Camera Techniques –

Nikon dSLR Cameras

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Stony Brook Camera Club

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Topics for this Session

Creative Lighting System (CLS)

Autofocus

Custom Functions

Flash Photography

Diffuse the flash

"Bounce"

Umbrella, soft-box etc.

Create Depth with Shadow – Use "Unequal" Light

Two flashes or flash + reflector

Get the Flash Off the Camera

Getting the Flash Off Camera – Connections

Wired

Sync (PC) cable – "dumb"

TTL cable – "smart"

Wireless

Slave Photosensor – "dumb"

Radio Triggers*– "dumb"

CLS – "smart"

* Pocket Wizard, etc.
New version of PWs are "smart"

Connections – "Dumb" vs. "Smart"

"Dumb"

- All manual (exposure, flash power, etc)
- Changing settings on a flash requires that you have it in hand
- Connection just tells off camera flashes that you triggered the shutter

"Smart"

- Takes advantage of iTTL
- Connection allows communication between camera and off camera flashes.
- Can change settings on flash remotely

CLS Technology

Camera gathers and analyzes data (exposure, focus distance, returns from pre-flashes, etc.) and decides on how flash should be set.

On camera flash (in "controller" mode) sends this data to other flashes (in "remote" mode).

Data is sent via pulses of light so remotes must be able to "see" controller.

"line of sight"; bright sun can interfere

All flashes respond "appropriately" when shutter is triggered.

Multiple flashes (or groups) can be controlled independently

Setting Built-in Flash to Act as CLS Controller

e3: Flash Cntrl for Built-in Flash
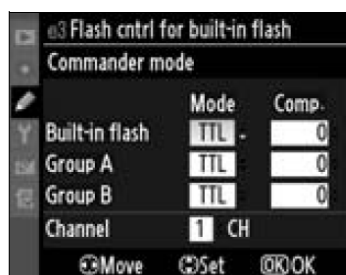
Choose the flash mode for the built-in flash.

D300 version

	Option	Description
TTL⚡	**TTL** (default)	Flash output is adjusted automatically in response to shooting conditions.
M⚡	**Manual**	Choose the flash level (pg. 292).
RPT⚡	**Repeating flash**	The flash fires repeatedly while the shutter is open, producing a strobe-light effect (pg. 292).
C⚡	**Commander mode**	Use the built-in flash as a master flash controlling one or more remote optional flash units (pg. 293).

Also need to set the off-camera flash(es) to "remote"

CLS is not available in all cameras –
    available in D70 and "above"
    not available in D40
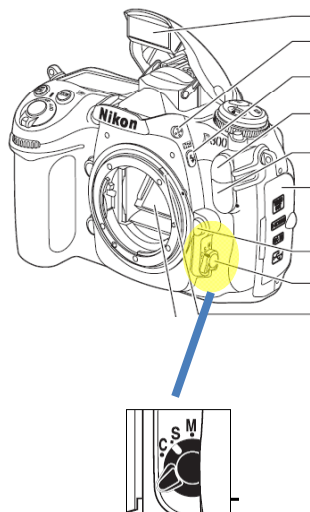   available using selected external flashes as controller in D3000

Commander Mode

e3 Flash cntrl for built-in flash
Commander mode

	Mode	Comp.
Built-in flash	TTL	0
Group A	TTL	0
Group B	TTL	0
Channel	1 CH	

⊙Move   ⊙Set   OK OK

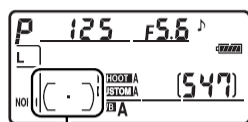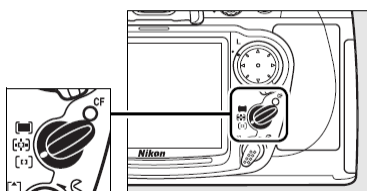| Option	Description
Built-in flash	Choose a flash mode for the built-in flash (commander flash).
TTL	i-TTL mode. Choose flash compensation from values between +3.0 and –3.0 EV in increments of $1/3$ EV.
M	Choose the flash level from values between [Full] and [1/128] ($1/128$ of full power).
– –	The built-in flash does not fire, but the AF-assist illuminator lights. The built-in flash must be raised so that it can emit monitor pre-flashes.
Group A	Choose a flash mode for all flash units in group A.
TTL	i-TTL mode. Choose flash compensation from values between +3.0 and –3.0 EV in increments of $1/3$ EV.
AA	Auto aperture (available only with SB-900 and SB-800 flash units). Choose flash compensation from values between +3.0 and –3.0 EV in increments of $1/3$ EV.
M	Choose the flash level from values between [Full] and [1/128] ($1/128$ of full power).
– –	The flash units in this group do not fire.

