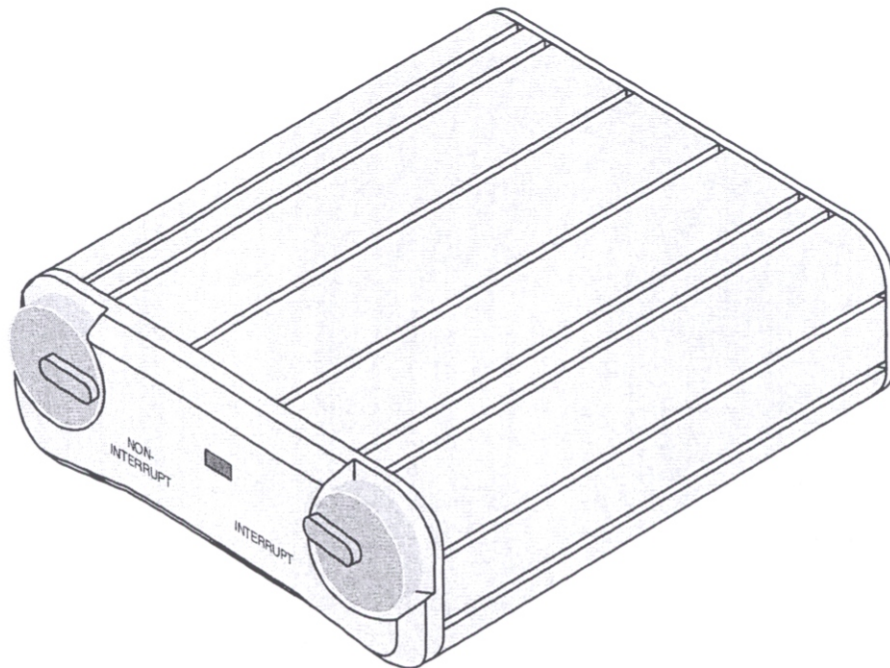


USER MANUAL

MODEL 4030

Two-channel Listening Station



RTSTM

PROPRIETARY NOTICE

The RTS product information and design disclosed herein were originated by and are the property of Telex Communications, Inc. Telex reserves all patent, proprietary design, manufacturing, reproduction, use and sales rights thereto, and to any article disclosed therein, except to the extent rights are expressly granted to others.

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UNPACKING AND INSPECTION

Immediately upon receipt of the equipment, inspect the shipping container and the contents carefully for any discrepancies or damage. Should there be any, notify the freight company and the dealer at once.

WARRANTY INFORMATION

RTS products are warranted by Telex Communications, Inc. to be free from defects in materials and workmanship for a period of three years from the date of sale.

The sole obligation of Telex during the warranty period is to provide, without charge, parts and labor necessary to remedy covered defects appearing in products returned prepaid to Telex. This warranty does not cover any defect, malfunction or failure caused beyond the control of Telex, including unreasonable or negligent operation, abuse, accident, failure to follow instructions in the Service Manual or the User Manual, defective or improper associated equipment, attempts at modification and repair not authorized by Telex, and shipping damage. Products with their serial numbers removed or effaced are not covered by this warranty.

To obtain warranty service, follow the procedures entitled "Procedure For Returns" and "Shipping to Manufacturer for Repair or Adjustment".

This warranty is the sole and exclusive express warranty given with respect to RTS products. It is the responsibility of the user to determine before purchase that this product is suitable for the user's intended purpose.

ANY AND ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY ARE LIMITED TO THE DURATION OF THIS EXPRESS LIMITED WARRANTY.

NEITHER TELEX NOR THE DEALER WHO SELLS RTS PRODUCTS IS LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND.

CUSTOMER SUPPORT

Technical questions should be directed to:

Customer Service Department
RTS/Telex
12000 Portland Avenue South
Burnsville, MN 55337 U.S.A.
Telephone: (952) 884-4051
Fax: (800) 323-0498

RETURN SHIPPING INSTRUCTIONS

PROCEDURE FOR RETURNS

If a repair is necessary, contact the dealer where this unit was purchased.

If repair through the dealer is not possible, obtain a RETURN AUTHORIZATION from:

Customer Service Department
Telex Communications, Inc.
Telephone: (877) 863-4169
Fax: (800) 323-0498

DO NOT RETURN ANY EQUIPMENT DIRECTLY TO THE FACTORY WITHOUT FIRST OBTAINING A RETURN AUTHORIZATION.

