G1000 Quick Ref. INDEX

G1000 Quick Ref. INDEX (continued)

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G1000 Quick Reference Guide

Direct To:

(MFD) Direct To (D→)Btn (Button)

Spell WayPoint

1. Small Knob (SmKb) Clockwise (CW) for 1st letter (let.)
2. Large Knob (Lgkb) for letter position – ENTER (Accepts)
3. ENTER (Activates)– FPL (Returns to Flight Plan) with Dir. To

FPL, NRST, RECENT

1 Sm Kb CCW (Counter Clockwise) 1 click (Clk) – FPL Box
2 Sm Kb CW – **FPL, NEAREST, RECENT** pages
3 Lg Kb selects WPT (Way Point) on page

Note: SmKb now also selects WPT on page
ENTER – Accepts
ENTER –Activates and shows Dir. To in Active FPL

Fly To WPT via Selected Course Line to Intercept

1. Press CDI for GPS, then press OBS, rotate CRS SmKb for intercept heading inbound to WPT.
2. Fly to intercept Magenta line (Inbound heading to WPT)

Direct To using Nearest (PFD)

1. Press NRST soft key (PFD). Us SmKb CW to scroll list.
2. Press Dir. To Btn –ENTER (Accepts)
3. ENTER (Activates)

Create A New Flight Plan (FPL) on MFD

1. Push FPL Btn, (Shows Active FPL if any), Sm Kb CW 2 clk, shows (FPL Catolog). Push Sm FMS knob to highlight. Scroll for blank space to create New FPL or

1 Push "New" soft key for 1st leg then LgKb/SmKb to spell WPT
2. FPL name, LgKbg CCW, LgKb/SmKb to spell Ident. –ENTER
3. LgKb/SmKB spell Wpt, or SmKb CCW for NEAREST, RECENT, LgKb scrolls list

ENTER accepts selection, ENTER, (Leg inserted)

4. 2nd Leg: - Repeat steps above
5. 3rd Leg: Same as above
6. Push Sm Kb (FMS) when finished accepting legs entered.
7. Push CLR to return to Map page

View Flight Plan (FPL)

1. Push FPL Btn; Sm FMS Kb CW to FPL CAT
2. Push Sm FMS Kb to high light 1st FPL in list.
3. Sm/LgKb CW to scrolls through FPL list

   Note: Map screen on left shows WP's of FPL
4. Push EDIT Soft key to view FPL or
5. ENTER (Accepts FPL to Activate/Edit), LgKb CW to Edit FPL
6. ENTER to Activate/Edit FPL, Edit views FPL legs
7. Push Sm FMS Kb twice to clear; Clr Btn to Map page

EDIT FPL (See View FPL steps 1-4 for Delete & Insert)

Delete a WPT in FPL

1. Lg FMS Kb scrolls list for WPT selection
2. Press Clr btn to delete, LgKb CW (Ok/Cancel)
3. ENTER deletes
4. Push Sm FMS Kb twice, unhigh light, Clr Btn 2 sec to Map

Insert a new WPT in FPL **(**View FPL 1-4, Inserts WPT above Cursor)

1. LgKb scrolls list of WPT's,
2. SmKb CW to Spell Ident
3. Sm/LgKb to spell Ident, ENTER accepts Ident and inserts WPT above cursor –OR-
4. SmKb CCW for FPL/RECENT/NRST,
5. LgKb scrolls list, SmKb CW for FPL/RECENT/NRST.
6. ENTER accepts WPT; ENTER inserts it above cursor.
7. Push SmKb (FMS) twice to FPL list, Clr Btn to Map

Copy A FPL to an empty FPL Location

1. Push FPL soft key; Sm FMS Kb CW to FPL Cat.
2. Push Sm FMS Kb to high light, Push Copy soft key
3. Copy FPL to first empty location – ENTER (Ok/Cancel)
4. Push Sm FMS kb unhigh light
5. Push Clr – Return Map page

Present Position (Lat/Long), View

1. Press Sm Range Kb, read Lat/Long upper right corner or
2. LgKb(FMS) CW 2 Clks to AUX pg.
3. SmKb CW 2 Clks to GPS Status, page 3.
4. See POSITION, Clr for 2 sec. to return to Map page.

VIEW Airport Diagram/Frequency/Approach Plates

From FPL: Press FPL softkey. SmFMS Kb (HL). LgFMS Kb APT ENTER – SmFMS Kb (HL). LgFMS Kb CW to Freq. ENTER to place Freq. in Standby of COM1 only.

From WPT Page: LgFMS Kb CW to WPT Pg. SmFMS Kb (HL). LgFMS Kb to Freq. – ENTER to Standby COM1 only. SmFMS Kb (UH) LgFMS Kb CCW to Map

From Nearest Page: LgFMS Kb CW to NRST – Press Sm FMS Kb (HL) – SmFMS Kb CW to APT. – ENTER – SmFMS Kb to Freq. – ENTER to Standby COM1 only – SmFMS Kb (UH) – Lg FMS Kb to MAP pg.

FUEL RING Reserve Setting

1. Main Menu
2. Map Setup – ENTER
3. LgKb CW to select MAP
4. SmKb ON/OFF
5. LgKb CW to time position
6. SmKb CW adjust Hrs
7. LgKb CW to minute position
8. SmKb to adjust minutes – ENTER
9. Push SmKb (FMS) to clear

TRACK Orientation

1. Menu Btn
2. Map Setup – ENTER
3. LgKb CW to select Orientation.
4. SmKb CW for:North Up/Track Up/DTK Up/HDG Up
5. Push SmKb to return to Map page.

