

# BI TAD™

## *Officer's Reference Guide*



© 2008 BI Incorporated

8-90-00130-0

Revision A





***Preface*** ..... vii

**Trademarks and Patents** ..... vii

**Technical Support** ..... vii

**Waste Electrical and Electronic Equipment (WEEE)** ..... viii

**United States FCC, Part 68** ..... viii

**United States FCC, Part 15** ..... ix

**Industry Canada Certification** ..... ix

**Operation and EME Exposure** ..... ix

**Electromagnetic Interference/Compatibility** ..... x

**Operational Warnings** ..... x

  

***Chapter 1*** Introduction ..... 1

**Product Overview** ..... 1

**Product Components** ..... 2

BI TAD Transmitter ..... 2

BI HomeBase Receiver ..... 3

**Common Terms** ..... 4

  

***Chapter 2*** The TAD Alcohol & Curfew Monitoring Device ..... 7

**Features** ..... 7

**Alcohol Monitoring** ..... 8

Alcohol Detection Module ..... 8

Water Reservoir ..... 8

**Electronic Tamper Sensors** ..... 9

Strap Tamper Sensor ..... 9

*72-Hour Count-Down* ..... 9

Proximity Tamper Sensor ..... 10

Motion Sensor ..... 10

Skin Contact Sensor ..... 10

Temperature Sensor ..... 11

Infrared Debris Buildup Sensor ..... 11

False Alerts ..... 12

*Improper Installation* ..... 12

*Poor Fit* ..... 12

**Calibration** ..... 12

**TAD Unit Battery**..... 13

**Installation & Removal**..... 13

Assembling ..... 14

Sizing..... 15

Attaching ..... 15

**Removing the TAD Unit** ..... 16

**Water Reservoir Replacement** ..... 17

**Battery Replacement** ..... 17

  

**Chapter 3** The HomeBase Receiver ..... 19

**Features**..... 19

**Equipment Models** ..... 20

BI HomeBase ..... 20

*Status Indicators* ..... 20

HomeBase +Cellular..... 21

*Cellular Signal Indicator* ..... 22

**Receiver Messages** ..... 22

Alcohol Monitoring Logistics ..... 22

*Alcohol Data Download*..... 23

Message Buffer ..... 23

Variable Leave Window..... 23

Power Loss Reporting ..... 24

Phone Loss Reporting ..... 24

*Location Verification* ..... 24

Cell Loss Reporting..... 24

Callback & Missed Callback Messages ..... 25

Tamper Detection..... 25

Motion Detection..... 25

Progressive Annoyance..... 26

**Telephone Restrictions** ..... 27

Telephone Usage Rules..... 27

Telephone Options ..... 27

**Voice Over Internet Protocol (VoIP)**..... 28

**Range Considerations** ..... 28

Equipment Location ..... 29

**Out of Range Alarm** ..... 29

**48-Hour Backup Battery** ..... 29

**Bulk Downloading** ..... 30

**Guest Reporting** ..... 30

**Receiver Connectors** ..... 30

**Installation and Removal** ..... 31

    Placement Guidelines ..... 32

    Installing with Cellular Operation ..... 32

*Configuration Settings* ..... 32

*Confirmation* ..... 33

*Installation Tips* ..... 35

    Installing with Phone Line Operation ..... 35

*Configuration Settings* ..... 35

*Confirmation* ..... 37

*Installation Tips* ..... 39

    Removing the HomeBase ..... 39

    Cleaning and Storage ..... 40

***Appendix A*** Frequently Asked Questions ..... 41

**TAD FAQs** ..... 41

**HomeBase Receiver FAQs** ..... 42

***Appendix B*** Troubleshooting ..... 45

***Appendix C*** Event Messages ..... 47

***Appendix D*** Product Specifications ..... 55



# ***Preface***

*BI TAD Officer's Reference Guide*  
*Copyright © 2008 by BI Incorporated*  
*All Rights Reserved*  
*Printed in USA*

BI prepared this manual for use by BI customers only. All comments concerning the contents of this manual should be directed to BI's Marketing Department, 6400 Lookout Road, Boulder, CO 80301, USA. No part of this work covered by copyright may be reproduced in any form whether graphically, electronically, or mechanically; including photocopying, recording, taping, or storage in an information retrieval system without prior written permission from BI.

