**Fujifilm Digital Minilab Frontier 340 Specifications**

**Type:** Floor-type, normal-light operation (input, laser printer, processor, cutter, sorter in one unit).

**Scanning section:** Area CCD.

**Film carriers:**
- Dual-format Interchangeable Film Auto Carrier (accepts 135F/H/P/Hv color negatives or Advanced Photo System [OX240]).

**Image processing:**
- Optimal color reproduction processing, color gradation control, super-sharpness processing, hyper-size processing, soft focus, facial expression enhancement, red-eye elimination, red-eye correction, a variety of compositions (e.g., calendar prints, greeting cards, multi-prints) and others.

**Display:** 17-inch CRT color display.

**Input light source:** LED.

**Printable films and sizes:** 110, 126, 135F/H/P/Hv/full-panorama, Advanced Photo System (OX240), 120, 220.

**Acceptable digital media:**
- Prints from ZIP™ disk, CD-R, MO disk, SD Card, Memory stick.
- Digital cameras (selected format), SmartMedia™, xD-Picture card, PC card, CompactFlash™, SD Card, Memory stick.
- USB port, Ethernet port, RS232C port.

**Exposure system:** Scanning exposure system using RGB lasers (solid-state G and B lasers).

**Print sizes:** 89 x 89 mm ~ 203 x 305 mm, A4.

**Paper:** FUJICOLOR paper (Crystal Archive Paper Type ONE).

**Paper magazine:** Single paper magazine (standard accessory).

**Expansion capability:** 100-base Ether (connectivity to internal PC or from external PC for FDI) port, USB ports, and RS232C port.

**Processing capacity:**
- 135: 3R/127 x 89 mm: Approx. 900 prints/hr. (using 127 mm width paper)
- 4R/152 x 102 mm: Approx. 850 prints/hr. (using 152 mm width paper)
- Advanced Photo System (OX240):
  - 21 rolls/hr. (3R C/H/P-mixed format; 25 exp. roll and index print)
  - 18 rolls/hr. (4R C/H/P-mixed format; 25 exp. roll and index print)
- (using 89mm (for 3R) and 102mm (for 4R) width paper)

**Media Prints:**
- (single-scan digitization)
- With main Controller:
  - 3R / approx. 630 prints/hr.
  - 4R / approx. 450 prints/hr.
- With Imaging Controller:
  - (Meeting Fujifilm recommended specs)
  - 3R / approx. 900 prints/hr.
  - 4R / approx. 650 prints/hr.

**FUJICOLOR CD Writing:**
- With main Controller:
  - 9 CDs/hr.
- With Imaging Controller:
  - (Meeting Fujifilm recommended specs)
  - 18 CDs/hr.

**Print to print:** Available with optional software.

**Processing time:**
- Dry to dry: 1 min. 40 sec.
- Processing chemicals: Chemical system CP-49E.

**Power requirements:** AC200-240V (50/60Hz) 4.8KVA.

**Dimensions:** 1,555 (W) x 931 (D) x 1,668 (H) mm.

**Weight:** Approx. 500kg (550kg during actual operation).

**Installation space:** Approx. 1.2 m².

---

**FUJI PHOTO FILM CO., LTD.**

FUJI PHOTO FILM CO., LTD.
36-30 NISHIAZABU 2-Chome, MINATO-KU, TOKYO 106-8620, JAPAN

---

**NEW**

**DIGITAL MINILAB Frontier 340**

Superlative image quality and improved speed in a compact minilab.
Fujifilm is a pioneer in digital image-processing technology, including sophisticated laser exposure system – with innovations at every step. The results can be seen in the extraordinarily high print quality of the Frontier’s output. And superior print quality means fewer rejects and more satisfied customers.

With its improved, icon-based user interface and its larger operations screen, the Frontier 340 is easier than ever to use. Standard operations are automated as fully as possible to reduce the potential for error, and maintenance routines are designed to be as clean and straightforward as possible.

While it’s vital to meet the demands of your current customers, it’s also important to keep an eye to the future. The Frontier 340 is flexible enough to address both present and future needs, letting you offer your customers a full range of special services. These include production of ID photos, calendars, and many other special print formats as well as reading and writing capabilities covering a variety of digital media.

