

FatBoyz Aviation Newsletter

Volume 1, Issue 1

January 2003

Welcome to our first issue!

The FatBoyz Aviation Newsletter is a monthly publication for pilots, owners, instructors, technicians, and enthusiasts interested in general aviation activities in the East Tennessee area. Each month will feature

- an aviator, flight instructor or aviation expert that continually contributes time and experience to the local aviation community
- commentary from local flight instructors for the latest rule and regulation changes
- owner's perspective of the joys and pitfalls of aircraft ownership, annuals and owner-performed maintenance
- travel stories and pilot reports of our latest purchases, etc.

Visit the web <http://www.geocities.com/fatboyzaviation> for updated weekend flying schedules for those \$100 hamburgers, links to flight planning and weather sites, information for local aviation resources (flight schools, CFI, AME, DE, AP/AI, insurance) and information pertinent to our local aviation community.

INSIDE THIS ISSUE

- 1 Spotlight Xen Portwood, The Original FatBoy!
- 3 Feature Article! The Dreaded Northeast Corridor
Buz Witherington, CFII
- 4 Trip Report, DKX > 60J Mike Dawley
- 5 Event Calendar
- 6 Welcome! Newest FatBoy Buddy Farmer
- 7 Aircraft Maintenance, Dakota Aviation
- 8 Aviation WX Primer, Thad Phillips

Spotlight

*The Original FatBoy
Xen Portwood, PP*

It is very appropriate to focus the first Spotlight on FatBoyz founder and chief, Xen Portwood.

A well-known businessman in the local community, Xen has been flying for about

10 years. During this time he has made significant contributions to the local flying community by keeping several airplanes, three C150s, a C172, and a Tampico TB9, on leaseback with a local flight school.

Xen's personal aircraft have included a 150hp Aeronca Champ, MX-7 Maule, Citabra, and his current war horse, a V-tail Bonanza with a 300hp Lycoming Super B conversion. This beautiful airplane putters along at 180kts IAS. The panel features a Garmin 430 coupled to a Century HSI and auto pilot, a King KX-155 with dual glideslope indicators, King Marker Beacon, Narco Transponder, and Narco audio panel attached to a 4 place intercom with stereo input. Except for the audio panel, all avionics was replaced within the last three years.

In his own words.....

I have always had a love of stick and rudder flying as you can see from the taildraggers I have owned. I miss not having a taildragger although the Bonanza can land and turn off at the first taxiway.

Spotlight continued on page 2

CONGRATULATIONS

MARK COLLINS, COMMERCIAL



Spotlight continued from page 1

I really enjoy the Sunday morning breakfast run and the lunch runs we make. Last summer my trusty co-pilot Buddy Farmer and I ate barbecue all over the southeast at fly-ins. I use my plane in the summers to follow my youngest son's addiction (baseball).

My most embarrassing time flying was when I flew to the Little League World Series in Iowa. My family took me to the airport and headed home in the trusty Suburban. I took off headed toward home and found a spot of weather. The summer storm put me on the ground twice, once in a town so small that when I went to the local Wal-Mart to get fresh underwear and a toothbrush it had already closed, it was 5:30 in the afternoon. The bad part is that I only beat my family home by an hour. So much for dad being an ace!

Weekends at "The Island" are great, they make sure none of us gets too cocky or overloaded with self-esteem. That's one place an opinion on anything from sex to politics is available.



More 8367D pictures!



Trip Report

The Dreaded Northeast Corridor – Episode I
(Sung to the tune of a Low Altitude L-24, 25)

Buz Witherington, CFII

My family likes to travel to New York City each Christmas season for a weekend of fun during the city's change to its festive personality. The people are warm and friendly while the air is cold and filled with a holiday spirit. We love New York. The place has taken on a higher meaning for us after 9/11. We went there right after the attack and participated in the crying.

Being the good pilot that always learns, I have tried to gather knowledge and experience from each trip and anticipate the turns and twists of the next clearance. Indeed, with an instructor's ticket in my pocket, I looked forward to the challenge of instrument travel in the Dreaded Northeast Corridor.

Flying into and out of Teterboro, NJ (TEB) presents many challenges to a general aviation pilot flying a normally aspirated airplane. Even with the addition of a second engine, weather radar, known ice certification, GPS with moving map, three axis autopilot with altitude pre-select, and TCAS the trip can still be a real challenge.

