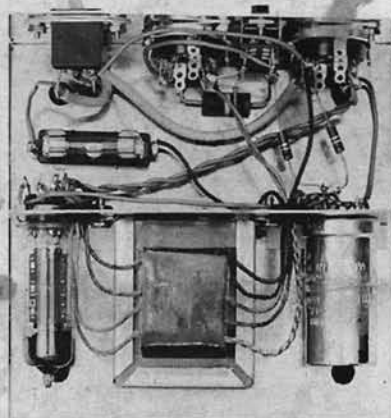


# *dynakit*

SERIAL NUMBER

4850033

This number must be mentioned in all communications concerning Dynakit.



## INSTRUCTIONS FOR ASSEMBLY OF THE DYNakit PS-1 DUAL POWER SUPPLY

The Dynakit dual power supply is a compact unit designed to supply operating voltages to either one Dynakit preamplifier or to a pair of Dynakit preamplifiers used stereophonically. It can also supply power to other brands of preamplifiers in which the voltage and current capabilities of the PS-1 are not exceeded.

The PS-1 has been designed so that optimum voltages are furnished to the Dynakit preamplifiers regardless of whether one or two are being used. In addition, the use of separate windings for the heaters of each preamplifier makes it possible to minimize the hum level of each preamplifier individually without interaction.

Assembly of the dual power supply is quite simple and can be done by following either the step by step directions or using the pictorial layout. However, for greatest ease of assembly, it is recommended that both the step by step directions and the pictorial be followed, one being used as a check against the other. It is also suggested that the instructions be read all the way through before commencing construction.

Upon opening your kit, check the components with the parts list. Familiarize yourself with the components; they can be identified by comparison with the pictorial diagram and by specified color coding. Proper color coding will be mentioned for each resistor as it is used.

Component leads should be trimmed as they are used; the length should be such that the proper connection can be made from point to point without strain on lugs or components. Care should be exercised not to allow wires to touch one another unless they are actually connected to the same point.

**USE ROSIN CORE SOLDER ONLY** - Do not use acid core solder - it is injurious to electronic components and does not make satisfactory electrical connections. Dyna Company assumes no responsibility for the function of any kit in which acid core solder is used. If you have solder on hand the origin of which is doubtful it is wise to obtain new 50/50 or 60/40 Rosin Core Solder.

Whenever a connection is made the instructions will specify (S) if the joint is to be soldered; otherwise the leads should be crimped in place and left unsoldered to be soldered at a later step. If good soldering procedure is followed all that is needed is an iron of 35 to 50 watt rating. When a soldering iron of a higher rating is used, care must be taken not to overheat the components. Both the wire and the lug to be connected should be clean and shiny. The wire should first be stripped (the insulation removed for about 1/4 inch) and then tinned by applying the hot iron to the bare portion of the wire while simultaneously applying a small amount of solder to the wire. The iron should heat the wire enough to cause the solder to flow smoothly on the wire. Note that the solder is applied to the work and not the iron. Similar procedure is followed when soldering a joint. The wire or pigtail lead from the component is connected to the point by hooking it through the hole in the lug and crimping the hook closed. The iron is applied to the joint to heat both the lug and the wire, and then solder is applied to the joint till a small amount flows smoothly on the joint. The iron is then removed and the joint allowed to set at least 10 seconds. The joint should not be disturbed while the solder is setting, and it should set smooth and shiny. If the soldered connection has a dull crackle finish, it is a "cold" joint and should be redone.

All the tools necessary for construction of this kit are a small tip soldering iron, a medium size screw driver, long nose pliers, and cutting pliers.

It takes very little time to construct this kit, so go slow and double check your work . . . . .

### Bracket Assembly

- ( ) Take the metal bracket and note that the side with one flange is the bottom of the bracket. Mount the seven pin socket in the 5/8" hole on the bracket using the #4 screws, nuts, and washers. Use the washer under the nut. Orient the socket with the #7 pin pointing away

from the flanged edge of the bracket. The pins of all sockets are numbered clockwise starting from the blank space or keyway when looking at the bottom of the socket.

