

**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HP48 TRAVERSING PROGRAM VERSION 5.0**

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HP48 TRAVERSE PROGRAM

INIT

Press key for function.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

FUNCTION	KEY	SEE PAGE	DESCRIPTION
MERGe	A	3	combines two coordinate files
NEW	B	4	Creates a New coordinate file
ReMOVe	D	5	Deleted a Existing coordinate file
Translate & Rotate	E	6	Translates & Rotates coordinate file
EXIT	F	7	Exits program
IN	G	8	Transfers a coordinate file from a computer to your HP48
OUT	H	9	Transfers a coordinate file from your HP48 to a computer
48IN	I	10	Transfers a coordinate file from a HP48 to your HP48
48OUT	J	11	Transfers a coordinate file from your HP48 to a HP48
ICS	K	12	Creates and transfers a "ICS" formatted Coordinate list to a computer
NeXT	L	13	Views next set of existing coordinate files
	M-R	13	Enters existing coordinate files

HP48 TRAVERSE PROGRAM

MERGE

Press "A" for merge.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

Press Key for coordinate file to be merged from.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0 MERGE FILES FROM					
	ABC	U2727				

Press Keys for coordinate files to be merged to. Merge will add coordinates from the "FROM" coordinate file to the "TO" coordinate file. The FROM coordinate file will not be changed.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0 MERGE FILES TO					
	ABC	U2727				

This screen shows that point number 1 is in both coordinate files. FROM will keep the coordinate from the "FROM" coordinate file BOTH will keep both coordinates and prompts for new numbers TO will keep the coordinate from the "TO" coordinate file	DUP POINT NUMBER					
	FROM: ABC		TO:DEF			
	PT 1		PT 1			
N 1000.000		N 1200.000				
E 2000.000		E 2100.000				
FROM	BOTH	TO				

If the BOTH key is pressed this screen is to input the new point number(s). Input the point number for the "from Point" and press ENTER or press the ↓ key and the ⇐ key to input a new "to point" number and press ENTER.	:FROM PT:					
	:TO PT:1					
	FROM	BOTH	TO			

Press key for function.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

HP48 TRAVERSE PROGRAM

NEW

Press "B" for new.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

Input file name for a new coordinate file and press ENTER.	Creating New File					
	:File Name:U2727					
	ABC	DEF				

See SETUP on page 14.

HP48 TRAVERSE PROGRAM

ReMOVE

Press "D" for ReMOVE.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				
Press key for coordinate file to be removed	NAME OF DATA FILE TO REMOVE					
	:File Name:ABC					
	ABC	DEF	AAA			
Press "A" for YES to remove the coordinate file.	NAME OF DATA FILE TO REMOVE					
	ARE YOU SURE ?					
	:File Name:ABC					
	YES					NO
Press key for function.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	DEF	AAA				

HP48 TRAVERSE PROGRAM

Translate & Rotate

Press "E" for T&R.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

Press key for coordinate file to be Translate & Rotate	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0 FILE TO ROTATE AND TRANSLATE					
	ABC	U2727				

Input rotation angle and press the ↓ key input existing point number to Translate & Rotate about and press ENTER.						
	:ROT <:35					
	:EX PT:1					
	ABC	U2727				

Input new coordinate for existing point and press Enter.	NEW COORD					
	:N:100000					
	:E:200000					
	ABC	U2727				

Input new coordinate file name and press ENTER.						
	:NEW FILE: ABC1					
	ABC	U2727				

Press key for function.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC1	ABC	U2727			

HP48 TRAVERSE PROGRAM

EXIT

Press "F" for EXIT.
Program will be Exited and will return to "HOME" directory.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
MERG	NEW		RMOV	T&R	EXIT
IN	OUT	48IN	48OUT	ICS	NXT
ABC	U2727				

HP48 TRAVERSE PROGRAM

IN

Press "G" for IN.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	DEF	AAA			

Connect HP-48 to PC. Start Kermit Server on the PC. Key in the PC coordinate file name to be received by the HP-48 Press ENTER to continue	Computer to HP-48					
	:File Name:U2727					
	ABC	DEF	AAA			

Press key for function.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	U2727	ABC	DEF	AAA		

HP48 TRAVERSE PROGRAM

OUT

Press "H" for OUT.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

Connect HP-48 to PC. Start Kermit Server on the PC. Press key for file to send to PC	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0 HP-48 to Computer					
	ABC	U2727				

Press key for function.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

HP48 TRAVERSE PROGRAM

48IN

Press "I" for 48IN	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

Align the triangles at the head of the HP-48's to transfer See page 11 for 48OUT Press key ON key to abort transfer	Awaiting Server Cmd.
---	----------------------

Press key for function.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

HP48 TRAVERSE PROGRAM

48OUT

Press "J" for 48OUT.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

Press key for file to send to a HP-48 Align the triangles at the head of the HP-48's to transfer See page 10 for 48IN	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0 HP-48 TO HP-48					
	ABC	U2727				

Press key for function.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

HP48 TRAVERSE PROGRAM

ICS

Press "K" for ICS.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

Connect HP-48 to PC. Start Kermit Server on the PC. Press key for coordinate file to create an "ICS" file for and to send it to the PC	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0 MAKE ICS FILE FOR					
	ABC	U2727				

Press key for function.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

HP48 TRAVERSE PROGRAM

ENTERING EXISTING COORDINATE FILES

Press "M-R" to enter an existing coordinate files or Press "L" for NeXT to view more coordinate files.	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION LOCATION AND SURVEYS HP48 TRAVERSE PROGRAM VERSION 5.0					
	MERG	NEW		RMOV	T&R	EXIT
	IN	OUT	48IN	48OUT	ICS	NXT
	ABC	U2727				

See SETUP on page 14.