This year's flight was planned with two prior year's experience and a wonderful Baron loaded with all the gee-whiz toys in the panel. I knew my prior routes and had them programmed into my Garmin GNS 530 and handheld GPS 295 on the yoke. But I knew to be flexible because of weather, traffic, and changes in routing. I was pumped and ready! I had all the VOR's highlighted on my low altitude en route chart. The approach plates were marked and studied as were the STAR's and DP's. I even read the AFD and had the ASOS and FBO programmed into my cell phone memory. I mean I was CRANKED and READY!

I knew from previous trips from Knoxville, Tennessee, that my routing would include:

Kessel VOR
V377
Harrisburg VOR
V162
East Texas VOR
Direct TEB.

Looking at the en route low altitude map, one can see that because of the many dog legs and intersections,

programming this route into the GPS flight plan required about 10 entries of waypoints. Well, with three hours en route, what else are we going to do?

While the sun dipped below the western horizon, I received the magic words "Cleared as Filed" from Knoxville Departure. With a nice tailwind and a solid undercast below me, my first thump occurred shortly after Kessel when Washington Center uttered the dreaded words, "62PK, We have a complete re-route. Notify when ready to copy." Although no one could hear me, I actually chuckled. My fingers itched, my brain hummed, and the license bearing CFII in my pocket burned.

Washington Center read my new clearance:

Direct Martinsburg VOR
V214
SWANN Intersection
Dupont VOR
V479
Yardley VOR
Direct TEB.

OK, this was not too bad. It had eight elements to look up and to program into the GPS. But then Center gave a descent from 9000 to 5000 and contact Dulles Approach on 121.1 while calling conflicting traffic, "VFR at one o'clock and three miles, 500 feet below, closing, opposite direction. Good day."

The good wife was watching for traffic while I was changing frequencies and looking up waypoints on the map. I had one eye on the TCAS and the other out the window as I checked in with Dulles.

After getting most of the waypoints loaded, I discovered on the chart that V479 was marked "unusable" after Dupont VOR. Maybe I had better check with Dulles on that. When asked, they replied that it was out of their airspace to the north and they would check with Philadelphia approach. Dulles then cleared me direct to Westminster VOR for the time being.

I stopped in the middle of my programming and grabbed the low altitude chart to find Westminster while we entered a cloud layer as Dulles gave me a handoff to Philadelphia. By the way, he said, you have overtaking traffic 1000 feet below, a Lear approaching at six o'clock. My wife's head was a blur as she scanned like mad.

Philadelphia countered my check in with a cheery

Witherington Trip Report continued on page 4

“Stand by for a re-route.” They gave me a new clearance as:

Direct Westminster VOR
V3
Modena VOR
Direct Solberg VOR
Direct Teterboro.

I hastily unfolded the low altitude chart again as Approach called another VFR traffic, same altitude at my nine o'clock, east bound, but “we’re not talking to him.” My wife spotted him heading squarely at us as I turned on all the lights I could find and began a diversion. We exhaled as he went below.

OK, this new route had only five or six waypoints, but it was getting time to listen to ATIS because there would be an instrument approach this night. I thought to myself that there were not very many times when you wonder if a Baron will fly a little slower.

Of course it all ended well with an easy ILS into TEB. But then I had my first encounter with a gate hold for inbound traffic. We were lined up in a run-up pad waiting for the ramp to clear enough to allow taxi into the FBO. The thirty minutes in the hold slowly slipped by as my sons began to sing Christmas Carols from the back seat. Instead of visions of sugarplums, I was thinking of the outbound flight that would take place in two days and what it must be like to fly this part of the country with significant weather like ice and thunderstorms.

The trip home? That’s another story. Stand by.

