TAP/CLEAR] button for approximately 1 seconds. Four centre bars will replace the BPM reading in the main display.

The BPM engine will now re-calculate the tempo however, if no new tempo is detected, the recorded loops can still be played back at the last detected BPM rate e.g. the last BPM value is memorised after clearing the BPM value or erasing all loops.

## MANUALLY SETTING A BPM VALUE

You can manually set a BPM value when there is no beat information available for the BPM engine or when [DISENGAGE ENGINE] is selected. To set a BPM value manually, first ensure the BPM engine is 'idle' (four centre bars on display) or disengaged (BPM value flashing). Press and hold down the [RE-SAMPLE] button, then (after a one second protection period) move the [EDIT] jog dial clockwise to increment or anti clockwise to decrement the BPM value [default setting is 100BPM from an idle condition], as shown in the following example:



# Operation

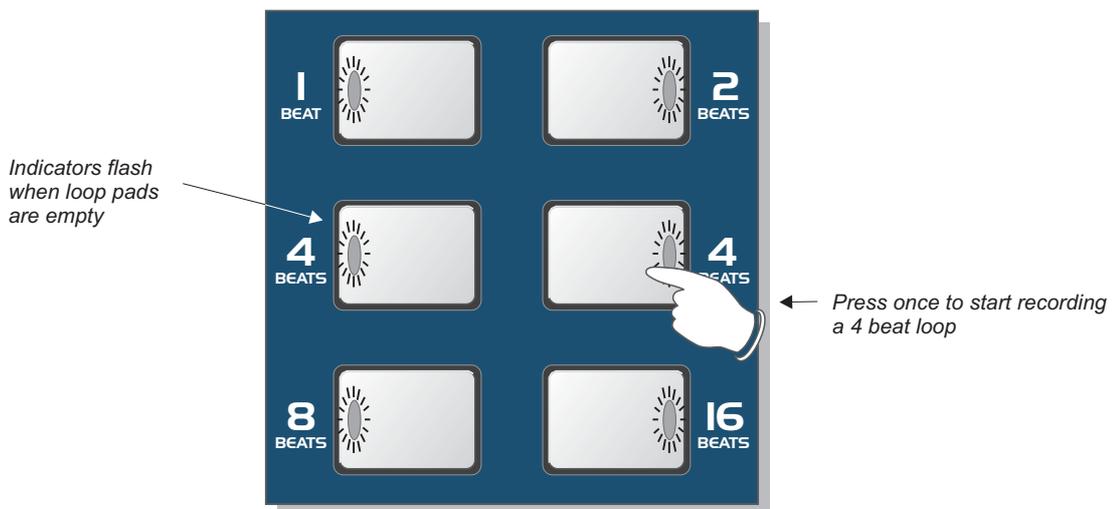


The default value (100BPM) will only apply if the BPM engine has not previously registered a value.

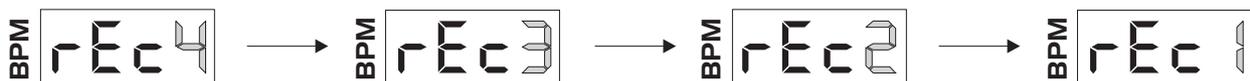
## RECORDING & PLAYING 'CYCLIC' LOOPS

This is where you create the loop samples. There is no input level setting to adjust as the on-board AGC takes care of all level adjustments automatically. You can record and play back up to 6 individual loops, each with different durations. To automatically record perfect loops, the BPM engine must be active and registering a BPM value (you can record loops without the BPM engine but these loops will not be automatically synchronised to the input - see "HINTS AND TIPS" on page 16). Also, ensure the [SAMPLE MODE] switch is set to [CYCLIC] mode.

Only one loop can be recorded at a time. From boot-up (or after pressing the [ERASE ALL] button) the six loop pads will be empty. Empty loop pads are shown by flashing indicators in the [LOOP] buttons. To start recording a loop, first ensure the display is reading a BPM value (wait a few seconds for the BPM value to settle to ensure accurate synchronisation), then simply press the desired [LOOP] button once, as shown in the following example:



During the sampling process the main display will show a count-down of the number of beats in the loop, as shown in the following example:



When the recording cycle is complete the display will revert back to its normal BPM readout. The recorded loop will now play back automatically, the indicator in the button staying ON to show that the loop pad contains a sample. To mute the sample playback simply press the [LOOP] button again, the indicator in the button now goes OFF to show that the loop is muted. Toggling the button on/off will play/mute the loop accordingly.

