

# Federal Aviation Agency



AC NO: AC 43-1

MAINTENANCE,  
PREVENTIVE MAINTENANCE,  
REBUILDING, AND  
ALTERATIONS

EFFECTIVE :

8/2/65


**SUBJECT :** MATCHING VHF NAVIGATION RECEIVER OUTPUTS WITH DISPLAY INDICATORS

1. PURPOSE. This Advisory Circular is to alert industry to the possibility of mismatching outputs, both guidance and flag alarm of certain VHF navigation receivers when used with some types of display indicators. With mismatching it is possible for the receiver to fail without providing a flag alarm. Improper guidance information obtained under this condition may not be readily detected by the pilot.
2. BACKGROUND. There have been several instances where a VOR/ILS navigation receiver failed and provided inaccurate guidance information, but did not show a flag alarm. In these particular cases, investigation revealed that if one channel failed (either reference, variable phase, 90 or 150 cps) the flag would not appear as required in the flag specifications outlined in Technical Standard Orders C40a, C34b and C36b. It was determined that the installed pictorial deviation indicator's flag alarm movement had considerably greater sensitivity (needing less current to remain concealed) than that amount to which the receivers were adjusted, and the associated aircraft interwiring and loading resistors did not take this into account. Similar mismatching in course deviation indicating circuits will also give erroneous guidance information. These types of erroneous indications are avoided by proper equipment matching.
3. INFORMATION. With these possibilities present, and industry having experienced the results of mismatched units in service, it is important to check for the proper matching between receivers, aircraft interwiring and display indicators.

In the case of an operator participating in a parts pool agreement, which may include such receivers and indicators, procedures should

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be coordinated with other participants to assure present and future compatibility between these units when used in the operator's aircraft.

  
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