Wind Vector Box

1. On PFD press PFD softkey, press Wind softkey
2. Opt1: Head/Cross wind; Opt2: Speed/Wind Vector; Opt3: Wind vector, Speed & true direction of wind.

Lat/Long Display Format Setting

1. (MFD) LgKb CW to Aux page
2. SmKb CW 3 Clks to page 4 (System Setup).
3. Push SmKb (FMS) - Cursor On
4. LgKb CW to select Display Units – Position
5. SmKb CW set: HDDD˚MM'SS.SS"
   HDDD˚MM.MM'
6. ENTER, then Push SmKb (FMS) to clear
7. Push Clr Btn for 2 sec to return to Map pg or LgKb CCW to Map

PFD Nav Screen (Display)

1. Press INSET soft key on PFD–brings up Map screen
2. Press OFF soft key to remove Map screen

Display Nav1/Nav2/DME on PFD

1. Push PFD soft key on PFD
2. Push BR1 soft key tfor Nav1, again for GPS, again ADF, again off
3. Push BR2 soft key for same as above.
4. Push DME soft key to display the DME for Nav2 above Nav1 box.
5. Push Back soft key to return PFD soft keys to default

Load Airport Radio Frequency

1. See **View FPL** this book page 2 steps 1 – 5, LgKb scrolls WPT's
2. ENTER, - Push SmKb (Cursor on), LgKb CW to scroll to and highlight desired Frequency
3. ENTER to load frequency into Standby Freq. Box
4. Push SmKb (FMS) to clear; CLR Btn 2 sec. for Map page.

Mark User WPT or Current Postion

1. Push Range SmKb
2. Move pointer to desired position with Range SmKb
3. ENTER selectsReview Airspace or Create User WPT
4. Rotate Sm FMS Kb Cw to select
5. SmKb/LgKb to spell name
6. ENTER accepts name
7. Push SmKb (FMS) for Cursor Off
8. Push Sm Range Kb to Clear
9.

Rename FPL

Use **View FPL** page 2 steps 1 – 6, then

1. Lg btn (FMS) CCW 1 clk – move to FPL name
2. Sm kb CW to start rename with Sm/LgKb
3. ENTER accepts new name
4. Note: LgKb CW to FPL No., SmKb scrolls FPL list
5. Push Sm kb (FMS) to clear and see FPL list
6. Push Clr btn 2 Sec. returns to Map page

Create User WPT with Lat/Long on (MFD)

1. LgKb (FMS) CW to WPT page.
2. SmKb CW to page 5 (User WPT)
3. Push "New" Soft Key
4. Sm/LgKb to Edit Name, then ENTER
5. LgKb (FMS) CCW to Lat/Long
6. SmKb CW 1 Clk then Sm/LgKb to Lat/Long values
7. ENTER
8. Push SmKb (FMS) to Clear
9. Push CLR 2 sec to return to Map page.

Note: WPT category, page 5 will remain unless set back to pg 1

Edit User WPT Lat/Long

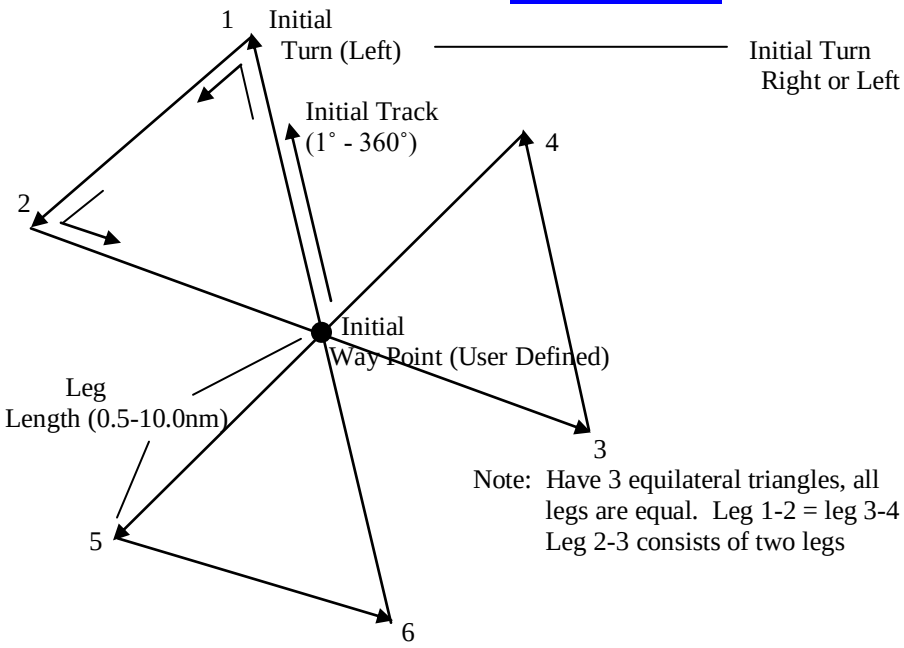
1. See Create User WPT steps 1&2
2. Push SmKb (FMS) to highlight Cursor on
3. SmKb/LgKb to Spell WPT Name then ENTER, or
4. LgKb (FMS) CW to scroll down to WPT list and select WPT
5. ENTER to high light WPT name
6. LgKb CW to scroll to Lat/Long position
7. Sm/Kb CW 1 Clk, Sm/Lg Kb to Edit,
8. Push SmKb to Clear cursor and save
9. Push CLR 2 sec to return to Map page.

