Very Preliminary
AUTOMUX Test Procedure

1) Materials needed to test the mux are:

Two Model II/12/16 or 16B
One mux
One Modem I
One mux test box
Two mux diagnostic disks
Two RS232 cables (26-1408)
One mux diagnostic ROM

Port A on II

2) Connect a Model II to port B of the mux using the RS232 cable. This Model II will be referred to as the Test Model II. Boot a copy of the mux diagnostic disk and init serial channel A of the Test Model II; the command is:

SETCOM A=(1200,7,E,1).

Enter the terminal mode by typing the command **TERMINAL** and at the terminal menu select option T. The Test Model II is now ready.

3) Connect the Modem I to the other Model II's serial channel A. This Model II will be referred to as the Automux Model II. Boot a copy of the mux diagnostic disk and after the date and time prompts enter the command **AUTOMUX**. The Automux Model II is now ready.

4) Remove the front panel from the mux. Remove the CPU card (the card in the black card guides). Carefully remove the boot ROM U insert the mux diagnostic ROM in its place. Reinstall the CPU board carefully.

5) Remove the red and black two wire plug connected to modem channel #0. Install the blue twisted pair from the mux test box on that connector.

6) Power up the mux and hit the reset button on the front panel. Hit the space bar on the Test Model II. The Test Model II will prompt for the channel to be tested; enter 0. Press the ring switch on the mux test box until the Test Model II acknowledges the ring. After a few seconds the Test Model II will indicate that the mux is on line. Connect a DVM to the meter leads on the mux test box. Set the DVM for AC volts. Adjust the trimmer pot for that channel for a reading of 330 mv. Connect the Modem I's modular phone jack into the mux test box's phone jack. At the Automux Model II press any key. The screens of both Model IIs should have two rows of alpha-numeric characters. The Automux Model II should also say "0 ERRORS TEST PASSES".

7) Steps 5 and 6 should be repeated for each of the 16 channels. The the mux should have its original ROM reinstalled, the cables hooked up properly, and the front panel reinstalled.

DISK PRE-INIT for MUX

1. Boot-up a TRSDOS 2.0a diskette.

2. Format a blank diskette using the following line:

```
FORMAT DIR=1 ALT=2
```

3. BACKUP the MUX 1.8 diskette onto the newly formatted diskette. This will be the actual running diskette.

4. Make a backup of a standard TRSDOS 2.0a diskette using regular FORMAT and BACKUP commands.

5. With the TRSDOS 2.0a diskette in drive 0, insert the MUX 1.8 diskette in drive 1 and execute the following line:

```
COPY SFU:1 :0
```

This TRSDOS diskette is now your operating SFU diskette.

6. It is a good idea to make another backup of each of these diskettes in case of accidental destruction. Remember, the SFU diskette is a standard TRSDOS 2.0a while the MUX 1.8 is NOT standard (DIR=1 ALT=2). BUT use a standard TRSDOS 2.0a to do the formatting and backups.

SET-UP of the MUX

1. Connect the MUX to the rotary phone service with the supplied cable. Connect Channel A of the MUX to Channel A of the S/F Model II unit using a standard RS232 cable (26-1408) supplied with the MUX.

2. If you have a SFU Model II, connect channel B of the S/F Model II to channel A of the SFU Model II using a transfer type cable (see schematic #1). This can be either a custom cable constructed from the schematic, or you can use a standard RS232 cable connected to a Mod I/II transfer cable available from RADIO SHACK National Parts.

2a. You may elect to use another computer as the SFU, or use a high speed modem to connect to another computer as an SFU. To use the modem, the MUX and the SFU software must be patched for low speed operation. As supplied, it operates at 9600 BAUD.

3. Connect Channel B of the MUX to the terminal monitor . This can be a Model II or the customers own terminal. If connected to a Model II, use a standard RS232 cable. (If needed to be pre-set, use 1200 baud, 7 bit words, no parity, and 1 stop bit)

4. Connect any disk bays the customer may have. If the customer has only one, it is advisable to attach to the SFU Model II as this is where it is REQUIRED to do Scripsit merges. If the customer has a printer, attach it to the SFU unit also.

POWER-UP for the MUX

1. Make sure the system is connected properly. The absolute minimum system is the MUX, a 26-1408 RS232 cable, and a Model II used as a S/F unit.

