TWA®

DM-02 DYNAMORPH®

envelope-controlled harmonic generator

In-Flight Manual

TWA®
DM-02 DYNAMORPH®
ENVELOPE-CONTROLLED HARMONIC GENERATOR

Thank you for purchasing the **TWA DYNAMORPH®**!

Distortion? Fuzz?
Filter? Synth?
DYNAMORPH® is all of these, and much more.

Featuring a distortion circuit where the amount and *type* of saturation is intricately and inextricably linked to the input signal level, **DYNAMORPH®** creates multi-layered, highly complex waveforms that twist and morph your instruments harmonic structure in bizarre, yet decidedly musical ways.

Add to this an envelope-detection circuit that allows control of distortion events via playing dynamics, and you have the extremely powerful tool for musical expression that is **DYNAMORPH®**.

Depending on control settings and playing technique, **DYNAMORPH®** can create an almost unlimited variety of filthy, flittering filter effects that will add depth and dimension to your notes. Tight chirps, greasy gurgles, and long, yawning sweeps are all available by simply varying your picking attack.

A light touch with low **DRIVE** settings can yield sagging, fuzzy burps that reside somewhere between a “starved voltage” fuzz and a dirty Moog filter set to tight decay.

Increased **DRIVE** settings create higher order harmonics that subsequently drop in pitch as the note decays (think swept resonant filter).

Playing double stops and chords will generate bizarre intermodulation effects that border on ring modulation, but with less dissonance.

Turning up the **Gain** makes the **Drive** hit harder (a LOT harder), resulting in extreme compression and more complex, thick harmonies with massive sustain.

Digging in hard with higher **Drive** and **Gain** settings will bury your notes under a torrent of waveforms battling for evolutionary supremacy—the victor finally blossoming into a screaming, searing siren-song.

Turning on the **Morph** function opens up an entirely new range of control over these effects, as the *amount* of **Drive** can now be controlled via playing dynamics as well. Notes will swell from zero volume into sustained harmonic glory, their tonal characteristics reacting and morphing in real time to the level changes present by the **Instar** and **Gestation** controls.

All of these tonal transformations can be further adjusted via the **Mode** switch that selects between two different overall EQ settings for the pedal (**Kafka** or **Ovid**). If things need to be reined in a bit, just blend in some DRY signal using the **Ametaboly** control.

For even *further* control options, the **Morph** function can also be controlled manually via an external expression pedal, allowing notes to be swelled in and out at will to create massive, sizzling synth pads.

If you've grown bored with the status quo of disappointing drives and flatulent fuzzes, then plug into the **DM-02 Dynamorph**® and witness your tone transform from an inchworm into a 600-pound mutant metallic Butterfly—*with teeth*.

The **DYNAMORPH**® is covered by a 3 year parts and labor warranty.

For more information and to register your warranty,
please visit our website:

WWW.TOTALLYWYCKEDAUDIO.COM/WARRANTY

The **DYNAMORPH**® is made in the USA.

For more info on **TOTALLY WYCKED AUDIO** products,
please visit our website:

WWW.TOTALLYWYCKEDAUDIO.COM

GO GIT SUM!!!

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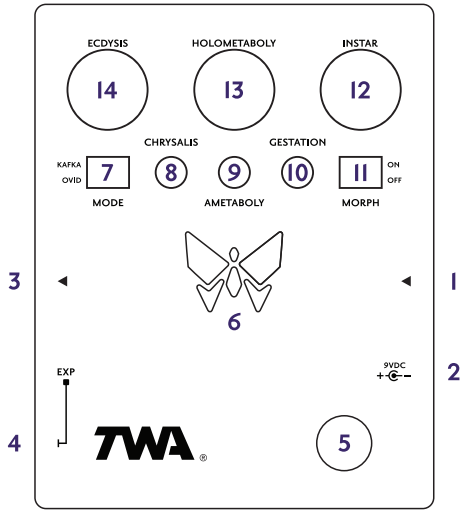


FRONT PANEL CONTROLS

1. **Input** – 1/4" unbalanced audio. Connect input signal here.

2. **DC In** – Connect to tip-negative 9VDC regulated power source via a 5.5mm O.D./2.1mm I.D. tip-negative male barrel plug with a minimum of 300 mA of current available. (**PA-9 Power-All ECO-Dapter** recommended)

3. **Output** – 1/4" unbalanced audio. Connect to amplifier, recording equipment, or other effects.

