



Combining digital flat-panel display sophistication with the power of high-speed computer processing, Garmin's MX20 is a major advance in information technology for the cockpit. Loaded with features, the MX20's versatile design offers multiple charting options and overlays – in pilot-selectable combinations – to achieve unprecedented levels of safety and situational awareness in flight.

Display features

6" diagonal color AMLCD
Ultra-high resolution 640x480 (921,600 RGB dots)
65,536 simultaneous colors
Direct sunlight-readable
Auto/manual dimming

User interface

Backlit, high tactile buttons
Six general purpose 'line select keys'
Four general purpose 'smart keys'
Dedicated function and menu-enter keys
Front panel datacard access
Front panel power/dim switch

Position source

Primary - external GPS or LORAN via RS-232 serial

Expansion / internal architecture

Open software architecture
Field upgradeable software
PC-104/PC-104L expansion bus
3 high-speed RS232 serial I/O ports
1 high-speed RS422 serial I/O port
4 general purpose input flags
External alpha keypad support

Databases

Worldwide Jeppesen® nav data
Terrain (elevation) data

Physical

Height: 5.00 inches (12.7 cm)
Width: 6.25 inches (15.88 cm)
Depth: 8.00 inches (20.3 cm)
Weight: 3.1 lbs. (1.4 kg)

Electrical

Input voltage - 10VDC to 40VDC, reverse polarity protected
Input power 40 Watts typical

Environmental

Tested to RTCA/DO-160D
Operating temperature -20C to +55C
Storage temperature -55C to +85C
Temperature variation 2C per minute
Humidity 95% at 50C
Maximum altitude 35,000 feet
Cooling not required

Certification

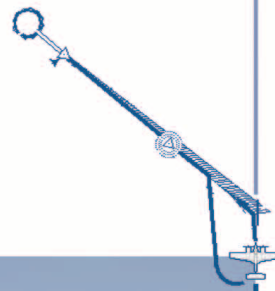
STC for over 500 airframe types
TSO-C110a
TSO-C113
TSO-C63c
TSO-C118
TSO-C147
JTSO-C110a
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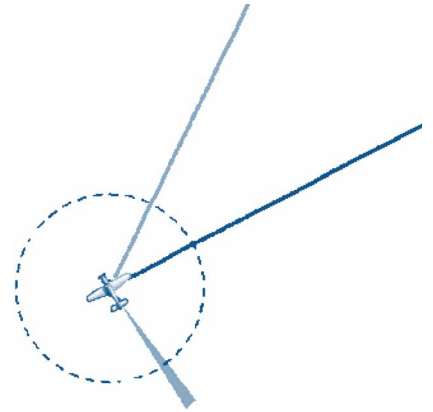
Garmin International, Inc.
1200 East 151st Street, Olathe, KS 66062
p: 913.397.8200 f: 913.397.8282

Garmin (Europe) Ltd. Unit 5, The Quadrangle, Abbey Park Industrial Estate,
Romsey, SO51 9DL, U.K. 44.1794.519944 fax 44.1794.519222

Garmin Corporation, No. 68, Jangshu 2nd Road, Shijr, Taipei County,
Taiwan 886.2.2642.9199 fax 886.2.2642.9099



Pilots who can visualize
their flight situation
at a glance
tend to make
better decisions
than those who can't.



There are basically two kinds of information most pilots want from a multi-function display:

(1) The kind that helps them see and avoid potential hazards, and

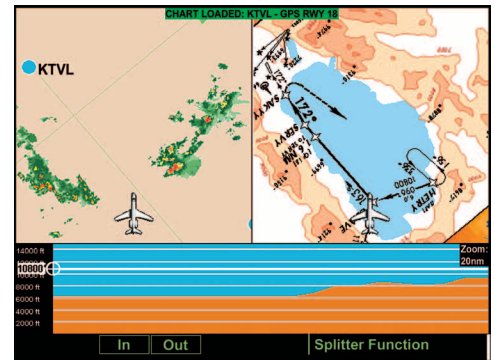
[**For GA pilots, getting the big picture just got easier.**]

(2) the kind that helps them plan and anticipate what's needed for a trouble-free flight.

