"COMM-STOR*" II COMMUNICATIONS STORAGE UNIT

ROUTINE MAINTENANCE PROCEDURES

1. GENERAL

1.01 This section covers the COMM-STOR II Communications Storage Unit manufactured by Sykes Datatronics, Incorporated.

1.02 Whenever this section is reissued, the reason(s) for reissue will be listed in this paragraph.

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1.03 The routine maintenance procedures for the COMM-STOR II Communications Storage Unit are contained in the attached reprint of the practice prepared by Sykes Datatronics, Incorporated.

1.04 This section also applies to COMM-STOR II Communications Storage Units equipped for 8A1/8B1 Protocol operation.

Comm-Stor II COMMUNICATIONS

STORAGE ARRANGEMENT

ROUTINE MAINTENANCE PROCEDURES

1. GENERAL

1.01 This section provides the routine maintenance procedures for the Comm-Stor ® II Communications Storage Arrangement, hereafter referred to as Comm-Stor.

1.02 Whenever this section is reissued, the reason for the reissue will be given in this paragraph.

1.03 This section also applies to Comm-Stor II systems equipped for 8A1/8B1 Protocol operation.

DANGER AND WARNINGS

1.04

Danger: Turn off all power and signal sources before removing or replacing any module or component.

Warning 1: To avoid possible internal damage to circuitry, wear a static ground strap connected to ground to allow static discharge before handling circuit boards or components. Avoid touching circuit lands or components as much as possible.

Warning 2: Put the replaced board in a static bag immediately after removal from unit. Never handle the board outside the bag without being properly grounded.

Warning 3: Handle all diskettes with care:

- *Never touch the exposed diskette surface. Handle the diskette only near the label.*

- *Do not write on the diskette cover; write only on the label. If possible, write on the label before placing it on the diskette.*

- *Do not attempt to clean a dirty or dusty diskette, such a diskette should be discarded.*

- *Keep the diskette away from potentially magnetic materials (paper clips, etc.) or magnetic sources (unshielded power supplies, CRT monitors, etc.).*

- *Do not bend the diskette.*

- *Do not expose the diskette to extremes of heat or cold.*

- *Keep the diskette in its protective cover when not in use.*

• *Store diskettes vertically in boxes when not in use.*

2. TOOLS AND SUPPLIES

2.01 The following tools and supplies may be required to perform the routine maintenance procedures discussed in this manual.

TOOLS

Screwdriver, Phillips $\frac{1}{4}''$, 4″ blade, 2 point size

Screwdriver, Slotted $\frac{1}{8}''$, 2″ blade

Volt-ohm Meter KS8455

Volt-ohm Multimeter KI4510

Nut Driver, $\frac{1}{4}''$

Nut Driver, $\frac{11}{32}''$

Screwdriver, Phillips $\frac{1}{8}''$, 2″ blade, 0 point size

Screwdriver, Slotted $\frac{1}{4}''$, 4″ blade

Penlight

Static Ground Strap (Simco Neutrostat, 3M Velostat, or equivalent)

Static Bag (Simco Neutrostat, 3M Velostat, or equivalent)

SUPPLIES

Head Cleaner Solution (Miller Stephenson— MS200 or isopropyl alcohol)

Soft wiping cloth (Lint-free)

Fan Filter Spray (Super Filter Coat #418, Research Products Corp.)

Soft Bristled Brush

3. ROUTINE MAINTENANCE

3.01 The following routine maintenance procedures are to be performed on all Comm-

Stor II units after *2000 hours or one year of service* (whichever occurs first), except for cleaning the fan filter, which must be performed more frequently as described on page 4.

> *Note:* For disassembly/reassembly procedures, refer to Section 578-400-700.

> *Warning: Do not use sharp objects, harsh cleaning agents, or any cleaning solution containing freon as these might scratch or damage plastic surfaces.*

GENERAL INSPECTION

3.02 Check for and correct any defects in the general appearance of the Comm-Stor II unit. Make sure:

- all connectors are seated properly and securely,

- there are no pinched or crimped wires or cables,

- doors open and close properly,

- all lamps and LEDs are functional,

- all hardware is secure,

- top cover is secure.

GENERAL CLEANING

3.03 Clean exterior surfaces:

(a) Wash with a mild detergent solution.

(b) Rinse with a damp cloth.

(c) Dry with a soft cloth.

3.04 Use a soft bristled brush to dislodge debris inside the unit. Vacuum the interior of the unit if possible.

DRIVE MAINTENANCE

3.05 If Comm-Stor is used in an extremely dirty environment, a more frequent cleaning schedule than that recommended may be necessary for the Flexible Disk Drive (FDD) assembly.

3.06 If a drive malfunctions, it is recommended
that it be inspected and cleaned as described
below. Visual inspection is the first step in any
maintenance operation. Always look for corrosion,
dirt, wear, binds, and loose connections. Noticing
these items may save downtime later.

3.07 Inspection and maintenance operations are
listed in Table A. During normal maintenance,
perform only those operations listed on the chart.
Observe all safety procedures.