4. **EXP In** – 1/8" TRS. The **EXP** jack on the **DM-02** will provide treadle-based control of the **Instar** *(threshold)* pot, allowing the user to control the amount of drive that will hit the circuits diode array. The **Dynamorph**® is designed to work with the Roland EV-5 or any expression device with the same TRS configuration. We recommend connecting the **TWA Side Step**™ for additional controls and effects.

NOTE: **Instar** *(threshold)* control should be set to zero (fully CCW) when using an expression pedal. Also, adjusting the side pot on the EV-5 will allow you to "fine-tune" the range of the Level/Drive swell.

5. **Bypass Switch** – Engages or disengages the effect. **Dynamorph**® features **TWA**'s proprietary **S3**™ "Shortest Send Switching"—a form of True Bypass that uses an electronic relay combined with a mechanical switch.

S3™ switching assures that the input signal travels the absolute shortest distance between input and output jacks, guaranteeing the most transparent bypass tone available.

In the event of a power loss, **S3**™ switching automatically reverts to bypass mode, saving the user from embarrassing "dead air" and the need to figure out which pedal must be switched off to regain signal flow.

6. **Dyna-Fly LED Array** – YEAH!! Lights when the pedal is engaged for morphing. LEDs will react to playing dynamics.

7. **Mode Ovid/Kafka** – This switch selects between two different overall EQ curves for the effect; **Ovid** is fuller-sounding while **Kafka** has more emphasis in the high frequency range.

8. **Crysalis** *(gain)* – Controls the output level of a high-gain preamp that sits before the rectifier array in the circuit. Gain makes the Drive control hit the rectifiers harder—a *lot* harder. When this occurs, more complex, thick harmonics with compression and increased sustain are some of the results. Turn Gain clockwise for more gain/distortion/filtering/morphing effect.

9. **Ametaboly** *(dry level)* – Controls output level of Dry signal. Turn clockwise for more Dry signal.

10. **Gestation** *(rate)* – When **Morph** is set to **ON**, this control determines how quickly the drive will swell from zero to full. Turn clockwise for faster gestation period (rate).

11. **Morph OFF/ON** – Turns the envelope-detector function of the pedal ON or OFF.

12. **Instar** *(threshold)* – When **Morph** is set to **ON**, this control sets the trigger point at which the drive level will increase from zero to wherever it is set on the **Ecdysis** *(drive)* control. Start with the control fully counterclockwise and adjust until you find the sweet spot where the pedal reacts best to your playing dynamics.

13. **Holometaboly** *(effect level)* – Controls output level of the distortion effect. Turn clockwise for more output level (volume).

14. **Ecdysis** *(drive)* – Controls the amount of signal level going into the circuits diode array. More **Ecdysis** *(drive)* yields more apparent change to the distortion's EQ components; effectively "morphing" the tone. Turn clockwise for more drive/distortion/filtering/morphing effect.

PRECAUTIONS:

• Only use recommended power supplies. All other power supplies will automatically disintegrate when connected to DYNAMORPH®.

• Do not submerge in water or other fluids—DYNAMORPH® will instantly vaporize them, releasing toxic fumes that will dissolve your lung tissue.

• If your hand or other appendage becomes possessed by the Necronomicon, grab the closest chainsaw and immediately dismember yourself.

• Keep right, pass left.

Questions; Comments; Answers to life's greatest mysteries:

INFO@GODLYKE.COM

OPERATING THE DYNAMORPH®

- Before making any connections, set controls to their lowest (full Counterclockwise) positions. Make sure pedal is bypassed.
- Make all the appropriate power and audio connections.
- Depress the Footswitch—the golden **"Dyna-Fly" LED Array** will glow brightly when the circuit is engaged and react to playing dynamics (if you have them).
- Turn up **Holometaboly** *(effect level)* first, this will raise the output level of the Distortion/Morph effect.
- Turn up **Ecdysis** *(drive)* control to add distortion/morphing to your signal.
- Adjust **Chrysalis/Mode/Ametaboly** controls to taste.

FOR ENVELOPE-CONTROL MODE

- Switch **Morph** switch to up (**ON**) position.
- Adjust **Instar** *(threshold)* control until the morph effect is triggered by your picking attack.
- Adjust **Gestation** *(rate)* to desired morphing rate.

FOR EXPRESSION MODE

- Make sure **Morph** switch is set to the up (**ON**) position.
- Connect Expression Pedal to **EXP** jack (1/4" to 1/8" TRS adapter may be required).
- Adjust **Instar** *(threshold)* to full Clockwise position.
- Adjust **Gestation** *(rate)* to full Clockwise position.
- It's **Morphin'** time*!*

TECH TALK

At the heart of the **DM-02 DYNAMORPH**® Circuit is a string of full-wave rectifiers. In front of this diode array sit two high-gain preamps set in series; the output levels of these pre's are controlled by the Drive and Gain controls accordingly.