60J Ocean Isle Beach, North Carolina



Trip Report

DKX to 60J

Mike Dawley, PP

Mike and Sharon



As a relatively new pilot with 100 hours in the log book, I decided it was time to venture out on that eagerly anticipated long cross country VFR flight. Having logged a little over 40 hours of cross country flights 1 to 1 1/2 hours from Downtown Knoxville (DKX), I felt it was time to test my skills a little further down range. Flight planning started about a month before the scheduled flight and the route was flown several times on Microsoft Flight Simulator. I caught a beautiful early October weekend with the southeastern states under a large high pressure system. I was accompanied by my wife Sharon as we departed DKX around 9:30 on a Saturday morning. We climbed out to 8,500 feet heading to the Snowbird (SUT) VOR. After activating my flight plan and establishing flight following with McGhee Tyson (TYS), we were ready for a leisure cruise to the NC coast, I thought. Sharon had flown with me several times but this was her first trip over the mountains. As we approached SUT and getting into the mountainous area, Sharon was getting a little nervous and fidgety and felt like she needed to make a early pit stop. After some reassurance from me and getting her to focus on the horizon she felt much better. The day was beautiful with visibility at least 40 miles as we continued passed SUT on a heading to the Sugarloaf Mountain (SUG) VOR. We caught a beautiful view of Biltmore Estates as we passed over Asheville on our way to the Spartanburg (SPA) VOR. By this time (TYS) had handed me off to Asheville who now has passed me on to Greer SC. As we cleared SPA and turned toward the Pageland (PYG) VOR I was nervously awaiting for Greer to hand me off to Charlotte as my planned route went through the southern boundary of Charlotte’s Class B airspace. The call arrived as I was instructed to contact Charlotte. Flight following was working beautifully as Charlotte was ready for my arrival. After making contact and receiving a few minor course instructions, I heard the magic words. Cessna 52434 you are cleared to enter the Class B airspace. I have to admit, it put a few chill bumps down my spine as I now knew I was in a totally new environment. I must add, the controllers were wonderful and I was allowed to continue on my planned route. Oh by the way, at this point Sharon is relaxed now that we are over the low lands of SC. I

Dawley Trip Report continued on page 5



EVENT CALENDAR

TN20 Seymour Airpark Seymour TN, Fly-in breakfast
8AM – whenever each Sunday

1ST WEEKEND

BGF Winchester TN. Saturday fly-in breakfast.
Scott Scarborough 615-967-0143

LZU Lawrenceville, GA. Saturday fly-In breakfast.
8-10:30 AM 770-394-5466

2ND WEEKEND

Saturday, MBT Murfreesboro, TN, Fly-in Breakfast.
David Swindler, 615-890-2439, arfarcione@juno.com

RMG Rome, GA. Saturday fly-in breakfast 706-235-0644

3RD WEEKEND

3M3 Collegedale, TN Saturday fly-in breakfast 423-236-4340

OWB Owensboro, KY. Saturday monthly breakfast, 8-10am.
Wayne Gibson 502-684-2859

3M5 Huntsville, AL. Saturday fly-in breakfast 7:30-10:00
256-880-8136. phanton-ii@usa.net

16J Dawson, GA. Saturday fly-in breakfast.
Ron Acker 912-888-2828

4TH WEEKEND

2AO Dayton, TN. Saturday monthly breakfast 7:30-11:00AM
Wanda Fulmer 615-775-8407

5TH WEEKEND

4A9 Fort Payne-Isbell, AL. Saturday fly-in breakfast
205-845-9129

Dawley Trip Report continued from page 4

have kept her busy searching for those VFR landmarks. While in the Class B airspace, we had beautiful views of U. S. Air jets on their approach routes into Charlotte. Sharon kept asking if we were suppose to be up there with them. After some reassurance, she went back to landmark searching as we headed to Marion County (MAC) SC for a scheduled refueling stop. Charlotte now has handed us off to Florence (FLO) who followed us on into MAC. Total flying to MAC was 2 hours and 30 minutes which left us 30 minutes from Ocean Isle Beach (60J). The stop at MAC was scheduled due to no fueling capabilities at 60J, time for a leg stretch and change into shorts, and a pit stop which Sharon very much appreciated. An added purpose of this trip was to see my dad on his 73rd birthday. It was a total surprise to him as I called him before I left home to tell him I was on my way to see him and when to pick us up at Ocean Isle airport. He was not in good health and somewhat depressed, but got very excited to hear I was flying down to see him. Having refueled and taken care of other necessities, we departed MAC on our way to 60J. Fifteen minutes into the flight we could clearly see the coastal waters of Ocean Isle Beach. What a sight and a totally new perspective from the air. As we approached 60J now at pattern altitude, we crossed midfield and I could see my dad along with my mother and sister waiting on us. I gave them a little dip of the wing to let them know I was there and headed to my down wind which was right over the beach. What a spectacular view as we continued downwind with the ocean to our right and the intercoastal waterway to the left. We turned base over Ocean Isle golf course and then final to a runway nestled between rows of tall Carolina pines. After just a little over 3 hours flight time from DKX in a Cessna 172, we landed and taxied to the tie down area. I will never forget the smile on my dad's face as came to a stop and shut down the engine. Needless to say, I was also smiling and proud of what I had accomplished. It has to be the most exciting/satisfying thing I have ever done and was so happy to share it with my wife. Speaking of Sharon, she has now departed the plane and is kissing the ground. All kidding aside, she is a real trooper and I give her a lot of credit for making the trip with me.

