Supplement for Firmware v3.0

The Friedman Archives Guide to

Sony's A7R V

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1.1   SYNOPSYS OF NEW FEATURES

- Camera now supports Sony's Creators' App, which replaces the older Imaging Edge Mobile app. UI is similar, but the Creators' App has more functionality. More details in Section 1.3.1.
- Four new menu items (plus a few items that have been gratuitously renamed)
- Folders on the memory card can now hold 9,999 images.
- There's a new Wi-Fi Signal Strength icon (Section 1.3.10).
- You can do a Live Stream on your favorite social media platform. All you need is your camera, a smartphone for configuring it, and a Wi-Fi access (which your smartphone can provide.) It's a bit involved to set up, and I explain it all starting in Section 1.3.14.
- The camera now supports paid feature updates. (Who asked for that?) The first available update is described in Section 1.3.11.
- There are two new functions that can be assigned to buttons. Those are listed in Section 1.3.12.

1.2 HOW TO UPDATE THE FIRMWARE

The firmware update for the A7R V was an interesting adventure. It was first released on Sept 13, 2024 and then immediately withdrawn due to some of the cameras not updating properly. Apparently that problem has been fixed and the update was re-issued on October 9, 2024.

You can download the Firmware v3.0 from Sony's website: https://www.sony.com/electronics/support/e-mount-body-ilce-7-series/ilce-7rm5/software/00292267

> *TIP*: *If you're upgrading from Firmware v1.0, and you've paired the camera with a Bluetooth remote control, after upgrading you'll have to up-pair and re-pair the remote in order to have the two talk to each other.*

To Install the Firmware Update

1. Download the BODYDATA.DAT file to an empty memory card. Insert the memory card into Slot 1 of the camera.
2. Do a **MENU → 🧰 → Setup Option → Version.** The screen in **Figure 1a** appears.
3. If the camera sees the BODYDATA.DAT file on the memory card, the words **Software Update** appear. Select it and hit the center button.
4. A screen of instructions appears. Scroll down all the way and finally hit "Execute" at the bottom.
5. Wait. The rear screen will be blank. The red Read/Write LED near the memory card door will start to flash more frequently as the update progresses. The process takes several minutes.
6. When the process finishes, the camera reboots and a screen saying, "Body update complete" appears.
7. Verify the new firmware version via **MENU → 🧰 → Setup Option → Version**

And you're done! My update from v2.0 to v3.0 did not erase any of my settings.
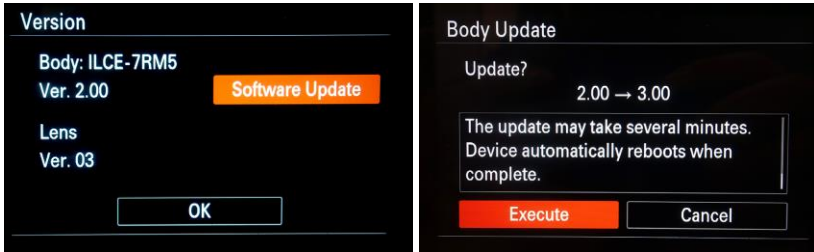
Figure 1: *Upgrading the firmware. Just highlight "Software Update" and sit back.*

TIP: *You can also update the firmware using the new Creators' App. (It's probably too soon to talk about this – you have to go through all the initialization described in Section 2.1 first. But once configured you can initiate the firmware update from the app without needing to move memory cards from a desktop computer.*

1.3   DETAILED DESCRIPTION OF NEW FEATURES

1.3.1   MENU HEADING CHANGES

The **MENU ➔ ⊕ ➔ ❑ Cnct./PC Remote** menu has been changed to **MENU ➔ ⊕ ➔ ❑ Cnct./Remote Sht.** (That last word stands for "Shooting" ☺.)

Also, **MENU ➔ ⊕ ➔ ❑ Cnct./PC Remote ➔ PC Remote Function** has been changed to **MENU ➔ ⊕ ➔ ❑ Cnct./ Remote Sht. ➔ Remote Shoot Function .**

Please take a thick black marker and go through the original book and cross out all of the original references. ☺

1.3.2   WI-FI CONNECT

Menu Position MENU ➔ ⊕ ➔ Wi-Fi ➔ Wi-Fi Connect

What it Does Tells the camera to connect to an Access Pont that it already knows about

Recommended Setting   n/a

This new function has only two settings: **On** and **Off**. When **Off**, Wi-Fi is disabled, when **On** it seeks out a Wi-Fi access point it already knows about.

You can configure new access points via the **MENU ➔ ⊕ ➔ Wi-Fi ➔ Access Point Set.** command (Section 9.4.2 of the original book).

1.3.3   ACCESS AUTHEN. SETTINGS

Menu Position **MENU → ⊕ → Network Option → Access Authen.
Settings**

What it Does Provides information to allow the encryption of information
between the camera and the Creators' App

Recommended Setting   n/a

Constraints   PC Remote must be disabled in order for this to be changed.
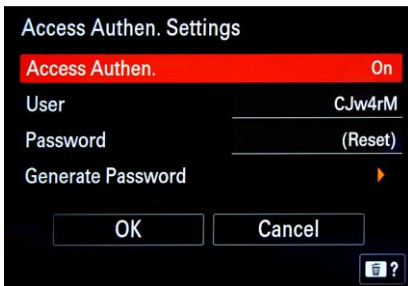
Figure 2: *These are settings you use
when wishing to connect to another
device using encryption.   You can
enter your own username and
password, or rely on the camera's
defaults.*

The A7R V has the ability to
encrypt wi-fi communication with
your smartphone using the
**MENU → ⊕ → Network
Option → Access Authen.
Settings** function.

The menu settings available to
you are:

Access Authen.	Turns encryption On or Off.
User	This is the username you type into the Creators' App when connecting to the camera for the first time. You can change the factory default here.
Password	You can change the factory default password here. The actual password will appear when you bring up the **MENU → ⊕ → Network Option → Access Authen. Info** screen.

Generate Password	As an alternative to setting your own password, you can have the camera generate a new, difficult-to-guess password on its own. The new password will appear when you bring up the MENU → ⊕ → Network Option → Access Authen. Info screen

Encrypting your connection is completely optional. Setting it up is described in Section 2.1.2.

1.3.4   ACCESS AUTHEN. INFO

Menu Position MENU → ⊕ → Network Option → Access Authen. Info

What it Does Provides login information to allow the encryption of information between the camera and the Creators' App

Recommended Setting   n/a

This function is used with the **Access Authen. Settings** function (previous section) to set up an encrypted link between the camera and
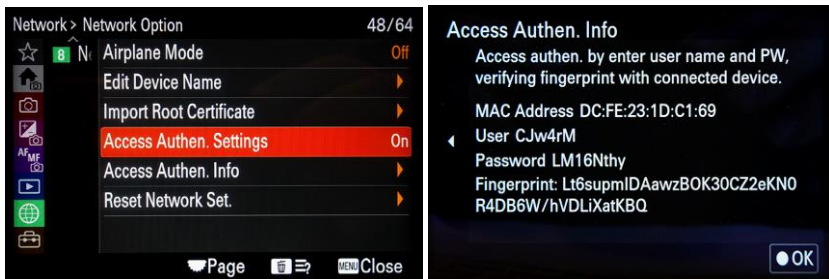
Figure 3: The information entered in the previous function appears on this screen.

the Creators' App.

Again, setting it up using the information provided in this screen is detailed in Section 2.1.2.

1.3.5 TETHERING CONNECTION

Menu Position MENU ➔ ⊕ ➔ Tethering Connection ➔ Tethering Connection

What it Does Configures the camera to access the internet via the USB port and your smartphone (in USB Tethering mode)

Recommended Setting n/a

Your camera has the ability to transfer pictures directly to a server anywhere in the world via a USB cable tethered to your phone, and a protocol called FTP (File Transfer Protocol). This provides a faster option for reaching the internet than using wi-fi; it allows you to plug your camera directly to your phone and use your phone's USB Tethering feature for faster upload times to the internet.

To use:

1) You'll need a USB cable with USB-C on one end and whatever connector your phone uses on the other.
2) Hook the camera and smartphone together, and turn the camera on. (If the "Select USB Connect Mode" screen appears, just hit the menu button to make it go away.)
3) Go to **MENU ➔ ⊕ ➔ Tethering Connection ➔ Tethering Connection**. (**Figure 4a and b).**
4) If you're on Android, go to Gear icon (Settings), hit the Magnifying Glass icon, and search for "USB Tethering". Find that setting and turn it on.
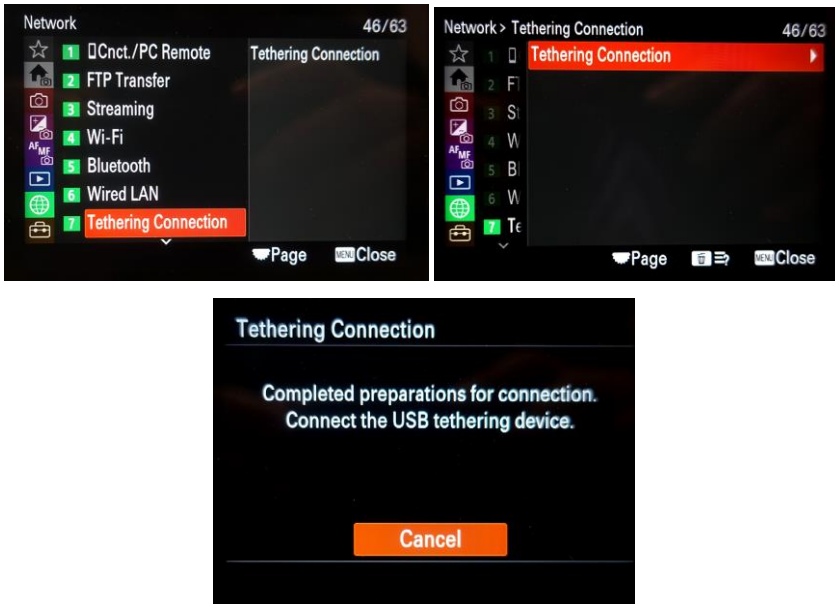
Figure 4:   *Some screens you'll encounter while physically tethering your camera to your smartphone via USB.*

5) If you're on an iPhone, go to your phone's on-screen **Settings.**
   a) Look for **Personal Hotspot**; or **General**, followed by **Network**, and finally **Personal Hotspot**
   b) Tap on **Personal Hotspot** and then slide the switch to **On**
   c) Then connect the iPhone to your camera using a USB cable.

