

TMS-10 TAPE RECORDER AND PROCESSOR SELECTOR BOX

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The TMS-10 connects to your tape monitor system in the same fashion as would a single tape recorder. The four switchbox jacks at the end marked "TAPE MONITOR" are the INPUT and OUTPUT, and are marked accordingly. Shielded cables connect between your amplifier TAPE OUT and the TMS INPUT, and between the TMS-10 OUTPUT and your amplifier MONITOR IN. Observe L and R channel continuity throughout all connections.

If your amplifier has provisions for more than one recorder, select one set of tape monitor jacks for connection to the switchbox, the remaining ones will not normally be used.

If you intend to use one or two processors with the TMS-10, consideration must be given to which recorders will be used ahead (pre-processor) of the processor(s), and which will follow (post processor). If no audio processors are to be used, the recorders can be connected in any order.

With processors, it is important to remember that all recorders connected to inputs/outputs 1 through 5 will be ahead of the processors, and those connected to 6 through 10 will follow them. Thus the recorders used for listening or as a source for copying (dubbing) through the processors must be connected to 1 through 5. The recorders used to record the processed source must be connected to 6 through 10.

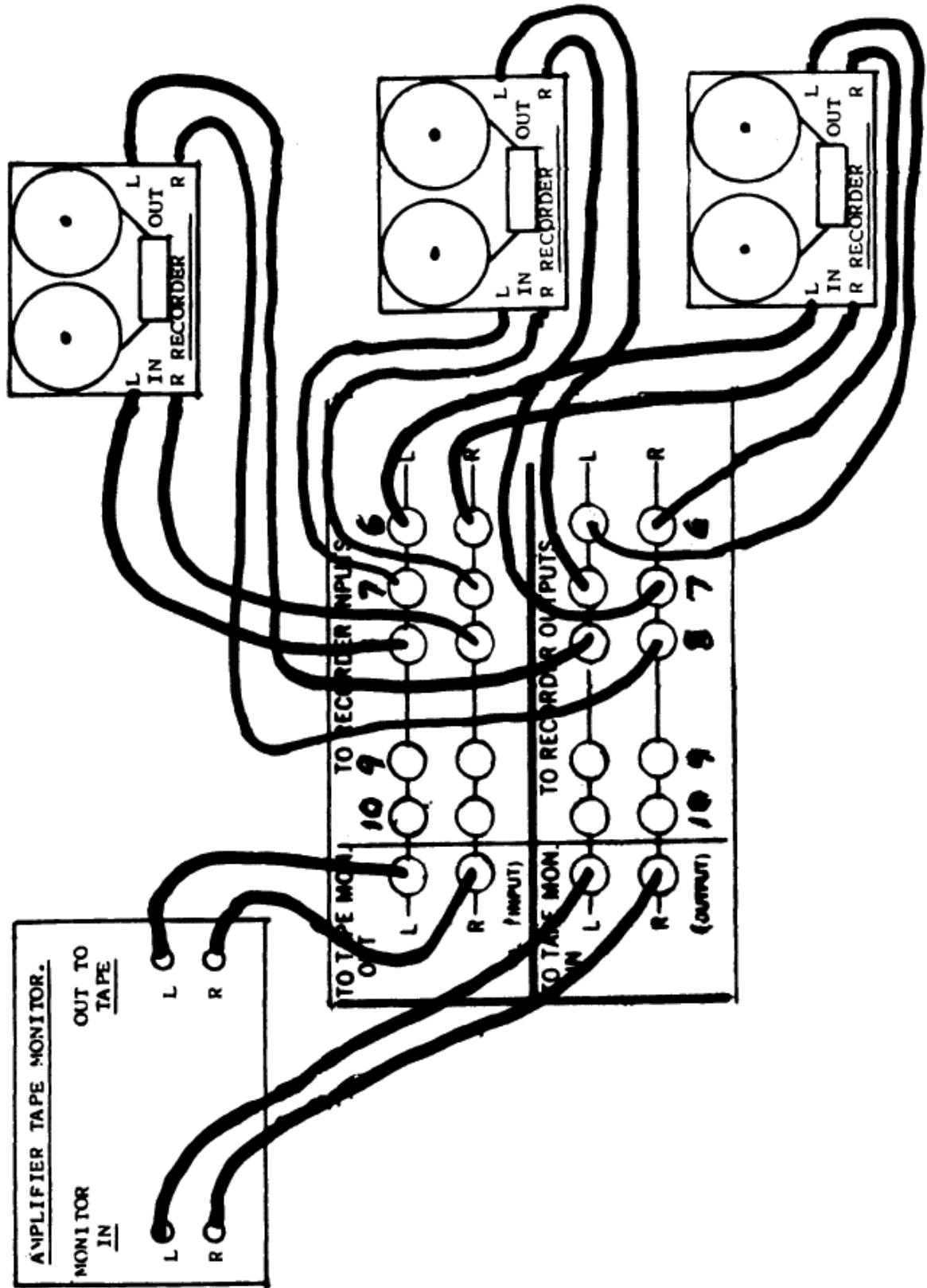
The high level, or LINE inputs for your tape recorders connect to the TMS-10 jacks marked "TO RECORDER INPUTS", observing channel identification, L to left or A channel, R to right or B channel. Note that the input switches numbered 1 through 10 are connected to the associated jacks under the same number on the TMS-10 back panel.

