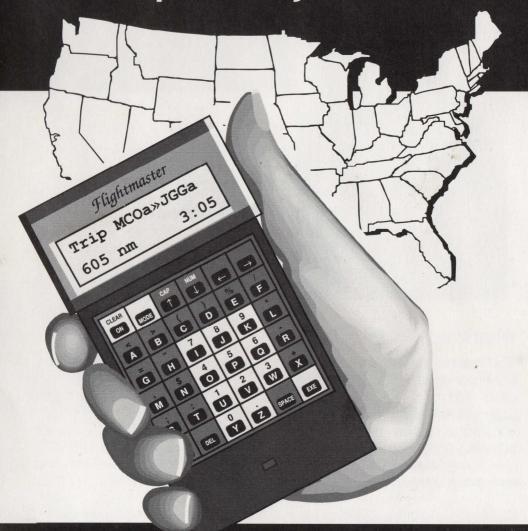
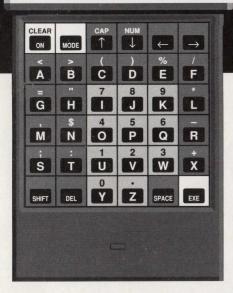
Put the U.S. airspace system in the palm of your hand...



Flightmaster^m

Flightmaster

Quick Route View W&B ChkLst E6B



What is a "Flightmaster"?

Flightmaster is a unique handheld flight management computer for pilots. With its huge built-in navigation database, it completely automates all phases of pre-flight planning and in-flight progress monitoring. Nothing like this has ever been available before!

Flightmaster weighs 10.5 ounces and fits easily in your palm or pocket. It's so handy that you'll use it wherever you go: home, office, car, cockpit, FBO, hotel, etc.

Pre-Flight...

...Flightmaster automates all of your planning tasks:

- great-circle distances
- trip time estimates
- optimum routes
- detailed trip logs
- fuel burn calculations
- flight plan forms
- weight-and-balance and much more.

In-Flight...

...Flightmaster monitors your flight progress, continuously updating ETA and fuel projections. It quickly revises your trip log whenever ATC re-routes, weather deviations, and other in-flight contingencies arise. It sequences your aircraft checklists, searches for nearby airports and navaids, calculates RNAV waypoints, and performs many of the functions of a standard E6B flight "computer."

"Once in a great while, a new product is so well designed that using it is an almost sensuous experience. If you think this description is ludicrous when applied to a pocket computer, you haven't experienced the Flightmaster. It could revolutionize the way you plan and perform flights. We experimented with Flightmaster over a period of about three months and we are impressed. This is one product that really stands out from the pack."

—Seth Golbey, AOPA Pilot Magazine (9/89)

Navigation Database...

Flightmaster contains an extensive navigation database of airports, navaids, intersections—11,000 fixes in all—plus all U.S. Victor and Jet airways. The database is updated every eight weeks. Using this data, the Flightmaster quickly figures out optimum routes using your choice of airway, VOR-direct, or RNAV-direct navigation.

Aircraft Database...

Flightmaster also memorizes a large body of aircraft-specific data for the various aircraft you fly regularly. This includes climb-cruise-descent performance charts, weight-and-balance data, and checklists. Since Flightmaster "knows" all about the aircraft and the airspace system, it can calculate trip-time estimates and fuel-burn projections of consistent and astonishing accuracy.

Can you believe it?

If you haven't seen Flightmaster yet, it may be hard for you to believe that a palm-sized device can do all this. **But it does!**

Try Flightmaster <u>risk-free</u>

We're so confident that you'll find the Flightmaster to be an invaluable addition to you flight case and cockpit that we're making this extraordinary no-risk offer:

Purchase a Flightmaster. Fly with it for a few months. Take it on trips. Put it through its paces. If you haven't fallen in love with your Flightmaster by then, return it to us in original condition within 90 days of purchase for a full refund...no questions asked.

Test-fly the Flightmaster now. You have absolutely nothing to lose. Call us toll-free at (800) 462-6669.

Flightmaster

»BEFORE TAKEOFF aux pumps LOW



It saves you time...

...on every flight. It estimates trip time, selects an optimum route, prepares a detailed trip log, figures fuel requirements, fills out a flight plan, computes weight-and-balance, and more. It does all of this automatically, accurately, and very quickly...the whole process takes just a minute or two.