That's it!   All FTP transfers will now shoot across to your phone and your phone will buffer them as they're slowly sent out.
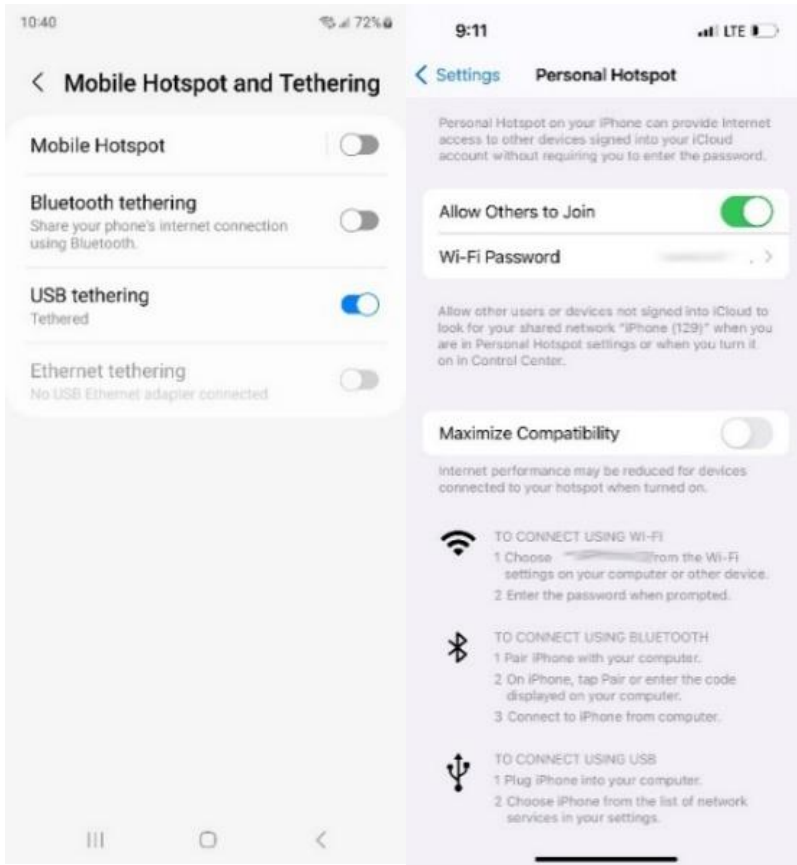
Figure 5: *USB Tethering screen on Android (left) and iPhone (right).*

1.3.6   *AUTOMATIC STILL IMAGES FROM SHOT MARKS*

Recall that Shot Marks are ways of marking points in video for shortening or quickly jumping to while playing back. (Section 10.3.1.2 in the original book has more details.) In use, you have to assign **Add Shot Mark 1 [or 2]** to a button (**MENU → 🧰 → Operation Customize → 📹 Custom Key/Dial Set. → [Pick a button] → Add Shot Mark [1/2].**), then you press it at the appropriate time while shooting.

Well, now your camera can automatically create still images from those Shot Marks. (And you have the option to automatically delete those shot marks once the still images have been created!)

There are THREE new menu items that support this new functionality:

1) **Auto Create Still Image**, which lets you specify Shot Marks to turn into still images *while you're recording the movie*. (Section 1.3.6.1)
2) **Create Still Image**, which lets you specify Shot Marks to turn into still images *while you're playing the video back*. (Section 1.3.6.2)
3) **Delete After Still Image Creation**, which tells the camera whether to remove the shot marks from the videos once the images have been extracted. (Section 1.3.6.3)

Details on all three of these new menu items are explained in the next sections:

1.3.6.1   AUTO CREATE STILL IMAGE

Menu Position MENU → ▶■ → Shooting Option → ⬛
AutoCreateStillImage

What it Does Automatically creates still images from Shot Marks made while the movie is being recorded

Constraints   Must be in "Movie" mode

Recommended Setting   On, unless you use Shot Marks for other purposes and don't want the extra freeze frames created

To use this feature, just assign Add Shot Mark [1/2] to a button (as described in the previous section) and then press it at key times while you're shooting video.   The image extraction begins once the video shooting has stopped.

How large are the images this feature creates?

- If you're shooting 4K: 3840 x 2160 (12.8" x 7.2" at 300 dpi); approx. 8.3 MP file size
- If you're shooting HD: 1920 x 1080 (6.4" x 3.6" at 300 dpi); approx. 2.1 MP file size
- (And for comparison: one standard .jpg image from this camera is 9504 x 6336 (31.6" x 21.1" at 300 dpi))
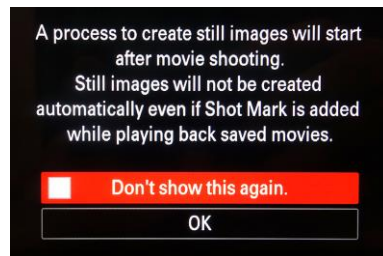
Figure 6:   When invoking this feature, the camera reminds you that this only applies to Shot Marks created while shooting the video. If you want to create images from Shot Marks added while playing back the video, see "Create Still Image" (see next section).

1.3.6.2   CREATE STILL IMAGE

Menu Position MENU ➔ ▶️ ➔ Edit ➔ 🔛 Create Still Image

What it Does Creates still images from frames with Shot Marks that were made while playing back a movie

Constraints   Camera must be in "Movie" mode

Recommended Setting   (It's a command; not a setting.)

Let's say you created Shot Marks while playing it back (as opposed to "while recording it", which is what the previous menu item is for). When done, while still in playback mode, you would invoke this feature to go through the current video and extract images at the Shot Mark points.

In order to create Shot Marks while playing back a video, another button assignment is needed: **MENU ➔ 📷 ➔ Operation Customize ➔ ▣ Custom Key Setting ➔ [Pick a button] ➔ Add/Delete Shot Mark [1/2] .** (Note that this is a different button assignement than the one you use to create Shot Marks while shooting the video.)

TIP 1: You can only execute this command on one video at a time; not on all videos on the card at once.

*TIP 2:   Don't forget you also have the **Photo Capture** function to grab a freeze frame during playback mode, which does the same thing as this but doesn't require any button assignments. See Section 8.5.4 of the original book.*

1.3.6.3 DELETE SHOT MARKS AUTOMATICALLY AFTER STILL IMAGE CREATION

Menu Position MENU → ▶■ → Shooting Option → 🔯 🅂 after still img crt

What it Does Tells the camera to automatically delete those Shot Marks after images have been extracted from the videos

Constraints Camera must be in "Movie" mode

Recommended Setting "Maintain"

The description pretty much explains it. This applies to Shot Marks created either while shooting the video or while playing back the video. You have to configure this menu item first prior to extracting the images.

Your choices are **Auto Delete** and **Maintain** (meaning "Don't Auto Delete").

1.3.7   CORRECTION   TO   SECTION   7.3.6   (FACE MEMORY)

In the original book, Section 7.3.6 on Face Memory mentions that you can register up to 8 different faces. In truth you can only register seven. (The illustration in Figure 7-12 had it right.)

Also, with the introduction of Firmware v3.0, the "Order Exchanging" function described in Section 7.3.6 of the original book is gone. But the **Set Ident Trgt** function described in the TIP box remains.

1.3.8   FOCUSING AIDS IN BRIGHT MONITORING

I've been wanting this feature for a long time. Recall that the Bright Monitoring feature (Section 10.3.1.1 in the original book) is designed to help you compose your shot in extremely low light – so low that you can't really see your subject. When assigned to a button, this feature greatly amplifies the Live View image so you can see what you're doing.

Figure 7:   The Bright Monitoring function was designed to help you compose your shot in extremely low light – situations where previous Live View cameras would only show you a black screen.

So far, so good. BUT as I discovered the first time I used it, the feature couldn't be used to aid in focusing; you kind of had to use that low-resolution distance scale on the bottom of the screen when you were in Manual Focus mode. Not very bueno.

Well, now if you're in Manual Focus mode, and have the Focus Magnifier (Section 7.4.3 of the original book) and/or Auto Magnifier in MF (Section 7.4.2 of the original book) enabled, these functions can help you focus critically in these uber-dark environments. Huzzah!

In use, you press the assigned button which brightens up the Live View screen, and focus manually. The focusing aids you normally use will kick in (showing Peaking Color around areas of high contrast; zooming in on a specified area if invoked), and you can compose and focus your shot. Bright Monitoring remains in effect until you press the assigned button again.

1.3.9   CREATORS' APP AND CREATORS' CLOUD SUPPORT

Remember that Imaging Edge Mobile program you had downloaded to your phone to control your camera remotely and have it receive images sent by the camera? Well, it won't work anymore after the upgrade. Now Sony wants you to use the new Creators' App instead, which has all of the functionality of the old app (but a very similar user interface) but also has a Sony Creators' Cloud attached to it, allowing you to upload images to Sony's cloud when you return to a known Wi-Fi access point. Available in all the usual places.

I have updated Chapter 4 of the original book to accommodate the new software. You can find it all in Section Chapter 2 of this supplement.

To accommodate the "Upload to the Cloud" function, the A7R V now has two new menu items: Cloud Connection and Cloud Information, both described in the next two sections.

1.3.9.1   CLOUD CONNECTION

Menu Position **MENU → ⊕ → Creators' Cloud → Cloud Connection**

What it Does Establishes connection to Creators' Cloud via your smartphone or tablet

Recommended Setting   On

In order for any of this to make sense, you have to install the Creators' App and link it to your camera first (Section 2.1 in this supplement). Once done, you can use this feature to upload images that you take to the cloud while in the field.

To begin, start the Creators' App on your phone/tablet and then sign into your Sony account (you'll need to create a free account in order to proceed). Then go to this function, and tell it you have the Creators' App already.
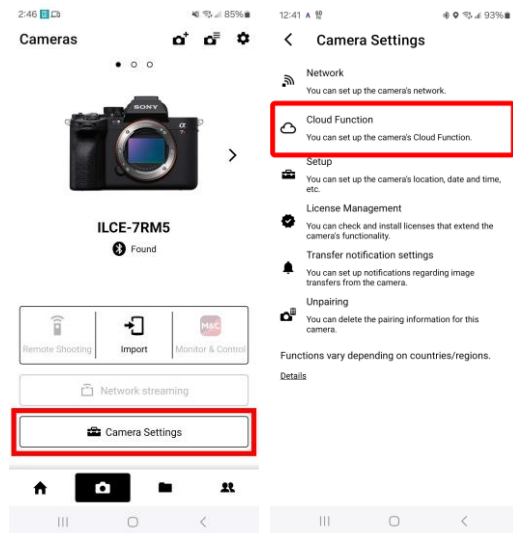
Figure 8: Getting to the point where you can start inputting the streaming settings.

The first problem you'll encounter is this display screen, telling you to launch the Creators' App and "start the settings from "Cloud Functions". The only problem is I couldn't find "Cloud Functions" in the app. What you're *supposed* to do is hit "Camera Settings" (near the bottom of the screen), then hit "Cloud Function" on the page that comes up. Then hit "Start Settings (at the bottom of the screen) then start following the step-by-step instructions.

1. Setup the Camera's Wi-Fi – this actually changes the camera settings for you, so you don't have to menu dive. Nice touch. *If you want your images and video to be sent using the phone's internet connection, set up a wi-fi hot spot on your phone first, then connect to that hot spot in this step.*
2. Link the Camera with the Cloud – hit "Start Linking" at the bottom. The app works the camera in this regard as well. Hit OK on the back of the camera to continue.
3. Cloud Upload – hit "Go to Settings" at the bottom of the phone to configure. Here you can specify which file formats you want
4. automatically uploaded. Beware that RAW files and videos can take a long time to upload and fill the cloud space quickly.
5. Then a quick tutorial appears.

