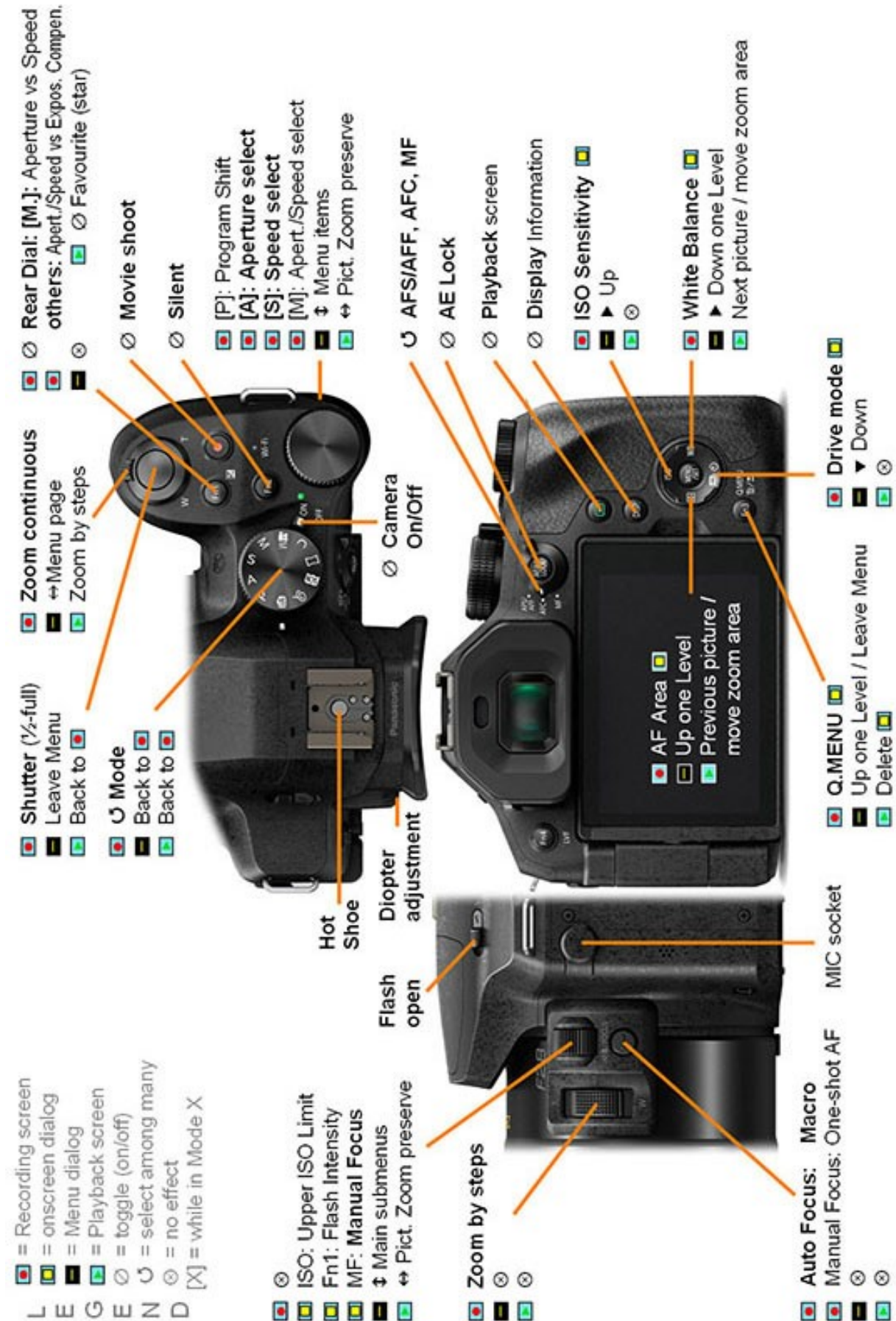


Panasonic® DMC-TZ330

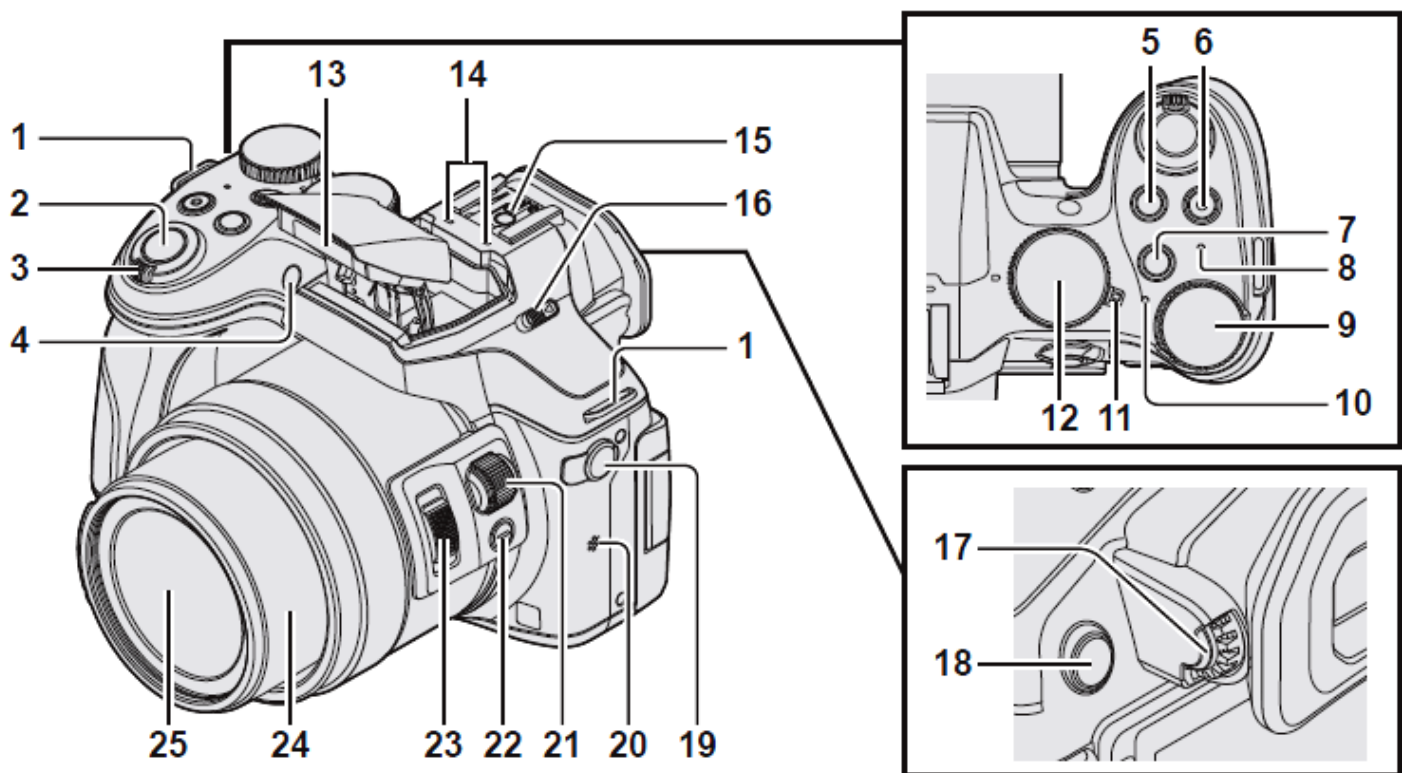
Claudio Di Veroli® User Manual v.1.2


August 2016

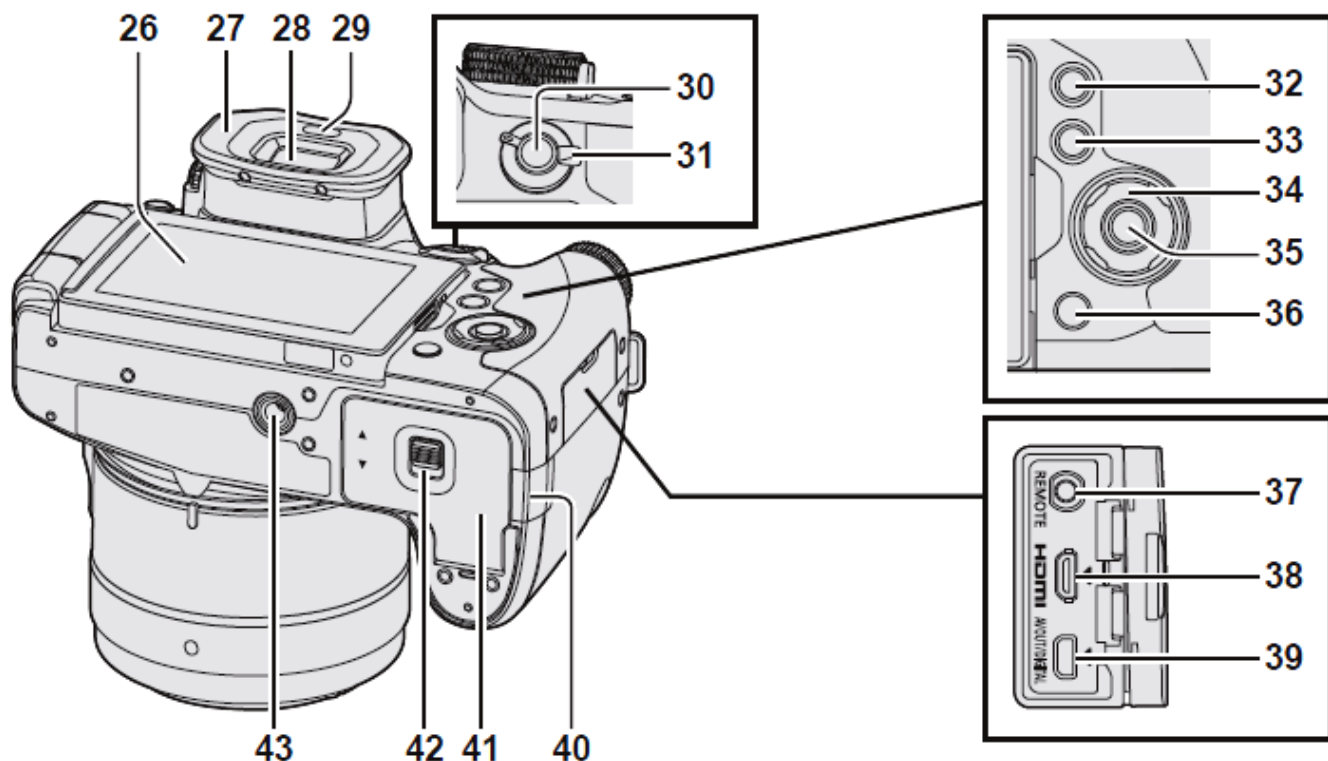
1. ABRIDGED FUNCTIONS OF BUTTONS AND DIALS



2. BASIC INFORMATION AND PREPARATIONS



- | | | | |
|-----------|--|-----------|--|
| 1 | Shoulder strap eyelet (→15) | 15 | Hot shoe |
| 2 | Shutter button (→20) | 16 | Flash open lever
The flash opens, and recording with the flash becomes possible. |
| 3 | Zoom lever (→20) | 17 | Diopter adjustment dial (→24) |
| 4 | Self-timer indicator / AF Assist Lamp | 18 | [LVF] button (→24) / [Fn4] button (→26) |
| 5 | [] (Exposure Compensation) button / [Fn1] button (→26) | 19 | [MIC] socket
An external microphone (optional) can record higher quality audio than the built-in microphone. |
