

DN-SE10

DIMENSION SHIFTER

Expression Strap

User's Guide

Official DIMENSION SHIFTER website

<https://www.casio.com/us/dimensionshifter/>

- Features of this Product, How to Use this Product
- Customer Support (User's Guide, repairs, Q&A, inquiries, etc.)



Contents

Official DIMENSION SHIFTER website	1
Safety Precautions	3
Additional Information	9
Notes on Using the Product	9
Checking the Components and Accessories	10
Component Names	11
Receiver	11
Transmitter	13
Attaching the Silicone Cover	14
Getting Ready to Use the DIMENSION SHIFTER	15
1: Attaching the transmitter to the guitar	15
2: Adjusting the tension	15
3: Pairing	16
4: Connecting to the effector EXP/CTL terminal	16
5: Checking the connections	18
6: Adjusting the expansion and contraction (calibration)	18
7: Auto Power Off function	19
Specifications	20
Trademarks	20
Precautions When Using Bluetooth Functions	21
Precautions when Disposing of This Product	21
Open Source Software	22

Safety Precautions

Thank you for selecting this CASIO product.

Before using the instrument, be sure to carefully read through the instructions contained in this leaflet.

Please keep all information for future reference.



WARNING

Indicates something that creates the risk of death or serious personal injury.



CAUTION

Indicates something that creates the risk of minor personal injury or physical damage.

Symbol Examples



The (⊘) symbol indicates something you should not do.
(Symbol to the left means "Do not disassemble.")



The (⚡) symbol indicates something that requires caution.
(Symbol to the left means "Electrical shock caution.")



The (⏻) symbol indicates something you must do.
(Symbol to the left means "Unplug the power plug.")



WARNING

Battery Precautions



Should fluid leaking from a battery get on your skin or clothing, immediately rinse it off with clean water.

Battery fluid getting into the eyes creates the risk of eyesight loss, etc. Rinse the eyes and then immediately contact a physician.



Keep batteries away from children.

Should a child swallow a battery accidentally, immediately contact a physician.

Small Parts



This product includes small parts. Such parts create the risk of accidental swallowing and suffocation.

WARNING

AC Adaptor



Observe the precautions below in order to avoid AC adaptor fire and electric shock.

- Do not use any adaptor for the receiver other than a DC 9V center negative AC adaptor rated to at least 500 mA.
- Use the AC adaptor only with the device specified for it.
- Do not plug the power cord into an outlet with the wrong voltage rating.
- Do not plug into an overloaded extension cord or power outlet.
- Do not cover the power cord with a blanket or other material during use, and keep it away from heating devices.
- Do not place heavy objects on the power cord and do not leave it bundled during use.
- Do not locate any objects in the vicinity of the power plug and keep it easily accessible so it can be unplugged in case of an emergency.
- Do not subject a power cord to heat or attempt to modify it, and avoid damaging it.
- Do not subject the power cord to excessive bending, twisting, or pulling.
- Make sure the power cord is not pinched between the wall and the rack or table where the product is located, and never cover the power cord with a cushion or other object.



Do not use the AC adaptor while it is wet.*

* Avoid water, sports drinks, seawater, animal or pet urine, and other liquid.

Liquid creates the risk of fire and electric shock.

Do not place a flower vase or any other liquid container on top of the AC adaptor or power cord.

Water creates the risk of fire and electric shock.



Do not touch the plug with wet hands.

Doing so creates the risk of electric shock.



Do not use the AC adaptor or power cord if they are damaged.

Continued use creates the risk of fire and electric shock.



Before leaving the product unattended, unplug the AC adaptor from the power outlet, and move the product to a location away from animals and pets.

Pet chewing or urine can cause shorting, which creates the risk of fire.

WARNING

Storage and Operation Locations



Do not store or use the product in any of the locations described below.

Doing so creates the risk of fire and electric shock.

