

Canon EOS C80



September 9, 2024. Canon announced the new Cinema EOS C80 Camera. Full Frame, RF mount, compact and lightweight, it has a 6K (26.67 Megapixel) sensor that measures 36.0 x 19.0 mm (40.7 mm diagonal). And look—it has a 4K 12G SDI Output BNC!

You could say this is the inevitable successor to the Cinema EOS C70 Camera that came out four years ago—September 2020. The C70 was the first RF mount Cinema EOS Camera. It became a breakthrough success because its Super35 4K sensor was similar to the Canon EOS C300 Mark III and yet it came in a much smaller body, albeit with fewer capabilities.

At that time, FDTimes wrote, “I expect the new Canon EOS C70 will blaze the path for an entire line of new RF mount cine cameras from Canon in both Super35 and Full Frame.”

Fast forward to November 2023. At InterBEE in Tokyo, Canon Inc Manager Isamu (Sam) Senoo warned me, “Jon, without telling you how, we’re going to keep you very busy in the coming year with new products.” He was right. It’s been a steady stream: RF mount Cinema Primes, EOS R5 C, RF24-105 F2.8, EOS C400, EOS R5 Mark II...

And so, on August 9, 2024, Yuji Tanaka (Canon USA Senior Man-

ager and Product Planner) and Paul Hawxhurst (Canon USA Senior Technical Specialist) arrived, bearing cameras and lenses and a pre-production Cinema EOS C80.

If you know how to use a C70 (and who doesn’t?) the new C80 will be familiar and you’ll be shooting almost immediately. It will also be familiar to users of the new C400—with main differences being lower top speeds and recording to SD cards rather than CFexpress and SD.

The EOS C80 camera bridges the gap between Canon Photography EOS and Cinema EOS families. This is the camera you want when you want high quality video with something that is unobtrusive or easy to carry in a backpack. It is small and lightweight—2.6 lb—and a pleasure to handhold.

The C80 has a thin, motorized ND filter unit that is only 6 mm thick. It fits within the 20 mm gap between the RF mount and the sensor. ND + and - buttons are in the familiar Cinema EOS location, on the camera left side, with 0, 2, 4, 6, 8 and 10 stops of light reduction. *Note that for 8 and 10 stops (ND2.4 and ND3.0) two filters are engaged in the optical path, shifting the flange focal distance of the lens accordingly. Your focus marks will be different and you may not reach infinity on some lenses.*

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There are 13 assignable custom buttons for quick access to more than 80 functions. Have your P-Touch Label Maker ready with 6mm white on black tape to identify all those buttons.

The camera has a Canon Full Frame 6K back-illuminated stacked CMOS sensor with Dual Pixel AF II and Triple Base ISO, like the EOS C400. It records to SD media—there are two SD card slots on the camera right side.

The camera records in RAW LT, RAW ST, XF-AVC, XF-AVC S and XF-HEVC S formats. For example, Full Frame RAW LT 6000x3164 12-bit is available from 1 to 30 fps. XF-AVC Intra-Frame Full Frame 4K goes from 1-60 fps and 2K from 1-120 fps. In XF-AVC, AF-AVC S, and AF-HEVC S, the top frame rate in 4K is 120 fps, while in 2K resolution it's capable of 180 fps.

There are two available sensor modes: Full Frame and Super35. In Full frame, the effective image size is 36.0 x 19.0 mm (40.7 mm diagonal) at 6000x3164, 4096x2160 and 2048x1080 resolutions.

At 3840x2160 and 1920x1080 resolutions, image size is 33.8 x 19.0 mm (38.7 mm diagonal) So, yes, you can have Full Frame HD.

In Super 35mm (Crop) Sensor mode, the effective image size is 26.2 x 13.8 mm (29.6 mm diagonal) at 4368x2304, 4096x2160 and 2048x1080 resolutions.

And at 3840x2160 and 1920x1080 resolutions, image size is 24.6 x 13.8 mm (28.2 mm diagonal).

The Cinema EOS C80 has an active fan cooling system. Air intake is on the camera left side. The exhaust vent is on the camera right side, above the handgrip. This cooling system is isolated from the sensor and electronics to protect them from water, sand, and dust and allows uninterrupted recording for extended periods of time.

