

# REPRODUCTION

## BRANCH HIGH

### A. PURPOSE OF TEST

1. TO TEST THE BRANCH HIGH CIRCUITRY BY COMPARING EACH OF THE 64 POSSIBLE CHARACTERS WITH ALL OTHER CHARACTERS THAT ARE SEQUENTIALLY HIGHER. ERRORS ARE DETECTED BY A NO-BRANCH (LOW OR EQUAL) WHICH FORCES A PRINTOUT OF THE TWO CHARACTERS COMPARED, RESULT SHOULD BE (ALWAYS HIGH), RESULT IS (LOW OR EQUAL), AND THE WORD "ERROR"; OR STOPS THE MACHINE WITH SENSE SWITCH E ON.
2. TO TEST THE BRANCH HIGH CIRCUITRY BY COMPARING EACH OF THE 64 POSSIBLE CHARACTERS WITH ALL OTHER CHARACTERS THAT ARE SEQUENTIALLY LOWER. ERRORS ARE DETECTED BY A BRANCH (HIGH OR EQUAL) WHICH FORCES A PRINTOUT OF THE TWO CHARACTERS COMPARED, RESULT SHOULD BE (ALWAYS LOW), RESULT IS (HIGH OR EQUAL), AND THE WORD "ERROR"; OR STOPS THE MACHINE WITH SENSE SWITCH E ON.

NOTE: NO PRINTOUT OCCURS FOR CORRECT RESULTS EXCEPT THE PRINTING OF THE TITLE AND HEADINGS WHEN "I" IS MANUALLY ENTERED IN S52.

### B. LOADING PROCEDURES

1. PLACE TEST. IN 1402 READ HOPPER AND DEPRESS LOAD KEY.
2. WHEN RUNNING TEST FROM TAPE, ENTER A 1 IN 1259.

### C. PROGRAM CONTROL

#### 1. SENSE SWITCHES

- B ON TO REPEAT FOR SCOPING  
OFF TO CONTINUE
- D ON TO REPEAT INCLUDING LOOP COUNTER  
OFF TO CONTINUE
- E ON TO STOP ON ERROR  
OFF TO PRINT ERROR
- G ON TO REPEAT ENTIRE PROGRAM  
OFF TO CONTINUE

### D. TEST PROCEDURE

THE FOLLOWING CHARACTERS AND BLANKS ARE STORED IN ASCENDING SEQUENCE BY THE LOADING ROUTINE IN LOCATIONS 701-830, EXCEPT THE WORD MARKS IN ALL ODD NUMBERED POSITIONS, THE WORD SEPARATOR CHARACTER IN LOCATION 733, AND THE A-BIT IN LOCATION 739 WHICH ARE PROGRAM GENERATED:

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**E. STOPS**

979 OR 1089 IN STORAGE ADDRESS REGISTER: ERROR-SENSE E ON

**F. PRINTOUTS**

1. CORRECT

NONE

2. ERROR

<u>A FIELD</u>	<u>B FIELD</u>	<u>RESULT SHOULD BE</u>	<u>RESULT IS</u>	
A	B	HIGH	LOW	ERROR
B	F	HIGH	EQUAL	ERROR
Y	Q	LOW	HIGH	ERROR
Z	R	LOW	EQUAL	ERROR
8I	9I	HIGH	LOW	ERROR
9I	8I	LOW	HIGH	ERROR
	\$	HIGH	LOW	ERROR
*		LOW	EQUAL	ERROR
		HIGH	LOW	ERROR
		LOW	HIGH	ERROR

NOTE: NO PRINTOUT OCCURS IN THE A AND B FIELD COLUMNS FOR UNPRINTABLE CHARACTERS.

