

RECOMP II USERS' PROGRAM NO. 1122

PROGRAM TITLE: BAUDOT TO HOLLERITH CONVERSION

PROGRAM CLASSIFICATION: Subroutine

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PURPOSE: To accept a word of baudot characters,  
translate them to Hollerith coded characters,  
and punch them on IBM cards.

DATE: July 1962

Published by

RECOMP Users' Library

at

AUTONETICS INDUSTRIAL PRODUCTS  
A DIVISION OF NORTH AMERICAN AVIATION, INC.  
3400 East 70th Street, Long Beach 5, California

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## BAUDOT TO HOLLERITH CONVERSION

### PURPOSE:

Accepts a word of baudot characters, translates them to Hollerith coded characters, and punches them on IBM cards.

### CALLING SEQUENCE:

- 1) Using SM/I's trapping mode interpretative routine, 108R:

PCD 000N.0

- 2) For use without the trapping mode feature: (the transfer instruction must be in right 1/2 word)

TRA (location of this routine)  
PZE 000N.0

In both cases, N denotes the number of characters to be punched ( $1 \leq N \leq 7$ ).

Enter with the baudot word in the A register, and anything in the R register. The first character to be punched should be in bit positions 5-9, the second, in 10-14, and so on. This is similar to the alphabetic (baudot) format for the PNC 777N instruction, except that bit positions s, 1, 2, 3, 4 are ignored, and only a maximum of 7 characters may be punched at one time.

Exit with garble in both the A and R registers.

### RESTRICTIONS:

1. The baudot codes are assumed to refer to their letters case equivalent; only alphabetic characters will be converted correctly. Up to seven letters may be punched at one time.
2. The baudot codes for "space" and "blank" will produce a Hollerith "space" - a blank column. All other non-alphabetic baudot codes (figure shift, letter shift, carriage return, tab, and line feed) generate a slash-bar ( \ ) on the card.

### STORAGE:

50 (octal) sectors, relocatable to any even 8 word location (XXX0.0)

using SM/I's 127 R (RUG 1082), which temporarily uses three additional words at the end of this routine for a modification "matrix".

**TIME:**

Approximately 175 ms per character, or 14 seconds per card.