We had a little family birthday party for my dad in the afternoon then went out for a wonderful seafood dinner at the Dockside restaurant in Calabash NC. The meal alone was worth the trip. After a good nights rest, we headed back to DKX Sunday afternoon in beautiful weather under the same high pressure system. I could not have picked a better weekend. Someone above

Dawley Trip Report continued on page 6

was looking out for me making it possible to enjoy this birthday with my dad. It was his last as he passed away a few weeks later. I was so fortunate to use the gift of general aviation to lift his spirits if only for a short time. The trip back to DKX was along the same route with flight following all the way. Excellent visibility created spectacular low country and mountainous views. Sharon was much more at ease as we approached the mountains over Saluda, SC. After landing back at DKX, I could hardly believe what we had just accomplished. My first long cross country will never be forgotten.

Welcome! Newest Fatboy

My 1st year in Knoxville

Buddy Farmer, PP

I started flying in 1983. I got my private ticket in 1987. It took longer than most, as I was into fishing as well. I bought my first airplane in 1991, a Cessna 150. The very first weekend that the weather was good, I flew the 150 to Myrtle Beach SC While on the way there, the weather was terrible. I had checked the weather before I had left. They were reporting 4500 scattered. I had filed a VFR flight plan for 3000. About half way there, the 4500 scattered was 2800 broken. The approach control told me to maintain 3000 for 10 miles. I was in and of the clouds. I had called back and told control that I was unable to maintain VFR at that altitude. He said that I had traffic at 12o'clock, 2 miles. Now I was really scared. I only had about 50 hours or so at that time. I asked the controller if I could descend to 2500 feet. I told him that I was in the clouds. Finally he said turn right 10 degrees and descend and maintain 2500. That was all I was asking for. I never saw the other traffic that he said that was out there. The rest of the trip went great. I stayed at 2500 for about 20 miles, and then was able to climb back to 3000.

After I got back home, I had made my mind up that someday I would have an instrument rating. I kept the Cessna 150 so that I could build some time. Finally I had flown enough that I could start working on my instrument rating. The first 5 hours or so was so hard that I thought that this was gonna be too hard for me. But after that, things began to start working out. I traded my 150 for the 172 Skyhawk I have now. Its been a great plane for me. I got my instrument rating in 1996. Since I now had my rating, it was time to make a long cross country trip. I went to Sun & Fun in



USEFUL AVIATION LINKS

Web Page <http://www.geocities.com/fatboyzaviation>
Events <http://www.calendar.yahoo.com/fatboyzaviation>
Photo <http://photos.yahoo.com/fatboyzaviation>
Email fatboyzaviation@yahoo.com

AIM <http://www2.faa.gov/ATPubs/AIM>
ASRS http://asrs.arc.nasa.gov/main_nf.htm
NOTAM <http://www2.faa.gov/NTAP>

ADDS <http://adds.aviationweather.noaa.gov>
AirNav <http://www.airnav.com>
DUATS <http://www.duats.com>

Lakeland, Florida. It took about 4 hours flight time. I never thought in a million years that I could fly that far. I had a very good flight instructor. His name is Larry Paris. He taught me how to fly, as well as teaching me how to get my instrument rating.

I moved to Knoxville, TN in the year of 2000. I have meet some great pilots up here. Xen Portwood has been a friend to me since I met him three years ago. He and I have flown alot together . He has been a big help to me when I needed to take my plane to the shop for annuals and radio work. Mark Collins, who is another great friend, took me to Seymore for the first fly in breakfast that I have ever been to in TN. If you have never been to breakfast there, it's time to go. They have an excellent breakfast. It's all you can eat for \$3.00. And there's also Thad Phillips, the best flying buddy a guy could ever have. He has ridden safety pilot with me for several hours. I have learned alot from him. We have been everywhere in East TN. Thad was also the first pilot that I ever went to Sporty's with. He has some great flying skills as well as a being a wonderful friend.

Close your flight plan!

