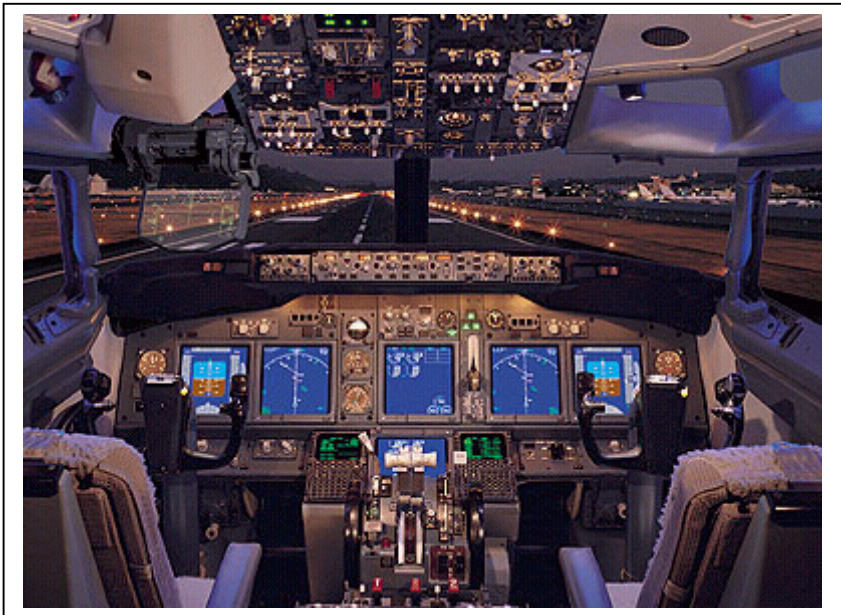


TELELINK[®] DATA LINK COMMUNICATION SYSTEM FOR THE BOEING BUSINESS JET

**REFERENCE GUIDE FOR GLOBAL DATA
CENTER SERVICES**



**TELELINK DATA LINK
COMMUNICATION SYSTEM FOR
THE BOEING BUSINESS JET
REFERENCE GUIDE
FOR GLOBAL DATA CENTER
SERVICES**

176-9001-000

Version 1

February 2002

Contact Information

Global Data Center

(425) 885-8100	Global Data Center, or
(888) 634-3330	Toll Free in U.S. & Canada
(425) 885-8930	Facsimile
<i>gdc@honeywell.com</i>	<i>E-mail</i>

Via ACARS Message

“GLOBAL”	At the “SUBJECT” prompt on the message page.
----------	--

Honeywell Main Number

(800) 707-4555	Directory Assistance Morristown, NJ
(800) 421- 2133	Customer Access Center Phoenix, AZ
(888)-TALK FMS	Honeywell FMS support

Table of Contents

Contact Information	3
What is the Global Data Center?	5
Current Data Link services	5
ACARS Network	6
MCDU Menu	7
ACARS MAIN MENU	8
System Initialization	9
Preflight Services.....	10
D-ATIS	11
TWIP (Terminal Weather Information for Pilots)	11
Text Weather	12
Pre-Departure clearance request (PDC)	13
Oceanic Clearance (CLX).....	14
Oceanic Clearance (CLX) using a callsign.....	15
In-flight Services	16
Text Weather	12
OOOI	17
COMM Control	18
VHF Network	19
SATCOM	20
Create Message	21
Addressing	22
Message Address Examples	23
Received Messages	24
Flight Plan Recall	25
Miscellaneous Tables	26

What is the Global Data Center?

The TeleLink® management unit is a data communication system that provides two way air-to-ground communication and permits access to a wide variety of flight information services. Data may be transmitted through either the VHF (ACARS) or Satellite networks. All communications are routed through the Global Data Center (GDC) located in Redmond, Washington.

The Global Data Center (GDC) provides comprehensive data management, message handling, flight planning, and other flight related products and services. Datalink messages are normally handled automatically by the GDC computer network, and in many cases no human intervention is necessary. However, often times it is desirable to have special handling, therefore users are encouraged to contact the Global Data Center staff at anytime, 24/7, for one-on-one assistance. The GDC is staffed with dedicated aviation professionals who are specially trained and eager to help. The GDC is therefore a virtual extension to your flight department and a communication resource to link your flight department with all segments of aviation.