The tape recorder OUTPUTS connect to the TMS-10 jacks marked "TO RECORDER OUTPUTS", again observing channel identification. Make sure that the inputs and outputs of each tape recorder are connected to the jacks under the same number.

If processors are to be used, one or two units can be connected to the jacks under "TO PROCESSOR". If only one processor, ie. an equalizer, is used, it would be preferable to connect it to the jacks under #1. If a closed loop noise reduction unit such as dbx is used to decode processed tapes, it should be connected to #1. If such a unit is used to encode the tapes for the copying recorders, the encode circuit should be connected to the #2 jacks. A closed encode-decode noise reduction system should always immediately precede or follow the tape recorder. Note the order of audio signal flow indicated on the TMS-10 front panel-processor #1 precedes processor #2 (if used), and the two units are in series if both are in operation simultaneously.

Connect the processor inputs to the TMS-10 jacks marked IN, and the outputs to those marked OUT.

* If the processors used are also intended to be operated direct from your tape monitor, see additional hook-up information under "OPERATION WITH PROCESSORS".



OPERATION WITHOUT PROCESSORS

The following procedures are valid with PROCESSOR 1 & 2 switches OFF, and L & R BYPASS switches in BYP. position.

It is helpful to become comfortably familiar with the basic operating principles of the TMS-10 as outlined below before attempting to operate with the processors in circuit.

General principles:

- A. Upper row of switches - Recorder inputs. (RECORD)
 - B. Lower row of switches - Recorder outputs. (PLAY)
 - C. White center line - Connection between recorder inputs and outputs.
- I. To play any recorder:
- A. Set switch box MONITOR to PLAY.
 - B. Switch in tape monitor on amplifier.
 - C. In lower row (PLAY) of switch box, set switch of desired recorder to PLAY.
 - 1. Be sure that all other decks have lower row switches in OFF position.
 - 2. To listen to two or more recorders at the same time, set lower row switches of additional desired recorders to PLAY.
 - 3. Note that when more than one recorder is being played there is a 6 dB loss, sound level will drop approximately $\frac{1}{2}$.
- II. To record from amplifier source to any recorder or several recorders:
- A. Set switch box MONITOR to PLAY.
 - B. Select desired source on amplifier (FM, phono, etc.).
 - C. In upper row of switch box, set switch of desired recorder to REC. (Record) and begin recording as usual.
 - D. To record on more than one recorder at one time, repeat step C. above for each additional recorder that is to receive the signal.
 - E. To monitor a particular recorder during recording, set switch in lower row of switch box to PLAY for the recorder that you desire to monitor.
 - F. Be sure to switch in tape monitor on amplifier.
- IV. Copying:
- A. Procedure:
 - 1. Set switch box MONITOR to PLAY.
 - 2. Set upper row switch of source recorder to OFF.
 - 3. Set lower row switch of source recorder to COPY.
 - 4. Set upper row switch of recorder that you are recording onto to COPY. Begin recording as usual.
 - 5. To monitor the signal on the recorder onto which you are recording, set the switch in the lower row of the switch box to PLAY.
 - 6. If you wish to copy onto more than one recorder, simply repeat step 4 above for the additional desired recorder or recorders onto which you wish to record.
 - 7. When recording onto more than one recorder, you may select which one you wish to monitor by switching the lower row switch

