

AutoLab

ATL-1000

**Automatic Processor
Instruction Manual**



**For Your
Best Image**

Introducing The Autolab ATL-1000

FEATURING:

QUALITY

- Fully automated via electronic control
- Consistent results batch to batch
- Each step of a process accurate to the second

ECONOMY

- Maximum efficiency of chemistry
- Built-in tempering of complete system

VERSATILITY

- Rapid Warm-up
- Multiple processes: C-41, E-6, B&W, EP-2, ...
- Formats including 120, 220, 35mm, 9 x 12 cm sheet film and 4 x 5 inch sheet film
- Paper from 3½ x 5 - 8 x 10

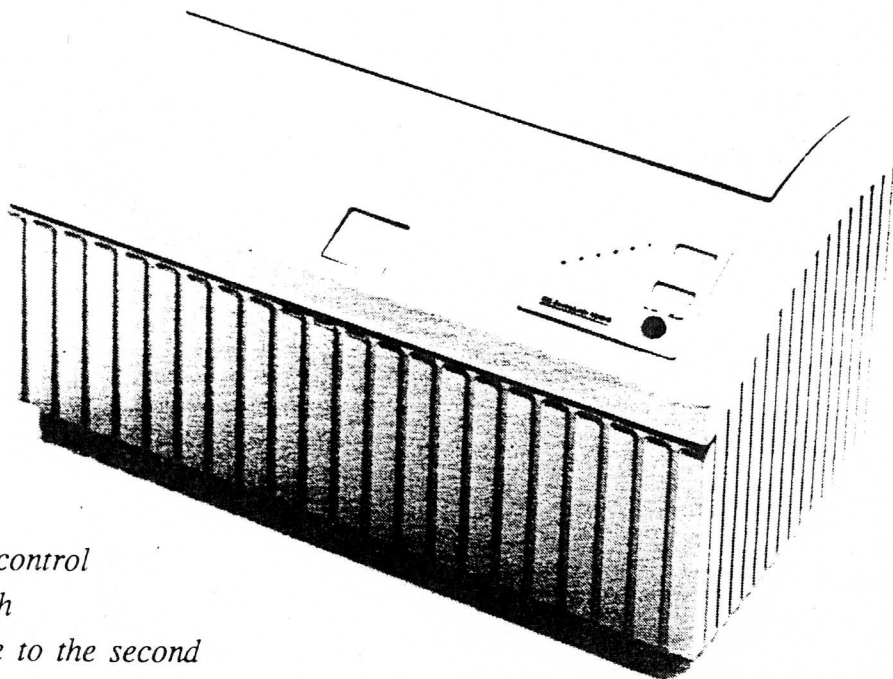
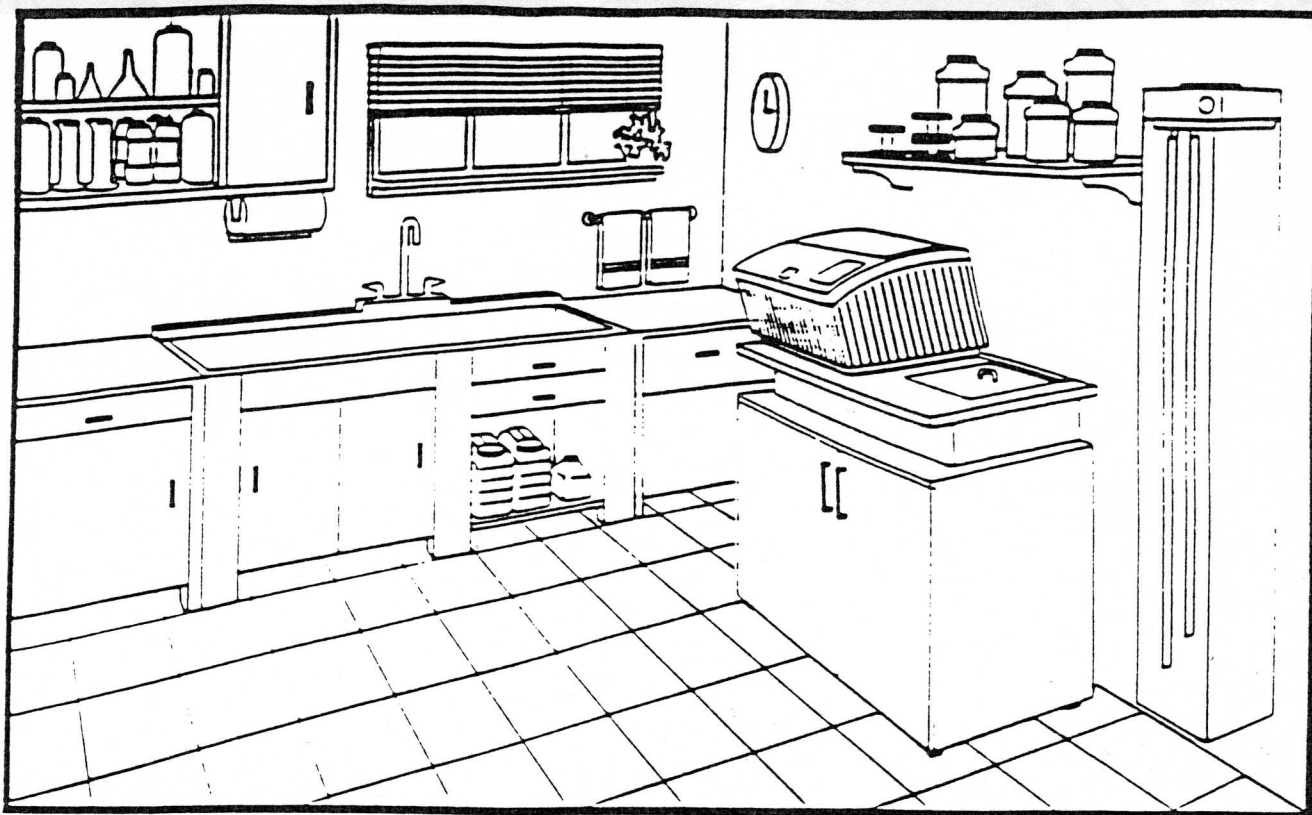


