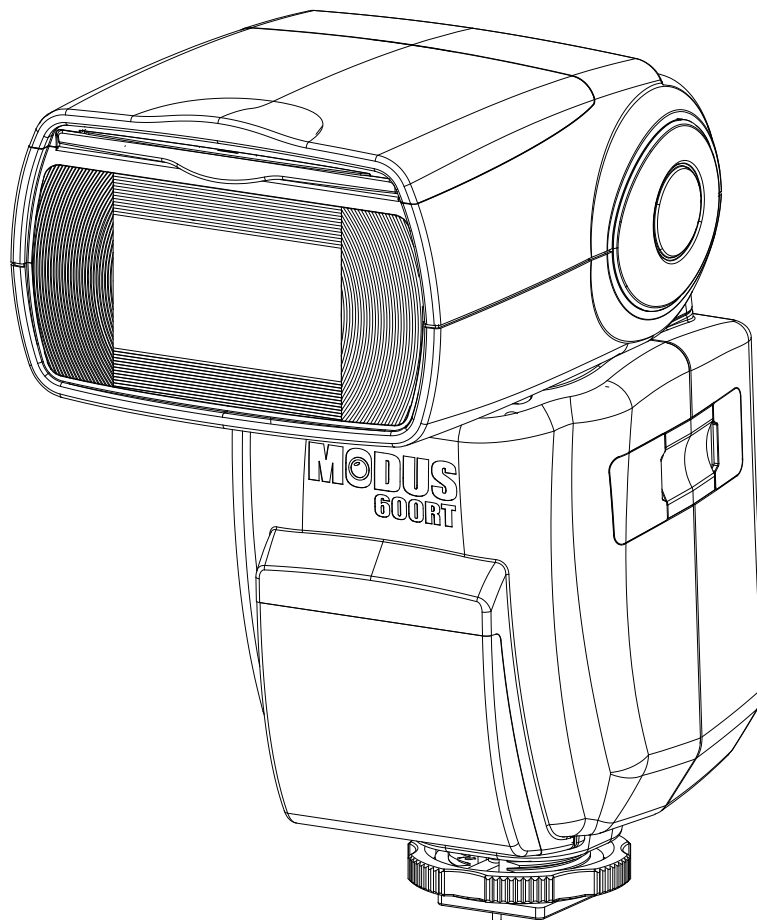


MODUS 600RT

English



*Wireless Speedlight
for Sony*



Instruction
Manual

Foreword

Thank you for purchasing the hähnel Modus 600RT.

- Before starting to shoot, be sure to read this manual
- When reading this manual also refer to the camera's Instruction Manual

Conventions & assumptions

- The manual is based on the assumption that all devices including camera are turned on
- Reference page numbers are indicated by (page **)
-  The caution symbol indicates a warning to prevent shooting problems
-  The Note symbol gives supplemental information

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1

Introduction

⚠ Warnings:

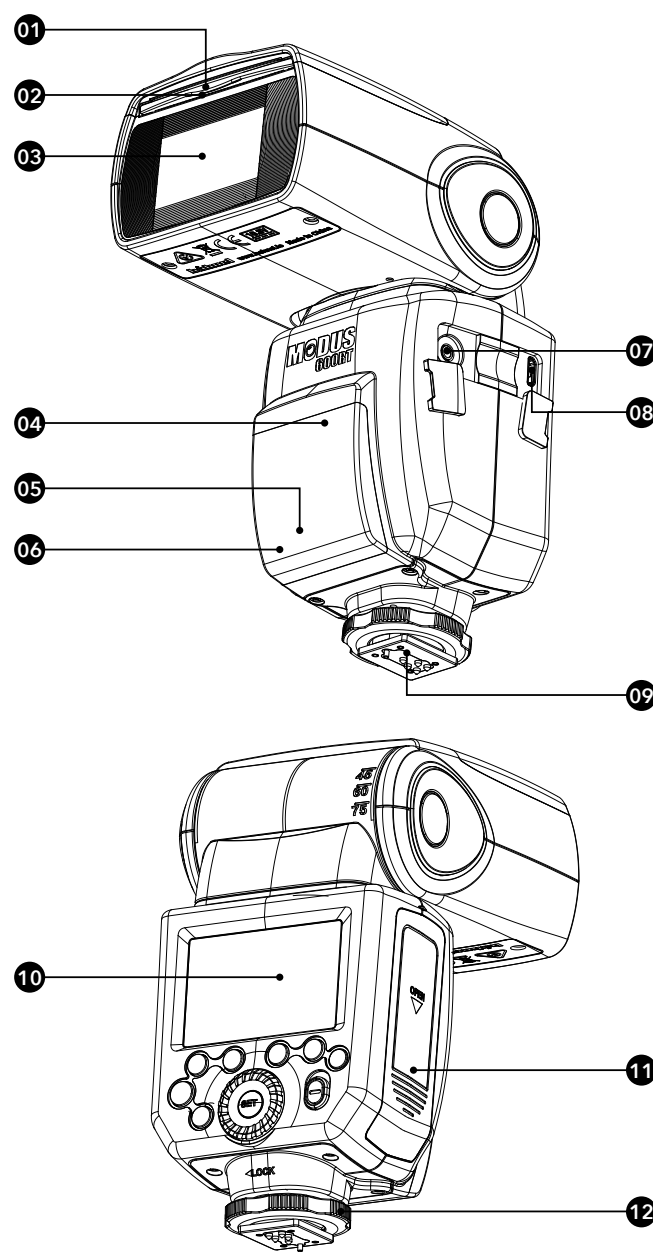
Failure to observe the instructions below may result in loss of life or serious bodily injury. To prevent fire, excessive heat, chemical leakage, explosions, and electrical shock, follow the safeguards below:

- Do not insert any foreign metallic objects into the electrical contacts of the product, accessories, connecting cables, etc
- Do not use any batteries, power sources, or accessories not specified in the instruction Manual. Do not use any deformed or modified batteries, or the product if it is damaged
- Do not short-circuit, disassemble, or modify the product or batteries. Do not apply heat or solder to the batteries. Do not store batteries with metal objects. Do not expose the batteries to fire or water. Do not subject the batteries to strong impact or continuous mechanical shock
- Do not place batteries in microwave, cooker or high-pressure container
- Do not use the product in locations where there is flammable gas
- Do not fire the flash at anyone driving a car or other vehicle
- Do not disassemble or modify the equipment. High-voltage internal parts may cause electrical shock. If you drop the equipment and the casing breaks open to expose the internal parts, do not touch the exposed parts. There is a possibility of an electrical shock
- Do not store the product in dusty or humid places or location with lots of oil smoke. Do not store battery in charger
- Keep the batteries and other accessories out of the reach of children and infants
- Do not drop product or battery in fire or water
- Do not expose product or battery to excessive temperature (below 0°C or above 40°C) or strong direct sunlight
- Battery temperature while on charge or in use should never increase above 60°C/140°F. If higher temperature occurs, stop using and stop charging immediately
- Do not use paint thinner, benzene, or other organic solvents to clean the product

⚠ Caution:

- Failure to observe the instructions below may result in serious bodily injury or damage to property
- When the product is not in use for a prolonged period, make sure to remove the batteries before storing
- When disposing of a battery, insulate the electrical contacts with tape. Contact with other metallic objects or batteries may cause a fire or an explosion. Dispose of battery in accordance with the appropriate regulations
- Do not store or leave product or battery in trunk or on dashboard of a vehicle or in direct sunlight or with a high interior temperature as overheating can result in burns if touched leaking, fire or explosion
- Do not fire the flash with the flash head (light-emitting unit) in contact with a human body or any object doing so may result in the risk of burns and fire
- Do not fire the flash near the eyes. Keep the flash unit at least 1m (3.3 feet) away from face. It may hurt or damage the eyes. Using bounce flash to reduce light intensity is also recommended

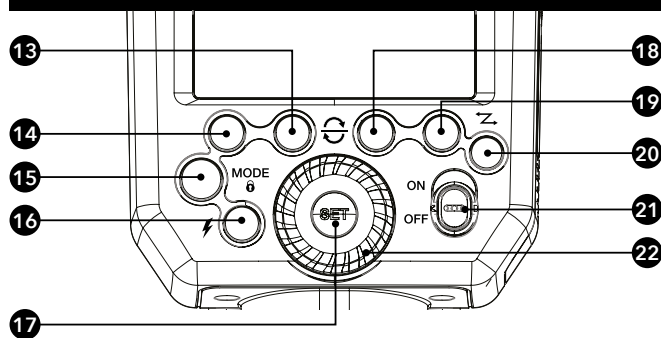
Nomenclature



Nomenclature - Body

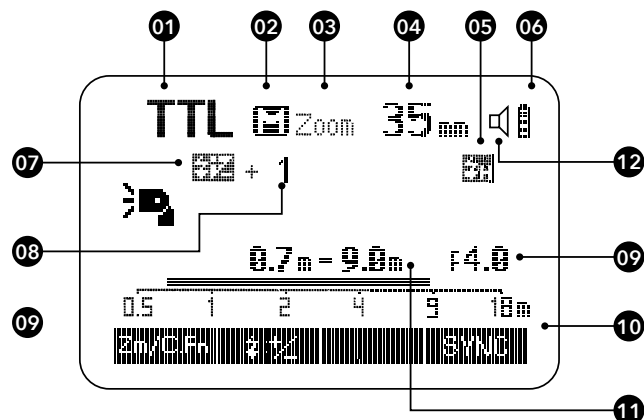
- | | |
|----------------------------------|--------------------------|
| 01. Catchlight Panel | 07. Sync Cord Jack |
| 02. Built-in Wide Panel | 08. USB Port |
| 03. Flash Head | 09. Hotshoe |
| 04. Optical Control Sensor | 10. Dot-matrix LCD Panel |
| 05. Focus Assist Beam | 11. Battery Compartment |
| 06. Slave Flash Ready Indicators | 12. Lock Wheel |

