The 484 Tape Loader Tape (AS-T190-001) is used to load a PC's memory from the controller to a blank tape in a P190 Programmer, to dump the memory from a data tape in a P190 to a controller, and to compare a data tape in a P190 with a PC's memory. Figure 3-1 shows the software labels associated with the 484 Tape Loader operations.
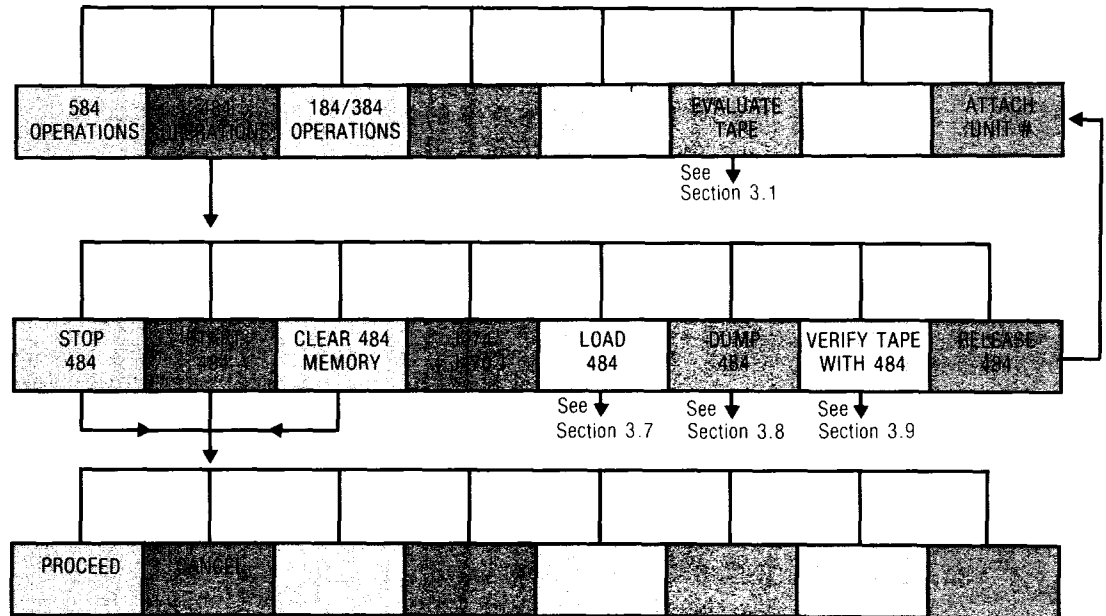

Figure 3-1. 484 Tape Loader Operations

3.1 TAPE EVALUATION

Before a blank tape, new or used, can be made into a working tape it should go through the tape evaluation procedure on the tape loader tape. A working tape is used for actual programming and is made from a Modicon master tape. The evaluation procedure writes and verifies the quality of a blank tape, making two staggered passes so that the entire tape is evaluated; slack caused by temperature changes is eliminated. The evaluation procedure takes about twenty minutes, ten minutes per pass, to complete.

To evaluate a tape:

1. If evaluating a used tape, first erase the tape with a bulk tape eraser. Slide the RECORD tab in the direction indicated by the arrow on the tab, so that the tape is in a write-enabled state.

2. Place the tape loader tape in the tape drive. If this is the first tape inserted after power-up, it will be loaded automatically. If switching from another tape, press the INIT and INIT LOCK keys to load the tape. Loading takes approximately fifty seconds.

3. When the tape is loaded, the following software labels appear across the bottom of the screen:

584 OPERATIONS		184/384 OPERATIONS							ATTACH UNIT #

4. Remove the tape loader tape and insert the tape that is to be evaluated. Press the EVALUATE TAPE software label key. Two new software labels, PROCEED and CANCEL, appear. Press the PROCEED software label key to begin the tape evaluation process.

5. If the evaluation is successful, a message appears on the screen indicating such. Next, erase the tape and use it for the creation of a working tape.

If the evaluation is unsuccessful, a message appears on the screen indicating that the tape is not usable. You may want to erase the tape and evaluate it once again before discarding it.

NOTE

The tape must be erased before evaluation takes place. Do not attempt to evaluate a working tape, as this function will erase it. If a working tape is suspect, first make another copy of it from the master tape, then erase the working tape and evaluate it.

3.2 484 PC TAPE LOADER OPERATIONS

To use the tape loader tape with a 484 PC, insert the tape into the P190 tape drive and press the red INIT and INIT LOCK keys. You do not need to press these keys if it is the first tape loaded after power-up. Next, press the ATTACH UNIT # software label key; enter the unit number, 1-247, into the AR; and press the 484 OPERATIONS software label key.

The following are the software labels which appear on the screen, each one representing a basic function of the tape loader tape:

STOP 484		CLEAR 484 MEMORY			LOAD 484		VERIFY TAPE WITH 484	

NOTE

For the START 484, STOP 484, and CLEAR 484 MEMORY functions, the P190 keylock must be in the unlocked position.

3.3 STOP 484

To stop the 484, press this software label key then press PROCEED. The CANCEL software label key is used to cancel the request.

3.4 START 484

Press this software label key followed by the PROCEED software label key to start the 484 PC which is connected to the P190. Press CANCEL to cancel the request.

3.5 CLEAR 484 MEMORY

To clear the memory of the connected 484 PC, ensure that the controller is stopped, press the CLEAR 484 MEMORY software label key, then press PROCEED. Press the CANCEL software label key to cancel the request.

3.6 J474/J470

The P190 Programmer communicates with a 484 PC through either a J470 EIA Adapter or a J474/J475 Interface. To select the unit being used, toggle the J474/J470 software label key until the arrows in the software label point to the appropriate interface. If a J474/J475 Interface is used, a unit address must be entered into the AR before toggling the software label key. A unit address indicates the location of the 484 PC in the data line communicating with the P190; this value can range from 1 to 247.

