Squadron 5 News

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THE COMMANDER'S CORNER

By Capt Jon L. Stokes

"A New Era Has Begun"

In late August, we received some very good news from our Wing Commander Virginia Nelson and our Group Commander George White. We were advised that in June 2007, we will take possession of a new Cessna 182T, equipped with the new Garmin G-1000 "glass cockpit" avionics suite. This new aircraft will be equipped with entirely new systems for flying, navigation, communication and direction finding and will require the squadron to re-learn much about flying CAP missions. Our chief check pilot, Capt Mark Robinson, will be sent back to Kansas sometime after the first of the year to undergo extensive training on the aircraft's systems. Although the new aircraft won't be delivered until mid-year, it is our goal to have a minimum of two mission pilots and two mission observers fully trained at the time of delivery. This will be accomplished by working closely with the Squadron 40 in Fullerton to have selected pilots and observers train in their aircraft.

As the end of the fiscal year quickly approaches, I am pleased to report that we have met the 200 hour minimum on '53E and will end the year with over 220 hours. During the year, we have participated in four counterdrug weekends, three homeland security missions, three actual search missions, two wing exercises and numerous cadet and AFROTC orientation rides. All aircrew members should be commended in their efforts to meet the needs of CAWG and the Air Force. In the year to come, we will need to continue to fly as much as possible, both training and actual missions.

CAWG has flown more homeland security flights this year than in any year prior and we should expect that increase to continue into next year. Although there was a brief time this year when non-counterdrug qualified members could fly homeland security missions, it has been announced that in the year to come, all those participating in HLS flight must be CD qualified. All aircrew members that have been with CAP more than 2 years (time does not need to be continuous) should apply for the CD program so that we have as many aircrew members available to fly these important missions.

Congratulations to all members of the squadron for a successful fiscal year of flying and get ready for an even busier year next year.

Jon

"CRM for ES"

Emergency Services Training by 1st Lt. Roger Mann

What does that mean? Simply put it means Crew Resource Management for Emergency Services.

When I was in the Air Force I saw what seemed like thousands of acronyms representing organizations, training programs, aircraft components and on and on. After joining the Civil Air Patrol, I discovered that CAP used even "more" acronyms.

However there is one that I knew and also knew what it meant. That is "CRM". CAPR 60-3 calls it Crew Coordination and Resource Management. The Air Force calls it Crew Resource Management. Both mean the same thing.

As an aircrew member, you are an integral part of the safe operation of the aircraft. If all do their part this will equate to a safe and successful mission. Knowing your duties at all times is vital to the CRM process. That's why CAP spends time training for all aircrew positions. Your CRM includes start up, taxi, takeoff, departure, transit, approach and landing.

Each crewmember should be able to identify all resources available to them, such as the incident commander, flight service stations, other crewmembers, equipment etc. Remember that your own experiences are a resource for you.

The Imperial crew communicates while leaving base.

Both the Air Force and CAP emphasize "communications" with other crewmembers. This starts at the beginning. Do not be afraid to mention any concern. Talk about your concerns, about the mission or any idea that may make the mission safer. Whatever relates to the mission and safe operation of the aircraft, "talk" about it.

If an emergency takes place, that's when you use all the information mentioned above and "communicate" with the other crewmembers to solve the problem.

Workload management is also related to CRM. Even when the mission and aircraft are doing well, the "crew" having the "CRM" mentality will be the most successful.

When I was flying the C-141, the aircrews were required to fly the simulator once a year. The course was 4 days long with one of those days dedicated to CRM. One time, on the CRM day, the simulated flight developed an "emergency". That one emergency was designed so that it took the total crew "communication" to get the airplane on the ground safely. I witnessed several runs through the scenario and when the crew did communicate properly the problem was solved and the aircraft landed with little or no problems. However, when communications failed the aircraft either "crashed" or someone "died" in the simulation. That day of Crew Resource Management training really drove the point home.

So periodically dig out the 60-3 regulation to refresh yourself as to your duties aboard the aircraft and both you and your crew will be better for it.

Crew communications complete, LTC Pearce settles into the right seat at Imperial ...

... and discovers a raft where none was before!

