

**ABS<Comtrak™ 1700-1702  
Installation & Start-up Procedure**



General Operation:

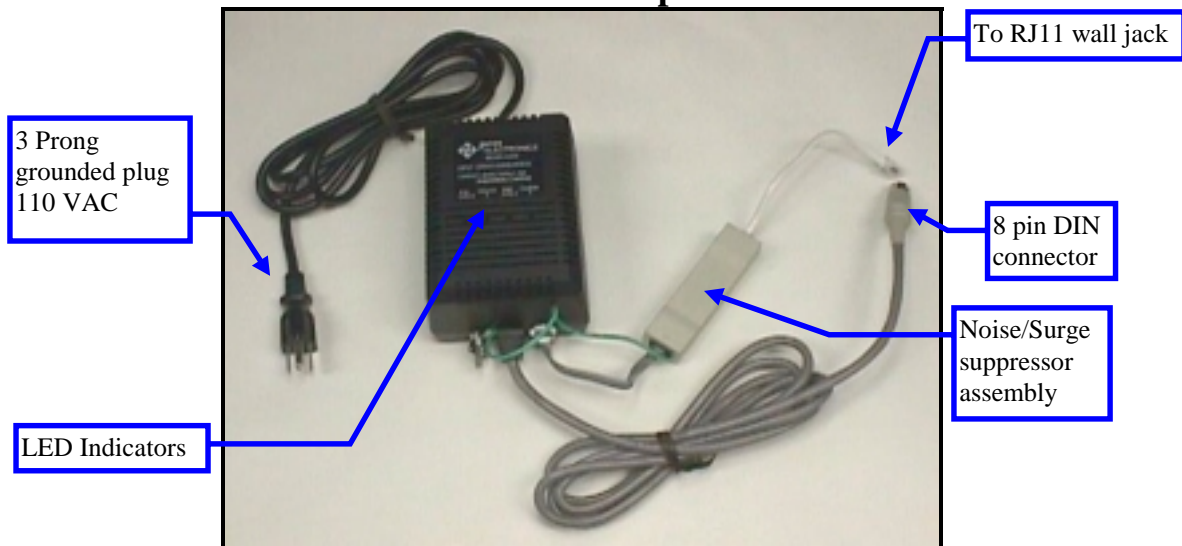
The ABSComtrak™1700 (model 1700) system consists of a Personal Tracking Unit (PTU) and battery charge system. During normal operation the PTU is to be connected to the battery charger for a minimum of seven hours each day. It may then be run for a minimum of seventeen hours before a recharge is required. During this period the client is free to move within the range, from the shoulder pack, that the wireless cuff allows (+/- 20 ft. outdoors and +/- 30 ft. indoors). When moving from one location to the other (i.e. from home to work) the client (with PTU) must remain within +/- 20 ft. of the shoulder pack to avoid a proximity violation. When in a home or other building the client must remain within +/- 30 ft. to avoid a proximity violation. For optimum performance the unit should be in an upright position at all times. When the cuff bracelet is cut/ removed by the client a cuff violation will be communicated to the customer.

Charger Installation Procedure:

In addition to the Personal Tracking Unit (PTU) each client will be provided with a battery charger, surge suppressor and cable. When set up properly, these three components will allow connection to the client's home phone line while charging (Reference Figure 1).

- 1.0 Assure the surge suppressor telephone plug is connected to charger
  - 1.1 Assure ground (green wire) is securely attached to the ground lug on the charger.
  - 1.2 Connect the telephone cable between the surge suppressor jack and telephone jack in the home/office. Connect the battery charger to grounded AC power outlet (110 V, 10 amp minimum).
- Note: The charger is now ready for charging the batteries in a ABSComtrack™1700.**

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**Figure 1. Battery Charger Assembly**

### Battery Charging Procedure:

Note: This process assumes charger installation has been complete.

The model 1700 operates for a minimum of 24 full hours . The 24 hour schedule includes a minimum of 7 hours on-line charging plus a minimum of 17 hours independent operation off of two fully charged main batteries. The charging process is as follows:

1. Verify the charger has been set up per “Charger Installation” procedure.
2. Connect the PTU power connector to the battery charger power connector ; “Charge “B” red lamp will light and remain lit until “B” battery pack is fully charged; “A” will continue blinking until “B” is charged. The “Full Chg. B” lamp will then light. “Charge A” red lamp will light and remain lit until “A” battery pack is fully charged. The “Full Chg. A” lamp will light. Both the “A” and “B” battery “Full Chg.” lamps will remain lit as long as the PTU is connected to the charger.
3. The PTU should be left connected to the charger for a minimum three hours (a full 7 hours) after both “Full Chg. Lamps are lit to allow for top-off of both battery pack “A” and “B”.

If both lights on the battery charger flash when the PTU is connected the batteries may be in a condition where the charge cannot begin immediately. Leave the charger connected. After a period of time, depending upon conditions, charging will start. Conditions where this could occur include:

- when the PTU temperature, due to outdoor exposure is less than approximately 50 degrees.
- when the battery voltage has fallen below the minimum voltage but not into a deep discharge condition.
- when the time between charge start is greater than 24 hours and the batteries have been allowed to discharge beyond the deep discharge voltage, 9.5 Volts.

### **Caution**

**While charging batteries assure that all four sides and the top of the charger main body are not obstructed. Do not lay blankets, coats or any materials, that would prevent proper ventilation of the charger, over the ventilation ports on the unit.**

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Wireless Cuff Preparation:

The wireless cuff includes five components, a battery assembly (hub), “O” ring, transmitter assembly, a bracelet and four screws.

- Battery Assembly - Provides a nominal 6 Volt DC source to power the transmitter when assembled. Life is estimated at 3 months average. The transmitter will cease operation at around 3.9 Volts.
- “O” Ring - Seals the transmitter compartment when assembled making it waterproof.
- Transmitter Assembly - Encapsulated transmitter with battery contacts for power. Periodically sends a message to the receiver which is resident in the PTU.
- Screws, 4 each - #4 Phillips, flat head, stainless steel, sheet metal screws; 3/8” in length.

A cuff may be attached to a client once preparation has been completed. Select an appropriate length bracelet for the ankle (table 1), one battery assembly with “O” ring installed, one transmitter assembly and four screws. Sizes 5,6,7 and 8 are stocked by ABS. Other sizes will have to be special ordered at the time of contract. Lead time is two weeks.

<u># of holes</u>	<u>Ankle Circumference</u>	<u># of Holes</u>	<u>Ankle Circumference</u>
2	6.5”	7	9.0”
3	7.0”	8	9.5”
4	7.5”	9	10.0”
5	8.0”	10	10.5”
6	8.5”	11	11.0”

**Table 1**

Assemble Transmitter and Battery:

Align the battery assembly key appropriately with the transmitter assembly slot and lightly engage the hub of the battery assembly to the transmitter cavity. Rotate one assembly carefully until the index mark on one aligns with the index mark on the other. Press the two assemblies together firmly with both hands until little gap can be observed between the two assemblies. Hold them in place with one hand and insert one screw (using a Phillips screwdriver) at a time. Insert the second screw 180 degrees from the first and tighten. The other two screws may be inserted in any order.

Wireless Bracelet Installation:

Figure 2 provides the necessary client installation instructions. Install the bracelet to one side of the cuff assembly first. The second side is installed while against the clients wrist or ankle. Once the cuff is installed on the client it must be activated. Activation occurs when the magnet provided is placed against the transmitter body for a minimum of five seconds. Once activated the client is free to move within the limits of the following violation definitions.

- Proximity - Occurs when the client, wearing the cuff, moves away from the PTU between **20 ft.** outdoors or **30 ft** indoors. To be detected as a cuff violation the client must outside these

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limits for a minimum of for 30 minutes. This violation rearms itself if an individual moves back inside these limits after being out for 30 minutes.

- Cuff violation - Occurs when a client forcibly removes or cuts the bracelet from the transmitter. This violation will not page again until the bracelet has been replaced and the cuff has been rearmed (minimum of 10 seconds) with the rearming tool.

### Cautions

- **After rearming is complete the client must stay within the proximity limits for 5 minutes. Premature movement outside these limits may prevent a cuff violation from being detected.**
- **Metal obstructions, in the line of sight between the cuff and the PTU, such as metal filing cabinets, walls or refrigerators can result in false proximity violations.**

### Wireless Cuff Training/Activation: Model 1700-1705

- **Plug in Customer Cuff Tester (#1021835).** To do this unzip the unit and find the white GPS antenna housing on the top side of the unit and place that end farthest away from you. Then pull the bag down and plug the test unit into the jack on the end of the unit closest to you.

**Note: This test unit is helpful, but not absolutely necessary to train/activate the cuff.**

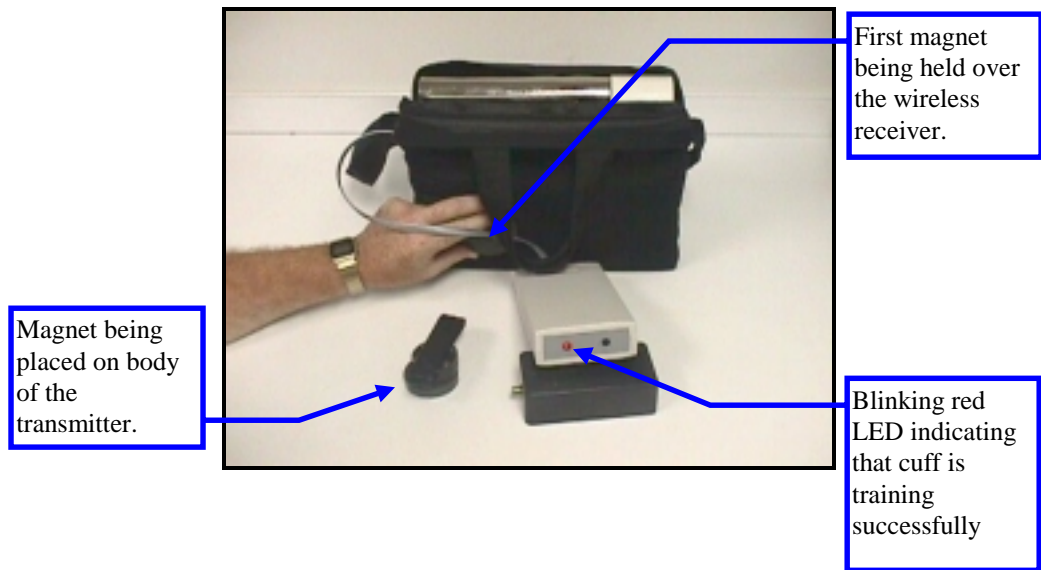


- **Locate the wireless receiver.** If the unit is not sealed, unzip it and locate the white GPS antenna housing on the top side of the unit. Facing the housing to your right, the wireless receiver is at the bottom left corner of the unit. If the unit is sealed, face the unit Identification tag away from you. The wireless receiver will then be located in the bottom left hand corner of the unit as seen in the following picture

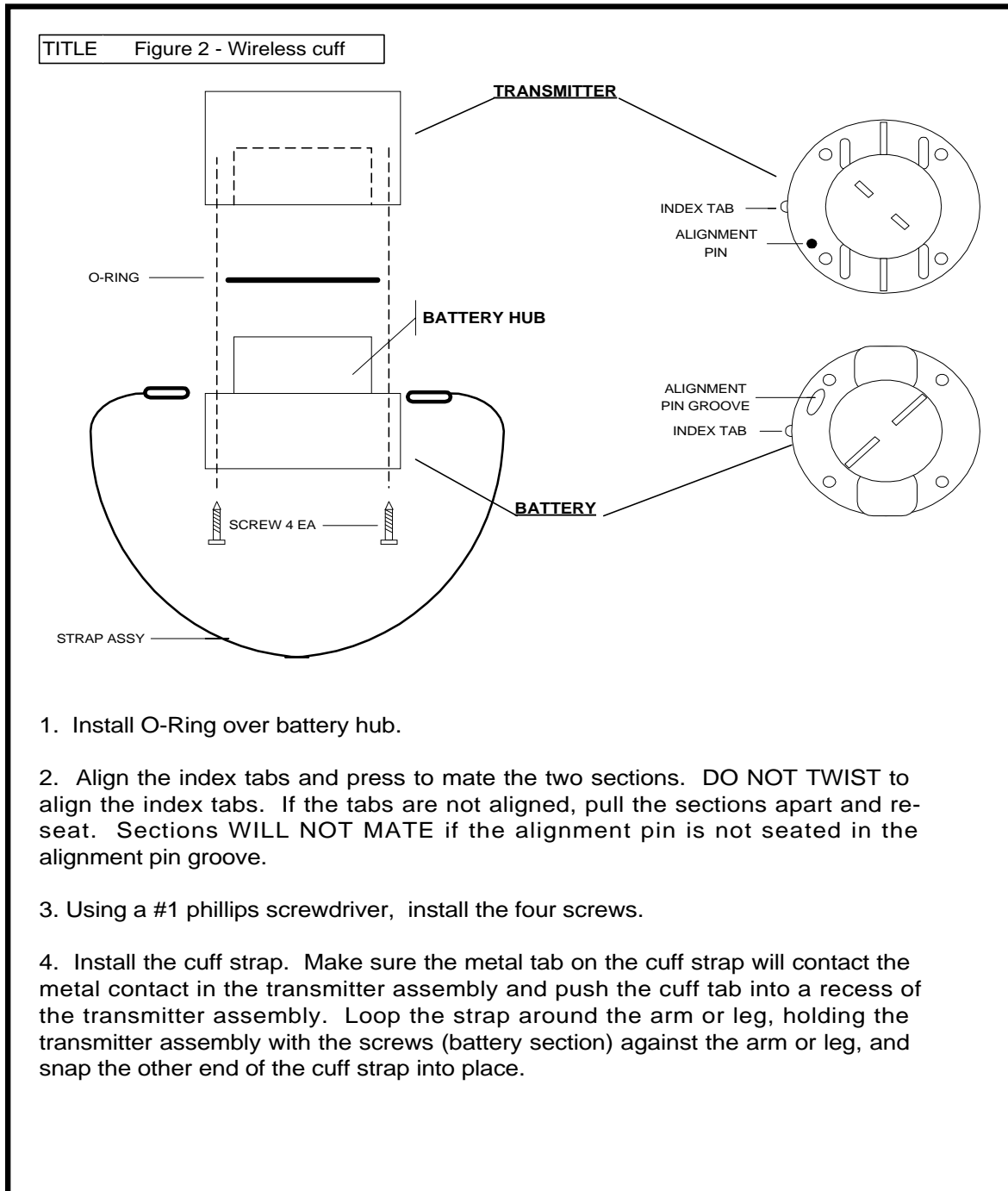
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- **Training the cuff.** This is done by first placing a magnet on the outside of the bag over the wireless antenna and then placing a separate magnet over the body of the transmitter. As a general rule, hold the magnet over the transmitter for a minimum of 5 seconds. If you are using the Cuff Tester the red LED will blink while the receiver is properly being trained to the cuff. Remove the magnet from the receiver and leave the magnet on the transmitter. The buzzer on the Cuff Tester will beep repeatedly if the cuff is properly trained. If it doesn't, repeat the process over again this time training it longer than five seconds.  
**Note: Some magnets may not be strong enough to properly train the wireless receiver through the black bag. In this case it is necessary to unzip the bag and slide the magnet down the side of the unit placing it directly on the metal cover keeping in mind the location of the receiver.**



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FCC Requirements

1. The Federal Communications Commission (FCC) has established Rules Which permit this device to be directly connected to the telephone network. Standardized lacks are used for these connections. This equipment should not be used on party lines or coin phones.
2. If this device is malfunctioning. it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service.
3. The telephone company may make changes in its technical operations and procedures: if such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes. You will be advised of your right to file a complaint with the FCC.
4. If the telephone company requests information on what equipment is connected to their lines, inform them of:
  - a. The telephone number to which this unit is connected. End user phone number
  - b. The ringer equivalence number. 0.7B
  - c. The USOC jack required. RJ 11
  - d. The FCC Registration Number. **OAM170102**

items M and (d) are indicated on the label. The Ringer Equivalence Number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the REN's of all devices on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

**Service Requirements**

In the event of equipment malfunction, all repairs should be performed by our Company or an authorized agent. It is the responsibility of users requiring service to report the need for service to our Company or to one of our authorized agents, Service can be obtained at

**Advanced Business Sciences, Inc.**  
**3345 North 107<sup>th</sup> street**  
**Omaha, NE**  
**68134-3664**  
**pH: 402-498-2734**  
**Fax: 402-498-8812**