UNILINK UL-800/801 OPERATOR'S MANUAL (FANS Disabled) SCN 30.X

With Corporate Database

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RECORD OF REVISIONS

Rev No.	Issue Date	Insertion Date	Initials

Retain this record in front of the manual. Upon receipt of revision, insert and remove pages according to the *List of Effective Pages*. Then enter on this page the revision number, issue date, insertion date and your initials.

RECORD OF TEMPORARY CHANGES

Change No.	Issue Date/ Page	Insertion Date & Initials	Removal Date / Initials / Reason

LIST OF EFFECTIVE PAGES

Original……..XX October 2010

Page No.	Date	Page No.	Date
51	xx/xx11	86	xx/xx11
52	xx/xx11		
53	xx/xx11		
54	xx/xx11		
55	xx/xx11		
56	xx/xx11		
57	xx/xx11		
58	xx/xx11		
59	xx/xx11		
60	xx/xx11		
61	xx/xx11		
62	xx/xx11		
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76	xx/xx11		
77	xx/xx11		
78	xx/xx11		
79	xx/xx11		
80	xx/xx11		
81	xx/xx11		
82	xx/xx11		
83	xx/xx11		
84	xx/xx11		
85	xx/xx11		

TABLE OF CONTENTS

INTRODUCTION

UniLink is an air-to-ground digital data communication system that operates with Universal Avionics Systems Corporation's (UASC's) Fight Management Systems (FMSs). It is capable of using a variety of media such as Satellite Communications (SatCom) and Very High Frequency (VHF) communications to exchange data with Datalink Service Providers (DSPs). When communicating over the Aircraft Communications Addressing and Reporting System (ACARS) network, UniLink is the functional equivalent of an ARINC 758 Communications Management Unit (CMU). The UL-801 contains an imbedded VHF data radio (VDR) whereas the UL-800 requires an external VDR. The VDR provides ACARS and various other types of network communications capability for UniLink.

The UniLink UL-80X database-driven user interface and message set is easily customized to match airline operational requirements uploaded into the UL-80X without affecting product software or certification status.

NOTE: The current UniLink 80X uses Software Control Number (SCN) 30.X. It is important to ensure that operating documentation reflects the SCN being used.

NOTE: The colors shown on the screens in this operator's manual are based on an FMS with SCN 1000.5/1100.5 installed and configured for STANDARD-2 color pallet.

Components

A VHF receiver transmitter or ARINC 741 SatCom is required for full ACARS communications. An airborne telephone system is required to obtain weather graphics and is capable of providing limited ACARS communication with some service providers.

Capabilities

The two-way data link allows the crew to request and receive clearances, weather reports, and messages. Weather graphics are available on UASC's FMS using flat panel displays and air phone equipment. UniLink advisories alert the crew to newly received messages.

Operations

Crew interface is accomplished through the FMS CDU and/or MCDU, utilizing a UASC FMS with SCN 1000.5/1100.5 or later. Data may be entered at any field highlighted by a cursor. The cursor is displayed in the first empty data field. Fields with plus signs (+) indicate information is required. Fields exhibiting minus signs (-) indicate input is optional.
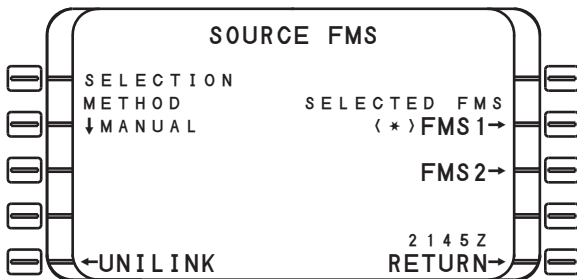
If there is no cursor displayed in a data field, selecting the ENTER key will place the cursor over the first enterable field on the page. Data is then entered into the field using the CDU/MCDU alphanumeric keys. In some situations, flight progress and related data from the FMS will be prefilled. Subsequent presses of the [ENTER] key will move the cursor to the next enterable field. Pressing a line select key (LSK) highlights the corresponding data entry field. Selecting [ENTER] when the cursor is in the last data field on the page results in the cursor parking off of the page. Pressing [ENTER] again positions the cursor on the initial enterable field on the page.

FMS Input

The FMS continuously provides current data to UniLink. Many messages and requests have fields that prefill with FMS flight progress data and computed information. In most cases the user accepts the data for inclusion into the message. It is possible however to change a value by overriding that value with a manual data entry. Manual entries are generally retained until power shutdown, although data that would normally change as a flight progresses will be cleared once the page has been exited (is no longer displayed).

Source FMS

The crew must ensure that the FMS that is navigating the aircraft (Source FMS) is the same FMS that supplies data to UniLink. The Source FMS is shown on the SOURCE FMS page, accessed via MAINTENANCE (1/3) > SENSOR STATUS > SOURCE FMS.

```
                    SOURCE FMS

   SELECTION
   METHOD            SELECTED FMS
   ↓MANUAL              (*)FMS 1→

                        FMS 2→


                        2145Z
   ←UNILINK             RETURN→
```

The Source FMS is indicated by an asterisk next to it. Any available FMS can be manually selected by pressing the adjacent LSK. If automatic (AUTO) selection is desired, the SELECTION METHOD LSK will toggle between MANUAL and AUTO.

NOTE: It is important for the crew to ensure that the Source FMS is not changed prior to an expected flight plan modification uplink. If the Source FMS is changed prior to the uplink, the flight plan information will need to be transferred to the new Source FMS from the previously designated FMS.

Communications

Prior to entering Oceanic Airspace (and loss of VHF communications) the crew should suspend VHF and transition to satellite communication (See STATE under VHF DATA in the COMM CONTROL section). The crew must enable VHF communications once again when reentering a VHF-available region.

Current Time

On every UniLink screen above the RETURN option at LSK [5R], the current UTC time is displayed.

SEND

When the SEND LSK is pressed, the request is placed into queue for transmission. The delivery status of the message appears above the SEND option. If data required for the message has not been entered completely, the SEND option will display as inactive and if selected, a pop-up window DATA REQUIRED will display (indicating the data is insufficient).The SEND prompt will not display an arrow (indicating active) until all required data is entered. Clear the pop-up window by pressing any key or LSK.

UNIVERSAL® AVIONICS
SYSTEMS CORPORATION
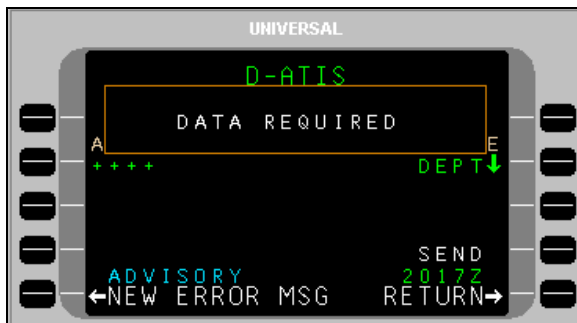
SEND status displays the current status of the message. When the SEND LSK is pressed, the status will briefly change to QUEUED, then SENDING. The selected media for transmission (VHF, SAT, or TEL) is indicated after SENDING. When acknowledgement is received from the DSP, SENT status will display.

UniLink Advisories

The bottom left LSK on each UniLink page will display either the UNILINK MENU prompt or UniLink advisories. UniLink advisories notify the crew of UniLink activity that may require user action. Only one advisory will display at a time in the order of priority. Pressing the adjacent LSK allows viewing of the advisory message.

When no advisory is displayed, the advisory field is used to display the UNILINK MENU prompt. Selecting this prompt displays the UNILINK MENU.

When on an FMS page, UniLink advisories will be indicated by the flashing MSG annunciator. Pressing the [MSG] key will allow viewing of UniLink advisories and messages via the NEW MESSAGE Advisory prompt (LSK [5L]). This will open the appropriate UniLink page.

Advisory Messages

NEW ERROR MSG – This advisory is active when an unviewed entry exists in the Error Log. Selection of this advisory displays the detailed error message page for most recently logged error message that has not been viewed.

ACKNOWLEDGE – Indicates that an uplink message that is displayed requires crew acknowledgment. Selection will send an acknowledgment message.

NEW MSG – Indicates a new unverified message in the Uplink Log. Selection of this advisory displays the detailed message page for the latest unread unverified message**.**

NEW VERIF MSG – Indicates a new verified message in the Uplink Log. Selection of this advisory displays the detailed message page for the latest unread verified message.

NEW WX MAP – Indicates a new unviewed weather graphic in the Graphic Log. Selection of this advisory displays the most recent graphic.

SELCAL – Indicates a SELCAL request has been received. Selection of this advisory displays the SELCAL page.

VHF VOICE (applies to UL-800 only) – Indicates the VDR is in Voice Mode. Selection of this advisory displays the VHF VOICE page.

TEL SUSPEND – Indicates the configured dial attempt limit has been reached and TEL LINK has been suspended (or TEL LINK has been manually suspended). Selection of this advisory displays the TEL DATA page.

GND DELAY – Indicates a configurable timer has elapsed since the last OUT event (push back) and the OFF event (take off) has not yet occurred. Selection of this advisory displays the EST TIME OFF page**.**

NOCOMM – Indicates multiple air/ground links are not available. Selection of this advisory displays the COMM STATUS page.

SAT NOCOMM – Indicates the configured SatCom air/ground link is not available. Selection of this advisory displays the COMM STATUS page.

TEL NOCOMM – Indicates the configured airborne telephony (SatCom) system link is not available. Selection of this advisory displays the COMM STATUS page.

VHF NOCOMM – Indicates UniLink has determined that a VHF air/ground link is not available. Selection of this advisory displays the COMM STATUS page.

Error Messages

Most error messages generate a NEW ERROR MSG advisory which is displayed in the ERROR LOG pages. Certain error messages which are considered more urgent are displayed in a pop-up window in the middle of the current UniLink page. Examples include: QUEUE FULL, DISPLAY PROCESSOR FAIL and A740: PRINTER FAIL.

Entry Error Pop-up Windows

UniLink provides feedback when an invalid entry is made. After an invalid entry, a pop-up window identifies the entry error.
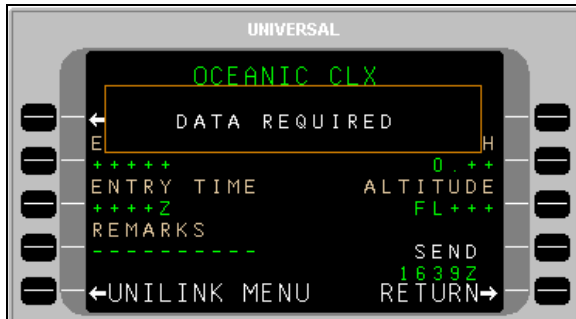
The following is a list of data entry errors and the condition that will initiate the error pop-up window.

Screen Text	Condition
VALUE TOO LARGE	The entered numeric value exceeds the allowable maximum.
VALUE TOO SMALL	The entered numeric value is less than the allowable minimum.
TOO MANY CHARACTERS	The entered number of characters exceeds the allowable maximum.
TOO FEW CHARACTERS	The entered number of characters is less than the allowable minimum.
VALUE MUST BE NUMERIC	The prompt only accepts digits.
VALUE MUST BE ALPHABETIC	The prompt only accepts letters.
TOO MUCH PRECISION	The entered numeric value has too many numbers to the right of the decimal point.

Screen Text	Condition
NEGATIVE NOT PERMITTED	The prompt only accepts positive numbers.
MISSING N OR S	The entered latitude does not specify a hemisphere.
MISSING E OR W	The entered longitude does not specify a hemisphere.
INVALID NUMBER	The entered characters could not be interpreted as a number.
INVALID ENTRY	The entered characters do not conform to specific textual data item input restrictions.
ILLEGAL HYPHEN	The entered tail number begins or ends with a hyphen.
ILLEGAL VHF FREQUENCY	The entered frequency is not a valid VHF voice or data frequency, or is the CSC frequency (136.975).
ILLEGAL DATA FREQUENCY	The Emergency Voice frequency (121.500) has been entered at a prompt that expects to receive a data frequency.
PRESSURE OUT OF RANGE	The entered atmospheric pressure is out of range.
INVALID SECONDS VALUE	The entered seconds value within a time field is invalid.
INVALID MINUTES VALUE	The entered minutes value within a time field is invalid.
INVALID HOURS VALUE	The entered hours value within a time field is invalid.
INVALID DAY	The entered day value within a date field is invalid.
INVALID MONTH	The entered month value within a date field is invalid.
INVALID YEAR	The entered year value within a date field is invalid.
INVALID LEAP YEAR	The entered date value includes Feb 29th in a year that is not a leap year.

Screen Text	Condition
INVALID SECONDS	The entered seconds value within a latitude or longitude field is invalid.
INVALID MINUTES	The entered minutes value within a latitude or longitude field is invalid.
DATA REQUIRED	An attempt has been made to navigate to a new page or send a request without supplying required information.

Alerting

Message Alerting

Message alerting functions include visual and aural alerts, and digital outputs to various Line-Replaceable Units (LRU). The outputs are intended to drive visual or aural alerting when a new uplink message is received. The digital outputs provide messaging alerts that may be used by other devices for additional alerting functions, such as the FMS MSG annunciator.

Alert Inhibiting

UniLink Alert Inhibiting operates in order to suspend the output of message alerting during critical phases of flight (i.e., takeoff and landing). Displayed UniLink advisories are not suppressed during critical flight phases.

NOTE: If UniLink transitions out of the takeoff phase due to transitioning directly into the landing phase, UniLink will continuously inhibit alert outputs. This ensures there are no aural alerts that could potentially distract the crew.

User Interface Menu Tree

The UniLink Main Menu page is accessed from the UNILINK prompt on either DATA 1/4 or the MESSAGE page (from a reboot or initial startup). To navigate down through the menu tree, select the applicable page option LSKs to move to the desired function. Use the RETURN LSK to move back up the menu tree.