The menu lets you select ALWAYS ON or AUTO. In AUTO mode, the fan will automatically stop when you're shooting, but if the camera gets hot, the fan will go on during a take. You can adjust this setting from the menu as well: FAN SPEED (REC).

The camera uses the same onboard battery as the EOS C400: BP-A30N or A60N — "N" as in new style 14.4 V DC battery. Canon's CG-A10 or A20 charger will fully charge the A30N battery that comes with the camera in about 175 minutes. An A60N will take about 310 minutes to full charge.

There's a 24 V DC (23.7 - 25 V) DC IN external power connector at the rear and the camera comes with a CA-CP300 B Compact Power Supply.

By the way, older style BP-A60 and A30 will also work, though run time may not be as long.

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Canon Cinema EOS C80 with Canon RF 24-105mm F2.8 L IS USM Z zoom lens.

Accepts optional Canon Power Zoom Adapters (servos) PZ-E2 and PZ-E2B. (The EZ2B has a 20-pin connector for external or remote zoom control.)



Canon Cinema EOS C80 with Canon RF 35mm F1.4 L VCM lens



Canon Cinema EOS C400: A few Quick Specs

Lens mount	RF mount. 20 mm Flange Focal Depth, 54 mm Inside Diameter.
Sensor	Full Frame 6K CMOS sensor. Approx. 26.7 megapixels total (6202 x 4300). Actual picture area at 6000 x 3164 Full Frame Sensor Mode: 36.0 x 19.0 mm (40.7 mm diagonal)
ISO sensitivity	160-25600 (Extended: 100-102400)
Triple BASE ISO	Clog2 / Clog3 RAW = 800, 3200, 12800. Canon 709, PQ, HLG, Wide DR = 400 / 1600 / 6400 BT. 709 Standard = 160 / 640 / 2500
Sensor modes	Full Frame, Super35 Crop.
Dynamic range	16 stops in Canon Log 2 at Base ISO 800.
Recording formats	Cine: Cinema RAW ST, LT, XF-AVC, XF-HEVC S, XF-AVC S / Photo: JPEG
LCD Monitor:	3.5-inch (8.8 cm diagonal) touchscreen, approx. 2.76 million dots, (1280 x RGB x 720)
Outputs:	Full size HDMI connector and SDI BNC connector
Dimensions — camera body only	160 x 138 x 116 mm / 6.3 x 5.4 x 4.6 in. (W x H x D)
Weight — camera body only	1310 g / 2.9 lb