Using the TeleLink System, the following is a list of the current data link services available through the Global Data Center.

Digital ATIS (D-ATIS)

Flight Plan Upload to the FMS

Messages

Oceanic Clearances

Pre-Departure Clearances (PDC)

SIGMETS

Take OFF and Landing Times

Terminal Weather (TAF/METAR/NOTAMS/PIREPS)

TWIP (Terminal Weather Information for Pilots)

Winds Aloft

On the ground, users may also access GDC services over the telephone or through a ground-based computer interface utilizing widely distributed GDC communication software.

ACARS Network

Datalink communications are normally transmitted via one of three VHF networks operated by ARINC, AVICOM, or SITA. This combined network (which is also utilized by most scheduled airlines) is termed the ACARS (Aircraft Communication and Reporting System) network. GDC subscribers are automatically registered to use all three VHF networks.

ARINC North America, Hawaii, and Mexico

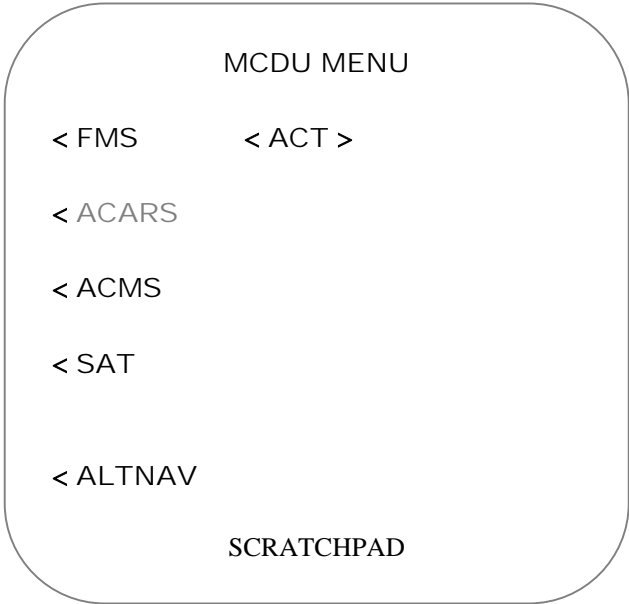
AVICOM Japan

SITA Africa, Europe, South America, and
 the South Pacific.

ACARS VHF stations are stand-alone facilities and are usually not related to ATC voice communication or navigation facilities. The Telelink data management unit (MU) uses a VHF transceiver to communicate over the ACARS network. The MU also interfaces with satellite communication systems for data and voice communications via the satellite network. Communicating in satellite mode is normally used when the aircraft is out of range of VHF stations. Although the MU can automatically switch between satellite and VHF, the pilot may opt to manually switch between modes at anytime.

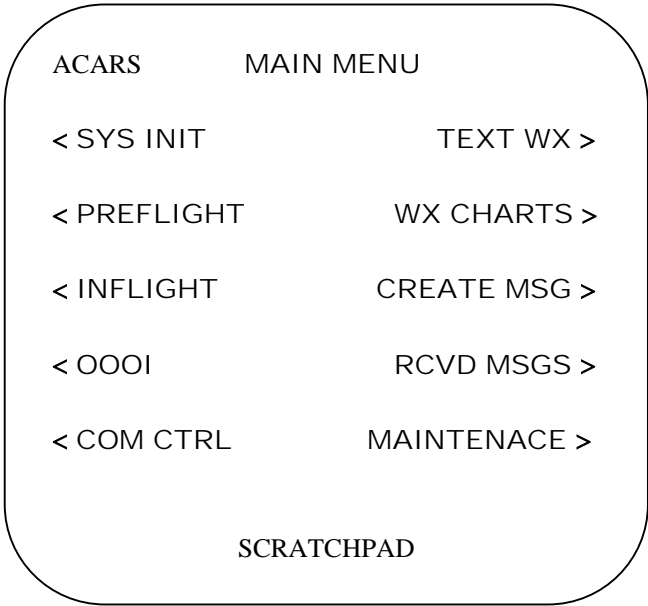
DATALINK ACCESS

The DATALINK INDEX is accessed by selecting the MENU button on the CDU key pad. Access the ACARS MAIN MENU from the MCDU MENU page by selecting ACARS.



