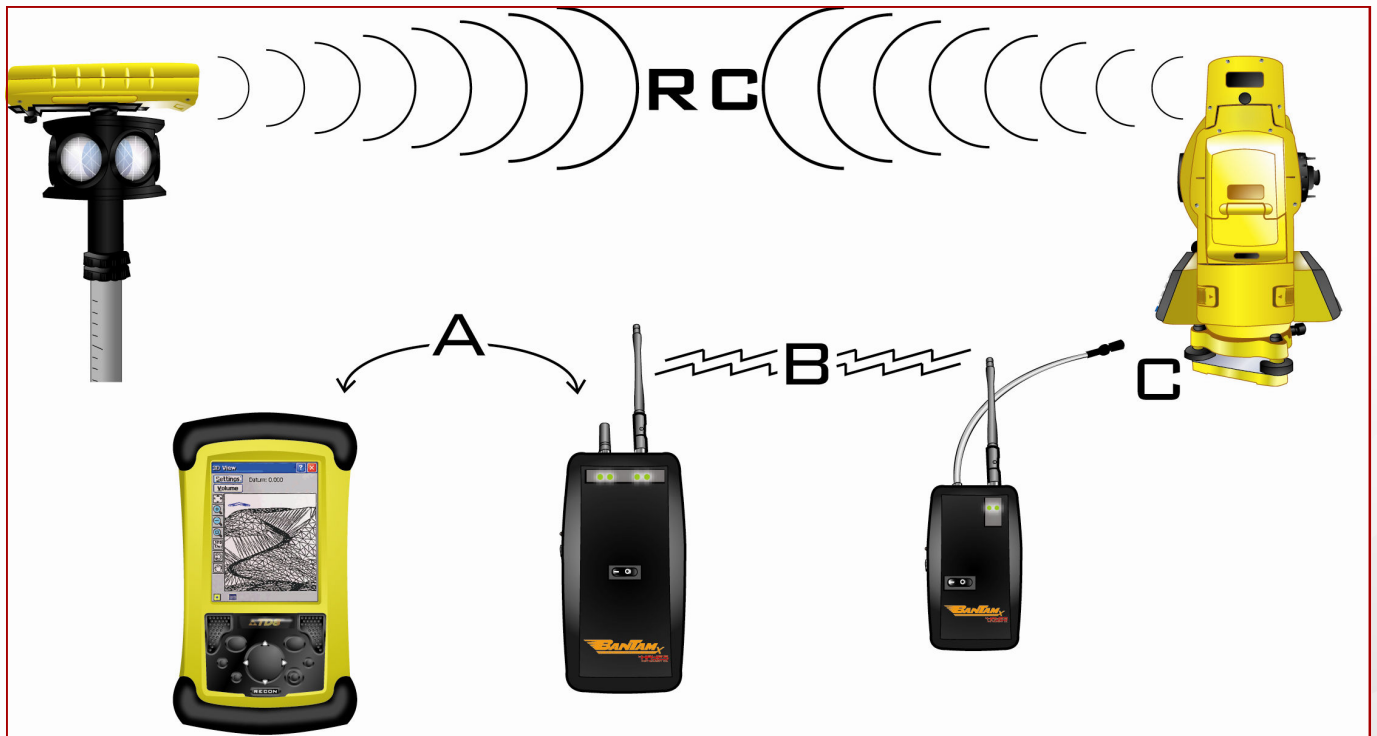


## The BanTamX Setup Guide for the ReconX and Topcon 800X Series Robot.

**Concepts**— This document outlines the setup instructions to connect the ReconX to a Topcon 800 Series Robot using the Hayes BanTamX Communication System. Many of these steps only need to be done during the initial setup or when the system configuration changes.

There are 4 communication links to setup in addition to the Robotic profile in Survey Pro: **(A)** Recon to Rover Radio, **(B)** Rover Radio to Instrument Radio, **(C)** Instrument Radio to Robotic, and **(D)** the RC2II setup used for Quicklock.



# Hayes BanTamX Setup Guide



**(A) Recon to Rover Radio**— The link to the Rover Radio is setup through the Microsoft 5.0 PPC Operating System as a standard Bluetooth Connection.



## Step 1

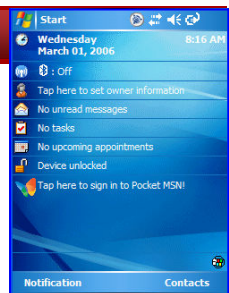
Turn on the Bantam X Rover Radio.

