Seedburo®
Equipment Company

INSTALLATION & OPERATING INSTRUCTIONS

CONSOLE-STYLE GERMINATORS

Single Chamber
S-6920-T Fully Automated
With Recording Thermometer

Double Chamber
D-7440-T Fully Automated
With Recording Thermometer

Model S-6920-T

Heat Cycle / Cold Cycle
Light / Dark Mode
Wet or Dry Chamber

Accurate and reliable temperature control allows for
tetrazolium testing, chemical storage, accelerated aging, plant growth,
seed germination, prechill and biological research.

CAUTION!
Read this entire "Installation and Operating Instructions" carefully prior to plugging equipment into a power source and/or into service. Information found in this manual is important for safe operation and proper use / maintenance.

WARNING!
Verify the electrical requirements of equipment and verify the intended electrical power receptacle. The intended power receptacle must be compatible with the operational electrical requirements of the equipment and be properly grounded. The electrical data plate of your equipment is located near the electrical power supply cord (extension cord).

WARNING!
Do not apply more than intended rating to the supply (power cord). Use only the specified power cord and connector. Refer to a qualified service technician for changes to the electrical supply cord.

WARNING!
If there are any questions with regards to wiring, adequate electrical supply, proper power to you building / outlets or service for your equipment, a qualified electrician should be contacted before using your equipment.

WARNING!
Follow local regulations of electrical codes, installation methods and proper use of equipment.

CAUTION!
Germinator and or Lab Test Chamber equipment should only be used for its intended purpose, of typical testing with requirements of temperatures between 35°F and 130°F / 1.6°C and 54.4°C and light level intensity not to exceed the manufacture standard, and those standard test in a professional setting with qualified technicians, to prevent personal injury or a hazard to property including equipment. Consistent with tests, such as: pre-chiller, seed germination, seed tests and research, plant test and research, plant growth, propagation, accelerated aging, photo stability tests, zoology, botany, tetrazolium, biological research and tissue cultures tests.

DANGER!
Failure to read, follow all installation / operation instructions, as well as safe working habits, can result in a situation that personal injury hazards may exist that may not be apparent, or a condition where a hazard to property including the product itself.

CAUTION   INSTALLATION

REMOVE THE PACKING MATERIAL
Great care has been taken to protect the unit and content during shipping. After uncrating the unit, make sure to remove all cardboard, padding, wood, tape, plastic ties, and other packing material that secure shelves, racks, humidifier, water reservoir, etc... in place during transit.

SERIAL AND MODEL NUMBER
These numbers are found on the nameplate (serial tag) affixed to the lower back or side of the unit. Please record these numbers along with the voltage, amperage and code number in this booklet, in the space provided on the back cover for easy and quick reference. If you ever need technical information or parts, this information will be required in order to provide you proper assistance.

INSTALLATION & LOCATION

ALWAYS:

- Install equipment to assure that the location for your equipment is level.

- Install equipment away from heat sources and extreme cold areas.

- Install equipment to assure sufficient clearance to side and back walls of 6" (152.4 mm).

- Install equipment only in appropriate areas that are conducive to electrical appliances.

- Install equipment in an appropriate safe working environment.

NEVER:

- Never install equipment in an area of standing water.

- Never install equipment in an area with overhead power-lines

- Never install equipment in an area not conducive to safe and proper operator use.

PROPER ELECTRICAL HOOK-UP

Caution:
To protect operator as well as equipment from a possible power surge:
- Verify that the power switch is in the "OFF" position before plugging in the electrical cord.
- Verify the electrical requirements of equipment and verify the intended electrical power receptacle. The intended power receptacle must be compatible with the operational electrical requirements of the equipment and be properly grounded. The electrical data plate of your equipment is located near the electrical power supply cord (extension cord), indicating voltage, amp, wattage, Hz, and phase.
- Plug the power cord into a proper voltage and grounded outlet only.

Danger:
DO NOT, UNDER ANY CIRCUMSTANCES, CUT OR REMOVE THE GROUNDING PRONG (Earth Ground) FROM THE CORD PLUG.

WARNING:
If the product loses the ground connection, usage of knobs, controls, hinges latches and all other parts may become conductive of electricity can cause an electrical shock. Electrical products may be hazardous if misused.

WARNING:
For your protection, do not bypass any interlocks, electrical safety devices or fuses. Only a qualified electrician should attempt repair or replacement of electrical wiring and or components.

Danger: BE SURE THE EQUIPMENT IS UNPLUGGED FROM ELECTRICAL SOURCE BEFORE REMOVING CONTROL PANEL.