Your Flightmaster does all of this whenever and wherever you wish—at home, in your hotel room, driving to the airport, in the FBO or FSS, virtually anyplace.

How long does pre-flight planning take you now? And how often do you launch without any detailed trip log or fuel-burn estimates or W&B calculations at all?

"Flightmaster is the greatest advance in cross-country flying since the VOR."

-Gregor Freund, 300-hour instrument pilot, Trinidad owner

"I made the mistake of lending my Flightmaster to a friend. A month later, I'm trying to retrieve it. I never imagined how much I'd miss it!"

—Barry Schiff, airline pilot and aviation writer

It saves you money...

...enough to pay for itself quickly if you fly long trips.

The Flightmaster helps you pick optimum routes and altitudes on every flight. It lets you file and fly RNAV-direct effortlessly. It gives you fuel-burn projections so you can optimize your refueling stops and know how many gallons of fuel to take on.

And of course Flightmaster saves you time...and time <u>is</u> money.

It enhances flight safety...

Flightmaster tells you how much fuel you need to make each flight with prudent reserves...accurately and consistently.

It makes W&B calculations so quick and easy that you'll never again be tempted to neglect doing them.

It memorizes and sequences through your aircraft checklists. This is a vital safety feature if you fly single-pilot operations.

And when in-flight contingencies occur, Flightmaster keeps you constantly apprised of the impact on fuel status and ETA.

...and it's so easy to use!

Turn the page for a demonstration of just <u>how</u> easy...



You won't believe how easy it is to use Flightmaster...

...until you try it out for yourself. Or at least view our half-hour-long Flightmaster videocassette. But here's a taste of what it's like...

Let's say you want to plan a flight from Fort Worth to Durango in an RNAV-equipped Cessna 414.

Pull your Flightmaster out of your pocket and press the **ON** key. The display presents you with a menu of functions:

Quick Route View W&B ChkLst E6B

Now let's ask Flightmaster to pick an RNAV-direct route from Fort

Worth to Durango and to plan our flight in detail. Press **R** for Route. This brings up a Route sub-menu:

New Change Revrs Xpand Load Save

Press **N** for New, and key in a route specification:

Route: FTW R DRO

where the **R** means "automatic routing by RNAV." (You could also have entered **V** or **A** for automatic VOR-to-VOR or airways routing, or you could have entered an explicit route.)

"I showed my Flightmaster to two other pilots, and both were operating it within three minutes."

—David Elliot, 1,400-hour instrument pilot, Skylane owner

Now enter your cruising altitude:

Altitude: 16000

and the forecast winds-aloft:

Winds aloft: DFW 3118 FMN 0214

and you wind up at the menu:

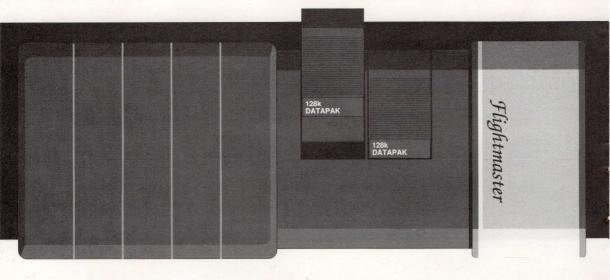
Quick Route View W&B ChkLst E6B

Press **V** for View. Flightmaster plots an RNAV-direct route (using waypoints offset from DFW, SPS, GTH, PVW, TCC, LVS, TAS, and DRO VORTACs), calculates time and fuel figures based on Cessna 414 performance charts interpolated for the 16,000' cruising altitude, prepares a detailed leg-by-leg trip log, and displays the upper-left "cell" of the trip log:

> Trip FTWa»DROa 573 nm 3:12

The trip log is laid out like a twelve-column spreadsheet. The top row contains trip summary information. There is also a row for each leg of the trip. By using Flightmaster's four arrow-keys, you can navigate through the various rows and columns of the trip log.

You've just mastered the most complex function of Flightmaster. Believe it or not, it's <u>that</u> easy!



If you have a database LORAN in your aircraft...

...you already have a feeling for the power of a digital navigation database. Although the Flightmaster's database resembles the one in your LORAN receiver, the two devices have auite different functions and do not compete with one another. The Flightmaster is designed for pre-flight planning and in-flight progress monitoring, while the LORAN is a navigation device. Most Flightmaster owners fly aircraft that are LORAN-equipped and find the two devices to be splendid companions.