**Recording Start Point** - in [CYCLIC] mode the exact timing of when you press the button is not critical with regard to loop creation e.g. if you start recording a 4 beat loop slightly after the beat (missing a down-beat kick drum for instance), SoundBITE will automatically create a perfect 4 beat loop and include the last kick drum instead (i.e. the loop will be in synchronisation and have a precise 4 beat duration no matter where you start recording). However, when [SAMPLE MODE] is set to either [HOLD] or [REVERSE] the playback will always begin from the recording start point so try to bear this in mind when using these modes.



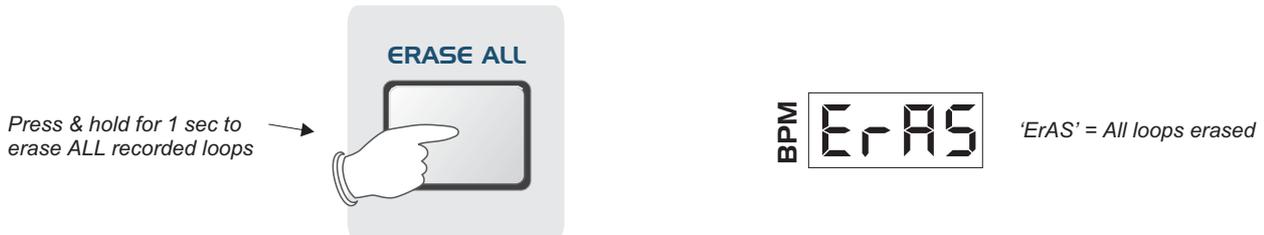
# Operation

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## ERASING LOOPS

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This is where you erase all the loops simultaneously. To erase all recorded loops (any number from just one to all six) simply press the [ERASE ALL] button and hold for 1 second, as shown in the following example:

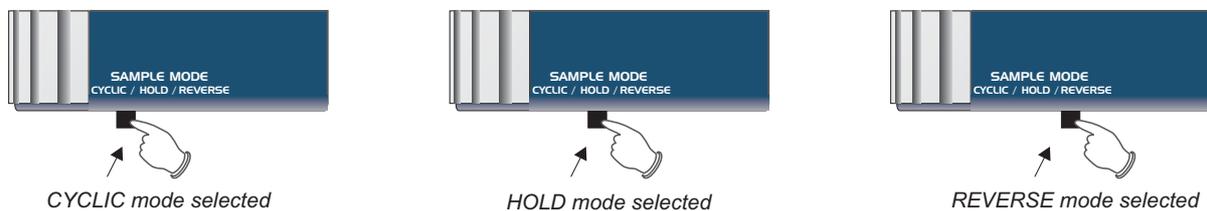


Whilst the button is pressed down the display will show 'ErAS'. All previously recorded loops have now been erased and so the six loop pads are empty and ready for the next recording session.

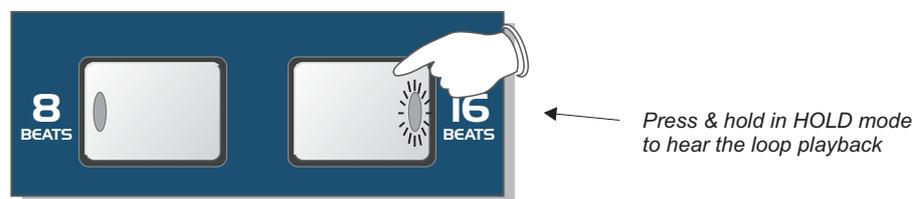
## SAMPLE MODE

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This is where you change the way SoundBITE plays back samples. In addition to the normal [CYCLIC] mode described in the previous chapter SoundBITE also features two further playback modes, namely [HOLD] and [REVERSE]. Moving this switch will not affect loops that are already playing back but will affect any loops that are started after the switch is moved. To select a different sample mode use the [SAMPLE MODE] switch as shown in the following examples:



**HOLD MODE:** With this switch set to the [HOLD] position any recorded sample will only playback when the button is pressed and held down, as shown in the following example:



The loop sample will re-start from the beginning of the recording each time the button is pressed. When the button is released the playback will be muted (off). A combination of holding and tapping the button allows you to control the playback of the sample creating re-mix style stutter effects. If the button is held down continuously the loop will cycle as in [CYCLIC] mode.

**NOTE:** in this mode the sample playback starts from the point where the sample recording was taken so it is advisable to try and start your recording on the beat.