Nomenclature - Control Panel



- | | |
|---|---|
| 13. Function Button 2 | 18. Function Button 3 |
| 14. Function Button 1 | 19. Function Button 4 |
| 15. <MODE> Mode Selection Button / Lock button | 20. <Z> Wireless Mode/Master/Slave |
| 16. <⚡> Test Button / Flash Ready Indicator | 21. ON/OFF Power Switch |
| 17. <SET> Set Button | 22. Select Dial |

Nomenclature - LCD Panel



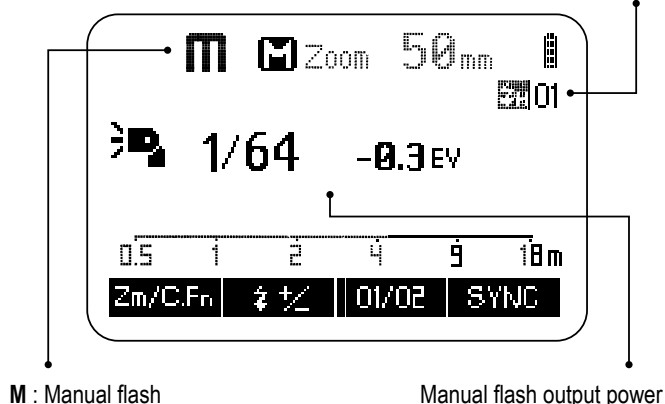
(1) TTL Autoflash

- | | |
|---|--|
| 01. TTL : TTL autoflash | 08. Flash exposure compensation amount |
| 02. A : Automatic
M : Manual | 09. Aperture |
| 03. Zoom : zoom display | 10. Distance indicator scale |
| 04. Focus Distance | 11. Effective flash range |
| 05. SH : High-speed sync | 12. Beep on/off (C. Fn 7) |
| 06. Battery level indicator | |
| 07. ± : Flash exposure compensation | |

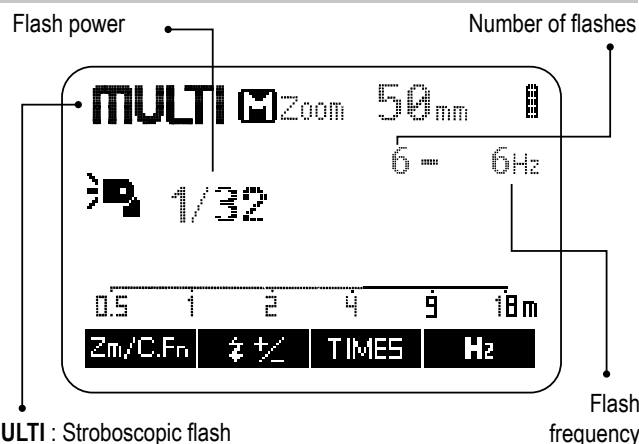
- The display will only show the settings currently applied.
- The functions displayed above function buttons 1 to 4, such as **SYNC** and **±** change according to settings' status.
- When a button or dial is operated, the LCD panel illuminated.

(2) Manual Flash

01: Standard Optical. 02: Preflash Optical

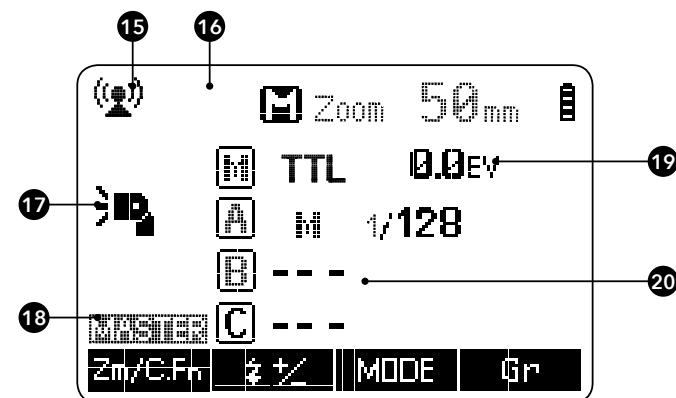


(3) Multi Flash



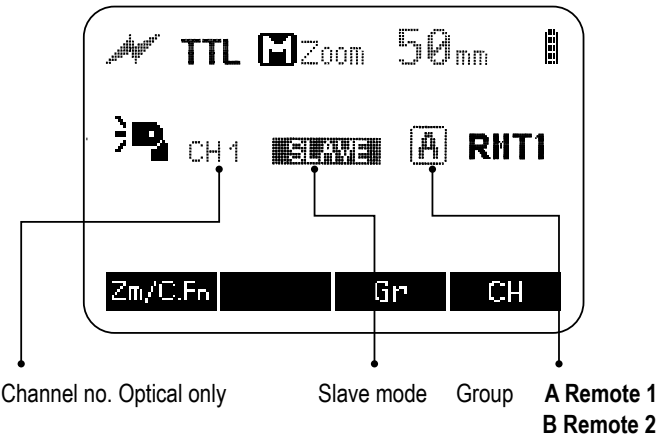
(4) Radio Control Shooting/Optical Control Shooting

(a) Master Unit - Flash Mode



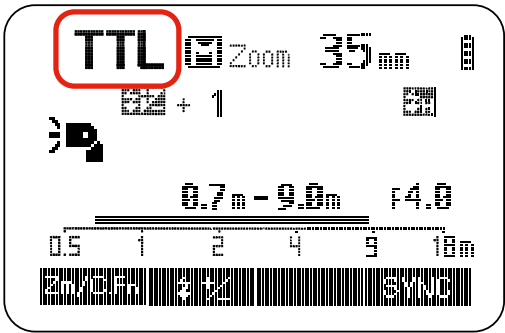
- | | |
|--|---|
| 15. Ⓜ : Radio control wireless shooting
⚡ : Optical control wireless shooting | 17. Ⓜ : Master unit flash ON
Ⓜ : Master unit flash OFF
Ⓜ : Master unit bounce ON |
| 16. Flash mode : <blank>, <MULTI> | 18. MASTER : Master |
| | 19. Master Group: Mode |
| | 20. A.B/C Group: Mode |

(b) Slave Unit

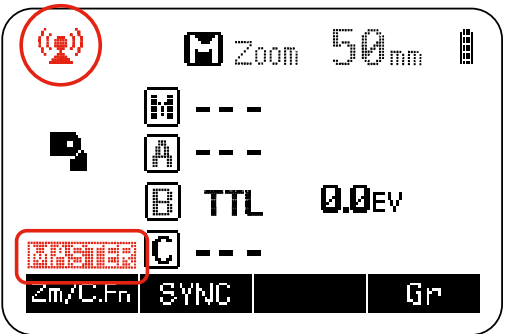


LCD Panel in Five Modes

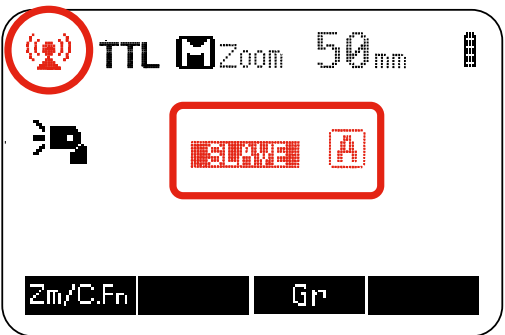
(1) Attached to the Camera



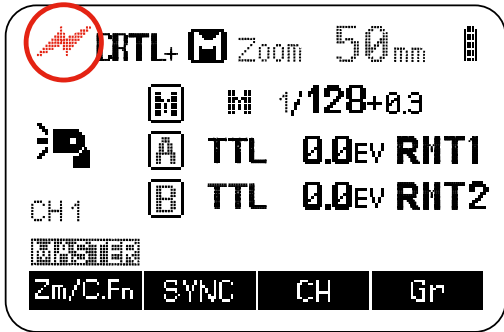
(2) 2.4GHz Radio Control: As a Master Unit



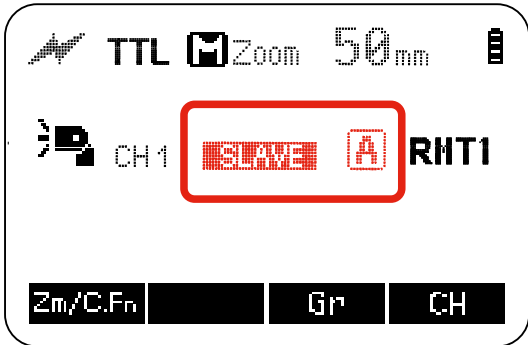
(3) 2.4GHz Radio Control: As a Slave Unit Group A



