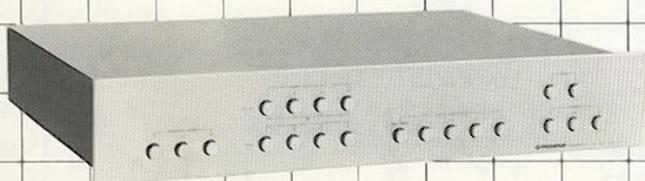


PROGRAM SELECTOR

0200071

U-24

OPERATING INSTRUCTIONS



 PIONEER®

WARNING: TO PREVENT FIRE OR SHOCK HAZARD,
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR
MOISTURE.

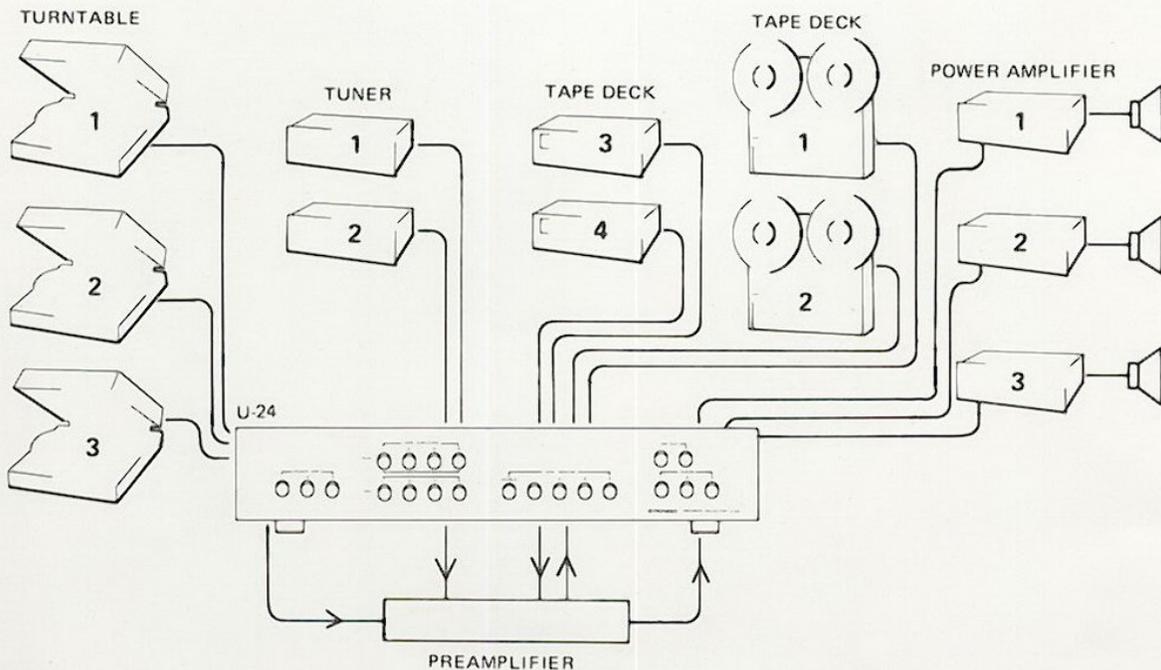
FUNCTIONS OF THE U-24

You can use the U-24 Program Selector to:

- Select any one of three turntables, or compare the sound quality of a cartridge on a turntable equipped with three tonearms.
- Select one of two tuners, or change over between different stations on two tuners in a flash.
- Record and play back tapes simultaneously on up to four tape decks, or duplicate tapes using four decks.

- Listen to another program source (FM broadcast, record or tape) while you are duplicating tapes.
- Select any of three power amplifiers.

Please note, however, that you cannot use the U-24 Program Selector to select preamplifiers or speakers.



INSTALLATION PRECAUTIONS

Do not install your program selector in any of the locations listed below since they will impair its performance and shorten its service life.

Locations to be avoided	Trouble
1. Locations exposed to the direct rays of the sun, or close to heating appliances and other heating elements.	1. External heat downgrades the circuit parts and impedes stable operation.
2. Poorly ventilated, humid or dusty locations.	2. These lead to rusting and defective contact in the input and output terminals. In particular, humidity and moisture easily cause defective insulation, and there is the danger of power leakage and heat generation in the circuit parts.
3. Locations near or exposed to alcohol, insecticide sprays and other volatile fluids.	3. These may corrode the various panels.