- Areas subjected to large amounts of moisture and dust
- Food preparation areas, near a humidifier, or in areas where the product is exposed to oil smoke or water vapor
- Near a heating device, on an electric carpet, in a location exposed to direct sunlight, in a car parked outside, or any other area where the product is subjected to high temperatures.
- Anywhere outdoors



Do not place the product on an unsteady platform, on a high shelf, or in any other unstable location.

Dropping and tipping over create the risk of personal injury.



Do not place heavy objects on the product.

Dropping and tipping over create the risk of personal injury.

Abnormalities (Smoke, Odor, Heat Generation, etc.)



Do not use the product if it is emitting smoke, odor, heat, or exhibiting any other abnormality. Do not use the product after it has been dropped or otherwise damaged.

Doing so creates the risk of fire and electric shock. Immediately perform the steps below.

1. Turn off power.
2. If you are using an AC adaptor, unplug its power plug from the power outlet.
3. Contact your original retailer or a CASIO Service Center.

Disassembly and Modification



Do not attempt any disassembly or modification. For any internal inspection, adjustment, or repair, contact your original retailer or a CASIO Service Center.

Doing so creates the risk of electric shock, burn injury, and personal injury.

Suffocation and Choking Risks



Do not place any plastic bag that comes with the product over your head or in your mouth.

Plastic bags create the risk of suffocation when placed over the head, when swallowed, etc. Particular care is required in areas where young children are present.

WARNING

Avoiding Water and Foreign Matter



Do not allow water, other liquids (sports drinks, seawater, animal or pet urine, etc.), or foreign objects (metal fragments, etc.) to get into the product or the AC adaptor. Should any such matter get into the product, immediately perform the steps below.

Continued use creates the risk of fire and electric shock.

1. Turn off power.
2. If you are using an AC adaptor, unplug its power plug from the power outlet.
3. Contact your original retailer or a CASIO Service Center.



Do not locate a flower vase or other liquid container on top of or next to the product or AC adaptor.

Liquid spilling from a container creates the risk of fire and electric shock.



Do not operate with wet hands.

Doing so creates the risk of electric shock.

In the case of a lightning storm, do not touch the device plugged into the power outlet.



Lightning creates the risk of electric shock.

Effect on Other Electronic Devices



When using the product in a medical facility or aircraft, follow the instructions of local personnel and crew concerning use of such devices. Do not use the product in an area where use of such devices is prohibited.

Electromagnetic waves and other signals emitted by this product may affect measuring instruments and create the risk of accident.



Do not use the product in the vicinity of high-precision electronic equipment or any electronic equipment that handles weak signals.

Doing so can cause misoperation and other problems in the electronic equipment, and creates the risk of accident.







People fitted with a cardiac pacemaker should consult their physician before using this device.

Cardiac pacemakers and similar devices can be affected by electromagnetism. Should anyone fitted with a cardiac pacemaker or other medical device ever experience any abnormality, move the product away and contact a physician.

CAUTION


Battery Precautions

-  **Observe the precautions below. Failure to do so can cause a battery to rupture, creating the risk of fire, personal injury, and soiling of nearby objects by leaking fluid.**
 - Do not try to take a battery apart and never allow a battery to become shorted.
 - Do not charge a non-rechargeable battery.
 - Do not mix old and new batteries.
 - Do not mix different battery types.
 - Do not expose a battery to heat or throw it into fire.
 - Use only the specified type of battery.
 - Do not use a battery whose covering has been removed.
-  **Load a battery with its poles (plus (+) and minus (-)) facing correctly.**
 - If you do not plan to use the product for a long time, remove batteries.
 - Replace the batteries as soon as possible after they go dead.
-  **Do not try to remove or replace the batteries if you have long fingernails.**

Doing so creates the risk of personal injury.
-  **Do not use a leaking battery.**







Doing so creates the risk of fire and electric shock. Immediately stop using the product and contact your original retailer or a CASIO Service Center.

Connections

-  **Connect only specified devices and items to connectors.**

Connecting to other devices and items creates the risk of fire and electric shock.