Pages shown in the menu trees may or may not be available depending on specific installation configuration. Check with installer for specific configuration details.
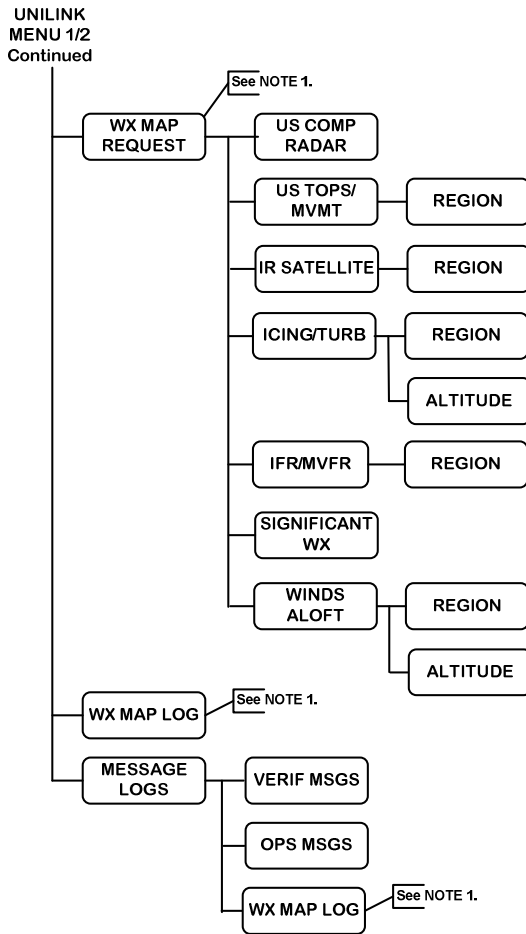
UniLink Menu 1/2

(Continued on next page)
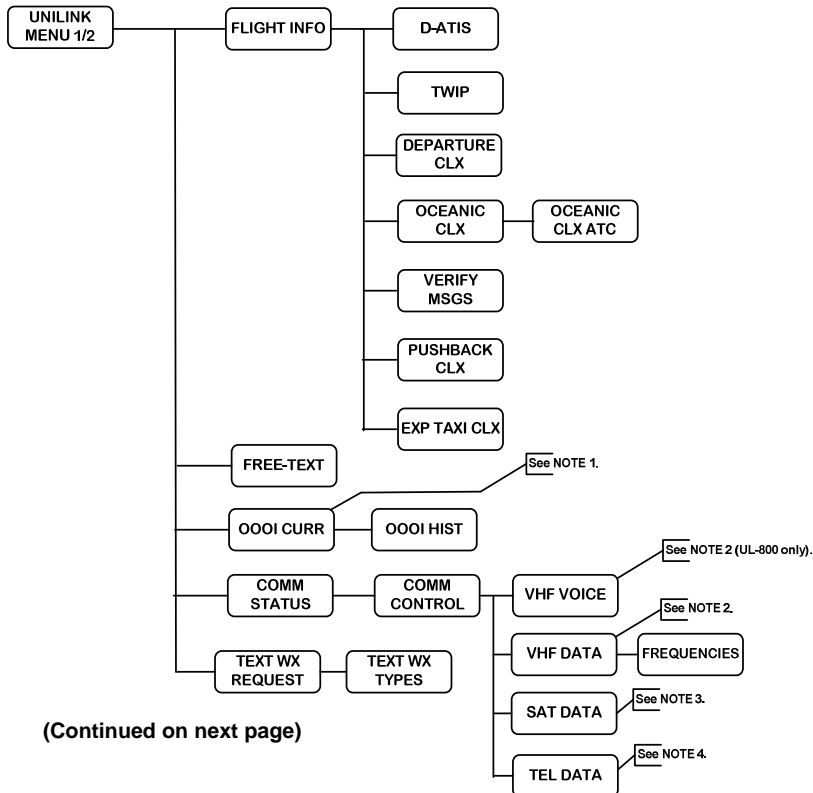
NOTES:
1. Only available if OOOI is enabled in configuration.
2. Only available if VHF is enabled in configuration.
3. Only available if DATA is enabled in configuration.
4. Only available if TEL is enabled in configuration.

UniLink Menu 1/2 (continued)

UNILINK
MENU 1/2
Continued

```
                    See NOTE 1.
WX MAP          US COMP
REQUEST         RADAR

                US TOPS/
                MVMT          REGION

                IR SATELLITE  REGION

                ICING/TURB    REGION

                              ALTITUDE

                IFR/MVFR      REGION

                SIGNIFICANT
                WX

                WINDS
                ALOFT         REGION

                              ALTITUDE

                    See NOTE 1.
WX MAP LOG

MESSAGE         VERIF MSGS
LOGS

                OPS MSGS

                                  See NOTE 1.
                WX MAP LOG
```

(Continued on next page)

NOTES:
1. Only available if TEL is enabled in configuration.

UniLink Menu 2/2

NOTE: The SELCAL option only displays when associated messages are available and pending.
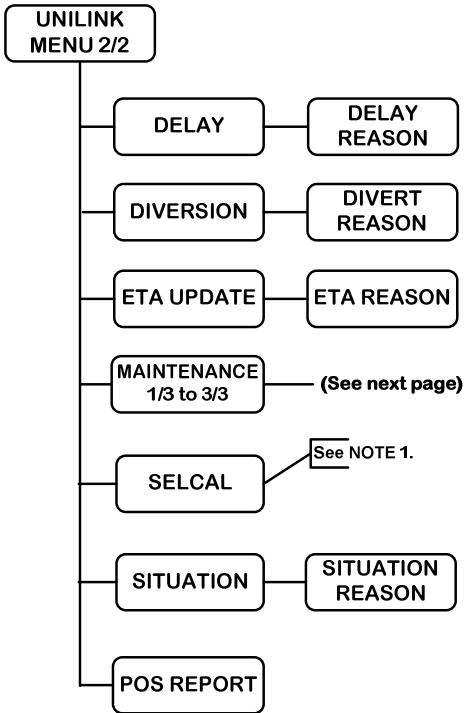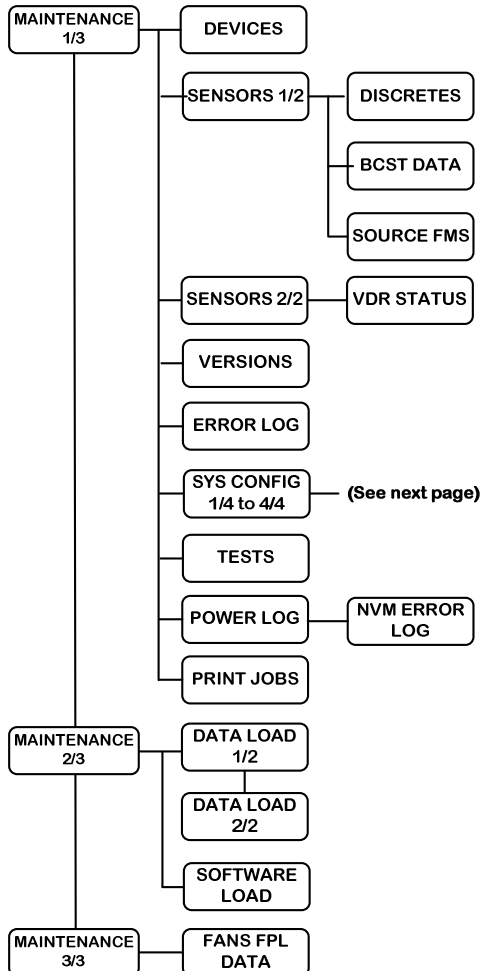

NOTES:
1. Check with DSP for availability of this feature.
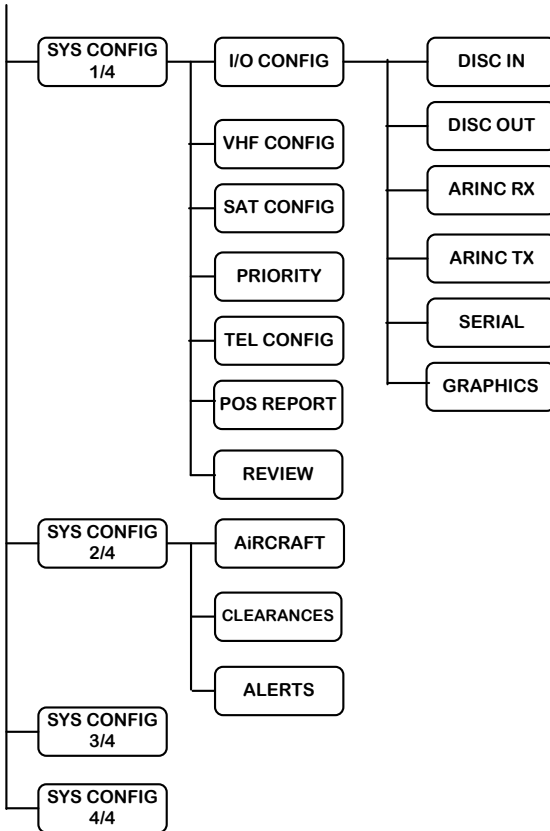
Maintenance Menu

Maintenance pages are used to access UniLink maintenance-related functions. They are accessed by pressing the MAINTENANCE LSK on the UNILINK MENU page 2/2. Other than TESTS, there are no user-related functions that are performed on this page or subpages. See the associated UniLink Installation Manual for installation and maintenance procedures.

```
MAINTENANCE ──── DEVICES
    1/3
              ──── SENSORS 1/2 ──── DISCRETES
              
                              ──── BCST DATA
                              
                              ──── SOURCE FMS
              
              ──── SENSORS 2/2 ──── VDR STATUS
              
              ──── VERSIONS
              
              ──── ERROR LOG
              
              ──── SYS CONFIG      (See next page)
                   1/4 to 4/4
              
              ──── TESTS
              
              ──── POWER LOG ──── NVM ERROR
                                      LOG
              
              ──── PRINT JOBS

MAINTENANCE ──── DATA LOAD
    2/3            1/2
              
              ──── DATA LOAD
                     2/2
              
              ──── SOFTWARE
                     LOAD

MAINTENANCE ──── FANS FPL
    3/3            DATA
```

Configuration Menu

Configuration pages are used to access UniLink configuration-related functions. They are accessed by selecting the CONFIG LSK on the MAINTENANCE 1/3 page. There are no user-related functions that are performed on this page or subpages. See the associated UniLink Installation Manual for installation and configuration procedures.
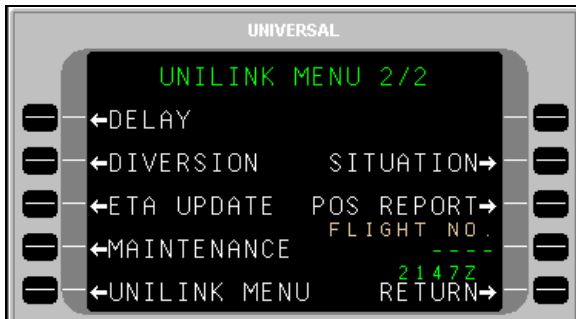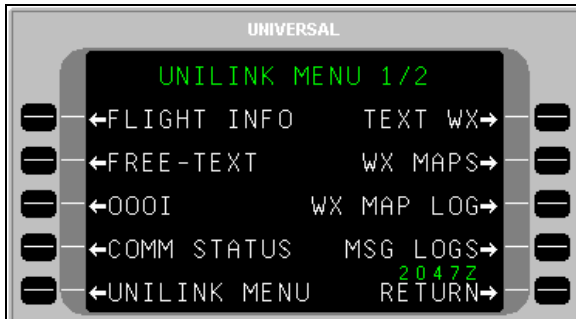
**MAINTENCE 1/3
(continued from
previous page)**

```
SYS CONFIG 1/4 ── I/O CONFIG ── DISC IN
                                 DISC OUT
                  VHF CONFIG     ARINC RX
                  SAT CONFIG     ARINC TX
                  PRIORITY       SERIAL
                  TEL CONFIG     GRAPHICS
                  POS REPORT
                  REVIEW
SYS CONFIG 2/4 ── AiRCRAFT
                  CLEARANCES
                  ALERTS
SYS CONFIG 3/4
SYS CONFIG 4/4
```

UNILINK MENU

Menu Navigation: DATA (1/4) or MESSAGE 1/1 >UNILINK MENU 1/2

The UniLink Menu pages are accessed by selecting UNILINK from either DATA 1/4 page or the MESSAGE 1/X page. The DATA 1/4 page is accessed by pressing the [DATA] key. The MESSAGE 1/X page is accessed by pressing the [MSG] key.

```
                    UNIVERSAL

              UNILINK MENU 1/2

    ←FLIGHT INFO      TEXT WX→
    ←FREE-TEXT        WX MAPS→
    ←OOOI          WX MAP LOG→
    ←COMM STATUS    MSG LOGS→
                        2047Z
    ←UNILINK MENU     RETURN→
```

```
                    UNIVERSAL

              UNILINK MENU 2/2

    ←DELAY
    ←DIVERSION      SITUATION→
    ←ETA UPDATE    POS REPORT→
                   FLIGHT NO.
    ←MAINTENANCE        ----
                        2147Z
    ←UNILINK MENU     RETURN→
```

NOTE: Based on installation and configuration, the FLIGHT NO. field may or may not be displayed.

Flight Information

Menu Navigation: UNILINK MENU 1/2 > FLIGHT INFO

On the UNILINK MENU 1/2 Page, press FLIGHT INFO, LSK [1L], to access the FLIGHT INFO page. All services provided on this menu are available only over the ACARS VHF or SatCom packet data network.

NOTE: Flight Information Services are advisory only. It is the responsibility of the pilot to exercise reasonable and prudent judgment in the use of these advisory services.
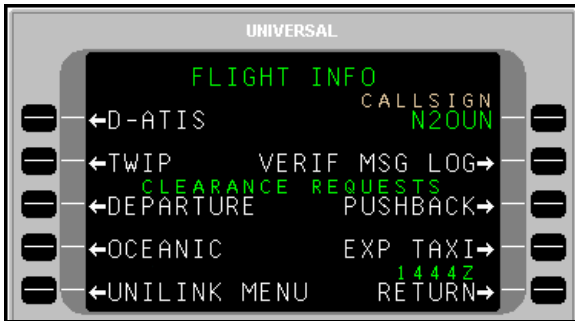
NOTE: DEPARTURE, OCEANIC, PUSHBACK, and EXP TAXI requests are configurable options and are not displayed if configured as disabled.

The aircraft tail number is automatically inserted in the CALL SIGN field. If the aircraft has a different ATS call sign assigned for the flight, it should be manually entered.

To manually enter a callsign:

1.   Press LSK [1R]. The CALLSIGN field will become active.

2.   Enter the desired callsign using the alphanumeric keys.

3.   Press [ENTER]. The new callsign will display in the field.

ATIS Request

Menu navigation: UNILINK MENU 1/2 > FLIGHT INFO > D-ATIS

The D-ATIS page is used to request local arrival or departure Automatic Terminal Information Service (ATIS).
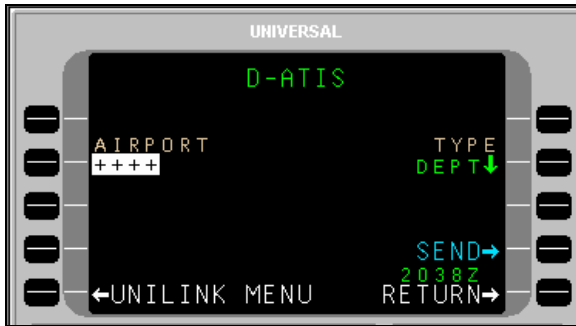
To request ATIS:

1. Press D-ATIS, LSK [1L] on the FLIGHT INFO page. The D-ATIS page will display.

2. With AIRPORT active, enter the Airport Identifier and press [ENTER], or accept the default destination airport from the FMS flight plan.

NOTE: If an incomplete identifier is entered, the message TOO FEW CHARACTERS will display and the field will flash. Pressing the LSK and re-entering a complete identifier will correct the error.

3. DEPT is the default type of ATIS. Press TYPE, LSK [2R] to toggle the field between ARRV and DEPT as needed.

4. Press SEND, LSK [4R] to place the message in queue for transmission.

NOTE: If the information on this page is incomplete, the pop-up window DATA REQUIRED will display and the SEND prompt will not enable.

TWIP Request

Menu navigation: UNILINK MENU 1/2 > FLIGHT INFO > TWIP

The TWIP page is used to request Terminal Weather Information for Pilots (TWIP).