3.08 Cleanliness cannot be over emphasized in
maintenance of the FDD. Do not lubricate
the drive. Oil will allow dust and dirt to accumulate.
The read/write/erase head should be cleaned, but
only when signs of oxide build up are present.

READ/WRITE/ERASE HEAD MAINTENANCE

*Caution: Do not smoke while inspecting or
cleaning. Do not touch the head face with
fingers. Do not leave residue or lint on the
head face. Trapped residual particles can
result in irreversible damage to the head
and/or a scored diskette.*

(a) Remove AC power.

(b) Remove the top cover.

Note: Use a suitably bright penlight during
the following steps.

(c) Be sure carriage is fully retracted to Track
00. Rotate stepper shaft to position carriage
assembly.

*Caution: Do not attempt to manually force
the carrige assembly.*

(d) Inspect head face for reddish-brown oxide
deposits. Proceed to step (e) and clean head
only if deposits exist.

(e) If oxide deposits are found, use a lint-free
cloth to lightly dry-buff head face. Cleaning
is completed when deposits are removed.

(f) Dampen (do not soak) soft wiping cloth with
head cleaning solution or isopropyl alcohol
and wipe head face if oxide deposits were not
removed in previous step. Use dry cloth to
lightly buff head face to remove any remaining deposits.

TABLE A

INSPECTION AND MAINTENANCE PROCEDURES

UNIT	OBSERVE	CLEANING PROCEDURE
Read/Write/Erase Head	Oxide build up and scratches	Clean Read/Write/Erase Head *only if necessary.*
Stepper Motor Shaft and Carriage	Inspect for nicks and burrs	Clean off all dust, dirt, and *excess* lubricant.
Belt	Frayed or weakened areas	Replace if necessary.
Chassis	Inspect for loose screws, connectors, switches, etc.	Clean chassis.
Head Load Arm	Check the head load pad for wear. The pad must extend at least .020″ (.50mm) below the head load arm.	Replace head load pad if necessary (refer to Section 578-400-700, Disassembly/Reassembly and Parts).
Motors	Check for noisy bearings	Replace the motor (refer to Section 578-400-700).

FAN FILTER CLEANING

3.09 The Comm-Stor unit must not be operated without the filter, as this provides protection against entry of airborne dust and lint through the cooling fan. Routine cleaning of the filter is recommended as follows: every six months for a Comm-Stor unit operated in a clean office environment, or at three-month intervals if conditions are less ideal. A clogged filter may cause the unit to overheat. This may cause damage to the unit itself or any diskettes in the drive. Clean the filter as follows:

(a) Turn the Comm-Stor power OFF (indicator not illuminated).

(b) Remove the two screws which fasten the filter cover.

(c) Remove the filter cover and air filter.

(d) Brush the frame to remove any dust dislodged by filter removal. Also, brush the fan to remove all dirt accumulated on the fan blades. If possible, blow out the fan assembly from inside the unit with compressed air and vacuum clean.

(e) Wash the filter in a detergent solution; then rinse and let air dry.

(f) Coat the filter media with a dust-collecting adhesive (Research Products Corporation Super Filter Coat Adhesive Spray #418 or equivalent).

(g) Reverse procedure to replace filter.

BATTERY

3.10 Replace the battery located on the base card assembly.

POWER SUPPLY

3.11 Using a voltmeter, check the voltages on the power supply. The voltage adjustments should be within ±5% of the normal voltages shown in Fig. 1.

4. OPERATIONAL CHECKOUT

4.01 After servicing the Comm-Stor II, perform the diagnostics as discussed in Section 578-400-500, Testing and Troubleshooting.

4.02 On-line testing must be performed as discussed in Section 578-400-200, Installation Procedures.

+5, ± 12 RETURN
+12 VOLT ADJUST
+12 VDC
+5 OVER CURRENT ADJUST +5 VDC
+5 VDC
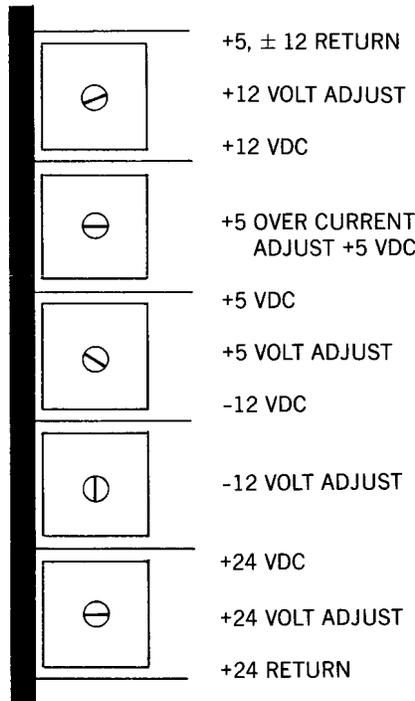+5 VOLT ADJUST
-12 VDC
-12 VOLT ADJUST
+24 VDC
+24 VOLT ADJUST
+24 RETURN

Fig. 1—Power Supply Voltage Adjustments