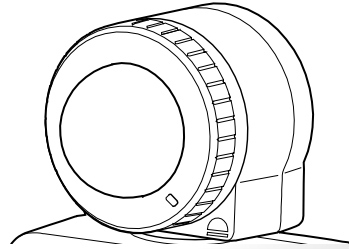
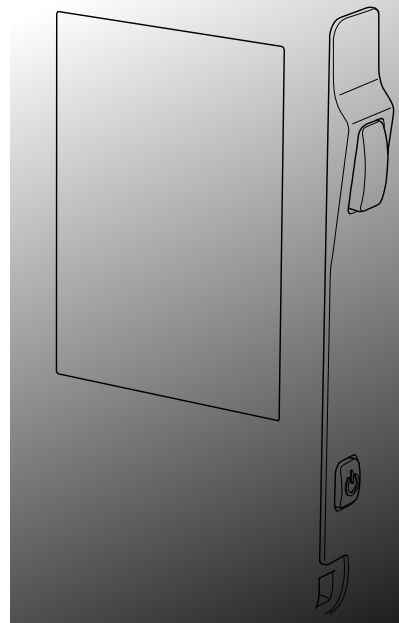


SEKONIC



使用説明書
Users' Manual



LiteMaster Pro
L-478D / L-478DR

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Thank you for purchasing our Litemaster Pro L-478D/L-478DR.

Please read this Users' Manual thoroughly in order to become acquainted with the light meter and thus be able to use it safely and correctly.

The Litemaster Pro L-478D/L-478DR (referred to as L-478D/L-478DR from here on) comes with "color exposure profile" and "EV scale" functions that are highly compatible to digital cameras. What is more, it is a light meter packed with exceptional functions to deal with images and all sorts of filming intentions that require systems such as spot measuring, incident light measuring, flash measuring and partial metering. The L-478D/L-478DR makes outstandingly accurate measuring across a wide range come true in all shooting scenarios, whether they be outdoors or in.

Using in advance the latest Data Transfer Software^{※1}, you can set your camera exposure profiles^{※2} in the L-478D/L-478DR (profiles for up to ten cameras). And, by calling up these settings when you need them, you can measure exposure accurately. Moreover, when metering light, you can check in an instant whether or not the subject is in the exposure range. Additionally, you also can make user and Custom Setting Function at the Data Transfer Software side.

- ※1 Data Transfer Software is provided on the CD-ROM. To use this software, you will need to install it onto your computer and connect it to L-478D/L-478DR via a USB cable. Please see the Users' Manual on the CD-ROM for operating details.
- ※2 Exposure profile is the information denoting the characteristics of your digital single-lens reflex. (This is information such as sensor and circuit characteristics that occur for digital single-lens reflex, or the exposure tolerance and exposure range (reproduction field and tolerance range) that occur for film characteristics of a silver halide camera. First, authenticate the information by test shooting and then create exposure profiles using the Data Transfer Software.

Caution

1. The reproduction of all or any part of this document without permission is strictly forbidden.
2. The product concerned and/or this manual may be subject to future changes without prior notification.
3. Please contact the store of purchase if you have any queries or questions about this product or this document.

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■ Accompanying Accessories

The light meter and accompanying accessories below are packed together. Please check that all accessories are included when unpacking.

If, by chance, something is missing, please contact the store of purchase.

Startup Guide

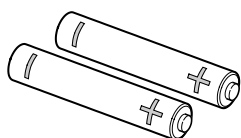


CD-ROM

(Users' Manual and Data Transfer Software)



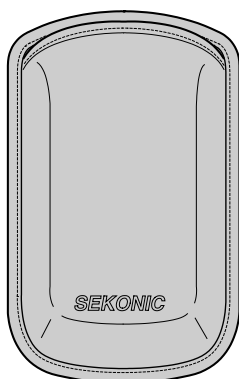
Two 4 AAA alkaline batteries



Strap



Soft case



Reference

- Please see "7. Separately Sold Accessories" (P80) for details about available accessories.

■ For Safe and Correct Use

Before using the light meter please be sure to read these safety precautions thoroughly and then use the light meter correctly at all times.



Warning This symbol denotes the possibility of user death or injury if the product is not used correctly.



Caution This symbol denotes that there is a possibility of slight to moderate injury to the user or a likely danger of material damage if the product is not used correctly.



Caution: This symbol denotes operating cautions and/or restrictions. Be sure to read text accompanying this caution to prevent misoperation.



Reference: This symbol denotes information concerning operation references and related functions. We recommend that you read this information.

<p>Warning</p>	<ul style="list-style-type: none"> ● Keep the strap out of reach of babies and infants, as they may mistakenly wrap the strap around their necks, which could lead to the danger of suffocation. ● Do not place batteries in a flame, or short-circuit, or dismantle, or heat up, or recharge (unless the batteries are rechargeable), as doing so may cause the batteries to burst, which may in turn cause fire, injury and/or peripheral contamination. ● For L-478DR only: If user intentionally modifies or converts the L-478RD, there is a risk that doing so may violate the Radio Law, which may make the user liable to punishment according to the law.
<p>Caution</p>	<ul style="list-style-type: none"> ● Do not use the product in the rain or locations where spray and/or moisture occur. Moreover, do not handle the product with wet hands. Failure to observe the above leads to the danger of electric shock when the product is in "Cord flash mode" (cord connected). Also, the product may become damaged. ● Never dismantle the main unit of this product. ● Do not play the accompanying CD-ROM in a music-type CD player, as there is a risk of hearing damage as well as damage to speakers and/or earphones. ● Use fingers to lightly touch the LCD when operating. Do not use sharp objects such as ballpoint pens or pencils, as doing so may damage the LCD or cause damage. ● Do not look directly at the sun via the viewfinder (sold separately), as doing so may damage eyesight. ● For L-478DR only: This product has certification of conformance to technical standards as specified low power radio equipment in compliance with the Radio Law (the user is not required to apply for a permit, etc., to use the equipment). Nevertheless, the following points must be observed when using L-478DR. <ul style="list-style-type: none"> · Do not dismantle and/or convert the product, as doing so is prohibited by law. · Do not peel off the label on the rear of the main unit, as using the product without that label attached is prohibited by law. · This product does not conform to radio laws outside of Japan; therefore, this product may only be used in Japan.



Caution: The LCD is covered by a protective sheet. Please peel off this sheet before using the screen.

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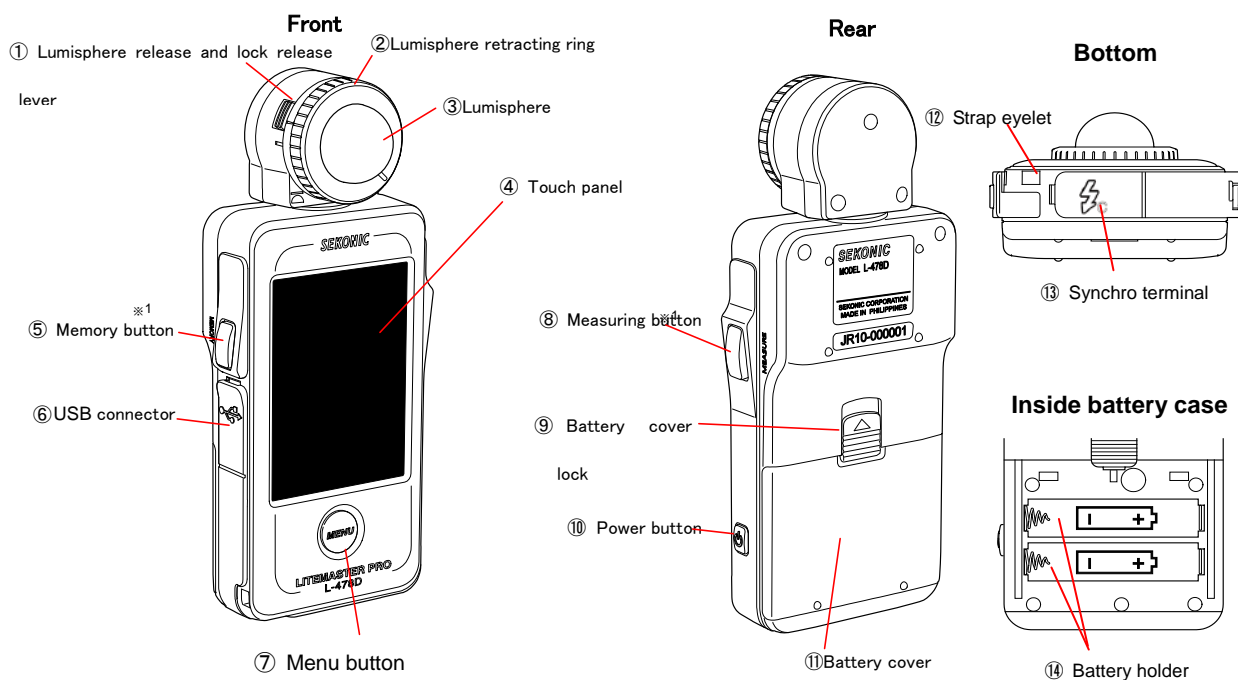
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1. Component Names

1-1 Main Unit



※1 Using Custom Setting Function (see P74), the Memory button ⑤ and the Measuring button ⑧ can be swapped from left to right.

The following are the main unit components and their functions.

No.	Name	Explanation
①	Lumisphere release and lock release lever	Hold this down when removing the lumisphere from the main unit. (See P24 for details.)
②	Lumisphere retracting ring	Use this to switch between extended and retracted lumisphere. (See P23 for details.)
③	Lumisphere	Use the Lumisphere retracting ring to switch between extended and retracted lumisphere. Can be freely rotated through 270° to receive light.
④	Touch panel	This displays measuring screens and setting screens. Touch this panel to perform settings and operations. (See P11 for details.)
⑤	Memory button* ¹	This memorizes the current measuring value in memory. Press this during measuring in accumulative mode to clear the accumulated measuring values.
⑥	USB connector	This is for connecting to a computer installed with the Data Transfer Software. USB terminal is a 5-pin mini B connector.
⑦	Menu button	Press this to enter Menu mode from any of the screens. Press again to return to the previous screen. (See P21 for details.)
⑧	Menu button* ¹	Press this when the Measuring screen is displayed to implement measuring.
⑨	Battery cover lock	This is the battery cover lock.
⑩	Power button	User this to turn power ON and OFF. Hold this button down (approximately one second) when turning power OFF.
⑪	Battery cover	This is the battery cover.

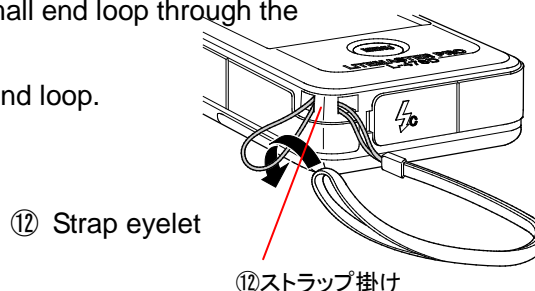
⑫	Strap eyelet	This is for attaching the strap accessory.
⑬	Synchro terminal	A synchro cord (sold separately) is plugged into this terminal when measuring in a flash-connected mode.
⑭	Battery holder	This is for housing the batteries. Be sure to insert batteries according to polarity.

※1 Using Custom Setting Function, the Memory button ⑤ and the Measuring button ⑧ can be swapped from left to right. (See P56 for details.)

2. Before Using

2-1 Attaching Strap

- 1) Attach the strap accessory by passing the small end loop through the eyelet ⑫.
- 2) Pass the end of the strap through the small end loop.

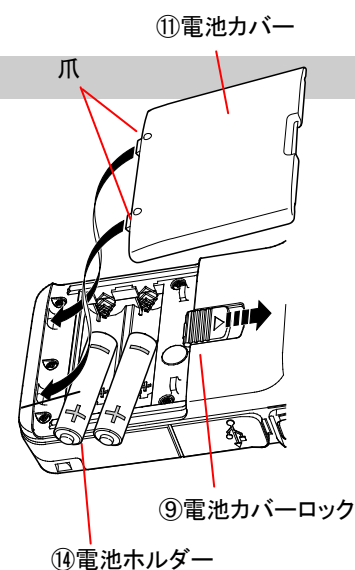


Warning

Keep the strap out of reach of babies and infants, as they may mistakenly wrap the strap around their necks, which could lead to the danger of suffocation.

2-2 Inserting Batteries

- 1) Requires two 4 AAA alkaline batteries.
- 2) Slide the battery cover lock ⑨ in the direction of the arrow and remove the cover ⑪.
- 3) Insert the batteries, observing the polarity with the + and – symbols.
※ Insert both batteries with + and – aligned as shown in the diagram.
- 4) Insert the two prongs on the cover ⑪ and then press down cover to close.



⑪ Battery cover

Clasping prongs

⑨ Battery cover lock

⑭ Battery holder



Warning

Do not place batteries in a flame, or short-circuit, or dismantle, or heat up, or recharge (unless the batteries are rechargeable), as doing so may cause the batteries to burst, which may in turn cause fire, injury and/or peripheral contamination.



Caution

- Insert batteries from the minus (-) end. When removing batteries, pull out from plus (+) end.
- Do not use different brands of battery. Also, do not use new and used batteries together.
- Remove batteries if the light meter is not going to be used for a prolonged period. Batteries can leak and may adversely affect the main unit.

2-3 Power ON/OFF

Power ON: Press the Power button ⑩.

The main unit will turn ON, and after the title screen has been displayed, the Measuring screen will be displayed.

Power OFF: Press the Power button ⑩ for one second or longer. The main unit will turn OFF and the display will close.

Title Screens

L-478D



L-478DR



⑩ Power button

Caution



- Directly after replacing batteries, a white screen with the SEKONIC logo in blue will be displayed, followed by the appropriate title screen above.

Logo Screen

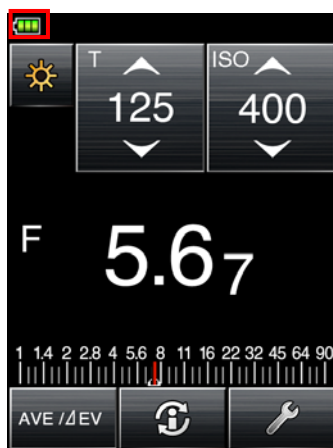


(※An L-478D/DR memory check is being executed while the blue bar graph is moving when the Logo screen is displayed, so please do not turn OFF the power, as doing so may cause damage.)





Reference

- If there is no display on the LCD (touch panel) once the power has been turned ON, check battery capacity as well as whether or not batteries have been inserted with polarities in wrong direction.
- The setting values and measuring values are memorized even when the power is turned OFF and they will be redisplayed when the power is turned ON again. Memorized setting values and measuring values also are saved even when the batteries are removed.

2-4 Checking Battery Capacity



When the power button is ON, the battery power indicator is displayed in the top left of the LCD.

-  Battery power level is good.
-  Battery power level is sufficient.
-  Battery power level is low. Have spare batteries ready.
-  If blinking, replace batteries immediately.

Reference

- When there is no battery power, and the power is turned ON, the screen may appear and then abruptly close, but this does not mean the main unit is damaged. Please insert new batteries. We recommend that you have spare batteries ready at all times.
- With consecutive measuring, the battery lifespan for this product at room temperature is approximately ten hours (Sekonic test conditions for alkaline batteries).
- The batteries packed with the product at time of purchase may have a shorter lifespan.

2-5 Cautions about Battery Replacement during Measuring or the Use of Memory Function

- 1) Always turn OFF the power before replacing batteries.
- 2) If an abnormal display (one that has not been set, etc.) appears on the LCD after battery replacement or during measuring, or the light meter will not operate even when an operation button is pressed, remove the batteries, wait ten seconds or longer and then reinsert them.

2-6 Auto Power OFF Function

The product is designed to save power, so all displays will automatically close and the power will turn OFF if approximately five minutes elapse from the last button operation.

Reference

- Even if the Auto Power OFF Function comes into action and the power is turned OFF, the set values and indicated values will be saved and then redisplayed once the power is turned ON again.
- The Auto Power OFF time can be selected at the Custom Setting screen. Enter Custom Setting mode and under setting number 21 select one of the following 0: 5 min (default), 1: 10

min, 2: 20 min, 3: Cancel Auto Power OFF. (See P56 for details.)

- When Power button ⑩ is held down continually, the power will initially come ON but then automatically turn OFF after approximately one minute. (This means battery depletion can be avoided even if the Power button ⑩ is held down during transportation.)

3. Screen Operations

The screen is a touch panel, so you can use your fingers to touch buttons in order to select desired menus and items.

※ Liquid Crystal Backlight

Once the power is turned ON, the backlight will be lit at all times. However, it will dim so that it does not influence measuring values during measuring or cordless flash standby.

3-1 On-screen Operations

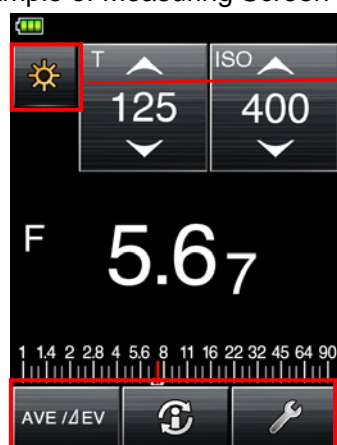
Touch the icons on screen to perform operations.

The following are the icon types.

(1) Measuring Mode Icon

Touch the Measuring mode icon to display the Measuring Mode Selection screen. Touch any icon to switch to that Measuring mode. (See P25 for details.)

Example of Measuring Screen



Measuring Mode Selection Screen



(2) Setting Value Change/Item Selection Icon

Touch Operation:

Touch the up arrow (▲) to increase the value or change up to the next item.

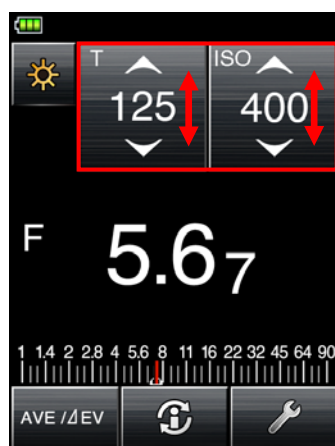
Touch the down arrow (▼) to decrease the value or change down to the next item.

Slide Operation:

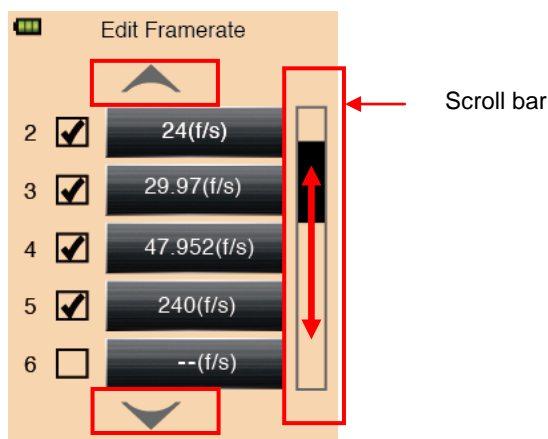
Slide numbers and items up and down with your fingertip to change display contents.

At screens with a scroll bar displayed on the right side, you can slide that scroll bar to change screen contents.

Example of Measuring Screen



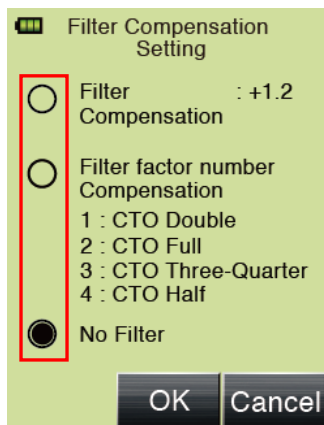
Example of Edit Frame rate Selection Screen



(3) Radio Button

Touch the Radio button and the item on the right of the Radio button is selected.
Only one item can be selected.

Filter Compensation Setting Screen



(4) Number/Alphabet Input Button

Example of Value Input Screen



Example of Alphabet Input Screen



Example Number Input Screen

**Inputting Values (Value Input Screen):**

- 0-9, Decimal point, +/- : Display input value at top of screen.
- Enter: Confirms input value and returns to previous screen.
- DEL: Deletes input value.
- Cancel: Cancels input and returns to previous screen.

Inputting Alphabet and Numbers (Alphabet Input Screen and Number Input Screen):

- 1/A/a: Switches between Tenkey input/Uppercase/Lowercase.
- ABC,abc,0-9, Decimal Point: Display input value at top of screen when touched.
Repeated pressing of the same button will change the alphabet character to be input.
- ← →: Shift input position.
- OK: Confirms input value and returns to previous screen.
- DEL: Deletes input value.
- Cancel: Cancels inputting and returns to previous screen.

3-2 Locking and Releasing of Screen

The screen can be locked to prevent unforeseeable misoperations, etc.

Touch operation of all screens is prohibited when locked (the lock icon is displayed at the top of the screen). Note however that the Memory button ⑤, Measuring button ⑧ and Power button ⑩ will be operational even if lock is ON.

