



CAPTAIN'S LOG

VOL. III NO. 2

FALL 1977



McDONNELL DOUGLAS DC-9

CONTRIBUTIONS WANTED

Anyone who wishes to contribute articles, pictures, or other items of interest to the membership are invited to do so. The CAPTAIN'S LOG and quarterly newsletter AIR LINES will publish members wants, trades and material concerning the history of airlines and airliners. Interesting experiences related to airlines will also be accepted for publication. Photographs and drawings will be published if of good quality and if accompanied by a full description.

Any articles or material on timetables, post cards, photography or modeling should be sent directly to the appropriate editor listed below. All dues and other material for publication should be sent to the Publication Editor.

PUBLICATION DATES

The CAPTAIN'S LOG is mailed quarterly to members on the 15th of March, June, September and December. Deadline for material is the 20th of the month prior to mailing date. AIR LINES is a quarterly publication mailed to members on the 15th of February, May, August and November. Material for this publication is accepted up to the 10th of the month of publication.

The CAPTAIN'S LOG is send 2nd Class mail, so please allow ample time for delivery. AIR LINES is sent via first class mail.

The CAPTAIN'S LOG and AIR LINES are the official publications of the WORLD AIRLINE HOBBY CLUB. Current membership fee is \$10 per year for US and Canadian members and \$12 for all others. Please add \$5 additional if you wish air mail delivery (foreign members only). Make checks payable to "World Airline Hobby Club". Send dues to the Publication Editor.

CHANGE OF ADDRESS

Please report any change of address promptly to the Publications Editor. Improper address will result in members not receiving their copies of the CAPTAIN'S LOG and AIR LINES. It also requires the payment of triple postage, in some cases. Additional postal charges will be passed onto members who fail to notify the Editor of any changes in their address.

EDITORIAL STAFF

Editor: Paul Collins 3381 Apple Tree Lane Erlanger, Kentucky 41018
Tele: 1-606-342-9039

Post Cards: John Moore 2062 Sloan Street St. Paul, Minn. 55117

Model News: Steve Kenyon 1453 Clark Avenue Yuba City, Calif. 95991

Timetables: Frank J. Lichtanski 1 Helvic #2 Monterey, Calif. 93940

Insignia: Bob Feld 630 East Avenue J-4 Lancaster, Calif. 93534

International: Joop Gerritsma P.O. Box 776 Welland, Ontario L3B 5R5

Artist: Tom Kalina

Contributing Editors: Dave Minton George Kinney George Gearley Jeff Matera
Peter Black Jack Stowers Airline Information Club

Please send material that you wished published to any of the people listed above, paying attention to what department they handle. Any material you have doubts about as to what category they belong in, please forward to the editor.

Thank you.



Allegheny DC-9 at CVG. Photo by Air Pix

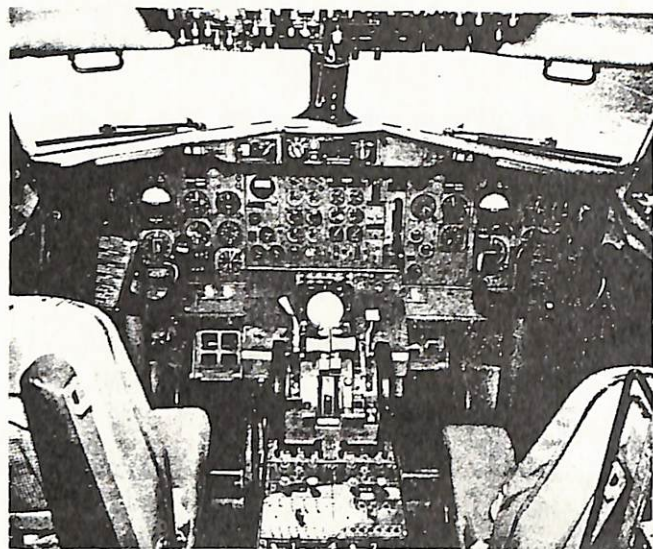
CAPTAIN'S LOG

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Note: The reverse side of pages containing post card pics have been left blank intentionally.



.....from the left hand seat.....

As usual, this issue of the "Log" is a little late getting to you. But after you check the contents, I don't think you will mind--at least not much.

Some great material in this issue on modeling the DC-9 by Steve Kenyon and Dave Minton. Two in-depth articles in one book, you can't beat it! The beginning of a multi-part series on foreign (to the U.S.) airlines by our international editor Joop Gerritsma. This looks like it will be a very interesting feature. Post card people should enjoy this issue also. We are going to start publishing the Douglas card catalog that has been put together by John Moore and Pete Black. Also we will be asking members to help us set up a system for cataloging Boeing 727 cards. See the post card section for additional information on this.

Marion Pyles will be starting a mini-series this issue on the history of Allegheny Airlines. This should prove to be a very interesting series also. We welcome all those interested in the history of airlines and airliners to send in material for publishing. You don't have to be a professional writer to share your information with the membership. Decal Capers by Steve Kenyon continues in this issue also. Steve has come up with some real good material for this issue.

There was comment in the last issue of the newsletter about changing the name of the organization. Well, according to letters received from members so far, there will be

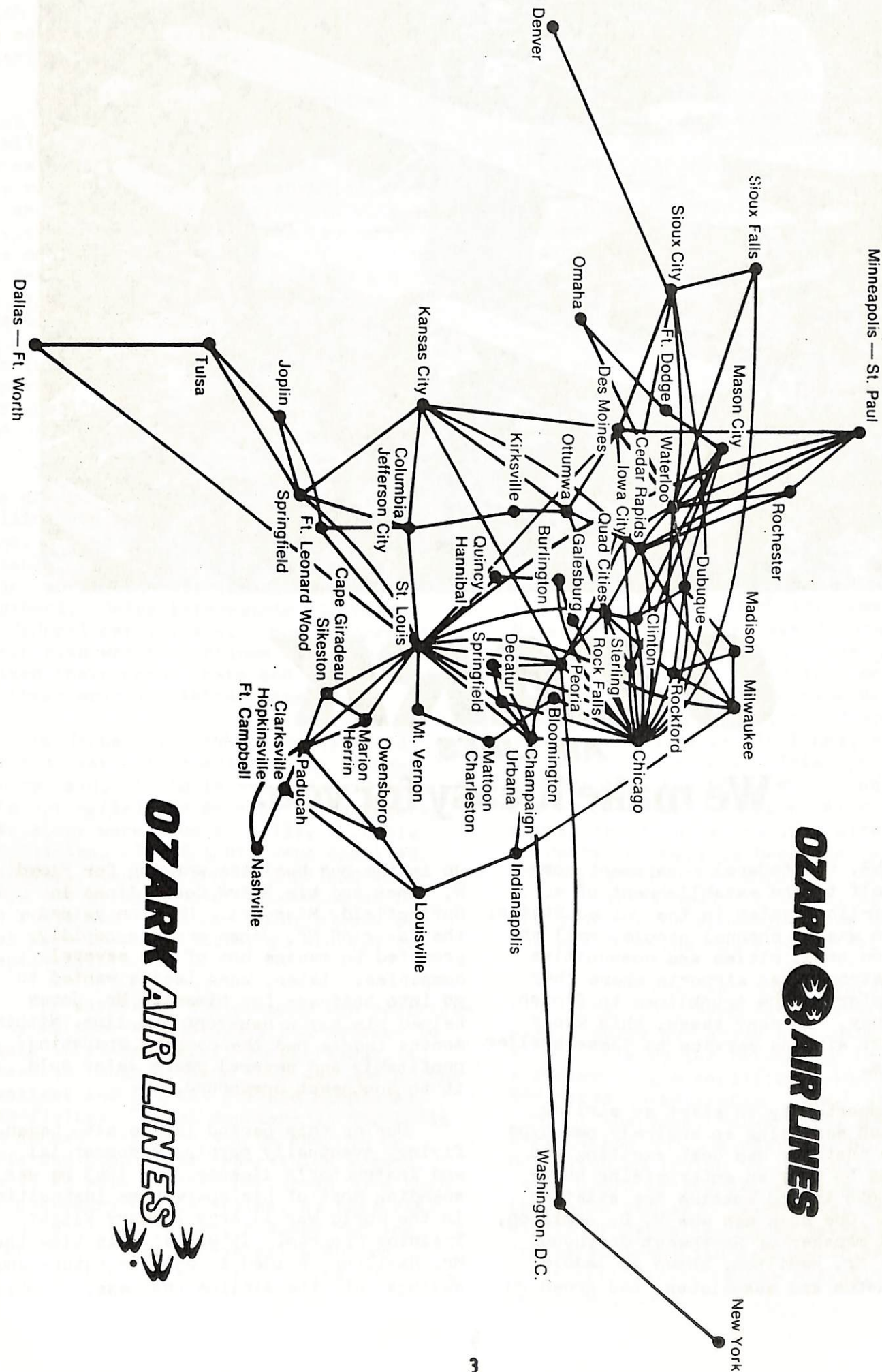
NO change in the Club name. With this out of the way, I can now go ahead with plans to have plastic membership cards made. There has been some suggestions made about having a Club patch or emblem of some type made. Anyone having a design for such a emblem, please send it in and we'll see what the other members think about it.

Sometime back, I asked members if they would be interested in purchasing a Club jacket (wind-breaker). The response at that time was just about nil. Now that we have over 200 members, perhaps a little more interest can be generated. At that time a high-quality jacket could be obtained for about \$13.00. This would cover the cost of the jacket and the Club logo printed on the back of the jacket. I would like to hear from anyone that would be interested in purchasing such a jacket. SEND NO MONEY at this time. I would just like to get a idea of how many people would be interested.

The next issue of the "Log" will be devoted to the charter carriers of the world. We will try to cover all the major carriers and some of the more important smaller charter lines. Anyone having any information on these kind of operators, is ask to send it in. All such material will be returned to their owners. Featured aircraft will be the Lockheed Electra. I'm sure there is a lot of information on this aircraft floating around out there. Anyone wishing to do a feature article on this bird is welcome to do so. Do I have any takers? Drop me a line and let me know what you have.

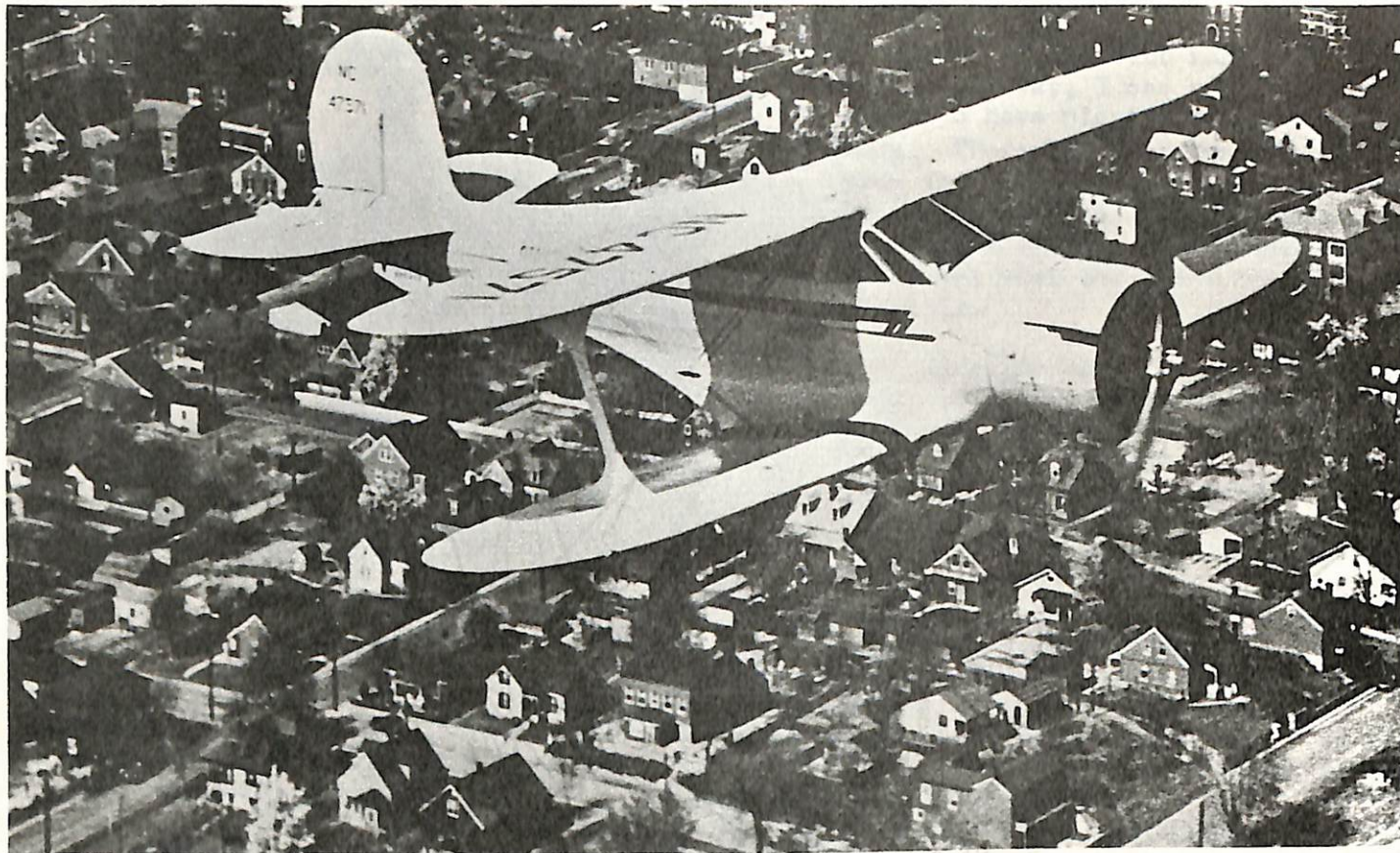
I had hoped to have some pictures from the convention for this issue of the "Log", but due to problems beyond my control, I will not be able to do so. Hopefully these pictures will be ready for the next issue. I would also like to receive any pictures that was taken by members attending the convention. These would be returned after printing.

Now would be a good time to start saving those bucks for the convention next year in Toronto. The Canadians will be going all out to top this years "event" and I'm sure you will not want to miss it. In the next newsletter I will try to have some info on the DC-3 charter. Until then, happy collecting.



OZARK AIR LINES

OZARK AIR LINES



OZARK

AIR LINES

We make it easy for you.

In 1943, the federal government committed itself to the establishment of a "feeder" airline system in the United States. This system was to channel people, mail and freight from small cities and communities to major metropolitan airports where they could transfer to the trunklines to finish their journey. In many cases, this would be the first airline service to these smaller communities.

The opportunity to start an airline from scratch servicing an entirely new type of airline customer was both exciting and challenging to many an enterprising businessman, both in and outside the aviation community. One such man was H. D. Hamilton, a regional manager of Southwest Greyhound Bus Line. Mr. Hamilton, known as Laddie by his friends and associates, had grown up

up in the bus business working for Floyd W. Jones and his MoArk Coach Lines in Springfield, Missouri. He soon gained the favor of Mr. Jones and was rapidly promoted to manage one of his several companies. Later, when Laddie wanted to go into business for himself, Mr. Jones helped him buy a bankrupt bus line. Within months Laddie had the company operating profitably and several years later sold it to Southeast Greyhound.

During this period Laddie also began flying, eventually earning a commercial and instructor's license. By 1943 he was spending most of his spare time instructing in the World War II Army Primary Flight Training Program. It was at this time that Mr. Hamilton decided to put his future and savings into the airline business. Combined

with his bus line experience, Laddie felt he could use his aviation knowledge to start a feeder airline.

Realizing the finances required for such a venture were far beyond his means, Hamilton decided to seek help from Floyd Jones again. The conservative Mr. Jones was not one to jump into anything, but agreed to a meeting in St. Louis with his lawyers to consider Laddie's proposition. The meeting was held at the office of B. T. Mattingly with Jones, Hamilton and A. G. Heyne in attendance. With the enthusiastic support of Heyne, Laddie managed to convince Jones and Mattingly to join him in financing his airline. Later, on September 1, 1943, the company was incorporated in the state of Missouri under the name Ozark Airlines.

In order to win a federal certificate, the group had to prove they were "ready, willing and able" to run a successful airline. To show themselves better than the sizable competition, Hamilton decided to start an airline within the borders of Missouri. Being intra-state, it needed no federal certificate. Once in operation, their plan was to continue until they received their certificate and then expand on their original intra-state route.

On January 10, 1945, they started service over a triangular route between Springfield, St. Louis and Kansas City, with Springfield as general headquarters. Flag stops were made at Rolla, Columbia and Clinton. Two flights were operated each day, both leaving Springfield at 9 a.m., one going counter-clockwise around the route and the other going clockwise. They were known as Routes #1 and #2, respectively.

For aircraft, the company was restricted by wartime availability but managed to obtain three Beechcraft Staggerwings, a five-seat cabin biplane that was one of the classiest and fastest private airplanes then flying. Ticket counters in St. Louis and Kansas City were set up and run by girls who doubled as reservation agents. The three pilots hired performed more than the customary flying duties, as they also acted as ticket takers, baggage men and flight attendants. These extra duties served little to detract from the job since

flying the Staggerwing was considered quite a privilege by most pilots. In fact, everything about the operation was done on a first-class basis, because the Ozark group knew they were selling a new idea not only to the public, but also the government, whom they were counting on to help support this public service.

In late summer, they introduced twin-engine Cessna T-50 Bobcats and traffic began to grow rapidly, but it also became increasingly apparent that the federal certificating procedures would take well into 1947. Although their finances were healthy and their traffic revenues growing, they were operating at a deficit and could not continue without the federal subsidies that went along with the federal certificate. After considerable thought, the operations were stopped on November 3, 1945. Hamilton would have to continue his fight for their certificate in hearing rooms and law offices, but they had shown the FAA and the CAB they knew how to operate an airline.

The next several years saw many more ups and downs for Ozark Airlines. In November, 1946, Ozark was recommended for several routes throughout Missouri, Oklahoma and Kansas by a CAB examiner. But when the final Board decision was handed down in December, 1947, the Board awarded the routes to Parks Air Lines, an affiliate of Parks Air College. This was done on the grounds that the Missouri routes were economically and geographically tied to routes in Illinois and Iowa already awarded to Parks in previous hearings, and for which Ozark had not applied. The Board noted Ozark's qualifications, but said the over-riding economic issue called for the award of the route to Parks.

Within the next three years, Parks Air Lines would experience severe financial trouble and would not inaugurate service on its routes before the CAB ordered a review of its certificate in the form of the Parks Investigation Case. In the outcome of the case, Parks would lose its certificate and the Ozark group, who had not given up trying to get their certificate, would be awarded a large portion of the Parks routes. Ozark later bought the assets of Parks including several DC-3s and began scheduled service on the same day their certificate became effective--26 September, 1950.

There were no bands playing, except maybe in the hearts of a few optimistic souls who dreamed of an airline. Only one passenger boarded Flight 2 that Tuesday morning at 6:58 a.m. Before the aircraft reached its Chicago destination, another traveler had boarded in Decatur.

It was September 26, 1950, the day Ozark Air Lines started operation on its single route from St. Louis to Chicago. There were three intermediate stops: Springfield, Ill., Decatur and Champaign/Urbana.

There were also four aircraft, the venerable DC-3.

During the 27 years since that date, it has been a story of growth for Ozark Air Lines. A story of expanded routes, increasing passenger loads, and new, modern jet equipment which put the carrier right "Up There With the Biggest" as noted in a recent advertising slogan.

Before 1950 came to an end, the new airline had already expanded to five additional stations. These were Peoria, Indianapolis, Burlington, Quincy/Hannibal, and the Quad Cities area of Moline, East Moline, Rock Island and Davenport.

Also, passenger traffic grew to a grand total of 4,001 travelers by the time 1951 was welcomed in.

During the next year expansion continued. Six more stations were added to the system, and the year saw 49,354 passengers boarded. The new cities were: Cape Girardeau, Rockford, Paducah, Joplin, Kansas City, and Springfield, Missouri.

There were no big changes during the next three years, as only three cities were added to the system. These were Columbia in 1952, Milwaukee the following year, and Jefferson City in 1954. By this time passenger traffic had grown to over 156,000 a year.

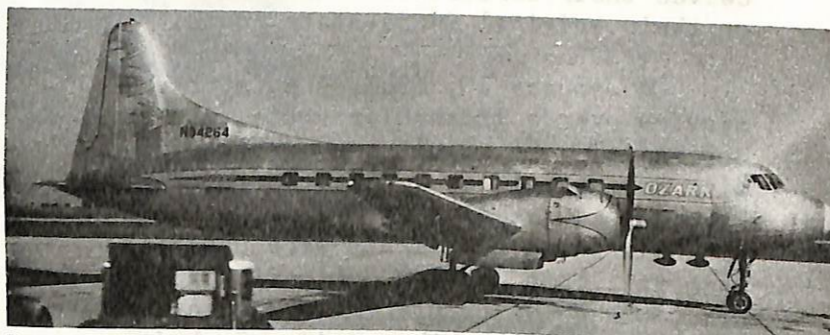
In 1955 growth was rather dramatic, however. Eleven stations were added to the route network. Up to this time the Company had been serving cities in Iowa, Missouri, Illinois, Indiana, Kentucky, and Wisconsin. Now Tennessee came aboard with the addition of Nashville and Clarks-



Douglas DC-3 Introduced Ozark service and used until late 1968.

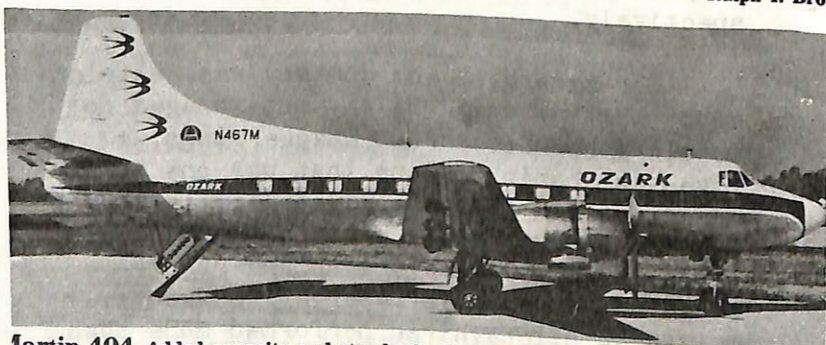


Fairchild F-27 Company entered jet era with this plane in 1960.