Delete User WPT

1. See Edit User WPT above steps 1-2, LgKb CW to scroll to WPT
2. Push the CLR button to Delete (Yes/No)
3. ENTER - accepts
4. Push SmKb to Clear cursor and save
5. Push CLR for 2 seconds to return to Map page.

Sector Track Search Pattern (6 Sector)

20 Sector Search Pattern See article at www.34.alwg.us



Note: Have 3 equilateral triangles, all legs are equal. Leg 1-2 = leg 3-4 Leg 2-3 consists of two legs

Sector Search Pattern - Example

OKW VOR initial waypoint. Initial track 340˚, Leg length 3nm, Initial turn Left.

Search and Rescue Flight Plans

1. FLT Btn
2. Menu Btn
3. Search & Rescue Selection
4. ENTER

Search & Rescue Form

Waypoint: OKW (VOR) User Select - Lg/Sm Kbs
Pattern ----------Sector
Initial DTK ----------340˚
Initial Turn ----------Left
Leg Length ----------3.0nm
Activate SAR – Press ENTER
SAR FPL created

Sector Search Pattern (20 Sector)

Use CDI/OBS & CRS knob function to enter heading.

See article at www.34.alwg.us

Search and Rescue Flight Plans

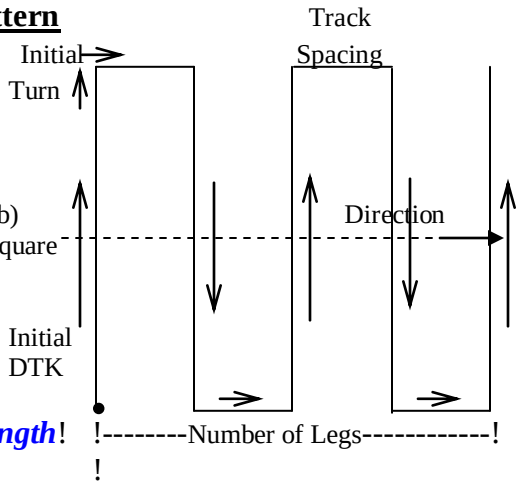
1. FLT Btn
2. Menu Btn
3. Search & Rescue Selection
4. ENTER

Parallel Track Search Pattern

1. Push FLP btn
2. Push Menu
3. ENTER

Search & Rescue Form

Waypoint (User Select LgSm Kb)
Pattern – Parallel, Sector, Exp. Square
Initial DTK (1 - 360˚)
Initial Turn (Left/Right)
Leg Length (1.0 – 99.9nm)
Spacing (0.5 - 9.9nm)
Number of Legs (1 – 40)

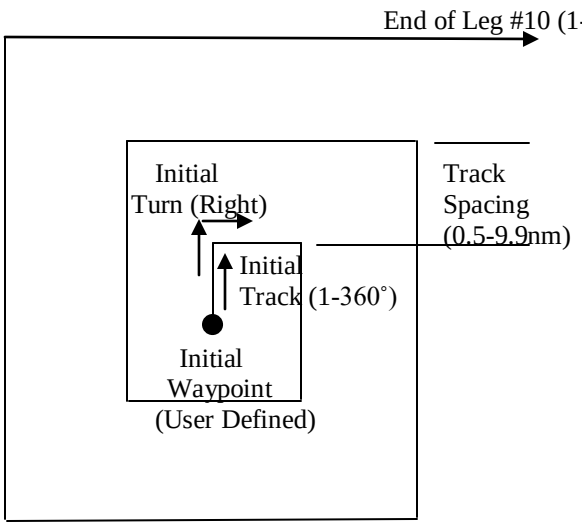


Note: Leg Length is full length!

Example:

1. **Waypoint** (Sm/Lg Kb User Select)
2. **ENTER – ENTER**
3. **Pattern:** SmKb CW ----(Parallel) -**ENTER**
4. **Initial DTK** – Sm/Lg Kb for selection (360˚) -**ENTER**
5. **Initial Turn** – Sm/Lg Kb CW (Right) -**ENTER**
6. **Leg Length** – Sm/Lg Kb (5.0nm) - **ENTER**
7. **Spacing –** Sm/Lg Kb (0.5 – 9.9NM) - **ENTER**
8. **Number of Legs –** Sm/Lg Kb (5) - **ENTER**
9. **Activate SAR - ENTER**

Expanding Square Search Pattern



Search & Rescue Form

Waypoint: OKW (VOR) User Select - Lg/Sm Kbs
Pattern –----------Sector, Parallel, Exp. Sqr.
Initial DTK ----------1 - 360˚
Initial Turn ----------Left/Right
Spacing ----------0.5 – 9.9nm
Number of Legs ------1 - 60
Activate SAR – Press ENTER
SAR FPL created
Note: 10 legs gives 5 nm last leg.

Creeping Line Search

Note: Use a Parallel Search Pattern to simulate a Creeping line.
See article at www.34.alwg.us

Route Search Pattern using 6 Route Lines

Note: Use a Parallel Search Pattern to simulate a 6 route search pattern.

Display FPL List

1. Push FPL Btn (MFD)
2. SmKb CW FPL Catalog, Press SmFMS Kb-high light, SmFMS kb Scroll.

View Timers

1. LgKb(FMS) 2CW to Aux pg.
2. SmKb 2CW to Utility
3. See Timers

Intercept GPS Radial to WPT

1. Set D ⟶WPT (See D ⟶)
2. Push CDI Btn for CDI GPS gauge
3. Push OBS Btn (PFD) to engauge the OBS function of the CRS Kb
4. Rotate the CRS SmKb CW/CCW to select Radial No. to intercept & track inbound to WPT.on Magenta line, Wht line back course.
   Note: Arrowhead of CDI selects radial inbound (Magenta Line)
   Tail of arrow of CDI selects radial from WPT (White Line)
5. Pressing the CRS SmKb will automatically place the magenta line directly under the plane.