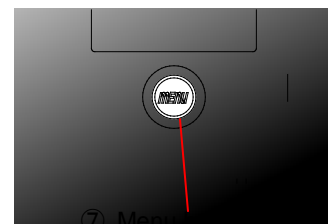
Lock status will be maintained even when power is turned OFF.

Setting Lock:

Press and hold down Menu button ⑦ to lock the screen (the lock icon will be displayed at the top right of the screen).

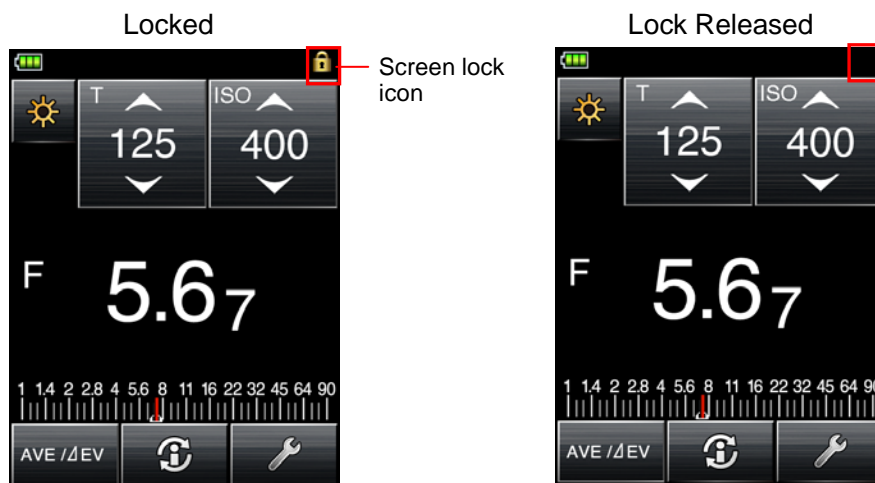
Buttons and icons on the LCD (touch panel) cannot be operated while the lock is ON. Moreover, pressing the Menu button ⑦ to open the Menu Functions is not possible.

※ This operation can be executed at the Measuring screen.



Releasing Lock:


Press and hold down again the Menu button to release the locked screen (the screen locked icon will close.)




3-3 Outline of Screen Transfer

(1) Measuring Screen (Background color: Black)


1) When turning ON the power, the measuring screen will be displayed using the setting values that were current when the power was turned OFF last.


To select another Measuring screen, touch a mode icon (, ,) and then select the desired Measuring screen at the Select screen.


2) To find out detailed information about the currently displayed Measuring screen, touch the Information icon (). (See P20 for details.)

3) To perform Radio Control, press the Menu button ⑦ at the Exposure Metering screen and

then select item 0 (ON) for Setting Number 14 (Radio Control).

Next, touch the Measuring mode icon at the top left of the Measuring screen to display the Measuring Mode Select screen and then touch the  icon to display the Flash Radio mode. (See P41 for details.)


Finally, touch the Radio Control icon () at the top left of the Measuring screen. (See P38 for details.)

4) To use the Average Function, touch the Average icon (). (See P49 for details.)

The Average Function can average out up to nine memorized readings and display the average.

This function can be used with the following modes: Fixed Light Shutter Speed priority, Stop priority, TF priority and Flash (cord, cordless, radio trigger), but note that it cannot be used with Accumulative mode.

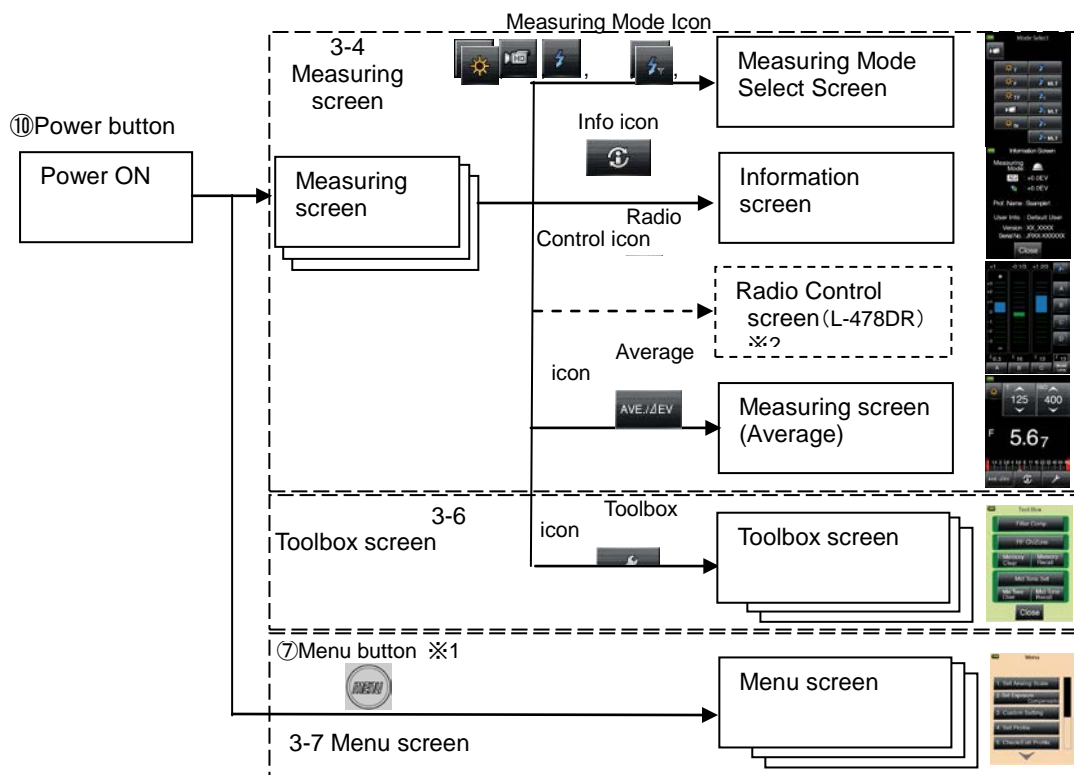
(2) Toolbox Screen (Background color: Green)

To make various settings for the current Measuring screen, touch the Toolbox icon () at the Measuring screen. (See P20 for details.)

(3) Menu Screen (Background color: Light orange)

Press the Menu button on the main unit (while working in any screen) to display the Menu screen (※1).

At the Menu screen, you can set all menu operations for this light meter. (See P21 for details.)

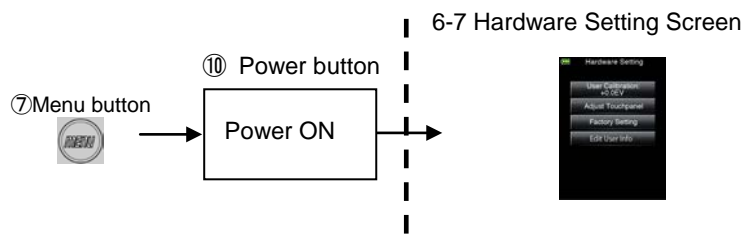


※1 If you press the Menu button while working at another Setting screen, the settings in mid-operation will be interrupted and the Menu List displayed.

※2 This screen is displayed only when the Flash Radio mode is being used (for L-478DR only).

(4) Hardware Setting Screen

Hold down the Menu button ⑦ and then turn ON the power to display the Hardware Setting screen. (See P62 for details.)

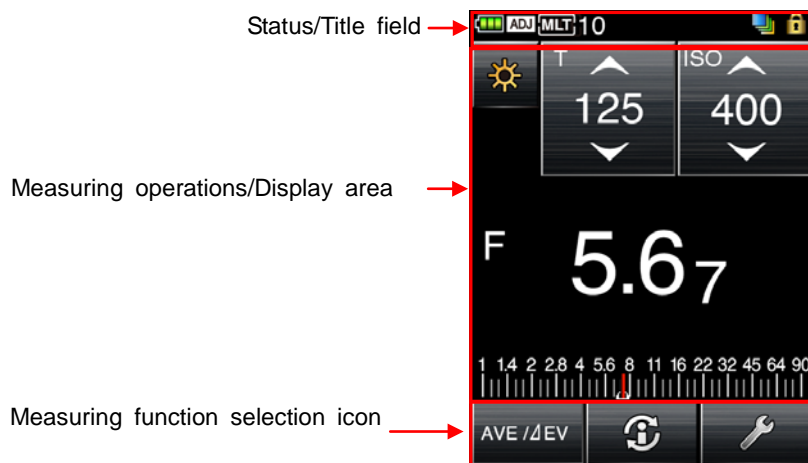


3-4 Measuring Screen

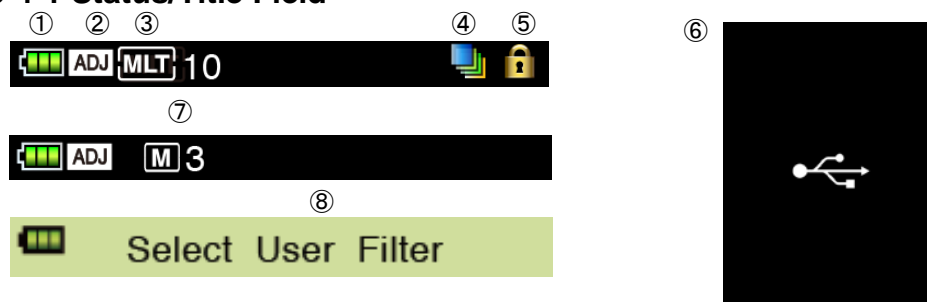
When the power is turned ON, the Title screen will appear, followed by the Measuring screen. Subject measuring can be performed at the Measuring screen.

Basic Configuration of the Measuring Screen

Example of Fixed Light Screen



3-4-1 Status/Title Field



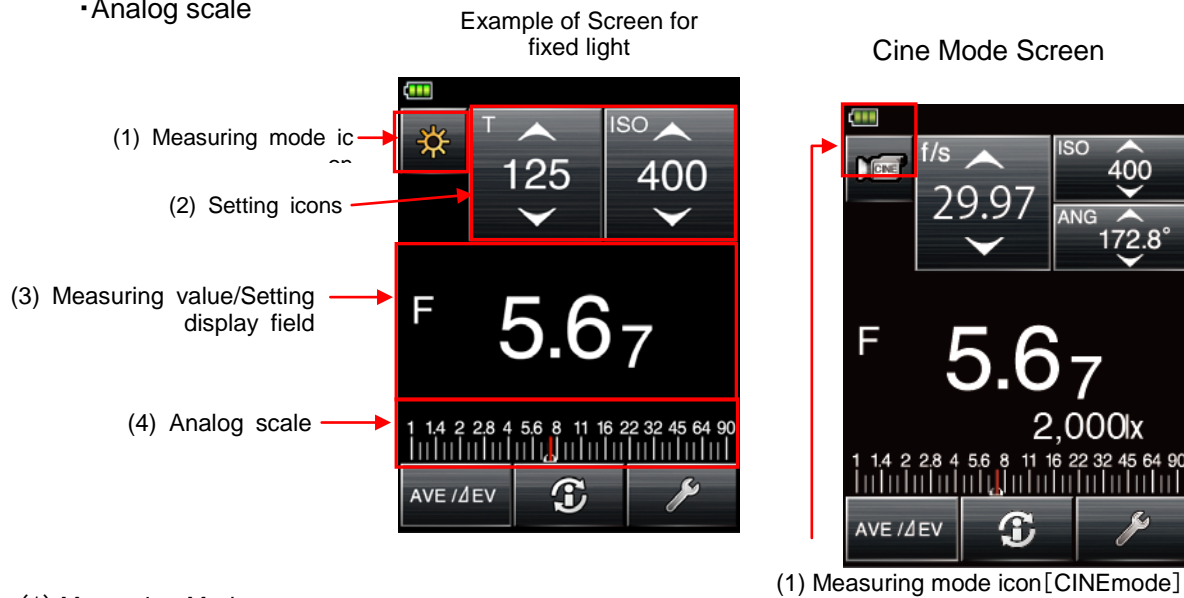
No.	Icon Name	Explanation
①	Battery Power Indicator Display	This displays battery capacity in four stages. (See P11 for details.)
②	Calibration compensation	This is displayed when calibration compensation is performed on actually measured exposure readings.
③	Accumulative mode/Accumulative count (multi)	This is displayed when an Accumulative mode is selected. It will be displayed with the following Measuring screens. <ul style="list-style-type: none"> • Cordless Flash Accumulative • Cord Flash Accumulative • Flash Radio Accumulative Mode (for L-478DR only) Accumulative count (up to 99) is displayed to the right of the MLT symbol.
④	Filter compensation	This is displayed when filter compensation is performed on actually measured exposure readings.
⑤	Screen lock	This is displayed when screen is locked. Operations cannot be performed on the touch panel when the screen is locked. (See P11 for details.)

⑥	USB display	This is full-screen displayed when USB cable is used to connect the main unit to a computer.
⑦	Memory count	This displays the number of memorized readings. The memory count (up to 9) is displayed to the right of the M symbol.
⑧	Title	This is the screen title. (Title is displayed except for Measuring screen.)







3-4-2 Measuring Operation/Display Field

Measuring Operation/Display Field is configured of the following sections.

- Measuring mode icons
- Setting icons
- Measuring value/Setting display field
- Analog scale



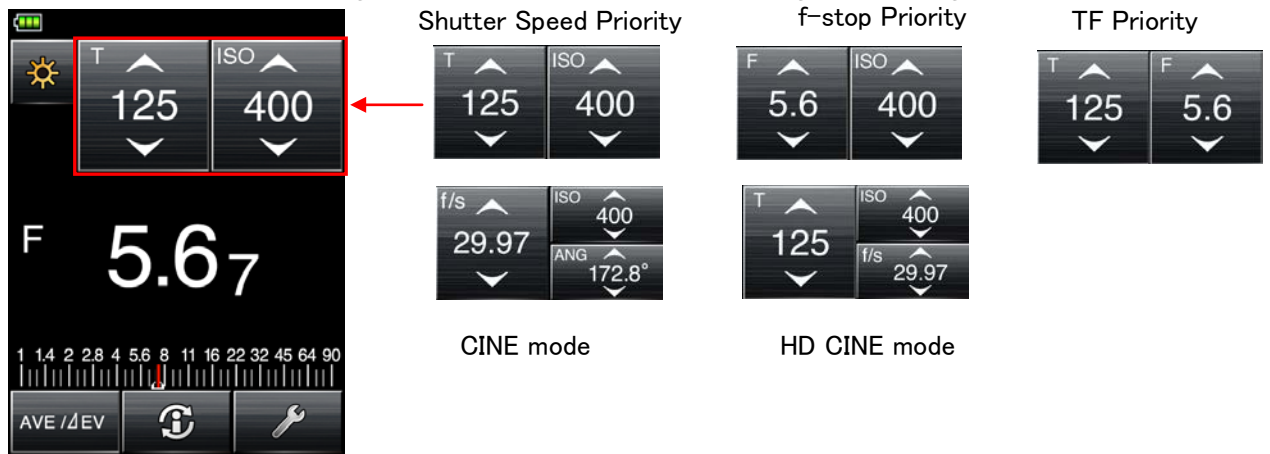
(1) Measuring Mode

Touch a mode ( ,  ,  ,  ,  , ) at the top left of the Measuring screen to display the Measuring Mode Selection screen, where any of the Measuring modes can be selected. (See P29 for details.)

(2) Setting Icons

Use this to set functions like shutter speed and f-stop. Setting values are displayed within the icons.

The displayed icons will change in accordance with the Measuring mode being used.



The alphabet letter in the top left of the set icon denotes setting contents.

- T : Shutter speed
Shutter speed is displayed in the following way.
30m(30 minutes)、8s(8 seconds)、125(1/125 of a second)
- ISO : ISO film speed
- F : f-stop
- ANG : Shutter opening angle
- f/s : Frame rate (= cine frame rate)

Set Icon Operation:

Value increases when up arrow (▲) is touched.

Value decreases when down arrow (▼) is touched.

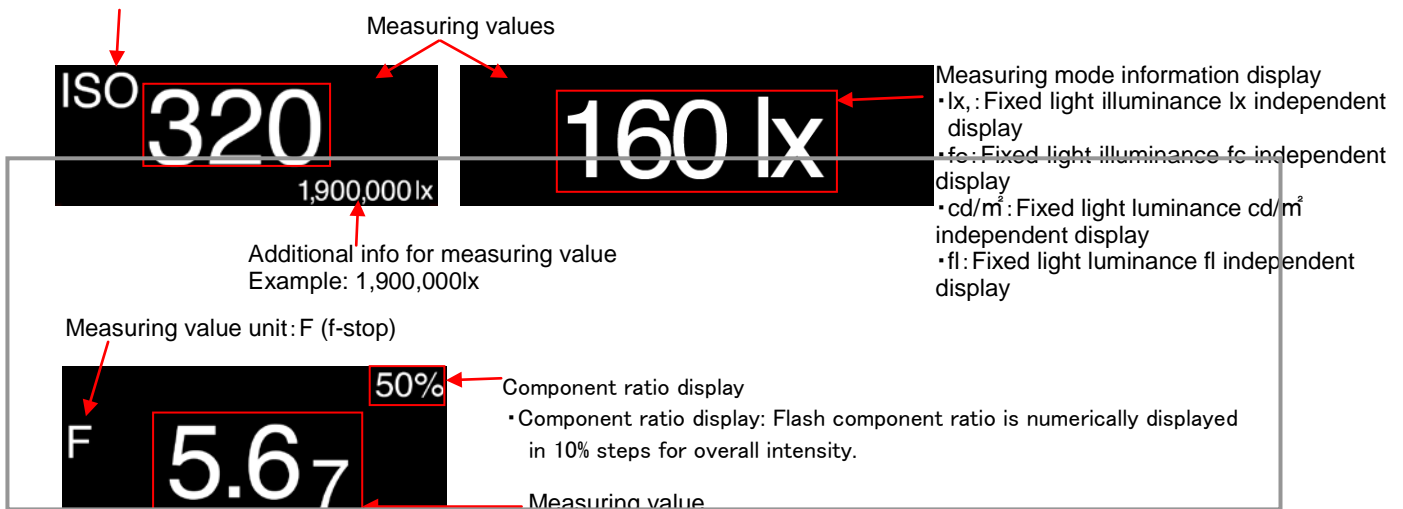
Slide the icon number up or down with your fingertip to increase or decrease the reading.



(3) Measuring value/Setting display field

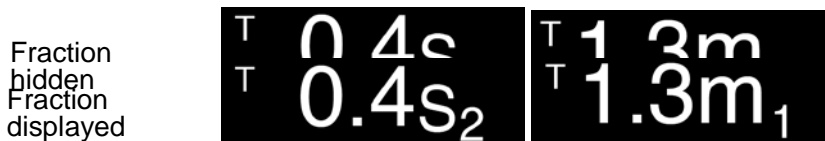
This displays information such as measured values and measuring units.

Measuring value unit: T (shutter speed), F (f-stop), ISO (ISO film speed)



Reference

The fractions of the measuring values can be hidden by changing setting at the Custom Setting Function. Display setting number 2 (fraction display) and then select 0 (ON) to display fraction and 1 (OFF) to hide fraction. (See P68 for details.)

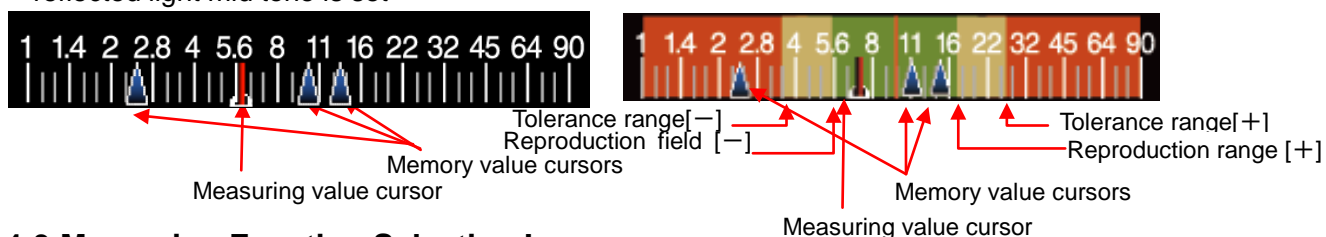


(4) Analog Scale

Depending on the Measuring mode, the following values will be displayed in the scale.
 •F value, T value, EV value (for incident), EV value (for reflected), illuminance lx (lux), illuminance fc
 The following is a scale display example.