HP48 TRAVERSE PROGRAM

SETUP

Press key to toggle options.	OVERWRITE PRO.	ON	STATION	3		
	PRINT	OFF	DISTANCE	3		
	SC CON PT STO	OFF	COORDINATE	4		
	SC ALN MODE	ON	BEARING	1		
	FILE UNIT	ON	BEEP	ON		
	DISPLAY UNIT	FT				
	STATION	FT				
		SS				
	OVER	PRINT	CON	ALN	FILE	DIS
	STA	STA	DIST	COORD	BEAR	BEEP

- A OVER Toggles overwrite protection ON & OFF.
- B PRINT Toggles Print between Off, Serial & Infrared.
- C CON Toggles ON & OFF control point storing (ex. TS,SC,...) in SC.
- D ALN Toggles ON & OFF SC ALN MODE
- E FILE Toggles File units from FEET to METERS
- F DIS Toggles Display Unit From FEET to METERS
- G STA Toggles between SS+SSS.SS & SS+SS.SS
- H STA Changes decimal Precision of the stations from 1 to 5
- I DIST Changes decimal Precision of the distances from 1 to 5
- J COORD Changes decimal Precision of the coordinates from 2 to 8
- K BEAR Changes decimal Precision of the bearings from 0 to 3
- L BEEP Toggles ON & OFF beeps

HP48 TRAVERSE PROGRAM

E&A

<p>Press the "H" key for E&A or Press the "B" key for STORE then the "A" key for E&A or Press the "F" key for MAIN then the "B" key for STORE then the "A" key for E&A.</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>E&A</td> <td>TSO</td> <td></td> <td>DEL</td> <td>AUTOP</td> <td>MAIN</td> </tr> </table>	E&A	TSO		DEL	AUTOP	MAIN
E&A	TSO		DEL	AUTOP	MAIN		
<p>Enter a known coordinate into the file. Use the ↓ key to move to each field of entry. Press ENTER to continue. Press ENTER with no input for "WHAT NOW" screen</p>	<p>Enter Coord.</p> <p>Point No.: 1 :N:100000 :E:200000</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
<p>Enter a known coordinate into the file. Use the ↓ key to move to each field of entry. Press ENTER to continue. Press ENTER with no input for "WHAT NOW" screen</p>	<p>PT 1 STORED</p> <p>Point No.: :N: :E:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							

HP48 TRAVERSE PROGRAM

TSO

Using POB enter number of point on line with known station. (see page 19)

Press the "N" key for TSO or Press the "B" key for STORE then the "B" key for TSO or Press the "F" key for MAIN then the "B" key for STORE then the "B" key for TSO	F(F)D(F)What Now? TRAV					
	E&A	TSO		DEL	AUTOP	MAIN

Input station for point on line. Press ENTER Key the station in feet. Press the "A" key for WHAT and ENTER to exit the TSO function.	:STA:1000.00					
	WHAT					

Input Bearing or Angle Press ENTER to continue Codes are 0=Point to Point bearing recall, 1=NE, 2=SE, 3=SW, 4=NW, 5=AZ, 6=AL, 7=AR, 8=DL, 9=DR. B2P at the bearing prompt will bring up a Bearing by two points screen HMS+ will add two angles or bearings at the bearing prompt ex. (10°23' + 34°43') enter as 10.23 SPC 34.43 HMS+ ENTER HMS- same as above NOTE :An angle code MUST be entered WHAT Will take you back to the What Now prompt.	10+00.00					
	R B N 00°00'00" E					
	:BRG or ∠:10					
	:Code:1					
	B2P	HMS-	HMS+	WHAT		

Input Station and press ↵ key Input Offset Press +/- if left and press ENTER Press ENTER with no input for WHAT NOW prompt	N 10°00'00" E					
	:STA:1000.00					
	:OFFSET:0					

Press ENTER with no input for existing or Input point number and press ENTER	:Pt 2:1					
	WHAT	CSO				

	N 10°00'00" E					
	:STA:					
	:OFFSET:0					

HP48 TRAVERSE PROGRAM

DEL

<p>Press the "B" key for STORE then the "D" key for DEL or Press the "F" key for MAIN then the "B" key for STORE then the "D" key for DEL</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>E&A</td> <td>TSO</td> <td></td> <td>DEL</td> <td>AUTOP</td> <td>MAIN</td> </tr> </table>	E&A	TSO		DEL	AUTOP	MAIN
E&A	TSO		DEL	AUTOP	MAIN		
<p>Input first point number to delete and press the ↓ key then input the last point number to delete and press ENTER. All points between the first and last point numbers will be deleted. Press the "A" key for WHAT and ENTER to exit the DEL function.</p>	<p>DEL COR</p> <p>:FROM:</p> <p>:TO:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>E&A</td> <td>TSO</td> <td></td> <td>DEL</td> <td>AUTOP</td> <td>MAIN</td> </tr> </table>	E&A	TSO		DEL	AUTOP	MAIN
E&A	TSO		DEL	AUTOP	MAIN		

HP48 TRAVERSE PROGRAM

AUTOP

Press "X" for AUTOP or Press the "B" key for STORE then the "E" key for AUTOP or Press the "F" key for MAIN then the "B" key for STORE then the "E" key for AUTOP	F(F)D(F)What Now? TRAV <table border="1"> <tr> <td>E&A</td> <td>TSO</td> <td></td> <td>DEL</td> <td>AUTOP</td> <td>MAIN</td> </tr> </table>	E&A	TSO		DEL	AUTOP	MAIN
E&A	TSO		DEL	AUTOP	MAIN		
Input point numbers for AUTOP list. Put a space between single points and a "-" for point groups and press ENTER.	ENTER POINT LIST { 1 3 4-10} <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
	{ 1 3 4 5 6 7 8 9 10} F(F)D(F)What Now? TRAV <table border="1"> <tr> <td>E&A</td> <td>TSO</td> <td></td> <td>DEL</td> <td>AUTOP</td> <td>MAIN</td> </tr> </table>	E&A	TSO		DEL	AUTOP	MAIN
E&A	TSO		DEL	AUTOP	MAIN		

after the point list is stored POB, INVERsing, RSO, PER and CCR will automatically input point numbers from the list in to the programs.

HP48 TRAVERSE PROGRAM

POB

<p>Press the "T" key for POB or Press the "C" key for COGO then the "A" key for POB or Press the "F" key for MAIN then the "C" key for COGO then the "A" key for POB</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>POB</td> <td>TRAV</td> <td>AREA</td> <td>INVER</td> <td>SS</td> <td>MAIN</td> </tr> </table>	POB	TRAV	AREA	INVER	SS	MAIN
POB	TRAV	AREA	INVER	SS	MAIN		
<p>Press ENTER with no input for existing or Input the point number of a known point from which to do computations and Press ENTER .</p>	<p>Point of Beginning</p> <p>:Pt 1:</p> <table border="1"> <tr> <td>WHAT</td> <td>CSO</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT	CSO				
WHAT	CSO						
	<p>PT 1 N 10000.000 E 20000.000</p> <p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>POB</td> <td>TRAV</td> <td>AREA</td> <td>INVER</td> <td>SS</td> <td>MAIN</td> </tr> </table>	POB	TRAV	AREA	INVER	SS	MAIN
POB	TRAV	AREA	INVER	SS	MAIN		

HP48 TRAVERSE PROGRAM

TRAVersing

<p>Press the "I" key for TRAV or Press the "C" key for COGO then the "B" key for TRAV or Press the "F" key for MAIN then the "B" key for COGO then the "B" key for COGO</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>POB</td> <td>TRAV</td> <td>AREA</td> <td>INVER</td> <td>SS</td> <td>MAIN</td> </tr> </table>	POB	TRAV	AREA	INVER	SS	MAIN
POB	TRAV	AREA	INVER	SS	MAIN		
<p>Input Bearing or Angle Press the ↵ key and input code and press ENTER Codes are 0=Point to Point bearing recall, 1=NE, 2=SE, 3=SW, 4=NW, 5=AZ, 6=AL, 7=AR, 8=DL, 9=DR. B2P at the bearing prompt will bring up a Bearing by two points screen . See page 37. HMS+ will add two angles or bearings at the bearing prompt ex. (10°23' + 34°43') enter as 10.23 SPC 34.43 HMS+ ENTER HMS- same as above NOTE :An angle code MUST be entered WHAT Will take you back to the What Now prompt.</p>	<p>Traversing From Pt 1 R B N 00°00'00" E</p> <p>:BRG or ∠:10 :Code:1</p> <table border="1"> <tr> <td>B2P</td> <td>HMS-</td> <td>HMS+</td> <td>WHAT</td> <td></td> <td></td> </tr> </table>	B2P	HMS-	HMS+	WHAT		
B2P	HMS-	HMS+	WHAT				
<p>Input distance and press ENTER or Press the "A" for ZA and ENTER to get a Zenith angle Prompt or Input a degree of curve and Press the "B" for DC⇒R to get the Radius or Press the "C" for D2P and ENTER to get the distance by two point screen. See page 37. or Press "D" for CUR and ENTER to traverse a curve. See Page 21 or Press "E" for STACK and ENTER shell to the stack for input See page 38 or WHAT Will take you back to the What Now prompt</p>	<p>Traversing N 10°00'00" E</p> <p>:Dist?:1000</p> <table border="1"> <tr> <td>ZA</td> <td>DC⇒R</td> <td>D2P</td> <td>CUR</td> <td>STACK</td> <td>WHAT</td> </tr> </table>	ZA	DC⇒R	D2P	CUR	STACK	WHAT
ZA	DC⇒R	D2P	CUR	STACK	WHAT		
<p>Press ENTER with no input for existing or Input a point and press ENTER. See page 38 for duplicate point number screens</p>	<p>Pt 1 N 10°00'00" E HD 1000.000</p> <p>:Pt 2:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
	<p>Traversing From Pt 1 R B N 10°00'00" E</p> <p>:BRG or ∠: :Code:1</p> <table border="1"> <tr> <td>B2P</td> <td>HMS-</td> <td>HMS+</td> <td>WHAT</td> <td></td> <td></td> </tr> </table>	B2P	HMS-	HMS+	WHAT		
B2P	HMS-	HMS+	WHAT				

HP48 TRAVERSE PROGRAM

TRAVersing WITH CURVED SIDES

<p>Input chord and press the \downarrow key then input the radius and press ENTER or Input a degree of curve and Press the "B" for DC\RightarrowR to get the Radius or Press the "C" for D2P and ENTER to get the distance by two point screen. See page 37 or Press "E" for STACK and ENTER shell to the stack for input See page 38 or WHAT Will take you back to the What Now prompt.</p>	<p>Traversing N 10°00'00" E</p> <p>:Chord: :Radius:</p> <table border="1" data-bbox="930 428 1531 464"> <tr> <td>ZA</td> <td>DC\RightarrowR</td> <td>D2P</td> <td>CUR</td> <td>STACK</td> <td>WHAT</td> </tr> </table>	ZA	DC \Rightarrow R	D2P	CUR	STACK	WHAT
ZA	DC \Rightarrow R	D2P	CUR	STACK	WHAT		
<p>See page 20 for Traversing.</p>	<p>Pt 1 N 10°00'00" E HD 1000.000</p> <p>:Pt 2:</p> <table border="1" data-bbox="930 695 1531 726"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							

HP48 TRAVERSE PROGRAM

AREA

Press the "O" key for AREA or Press the "C" key for COGO then the "C" key for AREA or Press the "F" key for MAIN then the "C" key for COGO then the "C" key for AREA	F(F)D(F)What Now? TRAV <table border="1"> <tr> <td>POB</td> <td>TRAV</td> <td>AREA</td> <td>INVER</td> <td>SS</td> <td>MAIN</td> </tr> </table>	POB	TRAV	AREA	INVER	SS	MAIN
POB	TRAV	AREA	INVER	SS	MAIN		
Press ENTER with no input for existing or Input closing point number and press ENTER	Total HD 1000.00 :Pt 1: <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						
Output shows Bearing to Closing point Distance to Closing point Error in the North Error in the East Precision ratio Square Feet or Meters Acres or Hectares Press ENTER to Continue	S 10°00'00" E HD 1000.000 N 1.000 E 2.000 1:50000 43560 Sq Ft 1.000 Ac <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						
	F(F)D(F)What Now? POB <table border="1"> <tr> <td>POB</td> <td>TRAV</td> <td>AREA</td> <td>INVER</td> <td>SS</td> <td>MAIN</td> </tr> </table>	POB	TRAV	AREA	INVER	SS	MAIN
POB	TRAV	AREA	INVER	SS	MAIN		

HP48 TRAVERSE PROGRAM

INVERsing

Press the "U" key for INVERsing or Press the "C" key for COGO then the "D" key for INVERsing or Press the "F" key for MAIN then the "C" key for COGO then the "D" key for INVERsing	F(F)D(F)What Now? TRAV					
	POB	TRAV	AREA	INVER	SS	MAIN

Press ENTER with no input for existing or Input the point number and Press ENTER or Input the point number and Press "B" for ICUR and Press ENTER to inverse a curve. See below. WHAT Will take you back to the What Now prompt	Inversing from PT 1					
	:Pt 2:					
	WHAT	ICUR				

	S 10°00'00" E HD 1000.000 PT 2 N 10000.000 E 20000.000					
	F(F)D(F)What Now? INVER					
	POB	TRAV	AREA	INVER	SS	MAIN

INVERSING WITH CURVED SIDES

Input the radius and Press ENTER	:Radius:					
	WHAT	ICUR				

HP48 TRAVERSE PROGRAM

Side Shots

<p>Press the "Y" key for SS or Press the "C" key for COGO then the "E" key for SS or Press the "F" key for MAIN then the "C" key for COGO then the "E" key for SS</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>POB</td> <td>TRAV</td> <td>AREA</td> <td>INVER</td> <td>SS</td> <td>MAIN</td> </tr> </table>	POB	TRAV	AREA	INVER	SS	MAIN
POB	TRAV	AREA	INVER	SS	MAIN		
<p>Input Bearing or Angle Press the \downarrow key and input code and press ENTER Codes are 0=Point to Point bearing recall, 1=NE, 2=SE, 3=SW, 4=NW, 5=AZ, 6=AL, 7=AR, 8=DL, 9=DR. B2P at the bearing prompt will bring up a Bearing by two points screen . See page 37 HMS+ will add two angles or bearings at the bearing prompt ex. (10°23' + 34°43') enter as 10.23 SPC 34.43 HMS+ ENTER HMS- same as above NOTE :An angle code MUST be entered WHAT Will take you back to the What Now prompt.</p>	<p>Side Shot From Pt 1 R B N 00°00'00" E</p> <p>:BRG or \angle:10 :Code:1</p> <table border="1"> <tr> <td>B2P</td> <td>HMS-</td> <td>HMS+</td> <td>WHAT</td> <td></td> <td></td> </tr> </table>	B2P	HMS-	HMS+	WHAT		
B2P	HMS-	HMS+	WHAT				
<p>Input distance and press ENTER or Press the "A" for ZA and ENTER to get a Zenith angle Prompt or Input a degree of curve and Press the "B" for DC\RightarrowR to get the Radius or Press the "C" for D2P and ENTER to get the distance by two point screen. See page 37 or Press "E" for STACK and ENTER shell to the stack for input See page 38 or WHAT Will take you back to the What Now prompt.</p>	<p>Side Shot from PT 1 N 10°00'00" E</p> <p>:Dist ? :1000</p> <table border="1"> <tr> <td>ZA</td> <td>DC\RightarrowR</td> <td>D2P</td> <td></td> <td>STACK</td> <td>WHAT</td> </tr> </table>	ZA	DC \Rightarrow R	D2P		STACK	WHAT
ZA	DC \Rightarrow R	D2P		STACK	WHAT		
<p>Press ENTER with no input for existing or Input a point number and press ENTER See page 38 for duplicate point number screens</p>	<p>Side Shot from Pt 1 N 10°00'00" E HD 1000.000</p> <p>:Pt 2:</p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						
	<p>Side Shot from PT 1 R B N 10°00'00" E</p> <p>:BRG or \angle: :Code:1</p> <table border="1"> <tr> <td>B2P</td> <td>HMS-</td> <td>HMS+</td> <td>WHAT</td> <td></td> <td></td> </tr> </table>	B2P	HMS-	HMS+	WHAT		
B2P	HMS-	HMS+	WHAT				

HP48 TRAVERSE PROGRAM

Bearing Bearing Intersection

Use POB (See Page 19) to start on a Point or get to a point by traversing or inverting

<p>Press the "J" key for BB or Press the "D" key for INTER then the "A" key for BB or Press the "F" key for MAIN then the "D" key for INTER then the "A" key for BB</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>BB</td> <td>BD</td> <td>DD</td> <td></td> <td></td> <td>MAIN</td> </tr> </table>	BB	BD	DD			MAIN
BB	BD	DD			MAIN		
<p>Input Bearing or Angle Press the \downarrow key and input code and press ENTER Codes are 0=Point to Point bearing recall, 1=NE, 2=SE, 3=SW, 4=NW, 5=AZ, 6=AL, 7=AR, 8=DL, 9=DR. B2P at the bearing prompt will bring up a Bearing by two points screen . See page 37 HMS+ will add two angles or bearings at the bearing prompt ex. (10°23' + 34°43') enter as 10.23 SPC 34.43 HMS+ ENTER HMS- same as above NOTE :An angle code MUST be entered</p>	<p>B-B R B N 00°00'00" E</p> <p>:BRG or \angle:10 :Code:1</p> <table border="1"> <tr> <td>B2P</td> <td>HMS-</td> <td>HMS+</td> <td>WHAT</td> <td></td> <td></td> </tr> </table>	B2P	HMS-	HMS+	WHAT		
B2P	HMS-	HMS+	WHAT				
<p>Input PI point number and press ENTER.</p>	<p>B-B :PI Point No.:</p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						
<p>See above</p>	<p>B-B R B N 00°00'00" E</p> <p>:BRG or \angle:10 :Code:1</p> <table border="1"> <tr> <td>B2P</td> <td>HMS-</td> <td>HMS+</td> <td>WHAT</td> <td></td> <td></td> </tr> </table>	B2P	HMS-	HMS+	WHAT		
B2P	HMS-	HMS+	WHAT				
<p>Input end point number for intersection.</p>	<p>B-B :To Point No.:</p> <table border="1"> <tr> <td>CSO</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	CSO					
CSO							
<p>Press ENTER to continue</p>	<p>PT 1 N 00°00'00" E HD 1000.000 PT 5 N 00°00'00" E HD 1000.000 PT 2</p> <table border="1"> <tr> <td>CSO</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	CSO					
CSO							
	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>BB</td> <td>BD</td> <td>DD</td> <td></td> <td></td> <td>MAIN</td> </tr> </table>	BB	BD	DD			MAIN
BB	BD	DD			MAIN		

HP48 TRAVERSE PROGRAM

Distance Distance

Use POB (See Page 19) start on a Point or get to a point by traversing or inverting

Press the "V" key for DD or Press the "D" key for INTER then the "C" key for DD or Press the "F" key for MAIN then the "D" key for INTER then the "C" key for DD	F(F)D(F)What Now? TRAV					
	BB	BD	DD			MAIN

Input distance and press ENTER or Press the "A" for ZA and ENTER to get a Zenith angle Prompt or Input a degree of curve and Press the "B" for DC⇒R to get the Radius or Press the "C" for D2P and ENTER to get the distance by two point screen. See page 37 or Press "E" for STACK and ENTER shell to the stack for input See page 38 or WHAT Will take you back to the What Now prompt.	D-D					
	:Dist ?:					
	ZA	DC⇒R	D2P		STACK	WHAT

Input distance see above.	D-D					
	:Dist ?:					
	ZA	DC⇒R	D2P		STACK	WHAT

Input end point number for intersection.	D-D					
	:To Point No.:					
	CSO					

Press "E" for STO1 to store solution 1 (Left solution) or Press "F" for STO2 to store solution 2 (Right solution) or Press ENTER to get to the WHAT NOW Prompt.	PT 1					
	N 00°00'00" E		HD 1000.000		PT	
	N 00°00'00" E		HD 1000.000		PT	
	N 00°00'00" E		HD 1000.000		PT	
	PT 2					
	STO1					STO2

Input PI point number and press ENTER.	D-D					
	:PI Point No.:					

HP48 TRAVERSE PROGRAM

Radial Stake Out

Use POB (See Page 19) to start on a Point or get to a point by traversing or inverting

<p>Press the "K" key for RSO or Press the "E" key for REPO then the "A" key for RSO or Press the "F" key for MAIN then the "B" key for REPO then the "A" key for RSO</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>RSO</td> <td>LIST</td> <td>PER</td> <td>CCR</td> <td>SCR</td> <td>MAIN</td> </tr> </table>	RSO	LIST	PER	CCR	SCR	MAIN
RSO	LIST	PER	CCR	SCR	MAIN		
<p>Input back sight point number and press ENTER.</p>	<p>Radial Stake Out from Point 1</p> <p>:Back Sight:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
<p>Press ENTER with no input for existing or Input point number to stake out and press ENTER.</p> <p>Press "A" for WHAT to exit RSO and go to WHAT NOW prompt.</p>	<p>N 00°00'00" E</p> <p>:Pt 3:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
<p>Display show point number , angle right ,bearing from occupied point to stake out point and distance to stake point.</p> <p>Press "A" fro STAC to do calculations with angle right or distance</p>	<p>PT 1 AR 00°00'00" N 00°00'00" E HD 1000.00</p> <table border="1"> <tr> <td>STAC</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	STAC					
STAC							
	<p>N 00°00'00" E</p> <p>:Point No.:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							

HP48 TRAVERSE PROGRAM

LIST

<p>Press the "Q" key for LIST or Press the "E" key for REPO then the "B" key for LIST or Press the "F" key for MAIN then the "E" key for REPO then the "B" key for LIST</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>RSO</td> <td>LIST</td> <td>PER</td> <td>CCR</td> <td>SCR</td> <td>MAIN</td> </tr> </table>	RSO	LIST	PER	CCR	SCR	MAIN
RSO	LIST	PER	CCR	SCR	MAIN		
<p>Input first point number to list then press the "↓" key and input the last point number and press ENTER.</p>	<p>List Coord</p> <p>:First Point: :List Point::</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
<p>Press the ENTER key to view the coordinate</p>	<p>List Coord</p> <p>PT 1 N 100000.000 E 200000.000</p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						
	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>RSO</td> <td>LIST</td> <td>PER</td> <td>CCR</td> <td>SCR</td> <td>MAIN</td> </tr> </table>	RSO	LIST	PER	CCR	SCR	MAIN
RSO	LIST	PER	CCR	SCR	MAIN		

HP48 TRAVERSE PROGRAM

PER

Use POB (See Page 19) to start on a Point or get to a point by traversing or inverting.
The point should be on tangent and you know the station value of it.

