KYBE

MLT-600 SERIES

OPERATORS MANUAL

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WARNING

This equipment generates, uses and can radiate
radio frequency energy and if not installed and
used in accordance with the instructions
manual, may cause interference to radio
communications. It has been tested and found to
comply with the limits for a Class A computing
device persuant to Subpart J of part 15 of FCC
rules, which are designed to provide reasonable
protection against such interference when ope-
rated in a commercial environment. Operation of
this equipment in a residential area is likely
to cause interference in which case the user, at
his own expense, will be required to take
whatever measures may be required to correct the
interference.

1.0 DESCRIPTION

The MLT-600 series manual load cleaner/tester is a precision Z-80 micro-processor controlled tape analysis system, designed to clean, test, and evaluate (or just clean) 2400', 1200', and 600' reels of 1/2" computer tape.

The tape is manually threaded by the operator from the supply reel along the marked tape path and on to the take-up reel. Selecting the "FWD" switch, the tape then runs forward at 400 inches per second. During this pass, the oxide surface is cleaned by the left hand burnishing station which contains a sharp enduron sapphire blade, and is wiped by two (2) automatically advancing tissues. The tape's mylar backing is also wiped by two (2) automatically advancing tissues.

When the "END OF TAPE" (EOT) reflective marker is sensed, the direction of tape motion reverses and testing begins (if the test mode has been previously selected). The tape will run at 225 inches per second in reverse and is tested by erasing and fully over-writing it with a test signal. This signal, when read back, must meet preset threshold settings. It is examined for dropouts by the amplitude and edge detection circuitry and the error processing circuitry for processing error information. Detected errors are displayed on a series of LED displays, and will also be recorded on an optional strip chart printer or circular chart recorder.

During reverse tape motion, the oxide surface is cleaned by the right hand burnishing station and is wiped a second time by automatically advancing tissues. When the "BEGINNING OF TAPE" (BOT) marker is sensed, the testing stops and the tape is wound back on to the supply reel for removal by the operator.

The MLT-600 series manual load cleaner/tester is available in four (4) models - 601, 602, 603, 604.

All four (4) models are derived from a basic deck and base module and are selected from the following four (4) test modules:

MODEL-601

800 B.P.I. Software Selection
7 Track Head Assembly
16 Channel Pre-Amplifier
Read Amplifier 001

MODEL-602

800/1600 B.P.I. Software Selection
9 Track Head Assembly
9 Channel Pre-Amplifier
Read Amplifier 002

MODEL-603

800/1600 B.P.I. Software Selection
7/9 Track Head Assembly
16 Channel Pre-Amplifier
Read Amplifier 002

MODEL-604

1600/6250 B.P.I. Software Selection
9 Track Head Assembly
9 Channel Pre-amplifier
Read Amplifier 003

PROGRAMMABLE FEATURES OF THE MLT-600 INCLUDE:

Bi-directional stacking wheel - used to produce precision stacking during both forward and reverse tape motion.

Header label retention - for a value anywhere from 0 inches to the total length of the tape.

Footage Search.

Threshold Sensitivity.

Diagnostics.

OPERATOR SAFETY FEATURES

1. The front cover is interlocked. All tape motion will automatically stop when the front cover is lifted.

2. No power will be applied to the control panel until the power module switch (located in the back of the MLT-600) is energized. The power module switch will be illuminated when energized.

OPTIONS/SPECIAL FEATURES

1. Circular Chart Recorder
2. Dot Matrix Strip Chart Printer
3. Opti-Tect, "LIGHT TRANSMISSION ERROR" (LTE) Defect Scanner
4. Static Eliminator
5. Erase After Read Head

CONTROL PANEL SWITCH OPERATION

The following is a brief summary of the control panel switch operation; for a more detailed description see section 1.2 (Operator Controls and Displays) and section 1.3 (Management Controls and Displays).

ON   Press the "ON" Switch to apply power to the MLT-600

OFF   Press the "OFF" Switch to turn power off

RESET   Press the "RESET" Switch to unlock forward and reverse switches, stop tape motion or to load tape.