D300 version

Focus Mode

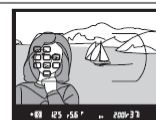| Option	Description
S Single-servo AF	Camera focuses when shutter-release button is pressed halfway. Focus locks when in-focus indicator (●) appears in viewfinder, and remains locked while shutter-release button is pressed halfway (*focus lock*). At default settings, shutter can only be released when in-focus indicator is displayed (*focus priority*).
C Continuous-servo AF	Camera focuses continuously while shutter-release button is pressed halfway. If subject moves, camera will engage *predictive focus tracking* (pg. 63) to predict final distance to subject and adjust focus as necessary. At default settings, shutter can be released whether or not subject is in focus (*release priority*).
M Manual (pg. 71)	Camera does not focus automatically; focus must be adjusted manually using the lens focusing ring. If maximum aperture of lens is f/5.6 or faster, viewfinder focus indicator can be used to confirm focus (*electronic range finding*; pg. 72), but photographs can be taken at any time, whether or not subject is in focus.

Auto-Focus Area Mode

AF-area mode
indicator (top panel)

Mode	Description
[□] Single-point AF	User selects focus point manually; camera focuses on subject in selected focus point only. Use for relatively static compositions with subjects that will stay in selected focus point.
[⊙] Dynamic-area AF	• **In continuous-servo AF** (pg 62), user selects focus point manually; if subject briefly leaves selected focus point, camera will focus based on information from surrounding points. Number of focus points used can be selected from 9, 21, and 51 using Custom Setting a3 ([Dynamic AF area], pg. 269). If [51 points (3D-tracking)] is selected for Custom Setting a3, focus point will be selected automatically using 3D-tracking. • **In single-servo AF**, user selects focus point manually; camera focuses on subject in selected focus point only.
[▣] Auto-area AF	Camera automatically detects subject and selects focus point. If type G or D lens is used, camera can distinguish human subjects from background for improved subject detection. In single-servo AF, active focus points are highlighted for about one second after camera focuses. Active focus points are not displayed in continuous-servo AF.

Number of Focus Points

AF-area mode		Control panel
[▫] Single-point AF		(·)
	Custom Setting a3 ([Dynamic AF area], pg. 269)	
Dynamic -area AF *	9 points (default)	(▣)
	21 points	(▦)
	51 points	(▦▦)
	51 points (3D-tracking)	(▦▦) 3D
[▪] Auto-area AF		AUTO (▦▦)

* Only active focus point is displayed in the viewfinder. Remaining focus points provide information to assist focus operation.
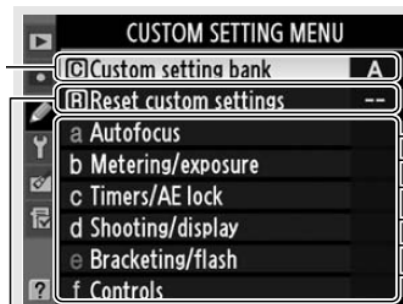
Custom Functions

Explore and experiment…. Repeat often!

What follows are some of my custom settings and, importantly, why I have set them this way

Remember… my settings are not yours!

All refer to D300

Options will be different on other models

CUSTOM SETTING MENU

[C] Custom setting bank	A
[R] Reset custom settings	--
a	Autofocus
b	Metering/exposure
c	Timers/AE lock
d	Shooting/display
e	Bracketing/flash
f	Controls

Metering / Exposure

b: Metering/Exposure

b1: ISO Sensitivity Step Value

This option determines whether adjustments to sensitivity are made in increments equivalent to ⅓ EV, ½ EV, or 1 EV.

Option	
⅓	**1/3 step** (default)
½	**1/2 step**
1	**1 step**

b2: EV Steps for Exposure Cntrl.

This option determines whether adjustments to shutter speed, aperture, and bracketing are made in increments equivalent to ⅓ EV, ½ EV, or 1 EV.

Option	Description
⅓ **1/3 step** (default)	Changes to shutter speed and aperture are in increments equivalent to ⅓ EV. The bracketing increment can be selected from ⅓, ⅔, and 1 EV.
½ **1/2 step**	Changes to shutter speed and aperture are in increments equivalent to ½ EV. The bracketing increment can be selected from ½ and 1 EV.
1 **1 step**	Changes to shutter speed and aperture are in increments equivalent to 1 EV. The bracketing increment is set to 1 EV.

b3: Exp Comp/Fine Tune

This option determines whether adjustments to exposure and flash compensation are made in increments equivalent to ⅓ EV, ½ EV, or 1 EV.

Option	
⅓	**1/3 step** (default)
½	**1/2 step**
1	**1 step**

All set to ½ stop

Making changes is faster

Don't need the finer granularity

Delays

c3: Self-Timer Delay

This option controls the length of the shutter release delay in self-timer mode. Choose from 2 s, 5 s, 10 s, and 20 s.