| 6 | Motion picture button (→36) | 20 | Speaker
Be careful not to cover the speaker with your finger. Doing so may make sound difficult to hear. |
| 7 | [Fn2] button (→26) | 21 | Side dial (→22) |
| 8 | Wi-Fi® connection lamp | 22 | Side button (→23) |
| 9 | Rear dial (→22) | 23 | Side lever (→20) |
| 10 | Status indicator (→19) | 24 | Lens barrel |
| 11 | Camera [ON/OFF] switch (→19) | 25 | Lens |
| 12 | Mode dial (→21)
Use this to select the recording mode. | | |
| 13 | Flash | | |
| 14 | Stereo microphone
Be careful not to cover the microphone with your finger. Doing so may make sound difficult to record. | | |



26 Touch screen / monitor (→19, 24, 50)

27 Eye cup

28 Viewfinder (→24)

29 Eye sensor (→24)

30 [AF/AE LOCK] button

31 Focus mode lever (→21)

32 [▶] (Playback) button (→38)

33 [DISP.] button
Use this to change display.

34 Cursor button

- Selection of items or setting of values etc., is performed.
- In this manual, the button that is to be used is indicated by ▲▼◀▶.



[ISO] (ISO sensitivity) (▲)

[WB] (White Balance) (▶)

[4K] (Drive Mode) (▼) (→32)

[AF] (AF Mode) (◀)

35 [MENU/SET] button

36 [Q.MENU] (Delete/Cancel) button (→26, 40) /
[Fn3] button (→26)

37 [REMOTE] socket

38 [HDMI] socket

39 [AV OUT/DIGITAL] socket

40 DC coupler cover (→17)

- Always use a genuine Panasonic AC adaptor (DMW-AC10PP: optional).
- When using an AC adaptor, ensure that the Panasonic DC coupler (DMW-DCC8: optional) and AC adaptor (DMW-AC10PP: optional) are used.
- When using an AC adaptor, use the AC cable supplied with the AC adaptor.

