



Installation Manual InSight Tracking GLS 400 Aluminum Roof Trailer

Kit Number: IT1AL-M1

Description: IT Aluminum GLS 400

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Revision History

Date	Change	Author	Rev
9/24/2009	Initial Release	D Parks	-

Forward

The purpose of this manual is to provide the installer with the proper installation techniques required for secure installation of the SkyBitz GLS 400 Mobile Terminal (MT) System. The Manual covers GLS 400 installation on the flat aluminum roof of a trailer using the Skybitz Aluminum Roof Mounting Bracket kit. Installation of the SkyBitz MT Safety Tether is described as well.

Required Components

- Mobile Terminal model GLS 400 (**MT**)
- Aluminum Roof Mounting Brackets (**XTB – 2 ea**)
- Safety Tether Cable (**STC**)

Failure to follow all instructions in this manual will void the product warranty.

Following the installation conditions and procedures, in the order indicated in this manual, is necessary to ensure the SkyBitz Mobile Terminal will form a safe and secure bond to the roof of the trailer.

CAUTION!

This installation procedure only pertains to ALUMINUM ROOF, DRY VAN TRAILERS! This Procedure *is not* to be used for MT installations on Fiberglass or other types of composite roof trailers or Refrigerated trailers. Failure to follow these installation procedures could result in the Mobile Terminal Assembly separating from the vehicle resulting in possible injury or death! Call SkyBitz Customer Service before making any deviations from this Installation Procedure.

Important!

Should you have any questions or concerns regarding the Mobile Terminal installation process, or for information on the installation on Refrigerated trailers, 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.

SkyBitz Mobile Terminal System Configuration

Introduction

This procedure covers the Installation of the **SkyBitz Mobile Terminal (MT)**, **Aluminum Roof Mounting Brackets (XTB)**, and **Safety Tether Cable (STC)**. The **XTB** are bonded to the trailer roof with 3m VHB (Very High Bond) adhesive tape. The **MT** is installed to the brackets with stainless steel self locking fasteners. The **STC** provides a mechanical connection between the MT and the trailer.

The **MT** is to be mounted on the exterior of an aluminum roof trailer, approximately 36 inches from the nose (front) of the trailer and approximately 10 inches from the road side of the trailer. This forward location helps to keep the **MT** in view of the satellites when the trailer is backed up to a building. The Roadside location is less susceptible to damage from branches.

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

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

Installation Environment

CAUTION!

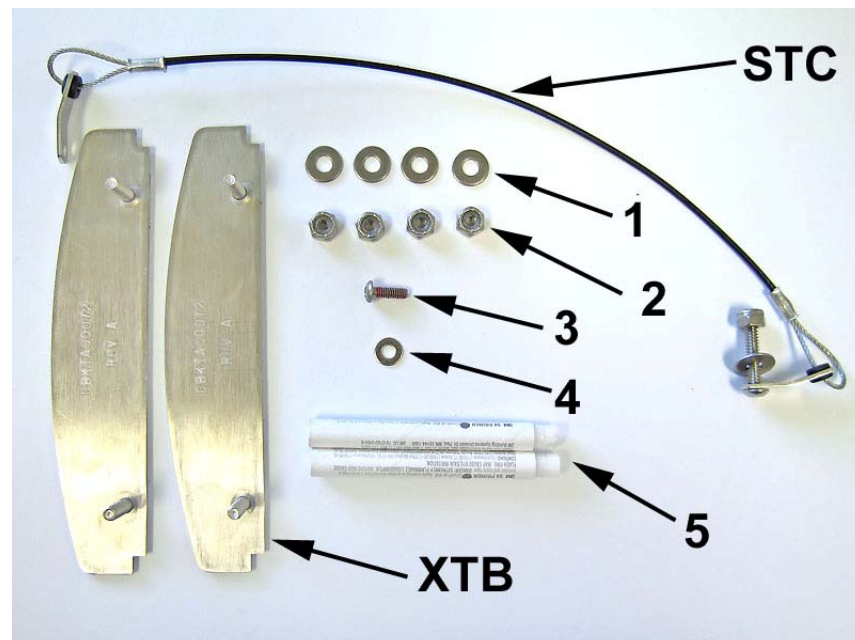
- DO all installations in a clean, dry, and properly prepared environment. Temperature should be maintained above 32°F for a minimum of 30 minutes before and after installation!
- DO NOT attempt to install the MT in the rain or fog, or if signs of snow, ice or condensation are evident on the trailer 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 Assembly to separate from the vehicle resulting in possible injury or death!