If your aircraft is presently RNAV-equipped...

...vou'll fall in love with the Flightmaster at first sight. In seconds, your Flightmaster can plot a great-circle RNAV-direct route between any pair of airports or fixes, and give you a complete set of appropriately-spaced waypoints to put into your RNAV... complete with frequencies, radials, and distances. Or give your Flightmaster the identifier of any airport or fix, and it will instantly provide you with the frequency/ radial/distance to position a waypoint right there. In short, Flightmaster will turn your under-utilized RNAV into the most valuable navigation device on your panel.

"The Flightmaster does for the handheld flight computer what database cartridges did for LORANs. The pilot basically tells it where he wants to go, and it gives him all the information he needs to get there in one fell swoop. The bottom line is...you're going to love it."

—Andrew Douglas, The Aviation Consumer (9/89)

If you use an on-line flight planning service...

...such as Compuserve/EMI, WSI, or Dataplan, you already have a taste of how valuable computerized flight planning can be. As a pre-flight planning tool, the Flightmaster has capabilities similar to those of your on-line flight planning service. But since there are no usage charges incurred when using the Flightmaster, it is much more conducive for evaluating routing alternatives and other "what-if" scenarios.

More importantly, the trip log information prepared by the various flight planning services becomes instantly obsolete whenever ATC re-routes, weather deviations, unforecast winds, or emergencies occur...and suddenly you are flying with no plan at all!

In contrast, the Flightmaster enables you to revise your flight planning whenever such in-flight contingencies arise, and to assess the impact on ETA and fuel reserves almost instantly.

Flightmaster

Quick DENa»STLa 080° 676nm 3:34



Flightmaster features:

Quick great-circle calculation gives you the distance, magnetic course, and estimated flying time between any two airports, fixes, or lat/lon positions. Takes just one second flat!

Complete flight planner automatically prepares detailed trip logs for flights up to 100 legs long, including all fixes, frequencies, radials, wind-correction angles, fuel requirements, ETEs and ETAs. Using performance data from the climb, cruise, and descent tables of your aircraft's POH (which you only have to enter once), the machine calculates flight times and fuel burns quickly and accurately.

Automatic VOR-to-VOR or RNAVdirect routing between any two airports or fixes is constructed at your request. The machine searches its database for the navaids closest to your optimal greatcircle route, and (for RNAV-direct) calculates vour enroute waypoints. It always constructs your route using navaids and leg distances appropriate to the cruising altitude you

specify.

"I can't believe you got the whole FAA database in there! The automatic routing via VORs, airways and RNAV is fantastic."

—Terry Dobbins, 400-hour private pilot

Automatic routing via U.S. Victor or Jet airways between any two VORs is derived at your request. The machine searches for a suitable airway or combination of airways that run reasonably close to your optimal great-circle route. It uses Victor or Jet airways according to the cruising altitude you specify. Automatic VOR-to-VOR routing is employed where no suitable airway can be found.

Standard FAA flight plan form is prepared with most of the sixteen



blocks automatically filled out for you and ready to phone in to Flight Service. Hardcopy printouts of your trip

logs and FAA flight plans are available, using the optional battery-powered thermal printer specifically designed to "dock" with the Flightmaster. Alternatively, the optional RS232



adapter lets you hook up the Flightmaster to any 80-column printer that has a serial interface.

Keep your most frequently-used routes on-file (dozens of them if you wish), and recall any one of them instantly with a few keystrokes.



More Flightmaster features:

Simply press two keys when you're cleared for takeoff, and again as you cross each fix along your

In-flight progress monitoring:

flight-planned route. Flightmaster uses its real-time clock to record your actual departure and fixcrossing times in the flight log.

It then tells you how far ahead or behind schedule you are, updates your groundspeed and fuelburn calculations, and gives you revised ETAs and ETEs to your destination and to each remaining fix along your route. The ETEs count down in real-time as you fly (like the time-to-station display on a DME or LORAN).

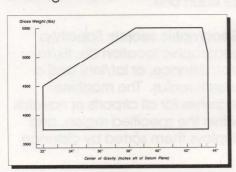
In-flight trip log amendments let you account for unforecast headwinds or tailwinds, deviations around weather, or ATC-issued route changes.

Long cross-country flights seldom proceed precisely as planned, and other computer-generated flight plans suddenly become worthless when in-flight surprises occur.