2. Make sure you have the necessary diskettes as described in the PRE-INIT procedures for the MUX.

3. Apply power to the MUX. Apply power to the S/F Model II. Hit reset on both units.

4. Insert the MUX 1.8 diskette into the S/F Model II disk drive.

5. The Model II will start its boot-up routine.

6. The Model II will pass 3F blocks of memory to the MUX using MUX 1.8. If you are not passing any blocks to the MUX, ie. it locks up on block 1, you probably do not have a good connection between the MUX and the Model II.

7. After passing these blocks, the Model II will load a few more modules, remind you of the date and time, and then finish. At this point, the system is ready for Videotex calls.

Procedure to run MUXBURN/CMD

Boot a Model II with the diagnostic diskette. Have both port A and B on the Model II connected to A and B on the MUX. Reset the MUX before starting. Type the following. Wait for prompts where appropriate

DO SETB <ENTER>

MUXDWN <ENTER>

MUXBURN/CMD <ENTER>

O — This is OBJECT code

N — This is NOT a ZILOG system

T — We will TRANSMIT this program

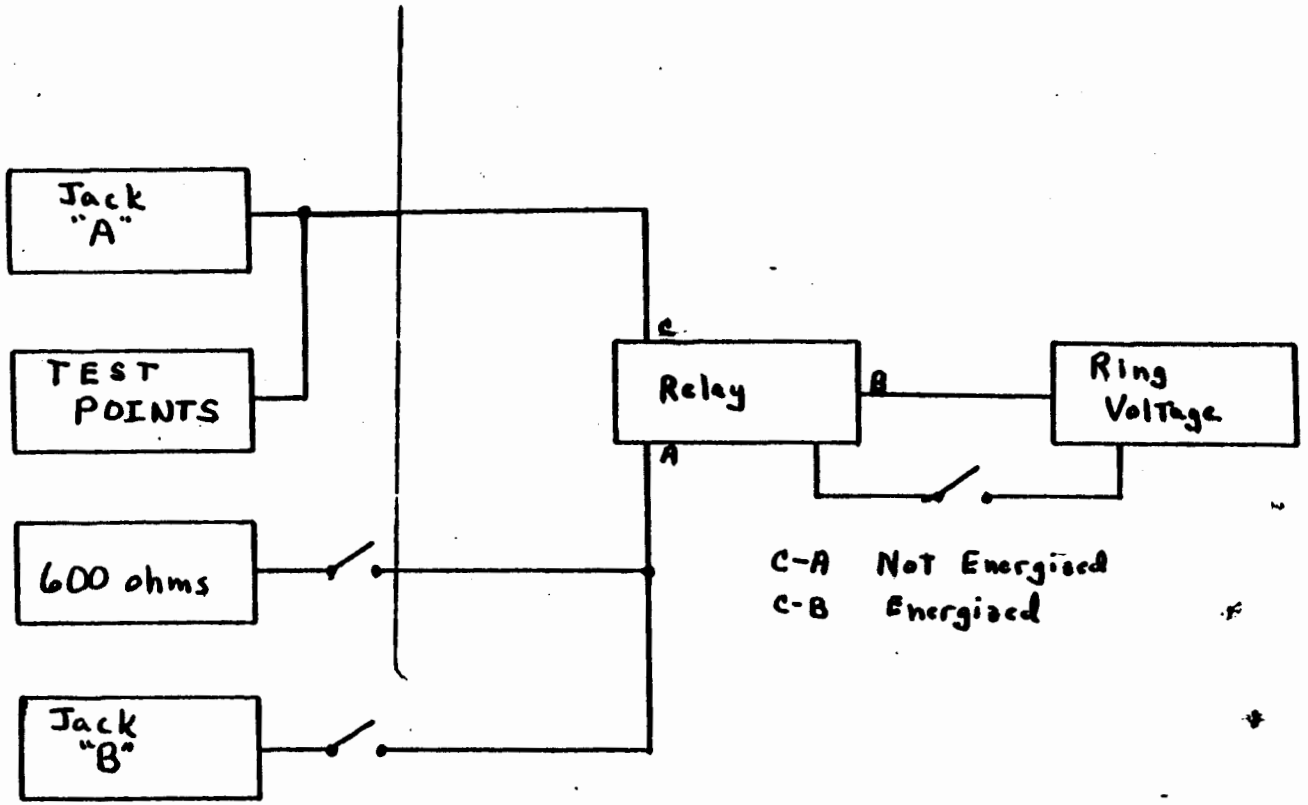
TERMINBL <ENTER>

L <ENTER>

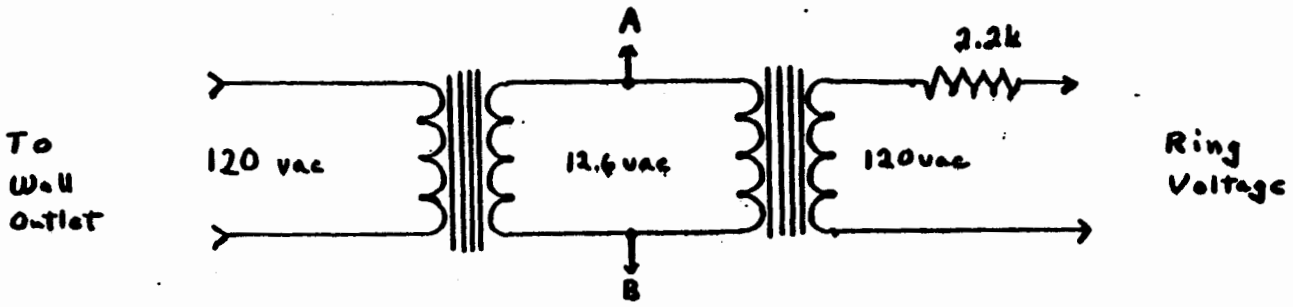
T <ENTER> (at this point the display should ask if you want to test UARTS only. If Y, then the UARTS but not the modems will be tested. If N, then the modems will be put into a self-test that will test everything except the hardware to the phone line. The display will not echo your Y or N. Do NOT press <ENTER>)

Y or N — The display will now log the test. To "clean up" the display, press the following keys: <BREAK> T <ENTER>

