

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR MOONEY MODELS: M20C, M20D, M20E, M20F,
M20G, M20J, M20K, M20L, M20M, M20R

WITH

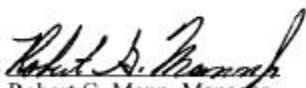
AVIDYNE FLIGHTMAX 5RR-MFC-XXX-()
FLIGHT SITUATION DISPLAY
WITH
SOFTWARE RELEASE 5

REG. NO. _____

SER. NO. _____

This supplement must be attached to the applicable FAA Approved Airplane Flight Manual when an Avidyne FlightMax 5RR-MFC-XXX-() is installed in accordance with STC SA00072BO. 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:



Robert G. Mann, Manager
Boston Aircraft Certification Office
Federal Aviation Administration
Burlington, MA.

Date: NOV 16 2000

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

LOG OF REVISIONS

Revision Number	Revised Pages	Description of Revisions	FAA Approval	Date
(-)	ALL	Initial Release	<i>A. J. Throckmold</i>	3/29/00
A	ALL	Adds Lightning	<i>A. J. Throckmold</i>	5/14/00
B	ALL	Incorporates software release 5	<i>A. J. Throckmold</i>	11/16/00

FAA APPROVED
Date: NOV 16 2000

Page 2 of 8
P/N 600-0052-00

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

SECTION I – GENERAL

The Avidyne FlightMax 5RR-MFC-4XX consists of FlightMax Map, FlightMax Charts, FlightMax Traffic, FlightMax Lightning, FlightMax GroundProx, and FlightMax CD Player.

FLIGHTMAX MAP

FlightMax Map is a moving map display that combines external sensor data and navigation data into a single display. The overlay functions are limited to the operating parameters of their respective sensors (see Lightning and Traffic).

FlightMax Map 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. Map can display a terrain or political boundary map which can be combined with navigational information as well as other data from Radar, Lightning and Traffic sensors. The amount of detail and layers is controlled by the pilot.

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

All flight plans are from the external navigational data source (GPS/FMS). When a flight plan is active, it is depicted on the map. The appropriate

FAA APPROVED
Date: NOV 16 2000

Page 3 of 8
PIN 600-0052-00

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

navigational information is also displayed. The operating mode of the GPS receiver constrains how Map may be used.

FLIGHTMAX CHARTS

FlightMax Charts, if activated, is a moving map display. Interfaced with an on-board, external GPS, FlightMax Charts shows aircraft position on a 3 by 4 inch display. FlightMax 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.

FLIGHTMAX TRAFFIC

FlightMax Traffic, if activated, displays traffic awareness data gathered by the Ryan TCAD 9900B airborne traffic sensor. Before operating FlightMax Traffic, consult the FlightMax Traffic Pilot's Guide and the Ryan TCAD Pilot's Handbook. They contain information essential to the proper use and interpretation of the displays presented by FlightMax Traffic.

FLIGHTMAX LIGHTNING

FlightMax Lightning, if activated, displays weather avoidance data gathered by an airborne thunderstorm sensor, the BF Goodrich Avionics Systems Stormscope® WX-500 Weather Mapping System. Proper use of FlightMax Lightning and the WX-500 can improve the pilot's ability to maintain a safe distance from thunderstorms. Before operating FlightMax Lightning, the Stormscope WX-500 Pilot's Guide should be read and understood. It contains information essential to the proper use and interpretation of the displays presented by FlightMax Lightning.

FAA APPROVED
Date: NOV 16 2000

Page 4 of 8
PIN 600-0052-00

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

Airborne thunderstorm sensors detect the electrical discharge associated with lightning. By means of their specialized antennas and electronics and sophisticated processing software, they are able to determine the approximate range and relative bearing of each lightning strike. This information is then sent to the FSD for display.

FlightMax Lightning gives access to all of the functions of the thunderstorm sensor. It provides display functions that will show the reported location of thunderstorms with respect to the aircraft. If a GPS navigator is reporting aircraft position to the FSD or a remote compass is reporting aircraft heading to the thunderstorm sensor, Lightning will adjust the displayed position of recorded lightning strikes.

Since lightning and thunderstorms are always associated with hazardous weather conditions, including extreme turbulence, heavy precipitation and damaging hail, avoidance of areas where lightning is present will increase the likelihood of avoiding these hazards.

FLIGHTMAX GROUNDPROX

This function is inactive in this installation.

FLIGHTMAX CD PLAYER

The FlightMax CD Player application allows the pilot to play ordinary music CDs over the aircraft's intercom, provided the FSD 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

FlightMax Map is intended for use as an enhanced human interface to a variety of certified GPS receivers. As with certified receivers, the database of FlightMax Map must be kept current.

FAA APPROVED
Date: NOV 16 2000

Page 5 of 8
PIN 600-0052-00

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

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. The warning can only be removed by updating the data. Subscription and data loading instructions are given in the Pilot's Guide.

SYSTEM CONFIGURATION

The FlightMax Flight Situation Display 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. Pilot's Guide

Additional information is shown in the Pilot's Guide.

SECTION II – LIMITATIONS

1. Use of FlightMax Charts during IFR flight requires an IFR approved GPS receiver and installation, operated in accordance with its applicable limitations.
2. FlightMax Map does not provide terrain data above 75 degrees north latitude or below 75 degrees south latitude.
3. Navigation is not to be predicated on the use of FlightMax Charts or Map, which are to be used only as an aid to situational awareness
4. Under no circumstances should the terrain color representations be used as a basis for terrain avoidance.
5. Loading or updating data with the CD-ROM not to be accomplished airborne.
6. The Avidyne FlightMax Pilot's Guide P/N 600-0053 Revision 00, or later appropriate revision, must be available to the pilot during all flight operations.
7. Traffic information shown on the FlightMax 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.
8. If a Ryan TCAD 9900B traffic sensor is installed:
 - a. If the pilot is advised by ATC to disable the transponder altitude reporting, the Ryan TCAD 9900B must be turned off.
 - b. Ryan TCAD 9900B can only detect aircraft that are transponder equipped.
 - c. The Ryan TCAD 9900B Pilot's Handbook P/N 32-2302 Revision 1, or later appropriate revision, must be available to the pilot during all flight operations.
 - d. Traffic Position is dependent on Ryan TCAD 9900B sensor signals. Operate the aircraft in accordance with the Warnings and Cautions in the Ryan TCAD 9900B Pilot's Handbook.

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

SECTION III - EMERGENCY PROCEDURES

No Change

SECTION IV - NORMAL PROCEDURES

Normal operating procedures for FSD functions are in the Avidyne FlightMax Pilot's Guide.

The system is protected by a clearly labeled circuit breaker.

SECTION V through X

No Change

FAA APPROVED
Date: NOV 16 2000

Page 8 of 8
PIN 600-0052-00