Tools Required for MT Installation

- 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
- Power drill with 3/16" drill bit
- 1/8" Hex Key Wrench (STC Screw)
- 3/8" open End Wrench (STC Nut)
- 3/8" socket (XTB lock nuts)
- Phillips screwdriver

Parts List for Installation Components and Hardware

Item	Item Description	Part Number	QTY
Components			
MT	SkyBitz Mobile Terminal	GLS 400	1
XTB	Aluminum Roof Mounting Bracket	CBKTA00072	2
STC	Safety Tether Cable Kit, 12"	KTHRA00001	1
			1
Hardware			
1	Washer, SS, #10, Flat	KHDWA00036	4
2	Nut, SS, 10-24, Ny-Lock,	KHDWA10002	4
3	Screw, 8-32 x 3/8" long, SS, loctite	KHDWA00074	1
4	Washer, SS, #8, Flat	KHDWA00058	1
5	3m Primer 94, .66ml Ampoule	CPRMA10001	2

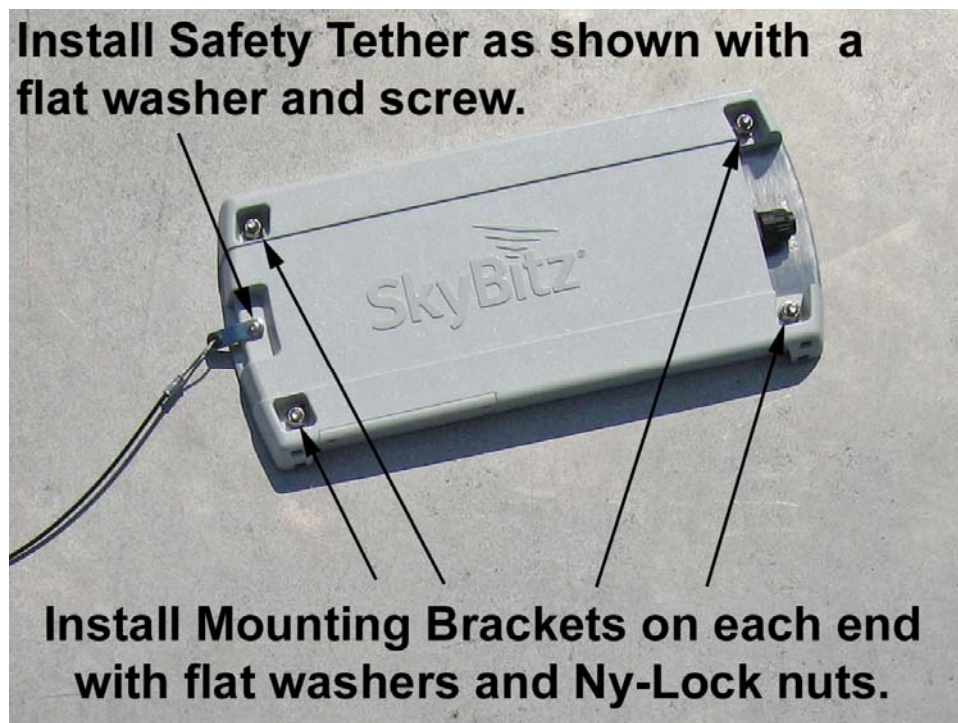


Location of the MT on the Trailer Roof

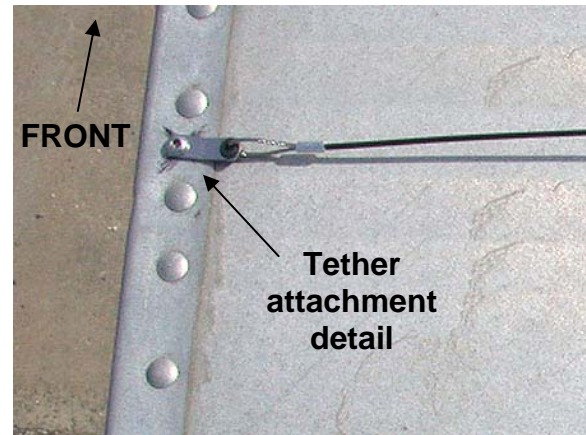
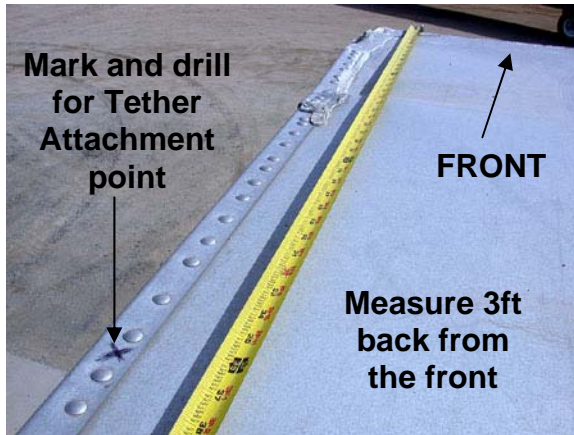