FRONT PANEL FACILITIES

POWER AMP SELECTOR SWITCHES

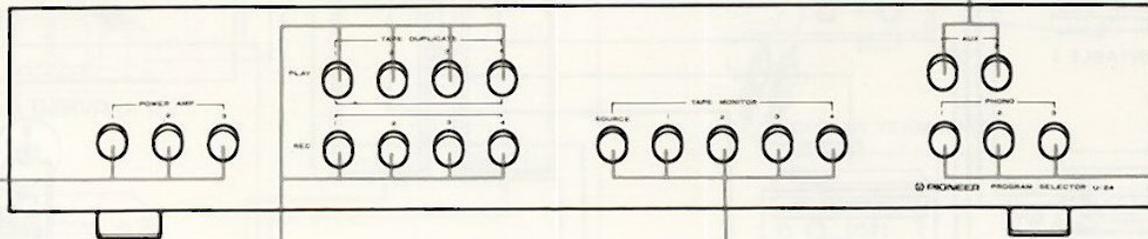
Use these to select up to three power amplifiers connected to the preamplifier. They are interlocking switches and so if you press 1 and then 2, 1 will be released.

AUX SELECTOR SWITCHES

You can use these switches to select two tuners (or cartridge tape players, or TV tuners) which are connected to the preamplifier. These are interlocking switches and so if you press 1, for example, and then 2, 1 will be released.

PHONO SELECTOR SWITCHES

You can use these switches to select three turntables which are connected to the preamplifier. These are interlocking switches and so if you press 1, for example, and then 2, 1 will be released.



TAPE DUPLICATE SELECTOR SWITCHES

Use these switches when duplicating a tape from one tape deck to another and when editing tapes. You can use up to four decks for tape duplication. For further details, refer to 'Duplicating' on page 8.

TAPE DUPLICATE PLAY (1, 2, 3, 4)

When duplicating, decide which tape deck you are going to use for playback and then press the appropriate switch. These are interlocking switches. For example, if you press 1, it will be released when you press 2. Therefore, remember to press only one switch.

TAPE DUPLICATE REC (1, 2, 3, 4)

When duplicating, decide which tape deck you are going to use for recording, and then press the appropriate switch. These switches are all independent. For example, if you press 2 and then 3 and 4, this will set all three switches. To release, press the switches for a second time. Do not press these switches unless for duplicating. When recording with the TAPE MONITOR SOURCE switch in the ON position, the program source will be recorded on all four decks without having to press the TAPE DUPLICATE REC switches.

