DIGIT-ABSORBING SELECTORS
ENGINEERING INFORMATION
STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section contains equipment information and data for step-by-step digit-absorbing selectors. The general description of these switches is covered in Section 955-110-100.

1.02 These selectors permit the use of more digits in the numbering plan than are required for trunking purposes. This is done by using up digits not required for switching, thus eliminating the necessity of building out ranks of selectors to provide the extra digits. A blocking feature which denies access to specified levels is also provided.

1.03 If long range plans indicate a future need for digit-absorption, the majority of cases will indicate installation of digit-absorbing selectors with no levels marked for absorption, rather than regular selectors, even when the absorption feature is not required at the time of installation.

2. USE IN SWITCH TRAIN

2.01 Digit-absorbing features are provided for local, toll transmission, AB toll transmission, toll incoming (or intermediate), and toll preceding selectors. Three types of absorption are used. They are available as shown in Table A.

2.02 When digit-absorbing selectors are used in the local train, they may be used as first selectors or in a subsequent position. An example of their use is shown in Fig. 1. In this example, assume that the digit-absorbing (DA) selector is arranged for once-only and/or repeated absorption with level 3 marked for repeated absorption, level 5 for once only, and levels 2, 4, 6, 7, 8, and 9 for blocking.

2.03 Figs. 2 and 3 show examples of the position of digit-absorbing selectors when used in the toll train.

TABLE A

	Once Only or Repeated	Once Only and/or Repeated	2-digit, Digit Absorbing	Blocking
Local	√	√	√	√
Toll Transmission	√			√
Toll Incoming (or Intermediate)	√			√
AB Toll Transmission	√			√
AB Toll Preceding		√		√

3. EQUIPMENT

3.01 Digit-absorbing selectors are physically interchangeable with nondigit-absorbing selectors of the same type. Local, toll incoming (or intermediate), and AB toll preceding selectors are mounted on 10- or 20-position single-selector shelves. Toll transmission and AB toll transmission selectors require double-selector shelves.

Nos. 1 and 350A Offices

3.02 In Nos. 1 and 350 offices, 11-foot 6-inch distributing terminal assembly (DTA) type frames are generally used. They consist of two bays, one on either side of the DTA. Each bay mounts eight 20-position single-selector shelves. Where toll intermediate and toll transmission selectors are used, they are mounted with a maximum of 80 toll transmission selectors per frame on the four lowest shelves (two double-selector shelves per bay). Toll intermediate selectors are mounted on the upper shelves; ordinarily, three are mounted on the left bay and two on the right. This amount is generally adequate to serve a 10,000-line unit if there are no more than ten toll intermediate selectors per 1000 lines. The remainder of the shelves may be used for extra toll intermediate selectors or 4-wire local selectors. This mixture of toll transmission and toll intermediate selectors on the same frame is recommended because of the cabling congestion that would result with complete frames of toll intermediate selectors.

3.03 In No. 1 or 350A offices, 9-foot or 11-foot 6-inch universal frames may be used for digit-absorbing selectors where the amount of intershelf bank multipling or graded multiple is small. If appreciable amounts of intershelf or graded multiple are involved, DTA-type frames should be used. Universal frames mount six or eight single-switch shelves (or three or four double), respectively. Each shelf will mount ten switches.

No. 355A Offices

3.04 The frames for No. 355A offices are generally 9-foot 0-inch universal-type frames although 7-foot 0-inch frames are available for small offices. The 9-foot frame will mount six single-switch shelves or three double-switch shelves. In No. 355A offices, 11-foot 6-inch universal-type frames may also be used where ceiling height is required for other reasons.

No. 356A Offices

3.05 The frames for 356A offices are 6 feet 10 inches and are double-sided with line finders and first selectors mounted on the front and incoming selectors and connectors on the rear.