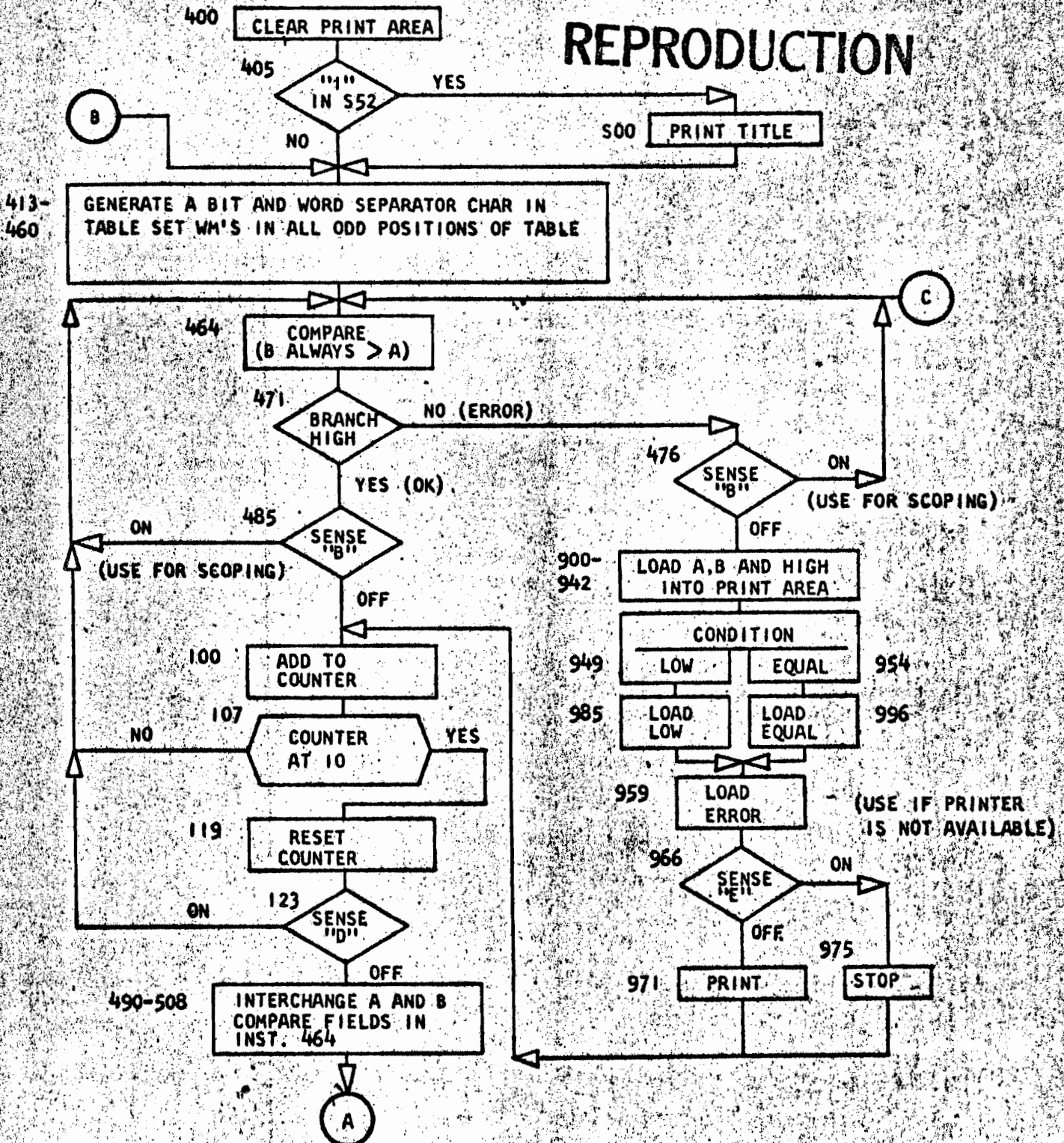
**G. COMMENTS**

AN OPERATION COUNTER IS INCLUDED TO REPEAT EACH BRANCH ON HIGH TEST 10 TIMES. THE APPROXIMATE RUNNING TIME OF THE COMPLETE TEST IS 30 SECONDS.