2. (✓) Insert rubber grommets in both 3/8" holes in bracket. Feed the transformer leads through the two grommet holes from top of the bracket. Note that the red and green wires go through hole closest to 7 pin socket. Fasten the transformer with #8 screws, nuts, and lockwashers.
3. (✓) Mount the dual capacitor can (10 mfd x 10 mfd) from the top side of the bracket. Insert the tabs in the slots around mounting hole and twist tabs about 45° to lock can in place. Orient the lugs of the can as shown in the pictorial diagram.
4. (✓) Connect one green lead from the transformer to pin #3 of the seven pin socket, and connect the other green lead to pin #4 of the seven pin socket.
5. (✓) Connect one red transformer lead to pin #1 of the seven pin socket (S). Connect the other red lead to pin #6 (S).
6. (✓) Connect the red-yellow lead of the transformer to the filter can mounting tab as shown in the pictorial.
7. (✓) Twist together a pair of 5-1/2" wires after stripping insulation from ends. Connect one of the pair to pin #3 of the 7 pin socket (S). Connect the other wire to pin #4 of the 7 pin socket (S).
8. (✓) Connect one end of a 4-1/2" wire to pin #7 of the seven pin socket (S). Connect the other end to lug A on the filter capacitor.
9. (✓) Connect the 4700 ohm (yellow-violet-red) resistor between the two lugs of the filter capacitor, solder only at lug A.
10. ( ) Connect one end of a 4" wire to the tab of the capacitor to which the red-yellow transformer wire is already connected (S).
11. ( ) Trim the leads of both 10,000 ohm (brown-black-orange) resistors to one inch at each end. Connect one end of each resistor to the capacitor lug marked B (S).

#### MAIN CHASSIS ASSEMBLY

1. ( ) Insert a rubber grommet in the 3/8 hole on the front of chassis under rectangular hole for ac outlet.
2. ( ) Mount the ac outlet in the rectangular hole. Insert #4 screws from the outside and fasten with lockwashers and nuts.
3. ( ) Mount an octal socket in the next hole. Orient with keyway up. Use #4 hardware.
4. ( ) Mount the slide switch in the next hole. Only #4 screws are necessary as the holes of the switch are threaded.
5. ( ) Mount the second octal socket in the last hole using #4 hardware. Orient keyway up as with other octal socket.

6. ( ) Insert a #4 screw in the hole in bottom of chassis from the outside and mount the fuse block on it. Fasten with #4 lockwasher and nut.
7. ( ) Connect one end of a 3-1/2" wire to pin #3 of #1 octal socket. Connect the other end to pin #3 of the #2 octal socket (S).
8. ( ) Trim the leads of the 100,000 ohm (brown-black-yellow) resistor to one inch at each end. Connect one end to #3 lug of the slide switch (S). Connect the other end to ground lug on side of octal socket (S).
9. ( ) Connect one end of a 3" wire to #1 switch lug (S). Connect the other end to pin #5 of the #2 octal socket (S).
10. ( ) Insert the line cord through the grommet from the outside. Put a knot in it about four inches from the end. Separate the two wires and cut one to 2" length, then strip 1/4" of insulation from ends. Connect the long end to pin #6 of the #1 octal socket (S). Connect the short end to the #1 ac outlet lug.
11. ( ) Connect one end of a 3-1/2" wire to pin #7 of #1 octal socket. Connect the other end to the #2 ac outlet lug (S).
12. ( ) Connect a short piece of wire between #6 switch lug (S) and pin #1 of #2 octal socket (S).
13. ( ) Connect one end of a 2" wire to #1 lug of ac outlet (S). Connect the other end to #1 lug of the fuse block (S).

#### FINAL ASSEMBLY

1. ( ) Fasten bracket in place with three #6 sheet metal screws through bottom of chassis.
2. ( ) Connect the wire coming from the ground tab of the capacitor can to pin #3 of the #1 octal socket (S).
3. ( ) Connect the loose end of one 10,000 ohm resistor (brown-black-orange) to pin #5 of #1 octal socket (S).
4. ( ) Connect the loose end of the other 10,000 ohm resistor (brown-black-orange) to #2 lug of the slide switch (S).
5. ( ) Connect one loose end of twisted pair to pin #1 of #1 octal socket (S). Connect other loose end to pin #2 (S).
6. ( ) Connect one black transformer wire to pin #7 of #1 octal socket (S). Connect other black lead to #2 lug of the fuse block (S).
7. ( ) Connect one brown transformer lead to #5 lug of the slide switch (S). Connect the other brown lead to pin #2 of the #2 octal socket (S).
8. ( ) Insert four rubber feet into bottom of chassis.

Check all your work for correct wiring and good solder connections. Insert the fuse in the fuse holder and the 6X4 tube in the 7 pin socket. The power supply is now ready to be tested after cover is put on and fastened with four sheet metal screws. Plug the AC plug of the power supply into one

of the switched AC outlets of your Dynakit preamp. The preamp should be plugged into your wall outlet of 117 volts 60 cps. Plug the power cable of the preamp into the #1 octal socket of the power supply. If only one preamp is to be powered, the #1 socket should be used and the slide switch moved to the "1" position. If two preamps are to be powered, #1 and #2 octal sockets are used, the power supply AC plug should be plugged into the preamp connected to the #1 octal socket, and the slide switch put on the "1 + 2" position.

