

Mueck Free42/Plus42 skin family (for fields like electrical engineering etc.)

NOTE: Please use the latest version of Free42 or Plus42 for these skins

SOME PROMINENT FEATURES:

If you use both a physical HP42S and Free42/Plus42 then, to save your sanity, choose a skin that matches the physical HP42S layout (names ending in "_HP"). Otherwise, please consider the remaining skins which I think have a much more efficient and intuitive layout.

- High resolution, large display font, big buttons with easy to see press animations, hot-key hints shown on the desktop skin buttons. All skins come in portrait and landscape versions.
- Menu buttons can **only** be pressed on the display - the top row of buttons always perform the operations printed on them. TOP.FCN is now redundant and allows for a new function.
- The double wide ENTER key supports two shifted functions, allowing another new function.
- The useless OFF function has been removed, allowing for a 3rd new function.
- The Free42 skins have 8 vs 7 rows of buttons (with corresponding extra functions) because a 7-row landscape skin just doesn't work out with a 2-line display. When using a Free42 landscape skin in Plus42, you can also select an extended display version. You can even select the display font size in the layout file to best fill the display with your desired number of lines.
- All skins contain $R\uparrow$, $x\rightleftharpoons$, $x!$, $\Delta\%$, $SST\uparrow$, $CONSTANT$, TVM (Time Value of Money) and a user definable "hidden" HP button. Plus42 skins contain $PLOT$, EQN , $EQN.FCN$, DIR , $DIR.FCN$, $UNIT$ and $UNIT.FCN$, whereas Free42 skins contain \log_2 , 2^x , RSS & RDS (Root Sum/Difference of Squares), dB & dB^{-1} , and $POLY$ (a quadratic, cubic and quartic equation solver using formulas).
- These skins require an accompanying suite of programs to be loaded. All program names and variables start with a colon to identify themselves as skin-related e.g. ":CONST" or ":POLY". Instructions for using the programs are provided in their text program listings.
- Desktop versions support numeric pads on extended keyboards and lots of additional useful functions via hot-keys e.g. $\sqrt[3]{\rightarrow 9 \rightarrow x^3 \dots x^9}$ or $\sqrt[3]{\rightarrow 9 \rightarrow \sqrt{x} \dots \sqrt[9]{x}}$ and *many* more. A full hot-key "cheat-sheet" is provided in this document. All emulate built-in functions i.e. they correctly update LASTx and don't disrupt the stack. All are also NULLable in the usual way. Please consider using a desktop skin - I spent waaay more time on them than the mobile skins!
- All desktop skins have full metric notation hot-key capability, making it simple and fast to enter values like 1.2 G Ω , 3.4 nH, 5.6 μ s, 7.8 pF, 9.0 TB etc. Note that my previous alternate layout skins (which included metric notation buttons) have been obsoleted because this new layout make regularly entering engineering notation numbers significantly easier.
- Amongst other things, my alternate layout skins address several aspects of HP's layout I never liked e.g. press \uparrow at the bottom and then go to the top for the most common functions, press STO/RCL at the top and then go to the bottom for a number or $+/-*$. R/S as a button was too dangerous to accidentally press yet it was in the numeric entry area and right next to $+$, etc.
- Additional space is allocated below the bottom row to make swiping up from the bottom to switch apps on the phone much less likely to hit the decimal point. That "dead" space was then constructively used for a "hidden" HP button that you can customize in the layout file :-).

PHYSICAL CONSTANTS and PROPERTIES:

The HP42S has lots of math functions, yet many of my calculations involve formulas containing physical constants e.g. the electron charge, the Boltzmann constant, the permittivity of free space etc. HP only give you ONE constant: π . It's a fully neglected category! The skin's program suite contains a program ":CONST" that is run when you press $CONSTANT$. The 1st menu level shows 6 classic high school science constants, the next level caters to electronics engineering, and the 3rd is just crazy specific - all to entice you to tailor it for your own needs. A mechanical engineer may want various material thermal and strength properties etc. Modifying ":CONST" for your content and number of menu levels is pretty obvious from the program's comments.