Convair 240 Used for short period in early 60's to expand fleet.

Photograph by:
Ralph I. Brown



Martin 404 Added capacity and standardized fleet in mid 60's.



ABOVE: Twin-engine Cessna T-50 Bobcat flown during the mid-forties.

BELOW: Twin-engine Douglas DC-9 currently being flown by Ozark.



OZARK Air Lines Douglas DC-9 Jet

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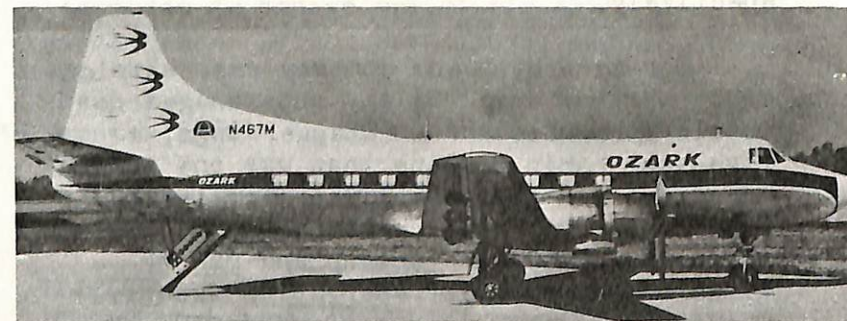


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ville/Hopkinsville/Ft. Campbell. Other new cities were: Marion/Herrin, Mattoon/Charleston, Clinton, Sioux City, Waterloo, Dubuque, Fort Dodge, Mason City, and Louisville.

The year 1956 brought the addition of two more cities--Des Moines and Ottumwa--while three stations were added in 1957. These were Cedar Rapids, Minneapolis/St. Paul and Rochester, which also added Minnesota to the map.

One big milestone was marked on 1957 also. The Company boarded its one millionth passenger on January 19. That's how many had been carried since that Tuesday morning in 1950.

Once again expansion slowed, and no additions were made to the system until 1959. That year Omaha, Madison and Iowa City were added, and Nebraska brought the number of states served to ten.

Also in 1959 the two million passenger mark was reached on June 26.

The next year brought a big change in the character of Ozark. Prop-jets were added to the fleet and the Company joined the turbine powered era. The new F-27 brought added speed--up to 300 mph--and added passenger capacity with seating for 40 travelers. Also Bloomington, Galesburg and Kirksville were approved for the line.

Sioux Falls, Mt. Vernon and Sterling/Rock Falls were added in 1962, followed by Ft. Leonard Wood and Tulsa in 1963, as Oklahoma and South Dakota were put on Ozarks route map.

By 1964 five million passengers had been carried. That total was reached on January 20.

The following two years proved to be some of the most exciting ever for anyone involved with Ozark. In 1965 one million passengers were carried in a year for the first time, and the planned purchase of jets was announced. In 1966 Ozark joined the pure jet era when the first new twin-engine DC-9 was placed in service on July 8. As far as any Ozark employee was concerned, the Company had really come of age with that 560 mph, 75 passenger aircraft joining the fleet.

Also in 1965 the purchase of 21 FH-227B prop-jets was announced, and these started entering the fleet in December 1966. This was a stretched version of the F-27, and foretold the long awaited demise of the DC-3. As many as 26 of that latter aircraft had been in the fleet at one time. Other Ozark aircraft had been the Martin 404 and the Convair 240.

Also during 1966 the Company really stretched its wings. System boundaries were moved westward to the Rocky Mountains as Denver service was inaugurated, and Colorado became a Ozark state.

By now growth and modernization were not to be slowed. The first two-million passenger year was recorded in 1968, and the Company sported an all-turbine fleet for the first time. Ozark operated its last DC-3 flight on October 26, and the following day only the new DC-9s and FH-227s were flying the system.

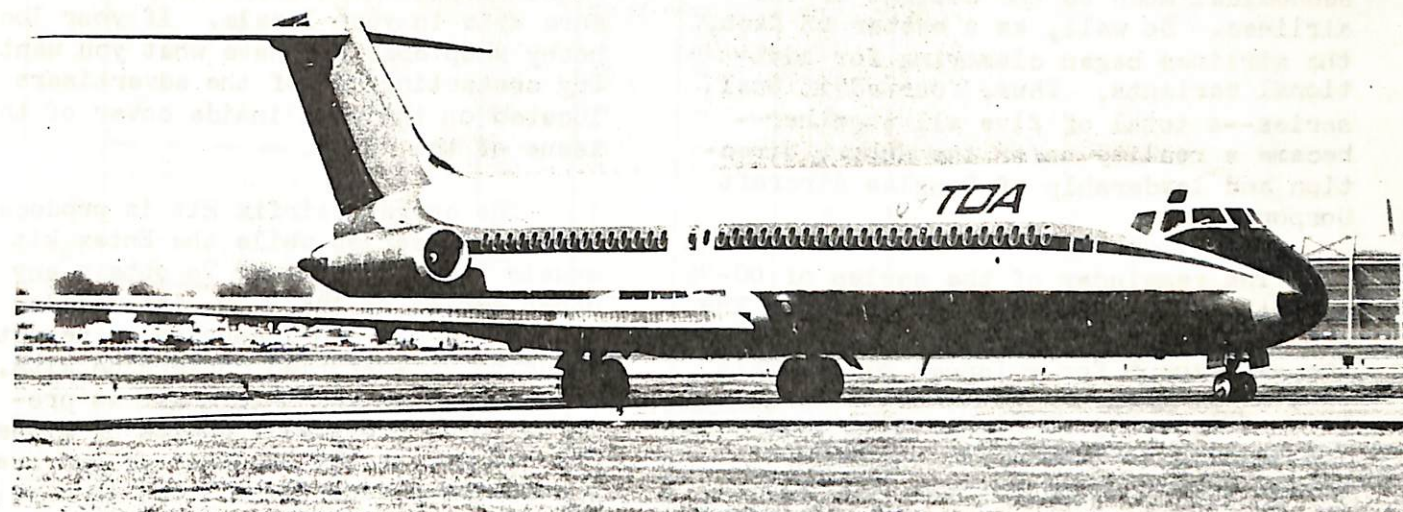
Again in 1969, Ozark showed how a little company could become even bigger. The system became two-thirds transcontinental with the addition of New York and Washington, D.C. Later in the year Dallas/Ft. Worth was added, and now the map included New York, Texas and Virginia.

In 1972 the 20 millionth passenger was carried on December 3, and three million passengers were carried in one year for the first time. It had taken over 10 years to carry that many travelers in the beginning.

Today the Company serves 46 cities in 15 states. Its system stretches from the Rocky Mountain city of Denver on the west, to Washington, D.C. and New York on the east, and from Minneapolis/St. Paul southward to Dallas/Ft. Worth. The fleet has grown from four DC-3s to 17 FH-227B prop-jet and 31 DC-9 jets.

What next? Well, Ozark is seeking routes to Phoenix, Canada and Mexico. With such ideas in mind, it is a little difficult to tell!

Thanks to Mr. Charles R. Ehler, Manager, News Bureau for Ozark Air Lines for the preceding history of his Company.



DOUGLAS MODEL 2086

by

Steve Kenyon and Dave Minton

This will be a two part article by Steve and Dave. The article will deal with both the real bird and material on modeling the DC-9. While some material will be repeated, I think you will be interested in the way the two gentlemen present their subject. We will start with Steve's article and then move on with Dave's presentation.

One Bird To Another

1962 was a very good year.

It spawned a significant event which eventually would have tremendous impact, socially and economically, on the world. Although it arrived unheralded and unannounced, witnesses could sense the excitement it would cause as they read and re-read a design study just released. It was known simply as Douglas Model 2086.

This study pioneered the way for the fabrication of still another variety of airplane. Only this airplane was destined to become the successor to the "World Famous" DC-3. As one writer stated, after

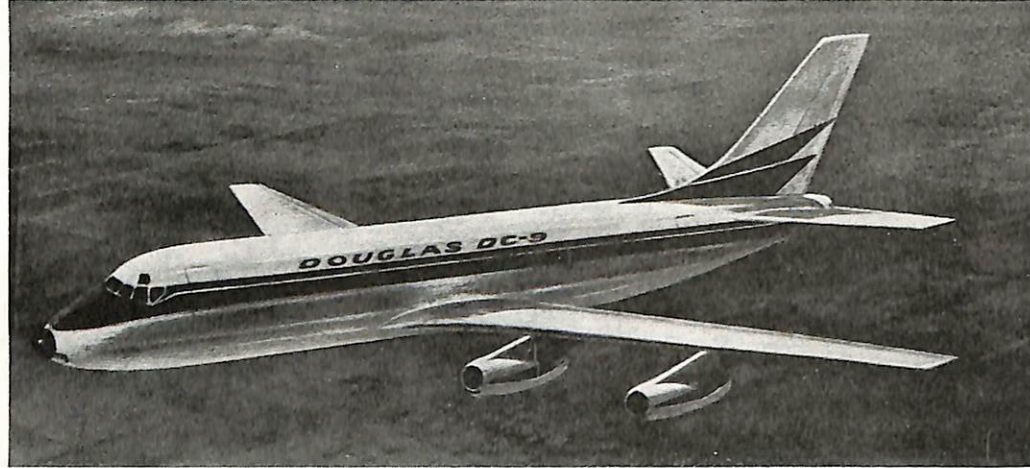
reviewing the project, "Ah! Ha! May the Grand Old Lady now finally rest in peace." He referred, of course, to the retirement of the DC-3. Thus, a long line of historical chapters finally drew to a close as writer after writer put finis to the seemingly never-ending saga of the workhorse of the World. Her replacement--a newly conceived idea---proudly stood on the threshold of a new era as the Douglas DC-9 appeared on the horizon. And, thus, it was born.

Destined for instantaneous fame and fortune, the DC-9s first airframe began to take shape at the end of Spring, 1964. The passage of a few additional months produced the first prototype. She emerged from her dark and cavernous nest to rest lightly and gently in the speculum of her full splendor on the tarmac of Mother Earth. Shortly, man would unbind her and this magnificent beast would be allowed to join her contemporaries in the sky.

Initially, the DC-9 was manufactured as a single version with two variants--the model 11 and the model 15. The difference

between the former and the latter was engines, fuel capacity and weight. This series proved to be very airworthy and economical much to the delight of the airlines. So well, as a matter of fact, the airlines began clamoring for additional variants. Thus, four additional series--a total of five all together--became a reality under the superb direction and leadership of Douglas Aircraft Corporation.

The remainder of the series of DC-9s were the -20, -30, -40, and the -50. The -20 series had the same dimensions as the -10 except for a longer wing. This lengthened wing was designed to operate more efficiently at higher altitudes (pertaining to take-offs) and under warmer ambient temperatures. The -30, 40 and 50 series had re-designed wings



DOUGLAS DC-9 Left: Artist's conception of medium-to-short range passenger jetliner being offered by Douglas Aircraft Co., for operation in 1963. Powered by four Pratt & Whitney turbofan engines rated at over 8,000 pounds of thrust, the DC-9 will accommodate 68 first-class passengers or 87 tourist passengers and have a speed comparable to DC-8's. Wing span, 94 feet.

that included new high-lift devices such as full span leading edge slats and double-slotted flaps. The span was also increased, along with each series increased fuselage lengths. The series -40 and 50 also had the height of the vertical stabilizers increased by six additional inches. The latter two series had increased fuel capacity over the other three series. The -50 series was also re-designed inside for greater passenger comfort and service. Actual dimensions will be listed in later paragraphs for the modeler's reference.

Models of the DC-9 are mainly provided by Airfix and Entex: Airfix is 1:144 scale while Entex is 1:100 scale. There are also some other models such as the Aurora 1:72 scale "giant" plus a number of desk size

models provided by the aircraft manufacturer. Which kit to use for your model would have to be based on your individual requirements and availability of one or more kits in your locale. If your local hobby shop does not have what you want, try contacting one of the advertisers located on the back inside cover of this issue of the "Log".

The current Airfix kit is produced in the -30 series while the Entex kit models the -40 series. To obtain any other series of the DC-9, the modeler is left to his own ingenuity or resort to using vac-u-formed conversion kits. Presently, one vac-u-form kit is produced which provides a choice of either the -10 or the -50 series. If you are a complete novice (like I am) in working with vac-u-form kits, try writing to

Drew Eubanks in Chicago. He's an experienced modeler who is full of hints and really enjoys assisting other people with their modeling problems. His complete address is in the WAHC membership roster.

Aircraft dimensional statistics for modelers and several new decal capers will follow.

Reference material used in this article will be acknowledged at the end of the article on the DC-9.

Following are a number of drawings depicting various DC-9s. Dave Minton's article will follow.

MCDONNELL DOUGLAS DC-9 DIMENSIONAL DATA
(for modelers)

Model	Wing Span	Length	Height	Wheel Trk	Wheel Base	Doors		Frt/Bge
						Pass.	Serv.	
DC-9-10	89ft 5in	104' 4-3/4"	27' 6"	16' 6"	43' 8 1/2"	(H) 6' 0" (W) 2' 9 1/2"	4' 0" 2' 3"	4' 2"
DC-9-20	93' 5"	104' 4-3/4"	27' 6"	16' 6"	43' 8 1/2"	fwd rear (H to sill) 7' 2" 7' 2"	4' 5" 3' 0" 3' 6"
DC-9-30	93' 5"	119' 3 1/2"	27' 6"	16' 6"	53' 2 1/2"	same as above	Dimensions for all doors as the same as above.	
DC-9-40	93' 5"	125' 7-1/4"	28' 0"	16' 6"	56' 1 1/4"	same	Same as listed above	
DC-9-50	93' 5"	133' 7 1/4"	28' 0"	16' 6"	60' 11"	same	Same as listed above	
DC-9-60	?	?	?	?	?	?	?	?

(don't be surprised if you see one. McDonnell Douglas is presently preparing a data study. And history shows that the majority of W.D. data studies have become a reality)

Legend: (H) = Height of door.

(W) = Width of door

fwd = Forward freight/baggage door

rear = Rear freight/baggage door

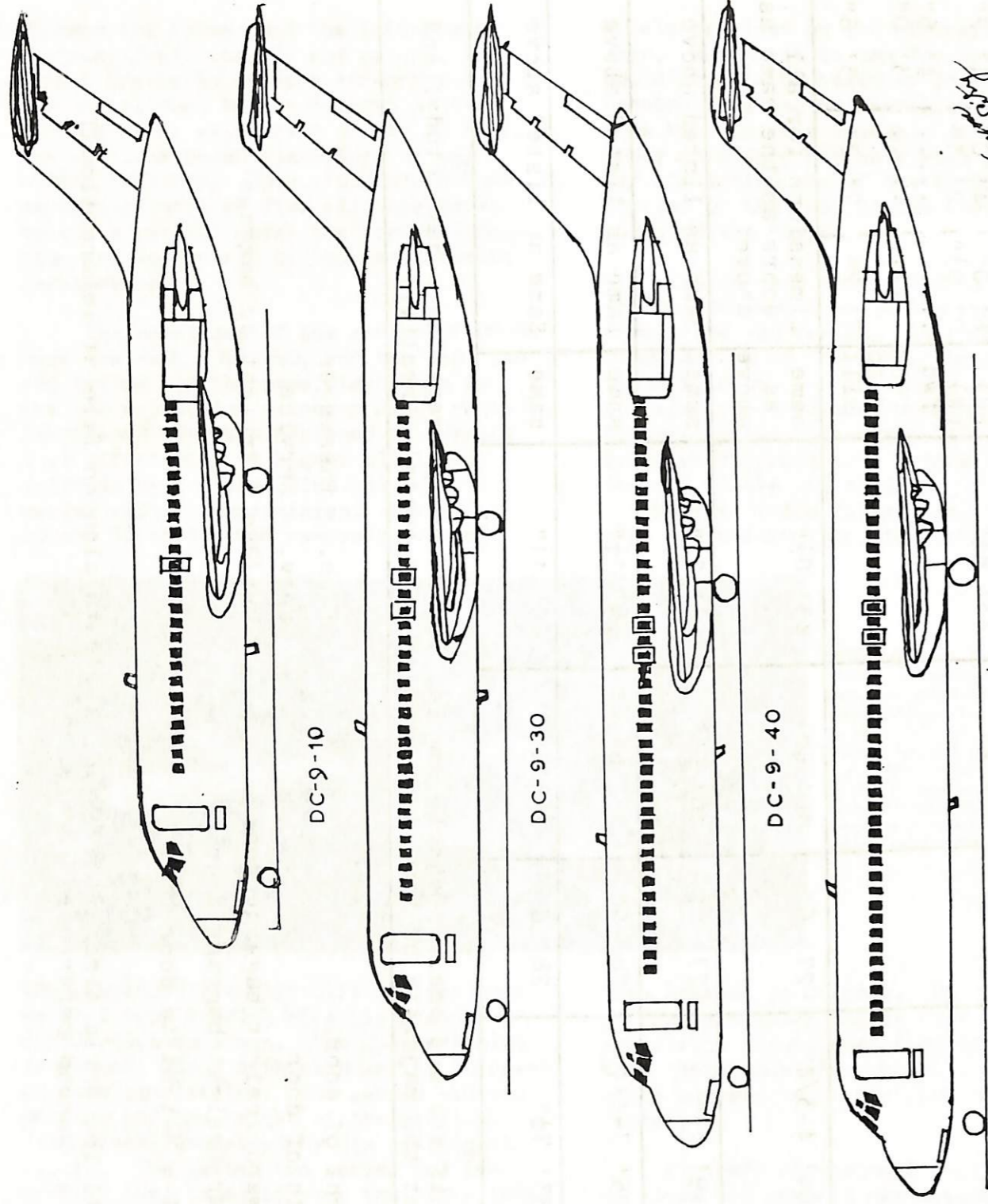
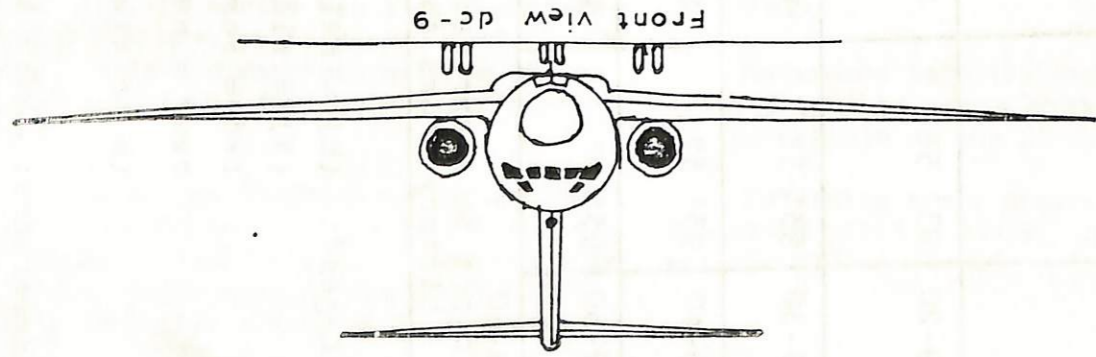
(H to sill = Height to door sill

Pass. = Passenger

Serv. = Service

Frt/Bge = Freight or baggage

Reference: JAMES All The World Aircraft 1975-76. All data also on file at International Mini Model Museum reference library.



