



**KURSUS PENGENALAN KEPADA GIS
UNTUK PEGAWAI DI JABATAN NRE/PBT/PTD
(GRED 17 – 38)**

**PENGOPERASIAN
ALAT HANDHELD GPS
[GPS MAP 76CSX]**

12 FEBRUARI 2014

INSTUN



UNIT OVERVIEW

Unit Overview



Memasang Bateri, MicroSD Card & Lanyard

Memasang Bateri

- 2 biji bateri jenis alkaline atau NiMH
- Putarkan D-ring $\frac{1}{4}$ puingan lawan jam & tarik
- Masukkan bateri baru & pastikan *polarity* betul (kedudukan tanda +/- sama seperti dibateri)
- Pasang semula penutup getah tersebut
- Pastikan bateri di keluarkan dari alat kalau tidak digunakan dalam



Memasang Kad MicroSD

- 1 kad memori MicroSD
- Putarkan D-ring $\frac{1}{4}$ pusingan lawan jam & tarik
- Masukkan kad MicroSD & tekan bahagian atas kad tersebut sehingga kedengaran bunyi “Klik”
- Pasang semula penutup getah

- Untuk keluarkan kad tersebut, tekan bahagian atas kad tersebut sehingga kedengaran bunyi “Klik” dan keluarkan secara perlahan



CIRI-CIRI GPSMAP 76CSX

- Berat : 7.5 oz / 0.21kg
- Penerima : 12 channel
- Standard GPS antenna : built-in Quad Helix
- Kekunci : 9 (dibahagian depan alat untuk memudahkan carian maklumat)
- Waterproof standard : IPX7
- Ciri-ciri tambahan :
 - Waypoint : 500 (nama dan simbol)
 - Tracks : automatic track log, 10 saved tracks
 - Routes : 50 routes dengan 50 waypoint setiap satu
 - Trip computer : trip odometer, stopped time, moving average speed, moving time, overall average, total time, max speed and odometer
 - Celestial date : tides, sun and moon, hunt and fish times



IN/OUT Zoom Keys

- Press to zoom in or out on the Map Page.
- Press to scroll up or down a list on any other page.

FIND/MOB Key

- Press at any time to view the Find Menu.
- Press and hold for MOB.

POWER Key

- Press and hold to turn the unit on or off.
- Press and Release to adjust the backlighting.

QUIT Key

- Press to cancel data entry or exit a page.



ROCKER Key

- Press up, down, left, or right to highlight options and to enter data, or move the map panning arrow.

PAGE Key

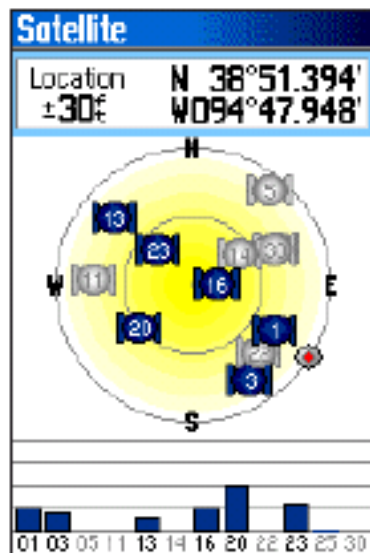
- Press to cycle through the main pages.
- Press and hold to turn the compass on or off

MENU Key

- Press to view page options.
- Press twice to view the Main Menu.

ENTER/MARK Key

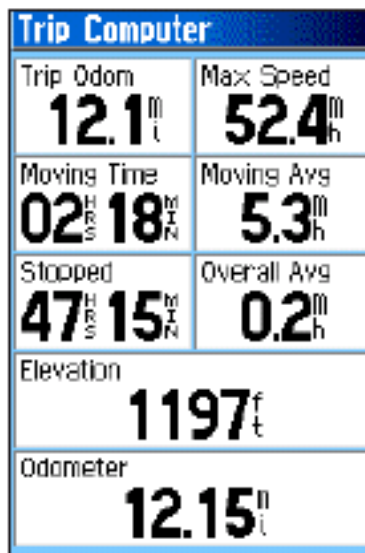
- Press and release to enter highlighted options, data or confirm on-screen messages.
- Press and hold at any time to mark your current location as a waypoint.