SKIN NAMING CONVENTION:

These skins come in my layout & HP layout versions, with each in a Free42 or Plus42 version, with each in a mobile phone and desktop version, and each in a portrait and landscape version. Because a Free42 skin can be used on Plus42 (with a larger display) the Free42 landscape skins come in a regular (2-row) and extended (multi-row) display version. That makes 20 skins altogether, each named according to:

Mueck_[F,P][P,L,LX][m,d]_[HP]

e.g. Mueck_FPd Free42 Portrait desktop (my layout)

e.g. Mueck_PLm_HP Plus42 Landscape mobile HP layout

e.g. Mueck_FLXm Free42 Landscape (extended display) mobile

QUICK INSTALLATION GUIDE:

- Install your chosen gif and layout file pair according to:
thomasokken.com/free42/skins/README.html
- Install the program bundles (which can unfortunately be a tedious process, especially for Android users) into the calculator according to:
thomasokken.com/free42/importexport.html

Skin programs come in 3 separate bundles (you'll only need 1 or 2 of them).

- **1(m) Mueck-Mobile.txt/raw** - Contains 2 programs for mobile devices only:
:CONST - A fully customizable menu of constants and physical properties.
:POLY - A formula-based solver for quadratic, cubic & quartic equations.
- **1(d) Mueck-Desktop.txt/raw**
Functions only accessible via desktop hot-keys, as well as :CONST and :POLY. If your mobile has a connected ASCII keyboard then use this bundle instead.
- **2 Mueck-TVM.txt/raw**
A TVM program for Free42 (don't load it if using Plus42, it already has TVM)

Install the bundles one at a time via "Menu→Program Import & Export" on a mobile device or "File→Import Programs" on the desktop. After each one, go into program mode and enter XEQ "LOCK" - it looks like you're adding a line of code, but you're actually performing a function. That will avert future grief if you ever go into program mode and accidentally modify them. The program pointer will turn "gray" to indicate the LOCK was successful, and the process can similarly be undone with XEQ "UNLOCK".

- For the mobile versions, I recommend turning off the preference setting for "Maintain skin aspect ratio" (tap the top-left of the display for preferences).
- If you see a header line at the top of the display (a Plus42 feature you might not want) you can turn it off via DISP and navigating to HDR (for Header).
- In Plus42 I prefer showing 5-6 rows (via the DISP menu's ROW+ and ROW-) to always see the full stack and also optionally LASTx even when a menu is displayed. You can view LASTx via the DISP menu and navigating to LTOP.
- For the mobile versions, set preferences for Orientation: Auto. With the phone in portrait orientation, load a portrait skin and set it's preferences as indicated above. Now put the phone in landscape orientation and load a landscape skin and separately set it's preferences. Now your phone will switch between portrait and landscape skins automatically :-).

Mueck_FPM_HP
Free42 Portrait mobile
(HP layout)

HP Compatible Skin Comparisons

Mueck_PPd_HP
Plus42 Portrait desktop
(HP layout)

Buttons are bigger, easier to read and press.
Button press animation is much easier to see.

All portrait skin images are the
same width to fairly indicate
comparisons of readability etc.

Skin is very high resolution - won't be blurry.
Magnified display is much easier to read

Free42 specific buttons:

POLY:
Solves quadratic, cubic
& quartic equations
using exact formulas

Binary log functions:
 \log_2 & 2^x 8th row

dB & dB⁻¹:
(a logarithmic scale)

RSS/RDS:
Root-Sum-Squares &
Root-Difference-Squares
(also for Pythagorean
triangles)

ENTER has TWO
shifted functions

CONSTANT: Physical
constants & properties
(fully customizable)

TVM:
Time Value of Money

Extra bottom space to minimize accidentally
pressing "." when swiping up to switch apps.
Used the room for a hidden HP logo button
which can be user-defined in the layout file.



Mueck_FLM_HP
Free42 Landscape mobile HP layout



Mueck_FLXm_HP
Free42 Extended Landscape mobile HP layout
(when using this Free42 skin in Plus42)



Mueck_PLM_HP
Plus42 Landscape mobile HP layout

Display menu buttons
aligned with keyboard
buttons and can ONLY be
pressed on the display

Plus42 specific buttons

Top keys are
ALWAYS available
(removed TOP.FCN)
(also removed OFF)

Desktop skin shows
hot-key hints, including
highlighted first characters

All hot-keys work across
all skins in this family.

