ON TRACK

Articles of Interest for the Professional Aviator
ICP Flight - Central Flying School

Have You Checked All The NOTAMs?

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On October 5th, 2005, a Beech C23 Sundowner, after an uneventful flight, landed in Higginsville, Montana. Unfortunately, the pilot landed on a portion of the runway that was under construction and approximately 8 inches lower than the remainder of the runway. The subsequent impact with the existing runway not under construction resulted in the separation of all three landing gear from the aircraft. As it turns out, the pilot had not conducted a complete NOTAM study and ultimately missed the fact that the runway was under construction. Luckily no one was injured in this mishap but the aircraft did sustain significant damage…

From day one of flight training, or at least shortly thereafter, we began to learn about the importance of checking the Notices to Airmen (NOTAMs) prior to flight. Over time it becomes a habit to ask ourselves "do I have all the NOTAMs?" Typically we say "Yes" else we wouldn't be stepping to the aircraft. However, before you enthusiastically exclaim that you've got them all, perhaps you should take a second look and verify that you do in fact have ***everything*** that you need from all the applicable NOTAM sources.

Of course, this begs the question, "What NOTAMs do I need to check?" and of course the follow-on question, "Where do I get them?" These questions may be a bit more involved than most might think.

As you're undoubtedly already aware, NOTAMs are a means of advising pilots of information "concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations" (GPH 204B).

All CF aviators also know that getting the NOTAMs is a B-GA-100 requirement. Beyond satisfying the regulatory requirement, getting the NOTAMs can, at the very least, save you from embarrassment and at the very most, save your life. Mission Accomplishment is paramount and that includes getting your aircraft, crew, and

passengers thru the mission in one piece. Thorough flight preparation is a key element in ensuring the successful accomplishment of the mission.

So, what does this mean to me, the operational pilot on the line? Simply put, you need to do your homework and ensure that you build enough time into your flight-planning schedule to do a complete NOTAM check. Unfortunately, however, there is no "one-stop shopping" option for this and the more airspace that you transit, and the more aeronautical information product sources you use, the more complicated the search process can be (especially if transiting multiple countries or using non DND products).

Why is it so complicated? The difficulty stems from the fact that the location in which NOTAMs are posted is dependant upon the products and/or facilities they are meant to service. As a result, pilots may have to consult a variety of sources to get all the applicable NOTAMs for the mission. To help ensure a successful mission, here's a list of NOTAMs that should be checked prior to departure:

a. Aerodrome NOTAMs,

b. Enroute NOTAMs,

c. Vendor Specific Product and FMS Database NOTAMs,

d. Attention Notices / Temporary Flight Restrictions / Special Notices (if appropriate),

e. FAA Notice To Airman Publication (if appropriate).

Lets break this down further by discussing each area of concern in turn.

Aerodrome NOTAMs:

Aerodrome NOTAMs are the given in any NOTAM search and needs hardly any further explanation. However, it's important to note that when a NOTAM from an aerodrome needs to be published, the information is submitted to the respective government's NOTAM system for publication. That government then formats it, typically in accordance with Aeronautical Information Regulation and Control (AIRAC) procedures and International Civil Aviation Organization (ICAO) Doc 8126, and enters the NOTAM into that nation's NOTAM system. Then, in most cases, they make it available to the general public and to the NOTAM systems of other governments (such as the U.S. NOTAM system).

For those who fly internationally, it's important to note that several countries do not share all, or in some cases any of their NOTAMs with outside NOTAM systems. Canada is an excellent example of this practice. The inherent problem, of course, is knowing which countries, and in some cases aerodromes, publish all, some, or none of their NOTAMs in the international NOTAM systems. Luckily Annex 15 to the Convention on International Civil Aviation produced by ICAO dictates the who, what, when, where, and why of NOTAMs but this document is advisory in nature for "Contracting States" and thus a nation may opt to apply alternate procedures if so desired.

This latest point highlights a serious wrinkle in the acquisition of any NOTAMs, even when flying here in Canada or down south in the U.S. For example, because Canada does not publish all of its NOTAMs in ICAO NOTAM systems, using the DoD, or any other ICAO NOTAM database engine to retrieve the NOTAMs for your Canadian destinations will result in an incomplete list of NOTAMs being retrieved.

A list of the nations who either directly or indirectly share at least some of their NOTAMs with the DoD NOTAM system can be found in the FAA International Flight Manual (FAA IFM) which is available online at http://www.faa.gov/ats/aat/ifim/ifim0103.htm. A complete tabulation of International NOTAM exchanges among International NOTAM Offices (NOFs) and the areas of responsibility for each NOF is contained in ICAO Document 7383-AIS/503 in case you're interested.

Moving south across the border, the U.S. system includes a series of NOTAMs known as "L" series, or Local NOTAMs. Unlike "D" series, or Distant NOTAMs which may affect your ability to use an aerodrome and are published in the ICAO NOTAM system, the "L" series NOTAMs are distributed locally only and will include such data as taxiway closures, airport construction, runway obstructions, runway service condition, ground lighting system outages, etc.