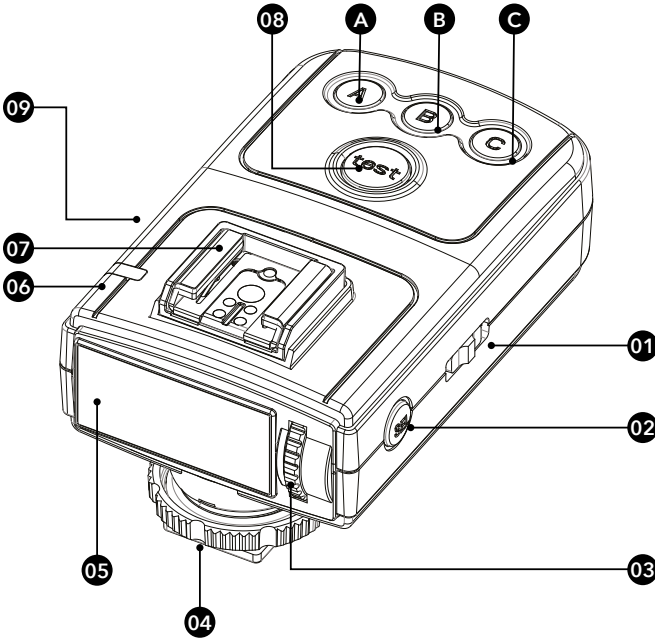
(4) Optical Control: As a Master Unit



(5) Optical Control: As a Slave Unit

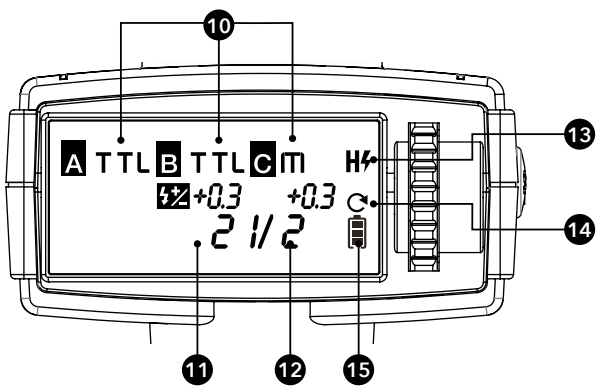


Nomenclature - Viper TTL Transmitter

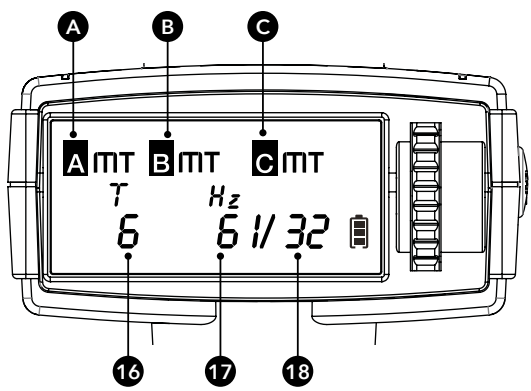


- (A) Group A
- (B) Group B
- (C) Group C
- (4) Lock Wheel
- (5) LCD Screen
- (6) Power / Status LED
- (7) Hot shoe
- (8) Test - button
- (9) Micro USB - firmware update

Transmitter LCD Screen



Multi Mode



- (10) Manual / TTL / OFF Mode

(11) Flash exposure compensation amount

(12) Manual flash output

(13) High-speed sync
- (14) Always On

(15) Battery indicator

(16) Number of flashes

(17) Flash frequency

(18) Flash output power

6. The Viper transmitter is included in the "Modus 600RT Wireless Kit" & "Modus 600RT Wireless Pro Kit" and sold separately

2 Getting Started

What's in the Modus 600RT?

1. Modus 600RT Speedlight

2. Li-ion Battery Pack

3. Battery Charger

4. Charger Power Cable
5. Mini Stand

6. Protection Case

7. Instruction Manual

What's in the Modus 600RT Wireless Kit?

1. Modus 600RT Speedlight

2. Viper TTL Transmitter

3. Li-ion Battery Pack

4. Battery Charger

5. Charger Power Cable
6. Mini Stand

7. Protection Case

8. Instruction Manual

9. 2 x AA Batteries

What's in the Modus 600RT Pro Kit?

1. 2 x Modus 600RT Speedlight

2. Viper TTL Transmitter

3. 2 x Extreme Li-ion Battery Pack

4. Battery Charger

5. Charger Power Cable
6. 2 x Mini Stand

7. 2 x Protection Case

8. Instruction Manual

9. 2 x AA Batteries

Battery and Charger

- The Modus 600RT uses a lithium ion battery HLX-MD1 and it must be charged before use
- Use only the MD1 charger to charge the battery
- Remove battery from charger when charging is finished and disconnect charger from mains

A fully charged battery will offer approx 500 flashes at full power and even more when power level is reduced. The composition and construction of the MD1 battery pack offers very reliable and fast refresh time for the speedlight.

How to store the battery

When not in use remove battery from the charger or the speedlight and store battery in a cool and dry place. Exposing the battery to higher temperature can shorten the lifetime of the battery. Store the battery almost empty (one bar in the battery level indicator) when not used for a long period of time. For optimum battery life use battery regularly and if not used for more than 6 months charge the battery fully and use it with the Modus 600RT until the battery level is down to 1 bar again before storage.

Battery Lifetime

The lifetime of a rechargeable battery is limited. The capacity will drop progressively with use and age of battery pack. Replace the battery pack when the flash cycle time becomes longer or the number of flashes reduces noticeably. The battery lifetime can vary substantially depending on storage, operation conditions and exposure to unsuitable environmental conditions.

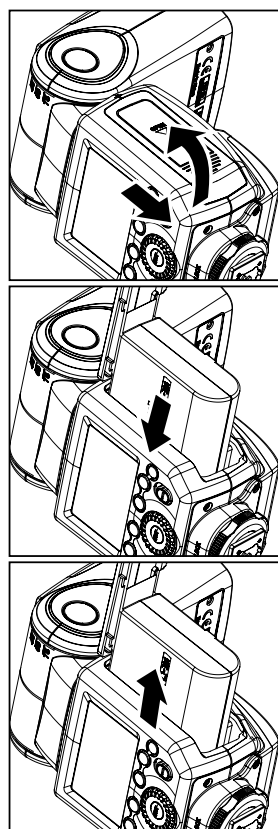
⚠ Caution

- Do not short circuit the battery
- Do not drop battery into water or fire
- Do not drop or dismantle or subject the batteries to strong impact or continuous mechanical shock
- Stop using the battery if the battery has any signs of damage or bulging to housing and dispose of battery in accordance with the appropriate local regulations

How to charge the battery

The HLX-MD1 battery must be charged before use. Use only the supplied MD1 charger to charge the battery. Connect the MD1 charger to the mains with the supplied mains cable and the power LED will light up red if connected correctly. To start the charge insert the HLX-MD1 battery into the MD1 charger and the green LED bars will start to illuminate, indicating that the battery is charging. 4 green LED's on indicates full charge. Remove the battery from charger when fully charged.

Fitting and Removing the Battery

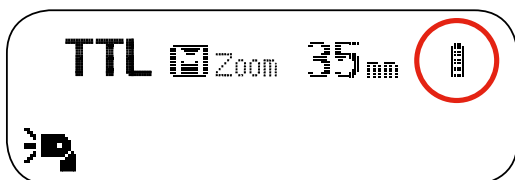


1. To fit the battery, push the battery compartment cover downward and open it.
2. According to the triangle sign on the battery pack, insert it into the compartment until a white clip locks the battery with a click sound.
3. To remove the battery, tap the white clip and the battery pack will pop out. Then close the compartment.

Battery Level Indication

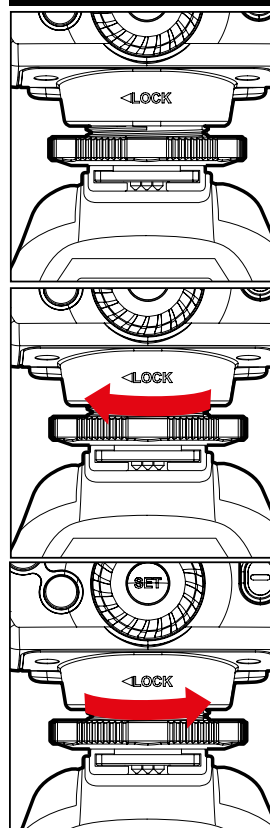
Make sure the battery pack is securely fitted in the flash. Check the battery level indication on the LCD panel to see the remaining battery level.

Low Battery Warning



Battery Level Indication	Meaning
3 bars	Full
2 bars	Middle
1 bar	Low
No bars	Lower battery, please recharge it
Blinking	The battery level is going to be used out immediately.
	Note: Please recharge the battery as soon as possible (within 10 days). Then, the battery can be used or stored as detailed in the "How to store the battery" section.

Attaching to Camera



1. **Attach the Speedlight to the camera.**
Slip the flash's mounting foot into the camera's hotshoe all the way.
2. **Secure the Speedlight**
Rotate the lock ring on the mounting foot until it locks in position
3. **Detach the Speedlight**
Rotate the lock ring on the mounting foot until it is loosened. Then slide the speedlight off the camera hotshoe

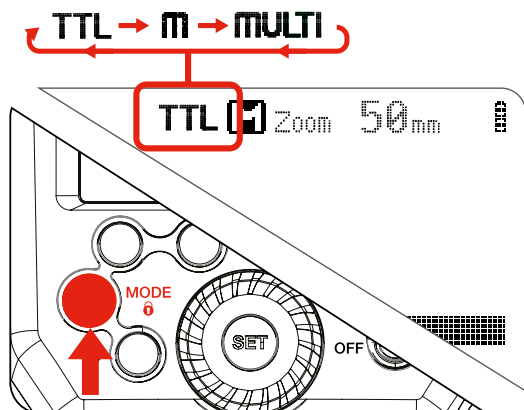
Power Management

Use **ON/OFF** Power Switch to power the flash unit on or off. Turn off if it will not be used for an extended period of time. Setting as a master flash, it will turn the power off automatically after a certain period (approx. 90 seconds) of idle use. Pressing the camera shutter halfway or pressing any flash button will wake up the flash unit. Setting as a slave flash, it will enter sleep mode after a certain period (adjustable, 60 minutes by default) of idle use. Pressing any flash button will wake it up.

