

METHOD OF OPERATION
SIGNAL CIRCUIT

Register - Overflow And Peg Count - Power Driven Machine Switching System.

GENERAL DESCRIPTION

1. The various figures of this drawing show various methods of connecting message registers to Selectors, Senders, Start Circuits, and A and B operators positions, for use as "overflow" register, "All Circuits Busy" register, or for "peg count".

DETAILED DESCRIPTION

FIGURES 3 and 9.

2. Figures 3 and 9 may be used with district or office selectors to record the number of times the selectors in each group go to the overflow terminals. In this case the A lead is connected to the tip overflow terminal. When a selector comes to rest on the overflow terminals, its sequence switch advances to overflow position and in so doing, connects ground from the Z commutator, through the tip terminal, windings of the A-50 relay and 5-P register to battery. The A-50 relay operates and locks to ground on its armature to provide sufficient time to insure the complete operation of the register. When the register is fully operated it short circuits the winding of the A-50 relay, which releases, removing the locking circuit.

3. Figures 3 and 9 are also used as selector group registers and as peg count registers for machine switching "B" or Special "A" operators. As a selector group register it is connected through cams to each selector in the group and is operated each time a selector is used, thus giving a record of the total number of times all the selectors in a group are used.

4. As a peg count register, the circuit is connected to manually operated keys at the "A" or "B" positions. In each case ground is connected to the circuit and it functions as described in paragraph 1.

FIGURES 4, 8 and 10.

5. Figures 4, 8 and 10 are used as overflow registers with Incoming or Cordless selectors, as District or Sender "All Circuits Busy" registers and as Start Circuit registers. As an overflow register, the circuit is connected to the tip overflow terminal of a group. When an Incoming or Cordless selector comes to rest on the overflow terminals, its switch advances towards "Overflow" position. In "Ringing" and "Talking" positions, ground is connected to the tip terminal, operating the 5-M register.

6. When used as an "All Circuits Busy" register, the circuit is connected through relay contacts or cam cuttings in each circuit of the group in series. Each individual contact or cam cutting is closed when its

corresponding circuit is "off normal" and when all circuits in the group are busy, ground is closed through to the register, which operates.

FIGURES 14, 15 and 16.

7. Figures 14, 15 and 16 are used in place of figures 4, 8 and 10 when used as overflow registers with incoming or cordless selectors, when the design of the selector circuit is such that ground is connected directly to the ring side of the fundamental circuit through a cam cutting, when the selector switch is in the "Selection Beyond" position. With this condition, the use of figures 4, 8 and 10 would cause the operation of the stepping relay in the associated sender circuit and the possible false operation of the register as the selector switch passed through "Selection Beyond". The 162 relay is slow to operate, preventing its own operation, and is also of sufficiently high resistance to prevent the operation of the stepping relay while the selector passes through that position. When the selector switch enters the "Ringing" position, ground is connected to the tip terminal, operating the 162 relay. The operation of the 162 relay operates the 5-M register. When the selector advances to normal, the 162 relay and 5-M register release.

CIRCUIT REQUIREMENTS

THE READJUST REQUIREMENTS SHOWN BELOW ARE FOR MAINTENANCE USE ONLY.

	<u>OPERATE</u>	<u>NON-OPERATE</u>	<u>RELEASE</u>
Special 162 per D-75747	Readj. .0075 amp. Test .0079 amp. W.C.C. .008 amp.	Readj. .0050 amp. Test .0047 amp.	
A50	Readj. .040 amp. Test .059 amp. W.C.C. .078 amp.		Readj. .020 amp. Test .010 amp.
5P register	Test .070 amp. W.C.C. .078 amp.	Test .060 amp.	
5M register	Test .036 amp. W.C.C. .072 amp.	Test .032 amp.	

ENG.--WAL-JO.
3/6/22.

CHK'D.--RCC-CWP.

APPROVED - C.L.SLUYTER, G.M.L.

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