Made by T-REX Denmark, 2020

Lars Dahl-Jørgensen
*Founder*

Sebastian Jensen
*Founder*




T-Rex Effects
www.t-rex-effects.com

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TAPE ECHO

# REPLICATOR

D'LUXE

HANDCRAFTED IN DENMARK BY T-REX EFFECTS

## CONGRATULATIONS

*on your purchase of the T-Rex Replicator D'LUXE!*

The Replicator D'Luxe is a sum up from all the knowledge, we have built up over the years, making Tape delays.

It is a 2 head machine. The drive mechanism has been updated with a noiseless belt drive. A tape lock/release mechanism is added, to make the Pinch wheel and tape last longer and electronics has been tuned to perfection.

A tape echo works by recording and playing back audio on magnetic tape loop run by a motor. The time it takes for the tape to go from the record head to the playback head will determine the delay time. A feedback circuit sends the delayed audio back to the recording head for multiple repetitions that fades over time.

On a tape echo, the delay time can be shortened by either turning up the motor speed or placing the playback head closer to the record head. Longer delay times require a slower motor speed or longer distance between the record head and the playback head.

## CONTROLS

**Delay level:** This controls the level of the delay(s). At the maximum setting, the delays will have appr. the same level as the dry signal (depending on the setting of the Saturation knob).

**Feedback:** This controls the amount of repetitions of the delay. When set to minimum only the first delay will be heard. At high settings, the Replicator D'Luxe's repeats will self-oscillate.

**Note!:** Self-oscillation will occur at different settings, depending on how fast the tape is running/delay time settings.

**Short:** This push switch engages the head closest to the record head. It gives a delay time from 108mS to 520mS

**Long:** This push switch engages the head farthest away from the record head. Gives a time from 215mS to 1 Second.

**Note!:** At least one of the heads has to be engage or both. If not then there will be no wet signal. NO DELAYS.

**Delay time:** This controls the speed of the motor, and thereby the delay time. The max/min delay time available is: Short: 108ms – 520ms. Long: 215mS – 1Sec.

## FOOTSWITCHES

**On/off:** This switch bypasses the effect, using a relay in a true bypass config. This means that when the pedal is off, the incoming signal is routed straight to the output jack.

**Tap Tempo:** This switch is used for tapping in a delay time with your foot. Tempos outside of the min/max-values for the delay time will be ignored.

## BACK PANEL

**Kill dry:** This switch will mute the direct signal when pushed IN.

***Note!:*** The direct signal will still be output when the pedal is bypassed, due to the true bypass switching.

**Saturation:** Controls the recording level of the record head. Depending on how strong the incoming signal is, the record head can be driven into saturation when this control is turned up. Lower settings will give you the cleanest/loudest effect signal with the least amount of noise. Higher settings will make the repeats more compressed, overdriven and fuzzy, with added harmonic content.

***Note!:*** Although the Replicator D'LUXE can handle very loud input signals, the recording head will saturate sooner, the louder the input signal is. If the optimal dry/effect-signal ratio cannot be obtained, turn down the input signal to the pedal.

**Input:** Connect your signal source (instrument/mixer send/fx loop send/etc.) to this jack.

**Output:** Connect your amplifier/mixer return/fx loop return/etc. to this jack.

**Power jack:** Connect the supplied adaptor to this jack.

## TAPE DECK MECHANISM

This mechanism is made to make your pinch wheel and tape cartridge last much longer. It is not good for a pinch wheel to be under pressure on the same spot for a long time. This pressure makes a dent in the rubber and you can hear that audio vice.

Before using the Replicator. Pull up the tape deck release rod. After use pull down the tape deck release lock. This removes tension from tape and pinch wheel.

## MAINTENANCE

The Replicator D'LUXE's moving parts as well as the tape heads WILL need a bit of cleaning every once in a while. If the unit is used on a regular basis, the tape cartridge will wear out faster and the various parts will need cleaning more often. In contrast to older tape echo units, the Replicator Junior is very easy to maintain and the cartridge can be replaced in seconds.

**Replacing the tape cartridge:** Turn off the effect (motor stops) and take out the knurled screw for the tape. Pull down the lever below the heads and lift out the cartridge. Insert a new cartridge while pulling down on the lever. Install the knurled screw and release the lever.

