MEMORANDUM

TO: All TC-120 Customers
FROM: K. Lee Clem, Sales Manager
DATE: April 12, 1979
SUBJECT: Product Information Bulletins:

Gentlemen:

Enclosed is a set of Product Information Bulletins that apply to your Model TC-120 Data General Magnetic Tape Controller. Most of these changes are already incorporated in your present board, and are being sent in a complete set merely as a reference.

If you have any questions concerning the level of your board for applicability of these Product Information Bulletins, please contact this office, and we will discuss it with you. Now that the mailing list is established, future P.I.B.'s will be sent to you on a routine basis.

If someone else in your organization should be on the PIB mailing list, please let us know and we will make the correction.

If we can be of assistance, please feel free to contact us at any time!

In

enc.
PRODUCT INFORMATION BULLETIN

GROUN D NOISE REJECTION IMPROVEMENT

<table>
<thead>
<tr>
<th>PRODUCT LINE</th>
<th>DISC CTL</th>
<th>TAPE CTL</th>
<th>ASSEMBLY AFFECTED</th>
<th>MODEL AFFECTED</th>
<th>EFFECTIVE DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>120024</td>
<td>TC-120 and TC-128</td>
<td>September 20, 1977</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>120025</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISPOSITION
- ☒ IMPROVEMENT
- ☐ RETROFIT ON FAILURE
- ☒ RECOMMEND MANDATORY
- ☐ INFORMATION ONLY

ORDER INFORMATION
- ☒ RETROFIT ON FAILURE
- ☒ RECOMMEND MANDATORY

SYMPTOM
System will exhibit random read errors.

CHANGE DESCRIPTION
This change isolates the data bus transceiver ground from the remainder of logic board.

CHANGE PROCEDURE
Make etch cuts at the following locations:
- Solder side, two places at 15D, pin 7
- Solder side between 15E pin 8 and 15F pin 7.
  - Note: Cut near 15E pin 7.
  - 15F pin 7 remains connected to feed-thru by 15F pin 7.
- Solder side between 15F pin 7 and 15G pin 7.
- Solder side between 15G pin 7 and 15H pin 8.
- Component side at 15H pin 8.
- Component side, two places at 15J pin 8.
  - Note: One etch from 15J pin 8 comes out between 15J pins 9 and 10.
- Solder side at 15B pin 7.

Add jumpers from 15C pin 8 to 15E pin 8, and from 15E pin 8 to 15H pin 8.

Mark revision level "V" (120024) or "G" (120025) on the board near the part number.
Visually inspect all changes. Use a continuity tester (or ohmmeter) to check etch cuts and jumpers. Watch for shorts to adjacent pins at each jumper connection.

15C pin 8, 15E pin 8, 15H pin 8 and 15J pin 8 should be isolated from normal ground (with board removed from the computer) and should connect to card edge finger B50 only. 15D pin 7 and 15F pin 7 should connect to normal logic ground.

SHOULD ADDITIONAL INFORMATION BE REQUIRED - CONTACT
WESTERN PERIPHERALS, INC.
1100 CLAUDINA PLACE
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE
<table>
<thead>
<tr>
<th>Location</th>
<th>Was</th>
<th>Should Be</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>1</td>
<td>2</td>
<td>Timer, Real Time Clock</td>
</tr>
<tr>
<td>216</td>
<td>0</td>
<td>177220</td>
<td>TTY Speed</td>
</tr>
<tr>
<td>453</td>
<td>6242</td>
<td>420 or 406</td>
<td>Mapped Processor</td>
</tr>
<tr>
<td>3276</td>
<td>44216</td>
<td>401</td>
<td>TTY Speed</td>
</tr>
</tbody>
</table>

**RELIABILITY PROGRAM**

<table>
<thead>
<tr>
<th>Location</th>
<th>Was</th>
<th>Should Be</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1021</td>
<td>101010</td>
<td>401</td>
<td>Error Trap (Nova 3)</td>
</tr>
<tr>
<td>1207</td>
<td>101010</td>
<td>401</td>
<td>Error Trap (Nova 3)</td>
</tr>
</tbody>
</table>
**PRODUCT INFORMATION BULLETIN**

