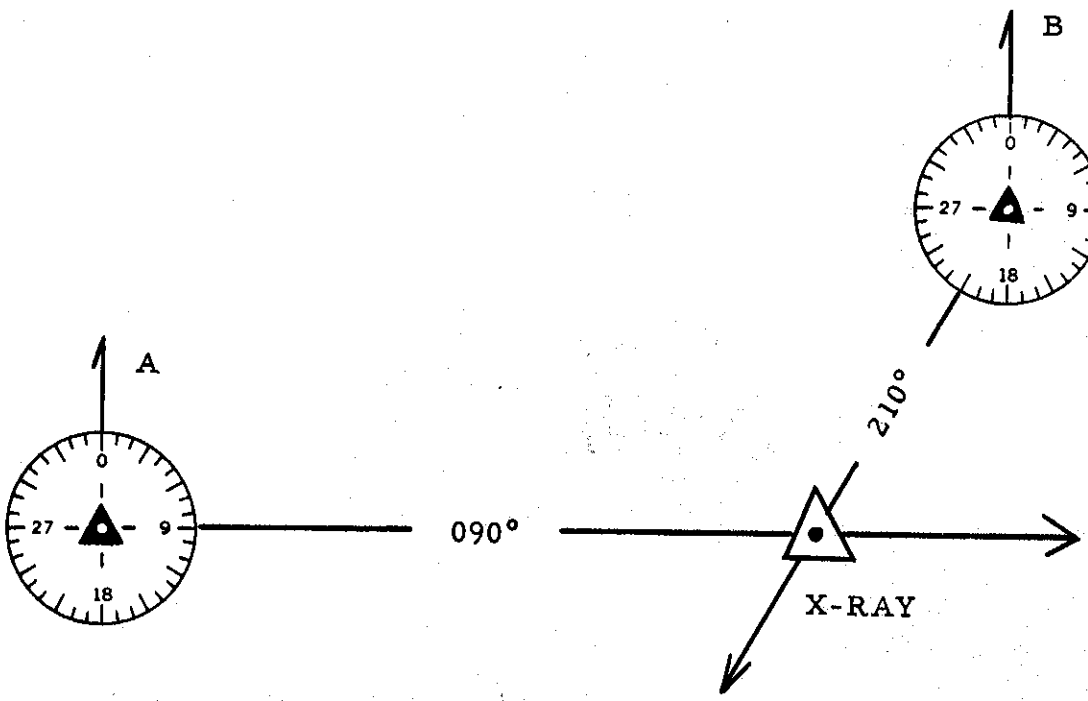
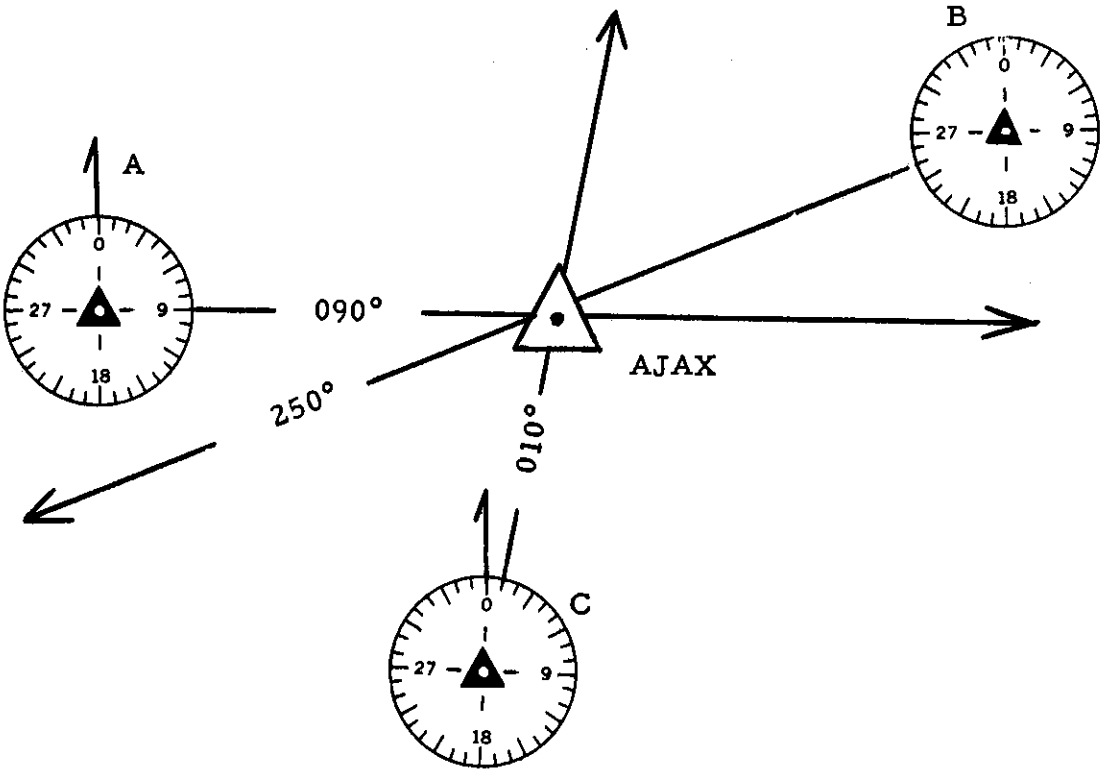
# PRACTICAL EXERCISE NO. 3

## RADIO NAVIGATION

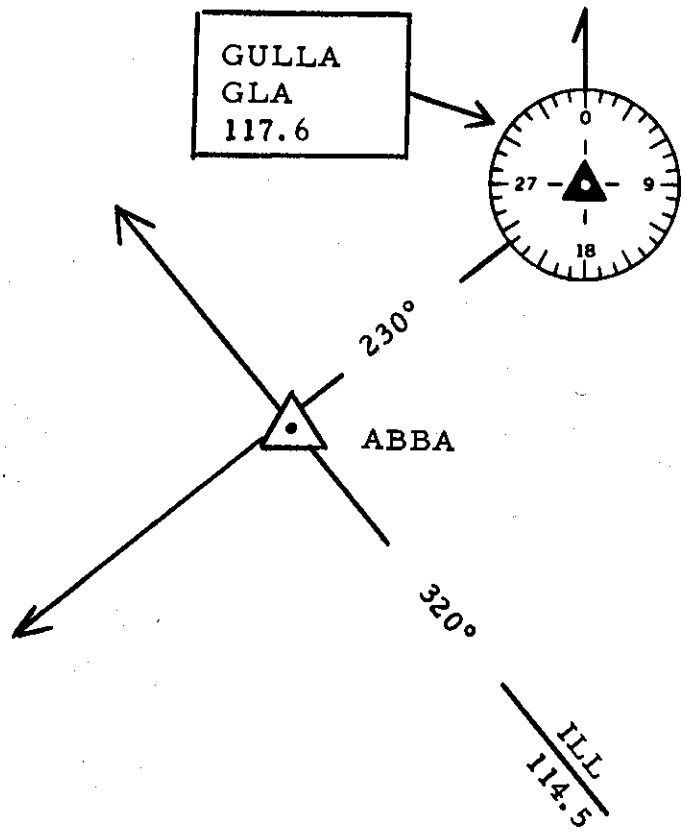



Radio navigation charts display numerous points which represent the intersection of radial from two or more omni stations. These intersections may be used for fixing position, reporting, etc.

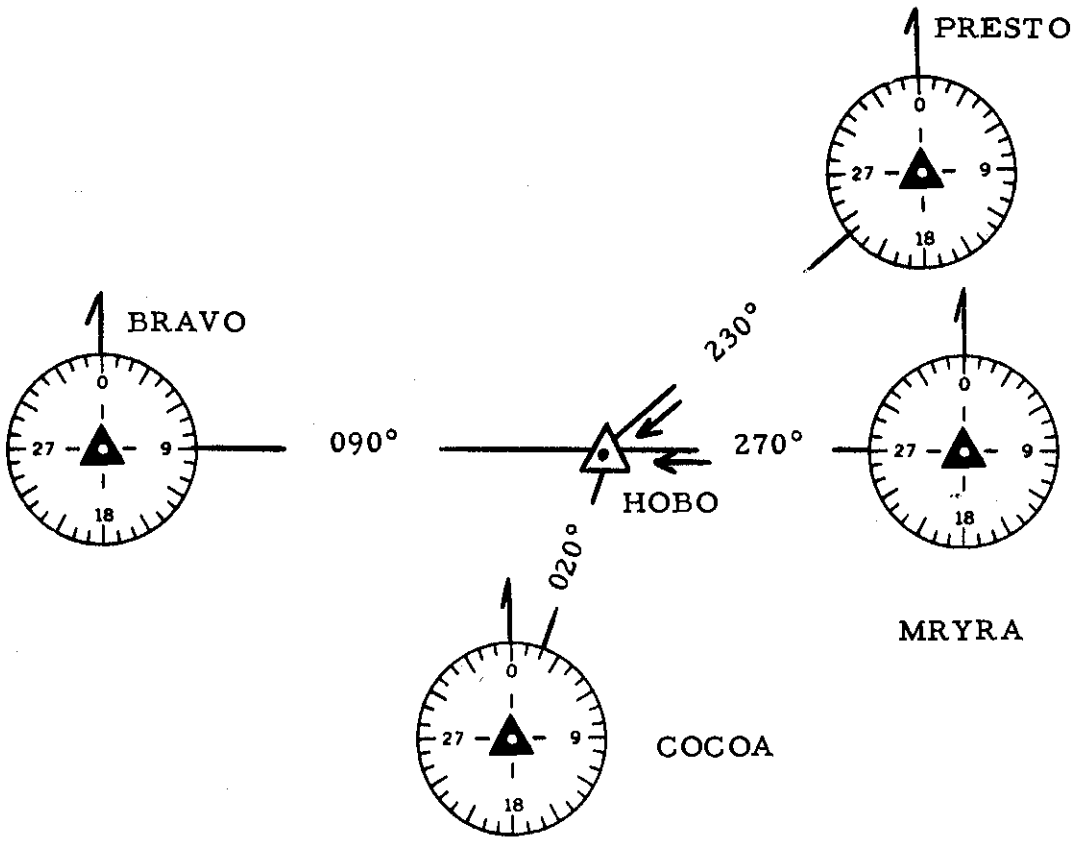
In the diagram above, the small triangle labled X-RAY is the intersection of the 090 ° radial from station A and the 210 ° radial from station B.



