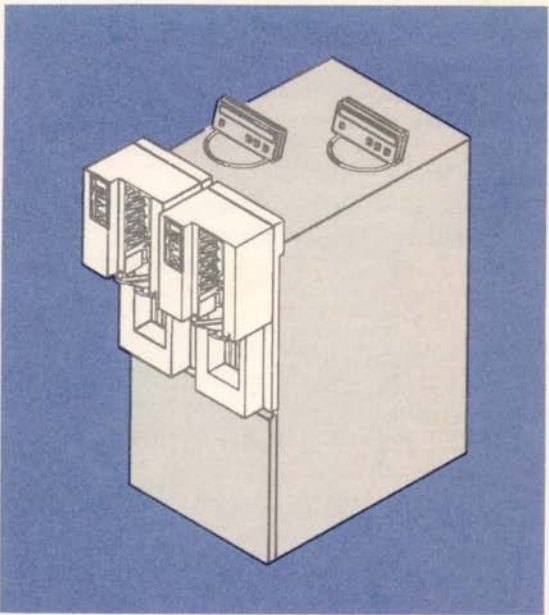


IBM

3480

**Automatic
Cartridge
Loader**



Z229-5915-02
IBM Internal Use Only

Purpose

The purpose of this brochure is to introduce the IBM Customer Engineer to the Automatic Cartridge Loader feature of the 3480.

Description

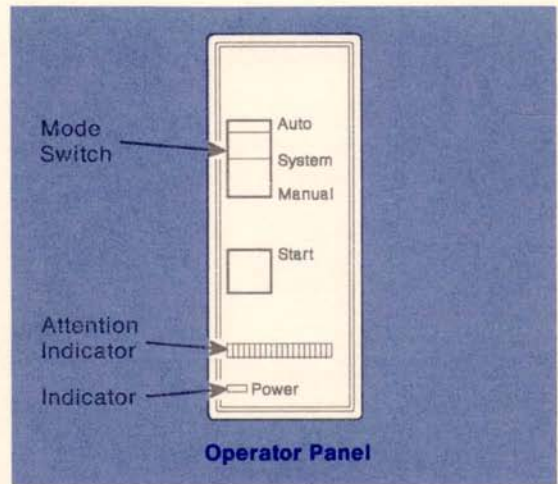
The Automatic Cartridge Loader feature consists of: An automatic loader mechanical assembly and the load assembly that is mounted on the front of a 3480 tape drive (replacing the front cover and manual latch assemblies). The Automatic Cartridge Loader feature allows for both automatic loading of pre-mounted tape cartridges or loading of a single tape cartridge. The Automatic Cartridge Loader feature (#2511) includes two Loader Mechanical and two Load assemblies, one for each tape transport in the 3480 B22 or B11 tape units.

Installation

The field installation time for one Automatic Cartridge Loader is 1.0 hours (2.0 hours per feature).

Diagnostics

The 3480 product diskette includes the diagnostics necessary to service the loader feature.



Modes of Operation:

Auto:

Allows the operator to premount up to six cartridges that are automatically mounted and demounted on the drive.

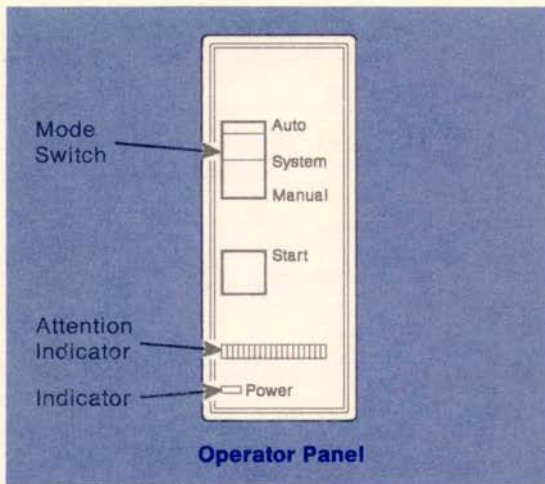
System:

Supporting software is required. In response to volume requests (mount messages), allows the operator to premount up to five scratch cartridges that are mounted and demounted on the drive automatically.