FORWARD Press the "FWD" Switch to start tape motion from left to right.

REVERSE Press the "REV" Switch to start tape motion from right to left, and to unload tape.

DISPLAY Press the "DISP.MODE" switch to display the
MODE   pre-programmed operating modes stored in memory.

ERROR   Press the "ERROR.GRAPH" switch for a visual GRAPH
GRAPH   display of the error information, or a hard copy print-out of the error information.

REPORT   Press the "REPORT.GEN" switch to access
GENERATION accumulative operational information such as; on hours, running hours - forward and reverse, power up modes, etc.

C SWITCH Press the "C" switch to display test results at run complete.

PRINT   Press the "PRINT" switch to access test results and/or additional information at run complete.

PAPER   Press the "PAPER-FEED" switch to advance the
FEED   paper in the strip chart printer.

CLEAN/   Press the "CLEAN/TEST" switch to select
TEST   either the "CLEAN ONLY" or "CLEAN/TEST" mode.

CYCLE   Press the "CYCLE" switch to select either the "HALF" or "FULL" cycle operating mode.

STACKING Press the "STK.WHL" switch to select any
WHEEL   one of four (4) modes of operation for precision stacking.

PRINT   Press the "PRT.MODE" switch to select any one of
MODE   four   (4)   modes   of   operation   for   manual   or
            automatic printing of test results and additional
            information.

SEARCH   Press   the   "SRCH"   switch to   enable   the   footage
            search mode and to program the desired footage
            value to be located.

OPTI-TECT   Press the "OPTI" switch to count only, or count and
            locate   all   light   transmission   errors   detected.
            These   errors   will   be   positioned   over   the   lower
            right hand tissue station for visual inspection.

CHANNEL   Press the "CH DEN" switch to select the desired
DENSITY   testing density.

THRESHOLD   Press the "THR SEL" switch to select the level of
SELECT   acceptability for which the tape will be tested.

ENTER   Press   the   "ENTER"   switch to program   any   desired
            operating mode in memory.

1.1   MLT-600 SPECIFICATIONS:

MICROPROCESSOR CONTROLLED:	Z-80 Microprocessor
TAPE SPECIFICATIONS:	1/2" wide, 2400, 1200, 600 feet on reels up to 10 1/2" in diameter.
TAPE HUB:	Self-seating, IBM compatible.
CYCLE TIME:	400 ips Clean, 225 ips Test 3.4 Minutes, Clean and Test 2.4 Minutes, Clean Only
CLEANING PROCESS:	2 Each long life sapphire burnishing blades. 4 Each automatically advancing wiping stations
TESTING FORMATS:	7 Track 800 BPI 9 Track 800/1600 BPI 7 Or 9 Track 800/1600 BPI 9 Track 1600/6250 BPI
EVALUATION PROCESS:	Optical Scanning of tape surface for light transmission errors (LTE).
TESTING CIRCUITRY AND RELATED FEATURES:	Automatic Gain Control (AGC) Circuitry. Long-life Ceramic or Tribaloy heads, Head Tape Lifter, and Adjustable Head Guides.
REPORT GENERATION:	20 Column Thermal dot matrix printer for 4 report formats. 4 Track Thermal Circular Chart.

LED DISPLAY:	2 Line 24 Character LED display.
800 BPI.	Footage Write Check Error Count. Edge Condition Error Count. LTE Error Count.
1600 BPI	Footage. 1 Track Error Count. 2 Track Error Count. Edge Condition Error Count. Permanent Write Error (PWE) Count.
6250 BPI	Footage 1 Track Error Count. 2 Track Error Count. 3 Track Error Count. LTE Error Count . Permanent Write Error (PWE) Count.
ADDITIONAL DISPLAYS:	Error Profile Graph. System Operational Check. Configuration Mode. Diagnostic Information. Leader Length. Missing BOT, Dual BOT. Blade Usage. Tape Fault. File Protect.

LED DISPLAY CONTROLS: Error Graphs.
                                     Report Generation.

