

Appendix D

Additional character set

While you can use any of the upper-case and lower-case English letter from the keyboard, there are 255 characters usable in the calculator. Including special characters like θ , λ , etc., that that can be used in algebraic expressions. To access these characters we use the keystroke combination \rightarrow CHARS (associated with the EVAL key). The result is the following screen:



By using the arrow keys, \leftarrow \rightarrow ∇ Δ , we can navigate through the collection of characters. For example, moving downwards in the screen produces more characters in the display:



Moving farther down, we see these characters:



There will be one character highlighted at all times. The lower line in the display will show the short cut for the highlighted character, as well as the ASCII character code (e.g., see the screen above: the short cut is $\alpha+D\alpha+9$, i.e., ALPHA \leftarrow D ALPHA \rightarrow 9), and the code is 240). The display also shows three

functions associated with the soft menu keys, f4, f5, and f6. These functions are:

CHAR: Opens a graphics screen where the user can modify highlighted character. Use this option carefully, since it will alter the modified character up to the next reset of the calculator. (Imagine the effect of changing the graphic of the character 1 to look like a 2!).

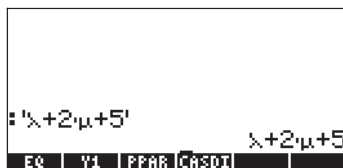
EQW: Copies the highlighted character to the command line or equation writer (EQW) and exits the character set screen (i.e., echoes a single character to the stack).

EQW: Copies the highlighted character to the command line or equation writer (EQW), but the cursor remains in the character set screen to allow the user to select additional characters (i.e., echoes a string of characters to the stack). To exit the character set screen press **ENTER**.

For example, suppose you have to type the expression: $\lambda^2 + 2\mu + 5$

Here is a suggested approach, using the stack in either Algebraic or RPN mode:

Use the keystrokes: **2nd** **CHAR** to get to the characters screen. Next, use the arrow keys to highlight the character λ . Press **EQW** (i.e., the **F5** key), and continue with the keystrokes: **+** **2** **x** **CHAR**. Next, use the arrow keys to highlight the character μ . Press **EQW** (i.e., the **F5** key), and finish the expression with the keystrokes: **+** **5** **ENTER**. Here is the result of this exercise in Algebraic and RPN modes, respectively:



Following, we list some of the most common **ALPHA** **2nd** keystroke combinations:

Greek letters

α	(alpha)	ALPHA → A
β	(beta)	ALPHA → B
δ	(delta)	ALPHA → D
ϵ	(epsilon)	ALPHA → E
θ	(theta)	ALPHA → T
λ	(lambda)	ALPHA → N
μ	(mu)	ALPHA → M
ρ	(rho)	ALPHA → F
σ	(sigma)	ALPHA → S
τ	(tau)	ALPHA → U
ω	(omega)	ALPHA → V
Δ	(upper-case delta)	ALPHA → C
Π	(upper-case pi)	ALPHA → P

Other characters

~	(tilde)	ALPHA → I
!	(factorial)	ALPHA → 2
?	(question mark)	ALPHA → 3
\	(backward slash)	ALPHA → 5
∠	(angle symbol)	ALPHA → 6
@	(at)	ALPHA → ENTER

Some characters commonly used that do not have simple keystroke shortcuts are: \bar{x} (x bar), γ (gamma), η (eta), Ω (upper-case omega). These characters can be “echoed” from the CHARS screen: → CHARS.