41 Card/Battery door (→17)

42 Release lever (→17)

43 Tripod mount
Do not attach this unit to tripods that have screws with a length of 5.5 mm (0.22 inch) or more. Doing so may damage this unit or the unit may not be secured properly on the tripod.

Arrows, Q.Menu, Menus

Colours in this Manual: Exposure, Focus, Shutter


- ◀▶ WB ▲▼4K : Buttons around MENU/SET button.
- ↻ Rotate the Rear (Top) Dial.
- SH Shutter pressed halfway
- Q.MENU Press the Q.MENU button.
- ☺ Press the MENU/SET button
- ↻ Rotate the Side Dial.
- ☑ shows onscreen ☑ onscreen dialog
- ▲▼▲ UL,LL,UR,LR screen corners

SD Card: recordable JPEG pictures with ratio 4:3 and MP4 movies (max. qual.)

Needed: Class 4 (have 10 w/32G and 6 w/16G). For 4K photos & video UHS Class 3 (OK my 32G).
Format: ☺, ⚙ Setup, 5/5, Format.

Picture / Movie →	12MB	3MB	AVCHD	FHD	HD	VGA	
Card type	Size	4000x3000	2048x1536	1920x1080	1920x1080	1280x720	640x480
SD (max. 2 GB)	1 GB	140	400	5'20"	6'00"	11'15"	25'35"
SDHC (max. 32 GB)	8 GB	1140	3220	43'00"	49'00"	1h 30'	3h 25'
SDHC (max. 32 GB)	32 GB	4650	13030	2h 55'	3h 20'	6h 25'	14h 10'
SDXC (max.128 GB)	64 GB	9150	24700	5h 50'	6h 40'	12h 50'	28h 15'

Battery power

- Indicator on ▼: 
- Charging time: approx. 2h40' with green light. Full: light off.
- Number of pictures (50% flash): approx. 360 pictures, 180 min.
- Movie recording time: (real with stops and zooms) approx. 65 min.

Battery and Card remove/insert

Check: Camera off, Lens retracted

- Battery: REMOVE: slide down the cover release, then the battery lever. INSERT: arrow up.
- Card: REMOVE: press until clicks. INSERT: contacts up (label towards camera front) until clicks.

Photo numbering and Folders

- When the SD card is formatted, a photo folder 100 is created and file numbers start from 0001
- When file number reaches 999 a new folder (101,102 ... 999) is created and file numbers restarted

Clock setting: ☺, ⚙ Setup, 1/5, Clock Set.

Eye-sensor sensitivity: set to LOW

Fn Assign: ☺, ⚙ Custom, 7/9, Fn Button Set, etc. (F2 original assignment is useless.)

Monitor Luminance & Economy: ☺, ▲▼, ⚙ SETUP ☺▶, p.2/5 etc.

3. RECORDING – PREPARATION

Zoom

Always refocus after zooming!

- CONTINUOUS or PRESET LENGTHS: customise with ☺, ⚙ Setup, p.8/9, Zoom lever/Side lever.
- SUGGESTED: Side lever: PRESET LENGTHS Zoom lever: CONTINUOUS
- DIGITAL: ☺, 📹 Rec, p.6/7, iZoom or Digital Zoom, etc.

Stabilizer: ☺, ▲▼, ⚙ SETUP ☺▶, p.7/7, Stabilizer, ☺, etc.

Modes all

Beep Vol., Shutter Vol. & Tone: ☺, ▲▼, ⚙ SETUP ☺▶, p.1/5, Beep etc.

Silent mode

No Flash, no AF lamp, no sounds

- ☺: ☺, ⚙ Custom, p.1/9, Silent Mode.
- FUNCTION BUTTON: Silent Mode ON/OFF now assigned to Fn2.
- SHUTTER: Even if set to Mechanical, if Silent mode is ON, shutter is temporarily Electronic! (max 1").

AF Assist Lamp: ☺, ⚙ Custom, p.3/9, AF Assist Lamp, etc. Range 1.5 mt only

Direct Focus Area OFF: ☺, ⚙ Custom, p.3/9, Direct Focus Area, OFF

Dials settings: ☺, ⚙ Custom, p.8/9, Dial Set., etc.:

My settings: see **A** & **S** below

4. RECORDING – MODES



Intelligent Auto+

- Automatically activates STABILIZER, AF LAMP, iISO, SCENE and FACE DETECTION, iEXPOSURE, RED-EYE CORR., BACKLIGHT COMPENSATION, iFLASH and MULTI METERING.
- **SCENE DETECTION:** If optimum scene identified, **blue** icon ☒ for 2 sec., then stays in **red**. If none of the above scenes is detected, standard settings are set and the icon stays as **iA**.
- **DEFOCUSING BACKGROUND:** Fn2 , ⇄) . **Note: in other modes Fn2 toggles Silent.**
- **COLOR CORRECTION:** ▶ , ⇄) .