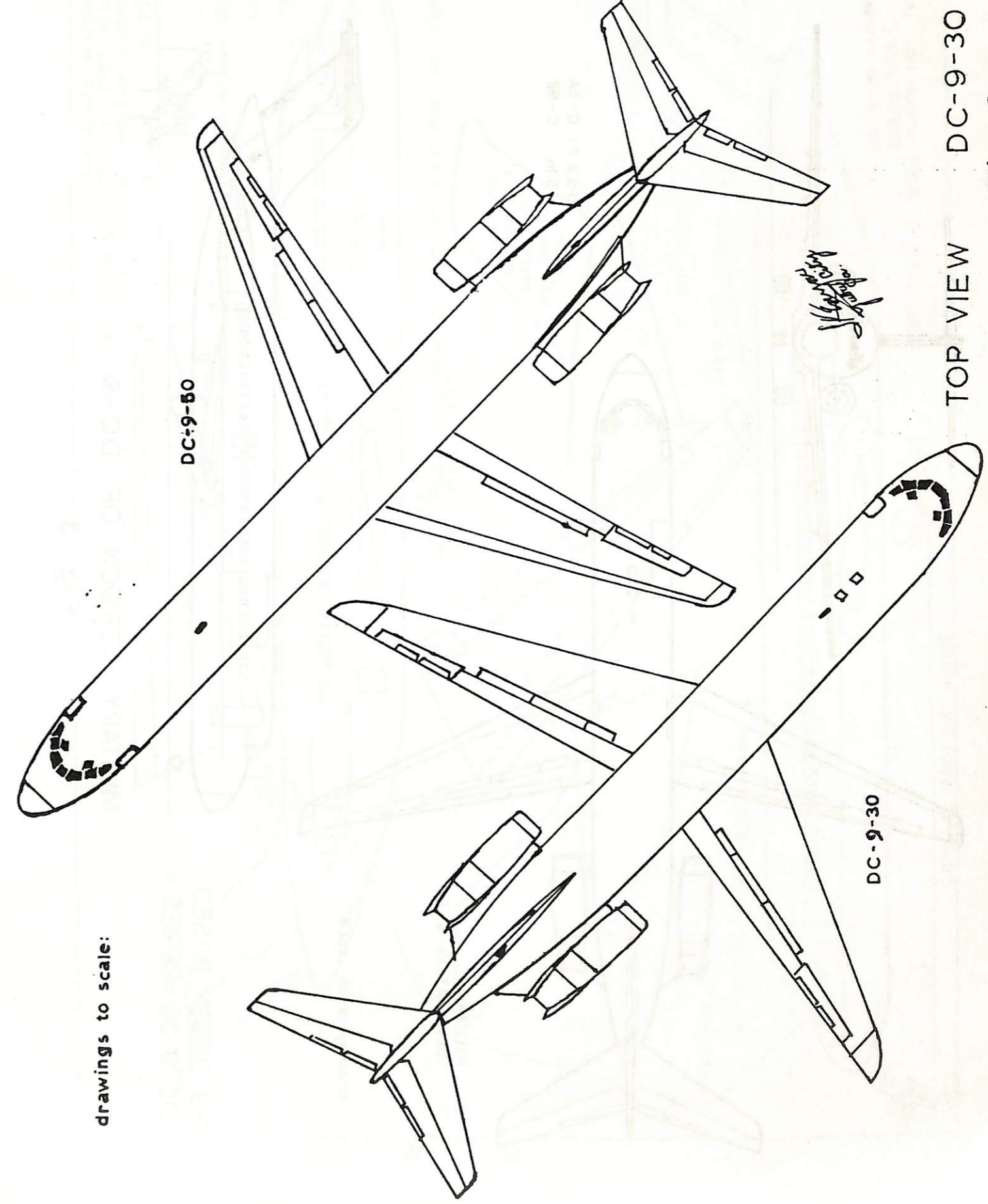
Handwritten signature

PROFILES OF DC-9 MODIFICATIONS

Fig. 1

all drawings to scale

drawings to scale:

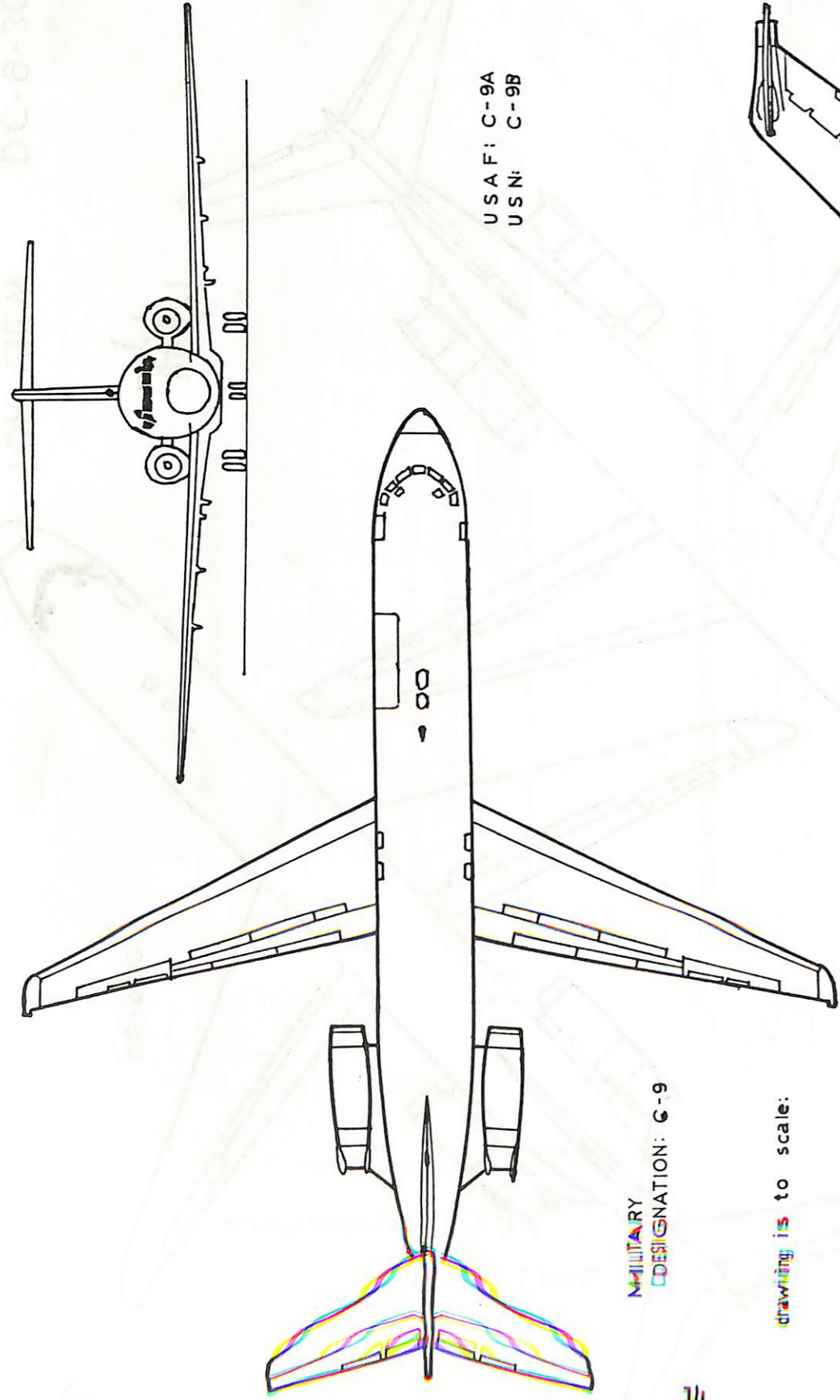


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TOP VIEW

DC-9-30 & 50

Fig. 2



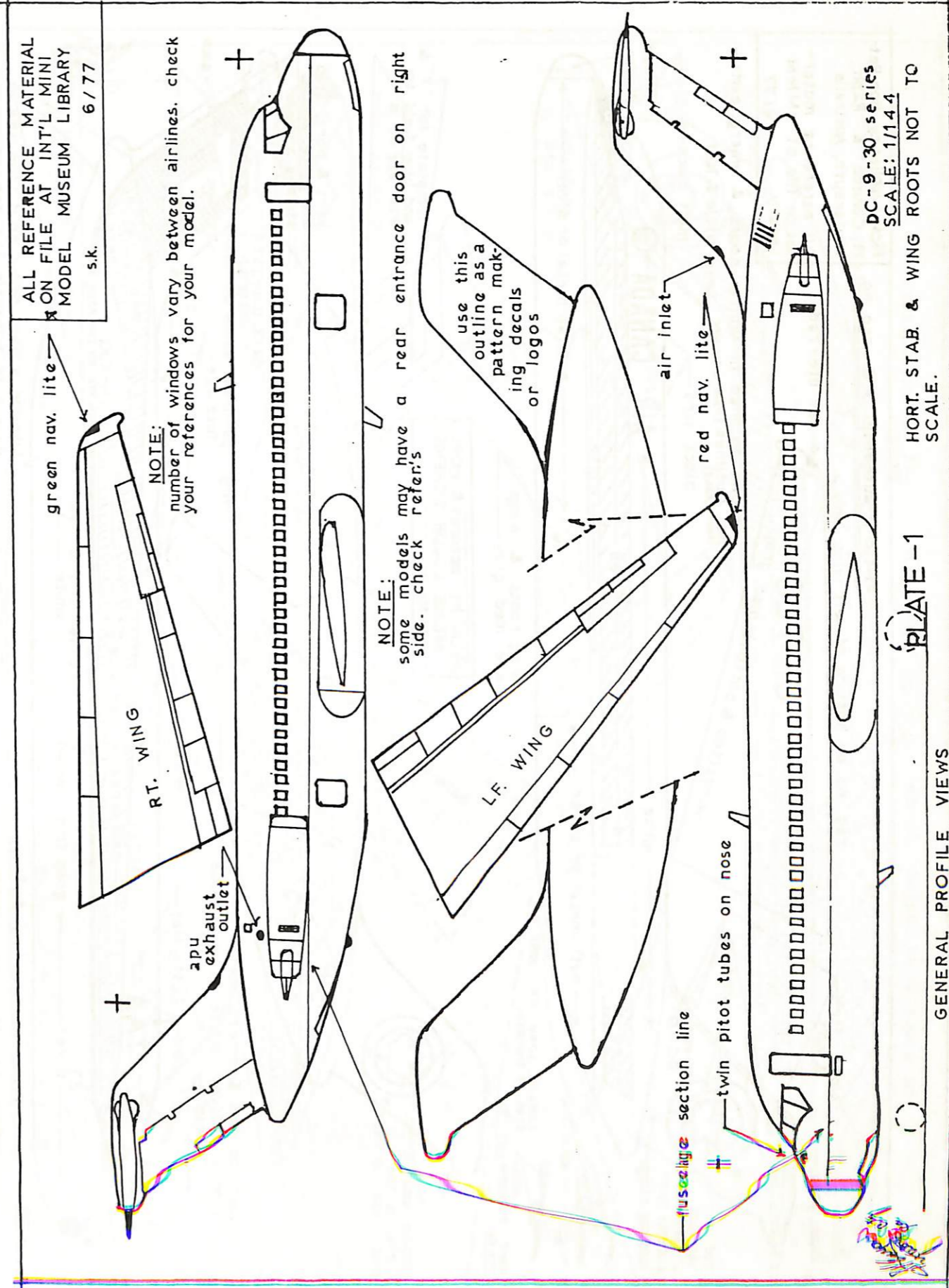
MILITARY DESIGNATION: C-9

drawing is to scale:

C-9 DESIGN BASED
DC-9-JO SERIES

MILITARY VERSION OF DC-9

Fig. 3



In modeling the DC-9, one has several choices. Thus, even though a recent issue of IPMS Quarterly discussed the DC-9, this article in no way repeats that article. There are several DC-9 kits on the market, which are as follows:

a/c	scale	maker	decals
DC-9-10	1/72	Aurora	Hughes
DC-9-40	1/100	Nitto	TDA
DC-9-40	1/100	Entex	SAS
DC-9-10	1/120	Revell	SAS
DC-9-10	1/120	Revell	Aero Mexico
DC-9-30	1/144	Airfix	KLM n/c

Besides the above, the Aurora kit has in the past come boxed with KLM, TWA, EAL and Air Canada decals. And the Revell kit has been boxed with Delta, Prototype and Aeronaves markings. In addition, Revell had made available, in the past, the following decals: Ozark, Bonanza, KLM o/c, Iberia o/c, Alitalia o/c, Air Canada, Swissair, Southern o/c, and Allegheny o/c.

Currently available are the following decals for the Airfix kit: Micro Scale Sheet 44-6--Hawaiian Air n/c, Hughes Airwest, Texas International n/c, and EAL. Sheet 44-18--ALM n/c, Atlantis, Alisarda and TDA. Sheet 44-23--JAT, Garuda and North Central. From Fowler one can obtain Southern n/c and Austrian. All of these decals are available from Victor 66. A note on Micro sheet 44-18: In order to be correct, this requires conversion of the Airfix kit to a Series 40 for TDA and a Series 14 for Alisarda. The other two are correct as Series 30. Sheet 44-23 comes with the cheat lines printed so painting is held to a minimum. Also, the fuselage markings for the ALM and the Hawaiian Air models are given on the decal sheet.

KIT REVIEWS

Because of the availability of the Airfix kit and decals for it, most of this article will focus on it.

Aurora DC-9: I have seen this kit made into a very nice Lockheed S34 Viking.
Nitto/Entex DC-9: The fit of the kit is very good and flash is at a minimum. The surface detail is nice and not

overly done. As a Series 40, it would have to be done in either SAS, TDA or Swissair marks. As it happens however, the kit is not really a Series 40, being too short by about 5 mm. Since it would perhaps be most popular as a Series 30, the conversion is as follows: From the front, count back 15 windows on the left side, and remove one. This will keep all of the antennas intact in the event you want to use them. Starting with the last window, count forward 2 windows and remove 2. When removing windows, cut reach window at the same relative location, i.e. at the leading or trailing edge of the window fram. (See drawing for the Airfix kit). In order to make this kit into a Series 40, count back 15, as before, and put in a window from another kit. The Nitto/Entex kit barely captures the shape of the fuselage cross section.

Revell DC-9: This is an old kit and fit is mediocre at best. There is some flash and quite a few sink holes. The surface detail is quite interesting, but not very useful. It is raised and somewhat overdone. On the plus side, the general shape and outline allow one to build a pretty pleasing model, as photo 1 will illustrate. Some



PHOTO 1: Revell 1/120 DC-9-15 with Revell decals. Note: For Series 30, white curves down at nose to lower part of fuselage.

construction notes: Be sure to clean out all of the tabs before assembly, especially the ones for the wing fences, flap guides and landing gear. If you do not want to use the windows supplied on the kit, the

edge of the wing and .3 from behind the trailing edge. I personally deleted areas which contained doors, so I would not have to fill them in later. Thus, one can make cuts A, A¹, B and B¹ and remove these sections, as shown in sketch 1. When removing windows, be sure to saw each different window at the same relative location--i.e. saw each at the leading or trailing edge of the window frame. This is shown in sketch 1. Also, the wings must be cut and sanded down, as shown in sketch 2. Be sure to put the Series 30 wingtip on the Series 10 wing.

For the Series 50, add 5 windows in front of the wing and add 3 in back. I added the ones I took from the Series 10 conversion, which meant I had to fill in a lot of doors anyhow, but it was cheaper than chopping up a new kit. You should also add the little nose formers, as indicated in sketch 3. The results of all this effort may be seen in photo 3.

Wing and Tail Colors: DC-9 wings and tails come in a pretty wide variety of colors. If you are really picky, then you will have to get a photo of the wing and tail of the particular aircraft you intend to model, which may be a lot easier said than done. Even so, the wing and/or tail on that same aircraft may be painted different the next time

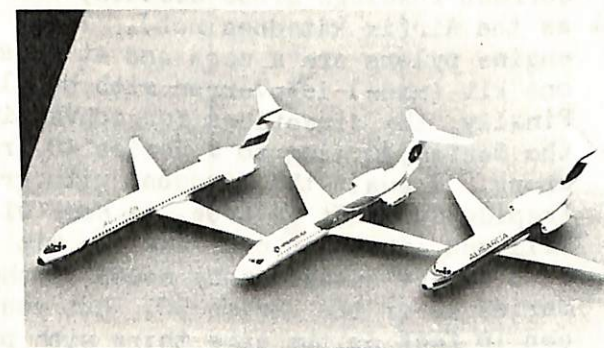
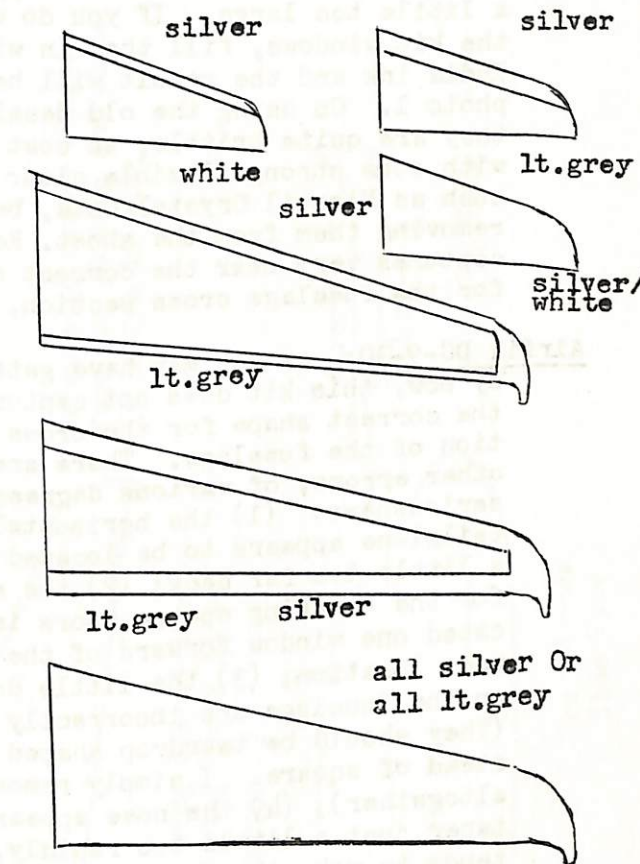


PHOTO 3: Airfix kits; Austrian -50; Hawaiian Air -30; Alisarda -10. Models of Austrian and Alisarda converted as explained in the article.

you see it. Some typical examples are given below--these are not to any given scale.



Decals: If you do not want to make your own, some suggestions are--Use Micro Scale Series 30 decals to make the following Series 50: (typical registrations are given where known by me) Swissair (HB-ISM) try CV990 decals for this one; EAL; Hawaiian Air(N619HA); and Fowler Austrian (OE-LDL) or 727 Delta for (N80LE). For the Series 10, use Micro Scale EAL (N890LE); Texas International (N5726) and Hughes Airwest (N9351). If you feel a bit more adventurous, some profiles are given. For some of these, you can get the decals from another sheet, but they may not be the correct size; Example, TWA tail logo from Airfix 727 and Air California sunflower from the Micro Scale sheet are both a bit large for the DC-9 tail, but they would probably look alright. Also note: you may find photos of these same aircraft painted

Micro scale L-1011 windows (sheet M-13) are near correct size. They are somewhat smaller than the kit windows, but the kit windows appear a little too large. If you do use the kit windows, fill them in with India ink and the result will be as photo 1. On using the old decals, they are quite brittle, so coat them with some strong flexible clear agent, such as Floquil Crystal Cote, before removing them from the sheet. Revell captures very near the correct shape for the fuselage cross section.

Airfix DC-9-30: As you may have gathered by now, this kit does not capture the correct shape for the cross section of the fuselage. There are other errors, of various degrees of seriousness: (1) the horizontal tailplane appears to be located just a little too far back; (2) the scribing for the overwing escape doors is located one window forward of the correct location; (3) the little domes on the fuselage are incorrectly shaped. (They should be teardrop shaped instead of square. I simply remove them altogether); (4) the nose appears to taper just a little too rapidly, which tends to make the model appear a little long; (5) the antenna and landing gear doors are way too thick; (6) and finally one needs to drill out the APU, located over the right engine pylon. There are a few other details one could correct, but for the most part this will do it. Of course, best is to check against a photo of the actual aircraft you intend to model for such things as location of escape doors. Nonetheless, the kit makes into a very presentable model, as photo 2 will illustrate. The fit of the kit is very good, except for a small amount of filling on the underside of the wing fuselage joint and the thrust reverse guides, which are broken about half of the time anyhow. Scribing is light and pretty adequate.

Conversion of Series 30 to Series 10, 50:

There are two ways to go--either use the Griffon conversion kit or brass it out. Griffon conversion kit: This kit is available from Victor 66. I really wish I could say great things about it because I applaud the idea--but the

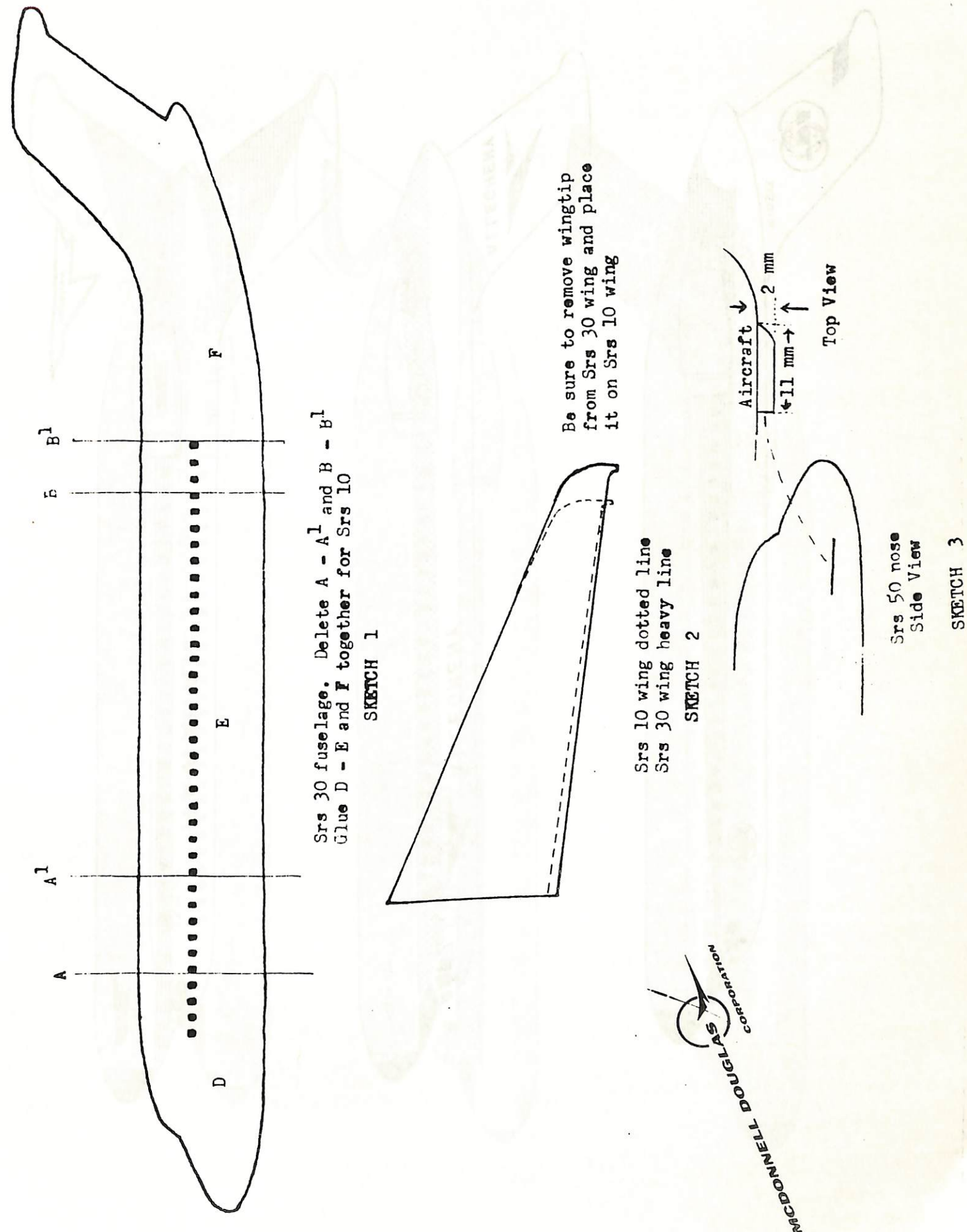
problems with the kit are pretty serious. The plastic is quite thin (probably 20 thou, though I haven't miked it), and this presents some very formidable problems in getting a good joint, even with formers. This is especially a problem with the Series 50 as it is so long. (It has been rumored that the surface detail was done by the "trencher" of Matchbox fame.) In any event, the detail is



PHOTO 2: Airfix DC-9-30 with Mico Scale decals.

absolutely meaningless at best. The windows and extensions from the original "mystery master" for the mold show easily and must therefore be sanded out. (Note: for some strange reason, this kit does not capture the correct fuselage cross section, exactly as the Airfix kit does not). The engine pylons are a mess and at least one kit (mine) is overrun with bubbles. Finally, the directions for converting the Series 30 wing to a Series 10 are wrong. I await the Viscount with great trepidation. It is true, as some will tell you, that you can make the kit into a very satisfactory model of the Series 10 or the Series 50. But you can in fact do the same thing with pine cones or floor sweepings--given time, resources, patience and the "knack". The question is whether or not it is worth it. The alternative is pretty simple.