DEFINITIONS

Heated Test: *Above* room ambient temperatures
Cool Test: *Below* room ambient temperatures
Cycle: A given period of time within either a hot or cold test

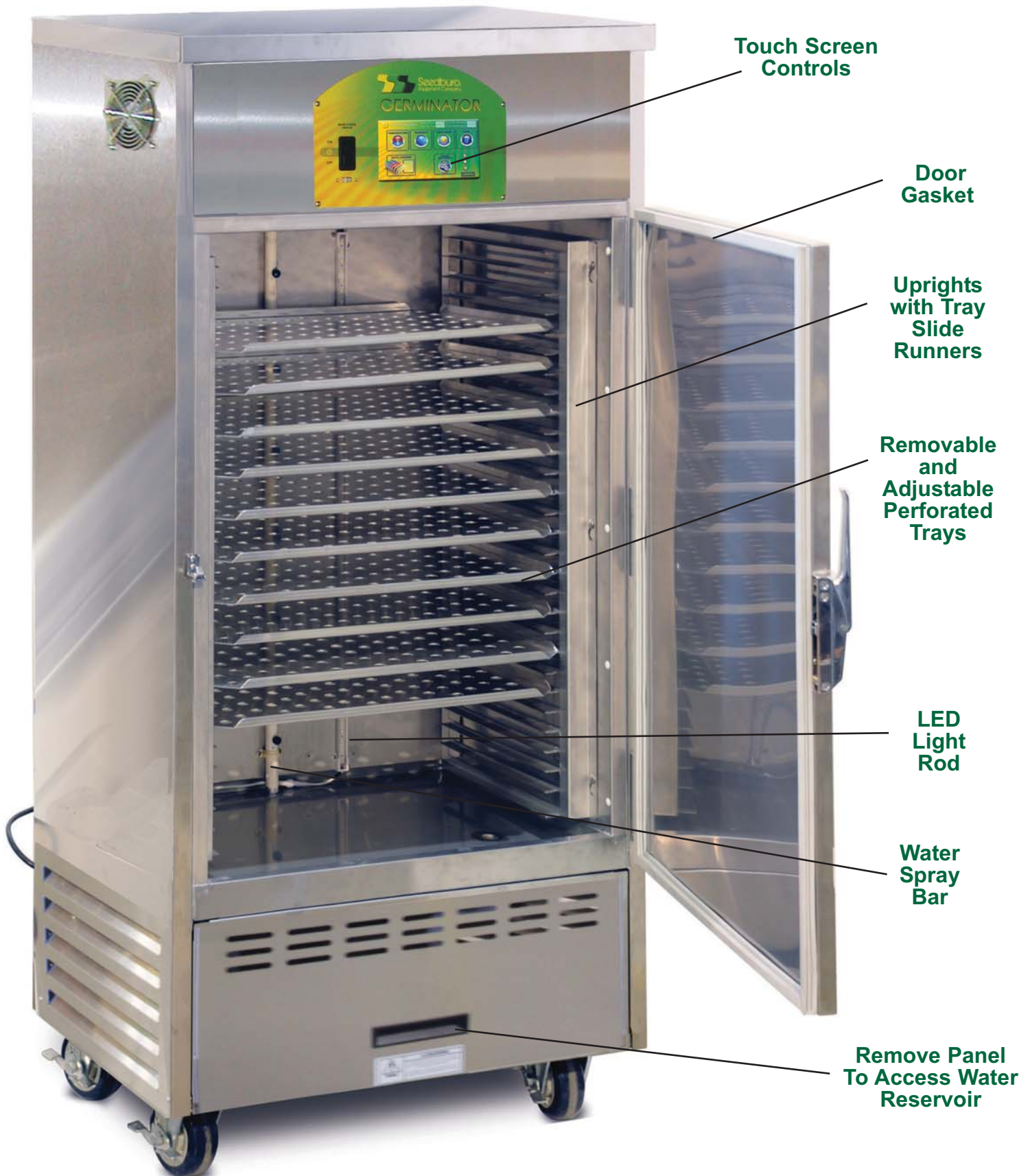# FILL WATER RESERVOIR BEFORE OPERATING

WARNING Fill the self-contained **water reservoir** inside the chamber
(below the tray racks) to the water level mark or 1.5" (3.8 cm) with water.

Tap water can be used, but *distilled water is preferred.*

Tap water may contain minerals that will cause a residue build-up
in the reservoir. Without using water, humidity levels will be low,
stainless steel bottom will discolor and heating will be uneven.