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This ATL-1000 Manual is part #60132 for units starting with serial #13191
Manual #60103 is for units with serial #13000 through 13190
Manual #66034 is for units with serial #12999 and lower



Welcome to the JOBO System

JOBO has been a leader in darkroom and processing technology for more than sixty years.

The Autolab ATL-1000 is the smallest, fully automated processing unit in the JOBO line. Since it comes with 15 of the most popular processes pre-programmed, you can process virtually any type of film and many popular paper processes easily and accurately in minutes. The ATL-1000 is versatile enough to be the main processor in your lab yet portable enough to be taken on location.

All the necessary functions (except drying) needed in photographic processing are fully automated with the ATL-1000. The working solution bottles and processing tanks or drums are kept at operating temperature with a water bath. Constant rotary agitation is maintained by the electronically controlled motor. Tempered chemistry is pumped from the stock bottles to the processing drum via an air pressure system. The ATL-1000 controls the timing of each chemical and rinse step, pumping in and dumping out at the appropriate times by following the programmed input to the second. Finally, the ATL-1000 offers you the option of reclaiming used chemistry separate from rinse water, reuse of developers for C-41 and B&W (with the addition of the JOBO Separator #4220), silver recovery or alternative disposal methods when necessary.

Technical Information

Height	11.9 in. (302 mm)
Height with top cover open	25.2 in. (640 mm)
Depth (Front to Back)	18.9 in. (480 mm)
Width	21.2 in. (540 mm)
Weight (empty)	24.25 lbs (11 kg)
Voltage	110-120 V/60hz or 220-240 V/50hz
Power Consumption	850 watts
Amps	7.42 Amps at 115 volts 3.9 Amps at 220 volts
Minimum Water Pressure	15 p.s.i. (1 bar)
Maximum Water Pressure	90 p.s.i. (6 bar)
Water Jacket Capacity	3.2 quarts (3.0 liters)
Process temperature	38°C for E-6/C-41 and 24°C* for B/W
Ambient room temperature range	50 to 86° F (10 - 30° C)
Maximum Film Format	4 x 5 inch
Maximum Print Format	8 x 10 inch (20 x 25 cm)
Max. Film Quantities	10 135-12 5 135-36 5 135-24 6 120 3 220 12 9 x 12 cm 12 4 x 5 inch
Max. Print Quantities	2 9 x 13 cm 2 3½ x 5 inch 2 4 x 5 inch 1 13 x 18 cm 1 5 x 7 inch 1 18 x 24 cm 1 20 x 25 cm 1 8 x 10 inch

* 24°C or room temperature, whichever is higher.

Max. Film Quantities

10	135-12
5	135-36
5	135-24
6	120
3	220
12	9 x 12 cm
12	4 x 5 inch

Max. Print Quantities

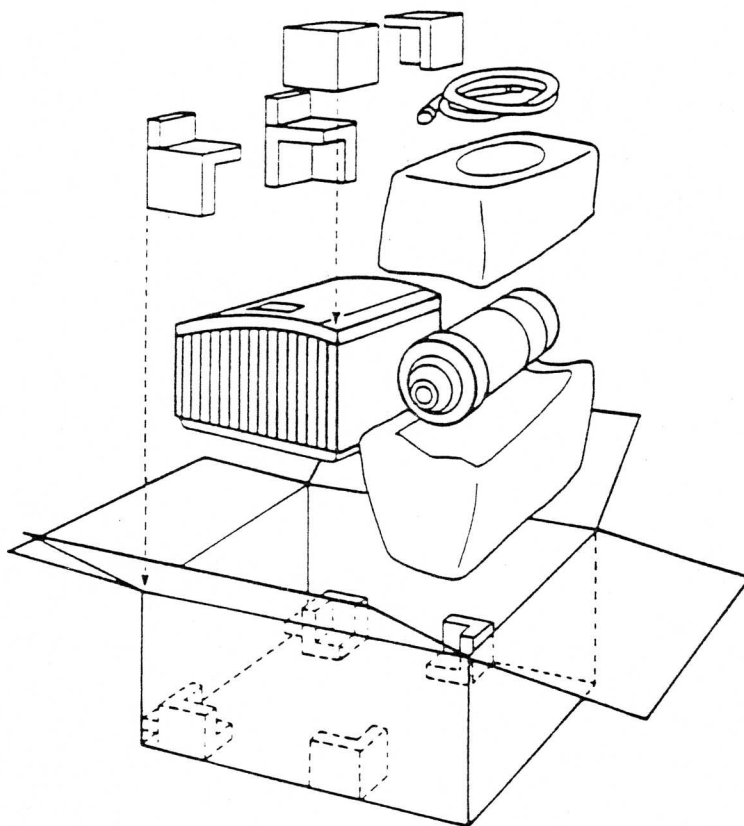
2	9 x 13 cm
2	3½ x 5 inch
2	4 x 5 inch
1	13 x 18 cm
1	5 x 7 inch
1	18 x 24 cm
1	20 x 25 cm
1	8 x 10 inch

Unpacking

1.1 Removal from Carton

The unit will arrive in one carton. The shipping weight is 40 pounds (18.2 kg).

To unpack the ATL-1000, first cut open the top tape sealing the carton. Remove the packing material and then remove the ATL-1000 and all the accessories.



Check that all items listed in Section 1.4 are included in the package.

1.2 Hidden Damage

Check the processor for any damage and, if found, immediately contact the shipping company that delivered the unit or the dealer from whom you purchased the unit.

