

Technical Data Package MODEL 862 System Interconnect

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WARRANTY NOTICE

See the enclosed warranty card for further details.

CUSTOMER SUPPORT

Technical questions should be directed to:

Customer Service Department RTS/Telex Communications, Inc. 12000 Portland Avenue South Burnsville, MN 55337 USA Telephone: 800-392-3497 Fax: 800-323-0498

RETURN SHIPPING INSTRUCTIONS

Customer Service Department Telex Communications, Inc. (Lincoln, NE) 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, 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 product 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 (4) 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

This package should include the following:

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SECTION 1: INTRODUCTION

The Model 862 System Interconnect interfaces with the Model 802 Master Stations and other external systems, and equipment. Typically, Model 802 Master Stations access communications circuits which include: conference-line and central matrix type intercom systems, paging systems, telephone lines and two-way radios. (see drawing AS3062).

The Model 862 System Interconnect enables the connection of up to twelve Model 802 type intercom channels; and up to twelve standard "TW" intercom system channels. The Model 802 Master Stations plug into the Model 862 System Interconnect at J1 -J4 inclusive. The Model 862 converts the twelve Master Station type channels (two-wire, balanced, dry) to twelve "TW" type channels (two-wire, unbalanced, 'wet = with dc) by using transformer and capacitive coupling. The "TW" circuits are accessed on rear panel mounted 4-pin XLR type connectors: J5 (channels 1, 2, 3), J6 (channels 4, 5, 6), J7 (channels 7, 8, 9) and J8 (channels 10, 11, 12). These circuits are directly plug-in compatible with standard "TW" intercom lines. The "TW" System power supply (ies) terminate the Master Station type channels. If a Master Station type channel does not interface to a "TW" system power supply, a proper termination must be added. This termination consists of a 200 ohm resistor and a 10 microfarad capacitor connected in series. The resistor-capacitor combination is connected on the unbalanced connector from the channel pin (to be terminated) to the common pin.

Associated with each Master Station channel is a "keying" logic type signal which operates a relay in the Model 862 System Interconnect. There are twelve such logic signals and they are originated by pressing a Model 802 "Talk" button. Each of the twelve relays has a set of single pole double throw contacts available on one of two rear panel mounted 25-pin "D" type connectors (J21, J22). The relay contacts may be used for control, signalling, or audio switching functions.

The relays for channels 7 though 12 have an additional set of audio contacts which are accessed on six female XLR-3 type input connectors (J9 - J14

inclusive). These circuits are line-level transformerbalanced and can be used for simple Studio Announce, Slate Microphone, IFB (Interrupted FeedBack or program interrupt), and/or similar functions. (These functions will be common to all Model 802 Master Stations in the system when they are equipped with the "Talk Option"). A transformer balanced, program input (J23, AUX PGM IN #2) on the Model 862 accepts a line level audio signal. This common program monitoring signal is disrupted to the "Auxiliary Program Input #2" on all the Model 802 Master Station in the system.

Additional Details

If more than four Model 802 Master Stations LINE CONNECTORS are to be connected to the Model 862 System Interconnect, use (a) Model 4025A 1 x 4 Splitter Assembly (s) to parallel the additional incoming cables from the Models 802's. The Model 4025A may be plugged into either the Model 862 or another Model 4025A. Each Model 802 LINE CONNECTOR contains 12 balanced audio pairs for channels 1 through 12. 12 keying lines, 12 keying line returns and 1 audio program pair (AUX PGM IN #2).

Functional Details of SA/IFB Feature

Normally, in a non-keyed condition, the relays connect the input female XLR-3 connectors to the output male XLR-3 connectors. When a talk circuit key of a given channel is activated, the relay disconnects the input female XLR-3 connector and connects the output male connector to that channel's talk audio from the Model 802. For example, a single IFB channel fed audio from channel 7, also, fed program audio into J9 should connect a power amplifier with speaker to J15. When the channel 7 talk button on any Model 802 is pressed, the program signal is interrupted and audio from that Model 802 will be fed to the power amplifier. When the talk button is released, the original program signal is restored.