Touch Screen Controls

Door Gasket

Uprights with Tray Slide Runners

Removable and Adjustable Perforated Trays

LED Light Rod

Water Spray Bar

Remove Panel To Access Water Reservoir

Model S-6920-T

SPECIFICATIONS

10 Trays Included Per Chamber:

- Controlled environment test chamber.
- Double walled insulation between interior and exterior walls.
- Interior and exterior made of stainless steel.
- Versatile testing with single point or alternating tests.
- 28 Tray positions per chamber.

Controls Per Chamber:

- Touch panel.
- Fully programmable.
- User friendly.
- Audio and visual icons and alarms.

Heating:

- Indirect forced circulated heating system.
- Warm air evenly distributed throughout the chamber by efficient long life heating element(s).
- Stable and even temperature sensitivity for cyclic and growth.

Cooling:

- Indirect forced circulated refrigeration system.
- Cool air evenly distributed throughout the chamber with even temperature sensitivity for cyclic and growth.
- High end CFC free sealed fan cooled compressor.

Temperature Range:

- 0°C (32°F) to 56°C (132°F).

Illumination:

- Highly efficient long lasting LED lights.
- The illumination has adjustable settings.

WET SERIES
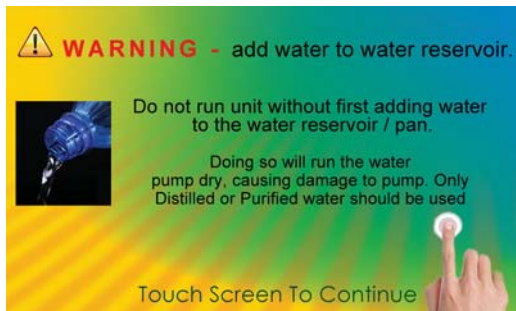
Rain Water Spray Timer:

- Control spray inverval time.
- Control length of spray-on time.

CONTROLLER MENU PROMPTS
TITLE SCREEN & MAIN MENUS

FILL WATER RESERVOIR FOR HUMIDITY CYCLE

Fill the self-contained **water reservoir** inside the chamber (below the tray racks) to the water level mark or 1.5" (3.8 cm) with water. ***Distilled water is preferred.***

PRE-CONDITION CHAMBER

Before loading the germinator chamber with test samples, operate the unit for approximately 45 minutes to allow chamber to "pre-condition" and reach temperature and humidity levels.

CONTROL SCREEN OPERATING INSTRUCTIONS

1. Plug unit in to proper outlet.
2. Turn the "ON / OFF" rocker switch on the face of the control panel to "ON".

Wait approximately 20 seconds:
3. The control panel will illuminate, showing the "Title Screen".
4. The controller is a soft-touch interactive display screen. Touch the screen to continue.
5. The Main Menu screen allows two choices of "Set-Up Menu" or "Run Menu".

Set-Up Menu

This function is for setting up the following parameters:
  "CLOCK / CALENDAR" (Real Time)
  "DATA STORAGE" (Data Logging Set-Up)
  "TEMPERATURE UNITS" (°F or °C Scales)
  "CALIBRATE" (Internal machine parameters - Password Protected)
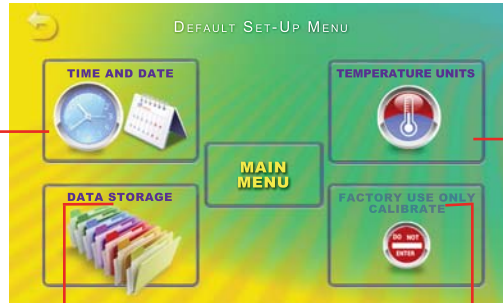Once these parameters have been set, they become the defaults and remain the settings for all tests, until changed or modified.

CONTROL SCREEN INSTRUCTIONS
Set-Up Menu

Before running the unit,
you must first set-up the
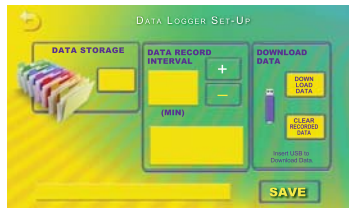CLOCK /CALENDAR,
DATA STORAGE,
TEMPERATURE UNITS
(°F or °C SCALES),
and CALIBRATE.
These become the settings for all
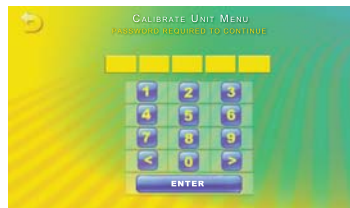tests until changed.

Password Protected

Clock / Calendar

Data storage allows variable
time interval in collection of
test values.