VOR Radial Selection "FROM"

1. Set Nav1/Nav2 to VOR freq. (Outer Arrowhead points to VOR) inner arrowhead (To/From indicator)
2. Rotate SmKb (CRM) until CDI needle centers. Tail of needle indicates Radial From VOR.

VOR Radial Interception TO/FROM

1. Set Nav1/Nav2 to VOR freq. (Outer Arrowhead points to VOR)
2. Push CDI Btn for VOR1/2
2. Rotate SmKb (CRM) until tail of CDI needle on desired No.

Track Inbound to VOR by given Course Line or Radial

1. Set D ⟶VOR (Push D ⟶ Btn)
2. Select VOR name
3. LgKb (FMS) CW to select Course direction
4. Set Course direction inbound to VOR
5. ENTER (Activates); ENTER (return to Map page)

VOT Test

1. Push Nav SmKb for Nav1
2. Set VOT frequency using Nav Sm/LgKb
3. Push Rt/Lft Nav arrow to select Nav1 freq
4. Push CDI button on PFD to select VOR1
5. Push PFD Btn (PDF) and display Nav1/2 on PDF
6. Push BRG1/BRG2 to display Nav's on PDF
7. Push Back Btn (PDF) for normal PDF screen
8. Rotate the CRS SmKb and set the OBS reading to 180
   The inner CDI needle should center and the inner arrow head should move up toward and point to the outer needle arrow head indicating a "To" reading.
9. Rotate the CRS SmKb so that the OBS reads 360. The inner arrow head should point opposite to the outer arrow head (From) and the CDI needle should center.

VOR Test over a land mark WP

1. See VOT test steps 1-7
2. Navigate to and over a know Sectional WP about 3000 MSL.
3. Using VOR1 set to the usable VOR freq., rotate the CRS SmKb and position the tail of the needle to the radial the WPT is on. The CDI inner needle should center with the inner arrow head facing the tail of the needle

Vertical Nav(VPTH) Set Top of Descent (TOD) Point

Manual (You set TOD point in active FPL)

1. Push FPL Btn to View active FPL and leave displayed
2. Push SmKb (FMS) for Cursor On.
3. LgKb CW to WPT to descend down to.
4. Press ATK OFST button
5. SmKb CCW to enter descend distance from WPt; press ENTER.
6. Sm/Lg Kb to enter Alt ; press ENTER (Inserts TOD pt in FPL)
7. Also set descent Alt window on MFD (GFC700), or KAP140.
8. Push SmKb (FMS) to clear cursor.
9. Press VNV soft key on Autopilot (700) or
10. Set rate of descent on KAP140 when at TOD point.

Auto (Let FPL determine TOD*)*

1. See steps 1-3 above.
2. Lgkb CW to enter Alt; Sm/Lg Kb for Alt, ENTER (MSL),
3. ENTER to accept. (Clear Cursor).

Personal Settings before Flight (My Personal Settings)

1. Track Up see pg. 3
2. Lat/Long Display (HDD.MM.M) see pg 4.
3. Fuel Ring Reserve(1 hour) see pg 3.
4. Record Tachometer reading (MFD) before starting for flight log.
   a. Before starting engine, turn on PFD, test sw. to Arm.
   b. Push Engine button (PFD) then System button.
   c. Record Eng. Hours.
5. Setting Fuel Quantities added to tanks before takeoff.
   a. Push Engine, System, then Gal Rem.
   b. If Filled to bottom of tab, push 64 Gal. If full 87 Gal .
   c. For other amounts add or subtract to match fuel in tanks.

Radio Frequencies Copied to Standby Radio Frequency Box

1. Method 1: Lg FMS Kb CW to NRST. Push Sm FMS Kb (highlight)
2. Sm FMS Kb Cw to select Apt..
3. Push FREQ Soft key on MFD. Sm FMS Kb Cw for Freq. Places FREQ on Com1 Standby only.

Method 2

1. (Load APT Freq from FPL): Push FPL softkey. Sm Kb Cw to Flt Pln Cat. Push Sm FMS Kb (highlight). Sm Kb Cw to FPL with Apts in it. ENTER; Push Sm FMS Kb (highlight), Lg FMS Kb Cw select APt. ENTER; Push Sm FMS Kb (highlight)
2. Lg FMS Kb CW to Freq. ENTER puts FREQ to Com1 Standby only.
3. Push Sm FMS Kb (unhighlight). Push Clr Btn for FPLs

Direct To WPT (User Defined)
1 .LgKb (FMS) CW to WPT
2 .Push SmKb (FMS)
3. LgKb (FMS) CW to WPT needed
4. ENTER to select
5. Push Direct To Btn
6. ENTER to select
7. ENTER to accept
8. Push CLR btn for 2 sec. to return to map page

Lat/Long Display on MFD
1. Menu Btn, ENTER
2. SmKb CW to land, ENTER
3. SmKb CW to set MFD screen display Txt size, ENTER
4. SmKb CW to set Range value (Off – 2000nm). Lat/Long lines will only be displayed within range set. Larger Range set by Range Knob will not display Lat/Long lines.