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Front



Top

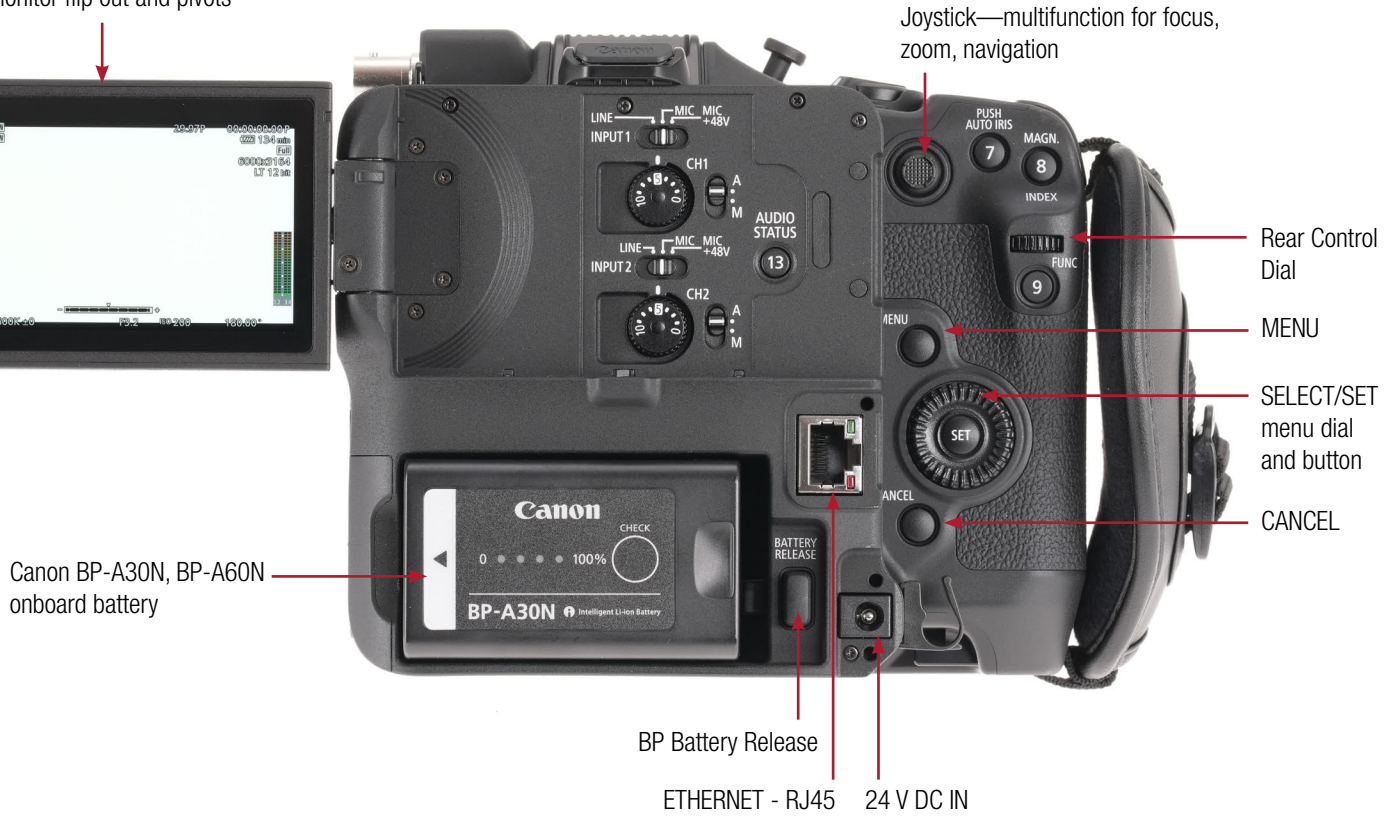


Canon EOS C80

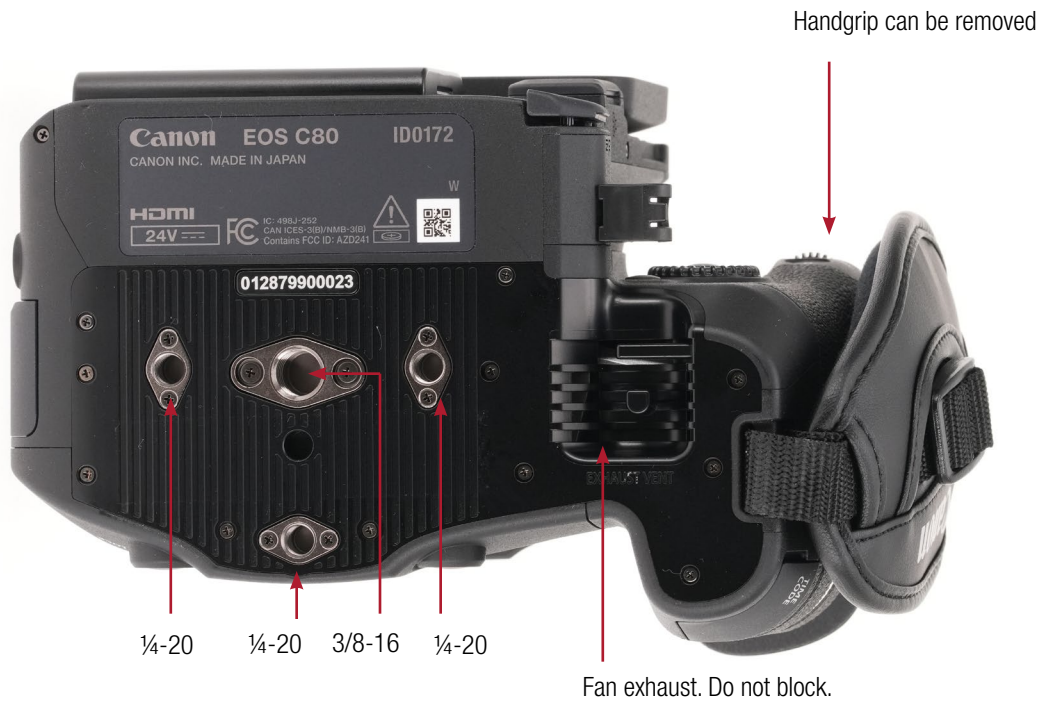
3.5" (8.8 cm) 2.7 million dot 1280x720 LCD monitor flip out and pivots



