



Quick-Start Operating Guide Document No. 1800-37

# Mailroom Glove Box and Hood

© Copyright 2017 Terra Universal Inc. All rights reserved. • Revised February 2017





# Quick-Start Operating Guide Mailroom Glove Box and Hood

© Copyright 2017 Terra Universal Inc. All rights reserved. • Revised Feb. 2017 • Document No. 1800-37

#### **Proprietary Notice**

This manual pertains to proprietary devices manufactured by Terra Universal, Inc. Neither this document nor any portion of it may be reproduced in any way without prior written permission from Terra Universal.

#### **Safety Notice**

A thorough familiarity with all operating guidelines is essential to safe operation of the product. Failure to observe safety precautions could result in poor performance, damage to the system or other property, or serious bodily injury or death.

The following symbols are intended to call your attention to two levels of hazard involved in operation:

The information presented here is subject to change without notice.

## 1.0 Introduction

This manual provides information on installing and operating your Terra Mailroom Glove Boxes and Hoods (Batch Processing and Continuous Processing).

By studying this document carefully, you can be assured of a long, efficient service life from your system.

## 2.0 Description

#### **Batch Processing**

The Batch Processing System is an acrylic glovebox. Mail is loaded into the box through the two 16" x 16" stainless steelframed side doors. The doors are closed and the operator sorts/opens the mail. If all goes well, the doors are opened and the mail is extracted. If anything unusual is found, the hands are removed, the box remains sealed with all contents, ancillary steps recommended by the CDC are taken and the appropriate authorities are called. Batch Processing units are offered in one-operator and two-operator sizes.



Terra Universal makes no warranties applying to information contained in this manual or its suitability for any implied or inferred purpose. Terra Universal shall not be held liable for any errors this manual contains or for any damages that result from its use.



Cautions are used when failure to observe instructions could result in significant damage to equipment.



Warnings are used when failure to observe instructions or precautions could result in injury or death.



#### **Continuous Processing**

The Continuous Processing System is an acrylic hood with HEPA filtered airflow to capture contaminating particles and a work opening in the front through which operators wearing nitrile gloves process mail. The operator turns on the filter, puts on nitrile gloves, then puts mail in through the 16" x 16" stainless-steel-framed side doors or through the front work opening and the sorts/opens it. Clean sorted/opened mail can be removed and processed as usual (put in the distribution cart, etc.). If anything unusual is found, the nitrile gloves are peeled off inside the box, the operators' hands are removed, the working door is latched, and the blower is turned off. The hood remains sealed with all contents inside, <u>ancillary steps recommended</u> by the CDC are taken and the appropriate authorities are called. Continuous Processing units are offered in one-operator and two-operator sizes.



# 3.0 Installation



To prevent dangerously low oxygen levels and risk of asphyxiation, nitrogen-purged systems should <u>only</u> be installed in a well-ventilated area.

## **Batch Processing**

- 1. Uncrate your Batch Processing unit, checking to make sure that it has no visible damage incurred during shipment. If damage is found, contact the freight company to file a damage claim immediately.
- 2. Place Mailroom Glove Box on a level surface.
- 3. Check and make sure your doors are aligned. (See instructions on next page for proper door alignment)
- 4. Place any instruments like letter openers in Glove Box. If needed plug into power outlet.
- 5. Plug outlet cord to power source.

#### **Continuous Processing**

- 1. Uncrate your Batch Processing unit, checking to make sure that it has no visible damage incurred during shipment. If damage is found, contact the freight company to file a damage claim immediately.
- 2. Place Mailroom Glove Box on a level surface.
- 3. Check and make sure your doors are aligned. (See instructions below for proper Door Alignment)
- 4. Place any instruments like letter openers in Glove Box if needed plug into power outlet.
- 5. Plug outlet cord to power source.



#### **Door Alignment**

On a properly aligned, level cabinet, all door latches are engaged directly in the center of the corresponding catch (see photos). To re-align a cabinet:

- 1. Open all doors.
- 2. Make sure that the bottom of the unit is level.
- 3. Make sure that each latch engages the center of the corresponding catch.

## 4.0 Operation



Door Latch Too Low Door Latch Correctly Centered



If anything unusual is found, the hands are removed, the box remains sealed with all contents, <u>ancillary</u> <u>steps recommended by the CDC</u> are taken and the appropriate authorities are called.

#### **Batch Processing**

- 1. Open door and put unopened mail in glove box.
- 2. Close door.
- 3. Put hands in the sleeve and glove combination and open contents.
- 4. If everything is okay, open door and take out contents.