There are MANY more
hot-keys than those
shown on the skin itself

HP button defaults:

HP: HMS+
HP: HMS-

The only difference between the Free42 and
Plus42 versions is within the dotted blue regions



My Layout vs HP's Layout

NOTE: All comments from the HP Layout page also apply here.

Mueck_PPd
Plus42 Portrait desktop

Mueck_FPm
Free42 Portrait mobile



DISP is now a button. Intuitively beside the display Intuitively anchors MODE

CUSTOM is now a button. Intuitively beside the XEQ

Shift beside all the most popular buttons

Probability & Statistics cluster: x! intuitively anchors PROB Δ% intuitively anchors STAT

Demoted DIR, UNIT & EQN to shifted buttons and promoted higher "daily use" functions

Rapid entry of most popular engineering notation suffixes

Separate π button, near 2 because 2π is very common. Intuitively anchors CONSTANT

Programming and navigation cluster

▲▼ & EXIT beside the display menus

R/S is now a shifted function (safer)

Most popular operators all on their own buttons

$1/x$ beside y^x for rapid n^{th} roots

MOD intuitively anchored by /

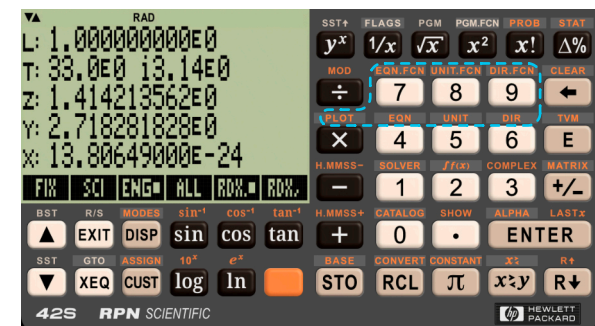
Advanced math cluster

Time cluster: H.MMSS+/- intuitively anchored by + & -

STO/RCL beside numeric keys and +&- for STO+, STO- etc.

HP button defaults:
HP: VIEW
⇧HP: PRINT

Stack cluster
Bigger ENTER button



Mueck_FLm
Free42 Landscape mobile

Mueck_FLXm
Free42 Extended Landscape mobile

Mueck_PLm
Plus42 Landscape mobile

For about 10 years all HP calculators (including the legendary HP41) had +&- on the LEFT side... You'll get used to this new layout - it's highly efficient! Full numeric entry, editing and +&- calculations in just 4 rows! In just 5 rows you also get all the most popular scientific operators without using SHIFT. These skins do NOT have % or PRINT. % is useless - why do 2 7 ⇧ % when you can do . 2 7 *. If you want, assign PRINT to the HP button. These skins do NOT have Σ +/. If you're using them then your end game is bringing up the STAT menu, which already has Σ +/, so just use that menu!

Standard, Alternative & Bonus Hot-keys

PREFIX $\backslash b, B \rightarrow \log_2, 2^x$ (binary log) menu button '7' $\wedge 7$ & F7 \rightarrow CUSTOM
 'or D \rightarrow MODES ' \rightarrow PGM.FCN
 ions $\backslash d, D \rightarrow dB, dB^{-1}$ (decibels) , & . \rightarrow decimal '.'
 { $\backslash e, E \rightarrow e^x, e^{ix}$ $\backslash \Delta \rightarrow R\uparrow$
 { $\backslash e \rightarrow e^x - 1$ $\wedge \Delta$ & $\wedge \nabla \rightarrow SST\uparrow$
 F \rightarrow FLAGS $\backslash 2 \rightarrow 9 \rightarrow x^2 \rightarrow x^9$
 ks like $\backslash f \rightarrow$ FACTORIAL $\uparrow \backslash 3 \rightarrow 9 \rightarrow \sqrt[3]{x} \rightarrow \sqrt[9]{x}$
 e. +/- $\backslash g \rightarrow$ GAMMA REAL results for $x < 0$
 e.g. $\sqrt[3]{-27} = -3$
 { $\backslash h, H \rightarrow H.MMSS+, -$
 { $\wedge \backslash h, H \rightarrow HMS, \rightarrow HR$
 e \uparrow *) j, J & i, I $\rightarrow \sqrt{-1}$, COMPLEX
 y) $\backslash /$ & $\backslash m \rightarrow$ MOD
 N { $\backslash n \rightarrow \ln(x)$ (natural log)
 { $\wedge n \rightarrow \ln(1+x)$
 o, O $\rightarrow \pi$, CONSTANT (circles)
 $\backslash p \rightarrow \Delta\%$ or $\%CH$
 $\wedge p \rightarrow$ PRINT
 e \uparrow +) { $\wedge \backslash s, C, t \rightarrow \sinh, \cosh, \tanh$
 { $\wedge \backslash S, C, T \rightarrow \sinh^{-1}, \cosh^{-1}, \tanh^{-1}$
 v \rightarrow VIEW
 { $\backslash v \rightarrow RSS (\sqrt{y^2 + x^2})$ *macOS: $\backslash v$ is \sqrt*
 { $\backslash v \rightarrow RDS (\sqrt{y^2 - x^2})$
 { $\wedge \backslash v, V \rightarrow RSSdB, RDSdB$
 $\backslash +, -$ & $\backslash w, W \rightarrow \Sigma +, \Sigma -$ (macOS: $\backslash w$ is Σ)
 y $\rightarrow y^x$

f (**femto** E-15)
p (**pico** E-12)
n (**nano** E-9)
u (micro E-6)
m (**milli** E-3)
k (**kilo** E3)
M (**Mega** E6)
G (**Giga** E9)
T (**Tera** E12)
P (**Peta** E15)

- Unlike in the main keyboard area, in the numeric pad you can enter $\hat{+}$ and $\hat{*}$
- Windows numeric pad functionality is buggy. **Only for Windows** you must use regular shifting in the numeric pad (i.e. hold shift down while pressing a key). Do NOT use CShift (i.e. press & release shift followed by pressing a key)

The top left of the keyboard nicely covers programming and execution.

A close-up photograph of the calculator's keypad. The visible keys include:

- TVM** (orange text) and **EXIT** (white text) on a dark grey key.
- esc** (white text) on a dark grey key.
- PGM** (orange text) and **PGM.FCN** (white text) on a dark grey key.
- A key with a tilde symbol (~) and a wavy line.
- A key with an exclamation mark (!) and the number 1.
- GTO** (orange text) and **tab** (white text) on a dark grey key.
- XEQ** (white text) on a dark grey key.
- A key with a 'Q' symbol.
- Part of a key with **⇧MENU** (orange text) and **F1** (white text).
- Part of a key with **MENU1** (white text).

Windows & Linux



COMPLEX F16 STO	% F17 RCL	LASTx F18 $x \leftrightarrow y$	CLEAR F19 ←
DISP clear E	MODES = +/-	STAT /	PROB *
SOLVER 7	$\int f(x)$ 8	MATRIX 9	PRINT -
BASE 4	CONVERT 5	FLAGS 6	CATALOG +
ASSIGN 1	CUSTOM 2	PGM.FCN 3	ALPHA
CONSTANT 0	SHOW .		enter



h, ⇧h (**hp** button)
(customize in layout file)
Defaults: h,H→HMS+, HMS-

-  **Shift**
shifted version of a main button
-  **Option/Alt**
mathematical functions
-  **Control**
screen buttons, bonus functions

$\nabla b, B \rightarrow \log_2, 2^x$
 (binary log)

$\nabla 2 \rightarrow x^2$
 $\nabla y \rightarrow y^x$
 $\nabla - \rightarrow \Sigma -$
 $\nabla + \rightarrow \Sigma +$
 π relates to circles
 $\nabla \rightarrow R \uparrow$
 $" \rightarrow \text{ALPHA}$
 $\nabla \rightarrow x \leq$
 $\nabla \Delta \rightarrow R \uparrow$
 $\Delta \nabla \rightarrow SST \uparrow$