AC Adaptor

- Observe the precautions below in order to avoid AC adaptor fire and electric shock.**
- 
 - Insert the power plug into the outlet as far as it will go.
- 
 - After use, unplug the power plug from the power outlet.
- 
 - When unplugging the power plug, do not pull on the power cord. Grasp the plug.
- 
 - If you do not plan to use the product for a long time, unplug from the power outlet.
- 
 - At least once a year, unplug the power plug from the power outlet and use a dry cloth to wipe away any dust buildup from the area between the prongs of the plug.
- 
 - Do not use detergent when cleaning the power cord, especially the power plug and jack parts.

CAUTION

This Product



Do not insert your hand or fingers into gaps in the product.

Doing so creates the risk of personal injury, and malfunction of and damage to the product.

User Maintenance



Before cleaning the product, turn off power and unplug the AC adaptor from the power outlet.

Failure to do so creates the risk of electric shock. Leaving the AC adaptor plugged in creates the risk of damage to the power cord, fire, and electric shock.



Battery Precautions

Observe the precautions below. Failure to do so can cause the battery to explode or leak flammable liquid or gas.

- Use only the type of battery that is specified for this product.
- Do not burn a battery or dispose of it in an incinerator, or by mechanical crushing or cutting.
- Do not subject a battery to excessively high or low temperatures during use, storage, or transport.
- Do not subject a battery to excessively low barometric pressure during use, storage, or transport.

Additional Information

- Do not use this product or its accessories for anything other than the intended purpose.
- Every effort has been made to ensure that the information provided in this User's Guide is correct. If you notice anything questionable or erroneous, do not hesitate to contact CASIO.
- Unauthorized copying or duplication of all or any part of this User's Guide is prohibited. Note also that, under copyright law, this User's Guide may not be used for anything other than the owner's individual use without prior authorization from CASIO COMPUTER CO., LTD.
- CASIO COMPUTER CO., LTD. accepts no liability whatsoever with respect to damages or lost income or any claims by third parties arising from the use of or faults in this product.
- CASIO COMPUTER CO., LTD. accepts no liability whatsoever for any damages or lost income resulting from the loss of data in memory due to a fault, repairs or any other cause.
- The screens and illustrations shown in the Startup Guide and User's Guide may differ from the actual product.

Notes on Using the Product

- Continued use of this product may result in looseness in the guitar's strap button. Because such looseness may cause the button's screw to dislodge, check that there is no looseness before using this product. If the strap button is loose, firmly tighten it with a screwdriver before use. Check also for splitting or tears in the strap before use.
- Be aware of your surroundings when using this product. Take care to avoid excessive movement when playing (jumping, etc.) as this could cause injury, damage to the guitar, or product faults or damage.
- Take care also not to subject your shoulders or arms to excessive strain due to extended use.
- Bear in mind that abrasion or chafing while using the product may lead to guitar damage, dents or peeling of the coating (particularly lacquer coatings).
- When not in use, remove this product from the guitar.
- This product is not built to be waterproof and should only be used indoors.
- When using the transmitter, take care not to trap your hair, skin or fingers in it.
- Do not connect the transmitter to anything other than the effector EXP/CTL terminal as doing so could cause damage.
- To avoid any risk of a fault occurring, set the receiver's "TRS switch **6**" and "Mode switch **7**" to the correct settings for your effector before connecting it to the transmitter.
- When attaching the transmitter and strap, check that you have securely locked the fasteners.
- AC adaptor
 - Connecting
 1. Insert the AC adaptor plug into the receiver.
 2. Plug the AC adaptor into a household power outlet.
 - Disconnecting
 1. Unplug the AC adaptor from the household power outlet.
 2. Pull the AC adaptor plug out of the receiver.

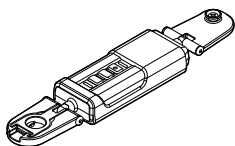
- Cleaning this product

- Clean this product by wiping it with a dry soft cloth. Tissues should not be used as they are too fragile.
- If you are concerned that the DIMENSION SHIFTER is dirty, gently wipe the surfaces using a soft cloth that has been moistened with diluted mild detergent and then wrung out firmly.
- Do not use cleaning solutions that include substances such as benzine, organic solvents or alcohol, chlorinated disinfectants, or alcohol-based antiseptic wipes as such materials can cause discoloration, material deterioration, or peeling and cracking of the coating material.