**TITLE/DESCRIPTION**
Eliminate Parity Error While Rewinding

**PRODUCT LINE**
Tape Controller

**MODEL AFFECTED**
TC-120/128

**EFFECTIVE DATE**
4-26-78

**REFERENCE ECO #**
341A

<table>
<thead>
<tr>
<th>DISPOSITION</th>
<th>EFFECTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ IMPROVEMENT</td>
<td>This change updates assembly number:</td>
</tr>
<tr>
<td>□ RETROFIT ON FAILURE</td>
<td>120024 from REV W to X</td>
</tr>
<tr>
<td>□ RECOMMEND MANDATORY</td>
<td>120025 from REV H to J</td>
</tr>
<tr>
<td>□ INFORMATION ONLY</td>
<td>1st SER. NO. 0739</td>
</tr>
</tbody>
</table>

**PREVENT SETTING OF PARITY ERROR STATUS WHEN REWINDING ON DRIVES THAT DO NOT INHIBIT READ STROBES DURING REWIND.**

1. **CHANGE SHEET (2) OF SCHEMATIC 120016 AS SHOWN BELOW**

   **WAS**
   
   ![Image of schematic diagram]

   **SHOULD BE**
   
   ![Image of schematic diagram]

2. **CHANGE SHEET (2) OF SCHEMATIC 120016 AS SHOWN BELOW**

   **WAS**
   
   ![Image of schematic diagram]

   **SHOULD BE**
   
   ![Image of schematic diagram]

3. **REWORK ASSY 120024 OR 120025 AS FOLLOWS:**
   - A. **CUT ETCH SOLDER SIDE AT 6K-4 (2 PLACES)**
   - B. **JUMPER 4E-2 TO 6K-4**
   - C. **JUMPER 4E-1 TO 3G-6**
   - D. **JUMPER 8M-1 TO 5H-1**

**SHOULD ADDITIONAL INFORMATION BE REQUIRED - CONTACT**

WESTERN PERIPHERALS, INC.
1100 CLAUDINA PLACE
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE
### PRODUCT INFORMATION BULLETIN

**Title/Description**
Nova 3 Diagnostic Compatibility

**Product Line**
Tape Controller

**Model Affected**
TC-120/128

**Effective Date**
2-2-78

**Reference ECO #**
296

### Disposition

- **Improvement**

- **Retrofit on Failure**

- **Recommend Mandatory**

- **Information Only**

Diagnostic tape 120009 (no revision) requires this change when using Nova 3.

### Change Procedure

Make the program changes listed in the following table:

<table>
<thead>
<tr>
<th>Location</th>
<th>Was</th>
<th>Should Be</th>
</tr>
</thead>
<tbody>
<tr>
<td>00057</td>
<td>065400</td>
<td>CMTA: DIB 1,0</td>
</tr>
<tr>
<td>00216</td>
<td>000000</td>
<td>DILLY: 0</td>
</tr>
<tr>
<td>03276</td>
<td>044216</td>
<td>STA 1, DILLY</td>
</tr>
<tr>
<td>04601</td>
<td>000401</td>
<td>MOV # 0,0;ERRORS, I/O RESET</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CMTA: DIB 1,0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DILLY: 177220</td>
</tr>
<tr>
<td></td>
<td></td>
<td>JMP .+1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NOP 101000</td>
</tr>
</tbody>
</table>

---

**Western Peripherals, Inc.**

1100 Claudina Place
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE
Pertec T 1000 Diagnostic Compatibility

PRODUCT LINE
Tape Controller

DISPOSITION

☑ IMPROVEMENT
☐ RETROFIT ON FAILURE
☐ RECOMMEND MANDATORY
☐ INFORMATION ONLY

EFFECTIVITY

Diagnostic tape 120009 (no revision) requires this change when using T 1000

CHANGE PROCEDURE

This program must be manually altered for operation of the diagnostic with a Pertec T 1000 tape drive. After loading diagnostic program tape 120009, and before executing the program, one location must be altered as shown below:

<table>
<thead>
<tr>
<th>Location</th>
<th>Was</th>
<th>Should Be</th>
</tr>
</thead>
<tbody>
<tr>
<td>000577</td>
<td>006126</td>
<td>JSR 000430 JMP</td>
</tr>
</tbody>
</table>

WESTERN PERIPHERALS, INC.
1100 CLAUDINA PLACE
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE
### PRODUCT INFORMATION BULLETIN

