

The Automatic Interpreter (Type 550)

The Automatic Interpreter (Type 550) is used to translate the holes punched in a tabulating card into printed figures along the top edge of the card. The information to be printed may be placed in any sequence. This is made possible by a plugboard which provides entire flexibility. Forty-five columns of interpreted data constitute the full printing capacity of the machine, but any 45 columns of a card may be selected.

The operation of this machine is very simple, the only requirement on the operator's part being to place the group of cards to be interpreted in the feeding unit, wire the plugboard, set the zero suppression levers, and press the start button. The machine then automatically interprets at the rate of 75 cards a minute or 4,500 cards an hour.

Automatic interpretation of punched cards is an aid to checking, filing, selection, and reference operations.

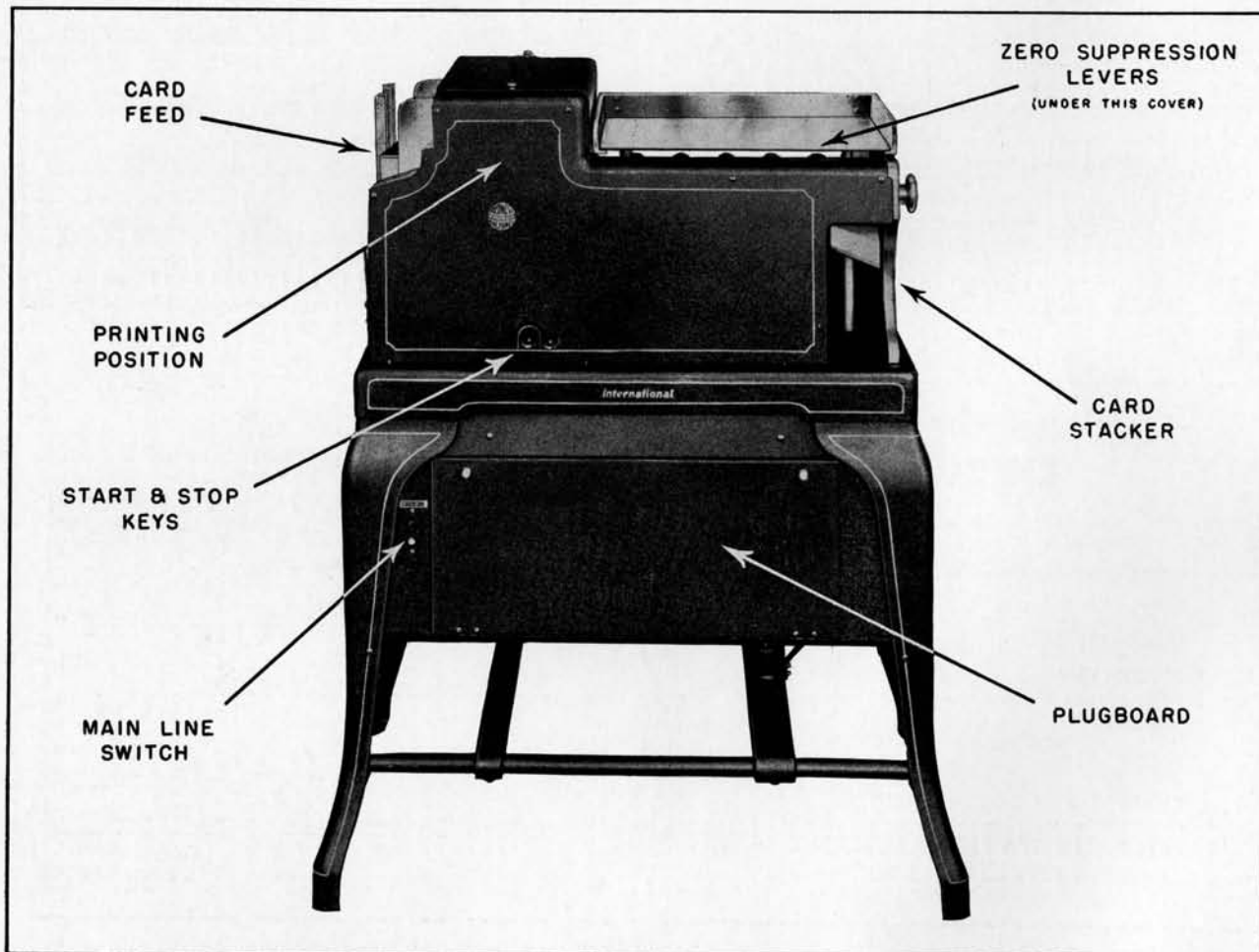
Card Feeding

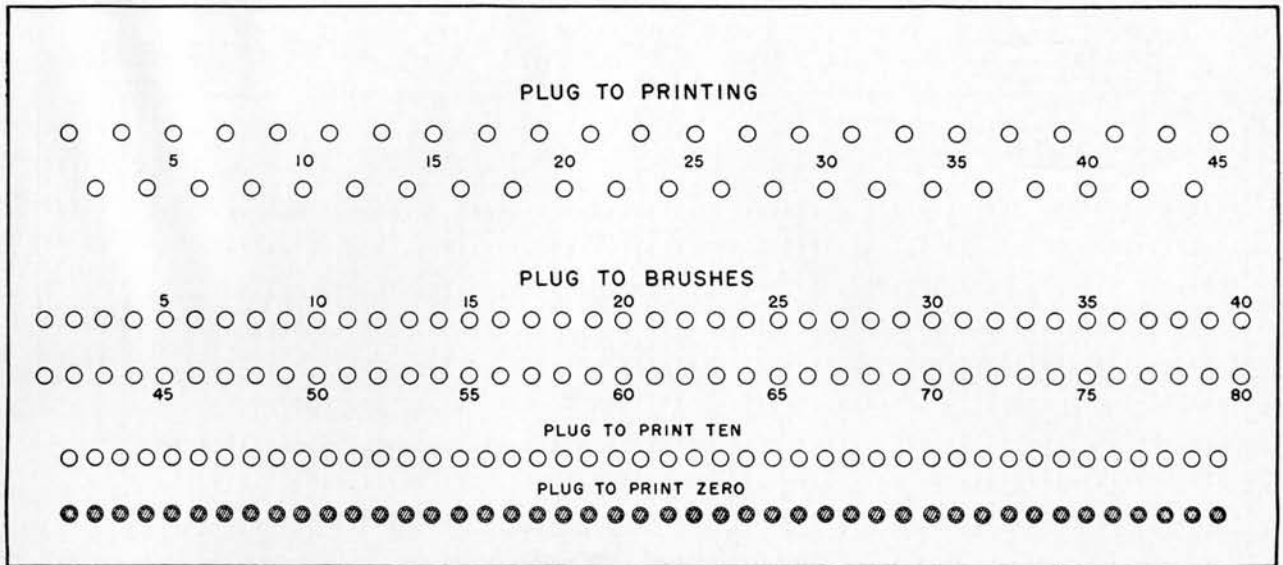
The machine is equipped with a horizontal feed which permits continuous operation when cards are being placed in the feed hopper or removed from the stacker. Cards should be placed in the hopper printed side down with the top edge (12's) entering the machine first.

The feeding hopper has a capacity of 800 cards; and the stacker, in which the interpreted cards are deposited, has a capacity of 1,000 cards.

Plugboard

There are two sets of hubs for the insertion of connection wires on this machine. One set corresponds to the columns of the card (brush positions) and the other set corresponds to the forty-five type bars (printing positions). These two sets of hubs make it possible to record across the top of the card, in any desired sequence, the information recorded in any forty-five columns of the card.





Plugboard of the Automatic Interpreter

At the bottom of the plugboard are two additional rows of hubs which are utilized for printing "10" or "0". These hubs are fitted with a special set of plugs which are normally inserted in the lower hubs (Print Zero) to cause the machine to interpret punched zeros in the normal manner. When any of the plugs are placed in the upper of these two rows of hubs (Print Ten) the machine interprets punched zeros appearing in the corresponding columns as 10's.