1.3 Packing Material

It is advisable to keep and store the carton and packing material for future shipping and/or moving of your ATL-1000 processor to prevent damage in transit.

1.4 Contents of Carton

The ATL-1000 package should contain the following items:

- 1- ATL-1000 Processor (Part #4210)
- 1- Instruction Manual (Part #66034)
- 1- Film/Print Tank (Part #4218)
- 1- Film/Print Drum (Part #4219)
- 2- Lids for Film/Paper Drum (Part # 91047)
- 5- Film Reels 35mm/120 (Part #2502)
- 1- Film Reel 4 x 5" including retaining plates (Part # 2509N)
- 1- Chemistry Displacement Device [Large Doughnut] (Part # 92066)
- 1- Pressure Hose for water hook-up (Part #16171)
- 1- Brass Hose Adaptor [North American Market only] (Part # 61003)
- 2- Stoppers for Film/Print Drum Lid (Part #15042)
- 1- Solenoid Valve Cap (Part #15023)
- 1- Rinse Water Pump Port Cap (Part #15024)
- 2- Tank Center Core (Part #04044)
- 1- Tank Center Core Extension (Part #04045)
- 4- Roller Block Rollers (Part #93023)

NOTE: The Solenoid Valve Cap (Part #15023) and Rinse Water Port Cap (Part #15024) are already installed on the back of the processor.

The Tank Center Cores (Part #04044) are shipped inside the Film/Print drums (#4218) and #4219) and the Tank Center Core Extension (Part #04045) is shipped inside the Film/Print Drum (Part #4219).

The lids (Part #91047) are shipped on the Film/Print Drums.

The reels (#2502 and #2509N) are shipped inside the Film/Print Drums. The Retaining plates for the 2509N reel are in slots in the lower grey packing material.

The Stoppers for Film/Print Drum Lids (Part #15042) and 2 of the Roller Block Rollers (Part #93023) are shipped inside the Film/Print Drum (Part #4218).