Aircraft Maintenance

How to change your oil

Ron Tallent, I.A. A/P
Dakota Aviation Service

As an owner, did you know that you can change your oil and filter? This is a relatively easy maintenance item requiring only basic hand tools and a torque wrench. It's good if you can drain the oil after the plane has just flown and the oil is hot. However, the oil can be drained cold, if you have time.

Oil drains on several of the smaller aircraft have been replaced with a spring loaded quick drain that only requires depressing for the oil to flow. It is a good idea to have a section of garden hose to slip over the nipple of the drain and into a bucket to keep from making a mess.

While the oil is draining, you might be working on removing the oil filter or oil screen. The oil filter is usually a screw-on canister similar to the one on your car. Cut the safety wire holding it tight and twist it off with a wrench. Place the oil filter aside to drain and install a new filter in its place. This requires some expertise. The filter must be torqued to the proper limits! This must be done with a torque wrench! Damage can occur if you over tighten! Or it may leak if you under-tighten! More expertise: the oil filter must be safety wired! Remember the wire you cut off to remove the filter? This must be replaced with new safety wire. If you are unfamiliar with safety wire, get you're A & P mechanic to show you how the first time. You will need to buy a roll of safety wire from him as well.

Oil drained? Be sure to close the quick drain. Fill the crank case to the recommended level. Put in the quantity it calls for on the dipstick.

Now. Ask yourself and double check. What did I do? I opened the quick drain. Did I close it back? I removed and replaced the oil filter. Did I torque it? Did I safety wire it? I drained the oil. Did I put the proper quantity back in?

Remember the oil filter? You need to cut it open. Inside you will find a paper element folded like an accordion. Cut this out so you can completely remove it. Spread it out and look for contaminates – mainly metal! Got metal? Got TROUBLE!!!! STOP!!!! Call a mechanic! (We hope you will call Dakota Aviation Services) If no contaminates, continue on.....

Clean up your oil spill. Run your engine. Check for leaks.

If your engine doesn't have a quick drain, but has an oil screen instead, get some OJT from you're A & P before going solo.

Fly Safe!
Captain Ron

Message to the FatBoyz from Ron:

Congratulations on your newsletter. We wish you the best of luck with it and we appreciate the opportunity to make a contribution to it.

We are Dakota Aviation Services, located at the Morrilstown airport. We are a general aviation maintenance base at MOR, specializing in fabric recovering, aircraft painting and radial engine maintenance.

As a service to our customers (both current and future) we have been holding monthly workshops on routine maintenance that aircraft owners might do. Past topics have included:

How to change oil
How to grease wheel bearings
How to change spark plugs

We believe the more knowledge an owner has about his/her aircraft, the more likely he/she is to recognize a maintenance issue before it becomes a problem. We try to give this FREE workshops from 1:00 - 3:00 PM on Saturdays. Lunch is provided FREE by Aunt Judy's kitchen. There are also some nice door prizes given out at each session.



Aviation Wx Primer

Decoding a Terminal Aerodrome Forecast (TAF)

Thad Phillips, PP

While studying for the Instrument written, it is painfully obvious that I must learn to translate the various codes and definitions associated with weather statements. I'm sure the proctor wouldn't appreciate me dragging out my laptop to obtain a plain language version from Duats and I can't afford to take a WAG at deciphering the text. This month I'll take a quick review of Terminal Aerodrome Forecasts (TAF) issued by the National Weather Service.

A Terminal Aerodrome Forecast is a concise statement of the expected meteorological conditions at an airport during a specified period of time, usually 24 hours.

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KTYS 111407Z 111412 24009KT P6SM SCT002 OVC010
TEMPO 1415 2SM -DZ BR BKN002 OVC006
FM1500 26008KT P6SM BKN012 OVC025
TEMPO 1518 5SM -DZ BR OVC006
FM2000 28008KT P6SM SCT015 OVC030
FM0000 31005KT P6SM BKN035
FM0700 35004KT P6SM SCT030
TEMPO 0812 3SM BR=
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Type of Report

There are two types of TAF reports. A routine forecast (TAF) is shown above. An amended forecast (TAF AMD) is issued if the current TAF does not sufficiently describe the ongoing weather and may be for time periods less than 24 hours. The report type is identified by the first element.

ICAO Station Identifier

ICAO four-letter identifiers are used to identify reporting stations in the US and consist of a three-letter identifier with a K prefix. For example, KTYS is the identifier for Knoxville, KBNA Nashville, KCHA for Chattanooga, etc.