There is no need to keep the app open while uploading. (The camera must remain on, however.)

Your Sony account gives you 25 GB of free storage on Creators' Cloud.

TIP 1: *In order for this to work,* **MENU** ➔ ⊕ ➔ **Cnct./Remote Sht.** ➔ **Remote Shoot Function** ➔ **Remote Shooting** *must be* **OFF**. *Also,* **MENU** ➔ ⊕ ➔ **Streaming** ➔ **Network Streaming** ➔ **Streaming** *must be* **Off** *as well. (No error message will appear if it's on.) (Ask me how I know this.)*

1.3.9.2   CLOUD INFORMATION

Menu Position MENU → ⊕ → **Creators' Cloud → Cloud Information**

What it Does Shows you the status of your Creators' Cloud connection established via the above function

Recommended Setting   n/a

Not much to say about this one, other than 1) This and the Cloud Connection function (previous section) are new with Firmware v3.0, and 2) The information on this screen doesn't provide enough troubleshooting information for when things go wrong. For example, after configuring the app and the camera to upload images to the Creators' Cloud, I received an orange cloud

Figure 9: *This is the status screen you get when invoking the Cloud Information function.*

icon with an orange "!" next to it on the screen, indicating that the upload had failed. Checking this screen (**Figure 9**), the "Error Info" tells me only that the camera is "properly connected" to the cloud. Not helpful.

1.3.10   NEW WI-FI SIGNAL STRENGTH ICON

When you're connected to Wi-Fi, there's a new icon that shows on certain display screens that lets you visually discern the signal strength. (The red circle in **Figure 10**) The more the curved arcs, the stronger the signal. If you can't see the icon, keep pressing the UP arrow button on the rear control wheel until it appears.

Figure 10: *The new icon showing Wi-Fi signal strength when connected. (Red circle)*

1.3.11 CUSTOM GRID LINE (A PAID FEATURE UPGRADE! $149!!)

You can now PAY Sony for the Privilege of adding a new feature: You can configure a Custom Grid Line for your viewfinder. Costs USD $149 for a per-camera license (!). I'm sure Sony is testing the market for paid new features and is waiting for the (so far lack of) backlash from users.

If you're interested in purchasing a license and adding the functionality to your camera, the details can all be learned here: https://pro.sony/ue_US/digital-imaging/custom-grid-line

1.3.12   NEW ASSIGNABLE FEATURES

There are two new assignable features, both in the **(Images)**
Custom Key Dial Setting and **(Movies) Custom Key Dial Setting.**
You'll find these functions under the 🌐➔ **Streaming** menu group when
making the assignments.

Feature	Description	C1-C4, Movie	Control Wheel	Center Button of Control Wheel / Multi-Selector	Left, Right, Down	AEL, AF-ON, Focus Hold	Front and Rear Dials
Streaming	Enables or Disables the Live Streaming function.	✓		✓	✓	✓	
Streaming Output/Stop	Starts/Stops streaming output. (The "Streaming" function above must be Enabled before this function will work. Once started, you then have to press the center button to actually start.)	✓		✓	✓	✓	

1.3.13   NEW MONITOR AND CONTROL APP

Sony has been enhancing their online services over the years. The full
catalog of tools (some free, some subscription) can be found at
https://creatorscloud.sony.net/catalog/en-us/index.html . Of note for you
video shooters is the Monitor and Control app, which allows you to turn
a tablet or phone into a video monitor (rather than having to spring for a
dedicated unit that mounts atop the camera). Check out its capabilities!

1.3.14 INITIATING A FIRMWARE UPDATE FROM THE CREATORS' APP

Don't want to futz with doing a firmware update via the process described in Section 1.2? Then the new Creators' App provides another alternative. (I was going to say "simpler", but really there's the same number of steps. But this method doesn't involve moving memory cards from your computer to your camera.

Sony has created a pretty good guide on how to use this, so there's no sense in re-inventing the wheel. You can see the step-by-step instructions here: https://www.sony.com/electronics/support/articles/CCCA06012
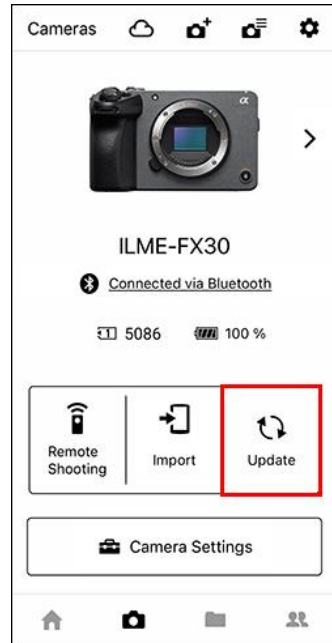
Figure 11: *If an update is available, you'll be able to install it by pressing the "Update" button.*

1.3.15   NETWORK STREAMING

Menu Position **MENU** ➔ ⊕ ➔ **Streaming** ➔ **Network Streaming**

What it Does Lets you configure 7 variables related to Live Streaming

Recommended Setting n/a

There are two menus you need to configure in order to support Live Streaming: This menu item, and an overlapping menu of similar items in the Creators' App. I'll briefly describe each of the menu item below; then in the next section I'll walk you through how to get this feature going, step-by-step.

Streaming	On or Off. Also can be set via the Creators' App.
Stream Connect Error Display	Is there an error while live streaming? If so, this menu item will give you more details about the error.
Out Img. Quality Set	Lets you set 4 variables regarding streaming video quality. Also configurable via the Creators' App, and the variables are described in the next section.
Output Information Display	Lets you see the Stream URL that was configured in the Creators' App.
Movie Rec During Streaming	Record on internal memory cards while streaming? (This way you can record in 4K but stream in 720p). Choices are "Enable" and "Disable". Also configurable via the Creators' App, and the variables are described in the next section.
Emphasized Output Display	Puts a blue border around the LCD screen to confirm streaming status.
Root Certificate Error	If there's a problem with the certificate used for encryption, do you want the camera to connect

	and try to upload anyway? Select "Connect" unless you absolutely are worried about eavesdropping on your upload. (Other option is "Does Not Connect".)

1.3.15.1   STEP-BY-STEP   INSTRUCTIONS   FOR LIVE STREAMING

This feature allows you to use your camera to live stream to platforms such as Youtube or Facebook through either wi-fi or your smartphone's Wi-Fi hot spot.

There are several steps required to set it up. At a high level:

1) Connect your camera to an Access Point using the **MENU → ⊕ → Wi-Fi → Access Point Set.** command (Section 9.4.2 of the original ebook) If you're out in the field, you can set up a Wi-Fi hotspot on your phone and connect to that.
2) Pair your camera with the Creators' App on your smartphone. On the camera, go to **MENU → ⊕ → Cnct./Remote Sht. → Smartphone Connection**. On the Creators' App, click on the Camera icon along the bottom, and the **◻⁺** icon on the top to add your camera. You only have to do this once.
3) On the camera, make sure **MENU → ⊕ → Streaming → Network Streaming → Streaming** is set to **On.**
4) Next, go to your streaming platform of choice and get the streaming credentials. You'll need a Streaming URL and a Stream Key. I give hints on where to find these for the most popular streaming platforms in Section 1.3.15.2.
5) With the camera on (make sure it doesn't time out!), go to the Creators' App, click on **Network Streaming**, and fill in the fields as described below:

Streaming Destination	Here you can choose from RTMP/RTMPS (the most popular method) or SRT. Click NEXT on the bottom of the screen to enter the Streaming URL and Streaming Key.
Output Image Quality	Here you have three choices via a dropdown menu: • High: 2K (1440p), 30p, 13.0 Mbps • Standard: HD (1080p), 30p, 6.0 Mbps • Low: HD (720p), 30p, 1.5 Mbps • Custom (where you can set the three variables yourself) Hard to recommend a setting, but "Standard" is good enough for most uses. (These settings can also be made via the camera's menu: **MENU → ⊕ → Streaming → Network Streaming → Out Img. Quality Set.)**
Movie Record Setting	Do you want the camera to record the video at the same time it's streaming its output via Wi-Fi? ("Enable" or "Disable".) If enabled you still have to manually start the video recording on the camera when streaming starts. (These settings can also be made via the camera's menu: **MENU → ⊕ → Streaming → Network Streaming → Movie Rec During Streaming.)**
Auto Power OFF Temp	If you stream for a long time (especially at 2K and record at 4K) heat buildup might occur. Changing this from "Standard" to "High" will have the camera tolerate higher temperatures and it will only shut down if it absolutely has to. ("High" would be my recommended setting in this case. Make sure the LCD screen is away from the camera body to help dissipate the heat.)

Once all of that is configured, I would recommend assigning **MENU → Toolbox → Operation Customize → (Movie) Custom Key/Dial Set. → [pick a button] → 29 → Streaming Output/Stop** to a button; preferably the C2 button so you can start /stop Live Stream and then also start/stop local recording with two proximate buttons.

Once you press the assigned button, in order to actually start the live stream you have to press the center button on the camera. Press it again to stop streaming. Alternatively, you can start/stop streaming (and recording to the memory card) from the Creators' App. (**Figure 12**)
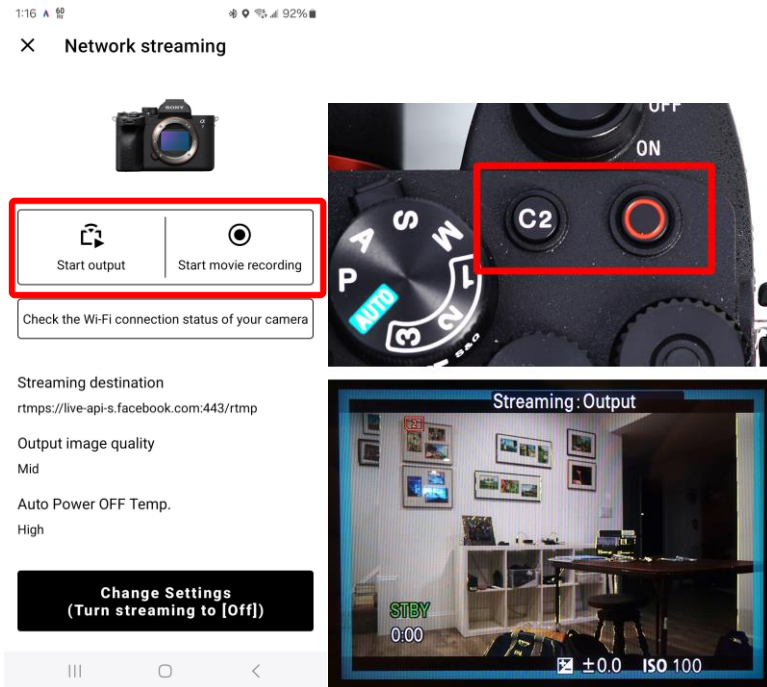
Figure 12: You can start/stop Live Streaming or local recording either via the Creators' App or via the Camera's buttons. When streaming, a blue border will appear on the LCD if MENU → ⊕ → Streaming → Network Streaming Emphasized Output Display is set to ON.