Be prepared to provide the company name, address, phone number, a person to contact regarding the repair, the type and quantity of equipment, a description of the problem and the serial number(s).

SHIPPING TO MANUFACTURER FOR REPAIR OR ADJUSTMENT

All shipments of RTS products should be made via United Parcel Service or the best available shipper, prepaid. The equipment should be shipped in the original packing carton; if that is not available, use any suitable container that is rigid and of adequate size. If a substitute container is used, the equipment should be wrapped in paper and surrounded with at least four inches of excelsior or similar shock-absorbing material. All shipments must be sent to the following address and must include the Return Authorization.

Factory Service Department
Telex Communications, Incorporated
West 1st Street
Blue Earth, MN 56013 U.S.A.

Upon completion of any repair the equipment will be returned via United Parcel Service or specified shipper collect.

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DESCRIPTION AND SPECIFICATIONS

DESCRIPTION

GENERAL

The RTS™ Model 4030 is a portable two-channel listening station. It permits a user to monitor one audio channel in each ear, with independent volume adjustment for each channel. The Model 4030 may be used as a component of the RTS Series 4000 IFB System. Or, it may be used as a listen-only user station in an RTS TW Intercom System.

In IFB applications, the Model 4030 can be used by talent, such as newscasters, musicians, sportscasters etc., to receive director instructions alone, or to receive both audio program feed and director instructions. It may also be used by behind-the-scenes personnel for production coordination and control. The Model 4030 receives operating power and audio via the Model 4010 Central Electronics Unit.

In TW intercom system applications, the Model 4030 may be connected and used like any other system-powered, two-channel belt pack.

FEATURES

- Monaural 1/4" phone jack for headphone/earset connection to channel two.
- Stereo 1/4" phone jack for headphone/earset connection to channels one and two.
- XLR type 3-pin female connector for audio/power connection. (Power supplied on channel one.)
- Separate volume control for each channel. Volume controls are detented to help prevent accidental misadjustment during use.
- Power-on indicator confirms connection to powered audio channel.

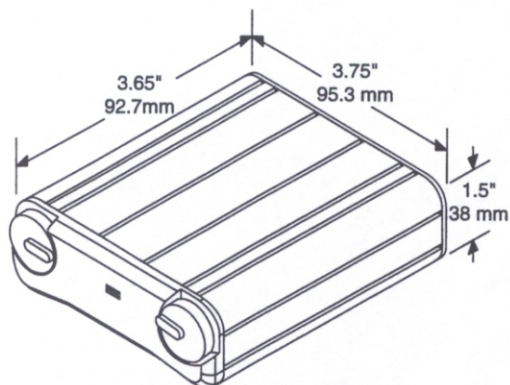


Figure 1. Dimensions

SPECIFICATIONS

GENERAL

Power Requirements:

32 VDC nominal (standard RTS line), 150 mA maximum

Environmental Requirements:

Storage: -20°C to 80°C; 0% to 95% humidity, non-condensing

Operating: 0°C to 50°C; 0% to 95% humidity, non-condensing

Dimensions:

See Figure 1-1

Weight:

10.8 oz. (303 gr)

INTERFACE REQUIREMENTS

Earset / Headphone Compatibility:

Accepts 50 to 600 ohm earsets or headphones

Audio Input Requirements:

Input Level: 2 Vp-p (0 dBu) nominal

Input Impedance: 200 ohms $\pm 5\%$

Noise Contribution:

Less than -60 dB nominal

HEADPHONE AMPLIFIER

Voltage Gain:

27 ± 3 dB from intercom channel to earset

Maximum Output:

65 mW into 150 ohms

Frequency Response:

250 Hz to 8 kHz $\pm 1/4$ dB

CONNECTOR PIN CONFIGURATIONS

Headset Connectors

Type: 1/4" Monaural Plug
Tip Headset audio high
Sleeve Headset audio low

Type: 1/4" Stereo Plug
Tip Headset channel 1 audio high
Ring Headset channel 2 audio high
Sleeve Headset audio low

Audio/Power Connector

Type: XLR-3F
Pin 1 Common
Pin 2 Channel 1 audio and power input
Pin 3 Channel 2 audio

