

INSTALLATION AND OPERATION INSTRUCTIONS

MODELS MM-4e/MM-2448e/MM-2460e



INTRODUCTION

The MiniMatcher is a compact color matching booth which provides colorists, stylists, designers and color technicians with the three most common types of lighting: daylight, office, and incandescent illumination, along with Ultra-violet and an optional 5th light source.

The user can create a viewing environment that simulates the typical lighting conditions in a store, office, home, or natural daylight. The MiniMatcher presents color samples and materials within a controlled neutral gray (Munsell N7/) surround, which eliminates color contrast and distortion caused by non-neutral surface reflections, or non-standard ambient light.

SET-UP AND USE

The shipping container has been designed for secure transportation of your new viewer. Please be sure that the power indicated on the viewer matches your local voltage and frequency.

Inspect Your New Viewer: This product was thoroughly checked and inspected before it was packed and shipped to you. Check to make certain that your viewer has arrived free of damage. If you find any concealed damage, contact the delivering carrier to initiate a claim for concealed shipping damage.

COMPONENTS OF THE MINIMATCHER

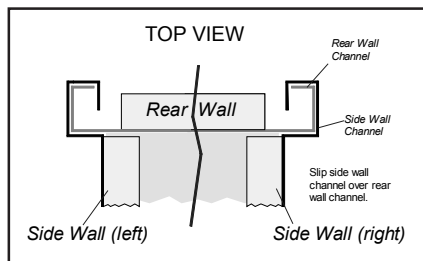
1 - Luminaire
1 - Viewing Surface
1 - Rear Wall

2 - Side Walls
5 - 1/2" Thumb Screws
4 - 3/8" Thumb Screws

ASSEMBLY

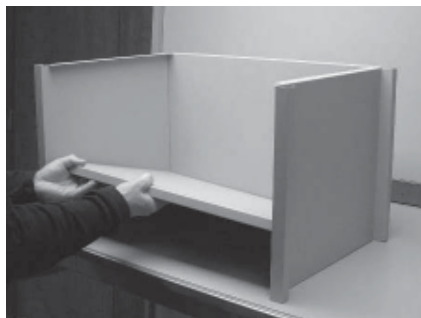
Step 1

Begin by sliding side panels over the channel of the rear panel (as shown).



Step 2

Next place viewing surface into booth as shown. Secure viewing surface to booth using five (5) 1/2" thumb screws.



Note: It is easier to install thumb screws when unit is "leaned back" onto rear wall.

Step 3

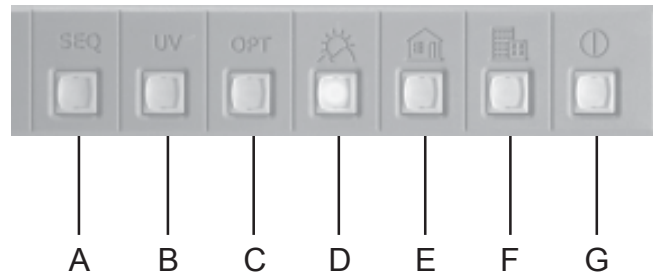
Place luminaire on the table with lamps facing up and line cord to the back. Place cabinet on top of luminaire and fasten to unit using the four (4) 3/8" thumb screws.

Note: This method makes it easier to line up the thumb screws with the screw holes.



CONNECTING THE MINIMATCHER TO A POWER SUPPLY

Before the line cord is connected to a power source, check the product specification plate on the rear of the booth to make certain that the electrical rating matches the power supply.



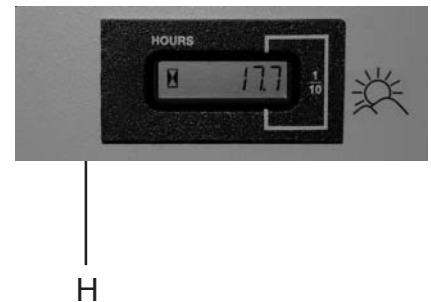
MINIMATCHER OPERATING CONTROLS

- A Sequence Button (Yellow)
- B Ultraviolet Source (UV) On-Off Button
- C Optional Source Button
- D Daylight (D65) Source Button
- E Home Light (Incandescent Illuminant A) Source Button
- F Store Light (Cool White Fluorescent) Source Button
- G Power Off Button (illuminated when unit is plugged in) (Red)
- H Elapsed Time Meter

ELAPSED TIME METER

The ETM is an instrument designed to ensure that the color balance and illuminance of the MiniMatcher are maintained according to its operational specifications. While most fluorescent daylight sources may operate for more than 12,000 hours, the color balance and luminance of such lamps deteriorates during their operation. After approximately 2500 hours of operation, the correlated color temperature of daylight lamps can diminish by as much as 150 kelvins and the luminance by as much as 15%.

1. The timer is only connected to the Daylight lamps.
2. Refer to the timer for 2500 hours of use and change all the lamps.
3. Log the time so the next 2500 hours can be easily calculated for lamp changing.