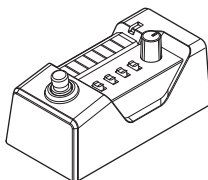
Checking the Components and Accessories

- DIMENSION SHIFTER components: 1

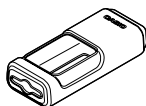
Transmitter



Receiver



- Silicone cover: 1



- Startup Guide

Equipment to be Provided by the User

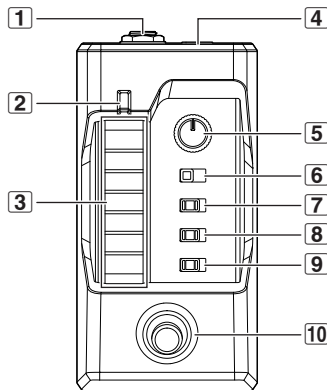
- AC adaptor: AD-0913S (DC 9V 1.3A center negative)
- 1/4-inch TRS cable: 1
- AAA alkaline batteries: 2

Optional Products

- AC adaptor: AD-0913S
Use only the designated AC adaptor

Component Names

Receiver



1 Output jack

Used for connecting a 1/4-inch TRS cable to output expression signals or external footswitch signals.

2 Power LED

Shows whether the receiver is powered on, the pairing state and sustain status.

3 Level indicator

Shows the signal output from the transmitter in realtime.

4 Power jack

Socket for the AC adaptor.

5 Minimum setting knob

Sets the minimum value for output signals when the expression pedal is used.

6 TRS type

Used to choose from 3 connection types according to the respective manufacturers' expression pedal plugs. (*1)

7 Mode switch

Switches between using the expression pedal and using the footswitch.

8 Type switch

Switches between using momentary and using latch.

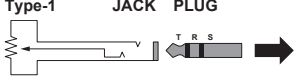


9 Polarity switch

Switches the output signal polarity.

10 Sustain switch

Sustains signal output when the switch is pressed and released. Holding down the switch cancels pairing.

*1 Connections to the pots for each number on the 1/4-inch TRS cable switch

Connection type	Approved models
<div><div>Type-1</div><div></div><div>JACK PLUG</div></div>	BOSS : GT-1000 Kemper : Profiler Stage STRYMON : NIGHTSKY
<div><div>Type-2</div><div></div><div>JACK PLUG</div></div>	ZOOM : G2 FOUR
<div><div>Type-3</div><div></div><div>JACK PLUG</div></div>	LINE6 : Helix floor

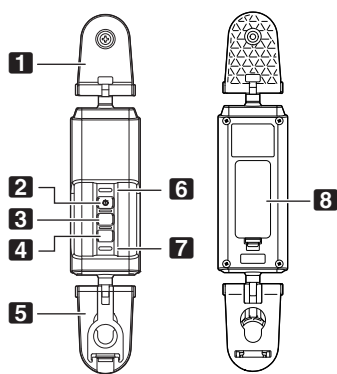
Valid as of July 2025

■ LED lit/flashing status (Receiver)

2 Power LED	Status
Off	Power off
Flashing green	Pairing with a transmitter with no pairing setting
Flashing cyan	Pairing with a transmitter set for pairing
Lit cyan	Outputs the connected transmitter's extension range in realtime.
Lit green	Outputs the extension range when the sustain switch is pressed.

- The LED colors may vary by individual unit.