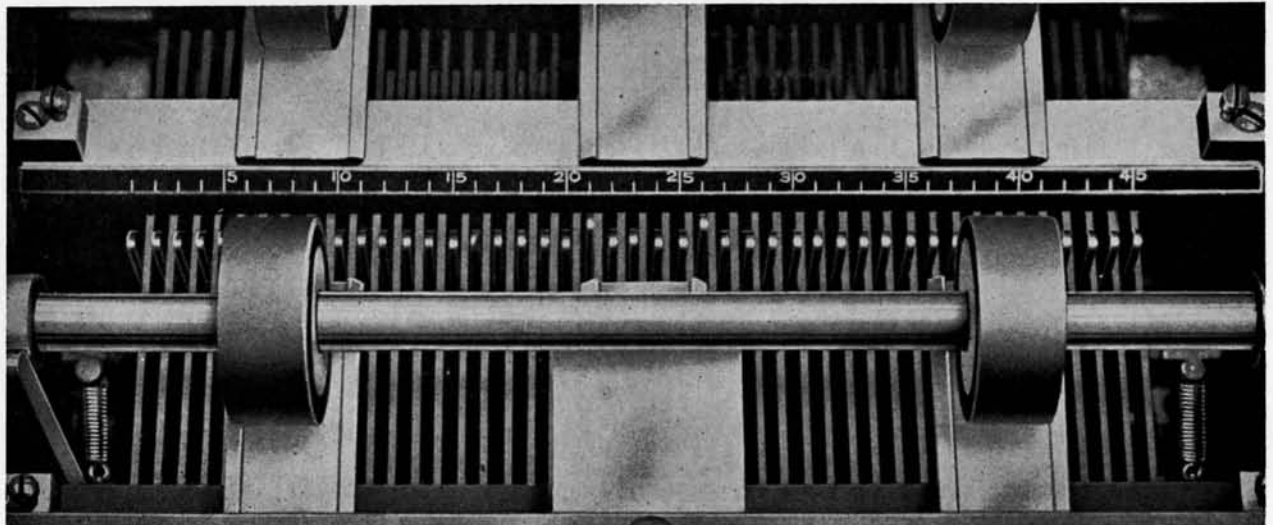
When the eleventh and twelfth positions at the top of the card are punched, they can be interpreted only by moving the plug to the Print Ten row of hubs. When double punching, such as "X" and "5", appears the "5" will be interpreted if the plug is set to Print Zero.

When plug wires are inserted to connect certain specified card columns with the desired printing positions, the machine will print not only the figures contained in those columns of the card which have been wired, but also a series of zeros to the right of the number unless controlled otherwise.