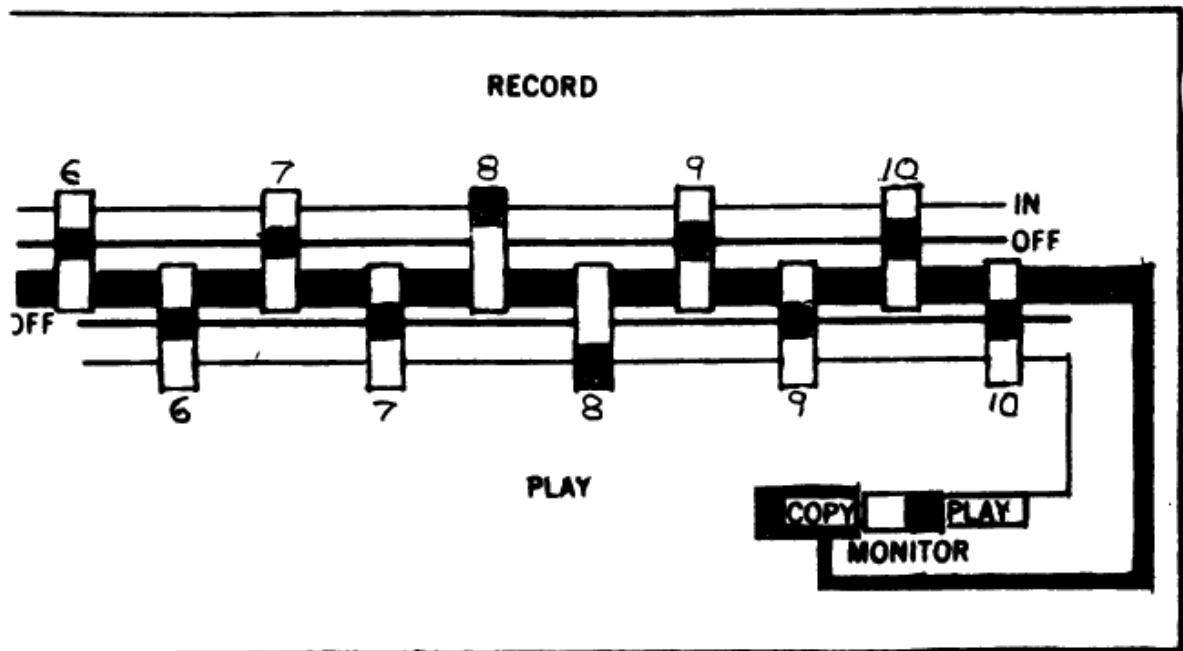
of the desired recorder to PLAY, and the lower row switch of any other recorders that are receiving the signal to OFF.

8. To monitor the signal from the source recorder, set switch box MONITOR to COPY.

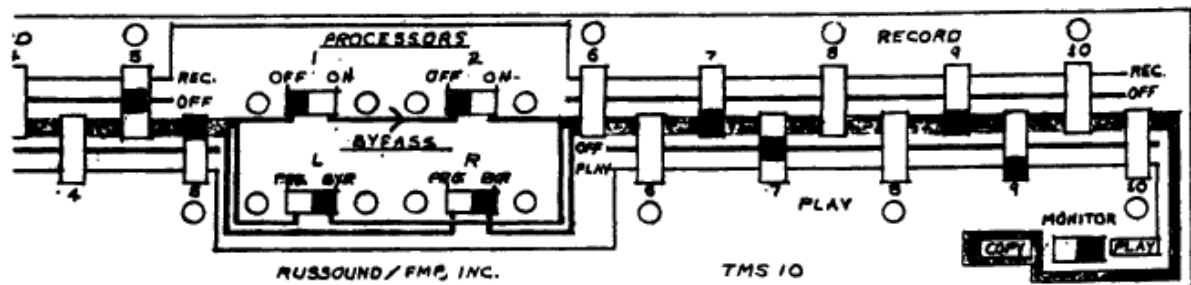
B. MIXING:

1. Select the recorders whose signals you wish to mix together on the recording deck, and set their lower row switches to COPY.
2. Set the upper row switches of source recorders to OFF.
3. For the recorder onto which mixed signal is to be copied, set upper row switch to COPY. Monitor as under A5 or A7 above.