> **TIP**: *I was going to make a youtube video showing step-by-step how to do this (because, let's face it, your eyes glazed over when reading the above), but someone in Australia named Wonk beat me to it, and he did a reasonable job. No sense re-inventing the wheel. You can see it at https://www.youtube.com/watch?v=MXH8YhxYfvI .*

1.3.15.2 WHERE TO FIND STREAM KEYS AND URLS

ON INSTAGRAM

On the desktop:

1. On the left edge, hit the ⊕ (Create) icon; then select "Live Video"
2. In the window that pops up, say something about the video, then choose your audience. Hit "Next".
3. Your Stream URL and Stream Key will appear on the next page.

(Not recommended to proceed from the app. The app assumes you'll be using your phone's camera, and there's no way to get the streaming URL or the key.)

ON YOUTUBE

1. Log into youtube.
2. In the upper-right-hand corner, press the 🖰 (Upload) icon and select "Go Live" from the dropdown menu. Youtube Studio then opens.
3. In the upper-left-hand corner, click "Stream".
4. The screen in **Figure 13** appears. While the Stream URL is plainly visible, the default stream key is hidden. You have to hit Copy, paste it into a Word or Text document, and then copy the string of characters into the Creators' App.
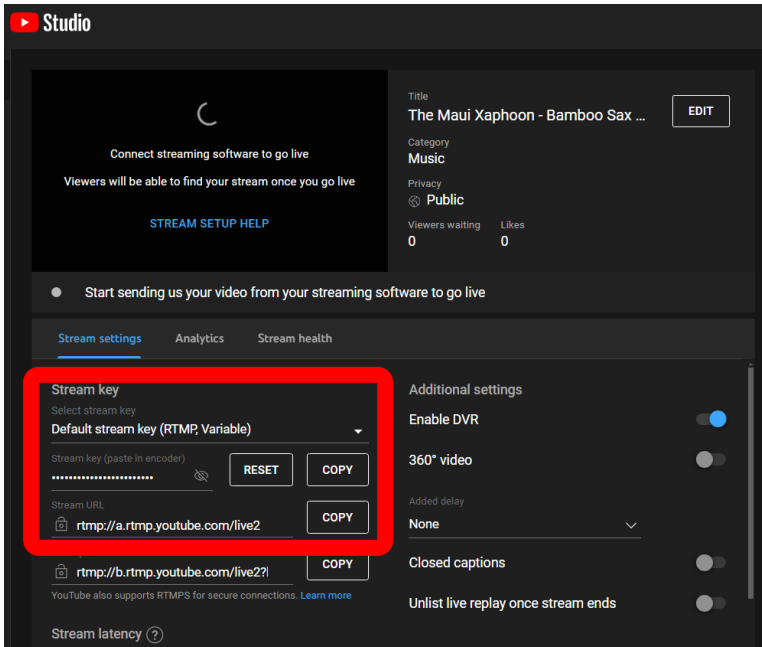
Figure 13: *Here's where to find the stream key and stream URL for youtube.*

ON FACEBOOK:

1. Under the "What's on your Mind?" prompt, click on the red ⬤ Live video icon.
2. You're presented with two options: Choose "Go Live" (the left option).
3. Click on othe "Streaming Software" option on the top of the page; then the Stream Key and Server URL will be visible.
4. Once everything has been input and configured correctly, you still have to hit "Go Live" in the bottom-left corner of the Facebook web screen in order for it to accept the stream from the camera.
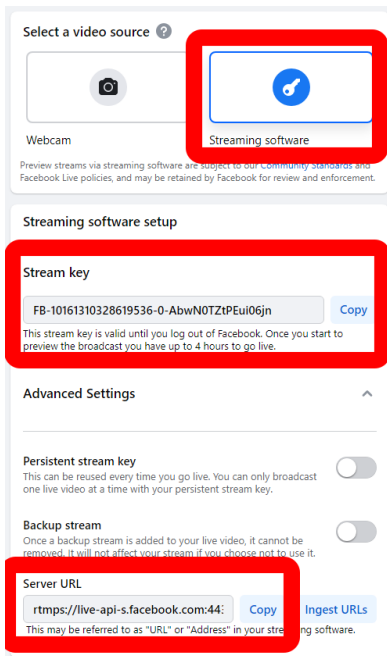
Figure 14: *Here's where to find the stream key and stream URL for Facebook.*

ON X

Apparently you need a verified account to live stream on X; which I don't have so I couldn't try it. However, X provides step-by-step instructions for doing so here: https://help.x.com/en/using-x/how-to-use-live-producer#RTMP

ON TWITCH

Stream URL is rtmp://TWITCH-INGEST-SERVER/app/STREAM-KEY . Instructions for finding the stream key can be found at https://help.twitch.tv/s/article/twitch-stream-key-faq?language=en_US

Chapter 2   New Chapter 4 (Connectivity)

The A7R V can connect to computers via Wi-Fi, Bluetooth, and Ethernet, allowing you to transfer the images you just took to your phone or your computer. You can also control your camera remotely using a phone or your computer. Lot of good options.

Here's what this chapter will talk about:

- Uploading a picture to social media via your smartphone (Section 2.2)
- Using your smartphone as a remote control and remote viewfinder for your camera (Section 2.3)
- Uploading images to your desktop using either USB or Wi-Fi or Ethernet (Section 2.5)
- Sending images to any FTP server in the world via your phone (Section 2.6)
- Geotagging your images using your phone's GPS and Bluetooth (Section 2.7)
- And much more…

All of the smartphone examples I show in this chapter are done with my Android phone. An iPhone experience should be very similar except you might get a couple more security popups while configuring.

TIP: Owners of older Sony cameras used to use the now-defunct "Imaging Edge Mobile" app. That app is still necessary to work with your older camera; however the A9 III requires the newer Creators' App.

2.1   SETTING THINGS UP – SMARTPHONE FUNCTIONS

2.1.1   *INSTALL AND PAIR WITH SONY'S CREATORS' APP*

You can get this essential piece of mobile software from the usual places: the App Store for the iPhone, Google Play store for Android.

Before you begin, make sure Bluetooth is on on your phone and that **MENU** → 🌐 → **Bluetooth** → **Bluetooth Function** is set to **On**.

When you start the Creators' app up for the first time, about a dozen configuration screens pop up. All of these

Figure 2-1: *Installing and configuring the Creators' App for the first time. There's about a dozen screens to plow thorough.*

configuration screens only have to be done once. The first one is "Do you want this app to send you notifications?" Answer No to that one,

since it will alert you continuously every time it finds a camera. Annoying.

Then it will ask you to create an account or to sign in. Creating an account is highly recommended, since you won't be able to upload images to Sony's cloud storage without one.

Next, follow the directions as provided on your smartphone screens (some of which are shown in **Figure 2-1**).

> **TIP**: *This software wasn't updated to reflect menu changes for Firmware v3.0. For example, at one point the app instructs you to "Select [Smartphone Connect] from the menu", when in fact that item has been renamed to "Smartphone Connection"*

You can also connect to the camera using either 2.4 GHz or 5 GHZ Wi_fi. Which is better? 5 GHz has a higher bitrate; the downside being it doesn't travel as far. As long as your phone and camera are proximate, 5 GHz should be the preferred choice.

Great! At this point you should now see the screen in **Figure 2-1c.** Now do the following:

1. Open the app, connect to the camera and go to the "Camera" screen (**Figure 2-1c).**
2. Hit the "Camera Settings" button near the bottom, then hit Setup.
3. Hit Location Information Linkage. Set this to "On". (This enables the geolocation feature, as described in Section 2.7.) Then select "Allow all the time" and turn on "Use Precise Location".
4. Back to the Camera Settings page, hit Transfer Notification Settings. Make sure it's "On". (This will help the process of pulling images over to your phone, as described in the next section.)

That's it. Now, let's see how we can pull individual images over to your smartphone and/or to the cloud.

2.1.2   ADDING ENCRYPTION TO YOUR SMARTPHONE CONNECTION (OPTIONAL)

Adding encryption to your Wi-Fi connection is not obvious and is kind of a pain, but if you want it you only have to configure it once. I've found that the ONLY way to do it successfully is to establish the connection with your smartphone manually (not using the QR code).

Here are the steps involved:

1. Unpair the camera and phone if they're already paired.
2. On the camera, make sure **MENU → ⊕ → Network Option → Access Authen. Settings → Access Authen.** is set to **On.**
3. On the camera, bring up a still image you want to send to your smartphone, then hit the **Fn** button and choose the ⏏ **Send** icon (top left slot) to send it to your smartphone.
4. Since there's no smartphone to talk to, the camera will give you the option to "Connect to a new smartphone". (**Figure 2-2a**) Press that option and you'll get the QR screen.
5. Instead of scanning the QR code, press the C4 (trash can) button on the camera, which brings up the SSID and password, allowing you to establish the connection on your smartphone manually.
6. On your smartphone, establish a Wi-Fi connection manually (every smartphone and OS version is different; on my Android phone you hit the gear icon, select Connections, touch on Wi-Fi, look for the SSID shown on the back of the camera ("DIRECT-xxxxxxx:ILCE-7RM5 and touch that option to connect to it. The phone will tell you that you're connected without internet.
7. Next, go the the Creators' App. Hit the 'gear' icon in the upper-right-hand corner.
8. Touch the "Connect only via Wi-Fi" option (**Figure 2-2d**).
9. Tap the ILCE-7RM5 icon. You will then see this screen asking for a username and password. Get this information from the **MENU → ⊕ → Network Option → Access Authen. Info** screen. (You have to type it in manually – sorry!)
10. Verify that the fingerprint string displayed on the phone matches what's being displayed on the back of the camera.
11. Hit "Connect. You're done!

From here on out all of your connections should be encrypted, and no further effort on your part should be required.
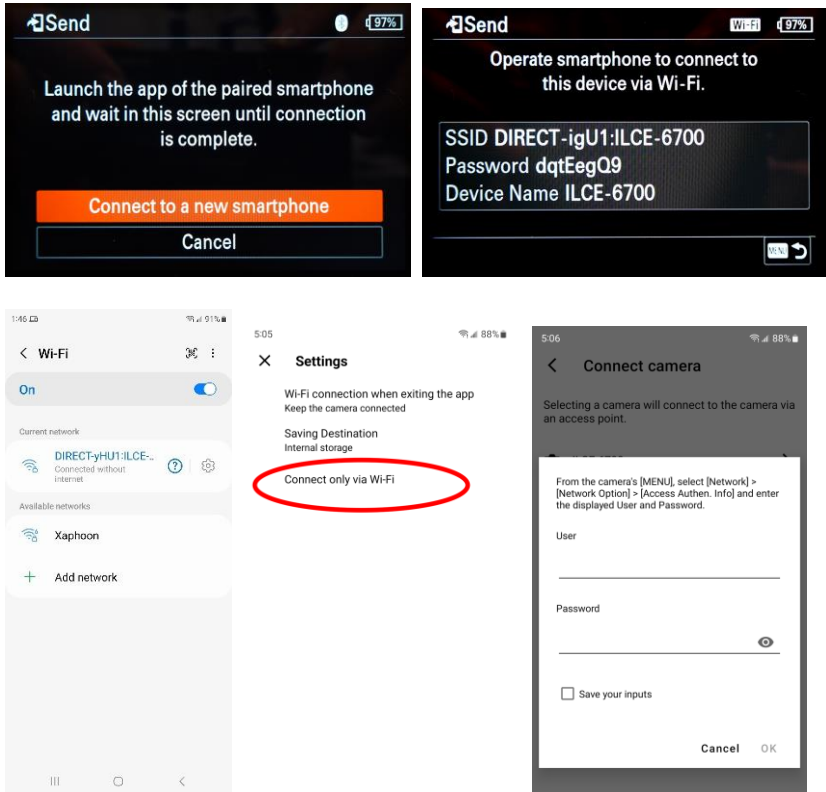
Figure 2-2: *Some of the screens you'll encounter when setting up encryption using the Access Authen. Settings feature.*

2.2 TRANSFERRING AN IMAGE TO YOUR SMARTPHONE

There's two ways to do this; one method is initiated from the camera; the other is initiated from your phone (with the camera off!).

