

# FLAME

## DUALKEY EURO MODUL



# MANUAL

Version 1.00

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# 1. Short description

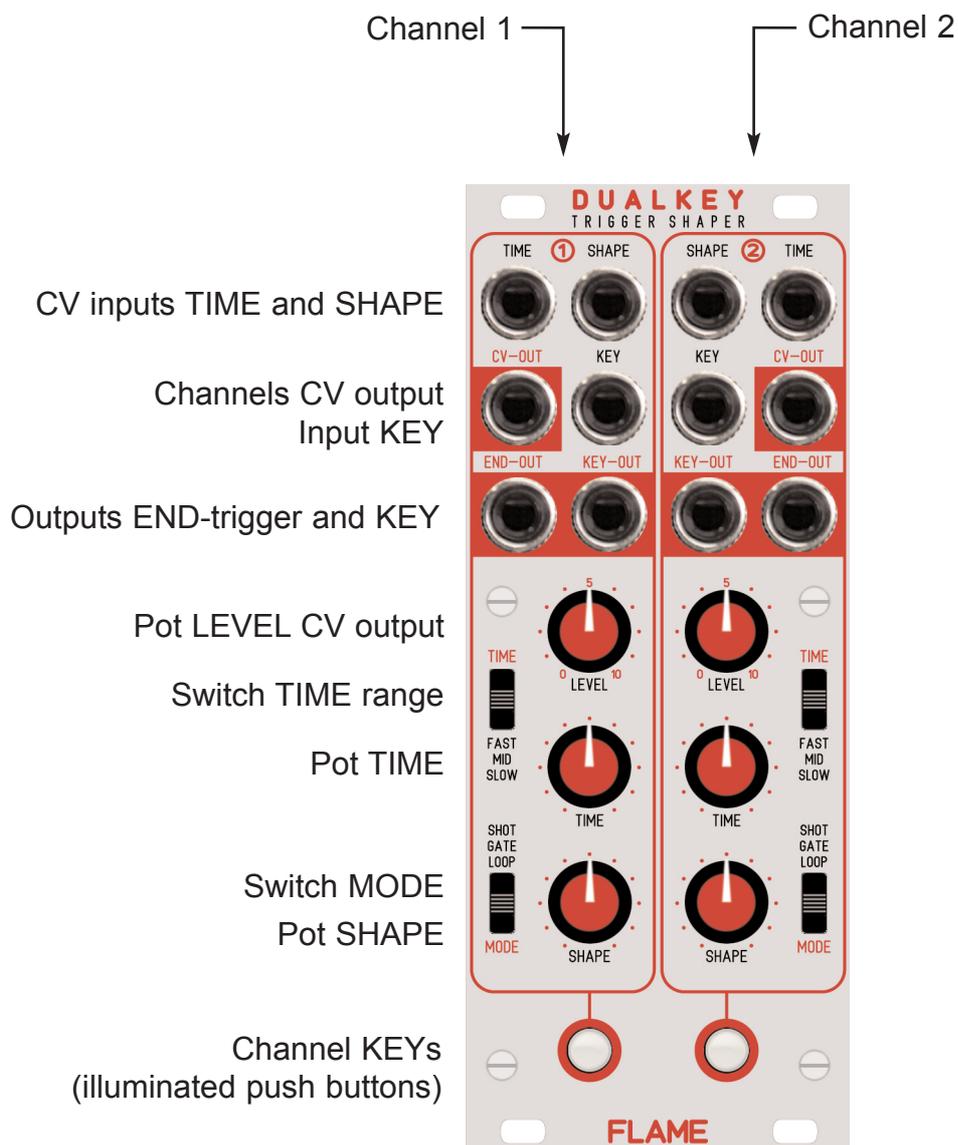
Dualkey is composed of two modulators with A(H)D, A(S)R and Loop modes. Length and shape of rising / falling edge can be adjusted manually as well as influenced by CV signals. At most, the module emits voltages of 0..+10v. Additionally the circuits generate a trigger signal after each envelope cycle.