To make a TWIP request:

1.   Press TWIP, LSK [2L] on the FLIGHT INFO page. The TWIP page will display.

2.   With AIRPORT active, enter a destination airport and press [ENTER] or accept the Destination Airport from the FMS flight plan.

NOTE: If an incomplete identifier is entered, the message TOO FEW CHARACTERS will display and the field will flash. Pressing the LSK and re-entering a complete identifier will correct the error.

3.   Press the SEND LSK to place this message in queue for transmission. The SEND prompt will not be enabled if the information on this page is incomplete.

NOTE: If the information on this page is incomplete, the pop-up window DATA REQUIRED will display and the SEND prompt will not enable.

## Departure Clearance Request

Menu navigation: UNILINK MENU 1/2 > FLIGHT INFO > DEPARTURE

The DEPARTURE CLX page is used to request departure clearance.
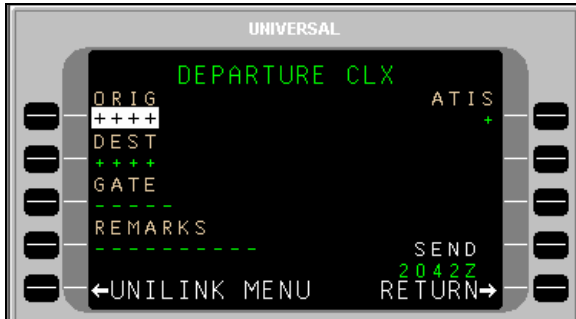
To request a Departure Clearance:

1. Press DEPARTURE, LSK [3L] on the FLIGHT INFO page. The DEPARTURE CLX page will display.

2. Verify or change the ORIG (origination) airport. This field defaults to the departure airport identifier from the FMS.

3. Verify or change the DEST (destination) airport. This field defaults to the destination airport from the FMS.

4. Enter GATE number (optional).

5. Press the REMARKS LSK to enter any remarks as needed (see the REMARKS Section in this manual).

6. Enter the latest ATIS version (alpha character).

7. Press SEND, LSK [4R] to place this message in queue for transmission.

NOTE: The SEND prompt will not be enabled if the required information on this page is incomplete, the call sign from the Flight Information Services page is not entered, or the aircraft type has not been configured from Aircraft Configuration page. Any attempt to send this request with incomplete information will result in the pop-up window DATA REQURED displaying.

Oceanic Clearance Request

Menu navigation: UNILINK MENU 1/2 > FLIGHT INFO > OCEANIC

The OCEANIC CLX page is used to request Oceanic Clearance.
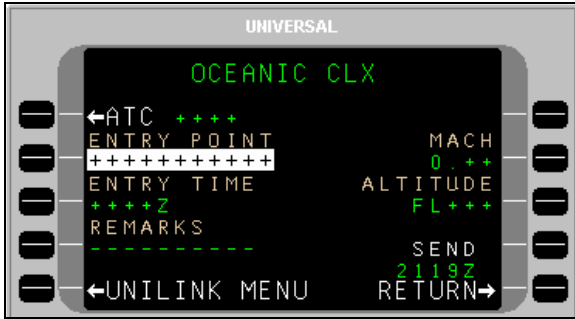
To request an Oceanic Clearance:

1. Press OCEANIC, LSK [4L] on the FLIGHT INFO page. The OCEANIX CLX page will display.

2. Press ATC, LSK [1L] to open the OCEANIX CLX ATC page.

3. Select the ATC Station using the adjacent LSK, or enter a station ID in the OTHER field, LSK [R4]. The OCEANIX CLX page will display, showing the selected ATC station.

4. If not active, press ENTRY POINT, LSK [3L] and enter the point of entry into oceanic airspace, then press [ENTER}.

NOTE: The Entry can have from 3 to 11 characters to specify the position by latitude/longitude, or by waypoint identifier.

5. If not active, press ENTRY TIME, LSK [3L] and enter the requested time for the clearance. Press [ENTER].

6. If not active, press MACH, LSK [2R] and enter the requested Mach number. Press [ENTER].

7. If not active, press ALTITUDE, LSK [3R] and enter the requested flight level. Press [ENTER].

8. Press REMARKS, LSK [4L] and enter any remarks as needed. OCEANIC Clearance remarks are entered using the OCEANIC CLX REMARKS page (see the REMARKS Page section in this manual).

9. Press SEND, LSK [4R] to place the message in queue for transmission.

NOTE: If the information on this page is incomplete, a pop-up window DATA REQUIRED will display and the SEND prompt will not enable

Verify Message Log

Menu navigation: UNILINK MENU (1/2) > FLIGHT INFO > VERIF MSG LOG

The VERIF MSGS page displays all verified uplink and downlink messages and can be used to check the queue status of sent messages. See VERIF MSG LOG in the Message Logs section of this manual.

Pushback Clearance Request

Menu navigation: UNILINK MENU 1/2 > FLIGHT INFO > PUSHBACK

The PUSHBACK CLX page is used to request pushback clearance.
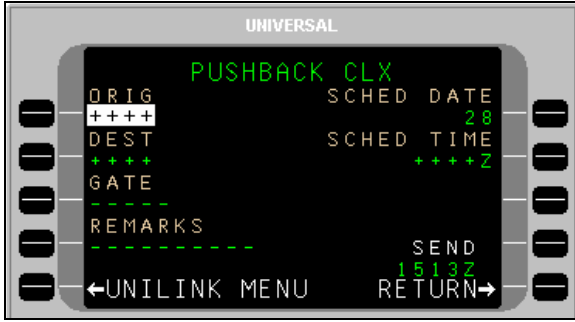
To request Pushback Clearance:

1. Press PUSHBACK, LSK [3R] on the FLIGHT INFO page. The PUSHBACK CLX page will display.

2. Verify the ORIG (Origination) airport. Change by pressing ORIG, LSK [1L] (if not active) and entering a different airport. Press [ENTER].

3. If not active, press DEST (Destination), LSK [2L] to enter the destination airport. Press [ENTER].

4. If not active, press GATE, LSK [3L] to enter gate Information (optional). Press [ENTER].

5. If not active, press SCHED DATE, LSK [1R] to enter the scheduled date (day). Press [ENTER].

NOTE: Default date is per GMT.

6. If not active, press SCHED TIME, LSK [2R] to enter the scheduled time. Press [ENTER].

7. Press REMARKS, LSK [4L] to enter any remarks as needed (optional). Pushback remarks are entered using the PUSHBACK CLX REMARKS page (See the Remarks Page section in this manual).

8. Press SEND, LSK [4R] to place this message in queue for transmission.

Expected Taxi Clearance Request

Menu navigation: UNILINK MENU (1/2) > FLIGHT INFO > EXP TAXI

The EXP TAXI CLX is used to request an Expected Taxi Clearance.
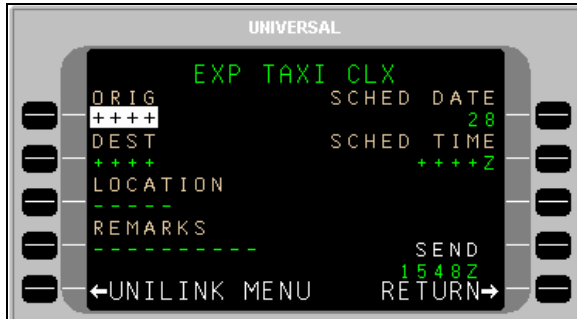
To request an Expected Taxi Clearance:

1. Press EXP TAXI, LSK [4R] on the FLIGHT INFO page. The EXP TAXI CLX page will display.

2. Verify the ORIG (Origination) airport. Change by pressing ORIG, LSK [1L] and entering a different airport. Press [ENTER].

3. If not active, press DEST (Destination), LSK [2L] to enter the destination airport. Press [ENTER].

4. If not active, press GATE, LSK [3L] to enter gate Information (optional). Press [ENTER].

5. If not active, press SCHED DATE, LSK [1R] to enter the scheduled date (day). Press [ENTER].

NOTE: Default date is per GMT.

6. If not active, press SCHED TIME, LSK [2R] to enter the scheduled time. Press [ENTER].

7. Press REMARKS, LSK [4L] to enter any remarks as needed (optional). Taxi Clearance remarks are entered using the EXP TAXI CLX REMARKS page (See the Remarks Page section in this manual).

8. Press SEND, LSK [4R] to place this message in queue for transmission.

Remarks – Create and Include with Requests

Menu navigation: UNILINK MENU 1/2 > FLIGHT INFO > DEPARTURE or OCEANIC or PUSHBACK or EXP TAXI

The Remarks page is available with the following Flight Information (FLIGHT INFO) services pages:

- DEPARTURE
- OCEANIC
- PUSHBACK
- EXP TAXI

To access the REMARKS Page;

1. On a Flight Information service page (in this example, OCEANIC CLX), press the REMARKS LSK.
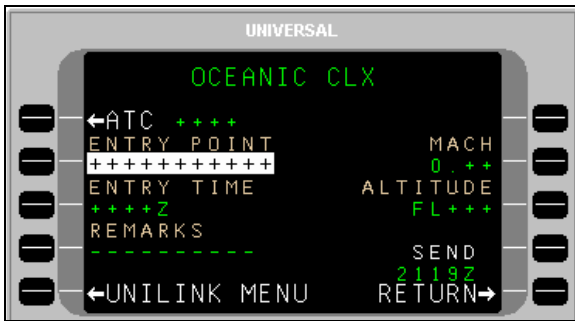
The associated Remarks page will open with the cursor (@) flashing on the text line.
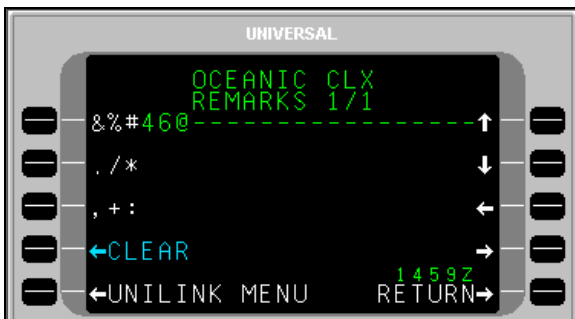
NOTE: In this example, OCEANIC CLX is used. All REMARKS pages are operated in the same manner.

2. Create a message using the alphanumeric keys and LSKs.

- The [+] key inserts spaces in the text.

- LSKs [1L] through [3L] provide special characters as indicated on the display. Pressing the specific LSK multiple times cycles through the displayed choices. To enter a special character several times in a row, select another key between special character LSK presses (example: to enter several periods in a row, press LSK [2L], then the right-arrow key (which does nothing), then [2R], then the right-arrow key, etc.).

- The arrow LSKs ([1R] through [4R]) move the cursor position within text already entered. Text entered at the cursor position in front of other text is inserted and word wrapping will occur as necessary.

- To start a new line of text, press [ENTER]; the cursor will start a new line of text.

- The CLEAR LSK erases all entered text on the page.

- The text automatically word wraps to the next line.

- The number of pages in the message will increase as necessary to accommodate entered text.

3. When finished editing the text portion of the message, press RETURN, LSK [5R]. The entered text will display in the REMARKS field for review.

NOTE: The REMARKS field displays the first 7 characters of entered text. A following ellipsis (…) indicates there is more text in the message. The REMARKS page allows review of the entire remarks text.

4. Press the SEND LSK to place the message in queue for transmission.

FREE-TEXT – Create and Send a Message
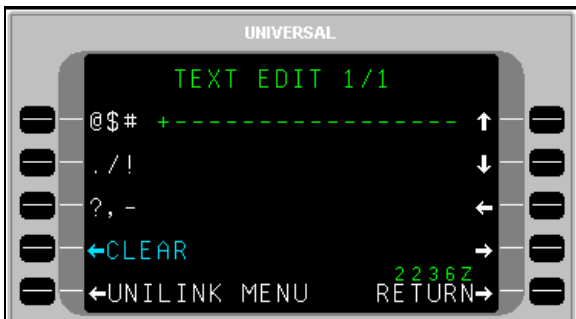
Menu navigation: UNILINK MENU 1/2 > FREE TEXT

The FREE-TEXT option is available at LSK [2L] on the UNILINK MENU 1/2 page. The FREE TEXT page allows the user to create and edit text messages.

```
              UNIVERSAL

           FREE-TEXT 1/1

   TO:████████████████████
   NO:--------------------
      --------------------


  ←CLEAR                SEND→
                        1833Z
  ←UNILINK MENU       RETURN→
```
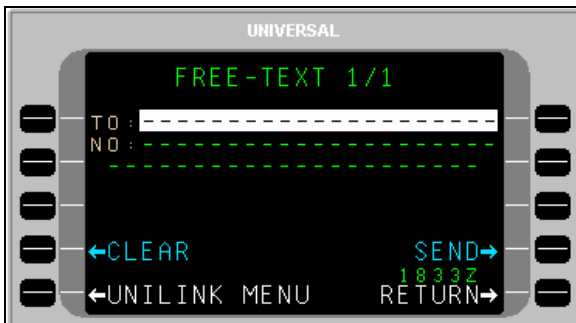
Create and Send a Message

1. Press FREE-TEXT, LSK [2L] on the UNILINK MENU 1/2 page.

2. With the TO field active, enter the destination identifier. Press [ENTER].

3. Enter the destination/recipient telephone number (if known) in the NO: field and press [ENTER]. Pressing [ENTER] moves the cursor to the first text line of the TEXT EDIT page.

NOTE: Pressing LSK [2L] will also bring up the TEXT EDIT page.

```
              UNIVERSAL

           TEXT EDIT 1/1

   @$#  +----------------   ↑

   ./!                      ↓

   ?,-                      ←

  ←CLEAR                    →
                        2236Z
  ←UNILINK MENU       RETURN→
```

4. Create a message using the alphanumeric text option keys.

- The [±] key is used to insert a space.

- The text automatically word wraps to the next line.

- The number of pages in the message will increase as necessary to accommodate entered text.

- The left LSKs are used to insert special characters as indicated on the display. Selecting the same special character key multiple times will cause the selected character to cycle between the three displayed choices.

- The right line select keys are used to move the cursor (+) position within the text that has been entered.

- Any text entered at the cursor position in front of other text will be inserted and word wrapping will automatically occur as necessary.

- To start a new line of text, press [ENTER] and the cursor (+) will start a new line of text.

5. When finished editing the text portion of the message, press RETURN, LSK [5R]. The entered text is displayed on the FREE TEXT page for review with additional pages added as necessary.

6. Press SEND to place the message in queue for transmission. QUEUED will display above the SEND option to indicate the message is in queue.

Send a Message to another Aircraft

1. On the Free Text page, enter the destination registry in the TO field and press [ENTER].

2. Enter the letter "A" in the first position of the NO field followed by the registry of the destination aircraft and press [ENTER].

3. Enter the message text in the free text area. When finished editing the text portion of the message, press RETURN, LSK [5R]. The entered text is displayed on the FREE TEXT page for review with additional pages added as necessary.

4. Press SEND, LSK [4R] to place the message in queue for transmission.

Send an E-Mail

NOTE: Arrangement with DSP must be made for e-mail capability to be available. Specific detailed instructions for email operation may differ from the following procedure, depending on the service provider.

