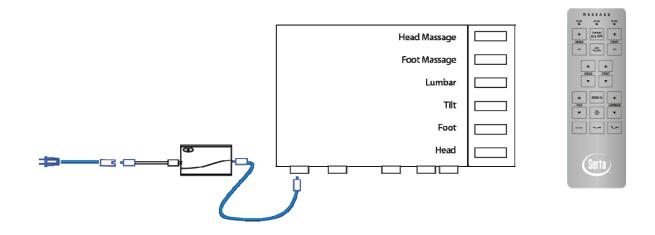


# **Control unit 900 Series**



mounting + operating

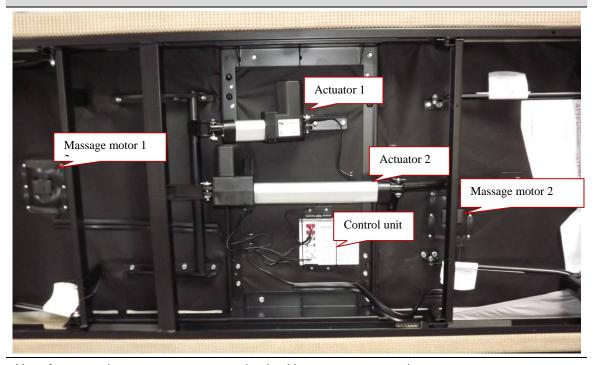


# 1 Overview

This control unit is designated to operate an electrically driven bed with optional comfort functions.

- Power supply is provided via SMPS so the control box has protection class III.
- The system is operated with an RF remote. The RF receiver is integrated into the control unit.

# Bed view from beneath



Here for example you can see a control unit with two actuators and two massage motors connected

October 31, 2012 Page 2 of 12



# 2 Mounting the control unit

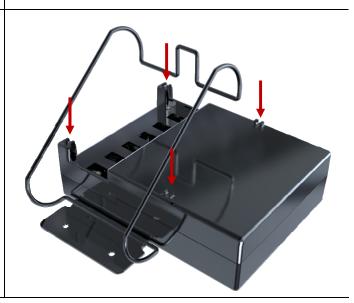
This mounting bracket is fixed on the flipside of the bed



These two bolts fix the position of the control unit between the mounting bracket.



The clip snaps in the holding fixtures of the control unit

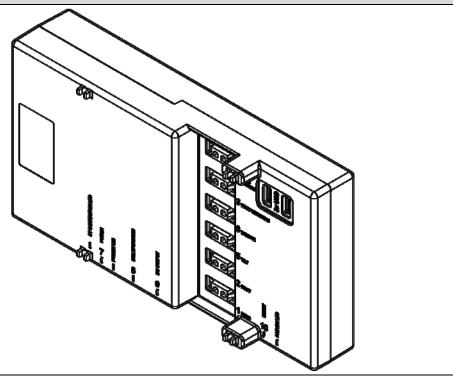


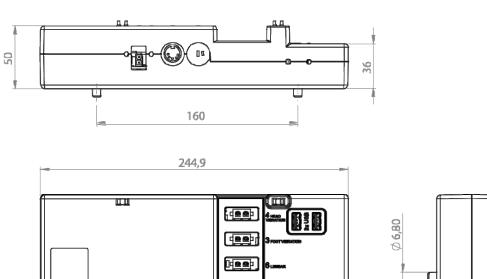
October 31, 2012 Page 3 of 12



# Control Unit 258-4

# 2.1 (with integrated *Bluetooth*® module)





October 31, 2012 Page 4 of 12

Performance data control unit			
Duty cycle	2/18 min. or 10 %, max, 5 switching cycles per minute		
Output voltage	29 V / 6A		
Further features			
Housing colour	black RAL 9005		
Housing material	ABS + PC		
Ports	drives: 4 actuators / 2 vibration motors 1 power input / 1 multifunction output / 2 USB ports /1 DC output		
Indicators + buttons	Reset + pairing button / Pairing LED for RF Power LED		
Protection type	IP20		
Protection class	III		
Relative humidity	30% - 75%		
Ambient temperature	+50°F - +104°F		
Power supply	external		
WT12 Bluetooth® module  Bluetooth module has been granted "Contains FCC ID: QOQWT12A "Contains IC: 5123A-BGTWT12A"	BIDE(SISO) WI12		

A). Operation Frequency: 2402-2480MHz

B). Modulation: GFSK, 1/4 II -DOPSK, 8DPSK+C). Number of Channel: 79 D). Channel space: 1MHz