1.2 SPECIFICATIONS

Color: Weight: Dimensions:	Gray, Federal Standard 595A Color #26492 11 pounds (5 kilograms) 3.5 inches (89 millimeters) high 19.0 inches (483 millimeters) wide 14.4 inches (363 millimeters) deep
Inputs	
Program Input Level:	0 10 dBu into 600 to 2000 ohms, balanced/floating
Power, Nominal:	120/240 volts ac rms at 20 volt-amperes
Outputs	
Relay Contacts:	1 amp, 24 volts dc maximum 0.5 amp, 110 volts ac maximum

SECTION 2: PARTS LIST

2.1 Introduction

This section contains parts lists and instructions for ordering replacement parts. The parts are divided into five sections: ship list, final assembly, back panel assembly, front panel and printed circuit board. Following the description of a part number is the manufacturer and the manufacturer's part number.

2.2 How To Obtain Parts

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

2.3 Shipping List, Model 862

Oty Description

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862 System Interconnect
 Technical Data Package

RTS Part Number

9000-3062-00 9300-3511-00

2.4 Final Assembly, Model 862 -- 9010-3062-00

Oty. Description

- Spacer, Hex 6-32 x 3/8" HH Smith 4304
 Spacer, Hex 6-32 x 3/8" THD
 Washer, Lock #6 Int'l Tooth, Zinc Plated
 Screw, 6-32 x 1/4" Phil, Pan Hd, Ylw Cad
- 4 Screw, 8-32 x 1/2" Flat, Phil 82 Deg Blk
- 1 Thermal Cutout Klixon, 9700K51-11
- 3 Connector, Female Pin Molex 02-09-1118
- 4 Connector, 4 Pin Female Molex 09-50-3041
- 19 Connector, Pin Crimp term Molex 08-50-0108
- 1 Connector, 3 Pin Female Molex 09-50-3031
- 1 Recpt. No Mtg Ears Molex 19-09-1039
- 4 Connector, 14 Pin Female w/ s.r. Berg 66900-014
- 4 Connector, 26 Pin Female 3M 3399-6026
- 4 Ribbon Cable 50 Cond Spectra 8431352801050

2.5 Back Panel Assembly, Model 862 -- 9020-3888-00

Oty. Description

2	Standoff, 6-32 x 1 5/16" Amatom 8166-A-17-0632
26	Pop Rivet Dome Head Whitson SSD 4.2
	-
4	Cable MTG Cradle Panduit TM1S4
4	Hex, Jack Screw, 9/16" Elec Hardware RA-47-50-7
4	Jack Socket, 3/8" Raf 4750-4
1 1	Washer, Lock #6 Int'l Tooth, Zinc Plated
1	Washer, Flat #6 Nylon Smith 2515
16	Nut, Hex Kep 4-40 Cad Plated
8	Screw 4-40 x 3/8" 100 de., Fl Hd, C/R, Br Wh Zinc
8	Screw, 4-40 x 1/2" Pan Hd, Phl, Yel Cad
1	Thumbscrew 6-32 x 1/2" Smith 2366
1	Screw, 6-32 x 1/4" Phil, Pan Hd, Ylw Cad
4	Connector, 50 Pin Female 3M 3565-1000
2	Connector, 25 Pin "D" Female 3M 8325-6000
1	Jack, 3 Cond Male Calrad 30-452
4	Connector, 4 Pin Female Cannon AXR 4-31
1	Power Cord 6" Grey Belden 17237
1	Strain Relief Heyco 1137
4	Cable Tie Panduit PLT2M
1	Fuse, 1/4 Amp Slo-Blo, Littlefuse 313.250
1	Fuse Carrier Schurter Fek 031.1666
1	Fuse Holder Body Schurter PCC 031.1653
	Rubber, Adhesive Back 1" x 5/16"