Brass it out: To make a Series 10 from the Airfix Series 30, delete 6 windows from in front of the leading

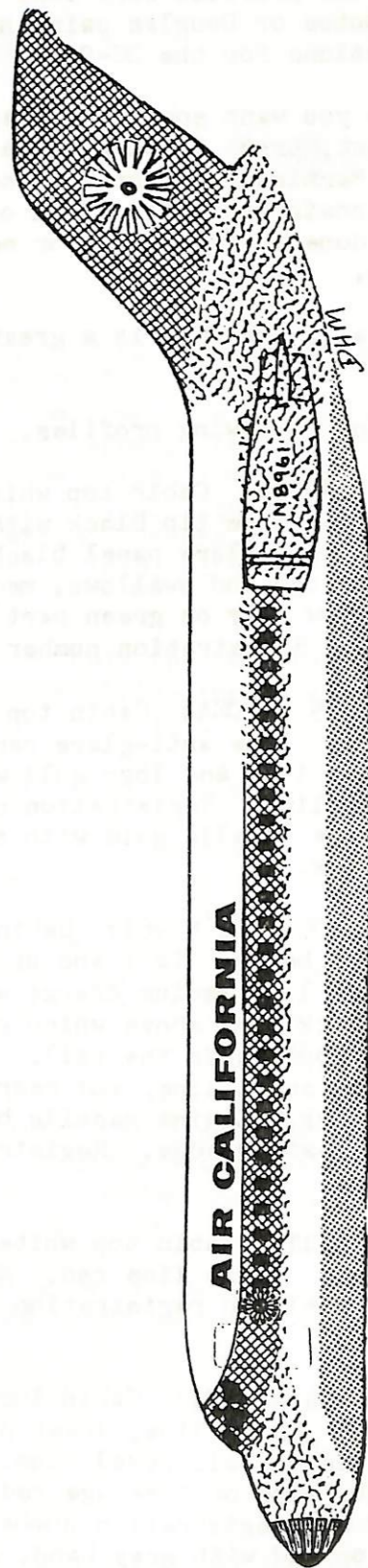
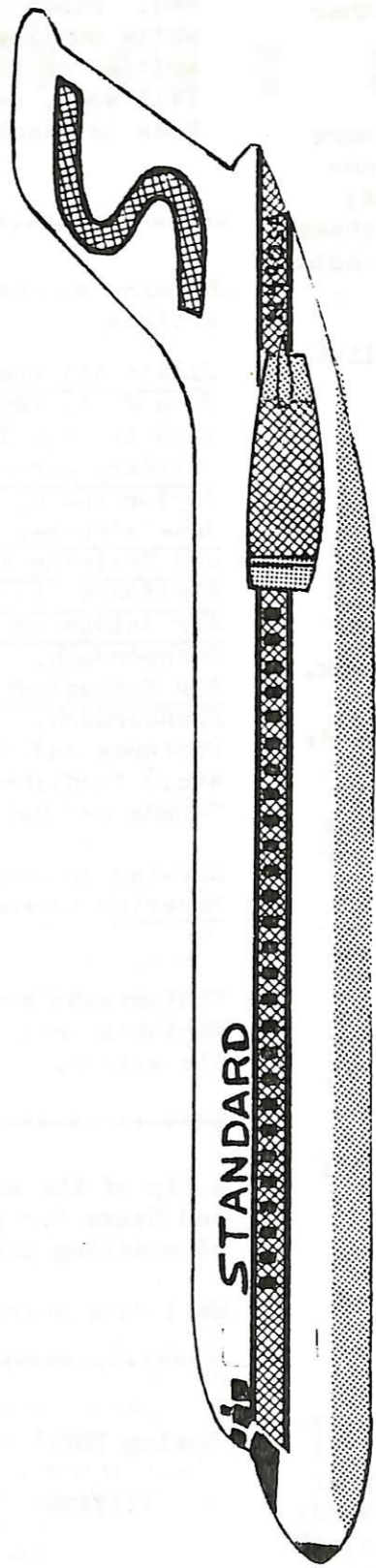
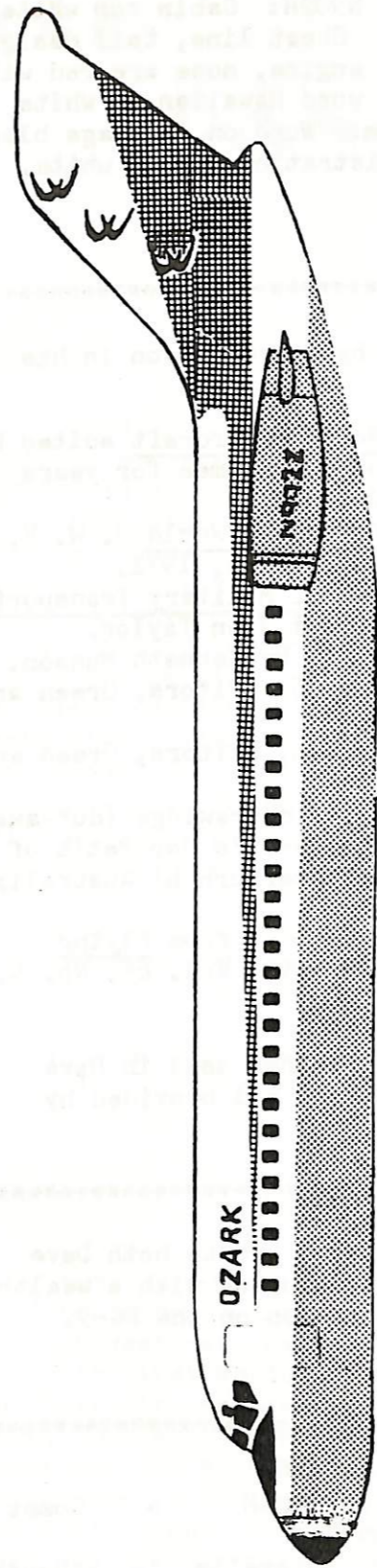
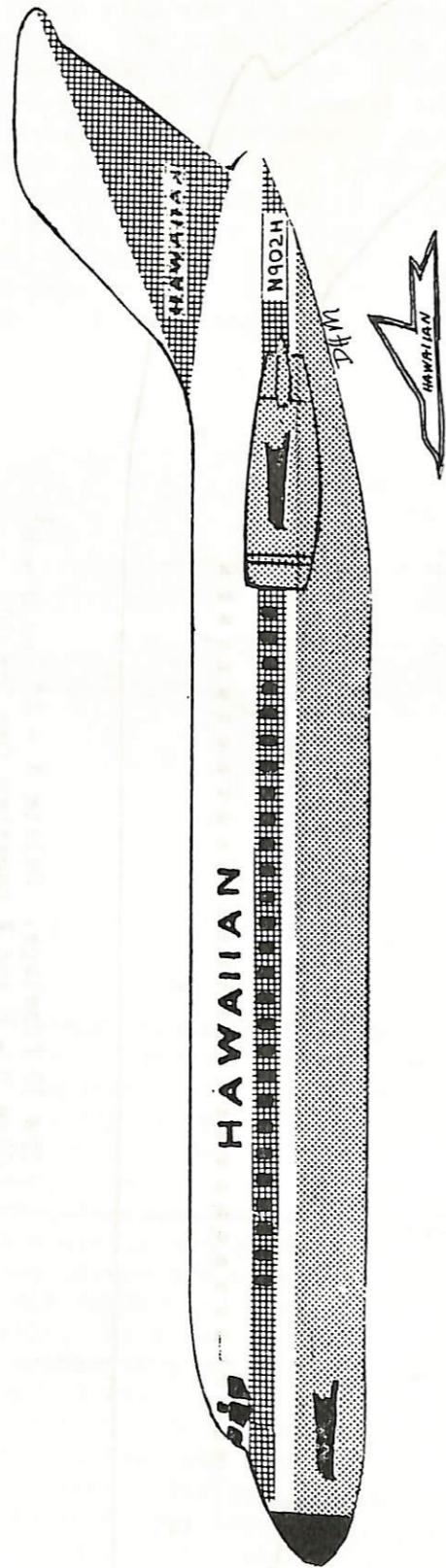
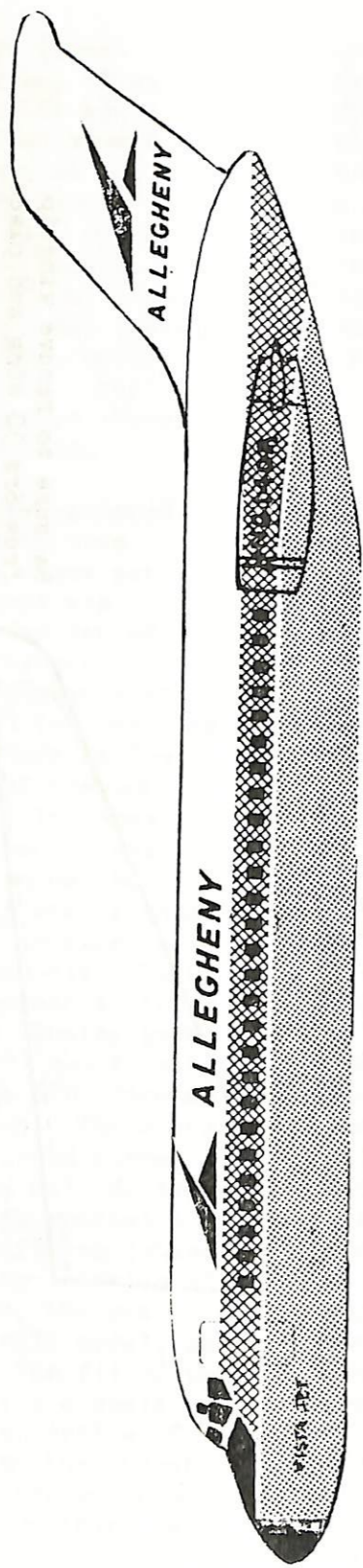
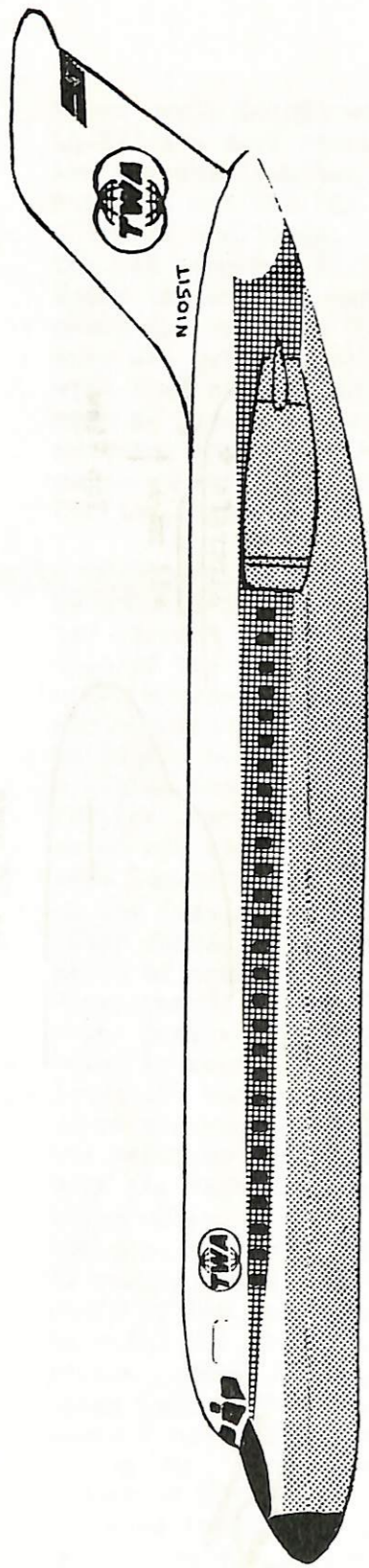


Srs 30 fuselage. Delete A - A¹ and B - B¹
Glue D - E and F together for Srs 10
SKETCH 1

Be sure to remove wingtip
from Srs 30 wing and place
it on Srs 10 wing

Srs 10 wing dotted line
Srs 30 wing heavy line
SKETCH 2

Srs 50 nose
Side View
SKETCH 3



differently than the profiles. Don't be alarmed, happens all of the time. All of the profiles were done either from photos or Douglas painting instructions for the DC-9.

In case you want something even more different, try: Northeast (yellow-bird); Martinair; Spantax, Ansett; TAA; Finnair and BWIA. Most of these may be done in either old or new color schemes.

All in all, the DC-9 is a great little plane to model!

Description of following profiles.

OZARK DC-9-15 N972Z: Cabin top white, silver below. Nose tip black with gray band. Anti-glare panel black. Cheat line, logo and swallows, medium green, swallow only on green part of tail, white. Registration number black.

STANDARD DC-9-15 N490SA: Cabin top white, silver below. Nose anti-glare panel black. Cheat line and logo gold with thick red outline. Registration number black. Engine nacelle gold with silver front and back.

AIR CALIFORNIA DC-9-14 N8961: Cabin top white, silver below. Tail and upper part of cheat line medium orange with very thin black line above which gets wider as it approaches the tail. Nose, lower part of cheat line, and rear of fuselage, black. Engine nacelle black with silver leading edge. Registration number white.

TWA DC-9-14 N1051T: Cabin top white, silver bottom. Cheat line red. Nose anti-glare panel and registration numbers black

ALLEGHENY DC-9-14 N6140A: Cabin top white, silver below. Cheat line, lower part of logo and title on tail royal blue. Upper part of logo, word on fuselage red. Words "vista jet" and registration number black. Nose black on end with gray band, anti-glare panel black.

HAWAIIAN DC-9-15 N902H: Cabin top white, silver bottom. Cheat line, tail design red. Birds on engine, nose are red with white outline, word Hawaiian in white written on them. Word on fuselage black. Tail work, registration number white. Nose is black.

References used by Steve Kenyon in his article.

Jane's All the World's Aircraft edited by John W. R. Taylor, 6 volumes for years 1970 through 1976.

Military Aircraft of the World J. W. R. Taylor and G. Swanborough, 1971.

Jane's Pocket Book of Military Transport and Training Aircraft John Taylor.

Airliners Since 1946 by Kenneth Munson.

Air Enthusiast Vol. 5, Editors, Green and Swanborough.

Air Enthusiast Vol. 6, Editors, Green and Swanborough.

Pictures and schematic drawings (cut-aways, etc.) furnished by Messr's Bob Petit of Canada and Ralph Winterburn of Australia.

Drawing of proposed DC-9 from Flying Magazine November, 1959, Vol. 65, No. 5.

Photographs and drawings used in Dave Minton's article were all provided by the author.

A tip of the editor's hat to both Dave and Steve for providing us with a wealth of modeling information on the DC-9.

Well done guys!

	COMING			
Boeing 707	-	DC-8	-	Comet IV
Trident	-	Caravelle	-	Vanguard
Viscount	-	Electra		
		Martin		

AIR TRANSPORT IN EUROPE

by
Joop Gerritsma

This is the first part of a continuous series in which our International Editor takes a look at the history and present status of the airline industry in Europe. The most difficult part in writing this series is not what to use, but what to leave out, since we can only offer limited space for this material. Therefore we will not publish long lists of fleet registrations. They are covered extensively elsewhere, in particular in the annual JP and AIR BRITAIN fleet list publication. Present-day activities are also widely covered in many publications and therefore the emphasis in this series will be on the history of the various companies. Only the major airlines will be mentioned, mainly for space reasons. Within these limitations, North American readers will get an insight in the past activities in Europe otherwise not easily available on this side of the Atlantic and therefore less well known.

But during the late Twenties six airlines built up a network that covered all of the country's main centers and went into Germany, France, Greece, Turkey, across the Adriatic and to Tunis and Lybia in North Africa. Equipment used was mainly from German (Junkers, Dornier) and Dutch (Fokker) origin, with a few Italian aircraft.

Soon only the two most-powerful lines, Fiat-backed Avio-Lines Italiane (ALI) and state-owned Societa Aerea Mediterranea (SAM), survived. In 1934 SAM took over the four other pioneer lines to form Ala Littoria, Italy's national airline. While ALI continued its domestic network and expanded to various southern and eastern European capitals and to North Africa. All airline activity came to an end, however, with the outbreak of World War II in 1939 and by the following year all commercial flying in Italy came to a standstill.

In 1939 a new line, Linee Aeree Transcontinentali Italiane (IATI) was formed to fly to Brazil and Argentina. The service operated only for one year before the war put an end to it.

Because of their late start, Italian airlines never operated converted warplanes on their first services like most other European nations did. Instead they went shopping for equipment in Germany, Holland and Britain. They also operated a small number of Italian Cant and Savoia Marchetti flying boats.

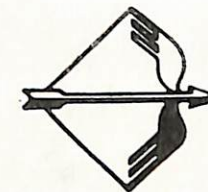
It was not until the late Twenties that the Italian industry began turning out its own airliners. Cand and SM developed a line of flying boats for South

ITALY

Most European countries established airlines linking their major centers with foreign destinations as early as 1919-20 when the first World War had barely ended. In Italy air services did not start until 1926, however. Main reasons for this late start are the high Alps to the north, which were at best difficult to cross for the early transport aircraft, while the vast expanses of the Mediterranean on the other sides impared air travel in those directions. Domestically there was a good system of surface transportation which did not entice the setting up of airlines either.

ALITALIA

AIRLINES



ABOVE: ALITALIA uses Boeing 747 a/c on its intercontinental services. I-DEMA (747-143) "Neil Alden Armstrong" is shown at Turin, June 4, 1970.

BELOW: When SAM still used its own aircraft, Douglas DC-6B I-DIMI was one of them. Aircraft shown here at Turin, March 19, 1968.

(Both photos by J. Gerritsma)



Atlantic and Mediterranean services, Caproni built single and three-engined high-wing aircraft and Fiat developed several fine twin-engined low-wing transports, the final one of which, designated G-18, was a direct answer to the DC-2. Savoia Marchetti also designed a successful series of land planes, the best-known of which were the S-73, S-74, S-75 and S-83. Some of these also sold outside Italy.

Civil aviation was again allowed in Italy in 1947 and by the end of the year eight airlines were active on a number of domestic and European services. The two biggest were Aerolinee Italiane Internazionali (Alitalia) with support from British European Airways, and Linee Aeree Italiane (LAI) backed by TWA. The other lines soon disappeared or merged into ALI (resurrected from the pre-war line of that name), but this company soon merged into LAI.

Both Alitalia and LAI developed extensive networks, with LAI getting the upperhand in Europe and on the North Atlantic, and Alitalia strong in the other parts of the world. But in 1957 the government put an end to the competition and duplication and both lines merged into one newly established, government-backed, airline, Alitalia. Since then steady expansion took place in both network and equipment.

At the end of the hostilities, Alitalia started with a fleet of three-engined Fiat G-12 and four-engined Savoia Marchetti SM-95 landplanes, and LAI was equipped with DC-3s and BEA Lancastrians. ALI's initial equipment comprised G-12/212s and DC-3s, soon replaced by DC-6s. Alitalia ordered Convair 340s and DC-6Bs, followed by Convair 440s and DC-7Cs. Some British Viscounts were delivered to LAI before the amalgamation, but L-1649 Starliners that were ordered, were never delivered.

After the merger Alitalia soon showed itself to be a pioneer and leader. It was one of the first Caravelle jet operators

Europe and also soon ordered DC-8s. At present the main lines are operated with DC-9, DC-10, Boeing 727 and Boeing 747s. It has an extensive domestic, European and intercontinental network.

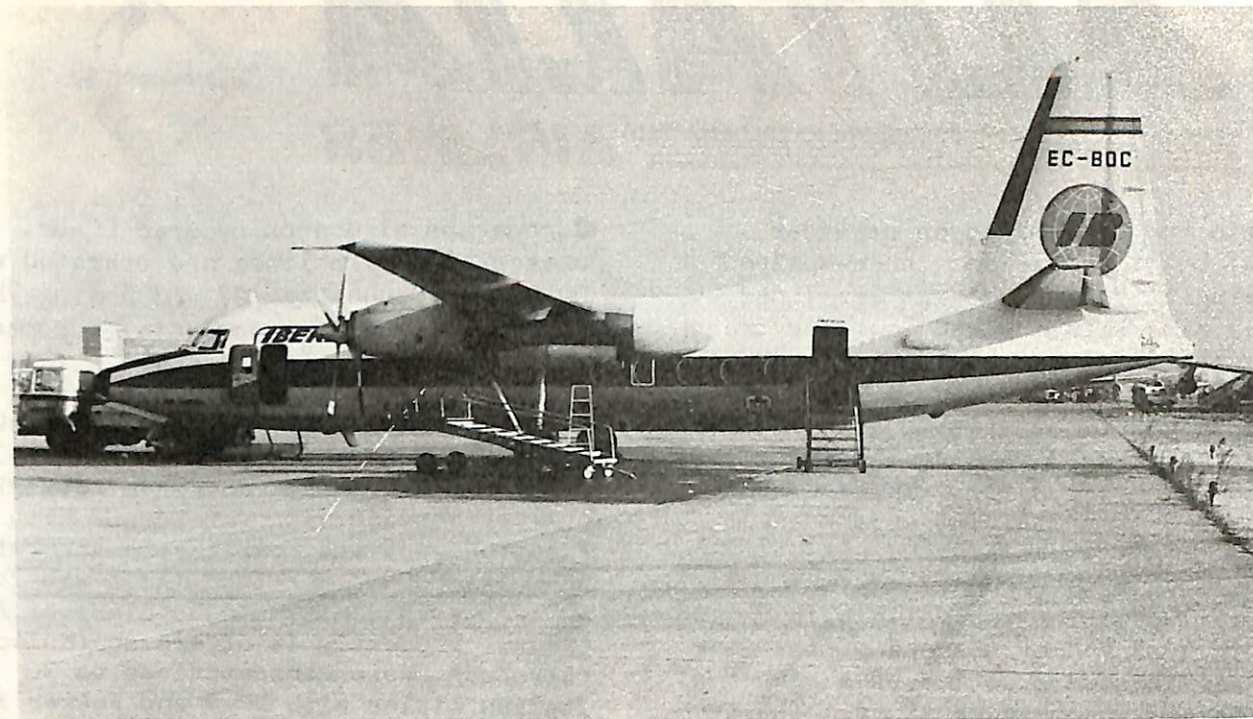
The other main carriers are ITAVIA which was formed in 1958 and presently operates a scheduled domestic network and charter service all over Europe with a fleet of DC-9 and Fokker F-28 aircraft. AERO TRASPORTI ITALIANI (ATI) was formed in 1963 as a domestic subsidiary of Alitalia. Presently it offers scheduled "Aerobus" passengers services to 30 Italian cities with DC-9 and Fokker F-27 aircraft. ALISARDA dates back to 1963 and started as an air taxi operator in Sardinia. Now, scheduled services are flown to several Italian and French cities with DC-9 and Fokker F-27 equipment. AVIO LIGURE took over the assets of Aertirrena in 1975 to link Florence with Rome and Milan, and to operate charter services. The fleet is two Yak 40s, with two more on order. SOCIETE AEREA MEDITERRANEA (SAM) was re-formed in 1959 as the non-IATA subsidiary of Alitalia for charter services. For many years SAM operated its own aircraft (ex-Alitalia DC-6B and Caravelle) but now it uses Alitalia aircraft and personnel as and when necessary.