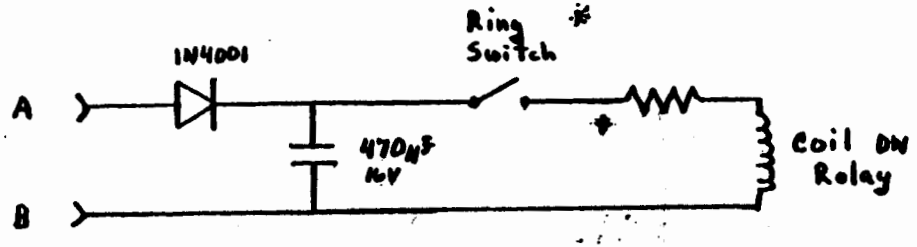
Block Diagram



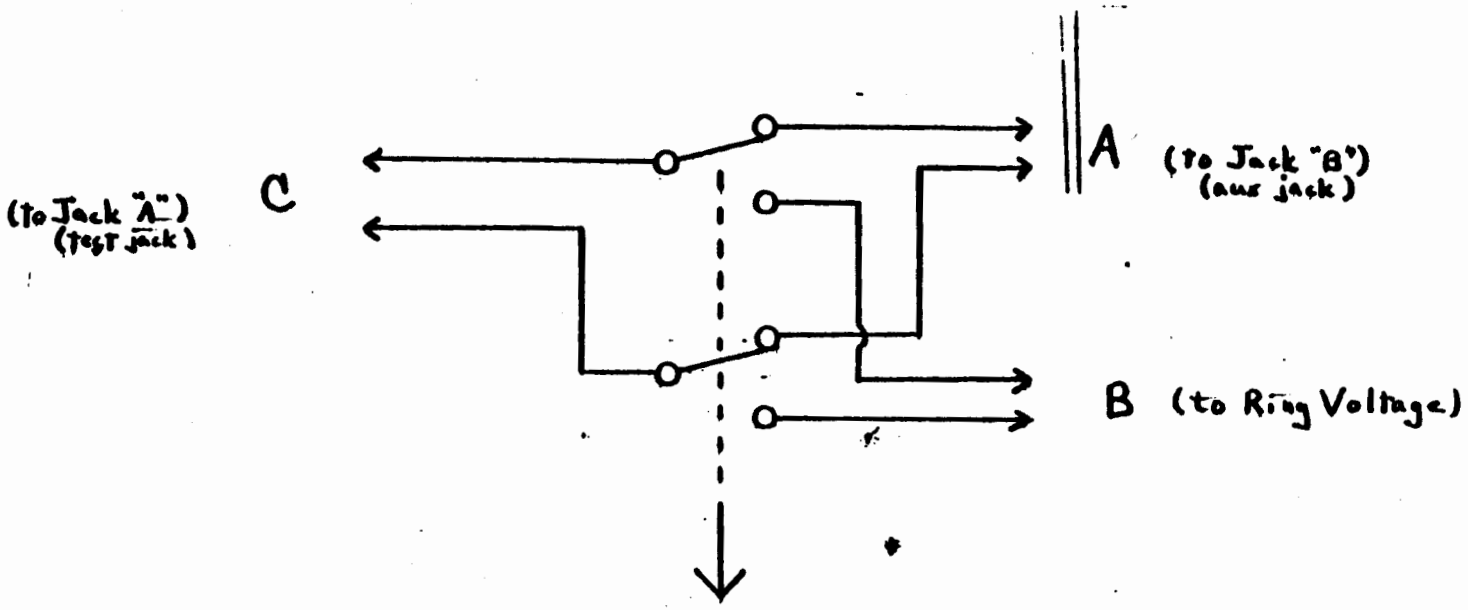