1. With the TO line active, press [ENTER] to make the NO field active.

2. Enter "E" in the first position of the NO field and press [ENTER].

3. In the free text area, enter the destination e-mail address. Use DA for a dash (-), DOT for dot (.) and AT for at symbol (@). Delimit the address with ST (Example: SCOTT AT AOL DOT COM ST). Use spaces as indicated in the example and press [ENTER].

NOTE: The message will not send if symbols are used in place of text (i.e., DA, DOT, AT).

NOTE: Spaces are placed in text using the plus/minus ([+]) key.

4. Enter the message text beginning on the next line after ST.

NOTE: If previously entered text is still in the Free-Text area, press CLEAR, LSK [4L] before entering new text.

5. When finished editing the text portion of the message, press RETURN, LSK [5R]. The entered text is displayed on the FREE TEXT page for review with additional pages added as necessary.

6. Press SEND, LSK [4R] to place the message in queue for transmission. A confirmation message will display if the e-mail is sent successfully.

Send a Fax

1. On the FREE TEXT page, enter the fax recipient in the TO field and press [ENTER].

2. In the NO field, enter the letter "F" followed by the destination fax number with no spaces. Include: country code, area code, fax number (Example: F17139434610) and press [ENTER].

3. Enter the message text in the free text area. When finished editing the text portion of the message, press RETURN, LSK [5R]. The entered text is displayed on the FREE TEXT page for review with additional pages added as necessary.

4. Press SEND, LSK [4R] to place the message in queue for transmission.

Send a Page to a Skytel Pager (Skytel Customers Only)

1. Enter "P" followed by the Skytel Pager PIN number, (no spaces) in the NO field and press [ENTER].

2. Enter the message text in the free text area. When finished editing the text portion of the message, press RETURN, LSK [5R]. The entered text is displayed on the FREE TEXT page for review with additional pages added as necessary.

3. Press SEND, LSK [4R] to place the message in queue for transmission.

OOOI

OOOI pages record data about the current flight and flight history. The OOOI option is available (if configured) at LSK [3L] on the UNILINK MENU 1/2 page.

OOOI Operation

OOOI (Out, Off, On, In) reports allow a dispatch or schedule office to track a flight as well as provide accurate flight times and block times. Based on installation, UniLink may use inputs from one or more doors, the parking brake, and weight-on-wheels (WOW) status input. OOOI reports may also use digital inputs from devices such as the FMS or configured Input/Output Processors (IOP).

UniLink monitors the state of each discrete and the WOW condition at power-up, but does not issue any reports unless a change in state is detected. The OUT requirement is met when all doors are closed and then the parking brake is released. The ideal sequence is:

1) UniLink powered up with brake set and doors open

2) Doors closed

3) Brake released

4) OUT report generated

Once the OUT report has been generated, if the door happens to be opened prior to takeoff, an OUT/RETURN IN report will be generated.

Once an OUT report is generated (and the door remains closed) a change in the WOW status from on-ground to in-air will result in an OFF report.

If UniLink is powered up or reset in flight, it will monitor the WOW state, determine that the aircraft is airborne and ignore all changes in status of doors and brakes. A change to the WOW status from in-air to on-ground will result in the ON report.

For an IN report to be generated, UniLink must:

- detect an OUT transition
- detect an OFF transition
- detect an ON transition

• and then detect that the door is opened

The IN time that is recorded for the IN event is the last time the brake was set prior to the door opening, or the time that the door opens if the brake was not set. The time for all other OOOI events is the time that the UniLink detected the last state change required for the transition to occur.

Ground Delay (Optional)

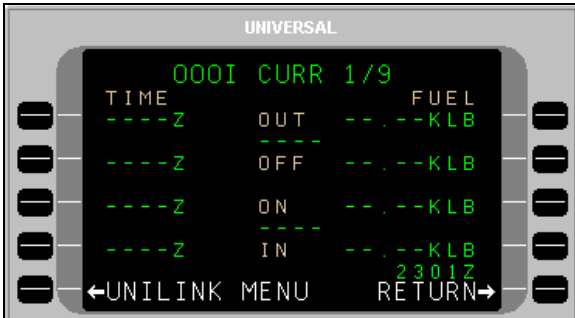To determine OOOI status, navigate to the SENSORS 1/2 page.

A GROUND DELAY ADVISORY occurs when the configured time on the Ground Delay Timer expires after doors closed /brakes released (OUT event) but before Weight-Off-Wheels/Takeoff (OFF event).

The GROUND DELAY ADVISORY annunciation will display at LSK [5L].

```
                    UNIVERSAL

               SENSORS 1/2
    OOOI STATE   IN
    DOORS        OPEN
    BRAKE        SET
    AIR/GROUND   ON GROUND

    ←DISCRETES    SOURCE FMS→

    ←BCST DATA
                       1943Z
    ←UNILINK MENU    RETURN→
```
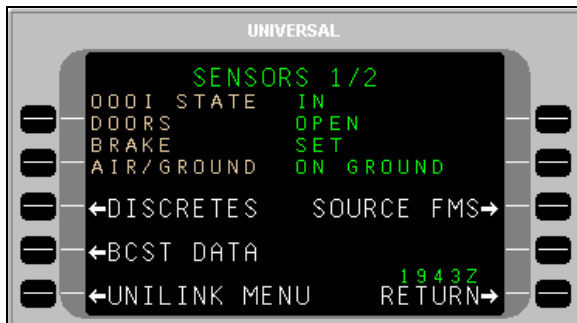
Pressing LSK [5L] will display the DELAY page. The crew can send a ground delay report by following the procedure listed in the DELAY section of this manual.

OOOI Current

```
                    UNIVERSAL

             OOOI CURR 1/9
        TIME                FUEL
        ----Z     OUT    --.--KLB
          ----
        ----Z     OFF    --.--KLB

        ----Z     ON     --.--KLB
          ----
        ----Z     IN     --.--KLB
                             2301Z
        ←UNILINK MENU      RETURN→
```

NOTE: The FUEL fields display the Fuel Onboard quantity from the FMS when an event is triggered. The FMS will auto-populate time and fuel information at each event. The crew must ensure that the FMS fuel information is initialized.

Depending on the installation and configuration, each field may or may not show the recorded times; a message is sent automatically when any of these four events take place.

OUT - Door Closed and Parking Brake Released. Includes OUT time, Fuel Onboard, Departure Airport, and Destination Airport,

OFF - Weight Off Wheels. Includes OFF time, Departure Airport, and Destination Airport.

ON - WOW. Includes ON time, Departure Airport, and Destination Airport.

IN - Parking Brake Set and Door Open. Includes IN time, Fuel On Board, Departure Airport, and Destination Airport.

OOOI History

The OOOI event history is captured at the start of the flight. The most recently stored event is displayed on OOOI HIST 2/9 page. The next most recent is displayed on OOOI HIST 3/9. A maximum of nine OOOI HIST pages are available. OOOI HIST is accessed from the OOOI page by pressing the [PREV] or [NEXT] keys. OOOI data is retained during a power cycle.
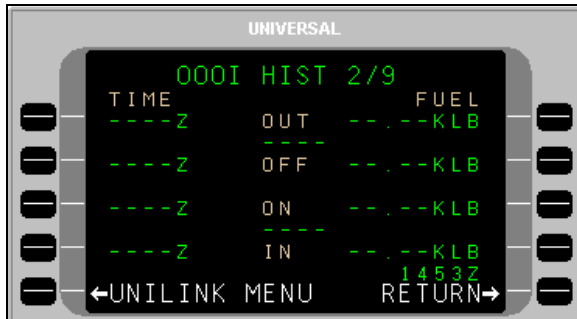
COMM STATUS

Menu Navigation: UNILINK MENU 1/2 > COMM STATUS

The COMM STATUS page displays the current configured status of available communication media links.

MODE

The MODE field indicates the manner in which ACARS will be used.

- MODE A = POA (Plain Old ACARS)
- MODE B = AOA (AVLC Over ACARS)
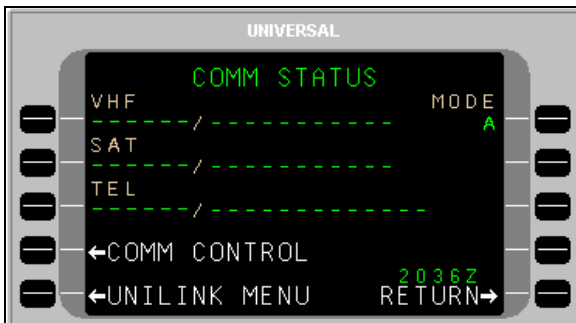
Based on the aircraft installation and configuration, all three media statuses may or may not display. If not configured, the media title will not display and the position on the page will be empty. The possible statuses include:

VHF Media Status	Reason
COMM / IDLE	Communications have been established with the ground and datalink messages can be transmitted over VHF. No data is currently being transmitted.
COMM / SENDING	A message is currently in the process of being transmitted over VHF and UniLink is waiting for acknowledgement from the ground.
NOCOMM / NO FREQ	UniLink has not selected a frequency for tuning due to invalid FMS lat/long or no radio type.
NOCOMM / SCANNING	UniLink is automatically selecting a frequency for tuning in current region with enabled DSP.

VHF Media Status	Reason
NOCOMM / CONNECTING	UniLink has sent communication to the ground and is awaiting a reply.
NOCOMM / NO DSP	All DSPs have been manually selected OFF.
NOCOMM / VOICE	The VDR is in VOICE mode. **NOTE**: Does not apply to UL-801 with internal VDR.
NOCOMM/VDR INOP	VDR inoperative.
NOCOMM/VDR FAULT	VDR is reporting a fault.
NOCOMM/MONITORING	UniLink has not detected a viable VDL mode 2 ground station.
NOCOMM VDR/UNAVAIL	UniLink has not set the VDR's protocol state.
NOCOMM/SUSPEND	VHR communications have been suspended by the crew.

SatCom Media Status	Reason
COMM / IDLE	SatCom (SAT) communication has been established and datalink messages can be transmitted over SatCom. No data is currently being transmitted.
COMM / SENDING	A message is currently in the process of being transmitted. UniLink is waiting acknowledgement from the ground.
NOCOMM /SDU UNAVAIL **NOTE**: SDU is the Satellite Data Unit	The SatCom's system SDU is reporting that it is unavailable..
NOCOMM / SDU INOP	UniLink does not detect the SDU.
NOCOMM / AUTO DELAY	UniLink is waiting before trying to establish a SatCom (SAT) link again.
NOCOMM / TIMEOUT	Retries have been exhausted, and Auto Return to Comm configuration setting is disabled. A manual Link Test must be performed, or an uplink received for the medium to return to COMM.
NOCOMM / CONNECTING	A SatCom (SAT) link is in the process of being established.
NOCOMM/SUSPENDED	SatCom (SAT) link has been suspended by the crew.

TEL Media Status	Reason
COMM / MDM TIMEOUT	UniLink has dialed the phone but a timeout occurred prior to a connection being established. **NOTE:** Sequential, excessive timeouts will result in the NOCOMM/ AUTO DELAY display to eventually activate.
COMM / DIALING	UniLink has provided the phone with the dial string command and is waiting for the phone to answer.
COMM / CONNECTING	The ground has answered the phone and UniLink is communicating with the DSP
COMM / IDLE	The phone is hung up and no attempt is currently being made to use it and SatCom (TEL) is not suspended or waiting to retry.
COMM / CONNECTED	The phone line is connected and messages can or are currently being transferred.
COMM / PLEASE WAIT	TEL SUSPEND has been manually activated. UniLink is in the process of shutting down the connection.
NOCOMM / SUSPENDED	SatCom (TEL) has been suspended, either by the crew or automatically due to excessive failed attempts.
NOCOMM / AUTO DELAY	UniLink is waiting for the configurable AUTO-DELAY timer to expire before trying again.
NOCOMM / CONFIG FAIL	While CONNECTING with the ground server, a message is received saying the configuration sent by UniLink is invalid. The SatCom (TEL) system is permanently shut down. Cycling UniLink power is required to exit this state.

TEL Media Status	Reason
NOCOMM / INIT FAIL	The telephone system is not available for operation. One or both of the following configuration items are invalid: Aircraft Registration Number or Phone Access Number.
NOCOMM / DIALING	UniLink exited out of the 5-minute delay and is in the process of making another connection attempt.
NOCOMM / PLEASE WAIT	TEL SUSPEND has been manually activated while a connection is in progress. UniLink is in the process of shutting down the connection.
NOCOMM / MDM TIMEOUT	UniLink exited out of the 5-minute delay and while in the process of making another connection attempt the UniLink modem has timed out.

COMM CONTROL

Menu Navigation: UNILINK MENU 1/2 > COMM STATUS > COMM CONTROL

The COMM CONTROL page provides access to media control pages and options. Access the COMM CONTROL page by selecting COMM STATUS, LSK [3L] from the UNILINK MENU 1/2 page. Then select COMM CONTROL, LSK [4L] from the COMM STATUS page to display the COMM CONTROL page. The COMM CONTROL page gives access to VHF VOICE (UL-800 only), VHF DATA, SAT DATA, and TEL DATA options (as configured and installed)
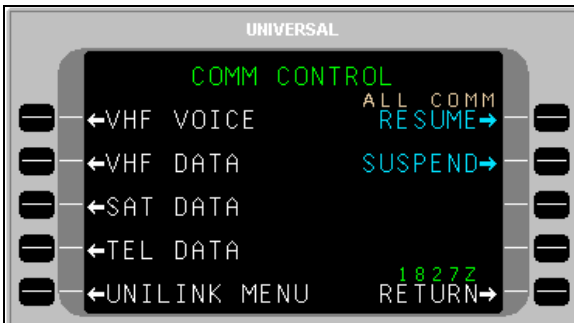
UL-800 with External VDR
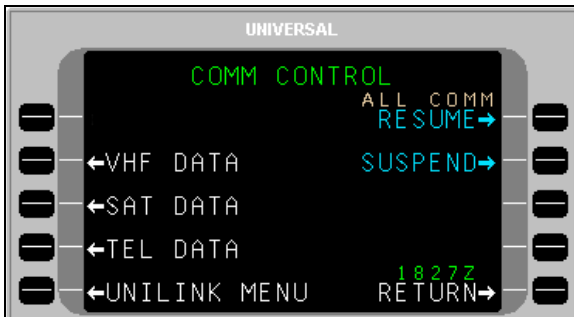
UL-801 with Internal VDR

VHF Voice (UL-800 only)

Menu Navigation: UNILINK MENU 1/2 > COMM STATUS > COMM CONTROL > VHF VOICE

The VHF VOICE option is available if the VHF radio supports voice communications (does not apply to UL-801 with internal VDR).

Pressing VHF VOICE, LSK [1L] from the COMM CONTROL page displays the VHF VOICE page.
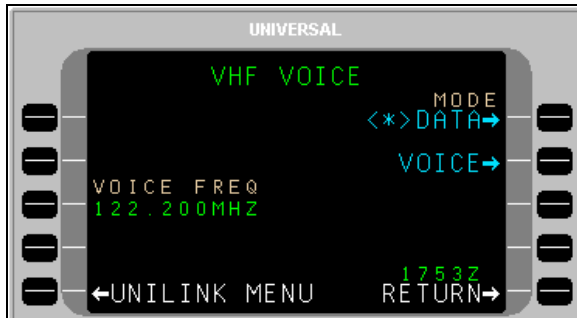
UL-800 with External VDR

The VHF VOICE page is used to enable/disable VHF voice mode. LSKs [1R] and [2R] allow selection of the MODE as either DATA or VOICE respectively (an asterisk <*> indicates the selected mode).