Transmitter



- 1 Strap attachment**
- 2 Power button**
Turns the transmitter ON/OFF.
- 3 Reverse/Pairing button**
Press and release to reverse the signal polarity. Hold down to cancel pairing with the receiver.
- 4 Sustain/Calibration button**
Sustains signal output when the button is pressed and released. Holding down the button initiates calibration for extension and retraction.
- 5 Guitar attachment**
- 6 Power LED**
Shows whether the transmitter is powered on, its pairing status, the signal output sustain, and the battery level.
- 7 Reverse LED**
Shows the output signal polarity switching status.
- 8 Battery compartment cover**

■ LED lit/flashing status (Transmitter)

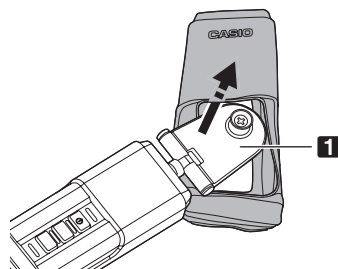
6 Power LED	Status
Off	Power off
Flashing green	Pairing with a receiver with no pairing setting
Flashing cyan	Pairing with a receiver set for pairing
Lit cyan	Sends the connected receiver's extension range in realtime.
Lit green	Sends the extension range when the Sustain/Calibration button 4 is pressed on the connected receiver.
Flashing two colors	The battery level is low

7 Reverse LED	Status
Off	Power off
Lit blue	The polarity of the extension range sent to the connected receiver is reversed.
Flashing green	Setting the minimum value of the extension range
Flashing blue	Setting the maximum value of the extension range

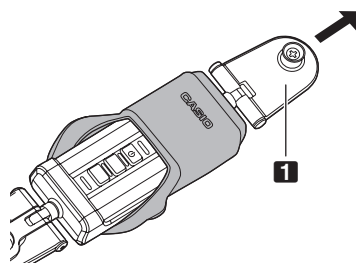
- The LED colors may vary by individual unit.

Attaching the Silicone Cover

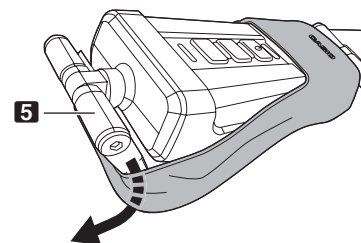
1. Insert the strap attachment **1** into the opening in the silicone cover with the CASIO logo.



2. Pull the strap attachment **1** out through the opening in the silicone cover with the CASIO logo.



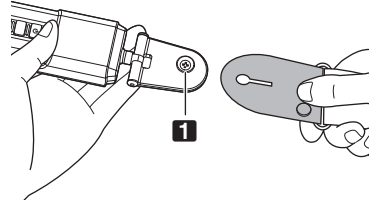
3. Pass the guitar attachment **5** through the opening in the other end of the silicone cover.



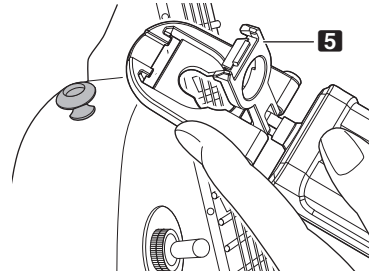
Getting Ready to Use the DIMENSION SHIFTER

1: Attaching the transmitter to the guitar

1. Open the battery compartment cover **3** and insert two AAA batteries, taking care that the battery polarities (\oplus/\ominus) are correct.
2. Fit the transmitter's strap attachment **1** to the guitar strap.

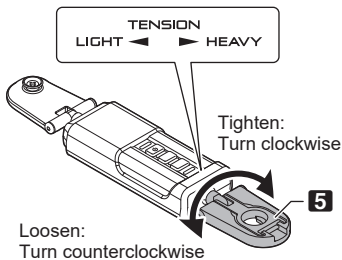


3. Fit the transmitter's guitar attachment **5** to the guitar.



2: Adjusting the tension

Adjust the tension by turning the guitar attachment **5** clockwise so that the weight of the connected guitar does not stretch out the transmitter. If the tension is too high and interferes with playing, you can also loosen the tension by turning it counterclockwise.



- When you reach the adjustment limits in either direction, the guitar attachment becomes more difficult to turn. When this happens, do not use excessive force to turn the attachment. Doing so could damage the product.