Program AE (Auto Exposure) **Not available with iISO**

- **SH:** Focus OK: ☒ **steady green light** and 1 beep. Focus BAD: ☒ **red frames** and 4 beeps.
- **PROGRAM SHIFT:** SH (exposure values show), ⇄) . **This setting is memorized!**



Aperture Priority **See below Auto Exposure Compensation**

- **APERTURE:** ⇄) . **Clockwise closes.** (← my setting)





Shutter Speed Priority **See below Auto Exposure Compensation**

- **SPEED:** ⇄) . **Clockwise fastest.** **Mech. shutter: 60"-1/400". Electr. shutter: 1"-1/16000"**



Manual Exposure **See below Apertures and Shutter speeds available**

- **APERTURE:** Fn1 , ⇄) . **SPEED:** Fn1 , ⇄) .
- **WRONG EXPOSURE:** If the selection does not allow correct exposure, ☒ aperture and shutter speed **numbers in red colour**, and small vertical bars appear below the -3 . . 0 . +3 scale.



Custom modes 1, 2 and 3 **Allow concocting and storing your own Modes**

- **PHOTOGRAPHY RECORDING:** Ⓜ , select set C1, C2 or C3. Exit with Q.MENU, set with Ⓜ .
- **CUSTOM MODE RECORDING:** In any Mode: Ⓜ , **fc Custom** , 1/9, **Custom Set Mem.** , etc.



Panorama **Shoots many pictures and makes a Panorama**

- **SHOOT:** After SH, press shutter and pan at constant speed. To end shooting, press shutter again.
- **SETTINGS:** Via Ⓜ , **Rec** , 5/7, **Panorama Settings**. Can change pan direction and quality.
- **RESOLUTION:** (Horizontal panning): Horiz . 8176px. Vert.: STANDARD 1920, WIDE 960.



Scene mode **Most Scenes use their special ISO, Metering and WB**

- **SCENE:** ◀ ▶ or ⇄) select among the 21 modes shown by the *Normal Scene display*.
- **SWITCH:** Touch DISP to change from Normal Scene display to Guide display and to List.
- **SELECT:** Ⓜ . You are back to the recording display. The Scene selection ☒ as SCN_{nn} in ▼ .
- **NEW MODE:** Touch the SCN_{nn} icon to get again to the Scene display.
- **CLEAR NIGHT PORTRAIT:** Set **flash** to **☒ S** . If possible use **tripod**.
- **NIGHT MODES AND SOFT FLOWER:** Recommended: tripod and either self timer or remote control.



Creative Control mode **Most Effects use their special ISO, Metering and WB** **When selected, Creative Control mode supersedes Photo Style (see below).**


- **EFFECT:** Zoom lever and ▲ ▼ or ⇄) select among the 22 modes in *Normal Creative display*.
- **SWITCH:** Touch DISP to change from Normal Creative display to Guide display and to List.
- **SELECT:** Ⓜ . You are back to the recording display. The selected Creative Control icon ☒ in ▼ .
- **ADJUST:** Back to recording display, ▶ WB ☒ an adjusting scale: select with ⇄) , set with Ⓜ . Special adjustments for some Modes: e.g. Star Filter (3 parameters).
- **NEW MODE:** Touch the Creative Control icon to get again to the Creative display.

5. RECORDING – Q.MENU: Style, Metering, Flash, Burst, Shutter, Stab.

- Q.MENU: ◀ ▶ selects feature, ▲ ▼ selects setting, memorize with Ⓜ or exit with Q.MENU.

There is a default Q.MENU with a some items, but we show below the items as per our Customised Q.MENU. The latter omits redundant items (such as ISO Sensitivity and White Balance, available with their dedicated buttons).

Photo Style (effects)

Modes all except 









- **PORTRAIT**: “Produces look of a healthy complexion!”

Metering (Multi, Centre, Spot)

Modes all except  

Flash Modes

Modes  **P A S M C**

- **FIRING MODE**: By default (change w.  **Rec**) it is TTL (Automatic). Alternative: MANUAL ratio.
- **FLASH MODE**:
 -  **A** Auto Flash
- **FLASH MODE**:
 -  **S** Forced Flash
 -  **S** Forced Flash / Red-eye
 -  **S** Slow Sync
 -  **S** Slow Sync / Red-eye
 -  **Flash Off**
- **SHUTTER SPEED**: In **Forced Flash** modes the minimum speed is set to 1/60”.
- **AUTO EXPOSURE COMPENSATION**: (change w.  **Rec**) if ON, it includes the flash.
- **FLASH RANGE** in ISO Auto: Wide (F2.8): 0.3 mt to 8.8 mt.
- **FLASH INTENSITY**: See the next section.