Not so when you use the Flightmaster. You simply enter changes to route, altitude, or winds-aloft as they occur in flight. Your Flightmaster recalculates your trip log instantly, and shows you the impact on ETA and fuel reserves. "I'm so impressed that I will probably not get a LORAN for the Mooney after all. The Flightmaster makes RNAV actually usable for everyday flying. Invaluable for Part 135 pilots like me who are required to work a W&B before every flight. I'm thrilled with the product!"

—Chris Wooldridge, CFII, Mooney 252 owner, multiengine charter pilot

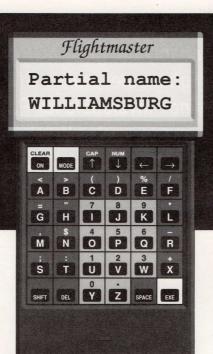
Custom weight-and-balance calculations provide alerting for overweight and out-of-envelope conditions, a graphic display of CG position, plus all the numeric W&B information required for a Part 135 loading manifest. Flightmaster uses a custom template derived from W&B tables in your aircraft's POH. You only enter this once, and Flightmaster memorizes it.



Custom checklist sequencing uses personalized checklists that you design for your aircraft. The machine electronically "checks off" the items as you perform them, and reminds you of any items you may have skipped. You need only enter the checklist items once, although you can revise them anytime.

If you fly single-pilot operations, this checklist feature <u>alone</u> justifies the purchase of your Flightmaster.

If you fly several different aircraft, your Flightmaster will memorize the performance data, W&B template, and custom checklists for all of them.



And Still More Flightmaster features:

Built-in navigation database is of a size that is unprecedented in a pocket-size unit. It includes all VORs, all paved public-use airports, all Victor and Jet airways, most intersections, and selected NDBs in the United States (including Alaska and Hawaii), plus VORs in Canada, Mexico, and the Caribbean. The database has easy updates you can install yourself by swapping datapaks that plug into the back of the machine. Flightmaster also memorizes user-defined fixes (dozens of them if you wish).

Name search: If you don't know the identifier of an airport or navaid, just enter a fragment of the facility name. The machine searches for all airports or navaids whose name matches the specified fragment, and will display the identifier, frequency, elevation, and other pertinent information for each one.

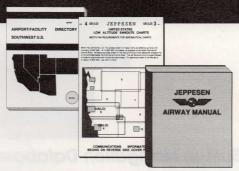
Geographic search: Specify a geographic location (fix, fix/radial/distance, or lat/lon) and a search radius. The machine searches for all airports or navaids within the specified region, and displays them sorted by distance

"I love my Flightmaster! It's so much more than I had hoped for." —Rill Hettinger, 200-hour private pi

–Bill Hettinger, 200-hour private pilot

"You've got to see this machine to believe it!"

—John Deakin, Boeing 747 captain



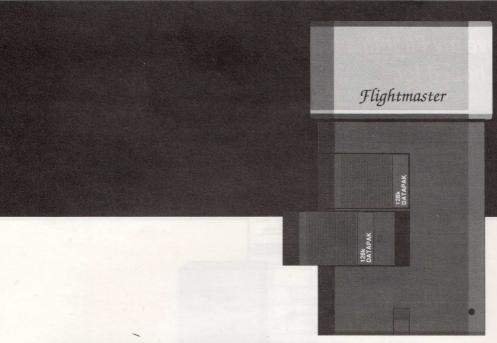
from the specified location. Similar to the "emergency search" function of database LORANs, but ever so much more useful. (What is the name of the VOR near Reno airport? Which GA reliever airports are closest to Boston Logan International? And so forth...)

RNAV waypoint definitions for any point: You specify a geographic location (fix, fix/radial/distance, or lat/lon). The machine finds all VORTACs and VOR/DMEs within 100 nm, sorts them closest-to-furthest, and displays an RNAV waypoint definition (frequency/radial/distance) for the specified location based on each navaid.

Functions of a standard E6B flight computer include TAS, density altitude, unknown wind, Mach number, temperature rise, and ordinary four-function arithmetic.

Functions of an electronic business organizer include notepad, phone directory, perpetual appointment calendar, and alarm clock. Optional plug-in software paks include spelling checker, spreadsheet, overseas travel info, and lots of other applications.

Quarterly newsletter Flying with Flightmaster is sent free to every registered owner. Each issue is packed with news, tips and techniques to help you get the most out of your Flightmaster.