OPERATOR CONTROLS: On, Off.
                                     Reset.
                                     Forward, Reverse.
                                     Display Mode, Print and
                                     Paperfeed.

MANAGEMENT CONTROLS: Lockable Control Panel Pad.
                                     Clean/Test, Cycle, Stack-
                                         ing Wheel.
                                     Printer Mode, Search.
                                     Channel Density, Threshold
                                         Select.
                                     Control, Blade Life,
                                         Enter.

OPERATOR SAFETY: Interlocked Front Panel.

PRECISION REWIND: Bi-directional automatic
                                     engaging stacking wheel.

ELECTRICAL: 105 VAC To 125 VAC.
                                     210 VAC TO 250 VAC.
                                     90 VAC TO 110 VAC.
                                     50 Hz Or 60 Hz.
                                     600 WATTS.

SIZE: 37"W X 20"H X 14"D

WEIGHT: 150 LBS.

1.2 OPERATOR CONTROLS AND DISPLAYS

1.2.1 POWER ON OR OFF

Press the "POWER MODULE SWITCH" located in the back of the MLT-600. Press "ON" Switch to turn power on. A self-test display message will be illuminated, cooling fans will be activated, and the current modes of operation will be printed out. (See example below).

EXAMPLE OF POWER ON PRINT-OUT:

```
SER.NO.
PRINTER ACTIVE
SELFTEST COMPLETE
 PROCEED

   *CURRENT MODES*

CLEAN ONLY
CYCLE FULL
STK WHL
   FWD STK ON
   REV STK ON
PRINT
   MAN OFF
   AUTO OFF
OPTI-TECT OFF
9 CHAN 6250 BPI
NOM
FTG SCH ON  9898 FT
ERR PRESET
HEADER 0000FT 20IN
```

Press "OFF" switch to turn power off. All circuits are reset when power is turned off, except blade timer and permanent data log circuits.

1.2.2 RESET:

Press "RESET" switch to unlock forward and reverse switches, to stop either forward or reverse tape motion or to load the tape on to the take-up reel. In "RESET" the stacking arm will be down, the tissues will not advance, and light tension will be applied to the tape. "RESET" must also be pressed after the "ENT" switch has been activated to enter a particular operating mode into memory. This will allow the operator to resume forward or reverse tape motion. "RESET" will be illuminated on the LED display when pressed.

1.2.3   FORWARD:

Press "FWD" switch to start tape motion from left
to right. "RUN FORWARD" will be illuminated on the
LED display. Tape will run forward until an LTE or
an "EOT" marker is sensed. The tape will then come
to a controlled stop. If the machine is in the
"FULL CYCLE" mode, the tape will then automatically
run in reverse until a "BOT" marker or a "NO TAPE"
condition is sensed.

1.2.4   REVERSE

Press "REV" switch to start tape motion from right
to left. "RUN REVERSE" will be illuminated on the
LED display. The tape will run in reverse until a
"BOT" marker is sensed. The tape will come to a
controlled stop at "BOT". The "RUN COMPLETE"
indicator will be displayed. Press the "REV"
switch to unload the remaining tape. The stacking
wheel will be disabled and tape will unload at 20
inches per second, ready for removal by the
operator.

1.2.5   DISPLAY MODE:

The display mode switch provides the operator with
the capability of checking the pre-programmed
operating modes stored in memory after the "ON"
switch is pressed.

Press the "DISPLAY MODE" switch in sucession to
step through each of the following display
messages:

1.   Clean only or clean/test mode.
2.   Full or half cycle mode.
3.   Stacking wheel mode.
4.   Printer mode.
5.   Footage search mode.

NOTE: A hard copy print-out will be provided by
       pressing the "PRINT" switch after stepping
       through the display mode sequence.

1.2.6   ERROR GRAPH:

The "ERROR GRAPH" switch is a dual function switch.
One function provides a visual display of all
detected errors (BOT, MAGNETIC and LTE) in 100
foot increments for a total of 2400 feet. The
other function provides a hard copy print-out of
the error information.

