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CROSSBAR SYSTEMS
NO. 5
INCOMING REGISTER CIRCUIT
MULTIFREQUENCY

CHANGES

B. Changes in ApparatusB.1 SupersededA411 Relay - AJ512 - Fig. 6
A411 Network - 185A - Fig. 6D. Description of Changes

D.1 A change is made to remove the feature foreign NPA-411 information from the feature and option Note 102. It has been decided that this will not be used as a standard arrangement and is therefore rated Mfr Disc. Foreign NPA-411 was combined with the feature for using the same NXX codes for both local and numbering plan areas option Z0, with this change foreign NPA-411 is removed from option Z0 assigned YE and rated Mfr Disc. Where Z0 has been provided and YE is removed option YF must be furnished.

D.2 A change is made in CAD Fig. 3 and 18 to include the master test frame auxiliary control bay as a terminating point for this circuit for certain leads shown in the above affected CAD figures.

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D. Description of Changes

D.1 A correction is made in Table 6 of the cross-connect information notes on sheet 7D, to show that terminals TCA1 and TCBA1 are to be cross-connected to TOC1, TOC2, TOC3, or TOC4 and not TIM for wideband services.

D.2 The before and after test requirements and test notes for the 293A dry reed relay packs for the digit registers A through L are removed from the circuit requirement tables in Section F. These units are sealed, therefore, these tests are not required.

D.3 A change is made to correct the rating (Mfr Disc.) to read (A&M Only) on App Fig. 5 on sheet C2 of the schematic drawing. The actual rating change was made in the 104 note on Issue 18A. This change makes the apparatus figure and note compatible.

D.4 A change is made to include the terminology "bit stream" into the feature and option Note 102 and into the cross-connect tables to provide ordering

and cross-connect information for "bit stream switching." When wideband services such as data or PICTUREPHONE[®] are to be transmitted via analog and/or bit stream transmission facilities into the same marker group, separate incoming class relays and cross-connects must be assigned in the incoming register for each type of facility used. Any of the class relays provided for wideband services may be assigned for these facilities.

D.5 A change is made to allow this incoming register circuit to function with a new transistorized MF signal receiving circuit. This change is reflected in the CAD figures of the SD only. The new signal receiver SD-99493-01 replaces the signal receiver SD-95536-01 under Connecting Circuit information in Section IV. With this issue of the circuit it should be noted that a new equipment arrangement was also made. The new receivers on a standard arrangement will be mounted separately in a new frame. The capacity of the new register frame without receivers has been increased from three to four registers.

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B. Changes in Apparatus

<u>B.1</u>	<u>Superseded</u>	<u>Superseded By</u>
	RV1 Capacitor - KS-13368,L3 - Fig. 1	RV1 Capacitor - KS-13367,L30 - Fig. 1

D. Description of Changes

- D.1 A 300 series note is added to describe the procedure for using the KS-16751 indicator to check the operation of dry reed relays used in this circuit.
- D.2 The capacitors per list 1 through 14 of KS-13365 to KS-13369 are being rated Mfr Disc. and are being replaced by additional numbered lists 21 through 35. This involves a code addition only of the RV1 capacitor.
- D.3 Provision is made for operation in a wire spring relay marker group arranged for up to 4000 trunk numbers. This involves the addition of two terminals and associated leads (designated option YD rated after-date Standard) to the incoming register marker connector circuit register part.

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D. Description of Changes

D.1 Circuit note 108 is modified to indicate that the marker requires a TCA or TCB mark from a register functioning in a marker group arranged for interchangeable code calls.

D.2 The WBT relay was added on Issue 19D and shown as a feature option required where the register serves wideband calls. The relay acted to repeat the TCA or TCB class group indication and to provide a wideband indication to the connector for selecting a special wideband marker. The TCA lead in the register is normally grounded so that the marker receives this indication on the incoming 4- and 5-digit classes. This normal ground acts as a locking circuit for the WBT relay whenever it is operated, thus preventing its release at the end of the call. To correct this condition this locking path is removed from the WBT relay. This change is made on a No-Record basis per agreement with WECo.

D.3 To obtain a cost reduction in shop labor and material the KS-8515 electron tube socket is being replaced by the KS-16481, 1L electron tube socket in this circuit on an after-date Standard basis.

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D. Description of Changes

D.1 On Issue 16D App Fig. 5 and associated wiring option N were rated "Mfr Disc." as the result of an AT&TCo inquiry to the operating companies which indicated that neither one-one foreign area nor 11X service codes were being used in any multifrequency incoming register. Apparatus Fig. 5 and option N provides for registering prefix ones used for one-one foreign area or 11X service codes over the TAN class trunks and also over the TAN1 class trunks if required. However, information received from the WECO East Region now indicates that there is an office in Wheeling, West Virginia presently using one-one foreign area codes.

Also, where provision is made for new numbering plan (added on Issue 14D) a conflict is created between 10X test codes over TAN or TAN1 class trunks and the one-one prefix codes over TAN class trunks.