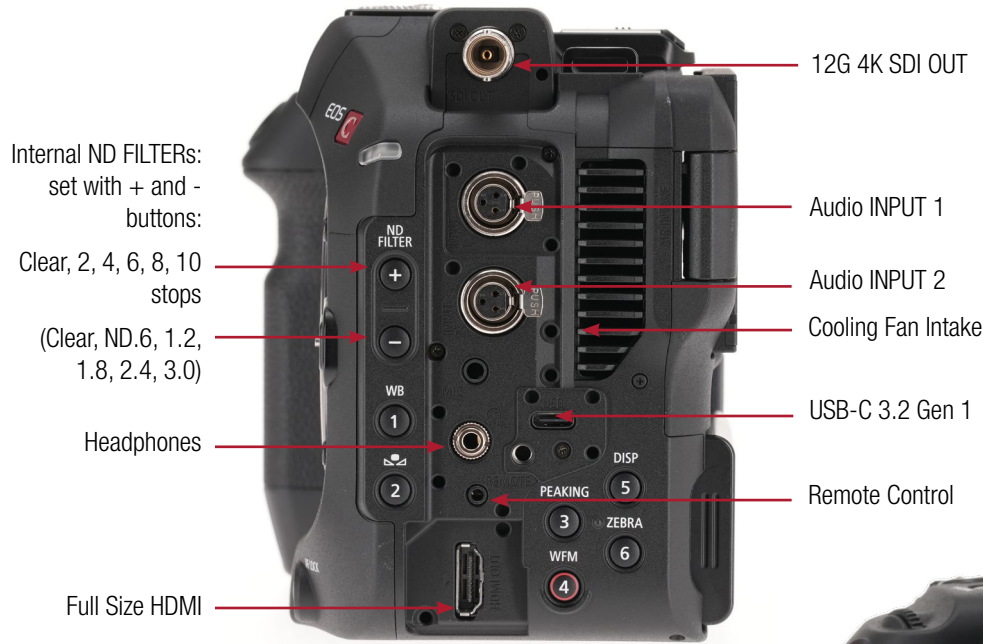
Rear



Bottom



Canon EOS C80



Camera Left Side
with connector covers
removed

Camera Left Side
with covers on



Camera Right Side
with SD Media Door
open, BNC cover
removed, and
Handgrip strap
removed