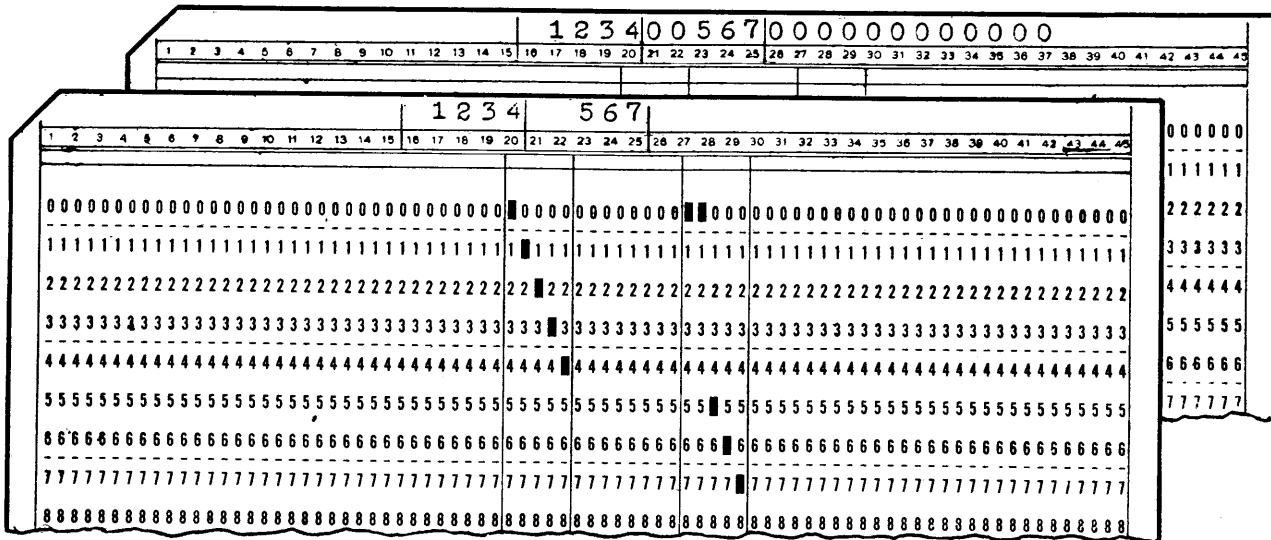
Zero Suppression

The printing unit of the Automatic Interpreter is composed of a single continuous bank of forty-five type bars. Since it is necessary to divide the printing into columnar fields, a device has been provided for preventing the printing of zeros to the right of interpreted amounts.

Next to the feed mechanism and under the glass cover is a series of 45 short levers and a columnar indicating strip corresponding to the



Zero Suppression Levers



Zero Printing and Zero Suppression

forty-five positions. These short levers are normally locked in the position to which they have been set by a mechanism controlled by either of the two long levers situated on the back and front rails.

If it is desired to print in two fields on a card—from position 15 to position 20, and from position 21 to position 25, inclusive—the locking mechanism should be set as follows: Press either of the long levers toward the stacker and then move the short levers in columns 21 and 26 toward the feed mechanism. All the short levers intervening should be away from the feed mechanism. The setting of the 21st lever prevents the printing of zeros immediately preceding any number, having less than five digits, which may be interpreted in the second field.

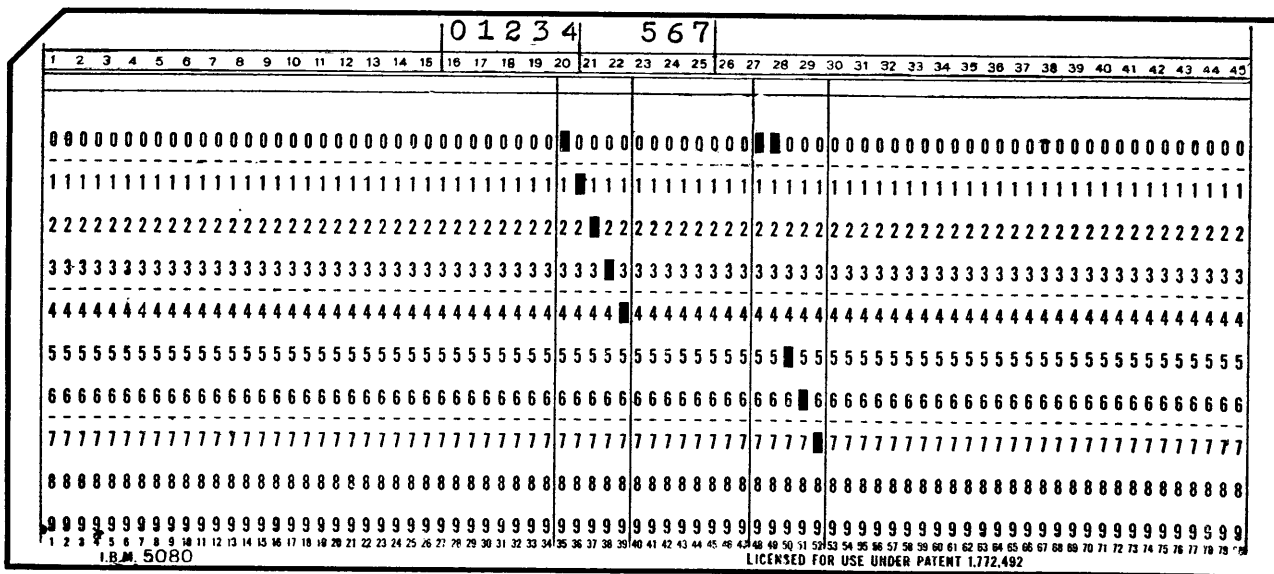
Likewise, the setting of the 26th lever prevents the printing of zeros after the second field or before any field to its right, which may be interpreted also.