Obtaining these NOTAMs may take a bit of effort and a bit more time. "L" NOTAMs can only be obtained by contacting the servicing Flight Service Station (FSS) or the airfield itself as they are not currently published in the DoD, FAA, or ICAO NOTAM systems. To help make this process a bit easier, the U.S. IFR Supplement and the Airport/Facility Directory can be very helpful in determining the servicing FSS. In the Communications section of an aerodrome's entry, look for an entry that looks like "FSS-Riverside RAL-NOTAM RAL" in the IFR Supplement or "Riverside FSS" in the Airport/Facility Directory. Next, call your local FSS (1-800-WX-BRIEF if your in the U.S. or 1-866-WX-BRIEF while still in Canada) and ask for the toll free phone number for the servicing FSS, in this case Riverside. Now all you have to do is call that FSS and ask for the Local NOTAMs for the aerodrome in question.

Now, will not getting these NOTAMs keep you from flying into an aerodrome? No, perhaps not, but it may keep you from leaving. For example, without the "L" NOTAMs, you could arrive at an uncontrolled aerodrome at night only to find that while pulling off the active onto the taxiway that you've always used, your aircraft falls into a recently dug

ditch or hole. Or, perhaps you've pulled up to the self-serve gas pump only to find that it's no longer in service. And to make matters worse, you don't have enough fuel to hop to the next field with fuel. These aren't exactly killer incidents, but they certainly don't help mission accomplishment.

Now, while we're on the subject of aerodromes, you may already be familiar with the rapidly developing realm of RNAV approaches. These approaches have come a long way since the original GPS overlay approaches and now, effective October 27, 2005, WAAS approaches have made their way north into Canada. However, unlike other aerodrome approaches, NOTAMs for an aerodrome's WAAS approach may not be where you would expect them to be. If the WAAS outage will affect only a single aerodrome, the NOTAM will be posted in the applicable aerodrome's NOTAM file. If the outage will cover more than one aerodrome or a large geographic area, the NOTAM will be issued under the appropriate Flight Information Region (FIR) NOTAM file(s) instead. And to further complicate things, if the entire WAAS system or the accompanying WAAS monitoring system goes down, then a Canadian national NOTAM will be issued under the CYHQ identifier (the U.S. will publicize these outages in the U.S. Air Route Traffic Control Center (ARTCC) NOTAMs). Oh, and don't count on the controller protecting you on this one as there is currently no plan to notify ATC of WAAS failures unless the entire system goes down.

Enroute NOTAMs

Having checked the aerodrome NOTAMs, the next logical NOTAMs to check are the enroute NOTAMs. Checking the enroute NOTAMs means that you check the airway, ARTCC (FIR and Upper Information Region (UIR)), enroute NAVAID facilities, airspace (including RVSM / DRVSM, Oceanic, etc.), and even the GPS NOTAMs if you intend to use GPS as a navigation source.

So what's the big deal about getting the NAVAID NOTAMs? Aren't they included in the ARTCC and aerodrome NOTAMs? Well, yes and no. To most people's surprise, internationally speaking, NAVAID NOTAMs are occasionally included in the ARTCC NOTAMs, but not always. Unfortunately, for the most part, the NAVAID NOTAMs must be obtained individually.

So how do we get them? Before we jump into how to retrieve them, lets talk about why it can be so challenging. NAVAIDs are broken into two basic categories, enroute and aerodrome NAVAIDs. NAVAIDs that are linked to an aerodrome will be included in that aerodrome's NOTAMs. This of course begs the question, which aerodrome is the NAVAID associated with? Well, if the NAVAID is located on an aerodrome or is used for an IAP at an aerodrome, then it will be associated with that aerodrome. In which case, you will need to retrieve the NOTAMs for that aerodrome to see if the NAVAID is serviceable (even if you only intend to use it for enroute navigation).

If the NAVAID is not associated with an aerodrome and is only used for enroute navigation, then it will be included in the FIR NOTAMs. Well, actually, it will be in the FIR NOTAMs in Canada and some foreign nations but in the U.S., for example, the enroute NAVAID NOTAMs are not included in the FIR NOTAMs. In order to obtain these NOTAMs, you will need to add a "K" to the 3-character identifier for the NAVAID (SIE VORTAC becomes KSIE for the NOTAM search) and enter it into the NOTAM retrieval form just like any other ARTCC or aerodrome identifier.

If you're like most pilots, you're probably thinking that there has to be an easier way to do this and you'd be right, there is. Probably the easiest way to get the enroute NAVAID NOTAMs is to call your local FSS and tell them where you're going and then request all the enroute NOTAMs. The FSS should be able to tell you which NAVAIDs along your route of flight are inoperative. The next easiest way, assuming that you're flying in Canada or the U.S., is to perform a flight path NOTAM search.

