Installation Procedure for the SkyBitz GLS Mobile Terminal on an Aluminum Roof Trailer

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Table of Contents

Forward

The purpose of this manual is to provide the installer with the proper installation techniques required for secure installation of the Skybitz GLS Mobile Terminal (MT). The Manual covers MT installation on the flat aluminum roof of a trailer using the Skybitz Mobile Terminal Bracket and 3M Very High Bond (VHB) adhesive. Installation of the Skybitz MT Safety Tether is described as well.

This Procedure is not to be used for MT installations on Fiberglass or other types of composite roof trailers. Contact Skybitz Customer Support for information regarding MT installation on trailers with roof materials other than Aluminum.

Following the installation conditions and procedures provided in this manual is strictly necessary to ensure the MT bracket will form a safe and secure bond to the roof of the trailer.

CAUTION!

Failure to follow these installation procedures could allow the Mobile Terminal to separate from the vehicle resulting in possible injury or death!

Important!

Should you have any questions or concerns regarding the Mobile Terminal installation process, please contact Skybitz Customer Support.

Skybitz Customer Service (866) 875-9248

Customercare@skybitz.com

Contact Skybitz prior to any deviations from the installation of the MT as described in this manual. Skybitz will not be responsible for any loss or damage caused by improper Mobile Terminal installation.

Installation of the Mobile Terminal (MT) on an Aluminum Roof Trailer

The following describes the proper materials and steps required for installing the MT on an Aluminum Roof Trailer. Strict adherence to the following procedures is paramount to ensuring a secure and safe installation.

Installation Environment

<p style="text-align:center">**Caution!**</p>

- *DO all installations in a clean, dry, and properly prepared environment. Temperature should be maintained above 32°F for a minimum of 30 minutes before and after installation!*

- *DO NOT attempt to install the MT in the rain or fog, or if signs of snow, ice or condensation are evident on the trailer roof. It is extremely important that the mounting surface be clean and dry prior to installing the unit.*

- ***Failure to follow these installation procedures could allow the Mobile Terminal to separate from the vehicle resulting in possible injury or death!***

Materials Required for MT Installation

Contact Skybitz Customer Service before making any substitutions to the items listed below:

- Skybitz Mobile Terminal Mounting Kit including Bracket with Pre-applied VHB Tape
- Skybitz Mounting Hardware kit including 4 ea. Torx #15 Security with a #8-32 - ½″ screws with thread lock, 4 ea. #8 lock washers, and 4 ea. #8 flat washers.
- Skybitz Mobile Terminal Safety Tether Kit including tether guard
- 3M Primer 94
- Small paint brush (when not using ampoules with integrated applicator)
- Medium Duty abrasive pad (Preferred Product - 3M Scotch-Brite Pad #9650)
- Clean, lint-free towels or paper towels
- 50% to 70% Isopropyl Alcohol and water solution – (Preferred Product - 3M Prep-Solvent 70)
- RTV sealing compound
- 6ft. of masking tape
- Power drill with 3/16″ drill bit
- Torx security driver bit #15 or Torx security wrench
- 1/8″ Hex Key Wrench (Safety Tether Screw)
- 3/8″ open End Wrench (Safety Tether Nut)

Location of the MT on the Trailer Roof

The recommended mounting location on the trailer roof is approximately 3ft. back from the front of the trailer, and about 1ft. in from the left road-side rail. This location is intended to minimize the potential for damage from low hanging tree branches and to maximize the Mobile Terminal's view of the sky when the trailer is backed into a dock. The Mobile Terminal(with integral antenna used for this transmitter) must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Installing the MT, Mounting Bracket, and Safety Tether

1. Begin by installing the MT and tether loosely to the mounting bracket.

   Do not fully tighten the MT to the bracket at this time. The MT must be free to float within the bracket at this stage of the installation. Tightening of the MT to the bracket at this time could impede the bonding of the MT bracket to the trailer roof!