DATA Mode - UniLink data communication; no voice communications. UniLink will tune to the appropriate datalink frequencies only.

VOICE Mode - UniLink no longer communicates via VHF to support datalink communications. The external VDR is used for voice and voice frequencies are tuned via VOICE FREQ, LSK [3L].

VHF voice frequency can be tuned from this page if Voice Frequency Control enabled in configuration. Valid frequency range is:

- If configured for frequency spacing of 25KHz - 118.000 to 136.950
- If configured for frequency spacing of 25KHz/8.33KHz - 118.000 to 136.965 and 136.980 to 136.990

NOTE: The frequency 136.975 is a reserved frequency.

VHF Data

Menu Navigation: UNILINK MENU 1/2 > COMM STATUS > COMM CONTROL > VHF DATA

The VHF DATA option is available if a VHF radio is configured. The VHF DATA page allows the user to enable or disable the individual DSPs and provides access to the VHF Frequency (FREQUENCIES) page. On the COMM CONTROL page press VHF DATA, LSK [2L] to access the VHF DATA page.
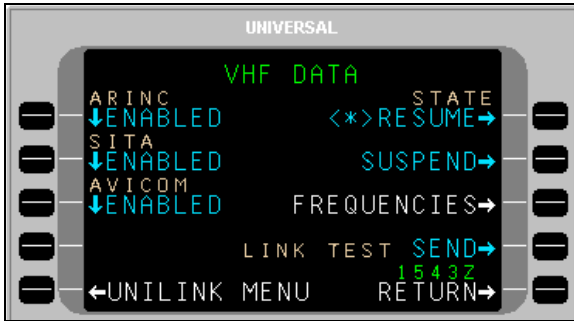
Pressing the LSK adjacent to each DSP toggles the network status between DISABLED and ENABLED. In the ENABLED status, UniLink will communicate with the service provider as appropriate. The DISABLED status prohibits communications with the provider. If all Service Providers are selected to DISABLED, the VHF status displayed on the COMM STATUS page will reflect NOCOMM/NO DSP.

To resolve a VHF NOCOMM problem:

1. On the VHF DATA page, ensure VHF STATE is not set to SUSPEND.
2. Press LINK TEST SEND. This will initiate a link test to reestablish VHF communications.

Communications should be reestablished within approximately one minute and the NOCOMM advisory should no longer be displayed.

If NOCOMM continues to be displayed, this may indicate an equipment or VHF system network failure not associated with incorrect frequency usage.

STATE

- RESUME: When selected, <∗> will display. This allows the VHF system to resume operation.
- SUSPEND: When selected, <∗> will display. This suspends the system. While suspended, no VHF transmissions will be permitted by UniLink and no VHF uplink messages will be processed.

DSPs

DSPs are configured into UniLink at installation. These selections are the default selections displayed on the VHF DATA page but may be overridden by the crew. Care should be taken when overriding these selections to ENABLED as network access fees may be charged to your account by the service provider.

DSPs include:

ARINC   Worldwide except Europe, North Atlantic and Japan

SITA   Worldwide except North America and Japan (Includes DEPV network in Brazil).

AVICOM   Japan

ALL COMM

The ALL COMM function allows the status of all media DATA (VHF, TEL, SAT) to be set to SUSPEND or RESUME.

- RESUME: When selected, <*> will display. This allows the communication system (VHF, SAT, TEL) to resume operation.
- SUSPEND: When selected, <*> will display. This suspends the configured communication system (VHF, SAT, TEL).

Each individual media DATA page has a STATE function that allows the same RESUME or SUSPEND status to be set just for that specific link.

FREQUENCIES

Menu Navigation: UNILINK MENU 1/2 > COMM STATUS > COMM CONTROL > VHF DATA > FREQUENCIES

The FREQUENCIES page is accessed by selecting the FREQUENCIES, LSK [3R] on the VHF DATA page. The FREQUENCIES page displays the primary frequency table and a field for secondary frequency selection. Normal frequency selection is controlled automatically by UniLink management logic and user intervention is not required.
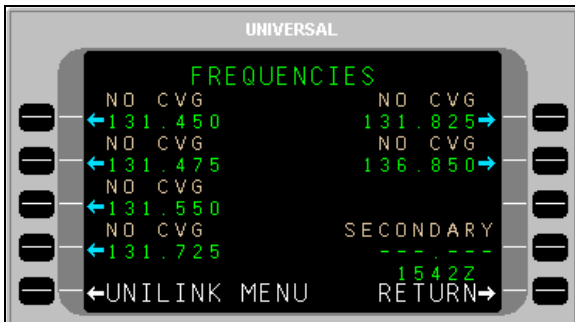
If the UniLink Geographic Database indicates that a DSP has coverage on a particular frequency at the aircraft's current location, the DSP's name will be displayed above the frequency (ARINC, SITA, AVICOM, or MULTIPLE). Otherwise NO CVG (No Coverage) will display.

LSKs allow manual selection of a primary frequency. The <∗> icon indicates the frequency that is currently tuned. The secondary frequency may be manually entered or uplinked from the ground. Any entry in the range of 118.000 through 136.975 will be accepted. Only one frequency, primary or secondary, can be selected at a time.

TEL DATA

Menu Navigation: UNILINK MENU 1/2 > COMM STATUS > COMM CONTROL > TEL DATA

The TEL DATA page is available if an air phone is configured. The TEL DATA page displays the DSP configured telephone number and also allows manual override with a different number.
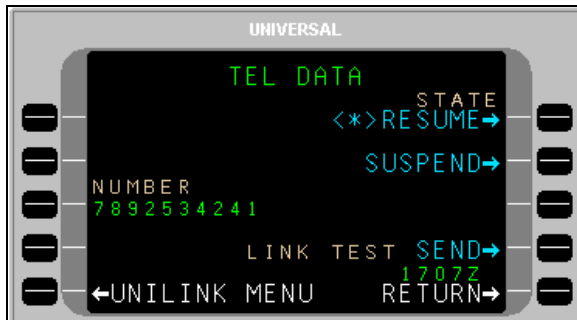
To override the configured telephone number, press NUMBER, LSK [3L]. This highlights the NUMBER field and allows the displayed number to be edited or a new number to be entered. An entry of up to 19 digits is acceptable. The new entry will remain active until the system is restarted, or the number may be restored to the configured value by pressing the [BACK], then [ENTER] keys. From the CDU/MCDU keyboard enter **P** for pause, **L** for #, or **A** for *.

Contact your DSP for the appropriate telephone number.

When the SUSPEND option is selected, telephone communication is suspended and no datalink messages can be sent via telephony. When RESUME is selected, the telephone can be used for sending messages. The SUSPEND option is automatically selected if there have been excessive unsuccessful attempts at sending messages via telephony to the ground. Any manual selection will override any automatically set condition. A <*> indicates the current state

STATE

- RESUME: When selected, <*> will display. This allows the TEL system to resume operation.

- SUSPEND: When selected, <*> will display. This suspends the system. While suspended, no TEL transmissions will be permitted by UniLink and no TEL uplink messages will be processed.

Telephone Link Test

This feature provides the operator the ability to test the telephone link by sending a downlink over the telephone system and then displays the link test status. Run the test by selecting LINK TEST SEND, LSK [4R]. The state of the telephone link test will display on the line above.

Once the test is complete, the telephone status is displayed on the COMM STATUS page. The displayed status is described in the COMM Status section of this manual.

SAT DATA

Menu Navigation: UNILINK MENU 1/2 > COMM STATUS > COMM CONTROL > SAT DATA

The SAT DATA page allows the user to send a SatCom link test.
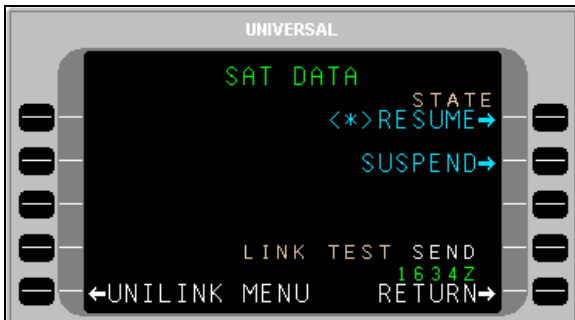
SatCom Datalink Test

This feature provides the operator the ability to test the SatCom link by sending a downlink over the SatCom system and then display the link test status. Run the test by selecting LINK TEST SEND, LSK [4R]. While the test is running, the state of the SatCom link test is displayed on the line above.

Once the test is complete, the SatCom status is displayed on the COMM STATUS page. The displayed status is described in the COMM Status section of this manual.

STATE

- RESUME: When selected, <*> will display. This allows the SAT system to resume operation.

- SUSPEND: When selected, <*> will display. This suspends the SAT system. While suspended, no SAT transmissions will be permitted by UniLink and no VHF uplink messages will be processed.

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SYSTEMS CORPORATION

Text Weather Report Requests

Menu Navigation: UNILINK MENU 1/2 > TEXT WX > TEXT WX REQUEST

The TEXT WX REQUEST page allows the user to request four types of text weather reports from up to six locations.

TERMINAL weather received from this request will apply to stations entered on this page, and will include both actual and forecast conditions for each station.

WINDS (Winds Aloft), SIGMETS (Significant Meteorological information), and PIREPS (Pilot Weather Reports), and will apply to the flight plan route from the FMS. If a manual data entry is made in STATIONS fields (LSKs [1L & 2L]), the Winds Aloft will apply to waypoints along the great circle route from the aircraft's present position to the airport identifier. Stored text weather messages are accessed via the VERIF OPS WX page (accessed from the MESSAGE LOGS page).

To request Text Weather:

1. Press TEXT WX, LSK [1R] on UNILINK MENU 1/2 page.

2. On the TEXT WX REQUEST page, enter up to six reporting stations (STATIONS) using LSKs [1L] and [2L], and then press the [ENTER] key. The first station will default to the FMS destination airport identifier.

NOTE: When exiting this page, all stations entered are cleared.
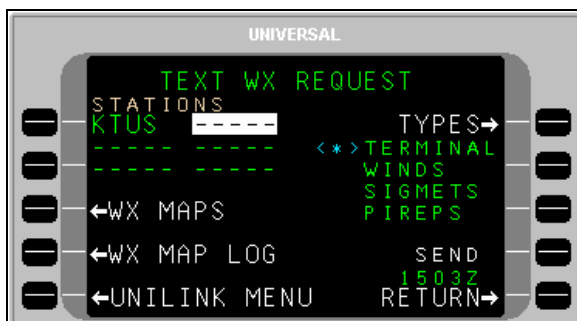
3. Press TYPES, LSK [1R] to choose the type of reports to receive. The WX TYPE SELECT page will display.

4. Multiple report types may be selected. Press the LSK adjacent the report types to request.

NOTE: Terminal is selected by default (indicated by <*>).

5. Press RETURN to go back to the TEXT WX REQUEST page. An asterisk will display next to the selected report types.

6. Press the SEND LSK to place the request in queue for transmission.

NOTE: DATA REQUIRED displays if no reporting stations have been entered.

Weather Map Requests

Menu Navigation: UNILINK MENU 1/2 > WX MAPS

The UNILINK MENU 1/2 page allows the user to request and view graphical weather maps. Maps are available only over an airborne telephony link and the WX MAP REQUEST page is only available when the WX MAPS configuration selection is enabled. Graphic weather maps are available on Flat Panel Control Display Units (FPCDU) having graphics capability.

NOTE: WX MAP REQUEST page can be accessed either from UNILINK MENU 1/2 (WX MAPS, LSK [2R]) or the WX MAPS LSK on the TEXT WX REQUEST page.
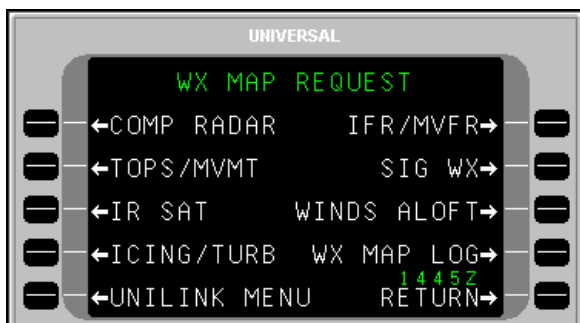
US Composite Radar

Menu Navigation: UNILINK MENU (1/2) > WX MAPS> COMP RADAR

The US COMP RADAR page allows the user to request Composite Radar Weather maps at specified weather stations and International Civil Aviation Organization (ICAO) airports.
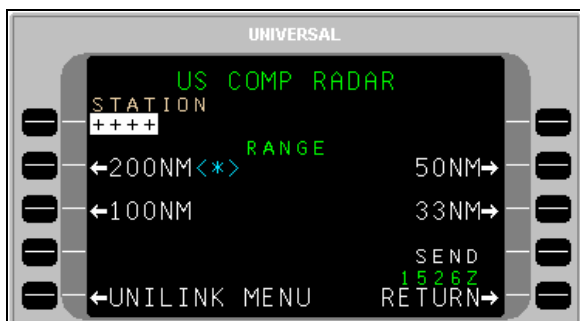
To request a Composite Radar graphic:

1. Press COMP RADAR, LSK [1L] on the WX MAP REQUEST page. The US COMP RADAR page will display.

2. Enter an airport identifier in the STATION field and press [ENTER], or accept the default destination airport identifier from the FMS.

NOTE: If an incomplete identifier is entered, the message TOO FEW CHARACTERS will display and the field will flash. Pressing the LSK and re-entering a complete identifier will correct the error.

3. Select a Map Range using the range LSK options. A <*> indicator will display adjacent to the selected range.

NOTE:The selected range is retained through system power cycles.

4. Press SEND, LSK [4R] to place the request in queue for transmission.

NOTE: The SEND LSK will not be active and DATA REQUIRED displays if no airport identifier has been entered.

US Radar Tops and Movement

Menu Navigation: UNILINK MENU 1/2 > WX MAPS > TOPS/MVMT

The US TOPS/ MVMT page is used to request US Radar Tops and Movement graphics from a specific geographical area.
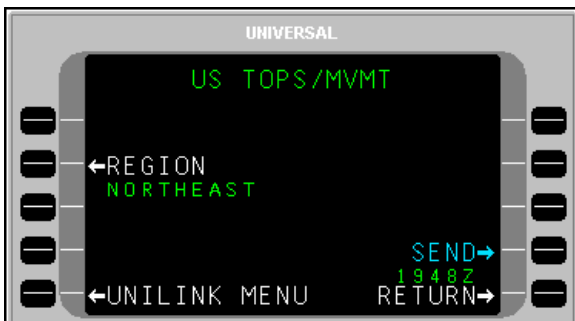
To request a Tops and Movement graphic:

1. Press TOPS/ MVMT, LSK [2L] on the WX MAP REQUEST page. The US TOPS/MVMT page will display

2. Press REGION, LSK [2L] to display the REGION- US TOPS/MVMT page.
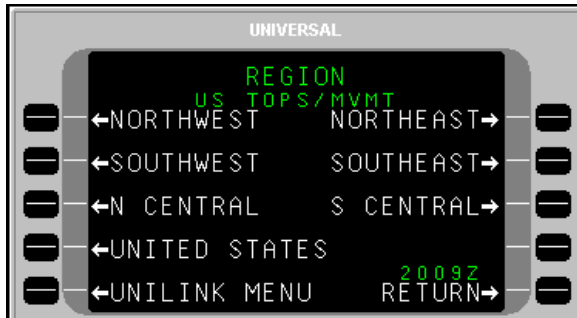
3. Select a region LSK option for display and return to the US TOPS/MVMT page. The last selection will remain through system power cycles.

