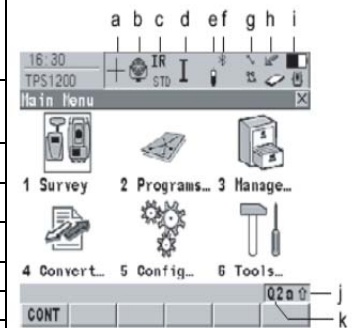


**Total Station Quick User's Guide (CVEN 303 Civil Engineering Measurement-Fall 2013)**

KEY	DESCRIPTION
Hot keys <b>F7-F12</b>	User definable keys to execute commands or access chosen screens.
Alphanumeric keys	To type letters and numbers.
<b>CE</b>	<b>CLEAR ENTRY</b> <ul style="list-style-type: none"> <li>Clears all entry at the beginning of user input.</li> <li>Clears the last character during user input.</li> </ul>
<b>ESC</b>	<b>ESCAPE</b> <ul style="list-style-type: none"> <li>Leaves the current menu or dialog without storing changes made.</li> <li>Turns receiver off when held for 2 s in the Main Menu screen</li> </ul>
<b>USER</b>	Calls the user-defined menu.
<b>PROG (ON)</b>	<b>PROGRAM</b> <ul style="list-style-type: none"> <li>If the instrument is off: to turn instrument on.</li> <li>If the instrument is on: press at any time to select an application program.</li> </ul>
<b>ENTER</b>	<ul style="list-style-type: none"> <li>Selects the highlighted line and leads to the next logical dialog/menu item.</li> <li>Starts the edit mode for edit fields.</li> <li>Opens a list box.</li> </ul>
<b>SHIFT</b>	Changes between the first and second level of function keys.
<b>Arrow Keys</b>	Move the focus (black highlight) on the screen.
Function Keys <b>F1-F6</b>	Correspond to the six softkeys that appear on the bottom of the screen when the screen is activated.
<b>PROG + USER</b>	Turns instrument off.
<b>SHIFT F12</b>	Calls <b>STATUS Level &amp; Laser Plummet</b> .
<b>SHIFT F11</b>	Calls <b>CONFIGURE Lights, Display, Beeps, Text, Lights</b> page.
<b>SHIFT USER</b>	Calls <b>QUICK SET Change Settings to</b>
<b>SHIFT</b>	Pages up.
<b>SHIFT</b>	Pages down.


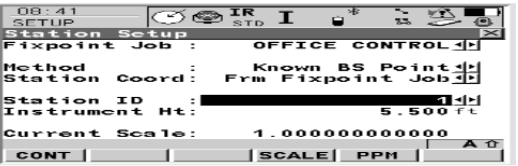

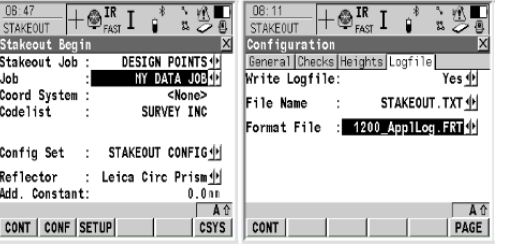
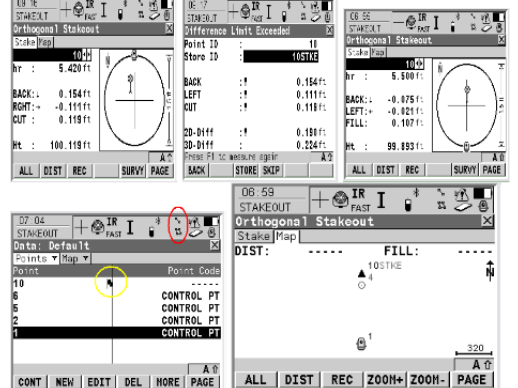
**SCREEN**

- a) ATR/LOCK/PS: Describe currently active ATR (Automatic Target Recognition)/LOCK/PS (Power Search) settings or prism searches for instruments enabled with robotic function. This application is not available in our lab instruments.
- b) Reflector: Display Currently active reflector. Circular prism. 360° prism.
- c) EDM: Display currently active Electronic Distant Measurement settings.
- d) Compensator/face I&II: Show current face of the instrument.
- e) RCS: Display Remote Control Surveying settings.
- f) Bluetooth
- g) Battery
- h) Point/line/area
- i) SHIFT
- j) Internal memory
- k) Quick coding



**GENERAL OPERATION**

Access a menu option	1) Use <b>up/down arrow</b> , press <b>F1(CONT)</b> , or	
	2) Enter the complete number corresponding to the menu item shown on the screen. eg. Press <b>1</b> to access " <b>Jobs</b> ". Note that the face icon <b>I</b> denotes that the instrument is facing phase <b>I</b> , and direction of a line of sight can be set to zero in this phase, but same is not true for phase <b>II</b> .	
Access another page	Press <b>F6 (PAGE)</b> . eg. To access the "Auto" page press <b>F6(PAGE)</b> twice to arrive at the "Auto" page	
Create a new job	Press <b>3</b> to access " <b>Manage</b> " icon in the <b>Main Menu</b> . Press <b>1</b> to access " <b>Job</b> ". Press <b>F2(NEW)</b> to create a new job. (You can also edit/delete a job by pressing <b>F3(EDIT)</b> and <b>F4(DEL)</b> , respectively.)	
	Press <b>ENTER</b> after each entry on the "General" page. Press <b>F6(PAGE)</b> twice to access and manage " <b>Coord System</b> ". Press <b>F1(CONT)</b> when finished. To return to the main menu press <b>F1(CONT)</b> again.	