Ring Voltage



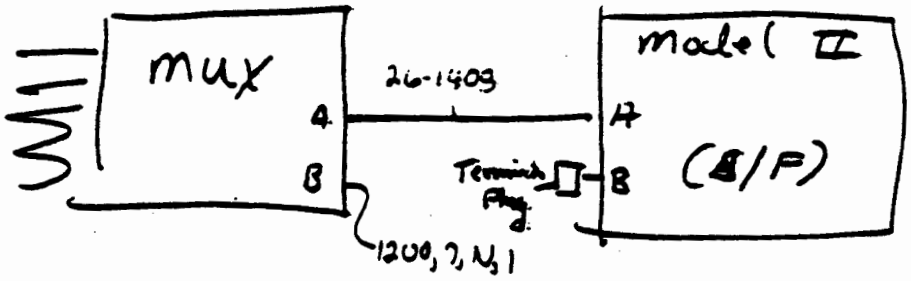
12.6v 300 ma transformers
273-1385



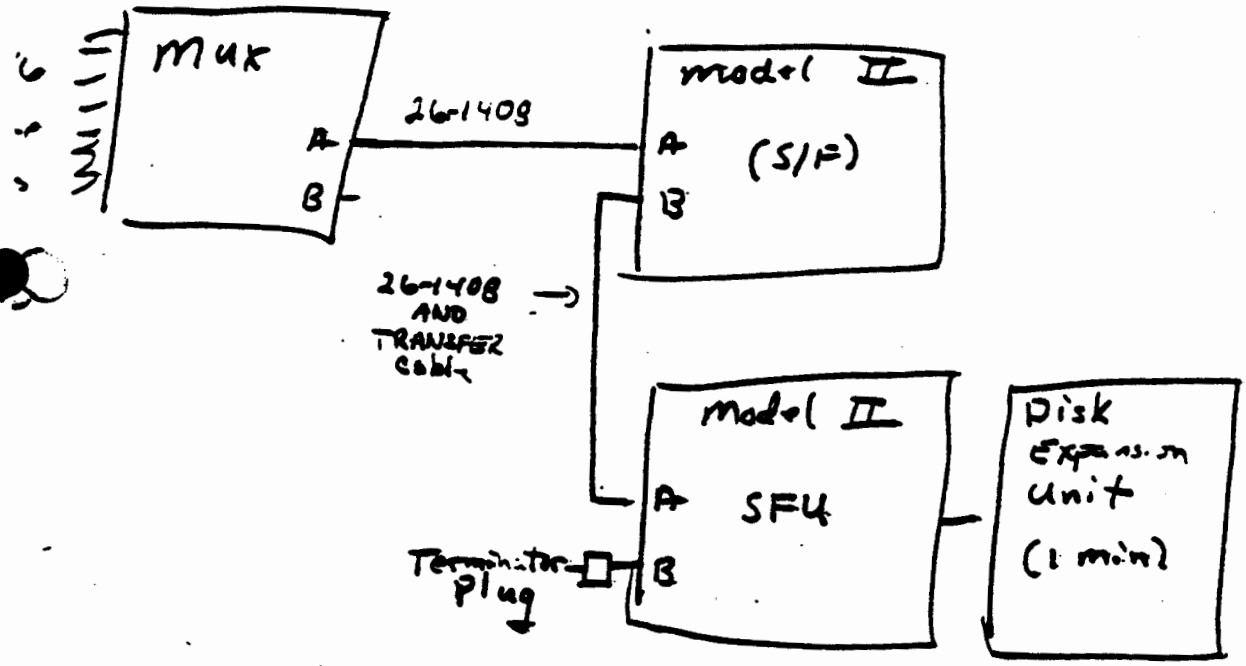
Relay Wiring



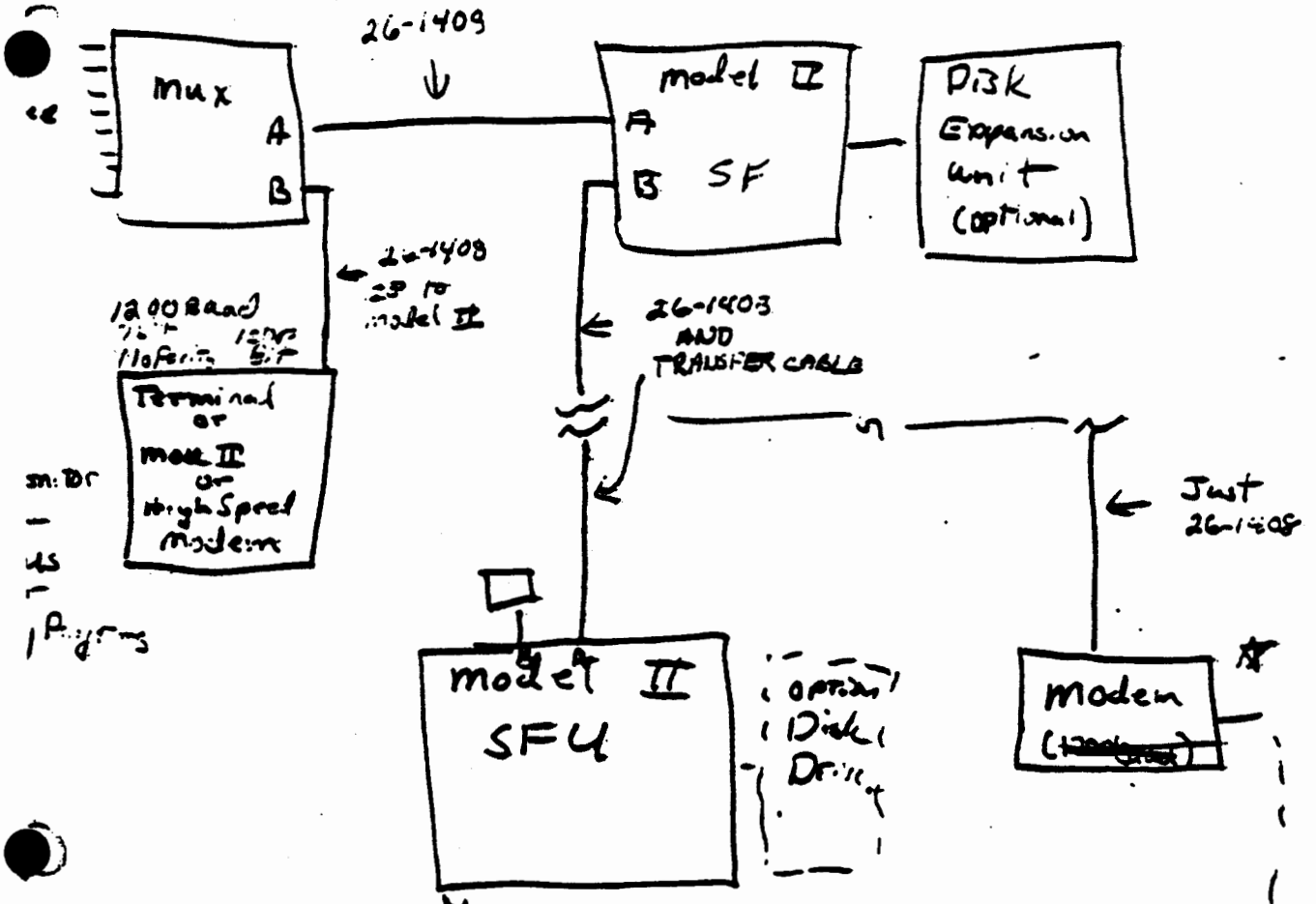
min Config :

