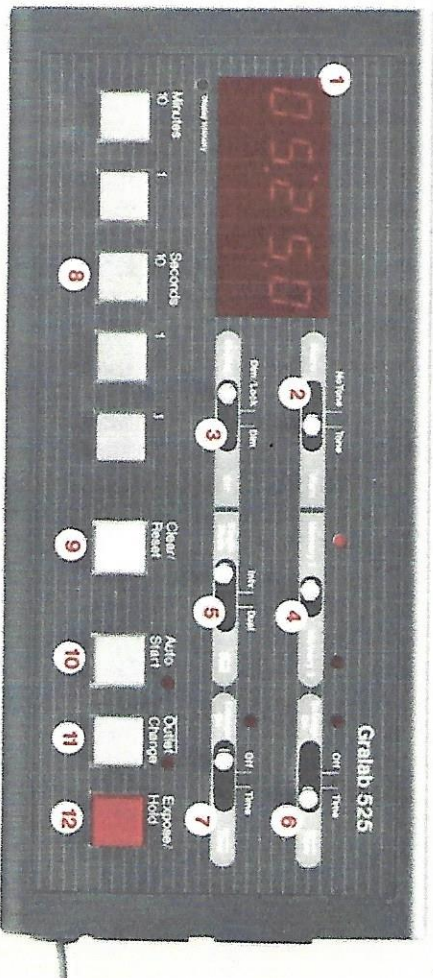


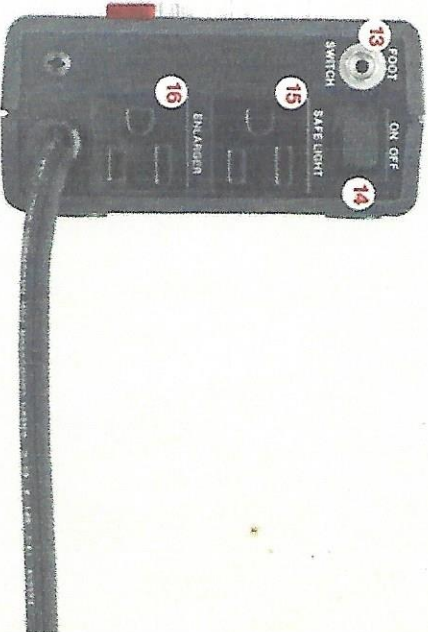
Features and Controls of the Gralab Model 525

- Five-digit LED display** registers time settings from one-tenth of a second through 59 minutes, 59.9 seconds. Countdown is in tenth-of-a-second intervals.
- Audio switch** selects, from left to right, 1. metronome beep on the second, 2. no audio signal, 3. one second end of cycle tone, 4. "warn" routine with beep on the whole and half minute, then one second interval beeps from 10 seconds to zero, then a one second tone at cycle's end.
- Display intensity control** selects, from right to left, full brightness, "Dim/Lock", dim, and off. For further adjustment, set switch at "Dim" and turn inset Display Intensity screw with small screwdriver. Clockwise brightens, counterclockwise dims. ("Dim/Lock" is used for locking programmed audio signals into the 525's two memories.)
- Memory selector switch** determines which memory is being programmed and displayed. LED indicators above switch show which memory is in use.
- Memory mode switch** lets you select one of four programming patterns for the 525's two memories. **Single mode:** one memory switches both AC outlets. **Intervalometer mode (Intv.):** two memories alternate switching the outlets. **Dual mode:** each memory switches a single outlet... in effect, two independent darkroom timers that can run singly or in parallel. **Dual mode:** same as previous mode, except both memories can be started, stopped, reset or cleared simultaneously.
- Individual AC outlet controls** for both safelight and enlarger have four positions. **On** and **Off** control AC power independent of timer. **Time** puts outlet under timer control (Enlarger outlet cycles on-time, Safelight outlet cycles off-time). **Time** keeps outlet under timer control, but reverses on/off status. LED indicators above controls light when outlets are supplying power.
- Five time entry pushbuttons**, one for each digit. A light tap will advance corresponding digit one unit. Steady pressure will advance digit continuously. Unit beeps each time a digit advances.
- Clear/Reset button** erases or clears unwanted time settings when timer is at rest, stops countdown and restores original setting when timer is cycling. Each memory must be cleared or reset individually.
- Autostart button** automatically recycles memory(s) in the Single, Dual and Dual modes... automatically alternates between memories in the Intervalometer mode. LED indicator above button lights when Autostart is activated.
- Outlet Change button** prevents outlet change at end of cycle. LED indicator above button lights when Outlet Change is activated.
- Expose/Hold button** initiates timing cycle(s). Pushed during cycle, it freezes the countdown. One more push restarts cycle.
- Accessory footswitch jack** is an extension of the Expose/Hold button. Used with Gralab Model 560 Accessory Footswitch, it provides "hands-off" control of timer unit.
- On/Off master switch** controls all AC power to both the timer and the AC outlets and clears timer memories for reprogramming.
- Two AC outlets** provide timed or untimed power for safelight and enlarger or other AC powered devices.