Furthermore, they produce gate voltages while active. Besides control inputs, each modulator features a button for manually starting the corresponding envelope.

There are two channels with almost identical functions.

# 2. Hardware / Connection

## 2.1. Module overview

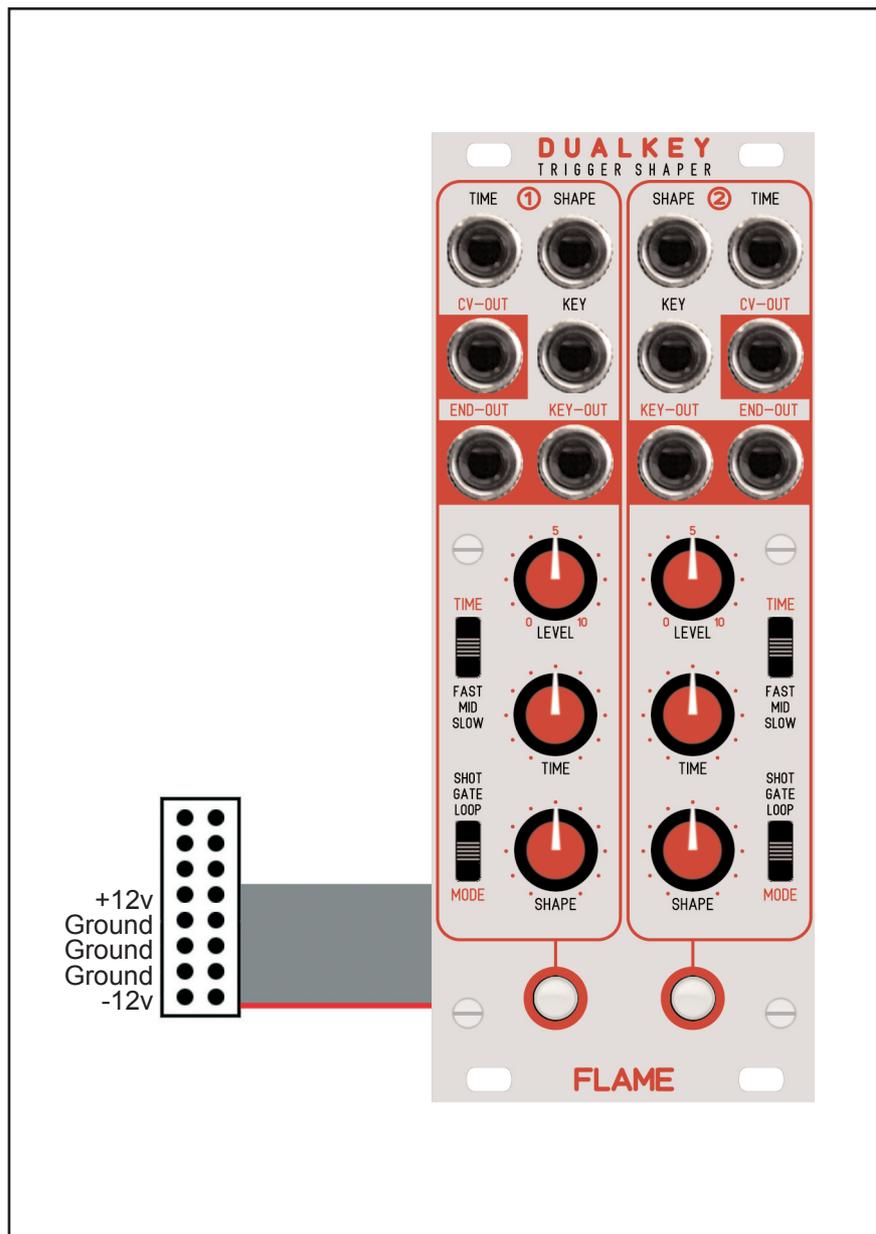


## 2.2. Connection to the modular system (Doepfer Bus)

The module is delivered with a connected ribbon cable for the Doepfer bus. The red lead marks -12 volt. Connecting the module please note the right polarity!