$\uparrow \circ$
 anchored to π
 (wealth) w

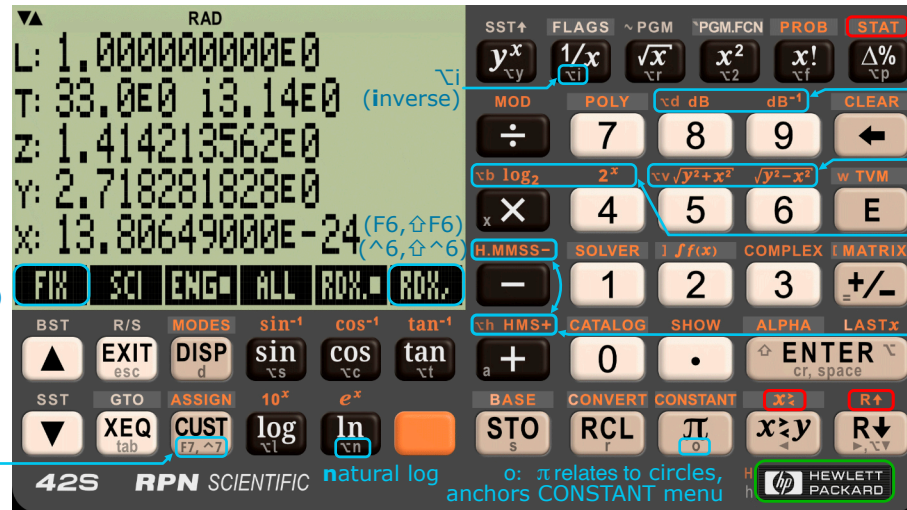
$\nabla \rightarrow RDS: \sqrt{y^2 - x^2}$
 (in macOS ∇ is $\sqrt{}$)
 $\nabla \rightarrow RSSdB$
 $\nabla \rightarrow RDSdB$
 ∇a (antilog)
 $\nabla e \rightarrow e^x$
 $\nabla e \rightarrow e^{ix}$
 $\nabla e \rightarrow e^x - 1$
 $\nabla \ln \rightarrow \ln(1+x)$ } complex capable

$v \rightarrow \text{VIEW}$
 $l \rightarrow \text{LASTx}$
 $d \rightarrow \text{DISP}$
 $D \rightarrow \text{MODES}$
 $] (\nabla 8 \rightarrow * \text{ is multiply})$
 $\nabla /, \nabla m \rightarrow \text{MOD}$
 $\nabla f \rightarrow \text{FLAGS}$
 (f \rightarrow femto 10^{-15})
 F7 or $\nabla 7$
 pseudo menu button
 7 is CUSTOM
 $\rightarrow .$ (used in some countries)

42S RPN SCIENTIFIC

Desktop Skin Keyboard Hot-Keys (Mueck_FLXd & Mueck_PPd)

Standard, Alternative & Bonus Key Mappings



(F1, ^F1)
(^1, ^1)

F7 or ^7
pseudo menu
button 7 is
CUSTOM



(antilog) ^Ca

^f→FLAGS
^A, ^V→SST

^/, ^m→MOD

x or *
(x"x" y)
] → f(x)

a or +
(add)

b→BASE
c→CONVERT

Add ^ for
hyperbolic
versions
^e→e^x
^Ce→e^{i^x}
^Ce→e^{x-1}
^Cn→ln(1+x)

^q→EQN.FCN
^;→UNIT.FCN
^\\→DIR.FCN
w→TVM (wealth)

j, j & i, I → √-1, COMPLEX
= key looks
like ± symbol
l→LASTx
"→ALPHA
(used in some countries)

h, ^h (hp button)
Defaults: h, H→VIEW, POLY

Shift
shifted version of a main button
Option/Alt
mathematical functions
Control
screen buttons, bonus functions

Keyboard program cluster:

The top left of
the keyboard
nicely covers
programming
and execution.



Potentially non-hinted hot-keys common to ALL skins

a → 10^x
^b, B → log₂, 2^x (binary log)
' or D → MODES
^d, D → dB, dB⁻¹ (decibels)
^e, E → e^x, e^{i^x}
^Ce → e^{x-1}
F → FLAGS
^f → FACTORIAL
^g → GAMMA
^h, H → H.MMSS+, -
^Ch, H → →HMS, →HR
j, j & i, I → √-1, COMPLEX
^/ & ^m → MOD
^n → ln(x) (natural log)
^Cn → ln(1+x)
o, O → π, CONSTANT (circles)
^p → Δ% or %CH
^p → PRINT
^Cs, c, t → sinh, cosh, tanh
^CS, C, T → sinh⁻¹, cosh⁻¹, tanh⁻¹
v → VIEW
^v → RSS (√(y²+x²)) macOS: ^v is √
^v → RDS (√(y²-x²))
^Cv, V → RSSdB, RDSdB
^+,- & ^w, W → Σ+, Σ- (macOS: ^w is Σ)
y → y^x

menu button '7'
^7 & F7 → CUSTOM
→ PGM.FCN
, & . → decimal '.'
^C → R↑
^A & ^V → SST↑
^2→9 → x²→x⁹
^C3→9 → √x→∛x
REAL results for x<0
e.g. √-27 = -3

