HP-41
Navigation Pac
Addendum Card

Module Corrections

The following corrections are for the Navigation Module, revision 1A. The revision number of the module may be examined by executing CATALOG 2.

Celestial Navigation

The declination of the star Acrux is incorrect. If this star is used, the following short program must be placed in program memory. This program will correct the problem for all programs except the STAR subroutine itself. It requires ten program registers. In order for the program to be properly stored, the Navigation Module must be plugged into the HP-41. The program can be entered with the following keystrokes:

Keystrokes	Display
[■] [GTO] [·] [·]	
[PRGM]	*00 REG nnn*
[XEQ] [ALPHA] *STAR [ALPHA]	*01 XROM^{T}*STAR*
[■] [GTO] [·] 000	*00 REG nnn*
[■] [LBL] [ALPHA] *STAR [ALPHA]	*01 LBL^{T}*STAR*
[ALPHA] NU* [ALPHA]	*02^{T}NU**
30	*03 30_*
[RCL] 47	*04 RCL 47*
[XEQ] [ALPHA] INT [ALPHA]	*05 INT*
[■] [X=Y?]	*06 X=Y?*
[ALPHA] [■] [ASTO] 47 [ALPHA]	*07 ASTO 47*
[SST]	*08 XROM^{T}*STAR*
[■] [RTN]	*09 RTN*
[■] [LBL] [ALPHA] NU* [ALPHA]	*10 LBL^{T}NU**
[ALPHA] ACRUX [ALPHA]	*11^{T}ACRUX*
30.057	*12 30.057_*
[STO] 47	*13 STO 47*
62.9275 [CHS]	*14 -62.9275_*
[ENTER↑]	*15 ENTER↑*
173.785	*16 173.785_*
[PRGM]	

Now you are ready to use the star Acrux in the celestial navigation programs.

Note that in using these programs, entering the name of the desired star instead of its number requires more program execution time. In the case that using a star name is preferred, only the first six letters of the name need to be entered.

Course Planning

If you are using programs outside the Navigation Pac, make sure that register 11 contains the desired eccentricity before using either GCPLAN or GCPLOT. This quantity may be examined by the key sequence [RCL] 11 and may be changed by keying in the desired value then pressing [STO] 11.

Misprints in the Manual

The following corrections are for the Navigation Pac Manual, part number 00041-90120 (no revision number or letter) which appears on the back cover.

Page 13: The input column in step 5 should read ***Hi,d.d*** (d.d meaning decimal degrees) instead of ***Hi,d.ms***.

Page 20: The words "*GCPLOT" and "*GCPLAN" are interchanged in paragraph 1, lines 3 and 4.

Page 24: In the example, the direction should be 250.5 not 250.0.

Page 26: The sextant reading should be 74° 40′ instead of 73° 50′ in the example at the bottom of the page.

Page 27: Line 8, in the display column, should read ***SUN a=4.2 A*** not ***SUN a=4.1 A***.

Page 31: The instruction for step 12 should read "Key in DEC at previous whole hour".

Page 32: The second line from the bottom should read ***PLANET a=1.4T*** not ***PLANET a=1.4A***.

Page 35: Under "Great Circle Heading and Distance" the instructions should read "Use L2 instead of d" not "use L2 instead of Hc".

Page 36: In the keystrokes for Example 1, the second line should read [XEQ] [ALPHA] *SRT [ALPHA] not [XEQ] [ALPHA] SRT [ALPHA].

Page 37: The letters "t" and "T" should be exchanged in the first paragraph, fourth sentence. In the example, 12 should be stored in register 34 instead of 0. The result should read 2,444,509.000 instead of 2,444.508.500.

Page 44: In the keystrokes for Example 2, the second line should read 23.441884 [STO] 29, not 23.44184 [STO] 29.

Pages 50 and 52: The star Polaris, object 0, should be included in these lists.

Page 53: Flag 09 is not used, but flag 08 is used by NA.

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