4. Press the SEND LSK to place the request in queue for transmission.

IR SATELLITE

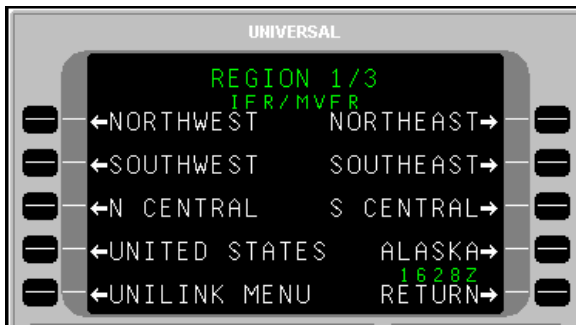*Menu Navigation: UNILINK MENU 1/2 > WX MAPS > IR SAT*

The IR SATELLITE page allows the user to request worldwide IR Satellite Weather maps.
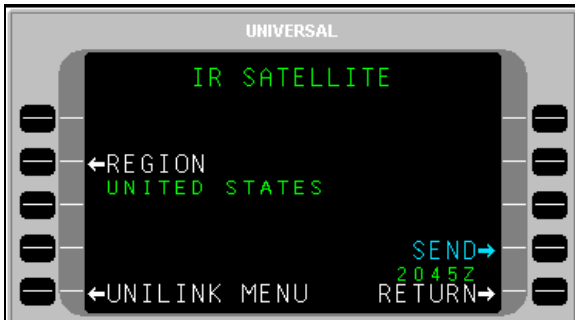
To request an IR Satellite Map graphic:

1. Press IR SAT, LSK [3R] on the WX MAP REQUEST page. The IR SATELLITE page will display.

2. Press REGION, LSK [2L] to display the REGION-IR SATELLITE 1/2 page. If needed, press NEXT to display the REGION-IR SATELLITE 2/2 page.

3. Select a region for display and return to the IR SATELLITE page. The last selection will remain through system power cycles.


4. Press the SEND LSK to place the request in queue for transmission.

Icing/Turbulence Potential

Menu Navigation: UNILINK MENU 1/2 > WX MAPS > ICING/TURB

The ICING TURB page is used to request worldwide icing potential or turbulence potential maps.
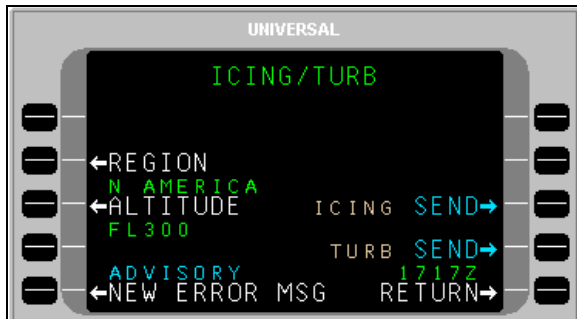
To request an Icing Potential or Turbulence Potential Map:

1. Press ICING/TURB, LSK [4L] on the WX MAP REQUEST page. The ICING/TURB page will display.

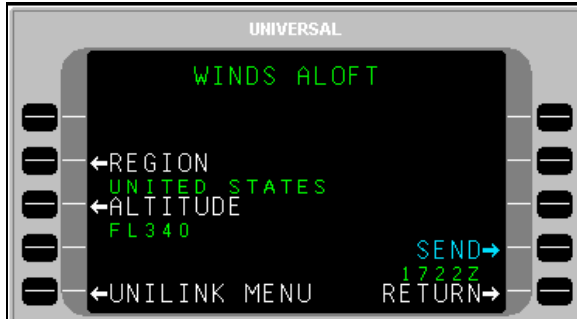2. Press REGION, LSK [2L] to display the REGION-ICING TURB page.

3. Select a region for display and return to the ICING/TURB page. The last selection will remain through system power cycles.

4. Press ALTITUDE to access the ALTITUDE-ICING/TURB page.

5. Select an altitude option by pressing the adjacent LSK and return to the ICING/TURB page. The last selection will remain through system power cycles.
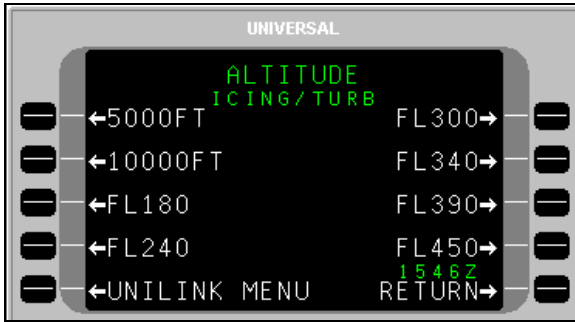
6. Press ICING SEND or TURB SEND to place the request in queue for transmission.

IFR/MVFR

Menu Navigation: UNILINK MENU 1/2 > WX MAPS > IFR/MVFR

The IFR/MVFR page is used to request worldwide IFR/MVFR maps.

```
              UNIVERSAL

            IFR/MVFR


  ←REGION
    NORTHEAST



                    SEND→
                    1 6 2 3 Z
  ←UNILINK MENU     RETURN→
```
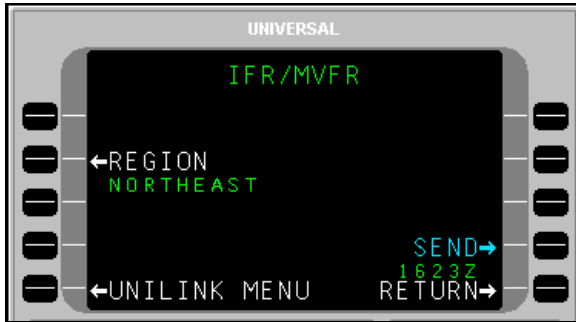
To request an IFR/MVFR Map:

1. Press IFR/MVFR, LSK [1R] on the WX MAP REQUEST page. The IFR/MVFR page will display.

2. Press REGION, LSK [2L] to display REGION-IFR/MVFR page.

```
              UNIVERSAL

            REGION 1/3
             IFR/MVFR
  ←NORTHWEST    NORTHEAST→
  ←SOUTHWEST    SOUTHEAST→
  ←N CENTRAL    S CENTRAL→
  ←UNITED STATES   ALASKA→
                    1 6 2 8 Z
  ←UNILINK MENU     RETURN→
```

3. As needed, press the [NEXT] key to display the REGION 2/3 and 3/3 pages. Select a region and return to the IFR/MVFR page.

NOTE: The last selection will be retained through system power cycles.

4. Press SEND, LSK [4R] to place the request in queue for transmission.

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Significant Weather

Menu Navigation: UNILINK MENU 1/2 > WX MAPS > SIG WX

The SIGNIFICANT WX page allows the user to request High Level Significant Weather Maps.
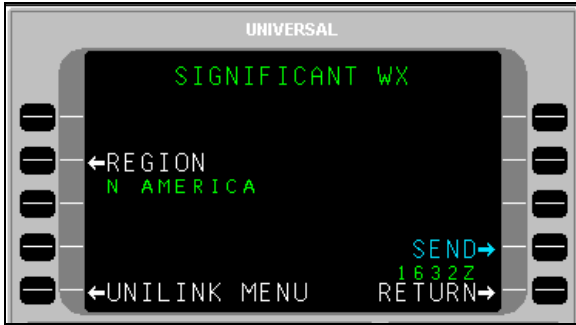
To request a Significant Weather Map:

1. Press SIG WX, LSK [2R] on the WX MAP REQUEST page. The SIGNIFICANT WX page will display.

2. Press REGION, LSK [2L] to display the REGION-SIGNIFICANT WX 1/2 page.

3. As needed, press NEXT to display REGION-SIGNIFICANT WX 2/2 page. Select a region for display and return to the Significant Weather page. The last selection will remain through system power cycles.

4. Press SEND, LSK [4R] to place the request in queue for transmission.

Winds Aloft

Menu Navigation: UNILINK MENU 1/2 > WX MAPS > WINDS ALOFT

The WINDS ALOFT page allows the user to request the most current worldwide Winds Aloft maps by region.

To request The Winds and Temperature Aloft graphic:

1. Press WINDS ALOFT, LSK [3R] on the WX MAPS REQUEST page. The WINDS ALOFT page will display.

2. Press REGION, LSK. [2L]. The REGION-WINDS ALOFT 1/3 page will display.

3. As needed, press the [NEXT] key to display the REGION-WINDS ALOFT pages 2/3 and 3/3. Select a region for display by pressing the adjacent LSK and return to the WINDS ALOFT page. The last selection will remain through system power cycles.

4. Press the ALTITUDE LSK to access the ALTITUDE-WINDS ALOFT 1/2 page.

5. As needed, press the [NEXT] key to display ALTITUDE-WINDS ALOFT page 2/2. Select an altitude by pressing the adjacent LSK and return to the WINDS ALOFT page. The last selection will remain through system power cycles.
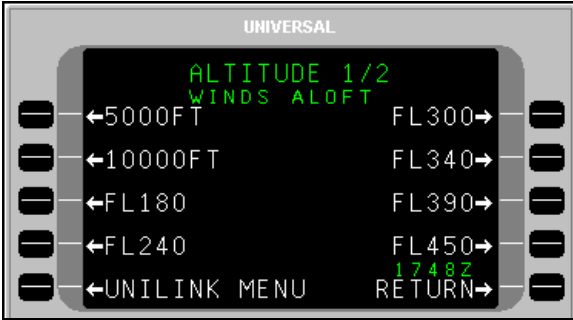
6. Press the SEND LSK to place the message in queue for transmission.

Weather Map Log

Menu Navigation: UNILINK MENU 1/2 > WX MAP LOG

The WX MAP LOG pages allow the user to select previously uplinked weather graphics for viewing on a CDU/MCDU, MFD, EFI-890R, or for deletion. Weather map titles are listed in the order they are received with the last map received appearing first. UniLink stores up to 32 maps.

NOTE: The WX MAP LOG page can be accessed from UNILINK MENU 1/2, TEXT WX REQUEST page, or WX MAP REQUEST page.

To display a weather map:

1. Press the WX MAP LOG, LSK [4R] on the WX MAP REQUEST page, LSK [3R] on UNILINK MENU 1/2 page, or LSK [4L] on the TEXT WX REQUEST page.

2. Press the left-hand LSK adjacent the desired weather map.

NOTE: Pressing any key while the map is displayed will return the display to the MAP LOG page.

To display a new weather map after receiving a NEW WX MAP RCVD message:

1. Press the UNILINK LSK on the DATA 1/X page or the MESSAGE 1/X page to access the UNILINK MENU page.

2. Press NEW WX MAP advisory prompt to view the weather map.

To delete an uplinked weather map:

1. Select the map to delete by pressing the adjacent right-hand LSK. This places the cursor over the map and displays the delete option window.

2. Press the DELETE LSK to delete the map.

3. To delete all uplinked weather maps, select the DELETE ALL option. DELETE ALL only appears on the WX MAP LOG 1/X page.

Message Logs

Menu Navigation: UNILINK MENU 1/2 > MSG LOGS

The MESSAGE LOGS page allows the user to view, print, or delete messages.

Verified Messages – The VERIF MSGS 1/X page displays all ATS or other verified messages. Press VERIF MSG LOG, LSK [1R] to access the VERIF MSGS page.

Operations Messages – The OPS MSGS 1/X page displays all unverified messages (messages containing unverified data). Press OPS MSG LOG, LSK [2R] to access the OPS MSGS page.

WX Map Uplinks – The WX MAP LOG 1/X page displays all weather graphic uplinks. Press WX MAP LOG, LSK [3R] to access the WX MAP LOG pages.

Message titles will appear on these pages in the inverse order they are received. The newest message will appear first. If more than one page of message titles exists, use the [PREV] and [NEXT] keys to cycle through the pages. A new message may be viewed from any UNILINK page by pressing the NEW MSG ADVISORY LSK.

Messages may be viewed by selecting the left-hand LSK adjacent the message title.

To delete all messages from a message log, press the DELETE ALL LSK. This prompt is only displayed on page 1 of the message log pages.

Verified Messages

The VERIF MSGS page displays all ATS, Clearance, and other verified messages. Press VERIF MSG LOG, LSK [1R] to access the VERIF MSGS page. The total number of pages increases as verified messages are received. If more than one page of message titles exists, use the [PREV] and [NEXT] keys to cycle through the pages.
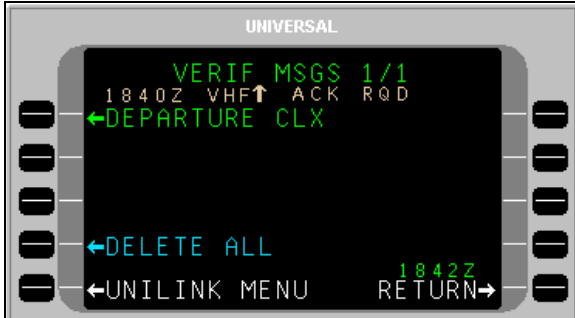
LSKs [1L] through [3L] on page 1/X and [1L] through [4L] on succeeding pages display ATS and other verified message titles. Status information is displayed above the message title and includes the time received, transmission medium, uplink (↑) or downlink (↓) indicator, and status.

Messages are sorted with the newest at the top of the list. Pressing the left-hand LSK adjacent a message displays the corresponding message if the message contains viewable text.

Pressing a right-hand LSK displays the message pop-up window for the corresponding message and allows the deletion or printing of the message (see the **Delete or Print a Message** section later in this manual). Any key press other than [1R] or [2R] will exit the pop-up window.

DELETE ALL, LSK [4L] on page 1/X is used to delete all uplinked messages from the displayed page.

RETURN, LSK [5R] returns the display to the MESSAGE LOGS page.

Message Status Descriptions

|	
NEW	The uplink is available in the log and has not been viewed.
OLD	The uplink has been viewed and does not require and acknowledgement.
ACK RQD	The uplink has been viewed and the ACARS ATS facility requests that the crew manually acknowledge receipt of the message.
ACKED	The uplink has been viewed and an acknowledgement has been sent.
SENT	The downlink has been successfully transmitted at the indicated time.
SENDING	The downlink is being transmitted via the indicated medium (VHF, SAT, TEL)
DEFERRED	The downlink message lacks priority for immediate transmission and is deferred pending availability of other downlink messages with which it can be bundled for transmission.
EXPIRED	The downlink message ceased being valid or useful before it could be successfully transmitted (as determined by the downlink message timer).