It is not necessary to plug in the AC plug of the second preamp unless use of the outlets on the rear is desired. Rotation of the volume control of the #1 preamp should turn on the system.

The PS-1 has been designed primarily to power two Dynakit preamplifiers. With proper connections it may also be used to power preamplifiers of other manufacturers, that require no more power than stated in the specifications provided their power plug is wired to use this socket arrangement.

A Heathkit preamplifier, or other unit which carries on-off switching through its power cable should be used in the #1 socket. In this way, the power supply can be plugged in the 117 volt wall outlet and turned on and off with the on-off switch of the preamplifier.

The power supply will deliver up to 1 amp at 6.3 volts for filaments and up to 7-1/2 MA at approximately 350 volts for plate supply of each preamp. The B+ will vary depending on the load. Any combination of loads may be used for the two sockets that does not exceed 15 MA drain. The unit runs relatively cool and may be placed conveniently inside equipment cabinets.

If the power supply does not operate or shows symptoms of smoke or overheating, it should be checked carefully. The voltages should be within 10% of those shown or some trouble is indicated.

	Voltage with no preamp connected. Switch on 1.	Voltage with two Dynakit preamps. Switch on 1 + 2.
6X4 pin #1	345 VAC	340 VAC
2	-	-
3	6.7 VAC	6.2 VAC
4	-	-
5	-	-
6	345 VAC	340 VAC
7	410 VDC	405 VDC
Capacitor lug A		405 VDC
lug B		380 VDC
Octal Socket #1 pin #5	435 VDC	350 VDC
#2 pin #5	400 VDC	350 VDC

If the pilot light on the preamp does not light when using the power supply, the heater voltages at pins #2 and #7 of the two octal sockets should be checked to see if 6 volts ac is available across these pins. Please note that when the switch is on #1, there is no voltage at pins #2, #7, and #5 of the #2 socket.

## FACTORY SERVICE AND GUARANTEE

All parts in the Dynakit are guaranteed for a period of 90 days, and defective components will be replaced without charge if returned to the factory directly or via your dealer. Many dealers carry Dynakit spare parts in stock to facilitate replacements. After the 90 day guarantee period, parts are charged for at regular prices.

