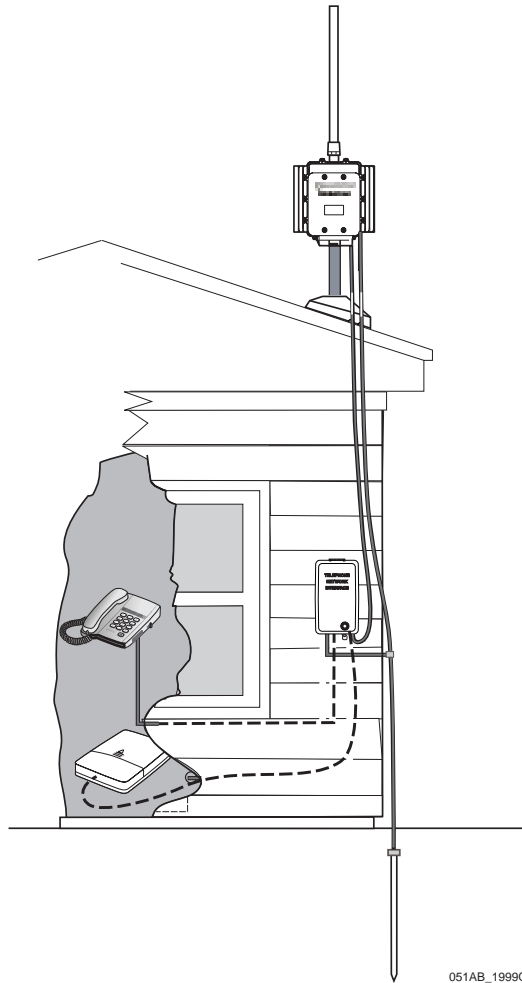


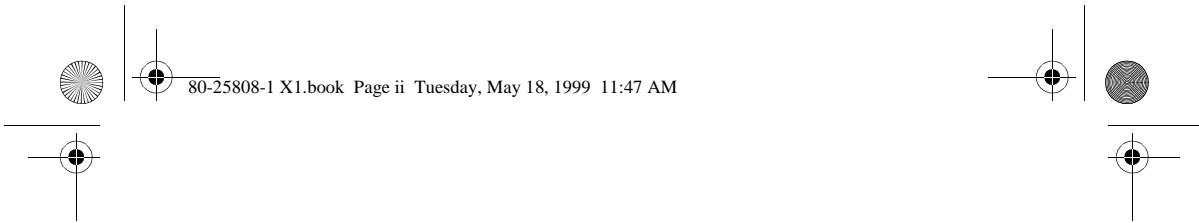
# QUALCOMM® Globalstar Fixed User Terminal, GSP 2800/2900



051AB\_1999Q



## User Guide



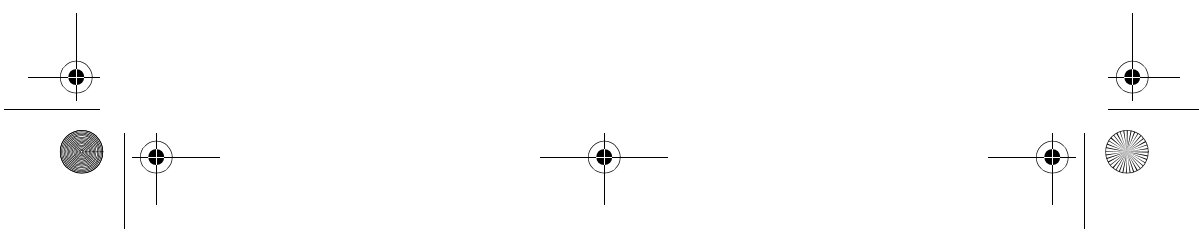
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Qualcomm Incorporated  
6455 Lusk Blvd., San Diego, CA 92121-2779  
Software Release 4.3  
Document Number 80-25808-1 X1  
May 12, 1999



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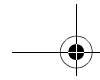
## ***Using this book***

This book was written for users of the Globalstar Fixed User Terminal (GFUT) and explains how to use your telephone.