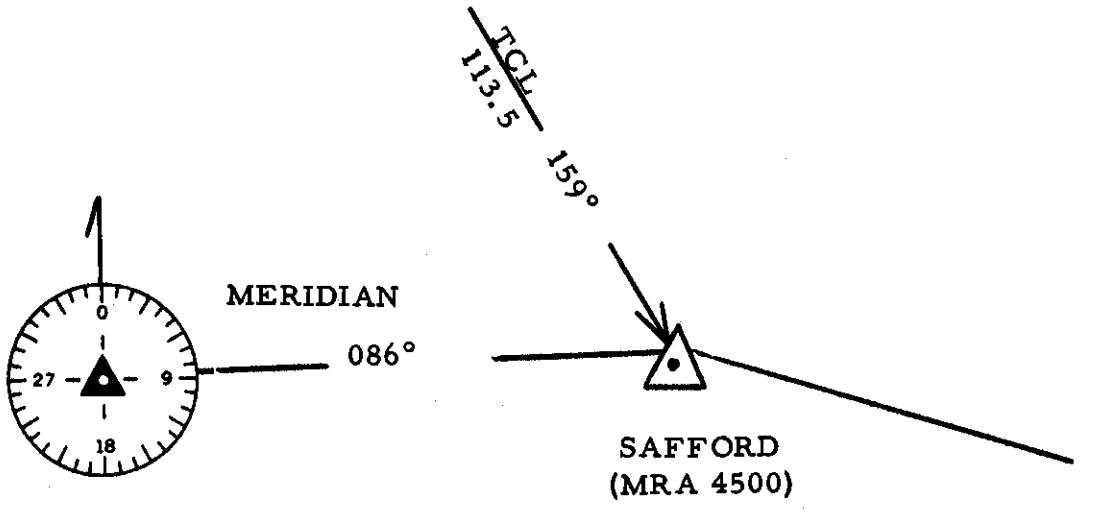

Intersections are formed by radials from two or more omni stations which intersect at an angle of 30° or more. The most accurate intersection occurs when the radials intersect at 90°. If the radials intersect by less than 30°, the intersection is usually not accurate enough for a precise fix. In the diagram above, the AJAX Intersection could most accurately be formed by the 090° radial from station A and the 010° radial from station C.




Navigation charts show the radials and stations which are used to form an intersection. In the illustration above, the 230° radial from station GULLA forms the ABBA Intersection with the 320 ° radial from station ILL (identification) which transmits on a frequency of 114.5 mc.

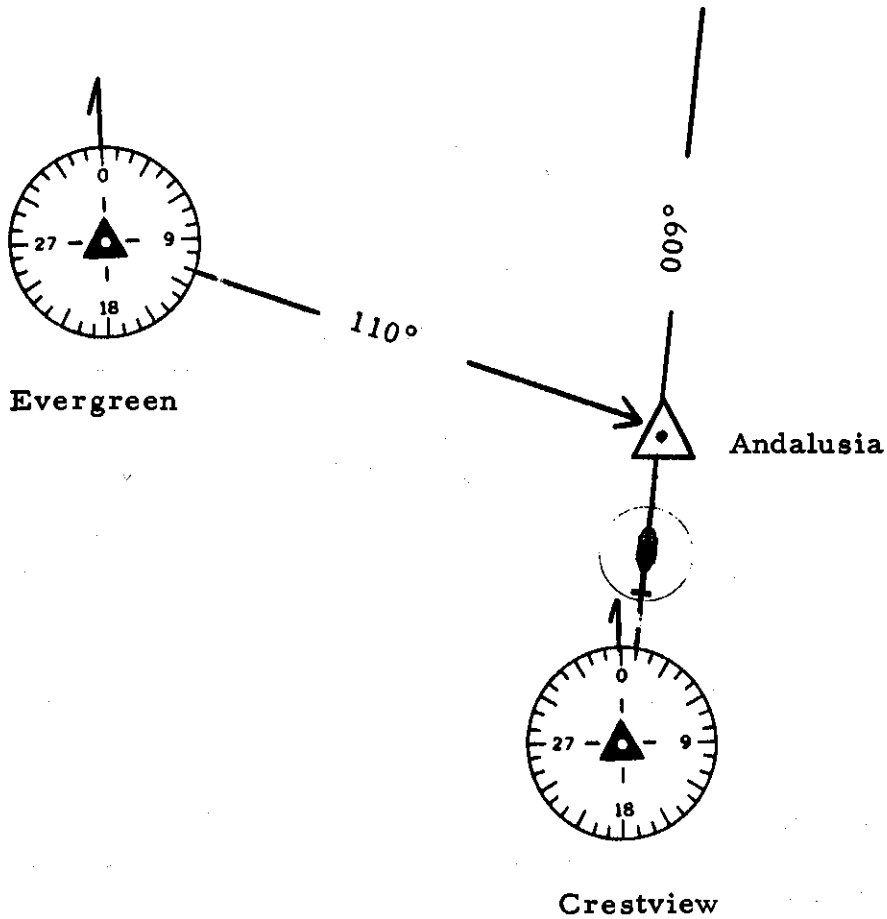



Where multiple stations are possible for forming an intersection, the stations which are used and flight-checked for accuracy are indicated by small arrows near the intersection. The small arrows by the HOBO Intersection indicate that the intersection is formed by the 230° radial from PRESTO and the 270 ° radial from Mryra.



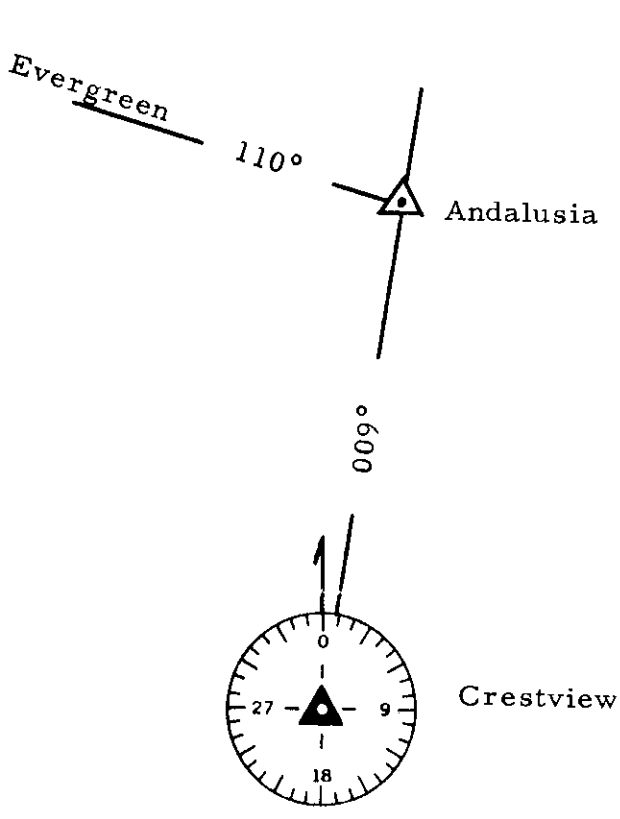

We saw earlier that omni stations are restricted to line-of-sight transmission and for this reason cannot always be received at low altitudes. Occasionally, a minimum altitude at which an aircraft can fix an intersection is shown by the intersection on the chart. This altitude is called the minimum reception altitude (MRA).

The MRA for the intersection above is 4500 feet.

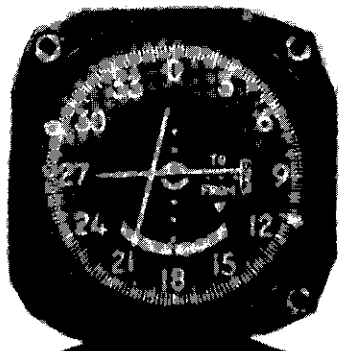



To fix the Andalusia Intersection, the aviator will fly outbound from Crestview on the 009° radial. The aviator will establish the heading necessary to keep the aircraft on the 009° radial CEW.

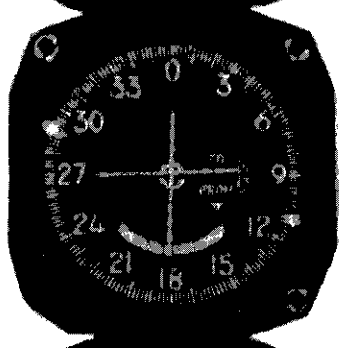
Next, the aviator will tune and identify Evergreen. The aviator knows that he will be over the Andalusia Intersection at the time he crosses the 110 ° radial from Evergreen.