Date and Time of Origin

The UTC date and time the forecast is prepared follows the station identifier. The format is a two-digit date, four-digit time, followed by the letter Z. TAFs are prepared and filed approximately one-half hour prior to scheduled issuance times at 0000Z, 0600Z, 1200Z, and 1800Z.

111407Z indicate the forecast was prepared on the 11th day of the month at 1407Z.

Valid Period Date and Time

The forecast are valid for 24 hours and the valid time period is identified by a two-digit date followed by a two-digit beginning hour and two-digit ending hour. Time periods beginning at 0000Z are indicated as 00 and periods ending at 0000Z are indicated as 24.

An abbreviated statement NIL AMD SKED AFT Z will be added to the end of the forecast when the airport or terminal is operating on a part-time basis and NIL will replace the forecast for TAFS issued while the airport or terminal is closed.

111412 the forecast is valid from the 11th at 1400Z until the 12th at 1200Z.

111423 the forecast valid from the 11th at 1400Z until the 12th at 0000Z.

Forecast Meteorological Conditions

Wind

Surface winds are encoded as the wind direction (first three digits) and wind speed (last two digits) followed by KT to denote the wind speed in knots. Calm winds (three knots or less) are encoded as 00000KT.

Variable winds are encoded as VRB when the wind direction cannot be forecast. Wind gusts are indicated when the prefix G is appended to the wind speed followed by the highest expected gust (two or three digits if 100 knots or greater).

24009KT the wind is forecast to be 240 at 9 knots.

24009G21KT the wind is forecast to be 240 at 9 knots, gusting to 21 knots.

VRB9G21KT the wind is forecast to be variable direction at 9 knots, gusting to 21 knots.

Visibility

Visibility is forecast in statute miles with fractions of miles separated by a space (1 1/2SM) followed by SM. Visibility greater than 6 statute miles is encoded as P6SM.

1/2SM - Visibility one-half statute mile

2 1/4SM - Visibility two and one-quarter statute miles

5SM - Visibility five statute miles

P6SM - Visibility more than six statute miles

Weather

Weather codes are the same as those used with METAR reports. Note, the weather is omitted for the time period that no significant weather is expected to occur and obscurations to vision are included in the forecast when prevailing visibility is forecast to be 6SM or less.

Qualifiers commonly used are
Intensity or Proximity
- Light
Moderate (no qualifier)
+ Heavy or well-developed
VC in the Vicinity

Qualifier Descriptors
MI Shallow
BC Patches
DR Low Drifting
BL Blowing
SH Showers
TS Thunderstorm
FZ Freezing
PR Partial

Precipitation
DZ Drizzle
RA Rain
SN Snow
SG Snow Grains
IC Ice Crystals
PL Ice Pellets
GR Hail
GS Small Hail or Snow Pellets (less than ¼
inch in diameter)
UP Unknown precipitation (automated stations
only)

Obscuration
BR Mist (Foggy conditions with visibility
greater than 5/8 statute mile)
FG Fog (visibility 5/8 statute mile or less)
FU Smoke
DU Dust
SA Sand
HZ Haze
PY Spray
VA Volcanic Ash

Other
PO Well-Developed Dust/Sand Whirls
SQ Squalls
FC Funnel Cloud
+FC Well-Developed Funnel Cloud, Tornado
or Waterspout
SS Sand storm
DS Dust storm

Sky Condition

Sky condition codes are the same as used in METAR reports. Vertical Visibility (VV) into surface-based obscuration is encoded as VV followed by a height in

hundreds of feet. (three digits). Cumulonimbus clouds (CB) are the only cloud type included in the forecast. Ceiling layers are not included and the ceiling is the lowest broken, overcast layer or vertical visibility into an obscuration.

SCT002 OVC010 two hundred feet scattered and 1000 feet overcast.
SKC - Sky clear
SCT008 BKN015CB BKN150 eight hundred scattered, ceiling one thousand five hundred broken cumulonimbus clouds, one five thousand broken.
VV008 - Indefinite ceiling eight hundred

Optional Data (Wind Shear)

Low level wind shear follows the sky conditions if expected to occur during the forecast period. The wind height (surface to 2000 feet), direction and speed at the given height in hundreds of feet AGL is encoded as WS followed by a three-digit height, forward slant, and wind speed.

WS015/09035KT Low level wind shear at one thousand five hundred, wind direction zero niner zero and thirty-five knots.