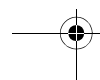
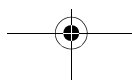
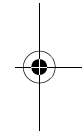
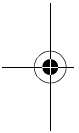
This book includes the following sections:

<b>Content</b>	<b>Page</b>
Cautions and warnings	v
Understanding your telephone	vii
Introduction: tells you how to use your telephone and its features.	1
Understanding the GFUT installation: explains how the Globalstar components work together: how the telephone works, who installs the components, and how to select a telephone.	3
Using your Globalstar Fixed User Terminal: explains how to obtain your telephone number, make a call, answer a call, and end a call.	7
Troubleshooting: explains what to do when the telephone doesn't work.	11
Safety Issues: explains how to use your telephone safely.	15
Glossary: explains terms used in this book	17

For more details on using the telephone, see the book that came with your telephone set.



***Using this book***



## ***Cautions and Warnings***

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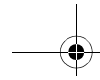
### **Caution**

**Any changes or modifications not expressly approved in this document could void your warranty for this equipment.**

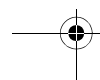
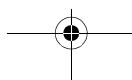
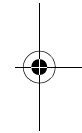
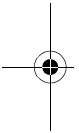


### **Warning**

**Do not operate the GFUT during a thunderstorm. Do not allow anyone to install, use, or service any portion of the GFUT during a thunderstorm.**



***Cautions and Warnings***

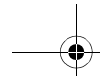


## Understanding your telephone

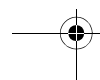
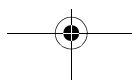
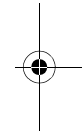
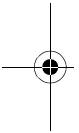


**Figure 1. Telephone showing relevant user features.**

Refer to Figure 1 to obtain a better understanding of the various parts of your telephone set. If your installation includes a telephone from Qualcomm, the diagram should match your telephone. If you elected to purchase your own telephone, the features labeled in this diagram may appear differently, depending on the particular model.



***Understanding your telephone***





## Introduction

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Congratulations on the purchase of your Globalstar GSP-2900 Fixed User Terminal!

### About the Globalstar Fixed User Terminal

The Globalstar Fixed User Terminal (GFUT) is easy to use, versatile, and dependable. It combines the ready availability of a two-wire telephone with the superior performance of a state-of-the-art digital wireless technology known as Code Division Multiple Access (CDMA), and the Globalstar system.

The elements comprising your GFUT consist of the following: a radio antenna unit (RAU), a junction box that minimizes damage from lightning strikes, a power supply, a telephone, and assorted cabling.

**Note**

In this book, we call the complete unit, including your telephone, the Globalstar Fixed User Terminal or GFUT. When we talk about the GFUT, we're talking about your entire Globalstar installation, not just your telephone.

These elements allow you to make and receive telephone calls using the Globalstar satellite system. The Globalstar system makes clear, high quality voice, data, and fax communications possible.

**Note**

Data and fax are available only where supported by the network.

The GFUT equipment required to make and receive telephone calls over the Globalstar system must be installed and maintained by your service provider with the exception of the telephone and inside wiring, unless the inside wiring was installed by your service provider.

*Introduction*

## Using your phone effectively

To obtain best results and satisfactory service from your telephone, follow these guidelines:

- Do not use the telephone if it is damaged.
- Speak directly into the mouthpiece.



**Note**

The GFUT setup (the RAU, junction box and cabling) is designed for outdoor use and, if properly installed, will not be harmed by weather. The telephone and the power supply are designed for indoor use and should be sheltered from the weather.



**Warning**

Do not use the telephone during an electrical storm. Do not allow anyone to install, use, or service any portion of the GFUT during an electrical storm.