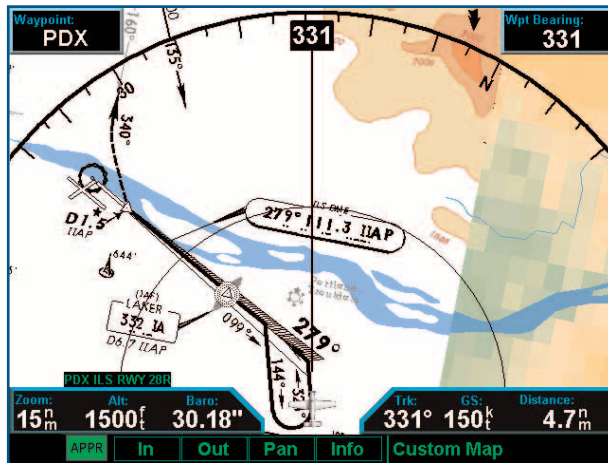
For both kinds of "big picture" situational awareness, the Apollo MX20 is a welcome new benchmark in pilot workload-reduction.

Providing a wealth of useful features and information for every phase of flight – from preflight checklist to final approach and taxi to the ramp – the MX20 offers easy, affordable access to MFD functions previously found only on high-end air transport and business jet systems.

The editors at Aviation Consumer magazine were so impressed they named the MX20 their 2001 "Product of the Year."



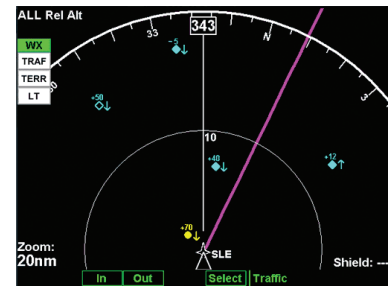
For multi-view situational reference, the latest MX20 software offers a unique split-screen feature – allowing side-by-side displays of any two MX20 charting functions. In addition, a vertical profile view of terrain peaks and obstructions relative to the current flight level can be displayed across the lower portion of the screen.



High-resolution color moving map



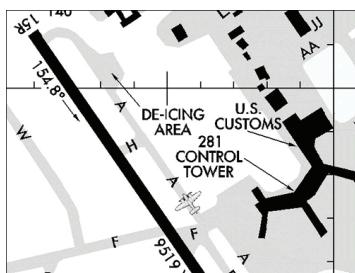
ADS-B traffic images.



MX20 I/O is compatible with Goodrich Skywatch and Ryan TCAD traffic systems.



The MX20 is designed to interface with most manufacturers' GPS navigation equipment. However, when teamed with the Apollo CNX80 GPS/COMM navigation system, the MX20 offers even higher levels of interoperability and convenience. For example, when an approach is selected on the CNX80, the MX20 will automatically load the approach charts for the selected airport – saving the pilot valuable eyes-down time during the busiest phases of flight.



With the exclusive Chart View™ option, instrument approaches and airport surface diagrams can be viewed on the MX20, with the aircraft position overlaid on familiar JeppView chart depictions. Standard Instrument Departure and Arrival charts (SIDs and STARs) are also provided.

A comprehensive view

The MFD's large active-matrix LCD display extends a full 6 inches diagonally, and its crisp 640 x 480 pixel screen offers the highest resolution in its class. At a glance, you can see your aircraft's position and track on a VFR or IFR style navigation chart – with course lines, waypoints and flight progress displayed over realistic terrain depictions. For arrivals and departures, an exclusive Chart View option lets you confirm your aircraft's position on Jeppesen® instrument approach plates and airport surface charts.

Added safety is provided by a built-in terrain elevation database that color codes relevant ground features in relation to your aircraft altitude, alerting you as you approach rising terrain. The MX20 will also integrate with various onboard weather radar, lightning, traffic awareness, and datalink systems that enable uploading of real-time graphical weather information and NEXRAD radar depictions.

You can interface the MX20 with most manufacturers' GPS navigation equipment. And when coupled to Garmin/Apollo GPS and VHF nav systems, the MX20 provides extra features and levels of convenience that exceed those of systems costing many times more. No wonder more and more pilots are choosing MX20 displays when they upgrade their avionics or purchase a new aircraft.