If anything unusual is found, the nitrile gloves are peeled off inside the box, the operators' hands are removed, the working door is latched, and the blower is turned off. The hood remains sealed with all contents inside, <u>ancillary steps recommended by the CDC</u> are taken and the appropriate authorities are called.

#### **Continuous Processing**

- 1. Turn blower on.
- 2. Put glove on.
- 3. Open door and put unopened contents into unit, then close door.
- 4. Open front access panel and open contents.
- 5. If everything is okay, then take contents out.



## 5.0 Maintenance

## **Batch Processing and Continuous Processing**



Terra's Glove Boxes require minimal maintenance. All materials are easy to clean with water or mild detergent and a dry, clean wipe.

All materials may be cleaned with clean, lukewarm water with or without a mild, non-abrasive detergent and a dry, clean non-abrasive wipe. Use only light pressure when cleaning. If the outside surface is exceptionally dirty or gritty, lightly swab the surface with a saturated cloth and allow the surfactants to drain away. Avoid rubbing dirt or grit into the surface. Turn the cloth often and replace with a clean cloth frequently. Dry the surface by blotting gently with a clean, dry cloth.

# 6.0 Specifications

## **Batch Process**

Material: 1/4" clear acrylic.

Door Opening: 15" x 15" door openings with gasketed doors on both sides of unit.

Port size: 10" round arm ports with wide flanges for connecting glove assembly.

Duplex outlet: One 120 Duplex outlet (two 120 outlet on two-operator, 59" Box)

Gloves Materials: For standard accordion sleeve assembly Sleeve: Neoprene 18" sleeve Glove: Nitrile, 18 mil thick

## **Continuous Processing**

Material: 1/4" clear acrylic.

Door Opening: 15" x 15" door openings with gasketed doors on both sides of unit.

Front Access Panel opening Dimensions: 6"H x 27 5/8W (two 6"H x 27 5/8W opening for two-operator 59" Box)

Duplex outlet: One 120 Duplex outlet (two 120 outlet on two-operator, 59" Box)



# Quick-Start Operating Guide Mailroom Glove Box and Hood

© Copyright 2017 Terra Universal Inc. All rights reserved. • Revised Feb. 2017 • Document No. 1800-37

# 7.0 Warranty

**Products Manufactured by Terra:** Terra Universal, Inc., warrants products that it manufactures to be free from defects for a period of 12 months for parts and 90 days for labor, commencing from the date of shipment. Terra's sole responsibility is to repair or replace, at its option, any part of the product that proves defective or malfunctioning during this time limit. In some cases, components incorporated in Terra Universal products are covered by additional warranties from component manufacturers; obtain specific information from Terra sales representatives. This warranty is void if the equipment is abused or modified by the customer, is operated outside Terra's operating instructions or specifications, or is used in any application other than that for which it is specified. This warranty does not include routine maintenance or service procedures, breakage of quartz baths after 60 days, shipping damage, nor damage from misuse, intentional or unintentional abuse, neglect, natural disasters, or acts of God.

**Products Manufactured by Others:** Terra Universal, Inc., warrants that, to the best of its ability, Terra's representations of products that are manufactured by others reflect the manufacturer's representations, subject to change without notice. Sole warranty for these products is the original manufacturer's warranty that is passed forward to the purchaser and constitutes the customer's sole remedy for these products. Detailed warranties for distributed products are available through Terra sales representatives.

**Freight Shortage or Damage:** Upon receipt of any equipment from Terra Universal, Inc., customer shall immediately unpack and inspect for damage or shortage. The customer shall not accept a damaged package or a short shipment until the carrier makes a "damage or shortage" notation on both the carrier's and customer's copy of the freight bill or delivery receipt. Service title passes when the shipment is loaded, so customer is responsible for filing and collecting a freight claim. Any replacement products must be ordered and paid for separately. For Terra's "Policy and Procedures for Returning Goods," see Terra's Internet site: www.TerraUniversal.com.

Generally, customers can improve the chance of collecting on a freight claim by following these procedures: 1) formally requesting that the carrier inspect the shipment immediately upon suspecting damage or shortage to verify condition; 2) notifying the carrier upon discovery of concealed damage and requesting an inspection within 15 days of receipt, both in person or phone and following up via mail; 3) keeping the shipment as intact as possible, including retaining original packaging materials and keeping the product as close to the original receiving location as possible; 4) holding salvage for disposition by the carrier.