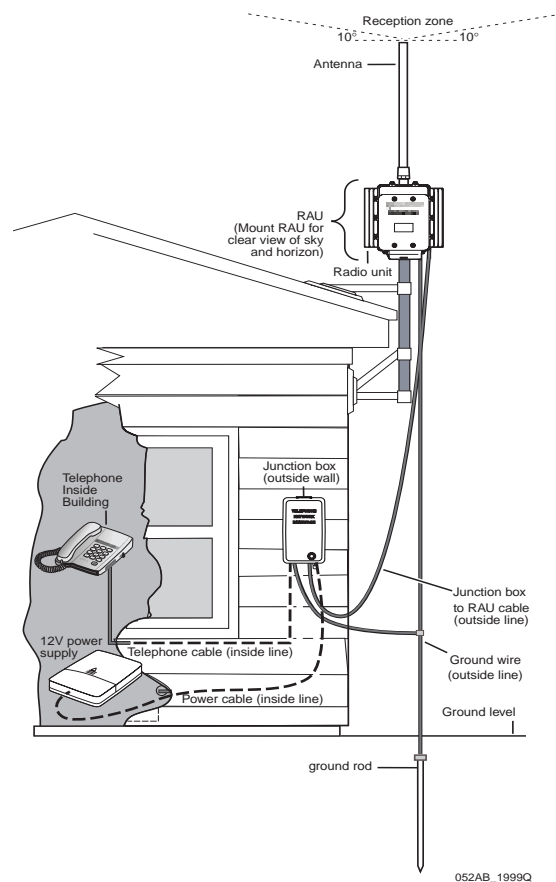


**Caution**

Allow only authorized personnel to install or service the AFUT components, such as the RAU, junction box, and power supply. Unauthorized installation or service can be dangerous and can invalidate the warranty.

## Understanding the GFUT Installation

This section explains the outdoor components of your GFUT and the telephone itself.



**Figure 2. Typical wall installation. See cover for a typical roof mount.**

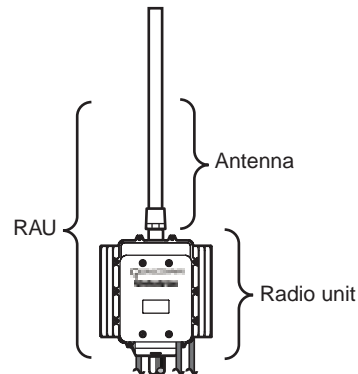
Figure 2 shows a typical GFUT installation. Your service provider will install the RAU, junction box, power supply and cabling. If you have problems with these components, contact your service provider.

### Understanding the GFUT Installation

When installation is complete you will have one or more standard RJ-11 jacks on the inside of your building. Jacks are the receptacles you plug your phone into.

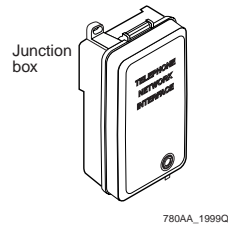
## Radio antenna unit (RAU)

The RAU, which acts as a radio receiver and transmitter, connects the telephone with the Globalstar satellites. It is essential that the RAU antenna have a clear view of the sky and the horizon.



## Junction box

The junction box connects outside cables to the inside wiring. It also receives power from your power supply and supplies power to the RAU. The junction box and the grounding rod provide the user with protection against lightning strikes to the RAU and outdoor cabling.



## Power supply



The power supply is the one selected by the service provider and the installer. The power supply provides 12+ volts to the junction box and RAU.

Note: Your installer will have equipped your installation with a power supply.

The installation is described in detail in *Installation Guide, Globalstar Analog Fixed User Terminal GSP 2900 (80-98052-1)*. It is used by your installer.

## Installing your GFUT

Your service provider will perform the GFUT installation. Qualcomm may supply a telephone with your GFUT installation for you. (See Figure 2.)

If you purchased a basic Globalstar telephone kit, you will need to purchase an off-the-shelf two-wire telephone set. You can either purchase a qualified and tested telephone from Qualcomm or you can buy one that meets Qualcomm requirements.

### Selecting a telephone

If you are selecting your own telephone, look for one that best fits these guidelines. For optimal results, a telephone should:

- Use standard DTMF tones, not pulses, for dialing. This is a requirement.
- Have good voice quality. Sound quality is determined by the telephone itself as well as by signal reception. Your Globalstar phone installer can ensure proper placement of components to obtain the best signal reception.