For the segment of your flight that is in Canadian airspace, you'll need to use the NavCanada flight planning website (http://www.flightplanning.navcanada.ca) and click on the "Route Data" tab. Once there, enter your departure point, enroute points, destination, and alternate(s) into the Route Selection form. Then scroll down and select what types of NOTAMs and Weather Reports you want. A word of caution for those of you who cover long distances, this form will retrieve NOTAMs for all the facilities within 50 nm of either side of your track so be prepared for some reading. The beauty of this form is that it will find everything that may be of concern to you, even those NAVAIDs and towers that you probably wouldn't have found doing your normal NOTAM search.

Now, for the U.S. segment of your flight, you can use the DoD version of this form by clicking on the "Flight Path Search" or "Radius Search" options at the top of the DoD NOTAM website (https://www.notams.jcs.mil). If you intend to remain within a set distance of your departure point then use the "Radius Search" option. Simply enter your departure aerodrome identifier (or a Lat Long) and a radius you want to search out to. This will then retrieve all the NOTAMs within that search area.

If you're leaving the local area, then use the "Flight Path Search" option. This form allows you to put in up to 5 points and a buffer distance. The ICAO waypoints can be either NAVAIDs or aerodromes but they must be identified with 4 characters. Then select what types of NOTAMs you want to retrieve. Of course, just like the NavCanada website, these engines will return everything you'll need for your flight but you may need to spend some time reading through it all to pick out the pertinent information.

Checking your enroute NOTAMs also means that you need to check the NOTAMs for the aeronautical information or FLIP products that you intend to use. While this latest point may sound a bit intimidating, it's really not that big of a deal. If you intend to use Jeppesen enroute charts, then check the Jeppesen Chart NOTAMs. If you intend to use the NavCanada charts or DoD charts, then checking the enroute NOTAMs in the respective NavCanada or DoD government NOTAM systems will highlight errors in

these government-produced products. DoD chart errors will also be included in the "DAFIF Notices" section of the DoD NOTAM website.

As for worldwide ARTCC NOTAMs, they can be acquired by entering in the respective 4-character ARTCC FIR and/or UIR identifier(s) into the ICAO NOTAM Retrieval Form on the DoD NOTAM website and then clicking on the "View NOTAMs" button. If you don't know what the ARTCC identifier is, they can usually be found on the enroute charts along the FIR and UIR boundaries. If you're flying in the U.S., then you can click on the "FDC TFR, Special Notices, ARTCC NOTAMs" link on the top of the page and then pick and choose which ARTCCs you want NOTAMs for. Or, if you're not intimidated by having lots of NOTAMs to read through, you can click on the "ARTCC TFRs" and "FDC, ZZZ Notices" buttons to retrieve all the U.S. ARTCC NOTAMs.

Vendor Product and Database NOTAMs:

As military aviators, we're quite accustomed to flying with government Flight Information Publications (FLIP) such as those produced by NavCanada, the Department of National Defence (DND), Department of Defence (DoD), and the Department of Transportation (DoT). However, no agency is infallible and this goes for government agencies (such as those listed above) as well as commercial agencies (such as Jeppesen). And while we may be quite familiar with checking the government NOTAM systems, if you use private vender products, then you'll also need to check the NOTAMs published by these vendors for their products.

But errors on the Jeppesen products are published in the government NOTAM system, right? Yes and no. If the error on the chart is caused by a government induced change, then yes, the government NOTAM would also apply to and appear in the Jeppesen NOTAMs. However, while private vendors do want to ensure that their customers are aware of errors in their products, they **do not** publish NOTAMs identifying their own errors on the government or ICAO NOTAM systems.

This means that if you intend to use a product from a private vendor (such as Jeppesen), then you must obtain the NOTAMs for these products from that vendor directly. If you use a Jeppesen navigation chart or a Jeppesen Instrument Approach Procedure (IAP), then you need to check the Jeppesen NOTAM database for errors on each of these products (the Jeppesen NOTAMs can be obtained at: http://www.jeppesen.com/wlcs/index.jsp?section=resources&content=notams.jsp).

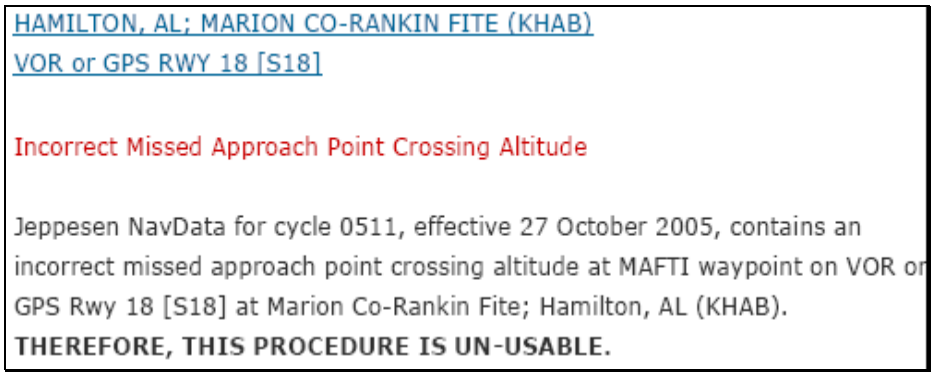
OK, so you already knew that you had to check the NOTAMs for your paper products, but did you know that NOTAMs are posted for FMS electronic databases as well? Just as IAPs and charts can have errors, so can your aircraft's FMS database. Some of these errors could be deadly if not caught. Let me take a moment to elaborate upon this latest point through an example.