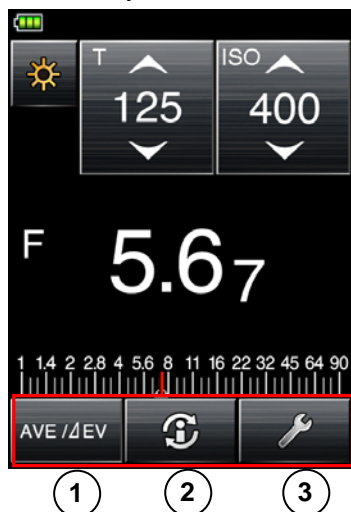
Scale Display (T value) Example

[Display when measuring] (except for mid tone setting) [Display when measuring] when reflected light mid tone is set



3-4-3 Measuring Function Selection Icon

Press any one of the icons to execute that function.



No.	Icon	Explanation
①	Average icon	Use this icon when using the Average Function or Monitor Function. See 6-3 Average Function (P59) and 6-4 Monitor Function (P60) for details.
②	Information icon	This displays detailed information about the Measuring screen currently selected. See 3-5 Information Screen (P20) for details.
③	Toolbox icon	Use this to proceed to the Toolbox screen related to the current type of measuring. See 3-6 Toolbox Screen (P20) for details.

3-5 Information Screen

This displays detailed information set for the light meter but not displayed in the Measuring screen.

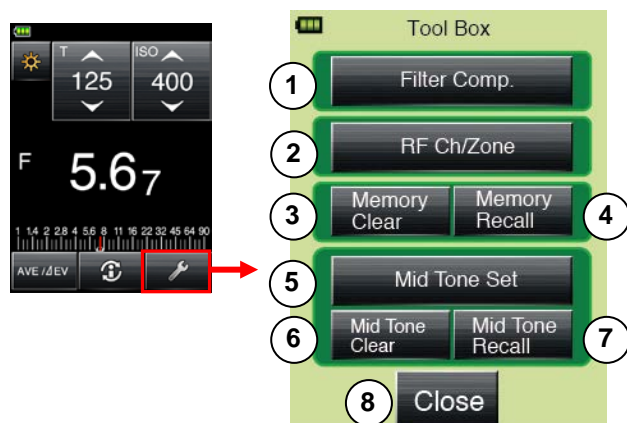


No.	Item	Explanation
①	Display of light receiving mode	Displays selection status of incident light (☀ or ☾) /reflected light (◀).
②	Display of amount of calibration compensation	Displays user-set calibration compensation value. See P55 for details on setting calibration compensation value.
③	Display of amount of filter compensation	Displays user-set filter compensation value. See P51 for details on setting filter compensation value.
④	Displays camera exposure profile	Displays camera exposure profile name. See P25 for details on selecting camera exposure profile name.
⑤	User information	Displays user information.
⑥	Version information	Displays firmware version.
⑦	Close	Returns to previous measuring screen.

3-6 Toolbox Screen

The following settings can be made by selecting the Toolbox from the Measuring screen.

- Filter compensation setting
- Memory recall, memory clear
- Mid tone set, mid tone clear, mid tone recall
- Radio trigger channel setting (for L-478DR only)



No.	Item	Explanation
①	Filter compensation	Displays Filter compensation setting screen. (See P51 for details.)
②	Radio trigger channel (for L-478DR only)	Displays Radio Trigger Channel Setting screen. (See P38 for details.)
③	Memory clear	Displays Memory Clear screen. (See P44 for details.)
④	Memory recall	Displays Memory Recall Selection screen. (See P45 for details.)
⑤	Mid tone set	Displays Mid. Tone Set screen (See P46 and P47 for details.)
⑥	Mid tone clear	Displays Mid. Tone clear screen. (See P47 for details.)
⑦	Mid tone recall	Displays Mid. Tone Recall screen. (See P48 for details.)
⑧	Close	Returns to previous Measuring screen.

3-7 Menu Screen

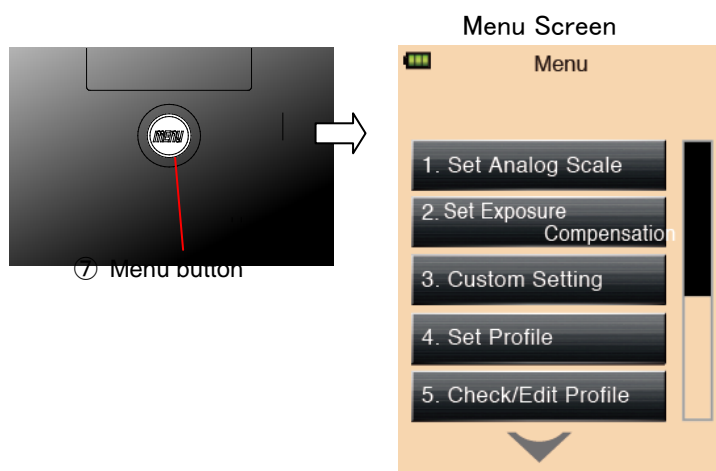
Press the Menu button ⑦ on the main unit to display the Menu screen.

Press the Menu button ⑦ again to return to the previous screen.

Caution



- If you press the Menu button ⑦ when another setting screen is displayed, the settings in mid-operation will be interrupted and the Menu List displayed.

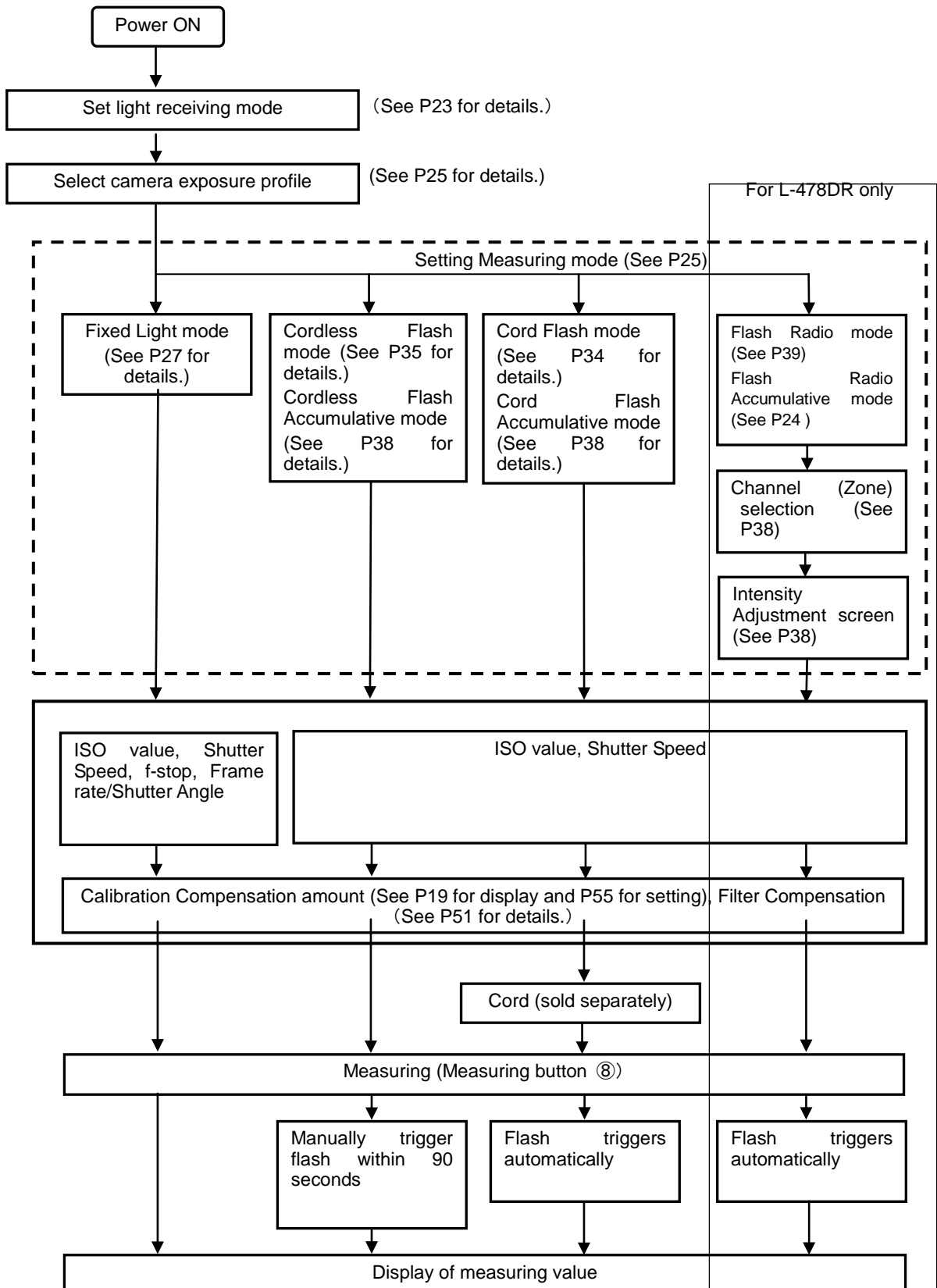


Menu Items

No.	Item	Explanation
1	Set Analog Scale	Transfers to Analog Scale Selection screen. (See P55 for details.)
2	Set Exposure Compensation	Transfers to Calibration Compensation Value Setting screen. (See P55 for details.)
3	Custom Setting	Transfers to Custom Setting screen. (See P56 for details.)
4	Set Profile	Transfers to Exposure Profile Selection screen. (See P25 for details.)
5	Check/Editing Profile	Transfers to Exposure Profile Edit Selection screen. (See P53 for details.)
6	Edit Frame Rate	Transfers to Frame rate Edit Selection screen. (See P57 for details.)
7	Edit Shutter Angle	Transfers to Shutter Angle Edit Selection screen. (See P58 for details.)
8	Edit Filter	Transfers to Filter Edit Selection screen. (See P59 for details.)

4. Basic Operations

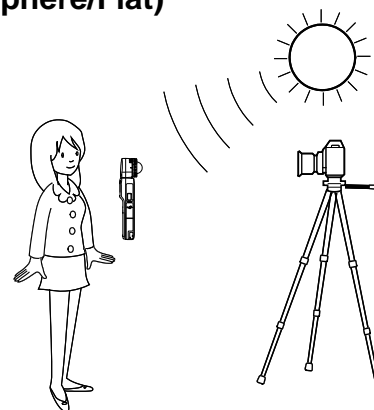
4-1 Basic Operation Flow



4-2 Setting Light Receiving System

4-2-1 Measuring with Incident Light Function (Lumisphere/Flat)

Use either extended or retracted (flat) lumisphere to measure incident light. Point the lumisphere at the camera (lens optical axis) from a position close to the subject and then measure.

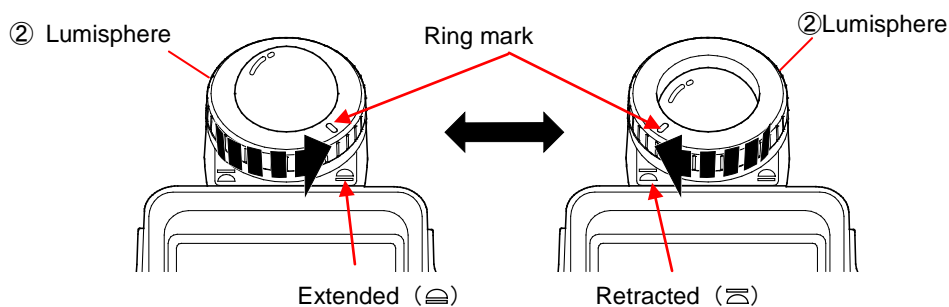


1) Extending Lumisphere

Rotate the upper part of the lumisphere retracting ring ② and fully align the ring mark with the extended symbol (☰).

2) Retracting Lumisphere

Rotate the upper part of the lumisphere retracting ring ② and fully align the ring mark with retracted symbol (☷).



Lumisphere Extended	Lumisphere Retracted (flat)
Extend lumisphere when measuring 3-D subjects such as people or buildings.	Retract lumisphere when measuring flat subjects such as manuscripts, books, pictures, or when measuring lighting ratio (monitor function) (see P50 for details) or simply measuring intensity of illumination (see P28 for details).

Caution

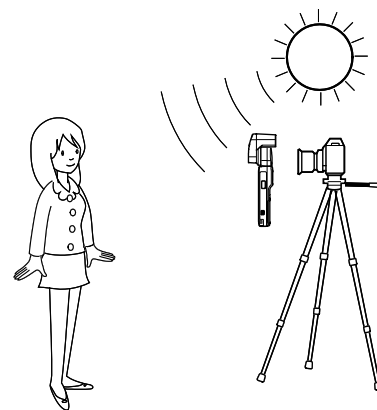
- Make sure the measurer does not influence the light measurement. (Do not block out light sources. Reflected light occurs due to the color of clothing. Take care not to let such reflected light enters Light Receptor Head.)
- If light meter is used with lumisphere retracting ring set at mid position, luminous intensity distribution characteristics will alter, resulting in inappropriate measuring.
- Do not push down the lumisphere with your hand.
- Keep lumisphere and Light Receptor Head clean and free of damage, as failure to do so may affect accuracy. When lumisphere becomes dirty, wipe clean with a dry, soft cloth. Never use organic solvent (thinner, benzene, etc.).

4-2-2 Measuring with Reflected Light System

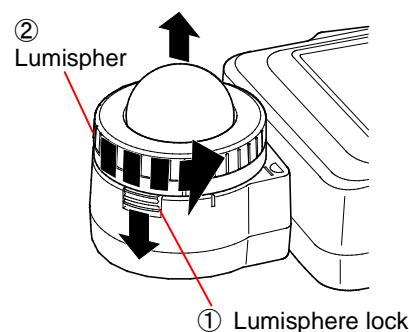
When changing the light receiving system to the reflected light system for use with this main unit, detach the lumisphere, and attach a viewfinder (sold separately).

The reflected light system involves measuring the brightness (luminance) of light reflecting off of the subject. This method is suited to measuring subjects that cannot be approached closely, or light emitting subjects (neon signs, etc.) or light-transmitting subjects (stained glass, etc.). From the camera position and from the same direction as the camera, correctly point the light meter lens at the part of the subject to be measured and take measurement.

※ See viewfinder manual for details on attaching viewfinder (sold separately).

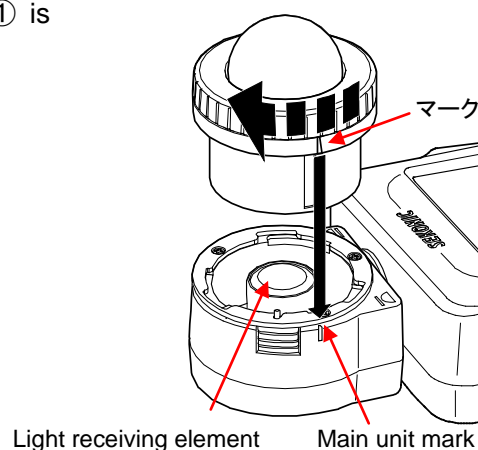


1) Detaching Lumisphere
Hold down the lumisphere lock lever ①, take in hand both the upper and lower rings comprised in the lumisphere retracting ring and turn them anticlockwise to detach the light receiving unit.



2) Attaching Lumisphere
Align the mark on the lumisphere retracting ring ② with the mark on the main unit, press the Light Receptor Head into main unit and then turn to the right until you hear a clicking sound.


※ Check to see that the lumisphere lock lever ① is sitting up.



Caution

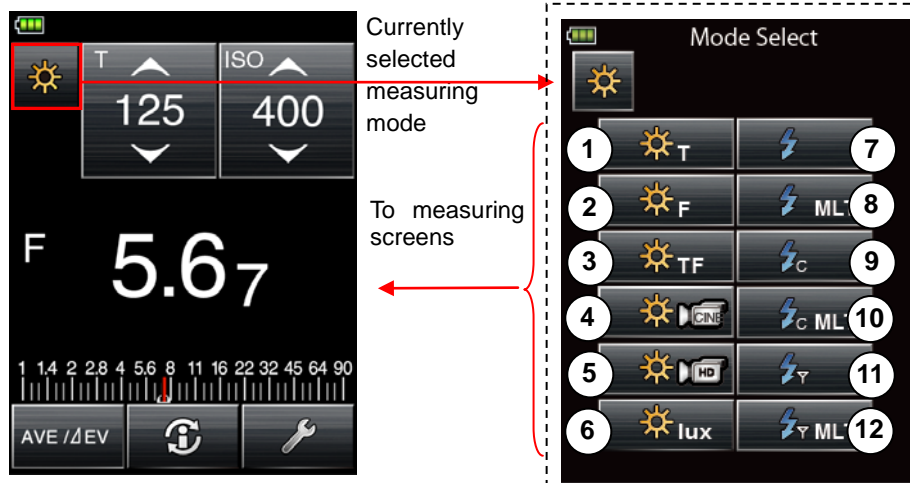
- When attaching/detaching lumisphere or viewfinder, be sure not to touch the light receiving element on the main unit side.

4-3 Setting Measuring Mode
















Touch the measuring mode icon () at the top left of the Measuring screen and then select any one of the measuring modes.

※ The measuring modes displayed on the Measuring Mode Selection screen will change depending on the settings at Custom Setting. (See P56 for details.)

Measuring Mode Selection Screen



About Measuring Modes

Mode	No.	Icon	Explanation
Fixed Light mode	①		Fixed light T (shutter speed) priority Measures f-stop in accordance with set shutter speed and ISO film speed. (See P27 for details.)
	②		Fixed light F (stop) priority Measures shutter speed in accordance with f-stop and ISO film speed. (See P28 for details.)
	③		Fixed light TF (exposure value [EV]) priority Measures ISO film speed in accordance with set shutter speed and f-stop. (See P28 for details.)
Fixed Light Cine mode	④		Measures f-stop in accordance with set shutter speed, ISO film speed and shutter opening angle. (See P30 for details.)
Fixed Light HD Cine mode	⑤		Measures f-stop in accordance with set shutter speed, ISO film speed and frame rate. (See P30 for details.)
Fixed Light mode	⑥		Fixed illuminance lux independent display Measures brightness in lux unit. (See P29 for details.)
			Fixed illuminance fc independent display Measures brightness using fc value. (See P29 for details.)
			Fixed luminance cd/m ² independent display (reflected light system) Measures brightness in cd/m ² unit. (See P30 for details.)
			Fixed luminance fl independent display (reflected light system) Measures brightness in fl unit. (See P30 for details.)
Cordless flash mode	⑦		Cordless flash Measures f-stop in accordance with set shutter speed and ISO film speed even though the main unit and flash are not connected (cordless). (See P35 for details.)
	⑧		Select cordless flash accumulative measuring screen. Accumulatively measures f-stop in accordance with shutter speed and ISO film speed even though the main unit and flash are not connected. (See P38 for details.)
Cord flash mode	⑨		Cord flash (connected) Measures f-stop in accordance with set shutter speed and ISO film speed with main unit and flash connected by synchro cord. (See P34 for details.)
	⑩		Cord flash accumulative (connected) Accumulatively measures f-stop in accordance with set shutter speed and ISO film speed with main unit and flash connected by synchro cord. (See P38 for details.)
Flash radio mode (for L-478DR only)	⑪		Flash radio mode Measures f-stop in accordance with set shutter speed and ISO film speed when the flash is equipped with a radio receiver. (See P39 for details.)
	⑫		Flash radio accumulative mode Accumulatively measures f-stop in accordance with set shutter speed and ISO film speed when the flash is equipped with a radio receiver. (See P42 for details.)

Reference

- Fixed light refers to natural light (sunlight) as well as continuous light like tungsten lamps and fluorescent lamps.
- Flash refers to momentary light such as that produced by a flashlight or flash bulb.
- If all light measuring modes are turned OFF, Fixed Light T priority will be selected.

5. Measuring

5-1 Measuring with Fixed Light Mode

Continuous light like natural light (sunlight) as well as tungsten lamps and fluorescent lamps are measured in Fixed Light Mode.

The following are the measuring methods in the Fixed Light Mode.





- T (shutter speed) priority
- F (stop) priority
- TF (EV) priority
- Illuminance lux independent display
- Illuminance fc independent display
- Luminance cd/m² independent display (reflected light system)
- Luminance fl independent display (reflected light system)

See 4-3 “Setting Measuring Mode” (P25) for details on changing measuring mode.

Reference


- Shutter speed step numbers are switched using the Custom Setting Function to change in stepped increments of 1/3 step, 1/2 step or 1 step from the set number 1 [displayed step]. (See P56 for details.)
- After measuring, if a setting values are changed at setting icons of screens, a measuring value that corresponds to that change will be displayed.
- Press (touch) the Average icon (AVE/ΔEV) at the bottom of the Measuring screen to switch to the Average Function. (See P71 for details.)
- The display contents of Analog Scale (measuring scale and EV scale) will change in accordance with the settings for Measuring mode, Incident/Reflected and Mid. Tone. (See P25 for details.)
- See P42 for details about being over or under the display range and measuring range, and combat these out-of-range issues by either changing the f-stop or adjusting the brightness of the measurement light source.