Mode 

Camera decides whether to flash in low light..

Modes **P A S M C**

Flash is always activated when shooting.

First flash closes eyes. Second flash takes picture.

Flashes with low shutter speed only (night).

Same with two-flash red-eye.

When closing the flash (not selectable in menu):

AFS/AFF (see Focus Auto below)

Modes all

Burst Speed

Modes all except  

- **DRIVE MODE**: Just selects Single or Burst. Here we select among 4 Burst speeds.
- **SH (Super High Speed)**: **60 fps, rec. Group Picture.** **Pict.Size 2048x1536**
- **H (High Speed)**: **12 fps, with no view during burst.**
- **M (Middle Speed)**: **6 fps, with Live View during burst.**
- **L (Low Speed)**: **2 fps, with Live View during burst.**

Shutter Type (Auto, Mechanical, Electronic)

Modes all

- **AUTO**: Camera decides, giving priority to the Mechanical shutter.
- **MECHANICAL**: Best. Needed for Low Speeds: Bulb and 60” to 1”.
- **ELECTRONIC**: Needed for High Speeds: 1/8000” and 1/16000”.

Setting Silent Mode ON temporarily sets the Shutter to Electronic.

Stabilizer (Normal, Panning, Off)

Modes all

Picture Quality

Modes all except  

Picture Size

Modes all except  

Motion Picture Size

Modes all except 

6. RECORDING – ISO, EXPOSURE, WB, DRIVE, FOCUS, MACRO

ISO Sensitivity

Modes **P A S M C**

- DISPLAY: ISO button. SENSITIVITY: ⇄. UPPER LIMIT: ⇄. SET: ☺. EXIT: Q:MENU.
- AUTO ISO: Camera sets ISO based on measured exposure: the ISO value ☒ in ▲.
- iISO: Camera sets ISO based also on subject movement. ☒ just “iISO”: no value. **iISO is only recommended for sports, babies and animals pictures.**
- SHUTTER SPEEDS: ISO AUTO, iISO. restricted. ISO 100-1600: all. ISO 2000-6400: 8” max.
- SHUTTER SPEEDS: ISO AUTO, iISO. restricted. ISO 100-1600: all. ISO 2000-6400: 8” max.
- NOISE: Even with ISO 800, digital noise (yellow specs mostly) is very visible.

Auto Exposure Lock & Compensation

Modes all except **M**

- LOCK: Toggle w/ AF/AE button. AEL ☒ in ▲. **The setting changes if you change the Mode.**
- COMPENSATION: Fn1 ⇄. **The setting is stored even if camera is turned off.**

Flash Intensity

Modes **P A S M C**

- Fn1 ⇄. **The setting is stored even if camera is turned off.**

White Balance

Modes **P A S M C SCN**

- DISPLAY: ► WB button yields ☒. SELECT: ◀▶ or ⇄.
- COLOUR ADJUST (Amber vs Blue and Green vs Magenta): ▼, ◀▶▲▼.
- MEASURED MODES (1,2,3,4): ☒ press ▲ to display window, ☺ to set: **shutter sound!**
- Some Scene Modes automatically use AWB.

Drive Mode: Burst, Auto-Bracket & Self timer

Modes all except **M**

- ▼4K, ◀▶, etc., ☺. **Auto-Bracket is not available when using the flash.**

Focus Auto: AFS, AFF & AFC

Modes all

- AUTO: Focus Lever: AFS/AFF: SH does AFS (single) or AFF (adjusts focus if subject moves).
- AFS/AFF switch: Q.MENU, AFS (/AFF), ▼, ▶, ☺ (or Q.MENU again). Now assigned to Fn9.
- CONTINUOUS: Focus Lever: AFC: SH continuously auto-focuses. AFS | AFF | AFC ☒ in ▼.
- DEPTH-OF-FIELD PREVIEW: Check by closing lens diaphragm. Now assigned to Fn4.

Focus Area

Modes all except **iA**

- SELECT TYPE OF FOCUS AREA: ☒◀, ◀▶, (▼ to move Area Shape: directions onscreen), ☺.
- DEFINE FOCUS AREA: Touch screen. MOVE: ◀▶▲▼. ZOOM: ⇄ & ⇄. SET: ☺.

