

Navigation Charts: Mapping New Strategies

You may soon be scrapping those loose-leaf approach plates, using a new WAC and carrying a miniature AIM in the cockpit

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■ ■ The charts we use to find our way around the airspace have in recent years gone relatively unchanged. Probably the most significant addition came with the inception of terminal control areas, which demanded a new chart showing detailed information concerning the 22 cities deemed to warrant a TCA designation.

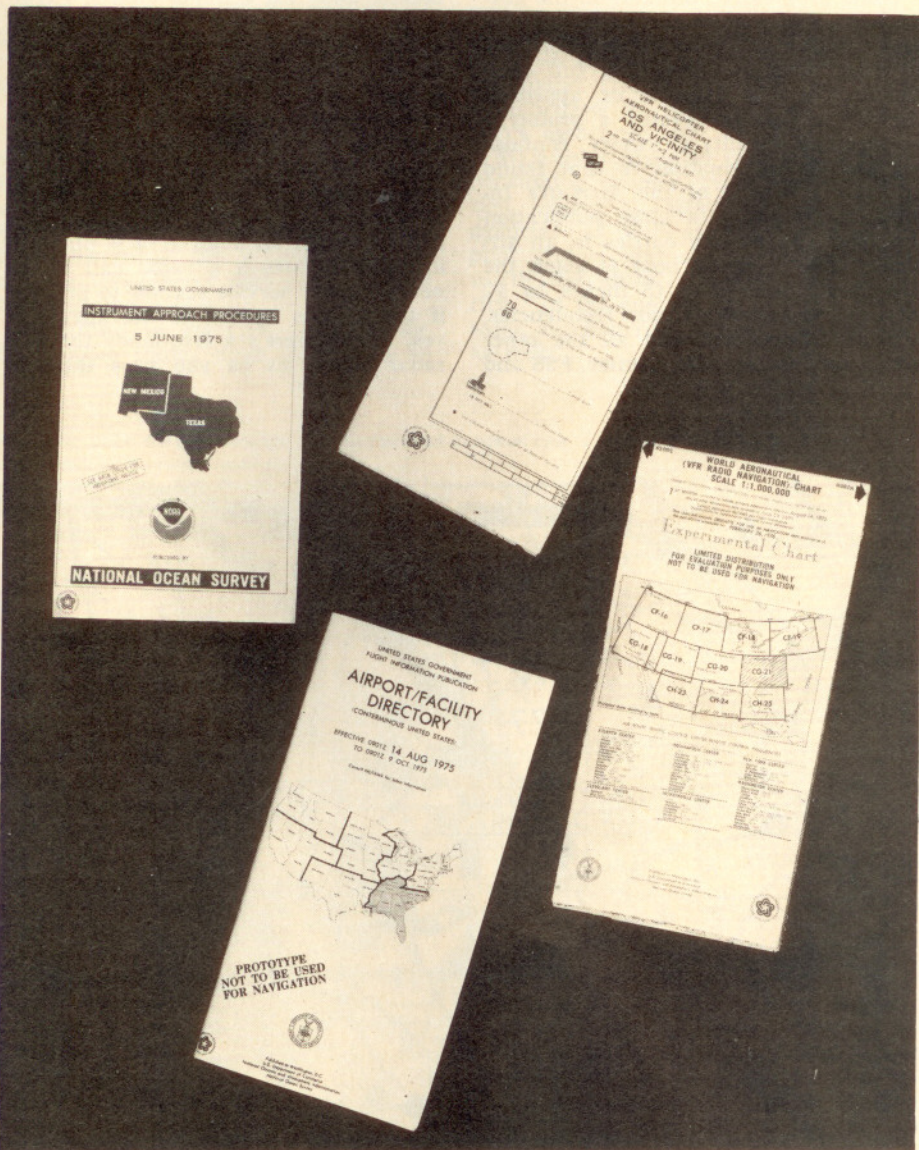
General aviation pilots most frequently use five types of charts as they plunge through the U.S. skies: sectionals; world aeronautical charts (WACs); terminal area charts (TACs), low-altitude IFR enroute charts; and instrument approach charts.

But changes are in the wind, and you may soon be seeing revisions that will leave only the old reliable sectional and the IFR enroute charts, in basically the same form. And an addition or two might be on the way, also.

Here's what's happening:

Experimental WAC. Last year a chart was put out that covered the CG-21 (mid/south Atlantic coastal) area. The test chart is called a VFR Radio Navigation Chart and includes both terrain features and a boatload full of radio navigation information. "More VFR flying is done with radio, rather than pilotage, as the primary type of navigation," says an FAA letter discussing the new chart. The letter notes, too, that many pilots use low-altitude enroute charts for VFR radio navigation, "and there is no fall-back position in case of radio failure."

The proposed chart, which has not yet been adopted, depicts many Victor airways, route distances, frequency changeover points, minimum enroute altitudes, and headings for the routes. That information is overlaid on a shaded relief map of terrain features that also shows most public-use airports,



major highways, bodies of water and cities.