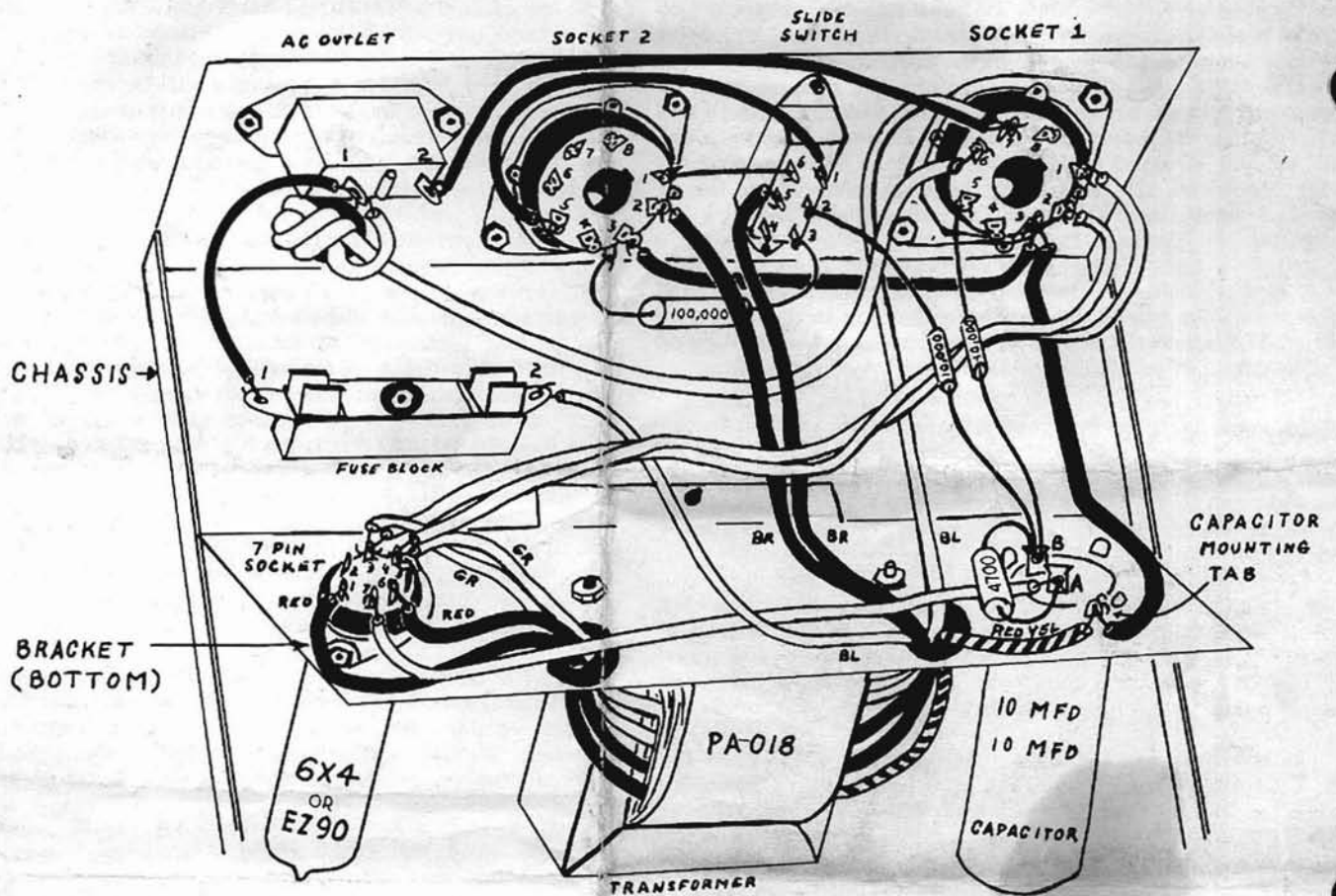
In the event that the assembled kit does not function properly or breaks down after some use, Dyna Company will service the kit for a service fee of \$2.50 plus the cost of parts which have been damaged by the user or are past the 90 day guarantee period. This service facility is not available for kits which are incompletely wired, or have been wired with other than rosin core solder, or in which changes have been made without factory authorization. In addition, NO PARTS WILL BE REPLACED NOR WILL ANY SERVICE BE AVAILABLE FOR KITS WHERE THE GUARANTEE POST CARD HAS NOT BEEN RETURNED. THE SERIAL NUMBER ON THIS INSTRUCTION BOOK MUST BE MENTIONED IN CORRESPONDENCE, PARTS RETURN OR KITS RETURNED FOR FACTORY SERVICE. It is the factory prerogative to limit the service facility to one year from the date of purchase.

When shipping the power supply for service a note must be attached specifying the symptoms, the name and address of the sender and the serial number. The kit should be securely packed in a carton in which it is surrounded by several inches of paper or other soft packing material.

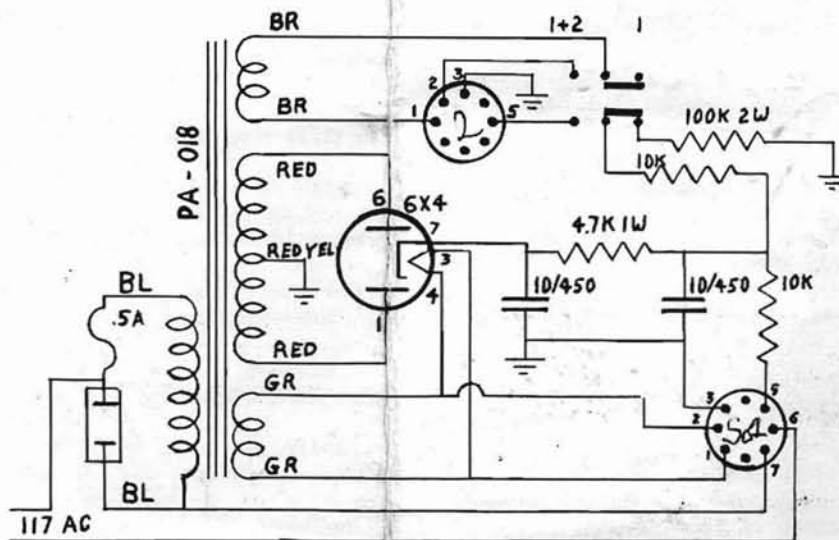
Dyna Company assumes no responsibility or liability for damages or injuries sustained in assembly or operation of the Dynakit.