**REVERSE MODE:** With this switch set to the [REVERSE] position any recorded sample will start to play backwards as soon as you press the button, reversing the recorded section. The functionality is the same as described in the [HOLD] mode section above so you need to press and hold the button to hear the reverse playback.

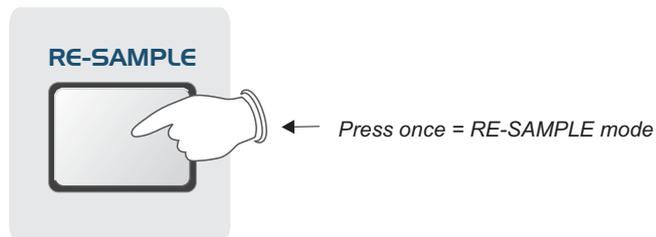
**NOTE:** in this mode the sample playback starts from the point where the sample recording was taken so it is advisable to try and start your recording on the beat.

**TIP!** - For a wicked 'spin-back' effect first record a loop in [CYCLIC] mode and mute it. Next, switch to [REVERSE] mode and re-start the loop (now plays in reverse) - then move switch to [HOLD] mode and re-start the loop again by tapping the loop button once, or holding it down to keep the loop playing forwards.

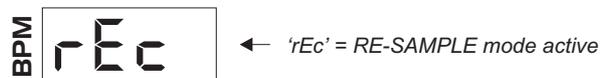
## RE-SAMPLING LOOPS

This is where you re-sample (replace) existing loops individually without erasing all the loops as detailed in the previous section. You can also use this mode to record empty loop pads if desired.

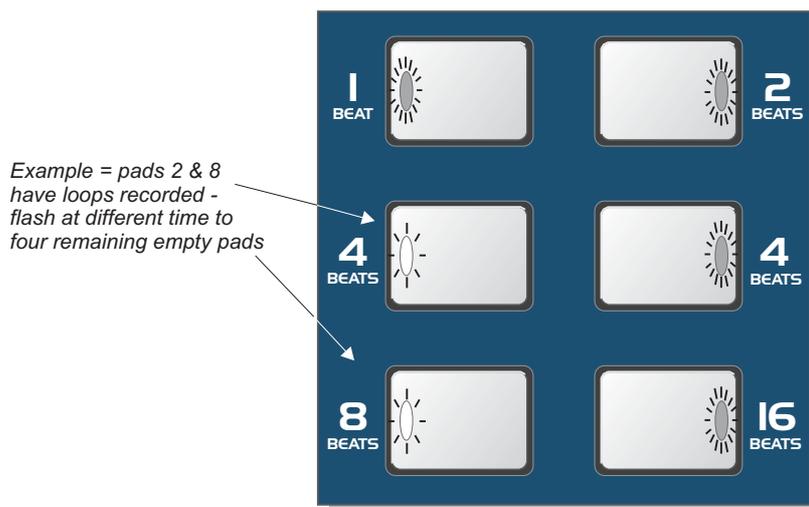
To enter this mode, press the [RE-SAMPLE] button once, as shown in the following example:



The display will now show the following:



The indicators in the [LOOP] pads will now flash. If some pads are empty, their indicators will flash at an alternate time to those that contain recorded samples so as to identify the two different conditions, as shown in the following example:



To re-sample or record a loop, simply press the desired [LOOP] button once (whether it is pre-recorded or empty). The main display will show a count-down of the number of beats in the loop whilst the sample is recorded as with normal record mode. When the recording process is complete, re-sample mode is automatically cancelled, the main display now reverting to show the BPM value once again.

# Operation

## OTHER LOOP EDIT FEATURES

These additional features allow you to control the output level of the loop samples and vary the synchronisation of the loops in relation to the incoming audio.

### LOOP OUTPUT LEVEL

When a loop has been recorded you can adjust its output level if desired - e.g. the Automatic Gain Control may boost quieter passages and so this feature lets you trim the level to suit. To boost/cut the output level of a loop, first press and hold down the [LOOP] button when it is in **PLAY** mode (indicator ON), as shown in the following example:



Default level setting = 0dB **BPM** 0db  $\longrightarrow$  **BPM** 4db Example: new level = +4 dB  
incremented to...