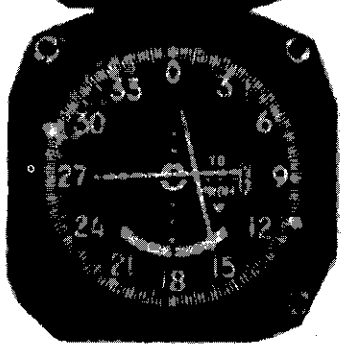

A.



B.

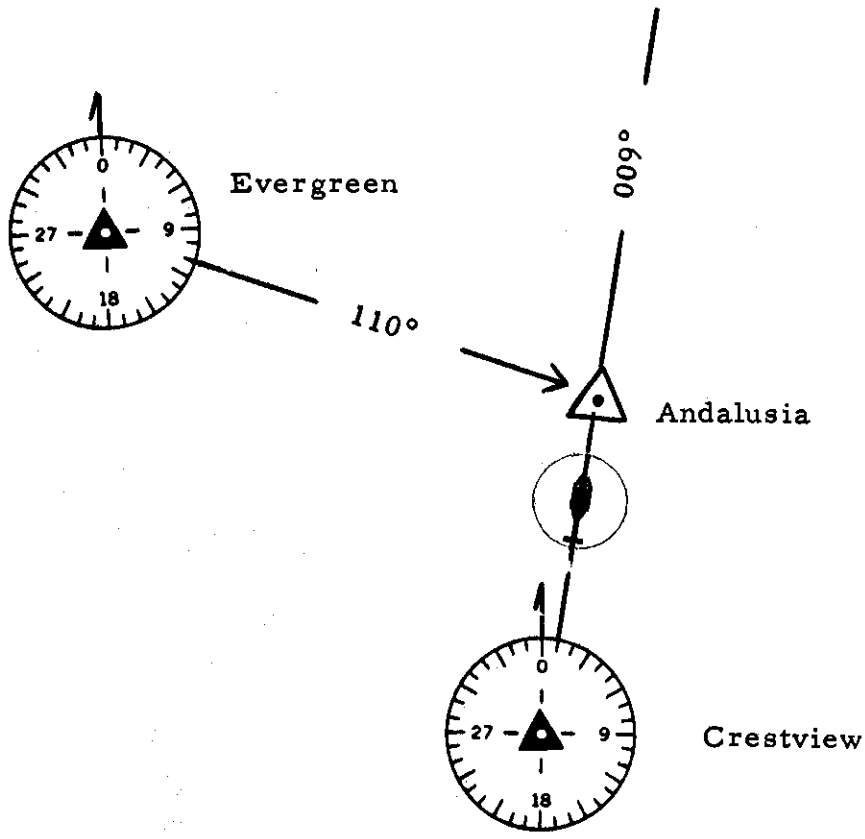


C.



After tuning and identifying Evergreen (EVR), the aviator will set the course selector on 110°, causing the TO-FROM indicator to show FROM because the 110° course goes from Evergreen.

Which of the course indicators above shows that the aircraft is <u>on</u> the 110° radial from Evergreen? B

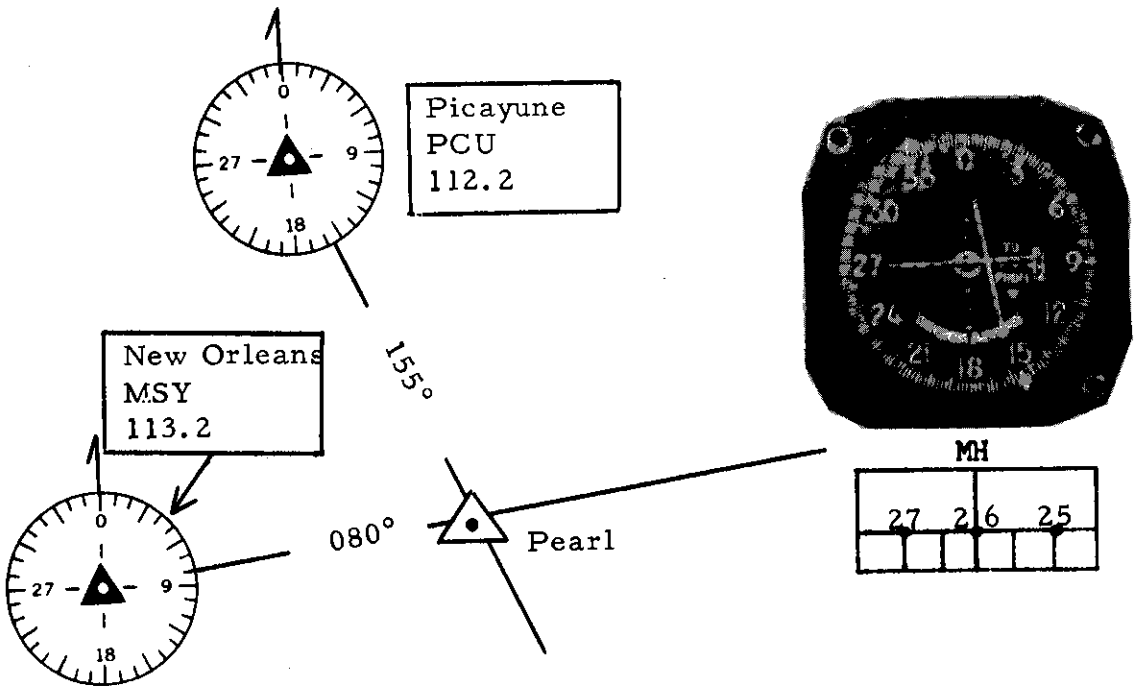



Remember that although the aircraft is not actually flying 110° (the radial from Evergreen), the aviator can assume that he is.

If he makes this assumption before he reaches the intersection (110° radial from Evergreen), he can say, "If I were flying a heading of 110°, the left needle is telling me that the 110° radial is to my left." In other words, in this particular case, the left needle means that the aircraft is _____ (north - south) of the 110° radial which fixes the intersection.

In the case of the Andalusia Intersection which we have been looking at, the needle was supposed to be deflected to the left before the aircraft reached Andalusia.

Therefore, after the aircraft passes the Andalusia Intersection, the needle should be deflected to the right.




In the diagram above, an aircraft (not shown) is flying inbound to New Orleans on the 080° radial, following a course of 260°.

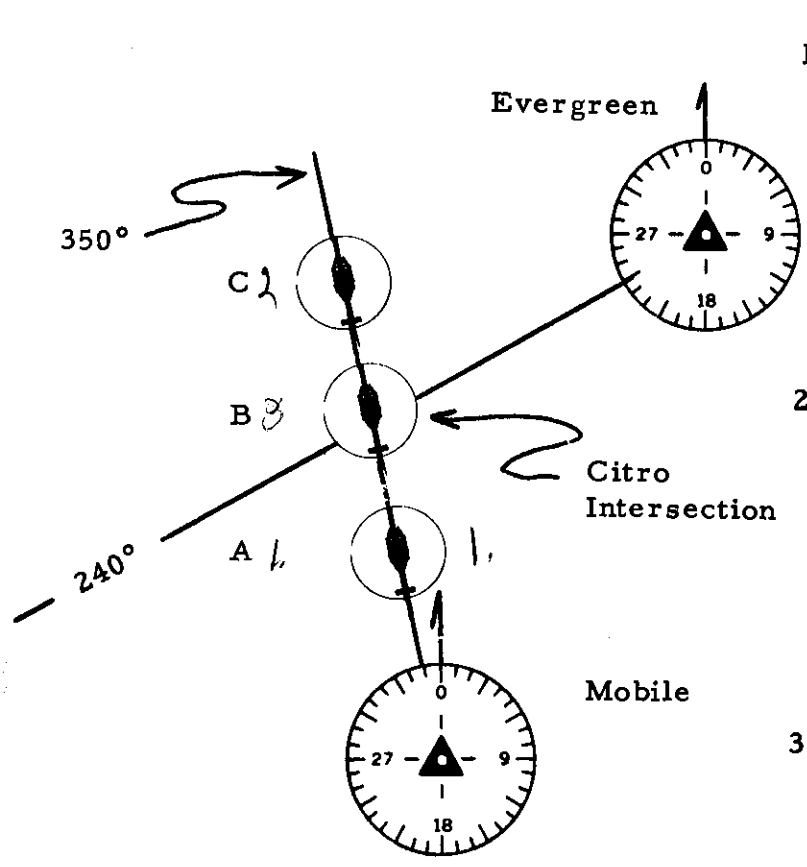
To fix the position of the aircraft at Pearl Intersection, the aviator tunes Picayune on a frequency of 112.2 mc and identifies the station (PCU).

He then -

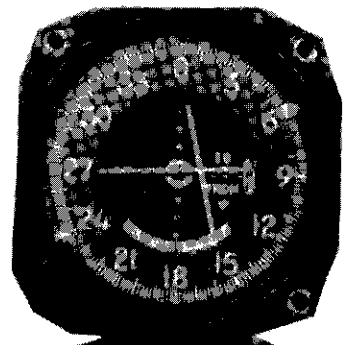
a. Sets the course selector on the 155° radial.

b. Observes that the TO-FROM indicator shows from.