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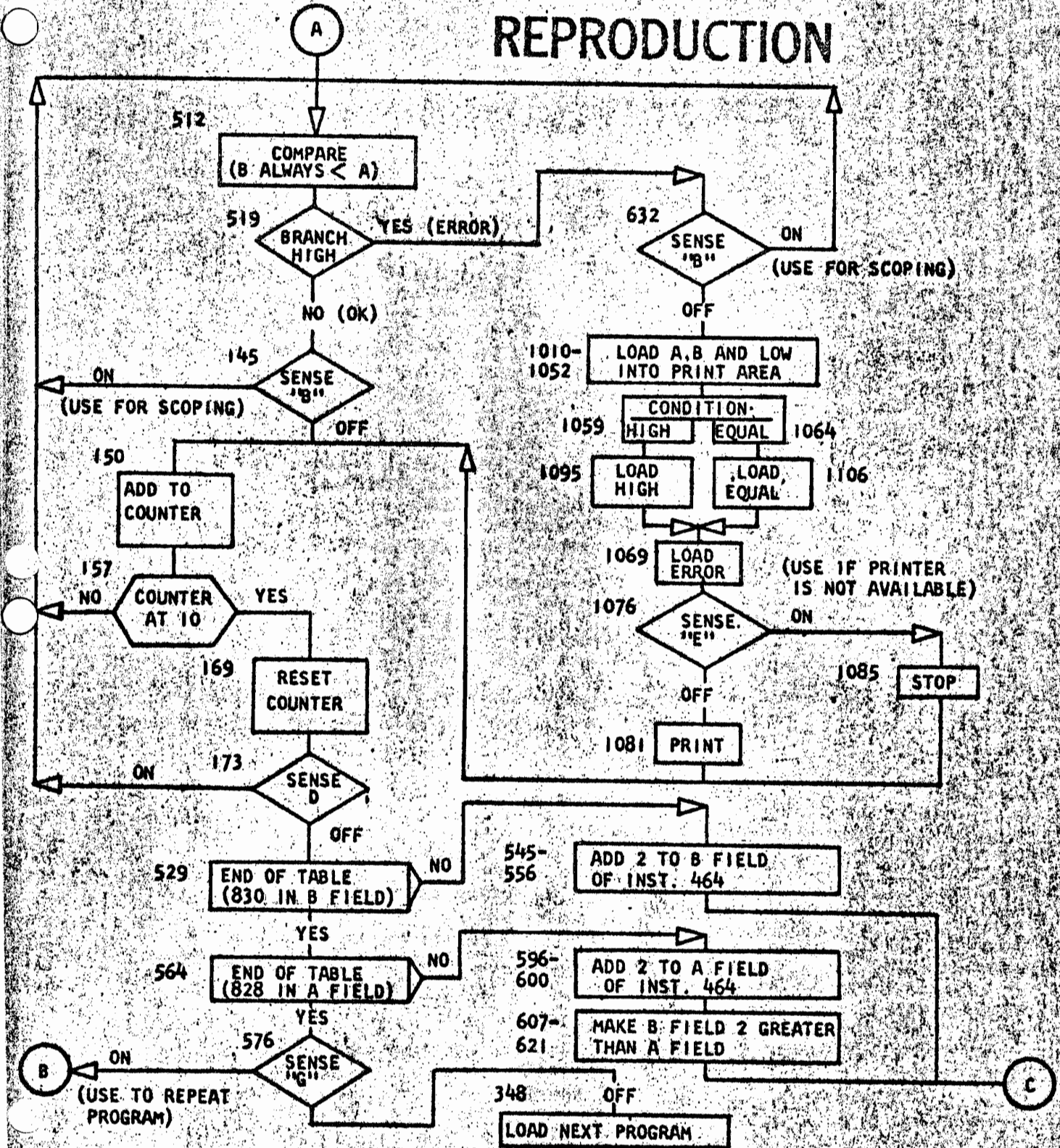
BRANCH HIGH  
 FLOW CHART



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PROGRAM LISTING FOR USE WITH FLOW CHART

BRANCH HIGH

3300B

INSTRUCTION

ADDRESS	OP	A	B	REMARKS
100	100	A	100 371	ADD ONE TO LOOP COUNTER
107	107	B	119 3701	BRANCH OUT OF LOOP COUNTER C FOR TA
115	115	B	464	REPEAT LOOP
119	119	S	371	RESET LOOP COUNTER
123	123	B	464 D	REPEAT LOOP ON SW D SS
128	128	,	513	INTERCHANGE A + B FLDS OF COMP IN 464
132	132	B	494	GO SET UP COMPARE FOR 512 FOR LOW COND
145	145	B	512 B	B ON TO SCOPE SS
150	150	A	150 371	ADD ONE TO LOOP COUNTER
157	157	B	169 3701	BRANCH OUT OF LOOP COUNTER C FOR TA
165	165	B	512	REPEAT LOOP
169	169	S	371	RESET LOOP COUNTER
173	173	B	512 D	REPEAT LOOP ON SW D SS
178	178	B	529	CONTINUE WITH TEST
368	368	O	00+	LOOP COUNTER
377	377	B	400 S591	USE WHEN TESTS ARE RUN FROM TAPE
385	385	B	588	..
400	400	/	332	START TEST
404	404	/		..
405	405	B	500 S521	BR TO TITLE PRINT ROUTINE IF 1 IN S52
413	413	L	653 441	SET INSTR IN 438 + 464 TO INITIAL COND
420	420	L	660 470	..
427	427	B	850	BR TO GEN WD SEP + A BIT FOR TABLE
434	434	□	439	SET WORD MARK IN ALL ODD ADDR OF TABLE
438	438	,	701 439	..
445	445	V	464 8291	..
453	453	A	971 441	..
460	460	B	434	..
464	464	C	702 704	*COMPARE
471	471	B	485 U	BRANCH HIGH - SHOULD BRANCH
476	476	B	464 B	B ON TO SCOPE SS
481	481	B	900	BRANCH TO ERROR PRINT ROUTINE
485	485	B	464 B	B ON TO SCOPE SS
490	490	B	100	GO TO LOOP COUNTER
494	494	M	467 518	TO SET UP COMP IN 512 FOR LOW COND
501	501	M	470 515	..
508	508	□	513	..
512	512	C	704 702	*COMPARE
519	519	B	632 U	BRANCH HIGH - SHOULD NOT BRANCH
524	524	B	145	GO TO SWITCH B
529	529	C	470 666	TEST FOR END OF TABLE IN B FIELD OF 464
536	536	B	545 /	BRANCH IF UNEQUAL TO ADD 2 TO B FIELD
541	541	B	564	BRANCH TO TEST FOR END OF TABLE IN A FLD