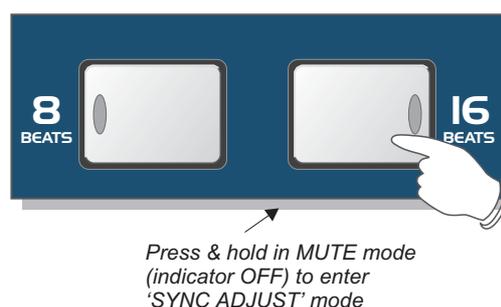
RANGE = -20dB to +6dB (due to display limitations the two lowest settings are indicated as -EdB (-16) and -FdB (-20))

To increase/decrease the volume simply rotate the [SHIFT LOOPS/EDIT] jog dial *whilst still holding down* the [LOOP] button. To exit this mode simply release the [LOOP] button.

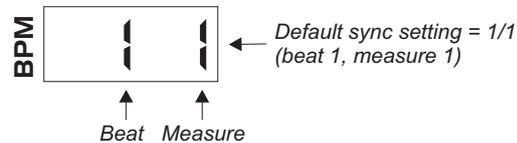
### LOOP SYNCHRONISATION ADJUSTMENTS - INDIVIDUAL LOOPS

You can use this feature to manually adjust the synchronisation of each loop independently. This may be necessary if the BPM engine loses input beat information during a track and the loop starts to drift-out of synchronisation or you may wish to creatively move the relative position of individual loops (try moving a loop half a beat compared to the input audio/other loops to achieve a new syncopated rhythm).

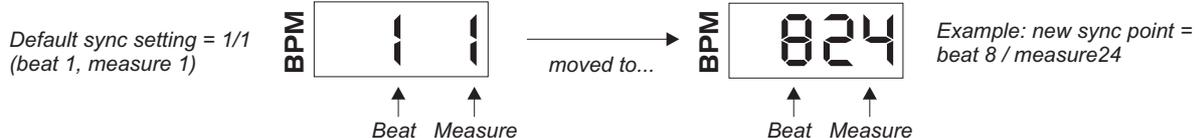
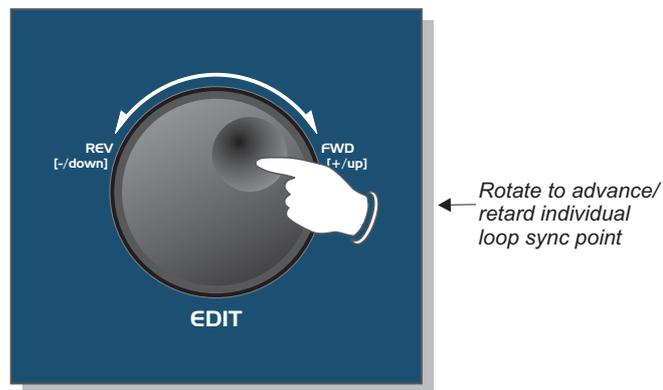
To adjust the synchronisation point of an individual loop, first press and hold down the [LOOP] button when it is in **MUTE** mode (indicator OFF), as shown in the following example:



The display will now show the following:



Each loop is divided into 32 measures per beat so, in this example having pressed the [16 BEAT LOOP] button, the two left-hand digits will show the beat position (1 to 16) whilst the two right-hand digits will show the measure position within each of the 16 beats, as shown in the following example:



To increment/decrement the loops' sync point simply rotate the [SHIFT LOOPS/EDIT] jog dial *whilst still holding down* the [LOOP] button.

**TIME STRETCHING** - As the loop synchronisation is adjusted, the loop playback will be automatically 'time stretched' (playback speed slowed down or speeded up) whilst keeping the same pitch. You can use this feature for special effects during loop playback.

To exit this mode simply release the [LOOP] button.

## LOOP SYNCHRONISATION ADJUSTMENT - ALL LOOPS

You can adjust the synchronisation point of ALL recorded loops simultaneously in a similar manner. With more than one loop recorded, simply move the [SHIFT LOOPS/EDIT] jog dial to adjust the overall synchronisation setting (do not press any buttons before adjusting the [SHIFT LOOPS/EDIT] jog dial). The display will show the same beat/measure indication as previously described whilst the jog dial is rotated and time stretching will be applied to the audio playback.

# Hints and Tips

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## RECORDING LOOPS WITHOUT THE BPM ENGINE

You can still record loops, even if there is no beat information available to trigger the BPM engine. First, manually set the BPM value (see page 9), then press the [RE-SAMPLE] button and [LOOP] button to create the non-synchronised loops.

## DIS-ENGAGING THE BPM ENGINE - A FEW APPLICATIONS

As you cue and/or move the pitch slider back and forth whilst monitoring in the headphones, all this musical and rhythmical information gets transmitted to SoundBITE via PFL. Naturally this cueing 'tempo' you create is **irregular**, sending small fluctuations to SoundBITE, which will intelligently track the BPM and time stretch any stored samples accordingly.