- C.Fn** Disabling Auto Power Off function is recommended when the flash is used off camera. (C.Fn-APO)
- C.Fn** Slave Auto Power Off Timer is set to 60 minutes by default. Another option "30 minutes" is available. (C.Fn-Sv APOT, Page 33)

Flash Mode - TTL Autoflash

This flash has three flash modes: **TTL**, **Manual (M)**, and **MULTI** (Stroboscopic). In **TTL** mode, the camera and the flash will work together to calculate the correct exposure for the subject and the background. In this mode, multiple TTL functions are available: **FEC**, **FEB**, **FEL**, **HSS**, **second curtain sync**, modeling flash. These can be controlled with the Modus 600RT or with the camera's menu screen.



* Press **<MODE>** Mode Selection Button and three flash modes will display on the LCD panel one by one with each pressing.

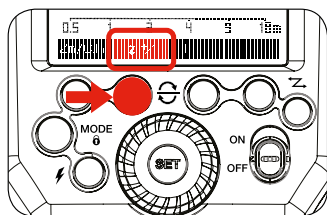
TTL Mode

Press **<MODE>** Mode Selection Button to enter **TTL** mode. The LCD panel will display **TTL**.

- Press the camera release button halfway to focus. The aperture and effective flash range will be displayed in the LCD panel.
- When the shutter button is fully pressed, the flash will fire a preflash which the camera will use to calculate the correct flash output power the instant before the photo is taken.

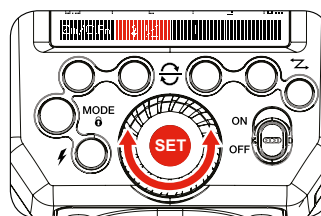
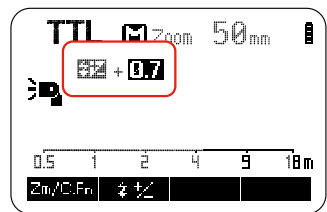
FEC: Flash Exposure Compensation

With **FEC** function, you can adjust the calculated level from -3 to +3 in 1/3 stops. It is useful in situations where minor adjusting of the TTL system is needed based on the lighting environment



Setting FEC:

1. Press **Function Button 2** **<FEC>**. The icon **<FEC>** and flash exposure compensation amount will be highlighted on the LCD panel.
2. Set the flash exposure compensation amount.
 - Turn the **Select Dial** to set the amount.
 - "0.3" means 1/3 step, "0.7" means 2/3 step.
 - To cancel the flash exposure compensation, set the amount to "+0".



3. Press **<SET>** button again to confirm the setting.

FEB: Flash Exposure Bracketing

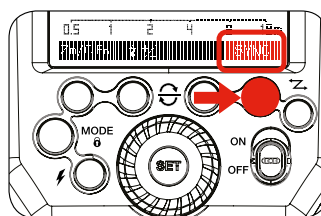
The Flash Exposure Bracketing can be set from your camera. Please refer to the Camera instruction manual for further details

FV Lock: Flash Value Lock

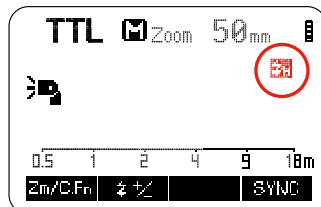
The Flash Value Lock can be enabled from the camera. Please refer to the Camera instruction manual for further details

High-Speed Sync

High Speed Sync (**HSS**) enables the flash to synchronize with all camera shutter speeds. This is convenient when you want to use aperture priority for fill-flash portraits.



1. Press **Function Button 4** **<SYNC>** to turn ON the High Speed Sync. The icon **<HSS>** will be displayed



6. With high-speed sync, the faster the shutter speed, the shorter the effective range
 - To return to normal flash, press **<SYNC>** button twice
 - **MULTI** Flash mode cannot be set in high-speed sync mode
 - Over-temperature protection may be activated after 15 consecutive high-speed flashes

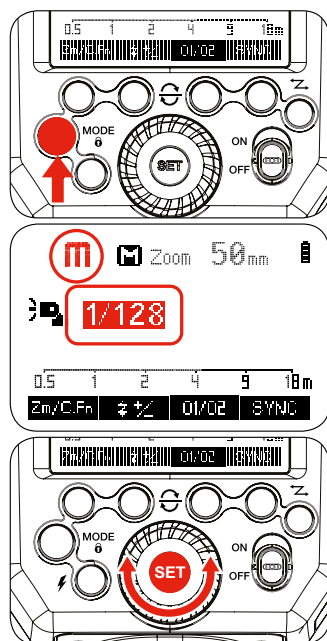
Second-Curtain Sync

The Second curtain sync (Rear curtain sync) can be enabled from the camera. Please refer to camera instruction manual for further details.

6. When rear curtain sync is enabled it will not be displayed on the modus 600RT speedlight. See LCD on camera.

Flash Mode - Manual Flash

The flash output is adjustable from 1/1 full power to 1/128th power in 1/3rd stop increments. To obtain a correct flash exposure, use a hand-held flash meter to determine the required flash output.



1. Press **<MODE>** button so that **<M>** is displayed

2. Turn the **Select Dial** to choose a desired flash output amount

3. Press **<SET>** button again to confirm the setting

Flash Output Power Range

The following table makes it easier to see how the stop changes in terms of f/stop when you increase or decrease the flash output. For example, when you decrease the flash output: 1/2, 1/2-0.3, or 1/2-0.7, or increase the flash output: 1/2, 1/2+0.3, 1/2+0.7, 1/1.

Figures displayed when reducing flash output level→

1/1	1/1-0.3	1/1-0.7	1/2	1/2-0.3	1/2-0.7	1/4	-----
	1/2+0.7	1/2+0.3		1/4+0.7	1/4+0.3		-----

←Figures displayed when increasing flash output level

Optical O1 Secondary Unit Setting

In **M** manual flash mode, press **<O1/O2>** button so that this flash can function as an optical **O1** secondary flash using its optical sensor. With this function, the flash will fire synchronously when a second main flash fires. This is the same effect as using a radio trigger to fire the flash off camera. This helps create multiple lighting effects.

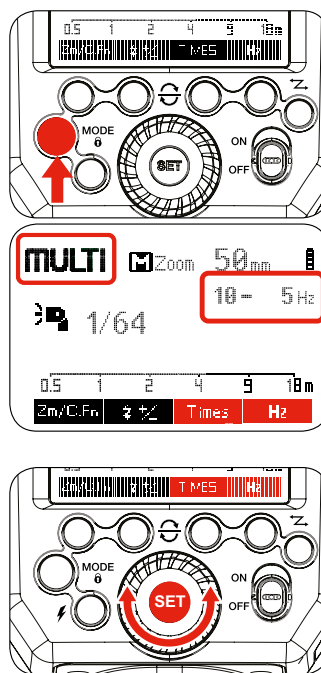
Optical O2 Secondary Unit Setting

In **M** manual flash mode, press **<O1/O2>** button so that this flash can function as an optical **O2** secondary flash using its optical sensor. With this function, the flash will fire synchronously when a second main flash fires as in **O1** but it will ignore the metering pre-flash and fire only in response to the exposure flash from the main unit.

• **O1** and **O2** optic triggering is only available in **M** manual flash mode.

Flash Mode: MULTI Flash

With stroboscopic flash, a rapid series of flashes is fired. It can be used to capture multiple images of a moving subject in a single photograph. You can set the firing frequency (number of flashes per sec. expressed as Hz), the number of flashes, and the flash output power.



1. Press **<MODE>** button so that **<MULTI>** is displayed

2. Turn the **Select Dial** to choose a desired flash output power

3. Set the flash frequency and number of flashes

- Press **<Times>** button
- Turn the **Select Dial** to set the number of flashes
- Press the **<Hz>**
- Turn the **Select Dial** to choose a desired flash firing frequency
- After you finish the setting, press **<SET>** button and all the settings will be displayed.

Calculating the Shutter Speed

During stroboscopic flash, the shutter remains open until the firing stops. Use the formula below to calculate the shutter speed and set it on the camera.

Number of Flashes / Flash Frequency = Shutter Speed

For example, if the number of flashes is 10 and the firing frequency is 5 Hz, the shutter speed should be at least 2 seconds.

- ⚠ To avoid overheating and deteriorating the flash head, do not use stroboscopic flash more than 10 times in succession
- After 10 times, allow the speedlight to rest for at least 15 minutes. If you try to use the stroboscopic flash more than 10 times in succession, the firing might stop automatically to protect the flash head. If this happens, allow at least 15 minutes' rest for the speedlight
 - Stroboscopic flash is most effective with a highly reflective subject against a dark background
 - Using a tripod and a remote control is recommended.
 - A flash output of 1/1 and 1/2 cannot be set for stroboscopic flash
 - Stroboscopic flash can be used with "bulb"
 - If the number of flashes is displayed as "--", the firing will continue until the shutter closes or the battery is exhausted. The number of flashes will be limited as shown by the following table.