When the "ERROR GRAPH" switch is first pressed,
both functions will appear on the LED display as
follows:

        ERROR GRAPH FOR GRAPH
        PRINT TO PRINT ERROR LOG

VISUAL:

If a visual display of the error log is desired,
press the "ERROR GRAPH" switch repeatedly to step
through each of the following error log.

        LTE   ERROR LOG   (LIGHT TRANSMISSION)
        PWE   ERROR LOG   (PERMENANT WRITE)
        3 TK/EEG   ERROR LOG   (3 TRACK/EDGE)
        2 TK   ERROR LOG   (2 TRACK)
        1 TK   ERROR LOG   (1 TRACK)

The numbers 1 through 24, appearing on the bottom
of the LED displays, represent 100 foot sections
for a 2400 foot tape. In order to read each error
log that appears on the display, symbols and
numbers are used to show each detected error:

Dots represent "0" errors found in each 100 foot
section.
Numbers 1 through 9 represent the actual number of
errors found in each 100 foot section.
X's represent 10 or more errors found in each 100
foot section.

HARD COPY:

If a hard copy print-out of the error log is
desired, enable the Manual Print Mode (see
"PRT.MODE" switch). Press the "ERROR GRAPH" switch
once to display both functions: Error Graph for
Graph, and Print to Print error log. Press the
"PRINT" switch to access all error log information.

1.2.7 REPORT GENERATION:

The "REPORT GEN" Switch is an alternate action switch that will provide a hard copy print-out for two (2) types of operational logs.

Both logs (Daily and Permanent) accumulate important operational information, such as: on hours, hours running forward and reverse, hours used in clean only or clean/test mode, cycle counts, power up modes, and hours the stacking wheel is enganged in each direction.

The Daily Log is reset after the unit is powered down.
The Permanent Log will be stored in the system's memory and remain accessable, even after the unit is powered down. It is an accumulation of data from the daily log.

To access the daily log, enable the Manual Print Mode, press the "REPORT GEN" switch once, then press the "PRINT" switch. The words "PRINT FOR TEMP LOG" will appear on the LED display.

To access the permanent log, enable the Manual Print Mode, press the "REPORT GEN" switch a second time, then press the "PRINT" switch. The words "PRINT FOR PERM LOG" will appear on the LED display.

NOTE: The daily log has not been incorporated into the MLT-600 at this time, but will be available at a future date.

1.2.8 "C" SWITCH

The "C" SWITCH enables the operator to read the test results on the LED display. It can only be used after a completed, uninterrupted clean/test, full cycle run.

Press the "C" SWITCH once to display test results after the run complete message is displayed. Press the "C" SWITCH a second time to display the original run complete message.

1.2.9 PRINT

The "PRINT" switch provides the operator with the capability of printing test results and/or additional information at the completion of a half cycle or full cycle run.

This switch must be preceeded by setting the "PRT.MODE" switch to the manual print function.

When the manual print mode switch has been programmed, the operator merely presses the "PRINT" switch to access the error log, daily log, permanent log, leader length, tape length, hours on time, etc., after the "ERROR GRAPH" and/or "REPORT.GEN" switches have been selected.

1.2.10 PAPER FEED

The "PAPER FEED" switch advances the paper in the strip chart printer without any printing occuring. This switch can be used at any time after the unit is powered up, even when tape is in motion.

1.3   MANAGEMENT CONTROLS AND DISPLAYS

1.3.1   CLEAN/TEST

The "CLEAN/TEST" switch allows the operator/supervisor to select either the "CLEAN ONLY" or "CLEAN/TEST" mode of operation.

Press the "CLEAN/TEST" switch once to recall from memory the last mode selected. If this is the desired operating mode, press the "ENT" switch to program this mode into the system's memory.

If this is not the desired operating mode, press the "CLEAN/TEST" switch a second time to display the alternate operating mode and then press the "ENT" switch.

Press the "RESET" switch after the mode has been programmed, to initiate forward or reverse tape motion.

1.3.2   CYCLE

The "CYCLE" switch allows the operator/supervisor to select either the "HALF CYCLE" or "FULL CYCLE" operating mode.