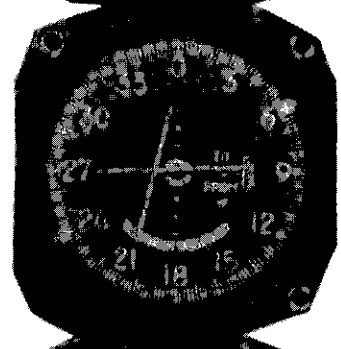
c. Realizes that since the station (PCU) is to his right (right - left) and the needle is also deflected to the right, the aircraft has not (has - has not) passed the Pearl Intersection.



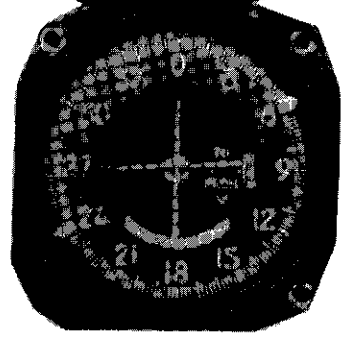

1.



2.



3.

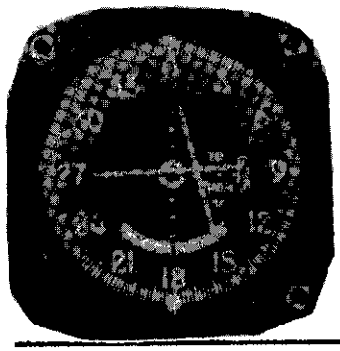


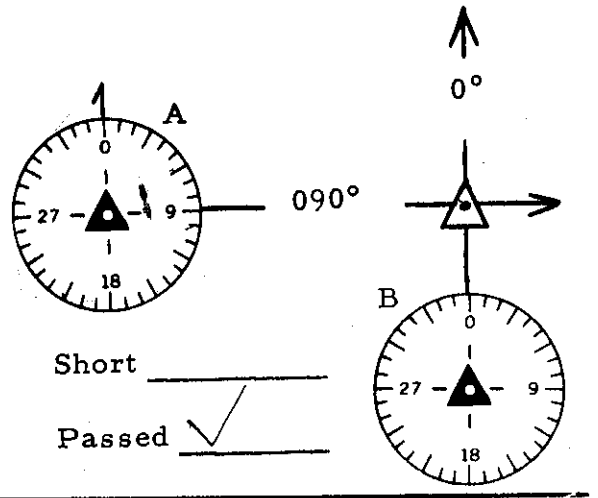
In the situation above, the aircraft is flying outbound on the 350° radial from Mobile (MOB). The aviator has tuned and identified Evergreen (EVR) in order to fix the position of the aircraft over the Citro Intersection.

Match the successive positions of the aircraft (A, B, and C) with the course indicators (1, 2, and 3).

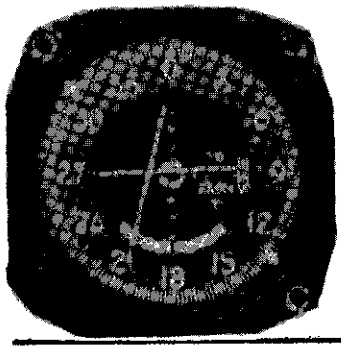
In each case below, the aircraft (not shown) is flying outbound from station A; the aviator has tuned station B in order to fix the intersection. Look at the diagram and course indicator in each case to determine if the aircraft has passed the intersection or has not reached it.

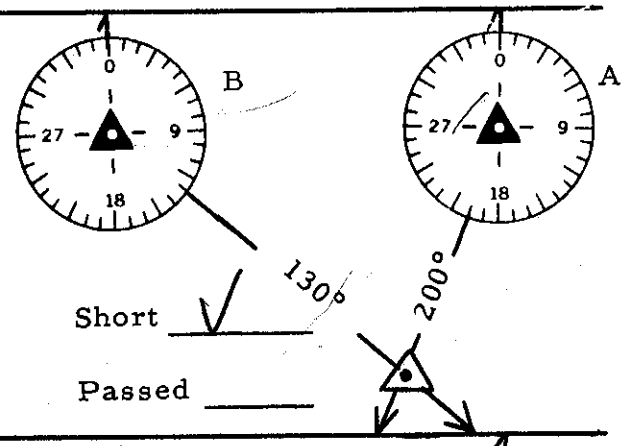
1.



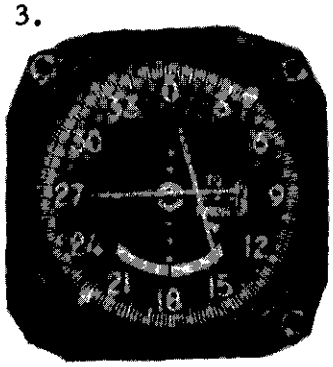


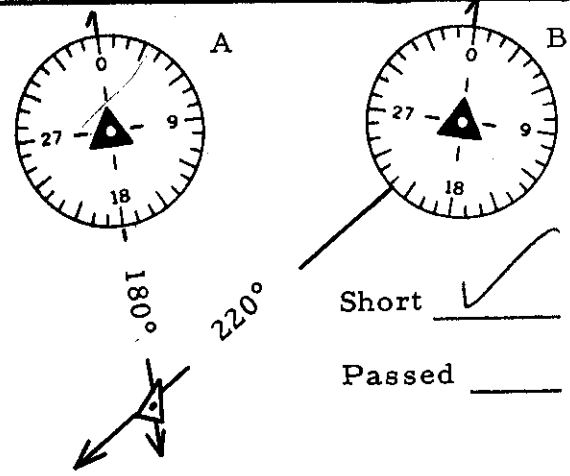

2.

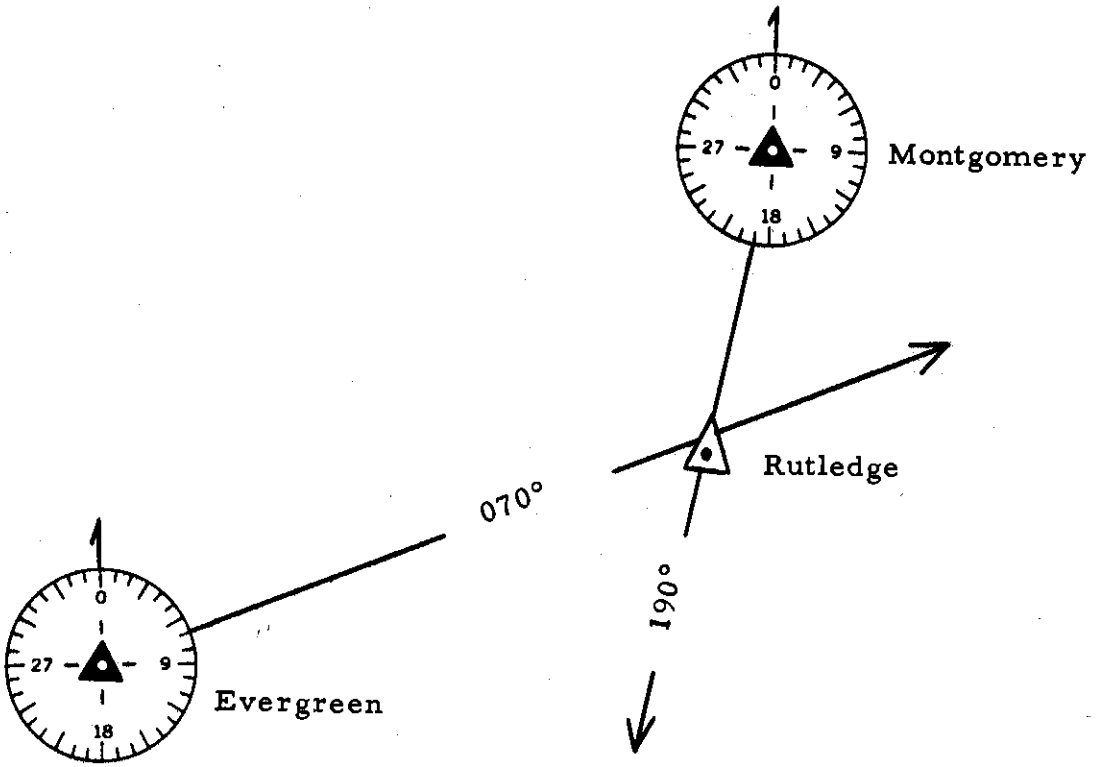





3.

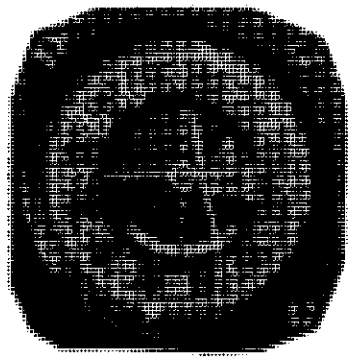







In some cases, it is necessary for an aviator to determine his arrival over an intersection and then turn to fly inbound to another station. In the diagram, the flight path is from Evergreen to Rutledge Intersection, and then to Montgomery.

In fixing the position at Rutledge Intersection, it _____ (would - would not) be practical to set the course selector on 190° because the inbound course to Montgomery is 010°.