Starting the process from your Camera

Just follow these instructions:

1. The absolute fastest way to send over one image is to playback your images, stop at the one you want to send, then hit the **Fn** button which invokes the ⤴ **Send** function. **Figure 2-3**a pops up.
2. Select "This Image" and then you might see a warning screen saying "If you're using other network functions, you will be required to finish them (first). **Hit Exit&Go to next**.
3. Next you'll see the "Preparing Wi-Fi connection" as shown in **Figure 2-3**b.
4. Now turn the phone on and go to the Creators' App. It will automatically recognize that the camera is trying to connect to it, and then the screens in **Figure 2-3c** and **d** appear.
5. The image comes over. A confirmation screen pops up.
6. Press "Imported Images" in the lower-left corner of the smartphone screen to bring you to an index view of what's been downloaded.

Congratulations! You just experienced some instant gratification.

You can send over .jpg images and proxies of video files this way. You can send RAW and HEIF images too, but your phone most likely won't know how to read them so you may as well not bother. And you can specify whether large or small .jpgs get downloaded on the camera via the **MENU ➔ ⊕ ➔ ▢ Cnct./Remote Sht. ➔ ⤴ Select on Cam & Send ➔ Size of Sending Image**.
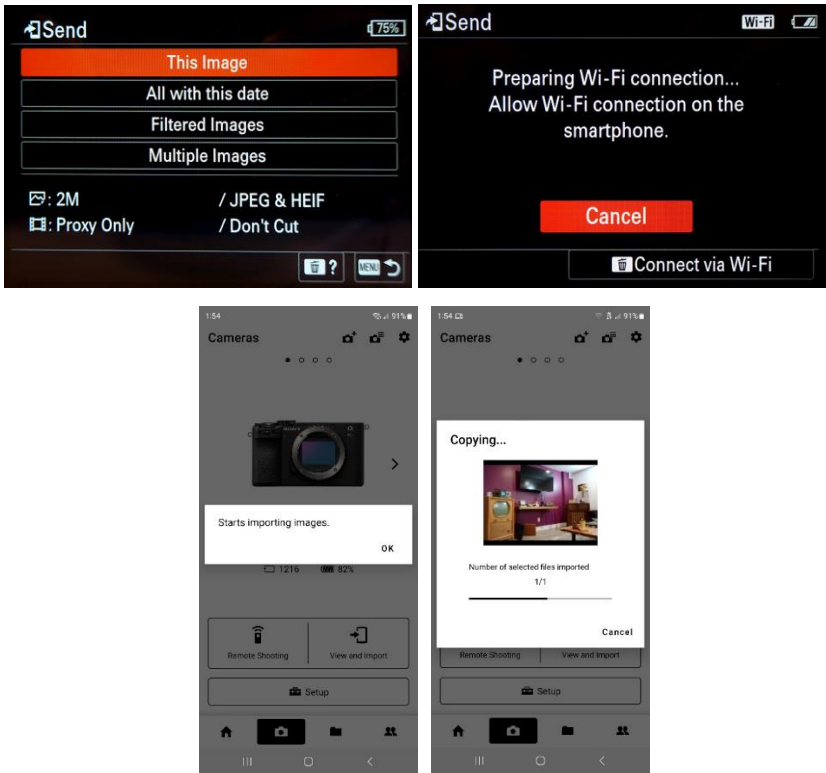
Figure 2-3: *The fastest way to transfer an image to your smartphone is to hit the **Fn** button during playback, and then these screens pop up.*

TIP 1: *If you forget to use the **Fn** button shortcut, you can also send an image via* **MENU → ⊕ → ☐ Cnct./Remote Sht. → Select on Cam & Send → Send.**

TIP 2: *On Android phones, your downloaded files end up in Internal storage/DCIM/CA_IMAGES/.*

TIP 3*: If you're connected to your camera via the Creators' App on an Android phone, and you put the program in the background (to take a call, for example), the Wi-Fi connection to your camera will terminate. Something to be aware of.*

2.2.1   STARTING THE PROCESS FROM YOUR PHONE

You can wake up your camera, browse the memory card, and pull over select images to your phone – *all while the camera is off and packed away in your camera bag*. Here's how to do it:

Before you begin, you need to set **MENU** ➔ 🌐 ➔ ☐ **Cnct./Remote Sht.** ➔ ☐ **Cnct. While Power OFF** ➔ **On**. This instructs the camera to always keep its Bluetooth receiver on even while the camera is turned off. (Don't worry; it doesn't consume much power.)

1. Start the Creators' App. You'll see only one option highlighted, as shown in **Figure 2-4a**. Tap "Import" (circled in red).
2. When you see the "Select camera connection method", scroll down and check that box on the bottom that says, "Use Wi-Fi connection
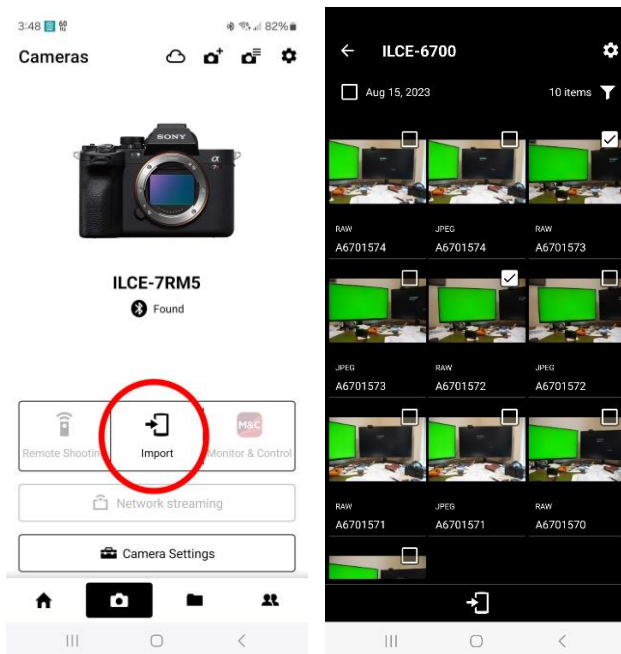
Figure 2-4: *Choose the images you want to download on your smartphone, then download them in the resolution you choose – all while your camera is off!*

from next time".   Then scroll back up and choose "Wi-Fi Connection".

3. The phone wakes up the camera, and then downloads thumbnails on all the images on the camera's memory card, grouped by date.

4. Click on one of the groups to see an index view of the thumbnails.

5. Here you can touch one of the corner checkboxes to select it for downloading, or touch the image to view larger versions of the thumbnails (and touch the checkbox near the top of the screen to select it). **Figure 2-4b.**

6. Touch the "Import" icon at the very bottom (it's supposed to be an arrow, inferring sending the image to a smartphone) and it will happen.

7. Hit "OK" at the confirmation screen, then you can terminate the program. Your images can be seen by tapping the "Storage" icon on the bottom of the main screen in **Figure 2-4c** (it looks like a file folder). They can also be seen in the Android "Gallery" app – click on "Albums" and then select "CA_IMAGES".

8. On the "Items copied" confirmation screen, if you get asked to use the differential import, I recommend selecting "Use". It means that next time you do this it won't show you images that you've already pulled over.

2.3   REMOTE SHOOTING ON A SMARTPHONE

The "Remote Shooting" function is my second-favorite feature, because it holds the possibility of taking cool shots that were much more difficult to do previously. Think of it as tethered shooting, but without the tether.

Using it is straightforward: Once things are set up as described in Section 2.1, just turn on your camera, open the Creators' App, and select "Remote Shooting". A screen similar to the example you see in **Figure 2-5** appears.
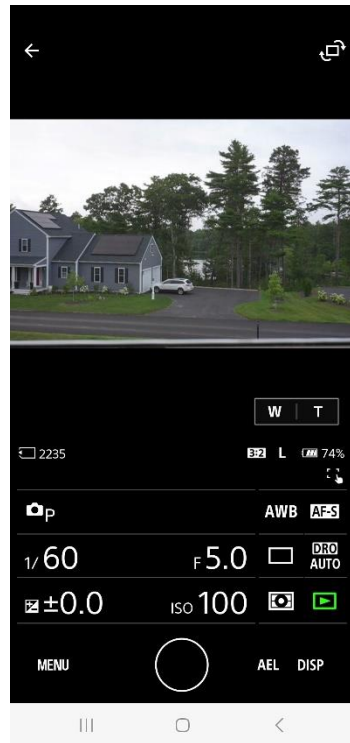
All of the camera's settings can be changed by clicking on the relevant icon; in addition many of these same variables can also be changed with written descriptions when pressing the Menu button. The options at the bottom of the app's Menu screen are also important:

- Review Image – do you want to see the image you just took after shooting remotely? It takes a few seconds to do so. Your choices are "On", "2 sec", or "Off".

- Location Information specifies whether to geotag the downloaded image using the smartphone's GPS signal. I prefer this to be "On".
- You can also invoke a "Mirror Mode" which reverses the Live View display on the phone in case you're using this to take a remote selfie.

From here, you have the following options:

- Touch your subject to specify your focus point. A small white square will appear where you touched, and the "Tap to cancel focus point" icon appears in the upper-right-hand corner. But the camera won't actually focus on that point yet.
- Touch and hold your finger on the circle at the bottom of the screen; the camera will autofocus according to how it's configured, and when you release your finger the camera will take the picture and (if configured) will send a version of it to the phone.
- If you have the Drive Mode set to Continuous (which you can change on the app), you can slide the virtual Shutter Release button to the left, which is the equivalent of keeping your finger depressed on the shutter release button – it will take a sequence of images in machine-gun mode until you slide it back to the right. (This is also useful when taking time exposures using BULB

Figure 2-5: *The Creators' App screens lets you specify a focus point, take a picture, or start/stop a video (if your camera is set to Movie mode).*

mode – no need to hold your finger down on the shutter release

button. Both your phone and the camera must be on during the exposure.)