## **Trademarks and Patents**

The following are registered trademarks of BI Incorporated:

- ❖ BI
- ❖ BI HomeBase
- ❖ BI logo
- ❖ BI Sobrietor
- ❖ BI TAD
- ❖ BI Sobrietor Cellular
- ❖ BI ExacuTrack

## **Technical Support**

For technical support when using BI's monitoring center, contact the BI GuardCenter:

BI GuardCenter  
800 Main Street, Suite 501  
Anderson, Indiana 46016  
1-800-666-3145  
FAX 1-765-649-3148

For technical support when using an agency monitoring center, contact BI Incorporated:

BI Incorporated  
6400 Lookout Road  
Boulder, CO 80301  
1-800-241-9924



## Waste Electrical and Electronic Equipment (WEEE)

All electrical products that reach the duration of their functioning capabilities must be returned to BI Incorporated for recycling.

## United States FCC, Part 68

Compliance statement - This equipment complies with Part 68 of the FCC rules. On the bottom of the receiver is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENS should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

The receiver connects to the telephone network with a USOC RJ11C jack. An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant.

If the receiver causes harm to the telephone network, the telephone company will notify you in advance that a temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company may provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.

If complications are experienced with the receiver, please contact BI Incorporated. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment from the network until the problem is resolved.

There are no customer-serviceable parts inside the receiver; however, power and phone cords which connect to the receiver are replaceable.

Connection to party lines or to telephone company coin service is prohibited.



## United States FCC, Part 15

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications made by the user to this equipment that are not expressly approved by BI Incorporated could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and radiates radio frequency energy. If installed incorrectly and/or the directions are not followed in accordance with the instructions, this equipment may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❖ Reorient or relocate the receiving antenna.
- ❖ Increase the separation between the equipment and receiver.
- ❖ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ❖ Consult the dealer or an experienced radio/TV technician for help.

## Industry Canada Certification

The equipment represented herein meets Industry Canada procedural and specification requirements for certification. The certification identification number is displayed on the equipment model identification plate prefixed by the acronym *IC*. The acronym "IC" only signifies that Industry Canada technical specifications were met.

## Operation and EME Exposure

The equipment represented herein is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy (EME):

- ❖ United States Federal Communications Commission, Code of Federal Regulations; 47 CFR part 2 sub-part J.
- ❖ American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE). C95. 1-1992.
- ❖ Institute of Electrical and Electronics Engineers (IEEE). C95. 1-1999 Edition.
- ❖ International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998.

- ❖ Ministry of Health (Canada). Safety Code 6. Limits of Human Exposure to Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz or 300 GHz, 1999.
- ❖ Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard 2003.
- ❖ ANATEL, Brazil Regulatory Authority, Resolution 303 (July 2, 2002) "Regulation of the limitation of exposure to electrical, magnetic, and electromagnetic fields in the radio frequency range between 9 kHz and 300 GHz." "Attachment to Resolution 303 from July 2, 2002."

## Requirements for Exposure to Radio Waves

This equipment includes a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines that establish permitted levels of RF energy for standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. These standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

## Electromagnetic Interference/Compatibility

Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

### Medical Devices

If a person using this equipment also uses any personal medical device (i.e., pacemaker, hearing aid, etc.), consult the manufacturer of the personal medical device to determine if it is adequately shielded from RF energy. A physician may be able to assist in obtaining this information.

## Operational Warnings

There are certain areas where you want to avoid operation of any radio product.

### Potentially Explosive Atmospheres

Turn off any radio product prior to entering any area with a potentially explosive atmosphere unless it is a radio product type especially qualified for use as "Intrinsically Safe" (for example, Factory Mutual, CSA, or UL-approved). Do not remove, install, or charge batteries in such areas. Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death.

**Note:** The areas with potentially explosive atmospheres referred to above include fueling areas, such as below boat decks; fuel or chemical transfer or storage facilities; areas

where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmospheres are often but not always posted.