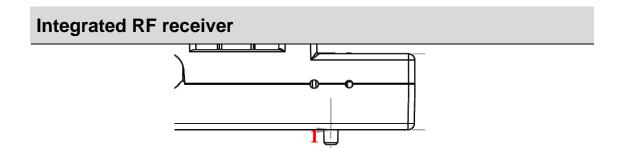
This

E). BIT Rate of Transmission: 1Mbps, 2Mbps, 3Mbps

F). Antenna Type: PCB antenna G). Antenna GAIN: 0.5dBi

October 31, 2012 Page 5 of 12



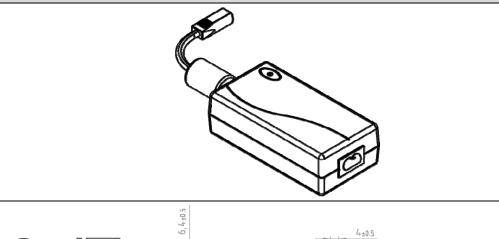


Key	Function
1	Pairing enable

Performance data RF receiver	
modulation	GFSK
Frequency Range	2.403~2.480GHz
Battery	30V supply voltage
Working Current	<60mA
Standby Current	<20mA
Ambient Temperature	-40—85°C
PCB Material & Size	FR4 1.6mm 120*120mm

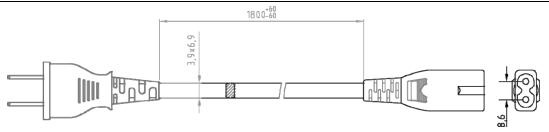
October 31, 2012 Page 6 of 12

# 2.2 Power supply 3.00.209.033.00





Connecting cable73178 to control box



Power supply cable 3.00.401.151.30 to mains power

Performance data		
Output voltage	29 V DC constant voltage output	
Components		
Indicators	LED operating status indication (green)	
Colour	black RAL 9005	
Further data		
Protection type	IP20	
Protection class	II	
Relative humidity	30% - 75%	
Ambient temperature	+50°F - +104°F	
Power supply	wide input voltage range 100-240 V AC	
Safety	NTC temperature sensor, thermal fuse, current sensing and limitation by control circuit, self resetting current limiting fuse on primary side as double safety, not self resetting	

October 31, 2012 Page 7 of 12



# **Remote Control 258D**

Frontside	Key	Function
M A S S A G E	1	Massage Head +
1 • • 2 • 3	2	Massage timer ON/OFF
4+ TIMER/ ALL OFF 5+ 6	3	Massage Foot +
8 10 S	4	Massage Head -
11 HEAD FOOT 12 13	5	Start all Massage
14 15	6	Massage Foot -
17₄ złRo g 19₄ TILT  →   LUMBAR  ▼	7	Relay 1 on
	8	Relay 3 on
	9	Relay 2 on
	10	Relay 4 on
Serta	11	Relay 5 on
	12	Position Zero G
Pairing button & battery box (flipside)	13	Relay 7 on
Insert 3x AAA	14	Relay 6 on
	15	Light ON/OFF
	16	Relay 8 on
	17	Position All flat
	18	Position Lounge
	19	Position TV/PC
	20	Pairing

October 31, 2012 Page 8 of 12



Performance data remote (RF transmitter)		
Modulation	GFSK	
Frequency Range	2.403~2.480GHz	
Battery	AAA	
Working Current	<40mA	
Standby Current	<8uA	
Ambient Temperature	-40—85°C	
RC Dimension	145*50*14mm	
PCB Material & Size	FR4 1.6mm 79*42mm	
Housing Material	ABS+PC	

October 31, 2012 Page 9 of 12



# 3 Board Schematics (remote)

# 3.1 Remote The state of the st

# 3.2 RX module

Pls insert diagram

October 31, 2012 Page 10 of 12



# 4 Functional Description

Take cable 3.00.401.151.30 and connect it to mains supply.

## The system is delivered paired!

You can test the functions of the system with the RF remote.

### Pairing instruction (in case of trouble)

Pairing the remote with the control box.

The distance between remote and control box for pairing should be less than 2 meters!

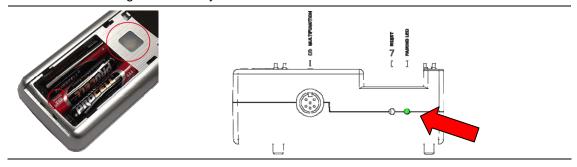
- 1. Remove the battery cover on the flipside of the remote.
- 2. Insert/check existing 3x AAA batteries.
- 3. Push the reset button on the control box twice with something spiky. The green pairing LED adjoining is lit.

Now you have 10 s to pair remote and receiver.

4. On the flipside of the remote is a silicone push button positioned above the batteries (13).

A blue LED starts blinking as the button is pressed.

Keep it pressed until the blue LED is lit continuously, then pairing is completed, the blue LED light fades away.



### IC warning

### - English:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### - French:

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement."

RSS-102 Statement: This equipment complies with Industry Canada radiation exposure limits set forth for an uncontrolled environment.

Déclaration CNR-102: Cet équipement est conforme à l'exposition aux rayonnements Industry Canada limites établies pour un environnement non contrôlé.

October 31, 2012 Page 11 of 12



### FCC Warning:

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- -- Reorient or relocate the receiving antenna.
- -- Increase the separation between the equipment and receiver.
- -- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- -- Consult the dealer or an experienced radio/TV technician for help.

### \* RF warning for Portable device:

The device has been evaluated to meet general RF exposure requirement.

The device can be used in portable exposure condition without restriction.

October 31, 2012 Page 12 of 12