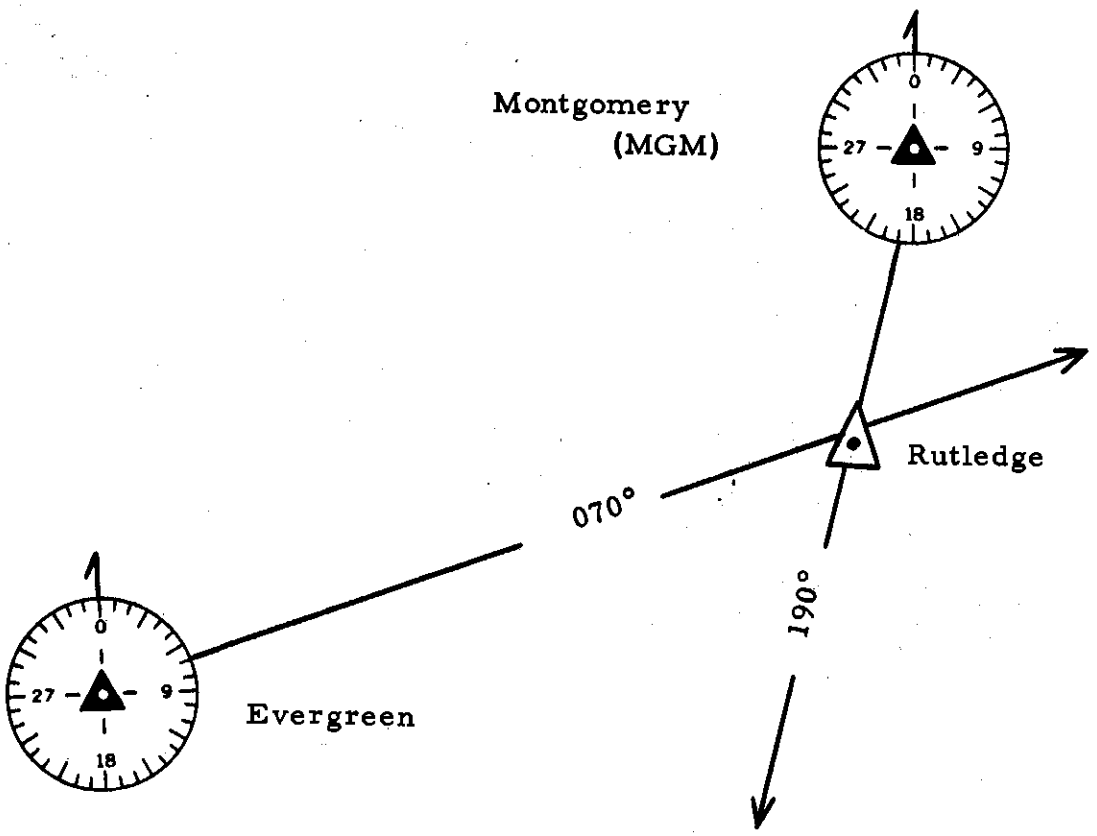



In fixing the Rutledge Intersection, the course selector should be set to the inbound course - 010°. This will cause the TO-FROM indicator to show TO.

How is the aviator to interpret the right needle of the omni indicator?

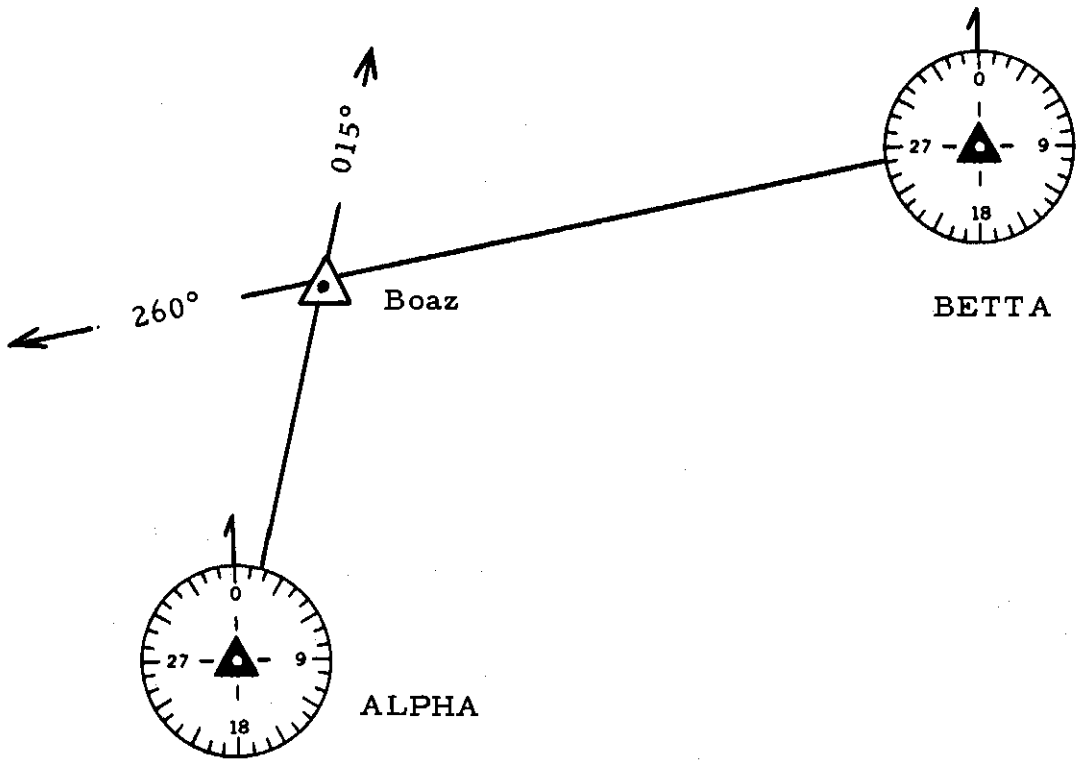
right of course

He may assume that he is flying the same course that is set on the course selector (010°) and say, "If I were flying a heading of 010°, a right needle would mean that the 010° course (to MGM) would be to my right; therefore, I am west (east - west) of the Rutledge Intersection."




You should remember that if the course selector is set on the radial, causing the sense indicator to show FROM, the needle would be deflected to the same side as the station (MGM) prior to reaching the intersection.

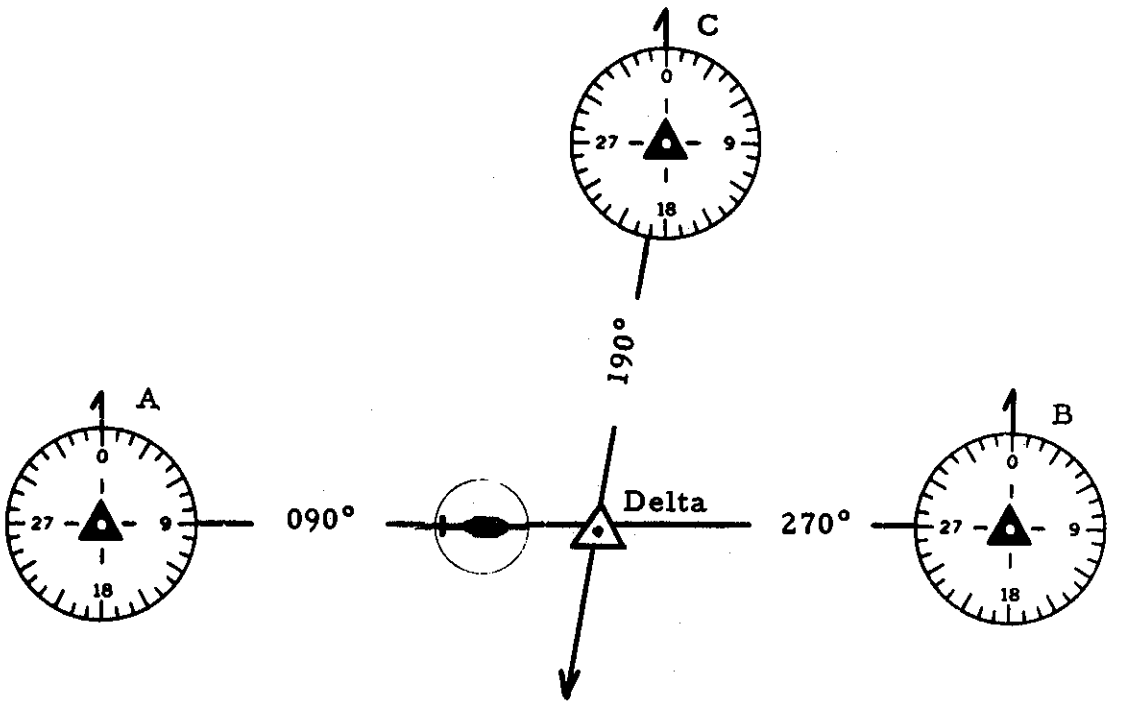
But, if you set the course selector for the inbound course, causing the sense indicator to show TO, the needle will be deflected to the opposite (same - opposite) side as the station prior to reaching the intersection.




You are flying from ALPHA to BETTA via the Boaz Intersection.