MAIN MENU (ACARS)

The MAIN MENU provides access to all ACARS functions. It is a one-page top-level menu through which all functions are accessed. This page is accessed directly from the MCDU MENU by selecting ACARS.



SYSTEM INITIALIZATION (MAIN)

The System Initialization page is accessed by selecting the SYS INIT from the MAIN MENU. Check that the ORIG airport ID is correct – if not, type the correct airport ID on the scratch pad and transfer the data to the ORIG field.

The UTC time can also be changed. Enter the current time on the scratchpad and transfer the data to the UTC TIME field.

The Global Data Center does not currently support Telephony therefore WX CHARTS are not supported (future service).

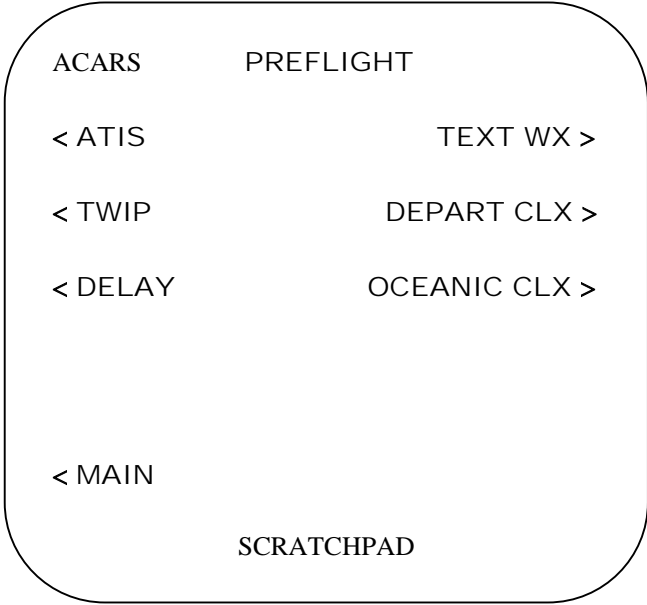
GND UPDATE is not supported.

UPDATE will copy the FMS time to the UTC time.

ACARS	SYS INIT	
FLT		UTC TIME
----		--:--:--
ORIG		
----		WX CHARTS >
DEST		
----		GND UPDATE
FMS CLOCK		
--:--		UPDATE
< MAIN		
	SCRATCHPAD	

PREFLIGHT MENU (MAIN)

Access the PREFLIGHT page by pressing the PREFLIGHT line select key from the MAIN MENU.



PREFLIGHT SERVICES

ATIS, TWIP, TEXT WX, DEPART CLX (PDC) and OCEANIC CLX are the initial services offered from the PREFLIGHT page. The Global Data Center does not support the DELAY page. This feature is designed for airline use and does not typically meet the level of detail needed for business jet use. The following pages illustrate how to access PREFLIGHT services.

ATIS and TWIP are requested by selecting the desired service. The airport ICAO identifier may be automatically pre-filled with the airport ID entered on the SYS INIT page . You may manually enter a desired airport on the scratchpad and transfer the entered data to the AIRPORT field.

ATIS (PREFLIGHT)

ACARS ATIS
AIRPORT
KBWI

< PREFLIGHT

SEND

SCRATCHPAD

TWIP (PREFLIGHT)

ACARS TWIP
AIRPORT
KDFW

< PREFLIGHT

SEND

SCRATCHPAD

TEXT WEATHER (PREFLIGHT)

The user may request terminal weather (includes TAF, METAR, PIREPS, and NOTAMS), WINDS, and SIGMETS from the TEXT WX page. It is not necessary to request PIREPS separately as they are included with terminal weather.

When there is an active flight plan in the system, STATION 1&2 will default to the flight plan's departure airport and destination airport.

You may manually enter different stations by entering the airport ICAO on the scratchpad and transferring the entered data to the STATION 1 and/or STATION 2 fields.

For TERMINAL, WINDS, and SIGMETS press line select key(s) adjacent to the item(s) to be included in the message. (*Selected items are indicated by an **).