3: Pairing

When you turn the transmitter and receiver on, they automatically pair with each other. Use the following procedure to pair with another DIMENSION SHIFTER.

1. Hold down the Reverse/Pairing button **3** on the new transmitter you want to pair with for 3 seconds.
When the Power LED **6** flashes green, release the button.
2. Hold down the Sustain switch **10** on the new receiver you want to pair with for 3 seconds. When the Power LED **2** flashes green, release the switch.
3. The receiver and transmitter on which the Power LEDs are lit green are automatically paired. Pairing is complete when the respective Power LEDs turn cyan.
4. This pairing will be enabled from this point on.

4: Connecting to the effector EXP/CTL terminal

Preparation: Set up your effector beforehand so that it operates from the expression pedal or footswitch.

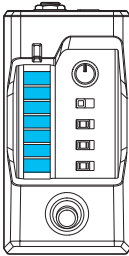
1. Connect the receiver's output jack **1** to the EXP/CTL terminal on your effector. Connect them using the 1/4-inch TRS cable.
2. To run the effector as an expression pedal, connect the receiver's mode switch **7** to PDL on the left. To run it as a footswitch, plug it into SW on the right.
3. Use your preferred setup for the minimum setting knob **5**, type switch **8** and polarity switch **9**.

Using a Footswitch

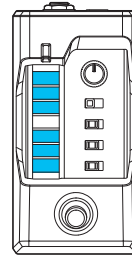
- When you use a footswitch, the tip and ring terminals on the TRS connector plugged into the output jack **1** can each be controlled independently.
- To use the tip terminal, extend the transmitter to its maximum position and then retract it in 2 seconds or less.
- To use the ring terminal, extend the transmitter to its maximum position and then hold it in that position for at least 2 seconds before retracting it.
- When you use a footswitch with the Polarity switch **9** set to NOR, the center LED on the level indicator **3** turns off when you hold the transmitter fully extended to the maximum position for 2 seconds or more. The LED turns on when the Polarity switch **9** is set to INV.

■ Level indicator **3** lit (footswitch used, MNT, NOR).

Transmitter max. position (up to 2 sec.)

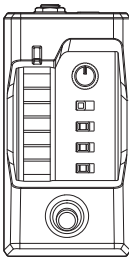


Transmitter max. position (2 sec. or more)

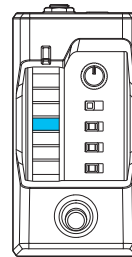


■ Level indicator **3** lit (footswitch used, MNT, INV or LCH).

Transmitter max. position (up to 2 sec.)



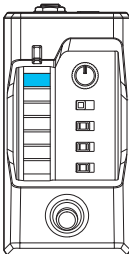
Transmitter max. position (2 sec. or more)



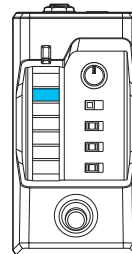
- When you use a footswitch, the switch function can be set to either Momentary or Latch depending on the Type switch **8** setting.
- In Momentary mode, the switch is very briefly ON just as the transmitter returns from the maximum position.
- In Latch mode, the switch toggles between ON and OFF each time the transmitter returns from the maximum position.
- In Latch mode, the level indicator **3** does not show the level in realtime as the transmitter is extended and retracted. When the tip terminal is ON, the top level lights. When the ring terminal is ON, the second level down lights.

■ Level indicator **3** lit (footswitch used, LCH).

Tip ON



Ring ON



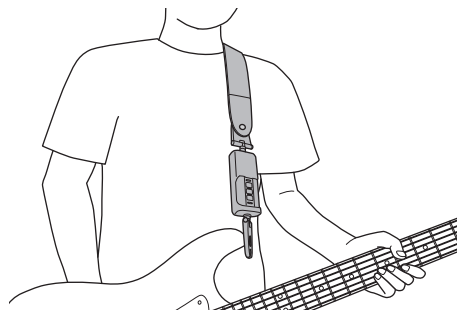
5: Checking the connections

If pressing down on the guitar neck extends and retracts the transmitter and the receiver's level indicator **3** lights up according to the amount of extension and retraction, the connection is secure.