Focus Manual

Modes all

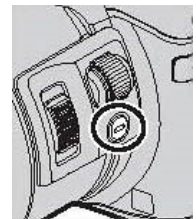
- SET TO MANUAL FOCUS: Focus Lever: MF, ⇄. MF ☒ in ▼ & Focus area is magnified.
- FOCUS AREA: MOVE: ◀▶▲▼, ZOOM: ⇄, ADJUST: ⇄, CLOSE: SH.
- REFINED TECHNIQUE: 1) Rotate ⇄ until subject is in focus, 2) Rotate a little more. 3) Finely focus by rotating slowly in reverse.

Macro

Modes all except **iA**

- AF☺, AF☺ / ☺ MacroZoom / ☺ OFF, ☺: AF☺ ☒ in ▼.

MIN. FOCUS RANGE	Focus Type	Wide	Tele
	AF (MACRO OFF)		30 cm
	AF MACRO	1 cm	1 mt



Smartphone control via Wi-Fi

Modes all

- Click F5-WiFi: broadcasts WiFi network **FZ300-980E9B**. **The upper blue light is on**
- Phone: Download and install the Panasonic Image App.
 - Run the app: controls main FZ300 functions via onscreen buttons and menu.
 - Touch camera icon: metres, focuses and takes picture.
 - Close app by pressing the Back button twice.
- Close the WiFi: easiest by switching the camera OFF.













7. PLAYBACK

- SWITCH ON IN PLAYBACK MODE: Press  while turning the camera ON.
- ENTER PLAYBACK MODE: Press .
- EXIT PLAYBACK MODE: Press either  or **SH** or .


Filtering Playback

- ,  **Playback**, p.1/4, **Playback Mode**: Normal (all), Picture Only, Video Only, 4K Photo, Post Focus, Category Play (by Scene type).

Picture/Movie Playback









- **BACKWARD/FORWARD SELECT**:   or  .
- **BACKWARD/FORWARD FAST**:   and hold buttons.
- **PICTURE ICONS ONSCREEN**: **Zoom out**: 12 pictures, 30 pictures, Calendar.
- **ZOOMING IN PICTURE ONSCREEN**: **Zoom in**: 2x, 4x, 8x and 16x.
- **MOVE ENLARGED SECTION**:    .
- **CHANGE PICTURE KEEPING ZOOMING**:  .

Movie Play













- Touch the center  icon: play starts and other icons appear.
- Volume: touch the icons. Fast forward/backward allow frame by frame and capture as picture.

Movie Divide


Splits Movie in two, allowing later to delete unneeded beginning or end.

- ,  **Playback**, p.2/4, **Video Divide**, : last movie appears with "Video Divide" title.
- Select the Movie to be divided. :  . Play the movie:  or touch "Set".
- Pause at the split point: . Split: : Confirmation screen displayed, etc.

Delete Pictures and Movies

- ,  select alternatives with   and confirm with .
- **DELETE MULTI**: 9 pictures per screen. Select. with     or by touch. Mark with  or touch. Delete with  and , or touch, which is best for Delete Multi.

PC USB Connection








- **Connect**: PC should be ON, camera OFF. Connect to camera w/ USB cable, plug-arrow forward.
- **Camera ON**: USB power is used, battery does not recharge, new drive shows in the PC.
- **Copy**: You can copy files from the camera but cannot delete anything there.
- **Disconnect**: Ensure no **ACCESS**  in the camera, then use the PC's USB Disconnect tray.
- **Power**: only from battery. USB cable does not recharge!
- **AC Adaptor and DC Coupler**: substitute for the battery, but are cumbersome to connect.

8. RECORDING MOVIES

Zoom only works in slow speed

Preparation

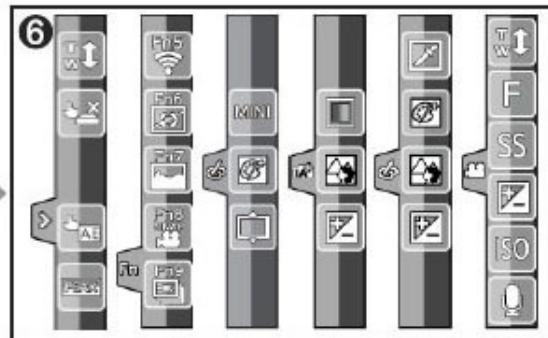
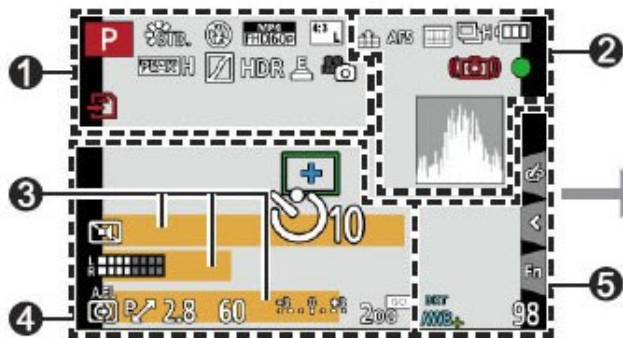
Modes **P A S M C**