SPAIN

The pioneer airline in Spain, COMPANIA ESPANOLA de TRAFICO AEREO (CETA) started a service from Spain to Spanish Morocco in 1921 with converted single-engined DH-9 day bombers for 2-3 passengers. Soon a German Dornier Komet 4-passenger cabin plane was added.

In 1925 a second airline was founded. UNION AEREA ESPANOLA (UEA) started domestic services and a line to Portugal with German Junkers aircraft. 1927 saw the founding of IBERIA to link Barcelona and Madrid, the country's two biggest cities.

Then, in 1929, the three lines merged into CONCESSIONARIA LINEAS AEREAS SUBVENCIONADAS S.A. (CLASSA), but the line was



ABOVE: IBERIA operates many domestic services with Fokker F-27s. EC-80C, a series F-27-400, is shown here at Madrid in January of 1975. (John Wegg photo)

BELOW: SPANTAX is one of the few remaining Convair 990A operators. Their EC-BJD is here seen at Amsterdam, February 15, 1971. (Gerritsma photo)



TAP

PORTUGUESE AIRWAYS

I. A. T. A. Member

EUROPE · AFRICA
SOUTH AMERICA

dissolved in 1932 and its assets taken over by a government-owned airline, LINEAS AEREAS POSTALES ESPANOLAS (LAPE). LAPE soon expanded to many domestic, European and North African cities with five DC-2. All operations were suspended, however, on the outbreak of the Spanish Civil War in 1936. When Europe became engulfed by the second World War in 1939-1940, a devastated Spain had just emerged from three years of civil war and remained outside the larger conflict.

A new company, IBERIA, was set up by the government in 1940 to operate domestic and North African services, but the latter were halted when the Allied forces invaded North Africa in 1943. A shortage of fuel put a complete halt to flying that year.

Service re-started in 1945 and from then on, IBERIA has never looked back. Domestic, European and Intercontinental services were added. The inevitable DC-3s and DC-4s made way for Convair 440s and Super Constellations. The line was one of the earliest to offer Caravelle jet service in Europe and today it flies Boeing 747 and 727, DC-8 and DC-9 and Fokker F-27 equipment.

Independent airline operations in Spain started in 1948 with the founding of AVIACION y COMERCIA (AVIACO). Main purpose was to operate freight services with the bulbous Bristol Freighter, but soon passenger services followed domestically and to other European countries. Initial equipment was DC-3 and DH-114, later followed by Convairs. Today's passenger and cargo fleet for scheduled and charter services includes DC-8, DC-9, Caravelle and F-27 aircraft.

SPANTAX started life in 1959. Its founder was an IBERIA DC-8 captain who ran SPANTAX on the side with DC-3 on some scheduled domestic taxi services. Soon the line switched to charter work and today it operates a fleet of DC-8-61, DC-9, CV-990A, DC-7C/F, DC-6, DC-3 and Twin

Otter aircraft. AIR SPAIN folded two years ago. It had been operating a fleet of DC-8s and Bristol Britannias on mainly European charter work. TRABAJOS AEREOS y ENLACES started operations in 1967 and now employs DC-8 and Caravelles on charter and inclusive tour work. TRANS EUROPA is another Caravelle operator working the charter passenger and cargo market.

PORTUGAL

Portugal's air transport history is rather short and straight-forward compared to that in many other countries. Air services started in 1934 when SOCIEDADE AERO-PORTUGUEZA was formed with help from AIR FRANCE to operate from Lisbon to Tangier, in North Africa, later extending this route to Casablanca, Morocco. The firm led a meagre existence until the end of 1942, when services were suspended. They resumed in 1944, but the line ceased operations again in 1953, this time for good.

In 1945 TRANSPORTES AEREOS PORTUGUESES (TAP) was formed by the government to pioneer air routes for commercial airlines. A service from Lisbon to Oporto was started and turned over to COMPANHIA TRANSPORTES AEREOS (CTA), a private firm, within the year. However, on 1947 TAP became a normal airline and CTA was absorbed. TAP started scheduled operations, linking domestic points, opening many European services and also building up a network to the many African and Asian colonies of Portugal, as well as to other countries. Initial equipment was DC-3s, soon upgraded to DC-4. In 1953 TAP was sold to private interests and three Super Connies were ordered. It also added the Caravelle in the early Sixties. Today, intercontinental services are flown with Boeing 747 and 707 a/c, while in Europe the Caravelle has given way to the Boeing 727.

Another Portuguese airline, SATA, operates two HS-748s in the Portuguese-owned Azores island off the African west coast.

--End Part 1--



ABOVE: TRANS EUROPA operates Caravelles. EC-BRX, a series 11R is shown out of service at Milan in April of 1974. (Gerritsma photo)

BELOW: TAP has this Boeing 707-382B for its longer routes. CS-TBB is caught taxiing at Paris in 1976. (Gerritsma photo)



THE AIRWAY TO EVERYWHERE

by

Marion C. Pyles

Airline histories are usually drab and boring to read. This one will probably be no different, but my intentions are to make the story as enlightening and pleasurable to read as possible. This is a story of ideas, inventions, dreams and schemes that evolved into the sixth largest passenger carrying airline in the United States and eighth largest in the free world. This is the story of Allegheny Airlines, Inc.

This story is dedicated to the flying mechanic who reeled in the first bag of mail ever snatched in a demonstration at the Chicago World's Fair in 1934. The information contained in this first installment has been largely supplied by that mechanic, Victor Yesulaites. Vic was a man of principle. He believed that a man should work when there was work to be done and he could loaf the rest of the time. Vic was a lot of things to a lot of people, but to this writer, Vic was a friend and collaborator who wanted the true story of Allegheny told in unembellished truth. I give you this story more than two years after the death of my good friend. I give it to you in the way he would have wanted it.

The story will be told in several installments in succeeding issues of the "Captain's Log". Here follows the complete history of Allegheny.

Dr. Lytle Schuyler Adams was born at Paint Lick, Kentucky, January 31, 1883. He received his academic education at the public schools in Mt. Vernon, Kentucky, the Mt. Vernon Collegiate Institute and the University of Kentucky. He was graduated D.D.S. from St. Louis University in 1905.

During the four years following his graduation, Dr. Adams was an oral surgeon in Parsons, Kansas at the State Hospital. He was also employed by the Parsons

Traction Company as an oral surgeon. Here, he became associated with one of the men who helped make the Wright brothers' first flight a success. It was Cyrus Mead of Dayton, Ohio who helped spark Dr. Adams' interest in aviation.

Dr. Adams was on vacation in California in 1909 when he met the famous Glenn L. Martin. The two men became friends. This friendship served to deepen Dr. Adams' interest in aviation. Dr. Adams also became interested in real estate while in California. There, he negotiated the sale of several large ranches and oil properties. He purchased Pauma ranch at the foot of Palomar mountain near San Diego. It was because of this that he had to learn more about agriculture and its problems.

It was this necessity which prompted Dr. Adams to invent the spiral plow, a rotary plowing machine, a stump cutter and a tree saw. He manufactured the spiral plow in East St. Louis, Illinois from 1914 until 1918. He returned to dental surgery at Longview, Washington until 1923 and Seattle from 1923 through 1928.

Dr. Adams invented the Air Mail Pick-up system in 1927 and gave up his dental practice again in 1928 to devote full time to developing this latest invention. The system was designed to permit the non-stop pick-up and delivery of air mail. The original invention was a large metal pan which tapered on a slat to a slot. The plane would swoop down trailing a cable which was weighted with a steel ball on the end. The ball would hit the pan and travel up the slant where the slot trapped the ball causing it to pick up the objects and carry them away.

The system was patented under two

patents; the first being August 11, 1931 and the second on May 10, 1932. Dr. Adams won a medal at the World's Fair in Chicago during 1934 for his work with the air mail pick-up system. He had the only exhibition sponsored by the management.

Dr. Adams completed pick-up tests during the 1934-36 years and began operation of Tri-State Aviation Corporation in early 1937. Home offices were at Wheeling, West Virginia. The operation was really an air express system for department stores. It was planned for quick package delivery since messages could be delivered faster by telephone.

"Doc" Adams had proven experiments on land and on sea with the pick-up. He had demonstrated it all over the East. The only apparent problem was that the Post Office had to be sold on the idea; special legislation would have to be enacted for pick-up air mail service and capital had to be acquired.

Post Office support and proper legislation were taken care of by one of the greatest friends in Congress that aviation ever knew. This support came from West Virginia's Representative Jennings Randolph of Elkins. The capital was located when "Doc" interviewed Felix and Richard DuPont of the Delaware family. The DuPonts had formed the Elton Investment Corporation to aid budding new business projects. The DuPonts were very strongly in favor of any aviation projects.

Richard Chichester DuPont was a shy and quiet young man, but a champion of aviation in his own right. He held many glider distance records. Richard saw the potential immediately for the experimental mail pick-up system. He envisioned it as a proving ground for flying equipment as well as air service to towns not fortunate enough to have airports. On October 1, 1938, Richard paid all of the debts held against Tri-State Aviation and its All American Aviation division. There was a stock agreement made with Dr. Adams as Dick DuPont and Arthur Davis became the lone financial backers of the new company.

All American Aviation was born with the idea that the pick-up would cover all of North and South America. The system would connect all small towns with the trunk airline system. Dick DuPont was up

against some strong odds because Postmaster James Farley was of the opinion that experimenting with new air mail routes was needless. DuPont was up to the task though, because the Air Mail "Act" had "authorized the Postmaster General to experiment with new and supplemental means of transporting mail by air". The youthful DuPont was now in possession of the only patented method for the aerial non-stop delivery and pick-up of mail. It was the only such method approved by both the CAA (Civil Aeronautics Authority, now the Federal Aviation Administration - FAA) and the Post Office Department.

All American Aviation evoked the idea that the airline would encompass all of America, although the company had been known as Tri-State Aviation in the post. Prior to the DuPont takeover, he and Dr. Adams had gotten into a violent argument about the name change. It was a trivial matter to be sure, but young Richard had acquired an unhappy partner in addition to a disinterested Postmaster General.

On the upside of things was the experience of four employees in the person of pilot, Norman Rintoul, Johnny Graham, Harry Stringer and last but not least mechanic, Victor Yesulaites. Victor had been involved with enough adventures in aviation that someone should go into a history of him alone.

All American's president and chief benefactor had a few irons in the fire of his own. When Postmaster Farley failed to award any new routes, the young president decided he would demonstrate the pick-up at the Postmasters Convention in Washington during November 1938. The timing would be perfect. The plan was put in motion.

The demonstration was set up on the mall in front of the Capitol by Harry Stringer as he erected the two 28' high poles. Each pole had a 2' by 5' sheet metal marker and they were spaced 54' apart. Three inch hemp rope was strung between the poles hooked to the top of each by a spring clip forming a loop at the bottom to which the mail bag was fastened.

The demonstration had begun. The Stinson SR10, NX21107 with pilot Norman Rintoul at the controls and flight mechanic Victor Yesulaites in the back began its run on the Capitol Mall. The Stinson would glide down with a grapple hook extending on a cable reaching down and behind it. The grapple hook would make connection with the loop set up on the ground by Harry Stringer and Vic would reel the mail bag into the bottom of the airplane.

The method was effective and convinced the Postmasters in attendance. There was some danger in the method though because the grapple would sometimes begin gyrating round and round and from side to side. No matter how much Norm would center the airplane between the poles, there was the chance that the grapple would be off to one or the other of the two poles set up on the ground. There were some instances where the grapple actually came back up and struck the airplane after making contact with the ground while gyrating intensively.

The problem was serious, but much research was to follow. The answer was right in front of everyone. The Washington demonstration had been productive in more ways than one because it brought out many of the major problems inherent in the pick-up as it existed at the time. Finally, it was Vic who came up with the solution.

It was very simple consisting of two pieces of wood which fit between the sides of a ring assembly. As the airplane came down between the poles with the grapple catching the suspension line and sliding to the monkey fists which were at the nearest end, the jaws of Vic's suspension mechanism were pulled slightly off center easing the shock of the connection as they tightened on their trip of 27 feet to the monkey fists opposite the connection. An illustration which is part of the original patent is shown herein for the reader's enlightenment.

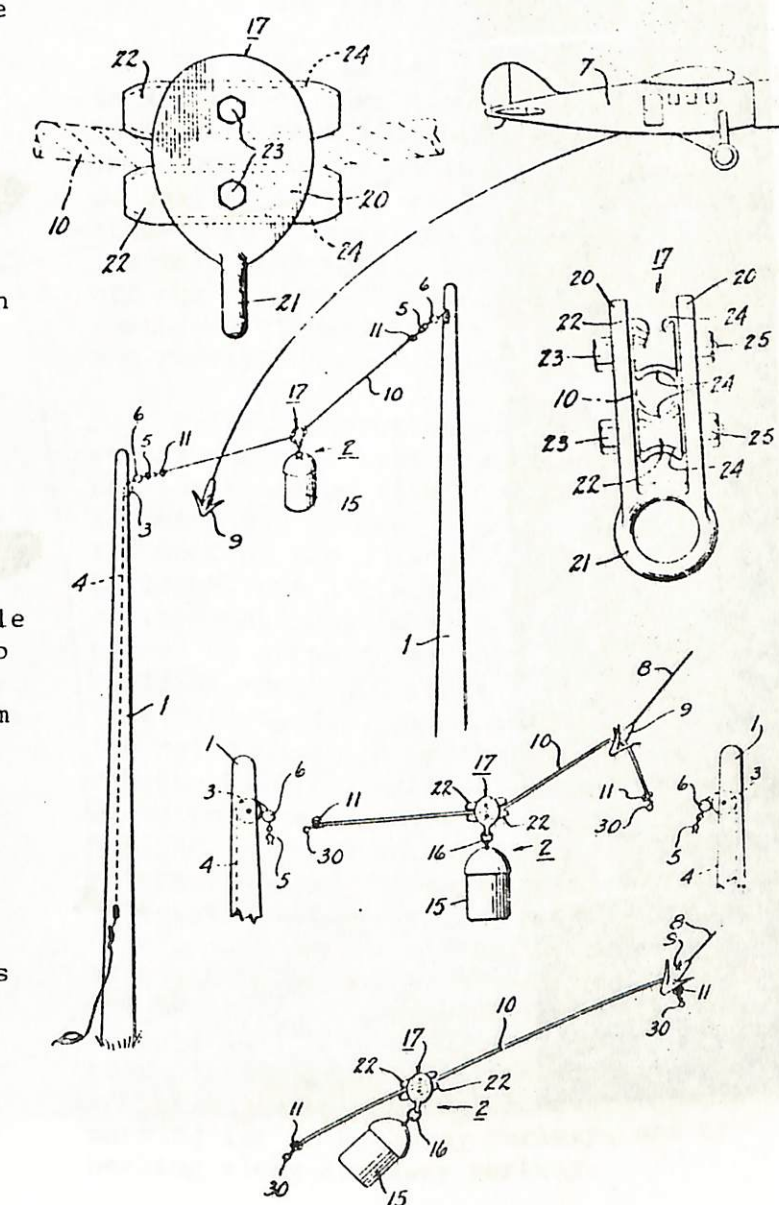
Vic was known widely as a tippler as is evident in this story told about him in the March 1945 issue of "Pick-Up", the house organ of All American Aviation:

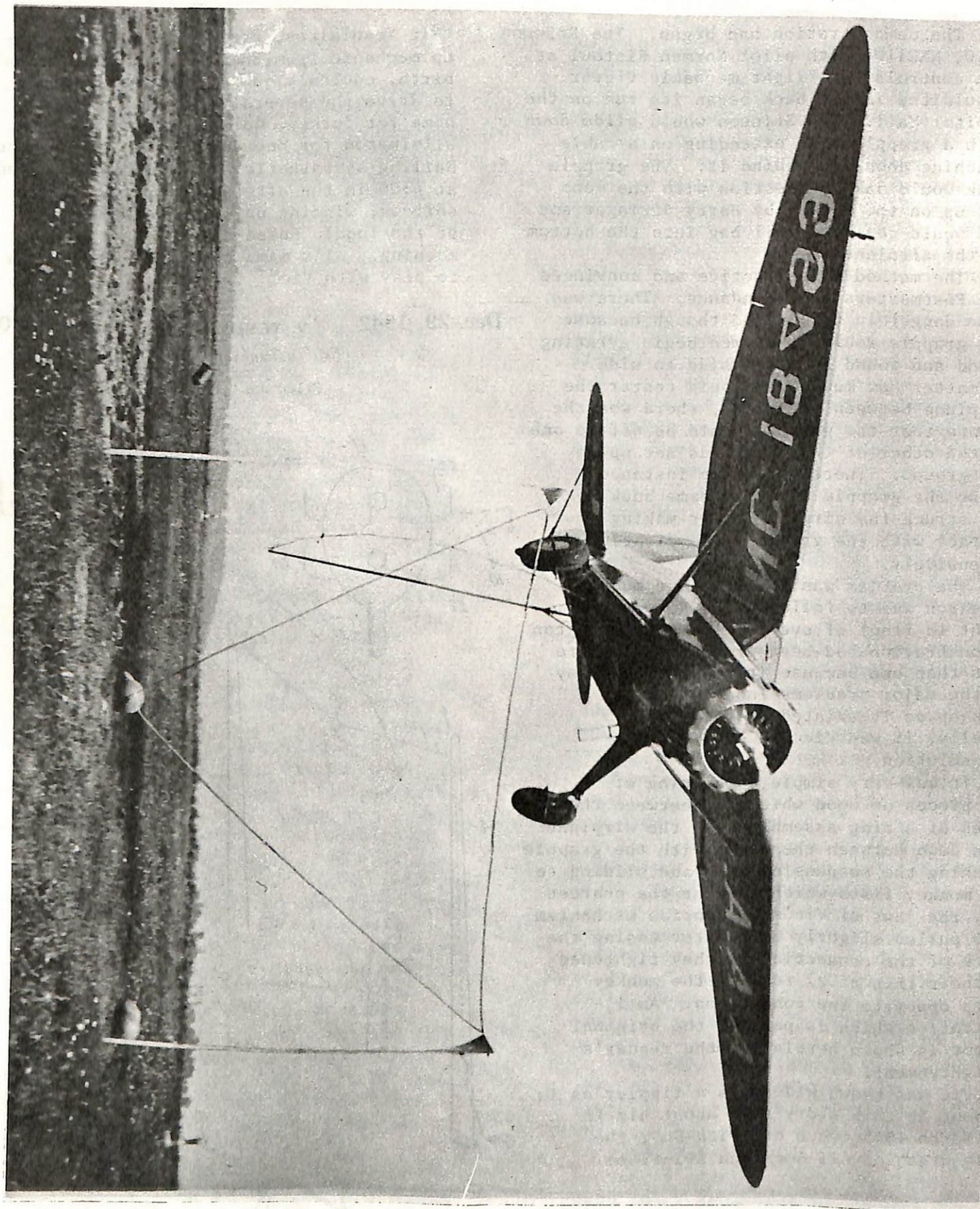
"Vic Yesulaites, craftsman and air pick-up mechanic from the day of All American's birth, couldn't quite make up his mind to drive the several hundred odd miles home for turkey, only to return to Wilmington for one day before the weekend. Nailing sympathetic Al Tyson, Vic started at 4:00 in the afternoon to drown his sorrows, winding up with two hamburgers at the Toddle House at 4:00 in the morning. Al's mama no longer allows him to play with Vic".

Dec. 29, 1942. V. YESULAITES 2,306,680

LOAD SUSPENSION MECHANISM

Filed Jan. 10, 1940





Around The Airports

BY
JOE TURNER

The last time we got together we talked about the Tokyo International Airport. This time around I will cover Honolulu International, Dallas-Fort Worth, and J.F.K.

Honolulu International Airport can be reached from downtown Honolulu by car or local bus. The local bus is the best way and can be picked up along Waikiki Beach or at the Ali Moana shopping center. The terminal is divided mainly into two separate areas; the local service, Hawaiian Airlines and Aloha Airlines and the international service. (See drawing on opposite page.) There is no viewing deck in either area but the international terminal is a wide open building along one side, having no windows, but being more like a porch. The building is shaped like a |||, with all parking of aircraft on the inside legs of the terminals. The three fingers and part of the central pier are closed off for security reasons, but you can see almost all of the gates from the open area mentioned. A telephoto lens is necessary but you can cover all gate areas with no trouble. And, since most of the aircraft operated into Hawaii are wide-bodies, you should get some good shots.