RECORD ON #8 MACHINE AND MONITOR OUTPUT



COPY (DUB) OUTPUT FROM #5 RECORDER ONTO 7 & 9, MONITOR #9.



DUBBING WITH PROCESSORS

The PROCESSORS switches are useful only for dubbing from any recorder connected to switches 1 through 5 onto any recorders connected to switches 6 through 10. Activating these switches splits the COPY connections into two banks of up to 5 recorders each. Bank 1 through 5 precedes any processors used, and 6 through 10 follow. This is the only change in operating characteristics. The RECORD (up) position of the upper row, and the PLAY (down) position of the lower row of all recorder switch functions remain as previously described. The PROCESSORS switches also permit listening to any recorder in the 1 through 5 group through the processors.

The manner on internal signal routing is indicated by the TMS-10 front panel markings.

PROCESSOR SWITCH FUNCTION:

- A. L & R BYPASS; Either or both channels of any processors connected to the TMS-10 will be completely bypassed when in BYP. position. The indicated L and R channel of **both** processors is bypassed.

If no processors are in use, or none are connected, both the L & R switches should be in the BYP. position.

- B. PROCESSOR 1 & 2: With the BYPASS L & R switches in the PRO. (Processor) position, the audio processor connected to either the #1 or the #2 set of jacks can be switched in by operating the PROCESSOR switch to ON. Both switches can be ON at the same time, the processors will then be connected in series sequence, the output of #1 connected to the input of #2.

If only one processor is connected to the TMS-10, the switch for the unused processor connection jacks on the rear panel of the TMS-10 must always be OFF.

OPERATION WITH PROCESSORS

I, II & III

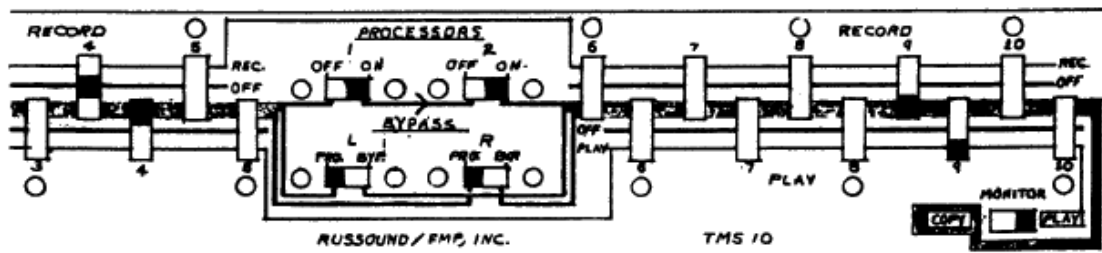
General principles, playing and recording are identical to OPERATION WITHOUT PROCESSORS previously outlined, I through III. The PROCESSORS switching has no effect on these previously listed operations.

IV. COPYING WITH PROCESSING.

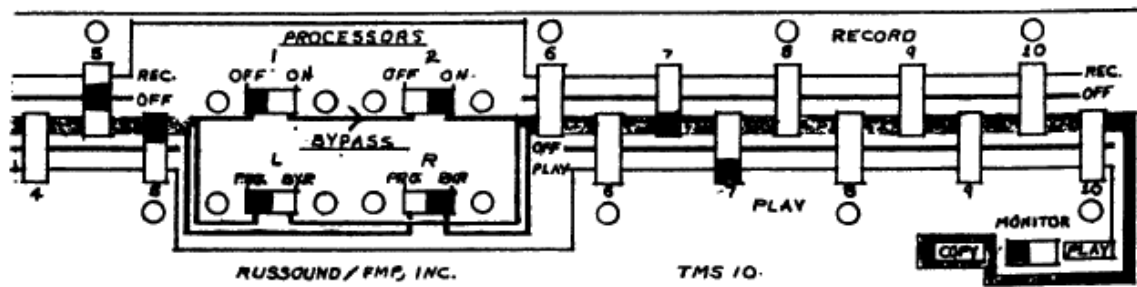
1. Set switch box MONITOR to PLAY.
2. Set upper row switch of source recorder in pre-processor bank (switches 1 through 5) to OFF.
3. Set lower row switch of source recorder in the bank to COPY.
4. Set upper row switch of recorder that you are recording onto in post-processor bank (switches 6 through 10) to COPY.
5. Set L & R BYPASS switches to PRO.
6. Select desired processing by operating #1 or #2 PROCESSOR switch (or both) to ON. Begin recording as usual.
7. To monitor the signal on the recorder onto which you are recording, set the switch in the lower row of the switch box to PLAY.