CONNECTION AND OPERATION

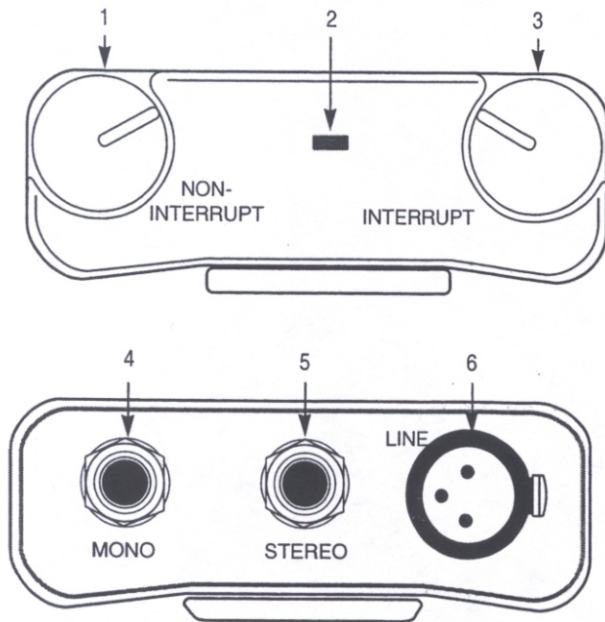


Figure 2. Model 4030 Connections and Controls

1 Channel 2 Volume Control

Use this control to adjust the channel 2 volume when using the **STEREO** jack.

2 Power Indicator

The power indicator lights to confirm that power is being received on channel 1.

3 Channel 1 Volume Control

Use this control to adjust the channel 1 volume when using the **STEREO** jack. This control is used with the **MONO** jack.

4 MONO Headset Jack

Use this jack to connect a monaural headphone or earset for listening on channel 1 only. The jack accepts a monaural, 1/4" phone plug.

5 STEREO Headset Connector

Use this jack to connect a stereo headphone or dual earsets for listening on both channels. The jack accepts a stereo 1/4" phone plug.

6 LINE Connector

Use this connector to connect audio and power from either a Model 4010 IFB Unit or from an RTS TW Intercom System.

PARTS DOCUMENTATION AND SCHEMATIC

Parts may be obtained directly from Telex at:

Telex Communications, Inc.
12000 Portland Avenue South
Burnsville, MN 55337 U.S.A.
Telephone: (877) 863-4169
Fax: (800) 323-0498