Satellite Page

- Menu**
- Use With GPS Off**
 - Track Up
 - Multicolor
 - New Location
 - GPS Elevation
- MENU** for Main Menu

Satellite Page
Options Menu



Trip Computer
Page

- Menu**
- Reset...**
 - Big Numbers
 - Change Data Fields
 - Restore Defaults
- MENU** for Main Menu

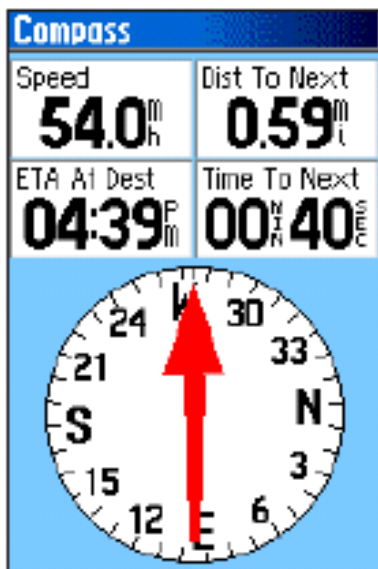
Trip Computer
Page Options
Menu



Map Page

- Menu**
- Stop Navigation**
 - Recalculate
 - Data Fields...
 - Guidance Text...
 - Setup Map
 - Measure Distance
 - Turn Declutter On
 - Restore Defaults
- MENU** for Main Menu

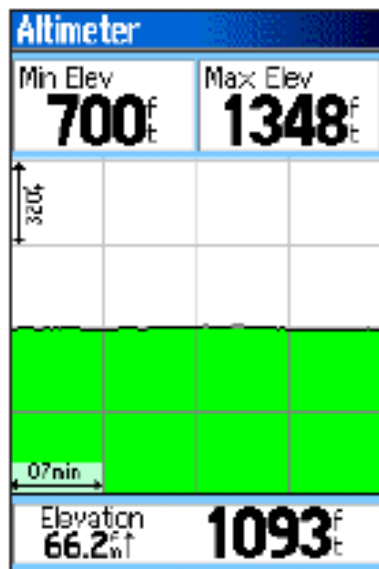
Map Page
Options Menu



Compass Page

- Menu**
- Sight 'N Go
 - Stop Navigation
 - Recalculate
 - Course Pointer
 - Data Fields...
 - Change Data Fields
 - Calibrate Compass
 - Restore Defaults
- MENU** for Main Menu

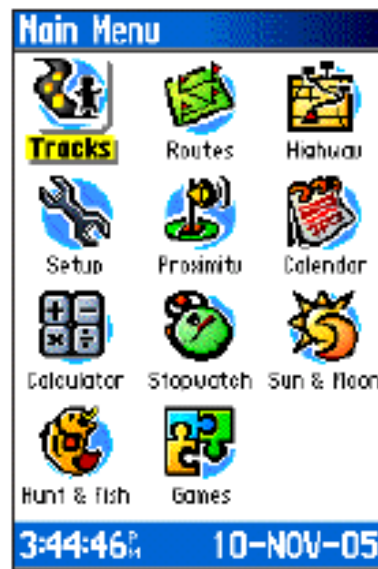
Compass Page Options Menu



Altimeter Page

- Menu**
- Plot Over Distance
 - View Pressure Plot
 - Zoom Ranges
 - Change Data Fields
 - Reset...
 - Calibrate Altimeter
 - Restore Defaults
- MENU** for Main Menu

Altimeter Page Options Menu






Main Menu

- Menu**
- No Options
- MENU** for Main Menu

No Options Available for the Main Menu

SETUP

Main Menu

 Tracks	 Routes	 Highway
 Setup	 Proximity	 Calendar
 Calculator	 Stopwatch	 Sun & Moon
 Hunt & Fish	 Games	

3:44:46 PM 10-NOV-05

Main Menu


Time
Time icon

Time Setup

Time Format
12 Hour

Time Zone
US - Central

UTC Offset
-06hrs 00min

Daylight Saving Time
Auto

2:56:16 PM 21-NOV-05


Units
Units icon

Units Setup

Position Format
hddd°mm.mmm'

Map Datum
WGS 84

Distance/Speed
Statute

Elevation (Vert. Speed)
Feet (ft/min)

Depth
Feet

Temperature
Fahrenheit

Pressure
Millibars



Samb..