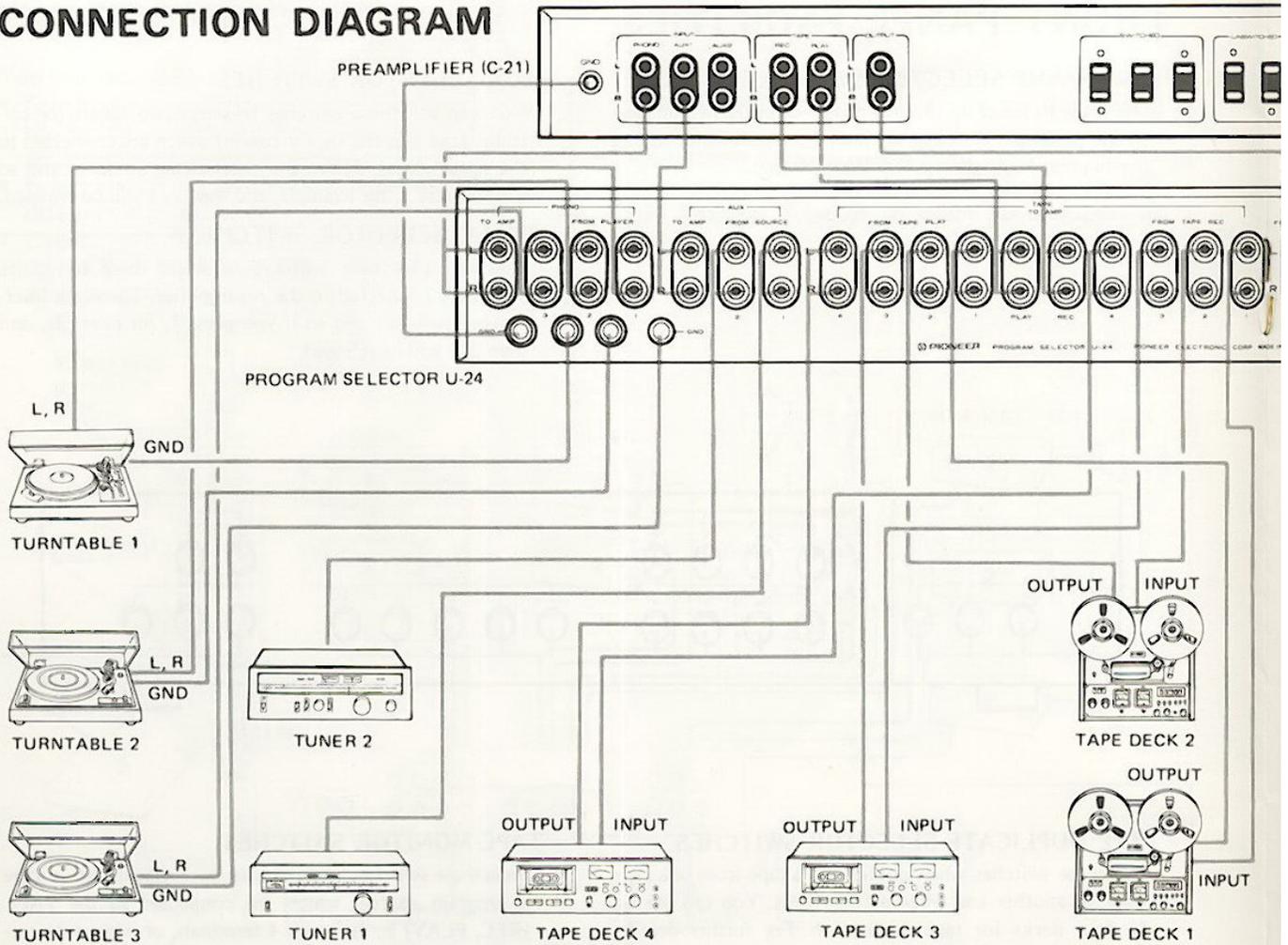
TAPE MONITOR SWITCHES

Press these switches when playing back tape decks, to tape a program source, which are connected to the TAPE (REC, PLAY) 1, 2, 3, and 4 terminals, or when monitoring a recording. Press the appropriate number. Remember to set the TAPE MONITOR switch on the amplifier (or preamplifier) beforehand to the ON position.

NOTES:

- Be sure to push the TAPE MONITOR SOURCE switch to the ON position when listening to a record or a program on the tuner.
- These are all interlocking switches. If you press 1, for example, and then 2, 1 will be released. Therefore, be sure to press just the one switch.

CONNECTION DIAGRAM



CONNECTIONS

CONNECTION PRECAUTIONS

- Make sure that you connect all the L (Left) channel inputs and outputs of the components connected in turn to the U-24 together and all the R (right) channels together. You can check this quite easily if you use color-coded connecting cords. Each of the U-24's terminals is clearly marked L (upper) or R (lower) for easy identification.
- Make sure that the connections are secure. If you have not connected the cords properly, the sound will not be heard and noise will be generated.
- Do not tie the input and output cords together with the power cords or speaker cords. Rolling

the cords up and running them over long distances also gives rise to unexpected trouble.