If the module is poled accidentally wrong safety diodes avoid the immediate destruction of the module but further damages cannot be expected.

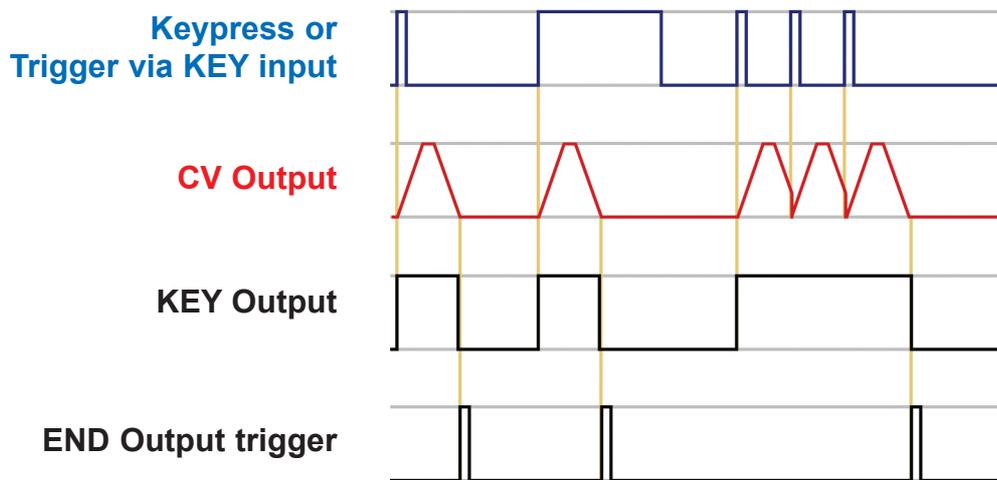
**So please pay attention: Check the connection various times before switching on!**



## 3. PLAY MODI

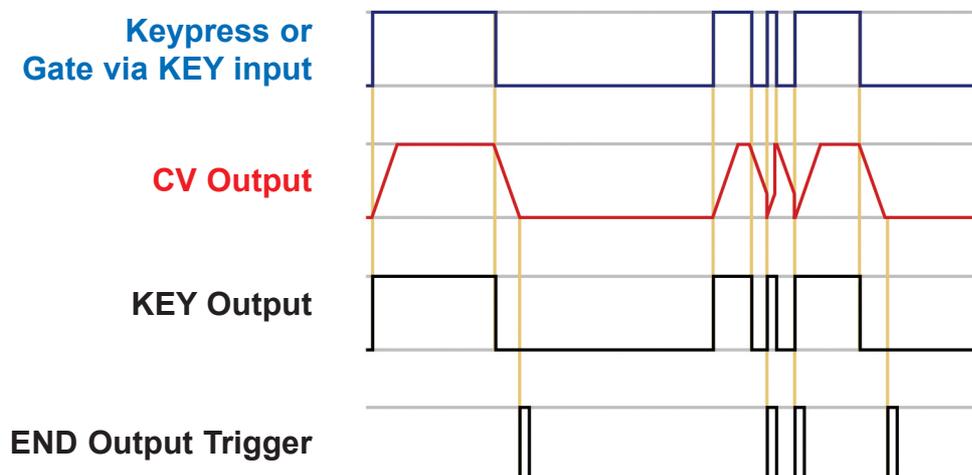
### 3.1. Mode ONE SHOT

Keypress (or Trigger via KEY input) starts the envelope (voltage via CV output jack). The envelope plays only one-time and create after the end a short trigger impuls via the END output jack. Reset the envelope, if you press again the key and while still play the envelope (Retrigger). Set the length of the envelope with POT TIME, set the shape with POT SHAPE and set the output level with POT LEVEL.