In order to get some pictures of the local carriers, you can walk over to the Ewa Concourse. Again, there is no viewing deck. However, to get pics of Hawaiian you can go to the baggage claim area and shoot through the fence. Another place to take some pictures is if you exit the airport and follow the perimeter fence to the other side of the "local" ramp. This is a public road and you should have no trouble or be bothered by anyone.

There is no place to get any take-off or landing pics since the runways are far off. A bonus at H.I.A. is there are quite a number of military a/c in the area.



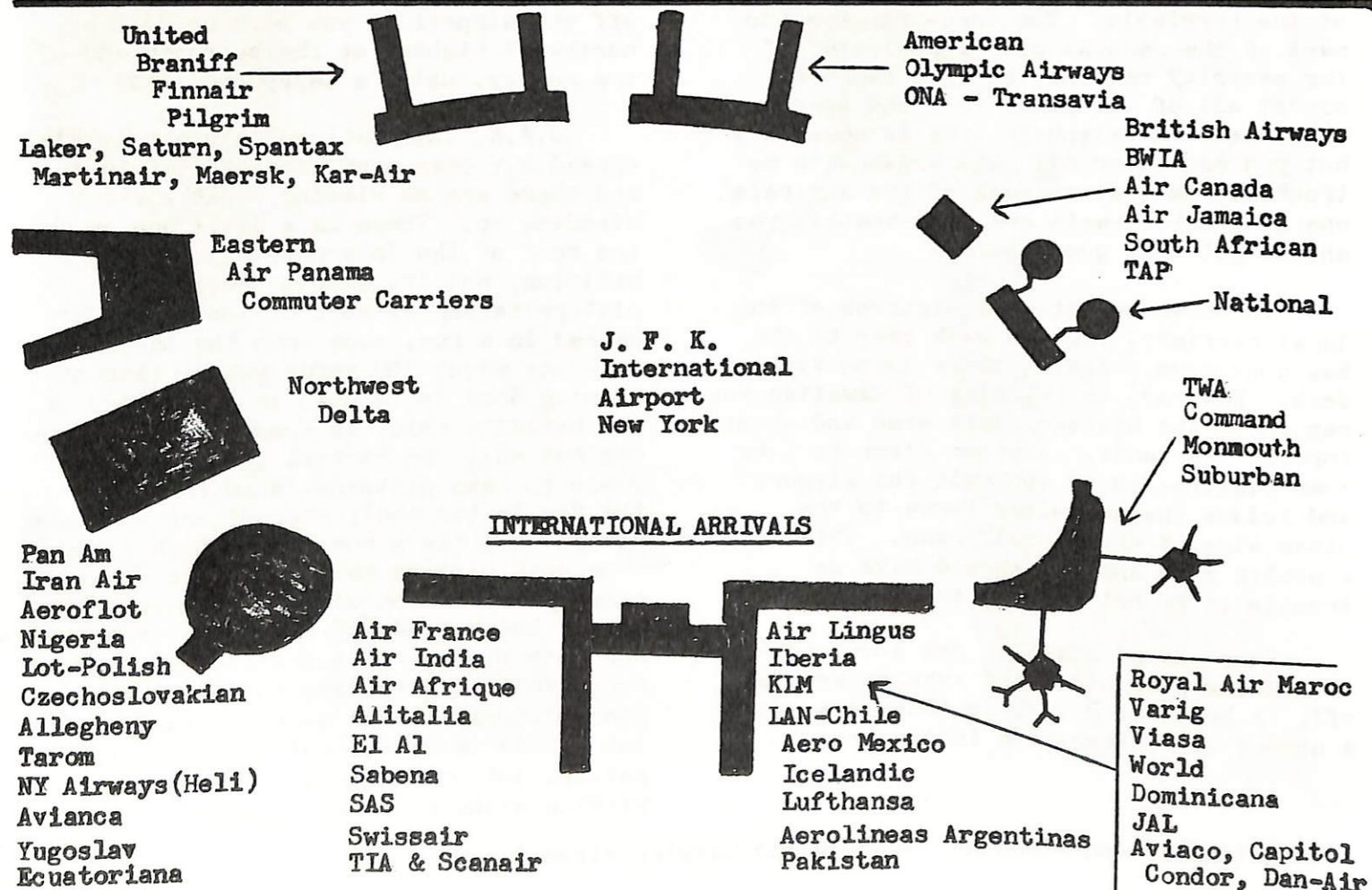
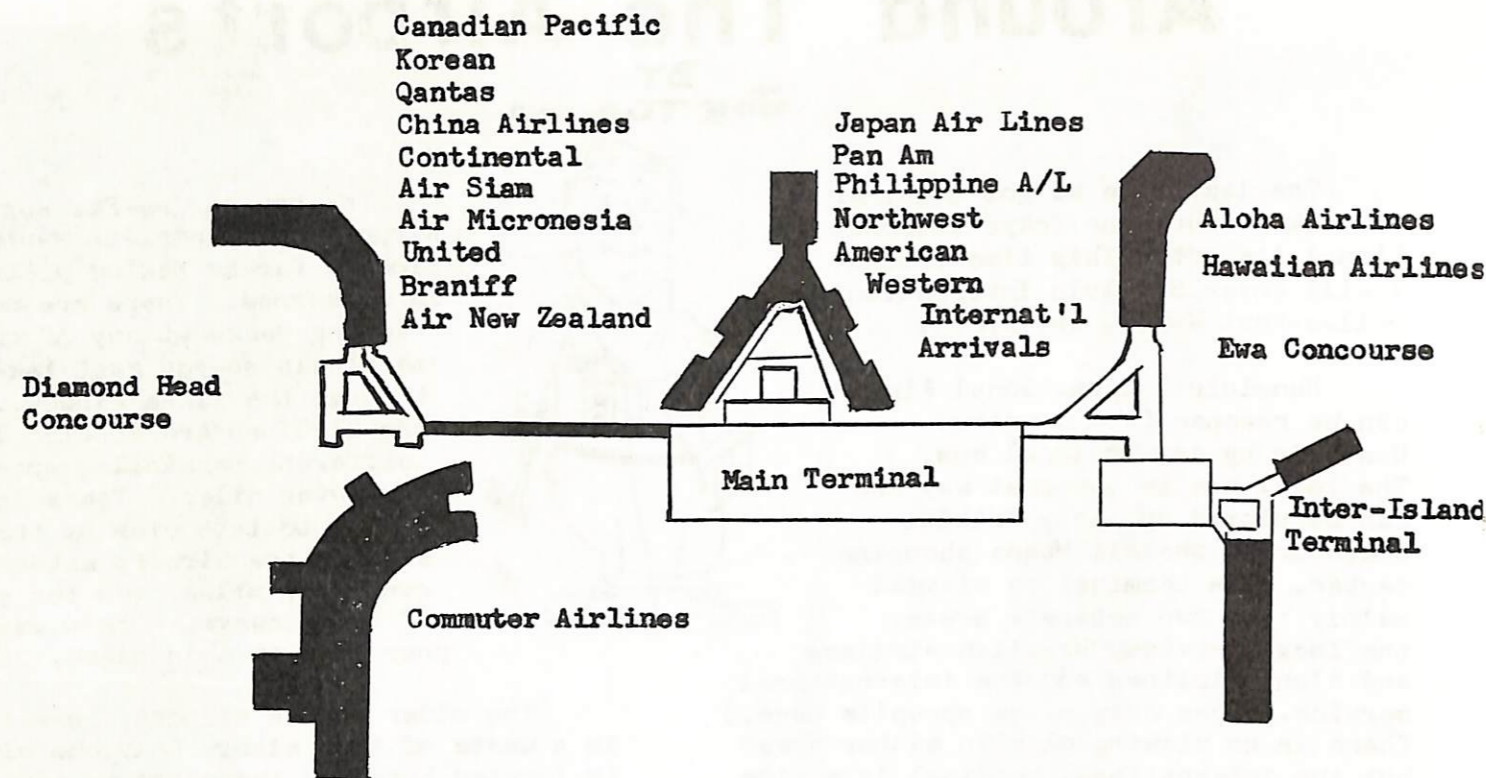
The new Dallas-Ft. Worth Airport is a complete waste of time as far as taking pictures is concerned. There are no viewing decks at any of the terminals so you must take pics through the glass windows. All the airlines are located in different terminals, spread out over miles. There is no place to take pics by the runways as the airport extends over many miles from the ends of the runways. Don't waste your time at this place.

The older Dallas airport, Love Field, is a waste of time also. Only one airline is located here and there are no viewing areas open to the public. There is a lot of smaller traffic at Love, corporate and other light planes and Braniff still has its main base here. You can take pictures off the airport if you park up by the northwest highway at the approach end of the runway, using a telephoto lens.

J.F.K. International Airport is also spread out over many separate terminals, and there are no viewing decks worth standing on. There is a small one on the roof of the International arrival building, but its almost useless for picture taking as most of the planes are parked in a row, nose onto the terminal building about 300 yards away. Also the viewing deck is located in the center of the building which is shaped TT so you can see only the central gates. The best place to take pictures is on the roof of the Pan Am terminal, where there is a car garage that has an open roof which allows some good picture taking. There is no other place on the airport to take pictures, but because of their location, there are many places off the airport for picture taking. Depending on the runway, some good pictures can be taken from the parking lot of the international hotel, Korvettes parking lot on Rockaway Parkway, and by parking along Rockaway parkway.

((Next time around--Londons Heathrow and Gatwich Airports--watch for me!))

HONOLULU INTERNATIONAL AIRPORT



John Moore and Peter Black have gotten together to make the first attempt at giving the post card collector a source of reference for their hobby. John and Pete have started a Douglas catalog of published post cards. They admit in their introduction to their work that the publication is far from complete. They need the help and support of every airline post card collector.

The plan at present is to print several pages of the catalog in each issue of the Captain's Log until the complete catalog has been published. The original catalog was xeroxed to save cost and only a limited number were printed. By printing it in the Log a good off-set copy of the booklet will be available to the collector, although it may take a while to get a complete copy. Also any additions to the catalog will be printed as they become available.

We will start off in this issue with a "How To Use" page and the complete card index as it now stands. We will also print three pages of the catalog or I should say 18 of the cards to be found in the book. Due to off-set printing techniques, the cards can not be printed as they originally appeared in the xeroxed copy of the catalog. Sometime during the printing of the catalog, blank sheets will be made available on which you can glue the copies of the cards in numeric order, or in whatever order you wish to use.

John and Pete certainly should be congratulated on beginning what is going to be a long, hard job. The editors would also like to hear from you if you have any suggestions on how the catalog could be improved. Of course they would like to receive copies of post cards not listed or shown in the catalog so they can update the booklet. In this regard, they will need the help of all card collectors. Let's give John and Pete all the support they can possibly use. Let's show them we really appreciate what they have done for us--the collector.

While John and Pete are working on the Douglas card catalog, I would like to have the support of all card collectors in starting a Boeing card catalog. Since I have a number of 727 cards, I thought I would try to do a catalog on all 727 cards published to date. Of course, like Pete and John, I will need the help and support of all card collectors everywhere. I would like to have this booklet finished by convention time next summer. This will give me all winter and spring to get it together and printed.

The following page is a "sample" of how I plan to catalog the 727 cards. The first three numbers represent the manufacturer's number, in this case 727. This is followed by a letter which is the first letter in the airlines name. The number that follows indicates that AIR ALGERIE is the first "A" in the listing. The BOEING CORPORATION is the first "B" listing, etc. The BRANIFF of 727-B-2-A indicates that that BRANIFF is the second "B" listed and the letter A indicates that this is the first "listed" variation of a BRANIFF 727, not necessarily the first published 727 BRANIFF card.

The additional information appearing with the listing is information found on the reverse side of the card, such as the printing company, where the card was printed and any other information that will help to identify the card. Additional information that will be included is a notation if the card is a drawing or if it is black and white. This type of info should really pin down the exact card being identified.

Since we are starting something altogether new with these post card catalogs, all the help and suggestions you can forward will be greatly appreciated. Card collectors all over the world will benefit from such listings as we are now working on. This being the case, we would like to have YOUR help.

The editors of this catalog have tried to blend simplicity and ease of use with thorough descriptions, captions and technical accuracy. It is inevitable that some inaccuracies will be detected and that some users of this work will have suggestions for improvement in future editions. The editors recognize that since this is the first work of its kind, it is in need of critical evaluation by its users. Comments relevant to this work should be addressed to either of the editors, whose names are listed below.

CAPTIONS:

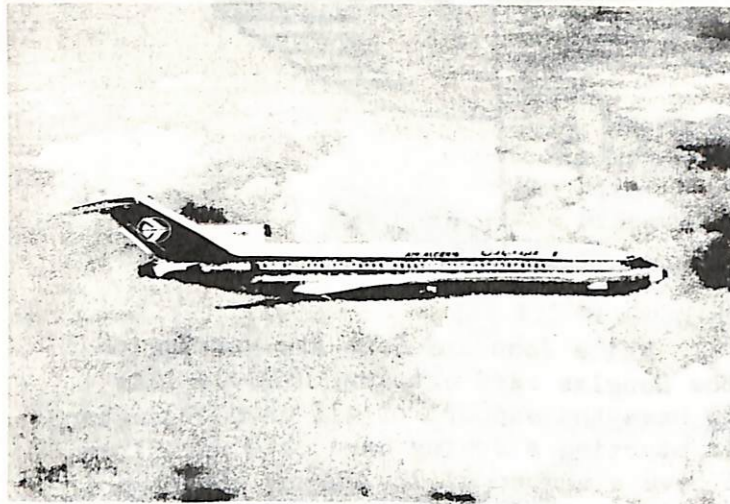
All cards illustrated are captioned to indicate the following:

1. **Catalog number.** This is a letter followed by a series of numbers. The letter indicates the first letter of the name of the designer or manufacturer of the aircraft. The number is an arbitrary sequential number to identify a particular card.
2. **Manufacturer or Designer.** The name of the manufacturer or designer of the aircraft pictured is indicated. In a few cases, where the aircraft is a hybrid subject to confusion by all but the most skilled spotter, a dual designation and two catalog numbers will be assigned as in the case of the Canadian built DC-4 variant the Canadair Four. (See Catalog number D-1069 for an example.)
3. **The manufacturer's designation of the aircraft pictured.** Many airlines are known for giving aircraft class names, service marks or names or some designation that bears no significance to the type in general. Where possible, we have indicated the generic name of the aircraft, as assigned by the manufacturer. (See catalog number D-1071/COO3.) The face of the card calls the aircraft an "Argonaut" but this is a BOAC designator, not one assigned by the manufacturer or designer. Therefore the aircraft caption shows the generic designator, C-4.
4. **The airline whose markings are apparent or easily deduced is indicated.** In the case of well known airlines who have an abbreviation (EG: KLM, TWA, UAT, etc.) generally known to most collectors, that abbreviation is used rather than the full name of the airline.
5. **Color or B&W** indicates the nature of the card. In the case of a chrome card, no such designator is given as all chrome cards known to the editors are color.
6. **Surface texture of card.** Linen, smooth, chrome, 3-dimensional, textured, glossy (photo cards), etc.
7. **Source of card.** The word "Airline" indicates a card issued by or on behalf of the airline whose aircraft appears on the card. "Non-Airline" indicates a card that was issued neither by or on behalf of the airline whose aircraft appears on the card.

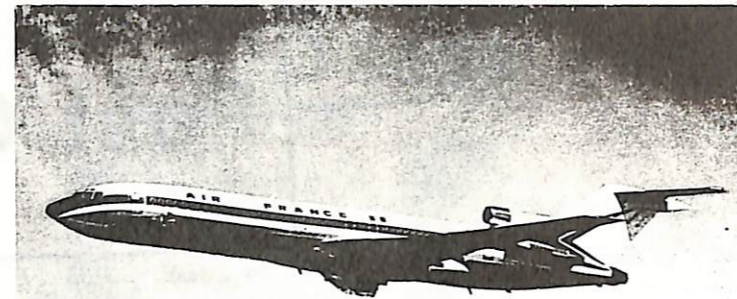
All cards are standard post card size being approximately 3½ X 5½ inches unless (C) appears in the caption indicating "Continental" size (4 X 5 7/8 inches), (S) indicating a smaller than standard size, or (OS) indicating an oversize card. Additional descriptive words may be included if appropriate. Please send comments to either:

Peter W. Black
84-01 Main Street
Briarwood, New York 11435 (DC-1)

John Moore
2063 Sloan Street
St. Paul, Minn. 55117



727-A-1-A Air Algerie 71-VEA Boeing 727-200 c/n 20472 "Tassili"
White Par Air Algerie - Service Publicite--Alger 1974



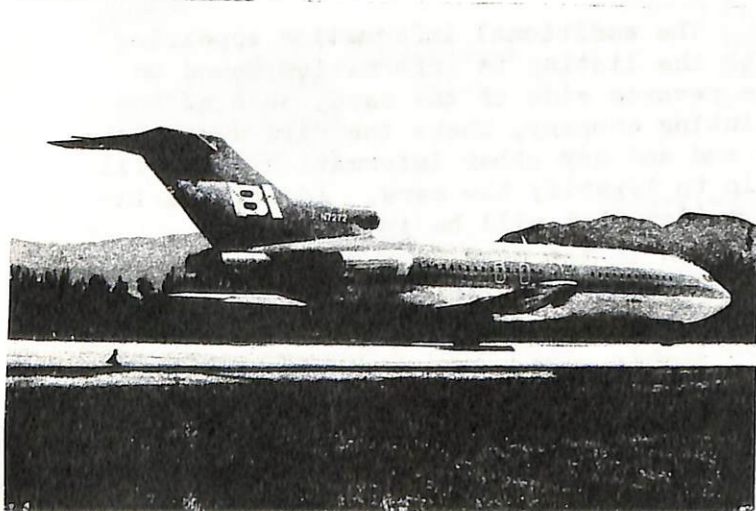
727-A-2-A Air France Boeing 727-228
Collection Air France Printed in Switzerland by Orell Fussli SA, Zurich



727-A-3-A Ariana Afghan Airlines Boeing 727-100
Airline release



727-B-1-A Boeing Corporation Boeing 727-200 Prototype
Made by Kruger of Western Germany



727-B-2-A Braniff International Boeing 727
Banco de fotografias Movifoto Medellin Colombia



727-D-1-A Delta Airlines Boeing 727-232 c/n 20635
Aviation Color Photo, Tacoma, Washington

INDEX BY AIRLINE

DOUGLAS DC-1, DC-2, DC-3 and VARIANTS

DOUGLAS DC-1	DOUGLAS DC-3 (Cont'd)	DOUGLAS DC-3 (Cont'd)
(None)	American	Mackey D-039
DOUGLAS DC-2		Mid-Continent D-124
American D-007	D-015	Naples D-146
D-008	D-016	N.Z. National D-141
D-009	D-017	D-142
D-012	D-018	North Central D-042
Braniff D-012	D-019	Northeast D-040
D-101	D-020	Northwest D-043
Canadian D-102	D-021	D-044
Colonial	D-022	D-045
Delta D-001	D-023	D-046
D-033	D-024	D-080
Eastern D-002	D-025	D-115
D-003	D-026	D-116
D-004	D-029	D-117
D-005	D-030	D-118
D-006	D-072	Pakistan Int'l D-096
D-035	D-072	Pan American D-047
K.L.M. D-010	D-103	D-048
D-089	D-106	Pennsylvania D-041
Panagra D-011	D-095	Central D-086
T.W.A. D-051	Arkia D-092	(PCA) D-087
DOUGLAS DST	Braniff D-098	D-135
American D-013	D-104	Skyways D-088
D-014	Canadian D-105	Strato Freight D-137
D-027	Colonial D-133	Swissair D-049
D-028	Capital D-133	D-085
United D-065	Eastern D-034	D-138
D-068	D-036	Transair D-140
DOUGLAS DC-3	D-093	Trans Canada D-050
Aer Lingus D-031	D-094	Trans Texas D-061
Air Rotterdam D-139	D-107	T.W.A. D-051
Air Sunshine D-144	D-108	D-052
	D-109	D-053
	D-110	D-054
	D-111	D-055
	D-112	D-056
	D-113	D-057
	D-114	
	Frontier D-143	
	Hawaiian D-126	
	D-127	
	K.L.M. D-037	
	D-038	
	Lake Central D-083	
	D-125	

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(Continued)

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T.W.A. (Cont'd) D-058	Colonial D-1012	Western D-1109
D-059	D-1101	
D-060	Delta (U.S.) D-1013	CANADAIR C-4 (Northstar, DC-4M, Argonaut, Canadair Four)
D-119	D-1084	B.O.A.C. D-1071/C-003
D-120	D-1102	Trans Canada D-1069/C-001
D-121		Air Lines D-1070/C-002
D-122	Eastern D-1017	D-1110/C-004
D-123	D-1018	D-1111/C-005
D-130	D-1085	
D-131	D-1103	
D-132		
United D-062	Flugfelag Isl. D-1020	
D-063	(Icelandair)	
D-064	Great Lakes D-1120	DOUGLAS DC-6 and DC-7
D-066	Airlines	Aerocondor D-1004
D-067	Japan Air D-1022	American D-1080
D-069	Lines D-1023	D-1112
D-070	D-1024	D-1125
D-071	D-1025	D-1126
D-072	Mackey D-1030	D-1127
D-077	Airlines	D-1128
D-078	Mexicana D-1078	D-1129
D-128	D-1079	D-1130
D-129	North American D-1036	D-1131
Western D-134	Northeast D-1037	D-1132
LISUNOV Li-2 (Variation)	Northwest D-1040	D-1133
Aeroflot D-091/L-003	D-1104	D-1134
LOT D-090/L-002	Pacific D-1087	Balair D-1081
TAROM D-084/L-001	Northern D-1005	D-1082
DOUGLAS DC-4 & Variants	Pan American D-1051	Braniff D-1076
American D-1001	D-1052	D-1086
D-1002	D-1105	D-1121
American Overseas D-1003	S.A.S. D-1056	B.O.A.C. D-1005
Balair D-1083	South African D-1058	Continental D-1122
Capital D-1006	Swissair D-1064	Delta (U.S.) D-1014
D-1007	T.C.A. D-1065	D-1016
D-1008	United D-1088	D-1023
D-1009	D-1106	Delta (Belgium) D-1077
D-1010	D-1107	Delta/C&S D-1015
D-1011	D-1114	Eastern D-1019
		Icelandic D-1021
		Loftleidir