Note\* the 1st and 3rd light should be solid, the 2nd and 4th should blink.



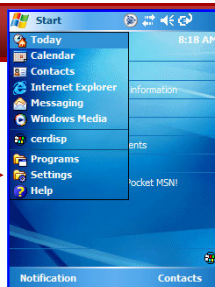
## Step 2

Exit out of Survey Pro and to the main Operating System screen of the Recon.



## Step 3

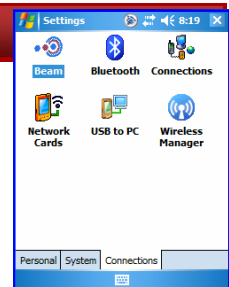
From the Recon Desktop. Select [Start] - [Settings]



## Step 4

Select the {Connections} Tab

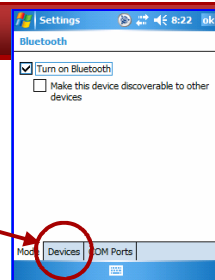
Double tap the [Bluetooth] Icon.



## Step 5

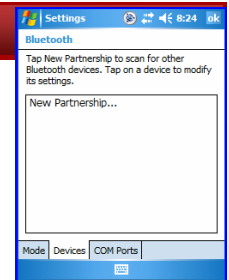
Check the [ ] Turn on Bluetooth checkbox.

Select the {Devices} index tab.



## Step 6

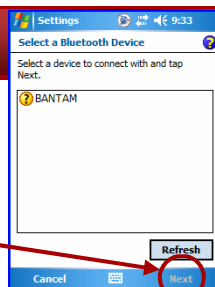
Tap **New Partnership...**



## Step 7

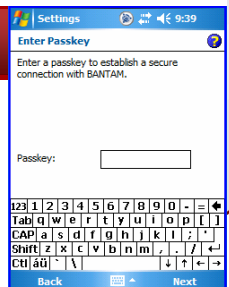
The BanTam Rover will appear in the dialog box.

Select it and tap **Next**.



## Step 8

Skip the next dialog by pressing **Next**.

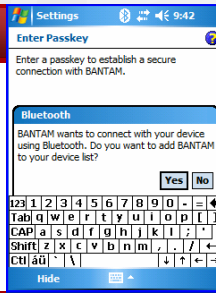


# Hayes BanTamX Setup Guide



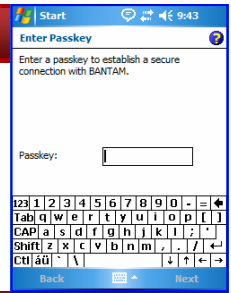
## Step 9

When the Bantam X responds, press the **[Yes]** button to allow the connection.



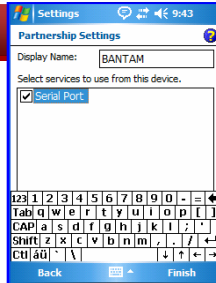
## Step 10

Enter a password of 1111  
Press **[Next]**.



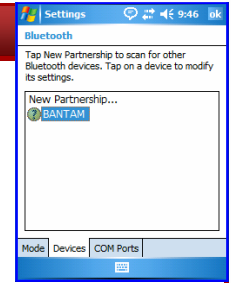
## Step 11

Check  **Serial Port**.  
Press **[Finish]**



## Step 12

The new device connection will now appear in the device list.  
Press **[OK]** in the upper right corner.



## (B) BanTamX Rover Radio to BanTamX Instrument Radio Connection.

This connection is predefined and configured at Hayes Instrument Company so that the radio pair will only recognize each other.

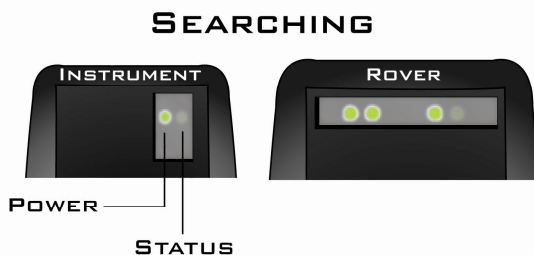
The connection is established automatically when both radios are powered on.

The status of the radio connection can be determined by the status of LED lights.



Status light will flash when searching.

Status light will stay solid when linked.



**(C)** Total Station Setup— The link to the BanTamX Instrument radio is setup on-board the Topcon 800X Robot.

Connect the BanTamX Bluetooth Radio to the total station via the 6-pin Hirose radio cable and turn the radio on.

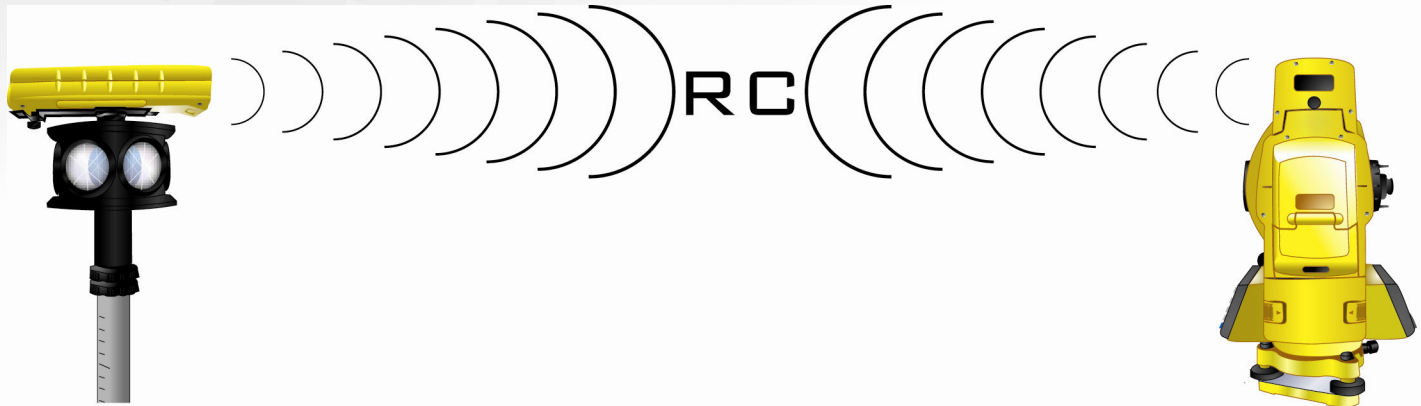
## 1. From the main total station menu:

- Select the Para Menu **[F6]**
- Select the Communication Menu **[F2]**
- Select Serial Port RS232C/RC **[F1]**
- Select **<RC>** using the **[F3/F4]** keys
- Press Set **[F1]** then YES **[F5]**
- Select Set RC **[F3]**
- Verify the following settings:
  - \* Channel **[1]**
  - \* V.Search **[15]**
  - \* RC **[S]**
  - \* Retry **[Std]**
  - \* Delimit **[ETX]**
  - \* REC-A/B **[B]**
  - \* NEZ-REC **[Std]**
  - \* TrkState **[ON]**
  - \* B.Rate **[4800]**
  - \* Data.L **[8]**
  - \* Parity **[None]**
  - \* Stop Bit **[1]**
- Press SET **[F1]** then YES **[F5]**
- Press **[ESC]** back to the main total station menu.



## 2. From the Main Total Station Menu:

- Press **Prog [F1]** then **MORE [F6]**
- Press **EXT.LINK [F3]**
- Press **2. Setting [F2]**
- Select **1. CABLE/RADIO MODEM/RC [F1]**
- Using the Up/Down **[F3/F4]** arrow keys, select **RADIO MODEM SATEL 3ASd.**
- Press SET **[F1]**
- At the Setting menu, Select **4.PARAMETER (RADIO MODEM) [F4]**
- Select **1.SELECT PARAMETERS [F1]**
- Using the Up/Down arrow keys, select **<REC-B>**. Press **SET [F1]**
- Press **[ESC]**
- Select **1. Execute [F1]**



**(RC) RC-2II— Quick Lock Setup**— The RC-2II can be used as a redundant communication mode (see RC-2II only setup guide) but when used with the BanTamX Hayes Communication System the RC-2II acts as a Quicklock assist to help the gun acquire lock to the prism.

### RC-2II

1. Open the battery chamber and remove the batteries. Locate the dip-switch block at the bottom of the battery chamber and verify that dip-switch 3 is to the right. The other switches should be set to the left.
2. Put in fresh batteries if unsure about their age (typical battery life is 40 hrs).