Maximum Stroboscopic Flashes:

Flash output	Hz	1	2	3	4	5	6-7	8-9
1/4		7	6	5	4	4	3	3
1/8		14	14	12	10	8	6	5
1/16		30	30	30	20	20	20	10
1/32		60	60	60	50	50	40	30
1/64		90	90	90	80	80	70	60
1/128		100	100	100	100	100	90	80

Flash output	Hz	10	11	12-14	15-19	20-50	60-199
1/4		2	2	2	2	2	2
1/8		4	4	4	4	4	4
1/16		8	8	8	8	8	8
1/32		20	20	20	18	16	12
1/64		50	40	40	35	30	20
1/128		70	70	60	50	40	40

If the number of flashes is displayed as “--”, the maximum number of flashes will be as shown in the following table regardless of the flash frequency.

Flash Output	1/4	1/8	1/16	1/32	1/64	1/128
Number of Flashes	2	4	8	12	20	40

3

Wireless Flash
Photography:
(2.4GHz) Control

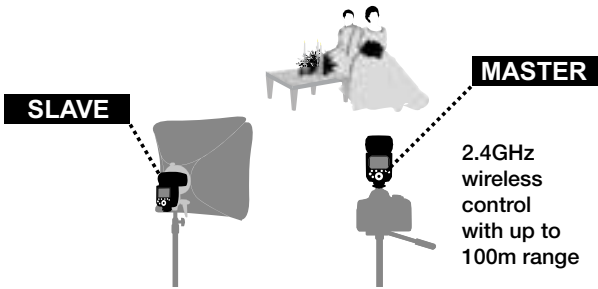
Master/Slave wireless flash lighting

- ⚠ When the camera's shooting mode is set to a fully automatic mode or an Image Zone mode, the operations in this chapter are not available. Set the camera's shooting mode to P/Tv/Av/M/B (Creative Zone Mode).
- 📷 The “Modus 600RT” attached to the Camera Hot shoe is called the “Master” unit. A second “Modus 600RT” which is wirelessly controlled is called the “Slave” unit
 - You can also wirelessly control the Modus 600RT as a “Slave” unit using a “Viper TTL” transmitter as a “Master” unit attached to the camera hotshoe

Using (Master/Slave) with wireless 2.4GHz control function allows you to easily perform shooting with advanced wireless multiple flash lighting in the same way as TTL autoflash photography. The system is designed so that the setting's of the “Master” attached to the camera are automatically applied to the wireless slave speedlights. Therefore you do not need to operate or adjust the slaves during shooting

Positioning and Operation Range (Example of wireless flash shooting)

• Master/Slave wireless flash lighting

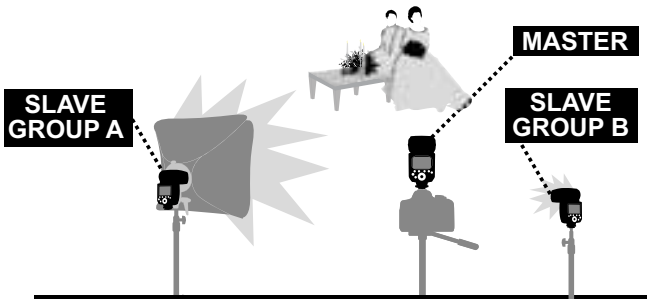


- 📷 The “Master” attached to the camera can be a “Modus 600RT” or “Viper TTL transmitter”
 - Use the supplied mini stand to hold the Slave unit in upright position
 - Before shooting perform a test flash and test shooting
 - The transmission distance may vary depending on the position of the slave speedlight, environment and weather conditions

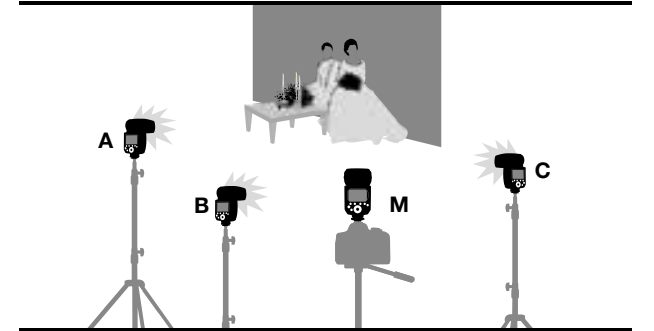
Wireless multiple flash shooting

You can divide the slave units into one, two or three groups and perform TTL autoflash. In addition, you can set and shoot with a different flash mode for each firing group, for up to 3 groups, plus master.

• Auto Shooting with Two Slave Groups



• Auto Shooting with Three Slave Groups



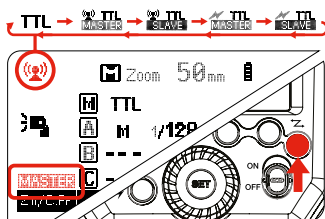
Wireless shooting using radio transmission has advantages over wireless shooting using optical control, such as being less affected by obstacles, and not having to point the slave unit's wireless sensor toward the master unit. The main functional differences are as follows:

Function	Radio Control	Optical Control
Distance	100m	15m
Channel	DCM	1~4
A/B/C Power	OFF, 1/128~1/1	1/128~1/1
Interference	Hard	Easy
Group	A/B/C	A/B/C

Wireless Settings

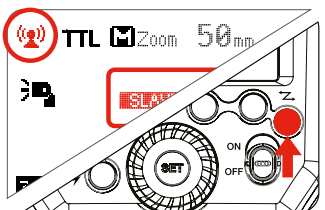
You can switch between normal flash and wireless flash. For normal flash shooting, be sure to set the wireless setting to OFF

Master Unit Setting



Press **<Z>** button so that **<(TTL)>** and **<MASTER>** are displayed on the LCD panel.

Slave Unit Setting



Press **<Z>** button so that **<(TTL)>** and **<SLAVE>** are displayed on the LCD panel

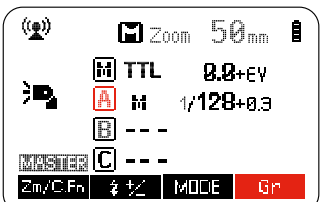
Master Unit Flash ON/OFF

You can switch ON or OFF the "Master" unit flash that is controlling the wireless "Slave" units. When Master flash is ON, it will flash as group M

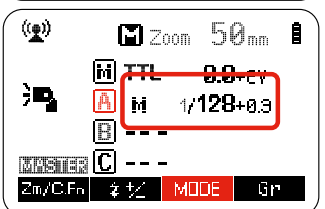
1. Press **Function Button 4** **<Gr>** and one Group M/A/B or C will be highlighted
2. Press **Function Button 4** **<Gr>** again until **<M>** is highlighted
3. Press **Function Button 3** **<MODE>** until **<M>** is **<--->**. The master speedlight is now OFF

Setting the group mode - TTL / M / OFF

From the "Master" Modus Speedlight each Group M (master speedlight) / A / B / C "mode" setting can be adjusted individually.



1. Press **Function Button 4** **<Gr>**
 - Keep pressing Button 4 **<Gr>** until **<A>** is highlighted

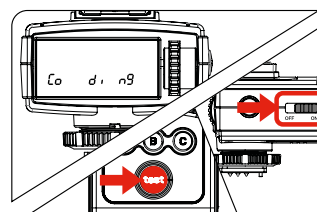


2. Press **Function Button 3** **<MODE>** and select the desired Mode TTL <TTL> / Manual <M> / Off <--->

Setting the DCM (Digital Channel Matching)

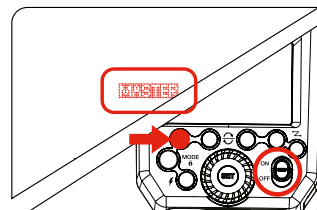
Initially the Modus 600RT wireless 2.4GHz is set to a general "open channel" and can be used as it is. To avoid interference with other wireless flash systems we recommend to DCM (digital channel match) your Modus 600RT speedlight's and Viper TTL.

Master - Viper TTL or Modus 600RT



1. If you have a Viper TTL, start the DCM matching with the Viper TTL

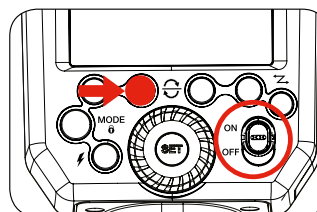
- Turn **<ON>** the Viper TTL transmitter whilst holding down the **<test>** button and release **<test>** button after 2 seconds
- The Viper LCD will show **<Co di ng>**



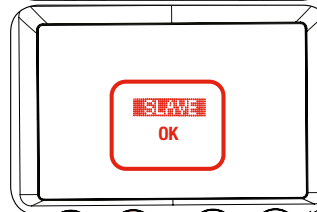
2. If you are not using a Viper TTL and only wish to DCM several Modus 600RT, then use any Modus 600RT as the Master unit

- Press **<Function Button 1>** whilst turning **<ON>** the power to the Modus 600RT
- A green LCD on the Modus 600RT will show **<MASTER>**

Slave - Modus 600RT



3. Press **<Function Button 2>** whilst turning **<ON>** power to the slave Modus 600RT

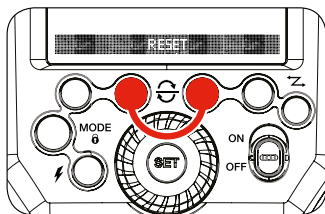


4. A red LCD will show "Slave OK". This slave Modus 600 RT is now DCM matched

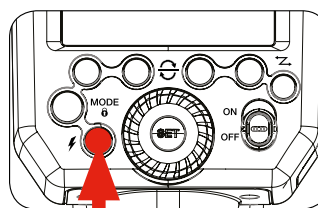
5. DCM match the same way, any additional slave Modus 600RT while the Master is still on