INDEX BY AIRLINE

(Continued)

DOUGLAS DC-6 and DC-7

Japan Air Lines D-1026
D-1115

K.L.M. D-1027
D-1028
D-1029

Mackey Airlines D-1031

National A/L D-1032
D-1033
D-1034
D-1035
D-1073
D-1117

North American D-1113

Northeast D-1038
D-1039

Northwest D-1041
D-1042
D-1043
D-1074

Panagra (Pan American
Grace Airways) D-1044
D-1045
D-1118
D-1124

Pan American D-1046
D-1047
D-1048
D-1049
D-1050
D-1053
D-1119

S.A.S. D-1054
D-1055
D-1057
D-1075
D-1116

Swissair D-1059
D-1060
D-1061
D-1062
D-1063

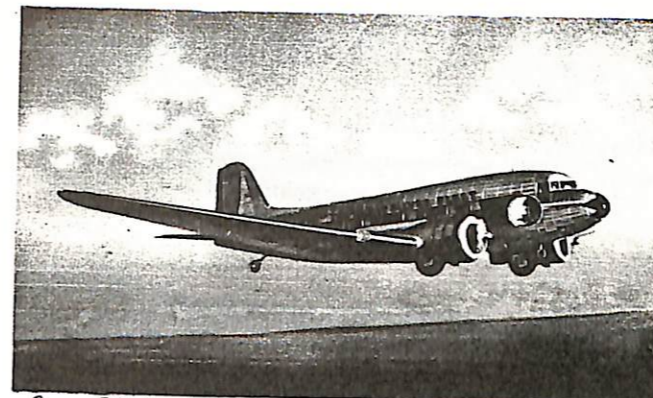
DOUGLAS DC-6 and DC-7

United Airlines D-1089
D-1090
D-1091
D-1092
D-1093
D-1094
D-1095
D-1096
D-1097
D-1098
D-1099
D-1100
D-1135
D-1136
D-1137
D-1138
D-1108

UAT-Union Aero-
Maritime de
Transport D-1066

Western D-1067
D-1068
D-1072

(DC-4)



Eastern Silverliner In Flight La Guardia Field

D-107 Douglas DC-3, Eastern, color linen, non airline

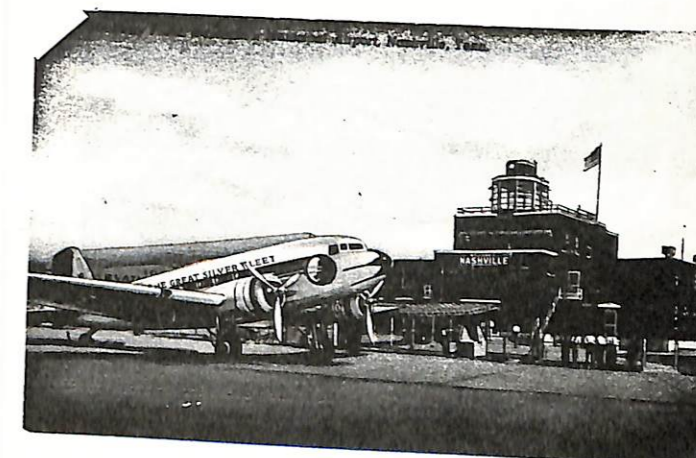


PLANE AT HEAD OF RUNWAY, WASHINGTON NATIONAL AIRPORT, WASHINGTON, D. C.

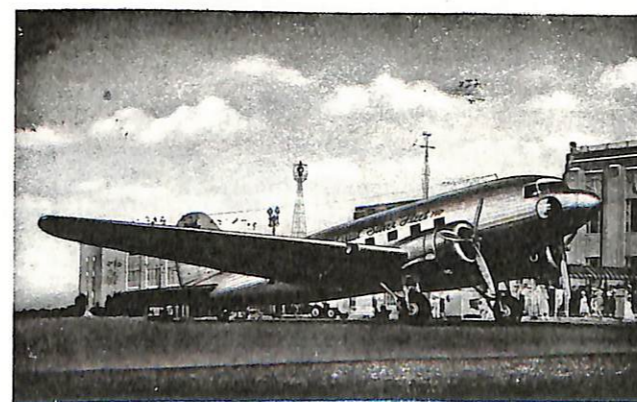
D-108 Douglas DC-3, Eastern, color linen, non airline



D-110 Douglas DC-3, Eastern, color linen, non airline

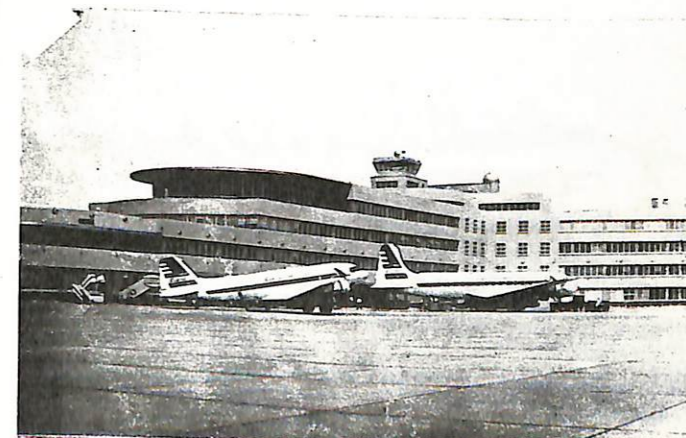


D-111 Douglas DC-3, Eastern, color linen, non airline

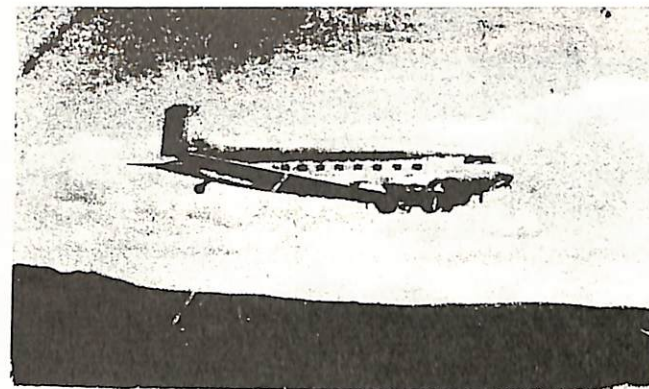


EASTERN AIR LINES' SILVERLINER AT NEW ORLEANS

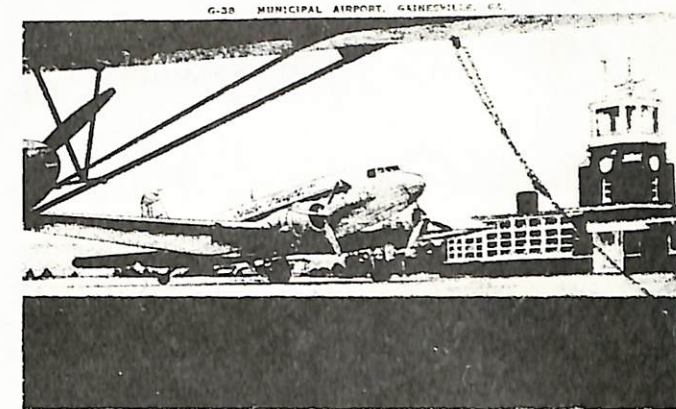
D-114 Douglas DC-3, Eastern, color smooth, airline card



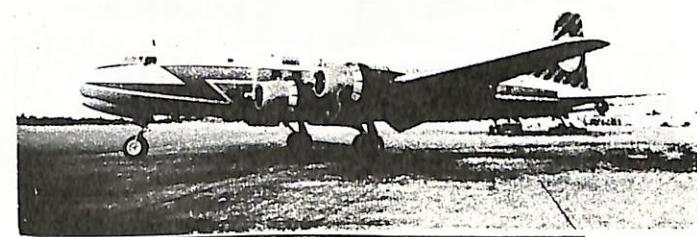
D-133 Douglas DC-3, DC-4, Capital, chrome, non airline



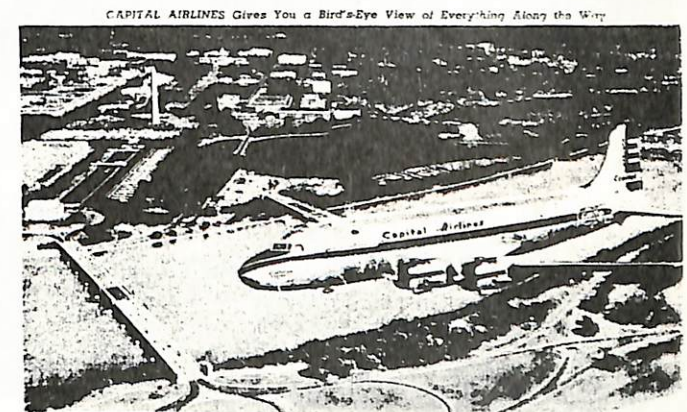
D-134 Douglas DC-3. Western, color linen, airline



D-137 Douglas DC-3, Strato-Freight, color linen, non airline



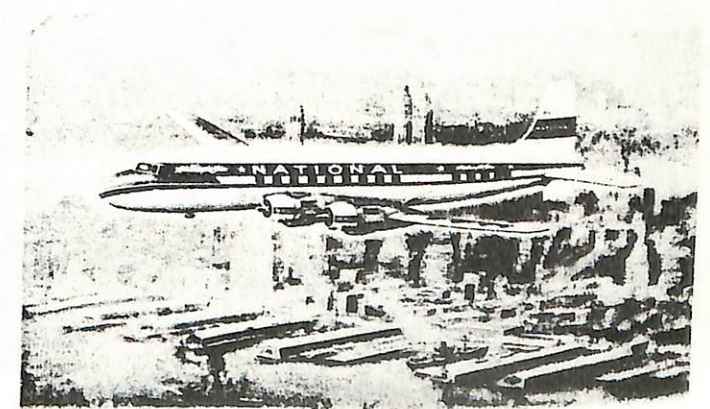
D-1004 Douglas DC-6, Aerocondor, chrome, airline



D-1006 Douglas DC-4, Capital, color line, airline



D-1011 Douglas DC-4, Capital, color linen, non airline



D-1032 Douglas DC-6, National, color linen, airline



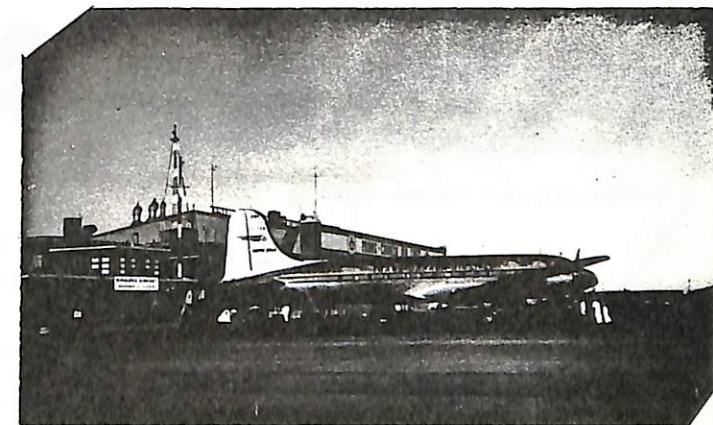
D-1034 Douglas DC-6B, National, chrome, airline



D-1082 Douglas DC-6B, Balair, chrome, non airline



D-1100 Douglas DC-7, United, chrome, airline



D-1110 Canadair DC-4M, Trans Canada, chrome, non airline, note C-004



D-1113 Douglas DC-6B, North American, chrome, airline



D-1115 Douglas DC-6B, Japan Air Lines, color smooth, airline

AIRLINE LOGO BADGES



McCulloch Int'l



Texas Int'l



Northwest Orient



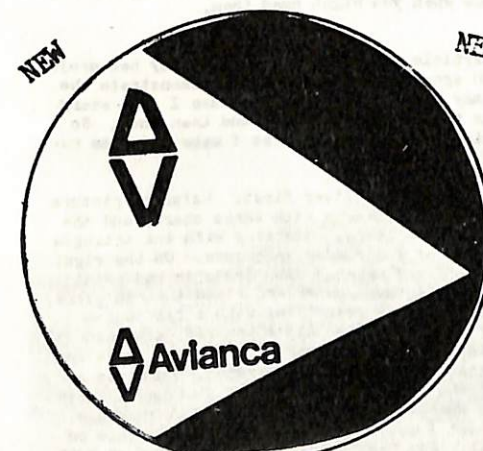
World Airways



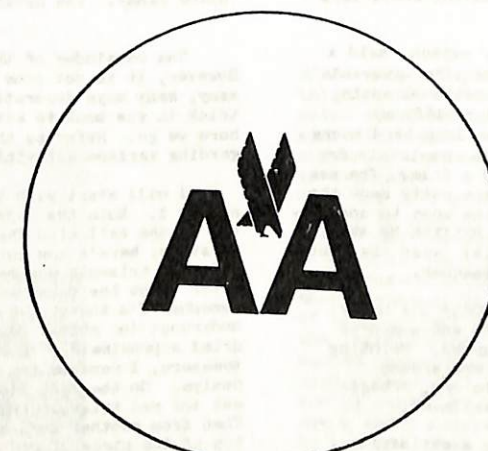
Ethiopian Airlines



KUWAIT AIRWAYS CORPORATION



Avianca



American



Continental Airlines

These Airline Logo Badges are made by the World Airline Hobby Club, and not the airlines depicted. They are approximately 2 1/4" round and come in the colors of the particular airline. Each badge sells for \$.50. In addition to the ones shown above are: TWA, Piedmont (o/c), CP Air, Air California, National, Korean A/L, Overseas National, TIA (o/c), and Saudi Arabian Airlines. Send in any design that will fit in the circle above and I will make you a badge. Same price \$.50. Paul Collins, c/o World Airline Hobby Club, 3381 Apple Tree Lane, Erlanger, Ky. 41018

DECAL CAPERS

by
STEVE KENYON

It does not seem possible that as you sit and read this issue of the *Captain's Log*, one year has passed since I joined the *Log's* staff. It has proven very interesting from a writer's viewpoint and the feedback from my readers have revealed some startling, as well as interesting, comments. But if I haven't accomplished anything else, at least I've provided a shoulder for my reader's gripes. Of course, if it wasn't for these gripes, the world would never know what areas need improvement. So if you fell griping is negative, forget it. Gripes are positive thinking and enough gripes will usually produce positive results. So let's continue to have your gripes as well as general comments and admonitions.

Now on to a different subject matter. As I promised you in the last issue, we would take an actual model and decorate it. So here we go. For the sake of illustration, I am using an example purposely made for this article whereby I could point out various techniques and ideas. It is not a registered airliner since it is of my own design. And you can see from the pictures it has no intricate designwork or complex color schemes. The exposure of the techniques and ideas will not work for everyone nor in every instance. On the other hand, if you adapt the principle involved and then modify it to suit your specific job(s) there should be no difficulty in finishing a fantastic-looking model.

The kit I used was a standard Boeing 707 kit from Airfix in 1:144 scale. I changed the design somewhat by blanking out the rear $\frac{1}{2}$ of the windows, adding a floor and installing a freight loading door. The front half of the aircraft was refurbished as living quarters. An additional radar dome (refer to picture number 3) was added as well as an APU (auxiliary power unit) and heating and air conditioning unit combined as one unit (refer to picture number 4).

Construction of the model was accomplished (generally) per the instruction sheet; however, before I glued the fuselage halves together, I made my modifications. Now arose a problem.

I wanted to try something new. My intentions were to try and find a speedier way of filling window openings and at the same time reduce filing and sanding efforts. I had read information and talked to different modelers about a special process which I wanted to try. This process was simply melting scrap sprue with liquid glue. In principle and with small fillings, it works very well since I have used it on several occasions previously. The mixture dries hard and smooth. Anyway, I took a large brush and coated the insides of each fuselage with a thick covering of this mixture (the fuselages were fastened to a smooth surface so the window opening would fill level with the outside contour of the fuselage) and set the items aside to dry. I became busy on some other things and did not get a chance to return to my project until about two weeks later. What I found was a mess. The mixture had softened the surrounding surfaces of the injection moldings and my fuselage halves were warped and distorted completely out of proportions. Besides this tragedy, the mixture and surrounding areas were still soft and not dried or hardened.

But, did I despair? (You bet I did---I hit the panic switch, said a few choice cuss words, kicked the dog, and in general, made life miserable for the whole family!) Finally, I calmed down, and being rational again, I set about to find a way to recover my fuselage halves and rectify my mistake. This mistake cost me one month's time and fifteen long hard hours of painstaking labor. It took one month for the mixture to completely dry and the fifteen hours was spent with green stuff putty and a file. The net results restored my faith in green stuff; however, the extra putty made the model extremely tail heavy and much weight was needed in the nose to counteract this weight so the model would sit on its wheels. SO BELIEVE ME AND LET THIS BE A GOOD LESSON TO ALL. The moral of this mistake is: even the best of us run into problems and experience is still the best teacher.

The remainder of the model was finished as required. Only the undercarriage, doors (wheel and entrance), antennas, engine pods and supports were left off. These were added after final painting occurred. Painting and decorating is much easier for me, if I don't have to work around these items. Once the glued surfaces (wings and tail) were dry, I began my decaling processes. And this is the heart of this installment.

Proper preparation of your model is most essential to a satisfying final product that displays your artwork. I will say again: patience is a virtue worth acquiring. The old saying, "haste make waste" is especially true when you work with the small scale objects. So from here on, don't hurry yourself; take your time and your reward will be your model speaking for itself.

As in any modeling job, research comes first. Here I refer to many pictures--both color and black and white--diagrams, drawings, schematics, templates, measurements, etc. Have them at hand so you may refer to them and do so often. In this case, since the model has no real-life example,

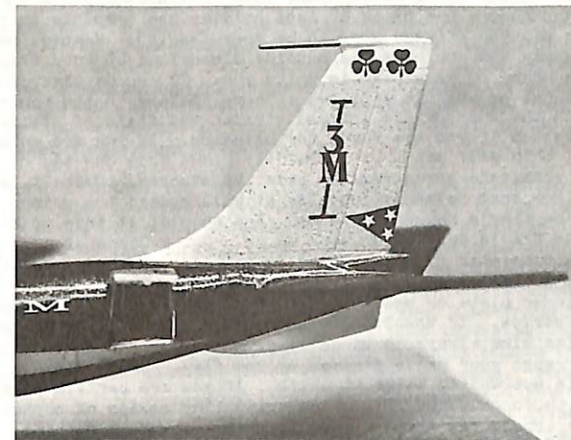
I had to proceed from scratch. So the first thing I accomplished was a drawing (layout) of my model in order that I would have a track to run on. Now my work became tedious, but easier.

At this point your model should have its final exterior coats of paint on it and make certain that the paint has dried thoroughly. This is especially true if you are using silver paint on any surface(s). Use that good old patience I spoke of earlier and let ALL paints dry at least 24 hours, even longer if you can stand it. I guarantee you won't be sorry. Fingerprints, smudges, oversprays, etc., certainly can take the enjoyment out of modeling in a hurry. But if you must handle your model shortly after you've painted it, try wearing a pair of rubber gloves. At least you won't have a nasty fingerprint to repair. Another hint to use now is to thoroughly wash your painted model with a light mixture of detergent and water thus removing any foreign matter which could mar the final "show" appearance of your model. For example: a speck of dust or a plastic chip under a dried decal looks like an outrageously popped rivet.

Another belief of mine is having proper tools to do the job. Holding your model with one hand and putting your decal on with the other is impossible. So I recommend some sort of a holding device. The item that I recommend is the Panavise made by Colbert Industries, South Gate, California 90280, very strongly. This vise adapts to several sets of jaws, swivels 360 degrees, tilts 90 degrees, and comes with either a fasten-down base or a vacuum type (suction) base. Two sets of jaws have proven most valuable for me: one set is a pair of jaws that open from 0 to 6 inches on a sliding track operated by a hand crank and worm gear; the second set of jaws is one made to hold electronic print boards and uses a pair of adjustable jaws placed into position by set screws thus letting you set the necessary distance apart. The two jaws contain a spring-loaded holding surface which form a solid grip on the material being held. Besides the vise, I also have a set of finely pointed dental tools. (I obtained mine by asking my dentist for his broken ones and then re-shaping them to suit my needs.) The dental tools may be used for burnishing, scribing, removing small minute decals from the paper backing, etc. A set of tongs (tweezers) with a 45 degree off-set point aids me immeasurably in holding a decal yet allows you to see the exact surface on which the decal will be placed. Several old brushes (round and chisel shaped) for putting on wetting and setting solutions; and X-acto decal knife; a small piece of plate glass (for trimming decals to prevent them ripping or tearing); an oak cutting board for cutting frisket paper, templates, etc.; paint mixing cups (I use the tops from screw-off soda bottles), brushes--a round 00000 and 000 work best for me, and air brushes, paint thinner and lacquer thinner (for cleaning airbrush) and jars, and a slab of clay round out my tool list. The clay is used to stick my brushes and other small tools in so they remain within my reach and I know where they are when I need them. For backup equipment, I always keep a dusting brush and my trusty X-acto with a sharp new #11 blade handy. You never know when you might need them.

The remainder of this article will refer strictly to my pet project. However, it is not done with ego-mania but, rather to demonstrate the many, many ways decorating may be accomplished. Because I used every trick in the book to achieve the finished product and then some. So here we go. Refer to the pictures and drawings as I make comments regarding various activities.

I will start with the vertical stabilizer first. Refer to picture number 1. Note the I-3M logo, the triangle with three stars, and the top of the tail with the two clover leaves. Starting with the triangle of stars, here's how both sides of the rudder were done. On the right side the triangle was masked off and painted with Testor's red paint after I cut the three stars from frisket paper and fixed them in place. Remember I'm the guy who always paints everything with a flat white undercoat (or primer coat if you will). So after the red paint had dried approximately 20 minutes and with the use of my X-acto knife and tweezers, I removed the frisket paper stars and preston, there was my design. On the left side of the rudder (shown in the picture) I first cut the red triangle from a surplus decal sheet and put it in place. Then from another surplus sheet I cut out three stars and put them on top of the piece of red decal. And before I forget, the sizes of both both triangles and all stars were matched by making templates before I began. My red paint was also mixed so that its color matched the decal since its color could not be changed.