Metric Notation
f (femto E-15)
p (pico E-12)
n (nano E-9)
u (micro E-6)
m (milli E-3)
k (kilo E3)
M (Mega E6)
G (Giga E9)
T (Tera E12)
P (Peta E15)

Numeric Pads

Windows & Linux
(Plus42 skin)



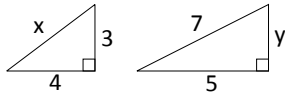
Mac (Free42 skin)



• Unlike in the main keyboard area, in the numeric pad you can enter ^+ and ^*
• Windows numeric pad functionality is buggy. **Only for Windows** you must use regular shifting in the numeric pad (i.e. hold shift down while pressing a key). Do NOT use CShift (i.e. press & release shift followed by pressing a key)

SOME DESKTOP VERSION USAGE EXAMPLES:

In the following examples, the buttons implied might not exist on your chosen skin, but the corresponding hot-keys are always available if using any of the desktop skins.

- Q: How many meters does light travel in 1nsec?
A: \hat{c} o (CONSTANTS), F3 (c: the speed of light), n (10^{-9}), * (which yields 0.2998)
- Q: What is the electronic thermal voltage, V_T , at 300K, where $V_T = kT/q$
A: \hat{c} o (CONSTANTS), \blacktriangle , F1 (k: Boltzmann constant), 300, *, F2 (q: electron charge), / (which yields 0.0259)
- Find x and y for the two right angled triangles shown:

x: 3, ENTER, 4, $\sqrt{}$ (RSS)
y: 7, ENTER, 5, \hat{c} $\sqrt{}$ (RDS)
- Q: What is the total noise when 3 rms sources of 1.2 μ V, 2.5 μ V and 666nV are added?
A: 1.2u, ENTER, 2.5u, $\sqrt{}$ (RSS), 666n, $\sqrt{}$ (RSS) (which yields 2.8519 μ)
Q: How much noise is left if we now remove the 2.5 μ Vrms source?
A: 2.5u, \hat{c} $\sqrt{}$ (RDS) (which yields 1.3724 μ)
- Q: How many bits are needed to represent the unsigned integer 1234567890?
A: 1234567890, \log_2 (which yields 30.20, so 31 bits)
- Q: What is the biggest unsigned integer that 32 bits can represent?
A: 32, \hat{c} \log_2 (2^x) (which yields 4,294,967,296. So, 1 less than that)
- Q: What is $e^{i\pi}$?
A: Mobile skin: -1, SQRT, π , *, e^x (loses the T-register)
A: Desktop skin #1: o (π), \hat{c} e^x (e^{ix}) (only modifies the X-register)
A: Desktop skin #2: i ($\sqrt{-1}$), o (π), *, $\sqrt{}$ (e^x) (loses the T-register)

OTHER RANDOM DETAILS:

- The hot-key NULLing capability is only achievable by using a separate small program for each function. Those programs (whose names all start with ":") will be visible in the menus when you press e.g. XEQ or GTO and perceived as "clutter". The HP42S always displays the most recently loaded program first. To bring your own programs to the top of the list, export, delete & re-import them AFTER you've loaded the program bundles that contains all the skin programs. Annoying, but you only have to do it once.
- Using hot-keys, *desktop* skins can trigger programs unavailable directly via the buttons on the skin graphics e.g. $x^3 \rightarrow x^9$, $\sqrt[3]{x} \rightarrow \sqrt[9]{x}$, hyperbolic trig functions etc. For this reason, desktop skins contain more programs than the mobile phone versions. Despite the large number of skins, there are only 2 program suites - the mobile suite and the desktop suite. Other than the added clutter, there is no harm in loading the desktop suite onto a phone or tablet incase you later decide to attach a Bluetooth keyboard.
- To customize the HP button, search the layout file for "# HP" and replace the existing macro numbers in both places with those of your choice.
- All units in the CONSTANTS menu are metric, but can easily be changed to Freedom units for the few places in the known galaxy that still support them ;-).
- When using a landscape skin with Plus42, you can increase the number or rows in the display than would normally fit. When that happens, the skin grows to accommodate the added rows. If you prefer, you can also change the display font size in the layout file so more rows will fit before the skin grows. Search for "font" and you'll find it.