Note: A cartridge should not be premounted in the feed position as this position may be needed for a specific volume request.

Manual:

Allows cartridge loading by depressing the start key on operators panel. This mode is effectively the same as a 3480 without the Automatic Cartridge Loader feature.

**Start Switch:**

Press the Start switch to cause an index and/or load procedure or, under error conditions, an unload. The Start switch is pressed after making any mode change (Auto, System, or Manual).

Attention Indicator:

The Attention indicator has two functions.

Flashing:

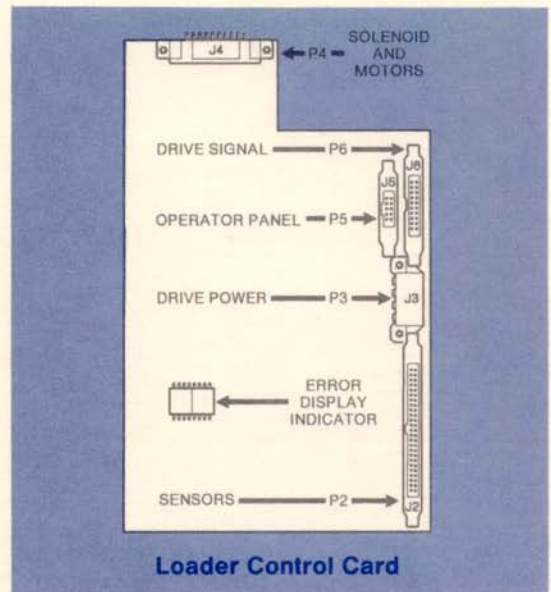
Clear cartridge(s) from output stacker and cartridge from feed position. Press the Start switch on the loader to clear this condition.

On Continuous:

Clear cartridge(s) from output stacker and cartridge from feed position. Press the Unload switch on the drive to clear this condition.

Power Indicator:

On when the voltages required for the Automatic Cartridge Loader are present.

**Error Codes:**

A two position Error Display Indicator is located on the Loader Control Card.

Blank:

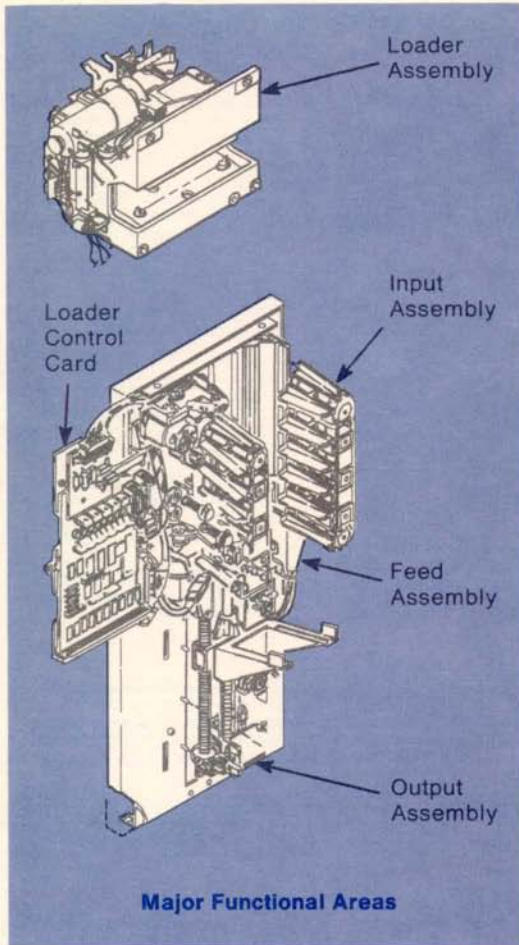
Indicates the microcode for the Automatic Cartridge Loader is not loaded.

00:

Indicates the microcode is loaded and the Automatic Cartridge Loader is functional.