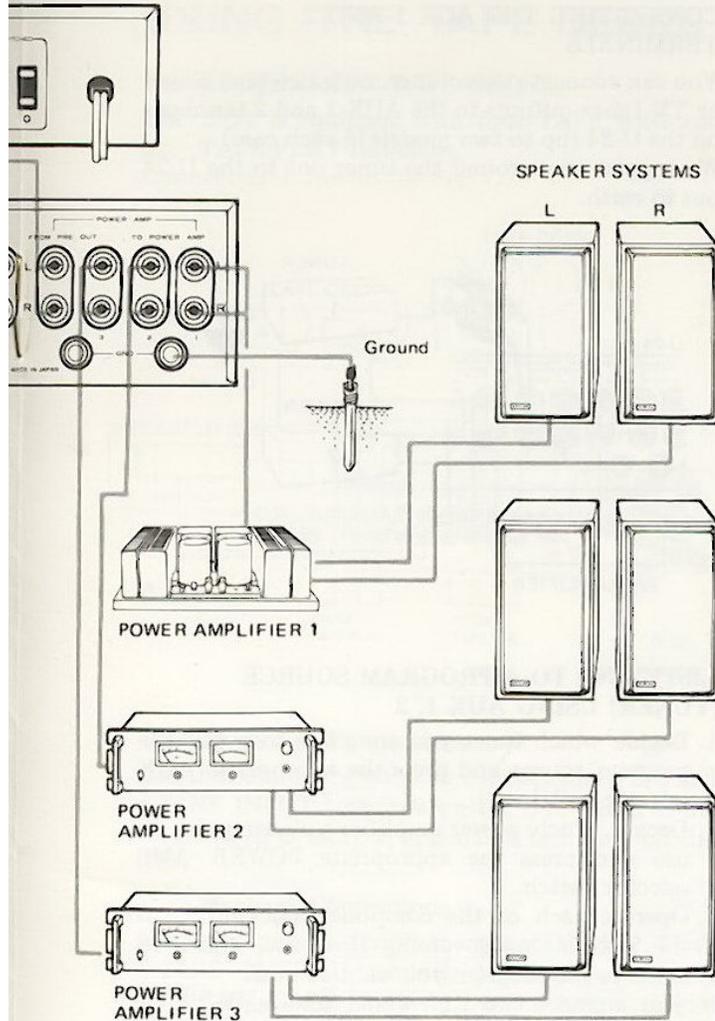
PREAMPLIFIER CONNECTIONS

- Connect the preamplifier to the U-24 as shown in the Connections Diagram.
- Use the connecting cords that come with the preamplifier or pin plug low-capacity cords which are sold separately for the input and output connections.
- Use the ground wire which comes with the U-24 for the ground connection, and connect the U-24's GND terminal to the GND terminal on the preamplifier.

CONNECTING THE COMPONENTS

CONNECTING THE POWER AMPLIFIER(S)

- Connect the power amplifier(s) (1 – 3 models) to the U-24 as shown in the Fig. 1.
- You do not necessarily have to connect the GND terminal on the power amplifier.



GROUND CONNECTION

- The U-24 has ground terminals on its chassis. There is one ground terminal per each set of connectors on the negative side of each signal system, and so under normal circumstances there is no hum. However, avoid running the ground wires over long distances and connecting more than one ground wire to a terminal.

SHORT PIN PLUGS

- Plug the two accessory short pin plugs into the PHONO terminals which are not being used to connect the turntables to the U-24.

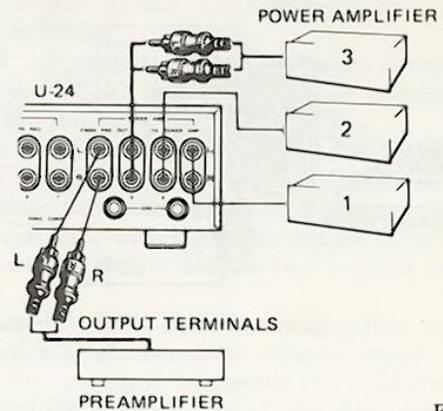


Fig. 1

SELECTING THE POWER AMPLIFIER(S)

- Connect the power amplifiers (1 – 3 units), decide which of the units you are going to use, and then you can select it by pressing the appropriate POWER AMP selector switch.

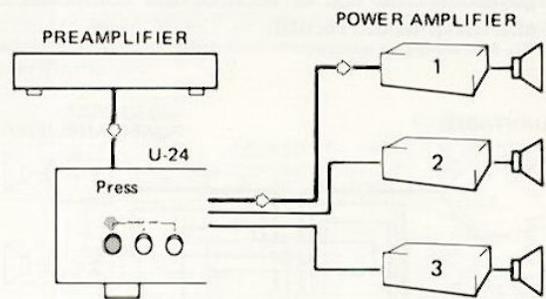


Fig. 2

CONNECTING THE TURNTABLE(S)

Connect the turntables (1, 2, 3) outputs to the PHONO 1, 2, and 3 terminals on the U-24. Also connect the turntables' ground wires to the GND terminals. With turntables having 2 - 3 tonearms, connect the outputs to the 1, 2 and 3 PHONO terminals.

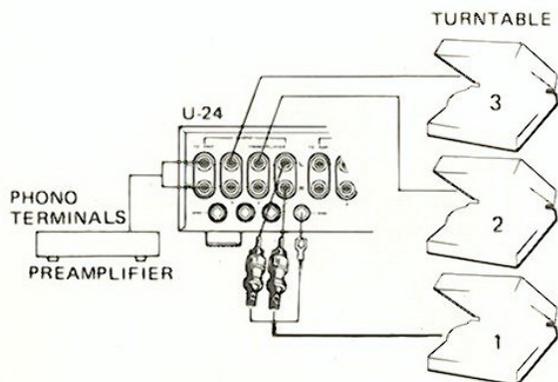


Fig. 3

PLAYING THE RECORDS

1. Decide which turntable you are going to play, and press the appropriate PHONO selector switch.
2. Decide which power amplifier you are going to use and press the appropriate POWER AMP selector switch.
3. Operate the turntable, follow the instructions governing the use of each of the components, and listen to the record.