**Title/Description**
Reliability Program Compatibility for Nova 3 & Eclipse

<table>
<thead>
<tr>
<th>PRODUCT LINE</th>
<th>MODEL AFFECTED</th>
<th>EFFECTIVE DATE</th>
<th>REFERENCE ECO #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape Controller</td>
<td>TC-120/128</td>
<td>5-11-78</td>
<td>352</td>
</tr>
</tbody>
</table>

**Disposition**
- ☒ IMPROVEMENT
- ☐ RETROFIT ON FAILURE
- ☐ RECOMMEND MANDATORY
- ☐ INFORMATION ONLY

**Effectivity**
Reliability tape 120010 (no revision) requires this change when using Nova 3 or Eclipse processors.

### Change Procedure
Make the program changes listed in the following table:

<table>
<thead>
<tr>
<th>Location</th>
<th>Was</th>
<th>Should Be</th>
</tr>
</thead>
<tbody>
<tr>
<td>01021</td>
<td>MOV # 0,0</td>
<td>MOV # 0,0</td>
</tr>
<tr>
<td>01207</td>
<td>MOV # 0,0</td>
<td>MOV # 0,0</td>
</tr>
</tbody>
</table>

Should additional information be required - contact Western Peripherals, Inc.

**Western Peripherals, Inc.**
1100 Claudina Place
Anaheim, Calif. 92805
Phone: (714) 991-8700
Attn: Manager, Field Service
PRODUCT INFORMATION BULLETIN

CORRECT GATING ERROR TO SHIFT REGISTERS

<table>
<thead>
<tr>
<th>TITLE/DESCRIPTION</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct Gating Error to Shift Registers</td>
<td>12007</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRODUCT LINE</th>
<th>MODEL AFFECTED</th>
<th>EFFECTIVE DATE</th>
<th>REFERENCE ECO #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape Controller</td>
<td>120/120024</td>
<td>September 9, 1976</td>
<td>108/138</td>
</tr>
</tbody>
</table>

DISPOSITION

☐ IMPROVEMENT
☐ RETROFIT ON FAILURE
☐ RECOMMEND MANDATORY
☐ INFORMATION ONLY

This change affects Assembly Number 120024 and updates those controllers below Serial Number 66 from Revision H to Revision K.

This change improves the gating into the data shift registers.

INSTALLATION:

1. Cut etch on solder side at E9, pin 1 (cut beyond feed through)
2. Add wire from E7B, pin 6 to E9, pin 1
3. Re-label board from H to K
4. Schematics - Sheet 14
   E-9 and E-10, pin 1 input is now the term WR from sheet 6
5. Maintain a copy of this document with affected controllers

SHOULD ADDITIONAL INFORMATION BE REQUIRED - CONTACT

WESTERN PERIPHERALS
1100 CLAUDINA PLACE
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE
PRODUCT INFORMATION BULLETIN

TITLE/DESCRIPTION
NOISE REDUCTION

PRODUCT LINE
TAPE CONTROLLER

MODEL AFFECTED
TC-120 & TC-128

EFFECTIVE DATE
1-17-77

REFERENCE ECO #
142, 148

NUMBER
12008

DISPOSITION

☐ IMPROVEMENT
☐ RETROFIT ON FAILURE
☐ RECOMMEND MANDATORY
☐ INFORMATION ONLY

EFFECTIVITY

These changes update Assembly Number:
120024 from Rev. K to Rev. L
120025 from Rev. N/C to Rev. A
SN 183 and below are affected.

CHANGE DESCRIPTION

These changes reduce noise that may exist because of component location.

CHANGE PROCEDURE

Add a jumper from 12H, pin 8 (ground) to the ground bus at the adjacent feed-thru as shown.

Cut the etch on the solder side of the board at the feed-thru next to 2N pin 5

Remove existing capacitor C3 from location near 1M and reinstall at location 2P pin 9 to ground at the end of C7, as shown.
Mark the updated revision level on the board near the part number. Visually inspect all changes and use a continuity tester (or ohmmeter) to check etch cuts and jumpers. Watch for shorts to adjacent pins at each jumper connection. Reinstall the controller and perform diagnostic and operational checks. Keep a copy of this change with affected systems.
# PRODUCT INFORMATION BULLETIN

## TITLE/DESCRIPTION

<table>
<thead>
<tr>
<th>PRODUCT LINE</th>
<th>MODEL AFFECTED</th>
<th>EFFECTIVE DATE</th>
<th>REFERENCE ECO #</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAPE CONTROLLER</td>
<td>TC-120</td>
<td>1-28-77</td>
<td>151</td>
</tr>
</tbody>
</table>

### DISPOSITION

- ☑ IMPROVEMENT
- ☑ RETROFIT ON FAILURE
- ☐ RECOMMEND MANDATORY
- ☐ INFORMATION ONLY

### EFFECTIVITY

This change updates Assembly Number: 120024 from Rev. L to Rev. M

SN 186 and below are affected.