Press the "CYCLE" switch once to recall from memory the last mode selected. If this is the desired operating mode, press the "ENT" switch to program this mode into the system's memory.

If the mode displayed is not the desired function, press the "CYCLE" switch a second time to display the alternate operating mode and then press the "ENT" switch.

Press the "RESET" switch after the mode has been programmed to initiate forward or reverse tape motion.

1.3.3   STACKING WHEEL

The "STK WHL" switch provides the operator/supervisor with the capability of selecting four (4) modes of operation.

Press the "STK WHL" switch once to recall the last operating mode programmed into memory.

Mode 1:

Press the "STK WHL" switch a second time to display the first sequence of the stacking wheels operation:
    FWD STK = ON   REV STK = ON
In this mode, the stacking wheel will come in contact with the tape in both forward and reverse.

Mode 2:

Press the "STK WHL" switch a third time to display:
    FWD STK = OFF   REV STK = ON
In this mode, the stacking wheel will come in contact with the tape in reverse only.

Mode 3:

Press the "STK WHL" switch a fourth time to display:
    FWD STK = ON   REV STK = OFF
In this mode, the stacking wheel will come in contact with the tape in forward only.

Mode 4:

Press the "STK WHL" switch a fifth time to display:
    FWD STK = OFF   REV STK = OFF
There will be no precision stacking in either direction.

Once one of the four operating modes are selected, it can be programmed into memory by pressing the "ENT" switch.

Press the "RESET" switch after the mode has been programmed, to initiate forward or reverse tape motion.

1.3.4 PRINT MODE

The printer can be used both manually or automatically for four (4) different modes of operation.

Press the "PRT MODE" switch once to recall the last operating mode programmed into memory.

Mode 1:

Press the "PRT MODE" switch a second time to display the first sequence of printer operation.
     PRINTER MAN = ON   AUTO = ON
The manual printer function allows the operator to print tape results at any time during a half or full cycle run by pressing the "PRINT" switch.
The auto function prints test results and additional information at the end of the run automatically.

Mode 2:

Press the "PRT MODE" switch a third time to display:
     PRINTER MAN = OFF   AUTO = ON
There is no manual intervention in this mode. The "PRINT" switch is disabled. Test results and additional information will be printed automatically at the end of the run.

Mode 3:

Press the "PRT MODE" switch a fourth time to display:
     PRINTER MAN = ON   AUTO = OFF
There are no automatic test results or information printed at the end of the run in this mode.

Mode 4:

Press the "PRT MODE" switch a fifth time to display:
     PRINTER MAN = OFF   AUTO = OFF
No printing will occur, either manually or automatically in this mode.

Pressing the "ENT" switch will program any one of the four (4) operating modes into memory.

Press the "RESET" switch after the mode has been programmed to initiate forward or reverse tape motion.

1.3.5   SEARCH

In order to search for the desired footage value the search mode must be enabled.

To enable this mode, you must complete the following sequence:

Press the "SRCH" switch once to recall the last mode programmed into memory. If "FOOTAGE SEARCH ON" is displayed, press the ENT switch and the search mode will e enabled.

If "FOOTAGE SEARCH OFF" is displayed, press the switch a second time and "FOOTAGE SEARCH ON" will appear on the display.

Press the "ENT" switch and the search mode will be enabled.

Press the "SRCH" switch again to display "SEARCH FOOTAGE = 0000". Now press the numeric value (labeled in the upper left hand corner of each switch) to the desired footage value.

Press "ENT" to program the footage value into memory.

Press the "RESET" switch after completing the entire footage search sequence to initiate forward or reverse tape motion.

1.3.6   OPTITECT

There are two functions associated with the "OPTI" switch for <u>CLEAN</u> <u>ONLY</u> operation.

1.   **"OPTITECT ON"** - FORWARD TAPE MOTION.
      This mode will enable the LTE defect scanner to count all light transmission errors caused by edge nicks, sheared sections, and certain types of stretches and creases in the tape. When a defect is sensed, the tape will stop, back up and position the error over the lower right hand tissue station for visual inspection.