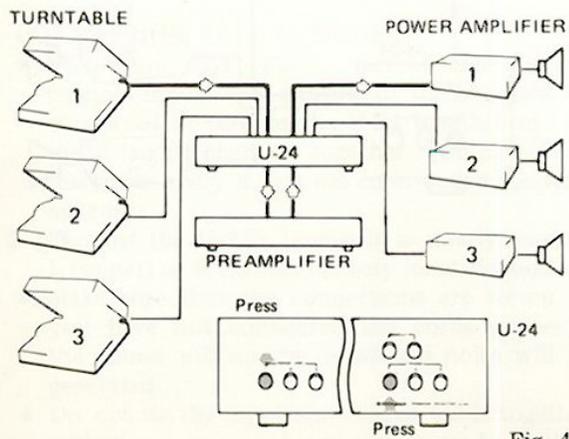


Fig. 4

CONNECTING THE AUX 1 AND 2 TERMINALS

You can connect stereo tuner, cartridge tape player or TV tuner outputs to the AUX 1 and 2 terminals on the U-24 (up to two models in each case). We suggest you ground the tuner not to the U-24 but to earth.

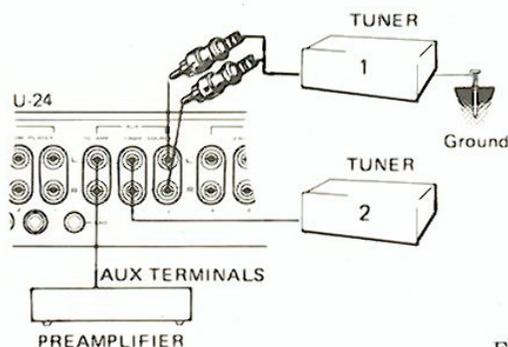


Fig. 5

LISTENING TO A PROGRAM SOURCE (TUNER) USING AUX 1, 2

1. Decide which tuner you are going to use as the program source and press the appropriate AUX selector switch.
2. Decide which power amplifier you are going to use and press the appropriate POWER AMP selector switch.
3. Operate each of the components according to the instructions governing their use, and then listen to the program you want to hear.

If you connect two tuners and tune each into a different station, you can listen to one station or the other in a flash by alternately pressing the above switches.

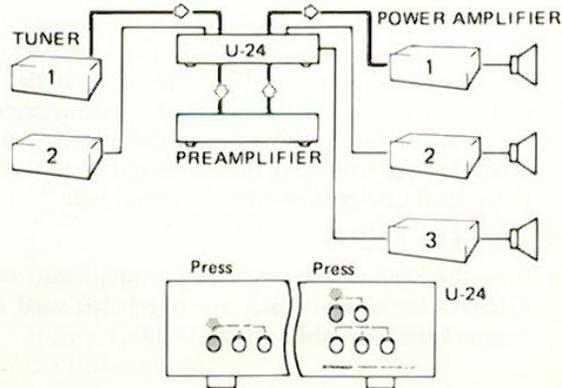


Fig. 6

USING THE TAPE DECKS

CONNECTING THE TAPE DECKS

The U-24 is equipped with four TAPE REC and four TAPE PLAY terminals. Connect as shown in the Fig. 7.

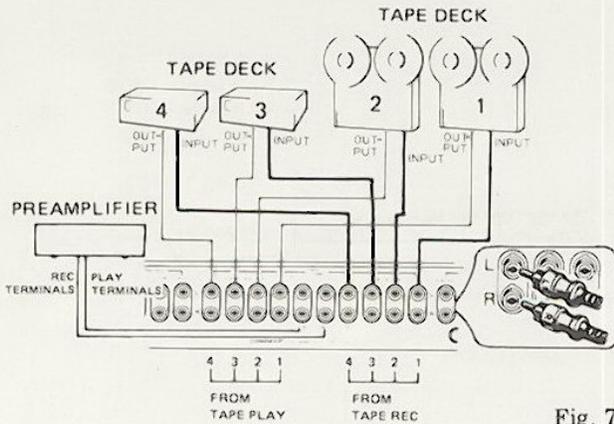


Fig. 7

Tape Recording Connections

Use the connecting cords to connect the 1, 2, 3 and 4 LINE INPUT terminals on the tape decks to the FROM TAPE REC 1, 2, 3 and 4 terminals on the U-24.

Tape Playback Connections

Use the connecting cords to connect the 1, 2, 3 and 4 LINE OUTPUT terminals on the tape decks to the FROM TAPE PLAY 1, 2, 3 and 4 terminals on the U-24.

