

SECTION 5

USER'S MANUAL



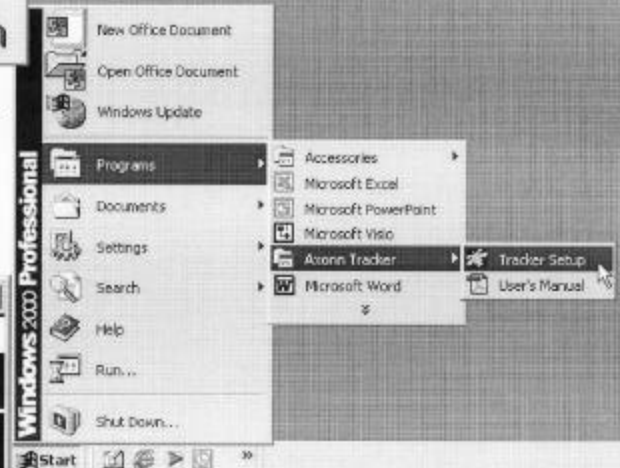
Quickstart AXTracker Setup – PC / PDA Tool

1) Software Installation

- Serial interface requires USB-Serial install as well as AXTracker Setup program install
- Follow instructions for USB-Serial driver install or plug in device and use driver CD as needed.
- Insert AXTracker application CD and follow installation procedure.

2) Launch Setup Program

- Start program (as shown at right) using:
Start/Programs/Axon Tracker
- Setup Program should launch loading the DEFAULTPROFILE as shown below:



- Connect cable to AXTracker and click under ESN to query for AXTracker serial number.

- Program displays "Querying..." then responds by displaying ESN of connected AXTracker.

- System is ready to program device





3) Using pre-programmed AXTracker settings:

• If device is preprogrammed and only needs initiation:

- Click RUN
- Click OK
- Device is running

Run Command
Command OK.
Ok

Sleep 7+ years Program
Default Batt \$\$\$Msg ESN
RUN 12137

4) Custom Configurations: Single Interval Setup

• Example: Setup device for 3 location fixes a day, begin operating immediately, randomize fix time by 10 minutes, no alarms enabled:

- Use EZSetup Tab to get started.
- Disable Randomize (turns off tool randomization)
- Set TX Interval1 to 8 hours (3 times a day)
- Clear Delay-to-Start (begin operating now)
- Disable alarms (Off)
- Set TX Interval2 is a zero (Interval tab)

EZSetup Interval Alarms Options Info
1 - 00:08:00
2 - 00:00:00
3 - 00:00:00
4 - 00:00:00
Clear Clear List Day Hr Min
Randomize 00 00 00

EZSetup Interval Alarms Options Info
GPS Fix
Tx Interval 1 Day Hr Min
Randomize 00 8 00
Delay to start Day Hr Min
Randomize 0 0 0
Alarm 1 Off No GPS Fix
Alarm 2 Off No GPS Fix
Sleep 4.9 years Program
Default Batt \$\$\$Msg ESN
RUN 13442

- Setup Satellite Transmitter (Options/Xmitter)
- Set TX Frequency to channel A
- Set TX attempts to 3
- Set Max and Min intervals to 600/300
- Set Power level to Low
- Set Dither (TX randomization) to 10 minutes
- Program device with settings
- Run to begin device operation

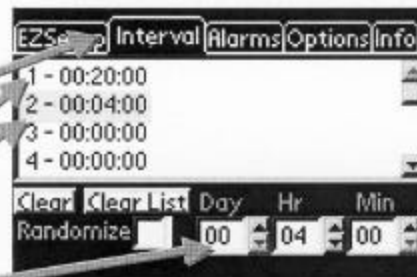
EZSetup Interval Alarms Options Info
RF Channels A B C D
Attempts 3
Retransmitt Interval
Max 600 secs Min 300 secs
Power Low
Dither 10 mins
Xmitter Messages Randomize Batt \$
Sleep 4.9 years Program
Default Batt \$\$\$Msg ESN
RUN 13442