AIRCRAFT ENGINE SAFETY

SAFETY

by 2Lt. Andy Horvath

Engines do not run forever and aircraft engines are no exception. We cannot just coast our aircraft to the side of the road when failure occurs so we all must be concerned with Time Between Overhaul (TBO). The engine manufacturers publish recommended overhaul time periods for specific engines as a reference. Owners and operators then use the total time on an engine as a basic factor in any decision to either continue flying, change, top, or major overhaul the engine.

In figuring TBO, an assumption is made that the engine has been in "continuous service" which is defined as a minimum of 15 hours of normal operation each month. The factory expects that an average 2,000 hour engine receiving recommended care will attain its recommended TBO in 11.1 years. Lycoming states that the decision to operate the engine beyond the recommended TBO is strictly the owner/operator's, provided the owner/operator is not limited in doing so by FAA regulations. Owners and operators should keep in mind, however, that a manufacturer's TBO is a recommendation applied to an engine as manufactured or overhauled by the manufacturer and delivered from the factory. It can normally be expected that these hours will be acheived provided that recommended operation, periodic inspections, frequent flight, and engine maintenance have been exercised in accordance with the respective engine operator's manuals.

If an owner/operator wants to operate an engine beyond the recommended time and is concerned with the present cost of overhaul, he or she should factor in the possibility that the overhaul cost may well be higher with increased engine time. Owner/operators who have top overhauled their engines invariably want to know if this extends the TBO life of the engine. While it may return the engine to good health by dealing with a particular problem, it does not serve to push back the recommended TBO. The top overhaul involves only those parts on top of the crankcase without having to dismantle the engine. Cylinders, pistons, valves and the valve operating mechanisms are reconditioned or replaced as necessary.

Engine manufacturers sometimes hear from an owner/operator that a top overhaul was performed at some point for no other reason than somebody said it was a good idea. Unless the manufacturer recommends it, or there is a problem requiring a top overhaul, this is a needless cost. If the engine is healthy and running satisfactorily, according to the manufacturers, it is probably best to wait for the complete overhaul.

Aging airplanes require special care. An aircraft is designed and built to provide many years of service provided it is operated in accordance with the manufacturer's recommendations and cared for with sound inspection and maintenance practices. Service experience has revealed that an aging airplane needs more care and special attention during the maintenance process and, at times, requires more frequent inspection of structural components for damage due to the effects of wear, deterioration~ fatigue, environmental exposure, and accident damage. Engine mounts are an important part of the engine's operation. Their condition should not be overlooked.

Engine accessories, and equipment related to other airplane systems, should be inspected and maintained in accordance with applicable service maintenance manuals. Special attention should be given to overhaul and replacement intervals for items such as filters, hoses, actuators and pumps.

Vigilance is the price of safety and, even though airplane and engine manufacturers do their best to anticipate all the maintenance required to provide for continued airworthiness, aging airplanes demand ever increasing care. Because of this, the final judgment rests with the airplane owner/operator. Therefore, all airplane owners/operators should use the following steps as minimum guidelines to ensure continued safe and efficient engine operation:

1. Always follow the manufacturer's recommended inspection procedures;
2. Recognize that rusting, corrosion, overloading ,or damage can drastically shorten fatigue life:
3. Comply with all applicable Service Bulletins, Letters, and Airworthiness Directives, and review possible modifications available from the manufacturer.

Engine improvements are usually directed to lowering working stresses, and the sooner they are made, the better the chance of slowing the progress of wear and aging.

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RNAV Modes

Aerospace Education

by Capt. Joe Alverio

This newsletter will cover the basic Random Navigation (RNAV) modes used with GPS and other navigations sensors. Will also introduce briefly some other RNAV concepts and issues.

First, the definition of RNAV. It comes from Random Navigation routes, however, it is officially known as "Area Navigation" – reference the AIM. It is defined as "RNAV is the method of navigation that permits aircraft operation on any desired flight path…". That means it can fly without relying on routes or radials connecting the ground based NAVAIDs.

RNAV is not new nor unique to GPS. It was first developed in the 1960s by calculating the aircrafts present positions by using a computer that read the information from various DME stations or combinations of VOR/TACAN and DMEs. Then, because it had its positions and where it wanted to go, it could calculate a route independent of the ground based NAVAIDs. Today RNAV has been employed by airline type Flight Management Systems (FMS) using a host of ground based sensors like: LORAN, DME/DME, VOR/DME/TACAN, Inertial Navigation System (INS), OMEGA, etc. Then there are the class of global satellite based navigation systems, a.k.a., Global Navigation Satellite System (GNSS), which GPS is one of them. Some examples are: GPS, GLONASS (Rusian), and Galileo (EU). WAAS, Wide Area Augmentation System is just an enhancement to GPS.