3.7 LOAD 484

With this function, a 484 PC's memory can be loaded into a P190 from a 484 PC data tape inserted in the P190. To load a 484's memory from a data tape:

1.   Press the LOAD 484 software label key.

2.   Insert a 484 PC data tape into the P190 tape drive.

3.   Press the PROCEED software label key. (Press CANCEL to prevent the action.)

     The STOP software label appears on the screen. When this software label key is pressed, the software labels PROCEED and ABORT appear. Press PROCEED to continue the operation or ABORT to terminate the operation.

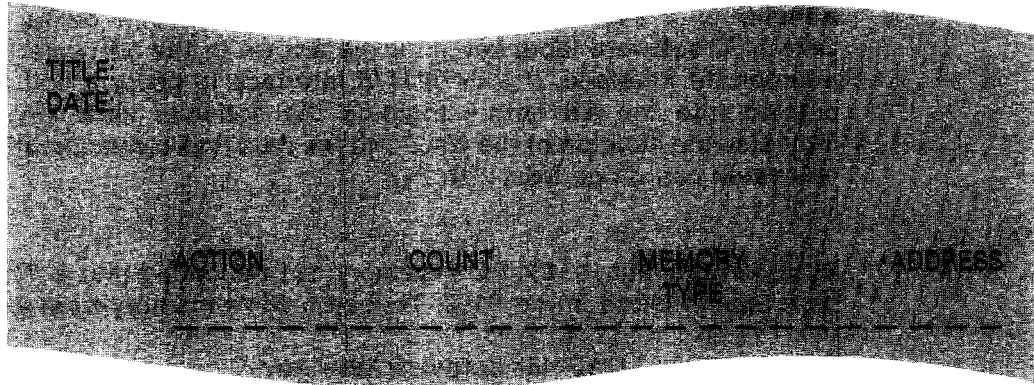When the operation is complete the message "LOAD COMPLETE" is displayed on the screen.

3.8 DUMP 484

This function allows a 484 PC's memory to be dumped to a blank tape in the P190 Programmer. To dump memory to a blank tape:

1.   Press the DUMP 484 software label key.

2.   Insert a blank write-enabled tape into the P190 tape drive. To write-enable a tape, push the RECORD tab on the tape in the direction indicated by the arrow on the tab.

3.   Press the ENTER TITLE software label key and enter a title of up to 52 alphanumeric characters. When you have finished entering the title, press END TITLE.

4.   Press the ENTER DATE software label key. Enter the desired date in six digits. This date usually reflects the date of tape creation or user program revision. When you have entered six digits the date is automatically inserted.

5.   Press the PROCEED software label key. (Press CANCEL to prevent the action.)

The STOP software label appears on the screen. When this key is pressed, the software labels PROCEED and ABORT appear. Press PROCEED to continue the operation or ABORT to terminate the operation.

The screen display during the operation is shown in Figure 3-2.

Figure 3-2. Dump Operation Screen Display

When the operation is complete the message "DUMP COMPLETE" is displayed on the screen.

3.9   VERIFY TAPE WITH 484

This function is used to compare a 484 PC's memory with a 484 PC data tape in the P190 Programmer. To do this:

1.   Press the VERIFY TAPE WITH 484 software label key.

2.   Insert the data tape to be compared into the P190 tape drive.

3.   Press the PROCEED software label key. (Press CANCEL to prevent the action.)

4.   Toggle the CONTINUE/PAUSE software label key until the arrows are pointing to the desired action.

Selecting CONTINUE causes each miscompare to be shown on the screen but allows the comparison to continue. If PAUSE is selected, the comparison stops when a miscompare is found and displayed. To proceed, toggle the STOP/PROCEED software label key. The comparison can be stopped at any time by pressing the STOP software label key.

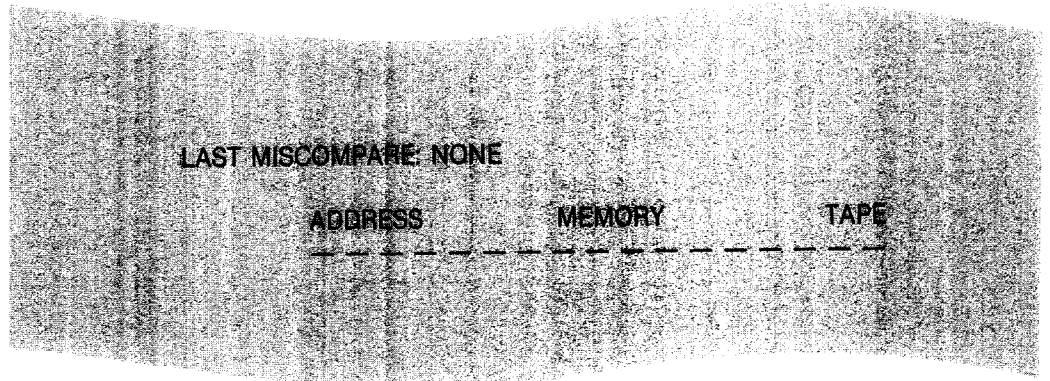The screen display during this operation is shown in Figure 3-3.

LAST MISCOMPARE NONE

ADDRESS   MEMORY   TAPE

Figure 3-3. Verify Operation Screen Display

When the comparison is complete, either a message stating that the 484 PC memory and the data tape match is displayed, or the total number of miscompares is displayed.

3.10 RELEASE 484

Press the RELEASE 484 software label key to return to the RESET Level. The following software labels are displayed:

584 OPERATIONS	484 OPERATIONS	184/384 OPERATIONS			EVALUATE TAPE		ATTACH UNIT #