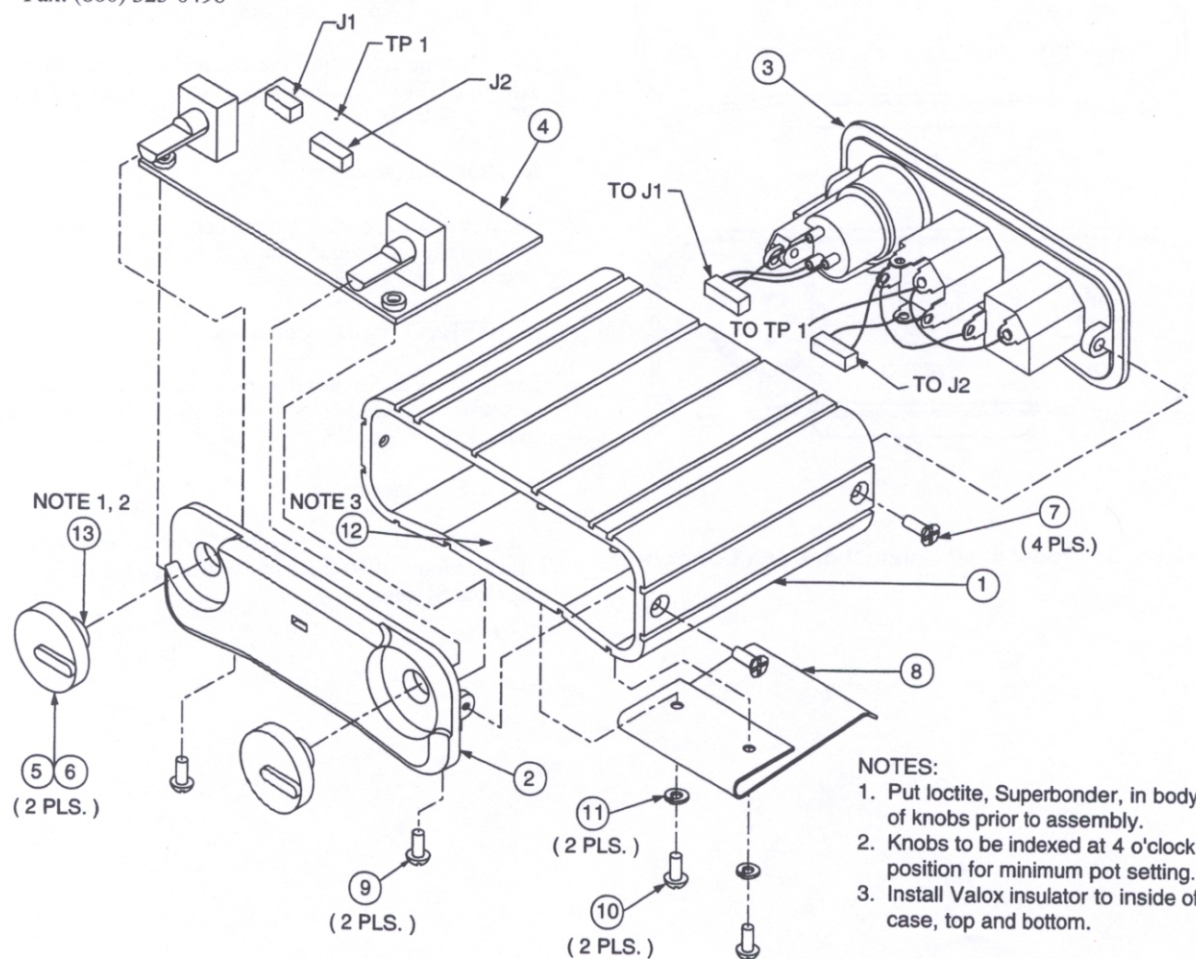


Figure 3. Final Assembly, Model 4030

Item No.	Description	Part No.
1	Case, 4030	9060-7374-009
2	Top Plate	9070-7489-002
3	Connector Plate Assy (see page 7 for parts list)	9020-7489-001
4	Circuit Board Assembly (see page 8 for parts list)	9030-7477-002
5	Knob, Nylon Body	9160-563-601
6	Boot, Knob	9160-563-602
7	Screw, 4-40 x 0.25, Flat Head	800124-001

Item No.	Description	Part No.
8	Belt Clip	358776
9	Screw, 4-40 x 0.25, Pan Head	51845-038
10	Screw, 4-40 x 0.1875, Pan Head	51845-037
11	Washer, Lock, Split, #4	50086-004
12	Insulating Film	Local Purchase
13	Loctite Superbonder (or equiv)	Local Purchase