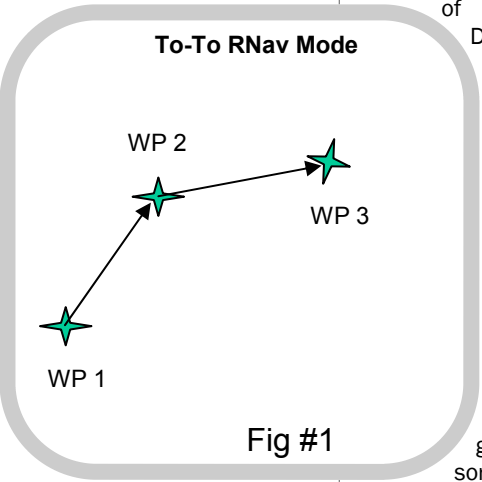

Fig #1

RNAV has many advantages over the VOR/TACAN/DME based navigation, and as a result, its more complicated and requires more training and flight planning. To further complicate this, RNAV, especially GPS based RNAV, lacks the standardization – unlike VOR/DME .

The actual flight instrumentation, CDI, HIS, etc., is flown practically the same. What complicates is that we trade the NAVAID selection by frequency selection, for a waypoint selection and route definitions (a collection of waypoints). Its this entry of information that that makes it more complicates. In other words, instead of a 109.3 MHZ, we exchange this for Lat 33E 19' 22.5"N Lon 117E 22' 33.5". Its much longer and error prone, so we have to use predefined, ICAO standardized database of waypoints, known as DAFIF. This is another issue and to be covered elsewhere.

Another key issue is the fact, when you define your own RNAV routes, you don't have the benefits of the FAA figuring out the Minimum Enroute Altitude (MEA), terrain clearance issues and the like has to be determined by you. Discussion for another time.

Although the flight instrumentation aspect of using RNAV is practically the same, it not all the same – noticed I said practically. There are some differences that we are covering here. Also, we are trying to go beyond the exclusive use of Direct-TO.

There are four main RNAV navigation modes, which are: a) To-To, b) Direct-To c) To-From, and d) Moving waypoints.

The first mode; To-To Navigation mode is when you supply the RNAV system with defined route. A route is a collection of waypoints – reference Figure #1. If you fly the route correctly, you will never see a "FROM" indication on your CDI or HSI, until you complete the route. In this three-waypoint route, you would start the route slightly before or after waypoint #1 when you activate the route, and continue flying through waypoint #3. You have the option of manually sequencing the waypoints, to the next waypoint once you pass it, or you can enable the auto-sequencing which will do it for you. You could have a route as short as two waypoints, the minimum needed for this mode.

In the To-To mode, the OBS input is ignored since the RNAV will calculate and the bearing from WP#1 and WP#2, known as the desired track. In a well designed avionics system, the RNAV takes control of the OBS and turns the OBS with the calculated bearing to WPT #2. This becomes especially important when using an HSI, otherwise the Horizontal Situation picture doesn't match. All of us are used to turning the aircraft to the desired course on top of the Course indicator. In the Garmin 300XL I am used to flying (which is IFR capable), it does not drive the OBS and as a result I have to constantly readjust the OBS to the GPS-RNAV calculated desired track. The RNAV will probably be providing you a magnetic course, check in the setup.

Then we have the Direct-To RNAV mode which is the second mode – please reference Fig #2. This is in reality a special case of the TO-TO mode. The difference is that the first waypoint is the pre-

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"406 MHz is Coming. Will CAP be Ready?"

by Capt. Jon Stokes

Glass Cockpit 182 in all her glory!

The phone rings in the middle of the night when a blurry-eyed volunteer Wing Mission Alerting Officer answers the phone. On the other end of the phone is a more alert sounding airman from the Air Force Rescue Coordination Center (AFRCC) in Langley, Virginia advising that they have an ELT mission to open up and needs the WMAO to find an Incident Commander to take control of the mission. Scenes like this have been repeated hundreds of times over but soon the way CAP receives and responds to ELT missions may be changing.

Over 20,000 people worldwide owe their lives to the COSPAS-SARSAT satellite network but on February 1, 2009, the Mission Control Center of the National Oceanographic & Atmospheric Association in Suitland, Maryland will stop its monitoring and alerting service of the 121.5 MHz emergency frequency and alter how Civil Air Patrol responds to missions. In October 2000 the International Cospas-Sarsat Program, announced at its 25th Council Session held in London, UK that it planed to terminate satellite processing of distress signals from 121.5 and 243 MHz emergency beacons on February 1, 2009. All mariners, aviators, and individuals using emergency beacons on those frequencies would need to switch to those operating on the newer, more reliable, digital 406 MHz frequency if they want to be detected by satellites. Yet as the termination date fast approaches, it would appear that general aviation pilots and aircraft owners have not yet embraced the new, more expense technology.

In 1964, Keith Fowler designed the 16-ounce Mafco "Mayday" beacon for use in general aviation airplanes. At a cost of $89.50, only 30 sold in the first year because back then pilots could not count on anyone listening to 121.5 MHz for the signal. Then, following the loss of United States Congressman Hale Boggs in a plane crash in Alaska in 1972, Congress mandated that all civil aircraft, including general aviation aircraft be equipped with beacons that would automatically activate on the international distress frequency of 121.5 in the event of a crash. The cost of these devices was relatively inexpensive, costing between $100 and $300 per unit. Air traffic controllers and airliners would constantly monitor that frequency and report activations to search & rescue agencies, including the Air Force, Coast Guard and Civil Air Patrol. In the 1980's, the United States, the Soviet Union and the United Nations entered into a cooperative agreement to develop the COSPAS-SARSAT program whereby these distress signals were monitored through a satellite network monitored throughout the world and reported to the appropriate agency. Although this system has been successful in saving thousands of lives from both crashed aircraft and distressed seagoing vessels, the system was susceptible to false alarms. The Air Force Rescue Coordination Center (AFRCC) estimates that up to 95% of the signals processed are false. As technology improved, work began on a more reliable, digital alternative and the first units were made available in 2000. Unlike the older devices, the new beacons can cost $1,000 or more and many in the general aviation community, including the Aircraft Owners & Pilots Association (AOPA) are resisting the new devices which are planned to become mandatory.

The new 406 MHz beacons are more reliable and easier to locate. Upon activation, the device transmits a burst transmission to orbiting satellites. Encoded in this transmission is a serial number that will be used to determine the aircraft identification number and owner as well as a signal that will report the longitude and latitude of the device. Search and rescue agencies that have been equipped with devices that allow for detection and tracking of the new devices report that the signals can be successfully tracked and detected 75% faster than the older 121.5 MHz beacons. Included with the new 406 MHz beacons is a 121.5 MHz signal that will activate simultaneously upon activation of the 406 MHz signal. This transmitter is of a lower wattage than the older 121.5 MHz

(Continued on page #7)

Glass cockpit technology will pick up the 406 MHz signals

Internet Security

by 1Lt. Jerry Mohr

I personally know of one account that was hacked to the tune of $137,000 dollars.

In this modern world we have conveniences that were not even a dream 30, 50, 100 years ago. Unfortunately, some of these conveniences have opened doors for the bad guys that they hadn't dreamt of either. One of the biggest doors for the bad guys is today's Internet. The gamut of illegal activities is enormous, running from email scams to investment scams, but the worst is hacking. Hacking is not new but has been raised to a new height by software that does the hacking for you. In the past you needed to be a software engineer to be able to hack (break into) email accounts, information sites and bank accounts, then steal information or even money. Today, with software that is available, I picture sweatshops where hundreds of people sit at computers running this program trying to hack accounts worldwide, I know it is pretty far fetched, but it is possible. Anyone ever heard of the Russian Mafia.? I personally know of one account that was hacked to the tune of $137,000 dollars. Sometimes the money can be retrieved, but not always. Of course, if personal information is stolen, the problem can be severe for the individual. In the USA, if your social security number is stolen, for example, you can be in for a rough time. Of course, the problem is world wide, that's what makes it so lucrative for the bad guys.

The good news is that you can prevent the bad guys from stealing your money or your personal information by taking a few precautions. Some Internet experts say that the most secure PCs are the Apple products (Mac Books). They are pretty much hack proof and safe from virus infection because of built in safe guards. But if you have a desktop PC or a laptop running windows, there are ways to protect yourself. You need a firewall, virus protection and some sort of spy ware to keep yourself out of harms way.

There are a number of firewalls that can be used, some are free and some you pay for. ZoneAlarm is probably the most popular and has a free version. The version you can buy gives you more extensive protection than the free version. Basically, the firewall is there to prevent hackers from accessing your computer while you are on line. If you have DSL or High Speed cable access through a router or direct through a modem and you leave your computer turned on, you need a firewall to stop them.

Virus protection is a must also and there are many good programs available that will protect your computer from harmful viruses. I use McAfee and I pay $19.95 a year for access to updates. Symantec's Norton Anti Virus is another good program to protect your computer from viruses. AVG has a free virus protection program that can be downloaded from the Internet and installed in minutes. Besides the program, AVG updates the definitions automatically and there is no annual subscription fee.

Last, but not least, and probably the most important protection you can get is an anti spyware program. I use a program that is called SpySweeper and is rated as one of the best to protect you from spyware. I recently lost a sum of money because I was not using my SpySweeper correctly. A hacker managed to place a " Key logger" on my computer and because I was not using SpySweeper to scan my computer regularly, a password and ID were stolen that provided access to an online account. I now have my SpySweeper set up to do a sweep every 2 days and this has kept my computer clean.

The best way to protect your computer from key loggers, besides a good spy sweeper, is to not, repeat, NOT let the key logger see your keystrokes if they have a presence on your computer. A simple solution for this is to use the on-screen keyboard that comes with Windows. What is that you ask? , Well it is a built in graphical keyboard that you can have displayed on your screen.

You then may click on characters on the keyboard just as if you were pressing buttons on your physical keyboard to input passwords, ID's and important information that you want to protect. Because its not a physical key stroke from your keyboard, the key strokes are not seen by whatever key logger program might have been planted on your computer. The good news is that if you use a good spy ware program you should not have a key logger problem. But it is better to be safe than sorry, so I combine and use all that I can to protect my computer. In Windows 98 or XP and I believe other versions, click on the "start" button in the lower left hand corner, click on "all programs", "accessories" and "accessibility" and then click on the "on-screen keyboard". A miniature keyboard should pop up on your screen for your use. That's the inexpensive and readily available solution but another solution, one that I use is a program

(Continued on page 7)

"406 MHz is Coming, Will CAP be Ready?" continued from page 5...

beacons but will allow older detection equipment to track the transmitter. CAP has begun detecting the signals from the new beacons with those few aircraft which are equipped with the new equipment.

The impact on CAP is still unknown, but CAP has already begun replacing ELT detection equipment in corporate aircraft with new units manufactured by Becker Avionics. These new units can track 406 MHz signals as well as the older 121.5 MHz and 243 MHz signals. L-Tronics, the company that manufactured the L-Per units previously used in both CAP aircraft and by ground teams has discontinued manufacture of the older units and has developed a new digital hand held unit for ground teams capable of tracking the new beacons. It is unknown whether CAP has begun purchasing and equipping ground teams with the new L-Tronics devices.

It has yet to be decided how CAP will respond to the older signals after February 2009. It is assumed that CAP will continue to respond to signals detected by ground units and airborne aircraft. Since the older signals will no longer be monitored by the Air Force, it is unknown how funding for these missions will be handled and if these missions would be Air Force missions or corporate in nature. Information on these missions will be forthcoming in the months to come.

Our new aircraft will be equipped with the Becker Avionics unit capable of tracking the 406 MHz signal and Squadron 5, along with Squadron 11 in Palm Springs, Squadron 129 in Torrance and Squadron 40 in Fullerton will be responsible for responding to all 406 MHz signals in the southern California areas. With only four corporate aircraft equipped with the new equipment, we will be called upon more frequently to respond to these missions. It will be imperative that all aircrews become proficient in the operation of the new equipment and be prepared to respond. We will begin organizing training prior to and following the aircraft's delivery to ensure all members are trained in all the aircraft systems.

Internet Security - continued from page 6 ...

called ROBOFORM. ROBOFORM may be downloaded and purchased on line for $19.95 and is well worth the money. Besides protecting your passwords it allows a fast and convenient way to enter passwords. It also has the ability to generate passwords. They do have a free version but your limited to 10 entries. If that's all you need then get it and use it.

In this modern world it is not enough to say I don't have to worry, that only happens to the other guy, problem is you are the other guy so it is best to protect your self and not worry about the other guy. Below are URL's to the various sites and programs I have mentioned in this article. I highly recommend that you at least check them out and then decide whether you have a need for them. Also I have added a link to FireFox, it is a free browser and is much safer to use than Internet Explorer. I use it and I recommend it.

Use these URL's to the various sites and programs mentioned in this article.

Free AVG Anti Virus
http://free.grisoft.com/freeweb.php/doc/2/

Roboform
http://www.roboform.com

Zone Alarm Firewall
http://www.zonelabs.com/store/content/catalog/products/sku_list_za.jsp?dc=12bms&ctry=US&lang=en&lid=dbtopnav_zass

FireFox Browser
http://www.mozilla.com/firefox

McAfee Anti-Virus
http://www.mcafee.com/us

Norton Anti-Virus
http://www.symantecstore.com/v2.0-img/operations/symantus/site/promo/pd/sidebyside.htm

Free Spyware removal
http://www.lavasoft.de/software/adaware/

"RNAV Modes" continued from page 4...

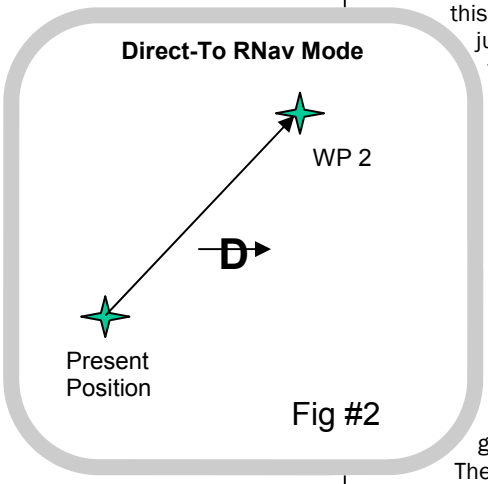

Fig #2

sent position when you press the direct-to key. Because of this you could readjust the desired track by pressing again the Direct-to key.

The direct-to mode is very often used because it does not require the definition of a route, which require pre-flight planning and the entering of this data on the ground or in flight. The problem with using direct-to, is that it does calculate the route directly to the supplied waypoint regardless of any TFR, special use airspace or Cumulus-Granite Obstruction.

The Third RNAV mode is the TO-FROM mode, reference Fig #3. This is very similar to how we currently use the VOR/TACAN except you get a better DME, for free. In order for this mode to be used correctly and for IFR use, the RNAV system needs to read the OBS knob (the resolver input) that provides the desired course or bearing/radial you enter. Also, the pilot has to define the waypoint to be used as a pseudo VOR/TACAN. A key issue to remember is to disable the waypoint auto-sequencing or you may think you are flying to PDZ when your RNAV is to HMT. This scenario is typically when you are following a route and then are requested to hold to a radial and DME, off an NAVAID. The GPS IFR requirement is to provide a Status annunciator and functional key, on the instrument panel, that disables/enables the Waypoint Sequencing.

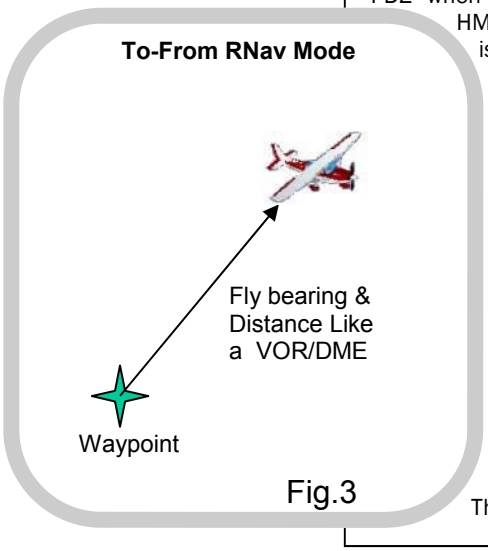

Fig.3

The last RNAV mode, is one you won't typically see because the military primarily uses it. This mode is known a moving waypoint and it can't be navigated to because GPS is a 4-Dimensional NAV system. It is used for one vehicle to rendezvous with another. For example, a fighter trying to rendezvous with a air tanker or an aircraft carrier – which both are moving. The planned profile of movement is loaded beforehand as a moving waypoint and the NAV system will give you both position and velocity cues to fly to.

Then there are sub-modes that are key to the use of RNAV. First, the CDI is called differently. In the TACAN/VOR, the displayable "two-dot" scaling, represents 10 degs of course from the desired bearing. The localizer and ILS has other scaling and is discussed another time.

The RNAV has three different scaling, which are controlled manually or automatically. These scale factors are: 1) the enroute scaling where a two-dots deflection represents a cross-track error of 5.0 nautical miles, 2) the terminal scaling where a two-dots deflection represents a cross-track error of 1.0 nautical miles, and, 3) the approach scaling where a two-dots deflection represents a cross-track error of 0.3 nautical miles.

Also, there are some additional RNAV sub-modes. There are search and rescue patterns and there are offset modes. The SAR modes we know what these are. The offset modes are ways to produce sort of lanes for a given route. For example, we can define an offset of 1 mile from a given route. This will allow us to fly two or more aircraft in the same route, at the same time, but at 1 mile spacing. This is typically used in the trans-oceanic routes where these routes are quite busy.

There are some other things to remember that are unique to these systems.

The RNAV typically work off true north and magnetic courses and bearings are derived. The magnetic direction info are calculated referencing true north and then MAG VAR is applied which is calculated from an algorithm. If you are trying to overlay a VOR approach by using GPS waypoint to define the VOR, you could have some small differences. This because the Magnetic declination of the VOR, where the zero radial is suppose to point to the magnetic North, it not always updated often enough to match the actual local magnetic variation. There are some other smaller contributors.

Another consideration is how courses are calculated for a RNAV system. When we calculated a course using a chart and plotter, it assumes the earth is flat because we are using a two-dimensional chart with a given projection. There courses are known as Rhumblines and when we fly them the desired track is constant.

The RNAV system assumes correctly that the earth is round and it calculates the shortest distance between two point – which is not a straight line but a curved one. This is true for a sphere. These courses are known as great circles. When you fly a short route between less than 25-50 Nm, both are mostly equivalent. However, in longer routes you will notice that to keep the CDI centered the desired track will vary a bit, in order to align with the great circle.

In this newsletter we have covered RNAV with a broad brush and discussed it key RNAV modes, some sub-modes and some unique features of this modern avionics system.

Group 3 Dining Out

LTC Norma Edwards is Group 3 Observer of the Year

LTC Bob Pearce Group 3 Safety Officer of the Year

Capt. Jon Stokes is Group 3 Officer of the Year

Capt. Jim Daley is Group 3 PAO of the Year

PERSONNEL UPDATES

Since July 1, 2006

Group 3 Award Winners

Sr. Squadron of the Year
San Bernardino Squadron 5
Composite Squadron of the Year
March Squadron 45
Cadet Squadron of the Year
Corona Squadron 29

Grp 3 Staff Member of the Year
LTC Jessica Black - Grp 3

Senior Member of the Year
LTC Bill Hartmann - Sq 6750
Officer of the Year
Capt. Jon Stokes - Sq 5
Cadet Officer of the Year
C/Capt. Matt Giles - Sq 29
Cadet NCO of the Year
C/MSgt. Scott Giles - Sq 29

Pilot of the Year
LTC Jerry Jones - Sq 5
Observer of the Year
LTC Norma Edwards - Sq 5
Safety Officer of the Year
LTC Bob Pearce - Grp 3
Chaplain of the Year
Lt. Col. Tim Spiller - Sq 5
MLO of the Year
Capt. Kathy Neubauer - Sq 45
Logistics Officer of the Year
1Lt. Carrie Olson - Sq 45
AE Officer of the Year
1Lt. Dave Goude - Sq 45
PAO of the Year
Capt. Jim Daley - Sq 5

AOPA Wings Award

LTC Jerry Jones

Promotions

Joe Alverio - Capt.

Joe Alverio receives Captain epaulets from Capts. Stokes and Daley

Level IV - Paul E. Garber Award

Maj.Craig Gallagher

Level I

SM Leo Umana
SM Chad Simmons
SM Shane Reichardt

ROA B-CUT

Capt. Joe Alverio
1Lt. Roger Mann
SM Chad Simmons

Maj. Rod Gisi presents the Garber Award to Maj. Craig Gallagher

Squadron 5 captures 7 Group 3 Awards!

All Group 3 Awardees are nominated for Wing Awards

Congratulations!