ACARS	TEXT WX
STATION 1	
-----	RCVD MSGS >
STATION 2	

< TERMINAL*	PIREPS >
< WINDS*	SIGMETS >
	SEND
< PREFLIGHT	
SCRATCHPAD	

DEPART CLX (PREFLIGHT)

Pre-departure clearance request page provides flight crews with the ability to request digital pre-departure clearances (PDC) at specific airports that support PDC services.

In order to transmit the Pre-Departure Clearance request it is necessary to enter data into each data field. The ATC STATION and ORIG fields must contain your departure airport ID and the DEST field must contain the destination airport ID.

Enter one number for the GATE data field (any number will do) and one character in the ATIS field (any character will do). When all fields are entered, press the SEND key to transmit the PDC request.

Global Data Center will return your PDC request in the form of a new message.

ACARS	DEPART CLX
ATC STATION	GATE
----	-----
ORIG	ATIS
----	-
DEST	FLT NO
----	-----
	SEND
< PREFLIGHT	
SCRATCHPAD	

OCEANIC CLX (PREFLIGHT)

OCEANIC CLX provides the crew with a digitized message containing the oceanic clearance. An oceanic clearance should be requested as soon as possible, up to one hour before entering Oceanic Airspace. Usually, 70° West is used as a rule of thumb to begin requesting your eastbound Oceanic Clearance. Due to varying times that Gander issues Oceanic Clearances, you may need to request the clearance a second time.

EAST BOUND:

GANDER must be in the ATC STATION field. It is necessary to enter a character (any character will do) into each of the data fields in order to transmit the OCEANIC CLX request.

WESTBOUND:

All fields require an accurate entry. Enter the ATC STATION, ENTRY POINT, ENTRY TIME, FLT LEVEL, MACH speed, and FLT NO. When all fields are entered, press the SEND key to transmit the OCEANIC CLX request. The Oceanic Clearance will be sent from the Global Data Center in the form of a new message.

ACARS	OCEANIC CLX	
ATC STATION		OR >
GANDER		
ENTRY POINT	FLT LEVEL	
-----		---
ENTRY TIME		MACH
----Z		---
FLT NO		

		SEND
< PREFLIGHT		
	SCRATCHPAD	

OCEANIC CLX USING A CALLSIGN (MAIN)

When using a callsign it will be necessary to request your oceanic clearance from the CREATE MSG page two. On the SUBJECT line type "CLX" followed by your callsign (no space between CLX and your callsign). Press the "PREV PAGE" button and from the CREATE MSG page one, press SEND. The Oceanic Clearance will be sent from the Global Data Center in the form of a new message.

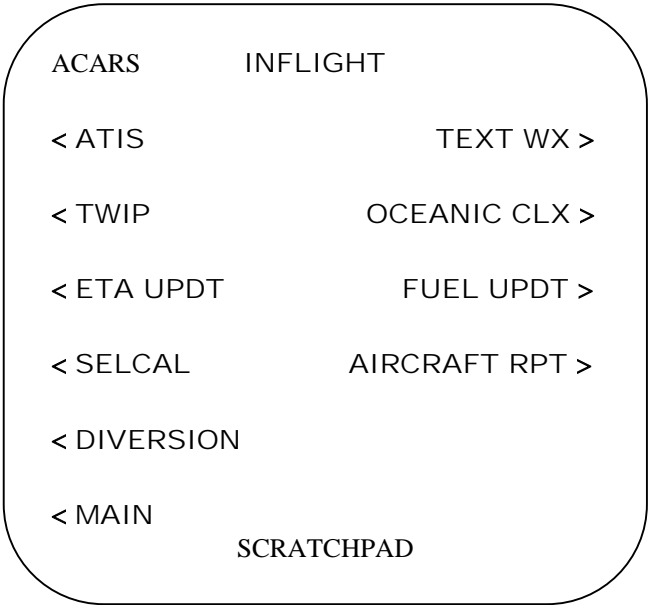
NOTE: When requesting oceanic clearances remember to add "AGCS EQUIPPED" to the ATC remarks on your flight plan.