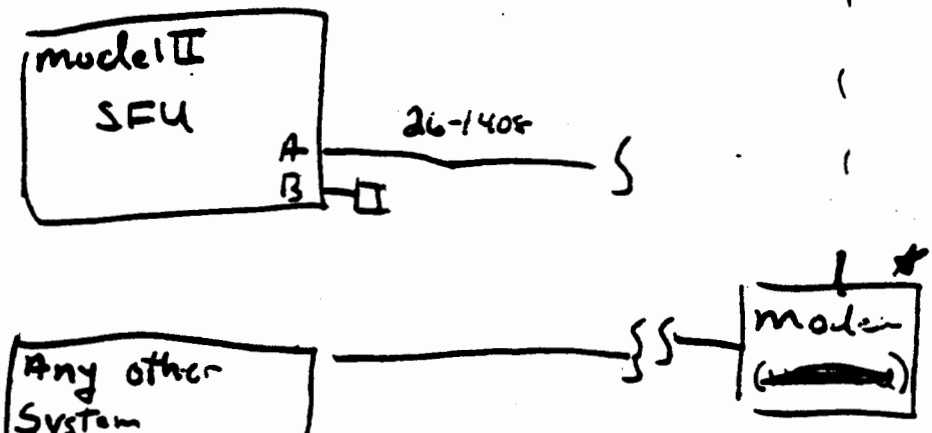


Rec. min Confic



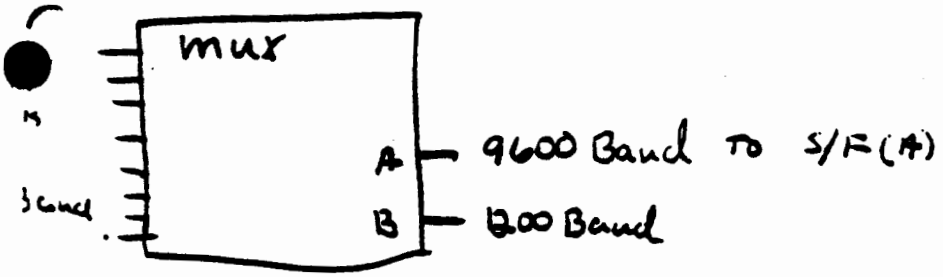
Possible Configurations



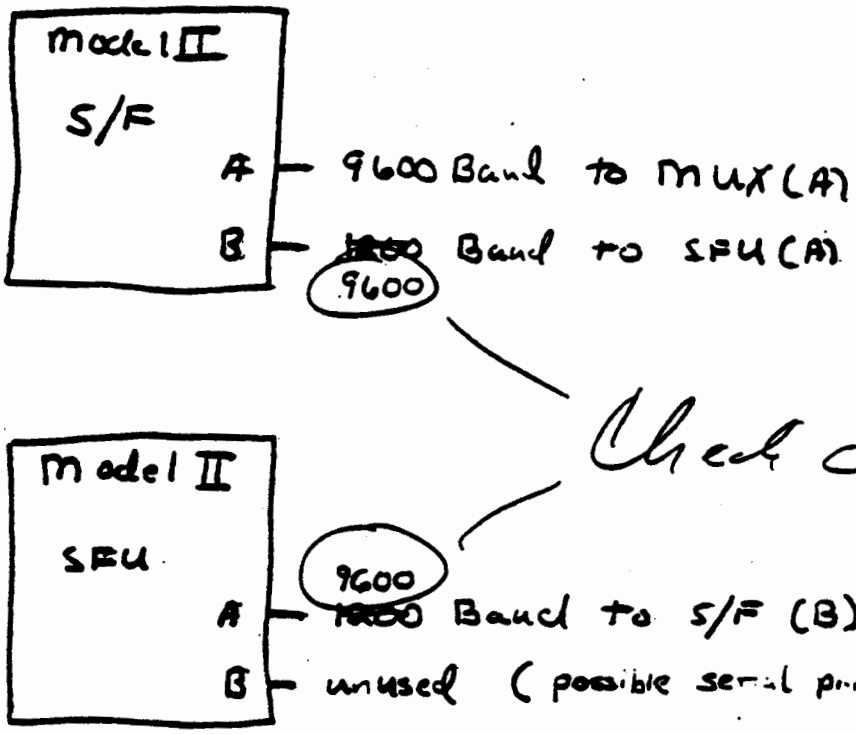


mainframe
multiple mod IIs
etc.
ANY system)

★ Can only use Modem if software is patched to slow from 9600



NOTE: A and B on the MUX are pin reversed so they can tie directly to a model II.