6. Once all slave units are DCM matched, reboot all master and slave's by turning OFF/ON
 - Once all devices are DCM matched they will memorize the unique ID even if power is removed. Therefore you only need to DCM your set once
 - If you add more speedlights or Viper TTL units to your range then you need to carry out the DCM matching for all your units again

Modus 600 RT - Reset



- To reset the Modus 600RT to factory default settings press **function buttons 3 & 4** at the same time and hold until the LCD shows **< RESET >** release the buttons
- When the Modus 600RT is reset the DCM is also reset back to open channel and the previous DCM is lost

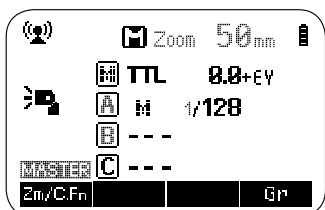


6 Check the Master slave speedlight operation

- Press the master unit's **< TEST >** button
- The slave speedlight will flash. If it does not fire, check the position or distance of slave from master
- You are now ready to take a photo with the wireless flash lighting

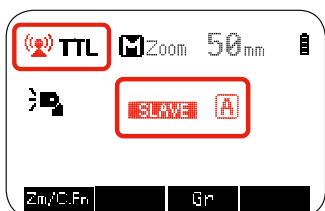
TTL Fully Automatic Wireless Flash Shooting

Basic Automatic Wireless Flash shooting with a Single Slave Unit



1. Master Unit Setting

- Attach a Modus 600RT to the camera and set it as the master unit (Page 22)
- The Viper TTL Transmitter can also be used as a master unit to control the wireless slave Modus 600RT (Page 30)



2. Slave Unit setting

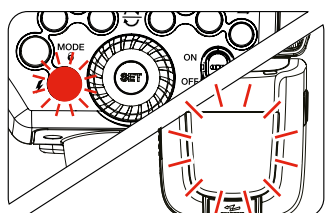
- Set the slave Modus 600RT to **< SLAVE >** setting (Page 22)

3. Position of camera and speedlight

- Position the camera with the master unit attached and the Modus slave within radio range

4. Set the Group **A** flash mode to **<TTL>**

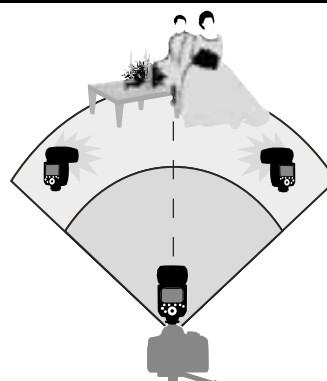
- Check that group **<A>** is set to **<TTL>**. If not press **< MODE >** button until **<TTL>** is displayed
- Check that the slave unit is set automatically to **<TTL>** by the master unit



5 Check Master/Slave units are ready

- Check master speedlight, ready indicator is lighting and that the slave flash ready indicators are blinking

Using Automatic Wireless Flash with Multiple Slave Units



When stronger flash output or more convenient lighting operation is needed, increase the number of slave speedlight's. To add slave units, use the same steps as setting **"automatic wireless flash with a single slave unit"** (Page 25). Any slave speedlight can be set as group (A/B/C).

When the number of slave units is increased or the master flash firing is set to ON, automatic control is performed to fire all flashes at the correct flash output to ensure that the total flash output results in the standard exposure.

- If the slave unit's auto power off takes effect, press the master unit's test flash button to turn on the slave unit. **Note** that the test flash cannot be performed while the camera's metering timer, etc. is operating
- The slave units auto power off setting can be changed (C.Fn-Sv / APOT page 33)
- In the C.Fn settings you can enable a beeper to sound when a Modus 600RT is recharged and ready to fire again

Advanced setting with fully automatic wireless flash

With the wireless system the following functions set on the master unit will automatically be adjusted on the slave unit. For this reason you do not need to operate the slave unit (s) and can operate it from the master in the same way as normal flash photography.

- Flash Exposure Compensation **< ± >** (Page 16)
- Flash Exposure Bracketing **< FEB >** (Page 17)
- FV Lock: Flash Value Lock (Page 17)
- High-Speed Sync **< H >** (Page 17)
- Manual Flash (Page 17)
- MULTI Flash (Page 18)

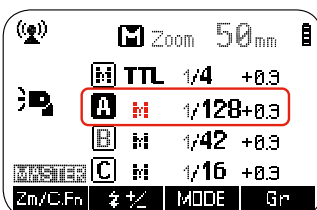
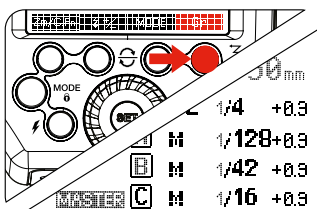
Multiple Master Unit

You can use two or more cameras with master flash units on each to change camera shooting while keeping the same lighting setup (slave units) in wireless flash photography.

• Second Curtain Sync - is only enabled when using the Viper TTL Transmitter

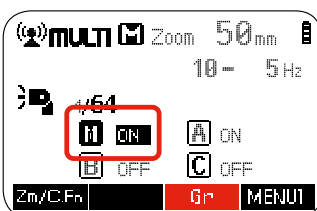
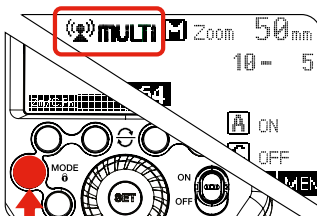
M: Wireless Flash Shooting with Manual Flash

This describes wireless using manual flash. You can shoot with a different flash output setting for each slave unit (firing group). Set all parameters on the master unit.

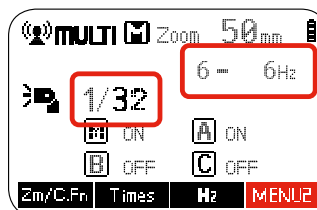


1. Setting the manual flash mode to <M>
 - Press Function Button 4 < Gr > to choose the group
 - Then press Function Button 3 < MODE > to set the <M> mode
2. Setting manual flash output power
 - Press Function Button 2 < \pm >. Turn the Select Dial to adjust the flash output of the group
 - Press <SET> button to confirm
3. Setting individual group flash output power
4. Each group M (Master speedlight) / A / B / C can be set individually to different power level
 - Set any group to <---> to turn off the power of this group

MULTI: Wireless shooting with Multi repeating flash stroboscopic



1. Setting <MULTI> stroboscopic flash
 - On the Master Speedlight press <MODE> button until <MULTI> is displayed
 - Turn the Select Dial to adjust the flash output power. Press <SET> button to confirm
2. Turning ON/OFF group M (master speedlight) / A / B / C
 - Press Function Button 3 < Gr >. Then turn the Select Dial to set the group ON/OFF

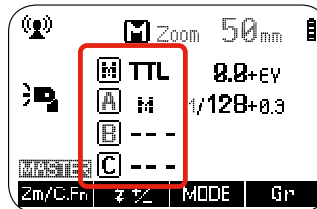
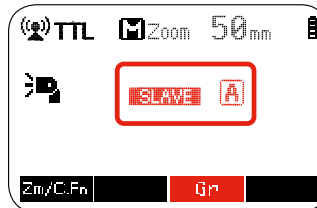
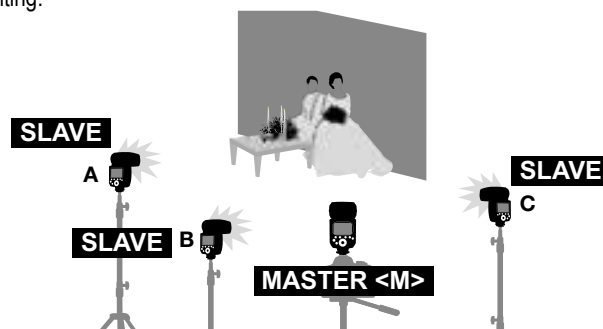


- Press Function Button 3 < Gr > again to select the next group. Press <SEL> button to confirm

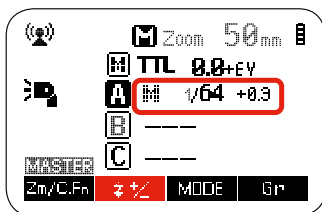
3. Setting the stroboscopic flash parameters
 - Press Function Button 4 < MENU1 >. This will display < MENU2 > which enables selecting of power < \pm >, number flashes < Times > and frequency < Hz >
 - Press < \pm > or < Times > or < Hz > to adjust the relevant setting

M/A/B/C: Wireless flash shooting with different flash modes for each group

You can shoot with different flash modes set for each firing group (M/A/B/C). The flash modes that can be set are TTL auto flash / manual / OFF. When the flash mode is in TTL exposure is controlled to result in standard exposure for the main subject as a single group. This function is for advanced user who are very knowledgeable and experienced in lighting.