NOTES:

The upper terminals (L) are for the left channel and the lower terminals (R) are for the right channel. Use the accessory tape deck cords for the connections.

TAPE PLAYBACK

1. Set the preamplifier tape monitor switch to the ON position.
2. Decide which tape deck you are going to use for the playback, and press the appropriate TAPE MONITOR switch.
3. Play back the pre-recorded tape on the tape deck.
4. Decide which power amplifier you are going to use and press the appropriate POWER AMP selector switch.
5. Operate each of the components according to the instructions governing their use, and then listen to the tape you want to hear.

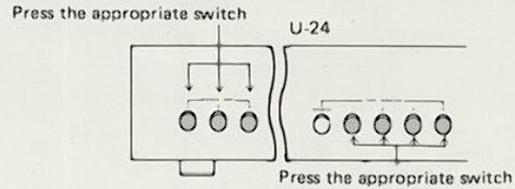


Fig. 8

TAPE RECORDING

1. Operate the U-24 in accordance with the program source (record, FM broadcast) which you want to record.
 - When the program source is a record, press the proper PHONO selector switch in accordance with the turntable you are using.
 - When the program source is an FM broadcast, press the TAPE MONITOR SOURCE switch, and then press the proper AUX selector switch in accordance with the tuner you are using so as to tune the station for the best possible reception.
 - Release the REC switch corresponding to the tape deck(s) which you are using to record.
2. Now that you have connected the U-24 and the preamplifier securely, set all the REC switches to the OFF (released) position. This makes the recording signal available at the U-24's TAPE terminals and so you can record the source onto all four tape decks simultaneously if you want to.
3. Adjust the recording level with the controls on the tape deck(s) and then start recording.

NOTE:

When using three or more tape decks to record simultaneously, the impedance of the tape decks and amplifier you are using as well as other factors might exert an adverse effect on distortion, frequency response and other specifications.

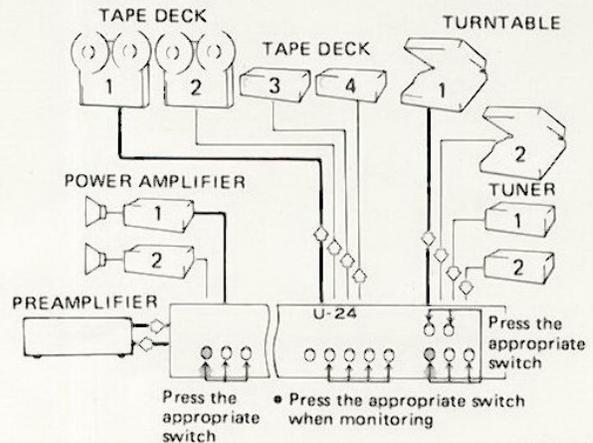


Fig. 9

MONITORING THE RECORDING

When recording with (3-head) tape decks featuring a monitor mechanism, you can check the recording on the tapes through the speakers by pressing the U-24's TAPE MONITOR switch in accordance with the tape decks you are using.

DUPLICATING

If you use four tape decks, you can duplicate a tape being played back on one of the decks by using the other decks to record it. The connections are the same as those for the recording and playback outlined above.

For example, if you are using deck 1 to play the tape back, then all you have to do is press the REC switches for the 2, 3 and 4 decks which you are using to record the tape. You can simultaneously duplicate the tape on three decks. You can also set the 2, 3 and 4 switches so that the tape is recorded on only one or all the decks.

The various duplicating combinations are listed in the table below.

For playback	◇	For recording
TAPE DECK 1	◇	TAPE DECK 2, 3, 4
TAPE DECK 2	◇	TAPE DECK 1, 3, 4
TAPE DECK 3	◇	TAPE DECK 1, 2, 4
TAPE DECK 4	◇	TAPE DECK 1, 2, 3

NOTE:

- You cannot use the same deck for duplicating as you are using for playback.
- You can use one or two decks for recording.

OPERATION

1. Decide which tape deck you are going to use for playback, and then press the appropriate PLAY switch (e.g.: PLAY 1).
2. Decide which tape deck you are going to use for recording, and then press the appropriate REC switch (e.g.: REC 2).
3. When monitoring at the recording end, press the MONITOR switch in accordance with the proper tape deck (e.g.: MONITOR 2).

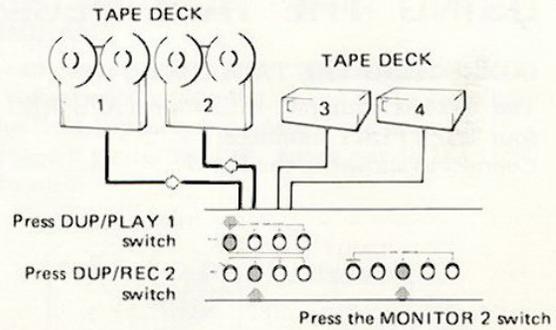


Fig. 10

At the same time as you are duplicating, you can also listen to a different program source (FM broadcast, record or a tape being played back on a different deck).

1. Operate the U-24 and the tape decks, and start duplicating.
2. Press the MONITOR SOURCE switch on the U-24, or the appropriate switch for the tape deck you want the tape to be played back on.
3. Operate the turntable, tuner or tape deck and listen to the program from the fresh source.
4. You can now enjoy a different program while you are duplicating a tape.

SPECIFICATIONS

Dimensions	420(W) x 81(H) x 329(D)mm
	16-9/16 x 3-3/16 x 12-15/16in
Weight	without package 4.4kg (9 lb 11 oz)
	with package 5.2kg (11 lb 7 oz)
Furnished parts	Short pin plug: 2
	Ground wire: 1
	Operating Instructions: 1

NOTE:

Specifications and the design subject to possible modification without notice due to improvements.

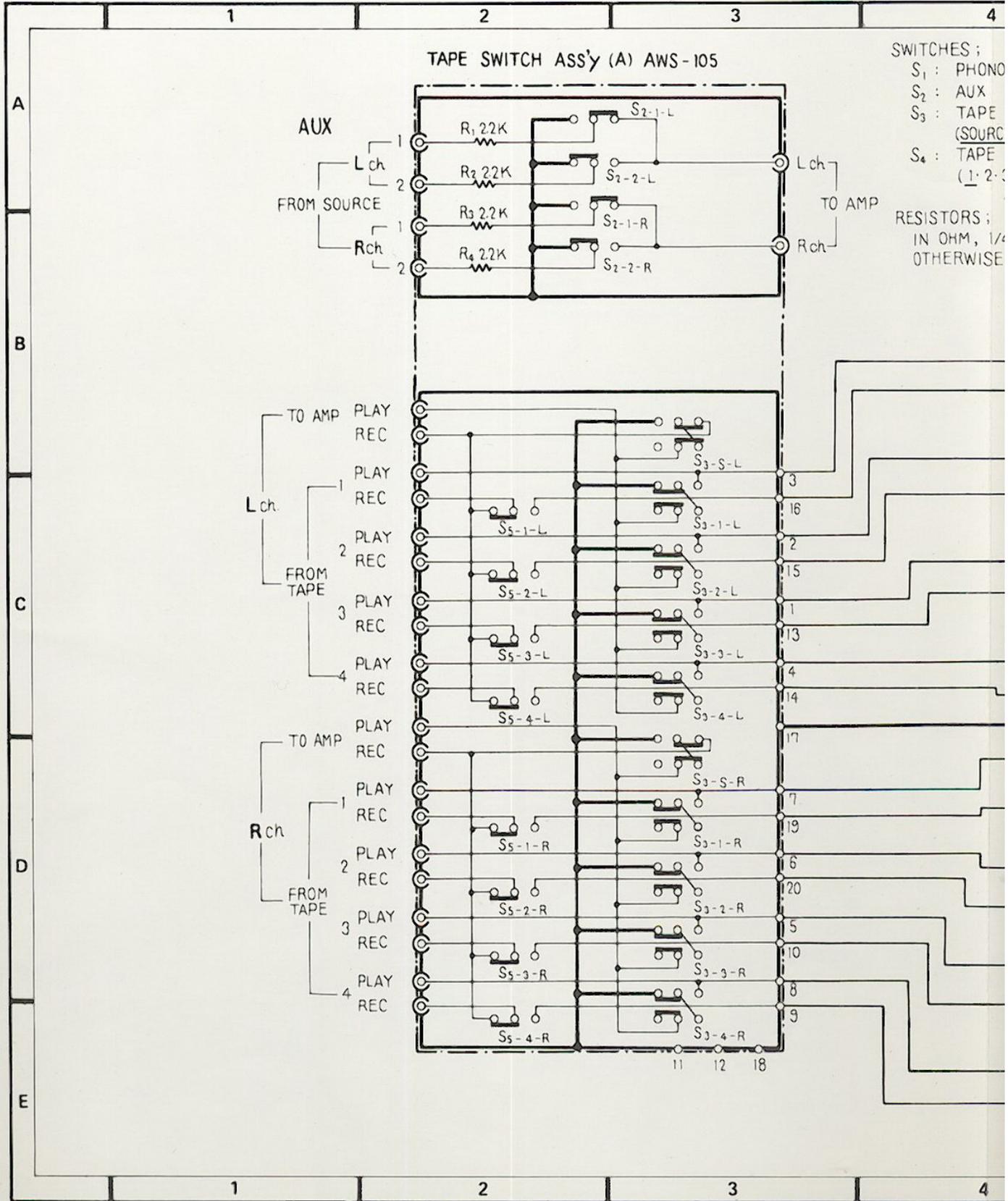
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PROGRAM SELECTOR