<p>Press the "W" key for PER or Press the "E" key for REPO then the "C" key for PER or Press the "F" key for MAIN then the "E" key for REPO then the "E" key for PER</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>RSO</td> <td>LIST</td> <td>PER</td> <td>CCR</td> <td>SCR</td> <td>MAIN</td> </tr> </table>	RSO	LIST	PER	CCR	SCR	MAIN
RSO	LIST	PER	CCR	SCR	MAIN		
<p>Input the station and Press ENTER. or Press ENTER with no input for "ahead back" output</p>	<p>:Occ Sta:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
<p>Input Bearing or Angle Press the \downarrow key and input code and press ENTER Codes are 0=Point to Point bearing recall, 1=NE, 2=SE, 3=SW, 4=NW, 5=AZ, 6=AL, 7=AR, 8=DL, 9=DR. B2P at the bearing prompt will bring up a Bearing by two points screen . See page 37 HMS+ will add two angles or bearings at the bearing prompt ex. (10°23' + 34°43') enter as 10.23 SPC 34.43 HMS+ ENTER HMS- same as above NOTE :An angle code MUST be entered WHAT Will take you back to the What Now prompt.</p>	<p>R B N 00°00'00" E</p> <p>:BRG or \angle:10 :Code:1</p> <table border="1"> <tr> <td>B2P</td> <td>HMS-</td> <td>HMS+</td> <td>WHAT</td> <td></td> <td></td> </tr> </table>	B2P	HMS-	HMS+	WHAT		
B2P	HMS-	HMS+	WHAT				
<p>Press ENTER with no input for existing or Input Point number and press ENTER</p>	<p>N 00°00'00" E</p> <p>:Pt 1:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
<p>Press ENTER with no input for existing or Input Point number and press ENTER or Press "A" for WHAT and press ENTER</p>	<p>PT 1 10+00.00 100.000 Right</p> <p>:Pt 2:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							

HP48 TRAVERSE PROGRAM

CCR

Use POB (See Page 19) to start on a Point or get to a point by traversing or inverting.
The point should be the radius of the curve

Press the "DEL" key for CCR or Press the "E" key for REPO then the "D" key for CCR or Press the "F" key for MAIN then the "E" key for REPO then the "D" key for CCR	F(F)D(F)What Now? TRAV <table border="1"> <tr> <td>RSO</td> <td>LIST</td> <td>PER</td> <td>CCR</td> <td>SCR</td> <td>MAIN</td> </tr> </table>	RSO	LIST	PER	CCR	SCR	MAIN
RSO	LIST	PER	CCR	SCR	MAIN		
Input PC point number and press the ↵ key Input PC station and press the ↵ key Input PT station and press the ↵ key Input radius and press the ENTER	:PC Point:: :PC Sta: :PT Sta: :R: <table border="1"> <tr> <td>WHAT</td> <td>DC⇒R</td> <td>D2P</td> <td></td> <td></td> <td></td> </tr> </table>	WHAT	DC⇒R	D2P			
WHAT	DC⇒R	D2P					
Press ENTER with no input for existing or Input Point number and press ENTER	:Pt 1: <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
Press ENTER with no input for existing or Input Point number and press ENTER or Press "A" for WHAT and press ENTER	PT 1 10+00.00 100.000 Right :Pt 2: <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							

HP48 TRAVERSE PROGRAM

SCR

Use POB (See Page 19) to start on a Point or get to a point by traversing or inverting.

The point should be the TS or ST of the Spiral

<p>Press the "E" key for REPO then the "E" key for SCR or Press the "F" key for MAIN then the "E" key for REPO then the "E" key for SCR</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>RSO</td> <td>LIST</td> <td>PER</td> <td>CCR</td> <td>SCR</td> <td>MAIN</td> </tr> </table>	RSO	LIST	PER	CCR	SCR	MAIN
RSO	LIST	PER	CCR	SCR	MAIN		
<p>Input TS station or CS station and press the ↓ key. Input 0 for TS or radius of curve for CS press the ↓ key. Input SC station or ST station and press the ↓ key. Input 0 for ST or radius for SC press Enter.</p>	<p>:STA1: :R1 : :STA2: :R2 : WHAT DC⇒R</p> <table border="1"> <tr> <td>WHAT</td> <td>DC⇒R</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT	DC⇒R				
WHAT	DC⇒R						
<p>Input Point number and press ENTER</p>	<p>:TS or ST PT: WHAT</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
<p>Press the "A" if the Spiral breaks to the Left or Press the "F" if the Spiral breaks to the Right.</p>	<p>LEFT RIGHT</p> <table border="1"> <tr> <td>LEFT</td> <td></td> <td></td> <td></td> <td></td> <td>RIGHT</td> </tr> </table>	LEFT					RIGHT
LEFT					RIGHT		
<p>Input Bearing of the back tangent Press the ↓ key and input code and press ENTER Codes are 0=Point to Point bearing recall, 1=NE, 2=SE, 3=SW, 4=NW, 5=AZ, 6=AL, 7=AR, 8=DL, 9=DR. B2P at the bearing prompt will bring up a Bearing by two points screen . See page 37 HMS+ will add two angles or bearings at the bearing prompt ex. (10°23' + 34°43') enter as 10.23 SPC 34.43 HMS+ ENTER HMS- same as above NOTE :An angle code MUST be entered WHAT Will take you back to the What Now prompt.</p>	<p>BRG FROM ST R B N 00°00'00" E :BRG or ∠:10 :Code:1 B2P HMS- HMS+ WHAT</p> <table border="1"> <tr> <td>B2P</td> <td>HMS-</td> <td>HMS+</td> <td>WHAT</td> <td></td> <td></td> </tr> </table>	B2P	HMS-	HMS+	WHAT		
B2P	HMS-	HMS+	WHAT				
<p>Press ENTER with no input for existing or Input Point number and press ENTER or Press "A" for WHAT and press ENTER</p>	<p>:Pt 1: WHAT</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
<p>Press ENTER with no input for existing or Input Point number and press ENTER or Press "A" for WHAT and press ENTER</p>	<p>PT 1 10+00.00 100.000 Right :Pt 2: WHAT</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							