5-1-1 T (Shutter Speed) Priority Measuring



- 1) Touch the Measuring mode icon at the top of the Measuring screen and then touch the  icon that appears on the Measuring mode screen. (See P25 for details.)
- 2) Set the ISO value at the ISO setting.
- 3) Set the shutter speed at the T icon.
- 4) Press the Measuring button  on the main unit. When the Measuring button  is released, measuring will end, and the measuring value (f-stop) will be displayed. Continuous measuring will take place while the Measuring button  is held down.



5-1-2 F (f-stop) Priority Measuring

1) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  icon that appears on the Measuring mode screen. (See P25 for details.)


- 2) Set the ISO value at the ISO setting.
- 3) Set the shutter speed at the F icon.
- 4) Press the Measuring button  on the main unit.




When the Measuring button  is released, measuring will end, and the measuring value (f-stop) will be displayed. Continuous measuring will take place while the Measuring button  is held down.



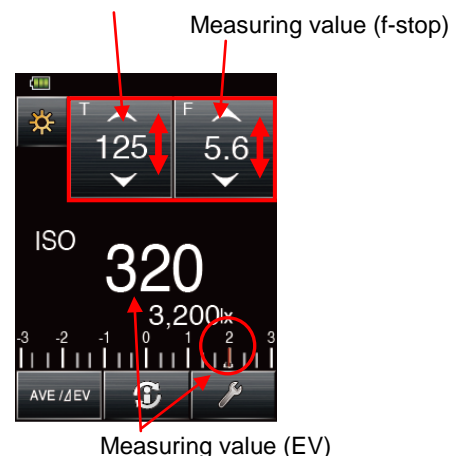
5-1-3 TF Priority Measuring

This setting can be used when set at the Custom Setting Function. To select TF Priority, select item number 0 (ON) for setting number 8 (TF Priority) in Custom Setting Function mode. (See P56 for details.)

1) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  icon that appears on the Measuring mode screen. (See P25 for details.)

- 2) Set shutter speed at T icon.
 - 3) Set f-stop at F icon.
 - 4) Press Measuring button  on main unit
- When the Measuring button  is released, measuring will end, and ISO film speed at that point will be displayed as the measuring value. Continuous measuring will take place while the Measuring button  is held down.

Measuring value (shutter speed)



5) Intensity can be additionally displayed on the Measuring screen.

Select item number 0 (ON) for setting number 19 (Luminance/Illuminance Independent Display mode) in Custom Setting Function mode. (See P56 for details.)

5-1-4 Illuminance/Luminance Measuring

Illuminance can be measured using the incident light system and luminance can be measured using the reflected light system. The following are the units that can be set.

See respective unit pages for details on operating.

Incident light system (illuminance measuring)

•Lux (Unit: lx)

•Foot candle (Unit: fc)

Reflected light system (luminance measuring)

- Candela per square meter (Unit: cd/m²)
- Foot-lambert (Unit: fl)

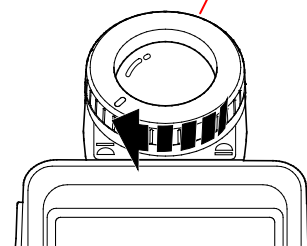
Reference

Calibration compensation value will be void with illuminance measuring.

② Lumisphere retracting ring

(1) Fixed Light Illuminance lux Independent Display

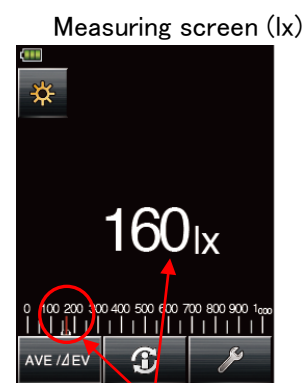
- 1) Rotate the lumisphere retracting ring ② and align the ring mark with the ☰ symbol.
- 2) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  displayed on the Measuring Mode Selection screen. (See P25 for details.)



- 3) Align the surface to be measured with the Light Receptor Head so that they are parallel and then press the Measuring button ⑧ on the main unit.


When the Measuring button ⑧ is released, measuring will end, and illuminance at that point will be displayed as a lux value.

Continuous measuring will be in place while the Measuring button ⑧ is held down.



Measuring value (illuminance lx)

(2) Fixed Light Illuminance fc Independent Display

- 1) Rotate the lumisphere retracting ring ② and align the ring mark with the ☰ symbol.
- 2) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  icon displayed on the Measuring Mode Selection screen. (See P25 for details.)
- 3) Align the surface to be measured with the Light Receptor Head so that they are parallel and then press the Measuring button ⑧ on the main unit.

When the Measuring button ⑧ is released, measuring will end, and illuminance at that point will be displayed as an fc (foot candle) value.



Continuous measuring will be in place while the Measuring button ⑧ is held down.


Measuring screen (fc)




Measuring value (illumination fc)



(3) Fixed Light cd/m^2 Independent Display (Reflected Light System)


- 1) Attach a viewfinder (sold separately). (See P24 for details.)
- 2) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  icon displayed on the Measuring Mode Selection screen. (See P25 for details.)
- 3) Look through the viewfinder, and when the desired measuring area is in the circled sight, press the Measuring button  on the main unit.


When the Measuring button  is released, measuring will end, and illuminance at that point will be displayed as a cd/m^2 value.

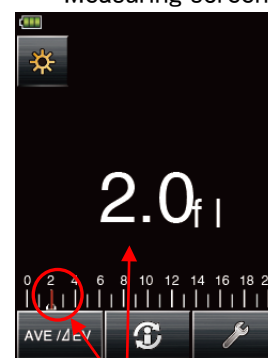
Continuous measuring will be in place while the Measuring button  is held down.

Measuring screen (cd/m^2)]Measuring value (luminance cd/m^2)(4) Fixed Light fl Independent Display (Reflected Light System)

- 1) Attach a viewfinder (sold separately). (See P24 for details.)
- 2) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  icon displayed on the Measuring Mode Selection screen. (See P25 for details.)
- 3) Look through the viewfinder, and when the desired measuring area is in the circled sight, press the Measuring button  on the main unit.





When the Measuring button  is released, measuring will end, and illuminance at that point will be displayed as an fl value.

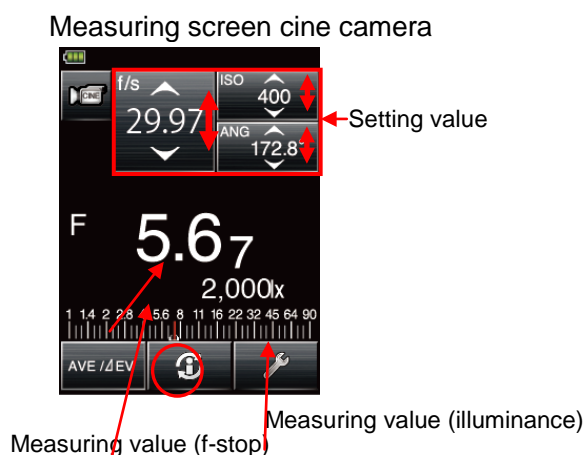
Continuous measuring will be in place while the Measuring button  is held down.

Measuring screen (fl)Measuring value (luminance fl)


5-1-5 Measuring when Shooting with Cine or HD Cine Camera

(1) Measuring when Shooting with Cine Camera


- 1) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  icon displayed on the Measuring Mode Selection screen. (See P25 for details.)
- 2) Set frame rate for cine camera at f/s setting icon.
- 3) Press the ISO (ISO value) setting icon to display an expanded view. Set the ISO value in this expanded state. The normal size will be restored after a set amount of time.
- 4) Set shutter open angle at the ANG setting icon. Press the ANG setting icon to display an expanded view. Set the ISO value in this expanded state. The normal size will be restored after a set amount of time.
- 5) Set the amount of calibration compensation in accordance with shooting parameters (highlight, shadow criteria).
- 6) Press the Measuring button  on the main unit. When the Measuring button  is released, measuring will end, and the Measuring value (f-stop) at that point will be displayed. Continuous measuring will be in place while the Measuring button  is held down.



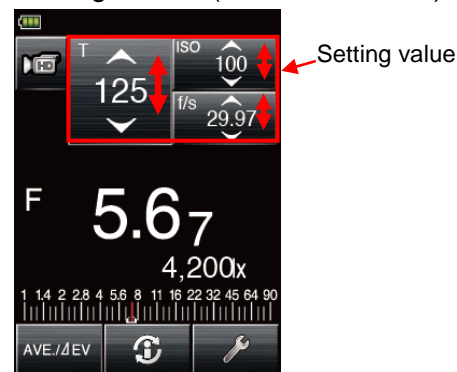
Reference




- The f-stop display steps are switched using the Custom Setting Function to change in stepped increments of 1/3 step, 1/2 step or 1 step from the set number 1 [displayed step]. (See P56 for details.)
- There are 20 types of frame rate that can be set at User Settings. (See P57 for details.)
- There are 20 types of shutter opening angles that can be set at User Settings. (See P58 for details.)
- After measuring, if frame rate is changed at f/s (frame rate) setting icon, an f-stop that corresponds to that change will be displayed.
- After measuring, if ISO value is changed at ISO setting icon, an f-stop that corresponds to that change will be displayed.
- After measuring, if angle is changed at ANG (shutter opening angle) setting icon, an f-stop that corresponds to that change will be displayed.
- Press the Average icon () at the bottom of the Measuring screen to switch to the Average Function. (See P71 for details.)
- The display contents of Analog Scale (measuring scale and EV scale) will change in accordance with the settings for Measuring mode, Incident/Reflected and Mid Tone. (See P25 for details.)
- See P42 for details about being over or under the display range and measuring range, and combat these out-of-range issues by either changing the f-stop or adjusting the brightness.

(2) Measuring when Shooting with HD Cine Camera

- 1) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  icon displayed on the Measuring Mode Selection screen. (See P25 for details.)
- 2) Set frame rate for cine camera at f/s setting icon.
Press the ISO (ISO value) setting icon to display an expanded view. Set the ISO value in this expanded state. The normal size will be restored after a set amount of time.
- 3) Set the HD cine camera frame rate at the f/s setting icon.
Press the f/s setting icon to display an expanded view. Set the frame rate in this expanded state. The normal size will be restored after a set amount of time.


Measuring Screen (HD Cine Camera)



- 4) Set shutter speed at the T (shutter speed) setting icon.
- 5) Set the amount of calibration compensation in accordance with shooting parameters (highlight, shadow criteria).
- 6) Press the Measuring button  on the main unit. When the Measuring button  is released, measuring will end, and the Measuring value (f-stop) at that point will be displayed. Continuous measuring will be in place while the Measuring button  is held down.

Reference

- The f-stop display steps are switched using the Custom Setting Function to change in stepped increments of 1/3 step, 1/2 step or 1 step from the set number 1 [displayed step]. (See P56 for details.)
- There are 20 types of frame rate that can be set at User Settings. (See P57 for details.)
- After measuring, if speed is changed at T (shutter speed) setting icon, an f-stop that corresponds to that change will be displayed.
- After measuring, if frame rate is changed at f/s (frame rate) setting icon, an f-stop that corresponds to that change will be displayed.

- After measuring, if ISO value is changed at ISO setting icon, an f-stop that corresponds to that change will be displayed.
- Press the Average icon () at the bottom of the Measuring screen to switch to the Average Function. (See P71 for details.)
- The display contents of Analog Scale (measuring scale and EV scale) will change in accordance with the settings for Measuring mode, Incident/Reflected and Mid Tone. (See P25 for details.)
- See P42 for details about being over or under the display range and measuring range, and combat these out-of-range issues by either changing the f-stop or adjusting the brightness.

5-2 Measuring in Flash Mode

Measuring in Flash Mode refers to a measuring method that uses momentary light such as that produced by a flashlight or flash bulb. The following are the measuring methods used in Measuring in Flash Mode.

- Cord Flash Mode (connected)
- Cordless Flash Mode
- Cord Flash Accumulative Mode
- Cordless Flash Accumulative Mode
- Flash Radio Mode (for L-478DR only)
- Flash Radio Accumulative Mode (for L-478DR only)

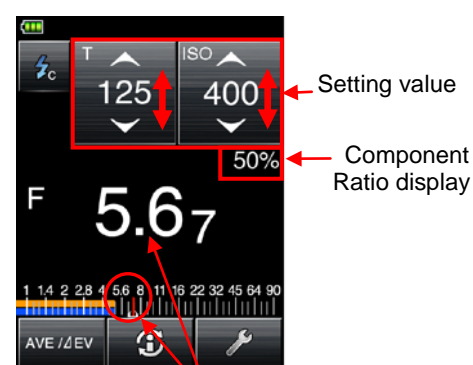
※The following items explain Flash Radio Mode and Flash Radio Accumulative Mode.

Also see 4-3 Setting Measuring Mode (P25) for details on changing measuring mode.

1) About Screen Display Details

When flash light is measured, f-stop (a mixed value of fixed light and flash light = total intensity) is displayed on screen. Also, flash component ratio is displayed in numerical 10% increments against the total intensity. The respective measuring results of fixed light (orange) and flash light (blue) are displayed in the Analog Scale.

Measuring Example in Cord Flash Mode



Measuring value (f-stop)

2) About the Analog Scale

Touch the scale to turn the component ratio display ON or OFF.



3) Light Analyzing Function

With a single measurement the ratio of flash light and fixed light are displayed. If flash light is measured, the measuring value will denote the total intensity (a mixed value of flash light and fixed light). Likewise, the component ratio display numerically shows in increments of 10% the ratio of flash light against the total intensity. This numeric value can be used to calibrate shooting to suit the artistic intention – for example, when shooting with a flash in a room lit by tungsten lamps, the tungsten lamp light (fixed light) can be strengthened or weakened (flash effect strengthened).

Measuring Example in Cordless Flash Mode



<Example>


As in the screen on the right, if shutter speed is 125 and ISO is 400, the flash component and tungsten lamp light will be 50% each. Likewise, the respective measuring results in the Analog Scale for flash light (blue) and fixed light (orange) will denote this.

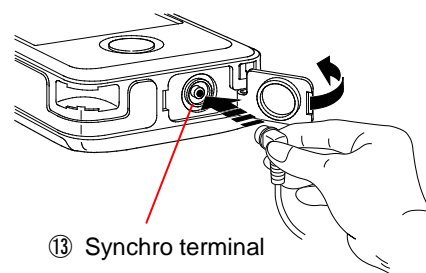
Reference

- The shutter speed display steps are switched using the Custom Setting Function to change in stepped increments of 1/3 step, 1/2 step or 1 step from the set number 1 [displayed step]. (See P56 for details.)
- The shutter speeds that can be set will vary depending on the displayed step.
- After measuring, if setting values are changed at ISO setting icon, an f-stop that corresponds to that change will be displayed.
- See 8. Setting Range for details on values that can be set for ISO.
- After measuring, if speed is changed at T (shutter speed) setting icon, an f-stop that corresponds to that change will be displayed.
- See P42 for details about being over or under the display range and measuring range, and combat these out-of-range issues by either changing the f-stop or adjusting the brightness.

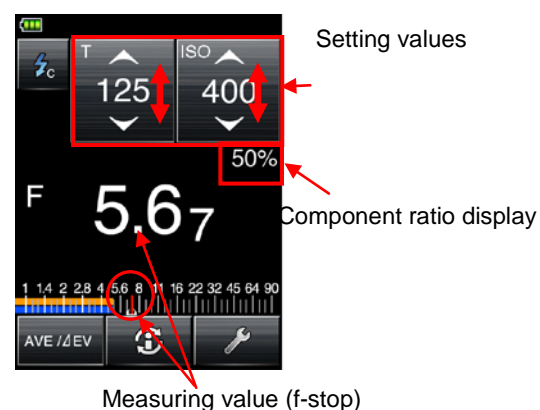
5-2-1 Measuring in Cord Flash Mode

In this measuring mode, a synchro cord (sold separately) is used to connect the flash and main unit. This is used when full conformity with the flash is desired or when measuring while a flash bulb is being used.


- 1) Connect the flash's synchro cord (sold separately) to the main unit's synch terminal ⑬.
- 2) Touch the Measuring mode icon in the top left of the screen and then touch the  icon displayed on the Measuring Mode Selection screen. (See P25 for details.)
 - 3) Set the ISO value at the ISO setting icon.
 - 4) Set shutter speed at the T (shutter speed) icon.
 - ※ Check in advance the conformity range of equipment to be used and then make settings.
- 5) Press the Measuring button ⑧ on the main unit. The flash will trigger, and the measuring value taken at that point will be displayed.



Example of Measuring in Cord Flash Mode











Caution

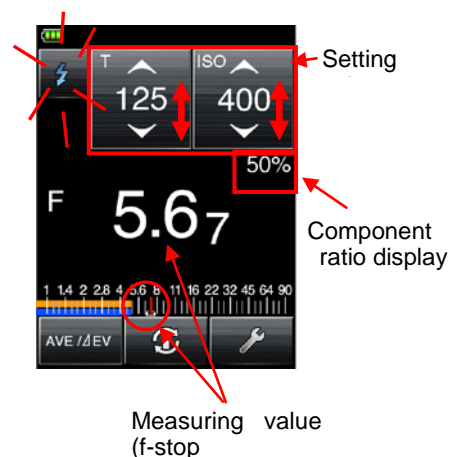
- Depending on the flash, it may trigger when the synch cord is inserted into the synchro terminal or when the Power button  on the main unit is pressed.
- The flash may not trigger when its trigger voltage is extremely low, etc. In such cases, take measurement as shown in 5-2-2 Measuring in Cordless Flash Mode. (See P35 for details.)
- When triggering a flash bulb to make a measurement, check the conformity range and set the shutter speed.
- When triggering a flash bulb to make a measurement, note that a new bulb has to be loaded for each trigger of the flash.
- The EV scale cannot be displayed.

5-2-2 Measuring in Cordless Flash Mode

With this measuring mode, the main unit is set to measuring standby status (90 seconds), and during this time the flash is triggered and the measurement taken. In general, this mode is used when there is some distance between the flash and the main unit (the synchro cord will not reach) or the desire is to measure the flash without the use of a synchro cord.

- 1) Touch the Measuring mode icon in the top left of the screen and then touch the  icon displayed on the Measuring Mode Selection screen. (See P25 for details.)
- 2) Set the ISO value at the ISO setting icon.
- 3) Set shutter speed at the T (shutter speed) icon.
 - ※ Check in advance the conformity range of equipment to be used and then make settings.
- 4) Press the Measuring button  on the main unit. Measuring standby will become effective with the Measuring mode icon  blinking for 90 seconds.
- 5) The flash has to be triggered manually while the Measuring mode icon  is blinking. The measurement will be performed and the measuring value (f-stop) displayed.
- ※ If the  icon stops blinking before the flash has been triggered, and you want to start again, please repeat procedures 4) and 5).
- 6) To release (cancel) the measuring standby status while the icon  is blinking for 90 seconds, touch the screen, or press either the Memory button  or Menu button .

Example of Measuring in Cordless Flash Mode




Caution

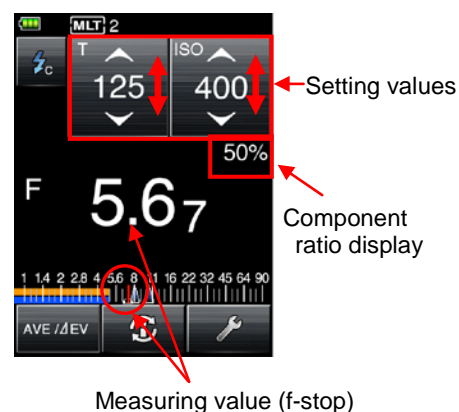
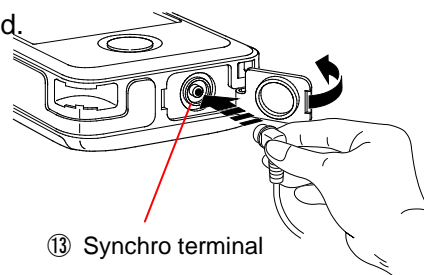
- If the amount of flash light seems small in comparison to ambient light when flash is triggered, there are times when the light may not be detected. In such cases, see 5-2-1 Measuring in Cord Flash Mode (P34) for details on how to measure.
- Under rapid-start fluorescent lamps or special lighting equipment, on rare occasions such lighting will be judged as flash light, and measured as such. In such cases, see 5-2-1 Measuring in Cord Flash Mode (P34) for details on how to measure.
- Even if the flash is not triggered during measuring standby status, a sudden change of light in the Light Receptor Head may cause a measurement to be taken. To avoid this, see 5-2-1 Measuring in Cord Flash Mode (P34) for details on how to measure.
- As the triggered light waveform of a flash bulb is gentle, light will not be detected in cordless mode. Therefore, be sure to see 5-2-1 Measuring in Cord Flash Mode (P34) for details on how to measure.

5-2-3 Measuring in Cord Flash Accumulative Mode

With this measuring mode, when a single triggering provides an insufficient intensity, multi flash triggering is performed and the measured value (f-stop) that is displayed matches the value for accumulative intensity.