Front View



End View



- Use timer only at AC voltage printed on nameplate.
- Be sure outlet load does not exceed maximum specified on outlet receptacle.
- Always protect timer from jars and shocks.
- Avoid spilling liquids on timer.

Precautions

Specifications

- Accuracy.** Better than $\pm .015\%$ @ 10 seconds, (20°C ambient, no load.)
- Repeatability.** $\pm .0005\%$ @ 10 seconds, (20°C ambient, no load.)
- Temperature Range.** 0°C to 55°C , no load.
- Humidity.** 0 to 95% non-condensing.

- Voltages.** Input voltages 100 to 130 VAC, 50 or 60 Hz (U.S. and Canada), 210 to 250 VAC, 50 or 60 Hz for use in other countries.
- Power Rating, AC Outlets.** For each outlet, Safelight and Enlarger, 600 Watts maximum @ 115 VAC.

Getting started

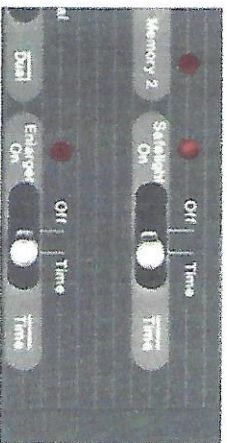
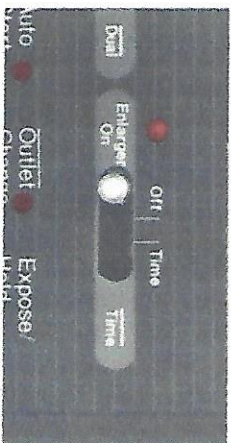
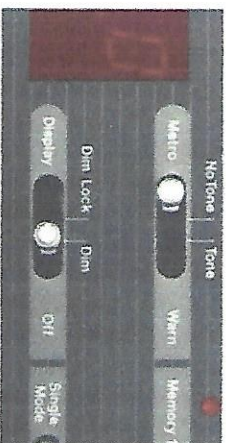
Always be sure both of the 525's memories are clear before you begin programming. You can do this by simply turning the Master Switch **Off**, then **On** again.

We also find it helpful to begin each programming job with all the switches in a common position—e.g. all the way to the left. This helps you set up your 525 in a systematic way...and reduces the chances of error.

How to Use the 525 for Single Prints

Let's assume you want to make a single exposure of 6.0 seconds. Just plug the timer into a grounded 120 VAC, 60 Hz outlet, make sure the memories are clear, and follow this simple procedure:

1. Plug safelight and enlarger into the appropriate AC outlets. Turn master switch **On**.
2. Set Audio and Display Intensity Switches as desired. Here, the audio is set at Metro-nome and the display is set at Dim.