RTS Part Number

1001-0012-00 1006-0006-00 1008-6038-00 1008-8017-00 1914-0001-00 2006-0013-00 2006-0014-00 2006-0018-00 2006-0018-00 2006-0040-00 2007-0037-00 2008-0033-00 2501-0001-00

RTS Part Number

1001-0139-00 1002-0006-00 1005-0046-00 1005-0092-00 1005-0193-00 1006-0006-00 1006-0019-00 1007-0001-00 1008-4012-00 1008-4025-00 1008-6002-00 1008-6038-00 2008-0013-00 2008-0040-00 2013-0015-00 2018-0001-02 2504-0004-00 2509-1137-00 2516-0008-00 2801-0001-00 2802-0002-00 2802-0003-00 4501-0067-00

2.6 Pr	inted Circuit Assembly, Model 862 (Upper) 9030-3365-00	
<u>Qty.</u>	Description	RTS Part Number
7	Connector, 3 Pin Female PC MT Neutrik NC3FD-H	2018-0011-00
1	Header, 14 Pin, DL Row Str, Berg 65611-414	9020-5841-14
19	Header, 72 Pin Berg 65611-472	2007-0039-00
2.7 Pr	inted Circuit Assembly, Model 862 (Lower) 9030-3366-00	
<u>Qty.</u>	Description	RTS Part Number
6	Connector, 3 Pin Male PC MT Neutrik NC3MD-H	2018-0010-00
1	Header, 14 Pin, DL Row Str, Berg 65611-414	9020-5841-14
	Header, 72 Pin Berg 65611-472	2007-0039-00
2.8 Pr	inted Circuit Assembly, Motherboard, Model 862 9030-3399-00	
<u>Qty.</u>	Description	RTS Part Number
1	Res. CF 1 ohm 2w 5%	1402-01R0-5G
12	Res. CF 10K ohm 1/4w 5%	1402-1002-5D
12	Res. CF 1M ohm 1/4w 5%	1402-1004-5D
1	Res. CF 620 ohm 1/2w 5%	1402-6200-5E
1	Res. MF 1.5K ohm 1/4w 1%	1403-1501-2D
1	Res. MF 243 ohm 1/4w 1%	1403-2430-2D
2	Res. Ntwk 22K Sip 8 Pos Bourns 4308R-101-223	1411-2202-00
8	Cap, .01uf/1Kv C.D., Disc Radial	1501-R103-2R
14	Cap. Mono .1uf/50v .1 Spacing, 1" Length	1511-R104-2I
26	Cap, Elec 10uf/50v Axial	1513-A106-4I
12	Cap, Elec 12uf/50v AX 20% Non Polarized	1513-A126-4I
1	Cap, Elec 10uf/16v radial	1513-R106-4E
1	Cap, Elec 100uf/16v radial	1513-R107-4E
2	Cap, Elec 2200uf/35v Max - 3/4" OD x 1 1/2" H	1513-R228-4G
2	Cap, .01/5Kv Cer 1400v Murata DE7150FZ103PVA1	1524-R103-2X
8	Diode, 11DQ04 1 Amp, 40V	1601-0003-00
26	Diode, 1N4004 1 Amp, 400V	1601-4004-00
2	I.C. MC1416P Motorola Sub = 1603-0075-00	1603-0008-00
2	I.C., 74C04 National	1603-0068-00
1	Voltage Regulator, National LM317MP	1603-0317-MP
12	Relay, 12v Form Omron G2VN-234P-USDC12-OEI	1701-0008-00
1	L.E.D. Green Oshino OLG-147	1801-0147-0G
1	Switch, Slide, DPDT Switchcraft 11A-1101A	1902-0001-00
2	I.C. Socket, 14 Pin Burndy DIL14P-108	2001-0002-00
2	I.C. Socket, 16 Pin Burndy DIL16P-108	2001-0003-00
1	Connector, 3 Pin Wafer Molex 26-51-0032	2006-0002-00
4	Connector, 4 Pin Wafer Molex 09-65-1041	2006-0012-00
1	Connector, 3 Pin Molex 15-31-1036	2006-0038-00