Operations Messages

Menu Navigation: UNILINK MENU(1/2 > MSG LOGS > OPS MSG LOG

The OPS MSGS page displays all operations unverified uplink messages including Text Weather and Free Text. Press OPS MSG LOG, LSK [2R] to access the OPS MSGS page. The total number of pages increases as uplink messages are received. If more than one page of message titles exists, use the [PREV] and [NEXT] keys to cycle through the pages.
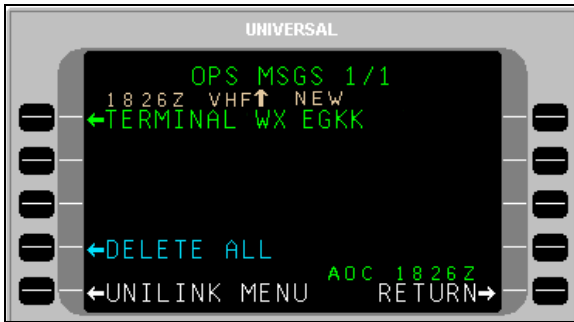
LSKs [1L] through [3L] on page 1/X and [1L] through [4L] on succeeding pages display unverified uplink message titles. Status information is displayed above the message title and includes the time received, transmission medium, uplink (↑) or downlink (↓) indicator, and status.

Messages are sorted with the newest at the top of the list. Pressing a left-hand LSK displays the OPS MSG page for the corresponding message if the message contains viewable text.

Pressing a right-hand LSK displays the message pop-up window for the corresponding message and allows the deletion or printing of the message (see the **Delete or Print a Message** section later in this manual). Any key press other than [1R] or [2R] will exit the pop-up window.

DELETE ALL, LSK [4L] on page 1/X is used to delete all messages from the log.

RETURN, LSK [5R] returns the display to the MESSAGE LOGS page.

Message Status Descriptions

NEW   The uplink is available in the log and has not been viewed.

OLD   The uplink has been viewed and does not require an acknowledgement.

ACK RQD   The uplink has been viewed and the customer AOC facility requests that the crew manually acknowledge receipt of the message.

ACKED   The uplink has been viewed and an acknowledgement has been sent.

SENT   The downlink has been successfully transmitted at the indicated time.

SENDING   The downlink is being transmitted via the indicated medium (VHF, SAT, TEL)

DEFERRED   The downlink message lacks priority for immediate transmission and is deferred pending availability of other downlink messages with which it can be bundled for transmission.

EXPIRED   The downlink message ceased being valid or useful before it could be successfully transmitted (as determined by the downlink message timer).

Weather Map Log

(See the Weather Map Log section).

View Message - Detailed Message Screen

A detailed message screen will display when a message is viewed by selecting a corresponding message LSK or via the NEW MESSAGE ADVISORY.

1. Press the [PREV] and [NEXT] keys to cycle through the pages.
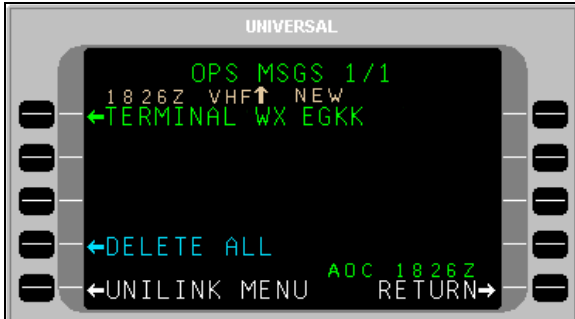
2. In the message log page (VERIF MSGS, OPS MSGS, or WX MAP LOG), press the left LSK adjacent a message title to view a message. A detailed message screen or weather graphic will display.
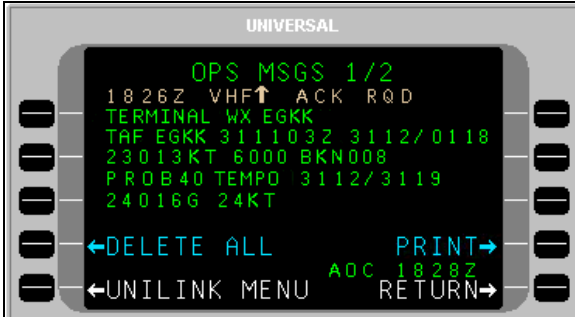
Delete or Print a Message

NOTE: This procedure is available on the VERIF MSGS, OPS MSGS, and WX MAP LOG pages.

1. Access the desired message log page.
2. Press the right-hand LSK of a message. This activates the message pop-up window.
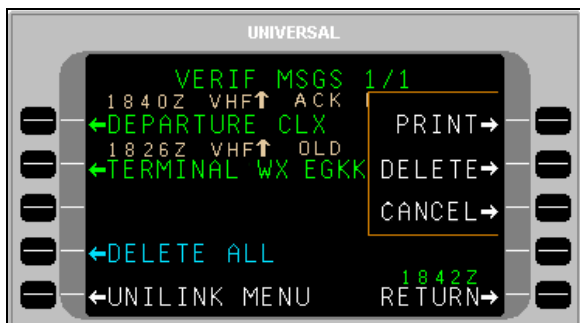
3. Press the PRINT LSK to print the message (a printer must be installed and configured).
4. Press the DELETE LSK to delete the message.
5. Press the CANCEL LSK to exit the pop-up menu.

NOTE: Any LSK or CDU keyboard selection other than LSKs [1R] or [2R] removes the pop-up window.

DELAY

Menu Navigation: UNILINK MENU 2/2 > DELAY

The DELAY page is used to report estimated ground delays prior to take off.
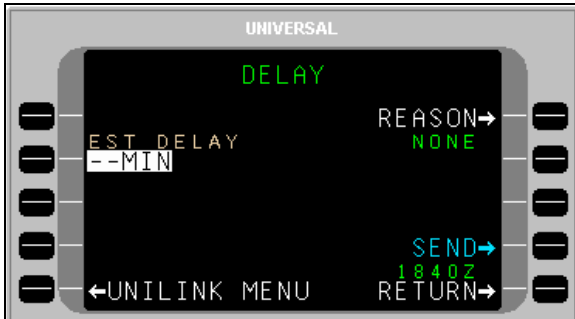
To send a Ground Delay report:

1. Press DELAY, LSK [1L] from UNILINK MENU page 2/2 or from any page when selecting the GROUND DELAY advisory.

2. With EST DELAY (estimated delay) active, enter the estimated time in minutes and press [ENTER].

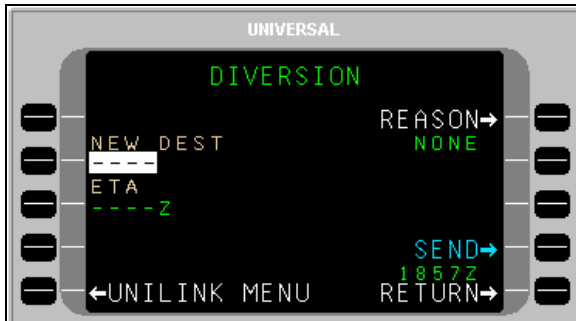3. Press REASON, LSK [1R] to access the DELAY REASON page.
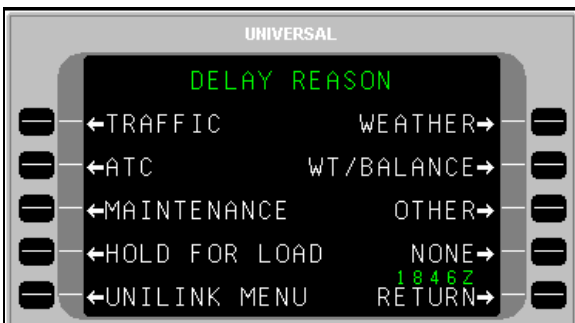
4. Press the LSK adjacent the appropriate reason option. The display will return to the DELAY page. NONE will be selected by default if no entry is made on this page.

5. Press SEND, LSK [4R] to place the message in queue for transmission.

DIVERSION

Menu Navigation: UNILINK MENU 2/2 > DIVERSION

The DIVERSION page is used to send a revised destination message.

To send a diversion message:

1. Press DIVERSION, LSK [2L] from UNILINK MENU page 2/2. The DIVERSION page will display.

2. With NEW DEST active, enter a destination and press [ENTER] or verify new destination data from the FMS.

3. If not active, press ETA (LSK [3L]), enter an ETA, and press [ENTER]; or verify ETA data from the FMS.

4. Press REASON, LSK [1R] to access the DIVERT REASON page.

5. Press the LSK adjacent the appropriate Divert Reason option and return to the DIVERSION page. NONE will be selected by default if no entry is made on this page.

6. Press the SEND LSK to place the report or message in queue for transmission.

NOTE: During a given flight leg, the first press sends a Diversion Report downlink. Each subsequent press sends a revised Diversion Report downlink.

ETA UPDATE

Menu Navigation: UNILINK MENU 2/2 > ETA UPDATE

The ETA UPDATE page is used to send an ETA update message.
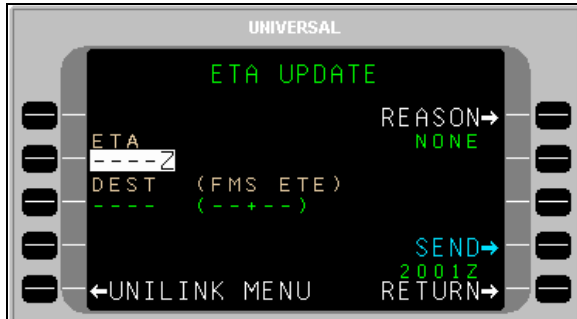
To send an ETA Update message:

1. Press ETA UPDATE, LSK [3L] from UNILINK MENU page 2/2. The ETA UPDATE page will display.

2. With ETA active, enter an ETA and press [ENTER], or verify ETA data from the FMS.

3. If not active, press DEST, LSK [3L], enter a destination airport identifier, and press [ENTER]; or verify the default identifier from the FMS.

NOTE: This field will display dashes if the destination airport is not available.

The FMS ETE field is provided for reference only and displays the current computed FMS estimated time enroute.

4. Press REASON, LSK [1R] to access the ETA REASON page.
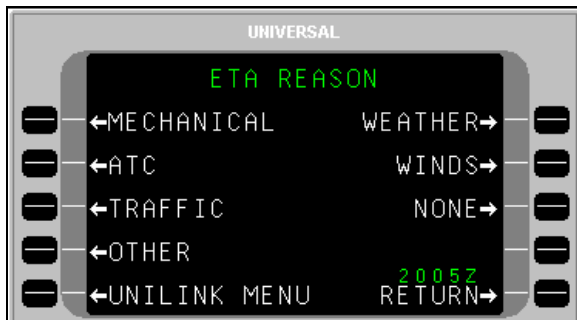
5. Press the LSK adjacent the appropriate ETA Reason and return to the ETA UPDATE page.

6. Press the SEND LSK to place the report or message in queue for transmission.

NOTE: During a given flight leg, the first press sends a Diversion Report downlink. Each subsequent press sends a revised Diversion Report downlink.

SELCAL

Menu Navigation: UNILINK MENU 2/2 > SELCAL

The SELCAL (Selective Call) CONTACT page displays the Ground Voice Request frequency. The SELCAL option on the UNILINK MENU will only display if a voice frequency request is received and the SELCAL advisory has been selected. This prompt is hidden at the beginning of each flight leg.
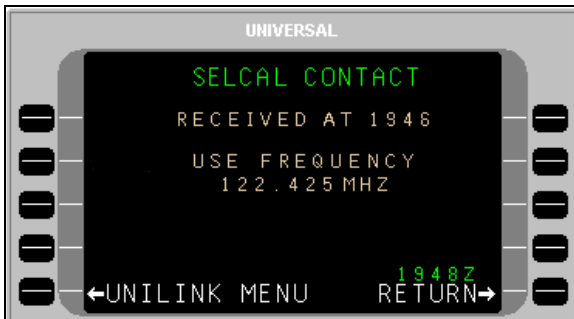
Press RETURN to return to the MAIN MENU or the CDU/MCDU page displayed when the ADVISORY was pressed to access the SELCAL contact message.

NOTE If not currently in a UNILINK page when the SELCAL request is received, the MSG annunciation will flash in the upper right-hand corner of the CDU/MCDU. Navigate to the UNILINK MENU page to access the SELCAL option.

SITUATION

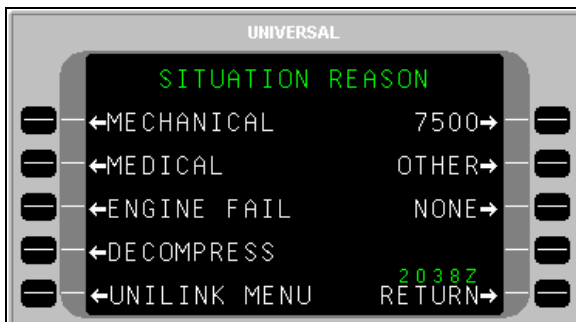*Menu Navigation: UNILINK MENU 2/2 > SITUATION*

The SITUATION page permits the sending of emergency report messages for mechanical and medical emergencies.
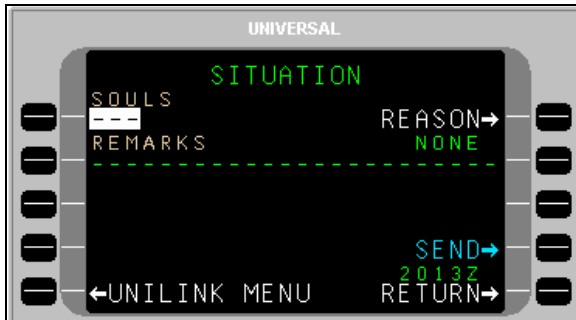
All situation reports include FUEL ONBD and ENDURANCE data from FMS FUEL page 2/5.

To make the report:

1. Press SITUATION, LSK [2R] on UNILINK MENU page 2/2. The SITUATION page will display.

2. With SOULS active, enter the number of persons onboard and press [ENTER].

3. If not active, press REMARKS, LSK [2L] (optional) and, enter information as needed. Up to 24 characters may be entered.

4. Press REASON, LSK [1R] to access the SITUATION REASON page.

5.   Press the LSK adjacent the appropriate reason and return to the SITUATION page. If no selection is made, the REASON field will default to NONE.

6.   Press the SEND LSK to place the report in queue for transmission.

POS REPORT

Menu Navigation: UNILINK MENU 2/2 > POS REPORT

The POS REPORT page is used to modify Position Report data prior to sending, and to enable and disable the Auto Position report (AUTO) function.

Data on this page is prefilled FMS/ADC data. Normally this data will be valid for the Position Report; however, temporary manual entries are possible for the current manually initiated transmission only.

To make the report:

1.   Press POS REPORT, LSK [3R] from UNILINK MENU page 2/2. The POS REPORT page will display.
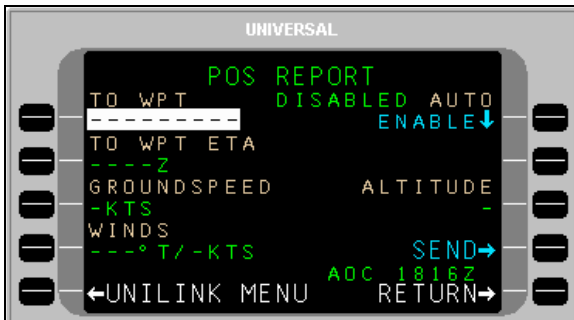

2.   With TO WPT active, enter a waypoint name and press [ENTER].

3.   The TO WPT ETA (LSK [2L]) is supplied by the FMS. To change, if not active, press and enter up to four digits (Time is UTC time). Press [ENTER].