MT and Tether Loosely Mounted to Bracket
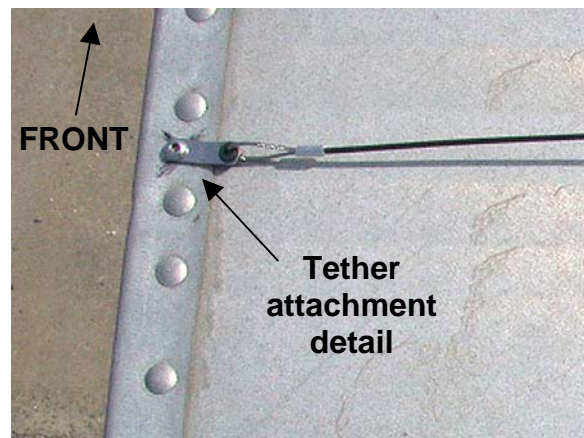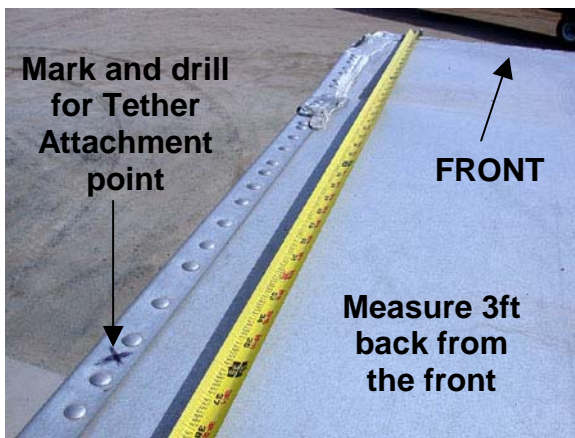
FRONT

MT Tether Attachment Detail

   Orient the terminal in the bracket so the screw holes align and the connector is at the open end of the "U". Install the tether to the MT using a Torx Security stainless steel screw with a lock washer. Insert the screw through the tether tab, then the MT bracket, and into the front roadside hole in the MT. Orient the tab with the tether towards the front of the bracket and partially install the screw leaving the MT free to move in the bracket. Complete the installation of the MT to the bracket with the 3 remaining Torx Security stainless steel screws, flat washers, and lock washers.
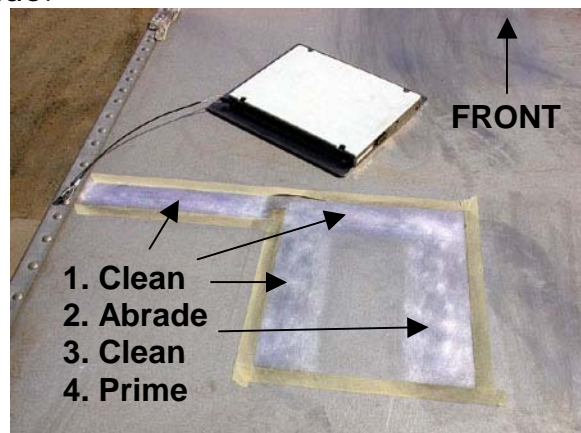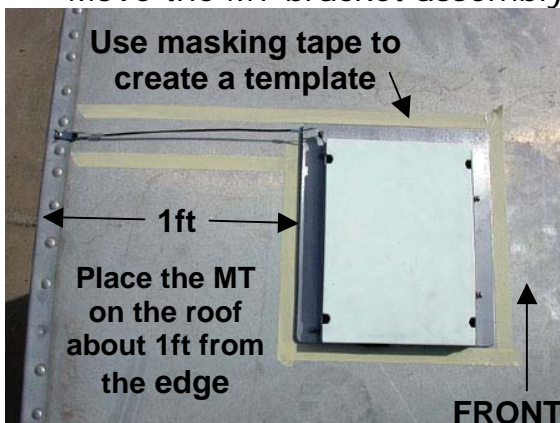
Partially install the screws leaving the MT free to move in the bracket.

2. Locate two rivets in the roof, about 3 ft. back from the front of the trailer, along the left road-side roof rail. Mark and drill a 3/16″ hole between the two rivets to create a mounting point for the Safety Tether. Install the 10-24 x 1″ long screw through the tab in the tether and fasten to the trailer with the #10 flat washer and 10-24 lock nut. Orient the tether mounting tab as shown in the photo and tighten.

Mark and drill for Tether Attachment point

FRONT

Measure 3ft back from the front

FRONT

Tether attachment detail

3. *Before* removing the plastic film to expose the VHB tape adhesive, set the MT Bracket in place on the roof of the trailer. Locate the MT bracket assembly approximately 12″ from the side of the trailer as shown. The open end of the bracket and the MT connector should be facing the rear of the trailer. Apply the masking tape to the trailer roof around the outside of the bracket and Tether to form a template. Move the MT bracket assembly aside.

