

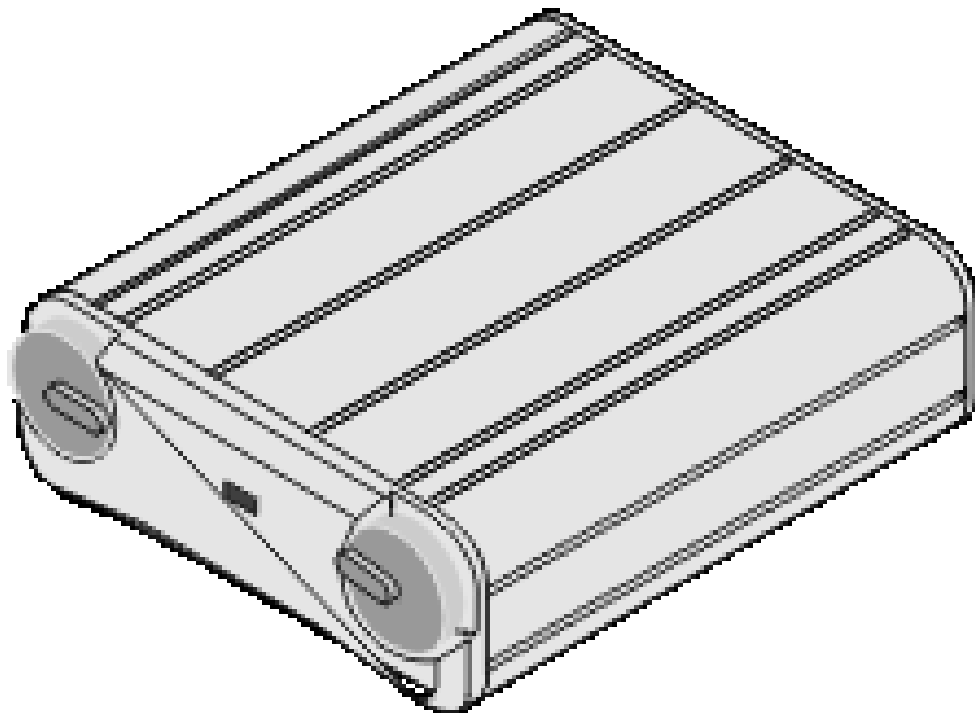
**RTS**<sup>TM</sup>

Two Wire Intercom Series  
innovating the future of communications

*MODEL 4030*

*Two-Channel Listening Station*

*User Manual*



## **PROPRIETARY NOTICE**

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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.

## **CUSTOMER SUPPORT**

Technical questions should be directed to:

Customer Service Department  
RTS/Telex Communication Inc.  
12000 Portland Avenue South.  
Burnsville, MN 55337 U.S.A.  
Telephone: (800) 392-3497  
Fax: (800) 323-0498  
Factory Service: (800) 553-5992

## **Return Shipping Instructions**

Customer Service Department  
Telex Communications, Inc. (Lincoln, Nebraska)  
Telephone: (402) 467-5321  
Fax: (402) 467-3279  
Factory Service: (800) 553-5992

Please include a note in the box which supplies the company name, address, phone number, and 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 the Manufacturer**

All shipments of products should be made via UPS Ground, prepaid (you may request from Factory Service a different shipment method). Any shipment upgrades will be paid by the customer. The equipment should be shipped in the original packing carton. If the original carton 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 Proof of Purchase for warranty repair. Upon completion of any repair the equipment will be returned via United Parcel Service or specified shipper, collect.

Factory Service Department  
Telex Communications, Inc.  
8601 East Cornhusker Hwy.  
Lincoln, NE 68507, U.S.A  
Attn: Service

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# *DESCRIPTION AND SPECIFICATIONS*

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## *DESCRIPTION*

### **GENERAL**

The Model 4030 is a portable user station for use with RTS/Telex two-wire or 4010 IFB intercom systems. The Model 4030 is a listen-only IFB belt pack that can be used to listen to one or two intercom or program channels.