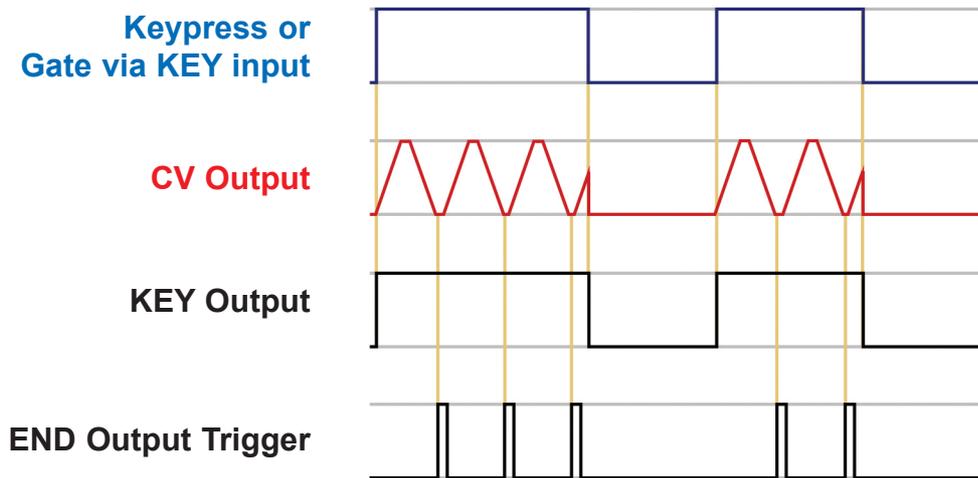
### 3.2. Mode GATE

Keypress (or High level via KEY input) starts the attack phase of the envelope (voltage via CV output jack). While hold down the key, the CV output keep up the output level. Let loose the key for starting the release phase. The envelope create after the end a short trigger impuls via the END output jack. Reset the envelope, if you press again the key and while still play the envelope (Retrigger). Set the length of the envelope with POT TIME, set the shape with POT SHAPE and set the output level with POT LEVEL



### 3.3. Mode LOOP

Play the envelopes in loop while hold down the key (or high level via KEY input). Each envelope create after the end a short trigger impuls via the END output jack. Set the length of the envelopes with POT TIME, set the shape with POT SHAPE and set the output level with POT LEVEL.

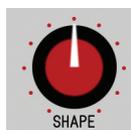
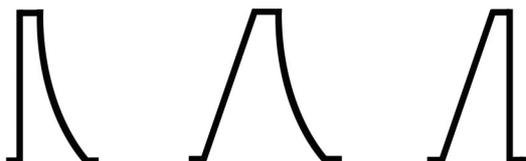


## 4. PARAMETER

### 4.1. SHAPE (shape of envelope)

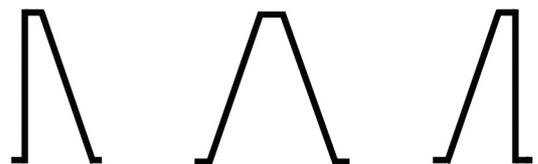
POT SHAPE set the shape of the envelope. Please note the logarithmic release of channel 1. If you use the SHAPE CV input, then the POT is an attenuator of the CV input. Set the level of the CV output of the envelope between 0..+10v via the POT LEVEL.

CHANNEL 1



Attack = linear  
Release = logarithmic

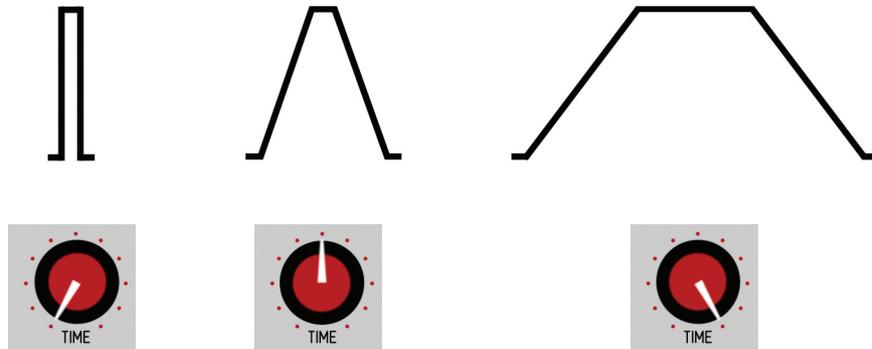
CHANNEL 2



Attack = linear  
Release = linear

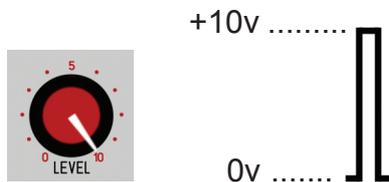
## 4.2. TIME (duration of envelope)

POT TIME set the duration of the envelope. There are three ranges between 1ms..1min, selectable with the TIME range switch . If you use the TIME CV input, then the POT is an attenuator of the CV input.



## 4.3. LEVEL (voltage output level )

POT LEVEL set the peak value of the envelope output jack. The range is between 0..+10v.



## 4.4. END-OUT (Trigger OUT)

After the end the envelope create a short trigger impuls (duration 10ms) via the output jack END. You can use this impuls for retrigger the other channel of the module for link the booth envelopes (MODE ONE SHOT).

## 5. Appendix

### 5.1. Technical details

#### Connections:

Ribbon cable adapter for Doepfer bus +/-12Volt	
KEY input:	Gate/Trigger 0/+10v (signal threshold ca.1,3v)
KEY output:	Gate/Trigger 0/+10v
TIME CV input:	CV input TIME 0..+5v
SHAPE CV input:	CV input SHAPE 0..+5v
End-Out trigger:	Trigger output (duration ca. 10ms)
CV-Out:	Voltage Output of the envelope 0..+10v (adjustable via LEVEL)

#### Control elements:

SHAPE:	AR envelope (Release of channel 1 logarithmic, channel 2 linear)
TIME:	Duration of envelope (3 ranges ca. 1ms..1min)
LEVEL:	Channel output level 0..+10v
4x three-stage switches (Time Range, Mode)	

**Current consumption:** ca. + 40mA / - 5mA

**Size:** Euro rack format 3U / 10HP 50,5x128,5mm

### 5.2 Warranty

Beginning from the date of purchase a 2-year warranty is guaranteed for this device in case of any manufacturing errors or other functional deficiencies during runtime. The warranty does not apply in case of:

- damage caused by misuse
- mechanical damage arising from careless treatment (dropping, vigorous shaking, mishandling, etc)
- damage caused by liquids penetrating the device
- heat damage caused by overexposure to sunlight or heating
- electric damage caused by improper connecting  
(wrong power supply/ jacks/ MIDI connections/ voltage problems).

If you have any complaints please contact your dealer or send an e-mail to:  
[service@flame.fortschritt-musik.de](mailto:service@flame.fortschritt-musik.de)

### 5.3 Terms of production

conformity: CE, RoHS, UL

### 5.4 Disposal

The device is produced with RoHS-conformity (subject to the regulations of the European Union) and is free of hazardous substances (like mercury, plumb, cadmium and hexavalent chrome). But electronical scrap is hazardous waste. Please don't add this to consumer waste. For an environment friendly disposal of waste please contact your distributor or specialist dealer.

### 5.5 Support

Updated and additional informations, updates, downloads and more see:  
<http://flame.fortschritt-musik.de>

### 5.6 Acknowledgment

For help and assistance big thanks to:  
Alex4 Berlin, Schneiders Büro Berlin, Robert Junge, Anne Metzler und Ebotronix.