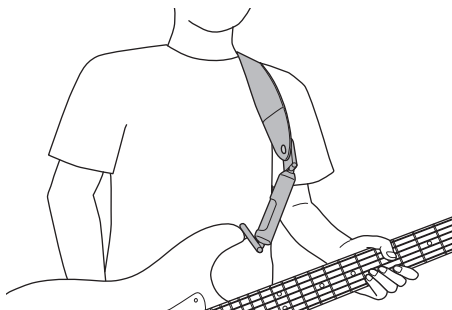
Caution

When playing the guitar or picking it up, always keep the transmitter in a straight line with the guitar attachment and strap attachment. Using the transmitter when it and the attachments are twisted could damage the DIMENSION SHIFTER or lead to an accident such as the attachment coming loose from the strap button.

OK



NG



6: Adjusting the expansion and contraction (calibration)

1. Press and hold the Sustain/Calibration button **4** for 3 seconds. When the Reverse LED **7** flashes green, release the button.
2. With the transmitter extended to the position you want to set as the minimum expression signal output, briefly press and release the Sustain/Calibration button **4**. The Reverse LED **7** starts flashing blue.
3. With the transmitter extended to the position you want to set as the maximum expression signal output, briefly press and release the Sustain/Calibration button **4**. The Reverse LED **7** reverts to the way it was lit prior to calibration.

7: Auto Power Off function

- If you enable the Auto Power Off function, the transmitter automatically shuts down if it is left unused for 20 minutes. The receiver also switches to Sleep mode. In Sleep mode, no expression signals or external footswitch signals are output. To cancel Sleep mode, briefly press the Sustain switch **10** on the receiver.
- If you disable the Auto Power Off function, the power is not automatically switched off.
- Pairing the receiver with the transmitter disables the Auto Power Off function. Once you have enabled the Auto Power Off function, using the pairing procedure again does not disable the Auto Power Off function.

Use the procedure below to set up the Auto Power Off function after pairing.

1. Hold down the transmitter's Reverse/Pairing button **3** and Sustain/Calibration button **4** at the same time (for 3 seconds).
 - The power LED **6** flashes twice and the function is enabled.
 - If you repeat the same procedure, the power LED **6** flashes once and the function is disabled.
2. With the receiver's minimum setting knob **5** in the center position and the Sustain switch **10** pressed, turn the minimum setting knob **5** from "min" (left) → "MAX" (right) and then → min (left) in that order.
 - The power LED **2** flashes twice and the function is enabled.
 - If you repeat the same procedure, the power LED **2** flashes once and the function is disabled.

Important Notice

If Auto Power Off is set to Off, this product does not automatically turn off and continues to use power.

Specifications

	Transmitter	Receiver
Output terminals	–	Expression output, switch output (6.3mm stereo jack)
Communications standard	Bluetooth® 5.1	
Communication range	Max. 10 m *Varies depending on the ambient environment	
Latency	Approx. 20 ms. *Varies depending on the ambient environment	
Power supply	Two AAA alkaline batteries	AD-0913S AC adaptor (uses household 110-120V power supply)
Battery life	Approx. 20 hours *Varies according to usage	–
Operating temperature range	0°C to 40°C	
Dimensions (W/D/H)	Approx. 50 × 25.5 × 120 mm (excluding attachments)	Approx. 60 × 115 × 40 mm (excluding protrusions)
Extension range	Approx. 20 mm (with adjustable tension)	–
Weight	Approx. 150 g (excluding batteries)	Approx. 145 g
Current used	50 mA	150 mA

The battery life shown is an estimated value when new alkaline batteries are fitted and the product is used at an ambient temperature of 25°C or less. Actual battery life may vary depending on factors such as the type of batteries used.

To allow for improvements, these specifications and the design are subject to change without notice.