8. If you wish to copy onto more than one recorder, simply repeat step 4 above for the additional desired recorders onto which you wish to record.
9. When recording onto more than one recorder, you may select which one you wish to monitor by switching the lower row switch of the desired recorder to PLAY, and the lower row switch of any other recorders that are receiving the signal to OFF.
10. To monitor the signal from the source recorder and processor(s), set switch box MONITOR to COPY.
11. To process one channel only, operate other channel BYPASS switch to BYP.

**COPY OUTPUT FROM #4 RECORDER THROUGH PROCESSORS #1 & #2
ONTO #9, MONITOR #9**



**COPY FROM #5 RECORDER THROUGH LEFT CHANNEL ONLY
OF PROCESSOR #2 ONTO #7, MONITOR INPUT TO #7**



V. PLAY ANY RECORDER IN THE 1 THROUGH 5 BANK THROUGH THE PROCESSORS

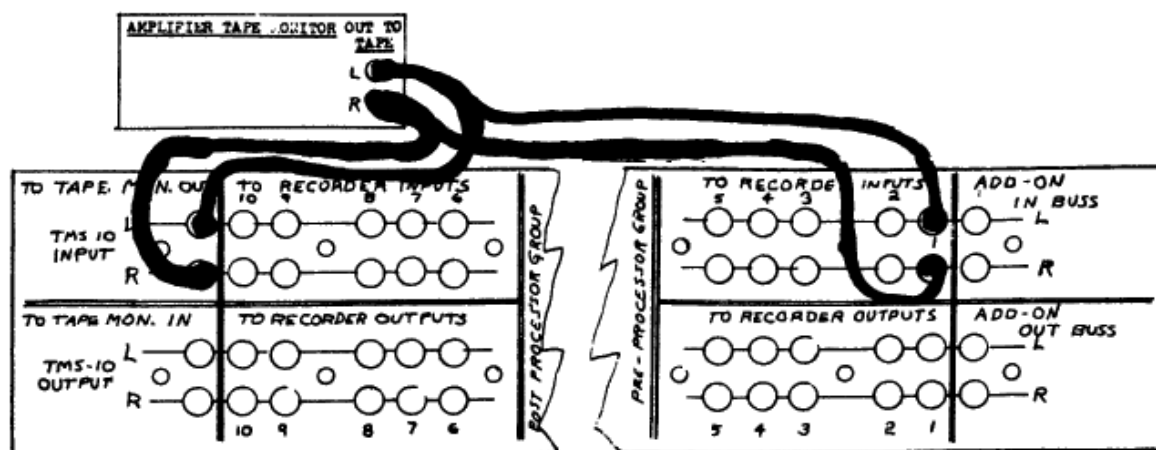
1. Set switch box MONITOR to COPY.
2. Set upper row switch of desired recorder to OFF.
3. Set lower row of desired recorder up to COPY.
4. Set L & R BYPASS switches to PRO.
5. Set desired PROCESSOR switch 1 and/or 2 ON.
6. Play recorder as usual.

NOTE: If two processors are connected to the TMS-10 but only one is in use, it is suggested that the power for both processors be switched ON. This will help to avoid possible distortion caused by clipping action at the input of the unpowered processing unit. When the BYPASS switches are at PRO., the inputs of both processors are connected to the COPY circuit. They are completely disconnected when in BYP.

*VI. PLAY DIRECTLY FROM TAPE MONITOR THROUGH PROCESSORS (no recorders)

If the processors are used for functions other than tape dubbing, such as processing FM or phono signals for listening, a slight revision in the connections of the TMS-10 to your tape monitor system will be required. A "Y" phono adapter will be required for each channel. Each adapter should be one plug to two jacks to split the Tape Monitor Out of your amplifier to two lines for each channel. Four cables instead of two will be needed to make 2 connections per channel to the TMS-10.

