



Innovative
Solutions & Support

*Serving Business/General, Commercial
and Military Aviation Markets*

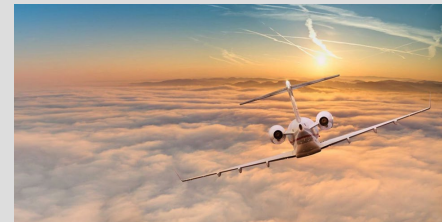


IS&S Communication and Navigation Products

Enhance IS&S Capabilities with Communication, Navigation and Inertial Computer Technologies

Communication and Navigation Products for the Business Aviation and Military Platforms

- 1) Audio Management Units
- 2) Radio Management Units
- 3) VHF Communication Radios
- 4) Navigation Radios
- 5) Distance Measuring Equipment
- 6) Transponders



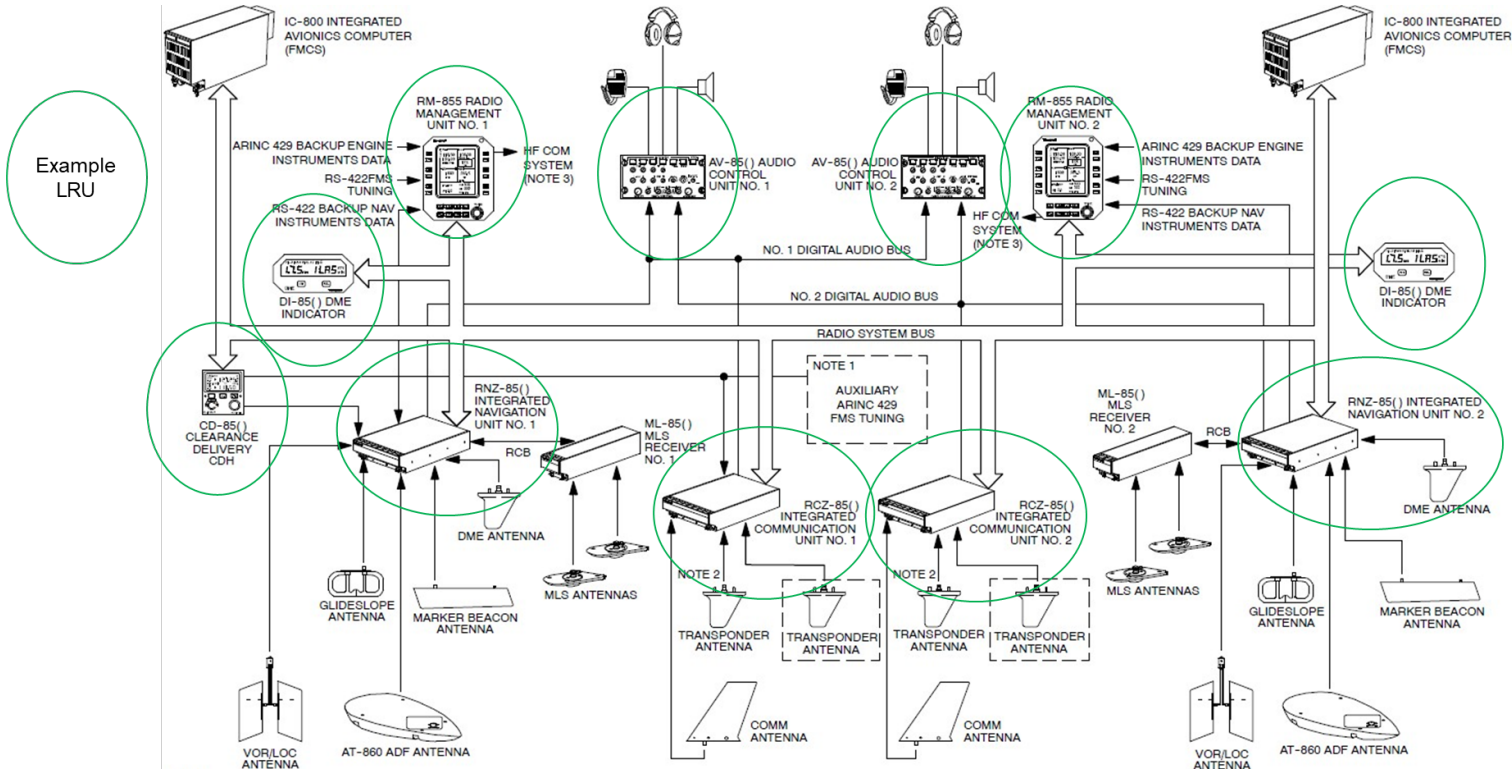
Inertial Reference Products for the Air Transport and Military Platforms

