

Self Help Article

Setting Aircraft Date and Time

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Setting Aircraft Date and Time

Objective:

The aircraft date may revert back to 1990 if there was a maintenance action of the MDC, or the MDC battery is failing or on rare occasion's maintenance of the FMC.

On power up the GPS looks for a good date and time from the aircraft which is supplied by the ARINC clock or MDC.

Applicability:

System:	MDC-3000	MDC-3100
	MDC-4000	MDC-4100

Revision Summary:

Original Issue: 12 October 2018

DEFINITIONS:

ASM	Aircraft Systems Manual
FMS	Flight Management System
GPS	Global Positioning System
MDC	Maintenance Diagnostics Computer
MFD	Multi-Function Display
SB	Service Bulletin
XM	Graphical Weather received from XM Aviation Weather

Setting Aircraft Date and Time via CDU or MDC pages

NOTE: Images provided are for reference only; your aircraft configuration may appear differently. Please consult your applicable ASM and diagnostics manual

NOTE: Do not replace the GPS or FMC when the date is incorrect. The GPS is only looking for a good aircraft date and time on start-up. The clock set operation is available only when the DCU does not receive the GPS or ARINC (ships) clock. The ARINC clock breaker and ARINC power breaker as well as GPS breakers should be pulled to set the date and time through the MDC. If the date on the MDC or ARINC clock is wrong then the date on the GPS will become wrong also. The DCU looks at all the possible clock/date inputs and determines which one will be used.

NOTE: Service Bulletin 9 for the GPS 4000A and 4000S is supposed to reduce the effect of an incorrect date on startup. After the SB fix, if the MDC is in 1990, it is possible to still confuse the GPS.

Excerpt from SB 9 Revision 1 (523-0816637):

Current units have potential to output incorrect GPS date. This issue will not occur until after June 20, 2009. Current GPS-4000S units have a greater sensitivity to multi-path on the ground. GPS-4000A (CPN 822-1377-xxx) and GPS-4000S (CPN 822-2189-xxx) GNSS software will be updated to reduce the potential for the GNSS receiver to output the incorrect GPS date. The best method for setting the correct date is through the MDC. Instructions to do this can be found in the Diagnostic Guide or Avionics System Manual. The GPS breakers need to be pulled

for the Set Aircraft Clock Page in the MDC to be displayed. If the GPS is still engaged then the date and time cannot be set.

- 1) Setting Aircraft Date and Time through the CDU Page
 - a) Disengage the GPS circuit breaker so the MDC Set Aircraft Clock Page can be displayed.
 - b) Ensure the CDU's are in SYNC
 - c) Press the IDX key on the CDU
 - d) Press the line select key for Status
 - e) Type the current date in the scratchpad
 - f) Line select the Date line select key to set the date (See Figure 1)
 - g) To set the time, type the current UTC time in the scratchpad
 - h) Line select the Time line select key to set the time (See Figure 1)

NOTE: You can only change the last two digits of the year (Example: 2018 would be 18)



Figure 1

- 2) Setting Aircraft Date and Time through the MDC Set Up Page

NOTE: Follow the instructions in the Maintenance Diagnostics Guide or Avionics System Manual (ASM) for your applicable aircraft to correct the date.

- a) Disengage GPS circuit breakers
- b) (If equipped) Flip the maintenance switch to the maintenance position.
- c) Using applicable steps for your aircraft, on the MFD enter MDC Diagnostics
- d) Select Maintenance Main Menu
- e) Select MDC Setup
- f) Select Set Aircraft Clock

- g) Set the date to the current date (See Figure 2)
NOTE: You can only change the last two digits of the year (Example: 2018 would be 18)
- h) Press accept
- i) Observe the date change on the CDU Status page
- j) Set Position Initialization on the CDU
- k) Re-engage GPS circuit breakers.

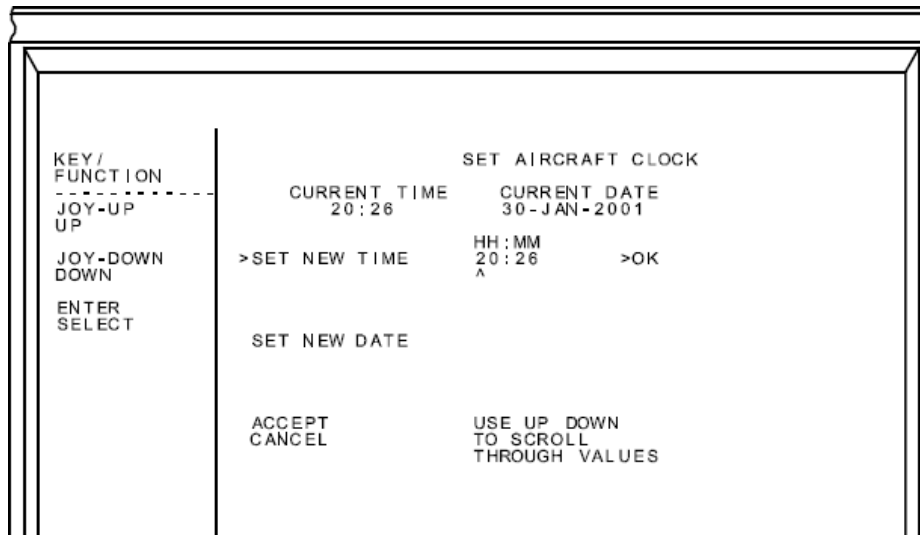


Figure 2

ADDITIONAL INFORMATION:

- Because GPS satellites didn't go on line until after 1970 the GPS should correct the date in the system when it comes on line.
- If after powering down the aircraft for more than four hours or after sitting overnight and the date is wrong on the next power up then send the MDC in for service. There is nothing wrong with the GPS.
Note: It takes a minimum of four hours for the non-volatile-memory (NVM) to clear in the GPS.
- If the Date does not stay corrected after re-engaging the GPS it is possible the GPS may have corrupted NVM memory and may need to be serviced. This can occur in all GPS 4000 LRUs.
- The GPS 4000A & 4000S does not have this problem.