Location Formats

hddd.dddd°	India Zone IVB
hddd°.mm.mmm'	Irish Grid
hddd°.mm'ss.s"	LORAN TD
British Grid	Maidenhead
Dutch Grid	MGRS
Finnish Grid	New Zealand
German Grid	QNG Grid
India Zone 0	RT 90
India Zone IA	Swedish Grid
India Zone IB	Swiss Grid
India Zone IIA	Taiwan Grid
India Zone IIB	UTM UPS
India Zone IIIA	W Malayan RSO
India Zone IIIB	User UTM Grid
India Zone IVA	

Setup Menu — 'Location' Tab

The 'Location' Tab contains the settings for 'Location Format', 'Map Datum', 'North Reference' and 'Magnetic Variation'. The settings are used in related fields throughout the unit.

'Location Format' — There are 28 different formats to choose from. See the sidebar for a list of the formats. You should not need to change the format unless you are using a chart or paper map for navigation. If so, find the format that most closely matches your chart or map.

'Map Datum' — Datums are used to describe geographic positions for surveying, mapping, and navigation and are not actual maps built in the unit. Although there are over 100 datums available to choose from, you should only need to change the Map Datum if you using a chart or paper map that specifies a different datum in the legend.





Samb..

- **PENTING :
SETUP LOCATION dan TIME**

- **Kaedah Setup Location**

- Tekan MENU 2 kali
- Pilih Setup dan ENTER
- Gerakkan butang Rocker ke kiri – pilih Location dan ENTER
- pilih Location Format yang sesuai dan ENTER
- Pilih Map Datum yang sesuai dan ENTER
- North Reference – pilih True

- **Kaedah Setup Time**

- Gerakkan butang Rocker ke Time
- Gerakkan butang Rocker ke Time Format dan ENTER
- Pilih samada 12 atau 24
- Time Zone : Other
- UTC Offset : +08:00

**Location format :
W Malayan RSO**

**Map datum :
Kertau 1948**

Location format :

hddd°.mm'ss.s"