XX:

Indicates the last error that occurred on the Automatic Cartridge Loader. The indicator having characters other than 00 is used by the Maintenance Device to isolate to the failing FRU.

**Diagnostics:**

The product diskette has been updated to incorporate the diagnostics necessary to service the Automatic Cartridge Loader.

Description	FRU
Loader Control Card	281
Load Assembly	282
Load Motor	283
Load Motor Complete Sensor	284
Cartridge Latched Sensor	011
Cartridge Present Sensor	010
File Protect Switch	009
Loader Mechanical Assembly	285
Fuse 24v	288
Fuse 5v	299
Stack Low Position Sensor	289
Cartridge in Stack Sensor	291
Cartridge Staged Sensor	292
Stacker Up Position Sensor	296
Input Stacker Assembly	290
Left Input Rail Assembly	293
Right Input Rail Assembly	294
Feed Assembly	295
Output Stacker Assembly	297
Loader Operator Panel	298
Loader Signal Cable	286
Loader Power Cable	287



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Sense Information

The following sense bytes contain information about the Automatic Cartridge Loader.

- Sense byte 7 must be 19 or 20
- Sense byte 25 bit 7 on = Automatic Cartridge Loader installed
- Sense byte 21 contains the drive check codes - EC, ED, EE or EF (all are Automatic Cartridge Loader errors). The check codes are converted to E7nn in the fault symptom index, where nn is equal to the contents of the loader control card display (sense byte 18). The drive check codes, and the contents of the loader control card, found in sense byte 18, are used to develop fault symptom codes.

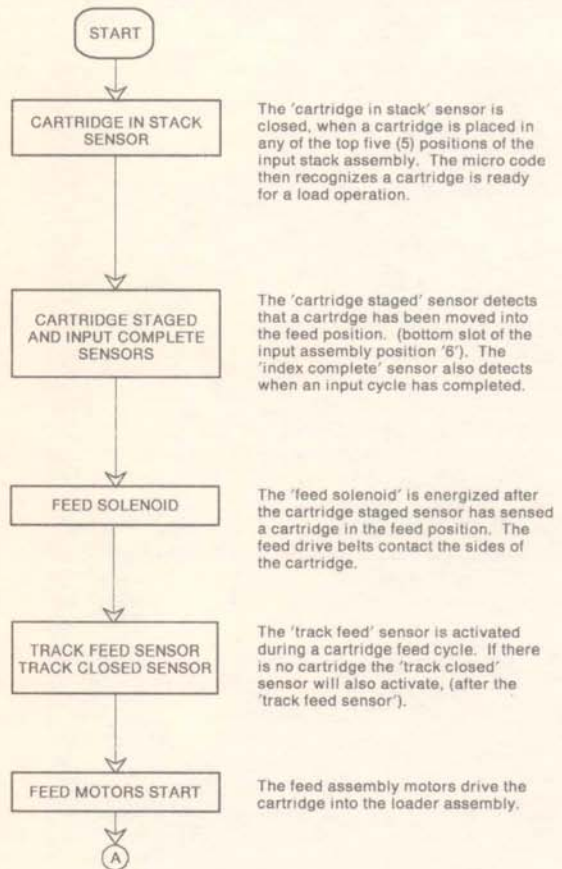
Example:

DRIVE DISPLAY = EC,ED,EE,EF
 LOADER CONTROL CARD = A9
 SENSE BYTE 18 = A9
 FSC WOULD BE = E7A9

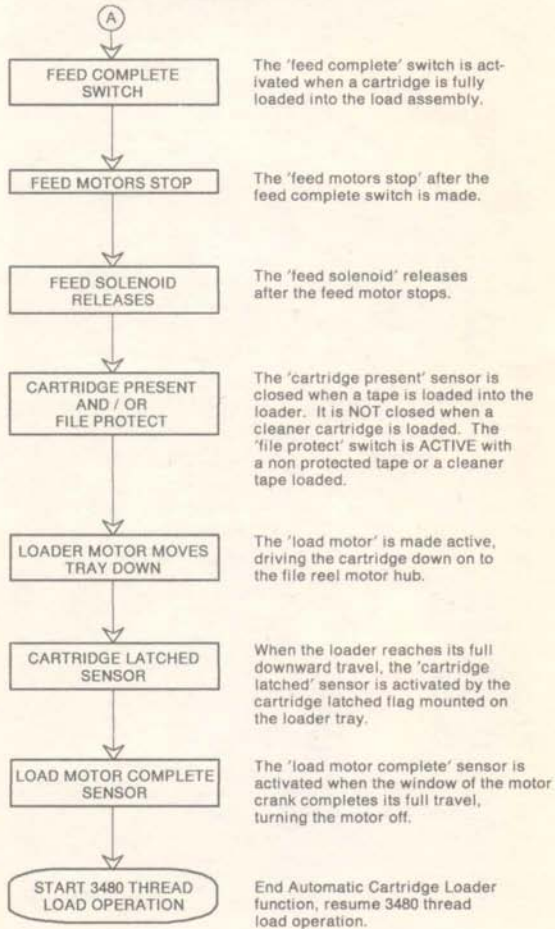
```

00 02 04 06 08 10 12 14 16 18 20 22 24 26 28 30
424098330000002073008E06000000000000A902FFEC0000F6810E7157379900
                XX  XX  XX
AUTOMATIC CARTRIDGE LOADER LEDs<XXXX  XX  XX
                XX  XX
DRIVE CHECK CODE<XXXXXXXXXXXXXXXXXXXX  XX
                XX
BIT 7 ON = AUTOMATIC CARTRIDGE LOADER INSTALLED<XX
    
```

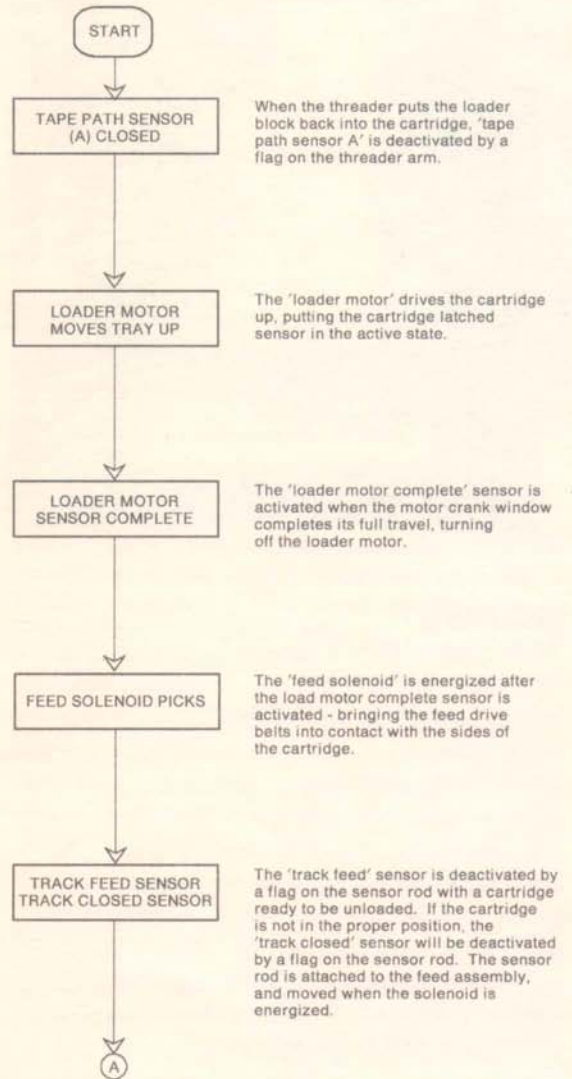
LOAD SEQUENCE



LOAD SEQUENCE (CONTINUED)



UNLOAD SEQUENCE



UNLOAD SEQUENCE (CONTINUED)