HP48 TRAVERSE PROGRAM

SC

Press the "L" key for SC or Press the "F" key for CURVE then the "B" key for SC or Press the "F" key for MAIN then the "B" key for CURVE then the "B" key for SC	F(F)D(F)What Now? TRAV <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 16.6%;">SETUP</td> <td style="width: 16.6%;">SC</td> <td style="width: 16.6%;">SO</td> <td style="width: 16.6%;">ALN</td> <td style="width: 16.6%;">SETA</td> <td style="width: 16.6%;">MAIN</td> </tr> </table>	SETUP	SC	SO	ALN	SETA	MAIN
SETUP	SC	SO	ALN	SETA	MAIN		

Input length of spiral back and press the ↵ key Input radius and press the ↵ key Input length of spiral ahead and press the ↵ key Input delta (press "±" for left) and press the ENTER Δ3PT will calculate a delta from 3 points (ex. DELTA:1 2 3 Δ3PT) will be a delta with 1 on the back tangent, 2 at the PI, and 3 on the ahead tangent. Note: delta is the total delta if spirals are not zero.	:LS- : :R : :LS+ : :DELTA: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 16.6%;">DC⇒R</td> <td style="width: 16.6%;">Δ3PT</td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> </tr> </table>	DC⇒R	Δ3PT				
DC⇒R	Δ3PT						

This screen displays the total delta and the total tangents distances. Press Enter to continue	Δ 10°00'00" RT. TS- 100.000 TS+ 100.000 <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 16.6%;">DC⇒R</td> <td style="width: 16.6%;">Δ3PT</td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> </tr> </table>	DC⇒R	Δ3PT				
DC⇒R	Δ3PT						

This screen display the length of spiral back of the curve, the spiral angle, the x and y distances, the short tangent and the long tangent. Press ENTER to continue	Ls- 200.000 ⊙ 5°00'00" x 199.848 y 5.815 ST 66.715 LT 133.387 <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 16.6%;">DC⇒R</td> <td style="width: 16.6%;">Δ3PT</td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> </tr> </table>	DC⇒R	Δ3PT				
DC⇒R	Δ3PT						

This screen display the radius of the curve, degree of curve, the delta of the curve, length of the curve, tangent, and external Press ENTER to continue	Rc 1145.9156 Dc 5°00'00" Δc 10°00'00" RT. L 320.000 T 161.048 E 11.262 <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 16.6%;">DC⇒R</td> <td style="width: 16.6%;">Δ3PT</td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> </tr> </table>	DC⇒R	Δ3PT				
DC⇒R	Δ3PT						

This screen display the length of spiral ahead of the curve, the spiral angle, the x and y distances, the short tangent and the long tangent. Press ENTER to continue	Ls- 200.000 ⊙ 5°00'00" x 199.848 y 5.815 ST 66.715 LT 133.387 <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 16.6%;">DC⇒R</td> <td style="width: 16.6%;">Δ3PT</td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> </tr> </table>	DC⇒R	Δ3PT				
DC⇒R	Δ3PT						

Input the total PI station and press ENTER or Press ENTER with no input to input PC or TS station and press ENTER	:PI STA: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 16.6%;">DC⇒R</td> <td style="width: 16.6%;">Δ3PT</td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> </tr> </table>	DC⇒R	Δ3PT				
DC⇒R	Δ3PT						

Input point number of the that you inputted the station for above and press	
---	--

HP48 TRAVERSE PROGRAM

ENTER	:Point: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 12.5%;">DC⇒R</td> <td style="width: 12.5%;">Δ3PT</td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> </tr> </table>	DC⇒R	Δ3PT				
DC⇒R	Δ3PT						
Input Bearing of the back tangent Press the ↓ key and input code and press ENTER Codes are 0=Point to Point bearing recall, 1=NE, 2=SE, 3=SW, 4=NW, 5=AZ, 6=AL, 7=AR, 8=DL, 9=DR. B2P at the bearing prompt will bring up a Bearing by two points screen . See page 37 HMS+ will add two angles or bearings at the bearing prompt ex. (10°23' + 34°43') enter as 10.23 SPC 34.43 HMS+ ENTER HMS- same as above NOTE :An angle code MUST be entered WHAT Will take you back to the What Now prompt.	Back Tan Brg R B N 00°00'00" E :BRG or ∠:10 :Code:1 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 12.5%;">B2P</td> <td style="width: 12.5%;">HMS-</td> <td style="width: 12.5%;">HMS+</td> <td style="width: 12.5%;">WHAT</td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> </tr> </table>	B2P	HMS-	HMS+	WHAT		
B2P	HMS-	HMS+	WHAT				
Press ENTER with no input for existing or Input point number you want to store the point as and press ENTER Note this Screen will not display if control point store is turned off see setup on page 14	TS 51+00.00 N 100000.000 E 200000.000 :Pt 1: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 12.5%;">DC⇒R</td> <td style="width: 12.5%;">Δ3PT</td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> </tr> </table>	DC⇒R	Δ3PT				
DC⇒R	Δ3PT						
This screen displays the bearing ahead Press ENTER to continue	N 00°00'00" E <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 12.5%;">DC⇒R</td> <td style="width: 12.5%;">Δ3PT</td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> </tr> </table>	DC⇒R	Δ3PT				
DC⇒R	Δ3PT						