**Map datum :
WGS 84**



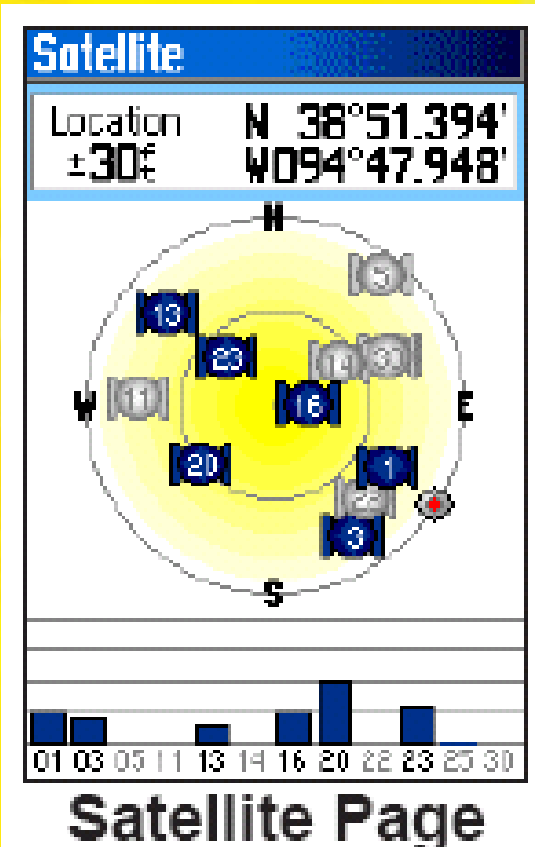


PAPARAN UTAMA

<p>Satellite</p> <p>Location N 38°51.394' W 094°47.948'</p> <p>01 03 05 11 13 14 16 20 22 23 30</p>	<p>Trip Computer</p> <table border="1"> <tr> <td>Trip Odom</td> <td>12.1^m</td> <td>Max Speed</td> <td>52.4^m_h</td> </tr> <tr> <td>Moving Time</td> <td>02:18^m_h</td> <td>Moving Avg</td> <td>5.3^m_h</td> </tr> <tr> <td>Stopped</td> <td>47:15^m_h</td> <td>Overall Avg</td> <td>0.2^m_h</td> </tr> <tr> <td>Elevation</td> <td colspan="3">1197^f</td> </tr> <tr> <td>Odometer</td> <td colspan="3">12.15^m</td> </tr> </table>	Trip Odom	12.1 ^m	Max Speed	52.4 ^m _h	Moving Time	02:18 ^m _h	Moving Avg	5.3 ^m _h	Stopped	47:15 ^m _h	Overall Avg	0.2 ^m _h	Elevation	1197 ^f			Odometer	12.15 ^m			<p>Map</p>	<p>Compass</p> <table border="1"> <tr> <td>Speed</td> <td>54.0^m_h</td> <td>Dist To Next</td> <td>0.59^m_l</td> </tr> <tr> <td>ETA At Dest</td> <td>04:39^m</td> <td>Time To Next</td> <td>00:40^m</td> </tr> </table>	Speed	54.0 ^m _h	Dist To Next	0.59 ^m _l	ETA At Dest	04:39 ^m	Time To Next	00:40 ^m	<p>Altimeter</p> <table border="1"> <tr> <td>Min Elev</td> <td>700^f</td> <td>Max Elev</td> <td>1348^f</td> </tr> <tr> <td colspan="4">Elevation</td> </tr> <tr> <td colspan="2">66.2^m</td> <td colspan="2">1093^f</td> </tr> </table>	Min Elev	700 ^f	Max Elev	1348 ^f	Elevation				66.2 ^m		1093 ^f		<p>Main Menu</p> <ul style="list-style-type: none"> Tracks Routes Highway Setup Proximity Calendar Calculator Stopwatch Sun & Moon Hunt & Fish Games <p>3:44:46% 10-NOV-05</p>
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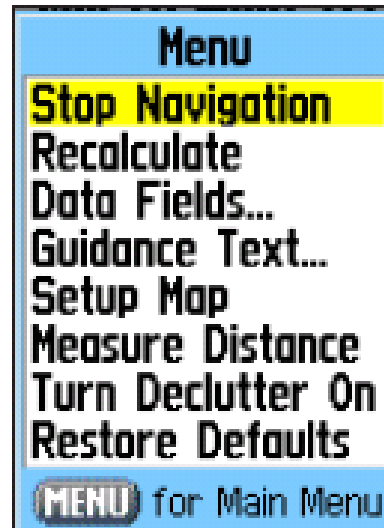
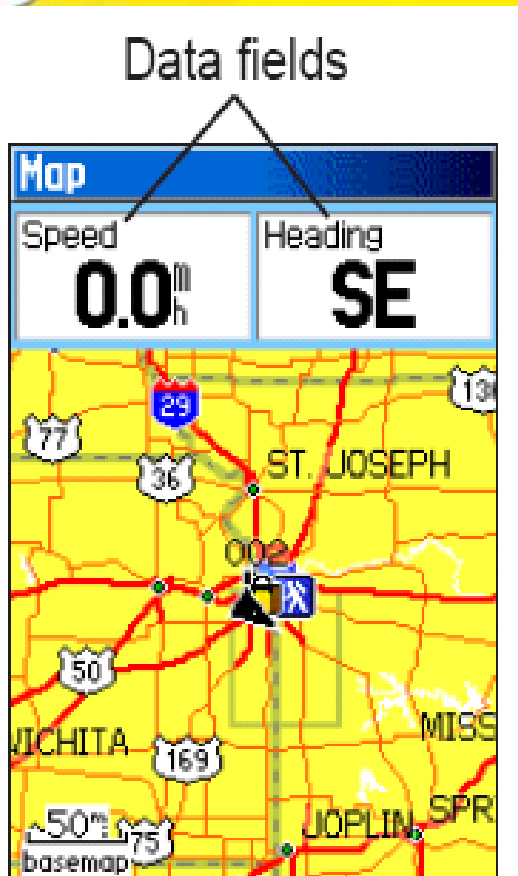
GPS INFORMATION PAGE



