

# HAYES INSTRUMENT Co.

502 S CANNON BLVD  
SHELBYVILLE, TN 37160

TOLL FREE: 1 800 251 1280  
WWW.HAYESINSTRUMENT.COM



## Topcon Robotic Series with RC2II Only Complete Setup Guide for the TDS Recon

December 05

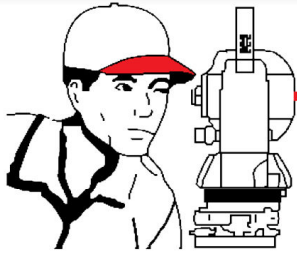
**Concepts**— When using the RC-2II stand-alone configuration, the RC-2II transmitter is responsible for the two way communication link and quick-lock function for the robotic system. It is also important to note that communication can only happen when the RC-2II unit and the total station are pointed at each other.

**Total Station Setup**— (note: many of the settings below are defaulted correctly)

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.





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- 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 **RC.**
  - Press **SET [F1]**
  - At the Setting menu, Select **3. PARAMETER (RC) [F3].**
  - Using the Up/Down arrow keys, set Channel **1.** Press **SET [F1]**
  - Set Terminate to **ETX.** Press **SET [F1]**
  - Set Retry to **Standard.** Press **SET [F1]**
  - Set REC TYPE to **REC-B.** Press **SET [F1]**
  - Press **[ESC]**
  - Select 1. Execute **[F1]**

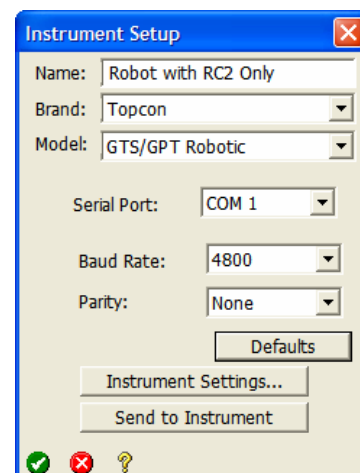
## RC-2II

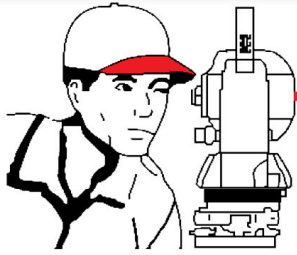
- Open the battery chamber and remove the batteries. Locate the dip-switch block at the bottom of the battery chamber and verify that dip-switch 3 is to the left. The other switches should be set the to left as well.
- Put in fresh batteries if unsure about their age (typical battery life is 40 hrs).
- Connect the cable between data collector and RC-2II.



## Recon Setup

- Run Survey Pro and Open a job for work.
- Go to **[Job] - [Settings]**
- Press **[Create New Instrument]**
- Create an Instrument Profile with the following settings.
  - Name: **Robot with RC2 Only**
  - Set the Brand to **<Topcon>**
  - Set the Model to **<GTS/GPT Robotics>**
  - Ignore the Serial port and baud rate settings for now.
- Press **[Instrument Settings]**





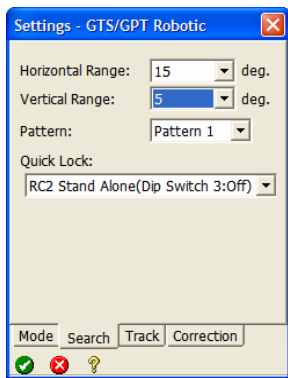
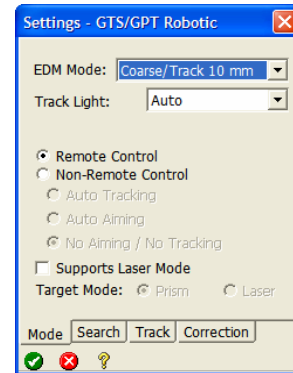
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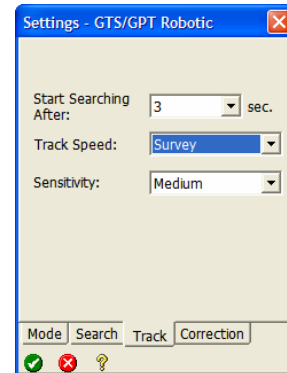


6. Set the EDM Mode: to the desired resolution.
7. Track Light: **Auto**
8. Check the **Remote Control** option.
9. Press the **{Search}** tab at the bottom of the display.



10. Set the desired Horizontal and Vertical Range.
11. Set Pattern to **<Pattern 1>**.
12. Set the Quick Lock: **<RC2 Stand Alone (Dip Switch 3:Off)>**
13. Press the **{Track}** index tab at the bottom of the display.

14. Set the desired search delay value in the Start Searching After: Field. (*3 is a typical value*).
15. Set the Track Speed value.
  - GTS 800/802/810/815 should be set to **<Machine Control>**.
  - GTS 820/GPT 8000/8200 should be set to **<Survey Control>**.



16. Set the Sensitivity to reflect the average distance that you will be shooting. **<Low>** (0-300ft), **<Medium>** (300-600ft), **<High>** (600+ft)
17. Set the Turn Speed to **<High>**.
18. Press the **{Correction}** index tab at the bottom of the display.
19. Verify that all the correction values are set to: **0**
20. Press the **[green check]** button to return back to the Instrument Setup Page.
21. Press the **[Defaults]** button to default the computed Baud Rate and Parity values. Verify that the Baud Rate is set to **4800** and the Parity to **None**.
22. Press the **[Send to Instrument]** button. Survey Pro should return a "Happy" sound.
23. Press the **[green check]** Button to exit out to the Instrument Profile page.
24. Press the **[green check]** again to exit back to the Main Survey Pro Menu.
25. Select **[Survey] - [Remote Control]**.
26. Press the **[Q-Lock]** button to activate the Quick-Lock function.
27. Verify active Angles are updating on the display.

You are now connected to your total station and ready to begin your survey.

