

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

FAA APPROVED
AIRPLANE FLIGHT MANUAL SUPPLEMENT
FOR RAYTHEON AIRCRAFT CO. MODEL 58

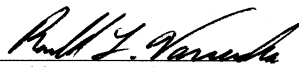
WITH
5RR-MFC-XXX-()
MULTIFUNCTION FLIGHT COMPUTER
WITH
SOFTWARE RELEASE 4

REG. NO. _____

SER. NO. _____

This supplement must be attached to the applicable FAA Approved Airplane Flight Manual when an Avidyne 5RR-MFC-3XX-() is installed in accordance with STC SA00117B0. The information contained herein supplements or supersedes the basic manual only in those areas listed. For limitations and procedures not contained in this supplement consult the basic Airplane Flight Manual.

FAA APPROVED:



Ronald L. Vavruska, Manager
Boston Aircraft Certification Office
Federal Aviation Administration
Burlington, MA.

Date: _____

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Date: MAR 14 2000

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LOG OF REVISIONS

Revision Number	Revised Pages	Description of Revisions	FAA Approval	Date
(-)	ALL	Initial Release	<i>Paul J. W...</i>	

A vertical black line in the margin shows revised portions of affected pages.

SECTION I – GENERAL

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Avidyne 5RR-MFC-3XX consists of Avidyne Navigator, Avidyne Traffic, Avidyne Radar, Avidyne Lighting, and Avidyne Charts and Avidyne CD Player.

AVIDYNE NAVIGATOR

Avidyne Navigator is a navigation management and display program. Navigator uses a database of airports, nav aids, airways and airspace fixes to present a detailed map of the navigational environment and follow the progress of a flight plan. Flight Plans can be constructed and saved using items in the database.

Navigator displays real-time navigation data such as distance and bearing to waypoints and nearby airports, cross-track error against a planned route of flight, and estimated time of arrival at a destination. This information is displayed in data blocks overlaid onto the moving map. Avidyne has provided several default nav pages which contain commonly used data blocks. Custom display pages can be designed by selecting and arranging data blocks in a manner appropriate to each phase of flight.

Avidyne Navigator obtains position data such as latitude/longitude, ground track and speed from a separately installed and approved Global Positioning System (GPS) receiver. The characteristics and approved uses of the GPS receiver from which it gets its data determine, in part, the ways that Navigator is used in flight. In addition to basic position data, most GPS receivers also send flight plan information, navigation data, and supplemental data such as satellite status.

Navigator may be used as either a navigation management system or simply as a navigation display. The operating mode of the GPS receiver constrains how Navigator may be used. If a direct-to waypoint or a flight plan is selected in the GPS receiver, Navigator disables its waypoint and flight plan selection features and uses the waypoints sent by the GPS receiver. In this mode Navigator functions as a navigation display, showing only the navigation data sent by the GPS receiver. This mode is referred to as "*external navigation.*"

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If no flight plan or other navigational mode is engaged on the GPS receiver, it will provide continuous position data to Avidyne Navigator. In this case, Navigator enables its navigational features. Navigation to waypoints and via flight plans may be selected. Navigation data such as range, bearing and cross-track error will be calculated internally by Navigator and displayed as before. In this mode, Avidyne Navigator works as a complete navigation management system. This mode is referred as "*internal navigation.*"

AVIDYNE CHARTS

Avidyne Charts is a moving map display. Interfacing with an on-board, external GPS, Avidyne Charts shows aircraft position on a 3 by 4 inch display. Avidyne Charts gives access to digitized versions of VFR and IFR ENROUTE charts. Depending on what digital charts the user has loaded, the digitized VFR charts consist of the Sectional, WAC, and TAC charts. The three layers of charts smoothly transition from one scale to another as the display is zoomed in and out. The IFR charts are digitized versions of NOAA IFR LOW AND HIGH ALTITUDE ENROUTE charts.