The image shows a screenshot of an ACARS 'CREATE MSG' screen. At the top, it displays 'ACARS CREATE MSG 2 / 5'. Below this, the 'SUBJECT' field is visible, with the text 'CLXCALLSIGN_' entered and circled in red. There are four dashed lines below the subject field for additional input. At the bottom left, there is a '< MAIN' button, and at the bottom center, there is a 'SCRATCHPAD' button.

INFLIGHT MENU (MAIN)

The Global Data Center does not support the ETA UPDT, FUEL UPDT, SELCAL, AIRCRAFT RPT, or DIVERSION fields. This feature was designed for airline use and is not descriptive enough for business jet use.

ATIS, TWIP, TEXT WX, and OCEANIC CLX have been previously illustrated (see preflight).



OOOI MENU (MAIN)

The OOOI fields are automatically filled when the TeleLink unit detects the OFF and ON events as well as the calculated flight time. This is a view only page.

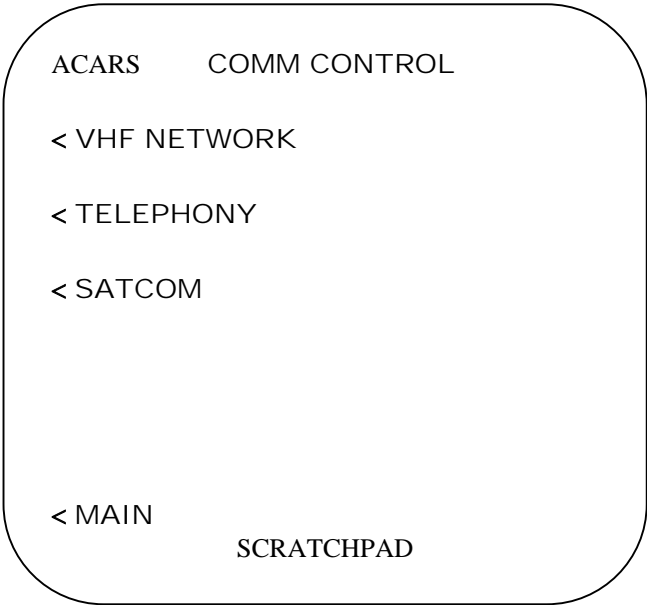
ACARS	OOOI	OFF
		---- Z
		ON
		---- Z
		FLT TIME

< MAIN	SCRATCHPAD	

COMM CONTROL MENU (MAIN)

The COMM CONTROL menu provides access to the VHF NETWORK, TELEPHONY, and SATCOM menus to view and change the state of these communication functions.

Note: The Global Data Center does not currently support TELEPHONY services. Users should leave the TEL COM fields empty (accessed from the CONFIG page by selecting TEL COM) in order to prevent unintended transmissions via the telephony communication system. The selected VHF VOICE mode setting should be left on DATA (accessed from the VHF NETWORK page and selecting VOICE) to ensure data communications with the ACARS network.



VHF NETWORK (COM CTRL)

The VHF NETWORK page displays the status of the four VHF networks and allows the user to toggle (ON or OFF) individual networks by pressing its line select key. The Global Data Center suggests to leave all networks ON except AIR CANADA (decommissioned) to ensure VHF communication while in VHF range.

The VHF FREQUENCY will automatically be selected by the TeleLink unit if the aircraft is within a VHF frequency range. However, the user may choose to manually select the frequency by selecting the OR line select key. This action will display a pick-list page (not shown). Typically, the Telelink unit will take a few minutes to scan the VHF frequency and lock onto the appropriate network. The user can minimize this time by directing the unit to tune directly to the manually chosen frequency selected from the pick-list.

Note: The Global Data Center does not currently support VOICE services.