View Lat/Long Grid Line
1. Push Menu Btn, ENTER
2. SmKb CCW for (Map,Wx,Traffic, Aviation, Airways, Land)
3. LgKb to Land, ENTER
4. SmKb Cw (Adjust Text size None, Sm, Med, Lg), ENTER
5. SmKb Cw (Adjust Range distance Off, 500ft – 2000nm)

Note: Grid only displays if range set below value entered for Range

AIRSPEED Climb Auto Pilot
1. Set Altitude before startup.
2 .Set takeoff heading and push HDG soft key to arm.
3. Push FD soft key to arm.
4. Push FLC soft key to turn on.
5. Push Up/Dn soft key to Decrease/Increase KIAS autopilot climb rate. Up nose decreases KIAS, Dn nose increase KIAS. After takeoff and approx. 500 AGL engage Autopilot

6 .Push AP soft key to engage Autopilot.

Measure Distance Between Two Points
1. Press Sm Range Kb, move arrow over 1st pt
2. Menu Btn, select Bearing and Distance, ENTER, ENTER
3. Move arrow to 2nd point and read Distance/Bearing upper left

Cursor/Screen Txt Box Display Visible Time Adjustment
1. Lg FMS Kb CW 3 Clks to Aux Page
2. Sm FMS Kb CW to System Setup
3. Press Sm FMS Kb to high light on, Lg Kb CW to Navigation Setup Time Out.
4. Adjust display time in seconds. Push Sm FMS Kb to un-highlight.
5. Hold Clr button for 2 sec to return to map page.

Victor Airway & Intersections added to a FPL
1. Create Intersection in recent (D----To). Start FPL with New
2. Load Airport, then Intersection, then.VAirway with: MENU, Load Airway (will list VAirways from Intersection) Select; then will show all airways, intersections, VOR'S etc on VAirway, Select; then will show all points on VAirway
3. Finish FPL with destination Airport

Setup (Initial)
1. Track Orientation:Press Menu Btn, MapSetup - ENTER
2. LgFMS Kb CW to Orientation, SmFMS kbTrack Up, - ENTER
3. LgFMS Kb Cw to WindVector, Sm Kb CW "On"
4. LgFMS Kb Cw to Nav Range Ring, Sm Kb Cw "On", unhighlight
5. Set Lat/Long Units readout:LgFMS Kb CW to Aux page SmFMS Kb CW to System Setup, Press SmFMS Kb, highlight LgFMS Kb CW to Display Units Position: SmFMS Kb to HDDDºMM.MM-ENTER
6. Nav Window on PFD –Press InSet Soft key, Back Soft Key
7. Vor1 & 2 on PFD- Press PFD Soft key, BRG1 & 2, DME, Wind, OPT1, Back Soft Key, & Nearest Soft Key, Unhighlight.

Delete All User WPT's

You must delete all FPL's first because they may contain UWPTS

1. Lg FMS Kb rt. Clk to WPT'S; Menu; Sm FMS Kb to Delete all UsrWPTs.; ENTER –ENTER (Yes)
2. CLR to Map

Delete All Flight Plans

1. FPL button; Sm FMS Kb rt. two Clks (FPL Cata.)
2. Menu; Delete All FPL's; ENTER –ENTER (Yes)
3. CLR to Map

Volume/Squelch Intercom Manual Control

(Note: GMA 1347 Copilot side, Copilot is known as Pilot, Scanner is Passenger). **Squelch Adj** Adjust for Ground and Air operation.

1. Press Man/Sq key (White triangle Lgt)on GMA 1347 Audio Panel.
2. Press Sm (Pilot Vol/Sq) Knob to Sq Lgt on.
3. Sm Kb CCW till hear noise (break Squelch). Sm Kb CW till silence. After takeoff, do again.
4. **Volume Adj** Press Sm (Pilot Vol/Sq) Kb Vol Lgt on. Sm knob adjusts Pilots Vol (Copilot), Lg Kb adjusts Passenger (Seat 3).

Select Switchs (Push Button) next to Trim Control

Fig 1

Fig 2

Seat Select 2/3 showing a (2) allows Copilot only access to Tx & Rec on any radio selected on GMA 2 Copilot Audio Panel. **Seat Select 2/3** showing a (3) allows Passanger only (Scanner) access to Tx & Rec on any radio selected on GMA 2 Copilot Audio Panel.

Com 3 Select showing **FM** connects 2m radio to GMA 1/2 Audio Panels. Always leave **FM** showing (NEVER use UHF)

VNAV (Vertical Navigation) - Specified altitudes at particular waypoints are entered into the FMS, and the computer figures the best way to accomplish what you want. For instance, if you are flying with the autopilot on in VNAV mode at cruise altitude, you can enter what speed you desire to make a descent at, and what altitude you wish to cross a particular point, and the computer will figure out where to bring the throttles to idle and begin a descent, to allow you to cross to that point in the most economical manner. VNAV also works in climb. There are airspeed restrictions at various altitudes, and if you are in VNAV, it will fly the plane at the desired power setting and angle to achieve the speed (and efficiency) you wish

NOTE: If pressed VNav, user Altitudes must be lower than blue Alts or VPATH will not follow Alts listed in blue. Not pressing VNav when on an RNav appr, AP assumes you will initiate VS decents down in FAF intercept Alt. If user entered Alt below GP intercept Alt, AP will initiate GP for approach.

RNAV (Area Navigation**)** - Computer creates imaginary navigation aid based on a direction and distance from a real one on the ground, from your origin to destination, and create the waypoints based on the computer figuring the direction and distance from some nearby navaids (usually VORs) and using that to fly a straight route. Nowadays, RNAV is also loosely used to describe any 'straight line' navigation method like GPS, as well as the old RNAV method too.