### **FEATURES**

Features of the Model 4030 include:

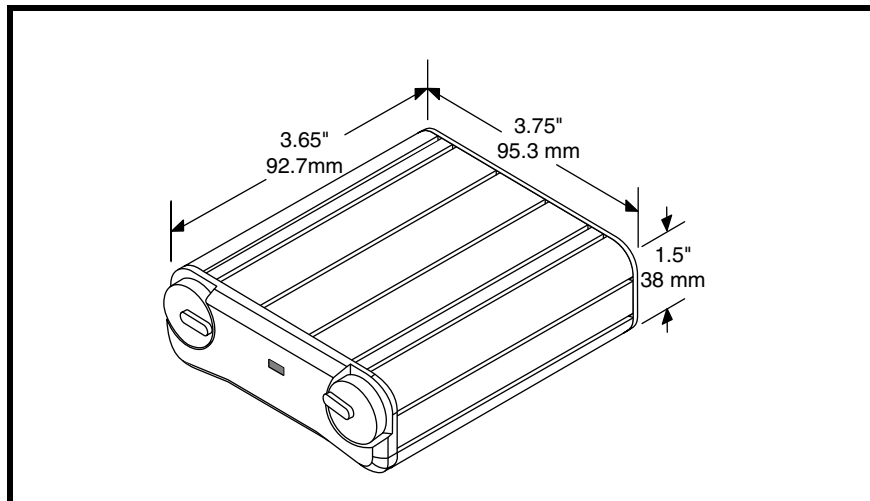
- Powered externally, via the intercom system power supply on channel one
- Power-on indicator
- Headset/earset jack set for a wide range of operation
- Monaural phone jack for intercom channel one

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## DESCRIPTION AND SPECIFICATIONS

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- Stereo phone jack for intercom channels one and two



**FIGURE 1. Dimensions**

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## *CONNECTIONS & CONTROLS*

The Model 4030 has the following connections and controls:

- Detented intercom/program volume controls
- Headset connector that accepts 1/4" monaural phone plug
- Headset connector that accepts 1/4" stereo phone plug
- Channel connector that accepts an XLR type 3-pin connector for intercom line and power input

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## ***SPECIFICATIONS***

Type: XLR-3F

Pin 1    Common  
Pin 2    Channel 1 audio and power input  
Pin 3    Channel 2 audio

### **GENERAL**

#### **POWER REQUIREMENTS**

32 VDC nominal (standard RTS line), 150mA 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

Physical : 3.65" (92.7mm) L x 3.75" (95.3mm) W x 1.5" (38mm) D

#### 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 V p-p (0dBu) nominal

###### Input Impedance

200 ohms  $\pm 5\%$

##### Noise Contribution

Less than -60 dB nominal

#### **HEADPHONE AMPLIFIER**

##### Voltage Gain

27  $\pm 3$ dB from intercom channel to earset

##### Maximum Output

65 mW into 150 ohms

##### Frequency Response

250Hz 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

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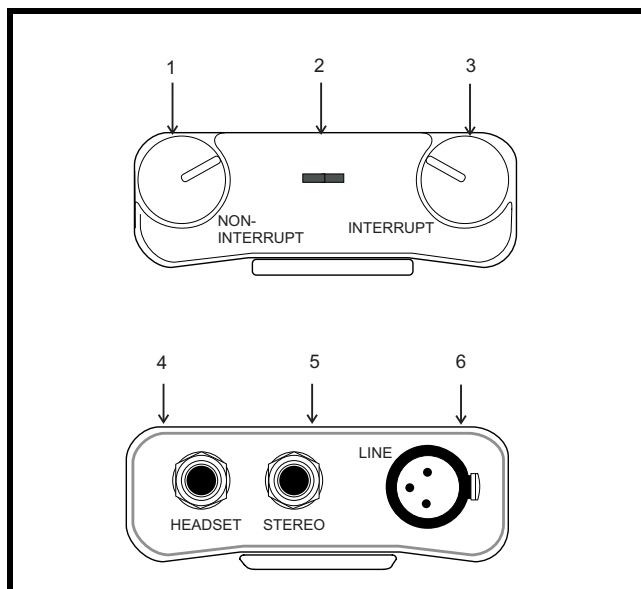
# *OPERATION*