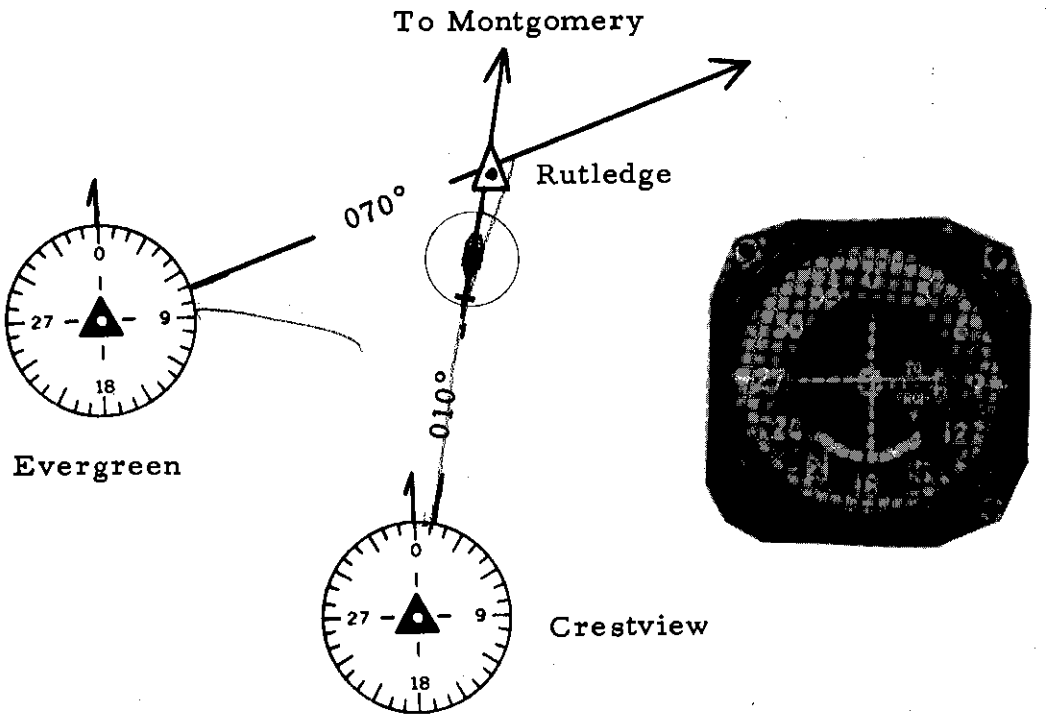
Before reaching the Boaz Intersection, you tune BETTA and set the course selector on 060 ° which causes the sense indicator to show TO.

You should expect the omni needle to be deflected to the left (left - right).




Another useful technique in checking the position of the aircraft in relation to an intersection is to find out what radial the aircraft is presently crossing and then compare it with the radial on the chart which passes through the intersection.

In the diagram above, the aviator is flying outbound from station A on the 090° radial. At the time he crosses the 190° radial from station C, he will be over the Delta Intersection. However, before the aircraft arrives at the Delta Intersection, it will be crossing radials from station C which are _____ (more than - less than) 190°.



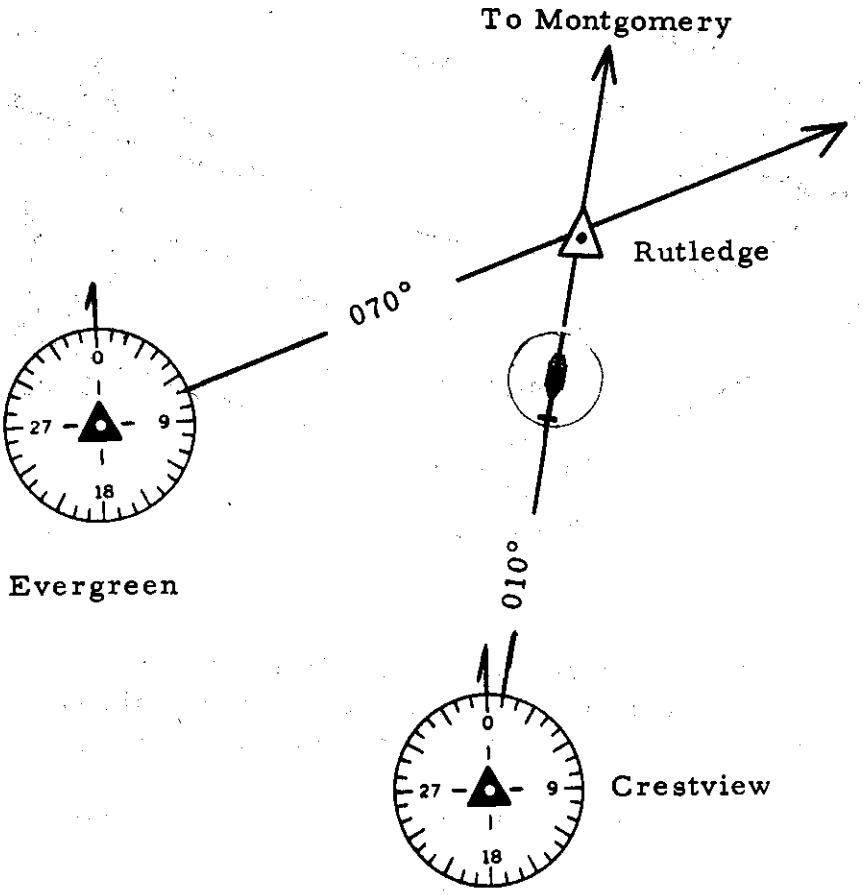

In the diagram above, the aircraft is flying outbound from Crestview toward Montgomery. Rutledge Intersection is on the 070° radial from Evergreen.

To verify that the aircraft has not yet reached Rutledge Intersection, the aviator tunes and identifies Evergreen. He then rotates the course selector in the vicinity of radials which are greater than 070°.

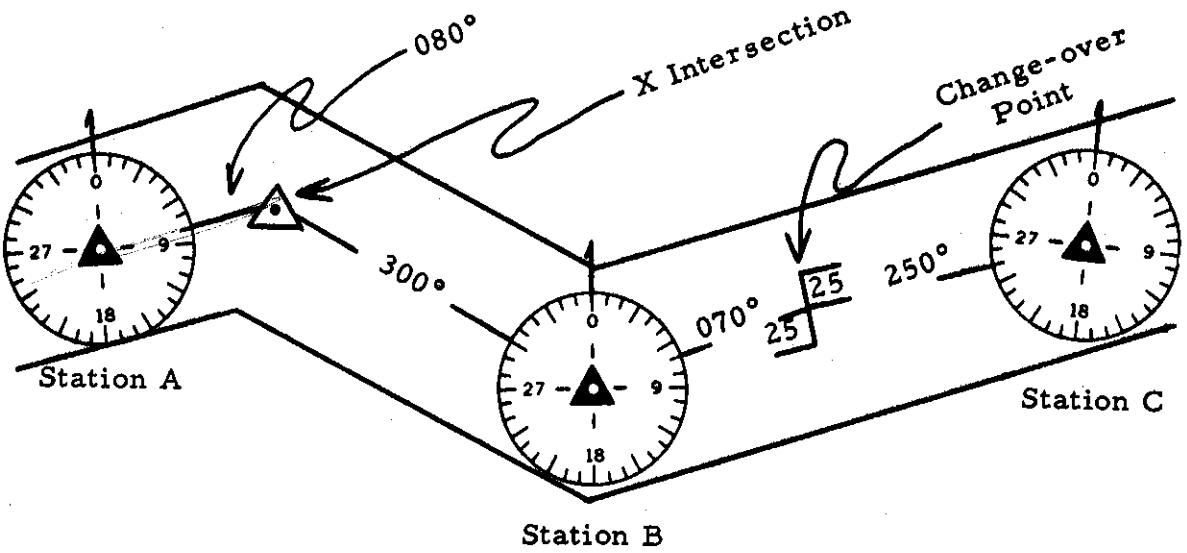
The needle centers on the radial shown on the course selector.

What radial (from Evergreen) is the aircraft crossing? 090 °

Does this verify that the aircraft has not yet reached Rutledge? yes




After determining that Rutledge is still ahead of the aircraft, the aviator sets the course selector on the 070° radial in order to fly to Rutledge. This causes the needle to deflect to the left since the aircraft is still short of Rutledge.




Omni is used principally for enroute navigation from station to station by tracking along the airways which are formed by omni radials. To navigate from station A to station C above, the aviator would -

1. Fly outbound from station A on the 080 ° radial to the X Intersection.

2. At the X Intersection, intercept the 300° radial from station B and track inbound to station B on a course of 120 °.

3. Turn at station B and fly outbound on the 070 ° radial to the change-over point.

4. At the change-over point, tune in station C and continue flying inbound to station C on the course of 070 °.

Radio tracking is a procedure aviators use to establish a heading which will keep the airplane or helicopter on a given radio track (course). As used here, the terms track and course are interchangeable.

Without prior knowledge of winds, an aviator can determine the drift correction to stay on a given course by a systematic bracketing procedure.

# NOTES

## PERFORMANCE OBJECTIVES

## IFR FLIGHT PLANNING AND NAVIGATION

1. KNOWLEDGES: Utilizing the rules for IFR flight procedures and without the aid of references, the student will be able to write 70 percent of the following:

(Period one of 10 periods)

a. The weather minima for—

(1) Takeoff.

(2) Destination.

(3) Flights not requiring an alternate airport.

(4) Flights requiring an alternate (minimums).

(a) With an approach facility.

(b) With no approach facility.

b. The copilot requirements for IFR rotary wing flights.

(1) Forecast instrument conditions.

(2) Name at least three of the publications used to aid in the selection of appropriate routes.

(3) Select enroute altitudes using—

(a) MEA's, MOCA's, and semicircular rule.

(b) Freezing level reports, icing conditions, and winds aloft.

(4) Name at least two items which would be contained in NOTAM.

(Period two of 10 periods)

(5) The rule for determining ETE to the destination and alternate.

(6) The four items which must be considered for fuel requirements in all IFR flights.

(7) Initial contact - no report to follow.