2.   **"OPTITECT OFF"** - FORWARD TAPE MOTION
      All light transmission errors will be counted only. The tape will not stop and back up to position these errors.

      Press the "OPTI" switch once to recall the last mode programmed into memory. If this is the desired operation mode, press the "ENT" switch.

      If this is not the desired operating mode, press the "OPTI" switch a second time to change to the alternate mode.

      Press the "ENT" switch to program desired mode into memory.

      Press the **"reset"** switch after completing the entire Optitect sequence to initiate forward or reverse tape motion.

1.3.7 CHANNEL DENSITY

The "CH DEN" switch allows the operator/supervisor to select the testing criteria desired, i.e.:
7 track or 9 track,
800 BPI or 1600 BPI, etc.
This switch must be preceeded by setting the "CLEAN/TEST" switch to the test mode. (see clean/test switch).

Press the "CH DEN" switch to display the testing density programmed into memory. If this is the desired mode, press the "ENT" switch. If this is not the desired mode, press the "CH DEN" switch a second time to display the alternate testing density. Press the "ENT" switch to program this mode into memory.

The "CH DEN" switch operates in conjunction with the threshold select switch ("THR SEL").

Press the "RESET" switch to initiate forward or reverse tape motion.

1.3.8 THRESHOLD SELECT

The "THR SEL" switch allows the operator/supervisor to select the level of acceptability for which the tape will be tested. This switch must be preceeded by the setting of the channel density switch ("CH DEN") to the desired mode.

There are three selectable threshold settings:

LOW	15% THRESHOLD LEVEL	SUBCRITICAL
NOM	20% THRESHOLD LEVEL	NOMINAL
HI	25% THRESHOLD LEVEL	HYPERCRITICAL

Press the "THR SEL" switch once to recall the last mode programmed into memory. Press the "THR SEL" switch repeatedly to step through the sequence of threshold settings.

Press the "ENT" switch when the desired threshold level is displayed.

Press the "RESET" switch to initiate forward or reverse tape motion.

1.3.9 ENTER

Press the "ENT" switch to program any desired op- erating mode into the system's memory. Management control switches, once pressed,

will flash repeatedly until the "ENT" switch
is pressed thus programming that particular
mode into memory.

1.4   OPERATIONAL INDICATORS

1.4.1   MISSING BOT - Indicates the leader length has
reached a maximum footage value of 19 feet
without sensing a beginning of tape marker.
The tape will stop and back up to the exact
spot (lower right hand tissue station) where a
BOT marker is to be placed.

1.4.2   MULTIPLE BOT - Indicates two or more BOT
markers have been sensed. The tape will stop,
back up and place the second BOT marker over
the lower right hand tissue station for remo-
val.

1.4.3   LEADER TOO SHORT - The length of the leader is
less then the minimum footage value of 13 feet
from the BOT marker. The tape will stop and
back up to position the BOT marker over the
lower right hand tissue station for removal.
The BOT marker should be placed 15 feet in
from the actual beginning of the tape.

1.4.4   LOCATE LTE - Indicates a light transmission
error has been located in the forward direc-
tion for the "CLEAN ONLY" mode. The tape will
stop and back up to position the error over
the lower right hand tissue station for
inspection.

1.4.5   SEARCH COMPLETE - Indicates the pre-programmed
search footage value has been located. The
tape will stop, and back up to within <1 foot
of the pre-programmed footage value.

1.4.6   SCH FTG NOT FOUND (SEARCH FOOTAGE NOT FOUND) -
Indicates the pre-programmed footage value is
greater than the actual length of the tape.
This indicator will be displayed at the
completion of a full or half cycle run.

1.4.7   TAPE FAULT - Indicates a reflective marker is
longer than 1 1/2 inches, or, both an EOT and
BOT marker have been placed on the same
section of the tape.

1.4.8   RUN COMPLETE - Indicates a successful full or
half cycle run has been completed.

1.4.9   FILE PROTECT - Indicates the supply reel lacks
a write enable ring. The tape will not be
tested even if the "CLEAN/TEST" mode has been

previously selected.