The recommended mounting location on the trailer roof is approximately 3ft. back from the front of the trailer, and about 10 inches in from the left road-side rail. This location is intended to minimize the potential for damage from low hanging tree branches and to maximize the Mobile Terminal's view of the sky when the trailer is backed into a dock. The MT must not be co-located or operating in conjunction with any other antenna or transmitter.

Installing the MT, Mounting Brackets, and Safety Tether

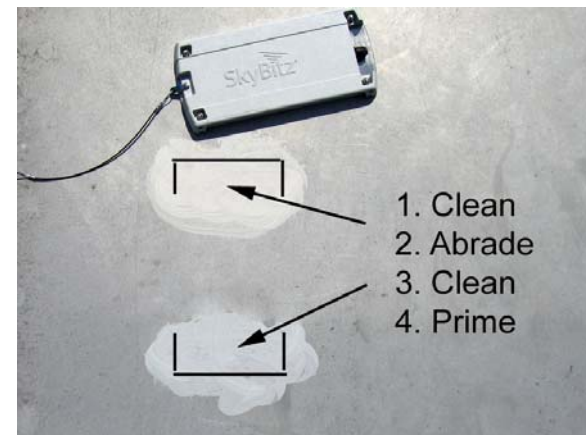
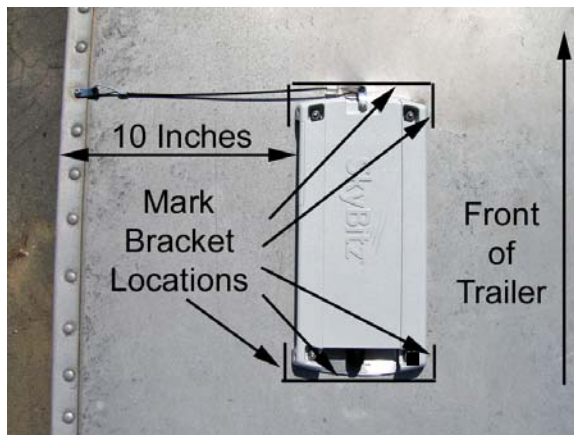
1. Begin by installing the MT to the Aluminum Roof Mounting Brackets (XTB). Align the XTB mounting studs and insert the XTB into the GLS 400 mounting holes from the bottom. Fasten the XTB to the GLS 400 with 2 flat washers (Item #1) and 2 lock nuts (Item #2). Repeat on the opposite end with the second XTB.