- **Start/Stop**: .
- **Slow Motion**: ,  **Motion**, High Speed Video: 100fps HD (1280x720) or 200fps VGA (640x480). Cannot zoom while taking!
- **Screen Ratio**: If Movie Size ratio (16:9 exc. VGA) differs from Picture Size (usually 4:3), the screen size changes when Movie recording starts. You can select to display the image either with Picture ratio or with Movie ratio: ,  **Custom**, 7/9, **Rec Area**: select either  or .
- **Max. MP4 Movie Size**: FHD 29" or 4GB.
- **ISO**: is automatically AUTO.
- **Focus**: Both Auto Focus and Manual Focus are available as in Picture taking.

List of monitor/viewfinder displays

• The following images are examples of when the display screen is set to [] (monitor style) in the monitor.

In recording



1		Recording mode (→21)
	C1	Custom Set
		[Photo Style]
		Flash Mode
		Flash
		[Rec Format]/[Rec Quality] (→37)
		[Snap Movie]
		[Aspect Ratio] (→29)/ [Picture Size] (→30)
		Image size (Panorama Shot Mode)
		Picture effect (Filter) adjustment display
	EXPS	Types of picture effects (Filter)
		Card (displayed only during recording)
	XXhXXmXXs	Elapsed recording time*1 (→36)
		Simultaneous recording indicator
		Automatic switching between viewfinder and monitor (→24)
		[Peaking] (→31)
		[Highlight Shadow]
	HDR	[HDR]/[iHDR] (→28)
		[Multi Exp.]
		[Conversion]
		Electronic shutter
		Picture Mode (Photo Priority)
		Overheat indicator (→36, 57)

2		[Quality] (→30)
		[High Speed Video]
		Focus Mode (→31)
		AF Mode
		[Pull Focus]
		[Face Recog.]
	AFL	AF Lock
		Burst (→32)
		[4K PHOTO] (→33)
		[Auto Bracket] (→32)
		[Self Timer] (→32)
		Remaining battery
		Macro recording
		[Level Shot]
		[Stabilizer]
		Jitter alert
		Recording state (Flashes red.) (→36)/ Focus (Lights green.) (→20)
		Focus (Under low illumination)
		Focus (Starlight AF)
		Wi-Fi connection status
		Histogram

3	Name*2
	Travel elapsed days*3
	Age in years/months*2
	Location*3
	Current date/time*3
	Travel destination setting*3: ✈
	Exposure meter
	Zoom

4

	AF area
	Spot metering target
	Center marker display
	[Self Timer]*4 (→32)
	[Zoom Mic]
	[Mic Level Disp.]
	[Mic Level Limiter] ([OFF])
	[Silent Mode]
	External Microphone
	AE Lock
	[Metering Mode]
	Program Shift
	Aperture value (→20)
	Shutter speed (→20)
	Exposure compensation value
	Brightness (exposure) (→28)
	Manual Exposure Assist
	ISO sensitivity

5

	[Dial Guide]
	White Balance Bracket
	White Balance Fine Adjustment
	White Balance
	Coloring (→28)
	Number of recordable pictures*5
	Available recording time*1, *5

6

Touch tab	
	Touch zoom
	Touch Shutter
	[Touch AE]
	[Peaking]
	Function buttons (→26, 43)
	Coloring (→28)
	Defocus control function (→28)
	Brightness (exposure) (→28)
	Type of defocus ([Miniature Effect])
	[One Point Color]
	[Sunshine]
	Picture effect (Filter) adjustment display
	Picture effects (Filter)
	Aperture value (→20)
	Shutter speed (→20)
	ISO sensitivity
	[Mic Level Adj.]

*1 [h], [m] and [s] indicate “hour”, “minute” and “second”.

*2 This is displayed for about 5 seconds when the camera is turned on if the [Profile Setup] setting is set.

*3 This is displayed for about 5 seconds when the camera is turned on, after setting the clock and after switching from Playback Mode to Recording mode.

*4 This is displayed during countdown.

*5 It is possible to switch the display between the number of recordable pictures and available recording time with the [Remaining Disp.] setting in the [Custom] menu.