VOR and flight service frequencies are shown as on current VFR charts, but tower and approach frequencies are listed on separate chart panels as is presently done on low-altitude IFR charts.

AOPA staff members who have flown with the experimental chart have generally found it quite useful, and AOPA has recommended publication of the chart with some minor changes. "If adopted," says the FAA, "the chart will gradually replace the conventional WAC over a period of time."

Bound Instrument Approach Procedures. Presently, if you subscribe to the government's instrument approach charts, you receive in the mail a continuous drizzle of new procedures that must be installed into ring binders. Only then are you assured that what you've got is what's current.

It seems, however, that there's a good deal of inconvenience in keeping these things up to date. And frequently unopened brown envelopes full of the latest approaches pile up on an earth-bound desk, instead of making it into the cockpit where they belong.

So last year, the government experimented with a bound book of approach plates covering all of Texas and New Mexico. The Defense Department has been using such books for years, but now the National Ocean Survey (NOS) is giving it a try. The approaches, listed alphabetically by airport, duplicate those that go into ring binders. The only difference is that they're bound together, and the whole book is replaced every

56 days. Although publishing the approaches in book form would use more paper, NOS claims savings in mailing, envelopes, handling, etc., would permit the bound approaches to be sold on subscription (14 volumes for full U.S. coverage) for prices comparable to the current loose-leaf version—or perhaps less.

August 12 has been set as a change-over from loose-leaf to bound approach plates. But there has been some discussion between NOS and FAA, which wants to combine Defense Department and civilian approaches to suit both groups of users, and thus save editing and publication costs.

Airport/Facility Directory. Ever been flying with only VFR charts aboard and needed the approach control frequency for Macon, Ga.? It's nowhere to be found on any of the charts you've got. Your options are to call up the tower and be told by a slightly annoyed controller, "Contact Macon Approach Control, 119.6." Or you can call up the nearest FSS if there's one in range and ask them the question, wait for the specialist to look it up, and then copy it down after he relays the information back to you.

Some progressive thinkers in the government feel you ought to be able to easily look up that information for yourself, without carrying a full complement of IFR enroute or approach charts. So they've created a prototype Airport and Facility Directory, containing similar information to that found in Parts 2 and 3 of the Airman's Information Manual (a large publication that virtually no one carries in an airplane). The proposed book is about the size of a folded chart (5 inches by 10 inches) and includes airport frequencies, runway information and all the other tidbits now in the AIM. Center, FSS and

navaid information is also included.

The U.S. is divided, for test purposes, into seven geographical areas, with each covered by one volume at \$11 per year (on a 56-day publication cycle). You would pay, says the FAA, \$76 per year for full U.S. coverage. The FAA points out though, that Part 3 of the AIM already costs over \$30 per year, and many users of this information would require only one or two volumes to cover the parts of the country in which they fly.

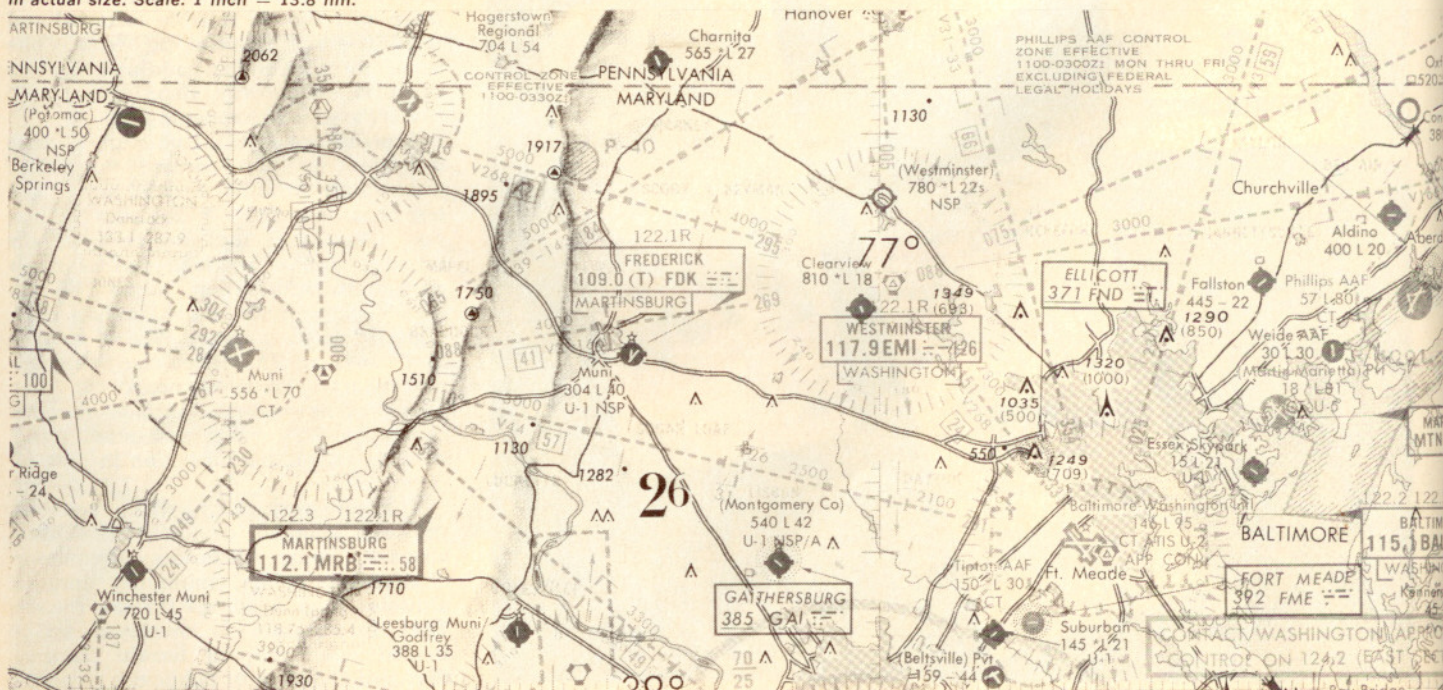
Airports in the book are listed by their name in alphabetical order, and the FAA and other groups coordinating publication of the Airport/Facility Directory are currently pondering a number of other possible changes to such a publication before putting it in service. AOPA recommends that for now, at least, there be no deletions in the airport and frequency information included on sectional or low-altitude IFR charts.

