

N1076B-01

# Modification Recommended Service Note

Supersedes:  
NONE

## N1076B Electrical Clock Recovery

Serial Numbers: US00000000 - US58490100

**Modification available to improve Clock Recovery performance on N1076B.**

Parts Required:

| PN:         | Description                          | Qty |
|-------------|--------------------------------------|-----|
| N1076-63010 | CDR Board - JSA Locking modification | 1   |

Situation:

### ADMINISTRATIVE INFORMATION

|               |   |                            |  |        |  |
|---------------|---|----------------------------|--|--------|--|
| ACTION        | <input type="checkbox"/> ON SPECIFIED FAILURE                       | STANDARDS                  |  |        |  |
| CATEGORY:     | <input checked="" type="checkbox"/> AGREEABLE TIME                  | LABOR:                     | 0.5 Hours                                    |        |  |
| LOCATION      | <input type="checkbox"/> CUSTOMER INSTALLABLE                       | SERVICE:                   | <input checked="" type="checkbox"/> RETURN   | USED   | <input checked="" type="checkbox"/> RETURN |
| CATEGORY:     | <input type="checkbox"/> ON-SITE (active On-site contract required) | INVENTORY:                 | <input type="checkbox"/> SCRAP               | PARTS: | <input type="checkbox"/> SCRAP             |
|               | <input checked="" type="checkbox"/> SERVICE CENTER                  |                            | <input checked="" type="checkbox"/> SEE TEXT |        | <input type="checkbox"/> SEE TEXT          |
|               | <input type="checkbox"/> CHANNEL PARTNERS                           |                            |  |        |  |
| AVAILABILITY: | PRODUCT'S SUPPORT LIFE  | NO CHARGE AVAILABLE UNTIL: | PRODUCT'S SUPPORT LIFE                       |        |  |
|               | <input checked="" type="checkbox"/> Calibration Required            | PRODUCT LINE:              | PL8F   |        |  |
|               | <input type="checkbox"/> Calibration NOT Required                   | AUTHOR:                    | NC   |        |  |

### ADDITIONAL INFORMATION:

Service for the N1076B is available in the Factory only. All service must be performed at the Factory, not the Service Center.

For N1076B with Option JSA, when using JSA in Jitter Mode and turning on the Jitter Optimization feature for Clock Recovery Emulation, Clock Recovery Lock may be lost. This is most likely to occur with PAM4 signals at higher data rates. When Jitter Optimization is enabled, a calibration step signal is used to characterize the loop response. Before this modification, it was possible for the calibration step to cause the clock recovery to lose lock for PAM4 signals at higher data rates. Loss of clock recovery lock is accompanied by an error message indicating “Clock recovery has lost lock.” Although this improvement is seen when using Option JSA, this modification will be performed on all N1076Bs, even if the unit doesn’t currently have Option JSA.

A resistor modification was made to the CDR board and is available to reduce the likelihood of loss of clock recovery lock and to improve overall performance.

This upgrade is to be performed at no additional charge to the customer. The customer may be charged for other services provided, such as repair or calibration, per the usual process.

**Solution/Action:**

Units received for service, repair or calibration, shall undergo As Received testing according to the regular service procedure.

Perform CDR board (N1076-63010) “**JSA Locking**” modification and the customer shall not be charged for parts or labor associated with this upgrade.

**Revision History:**

| Date        | Service Note Revision | Author | Reason for Change |
|-------------|-----------------------|--------|-------------------|
| 11 Jan 2019 | 01                    | NC     | As Published      |
|             |                       |        |                   |
|             |                       |        |                   |
|             |                       |        |                   |