See SO on page 35

HP48 TRAVERSE PROGRAM

SO

<p>Press the "R" key for SO or Press the "F" key for CURVE then the "C" key for SO or Press the "F" key for MAIN then the "F" key for CURVE then the "C" key for SO</p>	<p>F(F)D(F)What Now? TRAV</p> <table border="1"> <tr> <td>SETUP</td> <td>SC</td> <td>SO</td> <td>ALN</td> <td>SETA</td> <td>MAIN</td> </tr> </table>	SETUP	SC	SO	ALN	SETA	MAIN
SETUP	SC	SO	ALN	SETA	MAIN		
<p>Input the station and press "↓" and Input offset and press ENTER</p>	<p>Enter Station and Off.</p> <p>:Station:1500 :Offset:0</p> <table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						
<p>Press ENTER with no input for existing or Input Point number and press ENTER or Press "A" for WHAT and press ENTER</p>	<p>POT- 15+00.000</p> <p>:Pt 1:</p> <table border="1"> <tr> <td>WHAT</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	WHAT					
WHAT							
	<p>F(F)D(F)What Now? SO</p> <table border="1"> <tr> <td>SETUP</td> <td>SC</td> <td>SO</td> <td>ALN</td> <td>SETA</td> <td>MAIN</td> </tr> </table>	SETUP	SC	SO	ALN	SETA	MAIN
SETUP	SC	SO	ALN	SETA	MAIN		

HP48 TRAVERSE PROGRAM

ALN

Run SC first for the curve set to store as an alignment.

Press the "F" key for CURVE then the "D" key for ALN or Press the "F" key for MAIN then the "F" key for CURVE then the "D" key for ALN	F(F)D(F)What Now? TRAV					
	SETUP	SC	SO	ALN	SETA	MAIN

Input the line name and press the "α" key then the "↓" key and Input the number of the curve set and press ENTER note set 1 is the first curve system 2 is the second and so forth for each line.	:LINE:					
	:SET #:					

	F(F)D(F)What Now? SO					
	SETUP	SC	SO	ALN	SETA	MAIN

SETA

Press the "F" key for CURVE then the "E" key for SETA or Press the "F" key for MAIN then the "F" key for CURVE then the "E" key for SETA	F(F)D(F)What Now? TRAV					
	SETUP	SC	SO	ALN	SETA	MAIN

Press keys for alignment you what to make active.						
	L	YI				

	F(F)D(F)What Now? TRAV					
	SETUP	SC	SO	ALN	SETA	MAIN

HP48 TRAVERSE PROGRAM

SUB FUNCTIONS

B2P

Bearing by two points

Press "A" key for B2P then press ENTER	Back Tan Brg R B N 00°00'00" E					
	:BRG or ∠:B2P :Code:1					
	B2P	HMS-	HMS+	WHAT		

Input the first point number and press the "↓" key and input the second point number and Press ENTER. The bearing will be entered from the first point to the second point.	BRG BY 2 POINTS					
	:PT 1: :PT 2:					
	CSO					

D2P

distance by two points

Press "C" key for D2P then press ENTER	Traversing N 10°00'00" E					
	:Dist ? :D2P					
	ZA	DC⇒R	D2P	CUR	STAC	WHAT

Input the first point number and press the "↓" key and input the second point number and Press ENTER.	DIST BY 2 POINTS					
	:PT 1: :PT 2:					
	CSO					

CS0

coordinate from station and offset

Press "B" key for CS0 then press ENTER This should write over any point number that is at the prompt.	Point of Beginning					
	:Point No.:CS0					
	WHAT	CS0				

Input the station and press "↓" and Input offset and press ENTER	Enter Station and Off. +/- for offset Left					
	:Station: :Offset:0					

HP48 TRAVERSE PROGRAM

STACK

Press "E" key for STACK then press ENTER	Traversing N 10°00'00" E :Dist ? :STACK <table style="width: 100%; border: none;"> <tr> <td style="border: none; text-align: center;">ZA</td> <td style="border: none; text-align: center;">DC⇌R</td> <td style="border: none; text-align: center;">D2P</td> <td style="border: none; text-align: center;">CUR</td> <td style="border: none; text-align: center; background-color: #cccccc;">STAC</td> <td style="border: none; text-align: center;">WHAT</td> </tr> </table>	ZA	DC⇌R	D2P	CUR	STAC	WHAT
ZA	DC⇌R	D2P	CUR	STAC	WHAT		
Do what ever type of computations and leave the distance in line 1 and press "A" for CONT	4: 3: 2: 1: <table style="width: 100%; border: none;"> <tr> <td style="border: none; text-align: center;">CONT</td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> </tr> </table>	CONT					
CONT							

DUPLICATE POINT NUMBER

Press "A" to Overwrite or Press "F" to input new point number	OVERWRITE EXISTING POINT? <table style="width: 100%; border: none;"> <tr> <td style="border: none; text-align: center;">YES</td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; text-align: center;">NO</td> </tr> </table>	YES						NO					
YES						NO							
Input new point number and press ENTER	<table style="width: 100%; border: none;"> <tr> <td style="border: none; text-align: center;">:POINT NO.:</td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> </tr> </table> <table style="width: 100%; border: none;"> <tr> <td style="border: none; text-align: center;">YES</td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; text-align: center;">NO</td> </tr> </table>	:POINT NO.:						YES					NO
:POINT NO.:													
YES					NO								

INVALID POINT NUMBER

Input new point number and press ENTER	INVALID PT NUM: PT 1000 :New Point: <table style="width: 100%; border: none;"> <tr> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> <td style="border: none; width: 50px;"></td> </tr> </table>						