SETTING DEFAULTS
Min Temp   = 0°C (32°F)
Max Temp   = 56°C (132°F)
Min RH%   =   0%
Max RH%   = 100%
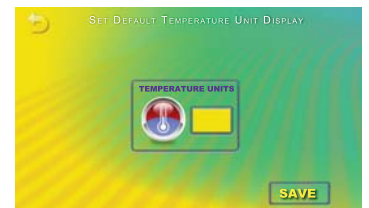
°F / °C Scale

CONTROLLER MENU INSTRUCTIONS
Run Menu

WARNING - add water to water reservoir.

Do not run unit without first adding water to the water reservoir / pan.

Doing so will run the water pump dry, causing damage to pump. Only Distilled or Purified water should be used

Touch Screen To Continue

Pressing "RUN" without going through "SET-UP" will default to running the last program that was loaded.

Seedburo Equipment Company
GERMINATOR
SET-UP MENU   RUN MENU

Manual Mode

Automatic Mode
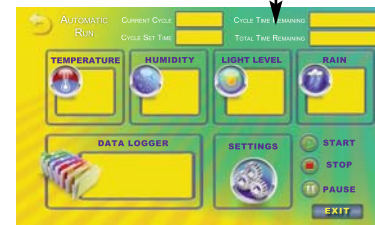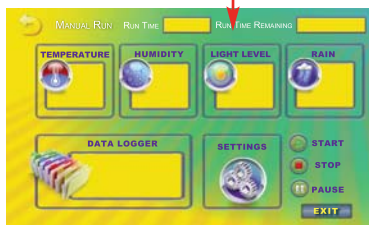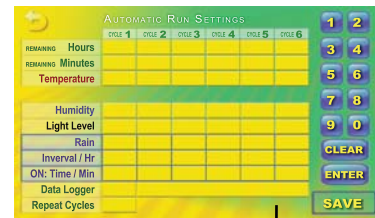
MAINTENANCE INSTRUCTIONS

CLEANING

CLEANING DANGER:
Never allow electrical parts to become wet, as this may cause electrical shock or death!

WARNING:
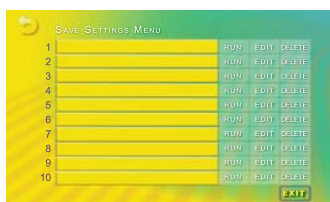Use only distilled water or water that has been boiled.
Mineral deposits will collect and damage sensors found in the unit,
causing fluctuation in factory tolerances.

The Console-Style is manufactured from stainless steel. Though stainless steel
is extremely resistant to mineral deposits and rusting, mineral found in water will collect on
stainless parts of the unit as well as components that meter and generate the temperature
and humidity levels. Remember stainless steel is stain-less, not stain-proof.

To keep your cabinet clean, simply wipe the interior and exterior, as needed, with damp cloth
or sponge with a mild soapy solution or white vinegar to aid in deliming. A stainless steel
cleaner / polish that is widely available, or that can be obtained from the distributor from whom
the unit was purchased. Never use abrasives, acids, or strong cleaners.

Do not flood or allow electrical parts to become wet. The interior racks are removable without
tools for easy cleaning.

Do not use wax or strong cleaners on door gaskets.

Seedburo® Equipment Company

MODEL NUMBER: _____

SERIAL NUMBER: _____

VOLTAGE: _____

DATE OF PURCHASE: _____

NOTES: _____

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REPLACEMENT PARTS LIST

REFRIGERATION COMPONENTS

Compressor / Condensing Unit	CU-5101
Evaporator Coil Motor	ECM-5102
Evaporator Coil Motor Fan Blade	ECB-5103
Solenoid Valve	SV-5104
Solenoid Coil	SC-5105
Dryer	DF-5106
Sight Glass	SG-5107
Expansion Valve	EV-5108
Pressure Control	PC-5109
Thermometer	T-5131
Recording Thermometer	RT-5135

HARDWARE

Door Hinge	DH-6201
Door Latch	DL-6202
Door Strike	DS-6203
5" Caster - Swivel	CS-6204
5" Caster - Rigid	CR-6205
Drain Shut-Off	DV-6206
Thermopane Rear Wall	TW-6207
Gasket, Door (per foot)	GD-6208
Perforated Trays - 17" x 19"	TP-1719

ELECTRICAL COMPONENTS

Controls	CNTRL-TOUCH-SCREEN-7
On-Off Switch	SWH RCK E1
Relay	R-7309
Heating Element	HE-7312
Transformer 220 / 240	TF-7313
Extension Cord - 8 Ft.	CE-7314

SEEDBURO EQUIPMENT COMPANY

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