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## *EXTERNAL CONNECTIONS & CONTROLS*

**NOTE:** The numbers refer to the callouts in Figure 2-1.

1. Channel One Volume Control  
Use this control to adjust the headset/earset listen<R>level for channel one.
2. *On* Indicator  
This LED glows green when the beltpack is connected to an intercom channel that is functioning.
3. Channel Two Volume Control  
Use this control to adjust the headset/earset listen level for channel two.



**FIGURE 2. Model 4030 Connections and Controls**

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4. *Mono* Headset Connector

This connector accepts a wide-response headset/earset, such as the RTS/Telex Model 2233 or Model 2234, with a 1/4" monaural phone plug

5. *Stereo* Headset Connector

This connector accepts a wide-response headset/earset, such as the RTS/Telex Model 2233 or Model 2234, with a 1/4" stereo phone plug

6. Intercom Channel Connectors

The Model 4030 intercom channel is connected via a 3-pin female connector. The Model 4030 is powered from the intercom system power supply and will turn on with the intercom system.

## *Parts Documentation and Schematic*

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Parts may be obtained directly from Telex at:

Telex Communications, Inc.  
12000 Portland Ave South  
Burnsville, MN 55337 USA  
Telephone: (800) 392-3497  
Fax (800) 323-0498

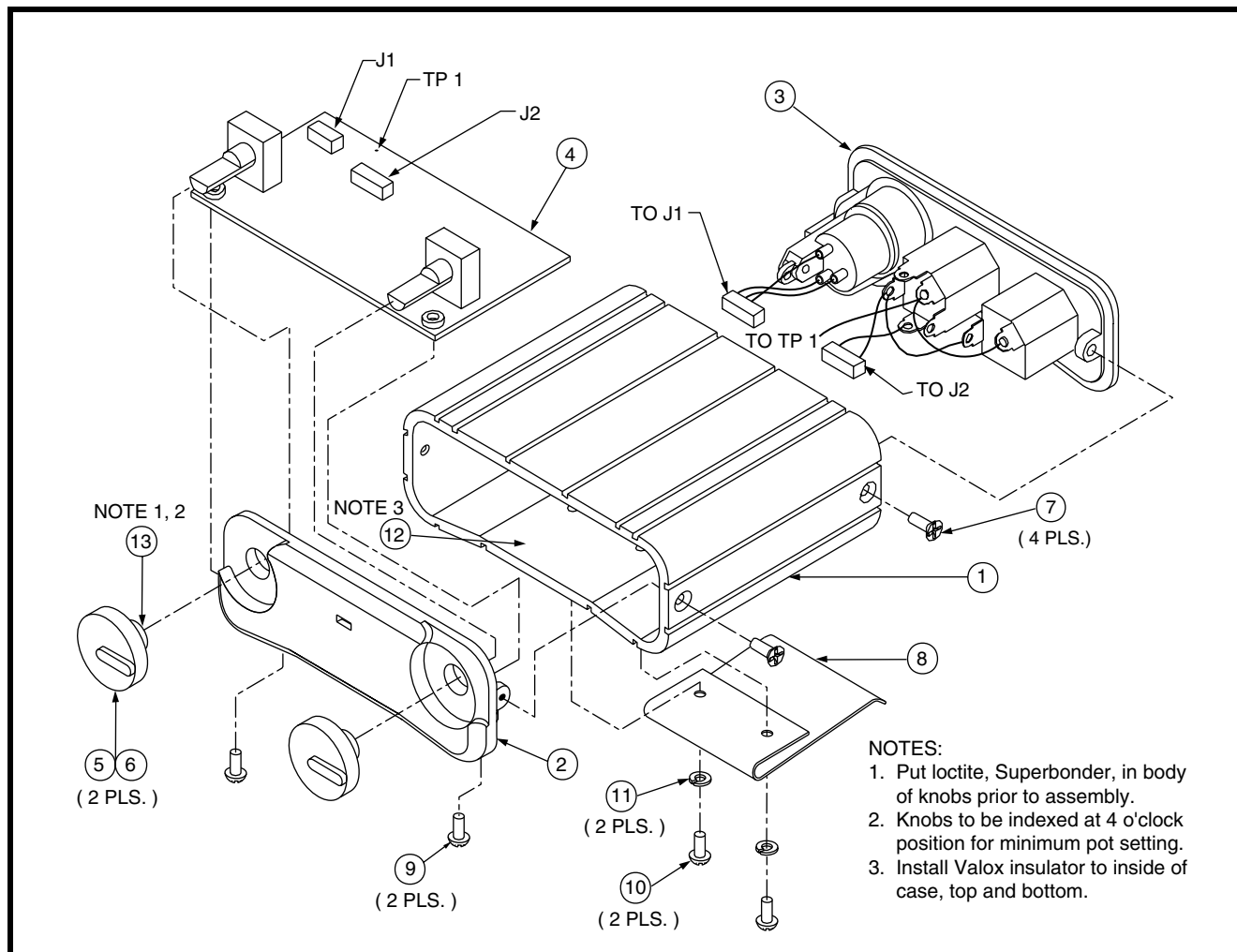
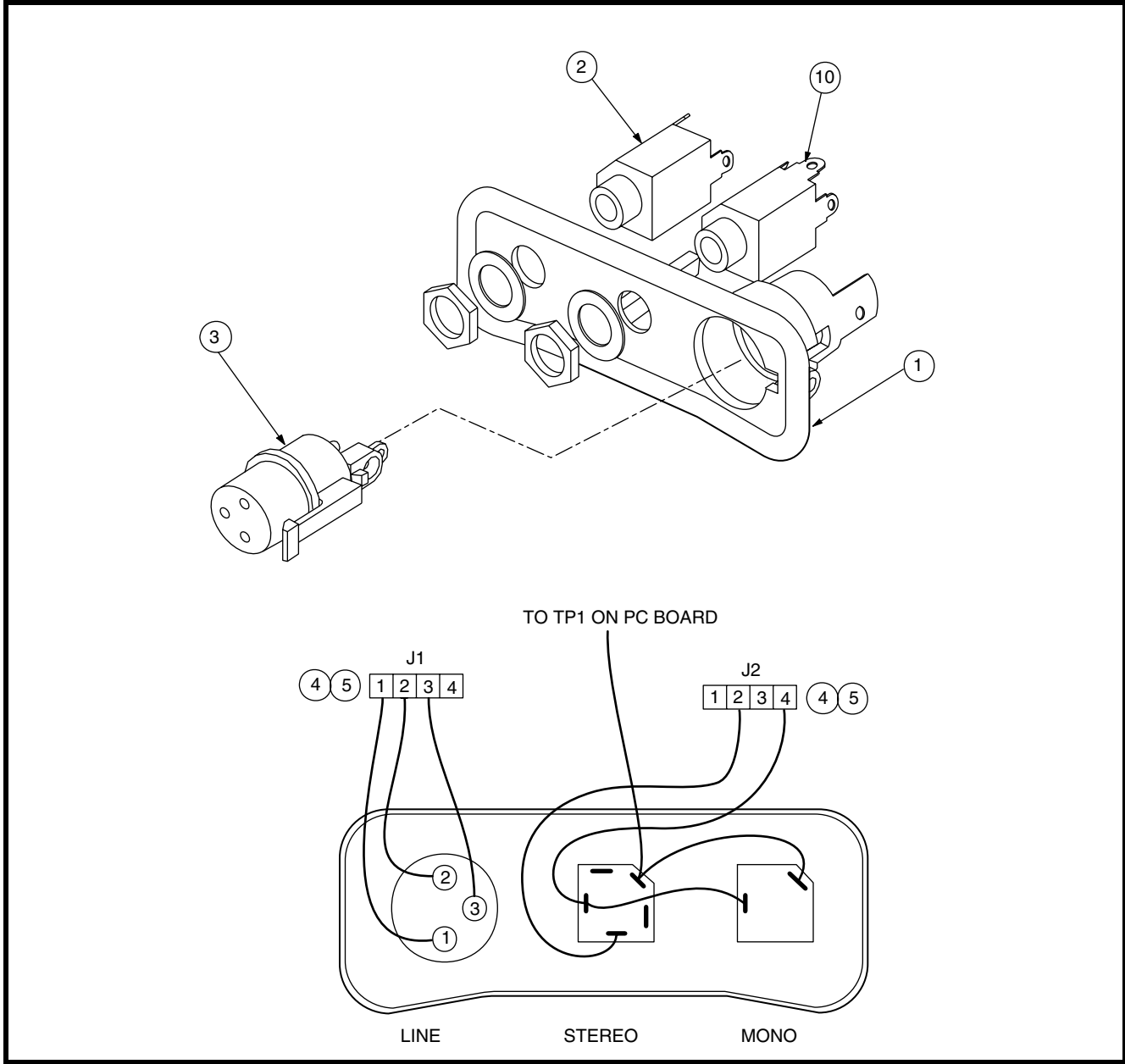