Use masking tape to create a template

1ft

Place the MT on the roof about 1ft from the edge

FRONT

FRONT
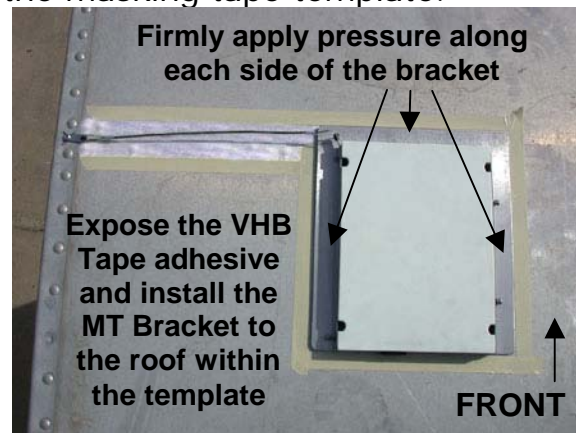
1. Clean
2. Abrade
3. Clean
4. Prime

4. Wipe and clean the area within the tape using the alcohol solution and a clean towel. Ensure any dirt, films, oils, waxes, release agents, or other contaminants are removed from within the mounting area.

5. Use the Scotch-Brite pad to abrade the area within the masking tape where the Bracket and Tether Guard will make contact with the roof. Using a circular motion will increase the bonding of the primer and adhesive. It is not necessary to completely remove all surface oxidation.

6. Wipe the abraded surface down using the alcohol cleaning solution and a clean towel. Repeat the cleaning again with a new clean towel until the clean towels show no sign of any remaining contamination. Thoroughly wipe the surface dry with another clean towel.

Be diligent as this is the most important step to acquiring a secure bond of the adhesive!

7. Prepare the 3M Primer 94 per the manufacturer's instructions. Use a small brush to apply the primer to the cleaned and abraded roof surface. Allow the primer at least 10 minutes to dry completely.

8. Remove the plastic film from the bracket VHB tape to expose the VHB tape adhesive.

Be careful not to touch the exposed adhesive or primed surface as any contamination will impede the bond strength.

Carefully place the MT/Bracket assembly on the roof within the boundaries of the masking tape template.

Firmly apply pressure along each side of the bracket

Expose the VHB Tape adhesive and install the MT Bracket to the roof within the template

FRONT

Firmly push down, back and forth several times, along the entire perimeter of the bracket.

Remove and discard the masking tape.

Visually verify a bond has been obtained between the bracket and the roof.

9. Firmly tighten all four MT bracket mounting screws.   Allow 15 minutes for the adhesive to set before testing the bond.
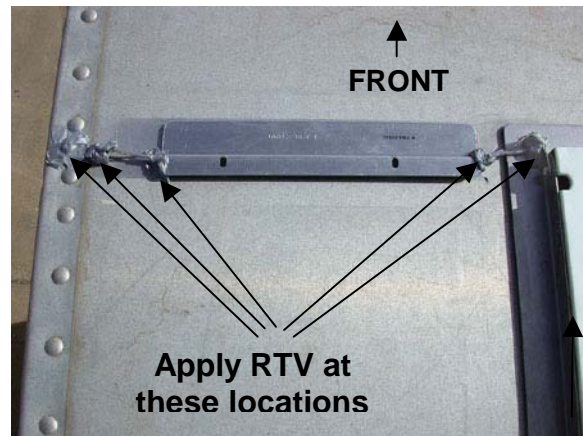
Firmly pull up on the MT/Bracket assembly, to verify a secure bond to the roof of the trailer, before releasing the trailer into service.

10.   Install the tether guard over the tether. Orient the guard with the raised section over the tether and the VHB tape section toward the front of the trailer. Remove the plastic film from the Tether Guard VHB tape to expose the VHB tape adhesive.

Be careful not to touch the exposed adhesive or primed surface as any contamination will impede the bond strength.

Carefully place the Tether Guard, over the Tether, on the roof.

Firmly push down, back and forth several times, along the entire length of the Tether Guard.

Firmly pull up on the Tether Guard, to verify a secure bond to the roof of the trailer, before releasing the trailer into service.

11.   Use a generous amount of RTV to seal around the head of the Tether mounting screw. Also apply RTV to each end of the tether where the tether passes through the grommets. Finally apply RTV to each end of the Tether Guard where the Tether makes contact with the Tether Guard.

Installation Registration

To view GLS data sent from the newly installed Mobile Terminal, it must be registered at the Skybitz data center. Mobile Terminal registration can be forwarded by **e-mail** to **customercare@skybitz.com** or by calling **Skybitz Customer Service** at **(866)-875-9248.**
The required information is as follows:

Date of Install: _____

Address: _____

City: _____

State: _____

Trailer Number: _____

Mobile Terminal Serial Number:_____

Name of Installer (Print): _____

Installers Signature: _____