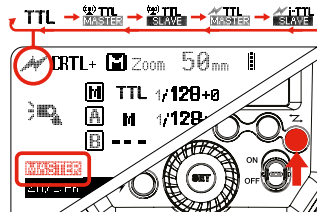
1. Set master Unit
 - Press the < MODE > button and set the flash mode to < MASTER >. See Page 22
2. Set the firing group of the slave units
 - Operate and set the slave units one by one
 - Press Function Button < Gr > to assign the speedlight to group <A>, or <C>. See
3. Set the flash modes
 - Set the flash mode of each firing group by the operation of the master speedlight. See Page 22
4. Set the flash output and flash exposure compensation amount
 - While a firing group is selected, press Function



Button 3 < >

- Turn the **Select Dial** to set the flash function corresponding to flash mode, and press **<SET> Button** to confirm
- When using the **<M> mode**, set the flash output power
- When using the **<TTL> mode**, set the flash exposure compensation amount as required
- Repeat step 4 to set the flash function of all groups

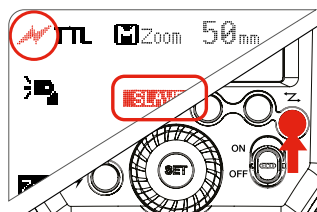
Master Unit Setting



Press **< >** button so that **< CTRL+ >** and **< MASTER >** are displayed on the LCD panel.

- In the master unit mode **< CTRL+ >** you must set the camera to Flash Wireless Mode (WL) before attaching the Speedlight to camera. "SET YOUR CAMERA" will be displayed in the Master unit LCD, if your camera is not set to (WL) mode. Refer to the camera manual on how to set the camera to (WL) mode.
- If a Sony branded flash unit is communicating wireless optical with Modus 600RT, set it to WL CTRL on the flash menu when it is a Master - and set it to WL RMT on the flash menu when it is a Slave. Refer to the flash unit manual for details.

Slave Unit Setting



Press **< >** button so that **< >** and **< SLAVE >** are displayed on the LCD panel.

Master Unit Flash ON/OFF

You can switch ON or OFF the "Master" unit flash that is controlling the wireless "Slave" units. When Master flash is ON, it will flash as group M.

- Even if the master unit flash firing is disabled, it still fires a preflash to transmit wireless signals

Setting the optical Communication Channel

The Modus 600RT has four optical communication channels. The master and the speedlights must be set to the same channel.

Master

- Press function button 3 **< CH >** and use the select dial to set the required channel
- Press **<SET> button** to lock selection

Slave

- Press function button 4 **< CH >** and use the select dial to set the required channel
- The channel must be set the same as the master speedlight

- Since the optical lighting system (WL) is restricted by the Sony's wireless protocol, it is recommended to use the 2.4GHz wireless system which is a more reliable wireless system.
- Turn off the cameras Flash Wireless mode (WL) when not using the optical wireless system. Refer to the camera manual on how to turn off the camera (WL) mode

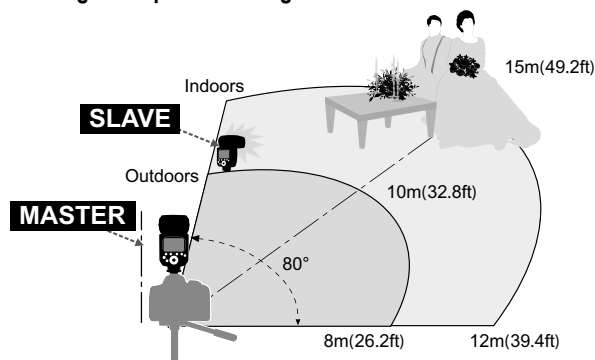
4

Wireless Flash Photography: Optical Transmission

This product is compatible with Sony Wireless Lighting System (WL). It can function as either an optical wireless master or slave. As a master unit, it can control Sony camera flashes e.g. HVL-F60M, HVL-F43M and HVL-F32M via wireless. As a slave unit, it can be controlled by wireless signals of Sony camera flashes e.g. HVL-F60M, HVL-F43M and HVL-F32M. Note following restrictions of the Sony camera wireless protocol. For optical wireless communication with the Modus 600RT, as a Master or as a Slave, set Sony branded flash units to CTRL+ on the flash menu. Refer to the flash unit manual for details.

- <MULTI> mode is disabled in optical wireless lighting system (WL)
- From the master unit <M> master channel can be set to TTL, Manual or OFF.
- From the master unit <A> and channel can only set to TTL or OFF
- The slave units can be manually set to <M> manual mode. When setting the slave to manual <M> mode, please set the <M> master group to TTL

Positioning and Operation Range



- Even with multiple slave units, the master unit can control all of them via wireless.
- In this user manual, "master unit" refers to the speedlight attached to the camera and "slave unit" will be controlled by the master unit.

Wireless Settings

You can switch between normal flash and wireless flash. For normal flash shooting, be sure to set the wireless setting to OFF

5

Wireless Flash Photography: (2.4GHz) using Viper TTL Transmitter

Wireless Settings

DCM (Digital Channel Matching)

1. DCM (Digital Channel Matching). Carry out the DCM matching, see page 23
2. Set the Modus 600RT to 2.4GHz as Slave Unit - Group A, see page 23
3. Press Viper **<test>** **08** button to confirm that Modus Speedlight is triggered wirelessly

Viper TTL group Mode Setting

Press buttons **A** or **B** or **C** to change the **MODE** setting of each group to **<TTL>**, **<M>** manual & **<blank>** OFF.

Take a test photograph now and the Viper transmitter will send a wireless signal to each Modus 600RT and to each 3rd Party Speedlight connected to a Viper TTL receiver. The Speedlight will then be set automatically to the same Viper TTL selected group mode setting.

- The Viper LCD **05** will show the setting of each group
 - A group is turned OFF if the LCD is not showing the group
 - A group is in Manual mode when **<M>** is displayed next to the group
 - A group is in TTL mode when **<TTL>** is displayed next to the group
 - Each group **A**, **B** or **C** is set independently and it is possible to use simultaneously different setting for each group (e.g. Group **A** may be in **<M>**, Group **B** in **<TTL>** and Group **C** turned OFF)

Group Power Control setting for Manual and TTL FEC

From the Viper TTL transmitter you can adjust the power level and the **FEC** of each group.

4. Press **<SEL>** **02** select button and all three icons **<A>**, **** and **<C>** will flash.
5. Press one button **A** or **B** or **C** to select which group you want to adjust the power. Now only the selected group icon **<A or B or C>** will flash
6. Use the adjust dial to set the power output in **< M >** mode and **FEC** in **TTL** mode
7. Press the **<SEL>** button to lock your selection

Multi Mode

- Press and hold the **< Group A >** button to select the Multi mode **< MT >** icon. Use the **<SEL>** button, Group Buttons and adjust dial to set the number of flashes, flash frequency and power output. Press the **<SEL>** button again to lock selection

- For more detail on operation of the viper TTL visit www.hahnel.ie

Sync Modes

- Press and hold the **< Group B >** button to select the High Speed sync **< H >** icon will switch on
- Press and hold the **< Group B >** button again to go back to normal sync

6

Other Applications

Sync Triggering

- The Sync Cord Jack is a $\Phi 2.5\text{mm}$ plug. Insert a trigger plug here and the flash will be fired synchronously with the camera shutter.

- To avoid overheating and deteriorating the flash head, do not fire the modeling flash for more than 10 consecutive times. If you fire the modeling flash 10 consecutive times, allow at least 10 minutes' break for the camera flash.

Auto Focus Assist Beam

In poorly-lit or low-contrast shooting environments, the built-in auto focus assist beam will automatically switch on to make it easier to autofocus. The beam will light up only when autofocus is difficult and will switch off as soon as the autofocus is set.

If you want to turn off the auto focus assist beam, set "AF" to "OFF" on the C.Fn settings.

- If you find the auto focus assist beam does not light up,
 - this is because the camera has got a correct autofocus.
 - The auto focus assist beam does not operate while Continuous AF is used in the camera focusing mode
 - Depending on your camera, the AF beam may not fire

Position	Effective Range
Center	0.6~10m / 2.0~32.8 feet
Periphery	0.6~5m / 2.0~16.4 feet

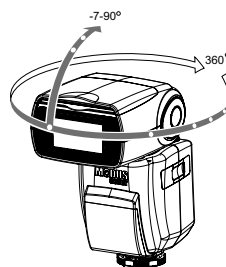
Bounce Flash

By pointing the flash head toward a wall or ceiling, the flash will bounce off the surface before illuminating the subject. This can soften shadows behind the subject for a more natural-looking shot. This is called bounce flash.

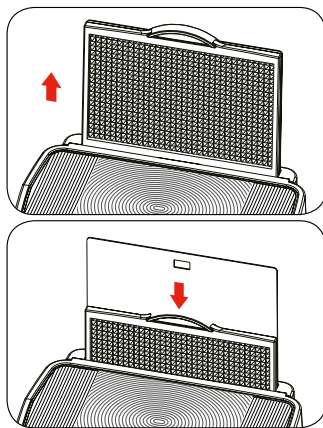
To set the bounce direction, hold the flash head and turn it to the required angle.

Catchlight Panel

With the catchlight panel, you can create a catchlight in the subject's eyes to add life to the facial expression.



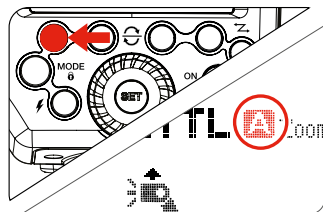
- If the wall or ceiling is too far away, the bounced flash might be too weak and result in underexposure.
- The wall or ceiling should be a plain, white color for high reflectance. If the bounce surface is not white, a color cast may appear in the picture.



1. Point the flash head upward by 90°
2. Pull out the wide panel. The catchlight panel will come out at the same time
3. Push the wide panel back in
 - Push in only the wide panel
 - Follow the same procedures as for bounce flash

ZOOM: Setting the Flash Coverage and Using the Wide Panel

The flash coverage can be set automatically or manually. It can be set to match the lens focal length from 20 mm to 200mm. Also, with the built-in wide panel, the flash coverage can be expanded for 14mm wide-angle lenses.