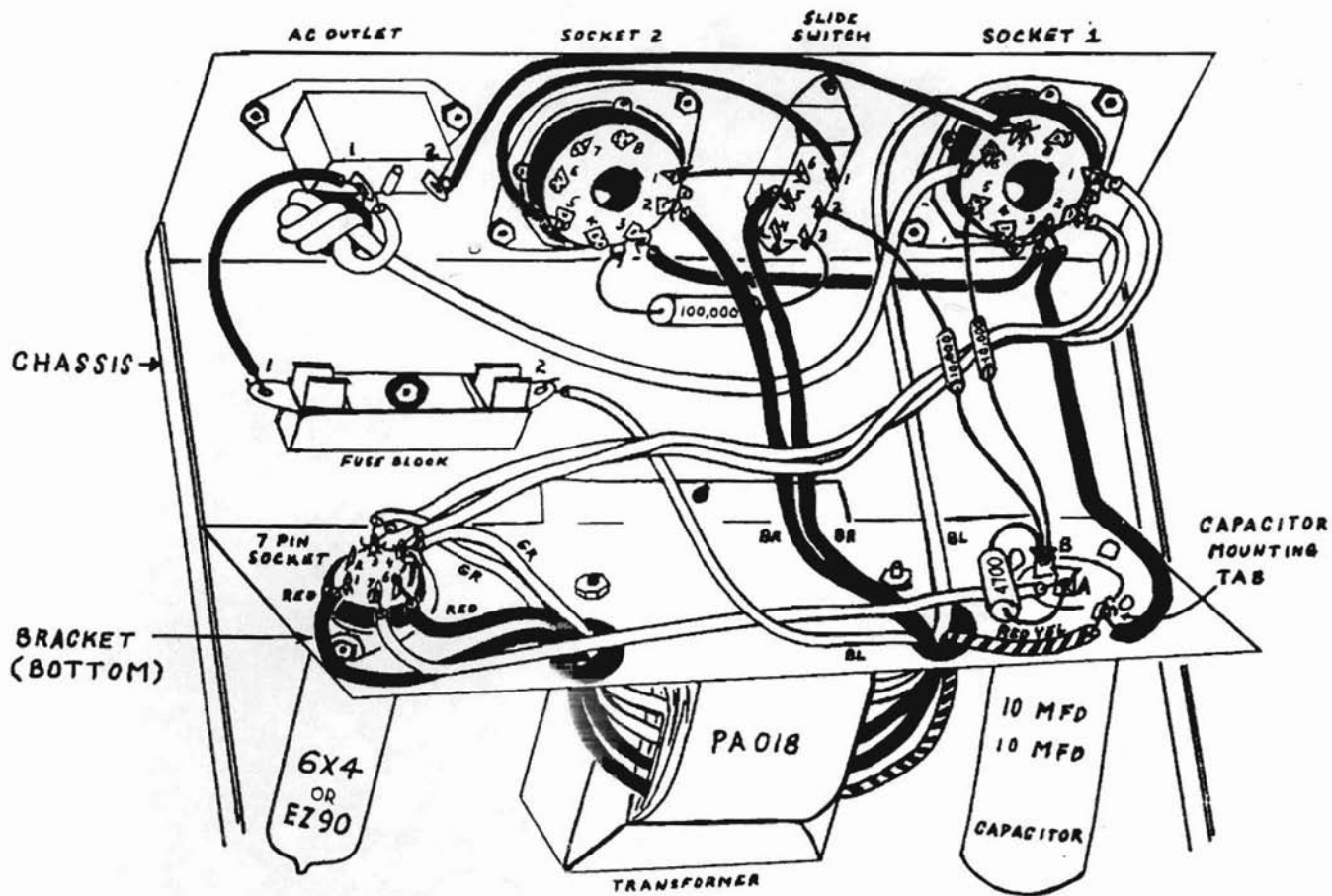
### POWER SUPPLY PS-1 Parts List

2 Octal sockets	1 Capacitor 10 mfd x 10 mfd
1 Seven pin socket	1 Tube 6X4 / EZ90
1 Slide Switch DPDT	1 Hank of Wire
1 AC outlet	1 Set of instructions
1 Fuse block	4 Rubber feet
1 .5 (1/2) amp fuse	3 Rubber grommets
1 100,000 ohm resistor (brown-black-yellow)	11 #4 x 1/4 screws.
1 4700 ohm resistor (yellow-violet-red)	9 #4 nuts
2 10,000 ohm resistors (brown-black-orange)	9 #4 lockwashers
1 Chassis, cover, and chassis bracket	7 #6 x 3/8 sheet metal screws
1 Line cord	2 #8 x 3/8 screws
1 Power transformer (PA-018)	2 #8 lockwashers
	2 #8 nuts



PS-1 PICTORIAL DIAGRAM





PS-1 PICTORIAL DIAGRAM