High speed, High capacity, Small size
Outstanding quality – thanks to new, faster processing technology.

The Digital Minilab Frontier series has won worldwide acclaim for the incomparable true-digital print quality produced by a revolutionary CCD scanner and FujiFilm’s proprietary, state-of-the-art laser exposure system. The newest Frontier 340 model represents a major technological breakthrough, achieving an outstandingly high production speed of 900 prints/hr at 3R size or 800 prints/hr at 4R size, which has never before been attained with a machine of this size, thanks to a newly developed, faster-processing chemical system.

The Frontier 340 performs its magic in a remarkably small space: with a footprint of just 1.2 square meters (13 sq. ft.), you can place one in a small kiosk or in a corner of a larger store, offering quick, onsite processing service wherever your customers are. And in spite of its many advanced features, the Frontier is easier than ever for the operator, with an improved icon-based user interface and a larger operations screen. With the Frontier 340 your customers can enjoy all the extraordinary benefits that the new digital era has to offer.
Technical advancements that make a visible difference.

Innovative digital imaging technology is the basis for the Frontier’s excellent reputation throughout the world. From the area CCD to the solid-state laser exposure system, each innovation has been developed with the goal of providing reliable, optimal image reproduction. In between digital input and output, the Frontier incorporates an impressive suite of image-processing software designed to make each and every photo come out as close to perfect as possible. The result of all this digital magic is quite clear – better prints, fewer rejects, and happier customers.

"Image Intelligence" is a set of sophisticated digital image-processing software technologies incorporated in the Frontier series. The software includes a "Scene Analysis Algorithm" that analyzes and diagnoses the captured scene, and an "Image Expression Algorithm" that introduces optimal corrections to the analyzed scene.
Simple Operation

A new operations interface that’s easier than ever.

Improving on an already easy-to-use system, the Frontier 340 introduces a new, more intuitive user interface based on large, descriptive icons with text rather than abbreviated pull-down menus. Operational steps and options are clearly laid out onscreen and can be quickly selected. The Frontier also introduces a larger display – 17 inches in size – to make screen operations even more user-friendly.

Simple user interface

Day-to-day production and regular maintenance operations are all accessible via a simple graphic user interface, so even inexperienced operators can soon master their jobs without extensive training. There’s also a detailed onscreen help system that provides step-by-step explanations and instructions for all these operations.

Easy digital media options directly from the main unit

The Frontier 340 offers optional software to handle digital media services like Digital Imaging Print Service and Digital Imaging Data Writing Service in the same manner as regular film-processing operations. These services, which once required the installation of an Imaging Controller unit, can now be handled directly from the Frontier 340’s main control screen.

Single-scan digitization

Now film only needs to be scanned once, as image data from the film is digitized at the same time as regular prints are produced. Thus, operations like creating a FUJICOLOR CD or storing image data for later use no longer require an extra scanning step.

Flexible-use film carrier

Film loading is easier thanks to a Dual-format Interchangeable Film Carrier that accommodates both Advanced Photo System film and 135 film, allowing automatic "one-pass" processing.

Auto calibration

The Automatic Calibrator, located on top of the Frontier 340, simplifies daily maintenance by automatically adjusting color and tone reproduction to a specified standard, for print quality that’s consistent from one day to the next.

Perfect one-channel print system

The "perfect one-channel print system" automatically detects the size and type of film, controlling all processing while eliminating the need for time-consuming manual selection and adjustment on the part of the operator. Different film types (negatives, monochrome film, reversal film, and even digital camera prints) are all handled together, so there’s no need to separate different kinds of film.

Cross-over rack auto cleaning

The Frontier 340 performs cross-over rack cleaning automatically each time the unit is turned off. As a result, the regular maintenance task of cleaning and drying the cross-over racks manually has been reduced from once a day (in conventional lab systems) to only once a week*.

Note: These services require optional media drives, such as a CD-RW drive and PC card reader, etc. This feature requires version 2.0 of the standard software, available in 2003. They are also available with an Imaging Controller. Processing via an Imaging Controller will increase processing capacity, see specs on last page for figures.

*Some racks excluded.
A flexible configuration ready to adapt to your specific requirements.

As customers’ requirements grow more sophisticated and more diverse, the Frontier 340 system is ready to adapt to a dynamic environment. The Frontier handles a full range of digital media and digital camera storage media, including various image-data formats.
**High-quality Prints**

### Scratch and dust elimination to clean up flawed film

Marks caused by scratches and dust on the original negative are especially noticeable in extra-large-size reprints, but the Frontier 340 automatically corrects these flaws using an exclusive correction technology. The result is a natural-looking final image, which translates into better customer satisfaction.

### Standard image-correction features

Sophisticated image-correction technology is built into the Frontier 340 system as a standard.

- **Backlight correction**
  Image density adjustment if performed independently for foreground and background areas, so the Frontier is able to automatically compensate for strongly backlit scenes.

- **Sharpness adjustment**
  Fujifilm’s proprietary HyperSharpness process enhances the edge definition of objects, colors and shadows while compensating for film grain.

- **High-contrast correction**
  This compensates for problems in flash shots where the foreground figures can appear too light and washed out while the background is dark and murky.

- **Over-/under-exposure compensation**
  When an underexposed or an overexposed negative is detected, the density and contrast of the image can be adjusted automatically.

### Further image-enhancement features

Optional image-enhancement features are available for various special purposes.

- **Red-eye compensation**
  The appearance of red eyes due to a bright flash can be corrected automatically after mouse selection with this function. Manual retouching is also possible.

- **Soft-focus**
  The soft-focus function softens the overall tone of a photographic image. It can be an effective method for creating elegant portrait shots.

- **Cross-filter**
  This feature places a 45-degree cross of light on any point on the photo to create a subtly dramatic effect. Light crosses can be added and removed manually.

- **Free cropping**
  This feature lets you take any selected area of a photo and use it to fill the entire frame; the area can also be rotated at the time of selection.

- **Lens distortion correction***
  The Frontier’s image processor is designed to detect less-than-ideal lens conditions and compensate automatically, by brightening the darker corner areas and correcting distortion around the photo’s edges.

### A full selection of print formats and sizes

Handy index prints - with thumbnail copies of every frame on a roll of film - are produced automatically when a roll of film is processed, and they can also be custom-ordered. Standard-size prints in different formats and regular enlargement prints in a range of sizes are also available.

- **Handy index prints**

- **Standard Software**

- **Optional Software**

- **Variety Print Service**

- **Advanced Photo System index prints (IX240)**

- **135 index prints**

- **C format**

- **8” x 12” prints**

- **H format**

- **P format**

- **Variety Print (for Digital Image) Service Software (Standard)**

* This service is not available for digital images.
This software produces high-quality ID photos using either conventional film or digital camera data as the input source. The software incorporates automatic sizing and cropping functions so that the size of the face within the final ID photo meets preset specifications, regardless of the face size in the original photo. Several different sizes of ID photo, or photos from several different individuals, can be laid out on a single print, for more cost-efficient use of color paper. And for more convenient reordering, the original images and processed ID photos can be stored on digital media for later use.
Digital Imaging Print Services

Complete services to answer your customers’ digital-imaging requests

**DI Print Service**

*Digital Camera Prints*

This service lets you to process digital still camera images from a variety of file formats. The image data can come directly from a camera or from any of several different types of storage media.

*Media Print Service*

This software reads, then prints, digital images that were created or manipulated by image-processing software such as Adobe® Photoshop®, the software can read data stored in several different file formats.

*Print-to-Print Service*

This function transfers high-resolution image data from film or from digital media onto CD-R or other digital media, such as Zip™ disk and MO disks for storage.

**Optional accessories and production materials**

- Manual Carrier
- Reusable paper magazine
- Diffusion Box for 120
- Viewer
- Negative Receiver

**Digital Camera**

- IX 240 Film
- 135 Film (Reversal/Negative)

**Prints**

- Instant photos
- Index prints
- FUJICOLOR CD

**Optional**

- DI File Import/Export Service Software
- Hyper Reorder Service Software
- Tone Selection Service Software
- DI Simple Print Service Software
- DI Print/Data Writing Service Software

**Hot Folder Print Function**

Take computerized image data files and print them directly on the Frontier’s printing unit, without going through the regular scanning/printing process. (Import requires Adobe® Photoshop®)

**Job File Print Function**

Take image data from film scanned on the Frontier and convert it to BMP format, for later printing or further digital manipulation.