Let's assume that you're flying an aircraft that's equipped with an FMS that utilizes a Jeppesen NavData database and you intend to fly from Ottawa, MacDonald-Cartier International (CYOW) to Toronto, Pearson International Airport (CYYZ). Upon your arrival you intend to fly the NDB (GPS) RWY 23 approach for training. You've checked the NavCanada NOTAMs for both locations and enroute and have found nothing that significantly affects your route of flight or the intended approach into Pearson Int'l. Unfortunately, however, by not checking the Jeppesen NavData NOTAMs you would have missed the following NOTAM:

> *"CYYZ, Toronto/Pearson Intl, Toronto, Ontario, LOC or (GPS) NDB Rwy 23 procedure not authorized."*

Now, you may be thinking "So what? If it's not authorized then ATC won't let me fly it." Unfortunately, this is not the case. The approach is not authorized due to an error in the Jeppesen NavData FMS database and not because the approach itself has a problem. ATC assumes that you have the current and correct charts and as such, will clear you for the approach not knowing that the errors in your aircraft's FMS database could actually kill you.

The example below is an actual Jeppesen NavData FMS database NOTAM taken from the Jeppesen NOTAM site. As this error applied only to the Jeppesen FMS database, it did not appear in the government NOTAM system. Obviously, errors like this one could have serious safety of flight implications.


HAMILTON, AL; MARION CO-RANKIN FITE (KHAB)
VOR or GPS RWY 18 [S18]

Incorrect Missed Approach Point Crossing Altitude

Jeppesen NavData for cycle 0511, effective 27 October 2005, contains an incorrect missed approach point crossing altitude at MAFTI waypoint on VOR or GPS Rwy 18 [S18] at Marion Co-Rankin Fite; Hamilton, AL (KHAB).
THEREFORE, THIS PROCEDURE IS UN-USABLE.

An example of where an approach is in the Jeppesen NavData database but has been NOTAM'd as un-usable on the Jeppesen NavData NOTAM website.

The aforementioned database error really drives home the importance of checking vender NOTAMs as well as completing a database check in accordance with existing procedures. The time to find these mistakes is on the ground and not in the air. NOTAMs like this make it very clear what the errors are and which approaches are unsafe to fly.

Of course, obtaining the NOTAMs does not absolve you of the requirement to check the aircraft database against a verified paper source but it does help ensure that you don't miss something that may not otherwise be so obvious in a busy cockpit. Take a look at the NavData NOTAMs and Alerts (which are also found at http://www.jeppesen.com/wlcs/index.jsp?section=resources&content=notams.jsp) and you'll notice that they're full of examples of incorrectly stored routings, altitudes, fix locations, etc. that could have a significant impact upon your flight. Items that you don't want to chance not finding when it really matters.

It's also important to note that the Jeppesen NOTAM website doesn't include the normal government NOTAMs either. Although they may have a few of the same NOTAMs (such as those defining a change in a federal airway because it will affect their charts as well), Jeppesen makes no claim that their system is all inclusive and as such, they expect the pilots to check the proper government NOTAM system as well before flying. With that being said, the Jeppesen Flight Planners will provide you with the government NOTAMs that you have requested in your account profile. Of course this means that you must have an account with Jeppesen and you must have a NOTAM profile already setup else you will be given only the basics. Furthermore, don't waste your time asking your local Flight Service Station (FSS) in either country to provide the NOTAMs for your non-government vendor products as they don't have access to these Notices.

Now, having said that, let me pass on one more word of caution. It is always a good idea to verify the integrity of your FMS database against a NOTAM verified paper product that was not produced by the same vendor as the FMS database. Of course, this is not always possible due to the very nature of our job but it is during these rare occurrences that we should be extra vigilant in our verification process.

If you use the DoD Digital Aeronautical Flight Information File (DAFIF) information to populate your FMS database, then these NOTAMs can be obtained on the DoD NOTAM website by clicking on the "DAFIF Notices" button. Clicking on this same button will also provide you with the current Active DoD FLIP NOTAMs (charts, FIH, Enroute Supplements, etc.).

General Planning (GP), Area Planning (AP), Planning Change Notices (PCN), Change Notices (CN), and Terminal Change Notices (TCN):

Due to the frequency of publication of the U.S. FLIP, Planning Change Notices (PCN) for the GP and AP series, Terminal Change Notices (TCN) for the DoD IAPs, and Change Notices (CN) for the DoT / FAA IAPs are published between cycles to cover changes and/or errors in their respective products rather than posting long term NOTAMs. Once the PCN, TCN, or CN is published, the corresponding NOTAMs are removed from the NOTAM system. So, if you intend to use these products don't forget to verify that it is in fact current and that you have the necessary Change Notice(s). Failing to use a PCN, TCN, or CN that's effective will result in you flying an outdated and possibly erroneous IAP.