### SYMPTOM

Record count errors may occur during spacing operations.

### CHANGE DESCRIPTION

This change improves the noise rejection for spacing operations when encountering interrecord gap, to prevent erroneous setting of RCDT, which increments the word count and address registers.

### CHANGE PROCEDURE

Remove the controller board from the equipment and perform the following modifications:

1. Make an etch cut at location 4K pin 5 on the solder side of the board.
2. Add jumpers on the component side of the board at the following locations:
   - From 16J pin 7 to 17L pin 12
   - From ML3A pin 8 to 17L pin 13
   - From 4K pin 5 to 17L pin 11

Mark the updated revision level on the board near the part number. Visually inspect all changes and use the continuity tester (or ohmmeter) to check etch cuts and jumpers. Watch for shorts to adjacent pins at each jumper connection. Reinstall the controller and perform diagnostic and operational checks. Keep a copy of this change with affected systems.

### DOCUMENT CHANGES

Change schematic 120016 in the Logic Manual as follows:

**WAS**

<table>
<thead>
<tr>
<th>SHEET 1A</th>
<th>SHEET 2A</th>
<th>SHEET 2B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2G-4TA</td>
<td>5 2S-5</td>
</tr>
<tr>
<td></td>
<td>B-R55</td>
<td>RCDT</td>
</tr>
<tr>
<td></td>
<td>LOCK</td>
<td>KA</td>
</tr>
<tr>
<td></td>
<td>4K</td>
<td>-7,16</td>
</tr>
</tbody>
</table>

**SHOULD BE**

<table>
<thead>
<tr>
<th>SHEET 2A</th>
<th>SHEET 2B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2G-13</td>
<td>17L</td>
</tr>
<tr>
<td>7R-16</td>
<td>1332</td>
</tr>
<tr>
<td>24-LOCK</td>
<td>4K</td>
</tr>
<tr>
<td>2S-5</td>
<td>B-R55</td>
</tr>
<tr>
<td>RCDT</td>
<td>LOCK</td>
</tr>
<tr>
<td>-7,16</td>
<td>4K</td>
</tr>
</tbody>
</table>

## Additional Information

**SHOULD ADDITIONAL INFORMATION BE REQUIRED - CONTACT**

WESTERN PERIPHERALS, INC.
1100 CLAUDINA PLACE
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE
PRODUCT INFORMATION BULLETIN

TITL/DESCRIPTION: ELIMINATE RACE CONDITION

<table>
<thead>
<tr>
<th>PRODUCT LINE</th>
<th>TAPE CONTROLLER</th>
<th>MODEL AFFECTED</th>
<th>EFFECTIVE DATE</th>
<th>REFERENCE ECO #</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>120/128</td>
<td>3-2-77</td>
<td>157</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120024/120025</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISPOSITION
☐ IMPROVEMENT
☐ RETROFIT ON FAILURE
☐ RECOMMEND MANDATORY
☐ INFORMATION ONLY

EFFECTIVITY

This change updates assembly numbers:

- 120024 from Rev. M to Rev. N
- 120025 from Rev. A to Rev. B

Rework assemblies below Serial Number 195

This bulletin eliminates a race condition in the SELB logic (busy)

INSTALLATION:

1. On component side, cut D4, pin 13
2. On component side, cut D4, pin 2
3. On solder side, cut D4, pin 1
4. On solder side, cut D4, pin 12
5. On solder side, cut D4, pin 13
6. Add jumper from F2, pin 13 to D4, pin 13
7. Add jumper from E5, pin 11 to D4, pin 1
8. Add jumper from E5, pin 11 to feed through near D4, pin 7
9. Add jumper from F5, pin 4 to D4, pin 2
10. Add jumper from E5, pin 13 to feed through near D4, pin 13
11. Add jumper from C4, pin 9 to feed through near D4, pin 13
12. Add jumper from E5, pin 12 to D4, pin 12
13. Re-label 120024 to revision N
    120025 to revision B
14. Schematic
15. Change the schematic as shown below:

SHOULD ADDITIONAL INFORMATION BE REQUIRED - CONTACT

WESTERN PERIPHERALS, INC.
1100 CLAUDINA PLACE
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE
PRODUCT INFORMATION BULLETIN

PRIORITY SIGNAL TERMINATION

MODEL AFFECTED
TC-120 & TC-128

PRODUCT LINE
TAPE CONTROLLER

EFFECTIVE DATE
3-2-77

NUMBER
12011

REFERENCE ECO #
160

DISPOSITION
☑ IMPROVEMENT
☐ RETROFIT ON FAILURE
☒ RECOMMEND MANDATORY
☐ INFORMATION ONLY

EFFECTIVITY
This change updates Assembly Number:

- 120024 from Rev. N to Rev. P
- 120025 from Rev. B to Rev. C

SN 213 and below are affected.

CHANGE DESCRIPTION
This change adds termination networks to the INTP OUT and the DCHP OUT signals.

CHANGE PROCEDURE
Remove the controller board from the equipment and perform the following modifications:

Add jumpers at the following locations:
- From 7E-B pin 3 to 7A pin 7
- From 9B-B pin 3 to 7A pin 9

Mark the updated revision level on the board near the part number. Visually inspect all changes and use the continuity tester (or ohmmeter) to check etch cuts and jumpers. Watch for shorts to adjacent pins at each jumper connection. Reinstall the controller and perform diagnostic and operational checks. Keep a copy of this change with affected systems.

DOCUMENT CHANGES
Change schematic 120016 in the Logic Manual as follows:

WAS

\[
\begin{align*}
\text{7E-B} & \quad \text{3} \\
\text{452} & \quad \text{A95} \\
\text{INTP OUT} & \quad \text{SHEET 3}
\end{align*}
\]

\[
\begin{align*}
\text{9B-B} & \quad \text{3} \\
\text{453} & \quad \text{A93} \\
\text{DCHP OUT} & \quad \text{SHEET 4}
\end{align*}
\]

SHOULD BE

\[
\begin{align*}
\text{7E-B} & \quad \text{3} \\
\text{452} & \quad \text{A95} \\
\text{INTP OUT} & \quad \text{SHEET 3}
\end{align*}
\]

\[
\begin{align*}
\text{9B-B} & \quad \text{3} \\
\text{453} & \quad \text{A93} \\
\text{DCHP OUT} & \quad \text{SHEET 4}
\end{align*}
\]

SHOULD ADDITIONAL INFORMATION BE REQUIRED - CONTACT

WESTERN PERIPHERALS, INC.
1100 CLAUDINA PLACE
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE
PRODUCT
INFORMATION BULLETIN

ERROR REPORTING IMPROVEMENT

PRODUCT LINE TAPE CONTROLLER MODEL AFFECTED TC-120

EFFECTIVE DATE 4-22-77

REFERENCE ECO # 176

DISPOSITION

☐ IMPROVEMENT ☐ RETROFIT ON FAILURE ☐ RECOMMEND MANDATORY ☐ INFORMATION ONLY

This change updates Assembly Number:
I20024 from Rev. P to Rev. R
SN 235 and below are affected.

SYMPTOM

Parity errors may be incorrectly reported at load point in the PE mode.

CHANGE PROCEDURE

Remove the controller board from the equipment and perform the following modifications:

On the component side of the board, cut the etch coming from 5M pin 9 where it comes out from under 5M between pins 6 and 7.

Add a jumper on the component side of the board from 4K pin 5 to 5M pin 9. (Note: existing wire on 4K pin 5 was installed at revision M).

Mark the updated revision level on the board near the part number. Visually inspect all changes and use a continuity tester (or ohmmeter) to check etch cuts and jumpers. Watch for shorts to adjacent pins at each jumper connection. Reinstall the controller and perform diagnostic and operational checks. Keep a copy of this change with affected systems.