4.   If not active, press GROUNDSPEED, LSK [3L] and enter up to three digits. Press [ENTER].

5.   If not active, press WINDS, LSK [4L] and enter three digits for wind direction. Press [ENTER] to advance the cursor to the velocity field and enter up to three digits. Press [ENTER].

6. If not already active, press ALTITUDE, LSK [3R] and enter current altitude if no ADC Altitude is available. Press [ENTER].

7. Press the SEND LSK to place the report in queue for transmission.

Automatic Position Reporting

1. Press AUTO, LSK [1R] to toggle the Automatic Report function to ENABLED or DISABLED. The current status is displayed to the left of AUTO.
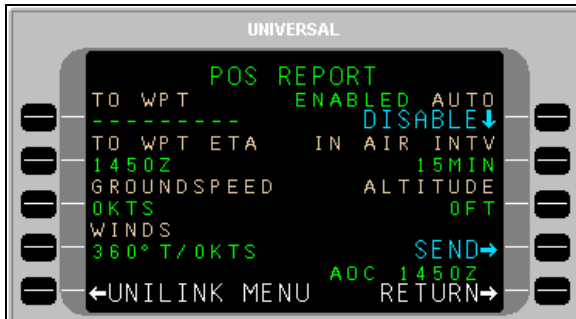
2. If AUTO is set to ENABLED, press IN AIR INTV, LSK [2R] to set the report interval time (default is based on configuration setting). Press [ENTER].

**NOTE:**   The IN AIR INTV option is not present if AUTO is set to DISABLED.

Maintenance

Menu Navigation: UNILINK MENU 2/2 > MAINTENANCE

Maintenance pages are used to access UniLink maintenance related functions. No operation-related functions are performed on this page or subpages. Operational tests can be conducted via the TESTS option.

From the UniLink Menu 2/2, press MAINTENANCE, LSK [4L]. The MAINTENANCE 1/3 page will display.

NOTE: See the associated UniLink Installation Manual for installation and maintenance procedures
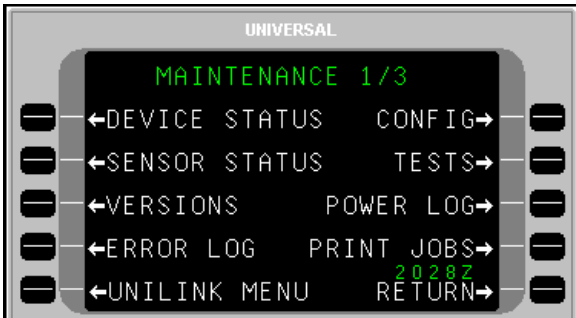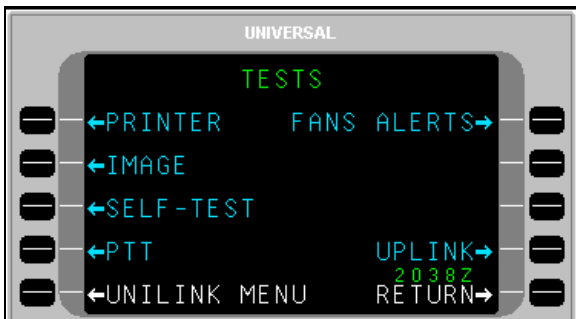

Tests

Menu Navigation: UNILINK MENU 2/2 > MAINTENANCE > TESTS

There are several tests available to exercise the functionality of UniLink. They include PRINTER Test, IMAGE Test, UniLink SELF-TEST, PTT, FANS ALERTS, and UPLINK test.

Press TESTS, LSK [2R] on the MAINTENANCE page to display the TESTS page.

Printer Test

Menu Navigation: UNILINK MENU (2/2) > MAINTENANCE > TESTS > PRINTER

If a printer is connected and configured, selection of PRINTER, LSK [1L] will send test message text to the printer. If there is no printer configured, the PRINTER option will not be displayed.

When PRINTER is selected, a pop-up window PRINTER TEST IN PROGRESS" is displayed. When complete, the pop-up window is no longer displayed.

The following will be printed:

```
THIS  IS  NOT  AN  UPLINK.  THIS  IS  AN  INTERNALLY
GENERATED  PRINTER  TEST  MESSAGE.  !"#$%&'()*+,-
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`
{|}~;
```
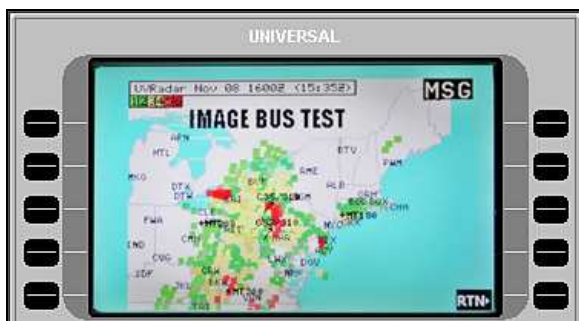
Image Test

Menu Navigation: UNILINK MENU 2/2 > MAINTENANCE > TESTS > IMAGE

Selection of IMAGE, LSK [2L] is used to display a test image. While the test image is being displayed, any key push will cause the display to return to the MAINTENANCE page. Image Test is not available when the aircraft is in the air.

When IMAGE is selected, a pop-up window with the message IMAGE TEST IN PROGRESS will display. When the test is complete, an ADVISORY will display on the CDU and NEW WX MAP is displayed adjacent LSK [5L] (LSK for MCDU may be different).
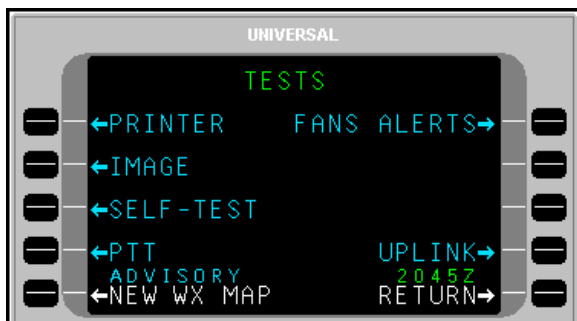
Press NEW WX MAP, LSK [5L] to display the generated test weather image. A test weather map will display with the title IMAGE BUS TEST.

NOTE: This image will display on an EFI-890R or MFD if installed
            and configured.

To exit the image, press RTN, LSK [5R].The display returns to the
TESTS page (NEW WX MAP and ADVISORY are no longer
displayed).

UniLink Self-Test

Menu Navigation: UNILINK MENU(2/2 > MAINTENANCE > TESTS > SELF-TEST

Selection of SELF-TEST, LSK [3L] places the system in a power up
test mode.

When the test is selected a pop-up window requesting to CONFIRM
or CANCEL the test is displayed. Selecting CANCEL closes the pop-
up window and returns to the current display. Selecting CONFIRM
reboots UniLink. The message UNILINK/FMS COMM ERROR
RESELECT UNILINK is displayed. During the period of reboot, the
UNILINK displayed on the CDUMCDU is not selectable. When the
test is complete, UNILINK will be selectable. Selecting UNILINK will
display UNILINK MENU page 1/2.

PTT (Push-To-Talk) (UL-801 only)

Menu Navigation: UNILINK MENU 2/2 > MAINTENANCE. > TESTS > PTT

If available, this test commands the radio to transmit for 3 seconds. A
pop-up window PTT TEST IN PROGRESS will display for 3 seconds.

FANS ALERTS

Menu Navigation: UNILINK MENU 2/2 > MAINTENANCE > TESTS > FANS ALERTS

1. Press FANS ALERTS, LSK [1R]. A pop-up window FANS DISCRETES NOT CONFIGURED will display, then close.

Uplink Test

Menu Navigation: UNILINK MENU 2/2 > MAINTENANCE > TESTS > UPLINK

Selection of UPLINK, LSK [4R] causes a test uplink to be placed in the OPS message log, generating a NEW MSG advisory at the bottom of the display.
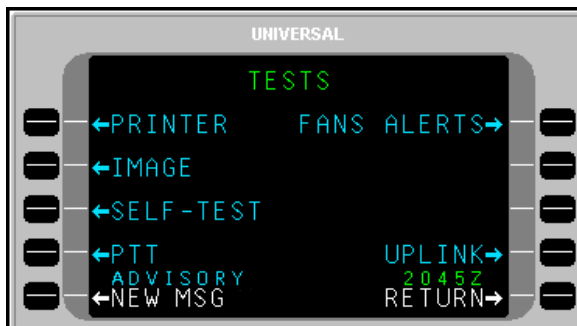
1. Press NEW MSG, LSK [5L] to display message.

2. If desired press PRINT, LSK [4R] to print the screen (Printer must be configured).
3. Press DELETE, LSK [4L] to delete test message. The display will return to the TESTS page.

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GLOSSARY

Acronym/Abbreviation /Term	Description
ACARS	Aircraft Communication Addressing and Reporting System
ACK	Acknowledgement
ADC	Air Data Computer
ADS-C	Automatic Dependent Surveillance - Contract
AFN	ATS Facilities Notification
ALT	Altitude
AOA	ACARS Over Aviation VHF Link Control (AVLC)
AOC	Aeronautical (airline) Operational Control
ARINC	Aeronautical Radio, Inc. (data interface format standard)
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service (see D-ATIS)
ATM	Air Traffic Management
ATN	Aeronautical Telecommunications Network
ATS	Air Traffic Services
AVLC	Aviation VHF Link Control
CDA	Current Data Authority
CDB	Customer Database
CDU	Control Display Unit
Circuit Mode Data	A full duplex bi-directional communication link in which data is transmitted and received simultaneously. A hand shake must be established prior to data being exchanged. Supported by a UniLink RS-232 port configured for TEL

UniLink UL-800/801
Operator's Manual

UNIVERSAL AVIONICS
SYSTEMS CORPORATION
UL-800/801
Operator's Manual

Acronym/Abbreviation /Term	Description
CLX	Clearance
CM	Configuration Module
CMU	Communications Management Unit
CNS	Communication Navigation Surveillance
COMM	Communication
CPDLC	Controller-Crew Datalink Communications
CRC	Cyclic Redundancy Check
CSC	Common Signaling Channel
CSDB	Commercial Standard Data Bus (data interface format standard)
CTS	Clear to Send
CVFDR	Cockpit Voice and Flight Data Recorder (UASC)
CVR	Cockpit Voice Recorder
D-ATIS	Digital Automatic Terminal Information System (also referred to as ATIS)
DEPT CLX	Departure Clearance
DM	Downlink Message
DP	Display Processor
DTU	Data Transfer Unit (UASC)
DTU-100	Data Transfer Unit – 100 (UASC)
DSP	Datalink Service Provider (sometimes referred to as DLSP)
EFB	Electronic Flight Bag
EFI	Electronic Flight Instrument
EFI-890R	Electronic Flight Instrument – 890R (UASC)
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
EUROCAE	European Organization for Civil Aviation Equipment
EXP	Expected

Acronym/Abbreviation /Term	Description
FAA	Federal Aviation Administration
FANS	Future Air Navigation Systems
FL	Flight Level
FLT NO	Flight Number
FMC	Flight Management Computer
FMS	Flight Management System
FPL	Flight Plan
FREQ	Frequency
GND SPD	Ground Speed
GNSS	Global
GPS	Global Positioning System
HS	High Speed
ICAO	International Civil Aviation Organization
ID	Identification, Identifier
IFR	Instrument Flight Rules
IOP	Input/Output Processor
I/O	Input/Output
LAN	Local Area Network
LRU	Line-Replaceable Unit
LS	Low Speed
LSK	Line Select Key
MCDU	Multifunctional Control Display Unit (UASC)
	Multi-Purpose Control Display Unit (ARINC)
MCU	Modular Concept Unit
MDM	Modem
MFD	Multifunctional Display
MSG	Message
MSK	Minimum Shift Keying
MVFR	Marginal Visual Flight Rules
ND	Navigation Display
NO COMM	No Communication

UniLink UL-800/801
Operator's Manual

UNIVERSAL AVIONICS
SYSTEMS CORPORATION
UL-800/801
Operator's Manual

Acronym/Abbreviation /Term	Description
NO CVG	No Coverage
ONBD	Onboard
OOOI	Out, Off, On, In (used to detect and report changes to the major flight phases of the aircraft)
Packet Mode Data	A half-duplex bi-directional communication link in which data is accumulated in packets of various lengths and sent out in a burst or bursts so therefore does not support voice communications. Packet switching is the process of routing and transferring data by means of addressed packets so that a channel is occupied during the transmission of the packet only. Upon completion of the data transfer, the channel is made available for the transfer of other traffic. Supported by a UniLink ARINC port configured to provide VHF and SAT capability.
PIREP	Crew Weather Report
PDC	Pre-Departure Clearance
POA	Plain Old ACARS
POS	Position
RCDU	Remote Control Display Unit
RCVD	Received
RPTS	Reports
RQD	Required
RTE	Route
RTS	Request to Send
RX	Receive
SAT	Abbreviation for Satellite Communications Link. The SAT link provides communication via Iridium Short Burst Data (SBD) and packet mode data Inmarsat equipment that utilizes a specific satellite constellation.

Acronym/Abbreviation /Term	Description
	When SAT is commanded for use by UniLink, a SAT-configured ARINC 429 (741 protocol) port is used. SAT provides VHF backup in most cases and does not support weather graphics.
SatCom	Satellite Communications
SCN	Software Control Number
SDU	Satellite Data Unit
SELCAL	Selective Calling
SIGMET	Significant Meteorological Information
SITA	Society of International Aeronautical Telecommunications (Societe Internationale de Telecommunications Aeronautiques)
SQP	Signal Quality Parameter
SSDTU	Solid State Data Transfer Unit (UASC)
TEL	Abbreviation for telephony. The telephony communication link provides a circuit mode data connection via a dial-up modem. A hand shake must be established prior to data being exchanged. Only an RS-232 capable SatCom can be used. The circuit mode connection will be used for obtaining color weather graphics and may be used for VHF back up in most cases. However, this link will not support safety services communications, which consists of flight information services, which is a UniLink service.
TWIP	Terminal Weather Information for Pilots
TX	Transmit
UASC	Universal Avionics Systems Corporation
UL	UniLink (UASC)
UM	Uplink Message
USB	Universal Serial Bus

Acronym/Abbreviation /Term	Description
UTC	Universal Time Coordinated
VDL	VHF Digital Link
VDR	VHF Data Radio
VHF	Very high frequency terrestrial-based packet mode. This is a data communications link used for obtaining textual weather, D-ATIS, and the transmission of position reporting, OOOI, and safety services communications (UniLink Flight Information Services). Does not support weather graphics.
VOX	Voice
WOW	Weight On Wheels
WPT	Waypoint
WX	Weather
XOFF	Transmission Off
XON	Transmission On

INDEX

A

C

D

E

F

G

I

UniLink UL-800/801
Operator's Manual

UNIVERSAL AVIONICS
SYSTEMS CORPORATION
UniLink UL-800/801
Operator's Manual

N

O

S

T

U

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