OPERATING THE MINIMATCHER

When the unit is plugged into a power source, the red OFF button (G) is illuminated. To select a light source simply press the desired button. When a source is selected the appropriate green button will illuminate to verify your selection. Pressing a different source button will turn on the selected source and turn off the original source. Turn off all sources using the OFF button. UV (B) is independently controlled and can be used with another source or by itself. If the Home Light (E) is selected and not switched for 15-20 minutes, the unit will turn all lamps off (this is a lamp and energy saving feature).

PROGRAMMING A SEQUENCE

Press and hold the yellow SEQ button (A). While holding the SEQ button, press the buttons for the sources you wish to turn on in the order you want them activated (up to 10). After selecting your light sources, while still holding the SEQ button, press the OFF button for the length of time you want each source to be on (note: all sources will be turned on for the same time period - if you want an individual light source to be on 2 or 3 times longer, simply press its button two or three times while programming the sequence. The sequencing "On" period has been programmed to not allow "On" times to be less than 5 seconds). After releasing the OFF button, you can release the SEQ button. The SEQ button will stay illuminated. To use the automatic sequence simply press the illuminated yellow SEQ button. The sequence will remain in memory until a new program is entered, or, if you press the SEQ button and hold while pressing the OFF button, this will also clear the sequence. You can use the selection buttons to operate the unit normally even though a sequence is stored.

ADJUSTING FOR SAMPLE BRIGHTNESS

For optimum viewing of color samples, very light materials should be placed at the bottom of the booth. When viewing very dark materials, the sample(s) should be raised closer to the light source.

DETECTING "METAMERISM"

When two color samples match under one light source, but not under one or more other light sources, the "color-match" is metameric. This means that the colorant formulation in one sample differs from the formulation in the other, resulting in differing spectral reflectance factor curve shapes. A metameric color match can also be referred to as a "conditional" color match, since the quality of the color match is **conditional** to the type of light source under which it is viewed.

While it may not be possible, with the colorants available, to completely eliminate metamerism, the MiniMatcher provides colorists with the means of visually "indexing" the degrees of metamerism under three spectrally dissimilar light sources. The formulation may then be adjusted to provide the "best match" under a specified lighting condition, or the least metameric match under all three lighting conditions.

For obtaining the best correlation with instrumental measurements, calculated color differences and metameric indices, the spectral power distribution of the sources in the booth should be used in the computations.

DETECTING METALLIC EFFECTS (FX MODELS ONLY)

"Metallic" effects cause an appearance "shift" or "flop" depending on the angle of the light source relative to the sample. The presence of the metallic elements can most easily be seen by using the special "FX" lamp in light booths so equipped. To evaluate for the metallic elements, turn on the FX lamp and observe the sample as the angle is shifted in your hand, right to left and front to back. Careful observations will yield a good understanding as to the level and concentration of the metallic elements within a particular sample.

MAINTENANCE OF THE MINIMATCHER

NOTE: Disconnect the power cord before cleaning or relamping the MiniMatcher!

Cleaning

The viewing area of the MiniMatcher should be kept clean and free of samples, notices, etc. To clean the neutral gray surface, use a soft, damp cloth with a mild soap or detergent. For stubborn marks or stains, use a non-abrasive "soft-scrub" type of cleaner. DO NOT use organic solvents on the surface.

When to Relamp the MiniMatcher

In order to maintain proper color quality and light intensity, the lamps should be replaced after 2500 hours use. The daylight source has the timer (optional) connected to it. All lamps should be changed at 2500 hours. It is important to use a GTI daylight source (D65 or D50) when relamping. To order replacement lamps for your viewing system, refer to the product label on the rear of the unit (located near power cord) for a relamp kit code.

Replacing the Lamps

Rotate the lamp 90 degrees to remove it from its lampholders. The tubular incandescent lamp has a screw-type base, which unscrews like a standard incandescent bulb. After removing the lamps, wipe the polished reflectors with a soft, damp cloth, to remove any accumulated dust. Install the new lamps into their appropriate sockets.

Fluorescent Lamp "Flicker" Note: Your fluorescent lamps may flicker or "spiral" when new. This is a common characteristic of new fluorescent lamps and does not indicate that the lamps are defective. Normally, flickering gradually diminishes then disappears after approximately 50 hours of operation. Flickering can be eliminated more rapidly by (1) turning the viewer on and off, rapidly, a few times or (2) by removing the lamps and reversing them end-to-end so that the pins go into the opposite sockets.

Extended, or chronic flickering can also be a result of the viewer being connected to an ungrounded outlet or to a "noisy" electrical circuit, e.g. a circuit with a photocopier or other device with high power requirements connected to it. To eliminate these causes of flicker, make certain that your viewer is connected or wired to a properly grounded outlet or reconnect the viewer to another circuit which is known not to have high-powered devices on it.

Fluorescent Lamp End Blackening: Ignition filament deposit during operation can cause lamp blackening(banding, spots) at the ends. This is a normal condition and will not affect the light quality or operational performance of your viewing system.

Disposal

All fluorescent lamps contain small amounts of mercury. Please dispose of lamps properly according to Federal, State, and Local regulations.

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