**Cleaning the tape heads/roller:** Take out the tape cartridge and release the lever. Use a cot¬ton swab dipped in isopropyl alcohol (wipe off any excess liquid on a piece of tissue paper) and carefully clean the heads where the tape touches them. If the heads are very dirty, you may do this a few times until the cotton swabs no longer has residue on them.

Clean the roller wheel by turning the pedal on and carefully put a cotton swab dipped in isopropyl alcohol (wipe off any excess liquid on a piece of tissue paper) up against the wheel while this rotates. Again, if the wheel is very dirty, do this a few times until the cotton swabs no longer has residue on them.

***Note!:*** It may be necessary to remove the metal cover before performing the above steps, for better access to the heads/cartridge.

**Adjusting the heads:** The heads can be adjusted for optimal sound and performance of the pedal. This is done by turning the small screw on the lever. If the tape heads are too close or too far away from the tape reel, the pedal will not perform its best and sound quality is compromised. Turn the screw clockwise until the delays can no longer be heard, then counter-clockwise until the delays are audible and clear with no "fluttering". This is easier to do if the delay level is turned up, the feedback turned down and the kill-dry is set to ON. When adjusting the screw, use small turns and listen carefully, then turn again. It is important to stop turning when the echos are loud and clear. Adjusting the heads too close to the tape can cause the tape cartridge parts to de-form (and cause a wobbly, vibrato-like sound) so be careful not to overdo this. Adjustment of the heads is normally not needed at every cartridge replacement but should be performed if the echos are particularly dark sounding/not audible or you have excessive flutter in the sound.

## HELPFUL HINTS

**Sound quality:** As the motor´s speed is increased, so does the high frequency content of the delays. Conversely, if the motor is running at a slow speed, there will be a high frequency loss. The Replicator D'Luxe has auto-compensation for this, in order to deliver the best sound quality at any motor speed (delay time).

However, there will be some treble loss as the delay time approaches maximum. In the old days, players would hear this when they modified their tape echos by slowing down the (fixed) motor

speed and because the Replicator Juniors works on the exact same principle, so will you.

It is just one of the many quirks that makes a tape echo stand out from other delay designs and we encourage you to take advantage of this "split personality" by using it musically and creatively.

**Saturation/delay level:** The Saturation knob works like an input level control for the delays and the Delay level knob works like an output level control, so turning one of them up will make the delays louder (unless you saturate the record head). If turning the Delay Level up does not give you enough effect, please check if the Saturation knob is set too low.

**Delay time/feedback:** You can create various effects by turning these knobs in real-time. For example, if the feedback is turned to maximum, the oscillation that occurs can be swept up and down in pitch by the Delay Time knob.

For best results, the feedback should be turned up right after the note(s) you want to oscillate has been played. If the delays ring out before you turn the knob, the oscillation will be dirtier, noisier and not as evident.

## T-REX WARRANTY CONDITIONS

T-Rex offers a 2-year warranty on all our products. In the unlikely event of a malfunction, please contact our technical support at service@t-rex-effects.com before sending us the product for repair. Read more about warranty conditions at www.t-rex-effects.com/service

**About T-Rex**

Based in Vejle, Denmark, T-Rex Effects makes classic and signature effects pedals for the world's best musicians. Our approach blends hi-tech innovation with old-world craftsmanship – always in the service of killer tone.

**EU regulations • Environment protection**

T-Rex accepts and follows the regulations and directives issued by the EU. We find these environment protecting regulations very good, and we are happy to follow them.

## TECHNICAL SPECS

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| Input impedance | 500K ohm |
| Output impedance (ohm) | 1K ohm |
| Power supply (included) | 12V DC, center negative |
| Current draw @12V DC | 300mA |
| Max. input signal | 8,7V p-p (12dBu) |
| External connectors | Input, output, DC inlet |
| Controls | Delay time, feedback, delay level, saturation, kill dry, short, long |
| Pedal size incl. knobs (WxHxD) | 8 x 17,4 x 17,5 cm / 3,15 x 6,85 x 6,89 in |
| Weight excl. packaging | 1,50 kg / 52,91 oz |

SUBJECT TO CHANGE WITHOUT NOTICE