Trademarks

Where used in this document, the terms listed below are trademarks or registered trademarks of their respective owners. Note that the ® and TM symbols are not used in this document.

- DIMENSION SHIFTER is a trademark or registered trademark of CASIO COMPUTER CO., LTD.
- The Bluetooth® wordmark and logo are registered trademarks owned by Bluetooth SIG, Inc. They are used under license by CASIO COMPUTER CO., LTD.
- All other trademarks and registered trademarks are the property of their respective owners.

Precautions When Using Bluetooth Functions

Because this device uses wireless communication, it may affect or be affected by nearby equipment.

Frequencies used

This device uses frequencies in the 2.4 GHz band that may also be used by other wireless equipment. To prevent radio interference with other wireless equipment, note the following when using this device.

This device includes built-in wireless equipment for a low-power data communications system. Other equipment that operates in the frequency band being used includes industrial, scientific and medical equipment such as microwave ovens, along with other wireless stations of the same type, in-plant wireless stations for mobile object identification that require a permit and are used in facilities such as factory production lines, specific low-power wireless stations that do not require a permit, and amateur wireless stations (hereinafter referred to collectively as “other wireless stations”).

- Check that there are no other wireless stations operating nearby before using this device.
- If any radio interference occurs between this device and other wireless stations, immediately move the device to another location or stop using the device.
- If any other difficulties arise, such as radio wave interference, contact the CASIO Service Center.

■ Use as a Wireless Device

The wireless function in this product should be used within the limitations stated in this User's Guide. CASIO COMPUTER CO., LTD. accepts no liability whatsoever from any damages arising from other uses of this device.

■ Magnetism, electrostatic charge and radio interference

Do not use this device in locations exposed to magnetism, electrostatic charge or radio interference, such as close to a microwave oven.

In some environments, it may not be possible to receive radio waves. Also, using this device close to another device that uses radio waves in the 2.4 GHz band may result in lower processing speeds in both devices.

■ Intended Region

Your DIMENSION SHIFTER is intended to be used in the US. If this product is used in a country outside the US, there is a risk that the radio wave regulations in that country might be violated. CASIO COMPUTER CO., LTD. accepts no liability for any such violations.

Precautions when Disposing of This Product

Dispose of this product in accordance with the relevant local government regulations.

Open Source Software

This product includes software that has been licensed in accordance with the terms stated below.

nRF5 SDK

Copyright (c) 2010 - 2020, Nordic Semiconductor ASA All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form, except as embedded into a Nordic Semiconductor ASA integrated circuit in a product or a software update for such product, must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of Nordic Semiconductor ASA nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.
4. This software, with or without modification, must only be used with a Nordic Semiconductor ASA integrated circuit.
5. Any software provided in binary form under this license must not be reverse engineered, decompiled, modified and/or disassembled.

THIS SOFTWARE IS PROVIDED BY NORDIC SEMICONDUCTOR ASA "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL NORDIC SEMICONDUCTOR ASA OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Apache License

Version 2.0, January 2004
<http://www.apache.org/licenses/>

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

“License” shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

“Licensor” shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

“Legal Entity” shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, “control” means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

“You” (or “Your”) shall mean an individual or Legal Entity exercising permissions granted by this License.

“Source” form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

“Object” form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

“Work” shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

“Derivative Works” shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

“Contribution” shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, “submitted” means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as “Not a Contribution.”

“Contributor” shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.
4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
 - (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
 - (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
 - (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
 - (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.
Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.
6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.
7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.
9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

ARM CMSIS

Copyright (c) 2009-2020 ARM Limited. All rights reserved.

NOTICE: This distribution includes files from ARM CMSIS that have been modified by Nordic Semiconductor ASA.

micro-ecc

Copyright (c) 2014, Kenneth MacKay All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

CASIO®

CASIO COMPUTER CO., LTD.

6-2, Hon-machi 1-chome
Shibuya-ku, Tokyo 151-8543, Japan

Published: 12/2025

MA2512-A

© 2025 CASIO COMPUTER CO., LTD.