Avidyne Charts does not have the functionality of a navigation system. It supplements the selected mode of navigation to improve situational awareness. The position displayed on Avidyne Charts should be correlated with the navigation information from conventional radio navigation instruments, GPS or pilotage.

AVIDYNE RADAR

Avidyne Radar is an interface, control and display system for airborne weather radar systems. It duplicates the weather display functions of the original equipment indicators. Avidyne Radar does *not* support the accessory functions of these indicators, such as flight plan overlay from Bendix RNAV units, checklist presentation, etc. In some cases, similar functionality is available through other Avidyne options.

AVIDYNE TRAFFIC

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Avidyne Traffic displays traffic awareness data gathered by the BF Goodrich Skywatch airborne traffic sensor. Before operating Avidyne Traffic, consult the User's Guide. It contains information essential to the proper use and interpretation of the displays presented by Avidyne Traffic.

AVIDYNE CD PLAYER

The Avidyne CD Player application allows the pilot to play ordinary music CDs over the aircraft's intercom, provided the MFC is configured with the optional CD-ROM drive. The user can start, stop, and pause the playing of a CD, can skip to the next or previous track on a CD, and can control volume and balance. CD Player displays status information to the operator, such as current track, elapsed playing time, volume and balance setting, and CD Player status.

DATABASE UPDATES

Avidyne Navigator is intended for use as an enhanced human interface to a variety of certified GPS receivers. As with certified receivers, the database of Avidyne Navigator is a critical component and must be kept current.

It is the pilot's responsibility to insure that current navigation and chart data is loaded in the system. An **Expired** warning will be displayed on system start-up for Navigator and during viewing of any expired digital chart. The warning can only be removed by updating the data. Subscription and data loading instructions are given in the User Manual

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SYSTEM CONFIGURATION

The Avidyne Multifunction Flight Computer consists of the items that follow:

- A. An integrated central processing unit and display screen (CPU/display)
- B. Optional CD-ROM and floppy drive unit (CD-ROM/floppy).
- C. User Manual

Additional information is shown in the User's Manual.

SECTION II – LIMITATIONS

1. Use of Avidyne Charts during IFR flight requires an IFR approved GPS receiver and installation, operated in accordance with its applicable limitations.
2. Use of Avidyne Navigator during IFR flight requires an IFR approved GPS receiver and installation, operated in accordance with its applicable limitations.
3. Navigation during IFR flight is not to be predicated on the use of Avidyne Navigator while in internal navigation mode.
4. Navigation during IFR flight is not to be predicated on the use of Avidyne Navigator unless:
 - a. The navigational database is current; or,
 - b. The pilot manually verifies the location of each waypoint used for navigational guidance.
5. Primary navigation during an IFR approach must be done using an IFR approved system. Avidyne Navigator is to be used only as an aid to situational awareness during an IFR approach.
6. Navigation is not to be predicated on the use of Avidyne Charts.
7. Loading or updating charts and navigation data with the CD-ROM not to be accomplished airborne.
8. The Avidyne 5RR-MFC Series User's Manual must be available to the pilot during all flight operations.

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9. Traffic information shown on the Avidyne Traffic display is provided to the pilot as an aid to visually acquiring traffic. Pilots should maneuver their aircraft based only on ATC guidance or positive visual acquisition of the conflicting traffic. Maneuver should be consistent with ATC instructions. No maneuvers should be made based only on a Traffic Advisory. ATC should be contacted for resolution of the traffic conflict.
10. If the pilot is advised by ATC to disable the transponder altitude reporting, Avidyne Traffic and SkyWatch must be turned off.
11. SkyWatch can only detect aircraft that are transponder equipped.

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SECTION III - EMERGENCY PROCEDURES

No Change

SECTION IV - NORMAL PROCEDURES

Normal operating procedures for MFC functions are in the 5RR MFC – Series User Manual.

The system is protected by a clearly labeled circuit breaker.

SECTION V through X

No Change

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