Option	
⏱2s	**2 s**
⏱5s	**5 s**
⏱10s	**10 s** (default)
⏱20s	**20 s**

c4: Monitor off Delay

This option controls how long the monitor remains on when no operations are performed. Choose from 10 s, 20 s, 1 minute, 5 minutes, or 10 minutes. Choose a shorter monitor-off delay for longer battery life. Regardless of the setting chosen, the monitor remains on if no operations are performed for about ten minutes when the camera is powered by an optional EH-5a or EH-5 AC adapter.

Option	
🖥10s	**10 s**
🖥20s	**20 s** (default)
🖥1m	**1 min.**
🖥5m	**5 min.**
🖥10m	**10 min.**

Often use self-timer in place of cable release.

Therefore don't want/need long delay

Use LCD mainly to view histogram / highlights
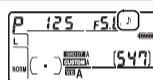
No need for longer – saves battery

Beep and Grid

d1: Beep

Choose [High] or [Low] to sound a beep when the self-timer is used or the camera focuses in single-servo autofocus (note that a beep will not sound if [Release] is selected for Custom Setting a2 ([AF-S priority selection], pg. 268)).

Wildlife!

Option	Description
◀》H **High** (default)	Choose the pitch of the beep from [High] and [Low]. A ♪ icon is displayed in the control panel and shooting information displays.
◀》L **Low**	
Off	Turn the beep speaker off.

d2: Viewfinder Grid Display

Choose whether on-demand grid lines are displayed in the viewfinder (or, in live view mode, in the monitor) for reference when composing photographs.

Helps me get horizons level
and
verticals vertical

Option	Description
On	On-demand grid lines displayed.
Off (default)	On-demand grid lines not displayed.

Flash Sync Speed

e1: Flash Sync Speed
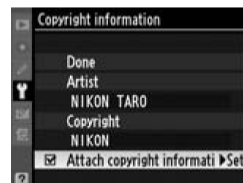
This option controls flash sync speed.

High-speed sync is
one of the wonders of
modern technology!

Option	Description
1/320 s (Auto FP)	Use auto FP high-speed sync with SB-900, SB-800, SB-600, and SB-R200 flash units. If other flash units are used, shutter speed is set to $^1/_{320}$ s. When the camera shows a shutter speed of $^1/_{320}$ s in exposure mode P or A, auto FP high-speed sync will be activated if the actual shutter speed is faster than $^1/_{320}$ s.
1/250 s (Auto FP)	Use auto FP high-speed sync with SB-900, SB-800, SB-600, and SB-R200 flash units. If other flash units are used, shutter speed is set to $^1/_{250}$ s. When the camera shows a shutter speed of $^1/_{250}$ s in exposure mode P or A, auto FP high-speed sync will be activated if the actual shutter speed is faster than $^1/_{250}$ s.
1/250 s (default)	Flash sync speed set to $^1/_{250}$ s.
1/200 s	Flash sync speed set to $^1/_{200}$ s.
1/160 s	Flash sync speed set to $^1/_{160}$ s.
1/125 s	Flash sync speed set to $^1/_{125}$ s.
1/100 s	Flash sync speed set to $^1/_{100}$ s.
1/80 s	Flash sync speed set to $^1/_{80}$ s.
1/60 s	Flash sync speed set to $^1/_{60}$ s.

Copyright Info

- [Done]: Save changes and return to the setup menu.
- [Artist]: Enter a photographer name as described on page 256. Photographer names can be up to 36 characters long.
- [Copyright]: Enter the name of the copyright holder as described on page 256. Copyright holder names can be up to 54 characters long.
- [Attach copyright information]: Select this option to attach copyright information to all subsequent photographs. [Attach copyright information] can be turned on and off by highlighting it and pressing ▶.

Found on set-up menu not on custom setting menu

Recent Settings / My Menu

Displaying Recent Settings

To display the twenty most recently used settings, select [Recent settings] for [My Menu] > [Choose tab].

1 Select [Choose tab].

In My Menu (⬜), highlight [Choose tab] and press ▶.

2 Select [Recent settings].

Highlight [Recent settings] and press ⊛. The name of the menu will change from "MY MENU" to "RECENT SETTINGS."

Menu items will be added to the top of the recent settings menu as they are used. To view My Menu again, select [My Menu] for [Recent settings] > [Choose tab].

My Menu

🗓 My Menu:
Creating a Custom Menu

The [My Menu] option can be used to create and edit a customized list of options from the playback, shooting, Custom Settings, setup, and retouch menus for quick access (up to 20 items). If desired, recent settings can be displayed in place of My Menu (pg. 348).

Options can be added, deleted, and reordered as described below. For information on basic menu operations, see "Tutorial: Camera Menus" (pg. 24).

The End!

Thanks for listening ... again !