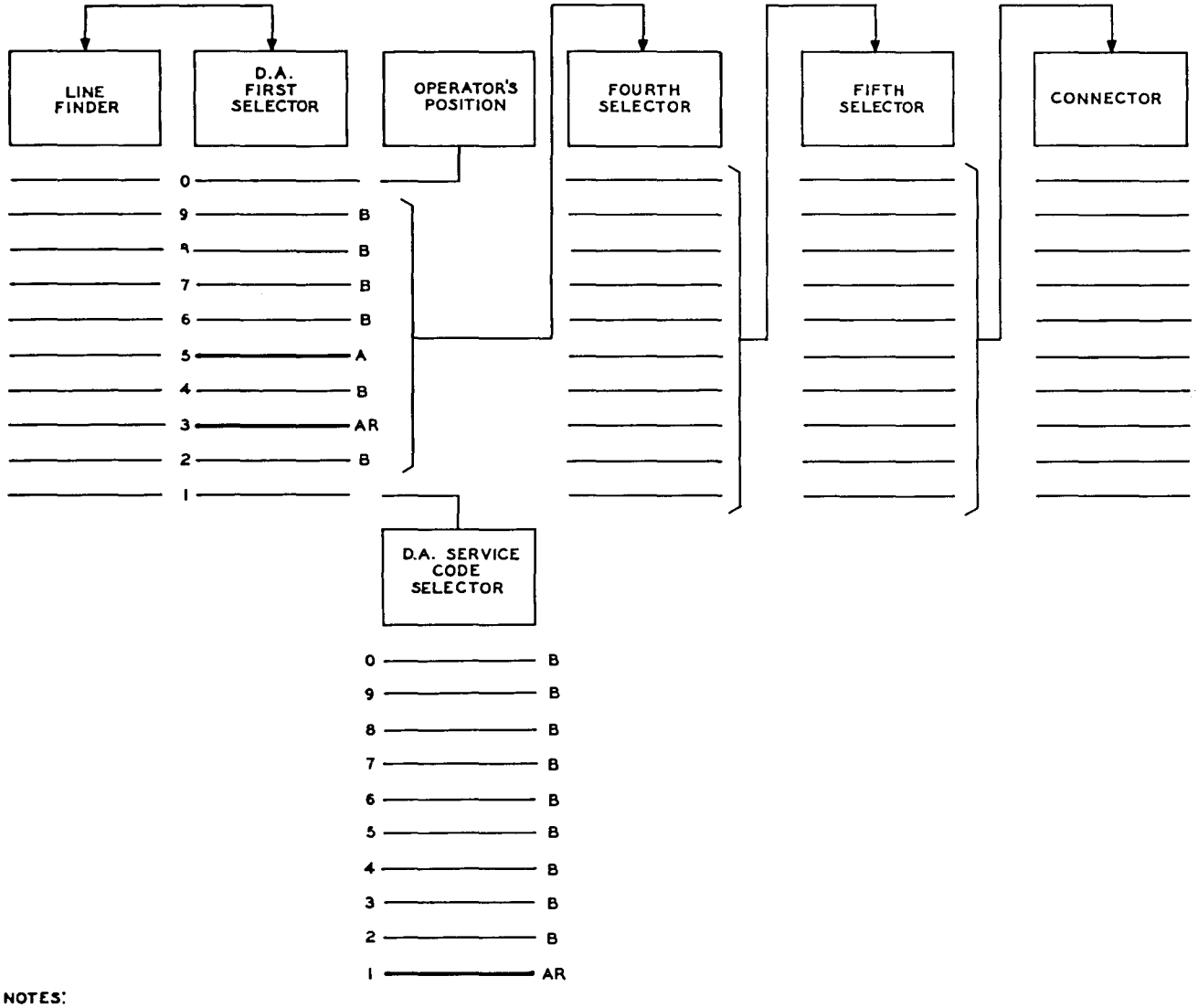
4. REFERENCES

4.01 The following is a list of sections to which reference can be made.

955-110-100 - Step-by-Step - Digit-absorbing Selectors

814-401-151 (J32302) - Selectors and Selector Shelves - 20 Capacity - For Use in Nos. 1 and 350A Offices and 702A PBXs - Step-by-Step Systems

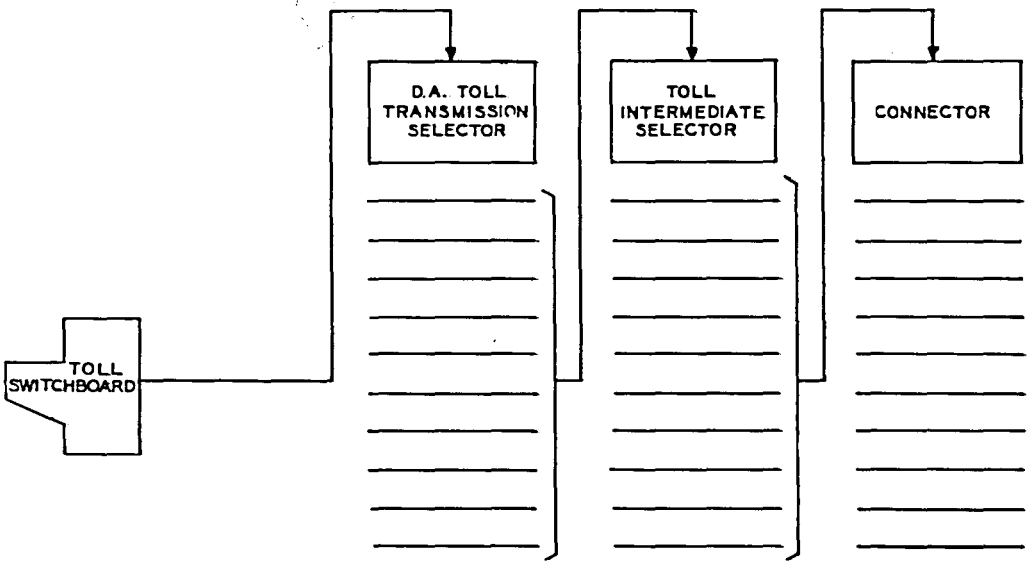
814-401-150 (J32310) - Selectors and Selector Shelves - 10 Capacity - For Use in Nos. 1, 350A, and 355A Offices and 702A PBXs - Step-by-Step Systems