Electrical Zeros

When it is desired to print zeros in a given position, regardless of whether or not a significant digit appears to the left, the printing may be accomplished by substituting a 0 for the 10 type character and placing the plug in the Print Ten hub.

Electrical Energy

The Automatic Interpreter operates on direct current—110 or 220 volts, and consumes 5.0 amperes for starting and 2.5 amperes for running at 110 volts.



Printing a Zero Electrically.



Printing Position Control Dial

In setting the disc, one of the five index numbers (1, 3, 5, 7, 9 — representing the numbers of eighths of an inch from the top of the card at which the center of printing will appear) corresponding to the position of printing desired, should be made to coincide with the etched line on the shaft.

Special Type

The special pin-point type requires a type bar of double the width of the ordinary type bar. This slightly reduces the number of positions available for regular interpreting. The pin-point characters require $10/32$ of an inch as compared with $5/32$ of an inch for the normal bar. The height of both types of symbols is the same—one-eighth inch.

When the special pin-point type are placed in

a machine for check writing purposes, these positions may be advantageously used for the interpretation of those fields which are used frequently for reference or filing. The special type makes these figures stand out from the other information appearing on the cards.

The tenth, eleventh, and twelfth position printing of the special width type bars is the same size as on the normal bar. These characters are printed in the regular type at the right of the double space.

Automatic Asterisks

The machine is arranged so that asterisks print automatically to the left of the last figure in the amount field, thus properly filling the amount space on the face of the check.

Special Devices for Interpreters

A. SELECTION OF PRINTING POSITION			B. FIELD SELECTION			C. CLASS ELIMINATION		
NO X	12000		NO X	1100		NO X	1000	
	DEBIT AMOUNT	CREDIT AMOUNT		PRICE	FOREIGN PRICE		COST	
	DR. OR CR. AMOUNT			DOMESTIC PRICE			COST	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
11111111	11111111	11111111	11111111	11111111	11111111	11111111	11111111	11111111
22222222	22222222	22222222	22222222	22222222	22222222	22222222	22222222	22222222
X	2100		X	1200		X		
PUNCHED	DEBIT AMOUNT	CREDIT AMOUNT	PUNCHED	PRICE	FOREIGN PRICE	PUNCHED	COST	
	DR. OR CR. AMOUNT			DOMESTIC PRICE			COST	
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
11111111	11111111	11111111	11111111	11111111	11111111	11111111	11111111	11111111
22222222	22222222	22222222	22222222	22222222	22222222	22222222	22222222	22222222