So, how do you know if there's a PCN, TCN, or CN in effect for your particular publication? Well, on the front cover of the GP and AP you'll find a PCN Effective date whereas on the DoD and DoT / FAA IAPs you'll find a TCN Effective date or a CN Effective date respectively. In the event that you don't have these products stuffed in your bag or in the mission planning area of your unit or neighbourhood FBO, the GPH series, and the accompanying PCNs, can be viewed online at https://164.214.2.62/products/digitalaero/index.cfm. The DoD IAPs (and TCNs) can be obtained online at https://164.214.2.62/products/digitalaero/index.cfm, and the DoT / FAA IAPs (and CNs) can be found at http://www.naco.faa.gov/index.asp?xml=naco/onlineproducts.

Volcanic Ash Advisories / NOTAMs (ASHTAMs):

On December 15th, 1989, a KLM Boeing 747-400 descending for landing in Anchorage, Alaska, was about 70 nm north of the city and entered a light cloud while descending through FL260. Shortly thereafter things got dark and the cloud started to sparkle "like fireflies in the dark". The Captain ordered a climb to get out of the cloud but shortly after climb power was added and the aircraft began it's climb, all four engines quit. The aircraft stall warning and stick shaker followed shortly thereafter and all airspeed indications were lost. The aircraft had inadvertently flown through a volcanic ash cloud from Mt. Redoubt, a volcano about 120 miles southwest of Anchorage, which in turn had failed all four engines and caused approximately $80 million worth of damage.

As many pilots have found, volcanic ash can have catastrophic effects on an aircraft. While volcanic ash may appear soft and fluffy, it is in fact very abrasive and flying through it can have similar effects to sandblasting your aircraft. In addition to clogging and ultimately failing engines, volcanic ash has been known to clog ports (including pitot-static tubes), glaze cockpit windows, damage flight control surfaces, and wreck havoc with aircraft environmental and electrical systems.

Ok, so who would intentionally fly through a volcanic ash cloud? Well, during day VMC you might be able to see the plum of smoke and ash spewing from the volcano but did you know that that same ash can be carried hundreds of miles by the winds aloft and can even be embedded in regular clouds. And to make matters worse, volcanic ash clouds are not picked up on normal radar scopes so you may not even know you're flying in an ash cloud until it's too late.
So, how do you avoid such a deadly menace? Aside from visually avoiding these clouds, the best option is to check the Volcanic Ash NOTAMs (ASHTAMs).

Since 1995, nine volcanic observatories have been monitoring volcanic activities worldwide. This information is then made available to aircrew through the ASHTAM advisory system. One such advisory source is the U.S. National Oceanic & Atmospheric Administration volcanic activity website, http://www.ssd.noaa.gov/VAAC/, where worldwide volcanic ash advisories and related materials are posted. On the other hand, if

you're one of the many pilots who never leave Canada, then you can click on the "Volcanic Ash" button found on the NavCanada NOTAM website (http://www.flightplanning.navcanada.ca/) and get the ASHTAMs that may affect your flight here in Canada.

With this being said, do you need to add an ASHTAM check to your daily pre-flight routine? No, probably not, especially if you're not flying anywhere near any volcanoes. But then if this check is not part of your regular pre-flight routine, you may want to add it to your pre-flight checklist for when you're away from home station.

Attention Notices:

Attention Notices are deemed pertinent to operations within certain regions of the globe but often tend to be overlooked by most aviators. Included in these NOTAMs might be region-wide announcements (such as new regional procedures, no-fly zones, and shoot down areas, etc.) that don't really apply to a specific ARTCC and are thus not included in the normal ARTCC or enroute NOTAMs.

X0012/05 - AP/2 DTD 24 NOV 05, PAGE 3-263, INSTRUMENT FLIGHT RULES, FM IMMUNITY, REVISE "...UNTIL 31 DEC 2005" TO READ "...UNTIL 31 DEC 2008." 28 DEC 12:04 UNTIL 16 MAR 23:59 2006

M0001/06 - AIR/GROUND FACILITY UNSERVICEABLE ELMENDORF HF GLOBAL STATION WILL BE OUT OF SERVICE FOR UPGRADE AND TESTING THROUGH FIRST WEEK OF FEB. 06 JAN 13:49 UNTIL 01 FEB 23:59

Excerpt from DoD ATTE and ATTP Notices

Oftentimes, there aren't very many NOTAMs in this file and there probably won't be anything of value, but you never know. Just click on the "Attention Notices" button on the DoD NOTAM site's main page or type in the specific designator for the region you want (ATTA for Attention ALL, ATTN for Attention North America, ATTE for Attention Europe, ATTP for Attention Pacific, and ATTC for Attention Central/South America) in the ICAO NOTAM Retrieval Form.