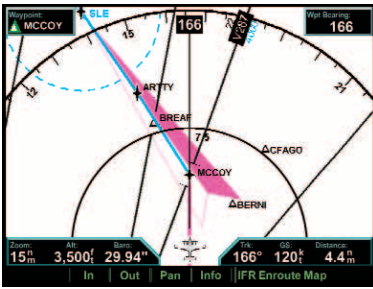
Multiple choices, smart solutions

Currently, there are three versions of the MX20 to select from: the standard MX20, the MX20 I/O with Traffic, and the MX20 I/O with Traffic and Radar interfaces.

The MX20 is compatible with most GPS units and all panel-mounted TSO-C129a approved navigators via RS-232 data interface.

The MX20 I/O Traffic model accepts inputs from the Garmin GTX 330 Mode S transponder, as well as the popular Goodrich Skywatch and Skywatch HP units, or the Ryan TCAD 9900 and 9900 BX. These products offer TCAS-1 like depictions of airborne traffic up to a range of 35 miles. Traffic advisories are color coded on the display for instant identification and avoidance.

The MX20 I/O can also be ordered with the Radar option, which allows users to display weather information from a digital radar system. With this unit, weather returns can be analyzed in standard horizontal or vertical profile modes. The MX20's pushbutton controls are used to operate the RDR 2000's tilt, gain, hold and range functions.



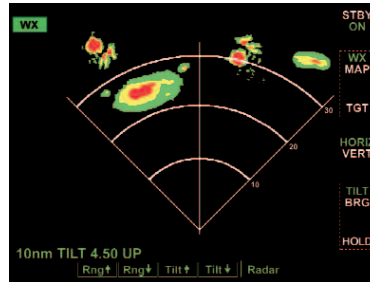
IFR charting feature depicts low and high altitude airways.



Custom map feature allows the pilot to overlay some or all of the MX20 features.



FIS map displays graphical NEXRAD weather along the route and nationwide weather summary charts.



MX20 I/O models display weather radar and TAWS via ARINC 453 interface.

For weather-on-request information, the MX20 and MX20 I/O interface with several ground-based and satellite-based subscription services offered by vendors of near real-time graphical weather products. In addition to graphical depictions of weather along your route of flight, these products enable the MX20 to display textual METARS, TAFS and NOTAMS advisories.

An off-the-charts exclusive

Unique to the MX20 system is the ability to display approach plates and airport surface diagrams with the Chart View option. Based on the popular Jeppesen® Electronic Airway Manual service, Chart View takes IFR flight management to a whole new level. The MX20 with Chart View accurately overlays the aircraft position on moving-map JeppView charts and automatically selects the airport surface chart for taxiing and takeoff. Also, based on the active flight plan, the MX20 automatically loads the approach plates for the destination airport, allowing the pilot to quickly select the ATC-assigned approach procedure. The destination airport's surface diagram is automatically displayed on touchdown – a real help in locating taxiways at unfamiliar airports. In addition to the airport and approach charts, Standard Instrument Arrival and Departure charts (SIDs and STARs) are also incorporated. Chart View functions and updates for the MX20 are available through Jeppesen's JeppView subscription service.

Multi-tasking made simple

For added situational reference, a unique split-screen feature for the MX20 enables side-by-side displays of any two MX20 charting functions. For example, you can select terrain mapping on one side and VFR sectionals on the other; or weather radar depictions with an IFR en route chart; or an approach plate with custom overlay map – any combination can be viewed side-by-side to give you the updates you need, at a glance.

In addition, a new vertical profile terrain image can be viewed at any time on the MX20. With this technology, pilots can identify terrain peaks and obstructions relative to the current flight level. So, conflicts can easily be seen and avoided for the ultimate in terrain awareness.

MX20 FEATURES AT A GLANCE.

- Advanced 6-inch diagonal color AMOLED display
- Built-in terrain elevation database
- Optional Chart View functions based on Jeppesen approach charts and airport surface diagrams
- Split-screen capability for multiple displays
- Aircraft position and track on VFR or IFR style moving map
- Enabled for ADS-B or TIS-B traffic targets
- Control/display for available airborne weather radar
- Displays GPS mapping, radar, lightning, traffic, terrain and datalink systems
- 10-40 VDC power capability