ACARS	VHF NETWORK
VHF FREQUENCY	
-----	OR >
ARINC	AIR CAN
ON	OFF
SITA	AVICOM
ON	ON
< VOICE	
< COM CTRL	
	SCRATCHPAD

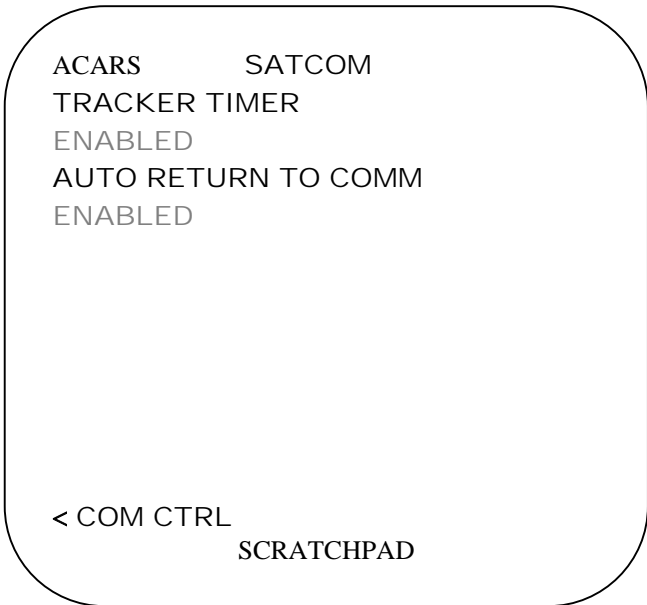
SATCOM MENU (COM CTRL)

The SATCOM menu is used to configure the SATCOM system settings.

Set TRACKER TIMER to ENABLED to ready the SATCOM system for transmission.

The AUTO RETURN TO COMM setting is used to transmit a link test message via satellite once every four hours if no satellite transmissions are heard to maintain positive communication to the satellite network. This should be left in the ENABLED setting.

Note: Disabling the TRACKER TIMER and/or AUTO RETURN TO COMM does not stop satellite transmissions. The SATCOM system must be deactivated to stop transmission.

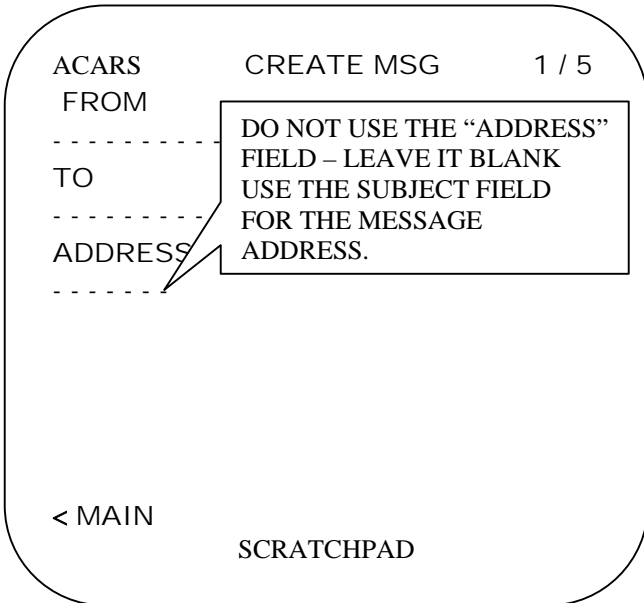


CREATE MESSAGE (MAIN)

The CREATE MSG page is used to create and send text messages and consists of five pages.

The first page contains FROM, TO, and ADDRESS (leave the ADDRESS field blank). Page two has a SUBJECT field and four data fields. Page 3 through 5 are data fields used for message content. Each line holds up to 24 characters and a message can have up to 17 lines. The NEXT key will display successive pages and the BACK key will go to previous pages.

Due to the ADDRESS field limitation of only seven characters, the Global Data Center has chosen to use the SUBJECT field to address all messages. The SUBJECT field has twenty-four characters and can be used to send messages to multiple types of media. Therefore the ADDRESS field is **NOT** to be used and should be left blank.



CREATE MESSAGE (MAIN) CONTINUED

The SUBJECT field line MUST be used to address messages. The remaining lines on pages 2 through 5 are for the content of the message.

Note: see next page for address formats.

The image shows a terminal window titled "ACARS CREATE MSG 2 / 5". The screen contains the following text and elements:

- ACARS CREATE MSG 2 / 5
- SUBJECT
- A dashed line indicating the start of the message content area, which is highlighted with an oval.
- Four additional dashed lines representing the message content area.
- < MAIN
- SCRATCHPAD

Examples and formats of addresses to be entered at the **SUBJECT** field:

In order to facilitate and expedite data entry we recommend that you set up a code with the GDC that corresponds to the address. For example, code GDCOPS for the fax number 42588588930.