2.8 Printed Circuit Assembly, 862 Motherboard -- 9030-3399-00 (continued)

Oty. Description

RTS Part Number

- Transformer EWC LP-20-600-B8
 Transformer, Audio Bourns LM9003 Wire, 20 Awg Buss
 Fuse, 1 Amp Slo-Blo, Littlefuse 313001
- T Puse, TAmp Sto-Blo, Littlefuse 5150
- 2 Fuse Clip P.C. Littlefuse 102071
- 2 Header, 14 Pin, DL Row Str, berg 65611-414 Header, 72 Pin Berg 65611-472
- 4 Header, 26 Pin, DL, Row Str, Berg 65611-426 Header, 72 Pin Berg 65611-472

2.9 Front Panel, Model 862 -- 9070-3145-00

Oty. Description

- 19 Extrusion, Front panel w/Grrove 11.25" x 3 1/2
- 2 Side rail, FAB Per Dwg 1835-4
- 28 Extrusion, Side Panel 10" x 3 1/2"
- 1 Cover, Top Model 862, FAB Per Dwg 3144-1
- 1 Cover, Bottom Model 862, FAB Per Dwg 3144-2

2301-0006-00 2306-0001-00 2512-0020-00 2801-0007-00 2802-0005-00 9020-5841-14 2007-0039-00 9020-5841-26 2007-0039-00

RTS Part Number

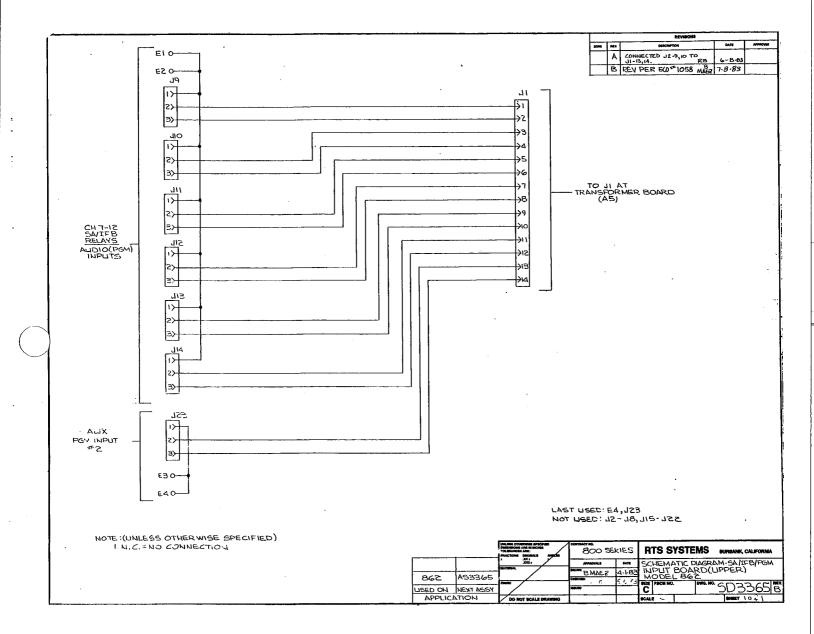
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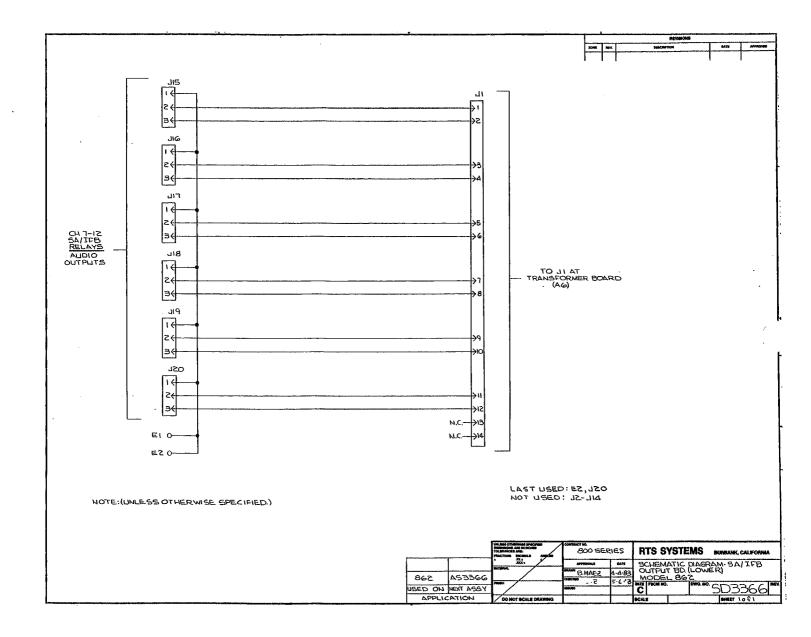
SECTION 3: LIST OF DRAWINGS