Class Selection

Class Selection Device for Interpreter

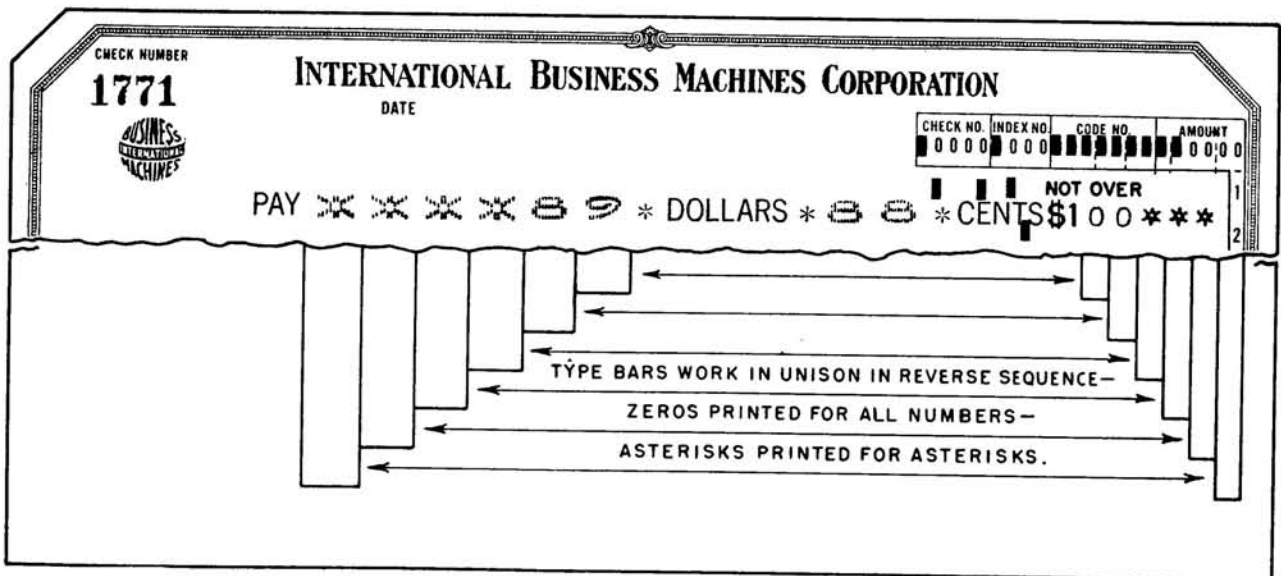
The Type 550 Automatic Interpreter and the Type 551 Automatic Check Writing Interpreter can be equipped with a ten-position class selection device which operates in exactly the same manner as the class selection device for tabulating machines. The use of this device is illustrated above.

tion when definitely specified. This is illustrated below and consists of special type bars and a special circuit which causes zeros or asterisks to print behind a fixed \$1 symbol in such a manner that the next round number greater than the check amount is always indicated.

Automatic "Not Over" Indication

The Check Writing Interpreter may be arranged to print an automatic "not over" indication

when definitely specified. This is illustrated below and consists of special type bars and a special circuit which causes zeros or asterisks to print behind a fixed \$1 symbol in such a manner that the next round number greater than the check amount is always indicated.



Automatic "Not Over" Indication

1010100	99124389			
1020100		2307475		
1030100	4000000			
2000100		18472149		
2010100		32443920		
2040100	107774			
2060100		4000000		
2200100		59676		
2500100		3103824		
2510100	4013777			
2520100		4308713		
2530100		2393200		
2540100		806870		
1000 Student's Office				
10034100		96301		28870
		3615	3227	75000
		119948	11574	171491
		232224		336289
			19441	281100
			172400	278400
				525574
				52500
1004 Dean of Women				
10041100		31763		694500
10042100		7092		29069
10043100		678		
1005 Restaurant's Office				
10051100		165763		264469
10052100		75364	88134	431157
1006 Board of Regents				
10062100		21319999999080		150000
1100 Field Secretary and Alumni Association				
11001100		44216		809700
11002100	6198			37508
11004100	3076		825	77014
1101 Editor's Office				
11011100		81900		351600
11012100		7118	1000	8500
1102 General and Chemical Storehouse				
11021100		134219		799614
11022100	90248		6865	75675
11024100	312063			12346
11025100		37341		
1103 Employment Bureau				
11031100		16655		399176
11032100		1227	514	7500
* 1103 - 3100 Income				
1104 Housing Bureau				
11041100		36110		240300
11042100		6696	500	13200
1105 Inter-Campus Trolley				
11051100		79255		118000
11052100		1235231	343423	528687
11053100		223051		650000
1106 Inventory and Service				
11061100		23432		539500
11062100		11306	10400	30000
1107 Library				
11071100		575527		844749
11072100		27156	123340	332758
11073100	25870			163578
11074100		417260	2241832	506070
11075100		35827		2800000

File of Interpreted Cards Used For Budgetary Control