LNAV(Lateral Navigation) - route over the ground. The plane may be using VORs, GPS, DME, or any combination of the above. It's all transparent to the pilot, as he enters his route as specified in the clearance and flight plan into the FMS (Flight Management System). The route shows up as a magenta line on the lower flight display, and as long as the autopilot is engaged in the LNAV mode, it will follow that line across the ground. LNAV however does not tell the plane what altitude to fly.

RNav GPS LPV or LNav Approach

1. Select Apt and Dir to it – Get WX at Apt, Set Baro
2. Procedure Btn – Select APR, Load;
3. Cleared to IAF, Dir to IAF; press APR Btn, arm VNav for Blue Alts; Set Alt Window below current Alt
4. APPROACH Checklist – G U M P Landing or Pulse Lgt On
5. On Final Appr Course – HDG Centered; DA or MDA Entered
6. Before FAF, 110 kts, One notch Flaps, GUMP (Cowl ½ open) LPV expect GP and DA; LNav VS down to MDA
7. GP Captured, Enter MAPR Alt in Window; Review MAP No GP, at FAF Vs down to MDA set in Alt Window
8. At MAP, Hold DA; or MDA; See runway, Land; if not GA Btn, (Auto CDI to GPS, Susp & Nav) Pitch Up to FltDir; Full Power, 1 notch Flaps off; cowl flaps open, Hold hdg to 500 AGL; Push
9. AP Btn; Note: MAPR Alt in Window; Monitor MAPR Pro

RNav GPS LPV or LNav Vectors to Final Approach

See ILS Approach, Vectors to Final

LOADING Approach from FPL with Multiple WPTS

1. Press Sm FMS Kb, LgFMS Kb select airport
2. Press ENTER key, press APR softkey, press Sm FMS Kb
3. Select APR parameters as needed,
4. Press Menu Btn, select LOAD APPROACH, ENTER
5. Approach now loaded in bottom of FPL

Offset Parallel Track

1. Create a FPL with two points and activate it.
2. Press FPL Btn, Menu and scroll down to Parallel Track, ENTER
3. Select Right or Left offset, ENTER. Select miles offset, ENTER.

Route Search using Two Parallel lines

1. Use Offset Parallel Track steps 1 thrun3.
2. At end of 1st 1mile offset invert the FPL. Press FPL Btn.
3. Menu Btn, Lrg Kn CW to Parallel Track, ENTER. Select Right, ENTER, then offset DIST, ENTER, ENTER.

ILS Approach, Vectors to Final

1. Get ATIS/ASOS; Set Baro
2. Select Approach and Load; Center Hgd Bug
3. HDG (for Vectors) – AP active, VS (for Assigned Alt)
   Note: Make Sure VS down to intercept Alt takes you below GS
4. Get headings, Activate Vectors to Final (Auto CDI to Loc1)
5. Cleared for the Approach, press Apr Btn; Landing Check LIst
6. Landing light On; HDG bug centered before FAF
   Note: At night key up landing lights and Make Distance Calls
7. GS Captured set MAPR Alt in window; - G U M P
8. 110 KIAS, 1 notch Flaps – G U M P, Cowl ½ open, no Red X's
9. At MAP, Hold DA; or MDA; See runway, Land; if not GA Btn, (Auto CDI to GPS, Susp & Nav) Pitch Up to FltDir; Full Power, 1 notch Flaps off; cowl flaps open, Hold hdg to 500 AGL; Push
10. AP Btn; Note: GPS in Grn & MAPR Alt in Window; Monitor MAPR Pro

ILS Approach from a IAF

1. Get ATIS/ASOS, Set Baro
2. Load APR; Center Heading Bug
3. Landing Check List (Check BARO setting); Landing Light On
4. Cleared to IAF; Direct to IAF; VS for assigned Alts
5. Press Nav, APR, AP Btns. Alt Window to DA

Note: LOC capture is automatic. Make Dist calls to Apt Traffic.

6. On Final LOC Appr course, center HDG bug; G U M P

Note: At night key up Landing Lights

7., Before FAF slow 110 KIAS, one notch Flaps, Cowl flaps 1/2
8. When Capture GS, enter MAP Alt in window
9. At MAP, Hold DA; or MDA; See runway, Land; if not GA Btn, (Auto CDI to GPS, Susp & Nav) Pitch Up to FltDir; Full Power, 1 notch Flaps off; cowl flaps open, Hold hdg to 500 AGL; Push
10. AP Btn; Note: GPS in Grn & MAPR Alt in Window; Monitor MAPR Pro

VOR Approach Vectors to Final

1. Direct to Apt, Get ASOS/AWOS, SET CTAF Freq
2. LOAD APPROACH; CDI GPS. HDG/AP for headings
3. Landing CHK LST G U M P
4. Being vectored, Activate Vectors to Final (See App on MFD)
5. VS adjusts Alt (Set all Alt's in Alt Window for legs of APR)
6. Cleared for APR - CDI to VOR1, APR Btn - Arm VAPP, AP Active
7. Intercept course Vs Dwn to FAF intercept Alt
8. Landing Lgt on, 110 Kias; 1 notch flaps; Cowl Flaps 1/2 open
7. AT FAF, Set ALT Box for MDA and VS down to it

Note: At Night Key up Landing Lighting System.