- Apabila GPS menerima sekurang-kurangnya 3 isyarat satelit, ia akan memberikan *current GPS speed*, DGPS status dan anggaran ketepatan lokasi GPS.
- Memaparkan ketepatan semasa isyarat GPS, lokasi satelit, kekuatan isyarat satelit, kodinit lokasi, status penerima serta waktu dan tarikh semasa.
- Berpandukan kepada ketepatan isyarat GPS, pengukuran boleh dilakukan.



MAP PAGE

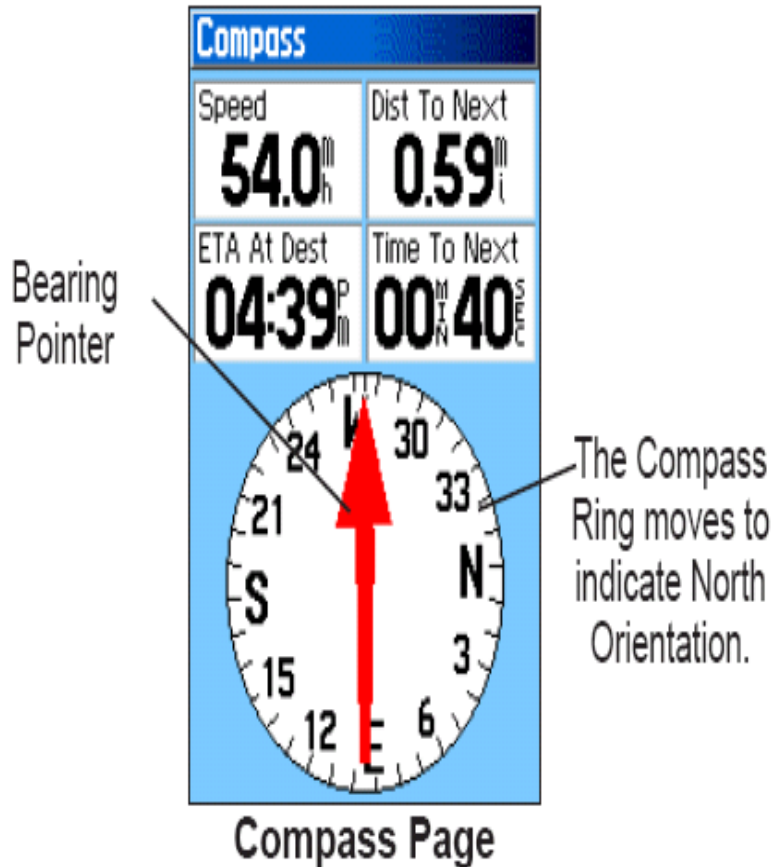


- Peta asas yang disertakan – Amerika Utara
- Peta asas standard boleh di aplikasikan melalui Garmin's MapSource products
- Memaparkan kawasan kerja/lokasi yang hendak diketahui





COMPASS PAGE



- Digunakan untuk navigasi apabila melibatkan laluan yang tidak lurus.
- Alat akan bernavigasi dgn kaedah Kompas Elektronik di bawah kegunaan kelajuan 10 mph dan bertukar secara automatik kepada kaedah Penerima GPS apabila melebihi had kelajuan tersebut.
- Kompas Elektronik hanya digunakan untuk bacaan sahaja bagi menjimatkan penggunaan bateri





COMPASS PAGE

Menu

Sight 'N Go

Stop Navigation

Recalculate

Course Pointer

Data Fields...