You can connect one or more telephones to your GFUT. When using several telephones, an individual telephone should be .5 to 1.5 REN (ringer equivalent number). The total load of all the phones when added together can not exceed 5.0B REN. (You can discuss this requirement with your service provider.)

### Activating the GFUT

When the building was wired for GFUT, jacks for the telephone were installed, or existing jacks may have been connected to the Globalstar GFUT components. If your installer did not plug the telephones into the jack, do so now.

*Understanding the GFUT Installation*

## Types of calling tones

When you listen to the handset, you may hear any of the following tones:

Type of Tone	Explanation
Dial tone	A continuous tone indicating your telephone is ready to use.
Busy	Slow beeping sound. The number you are calling is busy. Wait a while and dial again.
Fast Busy	Fast beeping sound. The system is busy and your service provider cannot handle any more calls. Wait a while and dial again.
Intercept tone	Two alternating tones. Your telephone has detected an error. Hang up and dial again.
None	You do not currently have telephone service. See the chapter on Troubleshooting for possible solutions.

## ***Using Your Globalstar Fixed User Terminal***

---

The GFUT acts like most telephones, with one exception: after a short pause, the GFUT will attempt to place the call. You can press the # key to accelerate placing the call.



### **Note**

You should expect excellent sound quality from your GFUT. However, sound quality is a function of both your telephone and the GFUT components of your telephone. If you have problems with poor audio quality, see the chapter on Troubleshooting.

### **Obtaining your telephone number**

Your service provider should tell you your the telephone number. This is the number you give out to others so that they can call you.

### **Making a call**

To place a call:

1. Pick up the telephone handset.
2. Listen for the dial tone. When you hear the dial tone, dial the telephone number.
3. After a short pause, the number will be sent over the system.
4. To avoid the short pause, press #.



### *Using Your Globalstar Fixed User Terminal*



## **Ending a call**

To end a call replace the handset in its cradle. Be sure the handset is seated properly.

## **Receiving a call**

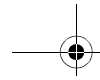
When you have an incoming call, the telephones connected to the GFUT will ring. To answer the call, pick up any handset and speak into it.



### **Note**

If the person at the other end of the call hangs up, the call is dropped.





*Using Your Globalstar Fixed User Terminal*



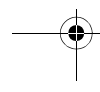
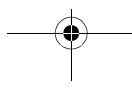
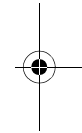
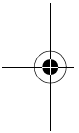
**Note**

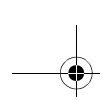
After you dial a number, the GFUT will pause for a short time before attempting to place the call. If you press # the GFUT will place the call without waiting.



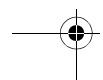
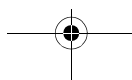
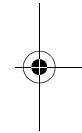
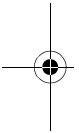
**Note**

When placing a call, if you do not hear a dial tone after lifting the handset, see the chapter on Troubleshooting.





***Using Your Globalstar Fixed User Terminal***



## ***Troubleshooting***

If you are unable to make or receive a telephone call, please refer to the following list of possible causes and attempt to find the problem before you contact your service provider's authorized service center.

<b>Problem</b>	<b>Solution</b>
No dial tone	Lift the handset to your ear and listen. If you hear nothing, then: <ol style="list-style-type: none"><li>1. Verify that your telephone was installed properly.</li><li>2. Verify that the telephone is plugged into the telephone jack.</li><li>3. Check visually to see that the RAU and antenna have not been damaged.</li><li>4. If steps 1 to 3 do not fix the problem, contact your service provider.</li></ol>
Regular busy tone (slow beeping sound)	The party you are calling is on another call.

**Troubleshooting**

**Problem**

Fast busy tone  
(quick beeping  
sound)

**Solution**

1. All channels may be busy. Try to dial the number again in a few minutes.
2. A fast busy tone means the system itself may be busy. Wait a few minutes and dial again.
3. The Globalstar telephone may not be registered with the service provider. To register, contact your service provider.
4. The antenna or other AFUT components may be broken or damaged. Contact your service provider.