DOCUMENT CHANGES

Change schematic 120016 in the Logic Manual as follows:

WAS

SHOULD BE

26-DTAL 9 | 5M
24-LOCK

13M-A

L532

DTAL - 24, 25, 27

SHT 26

27-DTAL 9 | 5M

5S32

SHT 25

13M-A

L532

DTAL - 24, 27

SHT 26

26-DTAL 13 | 17L

24-LOCK

L532

SHT 27

26-DTAL 13 | 17L

24-LOCK

DTAL* - 25

SHT 27

SHOULD ADDITIONAL INFORMATION BE REQUIRED - CONTACT

WESTERN PERIPHERALS, INC.
1100 CLAUDINA PLACE
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE

Page 1 of 1
## PRODUCT INFORMATION BULLETIN

**TITLE/DESCRIPTION**
DATA RELIABILITY IMPROVEMENT

<table>
<thead>
<tr>
<th>PRODUCT LINE</th>
<th>TAPE CONTROLLER</th>
<th>MODEL AFFECTED</th>
<th>EFFECTIVE DATE</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TC-120 &amp; TC-128</td>
<td>7-19-77</td>
<td>12013</td>
</tr>
</tbody>
</table>

### DISPOSITION
- ☒ IMPROVEMENT
- ☐ RETROFIT ON FAILURE
- ☒ RECOMMEND MANDATORY
- ☐ INFORMATION ONLY

### EFFECTIVITY
This change updates Assembly Number:
- 120021 from Rev. R to Rev. T
- 120025 from Rev. C to Rev. E

SN 328 and below are affected.

### SYMPTOM
Intermittent parity errors are detected, especially at higher data rates.

### CHANGE DESCRIPTION
This change decreases the susceptibility to read errors caused by jitter by increasing read window timing to 69% of the bit cell.

### CHANGE PROCEDURE
Remove the controller board from the equipment and perform the following modifications:

Remove resistor R12 (1K ohm) near IC I2E (one end connected to I2E pin 3)

On Assembly 120025, the following etch cuts and jumpers are not required:

Make etch cuts at the following locations:
- I2E pin 2, component side.
- I2E pin 2, solder side.
- H7 pin 4, component side.

Add jumpers on the component side of the board at the following locations:
- From I4N pin 4 to I4N pin 3.
- From I4N pin 3 to I4N pin 1

If a jumper exists between pins 12 and 13 of IC 7C, remove it.

Mark the updated revision level on the board near the part number. Visually inspect all changes and use the continuity tester (or ohmmeter) to check etch cuts and jumpers. Watch for shorts to adjacent pins at each jumper connection. Reinstall the controller and perform diagnostic and operational checks. Keep a copy of this change with affected systems.
DOCUMENTS CHANGES

Change schematic 120016 in the Logic Manual as follows:

WAS

![Old Diagram](image)

SHOULD BE

![New Diagram](image)
PRODUCT INFORMATION BULLETIN

REDUCE BUS NOISE AND IMPROVE POSTAMBLE DETECTION

PRODUCT LINE TAPE CONTROLLER MODEL AFFECTED TC-120 & TC-128 EFFECTIVE DATE 1-2-78 REFERENCE ECO # 259, 260

CHANGE DESCRIPTION

This change corrects the implementation of bad post-amble detection and improves the timing of resynchronizing circuits to assure correct data is transferred to the processor. In addition, this change improves the rejection of noise on the I/O bus.

CHANGE PROCEDURE

Remove the controller board from the equipment and perform the following modifications:

Desolder and remove the filter chip (part #120005) at location B7 and install filter header (part #120034) at location B7.

Cut the etch on the component side of the board at the following locations:

- From 7B pin 1
- From 6B pin 2 to 7B pin 16 where it passes between 7B pins 1 and 2
- From 10F pin 10 where it comes out between 10F pins 5 and 6
- From 7P pin 15 where it comes out between 7P pins 1 and 2

Remove any jumper connecting 7C pins 12 and 13

Add jumpers at the following locations:

- From 6B pin 1 to 6B pin 2
- From 7P pin 11 to 7P pin 15
- From 10F pin 9 to 10F pin 10

Install a 74S109 at locations 1B and 2F

Mark the updated revision level on the board near the part number. Visually inspect all changes and use the continuity tester (or ohmmeter) to check etch cuts and jumpers. Watch for shorts to adjacent pins at each jumper connection. Reinstall the controller and perform diagnostic and operational checks. Keep a copy of this change with affected systems.
PARTS REQUIRED

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
<th>Part #</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Filter header</td>
<td>120034</td>
<td>B7</td>
</tr>
<tr>
<td>2</td>
<td>IC</td>
<td>74S109</td>
<td>IB, 2F</td>
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</tbody>
</table>

DOCUMENT CHANGES

Change schematic 120016 in the Logic Manual as follows:

Change type of IC at locations IB and 2F from 74LS109 to 74S109 as shown on pages 3, 4, and 14.