(8) Initial contact - report follows.

(9) Reporting in a radar environment.

(10) At least six of the 12 mandatory reports covered in the FLIP planning document.

(11) The seven items contained in a position report.

(Periods three through 10 of 10 periods)

When given a practical exercise requiring the planning of an IFR cross-country flight and use of proper in-flight procedures, the student will complete each activity outlined below with a degree of accuracy of 80 percent.

Equipment provided: FLIP planning document, enroute and terminal publications, navigation worksheets, DD Form 175, and FAA Form 7233-1.

Data provided: Pertinent excerpts of teletype weather report, terminal area forecast, winds aloft, and NOTAM.

c. For the given flight situation, the student will plan the flight and write the calculations on the navigation worksheet including—

(1) Magnetic course on each leg as published or measured by the student.

(2) Distance for each leg of the flight and the total distance.

(3) Magnetic wind and velocity for each leg of flight.

(4) Average magnetic variation for the flight.

(5) True airspeed based on cruising characteristics of the aircraft, altitude, and forecast temperature.

(6) Groundspeed for each leg, based upon true airspeed, course, and winds.

(7) Estimated time en route for each leg and the total time en route.

(8) Repeat items "(1) through (7) above," for the flight to the alternate.

(9) Total fuel required for the flight (given consumption rate).

d. After determining all flight plan data "a above," the student will write all entries required on the DD Form 175 or FAA Form 7233-1, as appropriate.

e. For given in-flight situations, the student will calculate if necessary and write—

(1) True airspeed based on in-flight conditions.

(2) True altitude based on in-flight conditions.

(3) Actual groundspeed based upon ATA's over checkpoints.

(4) ETA's or revised ETA's for reporting points based on actual groundspeed.

(5) Actual wind conditions encountered on a given leg of flight.

(6) Actual fuel consumption and remaining fuel in time.

f. Review and summary.

2. SKILLS: None.

STUDENT OUTLINE

IFR FLIGHT PLANNING AND NAVIGATION

1. Weather.

a. Takeoff. 100/1/4 - standard
0/0 - special.

b. Destination. forecast = to or better than the lowest approach min at E.T.A.

c. Alternate.

(1) When required. if the weath at dest. is forecast less than 1000 above min, + visibility less than 2 statute or published min (for 1 hr ± E.T.A.

(2) Alternate minimums, if required. VFR 1.5 mi visblity 1 hr ± E.T.A.
for PAR 600/1 1 hr ± ETA
for nonprecision approach - 800/1 ± 1 hr E.T.A.
(if they have higher min. use them)

d. En route. avoid hazards of flight, icing, thunderstorms tornadoes.

any reg. Copilot requirements. inst rated and qualified in the type of aircraft (also current)

3. Route selection. prefered route in acft I

4. Selection of altitude.

5. NOTAM, special notices, and VOR shutdowns.

6. Estimated time en route.

a. Destination. from airport to approach fix.

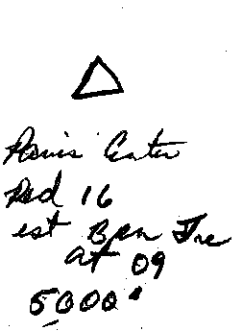
b. Alternate. approach fix to approach fix.

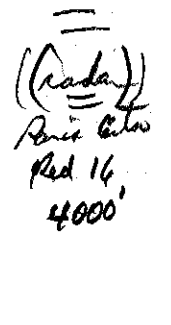
7. Fuel requirement for flight.

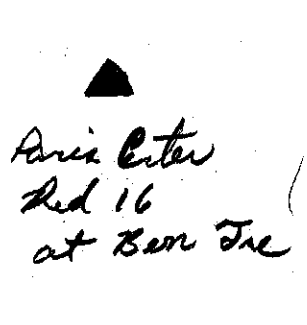
8. Enroute procedures.

a. Voice procedures.

(1) Initial contacts.




(2) Position reports.

(a) When required.

1. Radar controlled.

2. Non-radar controlled.

(b) Content and sequence.

(3) Other reports. change of ETA By 3 min. change of airfield by 10 knots, any emy or leaving of holding is reported. unforecasted weather conditions

b. Lost communication procedures.

(1) Frequencies to try.

(2) Route.

(3) Altitude.

(4) Holding.

9. Practical Exercise.

# PRACTICAL EXERCISE NO. 1

## IFR FLIGHT PLANNING AND NAVIGATION

(Period one of 10 periods)

1. As a standard instrument-rated helicopter pilot, your takeoff minimums, according to Army regulations, are 100 / 1/4.

2. What are your weather minimums for selecting the destination on an IFR flight?

at or above min at ~~time of~~ ETA.

3. The minimums for selecting an alternate with a facility and an approved approach are 800, 1, or min. what ever height.

What is the time requirement? ± 1 hr ETA

600 1 for a precision approach.

4. Give the copilot requirements for helicopter flights into instrument conditions.

same as pilots.

5. Name three publications you would normally use in planning an instrument cross-country flight.

a. sect I
approach plates, enrout chart

b. sect II

c. I F A supplt.

6. What is an MEA? the lowest alt. where all navaids are received and min. obstacle clearance

7. ~~Name~~ two information groupings covered in NOTAMS.

a.

b.

File No. 641-10

## PRACTICAL EXERCISE NO. 2

## IFR FLIGHT PLANNING AND NAVIGATION

1. What two points do you use when determining ETE from the destination to the alternate? airport to finally approach fix and approach fix to approach fix

2. Write four items which must be considered on all IFR flights during the planning phase.

   a. weather and hazards to flight.

   b. route and types of nav. aids

   c. airport and type of approach

   d. alternate if needed and route to it. fuel, time enroute, minimums, requirements

3. Enroute procedures require two types of initial contact reports. Name the two types.

   a. over non compulsory reporting fix. Houston center, Red 16, est Dothan at 02 Mobile

   b. with radar contact Houston center, Red 16, Dothan

4. When flying in a radar environment, is the pilot relieved of his responsibility for making position reports over compulsory reporting points?

5. There are several mandatory reports with which the pilot must be familiar. Name six of them.

a. Departing assigned alt.

b. Inbound at final approach fix,

c. arriving or departing holding

d. change of ETA by ± 3 min change of speed by ± 10 K.

e. Over a compulsory reporting point

f. Unforecasted weather conditions

6. Write the items contained in an IFR position report in the correct order.

Paris Cntr
Red 16
Bottom at 52
2000'
Est. Mobil at 40
Biloxi

## PRACTICAL EXERCISE NO. 3

## IFR FLIGHT PLANNING AND NAVIGATION

Charts L-13 and L-14

PROBLEM: Plan an IFR flight from Reese AFB, Lubbock, Texas, (REE), panel A, to Tinker AFB, Oklahoma City (OKC), panel C, with McAlester Municipal (MLC), panel D, as your alternate.

| | |
|---|---|
| AIRCRAFT: | UH-1B, Serial No. 59-1660 |
| COMMUNICATIONS EQUIPMENT: | ARC-55/T-366A |
| NAVIGATION EQUIPMENT: | ARN-59/ARN-30A |
| TAS: | 75 knots |
| FUEL IN TANKS: | 2080 pounds |
| FUEL CONSUMPTION RATE: | 420 pounds/hour |
| WARMUP AND TAXI FUEL: | 60 pounds |
| ETD: | 0600 C |
| ROUTE TO DESTINATION: | Direct Lubbock VOR, V-14, Oklahoma City VOR, direct Tinker VOR |
| ROUTE TO ALTERNATE: | V-272 |
| ALTITUDE: | Select the most desirable altitude, considering winds aloft, direction of flight, and MEA's |
| WEATHER: | Check appropriate entries of Form DD 175-1 |
| APPROACHES: | Plan for a VOR approach at Tinker AFB |

Part I: PREFLIGHT PHASE

1. Fill out a complete DD 175. (Blank forms located in back of this book.)
2. Fill out a complete flight log. (Blank forms located in back of this book.)
3. What is the ETE for the destination? _____ For the alternate? _____
4. What is the total fuel requirement for this flight?

Part II: IN-FLIGHT PHASE

Your initial ATC clearance reads: "ATC clears RC-91660 to the Tinker VOR via direct Lubbock, V-14 Oklahoma City, direct Tinker. Maintain 5000; contact Fort Worth Center on 307.8 megacycles over Lubbock VOR."

1. You arrive over Lubbock VOR at 1210Z. Write out your—

   a. Initial callup.

   b. Report.

2. You arrive over Petersburg Intersection at 1222Z. What has been your groundspeed (in knots)?

3. Would it be necessary to revise your estimate for Childress? _____ If yes, write out the report.

4. You report over Childress VOR at 1314Z. Between Petersburg Intersection and Childress VOR, you found it necessary to steer an MH of 042°. What is the actual wind velocity based on a TAS of 75 knots?

   _____°/_____ knots (magnetic)

5. You are instructed to contact Oklahoma City Approach Control on 232.1 megacycles at 1445Z. Write out the initial callup.