90107489, C

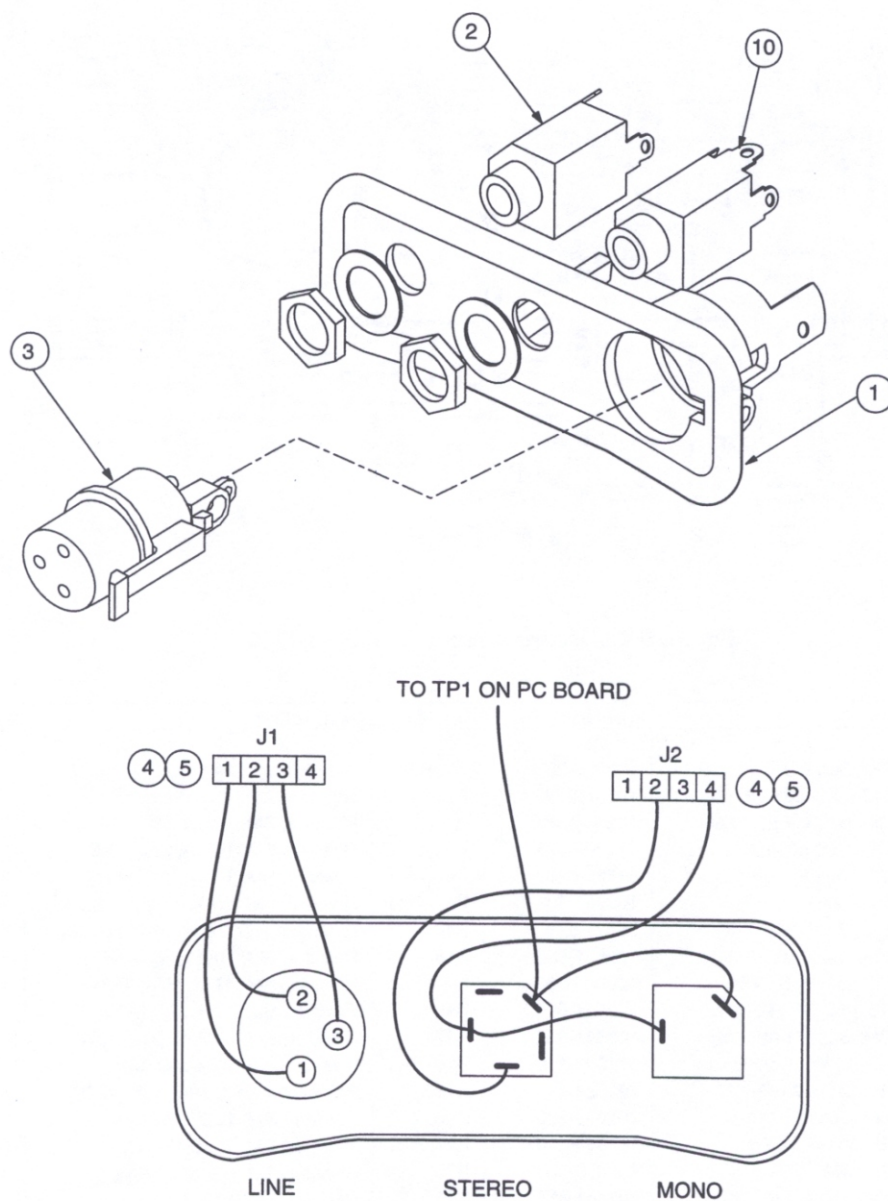


Figure 4. Connector Plate Assembly, Model 4030

Item No.	Description	Part No.
1	Connector Plate	90807374-008
2	Jack, Phone, Mono, 1/4"	2013001200
3	Connector, XLR-3F	40055-10
4	Connector, 4-pin	59958-004
5	Contact, Connector	59958-200
6-9	Not Used	
10	Jack, Phone, Stereo, 1/4"	2013000300