Select a job	Press <b>1</b> to access “ <b>Survey</b> ” in the <b>Main Menu</b> . Focus on “ <b>Job</b> ” and press <b>ENTER</b> to manage the “ <b>Job</b> ” field. From the list box, select the job you wish to use, and press <b>F1(CONT)</b> . You can also select a job from the “ <b>Manage</b> ” icon in the <b>Main Menu</b> .	
Setup	Press <b>2</b> to access “ <b>Programs</b> ” icon. Go to <b>Setup</b> to start <b>Station Setup Begin</b> . Press <b>F2(CONF)</b> to change the configuration. Press <b>F6(CSYS)</b> to select a different coordinate system. Press <b>F1</b> to continue to <b>Station Setup</b> . Press <b>F4(SCALE)</b> to access the <b>GeomPPM</b> and <b>F5(PPM)</b> to access the <b>TPS corrections</b> screen. After necessary changes being made, Press <b>F1(CONT)</b> to finish.	
Survey	Tap on <b>1 Survey</b> to access <b>Survey Begin</b> screen. Press <b>F6(CSYS)</b> to select coordinate system. Press <b>F3(SETUP)</b> to access the <b>SETUP Station Setup</b> . Press <b>F5(INDIV)</b> or <b>F5(RUN)</b> to change Press <b>F1(ALL)</b> to measure and store distances and angles.	
Stake-out	Select <b>2 Programs</b> . Select <b>Stakeout</b> from the list. Select the <b>Stakeout Job</b> that contains the known points to be located in the stakeout. Select the <b>Job</b> where measured points are stored. <b>Coord System</b> attached to the current <b>Job</b> is displayed. Select other necessary parameters. Press <b>F2(CONF)</b> to configure stakeout. After finishing all configuration, press <b>F1(CONT)</b> to <b>STAKEOUT Logfiles</b> screen. Press <b>F2(NEW)</b> to create a new logfile. Enter a name and press <b>F1(SRORE)</b> . Press <b>F1(CONT)</b> to go back to Stakeout Begin screen. Press <b>F3(SETUP)</b> to set up the instrument station. Press <b>F1(CONT)</b> to access <b>Orthogonal Stakeout</b> screen.	
Stake out points	From the <b>Ortho. St.</b> screen select the point number of the point you wish to stake. Enter the rod height in the <b>hr</b> field. Sight the reflector and press <b>F1 (ALL)</b> . In next screen The <b>!</b> icon appears to show value lies outside the tolerance. Move the reflector closer to the point and press <b>F1 (BACK)</b> to return to the <b>Ortho. St.</b> & make another observation. The screen now shows the directions and distances with respect to the orientation from the previous. Press <b>F1 (ALL)</b> to record observation. Repeat the process until the reflector falls within the tolerance limit. Press <b>F6 (PAGE)</b> twice, access the Map page. Access the Data Manage screen and see that the staked icon appears next to point <b>10</b> as a reminder to the user that this point has been staked out.	
Line Traverse	From <b>Main Menu</b> tap on <b>2 Programs</b> . Press <b>F1 (CONT)</b> . Highlight the <b>Traverse</b> Application, press <b>F1 (CONT)</b> . Select the necessary parameters. Press <b>F2 (CONF)</b> to configure <b>Parameters, Tolerances, and Logfiles</b> as necessary. Press <b>F1 (CONT)</b> . In the <b>TRAVERSE Traverse Information</b> enter the necessary information. Press the <b>F1 (CONT)</b> to go to <b>SETUP</b> screen to <b>setup</b> the station. After setting all the parameters press <b>F1 (SET)</b> . Press <b>F4 (OK)</b> button. In the <b>TRAVERSE Foresight, Set: 1/1</b> screen, you will be prompted to select an action from the User Guidance window as shown. At this initial setup, press <b>F1 (FS)</b> to begin the process to foresight Point3. Enter the required data, aim the instrument at the foresight target, press <b>F1 (ALL)</b> .. In the <b>TRAVERSE Point Statistics, Pt: 2/2</b> screen: Press the <b>F3 (EDIT)</b> to edit coordinates and code. Press <b>F1 (STORE)</b> button. The <b>TRAVERSE Data</b> screen accumulates the information for all of the sets turned during the traverse. Press the <b>F4 (MORE)</b> to view the information of a particular angle set. Press <b>F1 (CONT)</b> . In the TRAVERSE Traverse Data CONFIRMATION screen, You are now prompted to choose the next action to be taken. To go to next instrument setup, press <b>F1 (MOVE)</b> . Turn the instrument off, move to the next point. This new setup will occupy Pt 3, backsight Pt 2, foresight Pt 4.	