6. Does Oklahoma City Approach Control have radar available?

7. Does Tinker AFB have GCA? _____ If yes, list the UHF frequencies available.

8. What is bearing and distance from the VOR station to the field?

9. What is the bearing and distance from the TACAN station to the field?

# FLIGHT WEATHER BRIEFING

AIRCRAFT NO.: 59-1660 | BRIEFING NO.: 1 | DATE: 1-1-69

## I. TAKEOFF DATA

| RUNWAY TEMP. | PRESSURE ALT. | TEMP DEVIATION | VAPOR PRESSURE | SPECIFIC HUMIDITY | DENSITY ALTITUDE |
|---|---|---|---|---|---|
| +21°C | 9200 | | | | |

CLIMB WINDS

REMARKS: FORECAST WINDS SAMPLE

3-2718/15° 5-2830/11° 7-3030/7° 9-3335/3°

## II. ENROUTE DATA

| FLIGHT LEVEL | TEMPERATURE | WINDS |
|---|---|---|
| | | SEE FORECAST |

CLOUDS AT FLIGHT LEVEL: ☐ YES ☐ NO ☑ IN AND OUT

VISIBILITY AT FLIGHT LEVEL 2: ☑ HAZE ☐ DUST ☑ SMOKE ☐ PRECIPITATION

MINIMUM CEILING ENROUTE: 2000

MAXIMUM CLOUD TOPS: 12000

MINIMUM FREEZING LEVEL: 10,000

| THUNDERSTORMS | TURBULENCE | PRECIPITATION | ICING |
|---|---|---|---|
| ☑ NONE | ☐ NONE | ☑ NONE | ☑ NONE |
| ☐ FEW | ☐ CAT ☑ LGT | ☐ RAIN ☐ DRZL | ☐ CLEAR ☐ LGT |
| ☐ SCATTERED | ☐ TSTM ☐ MOD | ☐ SHOWERS ☐ SNOW | ☐ RIME ☐ MOD |
| ☐ NUMEROUS | ☐ ☐ SVR | ☐ FREEZING | ☐ MIXED ☐ SVR |
| ☐ HAIL | | | ☐ IN CLOUDS |

## III. TERMINAL DATA

DESTINATION (redacted)

FORECAST: TIK 9 @ 34 KN 2715/996 ( 1300 Z To 1600 Z)

ALTERNATE (redacted)

FORECAST: MLC 8 @ 2 2915/994 ( 1400 Z To 1800 Z)

## IV. COMMENTS/REMARKS

| VOID TIME | EXTENDED TO | FORECASTER |
|---|---|---|
| 1330Z | | [redacted] |

## V. TELEVISION/TELEPHONE BRIEFING RECORD

WEATHER FACILITY

| TAPE NO. | START | STOP | PHONE CHARGE |
|---|---|---|---|
| | | | |

DD FORM 1 NOV 64 175-1

## PRACTICAL EXERCISE NO. 4

## IFR FLIGHT PLANNING AND NAVIGATION

PREFLIGHT: Plan an IFR flight from Birmingham Municipal Airport, Alabama, to Godman AAF, Fort Knox, Kentucky. Use Bakalar AFB, Indiana, as the alternate.

| | |
|---|---|
| AIRCRAFT: | UH-1D, Serial No. 61-3177 |
| COMMUNICATIONS EQUIPMENT: | ARC-55/T-366A |
| NAVIGATION EQUIPMENT: | ARN-59/ARN-30D/APX-44 (64 code) |
| CAS: | 95 knots |
| FUEL IN TANKS: | 2080 pounds |
| FUEL CONSUMPTION RATE: | 450 pounds/hour |
| WARMUP AND TAXI FUEL: | 60 pounds |
| ETD: | 0800C |
| ROUTE TO DESTINATION: | BHM, V-57 BWG, V-49 MYS, FTK |
| ROUTE TO ALTERNATE: | LOU, V-51 SCIPIO Intersection, BXR |
| ALTITUDE: | Select based on MEA's, direction of flight, and enroute weather (DD 175-1) |
| APPROACHES: | Select a VOR approach at FTK with the lowest approach minimums. |

QUESTIONS:

1. Based on the weather forecast, what runway would probably be in use at FTK?

2. What runway at FTK has approach lights?

3. What is the minimum weather that BAK can be forecasting and still be suitable as a rotary wing alternate?

4. What type approach or approaches could possibly be available at BXR?

5. What entry should go in the aircraft designation blank for this flight? (Concerning transponder.)

6. What is the TAS at 6,000 feet?

7. At what point will an altitude change probably be required during this flight?

8. Would radar be available for departure at BHM?

9. On the DD Form 175, what should be entered in the "Hours Fuel on Board" block for this flight?

10. What is the distance to destination for this flight?

11. What is the ETE to destination?

12. What is the ETE to alternate?

13. What is the minimum fuel in pounds required for this flight?

14. What is the latest Zulu time that this flight plan can be filed in order to meet the proposed departure time?

15. With whom would the flight plan be filed?

16. What UHF frequency would be used to relay the ATC clearance to the aircraft?

17. What is the direction and distance from BHM airport to BHM VORTAC?

CLEARANCE: ATC clears RC13177 to Mystic VOR via Birmingham VORTAC, V-57, Flight Planned Route; maintain 6,000. After takeoff, contact Birmingham Departure Control on 343.9 megacycles. Squawk Mode 3 1000 normal. (Takeoff is at 1405Z.)

18. Write out the initial contact call to BHM departure control.

After passing BHM VORTAC at 1410Z, you are instructed as follows by Atlanta Center: RC13177, radar service terminated. Contact Memphis Center on 307.0 megacycles at Folsom.

19. List the two stations, frequencies, and radials to be used to identify Folsom.

20. Write out the initial contact call to Memphis Center if you are at Folsom at 1427Z.

21. You are later instructed to contact Memphis Center on 381.4 megacycles over GRAHAM VOR. Write out the initial contact call.

22. You arrive at Graham VOR at 1525Z. Write out the position report.

23. What UHF frequencies could you anticipate being assigned by Memphis Center between Burns Intersection and BWG VORTAC?

24. What type initial contact and to whom can be anticipated after passing BWG VORTAC?

25. You arrive at BWG VORTAC at 1607Z, at 5,000 feet. What is the ETA at Godman AAF in local standard time?

26. Is approach control radar available at FTK? If yes, what is the name of the facility?

27. Does FTK have GCA? If so, what are the GCA minimums for Runway 17?

28. What is the transition from MYS to FTK?

29. What is the FTK VOR frequency?

30. What are the weather minimums for a VOR Runway 17 approach, landing Runway 17?

31. Where is the VOR station with respect to Runway 17?

32. What is the time from VOR to missed approach?

33. What is the missed approach procedure?

Over mystic at 5,000 feet at 1638Z you are cleared as follows by approach control: RC13177 is cleared for a VOR Runway 17 approach, landing Runway 17. Report inbound out of procedure turn.

34. When should you depart 5,000 feet?

35. List the reports which should be made in connection with the clearance and the approach.

| FLIGHT WEATHER BRIEFING | AIRCRAFT NO. R13177 | BRIEFING NO. 4 | DATE X-X- 69 |
|---|---|---|---|

**I. TAKEOFF DATA**

| RUNWAY TEMP. | PRESSURE ALT. | TEMP DEVIATION | VAPOR PRESSURE | SPECIFIC HUMIDITY | DENSITY ALTITUDE |
|---|---|---|---|---|---|
| +17 | 600' | +3 | — | — | 1000' |

CLIMB WINDS

REMARKS WINDS ALOFT FORECAST SAMPLE

BNA 3-1808/+8° 5-2215/+8° 7-2418/+4° 10-2725/-3°

**II. ENROUTE DATA**

| FLIGHT LEVEL | TEMPERATURE | WINDS |
|---|---|---|
| | | SW TO W 10-20K |

CLOUDS AT FLIGHT LEVEL ☒ YES ☐ NO ☐ IN AND OUT

VISIBILITY AT FLIGHT LEVEL 3 ☐ HAZE ☐ DUST ☐ SMOKE ☒ PRECIPITATION

| MINIMUM CEILING ENROUTE | MAXIMUM CLOUD TOPS | MINIMUM FREEZING LEVEL |
|---|---|---|
| | | |

| THUNDERSTORMS | TURBULENCE | PRECIPITATION | ICING |
|---|---|---|---|
| ☒ NONE | ☐ NONE | ☐ NONE | ☐ NONE |
| ☐ FEW | ☐ CAT ☒ LGT | ☒ RAIN ☒ DRZL | ☐ CLEAR ☒ LGT |
| ☐ SCATTERED | ☐ TSTM ☐ MOD | ☐ SHOWERS ☐ SNOW | ☒ RIME ☐ MOD |
| ☐ NUMEROUS | ☐ SVR | ☐ FREEZING | ☐ MIXED ☐ SVR |
| ☐ HAIL | SCATTERED TWG CU | | ☒ IN CLOUDS 9000' AND ABOVE TO FTK 7000' AND ABOVE TO BXR |

**III. TERMINAL DATA**

DESTINATION (Existing)
FTK M9 @ 20 @ 3R- 1405/996

FORECAST
FTK 5 @ 2LF 1505/992 (1600 Z TO 2000 Z)

ALTERNATE (Existing)
BAK 15 @ M20 @ 5 2010/000

FORECAST
BAK 10 @ 20 @ 2R- 1810/996 (1800 Z TO 2000 Z)

**IV. COMMENTS/REMARKS**

| VOID TIME | EXTENDED TO | FORECASTER |
|---|---|---|
| 1500 Z | | C. P. Lanpher |

**V. TELEVISION/TELEPHONE BRIEFING RECORD**

WEATHER FACILITY

| TAPE NO. | START | STOP | PHONE CHARGE |
|---|---|---|---|
| | | | |

DD FORM 1 NOV 64 175-1