2. Install the Safety Tether (STC) to the MT using a 8-32 x 3/8" stainless steel screw (Item #3) and a flat washer (Item #4). Position the tether as shown and tighten the fastener.
3. Locate two rivets in the roof; about 3 feet 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.



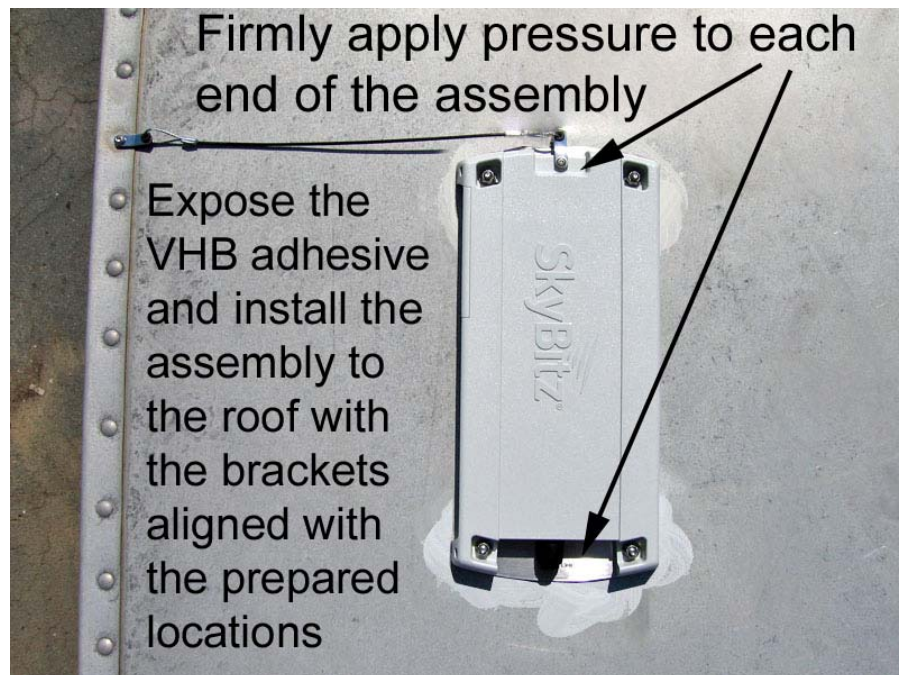
4. **Before** removing the plastic film to expose the VHB tape adhesive, set the MT Bracket in place on the roof of the trailer. Fully extend the tether to locate the MT assembly approximately 10" from the side of the trailer as shown. The MT connector should be facing the rear of the trailer. Mark the location of the mounting brackets on the trailer roof. Move the MT bracket assembly aside.



5. 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.
6. Use the Scotch-Brite pad to abrade the area within the masking tape where the Brackets 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.
7. **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 in cleaning the mounting surface as this is the most important step to acquiring a secure bond of the adhesive!

8. Apply the 3M Primer 94 (Item #5) to the cleaned and abraded mounting surface where the Skybitz brackets will be mounted. Allow the primer at least 2 minutes to dry completely.
9. Remove the plastic film from the bracket VHB tape to expose the VHB tape adhesive surface. **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 so the brackets align with the prepared mounting areas. **Firmly push down, back and forth several times, along the entire length of each bracket.** Visually verify a bond has been obtained between the bracket and the roof.



10. **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.**
11. **Complete the Installation Registration form found in the back of this manual!**

Installation Registration

To view GLS data sent from the newly installed Mobile Terminal, it must be registered at the SkyBitz Data Center.

To register your newly installed SkyBitz Mobile Terminal **online** please log on to SkyBitz InSight at <https://insight.skybitz.com> and follow the instructions under Configure Assets.

You Mobile Terminal registration can also be forwarded by **e-mail** to customercare@SkyBitz.com, by **fax to (703)-478-3301** or by calling **SkyBitz Customer Support at 1-(866)-875-9248**.

The required information is as follows:

Date of Install:	
Company Name:	
Trailer Number/Asset ID:	
Mobile Terminal Serial Number:	