Flightmaster's Built-In Navigation Database:

The Flightmaster comes with a built-in easily-updatable Full-U.S. navigation database that contains 11,000 fixes plus 13,000 airway segments:

- Navaids: all VORs and selected NDBs in the United States, plus Canada, Mexico, Central America, the Caribbean...more than 1,200 navaids in all. Frequencies included.
- Airports: all public-use airports in the U.S. (including Alaska and Hawaii) having at least one paved runway...more than 3,800 airports. Includes tower or CTAF frequencies.
- Intersections: all named intersections appearing on any U.S. high- or low-altitude enroute chart, area chart, SID or STAR...nearly 6,000 fixes.
- Airways: all Victor Airways and Jet Routes in the continental U.S., Alaska and Hawaii... more than 850 airways comprising nearly 13,000 route segments.

The built-in database is stored in a pair of thumb-sized datapaks that plug into the rear of the Flightmaster. All data in Flightmaster's navigation database comes from magnetic tapes issued by the FAA's National Flight Data Center and revised every eight weeks.

To update your database, simply pop out the datapaks and send them to us...we'll update your paks with the very latest database and software, and express them back to you 24 hours after receipt. You can order updates on either a one-time or annual-subscription basis. There's also a "zero-down-time" option if you simply cannot be without your Flightmaster.

"I fly Boeing 767s for a living, so I'm used to being surrounded by the latest state-of-the-art electronic marvels of a glass cockpit. But I still can't imagine how you managed to cram that huge database and all those features into a pocket-sized unit! Flightmaster even does a bunch of things that my million-dollar 767 FMC can't do. I just got a second Flightmaster as a gift for my daughter at Embry-Riddle."

-Ken Korshin, airline captain, Boeing 767

Flightmaster's User-Defined Database:

In addition to the built-in navigation database, the Flightmaster memorizes a "user-defined database" of information that you enter into the machine yourself:

- User-defined navigational fixes. You can specify a location as latitude/ longitude, or as a radial/distance from any known fix.
- Frequently-used routings that you elect to save for later recall. Recall them at the touch of a key.
- Aircraft performance data for your aircraft, taken from your Pilot's Operating Handbook (POH). This data includes climb, cruise, and descent performance data for various altitudes, plus other aircraft-specific items.

- A weight-and-balance template for your aircraft, taken from the W&B information in your POH. This defines the aircraft's empty weight and CG, the various loading stations, the subtotals you want Flightmaster to calculate, and the shape of the allowable weight/CG envelope of the aircraft.
- A set of custom checklists for your aircraft, typically customized from the generic checklists in your POH.

Remember, if you fly several different aircraft, your Flightmaster will memorize the performance, W&B, and checklists for all of them at once.



Flightmaster Accessories

Docking Thermal Printer

A miniaturized printer that "docks" with your Flightmaster and prints your trip logs, flight plans, and weather briefings on roll-fed thermal paper. Small enough to use in the cockpit. Incorporates a rechargeable nicad battery pack, and comes with an AC charger.

Comms Link RS232 Adapter

Plugs into the accessory port of your Flightmaster and provides a standard RS232 asynchronous serial communications port. Permits Flightmaster to talk to a PC or Mac, modem, serial printer, or any other serial device. Lets you

backup your user-

defined data onto

a PC disk, and to

communicate via

modem with DUAT, EMI/Compuserve, and similar services. Worth its weight in gold if you use a PC.

•32K RAMpack

Special plug-in datapak which contains 32K of high-speed RAM memory and a tiny lithium battery that preserves its contents even when unplugged from your Flightmaster. Provides the fastest and easiest means for backing up your user-defined data.

• Fitted Leather Case

A thin, tight-fitting leather case made of high-quality black soft glove leather. Flap with Velcro closure protects Flightmaster's display from getting scratched up. Highly recommended.

AC Adapter

Wall transformer to power your Flightmaster from 110–120 volt AC. (Included with printer.)

Product and Pricing Information

To order your Flightmaster call (800) 462-6669 toll-free, or FAX (301) 387-7322. VISA, MC, and AmEx accepted.

Flightmaster

Flightmaster is sold with a rather extraordinary 90-DAY NO-RISK SATISFACTION GUARANTEE. Fly with Flightmaster. If you are not delighted with it, return it in original condition within 90 days for a full refund...no questions asked.