8. Hold MDA; MAPR Alt in Window set; See runway, Land; if not
10. Push GA Btn; Pitch to Flt Director; Full Power Hold Headging,
11. 1 notch of flaps off, cowl flaps open to safe altitude (500 ft)
12. CDI to GPS, Push Susp, Nav, Ap Btns, VS up to Flt Dir,
13. Monitor MAPR Procedure, Climb to MAPR Alt

VOR Approach From IAF

1. Direct to Apt, Get ASOS/AWOS, SET CTAF Freq
2. Load Approach, CDI GPS, Nav/AP Btns; **Land Ck List G U M P**
3. Cleared to IAF, GPS Direct to IAF, descend to IAF Alt
4. At IAF CDI to LOC1, Set FAF Alt in Alt Window, Apr Btn
4. Final Appr Course; decend to intercept Alt. center HGD Bug

Landing Lgt on, 110 Kias; 1 notch flaps; Cowl Flaps 1/2 open

5. Set MDA in Alt Window at FAF
6. Descend to and hold MDA. At MDA, set MAPR Alt in window
7. See runway, Land if not,
8. Push GA Btn; Pitch to Flt Director; Full Power Hold Headging,
9. 1 notch of flaps off, cowl flaps open to safe altitude (500 ft)
10. CDI to GPS, Push Susp, Nav, Ap Btns, VS up to Flt Dir,
11. Monitor MAPR Procedure, Climb to MAPR Alt

Head of arrow – Points to Station (Heading to Station)
Tail of arrow - Radial U are on.

LOC Approach, Vectors to Final

1. Get ATIS/ASOS; Set Baro
2. Select Approach and Load; Center Hgd Bug (CHB)
3. HDG (for Vectors) – AP active, VS (for Assigned Alt)

Note: Make Sure VS down to intercept Alt takes you below GS

4. Get headings, Activate Vectors to Final (Auto CDI to Loc1)
5. Cleared for the Approach, press Apr Btn.
6. Capture LOC and VS dwn to Intercept Alt for FAF.
7. 110 KIAS, 1 notch Flaps – G U M P, Cowl ½ open, no Red X's Landing light On.or at Night, key up landing lights
8. When Intercept Alt captured, set MDA in Alt Window.
9. At FAF, VS dwn to MDA, center Hdg Bug, G U M P check.
10. At MAP, Hold MDA; See runway, Land; if not GA Btn, (Auto CDI to GPS, Susp & Nav) Pitch Up to FltDir; Full Power, 1 notch Flaps off; cowl flaps open, Hold hdg to 500 AGL; Push
11. AP Btn; Note: GPS in Grn & MAPR Alt in Window; Monitor MAPR Pro.

LOC Approach to IAF

1. Get ATIS/ASOS, Set Baro
2. Load APR; Center Heading Bug (CHB)
3. Landing Check List (Check BARO setting); Landing Light On
4. Cleared to IAF; Direct to IAF; Apr Btn, Vnv Btn to IAF Alt
5. Load IAF Alt in Alt Window, Auto CDI to LOC1.
6. Capture Intercept Alt, Landing Check List G U M P
7. On Final LOC Appr course, center HDG bug

Note: Make Dist calls to Apt Traffic, Night key up Landing Lights

8., Before FAF slow 110 KIAS, one notch Flaps, Cowl flaps 1/2
9. When capture intercept Alt, set MDA Alt in window
10. At FAF Vs down to MDA.
11. At MAP, Hold MDA. See runway, Land; if not GA Btn, (Auto CDI to GPS, Susp & Nav) Pitch Up to FltDir; Full Power, 1 notch Flaps off; cowl flaps open, Hold hdg to 500 AGL; Push
12. AP Btn; Note: GPS in Grn & MAPR Alt in Window.
13. Monitor MAPR Pro.

Go Around Procedure

1. Hold MDA or DA. See runway, Clear AP and Land; if not
2. Push GA Btn; Pitch to Flt Director; Full Power hold Headging
3. 1 notch Flaps off; cowl flaps open. Changes CDI to GPS and removes Suspend mode and activates GPS. Upon reaching 500 AGL, pilot should Re-engage AP and seeing Grn GPS and AP in window.
4. Adjust the VS Up to the Flight Director chevrons (FLC) if needed 5.
5. Monitor MAPR Procedures. Make sure MAPR Alt in window.

Go Around Button

1. Disengages Auto Pilot, Un-Suspends & Activates Flt Directors Missed Approach Procedures & Commands a pitch up of Flt Dir. attitude of 7.5 deg.
2. Changes Nav source to GPS

Upon reaching a safe Alt (500 ft AGL), Pilot should:

3. Re-engage the AP (making sure GPS & AP are showing Green)
4. Adjust the VS Up to the Flight Director chevrons (FLC) if needed

Ground / Remote Communications Outlets

Ground Communications Outlets (GCO) have been installed at some U.S. airports to provide a means for pilots on the ground to communicate with Flight Service Stations and Air Traffic Control (ATC) facilities for the purpose of filing, opening and closing VFR or IFR flight plans; obtaining weather briefings and clearances; and similar communications. Larger facilities instead have a remote communications outlet (RCO) installed, which allows pilots to communicate directly over a remote radio transmitter/receiver with the facility. A GCO instead connects with the aircraft/pilot via a radio transmitter/receiver, but with the ground facility via a telephone connection.

Visual Decent Point

A defined point on the final approach course of a non-precision straight-in approach procedure from which normal descent from the MDA to the runway touchdown point may be commenced, provided the approach threshold of that runway, or approach lights, or other markings identifiable with the approach end of that runway are clearly visible to the pilot.

Ground Communication Outlet (GCO continued)

Special electronic components in the GCO connect the radio communications from the aircraft to the telephone communications from the facility. Because GCO units are not part of the official air traffic control radio system, they may not receive regular operational status checks and therefore may experience unreported outages. However, since they do not provide guaranteed service, they also entail lower costs and can be installed at smaller locations that cannot afford an RCO.[1] In areas with cellular telephone coverage, the use of a GCO has sometimes been replaced by simply calling the air traffic control facility directly. (Flight Data Center 1-888-766-8267).
The system uses the airport's listed frequency (121.725 or 135.075). The system is activated with four “key clicks” on the VHF radio to contact the appropriate ATC facility or six “key strokes” to contact the FSS. There is a timer on the modem connection. If no voice is heard for a preset interval, the system disconnects. The VHF transceiver is very low power, 2 - 5 watts, which sometimes limits access. The GCO system is intended to be used only on the ground. GCO availability is noted in the text portion of the airport diagram.

Remote Communication Outlet (RCO)

Remote Communications Outlets (RCO) are remote aviation band radio transceivers, established to extend the communication capabilities of Flight Information Centres (FIC) and Flight Service Stations (FSS).
Pilots can find RCO frequencies in charts or publications such as the Airport/Facility Directory or Canada Flight Supplement. The RCO is used to make a radio call to the outlet as if the pilot were making the call directly to the FSS or FIC. The outlet will relay the call (and the briefer's response) automatically. RCOs are sometimes confused with RTRs, or remote transmitter/receivers. In fact, the difference between the two is subtle. While RCOs serve flight service stations, RTRs serve terminal air traffic control facilities.

RCOs and RTRs may be UHF or VHF and are divided into a variety of classes determined by the number of transmitters or receivers. Classes A through G are used mainly for air/ ground communications. Class O facilities were created specifically to provide ground-to-ground.

communication between air traffic controllers and pilots located at satellite airports. The idea was to create a way for pilots to receive en-route clearances or departure authorizations and cancel IFR flight plans. Class O RTRs also were intended to allow pilots flying below the coverage of the primary air/ground frequency to continue to receive advisories from air traffic control. Class O facilities are nonprotected outlets and are subject to prolonged outages which may go undetected and unreported.
There is also a special variant of RCO, which in Canada is called a **Dial-up Remote Communications Outlet** (DRCO) and in the U.S. is called a Ground communication outlet (GCO). DRCOs and GCOs connect to an FIC or FSS over a phone line, and pilots initiate the connection by keying their microphones in a prescribed pattern.

Identify Airports, Intersections, Vector Airways & Land Objects

1. Press the Sm Range Knob (Kb)
2. Move the white arrow over the object by moving the Sm Range Kb As a joystick.
3. Read label that comes up.
4. For Airports, just press Enter

APPROACH CHECKLIST

1. Lights - ON
2. ATIS review and then load desired approach
3. Altimeter - set PFD and Standby Altimeters
4. Approach Plate Review
5. Set frequencies/radials/identify
6. Final approach course entry and heading
7. Glide Slope Intercept Altitude
8. Field Elevation
9. Enter DH/MDA in window
10. `Review Missed approach path/Altitude
11. Marker Beacon - ON
12. G1000 - Activate Approach when cleared to IAF
13. Autopilot – APR when cleared for approach
14. CDI – SELECT NAV source (caution ROL revert)
15. Airplane – Flaps 10º when < 140 K
16. Enter missed app. altitude in Alt Sel after start of approach when you hear A/P altitude chime

Altitude Call Outs for an Approach

1000 ft above DA

1. Stable
2. Flaps as required, No Red X's
3. HSI want to see LPV (check WASS ability)
4. X check AS, HS, ALT agree with Standby Instruments
5. MDA or DA Alt (review)

500 ft above DA

1. Stable
2. R U Cleared to Land?
3. Final Configuration (Flaps, Gear; R U ready for landing)
4. Review Missed Approach
5. Lights (runway) radio operated
6. GUMP

200 ft above DA –Disengage Auto Pilot

100 ft – Hands on Throttle

50 ft - Land or Go Around

Display Cross Track Distance from (XTK) FPL

1. Lg. FMS Kb Cw to Aux
2. Push Sm FMS Kb to highlight
3. Lg FMS kb to Fields 1 – 4
4. Sm FMS Kb Cw to Cross Track (XTK) in field you want.
5. ENTER
6. Push Sm FMS Kb to unhighlight.

See "Starting Fuel injected Engines (UTube Video)":
https://www.youtube.com/watch?v=8QaQ6_cdMfU

Cold Starting: First start of the day CHT below 40 deg. F

1. Mixture to Full rich
2. Throttle to ½ of full
3. Boost Pump on for 3 sec
4. Crank engine till starts, when engine starts and falters, boost pump on to keep engine running then boost pump off.
5. After engine is running good, bring mixture back to ¾ of full for taxi.
6. Make sure to keep engine below 900 rpms due to no oil pressure at start.
7. If engine doesn't start after 5 to 7 blades, repeat steps 1 – 3 for 2 sec

Warm Starting: First start of the day or 2 to 3 hours after shutdown and CHT between 60 to 100 deg. F

Mixture Full rich

1. Throttle to 1 in
2. Boost Pump for 1.5 sec then off
3. Throttle to ¼ in in
4. Crank engine till start, then boost pump on if engine falters. Boost pump off after engine runs smooth.
5. Mixture to ¾ of full in for taxi.

Hot Starting:

1. Mixture to idle cutoff
2. Throttle to 3/8 in in
3. Crank engine while smoothly pushing in mixture to full rich position
4. When engine starts and starts to falter, boost pump on until engine runs smoothly then off.
5. Mixture to ¾ in for taxi

Squadron 90's attempt at Hot Starting (AVideo):
https://drive.google.com/file/d/1HMYzd9julkZJFsATUbU5ZuD_IPiQ-EzZ/view?usp=sharing