- After you take the picture you'll see the image on your phone (it might take awhile if you didn't tell the app to shrink it down to 2 megapixels). Touch the black area around the image and you can hit the "Share" icon at the top of the screen to send it off via a variety of phone-specific options.

- When you're finished, exit the app on your phone and turn your camera off.

Need to adjust more settings, such as image size, quality, focus mode, focus area, ISO, metering mode, and many others? Hit the MENU button on the app and change what you need to change.

You can choose where to save your images (Smartphone + Camera? Camera only?), choose your image size (Full or 2 MP for social media posting), and other variables with the **MENU ➔ 🌐 ➔ ▢ Cnct./Remote Sht. ➔ Remote Shoot Setting** (Section 12.1.6 of the original book).

Sony's official specs say that the maximum distance between the camera and the smart phone is 10m / 33ft, but of course this will be reduced depending upon what is between the two devices.

You can use your imagination for the kinds of unique shots you can get with this feature. Here are some ideas to get you started:

Figure 2-6: One thing you can do with the Smart Remote Control feature is to spy on people through high windows. (Not recommended.)

- Take a self-portrait and know that you've framed yourself properly beforehand.
- Shoot way above a large crowd using the long pole shown in **Figure 2-6**. This sort of thing is now a standard for group shots at weddings.
- Find a bird nest and shoot when the time is right. (**Figure 2-7**.) (Don't forget to set the Subject Recognition to Bird beforehand. ☺)
- Street photography – put the camera on top of a newspaper stand, point it at where pedestrians are apt to be, and shoot at the decisive moment from around a corner. (I didn't try this because I'm philosophically against street photography, plus I'm worried that someone might walk away with my camera.)
- Hide it amongst some presents under the Christmas tree, and get shots of your kids as they hover near the package to pick it up. (And make sure that the area under your tree is well-lit!)
- Have some cool pictures you've taken with this feature? Email me your best ones and they might appear in a future eBook.

TIP: Smartphone can't connect? Make sure the **MENU** ➔ ⊕ ➔ ☐ *Cnct./ Remote Sht.* ➔ *Remote Shoot Function* ➔ *Remote Shooting* on the camera is set to **OFF**.

Figure 2-7: *I mounted a camera next to a bird's nest and was able to take newborn shots by remote control. This is a cool feature!*

2.4   CONNECTING TO AN ACCESS POINT

Before you can upload images via Wi-Fi for the first time (using your local network and the Imaging Edge Desktop - Remote program), you need to do an initial configuration with your Wi-Fi router. The camera can memorize many different routers (which Sony calls "access points"), but I've yet to discover what the maximum number is.

There are two methods of pairing with a Wi-Fi access point: the traditional way, and the easy way (which requires that your access point has a "WPS" button, as in **Figure 2-9**). I'll outline the traditional way first.
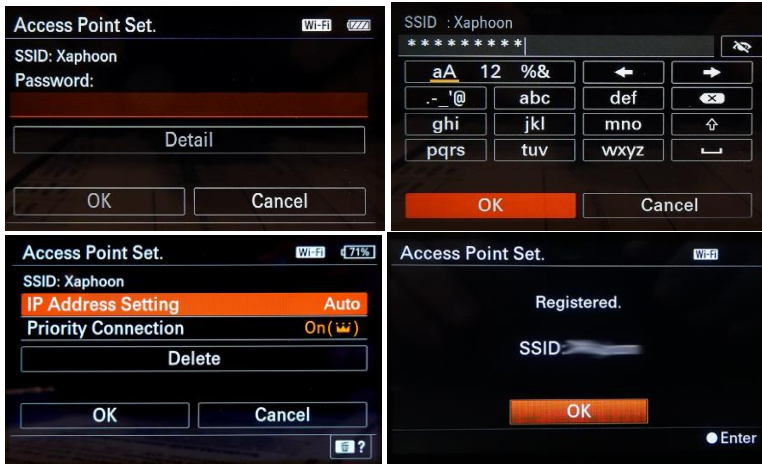
The Traditional Way

Go to **Menu ➔ ⊕ ➔ Wi-Fi ➔ Access Point Set.** and after a few seconds the camera will show you a list of all the Wi-Fi access points it sees. Select the one you want to connect to via the arrows and select with the center button (or touch it if the touch function is enabled). A password screen appears (if you're connecting for the first time), then a configuration screen in **Figure 2-8** appears.

Unless you're an IT Admin guy I recommend you keep the settings as shown in **Figure 2-8** and skip to the next paragraph. With **IP Address Setting** set to AUTO allows the camera to automatically be assigned an IP address via the router's DHCP function.   Many corporate IT departments have DHCP turned off to keep unapproved devices from accessing their network, and so you'll have to work with them to get an IP address and assign it manually when this function is set to "Manual".

Priority Connection is designed to give your Wi-Fi signal priority when many other devices are wanting to talk at the same time. (Usually this mechanism is useful when you're also streaming movies from one Wi-Fi device to another.) Keeping it On will move your pictures faster in theory, but your particular network configuration, building environment, and other network activity will determine how much of a speed increase it will get you (if there's one at all).

Then hit OK. The camera will try to access the Access Point, and if necessary it will eventually ask you for a Wi-Fi password (**Figure 2-8a**

Figure 2-8: *The screen you see to set up your Wi-Fi access the traditional way. (You can skip this method if your Wi-Fi router has a "WPS" button.) Fortunately you can now use the touch screen to enter all info.*

and **b**). The camera supports WEP, WPA, WPA2, and WPA3 format passcodes, which are the industry standard for Wi-Fi routers. You can use the touch screen as well as the arrow buttons to type things in, but you still have to enter your passcode old-school cell phone style: press the ABC button three times to get a "C", etc.

Finally, all your hard work will be rewarded with the confirmation screen you see in **Figure 2-8**d. Henceforth, the camera will remember this access point and you shouldn't have to do the above steps again.

The Easier Way

If your Wi-Fi router / access point has a button on it labeled "WPS", then the registration of a Wi-Fi Access point becomes a two-step operation:

1. On the camera: **Menu ➔ ⊕ ➔ Wi-Fi ➔ WPS Push**
2. On the Access point: Press the WPS button

You'll briefly see the screen in **Figure 2-9b** and then you'll get a confirmation screen. That's it!

Figure 2-9: *Many modern Wi-Fi routers possess a WPS button to make the setup of secure networks a push-button affair (left). Just push the button and then initiate "WPS Push" from the camera (right).*

WPS was originally designed to make setting up a secure network a push-button affair (without having to enter any SSID's or long passwords). Wi-Fi Protected Setup (WPS) goes by other names too – Wi-Fi Simple Config (WSC), or Push 'n' Connect. But the idea is you just press two buttons while the two devices are proximate and that's that.

Now that that's done, you can upload your files via the Remote Shoot function described in the next section.

TIP: The one-button-connect WPS function only works with access points supporting WPA or WPA2 encryption only. If your access point supports WEP or WPA3, use the instructions under "The Traditional Way" above.

2.5 UPLOAD TO DESKTOP VIA THE REMOTE SHOOT FUNCTION

The **MENU** ➔ 🌐 ➔ **☐Cnct./Remote Sht.** ➔ **Remote Shoot Function** allows you to perform tethered shooting using a USB cable (the way it's usually done), via USB-C port, Ethernet adapter, or via Wi-Fi, with or without an access point.

Below is a summary table of all the different parameters, which will be followed by details of implementing the various modes:

Item	What it Does / Comments
Remote Shooting	On/Off. (This option is greyed out if "Wi-Fi Connect" is set to Off. (Section 1.3.2)
Pairing	This is a command which becomes available if the PC Remote Cnct Method is set to "Wi-Fi Direct" and the Access Authen. Settings function (Section 9.5.2 of the original book) is set to OFF.
Wi-Fi Direct Info.	This produces a screen with info you need when "Wi-Fi Access Point" is selected as the PC Remote Cnct Method.

TIP: *Many of these functions are greyed out if the "Smartphone Connection" function is enabled.*

Below are more details on the different connectivity options.

2.5.1 USB CABLE

Plug one end into your camera, the other into your computer, and proceed as originally described in Section 3.22 in the original book.

2.5.2 ETHERNET CABLE

If using a Cat5 Ethernet cable and an Ethernet-to-USB-C adapter: Make sure **MENU → ⊕ → Wired LAN → Wired LAN Connect** is **On**.

Continue with the instructions in Section 3.22 (Shooting Tethered(ly) in the original book.

2.5.3 WI-FI ACCESS POINT

1. Set **MENU → ⊕ → ▢Cnct./Remote Sht. → Remote Shoot Function → Remote Shooting → Off**
2. Make sure the camera is connected to an access point (Section 2.4).
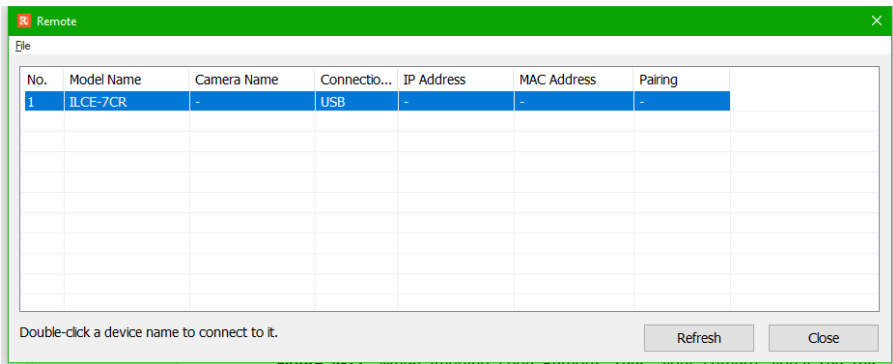
Figure 2-10: *When Imaging Edge Remote "sees" your camera, you'll see this. Double-click on your camera model ("ILCE-7RM5") and follow the directions.*

3. Before the first connection, turn **MENU → ⊕ → Network Option → Access Authen. Settings → Off** (If it's greyed out, make sure **MENU → ⊕ → ▢Cnct./Remote Sht. → Remote Shoot Function → Remote Shooting** is set to **OFF)**
4. Set **MENU → ⊕ → ▢Cnct./Remote Sht. → Remote Shoot Function → Remote Shooting → On**
5. Start Imaging Edge Remote on the desktop.

6. Invoke the **MENU → ⊕ → ▢Cnct./Remote Shoot Function → Pairing** function. After a second, the name of the camera should pop up in Imaging Edge Remote's screen. Double-click on it.
7. Follow the instructions on both the computer and the camera's screen.
8. Use the Imaging Edge - Remote software as outlined in Section 3.22 in the original book. There will not be any screen annunciations if the camera is transferring files to your computer.