4. When adjustments are complete, slide Enlarger outlet control switch to the **Time** setting. This will put enlarger under timer control. Safelight outlet control should also be set at **Time**.

5. Set memory Selector switch to the memory you wish to program—here, **Memory 1**. LED indicator will light. Set Memory Mode switch to **Single Mode**. (Note: you can independently program both memories with different time settings and different audio signals. The 525 will access whichever memory you choose while storing your instructions in the other.)

6. Enter in desired exposure time—in this case, 6.0 seconds—using the 1 second Time Entry pushbutton. You are now ready to make your exposure.

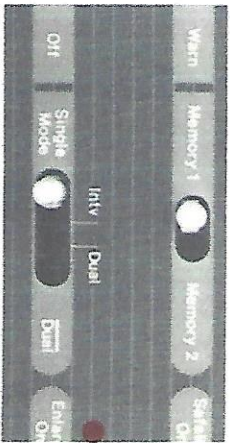
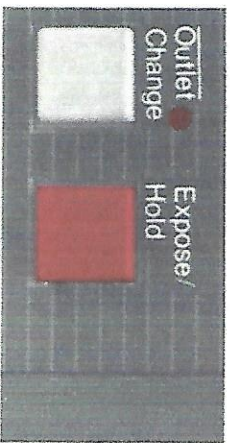
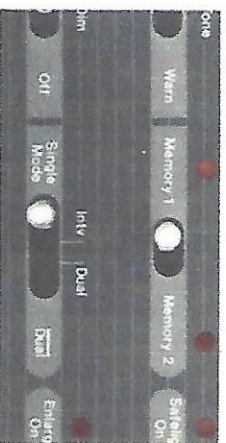
7. To start exposure, simply press the red Expose/Hold button once. Safelight will turn off, enlarger on. LED display will show countdown in tenths of a second...metronome beep will sound every second on the second. At end of cycle, enlarger will turn off, safelight on.

How to Use the 525 for Multiple Prints

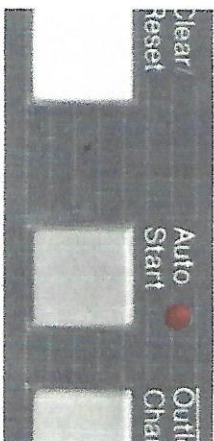
Let's assume you want to make several identical enlargements from the same negative. Each requires a 6.0 second exposure... and you require 25.0 seconds in between to mount paper on the enlarger. The 525 will allow you to make as many enlargements as you wish without having to reset times or even restart the cycle. Here's how:

1. After clearing the timer, set Memory Selection switch at **Memory 1** and Memory Mode switch at **Single Mode**. Set audio display at **No Tone**.

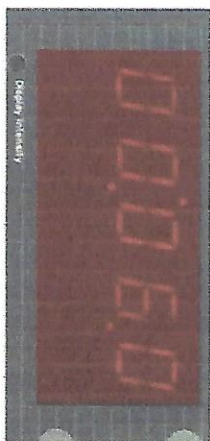
2. Program the time you want enlarger to be off first. In this case, it's 25 seconds.



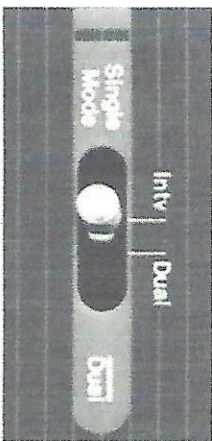
3. Push Autostart button once. This instructs timer to keep on cycling when 25.0 second interval is over. LED indicator lights to show that Autostart has been activated.



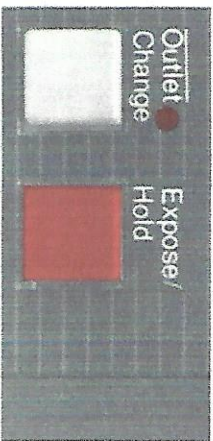
4. Now, switch to **Memory 2** and program the exposure time you want—6.0 seconds in this case. Push Autostart button again to keep timer cycling. (Autostart has now been independently programmed into both memories.)