One cable for each channel will connect between the Tape Monitor Out of your amplifier and the TMS-10 INPUT as originally described. The extra cable connects between the amplifier tape out and the #1 L & R TMS-10 jacks under TO RECORDER INPUTS. See illustration below. Also see **ALTERNATE METHOD** following VII.



OPERATION:

1. Turn all upper and lower recorder switches to OFF.
2. Set #1 upper row (RECORD) switch down to COPY. (This connects the amplifier tape out to the processor input circuit.)
3. Set L & R BYPASS switches to PRO.
4. Set desired PROCESSOR switch ON.
5. Set MONITOR switch to COPY.

Your AM, FM or phono source will now be heard directly through the processors.

6. Return the #1 switch to OFF when through!

VII. RECORD FROM TAPE MONITOR SOURCE THROUGH PROCESSOR(S)

With connections made as under VI above, processed recordings can be made as follows:

OPERATION:

- 1, 2, 3, and 4 as outlined immediately above.
5. Set upper row switch of recorder you wish to record onto in the 6 through 10 bank down to COPY.
6. Set the lower row switch for this same recorder down to PLAY.
7. Begin recording as usual.
8. MONITOR switch to PLAY to monitor recorder, or to COPY to hear processed source.
9. Return the #1 switch to OFF when through!

ALTERNATE METHOD:

Operation as outlined under VI and VII above can be accomplished without extra connections if one of the tape recorders connected to the 1-5 bank has line input monitoring capabilities (almost all 3 head machines do). If this is the case observe the following procedure.

OPERATION:

1. Turn all upper and lower recorder switches to OFF.
2. Set the upper row switch for the recorder with input monitoring facilities in the 1-5 bank up to RECORD.
3. Set the lower row switch for this same recorder up to COPY.
4. Select desired source (FM, phono, etc.) and adjust recorder to monitor input, adjusting level in usual manner.
5. The rest of the procedure is the same as outlined under VI and VII preceding, from step 3 onward. Reference to the #1 switch does not apply when this alternate method is used.

ADD-ON JACKS

The ADD-ON JACKS are not used unless the TMS-10 is to be operated in association with another TMS-10 or other switching or patching equipment such as the Russound FP-36 Patchbay or SP-1 Switching/Patching center. These jacks are located at common points in the internal circuit so that more recorders can be switched.

When used with another TMS-10, the similar ADD-ON jacks are simply paralleled, L IN BUSS to L IN BUSS, L COPY BUSS to L COPY BUSS, etc. The "TO TAPE MONITOR" connections on the added TMS-10 will not be used, and the MONITOR switch of the added unit will be inoperative. The MONITOR switch of the original TMS-10 (that is connected to the amplifier tape monitor) will work for both TMS-10s.

The ADD-ON COPY BUSS connections in the TMS-10 follow the processor switching. Thus if the processors are switched in on the original TMS-10 (the one connected to your amplifier tape monitor), all recorders connected to the added TMS-10 can receive the processed audio signal, as desired. The PROCESSORS switches in the added TMS-10 should be off and in the bypass mode to obtain this result.

Operation of two (or more) TMS-10's will be the same as if they were one unit with switching for 20 (or more) tape recorders. If 2 TMS-10's are used, it is understood that the numbers 1 through 10 on one of the units will in reality be 11 through 20.

Information about use of the ADD-ON jacks with other Russound units is included with those models.

WARRANTY.

The Russound/FMP, Inc. TMS-10 Tape Recorder Selector is fully guaranteed for 5 years from date of purchase against all defects in materials and workmanship. During this period Russound/FMP, Inc. will replace any defective part and correct any defect in workmanship without charge for either parts or for labor.

For this warranty to apply, the unit must be installed and used according to its written instructions. If servicing is necessary, it must be performed by Russound/FMP, Inc. The unit must be returned to Russound/FMP, Inc. at the owner's expense and with prior written permission.

Accidental damage and shipping damage are not considered defects under the terms of this warranty. Russound FMP, Inc. assumes no responsibility for defects resulting from abuse or from servicing performed by any agency or person not specifically authorized in writing by Russound/FMP, Inc.

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