The accumulative count will be displayed in the Test/Title field.

- 1) Connect the flash's synchro cord (sold separately) to the synchro terminal ⑬ of the main unit.
- 2) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  icon at the displayed Measuring Mode Selection screen. (See P25 for details.)
- 3) Set ISO value at ISO setting icon.
- 4) Set shutter speed at T (shutter speed) setting icon.
 - ※ Check in advance the conformity range of equipment to be used and then make settings.
- 5) Press the Measuring button ⑧ on the main unit. The flash will trigger and the measuring value (f-stop) at that point will be displayed.
- 6) Repeat this operation (pressing the Measuring button ⑧ on the main unit) only for the number of times necessary. The flash will trigger and the measuring value (f-stop) at that point will be displayed together with the accumulative count.



Caution

- Depending on the flash, it may trigger when the synchro cord is inserted into the synchro terminal or when the Power button ⑩ on the main unit is pressed.
- The flash may not trigger when its trigger voltage is extremely low, etc. In such cases, take measurement as shown in 5-2-2 Measuring in Cordless Flash Mode. (See P35 for details.)
- When triggering a flash bulb to make a measurement, check the conformity range and set the shutter speed.
- When triggering a flash bulb to make a measurement, note that a new bulb has to be loaded for each trigger of the flash.
- The EV scale cannot be displayed.


5-2-4 Measuring in Cordless Flash Accumulative Mode

With this measuring mode, when a single triggering provides an insufficient intensity, multi flash triggering is performed and the measured value (f-stop) that is displayed matches the value for accumulative intensity.



With this measuring mode, the main unit is set to measuring standby status (90 seconds) by pressing the Measuring button ⑧ on the main unit, and during this standby time the flash is triggered and the measurement taken. A measuring value (f-stop) is displayed for each trigger of the flash.


The accumulative count is displayed in the Status/Title field.

This type of measuring can be used when the Accumulative mode is ON at the Custom Setting Function. (See P56 for details.)

- 1) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the  icon at the displayed Measuring Mode Selection screen. (See P25 for details.)


- 2) Set the ISO value at the ISO setting icon.
- 3) Set the shutter speed at the T (shutter speed) setting icon.
- ※ Check in advance the conformity range of equipment to be used and then make settings.

- 4) If necessary, set calibration value for compensation.
- 5) Press the Measuring button ⑧ on the main unit. Measuring standby will become effective with the Measuring mode icon () blinking for 90 seconds.
- 6) The flash has to be triggered manually while the Measuring mode icon  is blinking. The measurement will be performed and the measuring value (f-stop) displayed.

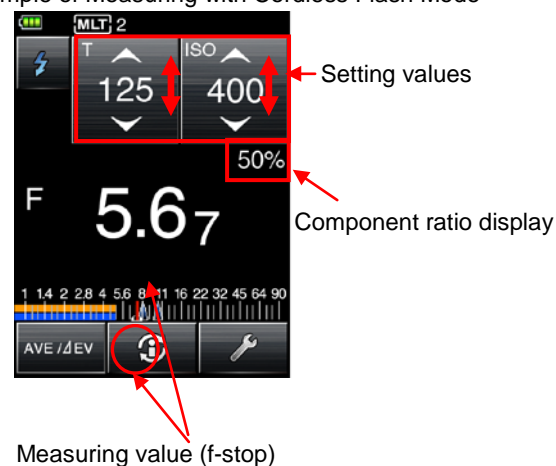
※ If the  icon stops blinking before the flash has been triggered, and you want to start again, please repeat procedures 5) and 6).

- 7) Repeat this operation (pressing the Measuring button ⑧ on the main unit) only for the number of times necessary.

The flash will trigger and the measuring value (f-stop) at that point will be displayed together with the accumulative count.

- 8) To release (cancel) the measuring standby status while the icon  is blinking for 90 seconds, touch the screen, or press either the Memory button ⑤ or Menu button ⑦.

Example of Measuring with Cordless Flash Mode



5-3 Measuring with Radio-controlled Flash (for L-478DR only)

5-3-1 How to Measure Using Radio Control

The measuring method using radio control involves connecting a radio receiver (sold separately) to the flash in order to trigger the flash from the main unit side. This enables one person to be able to measure the flash without the use of a synchro cord.

The following are the modes that can be set to measure this way.

- Radio Flash Mode
- Radio Flash Accumulative Mode

Note that prior to measuring the Radio Control channels must be set. (See P51 for details.)

※ Radio receivers compatible with L-478DR: PocketWizard® series or other flash manufacturers that equip flashes with PocketWizard systems.

Please read the manual provided with the radio receiver for details about operating the radio receiver.

For compatible products, please see the LPA website (www.pocketwizard.com).

Caution

- The controllable distance of flash-compatible radio systems varies in accordance with the position and direction that the radio receiver is set. To set the best parameters, be sure to set up the main unit and the radio receiver in the following way.
 1. Make sure the main unit and radio receiver are visible to each other in a straight line.
 2. Set up the radio receiver away from large metallic objects, concrete or objects containing a lot of moisture (people or wood, etc.).
 3. Use Velcro tape or the tripod slot to secure the radio receiver. At this time, make sure the radio receiver's antenna is fully above the power source box of the flash. In all situations, do not allow the radio receiver's antenna to come into contact with metallic objects.
 4. Depending on the location, there are cases when the radio receiver absolutely cannot receive a signal. The causes are varied and include radio waves being reflected off of nearby objects. Normally, this can be rectified by changing the direction of the radio receiver by several centimeters. Alternatively, check to see if the radio receiver is behind an object that absorbs or blocks radio waves, such as concrete, metal or low hill.
 5. Under the above parameters, use radio control at a distance within 30 meters.

5-3-2 How to Measure with Radio Control Channels

(1) How to Set a Radio Control Channel for Use

The radio channels that can be used for measuring on this product are Standard Channels and Control TL Channels.

Control TL Channel:


Among the PocketWizard® products, this is a radio system that can control power (calibrate intensity).

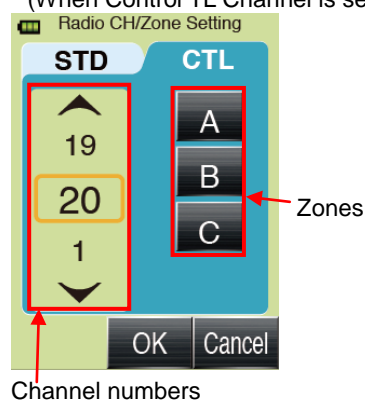
It has 20 channels. Each channel has three zones (A, B, C), which means that up to three flashes can be controlled by setting a zone.

Standard Channels:


Among PocketWizard® products, this is a radio system that only triggers flashes. It has 32 channels. Channels No. 1 to 16 are single channels. And, channels No. 17 to 32 are multi channels. Each channel has four zones (A, B, C, D) that can be set, which means that up to four flashes can be controlled by one channel.

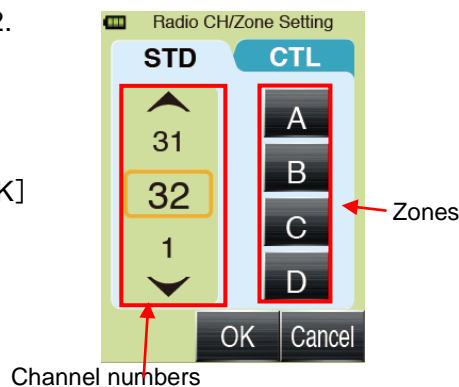
(1)-1 Setting Control TL Channel

- 1) Touch the toolbox icon  at the bottom of the Measuring screen to display the Toolbox screen and then touch the RFCh/Zone tab to display the Radio Trigger Setting screen. (See P20 for details.)
- 2) Touch the CTL tab.
- 3) Either touch the arrows ▲/▼ or slide the channel number dial to select a channel from 1 to 20.
- 4) Set one or more control zones (A to C) for the channel.
- 5) Touch the OK tab to confirm settings and then return to the Measuring screen. (Touch the Cancel tab to cancel settings.)

Radio Trigger Channel Setting Screen
(When Control TL Channel is set)

(1)-2 Setting Standard Channel

- 1) Touch the toolbox icon  at the bottom of the Measuring screen to display the Toolbox screen and then touch the RF Ch/Zone tab to display the Radio Trigger Channel Setting screen. (See P20 for details.)
- 2) Touch the STD tab.
- 3) Either touch the arrows ▲/▼ or slide the channel number dial to select channel number from 1 to 32.
- 4) Set control zones for selected channel number.
No settings for channels 1 to 16
A, B, C, D types for channels 17 to 32
- 5) Touch the OK tab to confirm settings and return to the [OK] Measuring screen. (Touch Cancel tab to cancel settings.)

Radio Trigger Channel Setting Screen
(When Standard Channel is set)

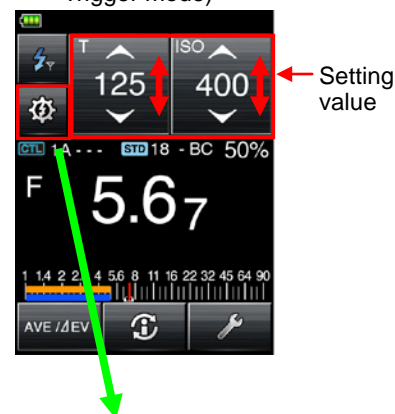
Reference

- When setting both Standard Channel and Control TL Channel, after both channels and zones have been selected, setting will be complete once the OK tab is pressed (touched).

5-3-3 How to Adjust Flash Intensity using Radio Control Screen

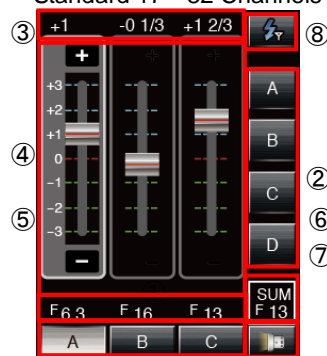
This type of measuring can be used when Radio Trigger mode is set at the Custom Setting Function. (See P73 for details.)

Measuring Screen (Radio Trigger mode)

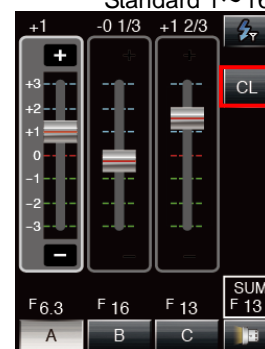


- 1) Touch the Measuring mode icon at the top left of the Measuring screen and then touch the icon on the displayed Measuring Mode Selection screen to call up the Radio Flash mode. (See P25 for details.)
- 2) Touch the Radio Control icon () to display the Radio Control screen.
- 3) Set flash intensity output at the Radio Control screen.
 - ※ Please set the channel number to be used in advance. (See P38 for details.)
 1. Touch the Zone buttons you want to select. When using a ControlTL channel: A to C buttons ② are set at bottom.
 2. The plus/minus (+/-) of the bar graph for the selected zones will become active and the current setting values will be shown at the top ③ and in the bar graph ④.
 3. Either touch the +/- symbols on the bar graph or slide the bar up/down to set values.
 4. Repeat the above items 1 to 3 in order to set the remaining desired zones.
5. Pressing the Measuring button ⑧ will display in item ⑤ the F value (f-stop) for each zone as calculated out by the set T value and ISO value.
 6. The average F value (f-stop) for all zones will be displayed in item ⑥.
 7. Touch item ⑦ to set ON or OFF modeling lamp used in measuring.
 8. Touch item ⑧ to return to the original Measuring screen.
- 4) Check that channel numbers (zones) are same for the main unit and radio receiver.

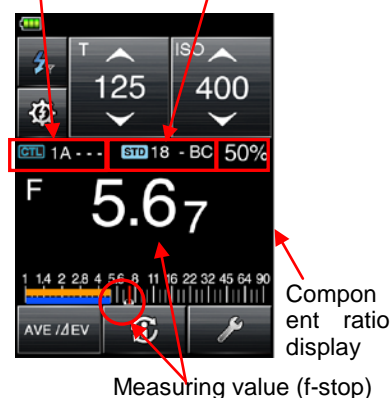
Radio Control Screen
Control TL +
Standard 17~32 Channels



Control Screen
Control TL +
Standard 1~16 Channels



Control TL channel & zone display Standard channel & zone display



Caution




- The controllable distance of flash-compatible radio systems varies in accordance with the position and direction that the radio receiver is set. To set the best parameters, be sure to set up the main unit and the radio receiver carefully.

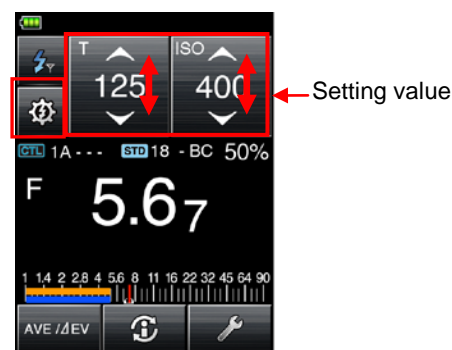
Reference

- The shutter speed display steps are switched using the Custom Setting Function to change in stepped increments of 1/3 step, 1/2 step or 1 step from the set number 1 (displayed step). (See P56 for details.)
- The shutter speeds that can be set will vary depending on the displayed step.
- After measuring, if setting values are changed at ISO setting icon, an f-stop that corresponds to that change will be displayed.
- See 8. Setting Range for details on values that can be set for ISO.
- After measuring, if shutter speed is changed at T (shutter speed) setting icon, an f-stop that corresponds to that change will be displayed.
- See P42 for details about being over or under the display range and measuring range, and combat these out-of-range issues by either changing the f-stop or adjusting the brightness.

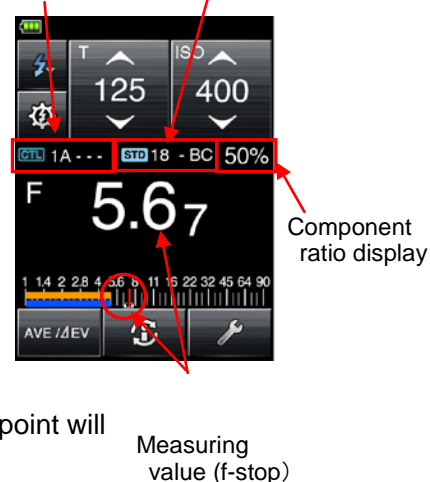
5-3-4 Measuring in Radio Flash Mode

This type of measuring can be used if Radio Trigger mode settings have been made at the Custom Setting Function. (See P73 for details.)

- 1) Touch the Measuring mode icon in the top left of the Measuring screen and then touch the  icon in the displayed Measuring Mode Selection screen. (See P25 for details.)
 - 2) Set the ISO value at the ISO setting icon.
 - 3) Set the shutter speed at the T (shutter speed) setting icon.
 - ※ Check in advance the conformity range of equipment to be used and then make settings.
- 4) When you want to calibrate flash intensity, touch the Radio Control icon  to display the Radio Control screen and then set flash intensity output.
 - 6) Check that channel numbers (zones) are same for the main unit and radio receiver.
 - 7) Press the Measuring button  on the main unit. The flash will trigger and the measuring value (f-stop) at that point will be displayed.






Control TL channel & zone display Standard channel & zone display



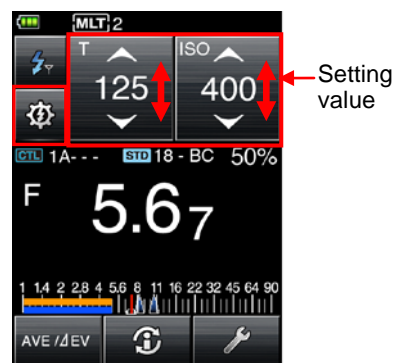
5-3-5 Measuring in Radio Flash Accumulative Mode

This type of measuring can be used if Radio Trigger mode settings have been made at the Custom Setting Function. (See P73 for details.)

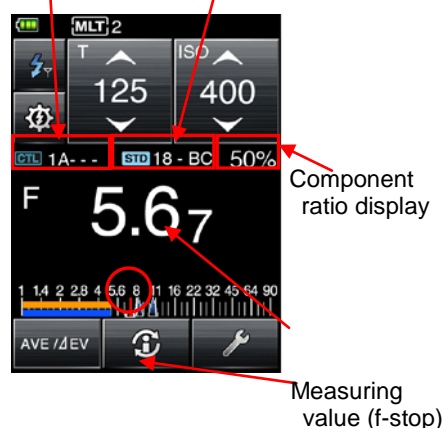
- 1) Touch the Measuring mode icon in the top left of the Measuring screen and then touch the  icon in the displayed Measuring Mode Selection screen. (See P25 for details.)
- 2) Set the ISO value at the ISO setting icon.
- 3) Set the shutter speed at the T (shutter speed) setting icon.
 - ※ Check in advance the conformity range of equipment to be used and then make settings.
- 4) Set calibration value for amount of compensation if necessary.
- 5) When you want to calibrate flash intensity, touch the Radio Control icon  to display the Radio Control screen and then set flash intensity output.
- 7) Check that channel numbers (zones) are same for the main unit and radio receiver.
- 8) Repeat the operation of pressing the Measuring button  on the main unit) only for the number of times necessary.

The flash will trigger and the measuring value (f-stop) at that point will be displayed together with the accumulative count in the bottom title field.

Measuring Screen



Control channel & zone display TL Standard channel & zone display



5-4 What to do when Displayed Range or Measuring Range is Exceeded

(※This example explains what needs to be done in Cord Flash mode.)

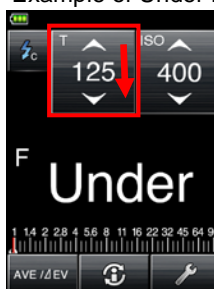
5-4-1 When Displayed Range is Exceeded

Even within the measuring range of this product, the “Over” (over exposure) message will be displayed for the maximum f-stop (F128) and the “Under” (under exposed) message will be displayed for the minimum f-stop (F0.5) in the set shutter speed. In such cases, take the following action.

Example of Over Exposure Display



Example of Under Exposure Display



- (1) When over exposure “Over” is displayed:

- When the display range is exceeded and the “Over” message appears, change the

shutter speed to a higher speed at the T (shutter speed) icon. A suitable f-stop in accordance with the new setting will be displayed.

(2) When under exposure “Under” is displayed:

- Also, when the display range is exceeded and the “Under” message appears, change the shutter speed to a lower speed at the T (shutter speed) icon. A suitable f-stop in accordance with the new setting will be displayed.

5-4-2 When Displayed Range is Exceeded

When brightness (or darkness) exceeds the measuring range of this product, the “Over” (or “Under”) message will blink to inform the user that measuring is not possible. In such cases, adjust the brightness.

When brightness exceeds measuring



When brightness is under the measuring range



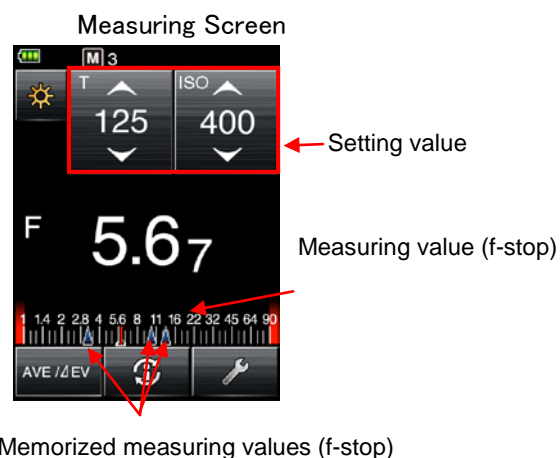
6. Functions

6-1 Memory Function

This product can memorize measuring values. This function can be used with Fixed Light Shutter Speed Priority, F (f-stop) Priority, EV Priority and Flash (cord connected, cordless) modes. Regardless of whether the system is incident or reflected light, up to nine measurement values can be memorized and displayed. For example, after a value is memorized in incident light settings, it will remain in memory even if settings are switched to reflected light, and a memory value for the new reflected light settings can be displayed.

6-1-1 Memory



- 1) Press the Measuring button ⑧ on the main unit when at the Measuring screen.
- 2) Press the Memory button ⑤ to memorize measuring value.
The memorized measuring value will be displayed as a dot on the scale.
- 3) Items 1) and 2) can be repeated.
Up to nine measuring values can be memorized.




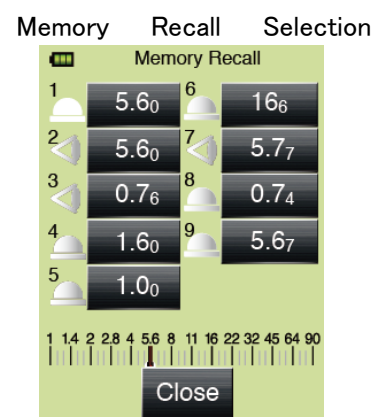
Caution

- Memory Function cannot be used with the following flash accumulative modes.
 - Cord Flash Accumulative Mode
 - Cordless Flash Accumulative Mode
 - Radio Flash Accumulative Mode (for L-478DR only)
- The tenth measurement value onward will be displayed but will not be memorized.