Codes are required for e-mail addresses since the FMS does not provide for the @ sign entry.

We've already set up the following codes:

Code	Recipient
GDC	The Global Data Center
JEPP	Jeppesen DataPlan
ARI	Air Routing International
UVAIR	Universal Weather and Aviation

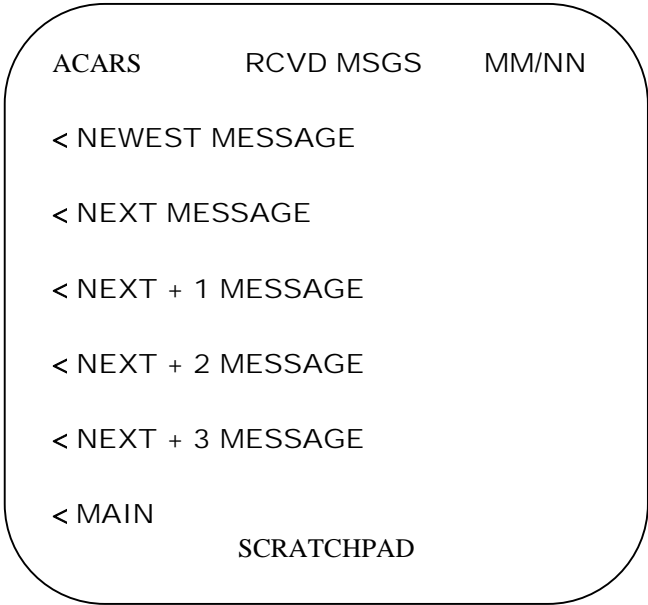
The Recipient	What To Enter	Example
The Global Data Center	GDC or GLOBAL	GDC or GLOBAL
A Datalink Aircraft	The complete tail number with no dashes	N12KZ
A Pre-defined Code	The complete code as set up with the GDC	GDCOPS
A Fax Machine in the US or Canada	The letter "F" followed by the complete Fax number.	F4258858930
A Fax Machine outside the US or Canada	The letters "FI" followed by the complete Fax number, including country code and city codes.	FI390271119966
To be Relayed via Telephone by the GDC staff	The complete phone number including country and city codes if applicable.	4258858100
To a PC using GDC Communication Software	The letter "A" followed by the complete modem number, including country code and city codes if applicable.	A4258858100
To a SITA, ARINC or ADNS Address	The letter "A" followed by the complete address	AHDQGLXH
To an AFTN Address	The letter "N" followed by the complete address	NKSNAXGSA

RECEIVED MESSAGES (MAIN)

The RCVD MSGS page, allows the viewing of all messages transmitted to the aircraft.

Text Messages, Terminal Weather, Winds Aloft, Digital ATIS, TWIP, Oceanic Clearance and Pre Departure Clearances (PDC) are accessible from the RCVD MSGS page.

Each screen displays up to three messages by message title. Press the NEXT key to display additional received message pages. The message title is extracted from the first twenty-one characters of the message text.



FLIGHT PLAN RECALL (RTE button)

Previously computed flight plans stored at the Global Data Center can be recalled from the ACT RTE page by selecting the RTE button on the MCDU.

Enter the flight plan recall number on the scratchpad, transfer the data to the CO ROUTE field, and press REQUEST.

When an ACARS Uplink of a ROUTE occurs, the MCDU displays a "ROUTE UPLINK READY" in the scratchpad, and a < LOAD prompt is displayed. By selecting the LOAD prompt the route will be inserted into the Flight Plan for Pilot Review.



ADVISORY MESSAGES

Advisories messages are displayed in the lower right-hand corner of the display screen just above the scratchpad. Advisories denote the status of the data link.

Please refer to Teledyne Controls [TELELINK PILOT'S GUIDE](#) for a complete description of advisory messages.

SEND STATUS MESSAGES

Send Status messages appear only on screens from which a downlink message can be initiated. These messages appear just above the SEND* prompt.

Please refer to Teledyne Controls [TELELINK PILOT'S GUIDE](#) for a complete description of send status messages.