9. If you turn off the camera before all of the uploads complete, the camera's buffer will still transfer to the computer even when you turn the camera off. (Cool feature. You don't even see the read/write LED illuminated.)
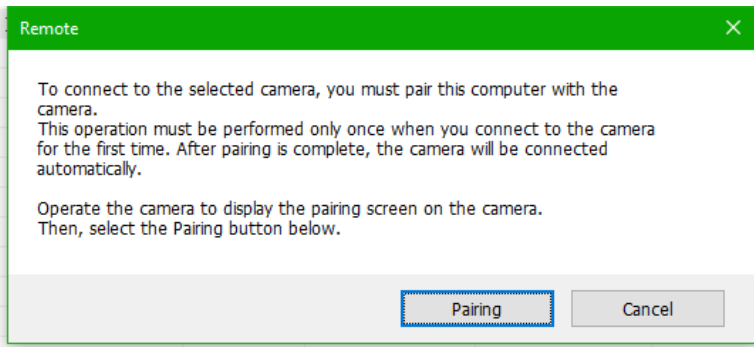
Figure 2-11: *When connecting via Wi-Fi to Imaging Edge Remote for the first time, you'll see this instruction box.*

TIP: *It is not enough for both the computer and camera to be on the same network. They both must be on the same network connected via Wi-Fi. (At least that was true for me using Google Nest Mesh Wi-Fi router.)*

2.5.4   WI-FI DIRECT

This option of connecting your camera to your computer doesn't require a Wi-Fi access point. The camera and computer communicate directly. (The downside? Your computer won't have access to the internet while it's talking to the camera.)

1. On **MENU ➔ ⊕ ➔ ☐Cnct./Remote Sht. ➔ Remote Shoot Function ➔ Wi-Fi Direct Info**, take note of the SSID and password provided on the screen.
2. On your computer, change your Wi-Fi access point to the information provide in the previous step. (It might not show up at all; I had to find it under "Hidden Network" and I had to type in the SSID as well as the password manually.) If your computer complains that the password is incorrect, try clicking on "Enter Network Security Key instead" and try again. If successful, you'll see a warning on your computer that your Wi-Fi has no internet behind it. You'll also see the logo **–PC-** on certain DISP screens on the rear LCD. (The logo should be white. If it's orange, that means the camera is configured for Wi-Fi Direct, but there's no connection yet.)

Important Note: Using Wi-Fi Direct means your computer will not have access to the internet or other shared network resources during this time.

Continuing…

1. Start Imaging Edge Remote. Double-click on your camera model.
2. Shoot away!
3. When you turn your camera off, the transfer will still continue until finished. At that time the camera's Wi-Fi will shut down and then your computer will try to connect with its usual router, meaning you'll have to do this entire procedure all over again next time.

Frequently Asked Questions:

Q: Can you specify the focus point using any of these remote methods?

A: Yes, and it works just like it does on the camera. If you set the Focus Area to something like Spot, you can click on the subject to specify a focus point, then hit the AF button to focus there. Then take the picture. The only thing you can't do is the "Touch Shutter" function – specifying the focus point and taking the picture must be two separate operations.

TIP 1: If you're using either USB or Wi-Fi/Ethernet via Access Point, the Imaging Edge Remote software will time out after 5 minutes, after which you'll have to re-establish the connection before shooting more.

*TIP 2: Image transfers aren't instantaneous, especially if you're shooting RAW+JPG. But you can configure the **Remote Shoot Setting** menu to only transfer the .jpgs over for more immediate results.*

Q: What happens if you turn the camera off before the image transfer finishes?

A: The image transference will finish, and then the camera will shut down. If you turn the camera back on before the image transference completes, you can continue to shoot normally, and the new images will be added to the queue.

If you're using the Wi-Fi Direct connection option, you'll have to re-establish the connection again each time you want to shoot tetheredly because your computer will probably have fallen back to its usual access point.

2.5.5 ENCRYPTING YOUR WI-FI CONNECTIONS

The A7R V has the ability to encrypt Wi-Fi communication with your smartphone using the **MENU ➔ 🌐 ➔ Network Option ➔ Access Authen. Settings** function (which was discussed in 2.1.2 for the smartphone, and Sections 1.3.3 and 1.3.4 for the PC).

2.6 UPLOADING FILES VIA FTP

The File Transfer Protocol (FTP) was one of the earliest utilities written for the ARPAnet to help research institutions move files between their respective computers. Although the ARPAnet has now morphed into the Internet, and things like web browsers have overtaken FTP as the dominant way of moving data, FTP never died, and is still in use by institutions worldwide. Your camera can transfer selected files via FTP to any other computer *anywhere in the world* (as long as you're connected to a Wi-Fi access point or Ethernet network via USB or your phone via a USB-C cable) which has an FTP server instance running on it.

FTP has a lot of variables, so this section might seem a little hairy. But once configured, it's the fastest way to bulk upload many images to a remote computer. So don't let this scare you off.

Before we begin, if you don't have access to an FTP server, here's how to configure your home computer to act as one in the background:

Configuring IIS on Windows 10: http://bit.ly/2v0VOoH

Mac OSX: https://bit.ly/35RParL

Linux: (Linux users already know. ☺)

2.6.1   USING FTP

To begin, you must enter your FTP login credentials into the camera. You only have to do this once.

1. **MENU ➔ ⊕ ➔ FTP Transfer ➔ FTP Transfer Func. ➔ FTP Function ➔ On**
2. Enter your FTP login credentials into the camera: **MENU ➔ ⊕ FTP Transfer ➔ FTP Transfer Func. ➔ Server Setting ➔ [Choose FTP Server 1 – 9] ➔ [Center button].** This makes the entry you just chose the default FTP server.
3. Then hit **Right arrow ➔ [Center button].** This brings up the menu in **Figure 2-12b.** From here you're asked to configure 4 categories of settings:
   a. **Display Name** – This is a nickname you give to your server so you can recognize it easily.
   b. **Destination Settings** – Here you put in the URL for your FTP server. There's also these variables:
      i. **Host Name** – the URL you usually FTP into.
      ii. **Secure Protocol** – you can actually encrypt the communication, which involves the use of a root certificate ("FTPES") described in Section 9.7.3 ("Import Root Certificate") in the original book, or a Secure FTP that doesn't require a certificate ("SFTP"). For the time being keep this to "off".
      iii. **Root Certificate Error** – If there's a problem with the certificate used for encryption, do you want the camera to connect and try to upload anyway? Select "Connect" unless you absolutely are worried about eavesdropping on your upload. This feature is greyed out unless Secure Protocol (above) is set to On.
      iv. **Port** – this is the default router port. Keep this intact unless you have good reason to change it.
   c. **Directory Settings –**
      v. **Specify Directory** - Here you can specify a subdirectory into which your images will be placed.
      vi. **Directory Hierarchy** – Choose from Standard (recommended) or "Same as in Camera".

vii.   **Same File Name** – If the camera detects that a file with the same name it's going to write already exists in the destination directly, you can tell the camera to either "Overwrite" or "Does Not Overwrite" (recommended).

b.   **User Info Settings** – Input your FTP username and password here. (Case sensitive).

c.   (There was a "Passive Mode" menu item here (**Figure 2-12c**), but it seems to have been removed in Firmware v3.0.)

4.   Make the server you configured above the default FTP server via **MENU ➔ ⊕ ➔ FTP Transfer ➔ FTP Transfer Func. ➔ Server Setting ➔ [Select the FTP Server you just configured] ➔ OK.** If successful, you'll see a "Connected" message at the bottom of the screen similar to that shown in **Figure 2-12a**.
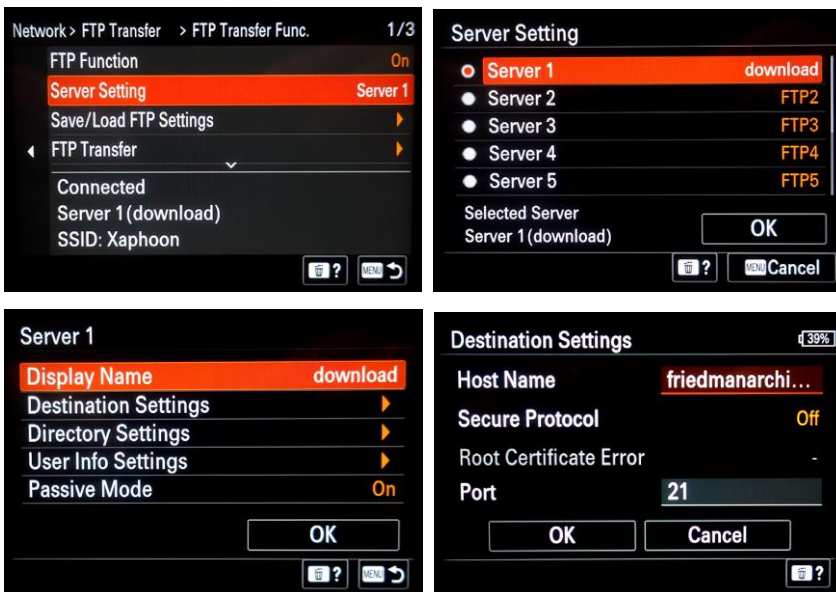
Figure 2-12: *You can configure up to 9 different FTP servers in the camera. You only have to do it once.*

Once the above is configured, here's what to do to transfer your image:

1. Initiate the FTP Transfer function via **MENU → ⊕ → FTP Transfer → FTP Transfer Func. → FTP Transfer → [accept all defaults] → OK.** You can specify files with a certain date, or of a certain type, or those that have been protected via the Protect function (Section 8.3.1 in the original book), or those image that have not yet been uploaded.
2. Confirm the total number of images and total number of megabytes to upload, and hit OK.
3. Wait.
4. Once the transference is done, the camera will say, "Complete. Continue with FTP transfer?" What it's actually asking you is, "Do you want to go back to selecting pictures for a second upload, or do you want to exit altogether and go back to taking pictures?" Hitting "Cancel" goes back to taking pictures.

Wait! You can do more! For example, you can have your camera automatically connect and upload via FTP every time you take a picture. Here are ALL of the rest of the submenus for **MENU → ⊕ → FTP Transfer → FTP Transfer Func.** and what they do:

Save/Load FTP Settings	All of the servers and passwords are saved to a file on the memory card. The camera recommends password protecting the file but that is completely optional.
FTP Transfer	This is where you can manually initiate the transference of a group of images.
Display FTP Error Info	View your connection or transference errors here as a first step toward troubleshooting.
Display FTP Result	This gives you a scoreboard of images that have and have not been uploaded successfully ("No. of Scs. Trn. Img.") or failed ("No. of Fail. Trn. Img.").
Auto FTP Transfer	My favorite FTP function. When On, the camera will automatically try to connect and upload every time you take a picture.

Auto FTP Target	What type of media do you want automatically sent with the Auto FTP Transfer feature (above)? You can select Still Image and/or Movies, and of the movies, you can select between all of them or only ones previously marked with a "Shot mark" (Section 1.1.15 in the original book).
RAW+J/H Transfer Target	Do you want to upload just JPEG/HEIF, or RAW too? (Or just RAW?)
Transfer JPEG Size	Choose from Large or Small.
(Px) Transfer Target	Do you want to upload full-scale movies or just proxies? (Or both?)
FTP Power Save	Do you want to the camera to disconnect from the FTP server after a timeout?