90207489, B

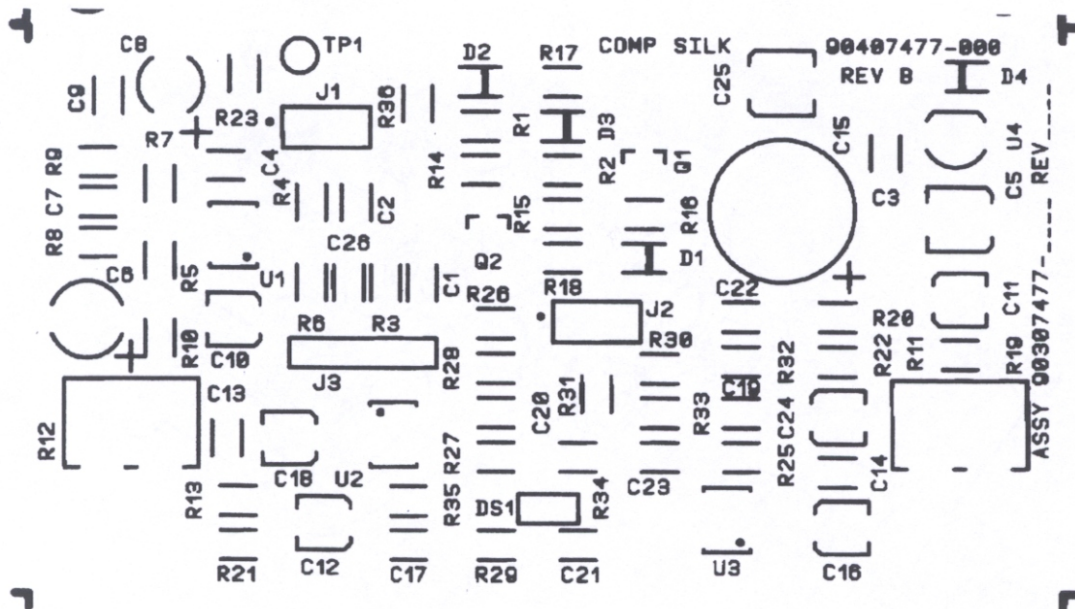


Figure 5. PC Board Assembly, Model 4030

Ref. No.	Description	Part No.	Ref. No.	Description	Part No.
C1, C2	Capacitor, CM, SM, 0.22 μ F, 50V	102880-237	R1, R2	Resistor, SM, 22.1 k Ω , 1%, 1/8W	102404-333
C3	Capacitor, CM, SM, 0.33 μ F, 50V	102880-239	R3-R6	Not Used	
C4	Capacitor, CM, SM, 0.1 μ F, 50V	102881-351	R7	Resistor, SM, 10 k Ω , 1%, 1/8W	102404-300
C5	Capacitor, LE, 2200 μ F, 16V	517002-081	R8	Resistor, SM, 10 k Ω , 5%, 1/8W	102513-103
C6	Capacitor, EL, 100 μ F, 25V	51821-626	R9	Resistor, SM, 10 k Ω , 1%, 1/8W	102404-300
C7	Capacitor, CM, SM, 0.01 μ F, 50V	102881-339	R10, R11	Resistor, SM, 4.7 k Ω , 5%, 1/8W	102513-472
C8	Capacitor, EL, 47 μ F, 25V	51821-625	R12	Potentiometer, 10 k Ω , 10%, 0.05W	54131-005
C9	Capacitor, CM, SM, 0.01 μ F, 50V	102881-339	R13	Resistor, SM, 10 Ω , 5%, 1/8W	102513-100
C10, C11	Capacitor, EL, SM, 1 μ F, 50V	102884-606	R14, R15	Resistor, SM, 47 k Ω , 5%, 1/8W	102513-473
C12	Capacitor, EL, SM, 0.1 μ F, 50V	102884-600	R16	Resistor, SM, 10 Ω , 5%, 1/8W	102513-100
C13, C14	Capacitor, CM, SM, 0.1 μ F, 50V	102881-351	R17	Resistor, SM, 150 k Ω , 5%, 1/8W	102513-154
C15	Capacitor, LE, 2200 μ F, 25V	517002-116	R18	Resistor, SM, 10 Ω , 5%, 1/8W	102513-100
C16	Capacitor, EL, SM, 4.7 μ F, 25V	102884-410	R19	Potentiometer, 10 k Ω , 10%, 0.05W	54131-005
C17	Capacitor, CM, SM, 220 pF, 50V	102879-208	R20	Resistor, SM, 10 Ω , 5%, 1/8W	102513-100
C18	Capacitor, EL, SM, 4.7 μ F, 25V	102884-410	R21, R22	Resistor, SM, 1 k Ω , 1%, 1/8W	102404-200
C19	Capacitor, CM, SM, 220 pF, 50V	102879-208	R23	Resistor, SM, 0 Ω , 5%, 1/8W	102513-000
C20-C23	Capacitor, CM, SM, 0.1 μ F, 50V	102881-351	R25	Resistor, SM, 100 k Ω , 1%, 1/8W	102404-400
C24	Capacitor, EL, SM, 0.1 μ F, 50V	102884-600	R26-R33	Resistor, SM, 10 Ω , 5%, 1/8W	102513-100
C25	Capacitor, EL, SM, 10 μ F, 25V	102884-412	R34	Resistor, SM, 1 k Ω , 5%, 1/8W	102513-102
C27	Capacitor, LE, 2200 μ F, 25V	517002-116	R35	Resistor, SM, 100 k Ω , 1%, 1/8W	102404-400
C28, C29	Capacitor, NP, 10 μ F, 25V	52710-078	U1	IC, SM, Dual Op Amp, LM833	16030833-SM
D1-D4	Diode, SM, Switching, 914/4148	58711-100	U2, U3	IC, SM, Low Pwr Audio Amp, MC34119	16030146-SM
DS1	LED, Rectangular, Green	58685-101	U4	IC, Voltage Regulator, 12V, 78L12	54680-412
J1, J2	Connector, St Locking, 0.059, M-4	59958-104		Support Bracket	64106-003
J3	Connector, St Header, 0.100, M-5	590089-005		Nut, Self Clinching, 4-40	59832-002
Q1, Q2	Transistor, SM, SI NPN, MMBTA13	54749-000			

90307477002, D

ABBREVIATIONS

CM, Ceramic Monolithic; SM, Surface Mount; LE Low Equivalent Series Resistance; EL Electrolytic; NP, Non Polarized; SI, Silicon.