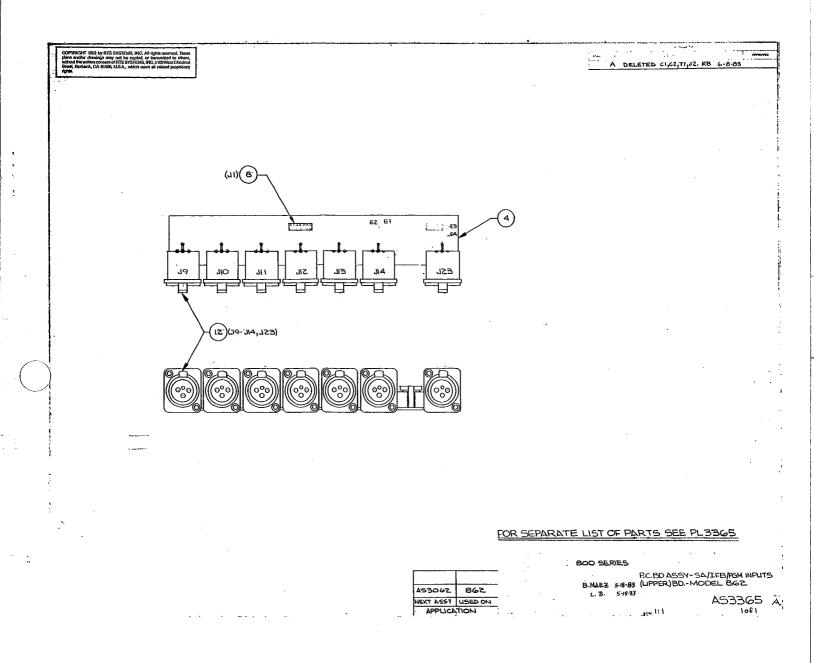
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Document		
<u>Number</u>	Title	Page
SD3365	Schematic Diagram, SA/IFB/PGM, Input Board (Upper) Model 862	11
SD3366	Schematic Diagram, SA/IFB Output Board (Lower), Model 862	12
AS3062	Assembly Diagram, P.C. Board, SA/IFB/PGM Inputs (Upper) Board - Model 862	
AS3366	Assembly Diagram, P.C. Board, SA/IFB Outputs (Lower) Board - Model 862	14
SD3399	Schematic Diagram, Model 862, sheet 1 through 3	15-17
AS3399	Assembly Drawing, P.C.B. Board, System Interconnect, Model 862	
AS3062	Assembly Drawing, Top Assy, System Interconnect, Model 862	