Required Cables:

X: 50 pin phone cable

RS232 cable (mux(A) to S/F(A))

E: Terminator on Chnl (B)

Optional Cables:

E: RS232 Cable to SFU(A) from S/F(B)

Terminator on chnl (B) of SFU

Transfer Cable (used with RS232 cable S/F(B) – SFU(A))

26-1408 RS232 cable

26-4403 RS232 cable with Terminator

Transfer Cable

Recommended Cables to ship Mux:

Telephone cable

2 RS232 cables } 1 - 26-1404 - Cable
1 Terminator } 1 - 26-4403 - Cable + Terminal

Transfer cable

Customer purchased Software:

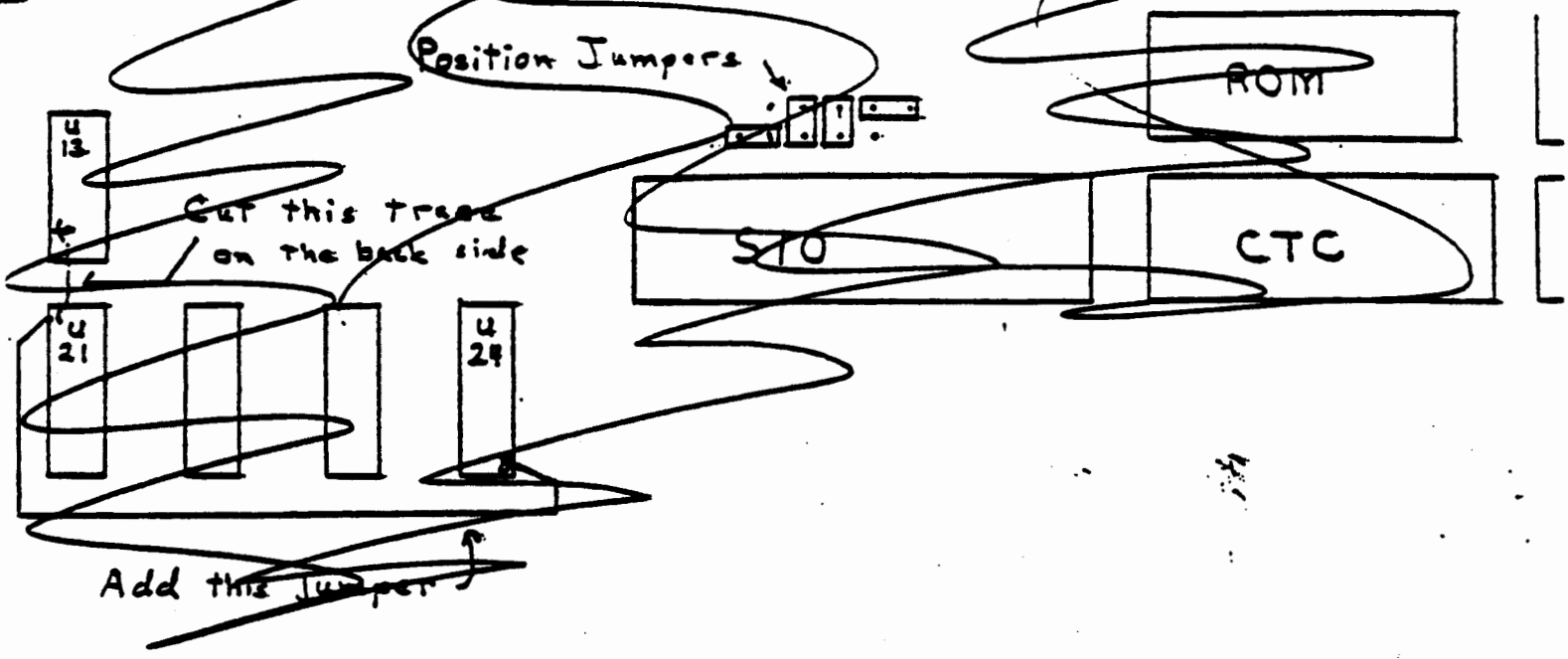
TED

SCRIPSIT

└ These could be optional if customer wants to write his own programs to Edit + create disk files

[illegible]: RADIO SHACK software (i.e. TERMINAL) and hardware (modems) may [illegible] function properly with these modifications unless other changes [illegible] made that we can not be responsible for.

[illegible]fications for the CPU board:



[illegible]pback connector modifications: