

SoundGraffiti Dimmer Pack 2.1

User Manual



Description

- [Tuning and adjustment](#)
- [Installation](#)
- [Write parameters to device](#)
- [Upgrade firmware](#)

1. SoundGraffiti Dimmer Pack 2.1 – a standalone device operating with the SoundGraffiti algorithm. The device converts input sound signal to DMX512 output for light dimmers.

=====

- The original SoundGraffiti algorithm (based on SoundGraffiti Dimmer program algorithm)
- Up to 16 DMX512 channels output
- DMX512 input/output. Insert/mixed SoundGraffiti frame to/with input frame (see User Manual)
- Sound signal input
- Upgradeable firmware
- Change/save parameters of algorithm on PC and record it to the device
- Drivers for Windows 2000/XP/Vista
- Adjustment for signal and noise levels
- Control indicators (16 channels + 3 levels + control)

Input/Output Protocol: DMX512 (**DMX input must be terminated by external 120Ω 0.5W resistor**)

- Input/Output DMX connectors: standard 5 pin "XLR"

=====

- The firmware program may be changed according to your wishes (especially for useful items)

We can help you customize the parameters of algorithm for your music

=====

- In the case of technical failure (fault of the manufacturer during, 2 years), the device will be replaced by a working device or you'll get a refund (the device must be send to the manufacturer, postage back to the buyer, PayPal only)

=====

- Size: 134x135x51 mm
- Weight: 0.2 kg
- Power: 1.5 W (from USB port of computer or from power supply 5V/300mA)

=====

- The order includes:

SoundGraffiti Dimmer Pack 2.1

2. Power supply AC-DC 5V/500mA (110-250 VAC, 50/60 Hertz - Europlug 250 V unearthed).

Replacement USB Cable (mini USB)

Audio Connectors (plug) 3.5mm

=====

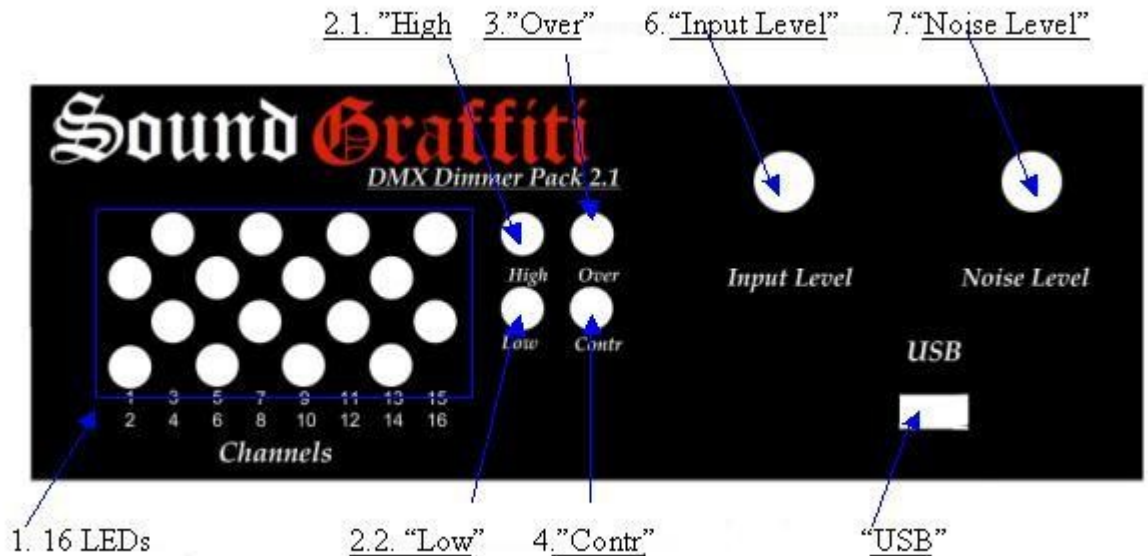
Output DMX frame:

Break – 140uS,

MaB – 180uS ,

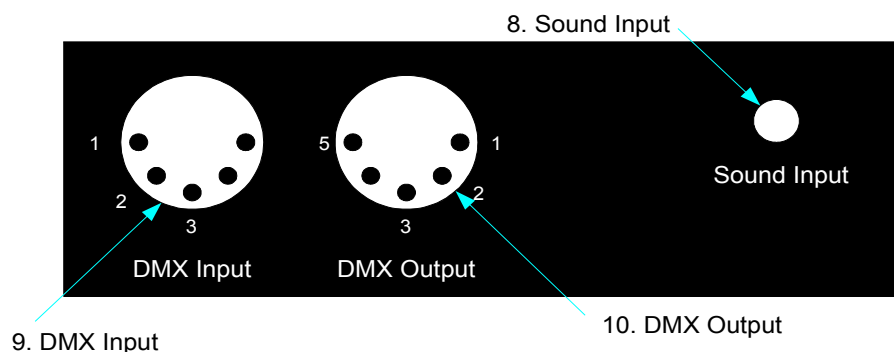
Refresh rate – 20Hz

Front panel



On the front panel are:

1. 16 LEDs – indication of work of output channels.
2. LEDs "High" and "Low" – indication of a level of a signal (accordingly high and low).
3. LED "Over" – indication of an overload on an input.
4. LED "Contr" – control indication.
5. Socket "USB" – Connection to power supply or to the USB port of a PC.
6. Controller "Input Level" – regulation of a level of an input signal.
7. Controller "Noise Level" – regulation of noise level.



On the back panel are:

8. Connector "Sound Input" – Input sound signal
9. Connector "DMX Output" (male) –
pin 1 – GND (0 V)

pin 2 – D- (data -)
pin 3 – D+ (data +)
pin 5 – C , control (see [Write parameters to the device](#)):

10. Connector “DMX Input” (female) -
pin 1 – GND)V)
pin 2 – D- (data -)
pin 3 – D+ (data +)

Tuning

The tuning and adjustment are made on site, for a particular level of a signal:

- 1.1. Set up “Sound Input” on a maximum (large) level of a signal.
- 1.2. Set the controller " Input Level" to right position.
- 1.3. Turn left the controller " Input Level", while at the LED "Over" lights up (from time to time. Continuous light means an overload of input signal).
- 1.3. Set “Sound Input” on a low level of a signal (level noise).
Noise Level defines the difference between music and pause, and turns out the lights during a pause. (see also “[Parameter Noise Level](#) ”).
- 1.4.1. Set the controller "Noise Level" in right position
- 1.4.2. Turn left the controller "Noise Level", while the LED " Low " lights up.

Software

1. Installation

Run "SetupSoundGraffitiDP21.exe" and follow the wizard.

2. Write parameters to device - SGDImPakParWr_2_1.exe

- 2.1. Connect (reconnect) device cross USB cable to computer.
- 2.2. Run program **SGDimPakParWr_2_1.exe**.
- 2.3. Change parameters and save them.
- 2.4. Write parameters to the device (button "**Write param to chip**").
(point 2.3. and 2.4. may be repeated as many times as needed)
- 2.5. Exit.

Program SGDImPakParWr_2_1.exe:

The screenshot shows the 'Write parameters to device' window of the SoundGraffiti Dimmer Pack 2.1 software. The interface includes a menu bar (File, USB, Tools, Help) and a grid of input fields for various parameters. Below the grid are sections for 'DMX Input' and 'Test' settings, a file path field, and a 'Write param to chip' button. At the bottom, there are buttons for 'Disconnect', 'Erase firmware', 'Get State', and 'Exit'. The status bar at the very bottom shows 'Vers: FW5GDP2.1 0904151' and 'State connection - Update Parameters'.

Parameter	Value	Parameter	Value	Parameter	Value
SG Number Channels	5	Sens	0,7	Coef Min	250
DMX StartByte	10	Tempo	0,2	Coef Plus	0
DMX_OutMin	200	Channels	90	Pos Max	20
Size DMX Output	5000	FreqH	10	Pos Min	5
	50	AvLevAmpl	0,8	Pos Plus	
	85	Noise Level	0,2	Pos Minus	

DMX Input: 3. DMX Input Channel
Address DMX Input Master Byte: 3
DMX Address Songgraffiti Frame: 2

Test: None
Channel Number: 1
Channel Data: 1

File path: C:_Beatles.in

Buttons: Write param to chip, Disconnect, Erase firmware, Get State, Exit

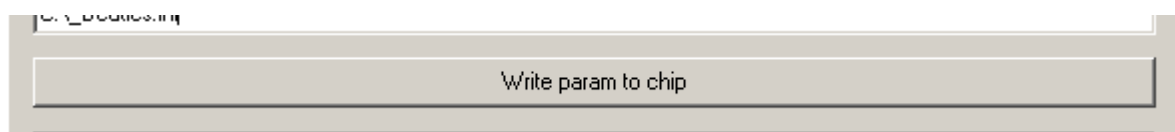
Status: Vers: FW5GDP2.1 0904151 | State connection - Update Parameters

Description of the program windows:

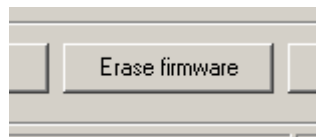
Location of initialization file:



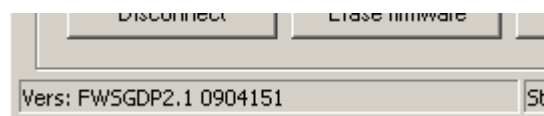
Button for writing the parameters to the device:



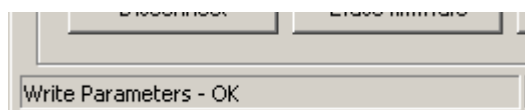
Button for erasing the firmware in the device and changing the work mode of the device. After this mode you only can update firmware (restart of the device is necessary):



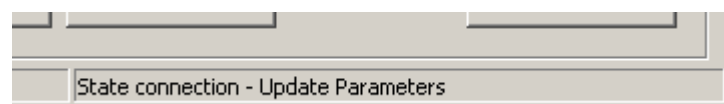
Firmware version in the device:



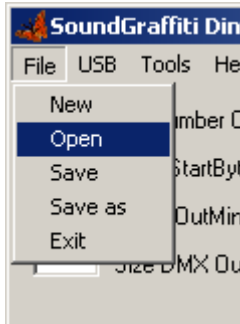
or as a result of change:



State of connection – connection in the “Update parameters in the device” mode:

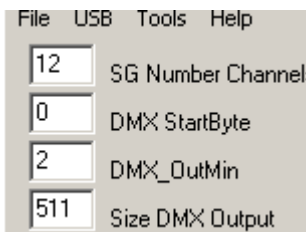


1.1. Menu



Choose and open a file with parameters initialization and save it.

1.2. DMX group parameters



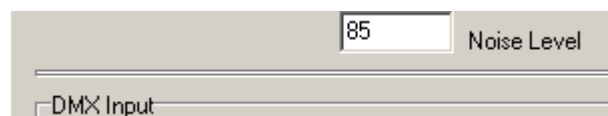
SG Number Channels – The number of output channels for SoundGraffiti algorithm.

DMX StartByte – Start Code of DMX512 (default zero)

DMX OutMin – Minimal value of signal for dimmers

Size DMX Output – size of DMX frame output (if input DMX is disabled, Size of DMX Output = SG Number Channels)

1.1. Parameter “Noise Level”



“Noise Level” defines the difference between music and pause, and turns out the lights during pause.

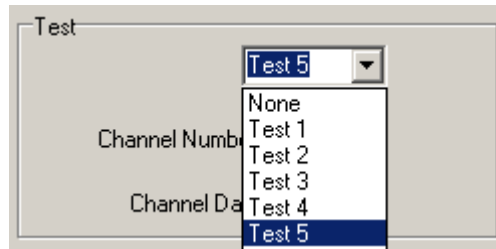
If “Noise Level” is zero, adjustment is made by the controller [“Noise Level”](#) on the front panel.

1.2. The rest of the parameters

The rest of the parameters are necessary for SoundGraffiti algorithm and there is no need to change them.

1.3. Test

You may choose 5 modes of testing the DMX output channels:



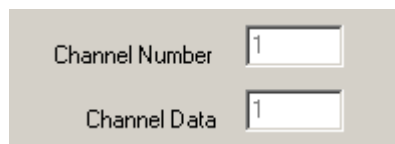
Test 1 – All channels turned on

Test 2 - All channels turned off

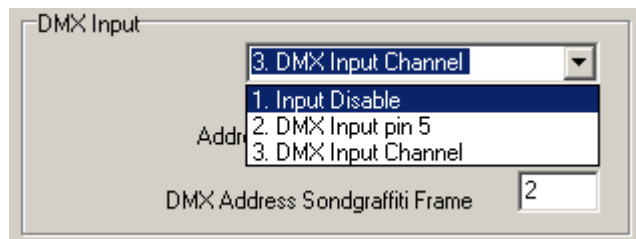
Test 3 – Sequence: every channel turned on from 1 to “SG Number Channels” (periodically)

Test 4 - All channels increase brightness (periodically)

Test 5 – Set level of brightness (Channel Data) for selected channel (Channel Number)



1.3. DMX Inputs:



Select between 3 modes for input of DMX data:

1. Input of DMX data disabled (ignored)

2. Control of DMX input/output by pin 5 of connector “DMX Output” on back panel.

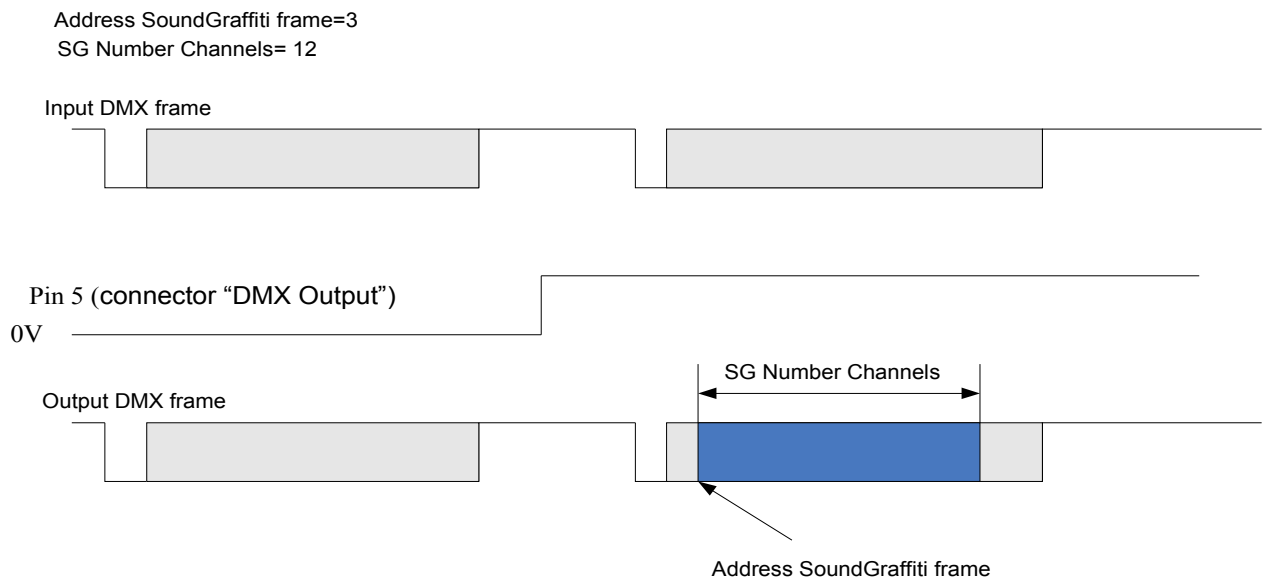
DMX Address Soundgraffiti Frame

2

In “DMX Address SoundGraffiti frame” define the place of DMX SoundGraffiti frame in input frame,

When pin.5 is off (free/3-5 V). DMX SoundGraffiti frame replaces the data (size of [SG Number Channels](#)) in input frame, by the data of SoundGraffiti from the address “DMX Address SoundGraffiti frame”, and sends data to DMX output.

When pin.5 is on (0V/connent to GND), all data from DMX input is sent to DMX output.



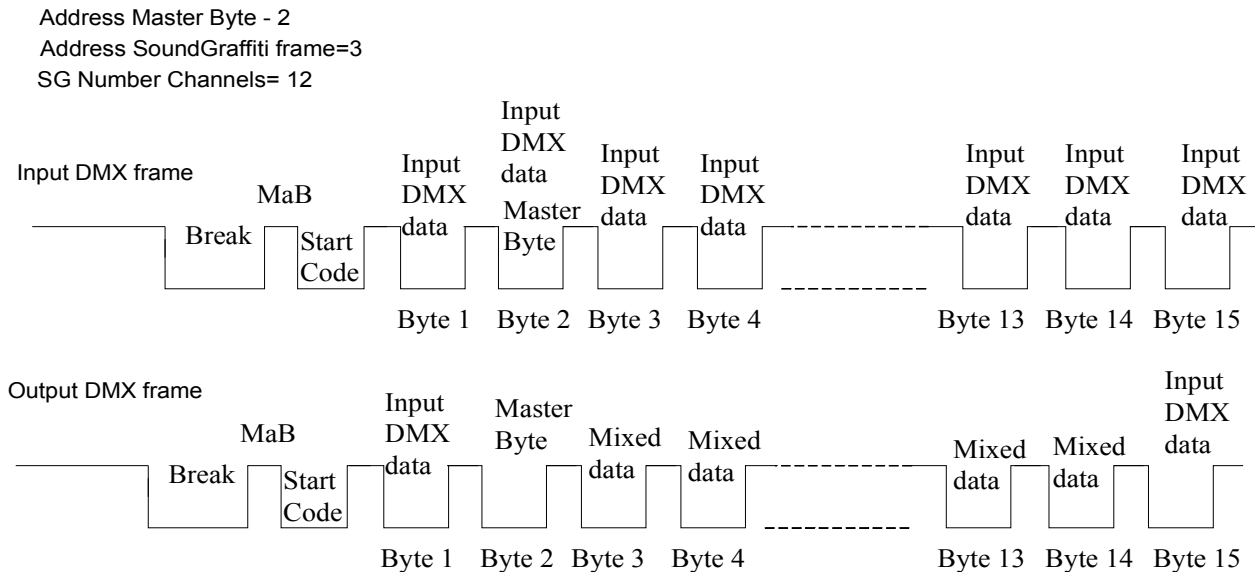
3. Control DMX input/output by data from DMX input:

Byte, defined by “Address DMX Input Master Byte”, determines the level of mixed input DMX data and SoundGraffiti data:

Address DMX Input Master Byte

For example: if “DMX Input Master Byte” equals to 25 (10% from 255), on output a signal will be sent with 10% from the DMX data input and 90% from SoundGraffiti data.

Example Mixed data.

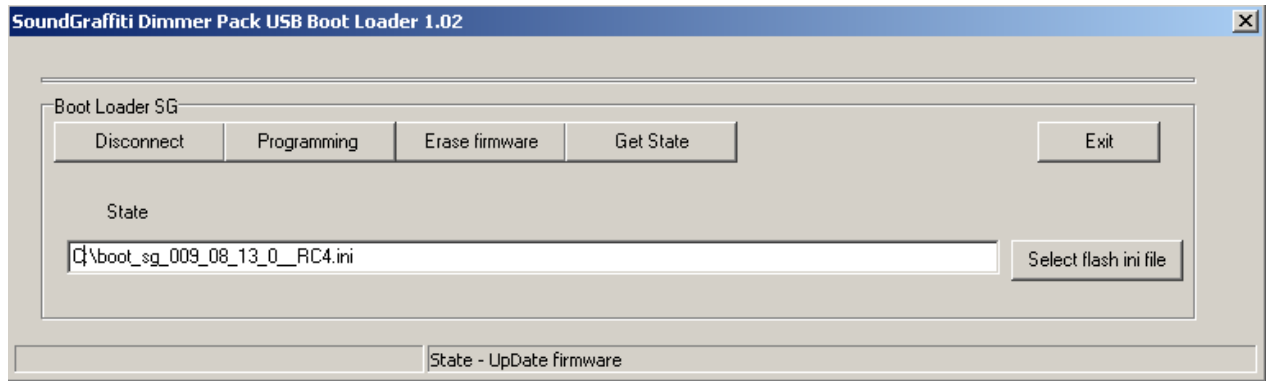


"Mixed data byte 4" = "Input DMX data Byte 4" x (Master Byte) + "SoundGraffiti data byte 2" x (255- Master Byte)

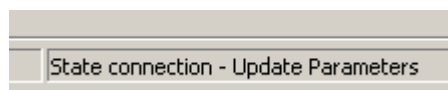
2. Upgrade firmware

2.6. Connect (reconnect) device cross USB cable to your PC.

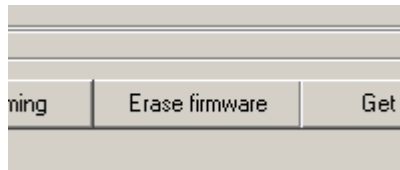
2.7. Run program `SGDimPakUpdate_2_1.exe`.



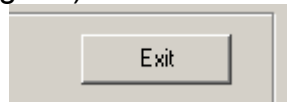
2.8. If you see “State Connection – Update Parameters”:



2.8.1. Press Button “Erase firmware”



2.8.2. Press “Exit” (Close program)



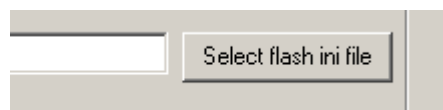
2.8.3. Reconnect device cross USB cable to computer

2.8.4. Run program SGDImPakUpDate_2_1.exe again

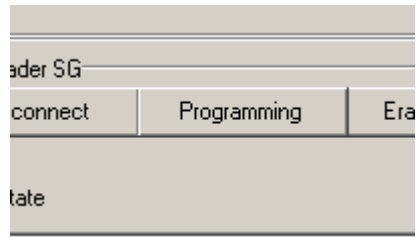
2.9. You must see “State – UpDate firmware”:



2.10. Select the upgrade file (Press button “Select flash ini file”).



2.11. Press button “Programming”:



2.12. Press “Exit”.