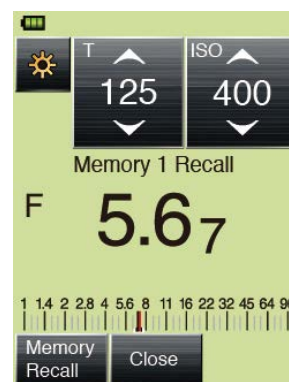
6-1-2 Memory Recall

This function is used to recall memorized contents for viewing. Memory recall items are listed in order, with memory contents (memory number, incident light  or reflected light  and measuring value) displayed. In Analog Scale, memorized measuring values are displayed as dots on the scale.

- 1) Touch the Toolbox icon  at the bottom of the Measuring screen.
- 2) Touch the Memory Recall tab on the Toolbox screen.
(See P20 for details.)
- 3) The Memory Recall Selection screen will be displayed and the memory contents will be shown. Touch a desired item to view its details.
- 4) The detailed contents will be displayed in the Memory Recall screen.
For Analog Scale, the recalled measuring value will be displayed.
- 5) Touch the Close tab to return to the Measuring screen. Touch the Memory Recall tab to return to the Memory Recall Selection screen.
- 6) Touch the Close tab at the Memory Recall Selection screen to return to the Measuring screen.



Memory Recall Screen





Caution


- Memory cannot be recalled if there are no memorized memory values.

6-1-3 Memory Clear

Memorized measuring values can be cleared individually or collectively.

Memory recall items are listed in order, with memory contents (memory number, incident light  or reflected light  and measuring value) displayed in the Memory Recall screen.

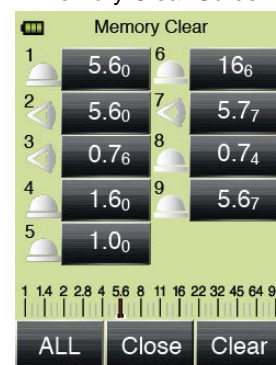
In Analog Scale, memorized measuring values are displayed as dots on the scale.

- 1) Touch the Toolbox icon () at the bottom of the Measuring screen.
- 2) Touch the Memory Clear tab in the displayed Toolbox screen. (See P20 for details.)
- 3) Touch the items you want to clear from the Memory Clear screen. The Clear Confirmation screen will appear, so select either the OK or Cancel tab. Pressing the OK tab clears the item, and then the shown contents will be redisplayed minus the cleared item.
- 4) Repeat items 2) and 3) above to clear other memory items as necessary.
- 5) Touch the Close tab at the Memory Clear screen to return to the Toolbox screen.

Toolbox Screen



Memory Clear Screen



Total Memory Clear:

Touch the ALL tab in procedure item 3) above. The Clear Confirmation screen will appear, so touch the OK tab to clear all items and return to the Toolbox screen.

Caution

- Memory Clear cannot be selected if there are no memorized memory values.


6-2 Mid. Tone Function

Mid. Tone is a function used to set the middle tone as the standard when the camera exposure profile function is to be used.

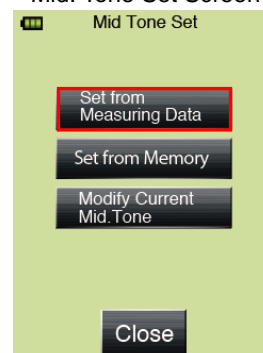
Mid. Tone has the following four functions.

- Sets measuring value as mid tone.
- Selects memorized measuring values (maximum of nine) and sets as mid tones.
- Corrects mid tones.
- Recalls mid tones

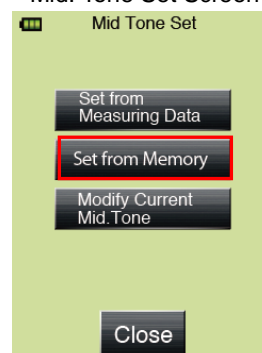
6-2-1 Setting Measuring Value as Mid. Tone

- 1) Press the Measuring button ⑧ of the main unit whilst in any Measuring mode.
- 2) Touch the Toolbox icon  at the bottom of the Measuring screen.
- 3) Touch the Mid. Tone Set tab in the displayed Toolbox screen. (See P20 for details.)
- 4) Touch the Set from Current Measurement tab in the displayed Mid. Tone Set screen to set the current measuring value as a mid tone.
- 5) Touch the Close tab in the Mid. Tone Set screen to return to the Toolbox screen.


Mid. Tone Set Screen





Mid. Tone Set Screen



6-2-2 Setting Memorized Measuring Value as Mid. Tone

- 1) Touch the Toolbox icon  at the bottom of the Measuring screen.
- 2) Touch the Mid. Tone Set tab in the displayed Toolbox screen. (See P20 for details.)
- 3) Touch the Set from Memory tab in the displayed Mid. Tone Set screen.

The Mid. Tone Memory Set Screen will appear, with memory contents (memory number, incident light  or reflected light  and measuring value) displayed.

In Analog Scale, memorized measuring values are displayed as dots on the scale.

- 4) Touch the Measuring value you want to set as a mid tone. The touched Measuring value will be set and the Measuring screen will be restored. At this time, the newly set mid tone will be displayed on the Analog Scale.
- 5) Touch the Close tab on the Mid. Tone Memory Set screen to return to the Measuring screen.




Caution

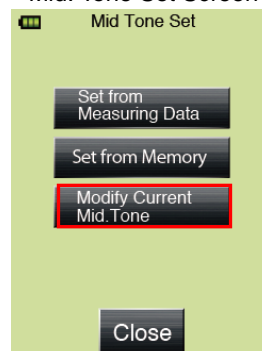
- This cannot be set if there are no memorized memory values.

6-2-3 Mid. Tone Modification

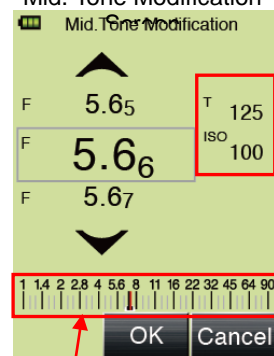
This enables minute adjustment of the currently set Mid. Tone value.

- 1) Touch the Toolbox icon  at the bottom of the Measuring screen.
- 2) Touch the Mid. Tone Set tab in the displayed Toolbox screen. (See P20 for details.)
- 3) Touch the Modify Current Mid. Tone tab in the displayed Mid. Tone Set screen.
The Mid. Tone Modification screen will be displayed.
- 4) Either touch the arrows ▲/▼ or slide the number dial to modify the value.
- 5) Touch the OK tab to confirm modification and return to the Measuring screen. Touch the Cancel tab to return to the Measuring screen without making the modification.

Mid. Tone Set Screen



Mid. Tone Modification



← Displayed settings during measuring


Displays measuring result

Caution

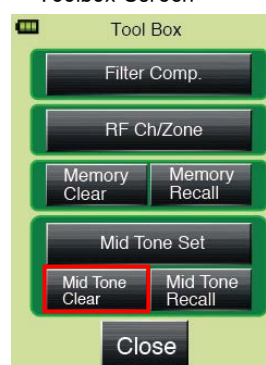
- Modification is not possible if there are no mid tone settings.

6-2-4 Mid. Tone Clearing

This clears the set mid tone.

- 1) Touch the Toolbox icon  at the bottom of the Measuring screen.
- 2) Touch the Mid. Tone Clear tab in the displayed Toolbox screen. (See P20 for details.)
The current mid tone setting contents will be cleared and the Measuring screen restored.
- 3) Touch the Cancel tab to return to the Measuring screen without clearing contents.

Toolbox Screen




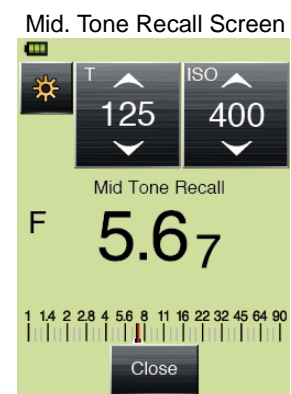
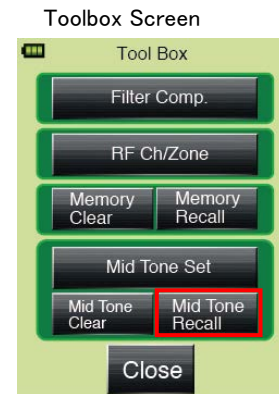
Caution

- Clearing is not possible if there are no mid tone settings.

6-2-5 Mid. Tone Recall

This is a function for recalling the set mid tone for viewing.

- 1) Touch the Toolbox icon  at the bottom of the Measuring screen.
- 2) Touch the Mid. Tone Recall tab in the displayed Toolbox screen. (See P20 for details.)
- 3) The current mid tone setting contents in the Measuring screen will be displayed.
- 4) Touch the Close tab in the Mid. Tone Recall screen to return to the Measuring screen.



Caution

- Recalling is not possible if there are no mid tone settings.

6-3 Average Function

The Average Function can average out up to nine memorized readings and display the average.

This function can be used with the following modes: Fixed Light Shutter Speed priority, f-stop priority and Flash (cord, cordless, radio trigger).

- 1) Press the Measuring button ⑧ on the main unit.
- 2) Press Memory button ⑤ to memorize Measuring value.

The memorized measuring value will be displayed as a dot in the scale.

- 3) Repeat items 1) and 2).

Up to nine measuring values can be memorized.

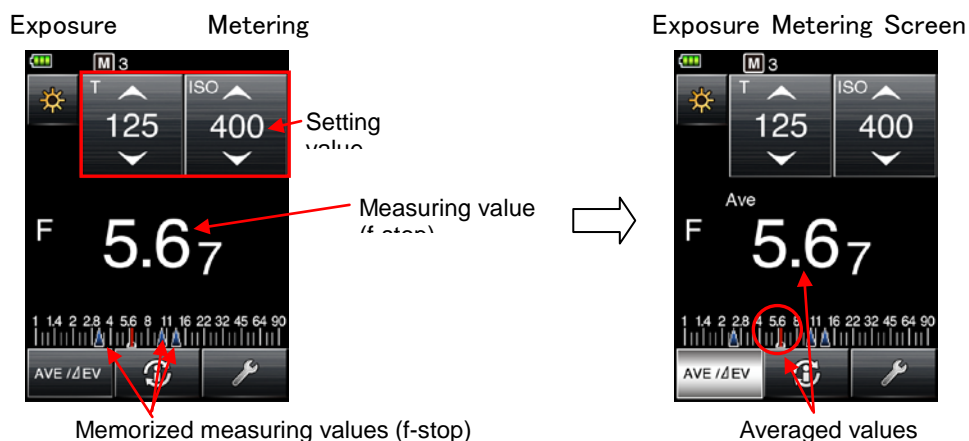
- 4) Touch the Average tab (AVE/ΔEV) at the bottom of the screen.

The average value for all the memory will be displayed. And the Ave mark will be displayed in the screen. When the Average Function is running, the Average icon AVE/ΔEV will be displayed in the negative




- 5) To remove average, touch the Average icon AVE/ΔEV.

The Ave mark will disappear from the middle of the screen.



6-4 Monitor Function



This is a useful function for checking studio lighting and illumination irregularities.



After setting as the standard a measuring value at some point and then holding down the Measuring button  at a location you want to compare with, the difference between the standard value and the other location will be displayed as an EV value (step number) in the measuring value display field. In the Analog Scale, the current measuring value will be displayed.


- ※ The standard value will use the last measuring value when there are no measuring values in memory. When there are measuring values in memory, it will use the average value of all the memory.

Example of illumination ratio measuring using the Monitor Function (in Shutter Speed Priority Mode with incident light system):

When measuring illumination ratio of the main light source and fill light source, use the Flat Function (lumisphere retracted) to measure.

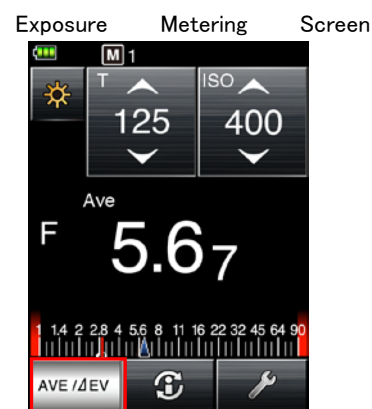
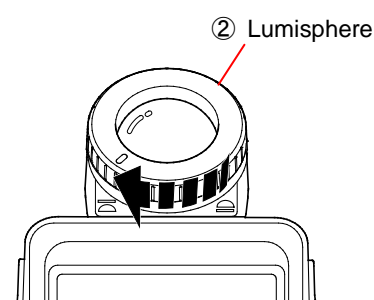
- 1) Rotate the Lumisphere retracting ring  until fully switching to the flat position.
- 2) Turn ON just the main light source.
Place the Light Receptor Head close to the subject and point it toward the main light source.
- 3) Touch the Average tab  at the bottom of the screen.

the Ave mark will appear on screen, and the main light source value will become the standard value. When the Average Function is running, the Average icon  will be displayed in the negative .

- 4) Next, turn ON just the fill light source.
Now, point the lumisphere at the fill light source, hold down the Measuring button , and the difference between measuring values for main and fill light sources will be displayed as an EV value.

Simultaneously, the memory value and monitor value (compared location measuring values) will be displayed on the Analog Scale, enabling you to get an illumination ratio (contrast ratio).

EV Difference of Measuring Value	Illumination Ratio
1	2:1
1.5	3:1
2	4:1
3	8:1
4	16:1



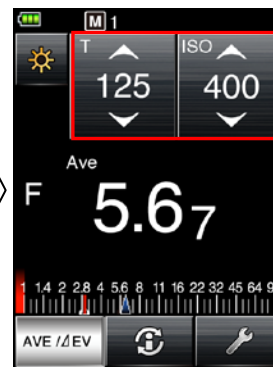
Screen Example (Main Light Source Measuring)



Setting value

Touch
AVE / ΔEV
after
memorizing

Screen Example (Fill Light Source Measuring)



Setting value

5) To remove Monitor, touch the Average icon . The Ave mark will disappear from the middle of the screen.

Reference

- The exposure decider when measuring in incident light involves turning ON both the main and fill light sources, setting the Light Receptor Head to lumisphere extended, pointing it at the camera (lens optical axis) and then measuring.
- The Monitor Function also can be used when measuring with reflected light.




6-5 Filter Compensation Function

By registering and setting the filter compensation value in the light meter, measuring results that reflect the compensation value can be obtained.

This is a useful function for measuring exposure when a filter is being used on the camera lens. Again, when deciding exposure using the highlight standard or shutter standard, having each of the compensation values registered in advance is useful.


The setting range of the filter compensation value is $\pm 5.0\text{EV}$.

The following are the three types of filter compensation that can be selected.

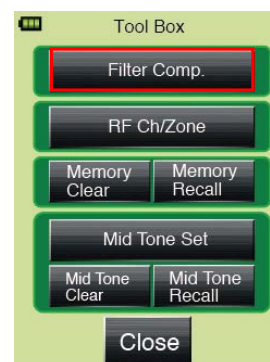
- 1) Filter compensation value setting (Input numeric value. The  icon will be displayed at the top of the screen.)
- 2) Selection of a filter name that has been registered in advance (Up to four filter names can be set, and the  icon will be displayed at the top of the screen.)
- 3) Filter compensation cancel (The  icon will disappear from the top of the screen.)

6-5-1 Setting Filter Numbers and Compensation Values

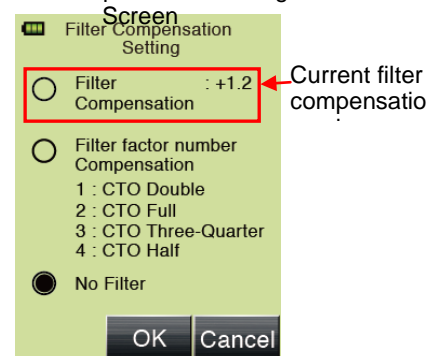
These can be set in steps of 0.1 EV at a range of $\pm 5.0\text{EV}$.

- 1) Touch the Toolbox icon () at the bottom of the screen.
- 2) Touch the Filter Comp. tab in the displayed Toolbox screen. (See P20 for details.)
- 3) Touch the radio button for Input Filter Comp. Value in the displayed Filter Compensation Setting screen.
- 4) Input the compensation value in the displayed Filter Numbers and Compensation Value Setting screen and then touch the Enter tab. (See P22 for details about inputting.)
The original screen will be restored and the input compensation value displayed.
- 5) Touch the OK tab to return to the Measuring screen.

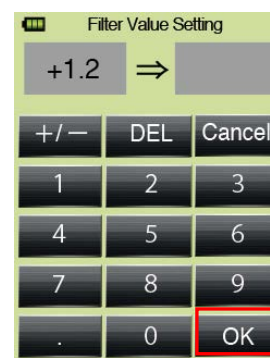
Toolbox Screen



Filter Compensation Setting Screen




Filter Number and Compensation Value Setting Screen



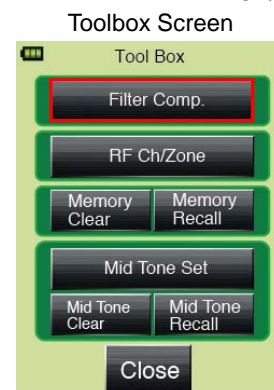
Reference

- Plus compensation will cause over exposure in shooting and minus compensation will cause under exposure.

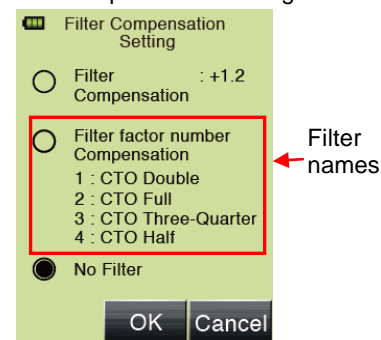
6-5-2 Selecting Filter

- (1) Setting Amount of Filter Compensation
 - 1) Touch the Toolbox icon  at the bottom of the Measuring screen.
 - 2) Touch the Filter Comp tab in the displayed Toolbox screen. (See P20 for details.)
 - 3) Touch-select the radio button for Select Filter factor number in the displayed Filter Compensation Setting screen.
 - 4) Touch the filter name you want to set in the list in the middle of the screen.
 - 5) In the displayed Filter Selection screen, either touch or slide with your fingers the arrows ▲/▼ to display the desired number and then touch it to select it.
 - 6) Repeat items 4) and 5) to set up to four compensation values as necessary. (All of the set compensation values will become compensation objectives.) After selecting the necessary filter names, touch the Close tab to return to the Filter Compensation List screen.
 - 5) Having returned to the Filter Compensation List screen, please check that selected filter names are displayed.

Touch the Close tab to return to the Filter Compensation Setting screen.
 - 6) To end operation, touch the OK tab at the Filter Compensation Setting screen, to return to the Measuring screen.



Filter Compensation Setting



Filter Compensation List




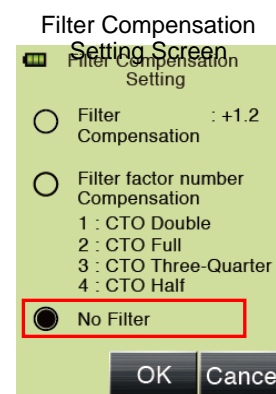
Reference



- See 8. Registered Filters for details about preset filters at time of shipping from factory. (See P65 for details.)
- The user can set filter compensation values. (See P59 for details.)

6-5-3 Deselecting Filter

- 1) Touch the Toolbox icon  at the bottom of the Measuring screen.
- 2) Touch the Filter Comp tab in the displayed Toolbox screen. (See P20 for details.)
- 3) Touch-select the radio button for No Filter in the



- displayed Filter Compensation Setting screen.
- 4) Touch the OK tab to return to the Measuring screen.

6-6 Functions by Menu Selection

6-6-1 Exposure Profile Selection/Editing Function

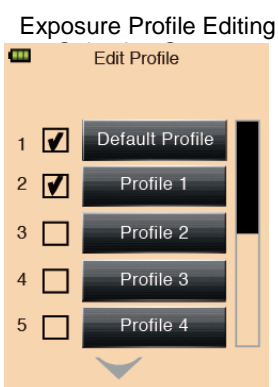
With Data Transfer Software created exposure profiles, if you want to edit (numeric values, names) using the L-478D/L-478DR, this is the function to use. Also, you can create exposure profiles independently with the L-478D/L-478DR. (The maximum number of exposure profiles that can be created are ten profiles.)

