

# ΔFIX Preprocessor Cheat Sheet

[ΔFIX Cheat Sheet.md]

Cat.	Item	Example
Cont.	Continuation Lines ... (dots / diaereses are ignored)	a←1 + 2 + ... 3 4 5
Cont.	Continuing Parenthetical Expressions Across lines	a←~1+(2* 31 32 33)÷ 1+ι3
Cont.	Continuing Strings Across Lines “string”	str← “This is line 1 and line 2”
Unicode	Decimal □Unnn	□U123≡□UCS 123 ♦ □U123≡'{'
Unicode	Hexadecimal □Unhhx	□U7BX≡□U123
Nums	Hexadecimal Integers dhhhx	1122X≡123X+0FFFX
Nums	Long number separator _	123_245_343_122.35 3.14159_26534
Atoms	Atoms consist of APL names, numbers, and APL strings.	:FOR a :IN `fred `jack 123`... 3.14159 55
Atoms	Atoms as names `atom1 atom2	colors←`red orange yellow red←`red orange ^/redsecolors
Atoms	Atoms as numbers	local←`CA 14850
Atoms	Atoms as strings `name1 `string2`	Last←`Smith `Van Buren` Jones
Parms (Para- meters)	Parameters	atom1 atom2→ arbitrary code [See Lists for examples]
Lists	Lists (code1 ; code2;)	Create mappings from names/ numbers/strings to arbitrary code expressions
Lists	Ordinary code (code1; code2; )	test←(ι3 ; ι4)
Lists	Function parameters	graph←(XY type 3→(ι20)(1οι20); legend x→`Voltage`; legend y→`Amplitude` )

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Lists	With atoms	<code>graph(type→`XY 3; smooth →`true; line color→`green; line height→`2.5 in)</code>
Lists	Omitted parameters (code1;;code3)	<code>address(2525; 'Cozy'; 'Lane'; ; ; 90212; USA)</code> A city/state opal with zip
Lists	Null list   ()	Always true: <code>() ≡ 0</code>
Name Suffixes	Is name defined? <code>name..DEF</code>	<code>:IF print..DEF</code>
Name Suffixes	Is name undefined? <code>name..UNDEF</code>	<code>:IF print..UNDEF</code>
Name Suffixes	Put name in quotes: <code>name..Q</code> (possibly after macro or other processing)	<code>□NPARTS fileName..Q</code>
Name Suffixes	Get value of environment variable 'name'	<code>PATH←PATH..ENV{×≠α: ω &lt;&gt; α}'...'</code>
Direc- tive	If clause <code>::IF code</code>	<code>::IF 0≠DEBUG..ENV</code>
Direc- tive	Test that name is defined	<code>::IFDEF DEBUG_FLAG</code>
Direc- tive	Test that name is not defined	<code>::IFNDEF DEBUG_FLAG</code>
Direc- tive	Undefine name	<code>::UNDEF DEBUG_FLAG</code>
Direc- tive	Else-if clause <code>::ELSEIF/ELIF code</code>	<code>::ELSEIF DEBUG_FLAG≥3</code>
Direc- tive	Terminate <code>::IF</code> , <code>::IFDEF</code> or <code>::IFNDEF</code> sequence	<code>::END, ::ENDIF, ::ENDIFDEF, ::ENDIFNDEF</code>
Direc- tive	Conditional with single variable name	<code>::COND DEBUG □←CUR_RESULT</code>
Direc- tive	Conditional with arbitrary parenthetical expression	<code>::COND (DEBUG≥3) □←CUR_RESULT</code>
Direc- tive	Preprocessor messages <code>::MESSAGE/MSG text</code>	<code>::MSG DEBUGGER CODE ACTIVATED!</code>

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Cat.	Item	Example
Direc- tive	Preprocessor error msgs ::ERROR [num] string	::IF CONFLICTING_OPTIONS ::ERROR 911 Conflicting Options Detected!
Direc- tive	Include a file unconditionally	::INCLUDE MyLocalData.dat
Direc- tive	Include a file if not already included earlier	::CINCLUDE printServices.dyalog