

Subject: Digital Channel Banks - Update and Summary of Modifications for Operation With No. 4ESS

4.  
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to: 78-02-087 Vice President - Engineering ELES  
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GENERAL  
ENGINEERING

to: Chief Engineers, General Network Managers, General Switching Managers and General Plant Managers

from: Engineering Director - Transmission Systems  
Director - Network Maintenance

synopsis: Provides additional information relating to the use of D1D, D2, D3, and D4 channel banks with the No. 4ESS switching machine.

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Since the release of Supplement 1 of this E.L. several additional channel bank changes have been identified to ensure proper operation with a No. 4ESS switching machine. Many of these modifications resulted from the initial Digroup Terminal (DT) service provided at Kansas City, Missouri.

Direct T carrier systems are now serving six No. 4ESS machines with relatively few problems. Several items should be noted. Alarm processing for switching machine failures will be recorded on all connecting channel banks as a CGA count. Some general trade channel banks have been successfully placed into service on digroup terminals of the No. 4ESS and a more detailed examination is planned. Channel bank installation, alignment, and operation into a Digroup Terminal is now being written into a new T carrier BSP section 365-010-106 Issue 1 to be released in 1978.

The additional modifications and corrections required for channel bank operation into a No. 4ESS are listed below:

D1D Channel Bank -

1. On the D1 channel bank SD-97060-01 Issue 14B, the option for loop timing has misleading identification. BSP 365-116-501 Iss. 2 Add 1 (Avail. Now) is correct and Issue 15B of the SD will carry the correction.
2. For proper D1D operation digit generator 4019H should be replaced with a 4019BH network.
3. The L5 DPT channel unit (J98711K, SD97052) must also have List 8 applied which adds option ZF and replaces option ZD. This modification alleviates a maintenance problem whereby spare List 5 units plugged into a bay may cause bipolar violations on the high frequency line.

SWITCHING STAFF

NOTICE

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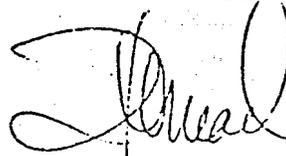
D3 Channel Bank -

1. To avoid a possible signaling lockup due to false synchronization on a loop timed D3 channel bank, the Receive Unit should be J98718AB-3 L4 or later, or modified per List 5 as covered in CCN 132MV. Some List 2 and List 3 units (without List 5) also have the change and can be identified by the letter A or the numeral 5 stamped on the 116B HIC inside the unit. The A is stamped on the corner of the HIC. The 5 may appear as "116B5", "MSI5", or it may be stamped under the 116B code. Units stamped L7 should also be checked for the proper HIC.
2. To ensure proper Loop Timing stability a wiring modification is required to the D3 Channel Bank equipment shelf. Details are provided in CN 6482MV.

The attached table serves as a summary to channel bank modifications for No. 4ESS digroup terminal operation.

*N. A. Adams*

Engineering Director -  
Transmission Systems



Director -  
Network Maintenance

Attachment

Channel Bank Modifications for No. 4ESS  
Digroup Terminal Operation

Channel Bank	Modifications	Comments
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D1 Common Equipment

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Convert to D1D</li> <li>2. Loop Time             <ol style="list-style-type: none"> <li>a) Replace 4019CN with 4019CW</li> <li>b) Add loop timing wiring option</li> </ol> </li> </ol> | <p>Check for 4019BH Digit Generator.<br/>EL 3451 and Supp. 1 contain more detailed information.<br/>See BSP 365-116-501 Iss. 2.</p> |
|--|---|

Channel Units:

	Modified	New
DPO J98711-J-3	L4	L5
DPT K-2	L5, 8	L6
4WE&M L-2	L3	L4
2WE&M AC-1	L3	L4
SDPO AD-1	L3	L4
4WE&M L-1	L3	---
DPT K-1	L5, 8	---

D2 Common Equipment

1. Bay changes
 

	'B' option on SD99478-01
	Iss. 11B

	<u>Fact. Mod.</u>	<u>Field Mod.</u>
J98714A1, A2 (11'6") List WA	L6	L6
B1, B2 (9')	"	L6
C1, C2 (9')	"	L6
D1, D2 (7')	"	L4
E1, E2 (7')	"	L6
F1 (7')	"	L5

Days modified prior to 4/76 should be corrected per CN6300MV and CN6156MV.

2. Replace DM24 with DM71
 

	Loop timing turn-key to "in" position on loop timed banks only
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Channel Units

No changes

Channel

Bank

Modifications

Comments

D3

Common Equipment

1. On Interface Unit  
J98718AE apply  
option 'A' and not 'B'
2. Receive units should  
be J98718AB-3 L4 or  
later except L7. See  
text for further details.

Verify completion of  
CN6482MV on D3 bank

Channel Units

DPO J98718-BA-1  
DPT BB-1  
4WE&M BC  
2WE&M BJ  
SDPO BH

Modified

New Product

L6 BA-1,L4,A,B or BA-2,L5  
L7 BB-1,L5,A,B or BB-2,L5  
All lists compatible  
All lists compatible, B wiring  
mod recommended on BJ-1 and BH-1  
to meet 4ESS crosstalk  
requirements

D4

Common Equipment

1. Set OIU for loop timing

Mode 3 is compatible now.  
Mode 2 is compatible provided  
an M1C is used at the No. 4ESS  
end.