TIP 1: If you mistype your FTP server name, the camera will give you a "Failed to acquire an IP address. Check the DNS server setting or the DESTINATION SET." when you try to connect. What it means is that it failed to get an IP address FOR THE SERVER YOU'RE TRYING TO REACH, not that it couldn't get an IP address from the router. Check your spelling and try again. (Ask me how I know this…)

TIP 2: If you're out in the field, the fastest way to upload images via FTP is to connect the camera and your phone via USB-C cable (with USB-C at both ends) and use the new Tethering Connection feature, described in Section 1.3.5.

TIP 3: There's a more in-depth Sony FTP Help Guide, written in the classic Sony documentation style. It's available at https://helpguide.sony.net/di/ftp_2110/v1/en/index.html

2.6.2   *SHOOTING TETHERED(LY) VIA WI-FI AND FTP*

Last year I took on a contract position as a headshot photographer for a company that specializes in branding for real estate agents (one of the few remaining fields which understand the value of traditional portrait photography). A day of shooting with them will be filled with periods of shooting and then periods of image selection and retouching and form filling-outing. My goal was to be able pick up the camera, start taking pictures, and then having the pictures instantly show up on the laptop without any futzing with memory cards.

Easy, right? Lots of tethered shooting options already exist, right? Regretfully, none of the usual methods would work for me.

What was the problem? Well, when shooting tethered using a USB cable, the camera communicates with a desktop app that times out after 5 minutes of inactivity. I didn't want to have to re-establish the connection every time I picked up the camera. And shooting with Wi-Fi is great for when you're sending your images to an FTP server somewhere around the world, but it's not at all obvious how to send it to a laptop on an internal local network. What's the address of the FTP server in that case?

So I set out to figure out how to send pictures automatically from my phone to my laptop using my phone as a wi-fi hotspot. (That way I don't have to connect the camera and the laptop to a new SSID every time I go to a new location.)

After much trial and error I figured it out. It works great, and I share the secret with you here in this downloadable .pdf file: https://friedmanarchives.com/~download/A1/Shooting_Tetheredly_via_Wi-Fi-and_FTP.pdf . You're welcome. :-)

2.7   GEOTAGGING YOUR IMAGES VIA YOUR SMARTPHONE

To geotag images when you're out in the field, you and your smartphone work together via the built-in Bluetooth function. Every time you take a picture, your smartphone will tell the camera where in the world you are, and your camera will embed that information into the EXIF field of your image file. This is a much better solution than embedding a GPS receiver into the camera itself (which Sony used to do), since your phone and lock onto a signal faster and can triangulate with nearby cell phone towers for additional accuracy.

2.7.1   SETTING UP BLUETOOTH / GEO-TAG FEATURE

To start, you need to pair your phone and camera via Bluetooth as first described in Section 2.1.1. You only have to do this once.
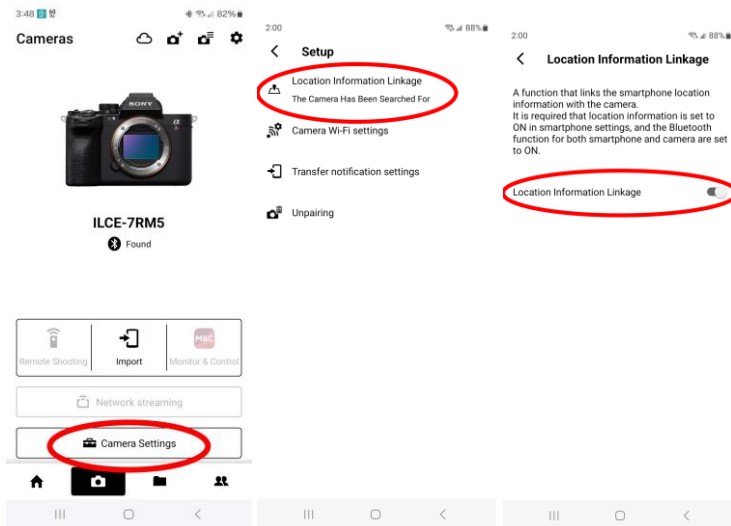
Figure 2-13:   *It is now much easier to configure your camera and smartphone to allow automatic GPS Geo-tagging of your images.*

Now open the Creators' App, hit the "Camera Settings" icon and then choose "Setup", then the "Location Information Linkage" option (first one), then touch the switch so it moves to the right (meaning it's On).

That's it! You've now set it and now you can forget it.   Even after you reboot your smartphone, it will always connect to the camera when it turns on and upload the current GPS coordinates when you take a picture.

TIP: *It takes about five seconds between when you turn your camera on and when the GPS logo* *appears on some DISPlay screens, letting you know that phone connectivity has been established and GPS info will now be embedded in your next photos. If you take a picture before that time no GPS information will be recorded.*

2.7.2 HOW DO I SEE THE GEO-TAGGED COORDINATES?

Every photo editing package shows GPS coordinates differently. **Figure 2-14** and **Figure 2-15** show how they appear in Imaging Edge Desktop - View and Lightroom, respectively.
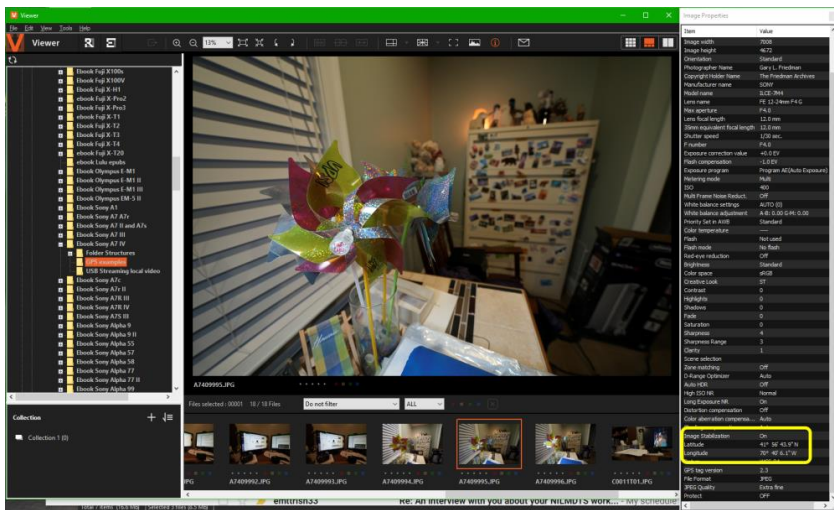

Figure 2-14: You can see the GPS coordinates in Imaging Edge Viewer by right-clicking on the image and choosing "Information Palette". The info appears at the bottom.

TIP: Although I find the geotagging feature extremely useful (especially when viewing images years after they were taken), it only works with one Sony camera at a time. Often when I'm on major trips (like my shooting assignment in Vietnam; see blog post at https://bit.ly/2CfOudM) I use several different cameras and I want all of my images to be geotagged automatically. In cases like that I ditch this Bluetooth geotagging feature (great as it is) and instead use a smartphone app called Geotag Photos Pro. With this app running; your smartphone logs a GPS reading every minute or so, and then when you get back to your computer you can merge the GPS

> *coordinates into each image automatically by matching the time stamp. Works great; and doesn't drain the smartphone battery too much after a full day. More info at https://www.geotagphotos.net/ .*
>
> *There is also a free, open-source app called GPSLogger (https://gpslogger.app/) which runs on Android and is about 10x more complex than it needs to be. ☺ Its claim to fame is being extremely battery efficient so your smartphone doesn't run down while in the field. I haven't tried it so I can't vouch for that claim, but hey – it's free!!*
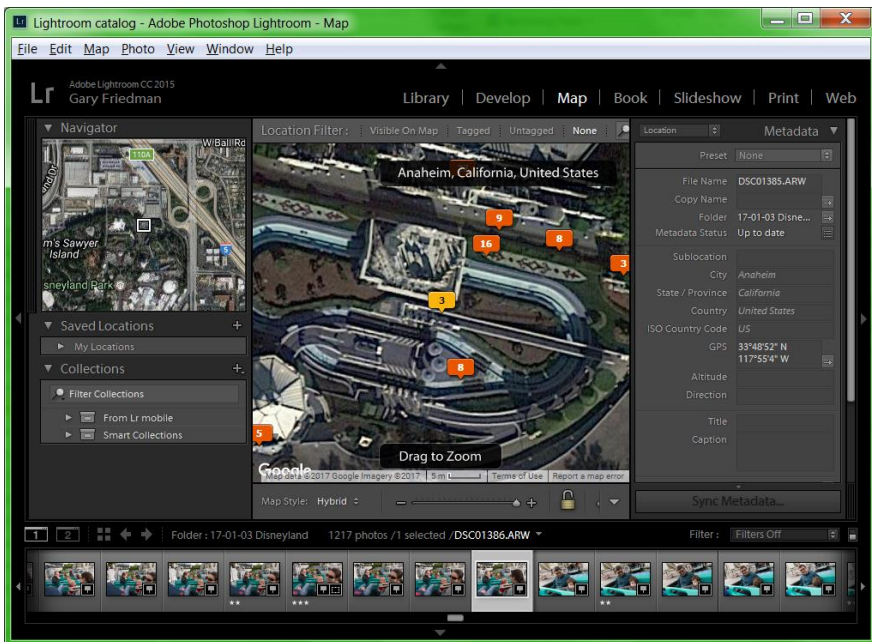
Figure 2-15: *Lightroom does it better by showing you a map with flags where you took individual pictures. Just use the "MAP" tab up on top.*

2.8   UPLOADING TO NEWS AGENCIES VIA THE TRANSFER AND TAGGING APP

I'm excited about this feature because there have been SO many times in my life when I was covering newsworthy events and I wanted to have the capability to upload my images while still in the field (instead of waiting to get home, plow through Lightroom, and then upload my favorite 6.)

This feature is geared specifically for news photographers who are working under deadline, and they want to upload their timely images to news agencies while still in the field.

Here's a Sony-produced YouTube video which gets the idea across very well: https://youtu.be/Sc2O7TIkzO0 .

Here's how the system works, at a high level:

1) You pre-configure the camera and the tablet / smartphone to work together (you can transfer images to the tablet / smartphone 3 different ways). You also pre-load as many of the captions / keywords / descriptions / locations as you can for the event you're about to attend.
2) Take pictures of your event and pull them over to your smartphone or tablet using one of 3 methods.
3) Once the images have been transferred, you can caption / keyword your images via typing or speaking, and/or apply pre-defined templates for the event to each image, crop, and then upload the final images from your smartphone / tablet to the newswire of your choice via FTP while you're still there (or as you drive home.) This final FTP step occurs on the smartphone, over your phone's data connection.

Despite Sony's very thorough documentation on this feature, I had a difficult time getting it all configured the first time, and so I've written a lengthy step-by-step guide to fill in those gaps and make your first experience playing with it easier. I've made it available via download: https://bit.ly/3GGKF0C .

> **TIP:**   *Some things are easier to explain via video as opposed to words. So I made a YouTube video showing how this and a few other impressive yet obscure features operate. Here you go: https://youtu.be/fyfdusGrWK4*

*** END OF SUPPLEMENT ***