Updates

- Annual (6x) update subscription
 via next-day air\$180
 Same as above, except we ship your
 updates by next-day air. This provides one
 less day of downtime.
- ☐ Zero-downtime update option\$200

 We provide a pair of extra datapaks for you
 so that you can receive database updates
 without any downtime whatsoever. This
 one-time-only price covers only the two
 extra datapaks... you must also purchase an
 update subscription.
- One-time update via 2nd-day air\$50 Ship us your two datapaks at any time, we reprogram them with the latest updated database and software revision, and ship them back to you via 2nd-day air. Add \$5 more for shipment by next-day air.

Accessories

- □ RS232 adapters\$20

 Used with Comms Link to change its DB25F
 connector to whatever is necessary. Specify
 which of the following adapters you need:
 IBM AT, Mac+, Mac SE or II, serial printer,
 or modem.
- ☐ Fitted leather case\$30
 With Velcroed flap to keep your Flightmaster looking new.
- 32K RAMPACK \$90

 The most convenient way to back up your Flightmaster data.
- ☐ AC adapter.....\$20

 Lets you power your Flightmaster from a
 120-volt AC electrical outlet.
- ☐ Printer II\$350

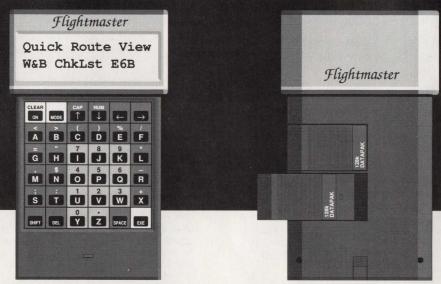
 Compact "docking" thermal printer for your Flightmaster.
- ☐ Thermal paper for Printer II.....\$20 Package of four rolls.

Video Information Package

page Flightmaster User's Guide. The \$15

purchase of a Flightmaster.

cost for this package is credited toward your



Flightmaster Hardware Specifications:

Dimensions: 5.5"H x 3"W x 1.1"D

Weight: 10.5 oz

Power: 9-volt alkaline battery

Power consumption:

30µa, switched off 4ma, awaiting input 20ma, processing 100ma, accessing database

Battery capacity: 500ma-hours

Battery life: 1-2 months in typical use

Accessories:

docking thermal printer
RS232 communications link
32K plug-in RAMpack
leather carrying case
110-120 volt AC power adapter

CPU: Hitachi HD6303XFP (0.9 MHz)

Display: liquid-crystal

2 lines x 16 char (standard) 4 lines x 20 char (optional)

Keyboard: 36-key alphanumeric

Buzzer: piezoelectric, 28Hz-12KHz

Real-Time Clock

Internal memory:

32K ROM 31K RAM

External memory:

two snap-in 128K EPROM datapaks (other sizes of EPROM and battery backed RAM datapaks available)

Accessory socket

Flightmaster, Inc. Lake Technology Park McHenry, Maryland 21541

(800) 462-6669 toll-free (9–5 Eastern time) (301) 387-7322 FAX

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Signature:	How did you learn about Flightmaster				
DESCRIPTION		PRICE	QTY	TOTAL	
Flightmaster handheld flight management system, complete		\$595			
Database updates: Annual (6x) update subscription via 2nd-day air		150			
Annual (6x) update subscription via next-day air		180			
Zero-downtime update option, subscription required		200			
One-time update via 2nd-day air		50			
One-time update via next-day air		55			
Flightmaster Accessories: 5.25" disk 3.5" disk					
Comms Link RS232 interface, check: □IBM/DOS □Macintosh		100			
RS232 adapters, check which: □ IBM AT □ Mac Plus □ Mac SE or II □ serial printer □ modem		20			
Fitted leather case		30			
32K RAMpack		90			
AC adapter		20			
Docking thermal printer		350		6 1	
Thermal paper for printer, 4 rolls		20			
Video information package with user's n		15			
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PHONE ORDERS & INFORMATION: Call (800) 462-6669 toll-free

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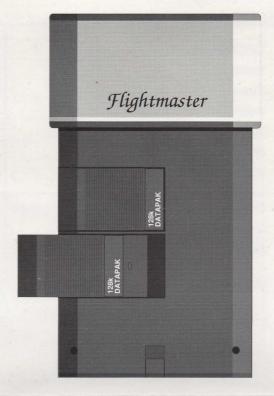
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