- 1) Inertial Reference Units
- 2) Air Data and Inertial Reference Units



- Product line includes PRIMUS II Integrated Radio Systems dual, remote-mounted digital radio system that encompasses all standard navigation and communication functions, including Very High Frequency Omnidirectional Range (VOR), DME, ILS, and Very High Frequency (VHF) communications.
- Marker beacon and transponder (Mode A/C/S, depending on installation)
- All control functions are operated from two RM-85X Radio Management Units (RMU). A CD-850 Clearance Delivery Control Head is also part of the system.





Example LRU

- NOTES:
1. FMS CDU WITH ARINC 429 MAY BE SUBSTITUTED FOR THE CLEARANCE DELIVERY CDH.
 2. FOR DIVERSITY TRANSPONDER, USE TWO ANTENNAS PER TRANSPONDER.
 3. HF COMMUNICATION SYSTEM (OPTIONAL) NOT SHOWN. THE RMU DIRECTLY CONTROLS THE HF SYSTEM.

The RM-855 RMU is a liquid crystal display unit primary interface used to control the Primus II radio system in the Primus 1000 and Primus 2000 flight decks.

Key Benefits:

- High frequency tuning, NAV Radio back up tuning, 3rd Com tuning
- Switch COM radios from voice to data mode (when equipped)
- Option to show a navigation radio magnetic indicator & engine backup display on the RMU
- Upgrades are easier - software only
- Required for ADS-B Out mandate

The RM-855 Radio Management Unit (RMU) is mounted in the cockpit panel and is the primary interface used to control the radio system functions.

Required for ADS-B Out Mandate on the following aircraft:

- Bombardier Learjet 40 / 45 & 70/75
- Embraer Legacy 600 / 650
- Gulfstream PlaneView Cockpits G350 / 450 / 500 / 550
- Textron Cessna Citation VII, X, Model 560 (Ultra, Encore, Excel and XLS)
- Textron Hawker 800



SPECIFICATIONS

DIMENSIONS:	8.10" L x 4.06" W x 5.06" H	WEIGHT:	5.2 lbs
POWER REQUIREMENTS:	28 V dc nominal, 50 VA maximum	MATING CONNECTOR:	Honeywell Part No. 4000809--631 (MS3126E24--61S)
MOUNTING:	Clamp HPN 7000066--9, MSP Part No. 64550B--103 can also be used	TSO:	C34e, C35d, C36e, C37d, C38d, C40c, C41d, C66c, C104, C112, C113, (C31d, C32d optional HF), (C43b, C44a, C47, C49a, C55, optional engine data), (C118, C119a optional TCAS I & II)
ENVIRONMENTAL:	DO--160C Environmental Category [A1F1]--CA(PBSMN)XXXXXXXXZAZZYLXX	OPERATION TEMPERATURE:	--20 to +55 degrees C
ALTITUDE:	55,000 feet	DECOMPRESSION:	8,000 to 70,000 feet
OVERPRESSURE:	-15,000 feet		

AV-850 / AV-850A Digital Audio Panel

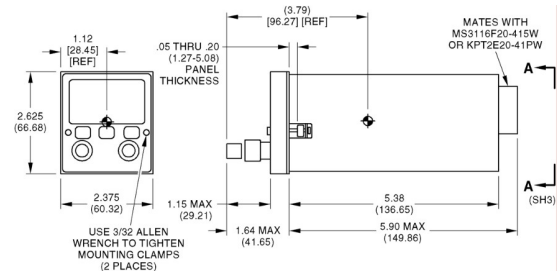
- The AV-850 receives digitized audio from remote radio units. The digitized audio is provided through two high-speed digital audio buses. This is usually installed in a dual system configuration.
- System No. 1 is on the pilot's or left side. System No. 2 is on the copilot's or right side. Up to six audio panels are installed in the aircraft on the high-speed digital audio buses.
- Each audio panel contains hardware, which switches the microphones to various radio units. The audio panel also contains hardware for the interphones, cabin audio, and intercoms. Amplifiers are provided to drive the headphones and speakers.
- The audio panel is a standard Dzus rail-mount package and uses electroluminescent panel lighting.
- The audio control unit decodes the digital data, controls the gain (volume) of the various channels, adds the channels together, does various filter functions on the audio, and outputs the audio to a digital-to-analog converter. It contains hardware for switching microphones to various radios, for the interphones, and for the passenger cabin audio and intercoms. Amplifiers are supplied for driving headphones and speakers



Characteristic	Specification
Length	7.10 inches (180.3 mm) maximum
Width	5.75 inches (146.1 mm) maximum
Height	3.00 inches (76.2 mm) maximum
Weight	3.75 pounds (1.7 kg) maximum
Power	DC inputs, +28 VDC, 28 VA nominal
Color	
Odd Dash Number Panel	Gray
Even Dash Number Panel	Black
Operating Temperature	-4 to +150°F (-20 to +66°C)
Operating Altitude	Sea level to 35,000 feet (10,668 m)
Mating connector:	
J1	HPN 2500981-195 (MS27473E20-A41S)
J2	HPN 2800981-197 (MS27473E20-A41SB)
Mounting	Unit Dzus fasteners per MS-25213
TSO	C50c
Environmental Specifications	DO-160B Environmental Category/A2C1/B//KPS/E1XXXXXZ/BZ/AZZ

CD-850 Clearance Delivery Control Head (CDH)

- The CD-850 Clearance Delivery Control Head (CDH) is an alternate or emergency backup capability for tuning the No. 1 VHF COM Module and the No. 1 VHF NAV Receiver Module, on private line data buses that remain operational if the primary Radio System Bus (RSB) tuning is not available, or if the pilot/operator wishes to override the bus tuning for any reason. The CDH listens on the RSB and displays the active frequencies of these two modules.
- The CDH is located on the center console in the cockpit of the aircraft between the RMUs, just forward of the engine power levers.
- The CDH uses a translatable, dichroic (black dye) LCD for enhanced readability and reliability. The panel lettering and buttons are internally lit using aviation blue—white lighting.
- The CDH has strap options that select various features of the COM or VOR radios in the emergency mode. These features are set at the rear connector by jumper straps.
- The normal and emergency modes are sub modes selected by the mode knob



NOTES:
 1. DIMENSIONS ARE SHOWN IN DECIMAL INCHES AND (MILLIMETERS).
 2. CONNECTOR NUMBERS ARE BY ITT CANNON.



Characteristic	Specification
Dimensions (maximum):	
• Height	2.62 in. (66.7 mm)
• Width	2.38 in. (60.3 mm)
• Length	7.54 in. (191.5 mm)
Weight (maximum)	1.25 lb (0.567 kg)
Power Requirements	28 V dc, 8 W (max)
User Replaceable Parts:	
• Knob, Mode	HPN 800B0718
• Knob, Coarse Tuning	HPN 800B0714
• Knob, Fine Tuning	HPN 800B0715
• Setscrew, 4-40 x 3/32-inch (6)	HPN 100A4634-01
Mating Connectors	MS3126F20-41SW, HPN 4000809-607
Mounting	Panel Mount

- The RNZ-851 Integrated Navigation Unit is a complete, self-contained navigation system. It contains the NV-850 VHF NAV Receiver, the DM- 850 DME, and the DF-850 ADF modules. Also, within the RNZ--851 is an XN-850 Cluster Module that supplies the interface with the NV--850, DM- 850, DF-850 and other units of the integrated radio system and digitizes the received audio for the digital audio system. Cooling is supplied by a noncritical, rack-mounted fan. Temperature sensors inside the individual modules report temperature rise to the cluster module, which switches the fan on and monitors its operation. When the temperature drop sufficiently, the fan is switched OFF.
- Part of the Primus II Integrated Radio System contains the VOR, localizer, glideslope and marker scanning Distance Measurement Equipment (DME) module
- Each module is self-contained within its own housing and connects to the cluster module through ribbon cable
- A typical RNZ--85X Integrated Navigation Unit contains the modules that follow:
 - NV-850 NAV Receiver Module
 - DM-850 DME Interrogator Module
 - DF-850 ADF Receiver Module
 - XN-850 NAV Cluster Module (RSB and Digitized Audio Interface)



GENERAL SPECIFICATIONS

DIMENSIONS:	14.01" L x 8.90" W x 3.38" H	WEIGHT:	13.0 lbs
POWER REQUIREMENTS:	28 V dc, 54 Watts (nominal)	TSO:	C34d, C35d, C36d, C40b, C41d, C66b
ENVIRONMENTAL:	DO--160B Environmental Category /A2E1/B/JLMY/E1XXXXZ/BZ/AZZ	OPERATION TEMPERATURE:	-55 to +70 degrees C
ALTITUDE:	70,000 feet	DECOMPRESSION:	8,000 to 70,000 feet
OVERPRESSURE:	-15,000 feet	VIBRATION JLMIY:	Category J - Fuselage mount, fixed wing--turbojet, subsonic, and supersonic Category L - Fuselage mount, fixed wing--reciprocating and turbopropeller, multi--engine over 12,500 pounds Category M - Fuselage mount, fixed wing--reciprocating and turbopropeller, multi and single engine less than 12,500 pounds Category Y - Fuselage mount, helicopter, reciprocating, and turbojet engine
MOUNTING:	P/N 7510124-910 (1/2" mounting screws) or 7510124-911 (3/4" mounting screws)	TUNING AND DATA BUS	Radio System Bus (RSB)
DIGITAL AUDIO OUTPUT BUSES:	2		

- The Integrated Communication Unit (COM Unit) is a complete, self-contained communication system. It contains the very high frequency (VHF) communication transceiver module, and either a transponder module or a traffic alert and collision avoidance system (TCAS) interface module. Also within the COM Unit is a communication (COM) cluster module that contains the circuitry necessary to handle all of the inputs and outputs of the COM unit modules and to place them on the digital audio bus and radio system bus (RSB).
- The rear of the COM Unit has two antenna connections; one for the very high frequency (VHF) communication and the other for the transponder; and connectors for all electrical connections.

FEATURES

- VHF COM Features
 - 25 or 8.33 kHz channel spacing
 - ACARS
- Transponder Features
 - ATCRBS
 - Mode S
 - TCAS Diversity
 - ARINC 429
 - Enhanced Surveillance & Change 7



Characteristic	Specification
Dimensions (maximum):	
Length (all)	14.10 inches (358.1 mm)
Width:	
RCZ-831/833C/833D/850/850A/851/851A/851C/851D	6.90 inches (175.3 mm)
RCZ-833B, -833E thru -833H/851B/851E thru -851H/854A, 854B/854E thru -854H	8.90 inches (226.1 mm)
Power	
	28 VDC, 36.5 watts (nominal receive mode)
	28 VDC, 230 watts (nominal transmit mode)
Temperature/altitude A2E1:	
Operation temperature	-67 to 158°F (-55 to +70°C)
Storage temperature	-67 to 185°F (-55 to +85°C)
Altitude	Sea level to 70,000 feet (21,336 meters)
Environmental specifications:	
All (except RCZ-833/853)	DO-160B Environmental Category/A2E1/B/JLMY/E1XXXXXZ/BZ/AZZ
RCZ-833/833H/853	DO-160C [A2E1]- Environmental Category BB[CLMY]EXXXXXZ[BZ]AZARZ[A3E3]XX
TSO:	
RCZ-831/833B/833E/833F/833J/833K	C37d, C38d, C112
RCZ-833/833C/833H/853	C37d, C38d
RCZ-833D/833G	C37d, C38d, C74c
RCZ-850/851/851A/851B/851E/851F	C37c, C38c, C112
RCZ-850A/851D/851G	C37c, C38c, C74c
RCZ-851C/851H/854E/854F/854G/854H/899	C37c, C38c
RCZ-854A	C37d, C38d, C74c

- The DI-851 Distance Measuring Equipment (DME) Indicator was designed and manufactured by BFG Flight Systems, Inc. per Honeywell Specifications. The DI-851 operates as an auxiliary display of DME Navigation information in the Honeywell Primus II SRZ-850 Integrated Radio System.
- The DME related information includes the distance to a Navaid in nautical miles, the identification character string for the Navaid, the computed ground speed of the aircraft in knots, and the time to go to the Navaid in minutes. The indicator may be used with either one or two DME receivers and is capable of displaying data for both the active and preset channels of each DME.
- The unit will also annunciate other information such as the Hold status for each channel and Microwave Landing System (MLS) DME activity. All data is input to the indicator from either the Primary or the Backup Radio System Bus (RSB).
- The DME display consist of a dichroic Liquid Crystal Display (LCD) with white characters on a black background. The display contains two displayed quantities and the annunciators for these quantities. The left display is DME distance in nautical miles, and the right display is either the station identifier character string, ground speed in knots, or time to station in minutes. The LCD display, the legends on the two pushbuttons and the indicator identifier legend are backlit by an electroluminescent lamp. The backlighting intensity is controlled by the aircraft instrument dimming line.

Characteristic	Specification
PHYSICAL:	
WEIGHT:	1.0 pound (0.453 kg)
SIZE:	1/2 3ATI Case 1.542 inches (39.16 mm) High 3.260 inches (82.80 mm) Wide 6.600 inches (167.65 mm) Deep
MOUNTING:	Front/Rear Mount with 1/2 3ATI Clamp (Optional Rear Mount with Nut Plate)
CONNECTOR P1:	DB-25P with Slide Lock
PANEL COLOR:	Gray or Black
ENVIRONMENTAL:	
TSO COMPLIANCE:	C66b
RTCA COMPLIANCE:	
Minimum Operating Performance Standards:	DO-189
Software:	DO-178A
Environmental:	DO-160B, Categories [A2C1] AKPSE1XXXXZBZAZZ
TEMPERATURE/ALTITUDE A2C1:	
DO-160B, Category A2:	
Storage Temperature: -	-67 to +185°F (55 to +85°C)
Operating Temperature:	5 to 158°F (-15 to +70°C)
Altitude:	0 to 15,000 feet (0 to 4,57 km)
Decompression:	8,000 to 70,000 feet (2,44 to 21.34 km)
Overpressure:	-15,000 feet (-4.57 km)
DO-160B, Category C1:	
Storage Temperature:	-67 to +185°F (55 to +85°C)
Operating Temperature:	-4 to +131°F (20 to +55°C)
High Short Time Operating Temperature:	158°F (70°C)
Altitude:	35,000 feet (10.67 km)



Characteristic	Specification
VIBRATION - DO-160B, Category KPS:	K - Panel mount, fixed wing-turbojet, subsonic and supersonic P - Panel mount, helicopter, reciprocating and turbojet engine S - Panel mount, fixed wing-reciprocating and turbo-propeller, multi and single engine, over and less than 12,500 lbs (5669.9 kg).
PERFORMANCE:	
ELECTRICAL:	
POWER REQUIREMENTS:	28 volts DC
LIGHTING POWER:	5 volts AC/DC, 28 volts DC
LIGHTING TYPE:	Electroluminescent Backlighting
DISPLAY:	Dichroic Liquid Crystal (white on black)
COMMUNICATIONS:	INPUT: Radio System Bus (RSB) - Reference Honeywell Spec No: 7500302-000
DISCRETE INPUT/OUTPUT (I/O):	INPUT: On/Off Control from NAV
DISPLAY RANGE:	
DISTANCE:	0.00 to 999 nm
GROUND SPEED:	0 to 999 knots
TIME TO STATION:	0 to 999 min.
STATION IDENTIFIER:	2,3 or 4 characters, right justified
DISPLAY DISTANCE RESOLUTION:	0.00 to 9.99 nm = 0.01 nm (0.1 nm for Resolution Limit Versions) 10.0 to 99.9 nm = 0.1 nm 100 to 999 nm = 1 nm
ANNUNCIATORS:	
MODE (Standard Version):	NAV, PRE, MLS, 1, 2, & HLD
MODE (No Preset Version):	NAV, MLS, 1, 2, & HLD
UNITS:	nm, KT, & MIN

Aircraft Platforms Communication and Navigation Products

Prime	Family	Platform
Bombardier	Challenger 300	Challenger 300
Bombardier	Global Express	Global Express/XRS
Bombardier	Learjet 31	Learjet 31
Bombardier	Learjet 40	Learjet 40/40XR
Bombardier	Learjet 45	Learjet 45/45XR
Cessna	Citation II	Citation Bravo (550B)/Cessna 550
Cessna	Citation V	Citation Encore (560)
Cessna	Citation Excel	Citation Excel XLS (Primus)
Cessna	Citation I	Citation I (Cessna 500)
Cessna	Citation II	Citation II (Cessna 550)
Cessna	Citation III	Citation III (Cessna 650)
Cessna	Citation Sovereign	Citation Sovereign (Epic)
Cessna	Citation V	Citation Ultra
Cessna	Citation V	Citation V
Cessna	Citation III	Citation VI
Cessna	Citation III	Citation VII
Cessna	Citation X	Citation X (Primus)
Cessna	CitationJet/M2	CJ1/CJ1+ (Cessna 525)
Dassault	Falcon 900	Falcon 900
Embraer	Legacy 600	Legacy 600
Embraer	Legacy 600	Legacy 650
Embraer	Lineage 1000	Lineage 1000/E190
Fairchild-Dornier	Envoy 3	Envoy 3 (Do-328 Jet)
Hawker Beechcraft	Hawker 1000	Hawker 1000
Hawker Beechcraft	Hawker 4000	Hawker 4000/4000TS
Hawker Beechcraft	Hawker 800	Hawker 800XPi/850XP
Syberjet	SJ30-2	SJ30i