Some caveats regarding metric notation hot-keys:

- Just because you pressed one hot-key that saved you typing "E +/- 1 2" doesn't mean a single press of delete fully backspaces over all that.
- Pressing e.g. 1.2pn enters "1 . 2 E +/- 1 2 E +/- 9". Sadly, the HP42S ignores all subsequent presses of E (instead of resetting the exponent) and therefore yields the awkward 1.2E129...

INTUITIVE HOT-KEY MNEMONICS:

Choosing intuitive hot-keys for calculator buttons gets ugly quickly because many names share the same key first letter e.g. (STO, SIN) & (RCL, \sqrt{x}) etc. As a result many Free42 hotkeys were forced into awkward mnemonics. This skin makes that worse because metric notation reserves the characters (f, p, n, u, m, k, M, G, T & P) e.g. 1.2p yields 1.2×10^{-12} . I chose to adopt a new rule to tackle hot-keys: if a mathematical operator is referenced then the hot-key uses the alt/option modifier - the symbol for which is $\sqrt{}$. It fixes much of the awkwardness e.g.

	Free42 HOT-KEY	MY HOT-KEY
STO	m	s
SIN	s	\sqrt{s} (a mathematical operator)
RCL	r	r
\sqrt{x}	q	\sqrt{r} (a mathematical operator)

This skin has hot-keys for every letter of the alphabet except one, and hot-keys for alt/option every letter of the alphabet except 7. And there are quite a few hot-keys involving the control modifier and also non-alphabetic characters. The desktop version is really quite expansive!

CALCULATOR BUTTON vs DESKTOP KEYBOARD HOT-KEY PARADOXES:

All skins try to maintain consistency between the 42S buttons and keyboard hot-keys e.g. the 42S "1" button maps to "1" on the keyboard, and the 42S \hat{c} 1 button ("ASSIGN") maps to \hat{c} 1 ("!") on the keyboard. However, all skins have exceptions to that consistency caused by mapping 42S buttons to traditional, but *already shifted* keys on the keyboard, specifically multiply \rightarrow * (\hat{c} 8) and add \rightarrow + (\hat{c} =), so you can't now use \hat{c} multiply \rightarrow \hat{c} * because that implies typing " \hat{c} \hat{c} 8" and likewise \hat{c} add \rightarrow \hat{c} + implies typing " \hat{c} \hat{c} =" both of which are impossible on a keyboard.

In the previous version of my desktop skins, I scrapped multiply \rightarrow * (\hat{c} 8) and instead used "x" (matching the 42S button icon). That enabled using the separate hot-key pairs 8 & \hat{c} 8 and x & \hat{c} x just like on the real 42S without any conflicts. Similarly I scrapped add \rightarrow + (\hat{c} =) and instead used "a" (for "add") so that you could then use "a" & " \hat{c} a" instead of the impossible " \hat{c} =" & " \hat{c} \hat{c} =". It made everything perfectly consistent. Once you got used to it, adding and multiplying could be typed very quickly because shifted characters won't involved. However, that proved too brain-twisting for some folks, so I relented to the traditional multiply/add hot-key mappings and made exceptions for shifted hot-keys above the calculator buttons for 8, + and x, just like all the other skins :-). Fortunately, you don't have to remember those exceptions because, unlike most skins, this desktop skin shows all the hot-keys on the buttons. Note that a \rightarrow + and x \rightarrow multiply are still defined on these skins :-).

If your keyboard has a numeric pad then those conflicting Add/Multiply mappings can be avoided because *ONLY* there can you physically do \hat{c} * and \hat{c} +. Always use the numeric pad if it exists - especially on the Mac where you have amazing flexibility! However, while the Mac and Linux numeric pads work flawlessly, Free42's Windows numeric pad implementation has issues (for these skins) that void the CShift entry method i.e. tapping \hat{c} followed by the hot-key vs just typing \hat{c} hot-key. You've been using the Shift method your whole life on the computer, so just keep doing that.

There's plenty more to say about these skins, but you're probably not even reading this anyway ;-). Good luck. I'd be interested if you have any feedback (good or bad).

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