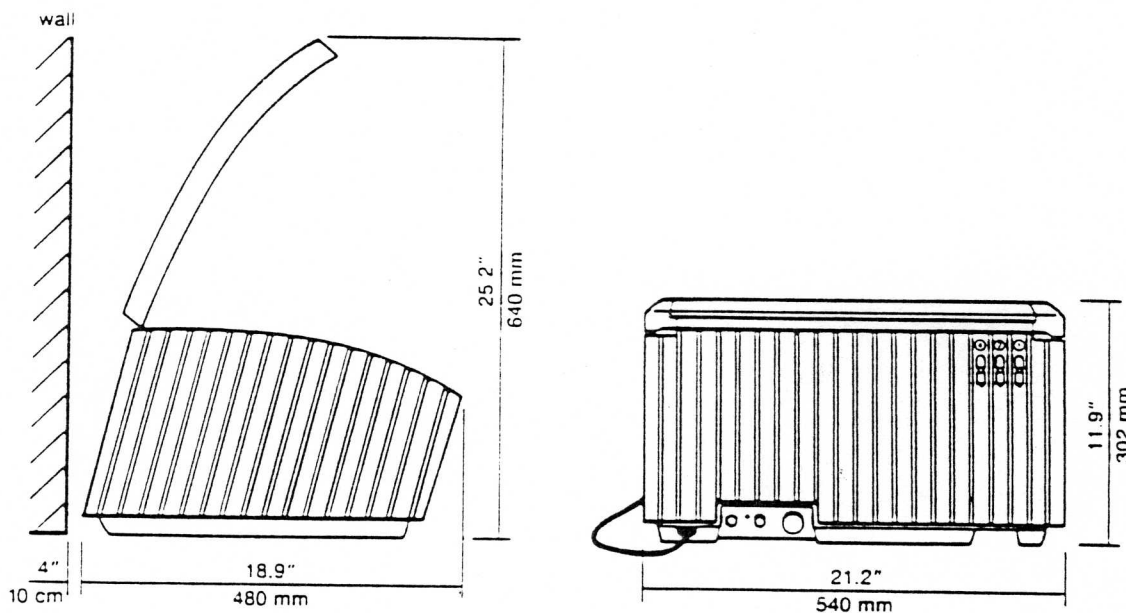
Pre-Installation Considerations

2.1 Location

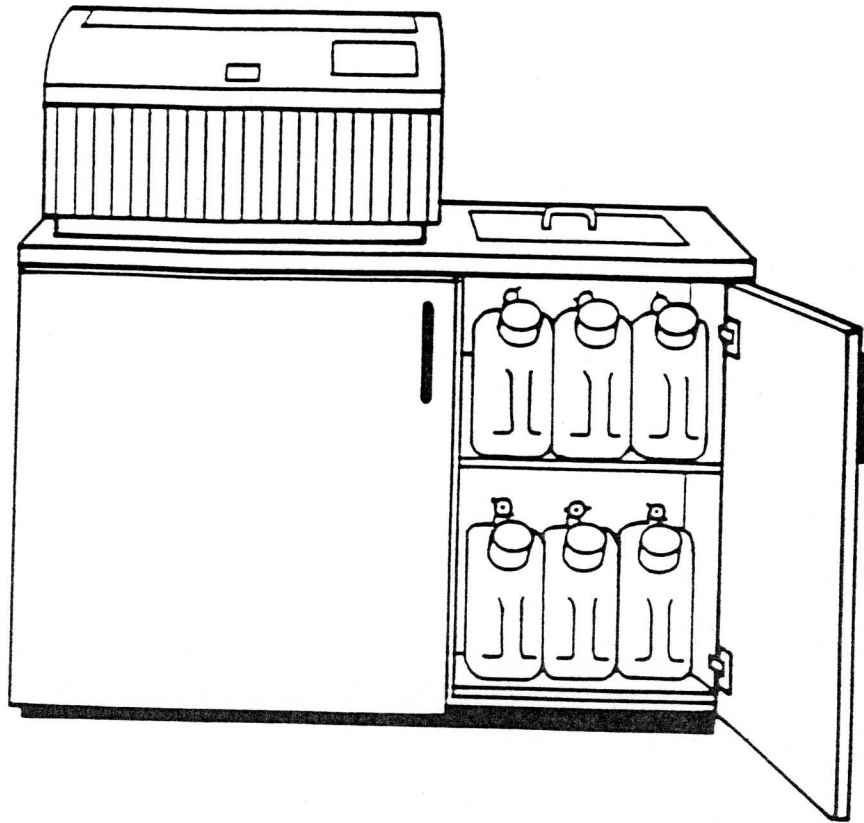
The ATL-1000 processor does not need to be located in a darkroom since all tanks and drums used with it are light-tight.

The ATL-1000 is most easily used when located near adequate drain facilities, hot and cold water sources, and electrical power. (With external pump accessory #4212 the ATL-1000 can be used without a pressurized water source. With Cord #4208 or Battery #4211 the ATL-1000 can be used without a permanent power source. See Section 3.4 for more information on these items.) If normal drain facilities are not available, the chemistry and rinse water can be collected in containers for later disposal. With the addition of the Chemical Separator (#4220), chemical disposal in compliance with your local EPA requirements is much easier, less costly, and easier to neutralize. Be sure to read the sections in this chapter on each of these items before choosing the location of the processor.

The ATL-1000 must be located on a level surface capable of supporting 51 lbs. (23.2 kg.) Due to the possibility of splashing, this surface should be water proof. The surface must be higher than the intended drain (or disposal containers) for the processor.



The JOBO ATL-1000 processor can be located on a counter-top, or on a specially designed JOBO support table (Part #4214). This table provides a convenient operating height for the processor, a covered sink adjacent to the processor for film stabilizing, storage for six 5 liter bottles (included), up to four 15 liter containers, and storage for tanks and reels.