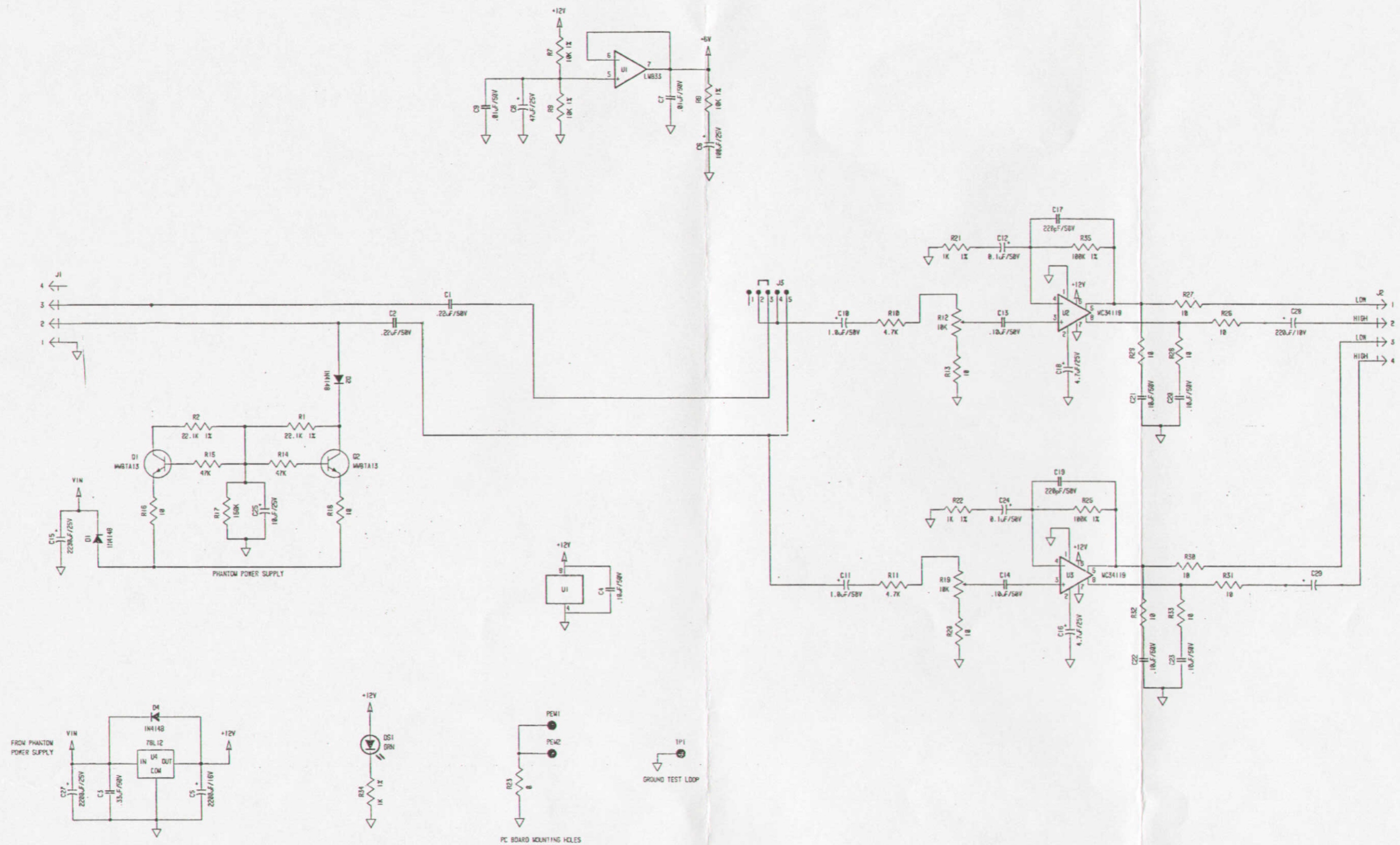


Figure 6. Schematic, Model 4030

