DIHWorld Audio Signal Flow & Sidechain Guide

Current: 2026-08-01 Scope: DIHWorld Audio 42-plugin suite

This customer guide covers every current DIH plugin with a named external host sidechain: **ANUBIS, TEHUTI, MARIANA, MONOLITH, NTRPL, and DrumKrushGlue**. It also explains how **DIH Drum Morpher** serves as a drum/key source for those processors. In every case, the external key is detector/control information only; it is never mixed into the target plugin's audible output.

Sidechain quick matrix

Plugin	Best target	What the key controls	Main controls
ANUBIS	Tracks, buses, ambience returns	Gate detector, independent output duck, or both	KEY, DUCK, Threshold, Range, Attack, Hold, Release
TEHUTI	Bass, pads, music buses, FX returns	Independent low/mid/high duck bands	Low, Mid, High, Depth, Speed, Mix
MARIANA	Bass and sub layers	Added low-end foundation layer only	KEY, DUCK, RECOVERY, Gain Match
MONOLITH	Bass, low percussion, body buses	Added stone/weight layer only	KEY, STONE DUCK, RECOVERY, Gain Match
NTRPL	Bass or creative rewrite layers	Generated rewrite/alternate layer only	KEY, REWRITE DUCK, RECOVERY, Gain Match
DrumKrushGlue	Drum bus or parallel drum return	Added weight/glue layer only	KEY, POCKET DUCK, RECOVERY, Gain Match
DIH Drum Morpher	Instrument/source track	Supplies kick, pad, or pattern energy to a downstream sidechain	Drum output/send; no external sidechain input

Host setup

Logic Pro

1. Insert the sidechain processor on the track, bus, or return that must move.
2. In the plug-in header, choose the key source from Logic's **Side Chain** selector.
3. Play the key and target together; the key track must contain real level.
4. Enable the plugin's KEY/sidechain function where provided.
5. Adjust duck depth and recovery while listening in context.
6. Enable Gain Match where provided, then compare with bypass at equal loudness.

Other VST3 hosts

1. Insert the processor on the target channel.
2. Enable the plugin's auxiliary/sidechain input in the host.
3. Route a send or direct key assignment into that auxiliary input.
4. Confirm the plugin's KEY or sidechain meter moves before increasing duck amount.

```
Key/source track -> host sidechain route -> detector only Target track -> plugin main input -> controlled processing -> plugin output
```

ANUBIS — Sacred Gate & Expander

Signal flow

```
Main input -> protected input -> detector selection -> Threshold / Ratio / Range -> Attack / Hold / Release -> gate and/or duck gain -> Mix -> Output

External sidechain -> KEY detector and/or independent DUCK envelope
```

KEY and DUCK are independent

KEY	DUCK	Result
Off	Off	Main input drives the gate; no external ducking.
On	Off	External sidechain drives gate detection; no ducking.
Off	On	Main input drives the gate; external sidechain ducks the output.
On	On	External sidechain drives the gate and a separate ducking envelope.

Control / Meter	Purpose
Threshold	Level where the selected detector opens or controls the gate.
Ratio	Expansion amount around the threshold.
Range	Deepest permitted attenuation; 0 dB means no gate/duck depth.
Attack / Hold / Release	Opening speed, minimum open time, and recovery time.
KEY meter	External sidechain RMS energy.
DUCK meter	Sidechain-driven gain reduction.
Gain Match	Compensates audition level so processing can be judged fairly.

Kick clears bass: insert ANUBIS on bass, select kick as Side Chain, enable DUCK, set Range for the needed pocket, then tune Attack/Hold/Release. Enable KEY only if the kick should also drive the gate.

Vocal opens ambience: insert ANUBIS on the reverb return, select the vocal as Side Chain, enable KEY, and leave DUCK off. The vocal opens the return while silence closes it.

TEHUTI — Three-Band Sidechain Duck Field

Signal flow

```
Main input -> three-band split -> sidechain-controlled Low / Mid / High reduction -> Depth -> Speed -> Mix -> Output

External sidechain -> detector envelope -> independent Low / Mid / High duck commands
```

Control / Display	Purpose
Sidechain Send	Confirms external detector activity from the host.
Low	Reduction below 162 Hz.
Mid	Reduction from 162 Hz to 1.62 kHz.
High	Reduction above 1.62 kHz.
Depth	Maximum overall duck-field intensity.
Speed	Attack/release response of the reduction envelope.
Low / Mid / High GR	Live gain reduction in each band.
Duck curves and live dot	Expected reduction versus key energy and the current operating point.
History	Recent sidechain and reduction motion; use it to spot pumping.

Practical routes

- Kick to bass: raise Low first; add only enough Mid to clear upper-bass masking.
- Vocal to music bus: use Mid for intelligibility and a small High amount for air-space.
- Drums to FX return: duck the return on hits so reverb or motion blooms between transients.
- Hi-hat to pad: use fast Speed and a light High/Mid field for rhythmic breathing.

Start with one band, raise Depth slowly, then set Speed so the return follows the groove without chatter.

MARIANA — Sub Foundation Sidechain

Signal flow

```
Main bass -> original bass path + generated foundation layer -> sidechain reduction on foundation layer only -> Mix -> Output

External key -> 35-160 Hz detector -> 5 ms attack -> DUCK amount -> RECOVERY
```

Control / Display	Purpose
KEY	Enables the external kick/sub detector.
DUCK	Maximum reduction applied to MARIANA's added foundation layer.
RECOVERY	40-420 ms return time for the foundation layer.
KEY meter	Detected 35-160 Hz sidechain energy.
Gain Match	Keeps the audition comparison level-centered.