FIGURE 3. Final Assembly, Model 4030

Item No.	Description	Part No	Item No.	Description	Part No
1	Case, 4030	9060-7374-009	11	Washer, Lock, Split, #4	50086-004
2	Top Plate	9070-7489-002	12	Insulating Film	Local Purchase
3	Connector Plate Assy (see page x for parts list)	9020-7489-001	13	Loctite Superbonder (or equiv)	Local Purchase
4	Circuit Board Assembly (see page x 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			
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			



**FIGURE 4. Connector Plate Assembly, Model 4030**

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

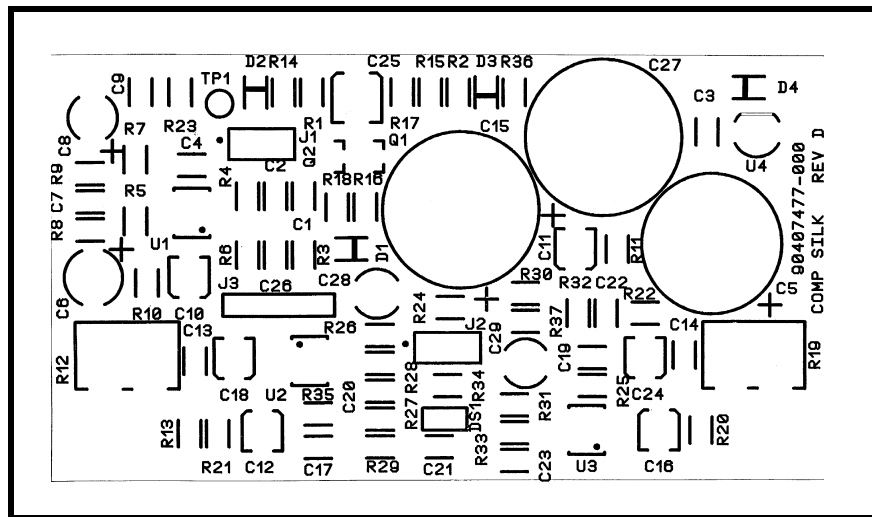


FIGURE 5. PC Board Assembly, Model 4030

Ref No.	Description	Part No.	Ref No.	Description	Part No.
C1, C2	Capacitor, CM, SM, 0.22 $\mu$ F, 50V	102880-237	R3 - R6	Not Used	
C3	Capacitor, CM, SM, 0.33 $\mu$ F, 50V	102880-239	R7	Resistor, SM, 10 k $\Omega$ , 1%, 1/8W	102404-300
C4	Capacitor, CM, SM, 0.1 $\mu$ F, 50V	102881-351	R8	Resistor, SM, 22.1 k $\Omega$ , 5%, 1/8W	102513-103
C5	Capacitor, LE, 2200 $\mu$ F, 16V	517002-081	R9	Resistor, SM, 10 k $\Omega$ , 1%, 1/8W	102404-300
C6	Capacitor, EL, 100 $\mu$ F, 25V	51821-626	R10,	Resistor, SM, 4.7k $\Omega$ , 5%, 1/8W	102513-472
C7	Capacitor, CM, SM, 0.01 $\mu$ F, 50V	102881-339	R11		
C8	Capacitor, EL, 47 $\mu$ F, 25V	51821-625	R12	Potentiometer, 10k $\Omega$ , 10%, 0.05	54131-005
C9	Capacitor, CM, SM, 0.01 $\mu$ F, 50V	102881-339	R13	Resistor, SM, 10 $\Omega$ , 5%, 1/8W	102513-100
C10,C11	Capacitor, EL, SM, 1 $\mu$ F, 50V	102884-606	R14,	Resistor, SM, 47 k $\Omega$ , 5%, 1/8W	102513-473
C12	Capacitor, EL, SM, 0.1 $\mu$ F, 50V	102884-600	R15		