Warning: For safety reasons do not place the ATL-1000 in any location where liquid could rise above the bottom of the processor. If the ATL-1000 is found in liquid above the bottom of the unit, immediately unplug the unit from the power source. Do not touch the liquid until all power is completely disconnected. Contact the service department of JOBO before again plugging in the ATL-1000.

2.2 Electrical Service

A grounded circuit of an ampere capacity equal or greater to that required by the ATL-1000 is required. To determine needed capacity see the Technical Specifications on Page 7 of this manual. (It is important to note that while your facility may have circuits rated above the requirements of the ATL-1000, if other devices are connected to the same circuit the total power consumption of all the devices may exceed the circuit capacity. If you have questions, contact a qualified electrician.)

It is advisable (and in some places required by local electrical code) to connect the ATL-1000 to a circuit that is "ground fault protected". (See a qualified electrician for more information.)

The length of the power cord on the ATL-1000 is approximately 5 feet (152 cm). Make sure an adequately rated electrical outlet is located within 5 feet (152 cm) of the proposed location of the ATL-1000.

Do not operate the ATL-1000 while connected to underrated extension cords or attached to overloaded circuits.

2.3 Water Pressure

Water pressure between 15 and 90 p.s.i. (1 to 6 bar) is required to fill the processor to the proper levels. Pressure of less than 15 p.s.i. may cause an exceptionally long fill time for the tempering bath and/or inadequate rinsing. Water pressure greater than 90 p.s.i. can damage the processor. (In the U.S.A. a pressure reducer [JOBO Part #61004] may be ordered from JOBO or your JOBO dealer if necessary.)

The ATL-1000 requires one water inlet hose which is supplied with the unit.

To avoid the possibility of water damage should the hose leak, always have faucets accessible and turn off faucets when the processor is not in use.

NOTE: See Section 3.3 for information on use of submersible pump #4212.

2.4 Water Temperature

The ATL-1000 requires a tempered water inlet. The tempered source should be set to within $\pm 1.0^{\circ}\text{F}$ (0.5°C) of your processing temperature. (In the U.S.A. a temperature control panel [JOBBO Part #4190] may be purchased from your local JOBBO dealer or directly from JOBBO.)

The water inlet fills the water bath and is also the source of rinse water for the processes.

2.5 Drain Facilities

The ATL-1000 processor has two separate drain outlets; one for rinse water and the tempering bath, and another for used chemistry. Each drain outlet comes with a hose attached. The hoses are approx. 39 inches (100 cm) long and have a diameter of .86 inches (22 cm).

The ATL-1000 can be placed on a counter-top or on the specially designed support table from JOBBO (Part #4214). (*See warning in Section 2.1*) In either case both processor drains must be routed to drains that are lower than the processor or alternately they can be routed to canisters. If the drain hoses are routed to canisters, it is important that the canisters have sufficient volume to handle the outflow of the processor. The drain hoses should be placed at a level that will insure that the end of the hoses will not be submersed in the liquid in the containers. This is important to insure siphoning does not occur. The largest amount of water supplied by one process would be 2.9 gallons (11 liters) which would be generated by the E-6 process. With draining of the tempering bath the total water output would be 3.7 gallons (14 liters). The largest amount of used chemistry generated in one processing run would be 1.2 gallons (4.5 liters). (6 bottles with 750 ml in each). If using the Chemical Separator (#4220) the chemical hose (yellow) is not utilized, but you will need 2 canisters to collect spent chemicals.

2.6 Room Temperature

While running any process the processor tempers the chemistry and processing tank with a recirculating water bath. The E-6 and C-41 processes will operate at 38°C (100°F). The B/W film processes and the two paper processes will operate at 75°F (24°C). Changes in room temperature between 50°F (10°C) and 86°F (30°C) will not affect the processor's ability to temper accurately (see Section 4.7 for details on how to adjust the processing for room temperatures out of this range).