The original dry bass path remains audible. The sidechain moves only MARIANA's added depth/foundation contribution, so the bass does not disappear when the kick hits.

Starting points: use **KICK DUCK FOUNDATION** for a firm kick pocket and **GENTLE KEY BREATH** for subtle movement. If the low end flutters, lengthen RECOVERY. If the kick still masks the sub, raise DUCK before changing the bass tone.

MONOLITH — Stone/Weight Sidechain

Signal flow

```
Main input -> original path + stone/weight layer -> sidechain reduction on stone layer only -> Mix -> Output

External key -> approximately 40-180 Hz detector -> 5 ms attack -> STONE DUCK -> RECOVERY
```

Control/Display	Purpose
KEY	Enables external low-frequency detection.
STONE DUCK	Moves the added impact/weight contribution aside.
RECOVERY	Controls how quickly stone/body weight returns.
KEY meter	Detected 40-180 Hz sidechain energy.
Gain Match	Matches processed audition level to the input reference.

Use MONOLITH on bass, low percussion, or a body bus. A kick key can clear the added weight while leaving the source-retained path intact. Short recovery creates a tight pocket; longer recovery produces a slower, heavier return.

NTRPL — Rewrite-Layer Sidechain

Signal flow

```
Main source -> source-retained path + generated rewrite/alternate layer -> sidechain reduction on rewrite layer only -> Main / ALT OUT

External key -> approximately 35-160 Hz detector -> 5 ms attack -> REWRITE DUCK -> RECOVERY
```

Control / Key	Purpose
KEY	Enables external detector control.
REWRITE DUCK	Reduces only the generated rewrite/alternate contribution.
RECOVERY	Controls the rewrite layer's return after each key hit.
SOURCE / REWRITE / ALT OUT / MAIN	Shows retained source, generated contribution, alternate output, and main output.
Gain Match	Supports level-fair comparison.

Use a kick or bass guide when the rewrite layer adds static-like density on a full-range reference. The source-retained component stays outside the duck multiplier. KEY off is sample-path neutral and adds no lookahead or reported latency.

DrumKrushGlue — Drum Pocket Sidechain

Signal flow

```
Drum bus -> original drum path + Krush / Weight / Glue layer -> sidechain reduction on added layer only -> Ceiling -> Output

External key -> approximately 40-180 Hz detector -> 4 ms attack -> POCKET DUCK -> RECOVERY
```

[illegible]	[illegible]
KEY	Enables the external kick/guide detector.
POCKET DUCK	Moves the added weight/glue layer aside.
RECOVERY	Controls how quickly cohesion returns.
KEY meter	Detected 40-180 Hz sidechain energy.
POCKET meter	Reduction of the added weight/glue layer.
Gain Match	Provides level-fair bypass comparison.

Use **KICK POCKET GLUE** for a firm kick pocket or **GENTLE BUS POCKET** for subtler bus movement. The original drum path remains outside the duck multiplier, so transient identity stays present.

DIH Drum Morpher — Sidechain Source Routing

DIH Drum Morpher is an instrument/source, not an external-sidechain processor. It has a normal main output and does not expose a host Side Chain input. Include it in sidechain sessions by sending its kick, pad, or complete pattern output to one of the six processors above.

Whole-kit routing

```
Drum Morpher instrument output -> pre-fader send / bus -> target plugin Side Chain
```

Use the whole pattern when the target should breathe with the kit's overall motion, such as TEHUTI on an atmosphere return.

Kick-only routing

1. Isolate the kick voice to a dedicated Drum Morpher output or duplicate/print the kick to a separate track.
2. Route that kick track or bus to the target plugin's host Side Chain input.
3. Keep the audible kick routed normally to the mix.
4. Confirm the target plugin's KEY/Sidechain meter moves.

Recommended downstream uses

Drum Morpher source	Target plugin	Result
Kick voice	MARIANA	Clears added sub foundation.
Kick voice	MONOLITH	Clears added low-end weight.
Kick voice	NTRPL	Moves generated rewrite density around the kick.
Kick voice	DrumKrushGlue	Opens a pocket in the added glue layer.
Full drum pattern	TEHUTI	Band-selective breathing on pads or FX returns.
Snare or percussion voice	ANUBIS	Opens a gate or ducks a competing return.

Troubleshooting and release checks

Symptom	Confirm or adjust
No host Side Chain selector	Confirm the current AU/VST3 build, restart the host, refresh/rescan plugins, then reopen the plugin.
KEY meter is idle	Confirm the selected source is playing, the send is active, and the sidechain bus has level.
Duck control appears inactive	Enable KEY/sidechain mode and increase the plugin-specific duck depth. In ANUBIS, enable DUCK and set Range below 0 dB.
Pumping or chatter	Reduce duck amount or lengthen Speed/RECOVERY/Release.
Target loses too much identity	Use MARIANA, MONOLITH, NTRPL, or DrumKrushGlue's layer-only ducking, or reduce ANUBIS Range.
Output sounds louder, not better	Enable Gain Match where available and compare with bypass at equal loudness.
Drum Morpher is absent from the host sidechain menu	Route or print its kick/pattern to an audio or bus source the host can select. Drum Morpher itself does not receive an external sidechain.

Before printing or delivery, verify the selected key, detector movement, recovery timing, matched output level, mono compatibility, and available headroom. SESHAT observes the result; it does not replace listening or bypass comparison.