Temporary Flight Restrictions and Special Notices:

Here's where it starts getting complicated as it deals with the U.S. NOTAM system. We've all heard the phrase, "information is power", well, the U.S. takes this to the extreme and provides so much information that it can be intimidating. As a result, many pilots choose to avoid these pages and pages of NOTAMs and then hope for the best. Unfortunately, many pilots, especially those operating under VFR within U.S. airspace

discover all too late that this course of action can lead to not only violations but also incarceration, loss of aircraft, loss of aeronautical ratings, and under extreme cases, being shot down. The FAA takes it's airspace and procedures very seriously and they expect all pilots operating aircraft within this airspace to be aware of their rules (something that is actually required by ICAO regulations).

So, now that I've gotten your attention, what are Temporary Flight Restrictions (TFRs) and Special Notices and how do I proceed from here? Well, for starters, get the Flight Data Center (FDC) NOTAMs. These are regulatory changes and advisories that have been issued and are kept on file until they're either cancelled or published in the FAR/AIM or Notice to Airmen Publication (NTAP). They include things like amendments to charts, temporary and combat zone flight restrictions, and certain changes to the Federal Aviation Regulations (FARs). These NOTAMs tend to be plentiful and rather dry reading. Although most of the stuff won't apply to your specific flight, there is a good chance that one or two little tidbits will. Legally, you're responsible for knowing these tidbits so be sure to include this in your NOTAM search. The FDC NOTAMs (including TFRs and Special Notices) can be obtained by asking the local Flight Service Station (FSS) for them via phone (800-WX-BRIEF) or by clicking on the "FDC, ZZZ Notices" button on the main DoD NOTAM web page (http://www.notams.jcs.mil).

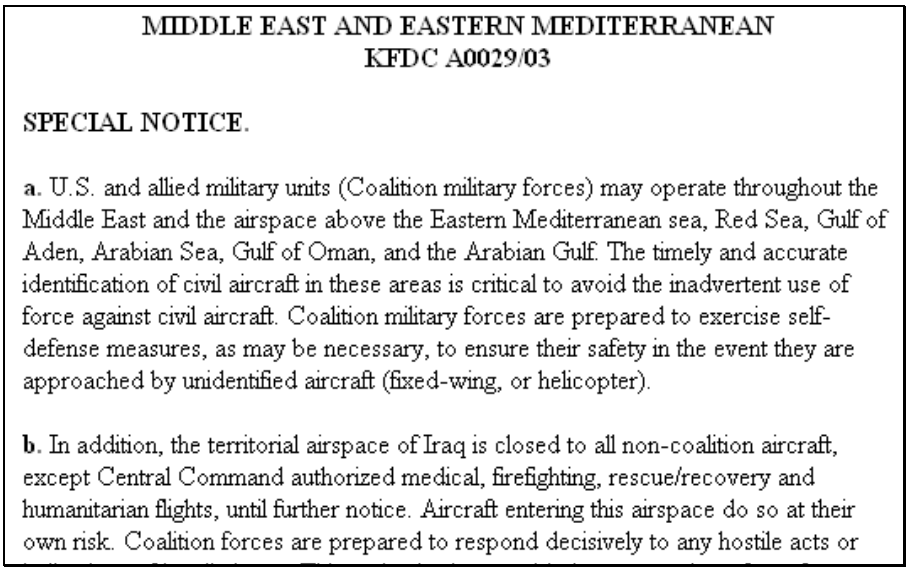
The Temporary Flight Restrictions (TFR's) are NOTAMs contained within the FDC and ARTCC NOTAMs that restrict flight over certain locations. These temporarily restricted airspaces are not printed on any chart so you'll have to transfer the NOTAM to your charts. Many of these areas are places where disaster clean up or fire fighting efforts are in progress. Many others are infrastructure, government, or military facilities that are included for national security reasons or airspace closure due to a Presidential or VIP visit.

Luckily, the TFRs are included in the NOTAMS you download for each ARTCC. They're also available by clicking on the "ARTCC TFRs" button (although this will give you ALL the TFRs for the U.S.) but they are not included in the FDC NOTAMs returned when you click on the "FDC, ZZZ Notices" button. You can also access a specific ARTCC's TFRs by clicking on the "FDC TFR, Special Notices, ARTCC NOTAMs" link on the top of the page, select "All Center Notices" or "TFRs Only", select the ARTCC you want the notices for, and then click on the "View Notices" button. Either way, violating these restrictions might constitute a significant safety risk, possible interception by heavily armed combat aircraft, or the dreaded "Call this number when you land" radio call from ATC. Read and heed as it's not really worth the risk.

During your NOTAM search you're also bound to find Special Notices. Special Notices are also regulatory in nature but don't necessarily meet the criteria for a standard FDC or Facility NOTAM. These are typically new or modified procedures or restrictions, or the reissuing of previously published procedures or restrictions that the FAA wants to draw special attention to. These Notices will be spread out in each applicable section but mostly in the FDC NOTAM section.

