HP Prime – Release Notes

Date Released: 2016/04/14

Internal Versions

Firmware Version: 2016 04 14 (10077)
Virtual Calculator Version: 2016 04 14 (10077)
Connectivity Kit: 2016 04 14 (10077)

Description

This release of the Prime Calculator firmware and associated PC software delivers significant new features and fixes outstanding issues. This document is not a complete list of all changes, but highlights specific items. All users of the HP Prime calculator are encouraged to upgrade for the best possible experience.

Please back up your calculator before the update. Any existing data on the device will be wiped during the update process.

New Functionality (Connectivity Kit)
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1. Progress bars on each calculator in tree to show transfer status
2. Calculator and content pane now dockable windows. Connkit will remember and restore position/state of all windows
3. Network mapped working directories supported
4. Ability to add plot backgrounds to graphing applications
5. Proctor mode to automatically start exam mode on connection
6. Improved polling and sending of response data back to classroom
7. Invalid .hpprgm files will be attempted to load as plain text if possible. Will attempt to determine text encoding format
8. Turned on IP networking for future usage

New Functionality (Virtual Calculator)
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1. Added confirmation on emulator reset menu press

New Functionality (Calculator Software)
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1. Ability to manipulate functions in the Function app
a. Change expressions into other forms
b. Reposition and modify existing expressions
c. Cubics now also recognized in sketch and manipulation
2. Use a picture for graph background
a. Choose from a built in image library, or add your own
b. Fit image to screen, or position at a specific Cartesian location
3. Sketch a function directly in the Statistics 2Var App
4. Recovered ~8MB of RAM for user use
5. Improved interaction between CAS functions and HPPPL program. CAS functions can now access directly HPPPL local variables as expected
6. Sequence app now allows N..N+1..N+2 form

7. Gradian support for angle mode

8. EQ function for exact equality test of list. EQ({1,2,3},{1,2,3}) -> 1

9. =CHOOSE(...) now makes a drop down selector in the spreadsheet

10. LNAME function to extract variable names from home functions

11. Added UNION function

12. Support for jpg read/write. AFiles("file.jpg",[1-100]):=G0

13. Direct access to images stored as files. G1:=AFiles("myfile.jpg")

14. Plot scatterplot/ode wizard in geometry app

15. Added alpha blend to BLIT commands

16. Added IFERR feature to enable access of the error value from the Ans variable on error

17. Added support for alpha channel in PIXON commands

18. Enhances PLOT-TABLE of Function, Polar, Parametric, and Sequence apps to bring up new G1,...,G9,TableSelection chooser for choosing what to copy where

19. Option for split stems in stem leaf plot

20. New backup manager. You can now create, archive and restore backups on your calculator directly from memory manager

21. VERSION() can take an argument to return that part of version info

22. TEXTOUT functions now return pixel coordinate of the end of the printed text.

Resolved issues and changes excluding CAS
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1. Resolved issue with excess power drain while in exam mode and calculator was "off"

2. Resolved issue with use of complex arguments for some drawing commands

3. Resolved issue with certain RPN programs causing issues when called from stack

4. Resolved issue where quadratic explorer SOLVE function will now return complex results

5. Resolved issue with "Cannot find solution" with negative seed values

7. Resolved issue in printing of complex with negative second component

8. Resolved issue with color chooser in note screen

9. Resolved issue with AVars accessing files from another application sometimes causing issues

10. Resolved issue with "CAS." being appended in spreadsheet

11. Resolved issue with declaring a LOCAL in home screen

12. Resolved issue with calling ΠLIST with vector

13. Resolved issues with SWAPROW/SWAPCOL

14. Resolved issue with REPLACE on lists behaving inconsistently

15. Resolved issue with INPUT choose lists and >9 items

16. Resolved issues with SORT

17. Resolved issue with summation rejecting non-integer values. Allows smooth plotting

18. Resolved issue with small plot previews in home/CAS not using current app plot window

19. Resolved issue with GETKEY working after third screen tap

20. Resolved issue with lists and comparison operators

21. Resolved issue with calling function such as DATEADD when named spreadsheet cell exists as "DATE"

22. Resolved issue with DIFFERENCE and calling multiple lists as arguments

23. Resolved issue with user app vars not showing in VARS menu

24. Resolved issue with long hold on grid chooser not selecting item

25. Resolved issue with exact() and approx() via [a b/c] key not setting Ans in CAS

26. Resolved issue with fraction^power not displaying (fraction)^power for clarity

27. Resolved issue with complex numbers and units needing ( ) for clarity

28. Improved ITERATE command to allow up to 2^16 iterations

29. Resolved issue where two parameter NORMALCDF behaving different in home/CAS. Now two params will give you the area for a standard normal between L/R ends