**DESCRIPTORS:**

Hollerith, baudot, cards, output, code, teletype, conversion, IBM

Loc'n	Cm'd	Addr.	Contents	Accumulator	b	Remarks
. . . 00	C.T.L	. . 02.0		baudot word	..	
. . . .	S.A.X	7.7.6.00	baudot word		..	
. . . . 1	A.D.D	7.7.6.30			..	
. . . . .	T.R.A	7.7.6.2.0			..	
. . . . 2	C.T.V	. . 2.0.0			..	
. . . . .	S.T.O	7.7.6.3.0			..	
. . . . 3	S.T.A	7.7.6.5.1			..	
. . . . .	C.L.A	00.0.1.0	(( — ))	code	..	
. . . . 4	E.X.T	7.7.7.6.0		n @ 18	..	
. . . . .	S.U.B	7.7.7.7.0	1 @ 18	n - 1	..	
. . . . 5	S.T.O	7.7.6.1.0	new "n"		..	
. . . . .	T.M.I	————	EXIT		..	
. . . . 6	C.L.A	7.7.6.0.1			..	
. . . . .	A.R.S	0.0.1.1.0	9		..	shift F1 to B of 18
. . . . 7	E.X.T	7.7.7.6.0	mask	bits F1, 2, 3	..	drop F4, F5 bits
. . . . .	A.D.D	7.7.7.3.0	table loc'n		..	→ 20
. . . . 10	-00	1.0.0.0.0	1 @ 9		..	← 34
. . . . .	-00	00.0.0.0.0			..	
. . . . 1	S.T.A	7.7.7.2.0			..	
. . . . .	C.L.A	7.7.7.0.0	1 @ 9	1 @ 9	..	
. . . . 2	A.L.S	————	N	N punch	..	
. . . . .	T.Z.E	7.7.7.7.0			..	
. . . . 3	S.U.B	7.7.6.2.1	0, 11, 12 punches		..	
. . . . .	P.N.C	7.7.7.1.0			..	
. . . . 4	C.L.A	7.7.6.0.0	baudot word		..	
. . . . .	A.L.S	00.0.5.0	← 5		..	
. . . . 5	S.T.O	7.7.6.0.0			..	
. . . . .	C.L.A	7.7.6.1.0			..	
. . . . 6	C.T.V	. . 2.0.0			..	
. . . . .	T.R.A	7.7.6.4.1			..	→ 04.1
. . . . 7	A.D.D	7.7.6.2.1			..	make sign + for
. . . . .	T.R.A	7.7.7.3.1			..	"9" bit
. . . . 20	S.T.O	7.7.7.3.0			..	← 07
. . . . .	C.L.A	7.7.6.0.1			..	
. . . . 1	E.X.T	7.7.7.5.0	3 @ 6	F5, F4 only	..	
. . . . .	A.R.S	00.3.5.0	28	16 (F5, 4) @ 18	..	
. . . . 2	A.R.S	00.0.0.0	NOP		..	NOP
. . . . .	S.T.A	7.7.7.3.1			..	
. . . . 3	C.L.A	. . 4.0.1	(( — ))		..	
. . . . .	A.L.S	————	16 (F5, F4)	code	..	
. . . . 4	C.T.V	. . 3.0.0			..	
. . . . .	T.R.A	7.7.7.0.0			..	→ 30
. . . . 5	+0.3	00.0.0.0	3 @ 6 (mask)		..	
. . . . .	-00	00.0.0.0			..	
. . . . 6	+0.0	00.0.7.0	7 @ 18 (mask)		..	
. . . . .	-00	00.0.0.0			..	
. . . . 7	+0.0	00.0.1.0	1 @ 18		..	
. . . . .	-00	00.0.0.0			..	

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V

Program No. 164R Title \_\_\_\_\_

Programmed by: \_\_\_\_\_ Date \_\_\_\_\_

Loc'n	Cm'd	Addr.	Contents	Accumulator	b	Remarks
. . . 30	STO	77.6.30	code		..	← 24
. . . .	EXT	77.7.50	7@15	0,11,12 bits	..	
. . . . 1	ALS	00.0.40			..	
. . . .	STO	77.6.20	0,11,12		..	
. . . . 2	CLA	77.6.30	tempsto	code	..	
. . . .	EXT	77.7.60			..	
. . . . 3	ARS	00.0.60			..	
. . . .	ARS	00.0.00		number of numeric punch	..	
. . . . 4	CTV	. . 1.00			..	
. . . .	T.RA	77.7.10		number	..	→ 11
. . . . 5	+0.0	00.7.00	7@15 (mask)		..	
. . . .	-0.0	00.0.00			..	
. . . . 6	+0.0	17.0.00	15@12 (mask)		..	
. . . .	-0.0	00.0.00			..	
. . . . 7	-0.0	00.0.00	) NOT USED		..	
. . . .	-0.0	00.0.00			..	
. . . 40	+0.0	11.0.00		- b1 b1 T 0	..	Table of Hollerith codes for the characters as shown. Codes are given as the number of the Hollerith numeric punch, followed by a binary representation of row 0,11,12 bits. Codes at b's of
. . . .	+4.0	703.1.0			..	
. . . . 1	+0.0	05.1.10		- E D Z B	..	
. . . .	-1.2	30.1.01			..	
. . . . 2	-0.0	01.4.20		- / R L G	..	
. . . .	+2.0	643.4.1			..	
. . . . 3	-0.0	01.1.00		- A J W /	..	
. . . .	+2.1	50.0.01			..	
. . . . 4	-0.0	11.0.10		- b1 N H M	..	
. . . .	+2.2	02.2.10			..	
. . . . 5	+0.0	02.4.11		- S F Y X	..	
. . . .	-1.2	10.3.60			..	
. . . . 6	-0.0	11.1.01		- I C P V	..	
. . . .	+1.1	642.6.0			..	
. . . . 7	-0.0	04.4.01		- U K Q /	..	
. . . .	-2.2	04.0.01			..	