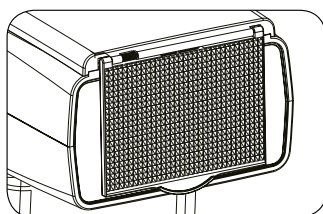


In Manual Zoom mode, press the **<ZM/C.FN>** button.

- Turn the Select Dial to change the flash coverage
- If **< A >** is displayed, the flash coverage will be set automatically

• If you set the flash coverage manually, make sure it covers the lens focal length so that the picture will not have a dark periphery.

Using the Wide Panel



- Pull out the wide panel and place it over the flash head as shown. The flash coverage will then be extended to 14 mm.
- The catchlight panel will come out at the same time. Push the catchlight panel back in.
 - The **<ZOOM/C.FN>** button will not work.

C.Fn: Setting Custom Functions

The following table lists the available and unavailable custom functions of this flash.

C Fn Custom Functions				
Custom Function Signs	Function	Setting No.	Settings & Description	Custom Functions No.
m/ft	Distance indicator	m	m	C.Fn-00
		ft	feet	
APO	Auto power off	ON	ON	C.Fn-01
		OFF	OFF	
AF	AF-assist beam	ON	ON	C.Fn-08
		OFF	OFF	
Sv APOT	Slave auto power off timer	60min	60min	C.Fn-10
		30min	30min	
BEEP	Beeper	ON	ON	C.Fn-20
		OFF	OFF	
LIGHT	Backlighting time	12sec	Off in 12 sec.	C.Fn-22
		OFF	Always off	
		ON	Always lighting	
LCD	LCD contrast ratio	0~9	10 levels	

1. Software Version

Press **<Zm/C.Fn>** Backlight/Custom Setting Button for 2 seconds or longer until C.Fn menu is displayed. The "Ver x.x" in the topright corner refers to the software version.

2. Select the Custom Function No

- Turn the Select Dial to select the Custom Function number

3. Change the Setting

- Press **<SET>** button and the Setting No. blinks.
- Turn the Select Dial to set the desired option. Pressing **<SET>** button will confirm the settings.
- After you set the Custom Function and press function button 4, the camera will be ready to shoot.

4. C.Fn Default

In the C.Fn menu, a long press of the "Clear" button for 2 seconds until "OK" is displayed on the panel, which means the values in C.Fn are reset to their default options

Protection Functions

1. Over-Temperature Protection

- To avoid overheating and deteriorating the flash head, do not fire more than 30 continuous flashes in fast succession at 1/1 full power. After 30 continuous flashes, allow a rest time of at least 10 minutes
- If you fire more than 30 continuous flashes and then fire more flashes in short intervals, the inner over-temperature protection function may be activated and make the recycling time over 10 seconds. If this occurs, allow a rest time of about 10 minutes, and the flash unit will then return to normal
- When the over-temperature protection is active, **< 33 >** is shown on the LCD display

Number of flashes that will activate over-temperature protection:

Power Output level	Number of Flashes
1/1	30
1/2 +0.7	40
1/2 +0.3	50
1/2	60
1/4(+0.3,+07)	100
1/8(+0.3,+07)	200
1/16(+0.3,+07)	300
1/32(+0.3,+07)	500
1/64(+0.3,+07)	1000
1/128(+0.3,+07)	

Number of flashes that will activate over-temperature protection in high-speed sync triggering mode:

Power Output	Times
1/1	15
1/2(+0.3,+07)	20
1/4(+0.3,+07)	30
1/8(+0.3,+07)	
1/16(+0.3,+07)	40
1/32(+0.3,+07)	
1/64(+0.3,+07)	50
1/128(+0.3,+07)	

2. Other Protections

The system provides real-time protection to secure the device and your safety. The following lists prompts for your reference:






Prompts on LCD Panel	Meaning
E1	A failure occurs on the recycling system so that the flash cannot fire Please restart the flash unit. If the problem still exists, please send this product to a maintenance center
E2	The system gets excessive heat. Please allow a rest time of 10 minutes
E3	The voltage on two outlets of the flash tube is too high. Please send this product to a maintenance center
E9	There are some errors occurred during the upgrading process. Please use the correct firmware upgrade method

Technical Data

Model		Modus 600RT
Compatible Cameras		Sony DSLR cameras (TTL auto flash)
Guide No.		60 {m ISO 100}
{1/1 output@ 200mm}		190 (feet ISO 100)
Flash Coverage		20 to 200mm (14mm with wide panel) <ul style="list-style-type: none"> • Auto zoom (Flash coverage set automatically to match the lens focal length and image size) • Manual zoom • Swinging/titling flash head (bounce flash): 0 to 360° horizontally and -7° to 90° vertically
FlashDuration		1/300 to 1/20000 seconds
Exposure control system		TTL autoflash and manual flash
Flash exposure compensation {FEC}		Manual. FEB: ±3 stops in 1/3 stop increments {Manual FEC and FEB can be combined.}
Sync mode		High-speed sync (up to 1/8000 seconds), first-curtain sync, and second-curtain sync
Multi flash		Provided (up to 100 times, 199Hz)
• Wireless Flash		
Wireless flash function		Master, Slave, Off
Controllable slave groups	Optical	M/ A / B/
	2.4GHz	M/ A / B/ C
Transmission range (approx.)	Optical	Indoors: 12 to 15 m / 39.4 to 49.2 ft. Outdoors: 8 to 10 m / 26.2 to 32.8 ft. Master unit reception angle: ±40° horizontally, ±30° vertically
	2.4GHz	Up to 100m
Channels	Optical	4 (1, 2, 3, and 4)
	2.4GHz	Digital Channel Matching
Slave-ready indicator		Two red indicators blink
Modeling flash		Fired with camera's depth-of-field preview button
• Auto Focus Assist Beam		
Effective range (approx.)		Center: 0.6-10m / 2.0-32.8 feet Periphery: 0.6-5m / 2.0-16.4 feet
• Power Supply		
Power source		10.8V/2040mAh Li-ion battery
Recycle time		1.5 seconds. RED LED indicator will light up when the flash is ready
Full power flashes		Approx. 500
Power saving		Power off automatically after approx. 90 seconds of idle operation. (60 minutes if set as slave)
• Sync Triggering Mode		Hotshoe, 2.5mm sync line, Wireless control
• Color Temperature		5600±200k
• Dimensions		
W x H xD		64*76*190 mm
Weight without battery		430g
Weight with battery		540g

Troubleshooting

If there is a problem, refer to this Troubleshooting Guide. The Camera Flash does not fire.

- The camera flash is not attached securely to the camera.
- → Attach the camera's mounting foot securely to the camera.
- The electrical contacts of the Camera Flash and camera are dirty.
- → Clean the contacts.
- <  > or <  H > is not displayed in the view finder of camera.
- → Wait until the flash is fully recycled and the flash ready indicator lights up.
- → If the flash ready indicator lights up, but <  > or <  H > is not displayed in the view finder, check whether this flash unit is securely attached to the camera hotshoe.
- → If the flash ready indicator does not light up after a long wait, check whether the battery power is enough. If the battery power is low, <  > will appear and blink on the LCD panel. Please replace the battery immediately.

The power turns off by itself.

- After 90 seconds of idle operation, auto power off took effect if the flash is set as master.
- → Press the shutter button halfway or press any flash button to wake up.
- After 60 minutes (or 30 minutes) of idle operation, the flash unit will enter sleep mode if it is set as slave.
- → Press any flash button to wake up.
-

Auto zoom does not work

- The camera flash is not attached securely to the camera.
- → Attach the camera flash's mounting foot to the camera.

The flash exposure is underexposed or overexposed.


- There was a highly reflective object (e.g. glass window) in the picture.
- → Use FE lock (FEL).
- You used high-speed sync.
- → With high-speed sync, the effective flash range will be shorter. Make sure the subject is within the effective flash range displayed.
- You used Manual Flash mode.
- → Set the flash mode to TTL or modify the flash output.

Photos have dark corners or only parts of the target subject are illuminated.


- The focal length of lens exceeds the flash coverage.
- → Check the flash coverage you set. This flash unit has the flash coverage between 20 and 200mm, which fits medium-format cameras. Pull the wide panel out to extend the flash coverage.

Firmware Upgrade

This flash supports firmware upgrade through the USB port. Update information will be released on our official website.

-  USB connection cable is not included in this product. The USB port is a standard Micro USB socket. Common USB connection cable is suitable.

Compatible Camera Models

-  For up to date compatibility of all camera models check www.hahnel.ie

Maintenance

- Shut down the device immediately should abnormal operation be detected
- Avoid sudden impacts and the product should be cleaned regularly
- It is normal for the flash tube to be warm when in use. Avoid continuous flashes if unnecessary
- Maintenance of the flash must be performed by our authorized maintenance department which can provide original accessories
- This product, except consumables e.g. flash tube, is supported with a one-year warranty
- Unauthorized service will void the warranty
- If the product has malfunctioned or has been damaged by water do not use until it is repaired by a professional
- Changes made to the specifications or designs may not be reflected in this manual

This Product complies with the EU Radio Equipment Directive 2014/53/EU. For compliance data visit www.hahnel.ie



Scan QR code for more
info & other languages

Änderung und Irrtum vorbehalten.

All product specifications subject to change without notice E.&O.E.
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S.E.O.O.

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