(1) Camera Exposure Profile Selection

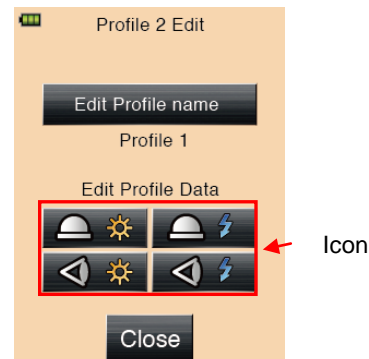
- 1) Press the Menu button ⑦ on the main unit. (See P21 for details.)
 - 2) Touch 4. Set Profile in displayed Menu screen.
 - 3) Items selected (check marked) are shown in the displayed Exposure Profile Editing Selection screen. To change profiles, either touch or slide your finger over the arrows ▲/▼ to display a desired exposure profile name and then touch it to select it.
 - 4) When the exposure profile name is touched, the Measuring screen will be restored.

(2) Exposure Profile Editing

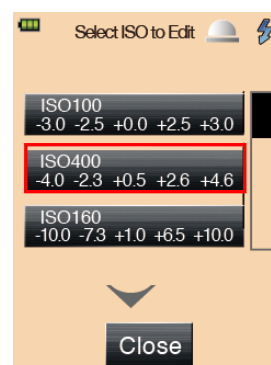
- 1) Press the Menu button ⑦ on the main unit. (See P21 for details.)
- 2) Touch 5. Check/Edit Profile on the displayed Menu screen.
- 3) In the displayed Exposure Profile Edit Selection screen, either touch or slide with your fingers the arrows ▲/▼ to display the desired exposure profile name and then touch it to select it. Items selected (check marked) are shown.
- 4) In the displayed Exposure Profile Information screen, touch one of the icons denoting an exposure metering mode.
 - ※ Selectable icons will be highlighted.
- 5) At the displayed ISO Selection screen, touch the arrows ▲/▼ to display the desired ISO exposure profile information and then touch it to select. The display can be changed by sliding your finger up and down over the exposure profile information.
- 6) Edit characteristics at the displayed Camera



Exposure Profile Information Screen



ISO Selection Screen



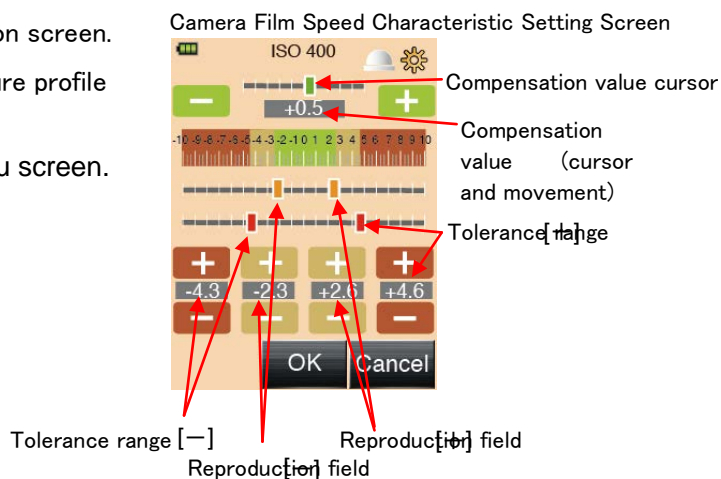
Film Speed Characteristic Setting screen.

1. Touch the compensation value cursor to set compensation value.
The cursor can be moved horizontally within the ± 5 EV range.
The setting value is numerically displayed above the cursor.
2. Set tolerance range (-), reproduction field (-), reproduction field (+) and tolerance range (+) of the various cursors.
Settings can be made to fulfill a range with the following parameters: tolerance range (-) \leq reproduction field (-) \leq reproduction field (+) \leq tolerance range (+).
3. Touch the OK tab to return to the ISO Selection screen.
(Touch the Cancel tab if editing is not needed.)

- 7) Touch the Close tab at the ISO Selection screen to return to the Exposure Profile Edit Selection screen.

※ If necessary, modify the current exposure profile name. (See P55 for details.)

- 8) Touch the Close tab to return to the Menu screen.



Reference

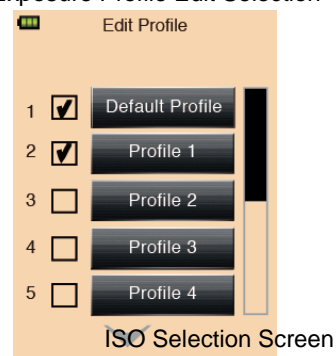


- To return exposure profiles to the initial settings, see the application software guide in Data Transfer Software (on the CD-ROM) for details.

(3) Changing Exposure Profile Name

- 1) Press the Menu button ⑦ on the main unit. (See P21 for details.)
- 2) Touch 5. Check/Edit Profile on the displayed Menu screen.
- 3) In the displayed Exposure Profile Edit Selection screen, either touch or slide with your fingers the arrows ▲/▼ to display the exposure profile name you want to change and then touch it to select it.

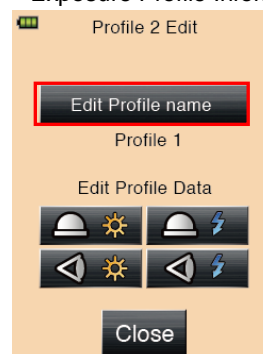
Exposure Profile Edit Selection



Items selected (check marked) are shown.

- 4) In the displayed Exposure Profile Information screen, touch the Edit Profile name tab.
- 5) Input a name at the displayed Exposure Profile Name Input screen and then press Enter. (See P13 for details on inputting.)
- 6) Touch the Close tab to return to the Exposure Profile Edit Selection screen.

Exposure Profile Information Screen




Exposure Profile Name Input Screen

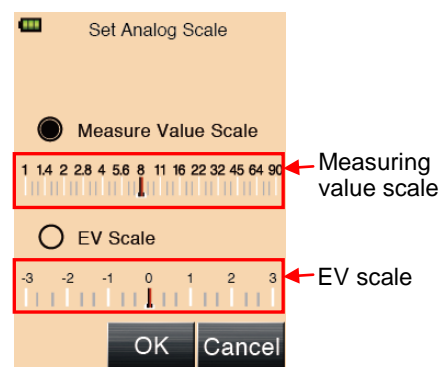


6-6-2 Analog Scale Switching

At the bottom of screens, such as the Measuring screen, there is a scale to display readings such as the latest measuring value, memory value, monitor value, average value, and tolerance range and reproduction field. This scale can be switched between a measuring value scale and an EV scale.

- 1) Press the Menu button  on the main unit. (See P1 for details.)
- 2) Touch 1. Set Analog scale in the displayed Menu screen.
- 3) At the displayed Analog Scale Selection screen, touch the Measurement Scale (f-stop standard scale) or the EV Scale.
- 4) Touch the OK tab to return to the Menu screen. (Touch the Cancel tab if you do not want to make a selection.)

Analog Scale Selection Screen (for incident light)



6-6-3 Calibrated Compensation Value Function

This product is corrected to a standard based on the Sekonic standard, but this measuring standard can be changed by using the Calibrated Compensation Function. The composable range is $\pm 9.9\text{EV}$.

When using the Calibrated Compensation Function, first set the measuring mode (incident light or reflected light). Compensation can be set independently for both incident and reflection.

Conditions for Minus Compensation:

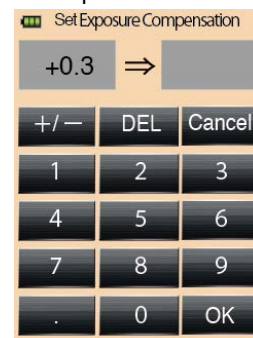
Use minus compensation to prevent over exposure (whiteout, unnaturally bright shots) when shooting in strong light.

Conditions for Plus Compensation:

Use plus compensation to prevent under exposure (blackout, unnaturally dark shots) when shooting in weak light or darkness.

- 1) Confirm that the Measuring mode is selected.
- 2) Press the Menu button ⑦ on the main unit. (See P21 for details.)
- 3) Touch 2. Set Exposure Compensation on the displayed Menu screen.
- 4) Set compensation value at Calibration Compensation Value Setting screen.

Calibration Compensation Value Setting Screen



The minimum input unit is 0.1 EV. (See P31 for details.)

- 5) Touch the Enter tab to return to the Menu screen.

Caution

- When compensating, base your compensations on the results of sufficient test shooting and your own personal preferences.

Reference

- When setting the calibrated compensation value, the **ADJ** icon will be displayed in the screen title field to show that compensation is being performed.
- The amount of calibrated compensation can be confirmed using the **ADJ** icon at the Information screen.
- The conventional Sekonic setting method involves selecting the setting number 3 (compensation value +/- definition) and item number 1 at the Custom Setting Function. (See P56 for details.)
The following are possible: plus compensation for under exposure (increase f-stop or shutter speed [= plus] achieves under exposure) and minus compensation for over exposure (decrease f-stop or shutter speed [= minus] achieves over exposure).

6-6-4 Custom Setting Function

This enables the setting in advance of necessary functions and display methods. (See P57 for details.)

(1) Custom Setting Function List

Setting No.	Custom Setting Name	Item Number				
		0	1	2	3	Default
1	Displayed step ^{※1}	1 step	1/3 段	1/2 段	—	1 step
2	Fraction display ^{※2}	ON	OFF	—	—	ON
3	Compensation value +/- definition	Increases (compensation for displayed value)	Decreases (compensation for displayed value)	—	—	Increases (compensation for displayed value)

4	Switching Measuring/Memory buttons ^{※3}	Left: Memory button Right: Measuring button	Left: Measuring button Right: Memory button	Auto switching ^{※3}	—	Left: Memory button Right: Measuring button
5	Fixed light measuring ^{※6}	ON	OFF	—	—	ON
6	T priority mode ^{※6}	ON	OFF	—	—	ON
7	F priority mode ^{※6}	ON	OFF	—	—	ON
8	TF priority mode ^{※6}	ON	OFF	—	—	OFF
9	Cine camera mode ^{※6}	ON	OFF	—	—	OFF
10	HD cine camera mode ^{※6}	ON	OFF	—	—	OFF
11	Flash measuring ^{※6}	ON	OFF	—	—	ON
12	Cordless mode ^{※6}	ON	OFF	—	—	ON
13	Cord-in mode ^{※6}	ON	OFF	—	—	ON
14	Radio trigger mode (L-478DRのみ)	ON	OFF	—	—	ON
15	受信機タイプ選択 (for L-478DR only)	Control TL	Standard CH	ControlTL + Standard CH	—	Control TL
16	Accumulative mode ^{※4}	ON	OFF	—	—	OFF
17	Display of additional measuring data	None	EV value	Illuminance/luminance	—	None
18	Illuminance/luminance unit setting	lux or cd/m ²	fc or fl	—	—	lux or cd/m ²
19	Illuminance/luminance independent display mode	ON	OFF	—	—	OFF
20	Screen color scheme	Black	White	Rose	Blue	Black
21	Auto power off time	5 min	10 min	20 min	None	5 min
22	Liquid crystal brightness	Bright	Medium	Dark	—	Medium
23	Liquid crystal backlight brownout time	20 sec	40 sec	60 sec	No brownout	20 sec
24	Custom Setting reset ^{※5}	—	—	—	—	OK/Cancel

※1 Fractions in all modes are displayed in steps of 1/10.

※2 Fraction ON/OFF will be effective only when displayed step is 1/3 step or 1/2 step.

※3 Auto switching: Measuring button ⑧ and Memory button ⑤ will be standard configuration with incident light system, but the button configuration will reverse automatically with the reflected light system.

※4 When turned ON, the following can be set in the Measuring Mode Selection screen: Cordless Flash Accumulative mode, Cord Flash Accumulative mode and Radio Flash Accumulative mode (for L-478DR only).

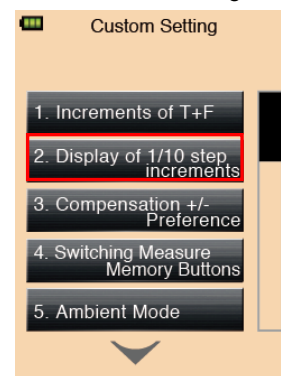
※5 This returns all items set in Custom Setting to the default settings. Touch OK tab to return default setting and touch Cancel tab to cancel the default settings.

※6 When all Measuring modes are turned OFF, the fixed light T Priority mode will be selected.

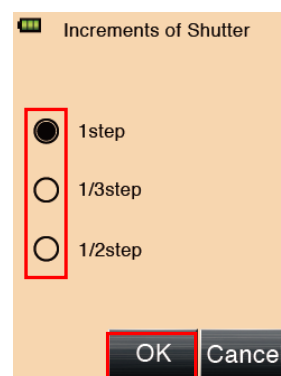
(2) Setting Custom Setting

- 1) Press the Menu button ⑦ on the main unit. (See P21 for details.)
- 2) Touch 3. Custom Setting in the displayed Menu screen.
- 3) In the displayed Custom Setting screen, either touch or slide with your fingers the arrows ▲/▼ to display the desired number and then touch it to select it.
※ See (1) Custom Setting Function List (P56) for details on item numbers.
- 4) Touch-select the desired radio button from the options in the detailed screen.
The ● symbol denotes the currently selected item.
- 5) Touch the OK tab to return to the Custom Setting screen.
(Touch the Cancel tab when you do not want to modify.)
- 6) Repeat items 3) to 5) above to set other Custom Setting items.
- 7) Press the Menu button ⑦ at the Custom Setting screen to return to the Menu screen.

Custom Setting Screen



Custom Setting Item Changing Screen

**6-6-5 Frame rate User Setting**

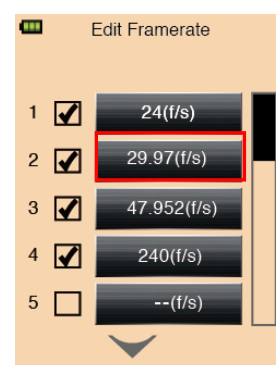
In addition to the standard available frame rates, a maximum of 20 frame rates can be registered.

Registered frame rates can be edited freely.

※ Frame rate is set in units of 0.001(f/s) over a range of 0.001 to 9999.999(f/s).

- 1) Press the Menu button ⑦ on the main unit. (See P21 for details.)
- 2) Touch 6. Edit Frame Rate in the displayed Menu screen.
- 3) The previously set frame rate items are check marked (☑) in the displayed Frame rate Edit Selection screen.
- 4) In the displayed Frame rate Edit Selection screen, either touch or slide with your fingers the arrows ▲/▼ to display the desired frame rate and then touch it to select it. Items selected (check marked) ☑ are shown.
- 5) Input the numerical value in the displayed Frame rate Input screen and then touch the OK tab. (See P13 for details on inputting.)
After the OK tab is touched, the Frame rate Edit Selection screen will be restored.

Frame rate Edit Selection Screen



Frame rate Input Screen



- 6) Press the Menu button $\text{\textcircled{7}}$ to return to the Menu screen.
- 7) The added frame rate will be added to the tail end of the selection order at the Exposure Metering screen.

Reference

- Frame rates without a check mark (\checkmark) will be displayed with two dashes (- -).

6-6-6 Shutter Opening Angle User Setting

In addition to the standard available shutter opening angles, a maximum of 20 shutter opening angles can be set. Set shutter opening angles can be edited freely.

- ※ Shutter opening angles are registered in units of 0.001° over a range from 0.001 to 360° .

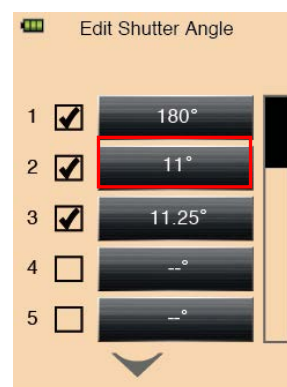
- 1) Press the Menu button $\text{\textcircled{7}}$ on the main unit. (See P21 for details.)
- 2) Touch 7. Edit Shutter Angle in the displayed Menu screen.
- 3) The previously set opening angle items are check marked (\checkmark) in the displayed Shutter Opening Angle Edit Selection screen.
- 4) In the displayed Shutter Opening Angle Edit Selection screen, either touch or slide with your fingers the arrows $\blacktriangle/\blacktriangledown$ to display the desired shutter opening angle and then touch it to select it. Items selected (check marked) \checkmark are shown.
- 5) Input shutter opening angle and then touch the Enter tab. (See P13 for details on inputting.)

After the OK tab is touched, the Shutter Opening Angle Edit Selection screen will be restored.

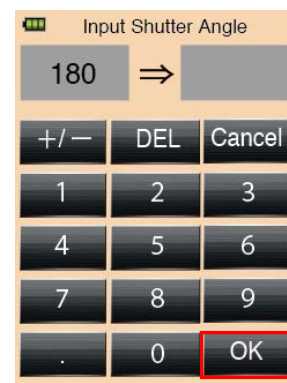
At the Shutter Opening Angle Edit Selection screen, press the Menu button $\text{\textcircled{7}}$ to return to the Menu screen.

- 7) The added shutter opening angle will be added to the tail end of the selection order at the Exposure Metering screen.

Shutter Opening Angle Edit Selection Screen



Shutter Opening Angle Input Screen






Reference

- Frame rates without a check mark (\checkmark) will be displayed with two dashes (- -) and they will not have opening angle values.

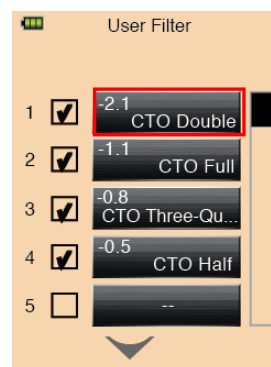
6-6-7 Filter User Setting

The user can set up to 30 filter compensations. Set filter compensation contents can be edited freely.

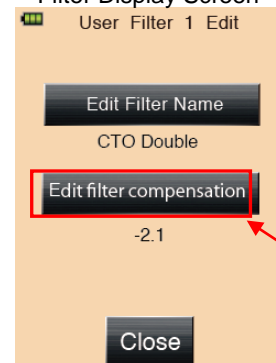
- ※ Filter compensation is set in 1/10 steps in a range of $\pm 9.9\text{EV}$.
- ※ User-set filter compensations are selected at the time of measuring in the same way as the filter compensations incorporated in the main unit (see P51 for details).
- ※ See P65 for details on registered filter types.

- 1) Press the Menu button  on the main unit. (See P21 for details.)
- 2) Touch the 8.Edit Filter at the Menu screen.
- 3) The previously set filter names are check marked () in the displayed Filter Edit Selection screen.
- 4) Either touch or slide with your fingers the arrows /
 to display the desired item and then touch it to select it. Items selected (check marked) are shown.
- 5) Set amount of filter compensation at the displayed Filter Display screen.
 1. Touch Filter Compensation button.
 2. Input amount of compensation at displayed Filter Compensation Input screen and then touch the OK tab. (See P13 for details on inputting.)
The input compensation value will be displayed at the Filter Display screen.

Filter Edit Selection Screen

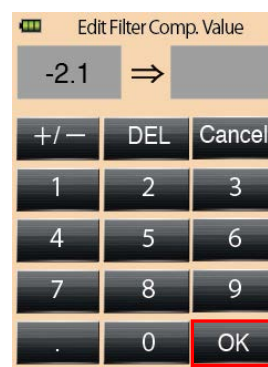


Filter Display Screen

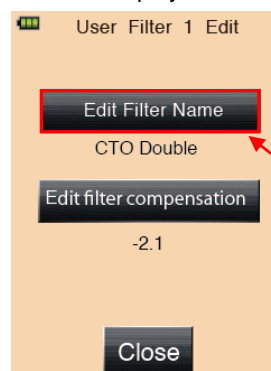


Filter compensation value button

Filter Compensation Input Screen



Filter Display Screen

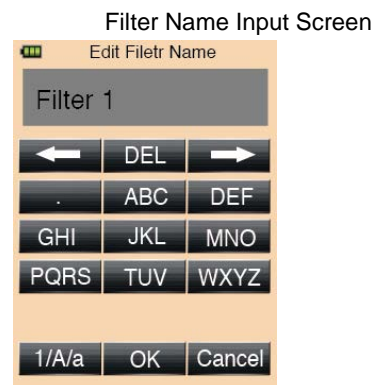


Filter name edit button

- 6) Change filter names as necessary at the displayed Filter Display screen.
 1. Touch the Filter name button.
 2. Input the filter name at the displayed Filter Name Input screen and then touch the OK tab. (See P52 for details on inputting.)
The input name will be displayed in the Filter

Display screen.
The Filter Display screen will be restored.

3. Touch the Close tab at the Filter Display screen to return to the Filter Edit Selection screen.
4. Press the Menu button ⑦ at the Filter Edit Selection screen to return to the Menu screen.



Reference

- Classified filters are preset from 1 to 24. (See P65 for details.)
- The user can set filters from 25 to 30 (initial value is: - -).