Change page 24 of the schematic as follows:

(SHEET 4)
PRODUCT
INFORMATION BULLETIN

TITLE/DESCRIPTION
PERFORMANCE IMPROVEMENT - 125 IPS

NUMBER 12015

PRODUCT LINE TAPE CONTROLLER MODEL AFFECTED TC-120 & TC-128 EFFECTIVE DATE 8-2-78 REFERENCE ECO # 375

DISPOSITION
☑ IMPROVEMENT ☐ RETROFIT ON FAILURE ☐ RECOMMEND MANDATORY ☐ INFORMATION ONLY

EFFECTIVITY
This change updates Assembly Number:
120024 from Rev. X to Rev. Y
120025 from Rev. K to Rev. L
SN 879 and below are affected.

CHANGE PROCEDURE

Remove the controller from the equipment and perform the following modifications:

Repair the etch on the component side of the board at the feed-thru by location 17C pin 16 that connects to 17C pin 15 on the solder side.
Remove the following jumpers:
- From 16L pin 6 to the feed-thru by location 17C pin 16 that connects to 17C pin 15 on the solder side
- From 16L pin 4 to 17J pin 1
- From 16L pin 5 to 5E pin 10

Cut the etch on the solder side of the board at the following locations:
- 4G pin 2
- 4G pin 3

Add jumpers at the following locations:
- From 13N-A pin 6 to 16L pin 4
- From 11C pin 12 to 16L pin 5
- From 16L pin 6 to 6D-A pin 1
- From 6D-A pin 2 to 3N pin 7
- From 6D-A pin 3 to 4G pin 2
- From 4G pin 2 to 4G pin 3
- From 4G pin 3 to 14A pin 4

Mark the updated revision level on the board near the part number. Visually inspect all changes and use the continuity tester (or ohmmeter) to check etch cuts and jumpers. Watch for shorts to adjacent pins at each jumper connection. Reinstall the controller and perform diagnostic and operations checks. Keep a copy of this change with affected systems.

SHOULD ADDITIONAL INFORMATION BE REQUIRED - CONTACT

WESTERN PERIPHERALS, INC.
1100 CLAUDINA PLACE
ANAHEIM, CALIF. 92805
PHONE: (714) 991-8700
ATTN: MANAGER, FIELD SERVICE
DOCUMENT CHANGES

Change schematic 120016 in the Logic Manual as follows:
**TITLE/DESCRIPTION**  
GROUND NOISE REDUCTION IMPROVEMENT

<table>
<thead>
<tr>
<th>PRODUCT LINE</th>
<th>MODEL AFFECTED</th>
<th>EFFECTIVE DATE</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape Controller</td>
<td>TC-120/128</td>
<td>6-6-78</td>
<td>12016</td>
</tr>
</tbody>
</table>

**DISPOSITION**  
- ☑ IMPROVEMENT
- ☐ RETROFIT ON FAILURE
- ☐ RECOMMEND MANDATORY
- ☐ INFORMATION ONLY

**EFFECTIVITY**  
This change updates Cable Assy. 121021 from Rev. C to Rev. D.

**CHANGE DESCRIPTION**  
Reduce noise on ground by isolating grounds for read, write, and control signals.

**CHANGE PROCEDURE**

REWORK THE CABLE ASSY BY MAKING
INDICATED ETCH CUTS ON THE PCB (9) AND
REWIRE THE GROUNDS AS SHOWN ON THE WIRING CHART.

**GROUND WIRING CHART**

<table>
<thead>
<tr>
<th>JUMPER FROM</th>
<th>TO</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>NOVA &quot;B&quot; 1</td>
</tr>
<tr>
<td>B</td>
<td>NOVA &quot;B&quot; 2</td>
</tr>
<tr>
<td>C</td>
<td>NOVA &quot;B&quot; 5D</td>
</tr>
<tr>
<td>D</td>
<td>NOVA &quot;A&quot; 79</td>
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<tr>
<td>E</td>
<td>NOVA &quot;A&quot; 80</td>
</tr>
</tbody>
</table>

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