

# ELLIOTT

# 903

Volume 2: PROGRAMMING INFORMATION  
Part 2: PROGRAM DESCRIPTIONS  
Section 18: C4 (COMPARE SUM-CHECKED BINARY TAPE WITH  
STORE)

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## Chapter 1: INTRODUCTION

### 1.1 Purpose

To check a sum-checked binary tape output by T22 or to compare its contents with those of store-locations. All errors or discrepancies are reported.

### 1.2 Summary

C4 sumchecks the whole of the tape output by T22 including the loader at its head. The program checks only those locations specified by the tape; discrepancies are reported immediately.

### 1.3 Form of Distribution

C4 is distributed as a binary tape for input by the initial instructions.

### 1.4 Method of Use

C4 may run in any store-module and at any program-level. If it is run in the first module it will check program held anywhere in store.

## Chapter 2: FUNCTIONS

C4 checks only those store locations whose values are specified on the S. C. B. tape. The copy of T23 punched at the beginning of every tape output by T22 is sum-checked by C4 as is the rest of the tape.

Messages are output on a newline of the teleprinter as specified below. After output C4 continues to check the rest of the tape.

<u>Message</u>	<u>Cause</u>
L	Error in copy of the loader at head of the SCB tape.
S	SCB tape fails to sum-check.

If a discrepancy is detected between the contents of store and of the SCB tape. C4 displays the following information on a newline as three integers.

- (i) the address being checked.
- (ii) the contents of the store location
- (iii) the contents of the tape.

When the end of the tape is reached the characters <halt> and <bell> are displayed.

Chapter 3: METHOD USED

C4 simulates the initial instructions to input each word of T23. Two locations in C4 contain the checksum for T23 and the number of words to be input to check it.

C4 does not alter the store locations it checks. Note that consecutive zeros skipped by T22 are not checked by C4.

See description of T22-23 for the format of an SCB tape.

Chapter 4: OPERATING INSTRUCTIONS

Input C4 by the initial instructions (8181)

Load SCB tape and enter at 8.

Chapter 5: STORE USED

C4 uses locations 8000 - 8179 inclusive.

Chapter 6: TIME TAKEN

C4 operates at the speed of the peripheral devices used.