C13,C14	Capacitor, CM, SM, 0.1 $\mu$ F, 50V	102881-351	R16	Resistor, SM, 10 $\Omega$ , 5%, 1/8W	102513-100
C15	Capacitor, LE, 2200 $\mu$ F, 22V	517002-116	R17	Resistor, SM, 150k $\Omega$ , 5%, 1/8W	102513-154
C16	Capacitor, EL, SM, 4.7 $\mu$ F, 25V	102884-410	R18	Resistor, SM, 10 $\Omega$ , 5%, 1/8W	102513-100
C17	Capacitor, CM, SM, 220 pF, 50V	102879-208	R19	Potentiometer, 10k $\Omega$ , 10%, 0.05	54131-005
C18	Capacitor, EL, SM, 4.7 $\mu$ F, 25V	102884-410	R20	Resistor, SM, 10 $\Omega$ , 5%, 1/8W	102513-100
C19	Capacitor, CM, SM, 220 pF, 50V	102879-208	R21,	Resistor, SM, 1k $\Omega$ , 1%, 1/8W	102404-200
C20 -	Capacitor, CM, SM, 0.1 $\mu$ F, 50V	102881-351	R22		
C23			R23	Resistor, SM, 0 $\Omega$ , 5%, 1/8W	102513-000
C24	Capacitor, EL, SM, 0.1 $\mu$ F, 50V	102884-600	R25	Resistor, SM, 100k $\Omega$ , 1%, 1/8W	102404-400
C25	Capacitor, EL, SM, 10 $\mu$ F, 25V	102884-412	R26-	Resistor, SM, 10 $\Omega$ , 5%, 1/8W	102513-100
C26	Capacitor, LE, 2200 $\mu$ F, 25V	517002-116	R33		
C28,C29	Capacitor, NP, 10 $\mu$ F, 25V	52710-078	R34	Resistor, SM, 1k $\Omega$ , 5%, 1/8W	102513-102
D1 - D4	Diode, SM Switching, 914/4148	58711-100	R35	Resistor, SM, 100k $\Omega$ , 1%, 1/8W	102404-400
DS1	LED, Rectangular, Green	58685-101	U1	IC, SM, Dual Op Amp, LM8333	16030833-SM
J1, J2	Connector, St Locking, 0.059, M-4	59958-104	U2,U3	IC, SM, Low Pwr Audio Amp, MC34119	16030146-SM
J3	Connector, St Header, 0.100, M-5	590089-005	U4	IC, Voltage Regulator, 12V, 78L12 Support Bracket	64106003
Q1, Q2	Transistor, SM, SI NPN, MMBTA13	54749-000		Nut, Self-Cinching, 4-40	59832-002
R1, R2	Resistor, SM, 22.1 k $\Omega$ , 1%, 1/8W	102404-333			