5) Custom Configurations: Staggered Interval Setup

• Example: Setup device for location fixes every day at 10:00 AM and 2:00 PM, begin operating tomorrow with first report at 10 AM, randomize fix time by 10 minutes, no alarms enabled:

- Setup device as simple interval (4) above,
 - Disable alarms, randomization etc.
- Set repeating interval times using Interval Tab
- Set TX Interval1 to 20 hours
- Set TX Interval2 to 4 hours (note interval sum equals 24 hours)
- Highlight interval and use controls at bottom to adjust
- Select EZSetup to set Delay-to-Start
- Remove tool randomization (uncheck)
- This example assumes it is now 9:50 AM. Set Delay-to-Start equal to 4 hours, 10 minutes. Unit will delay beginning service life till 2:00 PM then begin executing a 20 hour delay. First GPS fix and message will occur at 10:00 the next day.
- Program device
- Run program. Device is executing Delay-to-start followed by staggered interval timers



Interval Tab showing 4 intervals:

Interval	Time
1	00:20:00
2	00:04:00
3	00:00:00
4	00:00:00

Controls: Clear, Clear List, Day, Hr, Min, Randomize (checked)



EZSetup Tab showing Delay-to-Start settings:

GPS Fix: Day 00, Hr 20, Min 00

Delay To Start: Day 0, Hr 4, Min 10

Randomize (unchecked)

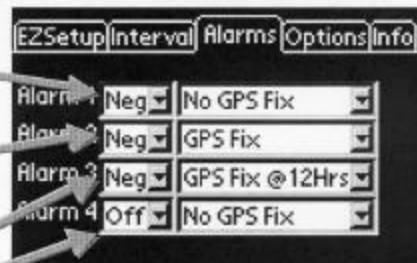
Alarm 1: Off, No GPS Fix

Alarm 2: Off, No GPS Fix

Buttons: Sleep, Default, RUN, 7+ years, Batt \$\$\$/Msg, Program, ESN 13442

6) Custom Configurations: Using Alarms

- Alarm 1 setup for immediate, no GPS message. Contact closure on alarm 1 will cause a satellite transmission with null (zero) GPS location data.
- Alarm 2 setup for GPS location. Contact closure on alarm 2 will cause satellite transmission following successful GPS location determination.
- Alarm 3 setup to provide hourly location updates following contact closure. Programmed interval schedule is temporarily suspended on alarm 3 assertion.
- Alarm 4 is disabled.



Alarms Tab showing 4 alarms:

Alarm	Trigger	Action
Alarm 1	Neg	No GPS Fix
Alarm 2	Neg	GPS Fix
Alarm 3	Neg	GPS Fix @12Hrs
Alarm 4	Off	No GPS Fix



7) Advanced Options: Manual Messaging

- Using the PDA tool to force messaging and confirm GPS operation:

- Send Setup Message forces device to immediately transmit type 3 setup message
- Send Truncated GPS Message forces device to determine GPS location, then append data from scroll window in a type 1 message. Data is space delimited, hexadecimal format. First byte (FF in example is bit masked to 6 Msbits).
- Send Raw Payload Message forces device to send 8.75 bytes of user data from scroll window in a type 2 message. Data is space delimited, hexadecimal format. First byte (FF in example is bit masked to 6 Msbits). Subsequent 8 bytes are sent in order.
- Get GPS data forces device to determine GPS location. Response is message indicating lock time.

- NMEA GPS data is posted to INFO tab

8) Advanced Options : Cost & Message estimator

- Use Options/Batt to estimate occurrence of non-scheduled events (alarms and serial messaging)
- Set events per day to be used by battery life estimator.

- Adjust GPS failure if device is to be mounted with poor visibility to sky.
- Entries used in battery life estimate
- Use Options/\$ to set network costs. Entries used to calculate device operational costs per year.

- Network estimates based on messages per year at provided network costs.