**Hyper Reorder Service**

Save print image and correction data, to ensure that reprints are identical to original prints in quality and color reproduction.

(Note: This service will be available in 2003.)

**Tone Selection Service**

Easily adjust color intensity and image contrast (gradation) directly from the Frontier’s main controller unit.

**DI Simple Print Service**

This software lets you take advantage of your existing local area network, giving Windows or Macintosh computers on the network easy access to the Frontier. With the Hot Folder print function, users simply copy an image file into a shared spool folder. This folder is checked at regular intervals, and any new files are printed on the Frontier. The Job File print function works in a similar way, but allows more detailed job specifications to be set.

**DI File Import/Export Service**

Take image data from film scanned on the Frontier and convert it to BMP format, for later printing or further digital manipulation.
Fujifilm Digital Minilab Frontier 340 Specifications

**Specifications are subject to change without notice. All brand names or trademarks are property of their respective owners.**

**Dimensions**

<table>
<thead>
<tr>
<th>Width</th>
<th>Depth</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>931 mm</td>
<td>410 mm</td>
<td>1,555 mm</td>
</tr>
</tbody>
</table>

**Type:** Floor-type, normal-light operation (input, laser printer, processor, cutter, sorter in one unit).

**Scanning section:** Area CCD.

**Film carriers:**
- Dual-format Interchangeable Film Auto Carrier (accepts 135F/H/P/Hv color negatives or Advanced Photo System (IX240)).

**Image processing:**
- Optimal color reproduction processing, color gradation control, hyper-sharpness processing, hyper-tone processing, soft focus, facial expression enhancement, monotone finishing, red-eye correction processing, a variety of compositions (e.g., calendar prints, greeting cards, multi prints) and others.

**Display:**
- 17-inch CRT color display.

**Input light source:** LED.

**Printable films and sizes:**
- 110, 126, 135F/H/P/Hv/full-panorama, Advanced Photo System (IX240), 120, 220.

**Acceptable digital media:**
- Prints from ZIP™ disk, CD-R, MO disk, FD, FUJICOLOR CD, Digital cameras (selected format), SmartMedia™, xD-Picture card, PC card, CompactFlash™, SD Card, Memory stick.

**Exposure system:** Scanning exposure system using RGB lasers (solid-state G and B lasers).

**Print sizes:**
- 89 x 89 mm ~ 203 x 305 mm, A4.

**Paper:**
- FUJICOLOR paper (Crystal Archive Paper Type ONE).
- Single paper magazine (standard accessory).

**Expansion capability:**
- 100-base Ether (connectively to internal PC or from external PC for FDI) port, USB ports, and RS232C port.

**Processing capacity:**
- 135: 3R/127 x 89 mm: Approx. 900 prints/hr.
- 4R/152 x 102 mm: Approx. 850 prints/hr.

**Media Prints:**
- (Using standard or optional film carriers)
- 127 mm wide paper
- 203 x 305mm: Approx. 220 prints/hr.

**FUJICOLOR CD Writing:**
- With main Controller: 9 CDs/hr.
- With Imaging Controller: (Meeting Fujifilm recommended specs) 18 CDs/hr.

**Print to print:** Available with optional software.

**Processing time:**
- Dry to dry: 1 min. 40 sec.

**Processing chemicals:**
- Chemical system CP-49E.

**Power requirements:**
- AC200-240V (50/60Hz) 4.8KVA.

**Dimensions:**
- 1,555 (W) x 931 (D) x 1,668 (H) mm.

**Weight:**
- Approx. 500kg (550kg during actual operation).

**Installation space:**
- Approx. 1.2 m².

**UL/CUL/CE Marks:**
- The Frontier 340 receives the UL/CUL/CE Marks for meeting high safety standards.

**NEW**
- Superlative image quality and improved speed in a compact minilab.

**FUJI PHOTO FILM CO., LTD.**

**DIGITAL MINILAB**

**Frontier 340**