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TABLE OF UNPRINTABLE CHARACTERS

LP-LEFT PARENTHESIS 12 5 8 SE-SEMICOLON 11 6 8 DE-DELTA 11 7 8  
 WS-WORD SEPARATOR 0 5 8 LT-LESS THAN 12 6 8 PZ-PLUS ZERO 12 0  
 TS-TAPE SEGMENT MARK 0 7 8 GT-GREATER THAN 6 8 TM-TAPE MARK 7 8  
 GM-GROUP MARK 12 7 8 MZ-MINUS ZERO 11 0 CO-COLON 5 8  
 RP-RIGHT PARENTHESIS 11 5 8 AP-APOSTROPHE 0 6 8

,008015,022029,033033N 1001 BRANCH HIGH 3300B 0A  
 ,008015,022029,033033N 1001 SET WORDMARK CARD 3300B 02  
 L069136,107115,119123,1281321001A10037181193701846453718464D,5138494 3300B 03  
 L070182,150157,165169,1731781001B5128A150371816937018512S371851208529 3300B 04  
 L067367,340344,348349,3573611001,008012,001100118361080AB400/340080 3300B 05  
 L069404,377385,389400,4044041001000P B4005591BS88 /332/ 3300B 06  
 Z  
 L072444,413420,427434,4384451001B5005S21L653441L6604708850 0439,7014393300B 07  
 L072484,453460,464471,4764811001V4648291A971441B434C7027048485U8464889003300B 08  
 L071523,490494,501508,5125191001B46488100M467518M4705150513C704702B632U 3300B 09  
 L068559,529536,541545,5495561001B145 C4706688545/8564,468A9714700468 3300B 10  
 L068595,564571,576581,5885921001B464C467663B596/B413G0711829/230B348 3300B 11  
 L068631,600607,614621,6286321001,465A971467L467470A97147004654688464 3300B 12  
 L072671,637650,654661,6646671001B512BB\*10 ,701C702704828830HIGH 3300B 13  
 L072711,677682,701701,7017011001LOW EQUALERROR . 0 L L G3300B 14  
 P T M  
 L0727510712712,721741,7417411001 + \$ \* R S D - / , % C A T # @ C G T P3300B 15  
 P E E O P S O T M Z  
 L0727910752752,761781,7817811001 A B C D E F G H I M J K L M N O P Q R \*3300B 16  
 Z  
 L0728310792792,801821,8218211001 S T U V W X Y Z 0 1 2 3 4 5 6 7 8 9 91 3300B 17  
 L0648630832852,850857,8648641001 Y850763Y857739 3300B 18  
 L068899,900900,900900,9009001001B434 3300B 19  
 L067934,907914,921928,9359351001,929936M467931M4709380929936LAAA202 3300B 20  
 L072974,942949,954959,9669711001LBBB222L6712458985TB996SL686285B975E21003300B 21  
 L067409,979985,992996,034101001.979B100 L676265B959L681265B959 3300B 22  
 L067444,417424,431438,4454451001,439446M515441M5184480439446LAAA202 3300B 23  
 L072484,452459,464469,4764811001LBBB222L6762458990B/06SL686285B985E21503300B 24  
 L067/19,489495,502506,5135201001.489B150 L671265B969L681265B969 3300B 25  
 L072/59,540560,560560,5605601001A FIELD B FIELD 3300B 26  
 L072/99,980S00,500S00,500S001001RESULT SHOULD BE RESULT IS 3300B 27  
 L057S24,501S05,512S13,517S1810012,049L0772772/27720/40/60 3300B 28  
 L052S44,529S36,537S41,545S4510010/80L/892702/2702413 3300B 29  
 /333080N CLEAR WORDMARK CARD 3300B 30  
 ,019027,031,0380428031T98G8400L046352BWO4BS88 BRANCH HIGH 3300B 31

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