6-6-8 Exposure Profile Editing Function

(1) Exposure Profile Function

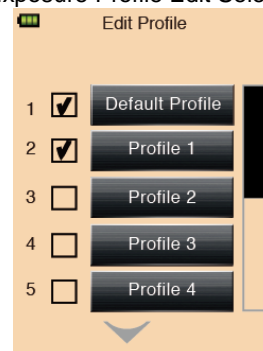
Use this function in cases where you want to refer to or edit exposure profiles created in the Data Transfer Software at the main unit side. Further, you can create exposure profiles independently with the main unit. (The maximum number of exposure profiles that can be created is ten.)

(2) Editing Exposure Profile

1) Press the Menu button ⑦ on the main unit. (See P21 for details.)

- 2) Touch 5. Check/Edit Profile in the displayed Menu screen.
- 3) The previously set exposure profile names are check marked (☑) in the displayed Exposure Profile Edit Selection screen.
- 4) Either touch or slide with your fingers the arrows ▲/▼ to display the desired exposure profile name and then touch it to select it. Items selected (check marked) ☑ are shown.

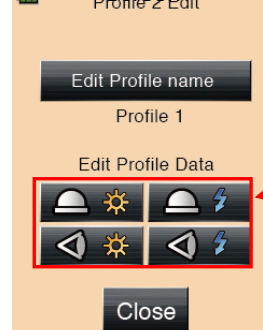
Exposure Profile Edit Selection



5) Touch one of the icons denoting a Measuring mode in the displayed Exposure Profile Information screen.

- 6) At the displayed ISO Selection screen, touch the arrows ▲/▼ to display ISO exposure profile information that you want to edit and then touch it to select it. You also can slide your finger up and down over the exposure profile information to switch information.

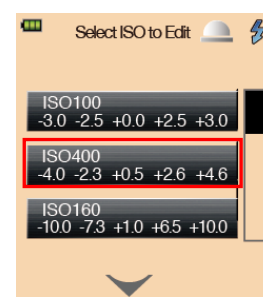
Exposure Profile Information Screen



7) Edit characteristics at the displayed Camera Film Speed Characteristic Setting Screen.

1. Slide the compensation value cursor left or right to set compensation value. Likewise, you can press the +/- tabs to set the compensation value.

ISO Selection Screen



The cursor can be moved horizontally within the ± 5 EV range.

The setting value is numerically displayed above the cursor.

2. Set tolerance range (-), reproduction field (-), reproduction field (+) and tolerance range (+) of the various cursors.

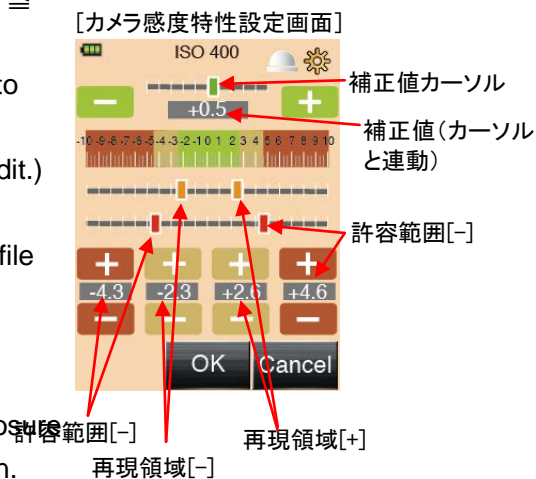
Settings can be made to fulfill a range with the following parameters: tolerance range (-) \leq reproduction field (-) \leq reproduction field (+) \leq tolerance range (+).

3. Touch the OK tab to confirm and then return to the Exposure Profile Information screen.
(Touch the Cancel tab if you do not want to edit.)

- 8) Touch the Close tab at the Exposure Profile Information screen to return to the Exposure Profile Edit Selection screen.

※ Modify current exposure profile names as necessary (See below for details.)

- 9) Press the Menu button ⑦ on the displayed Exposure Profile Edit Selection screen to return to the Menu screen.



右上画面の英訳

Camera Film Speed Characteristic Setting Screen

Compensation value cursor

Compensation value (cursor and movement)

Tolerance range [-]

Reproduction field [+]

Reproduction field [-]

Tolerance range [-]

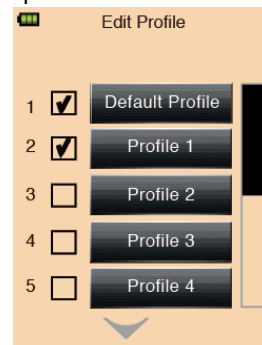
Reference

- See the Application Software Guide in the Data Transfer Software on the CD-ROM for details on returning exposure profiles to the initial settings.

(3) Changing Exposure Profile Name


- 1) Press the Menu button ⑦ on the main unit. (See P21 for details.)
- 2) Touch 5. Check/Edit Profile in the displayed Menu screen.
- 3) At the displayed Exposure Profile Edit Selection screen, touch or slide your finger up and down over the arrows ▲/▼ to display the exposure profile

Exposure Profile Edit Screen

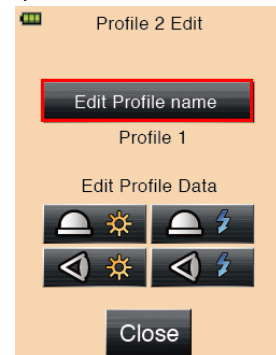


name that you want to change and then touch it to select it.

The selected exposure profile names are check marked .

- 4) Touch Edit Profile Name in the displayed Exposure Profile Information screen.
- 5) Obtain a name at the displayed Exposure Profile Name Input screen and then press Enter. (See P13 for details on inputting.)
- 6) Touch the Close tab to return to the Exposure Profile Edit Selection screen.
- 7) Press the Menu button  at the displayed Exposure Profile Edit Selection screen to return to the Menu screen.

Exposure Profile Information Screen



Exposure Profile Name Input Screen



6-7 Hardware Setting Screen

(1) Hardware Setting Screen

The following settings can be performed at the Hardware Setting screen.

- User calibration of EV value
- Adjust touch panel display position
- Returning to default settings (factory settings)
- Editing user information

- 1) Hold down the Menu button ⑦ and press the Power button ⑩ to turn ON the power.

The Hardware Setting screen will be displayed.

- 2) Touch the desired menu item.

1. User Calibration

Setting in advance means that compensation values in measuring results can be calibrated using EV value units.

(Setting range: -1.0EV to 1.0EV)

2. Adjust Touchpanel

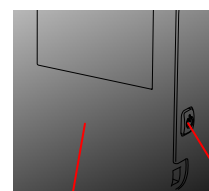
The coordinate positions recognized by the touch sensor of the touch panel can be adjusted.

3. Factory Setting

Parameters and setting contents are initialized back to factory setting.

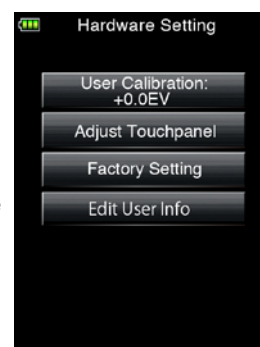
See Custom Setting (P56) for details on contents of factory settings.

- 3) When finished, press the Power button ⑩ to turn OFF the power.



⑦ Menu button ⑩ Power button

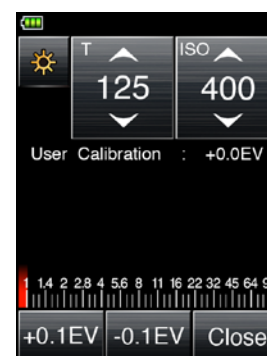
Hardware Setting Screen



(2) User Calibration Operating Method

- 1) Press the User Calibration tab at the Hardware Setting screen to display the User Calibration screen.
- 2) Using buttons at bottom of screen, adjust setting value in increments of ± 0.1 EV.
- 3) Press the Close button to return to the Exposure Metering screen.

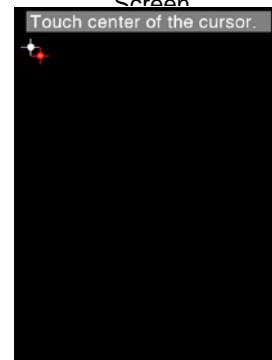
User Calibration Screen



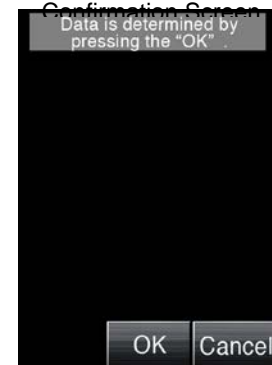
(3) Adjust Touch Panel Operating Method

- 1) Touch the Adjust Touch Panel tab as the Hardware Setting screen to display the Touch Panel Adjusting screen.
- 2) A white cross mark will light up at the top left of the screen. Please touch this cross. A red cross mark will be displayed in the touched position.
- 3) After touching, a white cross mark will appear in another position every time a red cross appears, so repeat this touch-and-display process eight times.
- 4) After that, the Touch Panel Adjust Confirmation screen will be displayed.
Press the OK button when you want to make adjustments.
To cancel adjustments, press the Cancel button.
- 5) After pressing the OK or Cancel button, setting will be ended and the Exposure Metering screen restored.

Touch Panel Adjusting Screen



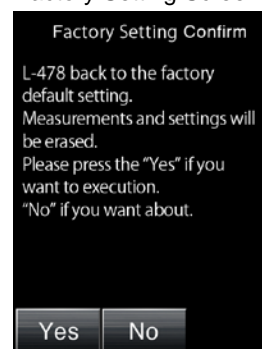
Touch Panel Adjust Confirmation Screen



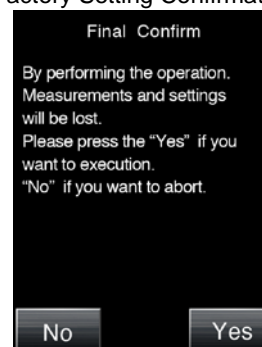
(4) Factory Setting Operating Method

- 1) Press Factory Setting at the Hardware Setting screen to display the Factory Setting Confirm screen.
 - 2) When implementing, if you are not going to implement the settings with the Yes button, then please press the No button.
 - 3) Pressing the Yes button displays the Factory Setting Confirm screen.
 - 4) Pressing the Yes button implements the factory settings. Pressing the No button means that the settings will not be made.
 - 5) After either pressing the OK or Cancel button, setting will end, and the Exposure Metering screen will be restored.

Factory Setting Screen



Factory Setting Confirmation



(5) User Information Editing

1) Press User Information Edit at the Hardware Setting screen to display the alphabet input screen. User information can be edited here.

2) Changed user information will be displayed on the Information screen. (See P20 for details.)

(Number of alphabet characters that can be input: 31 characters)

7. Separately Sold Accessories

▪ Synchro Cord

This is a three-way, five-meter long cord that sync connects light meter, flash and camera, which is great because there is no need to replug cords when shooting. Also, one of the synchro cord's connectors has a locking mechanism to prevent disconnection.

(Cord has two male connectors and one female one.)

The connector with the lock function is a male one.

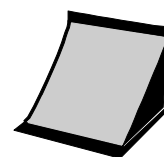


▪ Standard Gray Card

This is a gray card (110mm x 102mm) with 18% reflection ratio. 1

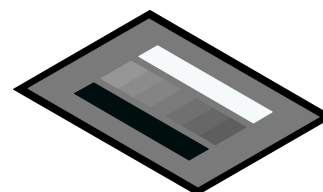
With this card, you can check the standard measuring value during shooting.

By using the standard gray card to determine standard exposure for results of measuring, you can acquire the exposure data that will provide faithful color reproduction.



▪ Exposure Profile Target

This is the test chart (260mm x 160mm) used to create camera exposure profiles. The front features nine types of gray patches including black and white ones, while the rear is 18% gray card, so it can be used to determine white balance for digital cameras and exposure with the reflected light system.



▪ Exposure Profile Target II

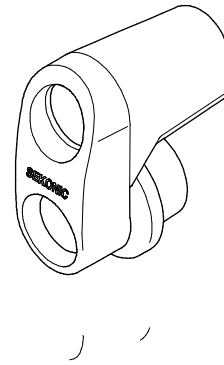
This is the test chart (350mm x 120mm) used to create camera exposure profiles. The front features 25 types of gray patches including white and black ones, while the rear is 18% gray card, so it can be used to determine white balance for digital cameras and exposure with the



reflected light system.

• **Viewfinder 5°**

This is a viewfinder with a five degree acceptance angle. When measuring with the reflected light system, remove the lumisphere and attach the viewfinder. When a subject cannot be approached closely, point the viewfinder lens correctly at the part of the subject to be measured and make the measurement. (See P29 for details.)



8. Registered Filters

Registered filters can be displayed at Filter Name Selection. The following are the registered filters and their compensation values. (See P52 for details.)

No.	Filter Name	Compensation
1	CTO Double	-2.1
2	CTO Full	-1.1
3	CTO Three-Quarter	-0.8
4	CTO Half	-0.5
5	CTO Quarter	-0.3
6	CTO Eighth	-0.1
7	No. 85	-0.8
8	CTB Double	-3.3
9	CTB Full	-1.5
10	CTB Three-Quarter	-1.3
11	CTB Half	-0.9
12	CTB Quarter	-0.4
13	CTB Eighth	-0.3
14	Minusgreen Full	-0.9
15	Minusgreen Half	-0.5
16	Minusgreen Quarter	-0.3
17	Minusgreen Eighth	-0.2
18	Plusgreen Full	-0.4
19	Plusgreen Half	-0.2
20	Plusgreen Quarter	-0.1
21	Plusgreen Eighth	-0.2
22	NDO. 3	-1.0
23	NDO. 6	-2.0
24	NDO. 9	-3.0

9. Specifications

Type	● Digital light meter for flash and fixed light
Light Receiving Method	● Incident light and reflected light
Receptor Head	● Incident light Retract (flat) function (by retracting the lumisphere into the main unit, the flat function can also be used)
	● Reflected light Lumisphere removing function (attachable/detachable viewfinder [sold separately])
Light Receptor Element	● Silicon photo diodes
Measuring Modes	● Fixed light f-stop priority measuring Shutter speed priority measuring TF priority measuring Cine camera measuring HD cine camera measuring Illuminance measuring (lux, foot candle) Luminance measuring (foot-lambert, cdm2)
	● Flash Measuring using synchro cord (with/without accumulative) Measuring without synchro cord (with/without accumulative) Measuring using radio trigger (with/without accumulative) (for L-478DR only)
Repeat accuracy	● $\pm 0.1\text{EV}$ or less
Calibration Constant	● Incident light Lumisphere C = 340, Flat C = 250
	● Reflected light K = 12.5
Setting Range	● ISO ISO 3 to 409600 (in 1/3 steps)
	● Shutter speed
	Fixed light 30 min to 1/64000 sec (in 1, 1/2 and 1/3 steps) Other possible settings: 1/200, 1/400 sec
	Flash light 30 min to 1/1000 sec (in 1, 1/2 and 1/3 steps) Other possible settings: 1/75, 1/80, 1/90, 1/100, 1/200, 1/400
	● f-stop F0.5 to F128 (in 1 steps)
	● Frame rate (f/s) 1 to 1000, other possible settings: 20 types
	● Shutter opening angle 1° to 358° other possible settings: 20 types
	● Monitor display -5.0EV to +5.0EV (in 1/10 steps)
	● Filter compensation -9.9EV to +9.9EV (in 1/10 steps)
	● Filter compensation selection Maximum of 4 types can be used simultaneously
	● Accumulative count 0 to 99 times (Maximum of 99 times is displayed)
	● Compensation display -9.9EV to +9.9EV (in 1/10 steps)
	● Monitor display -9.9EV to +9.9EV (in 1/10 steps)
	● Filter compensation -5.0EV to +5.0EV (in 1/10 steps)

Measuring Range (ISO100)

● Fixed light	FNo.0.5 to FNo.128 (in 1 steps) FNo.0.5 to FNo.161 (in 1/3 steps) FNo.0.5 to FNo.152 (in 1/2 steps) Incident light EV-2 (F2.0, 15 sec) to EV22.9 (Approx F22.9, 1/8000 sec) Reflected light EV2.0 to EV19.9
● Flash light component	Incident light F1.0 to F128.9 Reflected light F2.8 to F128.9
● Illuminance	0.631(EV-2.0) to 2,000,000 (EV19.6) lux 0.058 (EV-2.0) to 180,000 (EV19.6) foot candle
● Luminance	(Reflected light) 0.5 (EV3) to 980,000 (EV22.9) cdm ² 0.10 (EV1.5) to 290,000 (EV22.9) foot-lambert (for L-478DR only)
● EV value	EV-27.9 to EV55.8 (only effective with fixed light)
● Analog display	T scale 2s to 1/8000 F scale F0.7 to F128(in 1/3 steps), EV scale -3EV to +3EV (incident light, in 1/3 steps) -7EV to +7EV (reflected light, in 1/3 steps) Illuminance lux 0 to 50,000 lux Illuminance fc (foot candle) 0~5,000 fc Luminance cd/m ² (candela per square meter) 0~2,500 cd/m ² Luminance fl (foot-lambert) 0~1,000 fl

Other Functions	● Accumulative count	0 to 99 times (Display: Max 99)
	● Compensation display	-9.9EV to +9.9EV (in 1/10 steps)
	● Exposure profile display	Max 10 profiles
	● Light analyzing function	0 to 100% (in 10% increments)
	● Memory function	9 readings
	● Memory clear/recall function	
	● Average function	
	● Exposure out of range and display	Under, Over warning display
	● Battery power indicator display	4 stages
	● Auto power OFF function	Can be selected at Custom Setting
	● Liquid crystal backlight (EL)	ON (OFF after set time elapses)
	● Touch Panel lock function	
	● Custom setting function	22 items (L-478D), 24 items (L-478DR)
Battery	● Dry cell battery	2 4AAA dry cell batteries (alkaline, manganese, lithium, nickel hydride, or nickel based)

Operating temperature range	● -10°C to 50°C (no condensation)
Storage temperature range	● -20°C to 60°C (no condensation)
Dimensions	● Approx 56(W) × 136(H) × 25(D)mm (excluding protrusions)
Weight	● Approx 160g (L-478D without batteries), 170g (L-478DR without batteries)
Standard accompanying accessories	● Soft case, strap, 2 4AAA dry cell batteries, Startup Guide, CD-ROM (Users' Manual (this manual) and Applications)

For improvement reasons the specifications in this manual and external appearance may be subject to

future changes without prior notification.

10. Usage Precautions

Caution



- To avoid damaging this meter, never drop it or subject it to shock.
- Avoid using it in water spray or rain as doing so may cause damage.
- Avoid storing it in high-temperature and/or humid locations as doing so may cause damage.
- Beware of condensation caused by sudden temperature change, as such condensation may cause damage or malfunction.
- If the temperature of the meter drops to -10 deg. C or beyond, response of the LCD becomes extremely slow and displays are difficult to read. At temperatures between 0 and 10 deg. C the LCD will become somewhat slower than normal but this does not hinder usage. Also, when the temperature exceeds 50 deg. C, the LCD will turn black and will be hard to read. This will return to normal when the temperature returns to normal.
- Do not place the meter in direct sunlight during midsummer or near heaters, etc., as the temperature of the meter will rise beyond that of the air temperature. Be careful when using the meter in hot locations.

Maintenance Notes

- If your meter is splashed with water, wipe immediately with a soft dry cloth. Leaving the meter wet may cause rust or corrosion
- Keep the light receptor head away from dust/dirt and avoid scratching as accuracy may be affected.
- When light meter gets dirty, clean it with soft dry cloth. Never use organic cleaners (like thinner or benzene).

11. About Aftercare Service

● About Warranty Period

1. The warranty period is one year from the date of purchase.
2. A warranty without the date or retailer's name will be regarded as invalid. Always confirm that the warranty has date and retailer name.
3. Note that in some cases there are paid-for repairs even while the product is under warranty, so always confirm the warranty conditions.
4. Once the warranty expires, repairs will be charged for. Furthermore, costs – such as shipping - will be the responsibility of the customer.

● About Warranty Period of Repair Parts

1. Repair parts are usually stocked for seven years after product is discontinued. Therefore, once this period is exceeded, we may not be able to accept repair work.
2. Repaired products will be issued with a Sekonic delivery slip, so please confirm this slip.
3. Products that have been submerged in water, subjected to strong shocks, or markedly damaged in any other way, and, as such, are deemed difficult to repair successfully, will be deemed unviable for repair, even if they are still under warranty.

● Requesting Repairs

1. For product repair, please include a letter with thorough explanation of the problem, problem location or service to be performed. If these are not indicated, a thorough inspection in terms of quality and performance of the product in question will be required, and this may increase any charges due regarding repairs.
2. Among the requests for repair, we sometimes find that all that needs to be done is the simple task of replacing the batteries. Please thoroughly check that battery power and the loading direction (+/- is correct).

● Inquiries

Please contact the Sekonic Sales Department with inquiries about the warranty, repairs and usage of this product.

This product is guaranteed against irregularities occurring due to defects in manufacturing; however, we will not take responsibility for any other irregularities.

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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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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.

IC Warning

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.

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.