1.5 OPERATING INSTRUCTIONS

OPERATING THE MLT-600

1. Use the hand grip in the center of the safety cover to lift the cover up and back.

2. Place the reel of tape to be cleaned or tested on the left hand hub and push it back to be sure it is fully seated. Be sure there is an empty take up reel securely seated on the right hand hub.

3. Turn power on by pressing the POWER MODULE switch, located on the back of the machine, and the "ON" switch located on the left hand side of the control panel. The display messages:
   SELF-TEST IN PROGRESS
   NO TAPE SERVO OFF
   PRESS RESET TO LOAD TAPE
   will appear on the LED display. A hard copy of the current modes of operation selected will also be printed out automatically.

4. Press the "RESET" switch to load the tape along the marked tape path and on to the take up reel. The display message, "LOAD, CLEAN HEAD/BLADES", will appear on the LED display. Once the tape passes the photocell, and is wrapped onto the take up reel, the display message will change to PRESS RESET IF LOADED.

5. Press the "RESET" switch to take up the tape slack.

6. Before initiating forward tape motion, refer to the Management Controls and Displays Sect. 1.3 to select the desired modes of operation.

7. Press the "FWD." switch to initiate tape motion from left to right. The tape will run from beginning of tape (BOT) to end of tape (EOT) and back. When BOT is reached, the tape will stop and the "RUN COMPLETE" message will be displayed and printed out by the strip chart printer.

1.6   TISSUES

The cleaning tissues, which remove debris and loose oxide particles from both the backing side (2 upper tissue spools) and oxide side (2 lower tissue spools) of the tape, are continously advanced whenever the tape itself is running.

All four tissues advance at the same rate and will therefore require replacement at about the same time.

TO CHANGE TISSUES:

1.   Pull the full spool of used tissue straight out from the deck to remove it from its shaft. Discard the full spool. Tissues must never be reused.

2.   Remove the empty spool and wrap the end of the tissue from a new spool around the core of the empty spool:
        clockwise for the two upper tissue stations,
        counter clockwise for the two lower tissue stations.

3.   Place the empty spool on the shaft from which the full spool was just removed. Press the empty spool firmly towards the deck.

4.   To take up slack, turn the full spool:
        clockwise, for the two upper tissue stations
        counter clockwise for the two lower tissue stations.
    Twisting the spool while pressing it toward the deck will make it easier to slide on.

1.7 ENDURON BLADES

Enduron blades are supplied with the equipment. Each blade has two (2) cleaning edges. Each edge is capable of cleaning approximately 2,500 standard length tapes (depending on the abrasiveness of the tape and the pressure of the tape on the blade.)

To invert cleaning edges or change blades, squeeze the lower sides of the blade holder to release the holding pressure. Grasp the blade by the ENDS and lift it out. Reverse the edge or install a new blade. Replace the blade in the holder by squeezing the lower sides of the blade holder and inserting the blade. Once an enduron blade has been positioned in its housing, it should not be moved except to be reversed or replaced.

CAUTION: Do not grasp the enduron blade by the edges. These edges are very sharp, and delicate. They are potentially harmful and easily damaged.

1.8 OPERATOR MAINTENANCE

Any tape management system requires cleanliness in order to produce the desired results. To assure peak performance of the MLT-600, it is necessary to maintain a strict daily cleaning routine.
Cleaning should follow the steps below:

1. Saturate a clean swab with 91% Isoprop alcohol and wipe the magnetic head and guides, the blade housings and the adjacent areas, after each tape run.

2. Dampen a swab with alcohol and wipe the recessed surfaces of the tape guides and tape depressors, daily.

3. Using a lint free cleaning cloth dampened with alcohol, wipe the surface of the deck, periodically.

4. Use a cleaning cloth dampened with alcohol to wipe the surface behind each tissue spool whenever it is replaced.

If the tapes cleaned or tested on the MLT-600 were exceptionally dirty, or if a residue build up is noticeable around the cleaning and testing mechanisms, repeat the above steps to insure a clean environment for the tapes.