Reorder tone

1. Your call did not go through. Hang up and try dialing again.
2. If this doesn't work, your unit may have power, but not be able to connect with the Globalstar system. Contact your service provider.

Phone number  
dialed, but did not  
connect

1. Check the telephone number. You may have misdialed or dialed incorrect numbers.
2. The telephone you are dialing may be busy.

Phone does not ring

1. You may have connected too many telephones.
2. Check the ringer switch and verify that it is set to tone.

*Troubleshooting*

<b>Problem</b>	<b>Solution</b>
Sound volume is too low	Another telephone in your building may be off the hook. Hang up the extension.
Poor reception	Check the telephone wiring inside your building. Worn or inadequate telephone wiring may need to be replaced.
Dial tone in middle of call	The call has been lost. Dial again and attempt to reestablish the connection.

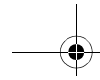
Note: If your telephone is working, you should always hear a tone of some sort.

## How to contact the service center

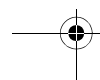
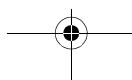
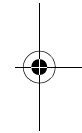
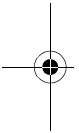
Call your service provider and ask if there is a special telephone number for service.

## Warranty

Packaged with your GFUT equipment is a Warranty Card that explains the warranty. Read it carefully.



**Troubleshooting**



## ***Safety Issues***

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This section describes the safety issues related to using a GFUT, and explains how to avoid dangerous conditions.

### **Precautions**

When using your GFUT, follow these basic safety precautions:

1. Do not use your telephone near water; do not use the telephone near the bathtub, sink, wet basement, or a swimming pool.
2. Avoid using the telephone during an electrical storm.
3. Do not use the telephone to report a gas leak while in the vicinity of the gas leak.
4. Do not use the telephone when someone is within 10 ft. (3 m) of the antenna.

### **Lightning Protection**

While the GFUT includes grounding and circuitry to protect equipment, facilities, and personnel from nearby lightning, lightning is a highly unpredictable and dangerous phenomenon. It is impossible to completely protect equipment and personnel from lightning. Do not use the telephone during a thunderstorm, except possibly for brief emergency calls.

### **GFUT components**

The GFUT components of your installation must be installed and repaired by a qualified technician sent by your service provider. Do not attempt to repair these components yourself. See the chapter on Troubleshooting for problems you can fix by yourself.

**Safety Issues**

## Radio frequency energy

Your GFUT incorporates a radio transmitter, receiver, and antenna (the RAU) that receive and send radio frequency (RF) energy.

The design of the Qualcomm Globalstar RF unit used with the phone complies with the updated (1992) ANSI standard for safe levels of human exposure to RF energy.

## Compliance with regulations

Your GFUT components comply with the following standards:

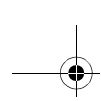
- ANSI C95.1 (1992) American National Standards Institute
- NCRP Report 86 (1986) National Council on Radiation Protection and Measurements
- ICNIRP (1996) International Commission on Non-Ionizing Radiation Protection.



## ***Glossary***

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<b>Term</b>	<b>Explanation</b>
GFUT	Globalstar Fixed User Terminal. The GFUT includes the RAU, junction box, power supply, telephone, and all cabling.
Globalstar	The provider of your satellite system.
Handset	The part of your telephone that you listen to and speak into.
Hang up	To replace the handset in the cradle of the telephone.
Jack	A receptacle that connects your telephone to the Globalstar components.
Junction box	The interface between outdoor cabling and indoor telephone wiring. Minimizes lightning damage when properly grounded.
RAU	Radio antenna unit. The RAU is a receiver, transmitter, and antenna for your satellite telephone.
REN	Ringer equivalent number
RF	Radio frequency
RJ-11 jack	A single line, two-wire receptacle for transmitting and receiving phone signals.



**Glossary**