The times when you would **not** want SoundBITE to do this are in the first two examples below. Imagine beat mixing against a track on a turntable whose tempo constantly changes with small fluctuations, it would be nearly impossible. Therefore, you can instruct the sampler not to analyse tempo changes (see page 8, Disengaging the BPM engine ) and no matter how fast/slow or in which direction you spin the forthcoming track, SoundBITE will play any samples back at a fixed tempo, steady as a rock.

**LEARNING TO MIX** - You can use SoundBITE as an aid to enhance your beat mix skills. It's always easier to practice beat mixing against a clean 4/4 rhythm with minimal melody/vocals. Now you can have an **infinite** looping clean sample of your choice to practice mixing against. Just record/playback the loop and dis-engage the BPM engine.

**MIXING VINYL TO VINYL USING ONE TURNTABLE** - Most dance tracks are structured to have a clean introduction (intro) and exit (outro) to facilitate mixing and to avoid melody clashes. Now you can sample either the start or the end of the track (we recommend 8 or 16 beat loops) and, using your cross fader, blend the outgoing track into your long sample, put a new record **on the same** turntable and mix against the sample. Just record/playback the loops and dis-engage the BPM engine. This also addresses...

**THE DREADED TURNTABLE/STYLUS FAILURE** - You can use SoundBITE as a security blanket in the unfortunate event of a turntable failing.

### SO, RULE OF THUMB -

*SoundBITE sampling from Master Track* - Do not disengage the BPM engine.

*Beat Mixing against SoundBITE* - Disengage before attempting to attain beat sync on next track, **then re-engage** before recording new samples.

## OTHER USES - (taken from IDJ magazine)

**“SCRATCH GOD** - Just imagine this little beauty in the hands of someone like the Scratch Perverts - the possibilities are awesome! For home scratchers, on a basic level you could set up breaks to scratch over. But really, for the turntablist, this unit is an extra deck, from which you can drop in individual scratches, samples or beats - this could take turntablism to a whole new level.”

**“ACAPELLAS** - So for you house and garage DJ's, how about having a bunch of vocal acapellas at your fingertips, ready to drop into the mix at any time. Record the samples on the fly and drop them back in as you build that ultimate roof-raising climax!”

*Special thanks to IDJ magazine - Note: quotations are taken from review of previous model.*

## Tips for getting the very best out of your SoundBITE:

\*When triggering multiple samples simultaneously, turn the bass EQ anticlockwise on the mixer channel used by SoundBITE (due to the fantastic accuracy of the SoundBITE it's possible to have the equivalent of 7 kick drums (the master track + 6 sample banks) playing simultaneously).

*continued over...*

# Specification

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\*If your mixer has a send/return feature, grab/play a sample and send it to an external effects device for extra creativity. This can be easily achieved using the RED Sound INFADER and XS-FX.

\*Because audio input/loop sync can drift as time progresses due to factors such as fluctuating deck drive speed, slipmat and the quality of the acetate/vinyl record (the master track) itself, you may wish to PFL the individual sample (or all recorded [LOOP] pads) and realign using the [EDIT] jog dial. SoundBITE will have time stretched the samples for you to play at the same speed as the master output but you will need to beat mix the kick/snare/hi hats as you would on a real turntable.

\*On shorter loop lengths, you can shift the sample to play on the off beat relative to where it is on the original track by rotating the [EDIT] jog dial in either direction 16 steps ( i.e. from beat 1/measure 1 to beat 1/measure 16)

## SoundBITE LITE SPECIFICATION

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-  **Sample rate:**  
96kHz
-  **Conversion resolution:**  
24 bit
-  **Polyphony:**  
6 sample loops
-  **Sample loop length:**  
1, 2, 4(x2), 8, 16 (32 beats total)
-  **BPM range:**  
60 - 230BPM (3 ranges)
-  **Connections:**  
Audio input, Loops output, Monitor output, AC adapter input
-  **Power Supply:**  
9vDC 500mA minimum - Output plug = 2.1mm wired centre pin +
-  **Dimensions:**  
202(H)x106(W)x30(D)mm    8”(H)x 4 1/4”(W)x 1 1/4”(D) inches
-  **Weight:**  
1Kg (2lb 4oz)
-  **Accessories (included):**  
Connecting Cables ( input - 1 x 1/4” Jack to RCA ) (output - 1 x single RCA to twin RCA )  
Mounting kit

*\* Specification and /or appearance subject to change without prior notice due to product improvement.*