NOTES:

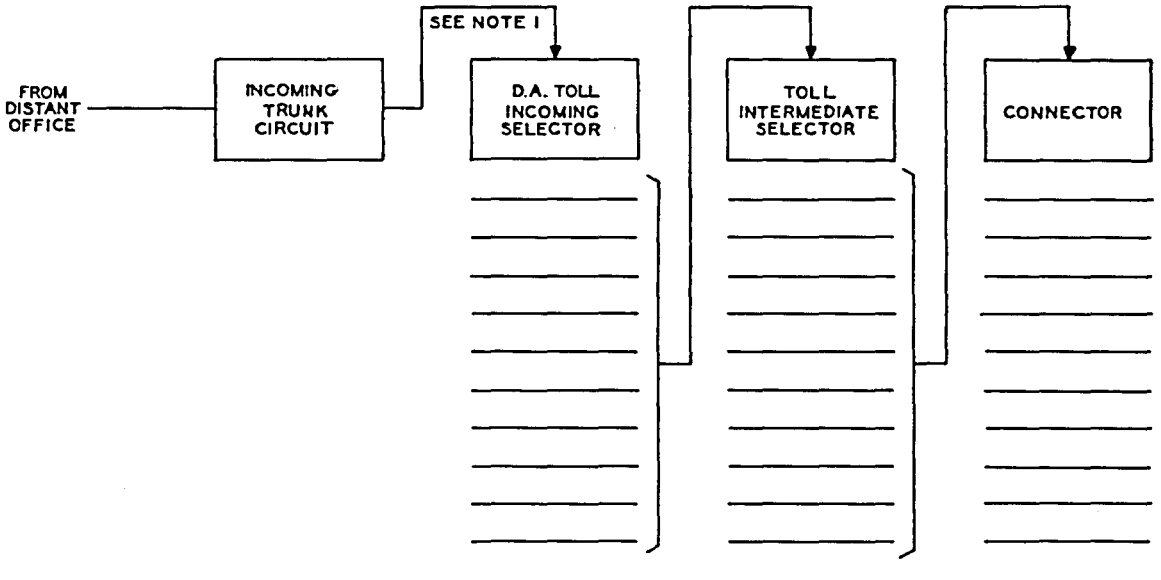
1. B - BLOCKING
   A - ONCE ONLY ABSORPTION
   AR - REPEATED ABSORPTION
2. D.A. FIRST SELECTOR ABSORBS 2 DIGITS AND TRUNK HUNTS ON THIRD.
3. SERVICE CODE D.A. SELECTOR ABSORBS "1", TRUNK HUNTS ON OTHER LEVELS AFTER A DIGIT HAS BEEN ABSORBED, BLOCKS ON THOSE LEVELS UNTIL DIGIT IS ABSORBED.

Fig. 1 - Example of 7-Digit Numbering in Office With Five Effective Digits



NOTES:
1. TOLL INTERMEDIATE SELECTORS MAY OR MAY NOT BE REQUIRED DEPENDING UPON NUMBERING PLAN.
2. TOLL INTERMEDIATE SELECTORS WHEN USED AS SUCH ARE NOT ARRANGED FOR DIGIT ABSORBING.

Fig. 2 - Position of Digit-absorbing Selectors Used in Toll Train



NOTES:
1. A TOLL INCOMING SELECTOR USED WITH A TOLL TRUNK IS EQUIVALENT TO A TOLL TRANSMISSION SELECTOR. THE SELECTOR MAY BE DIGIT ABSORBING.

Fig. 3 - Position of Digit-absorbing Toll Incoming Selector Used With a Toll Trunk in Place of a Toll Transmission Selector