Therefore to permit continuing use of one-one prefix codes for offices presently equipped for them, App Fig. 5 and options N, ZV, and ZN are rerated from "Mfr Disc." to "A&M Only". This change is retroactive to Issue 14D. Also, circuit Notes 115 and 118 are modified to clarify the conflict between one-one prefix codes and 10X test codes.

This change affects records only, and does not require modification of any equipment.

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D. Description of Changes

D.1 The multifrequency incoming register was originally designed to handle one-foreign area or llN service codes on tandem trunks. For this traffic the initial ones were recorded on a prefix counter and the N digit placed on the A digit register. A special "TAN" lead was run to the Automatic Monitor, Register, and Sender Test Circuit (SD-25680-01) to inform the monitor on a monitored call that the ones should be recorded on the prefix counter. The "TAN" lead was also connected to the "LT" translator lead which was synonymous with tandem in the register design. The "TT" translator lead was used in connection with the toll class relays which made use of LOX type codes with the ones recorded on the A digit register.

When provision was made for inter-changeable codes the LT became a seven-digit translator lead and the TT became a ten-digit

translator lead. However, the "TAN" lead to the monitor remained connected to the "LT" lead which means that any initial ones recorded in the register even on the TOL and CAMA classes will be recorded in the monitor on the prefix counter and a mismatch will occur.

Since the tandem class trunks associated with this register may be required to carry the LOX test codes but will not be required to carry the llN service or foreign area codes, the mismatch in the monitor can be eliminated by opening the "TAN" lead to the monitor. This is accomplished by designating the "TAN" lead option "ZV" rated "Mfr Disc.", adding wiring option "ZY" rated A&M Only, and modifying Circuit Notes 115 and 116.

This change must be applied on a A basis to all jobs arranged for new numbering plan where the register is equipped with the toll and tandem class relays and where the register functions with the automatic monitor.

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D. Description of Changes

D.1 A new equipment arrangement of the master test frame recorder, control, and jack bays is being made to provide spare equipment space for future growth. This new arrangement requires a connecting circuit information change of the CADs in this circuit.

D.2 The multifrequency incoming register was originally designed to handle one-one foreign area or LIN service codes on tandem trunks. For this purpose a general purpose A digit could be translated before being locked-in. If the digit were a one it was transferred to the prefix counter and the A digit register relays released. Since these service and foreign area codes are not used on the multifrequency incoming register the general purpose A digit register (Fig. 5) and associated wiring (option "N") is rerated "Mfr Disc.". Also, wiring option "Q" is rerated after-date Standard.

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D. Description of Changes

D.1 The connecting information for the "FR" and "CN" leads is changed to agree with WECO drawings.

D.2 Provision is made to allow the existing four TOLL-4 relays to be assigned for tandem purposes as well as toll purposes. Since the output of these classes toward the marker is now cross-connectable the only change required is in the 600-900 ohm impedance match which is placed under control of cross-connection. This change involves wiring only. The new wiring is designated "ZT" option rated after-date standard. The former wiring is designated "ZS" option rated "Mfr Disc."

D.3 Provision is also made to allow the existing CAMA0 and CAMA1 relays to be assigned for tandem or toll purposes as well as for CAMA purposes. This is the result of a similar change in the marker to remove the limitation on the number of toll

and tandem classes for CCSA networks. The marker previously provided a field of twenty classes of which the incoming, pulse conversion, and CAMA classes were fixed. These are being made flexible so that they can be used for tandem or toll where they are not required for their initial assignment. The register CAMA classes and class leads are made flexible so that they can be used for CCSA assignments. This change involves wiring only. The new wiring is designated "ZQ" and "ZV" options rated after-date standard and "ZX" option rated feature standard. The former wiring is designated "ZU" and "ZW" options rated "Mfr Disc."

D.4 A change is made to provide a new translator lead "LT3" from the incoming register to the completing marker. The register uses this lead to inform the marker that the incoming trunk is serving a private network which requires the use of the route translator. This change involves addition of wiring only which is designated "ZY" option rated after-date standard.

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B. Changes in ApparatusB.1 Added

WBT Relay - AF71 - YA Option - Fig. 7

D. Description of Changes

D.1 Provision is made to permit this register to function with trunks assigned to handle the audio portion of wideband (PICTUREPHONE®) service. These trunks must be assigned to the following trunk classes in the register; CAMAO, CAMA1, TOL, TOL1; TOL2, TOL3, TOL4, or TAN1. These classes are used in conjunction with a new wideband trunk relay (WBT) to obtain

a new special mark (SPLP) to the preference control circuit to select a special marker to handle the call. This involves the addition of the WBT relay and minor wiring changes designated option YA. Existing wiring is designated option ZZ. Both are rated feature Standard. This change requires minor wiring changes designated option YC rated after-date Standard which replaces existing wiring designated option YB rated "Mfr Disc."

D.2 A change is made to correct some inadvertent errors appearing in Circuit Note 104 which was redrawn on Issue 16D.

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