5. Slide Memory Mode switch from Single Mode to **Intv.** (Intervalometer). This instructs timer to alternate between memories. (Memory mode switch becomes inoperative in **Intv.** mode. To review memory or change times, slide memory mode switch from **Intv.** to **Single.**)



6. To start exposing prints, press red Expose/Hold button once. Enlarger will turn on for 6.0 seconds exposure, then off for 25.0 seconds so you can set up a second print. Process will continue automatically until you have desired number of exposures.



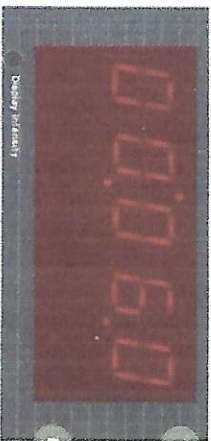
How to Use the 525 for Precise Dodging or Burning

Assume an overall exposure time of 20.0 seconds, 6.0 of which you want to spend dodging or burning. The 525 will let you know precisely when to begin dodging or burning with an audible signal. Just clear the timer, and follow this simple procedure.

1. Start by setting Memory Selection switch at **Memory 1** and Memory Mode switch at **Single Mode**.



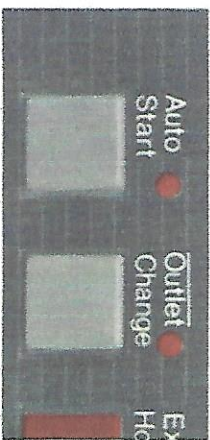
2. Program desired dodging or burning time, in this case 6.0 seconds. Be sure autostart light is off.



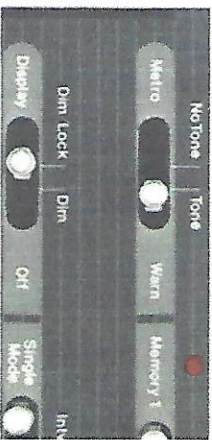
3. Now, switch to **Memory 2** and program the remainder of 14 seconds silent exposure time.



4. Push both the Autostart and **Outlet Change** buttons. This allows you to run the enlarger a continuous 20 seconds and still split the exposure into two timed intervals.



5. Set Audio switch to **Tone** and then lock that instruction into Memory 2 by sliding **Display Intensity** switch to **Dim/Lock**.



6. Slide Memory Mode switch to **Intv.** This instructs the timer to cycle both memories in sequence. (Displayed memory cycles first.)



Start exposure by pressing red **Expose/ Hold** button once. Enlarger will light for full 20.0 seconds, but audio signal will tell you when to start your 6.0 second dodging or burning procedure.

Other Darkroom Uses for the Gralab 525

By sliding the Memory Mode switch to **Dual**, you can program the 525 as two independent timers, each of which controls one AC outlet. **Memory 1** will always control the Safelight outlet, **Memory 2** the Enlarger outlet. Either memory will cycle on or off-time, depending on how the **Outlet Controls** are set:

Outlet control set at:	Time	Time
Safelight outlet cycles	Off-time	On-time
Enlarger outlet cycles	On-time	Off-time

The Dual mode allows you to run long cycles (up to 59 mins., 59.9 secs.) with one memory while reserving the second memory for another job. If you wish, **Memories**

1 and 2 can be started simultaneously by putting the timer in its **Dual** mode. (Note: Dual mode operations should always be programmed in the Dual mode.)

As you can see, the 525 is open to many more darkroom uses than we have described here. We suggest that you "experiment" with the 525 and use your imagination. Chances are you'll discover uses that haven't occurred to us yet, and we'd like to hear about them when you do. We're also very interested in your ideas on features for new timer products. Write: Dimco-Gray Company, 8200 South Suburban Road, Centerville, Ohio 45459.