Notice to Airmen Publication:

The NTAP is an elusive "catch-all" document that's published every 28 days. Unfortunately, due to budget cuts and advances in technology, you may only find this document online now and all pilots are responsible for complying with the contents. The NTAP is designed to contain NOTAMs that will be in effect for extended periods of time (at least 7 days past the expiration date of the NTAP it is published in) and to advertise future special airspace procedures around predicted high volume areas or special events. It's also meant to be a means of removing long running NOTAMs from the normal NOTAM system to reduce congestion without cancelling them. NOTAMs contained within this document tend to focus on flight within U.S. airspace but may include critical NOTAMs that may affect U.S. and foreign aircraft flying outside U.S. airspace that the FAA deems important enough to draw extra attention to.



MIDDLE EAST AND EASTERN MEDITERRANEAN
KFDC A0029/03

SPECIAL NOTICE.

a. U.S. and allied military units (Coalition military forces) may operate throughout the Middle East and the airspace above the Eastern Mediterranean sea, Red Sea, Gulf of Aden, Arabian Sea, Gulf of Oman, and the Arabian Gulf. The timely and accurate identification of civil aircraft in these areas is critical to avoid the inadvertent use of force against civil aircraft. Coalition military forces are prepared to exercise self-defense measures, as may be necessary, to ensure their safety in the event they are approached by unidentified aircraft (fixed-wing, or helicopter).

b. In addition, the territorial airspace of Iraq is closed to all non-coalition aircraft, except Central Command authorized medical, firefighting, rescue/recovery and humanitarian flights, until further notice. Aircraft entering this airspace do so at their own risk. Coalition forces are prepared to respond decisively to any hostile acts or

Excerpt from NTAP International NOTAMs section

This document can be found through the FAA website (http://www.faa.gov/NTAP/) or through the DoD website by clicking on the "Links" link on the top of the page and then selecting "Notice To Airmen Part I (*)" link. Even though it says "Part I", it is in fact the entire document and is broken down into 7 sections:

- General Information – Foreword and other NTAP Background Information
- Special Events
- Sporting Events
- Part 1 – Airway; Airport/Facilities/Procedural; and General FDC NOTAMs
- Part 2 – Revisions to MEAs and Changeover Points
- Part 3 – International Notices to Airman
- Part 4 – Graphic Notices

While the special and sporting events procedures / restrictions may be listed in the ARTCC NOTAMs when they go into effect, many of the Parts 1 - 4 items are not found anywhere else. For example, the International NOTAMs are notices that might affect your decision to operate in foreign airspace and will include procedural changes or even warnings from foreign governments.

The Graphic Notices section, on the other hand, focuses on U.S. airspace and is filled with a very wide assortment of need to know information (such as new airspace, new or modified procedures, navigation sources, airport lighting, etc.). If you haven't taken the time to read this section before now, I would highly recommend sitting down and reading through it… It doesn't take too long to check but it is one extra resource to devote some time to before stepping to go fly.

Oh, and by the way, if you call an FSS (1-800-WX-BRIEF) while in the U.S., you'll need to specifically request the NOTAMs from this publication as they won't typically give them to you right away. They won't give you the NOTAMs for Special IAPs that you may be certified to fly either unless you specifically request them. Also, if you attempt to call an FSS in Canada (1-866-WX-BRIEF) in preparation for your flight to the U.S., don't bother asking for the NOTAMs from the NTAP because they don't have access to it.

All right, so there you have it. Never knew how involved checking the NOTAMs really was, did you? I realize that this all sounds very intimidating and perhaps even restrictive but ARTCC expects you to know this information and they will hold you accountable if you violate it. Now granted, in most places we fly, we operate under IFR and ATC will keep us out of trouble… or will they? Are you willing to take that chance?

When it comes right down to it, completing a thorough NOTAM check isn't that hard. Run through it a couple of times to get it down to a routine and then it becomes just that, routine. To help streamline this process, I've attached a mission planning cheat sheet for your gen book. It's an excellent aid and should help make sure nothing is missed. In the end, while getting NOTAMs has become more difficult, it is no less important to the accomplishment of the mission. Mission Accomplishment, particularly in peacetime, includes getting everything and everyone to their destination in one piece. Fly Safe!

Extensive flight planning resources are available online at http://www.icpschool.com/planning.html.

Mission Planning Checklist

(As Required Depending Upon Route)

General:

AIF, Aircraft & Aircrew Publications
Customs (Notify and Verify Entry Requirements)
File Flight Plan (Acknowledgment Message)
Aircraft Performance (Takeoff & Departure Data)

Weather: *(In Accordance With B-GA-100,* A, ANA)

Departure Weather
Destination Weather
Alternate Weather (Departure Alternate, Arrival Alternate)
Enroute Weather (Charts, Hazards, Volcanic Ash, ETP, PSR)

NOTAMs:

Aerodrome (Departure, Arrival, Departure & Arrival Alternate Aerodromes)
Enroute (ARTCC, Airspace, RVSM, RNP, NAVAID, GPS, Volcanic Ash, etc.)
Vendor Specific (FMS, Enroute Charts, IAPs)
Change Notices (PCN for AP & GP, TCN for DoD IAP, CN for DoT/FAA IAP)
Specials (Special Notices, Temporary Flight Restrictions, Attention Notices)