Change Data Fields

Calibrate Compass

Restore Defaults

MENU for Main Menu

Compass Page
Options Menu

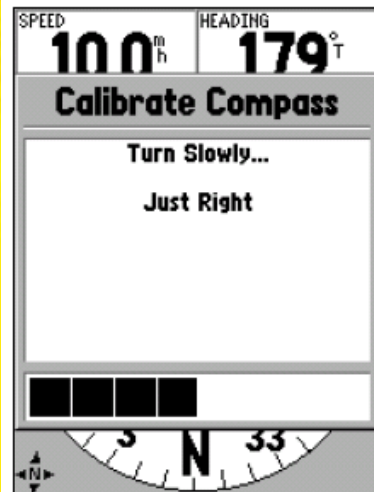
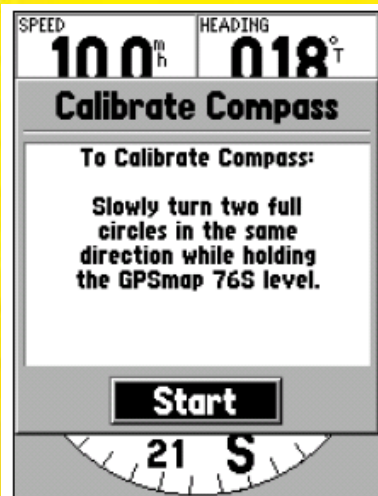


The Bearing Pointer always indicates the direction to your destination from your current location.





KALIBRASI KOMPAS




- Setiap kali baterai baru digunakan
- Kaedah :
 - Tekan butang MENU untuk dapatkan pilihan
 - Pilih 'Calibrate Compass' dan tekan ENTER
 - Pilih 'Start' dan tekan ENTER
 - Dgn perlahan, buat 2 pusingan dalam arah yang sama sambil memegang peralatan



MARK WAYPOINT/KEMASUKAN DATA

Waypoint symbol

Waypoint name

Mark Waypoint		
	001	
Note		
10-NOV-05 1:29:51PM		
Location		
N 38°51.394' W 094°47.948'		
Elevation	Depth	
1223 ^f	----- ^f	
From Current Location		
NE	2 ^f	
Avg	Map	OK

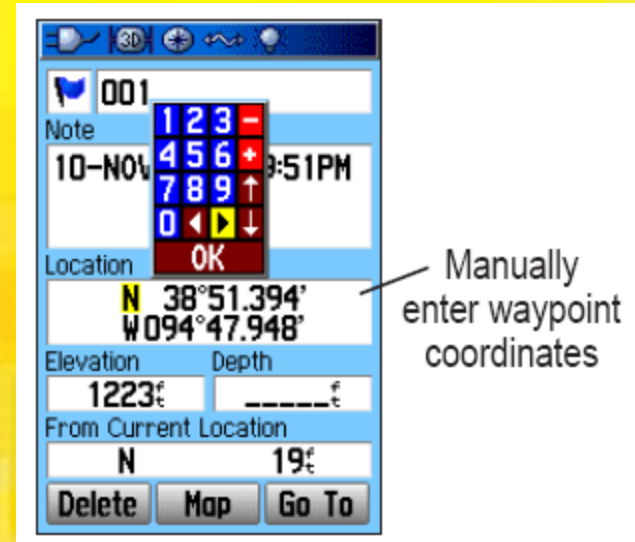
Mark Waypoint Page

- Apabila butang ENTER/MARK ditekan, fungsi penandaan diaktifkan dan kedudukan semasa adalah ditanda.
- Tekan ENTER sekali lagi untuk *save waypoint* dgn nama dan simbol yg boleh ditukar ganti.
- Menukar simbol :
 - Pilih *Symbol Field* dgn penggunaan butang Rocker dan tekan ENTER
 - Pilih simbol *Scenic Area* dan tekan ENTER



Samb..

- **Penukaran nama :**
 - Pilih *Name Field* dgn penggunaan butang Rocker dan tekan ENTER
 - Gerakkan butang Rocker disebelah kiri untuk memadamkan nama sebelumnya
 - Gerakkan butang Rocker di sebelah atas sehingga kelihatan senarai *Alpha-Numeric*
 - Setelah selesai menamakannya, anda perlu menyimpannya di unit memori.
- **Untuk menyimpan waypoint :**
 - Pilih OK dgn penggunaan butang Rocker dan tekan ENTER