As the diodes are hit with increasing signal level from the preamps, they bias either positive or negative, or not at all. The resultant waveform is a combination of many, including sine, triangle, square, and interactions/combinations of all of these. The more level that the diodes are hit with, the more non-linear and wackier (technical term) things will get.

This primordial harmonic soup is then passed along to an op-amp that sums it all. However, since these distortion events are non-linear in nature, there is also subtraction, which yields further tonal filtering and changes to the waveform output.

The Morph circuit is a high-gain VCA to activate the Drive; a smooth gate that makes the harmonics sweep versus level, tracking the incoming signal from the instrument. The more drive, the more the apparent EQ of the distortion changes, giving notes a varying degree of harmonic "movement."

DYNAMORPH® features **TWA**'s proprietary **S3**™ "Shortest Send Switching"—a form of relay-based True Bypass switching that provides the most transparent bypass sound available. **S3**™ switching also automatically reverts the pedal to bypass mode if power is lost—an essential failsafe for live gigs.

FLIGHT DATA

CODE NAME: DYNAMORPH® V2.5

FUNCTION: ENVELOPE-CONTROLLED HARMONIC GENERATOR

CONTROLS:
Drive (ecdysis)
Dry Level (ametaboly)
Threshold (instar)
Gain (chrysalis)
Effect Level (holometaboly)
Morph Rate (gestation)

CONNECTORS:
Input (1/4" audio)
Output (1/4" audio)
EXP (1/8" TRS)
DC Power (5.5mm O.D. / 2.1mm I.D. Barrel)
9VDC, tip-negative, regulated
Approx. 48mA current draw

INDICATORS:
"Dyna-Fly" LED Array indicates effect on/off
CV indication of input signal level
- On = bright LED
- Bypass = dim LED
- No power = dark LED

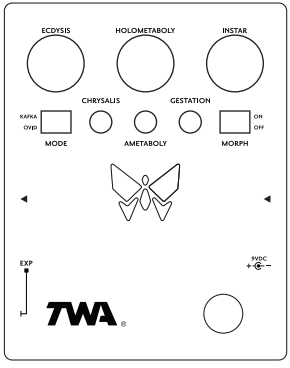
AUDIO:

Input Impedance: 1 Meg ohms
Output Impedance: 600 ohms
Max gain (before hard clip): 40db
Frequency Response (before hard clip):
Flat from 20Hz to 4kHz / -3dB @
10kHz / -6dB @ 20kHz (So it is Hi-Fi!)

SWITCHING:

Relay-based true bypass
S3™ Shortest Send Switching when bypassed
Auto-bypass on power failure
Mode (Ovid/Kafka) slider
Morph (On/Off) slider

DIMENSIONS: 4.625" L x 3.625" W x 2.25" T (to top of knobs)



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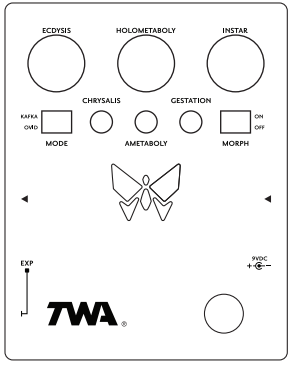

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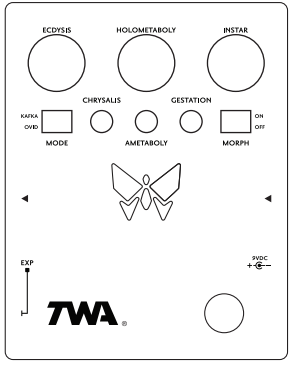

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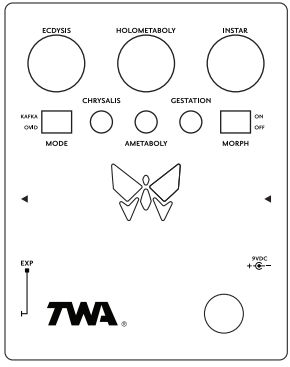

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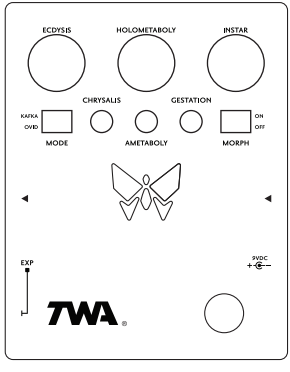

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TOTALLY WYCKED AUDIO

The way of the future...