All Claims: Terra Universal expressly disclaims all other warranties, expressed or implied or implied by statute, including the warranties of merchantability or fitness for intended use. Terra Universal is not responsible for consequential or incidental damages arising out of the purchase or use of the products supplied by Terra Universal. Terra Universal is not liable for damage to facilities, other equipment, products, property or personnel of others, or of their agents, suppliers, or affiliated parties, which is caused or alleged to have been caused by products supplied by Terra Universal. In any event or series of events, Terra Universal's total liability for any and all damages whatsoever is limited to the lesser of the actual damages or the original invoice cost of the items alleged to have caused the damage. The customer's sole and exclusive remedy for any cause of action whatsoever is repair or replacement of the non-conforming products or refund of the actual purchase price, at the sole option of Terra Universal. All claims must be made in writing within 90 days of the date the product was shipped. Any claims not made within this time limit shall be deemed waived by the customer. Terra Universal is not responsible for any additional costs of repair caused by poor packaging or in-shipment damage during return.

**Warranty Returns:** All warranty returns must be authorized in advance by Terra Universal and approved under an RMA. Unless approved in advance for good reason, all returns must be in original condition, including all manuals, and must be packaged in original packaging materials. All returned goods are to be shipped to Terra Universal, freight prepaid at customer's expense. See Terra's "Policy and Procedure for Returned Goods.

Thank you for ordering from Terra Universal



# 8.0 Replacement Parts

## **Batch Processing**

Changeable Sleeve and Glove Combination for 10"-diameter glove port			
Glove	Cat. #		
Size	Per Pair		
8	1689-46		
9	1689-46		
10	1689-47		

Ν	litrile	Replacement Gloves
G	Glove	Cat. #
3	Size	Per Pair
	8	1671-50
	9	1671-51
	10	1671-52





## Mounting the Glove and Sleeve Assembly to the Glove Box

Normally, the glove and sleeve combination is installed in the glove box prior to shipping. If for any reason you need to reinstall the assembly, follow these instructions:

- 1. Insert the glove and sleeve assembly into the glove box, allowing 2" of sleeve to extend beyond the front edge of the mounting flange.
- 2. Fold the outside edge of the sleeve over the flange, so that roughly 2" of the sleeve cuff is stretched along the outside perimeter of the flange.
- 3. The sleeve is held in place by a stainless steel clamp (TUI Cat. No.1689-40). Position this clamp along the mounting flange so that about 1" of excess sleeve cuff protrudes on the inside edge of the flange (the edge closest to the front wall of the glove box). Carefully tighten the clamp just enough to hold the sleeve in place.





Over-tightening the clamp could crack or warp the flange and damage the glove box.

4. Fold back the excess sleeve cuff toward the front edge of the flange to cover the clamp. Repeat procedure for the other glove and sleeve combination.



## Mounting the Glove to the Sleeve

The two-piece design of this assembly permits you to replace the glove without removing the sleeve from the glove box. To replace the glove,

- 1. With the glove and sleeve combination installed inside the glove box, insert your hand fully into the assemble and then pull it from the glove box to turn the glove and sleeve inside out.
- 2. A steel retaining spring holds the glove and sleeve together in position on a retaining ring. Remove this spring.
- 3. Peel the cuff of the sleeve from the retaining ring to remove it (still attached to the glove).
- 4. To remove the glove, peel its cuff from the retaining ring.
- 5. To install a new glove, first turn it inside-out and then stretch the cuff from inside the ring over and around the outside edge.
- 6. Now place the ring (with the glove attached) inside the cuff of the sleeve and stretch the sleeve over the outside perimeter of the ring.
- 7. Reposition the steel retaining spring over the channel of the ring, and reinsert the sleeve and glove combination into the glove box. Repeat the procedure for the other hand

# 8.1 Replacement Parts

## **Continuous Process**

Depending on the purity of ambient air, filters will eventually need to be replaced. As they become dirty, filters continue to function effectively but create additional back pressure; this back pressure in turn will cause the blower motor to operate more noisily—and call the problem to your attention.

Replacement HEPA Filter		
Filter Size	Cat #	
13"W x 27.75"L x 3"H	1681-10	





## **Replacing HEPA filter in blower**



Extended operation with a clogged filter could cause blower damage. Be sure to test the filter periodically with a suitable pressure gauge.

To change filters, caution must be observed to reinstall them properly or loss of compression can result from air bypassing the filters.

- 1. Remove the six screws that hold the Blower/Filter Housing to the top of the hood, and remove the housing.
- 2. Place the filter housing in an upside-down-position. Loosen and remove the wingnuts from the support panel inside the housing. Lift the L-shaped support out.
- 3. Replace the filter(s). Make sure that the top filter fits snugly against the gasket on the plenum chamber.
- 4. After all the filters have been reinstalled in the housing, place the L-shaped brackets over the filters.
- 5. Apply full force on the L-shaped brackets and tighten the wingnuts a little at a time on each side, back and forth, so they will be tightened evenly on both sides.
- 6. Replace the Blower/Filter Housing to the top of the hood using the six screws previously removed.