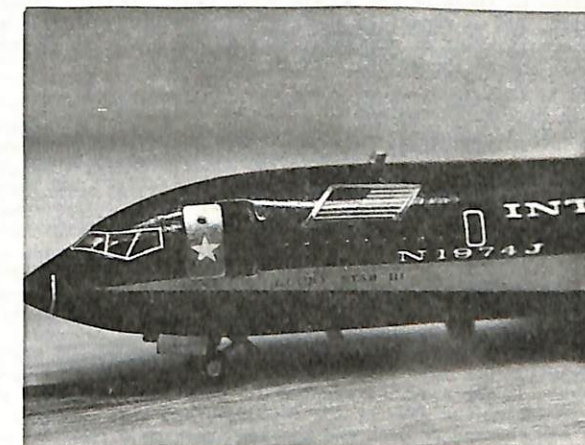
The I-3M logo was made using dry press-on letters. On the right side of the stabilizer, the letters were pressed directly on the painted surface. On the left side, the letters were first pressed onto clear decal paper (available from Victor-66 Products), cut out and then fixed to the surface. The black I of the logo was made from a border line of the press-on letter sheet.

A different system was used on the clover leaves. The tip of the stabilizer was already painted white so all I did was take frisket paper and cut out (using the X-acto decal knife--it has a very small and finely ground edge) a template. For those who may not be familiar with frisket paper, it is a very thin plastic film with glue on the back side and in turn attached to a paper backing. It may be re-used many times. Anyway, after I had traced and cut around the clover leaves, and again using the point of my X-acto knife, I lifted the clover leaves off the template. Then I sized the template so over spray would not get on the remainder of the stabilizer and fastened it in place. Care must be exercised here to make certain that the cut-out edges of your template are securely burnished to prevent run-offs in your pattern. For burnishing these edges, I used a bluntly pointed dentist's tool. The color of green paint was mixed and airbrushed on. After 20 minutes drying time, the template was removed and re-glued to the opposite side for a repeat of the painting process. By the way, try never to exceed a maximum of 30 minutes drying time before removing masking tape, frisket paper, etc. Waiting longer than 30 minutes to remove such items sometimes results in chipped or uneven edges to your design. Also failure to fully burnish all cutout edges of your design will allow your paint to run and correcting these mistakes can prove difficult; especially, if the base coat is white or some other light pastel shade of color.



And while we are on the subject of frisket paper, some of you may be wondering why we can't use it as decal paper. First, the thickness of the film is too great to be satisfactory; secondly, the adhesive on the backside will eventually wear out and your decal will come off. Its greatest attribute to modeling is its thinness which precludes paint build-ups at the edges of your cut-out design. The adhesive is a type which makes the template re-usable several times and thus does not require duplication of templates. The final advantage is your ability to use either the cut-out design itself or the remainder of the piece of frisket paper. Which you se depends entirely on you and your design and your techniques while you are painting directly to your model.

Next refer to any of the pictures where the cheat line is visible. Note that it does not appear in the customary area around or across the window areas. Instead it is much lower and encompasses a stripe across the tops of each wing directly at the wing root. In my example, this cheat line is silver and separates a royal blue top from a transparent candy green bottom. It was painted on after the two final coats of blue and green were in place. This reduces the margin of error of overlaps while changing colors in your scheme. The widness of the cheat line covers any overspray occurring when you paint the two different colors. More care would, of course, have to be exercised if you are modeling some exact color scheme of a regular airline. But the principle is adjustability and flexibility and you can CONTROL these factors as you make up your design. Also note that the cheat line contains both straight and curved lines. These are a deliberate part of the design to show that there is nothing difficult in making patterns or painting them. As to the process



of masking out your design, I recommend using clear 3M scotch tape. Its thinness maintains a low profile of paint build-up at the edges. Its chief disadvantage is that once in place if you must remove it, you must also start all over with a fresh piece of tape. Regular masking tape and/or frisket paper (or combinations) may also be used. Frisket paper is expensive and I don't recommend using it for large design since usually they are only going to be used once. If for some reason a rip or tear occurs in your tape or frisket paper, or color on color is needed, use a liquid masking agent and a finely pointed brush to accomplish your balance of design. Here a word of caution should be injected. If your model has any press-on letters in place and your design is in close proximity of these letters, do not use masking tape or scotch tape and allow the pieces of tape to come in contact with the letters. If you do, you will remove the letters since this is the best procedure to use in removing any unwanted press-on material. And while we are on the topic of removal, scotch tape will also remove any decals--wanted or unwanted--so beware and be cautious. If it is necessary to remove a piece of true decal, use a sharp X-acto blade and lightly cut the decal at the point you want to remove. Then place scotch tape down on the part to be removed and burnish very thoroughly. Be very careful that the edge of your scotch tape does not extend over on the part of the decal that is to remain on the model or you are in trouble. Anyway with the tape firmly in place over the unwanted piece of decal, quickly jerk the scotch tape off and you'll find that (in most cases) the unwanted decal has been removed.

But now back to a design whereby you are working close to the dry press-on letters or designs. If you can't use scotch or masking tape, then use a liquid masking agent. Coat over and around the dry press-on letters and let your liquid mask dry. Carefully cut out your design and peel off the unwanted pieces of liquid masking tape. Perform your

painting--or whatever--and then when you are through, with luke warm water, wash off the remainder of the dried liquid mask. At this point if the sheen appears dull or your colors have lost their luster, don't worry. They will be restored when you finalize your decorating by overspraying the entire model with glossy or flat (matte) finish.

Note, also, the clear, crisp lines of the cheat line (see pics 3 & 4). Especially note the point at either end of the design. This becomes possible, if you will take your piece of scotch or masking tape and attach it to a piece of glass first. Then using a straight edge and your knife, cut your line on the tape. Remove the tape and use the fresh edge you cut for the line of your design. This precludes having a jagged edge from the particles of lint, dust, etc. that cling to the edges of the tape as it comes from the roll. As with the use of any form of masking tape, remember to fully and completely burnish the edges of your design. Failure to do so will result in a lot of unnecessary cuss words and frayed tempers, not to mention extra work for yourself and a fair amount of wear and tear on your paint brushes. Now condition yourself with patience and after 15-20 minutes, remove the tape and this design is finished.

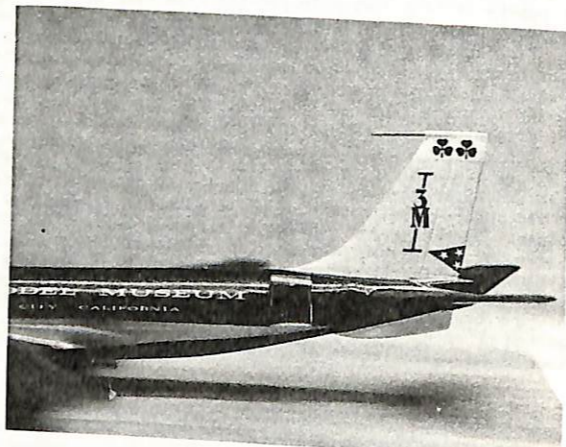
Referring now to picture number 2, we'll consider names and lettering. These can be accomplished in a variety of ways, if you are fortunate enough to have spare decal names in your decal box you're in luck. Use them. If not, then you must make them using any ingenuity you have available at your command. This can involve clear decal paper and then attaching them to your model; using individual letters and numbers from a regularly designed decal sheet; or, rummaging through your spare decals box and finding enough surplus letters to make up your name. And if you choose to use decal lettering sheets, don't overlook modeling railroad decal sheets for a solution to your unanswered project. You'll be surprised at what you will find. In the first place you will find a greater variety of colored lettering sheets. Secondly, many of the railroad sheets contain striping that becomes useable. And most of the scales are compatible to those of the models being used. Least I insult the PERFECTIONIST, let me repeat in another way my statement about scales. The scales aren't exact or precise, but they are close enough so they are useable. Now to the actual work on the example.

I chose to use the individual decal letters. And the only ones I could find were on a railroad lettering decal sheet. Each were cut from the decal sheet. Since they were individual letters, I cut them all out first before attaching any to the model. Before I began attaching them, though, I laid them out on my piece of glass and arranged my correct spacing as per my diagram which I spoke of earlier. Then turning to the model and knowing the exact distance between the first and last letters of the names and numbers, I took masking tape and placed it on the model so my beginning and ending were even and properly aligned on both sides of the fuselage. This eliminates guesswork and sore eyeballs. The next step amounted to establishing a straight line on each fuselage side without laying down an ink or pencil line on the line to establish the true first edge why not use a modified version on the fuselage? It was easy. I stretched a contrasting colored piece of thread lengthwise on the side of the fuselage, and then fastened it in place with scotch tape at each end leaving the middle free and moveable. Since the piece of thread is moveable it will return to its original position if it is accidentally touched or struck with your tweezers or fingers. To start the piece of thread determine "a known distance" above some known reference point (such as the window line) on the side of the fuselage. Set one end of the window line) on the side of the fuselage. Now stretch your thread quite taut and fasten the opposite end with additional tape. Now lay off your proper spacing between each separate word using small pieces of scotch tape cut exactly to the distance you want between each word in the complete name. I go one step further for complete uniformity. In each space where a word will ultimately be, I locate the center of this section. If the word has an odd number of letters to it, I attach the middle letter precisely over this center mark. If the number of letters is an even amount, I place the two middle letters an even amount of spacing to the right and left of this center line making certain that the total distance between the two letters is no more than will appear between the balance of the letters to be attached. Follow this procedure for the remainder of the words and, BINGO, you have a perfectly aligned set of letters announcing the name of your airline. I use this system for the alignment of all lettering and numbering. It can also be used to align dry press-on letters since the thread permits you to slide the dry transfer sheet under it and thus enable you to form a straight base line for your lettering. And this system works as well for putting on whole decal patterns as well as cheat line stripes that may be necessary. An additional advantage to using the thread is its ability to absorb and hold the setting solutions from spreading all over the side of the fuselage. Try it! You'll like it.

The name of the aircraft and the registration numbers (picture #3) were from the same sheet of railroad letters only scaled down to size as deemed necessary. The name of the aircraft, by the way, is depicted in the designs on the vertical stabilizer and rudder.

Next we consider the National symbol--our flag (picture #3). There are a number of ways it may be built. The most obvious, of course, is to find two flags from surplus decal sheets. But then maybe these are not the right scale or size. So what do you do? Very simply make your own and paint them directly to the sides of the fuselage. First design

a template in the scale you want. Fasten this over-all sized template in position on the fuselage with a small piece of scotch tape on one end or side leaving the other three open. Now mask around these three open sides. Then remove the piece of tape holding the template in position and finish masking off the area to be your flag(s). Remove the template completely and you have the outside dimensions of your flag. By the way, the shape of your flag is up to you. It can be slanted or completely vertical because it will not concern filling in the center of the flag with the appropriate colored stripes and field of stars. This note of caution if you are ready for painting. If you are going to brush paint, thin your paint so it readily flows from the tip of your brush and eliminate spreading the paint by strokes. Overall, an airbrush gives the best paint job because it will spread the paint evenly across the flag's background area. You should, at this point, be ready for the flag's details so here we go. Cut a piece of tape the size of the blue star field. Fasten it in place and burnish. Now lay out a strip of scotch tape on your piece of plate glass and, by the way, a large dinner plate or meat platter made of ceramics will also work, and cut narrow strips. If the background on the inside of your flag area is white (as mine always is since my primer coats are white) you are ready to arrange your white stripes of the flag. If the inside of the flag area is not white, paint it white. If you are certain your white paint is thoroughly dry, place the small tiny strips of scotch tape lengthwise across the white field and these become your white stripes in the flag after you've finished the rest of the painting and you have removed them. Now that the small tiny scotch strips are in place (and remember that a red stripe appears at both the top and bottom of the flag) you are now ready to paint the red stripes. After 20 minutes or so, remove the small tiny strips of scotch tape and you have your red and white stripes of the flag. Next remove the masking tape covering the blue field; mask around it and paint it blue. Wait the usual amount of drying time and then remove all remaining masking tape. Your flag is now complete with the exception of the white stars on the field of blue. To finish the stars, use a very finely small pointed brush or a round toothpick and dab white dots onto the blue field. If you are a perfectionist, fifty dots will appear. If not so perfect, one or two



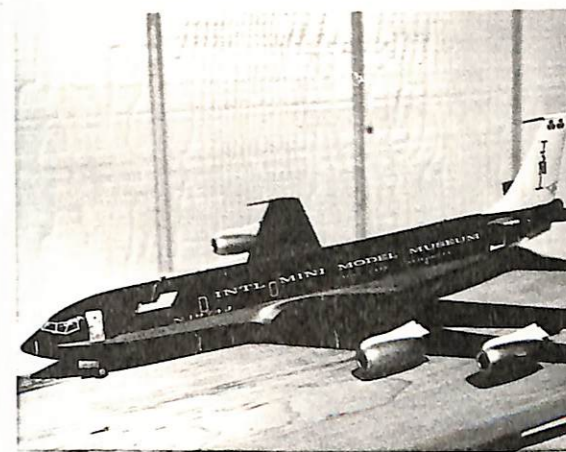
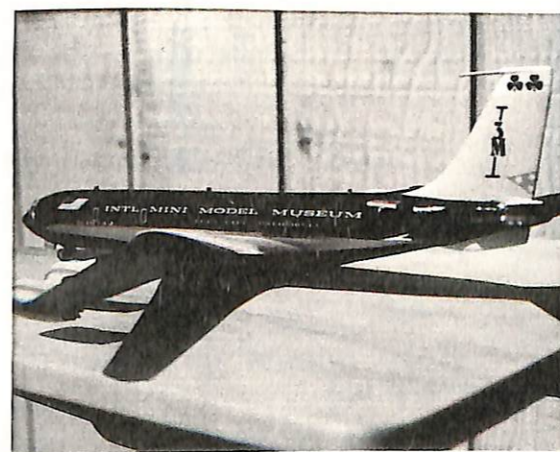
missing white dots will never be noticeable. Now repeat this same process on the opposite side of your aircraft and the flags are finished. It should go without saying that the same procedure could be used on clear decal paper and by making two at the same time a little time could be conserved. Remember, though, that the flag opposite the first one you make, must have a somewhat reverse process to it since both flags craft. So watch yourself and don't wind up having a flag flowing forward on the model we're working on.

From the flags to the radar nose which in most cases is painted black. If your hand is unsteady and want a perfectly straight line again use scotch tape. However, one slight problem arises here, Scotch tape will not bend and still make a perfect seal when you burnish it. So allow the scotch tape to lay flat on the convex surface of the nose. This will usually amount to using several pieces of short tape and overlapping them so the imaginary line where you make your cut for the beginning of the black nose is completely covered. To make sure that the line you cut is even and straight, use some hollow object which may be slipped over the nose of the aircraft and use the edge as a straight edge for cutting the tape. Again burnish the cut edge and paint the nose with your favorite system. Remove the scotch masking tape when the allotted time has elapsed and your finished with the nose job.

Another area needing paint is the anti-glare panel on top of the nose. Follow the same procedure with this panel as you did with the radar section. Form your lines, mask and paint it with the color called for in your pictures of your real-life example being modeled. Since the radar nose and anti-glare panels are usually flat or matte in texture, leave them till last to paint or else mask them over with liquid masking agents--especially, if you are going to spray the entire aircraft with clear gloss finishes.

Here's an idea you might like to try for painting the dividing strips of your windshield (pictures #3 and #5). If the windshield is molded as one piece and contains raised ribs to simulate the divider posts, cut, scrape, or file them flat to match the remainder of the windshield surface. Using toothpaste or silver polish, restore the clearness to the windshield where the surfaces were roughed up from removing the ridges or ribs. Now install your windshield in your usual manner and let your glue dry. While the glue is drying, take some clear decal paper and paint a small patch with matching colors of the fuselage top or cheat line that surrounds the windshield area. When it has dried for approximately 10 minutes take a straight edge and your faithful knife and cut strips the width of the simulated posts dividing sections of the windshield. Now lay these strips aside to completely dry. After the passage of sufficient time to thoroughly dry both the glue on the windshield and the painted strips, cut the strips into proper lengths for the divider posts. Attach them in the regular manner as you would a decal--that is, use your setting solutions, etc. Don't be concerned if there is a slight overhang above or below the top and bottom of the windshield. It can be trimmed after the strips have completely dried in place. If you refer to picture #2, you will not my windshield is completely outlined with white striping. Mine was accomplished by cutting out the desired lengths of white door outlines off Micro Scale's door decal sheet, and then attaching them using Micro Scale setting solutions and system. You must admit it makes a very nice appearance.

Putting in windows was no problem. I used several methods involving several products so I could outline them to my readers. In the first few windows, I used white glue. In the next few, I used Crystal Sheen sold by Victor 66 Products. The next few windows contain Micro Krystal-Klear manufactured by Micro Scale. The remaining cover used for my windows may come as a surprise to some. I cut clear decal paper sold by Victor 66 Products into small strips or squares large enough to just cover the windows and still leave a small edge to attach to the surface of the fuselage. These small sections of decal paper were installed in the usual manner and permitted to dry. One hint; do not use any length of decal paper longer than that necessary to cover two windows. A longer strip will stretch too much during the drying process and split. In 1/16th scale this system works well. What it will do with larger window openings is not known at this time. If anyone of my readers has tried using clear decal paper for windows on 1/72 scale or perhaps larger, how about dropping me a line and letting me know your results. Anyway, the finishing touches to the decal windows is to carefully brush on or airbrush on a coat of Micro Scale glossy finish. It makes the window surfaces nice and shiny like clear, clean glass and it also produces a protective coating against the elements and reduces your chances of the decal paper splitting. Spray or brush the glossy coat on approximately two hours after installation; or if the room in which you are drying your model is extremely warm, use a lesser period of time. And don't be afraid to overspray injection moulded clear plastic windows and windshields either. The Micro Scale glossy finish will make them outstanding and clear looking. One item about decal windows: after installation, be careful in handling your model or the soft fingers may splinter the windows for you. If this happens soften the section to be removed with Micro Scale setting solution (blue label) and lift the section off or cut a piece of scotch tape the exact size of the section and remove the shattered windows in the manner I have previously discussed for removing decals.



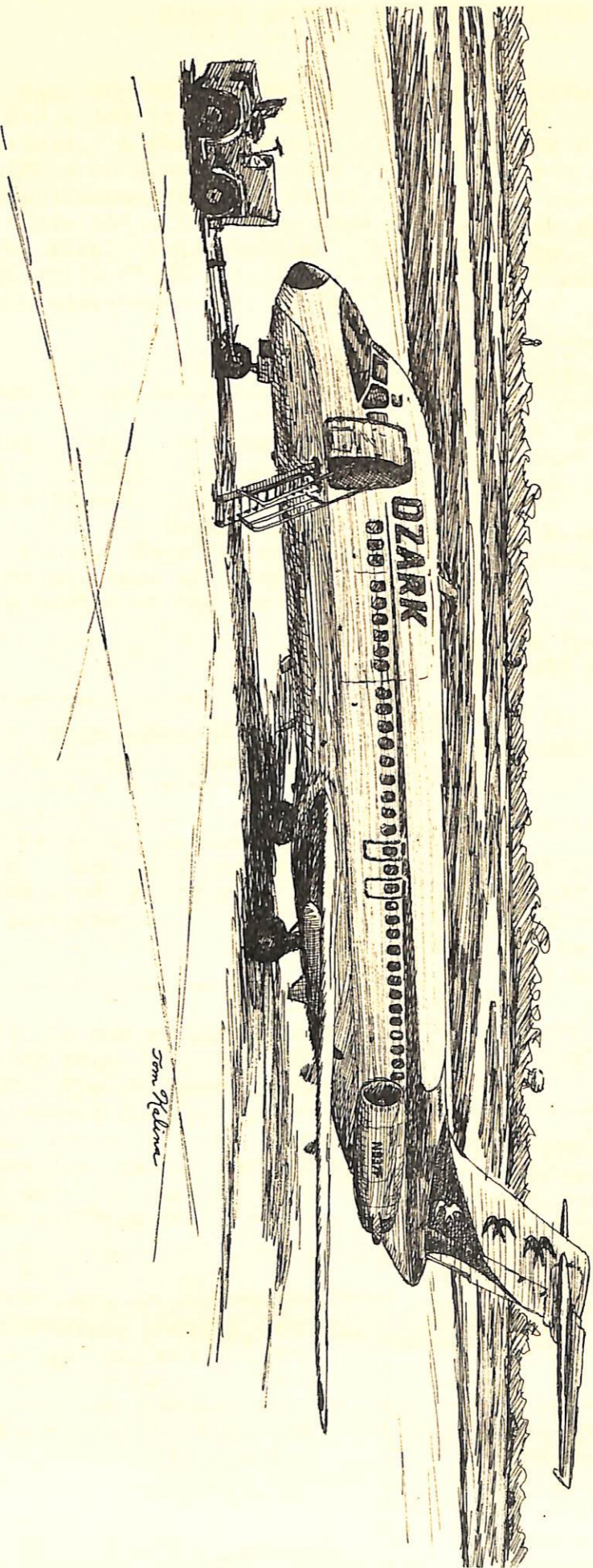
Before leaving the subject of using decal sheeting for windows I will relate one additional factor which I stumbled across quite by accident. After installing the windows, I cut out and attached over the clear decal windows, the escape door outlines. This procedure reinforced the first layer so there was no splitting of the decal paper. I had first used long strips of decal paper to cover many of the windows at one time. Then I put on the escape door outlines. Windows on both sides of the one containing the door window split while the reinforced ones did not. So careful experimentation followed and a double thickness of clear decal paper appears to do the job. My model is several months old now and none of the windows that I used reinforcement on have split. The only objection I can see at the moment is that the double thickness might be objected to by some of the ranks as being too thick and not sturdy enough. At this writing, I haven't found this to be true, but its possible. So your own personal preference must reign supreme.

Finishing with the windows, my decaling and decorating processes were completed. All that remained to be achieved was to install the items purposely left off. Once this was accomplished and the entire model sprayed with glossy finish, it was ready for the photographer and ultimate display among the many other examples at the museum. So far, it is my pride and joy and its space among the array of airliners receives daily attention.



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