Military Operations Areas (MOAs). These are not new, but instead consolidate and redefine areas that used to be called Alert Areas, Intensive Student Jet Training Areas, and Warning Areas.

MOAs have begun appearing on sectionals and IFR enroute charts. Eventually all the earlier designations will disappear, leaving special-use airspace in only three categories: MOAs, restricted, and prohibited.

A military-operations area can be transited by civilian aircraft even when active. However, flight in the MOA means the pilot must be exceptionally alert for possible military traffic. If a flight through such an area is planned, it might be worth a radio call to the nearest flight service station to find out if the area is in use. If the answer is yes, ask if there's a frequency for VFR radar advisories as you pass through.

Detail from VFR Radio Navigation Chart, reproduced in actual size. Scale: 1 inch = 13.8 nm.



Such caution might just save your neck and that of the jet jockey sharing the nearby air.

Terminal Area Charts. A TAC is, by its former name, a TCA (terminal control area) chart. Whatever the name, the chart is half the scale of a sectional and depicts the proverbial "upside-down wedding cake" airspace restrictions found at certain high-density cities around the U.S.

But it seems the TAC chart is falling into disfavor. It's difficult to obtain in some areas; it's expensive to buy (particularly if you live in an area where two or three TACs are included within the local sectional's coverage); and it adds another piece of paper to fold and unfold in crowded airspace.

Though nothing is firmed-up at this point, the FAA is trying to figure out a way to eliminate terminal area charts and include the pertinent information on sectionals. How to accomplish this task, however, is still a big question.

VFR Helicopter Chart. Helicopter operators in the Los Angeles basin are using the second edition of a chart designed solely for helicopters. Only Los Angeles has such a chart published for civil use, although the military has one for the Washington, D.C., area to aid the airborne movement of personnel between the Pentagon and the various military outposts in the area.

California, says the FAA, has the largest rotary-wing machine concentration, with the bulk of them in the Los Angeles area. Over the years, the helicopter operators developed letters of agreement with control towers around L.A. concerning the routes they'd fly and the frequencies they'd use as they traversed the routes.

According to an FAA cartographer, the chopper routes were charted on an

AAA road map of Los Angeles. Eventually the FAA was called on to map out the routes, frequencies, and prominent landmarks. The results of their efforts are a chart with a scale of one inch to two nautical miles that shows little drawings of oil refineries, college campuses, sports arenas, freeway intersections, and other prominent landmarks the swing-wing pilots might make use of. Most of the helicopter routes follow the L.A. freeway network, and include tower frequencies to be used in specific areas.

At present, no other helicopter charts are scheduled for publication. The FAA reports, however, that a study is being made of charting helicopter routes, VFR and IFR, along the busy Boston-New York-Washington corridor. Such a proposed chart is still in the earliest stages of development.

AOPA is involved on a daily basis with all of these proposed chart improvements. Wallace Goodrich, director of the Airspace Department of AOPA's Policy and Technical Planning Division, is looking for comments from pilots on the chart proposals. Of particular concern is whether the bound approach plates and the airport/facility directory will be accepted if alphabetized by airport name, with a cross-index by city. At present, instrument approach charts are found grouped by state and then alphabetized by the name of the airport's associated city.

Making changes in charts is a time-consuming process, involving coordination among a variety of government agencies, as well as AOPA and other pilot groups that use the charts. "It's worth the effort, though," said Goodrich. "In the end we try to make flying safer, and hopefully simpler and cheaper as well." □

Helicopter Chart for Los Angeles: a portion printed in actual size (1 inch = 2 nm) shows routes following freeways.