## **Blasting Caps and Areas**

To avoid possible interference with blasting operations, turn off radio products when near electrical blasting caps, in a blasting area, or in areas posted: "Turn off two-way radio." Obey all signs and instructions.



## Installing TAD

The installation process for the TAD unit involves three separate steps:

- ❖ Assembling the TAD unit
- ❖ Sizing for proper fit
- ❖ Attaching the TAD unit to the client

You will need both a standard and Phillips screwdriver to complete the installation. Discard the hinge pins after each use. All other supplies are reusable and should not be discarded. Keep in mind that the battery should be replaced after six months of continuous use.

### Assembling

Before beginning to assemble the TAD unit, verify that you have the necessary parts:

#### *Parts*

- ❖ 4 Standard Screws

- ❖ Male Hinge
- ❖ Female Hinge
- ❖ Joint Pin
- ❖ 2 Locking Pins
- ❖ Battery
- ❖ Battery Hatch
- ❖ Battery Cover
- ❖ Adjustable Strap
- ❖ Fixed Strap
- ❖ 2 strap clamps
- ❖ Unit Case

### ▶ **To assemble the TAD unit**

1. Insert the battery into the battery well.
2. Place the battery hatch inside the battery well. Using a screwdriver, rotate the battery hatch clockwise until the battery is secure.
3. Slide the battery cover over the battery hatch.
4. Slide the fixed strap into the fiber-optic connection bay opposite of the charging port.
5. Slide the adjustable strap into the other fiber-optic connection bay.
6. Using a Phillips screwdriver, secure the straps between the unit case and the strap clamps with the provided screws. Place one screw into each hole, and rotate each screw clockwise until you feel resistance.
7. Assemble the joint of the male and female hinges using the joint pin. Slide the joint pin through the hinge loops until the joint pin is flush with the hinge assembly.

## **Sizing**

Size the TAD unit while the client is standing. It must be installed on the narrowest part of the bare ankle.

### ▶ **To size the TAD unit**

1. Wrap the adjustable strap around the client's ankle and inside the fixed strap.
2. Wrap the fixed strap around the client's ankle and on top of the adjustable strap.
3. Note the sizing number on the adjustable strap that is closest to the fixed strap. For an accurate strap measurement, the absorption sensor must be firmly pressed against the client's ankle with a 50% depression into the absorption sensor cavity.
4. Remove the unit from the client's ankle.

5. Slide the male hinge into the sizing hole numbered three more than the number you noted in step 3. For example, if you noted the strap sizing number 6 in step 3, you will slide the male hinge into the strap hole numbered 9.

## Attaching

When attaching the TAD unit to the client, keep the following requirements in mind:

- ❖ The strap sizing numbers must face outward (away from the leg).
- ❖ The TAD unit must be in the upright position (battery toward the bottom of the ankle).

### ▶ To attach the TAD unit

1. Wrap the TAD unit around the client's ankle as you did in step 1 of the previous section.
2. Align the male hinge with the fiber-optic connector on the fixed strap. Press firmly on the fixed strap to hold both straps in place.
3. Close the hinge assembly around the straps until the locking holes are aligned.
4. Slide a locking pin into both sides of the hinge assembly. The wing-tipped ends of the locking pins must be inserted first. The locking pins should be flush with the sides of the hinge assembly.

## Installing the HomeBase

1. Place the HomeBase receiver in the selected location.
2. Plug the round connector of the power cord into the back of the receiver and plug the other end into the wall socket.
3. Insert one end of the supplied phone cord into the wall jack and the other end into one of the phone jacks on the back of the HomeBase. This step is not necessary when using a cellular signal connection. Additionally, you can connect the client's telephone to the HomeBase by connecting the client's phone cord to the unoccupied phone jack on the back of the HomeBase.

**NOTE:** *Do not use an extension cord unless absolutely necessary, and do not plug the receiver into an outlet that is controlled by a light switch (the client or family member may accidentally turn the switch off).*

4. Use your officer key to turn the receiver power switch to the ON position.