

Topics

C Assembler Error Messages

C-3

22 Assembler Error Messages

The assembler issues several types of error messages:

- Fatal
- Nonfatal
- Macro

When the assembler completes its second pass, it reports any errors that it encountered during the assembly. It also prints these errors in the listing file (if one is created); an error is printed following the source line that incurred it.

This appendix discusses the three types of assembler error messages; they are listed in alphabetical order. Most errors are fatal errors; if an error is not fatal or if it is a macro error, this is noted in the list.

absolute value required: A relocatable symbol was used where an absolute symbol was expected.

a component of the expression is invalid

address required: The operand of the flagged directive must be an address

an identifier in the expression is invalid

argument must be character constant

bad indirect address

bad macro library format

.break encountered outside loop block

cannot equate an external to an external

cannot open library: A library name specified with the `.mlib` directive does not exist or is already being used.

cannot redefine register: Register names cannot be used as labels.

character constant overflows a word

close ()) missing: Mismatched parentheses.

close (]) missing: Mismatched brackets.

close quote missing: All strings must be enclosed in quotes.

comma missing: The assembler expected a comma but did not find one. This usually means that more operands were expected.

conditional block nesting level exceeded

conflicts with previous section definition

copy file open error: A file specified by a .copy directive does not exist or is already being used.

directive only valid if (-a) option use: The .setsect and .setsym directives can be used only if the -a (absolute list) option is specified.

divide by zero: An expression or well-defined expression contains invalid division.

duplicate definition: The symbol appears as an operand of a REF statement, as well as in the the label field of the source, or the symbol appears more than once in the label field of the source.

duplicate definition of a structure component

.else or .elseif needs corresponding .if: An .else or .elseif directive was not preceded by an .if directive.

empty structure

expression changed values due to jump expansion: An expression is dependent on the amount of code between 2 labels. If the assembler expands a jump in the code between these 2 labels, then this expression will evaluate to different values in pass1 and pass2. Between the 2 labels, you will need to manually expand any jumps in your source code which were automatically expanded by the assembler.

expression not terminated properly

expression out of bounds

filename missing: The specified filename cannot be found.

floating-point expression not allowed

floating-point number not valid in expression

illegal label: A label cannot be used for the second instruction of a parallel instruction pair.

illegal operation in expression

illegal structure definition

illegal structure member

illegal structure, union, or enumeration tag

illegal relative address: The label destination of a relative jump must be defined within the same section as the jump.

illegal symbolic address: Operand only valid in absolute address mode.

illegal use of local label: Local labels are not allowed in expressions.

invalid binary constant: The only valid binary integers are 0 and 1; the constant must be suffixed with b or B.

invalid bit number: You must specify a bit number between 0 and 7.

invalid decimal constant: The only valid decimal integers are 0-9.

invalid expression: This may indicate invalid use of a relocatable symbol in arithmetic.

invalid floating–point constant

invalid octal constant: The only valid octal digits are the integers 0-8; the constant must be suffixed with q or Q.

invalid opcode: The command field of the source record has an entry that is not a defined instruction, directive, or macro name.

invalid operand or operand combination

invalid option: An option specified by the .option directive is invalid.

invalid subscript or index**invalid symbol qualifier**

invalid trap number: Trap numbers must be absolute values between 0 and 15.

label required: The flagged directive must have a label.

library not in archive format: A file specified with an .mlib directive is not an archive file.

local label multiply defined in block**local label not defined in block****local macro variable is not a valid symbol****macro parameter is not a valid symbol****maximum macro nesting level exceeded****maximum number of copy files exceeded****.mexit directive encountered outside macro****missing .endif directive****missing .endloop directive****missing .endm directive****missing macro name****missing structure tag****no include/copy files in macro or loop blocks****no parameters for macro arguments**

no relative jumps to symbols not in current section: Relative jumps to load–time addresses defined with the .label directive are not allowed.

offset must point to even (word) address**open “(“ expected**

operand missing: An operand must be supplied.

operand must be an immediate value

pass1/pass2 operand conflict: A symbol in the symbol table did not have the same value in pass 1 and pass 2.

positive value required

redefinition of local substitution symbol

register symbol used before definition: Equating a symbol to a register must be done before first symbol use.

relative jumps to externals are not allowed

string required: You must supply a string that is enclosed in double quotes.

substitution symbol stack overflow

substitution symbol string too long

subtraction of labels not allowed: Subtraction of labels or relationals involving the amount of code between labels is not allowed in expressions used in some contexts.

symbol required: The `.global` directive requires a symbol as an operand.

symbol used in both REF and DEF: A REFed symbol is already defined.

syntax error

target address not word aligned

too many local substitution symbols

unbalanced symbol table entries: For `.block` and `.func` directives.

undefined structure member

undefined structure tag

undefined substitution symbol

undefined symbol: An undefined symbol was used where a well-defined expression is required.

underflow in floating-point constant: Floating-point value is too small to represent.

unexpected .endif encountered: An `.endif` directive was not preceded by a `.loop` directive.

unexpected .endloop encountered: An `.endloop` directive was not preceded by a `.loop` directive.

unexpected .endm directive encountered

unexpected .endstruct directive encountered: An `.endstruct` directive was not preceded by a `.struct` directive.

value is out of range

.var directive encountered outside macro

version number changed

warning — block open at end of file

warning — function `.sym` required before `.func`

warning — immediate operand not absolute

warning — line truncated

warning — register converted to immediate

warning — string length exceeds maximum limit

warning — **symbol truncated**: The maximum length for a symbol is eight characters. The assembler ignores the extra characters.

warning — **trailing operand(s)**: The assembler found fewer or more operands than expected in the flagged instruction.

warning — **value out of range**

warning — **value truncated**: The expression given was too large to fit within the instruction opcode or the required number of bits.