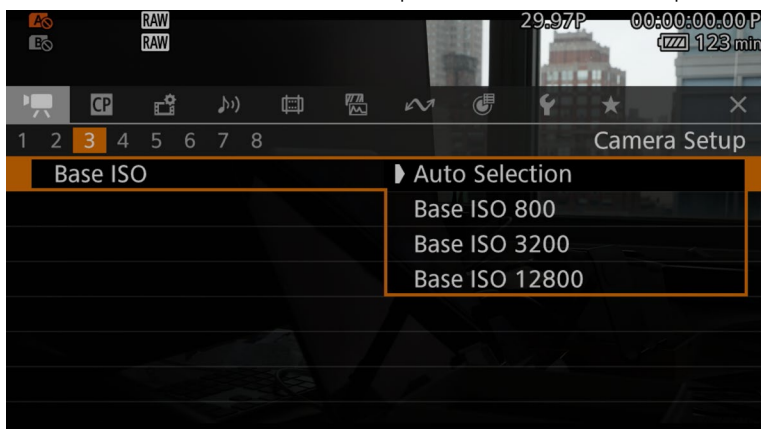
Canon EOS C80 Menus



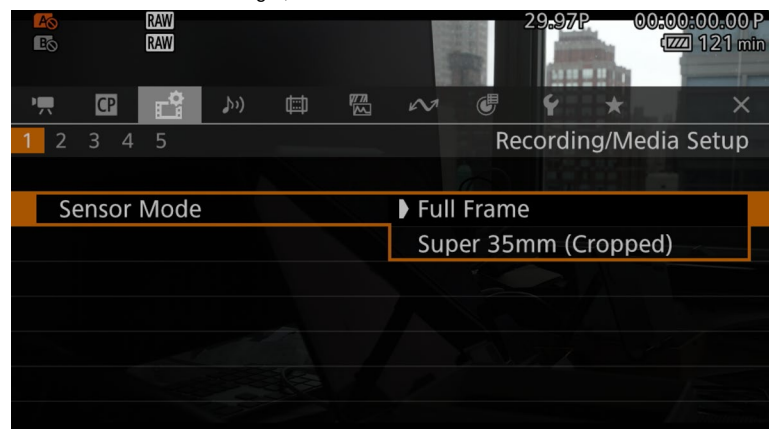
1. Set internal ND filter units to stops or ND or fraction. I like stops.