U-24

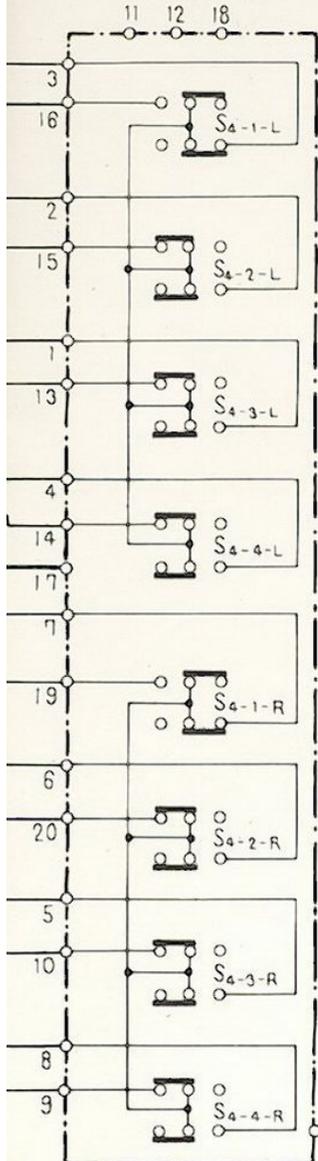


- SWITCHES ;
 S₁ : PHONO
 S₂ : AUX
 S₃ : TAPE
 (SOURCE)
 S₄ : TAPE
 (1-2-3)
 RESISTORS ;
 IN OHM, 1/4
 OTHERWISE

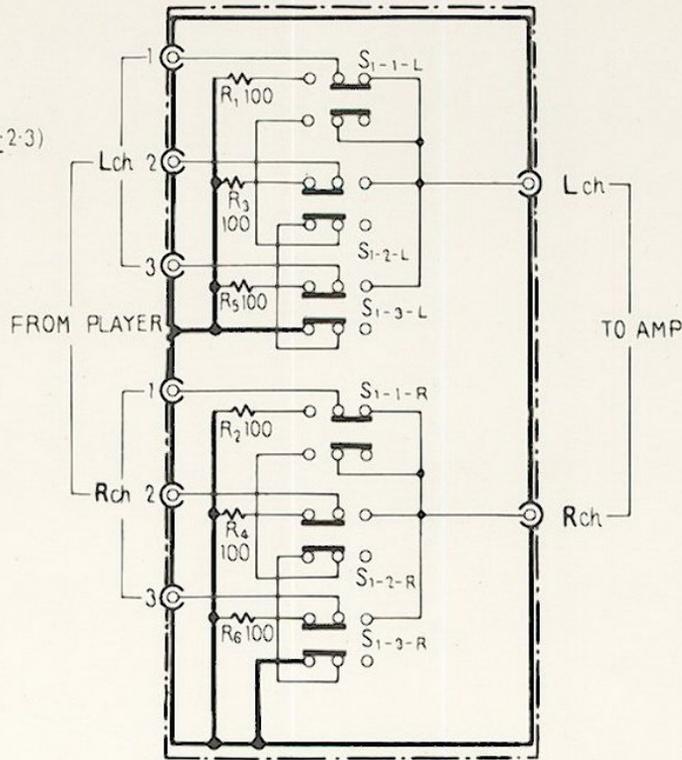
10 (1-2-3) S₅ : TAPE DUP/REC
 (1-2) 1. ON - OFF
 MONITOR 2. ON - OFF
 (1-2-3-4) 3. ON - OFF
 DUP/PLAY 4. ON - OFF
 (3-4) S₆ : POWER AMP (1-2-3)

1/4 W. ±5% TOLERANCE UNLESS
 OTHERWISE NOTED. K : KΩ

TAPE SWITCH ASS'y (B)
AWS-106



PHONO SWITCH ASS'y AWS-103



POWER AMP SWITCH ASS'y AWS-104