Probability Forecast

Probability forecast is included when there is a 30-50% chance of thunderstorms or other precipitation and is encoded as the probability value followed by the beginning and ending time period during which the forecast weather is expected.

PROB20 1113 1/2SM +TSRA – 40% chance between 1100Z and 1300Z of visibility one-half statute mile, thunderstorm and heavy rain.
PROB30 1018 1SM RASN – 30% chance between 1000Z and 1800Z of visibility one statute mile, rain and snow.
PROB50 0811 3SM FZRA – 50% chance between 0800Z and 1100Z of visibility three statute miles and freezing rain.

Forecast Change Indicators

Change indicators are included in the forecast when rapid, gradual, or temporary changes are expected in forecast meteorological conditions.

Each change indicator marks a time group within the TAF report.

FROM

FM indicates a rapid change in current conditions is expected to occur in less than one hour usually as a result of a warm or cold front quickly passing through the forecast area. Encoded as the time the weather change is expected to begin (four digits for hour and minutes), wind, visibility, and sky conditions as appropriate. The time period continues until the next FM or until the end of the forecast. Weather is omitted if not significant to aviation.

FM1500 26008KT P6SM BKN012 OVC025 After 2000Z wind two eight zero degrees at 12kts, visibility more than 6 statute miles, ceiling twelve hundred broken, two thousand five hundred overcast.

BECOMING

BECMG indicates a slow change in conditions is expected to occur over a 2 hour time period. Encoded as the time the weather change is expected to begin and end.

OVC015 BECMG 1013 BKN025 - Ceiling one thousand five hundred overcast, changing to ceiling two thousand five hundred broken between 1000Z and 1300Z.

TEMPORARY

TEMPO identifies wind, visibility, weather or sky conditions expected to last for less than an hour at a time and expected to occur during less than half the time period. Encoded as the time the weather change is expected to begin and end.

TEMPO 1415 2SM -DZ BR BKN002 OVC006 Visibility two statute miles in drizzle and mist, two hundred broken and six hundred overcast between 1400Z and 1500Z.

Armed with this new information, it's time to try my hand at decoding a TAF issued for our local airport.

KTYS 131738Z 131818 VRB05KT 6SM BR SCT005 OVC040
TEMPO 1821 2SM SHRA BR OVC004
FM2100 25010KT 6SM BR OVC025
TEMPO 2101 3SM -SHRA BR OVC006
FM0100 26012KT 6SM -RA BR BKN012 OVC025
TEMPO 0105 3SM -RA BR OVC009
FM0600 27012KT 6SM BR SCT005 OVC010
TEMPO 0812 4SM -SHRASN BKN005
FM1200 27012G20KT P6SM OVC010
BECMG 1416 29013KT P6SM NSW OVC025=

At Knoxville's McGhee Tyson Airport, forecast prepared on the 13th at 1738Z, valid from the 13th at 1800Z until the 14th at 1800Z. Wind variable direction at 5kts. Visibility more than 6 statute miles. Weather foggy conditions with visibility greater than 5/8 statute miles. Sky condition five hundred feet scattered, four thousand feet overcast.

Temporary visibility two statute miles with rain showers and fog, four hundred overcast between 1800Z and 2100Z.

After 2100Z winds two five zero at 10kts, visibility more than 6 statute miles with fog, twenty-five hundred overcast.

Temporary visibility three statute miles with rain showers and fog, six hundred overcast between 2100Z and 0100Z.

After 0100Z winds two six zero at 12kts, visibility more than six statute miles with rain and fog, twelve hundred broken, twenty five hundred overcast.

Temporary visibility three statute miles with rain showers and fog, nine hundred overcast between 000Z and 0500Z.

After 0600Z wind two seven zero at 12kts, rain showers, five hundred scattered, one thousand overcast.

Temporary visibility four statute miles with rain and snow showers, five hundred broken between 0800Z and 1200Z.

After 1200Z wind two seven zero at 12kts gusting to 20kts, visibility more than 6 statute miles, one thousand overcast.

Becoming wind two niner zero at 13kts, visibility more than 6 statute miles, no significant weather, twenty-five hundred overcast.

Sources:

Aviation Weather Center
FAA Training Center
National Air Traffic Training Program
Air Traffic Guide
Aviation Routine
Weather Report (METAR)
Aerodrome Forecast (TAF)
Duats
ADDS

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