2. Set Shutter Mode to Angle, as in 180° shutter and not 1/48th second.



3. Base ISO: Auto Selection works well.



4. Sensor Mode: Full Frame.



5. Let's record in Canon Cinema RAW LT.



6. There are 2 SD Card Slots. Choose how to use the 2nd Slot.

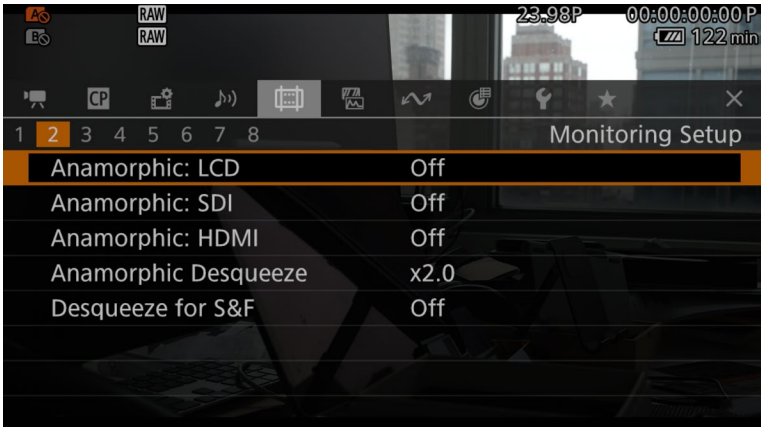


7. There are lots of Aspect Ratios from which to choose.

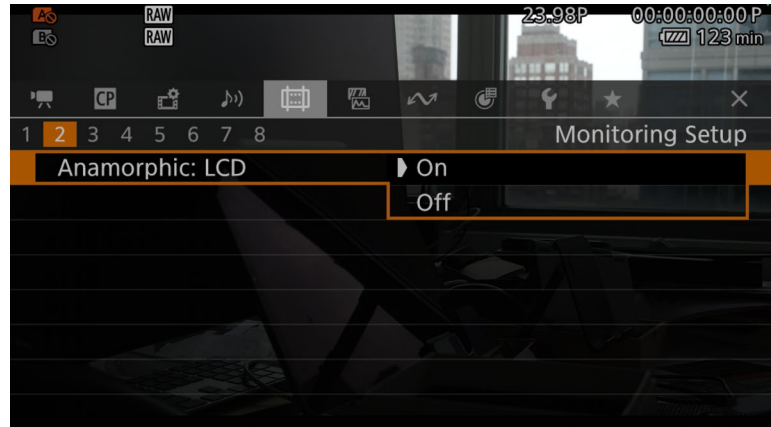


8. Or, create your own Custom Aspect Ratio with easy numerical entry.

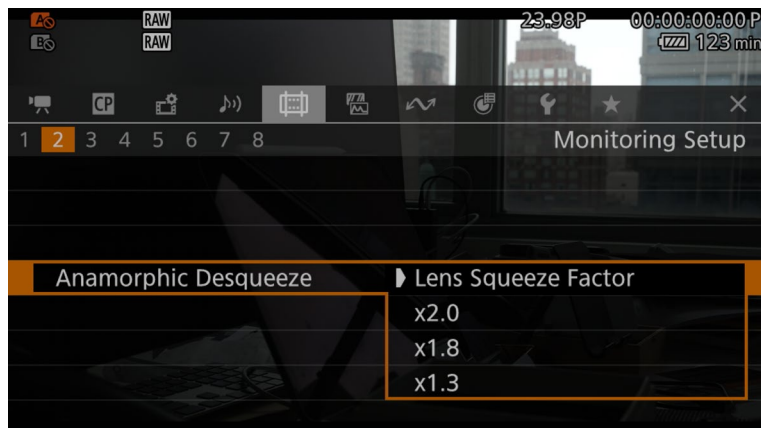
Canon EOS C80 Menus



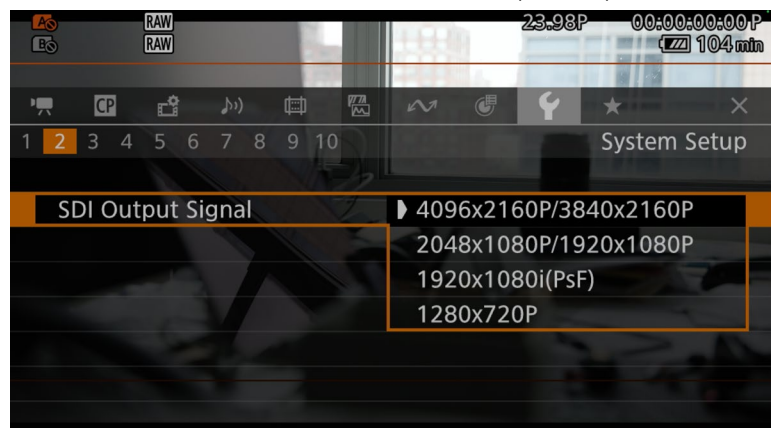
9. For anamorphic lenses, choose where to view desqueezed.



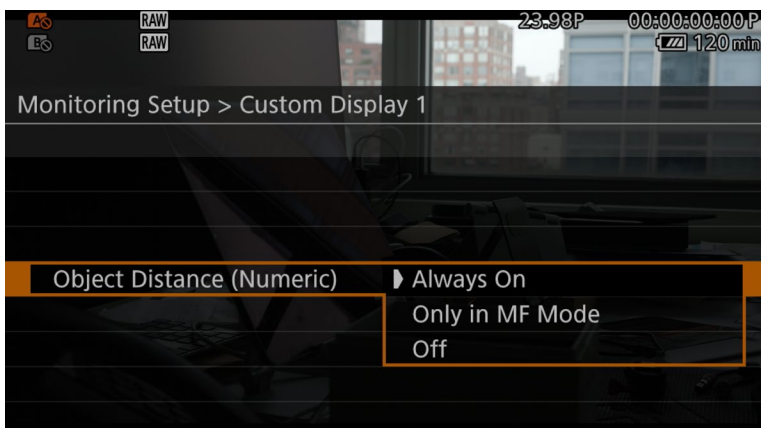
10. Here, we turned on the onboard monitor's anamorphic desqueeze.



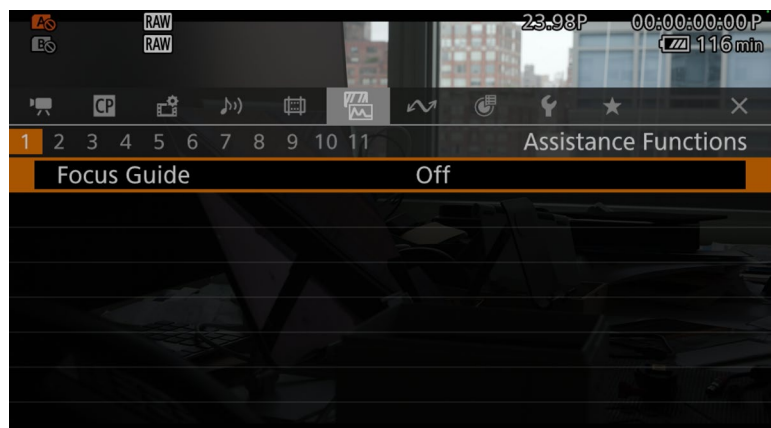
11. These are the anamorphic desqueeze factors so far.



12. Choose the appropriate SDI Output for an external monitor.



13. Focus distance can be displayed in the viewfinder.



14. The Focus Guide is very good. Turn it ON for manual focusing.



15. Paul and Yuji. C80, C400, lenses and everything in one small case.



The best menu: Chicken Chashu Ramen at Meijin New York City.