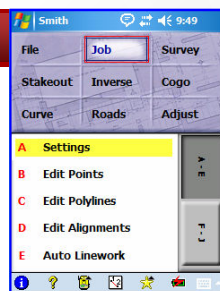
## Survey Pro Setup—

This process will set up a Robotics profile in Survey Pro and only needs to be done once.

Run Survey Pro and Open a job for work.

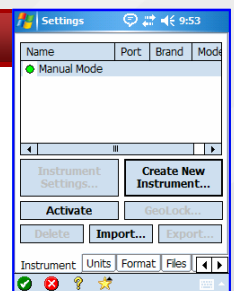
### Step 1— Start

Go to [**Job**] - [**Settings**]



### Step 2

Press [**Create New Instrument**]

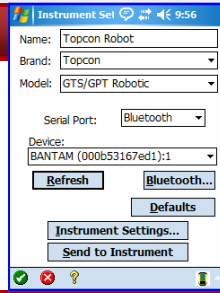


# Hayes BanTamX Setup Guide



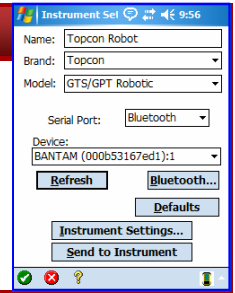
## Step 3

Give your profile a Name.  
Set Brand to **Topcon**.  
Set Model to **GTS/GPT Robotic**  
Set Serial to **Bluetooth**.  
Set Device to **BANTAM**.



## Step 4

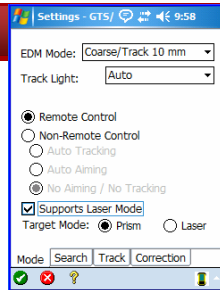
Press [**Instrument Settings**]



## Step 5

Check [] **Remote Control**.  
Check [] **Supports laser mode** if your gun supports reflectorless mode.

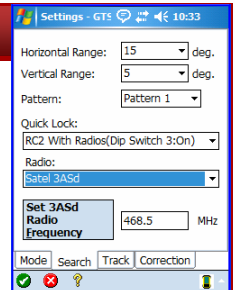
Press {**Search**} Tab



## Step 6

Set the Quick Lock to **<RC2 with Radios (Dip switch 3:on)>**  
Set Radio to **<Satel 3ASd>**

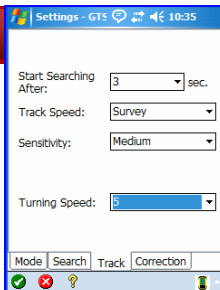
Press {**Track**} Tab



## Step 7

For GTS 800/802/810/815  
Set Track Speed to **Machine Control**.

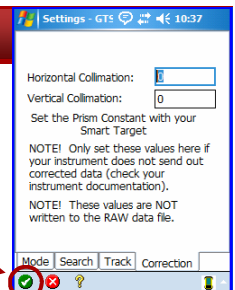
For GTS 820/GPT 8000 series,  
Set Track Speed to **Survey**.  
Press {**Correction**} Tab



## Step 8

Ensure that Horizontal and Vertical Collimation values are set to **0**.

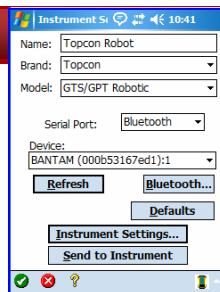
Press "Green Check" at bottom of dialog.



## Step 9

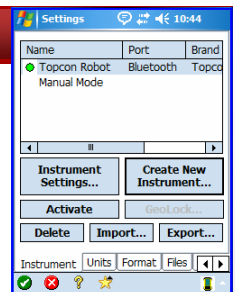
Press [**Send to Instrument**]  
The Ranger will chime with a "happy" sound.

Press "Green Check" at bottom of dialog.



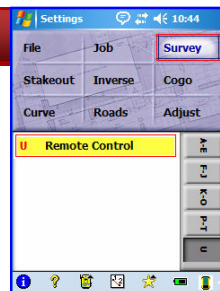
## Step 10

Press "Green Check" at bottom of dialog.



## Step 11

Go To [**Survey**] - [**Remote Control**].



## Step 12

Press [**Qlock**]  
Immediately press the "yellow" Quicklock button on the RC2. The gun should turn and lock to the prism.  
You are now ready to survey.