30. Resolved issue where copying something like 1.5e-25/2 into command line in CAS from history did not do division template properly

31. Resolved issue where stat 1var calculation with frequency when frequency sum was identical to 1 was throwing an error
32. Resolved issue so that LOG(81,3) returns 4 and not 3.9999...
33. Resolved issue with REPLACE expanding with strings, but not vectors
34. Resolved issue with integration in programs not able to use local variables
35. Resolved issue with Σ failing with local variables
36. Pressing Esc from List/Matrix did not return to List/Matrix screen like Program/Notes behavior
37. Resolved issue where [sto] was allowed as first character in home var name
38. Resolved issue that prevented assigning a user variable a complex form polar in a program source
39. Resolved issue where Linear Explorer SolveForSlope function did not have the order of arguments working as expected
40. Resolved issue with Resid() and PredY() throwing an error if Med-Med was fit type
41. Resolved issue where shift-copy would not allow copying of system help text
42. Resolved issue where change of display format did not invalidate 2D expression cache resulting in stale number display
43. Resolved issue where F1(X)=STUDENT(N,X) reports Signed Area as NaN. Fisher, and Chi will also now work as expected
44. Resolved issue where program editor could misbehave and cause memory issues
45. Resolved issue with memory leak when application had embedded PNG images
46. Renamed "Rect" variable in Triangle Solver app to "TriType"
47. Removed error check on proportion z interval to allow a negative confidence interval. - can be negative vs error
48. Resolved issues with WAIT/GETKEY not responding as expected after 3rd screen touch.

Resolved issues and changes in CAS
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1. Improved results for tan(pi/24)
2. Resolved issue with display of int(sqrt(1/x-1),x,1/2,1) (sqrt(1/4) getting converted to sqrt(1)/4 on copy
3. Improved printing of (e^2)^3
4. Fix for desolve([y'=[[1,2],[2,1]]*y+[x,x+1],y(0)=[1,2]])
5. Fix for fsolve(x^3-3*x^2+4,x,-3..5)
6. Support for gradians.
7. Fix for solve(3 NTHROOT (2^(4*x-1))>=(2^(x-5))/(4 NTHROOT (16^x)))
8. Fix for polynomial_regression(8)
9. Resolved issue with "break" being parsed differently than "BREAK"
10. Improved student_cdf for dof>=100
11. Fix for limit((3*e^(2x)-12)/(e^(2x)-7*e^x+10),x,ln(2))
12. Fix for forms like (sqrt(sqrt()))
13. Behavior change so that fsolve without guess now tries 0 if default bisection returns [ ]
14. Fix for laplace([0,0],x,x) and a:=[[1,2,3],[4,5,6],[7,8,9]];[y0]:=desolve(y'=a*y and y(0)=[1,0,0]);
15. Fix for solve(x^3=1.2e-15,x)
16. Fix for $\partial(\partial(x^2*y^3,y),x)$
17. Enabled mod in parser as a synonym for irem (prefixed, MOD is infixed)
18. Fix parsing of "return"
19. Fix for int(abs(sin(2*pi*x)),x=0..1)
20. Fix for sum(sum(1/(j+k),k,1,m),j,1,n))
21. Make circle() work like circumcircle() when called with 3 args
22. Modified implicitplot to returns a list instead of a sequence for hyperbola
23. Fixes for ker and finite field factorization
24. Fix for cfactor(2*x^3+x^2+x+1/2)
25. Fix for solve((3*ABS(6-x)+2*ABS(3/2*x-5))=8,x)
26. Fix for csolve(-256*p^5-128*p^4-16*p^3+2000*p^2+900*p+3233=0,p)

27. Implicit multiplication warnings replaced by errors
28. Fix in DELROW/DELCOL to eval second parameter
29. Fix for int(1/(4+sin(3*x)),x,0,2)
30. Add warning for (1+2)(3+4)
31. Extend areas to support ellipse. e.g. area(ellipse(-1,1,2))
32. Fix so simplify(sin(x-sin(x))') leaves unchanged
33. Fix SVL for sym. matrices
34. Fix for sum(legendre(j),j,0,3)
35. Fixes for nested sqrt like normal(sqrt((1)-((5)*(sqrt(2)))))
36. Fixes sum bug (-1)^(n+1) / n^2 and sum((-1)^(n+1)/n^4,n,1,inf)
37. Modified geometric_cdf to be inclusive of lower bound
38. Fix for assume(z>1000); sum(3^n*z^(-n),n,0,inf)
39. Added Dirac support in ztrans