Diplomatic Clearances: *(Verify for next flight and all subsequent flights)*

General Info (Valid Times and Dates, Tail Number, Call Sign)
Hazardous Cargo (Special DIPs, Special Routing)
Departure (Departure DIP, Slot Time, Departure Window)
Enroute (Overflight DIP, National Entry / Exit Waypoints and Times)
Destination (Landing & Departure DIP, Arrival and Departure Window)

Route:

Slot Time
Route Verification (Verify Flight Plan & Jetplan Route against charts)
Preferred Routing *(GPH 205, GPH 270, RAF Planning Handbook)*
National Procedures *(GPH 270, Airspace Restrictions / Procedures, etc.)*

Airfield Study: *(Departure, Arrival, Alternate Aerodromes)*

Restrictions *(Flight Supplement(s), AP)*
PN, PPR, Operating Hours, Preferred Arrival / Departure Routing, Fuel, etc.
Approach Review / Selection (DND, TC, DoD, Host Nation, Jeppesen, RCAP)
A, ANA, and V
Terrain Study (OPC, GNC, JNC, TPC, VNC, Sectional, VTA)
RWY, TWY, Apron (Width, PLR, PCN, LCN, Condition, Obstacles, etc.)
Security (Airport Security, Area Stability, etc.)
Ethnic / Regional Customs & Behaviours (Alcohol, Attire, Behaviour, etc.)
Local Knowledge (Airfield Data Reports, Airfield Familiarization Manual, etc.)

NOTAMs:

NavCanada:	http://www.flightplanning.navcanada.ca
DoD:	https://www.notams.jcs.mil
FAA NTAP:	http://www.faa.gov/NTAP/
GPS:	http://www.navcen.uscg.gov/ADO/GpsActiveNanu.asp
Jeppesen NavData:	http://www.jeppesen.com/wlcs/index.jsp?section=resources&content=publications_notam.html
Jeppesen Chart:	http://www.jeppesen.com/wlcs/index.jsp?section=resources&content=publications_notam.html
RAF:	http://www.ais.org.uk/aes/login.jsp
RAAF:	http://www.airservicesaustralia.com/brief/
Canadian Ash:	http://www.flightplanning.navcanada.ca
Worldwide Ash:	http://www.ssd.noaa.gov/VAAC/

WEATHER:

NavCanada:	http://www.flightplanning.navcanada.ca
ADDS Icing Products for CONUS and S. Canada	http://adds.aviationweather.noaa.gov/icing/
NOAA:	http://aviationweather.gov
U.S. ASOS:	http://www.faa.gov/asos/index.htm
U.S. Duats:	http://www.duats.com
Int'l Weather:	http://www.aviationweatherbrief.com

PLANNING:

DND DFLIP	http://1cadgeo.winnipeg.mil.ca/DFLIP/launch.pdf
GPH 270, DoD IAP	http://164.214.2.62/products/digitalaero/index.html
FAA/DoT IAP	http://www.naco.faa.gov/
CARs	http://www.tc.gc.ca/CivilAviation/RegServ/affairs/cars/menu.htm
TC AIM	http://www.tc.gc.ca/CivilAviation/publications/tp14371/menu.htm
FAA FARs	http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgFAR.nsf/MainFrame?OpenFrameSet
FAA AIM	http://www.faa.gov/ATpubs/AIM/index.htm
Jetplan	http://www.jetplan.com/
FAA's Int'l FIM	http://www.faa.gov/ats/aat/ifim/
Host Nation Regs	http://www.eurocontrol.int/ais/links/world.htm

NOTAMS: *(As Required For Route Of Flight and Materials Used)*

Aerodrome

Departure, Arrival, Departure & Arrival Alternates

Enroute

ARTCC, Airspace, RVSM, RNP, NAVAID, GPS, ASHTAM, etc.

Vendor Specific *(Jeppesen, Host Nation)*

FMS, Enroute Charts, IAPs

Change Notices

PCN for AP & GP, TCN for DoD IAP, CN for DoT/FAA IAP

Specials / Miscellaneous

Special Notices, Temporary Flight Restrictions, Attention Notices, FAA NTAP

NOTAM Websites:

NavCanada:	http://www.flightplanning.navcanada.ca
DoD:	https://www.notams.jcs.mil
FAA	https://www.notams.faa.gov
FAA NTAP:	http://www.faa.gov/NTAP/
GPS:	http://www.navcen.uscg.gov/ADO/GpsActiveNanu.asp
Jeppesen:	http://www.jeppesen.com
RAF:	http://www.ais.org.uk/aes/login.jsp
RAAF:	http://www.airservicesaustralia.com/brief/
ASHTAMs	
Canada:	http://www.flightplanning.navcanada.ca
Worldwide:	http://www.ssd.noaa.gov/VAAC/