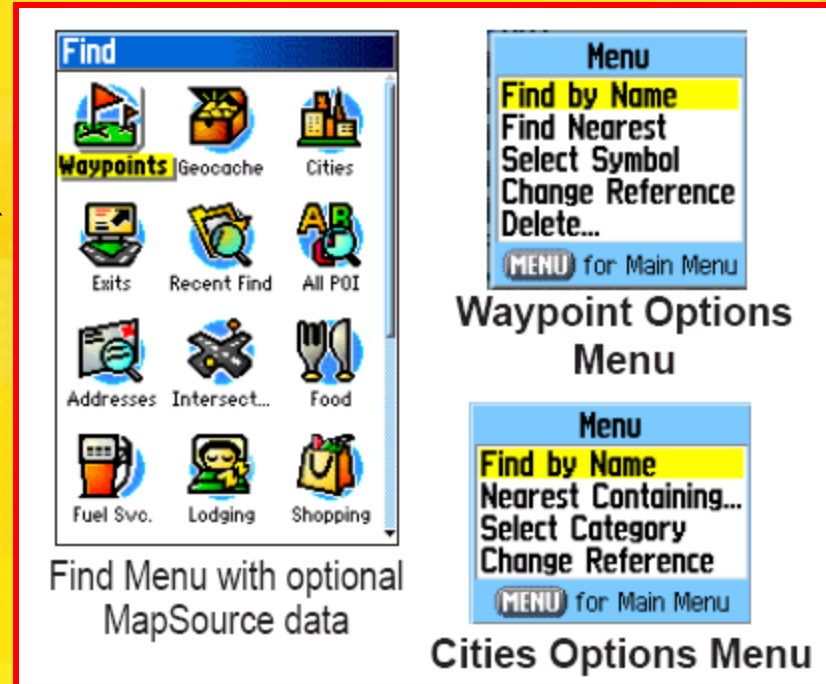
MENCARI SEMULA LOKASI YANG TELAH DITANDA

• KAEDAH 1

- Tekan butang FIND/MOB
- Pilih Go To Point dan tekan ENTER
- Pilih Waypoints dan tekan ENTER
- Pilih point yang dikehendaki

• KAEDAH 2

- Tekan MENU 2 kali
- Pilih Points dan ENTER
- Pilih Waypoints dan ENTER
- Pilih point yang dikehendaki dan ENTER
- Di paparan Waypoint, pilih samada Map/Goto dan tekan OK





MENCARI LOKASI MELALUI KEMASUKAN KODINIT

- Pada paparan Active Route – tekan MENU
- pilih Add Waypoint dan tekan ENTER
- Pilih Waypoints dan tekan ENTER
- Cari Nearest Waypoints atau pilih mana-mana point yang sedia ada
- Tukar simbol/nama/location dan tekan Goto – kompas akan menunjukkan arah ke lokasi yang baru dimasukkan kodinit **ATAU**
- Tekan OK untuk save point yang telah ditukar simbol/nama/location dan kemudian di paparan Map Page, dengan menggunakan butang NAV/MOB – pilih Go To Point untuk mendapatkan lokasi tersebut.





TRACK LOG

- Ianya amat berguna terutama untuk memeta kawasan seperti kolam, paya, *roundabout* dsb.
- KAEDAH MENGADAKAN/MENGHILANGKAN TRACK LOG
 - Dari paparan Map Page – tekan MENU
 - Pilih Setup Map dan tekan ENTER
 - Dengan menggerakkan butang Rocker ke kiri – pilih Line
 - Pilih samada Track Log perlu di **ON/OFF**





TRACK LOG

Main Menu

- Tracks
- Routes
- Highway
- Setup
- Proximity
- Calendar
- Calculator
- Stopwatch
- Sun & Moon
- Hunt & Fish
- Games

3:44:46 10-NOV-05

Main Menu

Tracks

Track Log On Off

20%

Percentage of memory used

Setup Clear

Save TracBack

Saved Tracks

24-NOV-05

19 Unused

Tracks Page

List of saved tracks

Track Log Setup

Wrap When Full

Record Method

Distance **Auto**

Interval

Normal

Color

Transparent

Distance Time **Auto**

Most Often
More Often
Normal
Less Often
Least Often





Sekian, Terima kasih

Q & A