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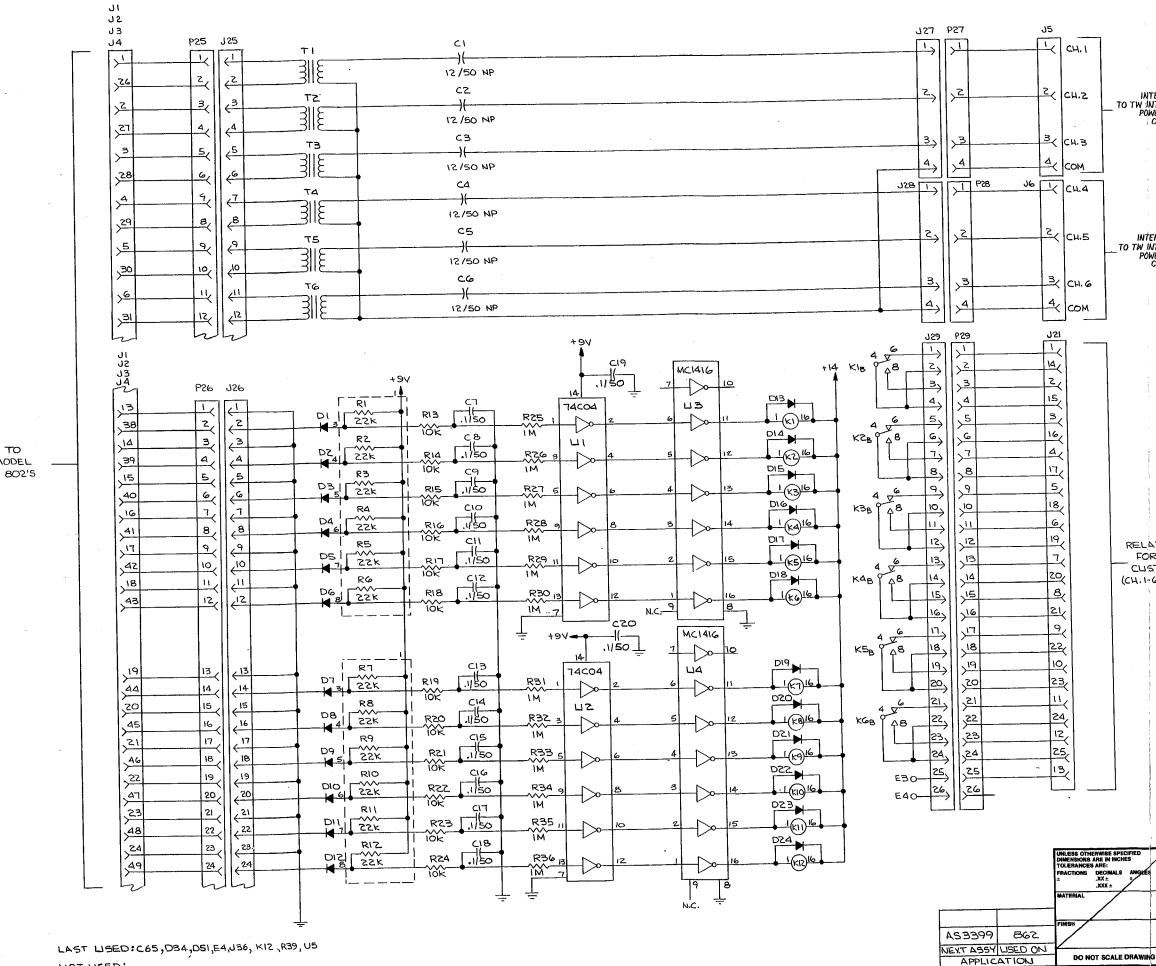
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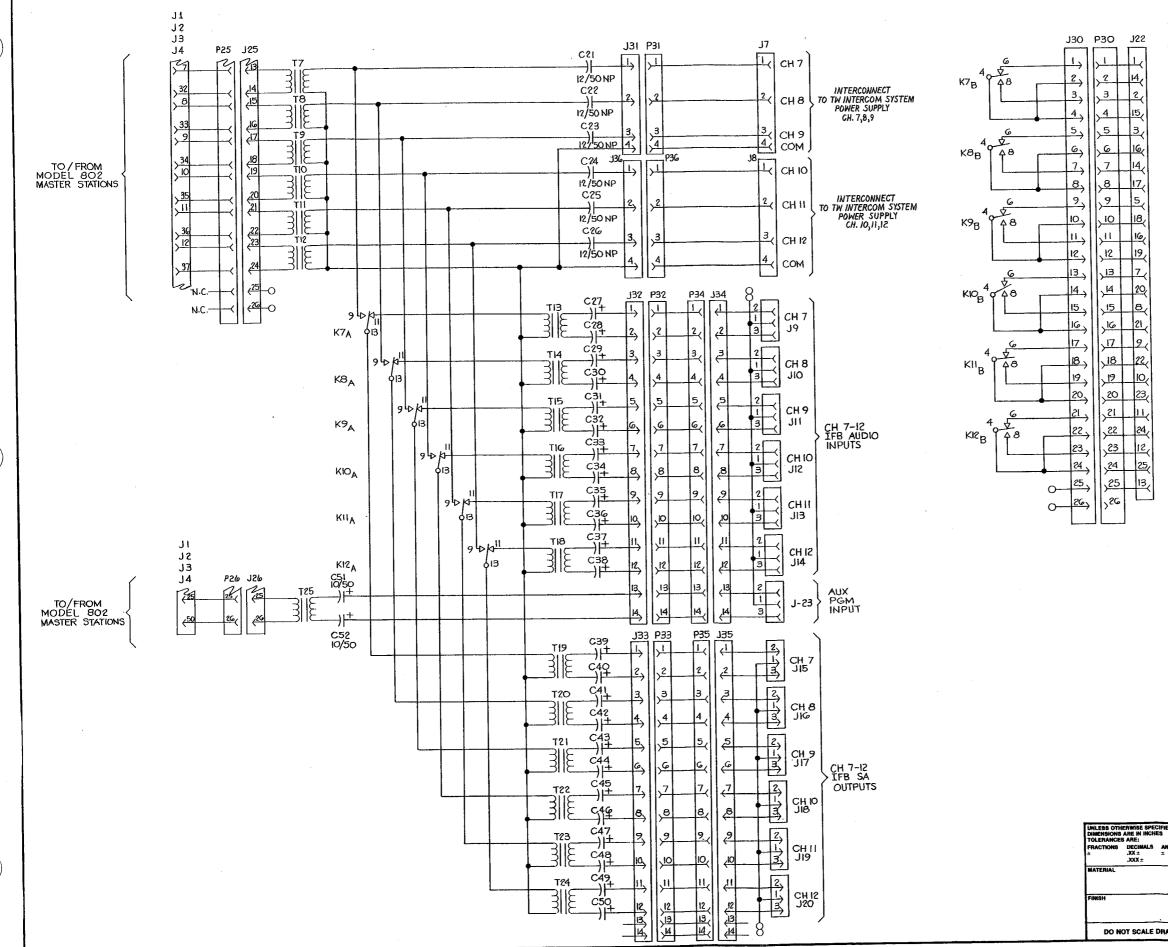
REVISIONS DATE APPROVE DESCRIPTION ZONE 7.15.83 A REVISED PER ELO 1067 INTERCONNECT TO TW INTERCOM SYSTEM POWER SUPPLY CH. 1-3 INTERCONNECT TO TW INTERCOM SYSTEM POWER SUPPLY CH. 4-6 TOP VIEW RELAY \sim RELAY CONTACTS FOR OPTIONAL CUSTOMER USE (CH. 1-6 ACTIVATED) 7. RI-6 & R7-12 ARE 22K RESISTOR NETWORKS. 6. C27-C50 ARE 10/50. 5. ALL TRANSFORMERS ARE BOURNS LM9003. 4, ALL CAPACITANCE VALUES ARE IN MICROFARADS/VOLTS. 3. ALL RESISTANCE VALUES ARE IN OHMS, 15%, 4, CARB. FILM 2. ALL RELAYS ARE OMRON G2V-2-34P-DCI2. I.ALL DIODES ARE IN4004 NOTES: (UNLESS OTHERWISE SPECIFIED) 800 SERIES RTS SYSTEMS BURBANK, CALIFORNIA SCHEMATIC DIAGRAM, DATE APPROVALS B. MAEZ 5.26-83 MODEL 862 SD3399 Δ D 60572 SHEET I OF 3 SCALE

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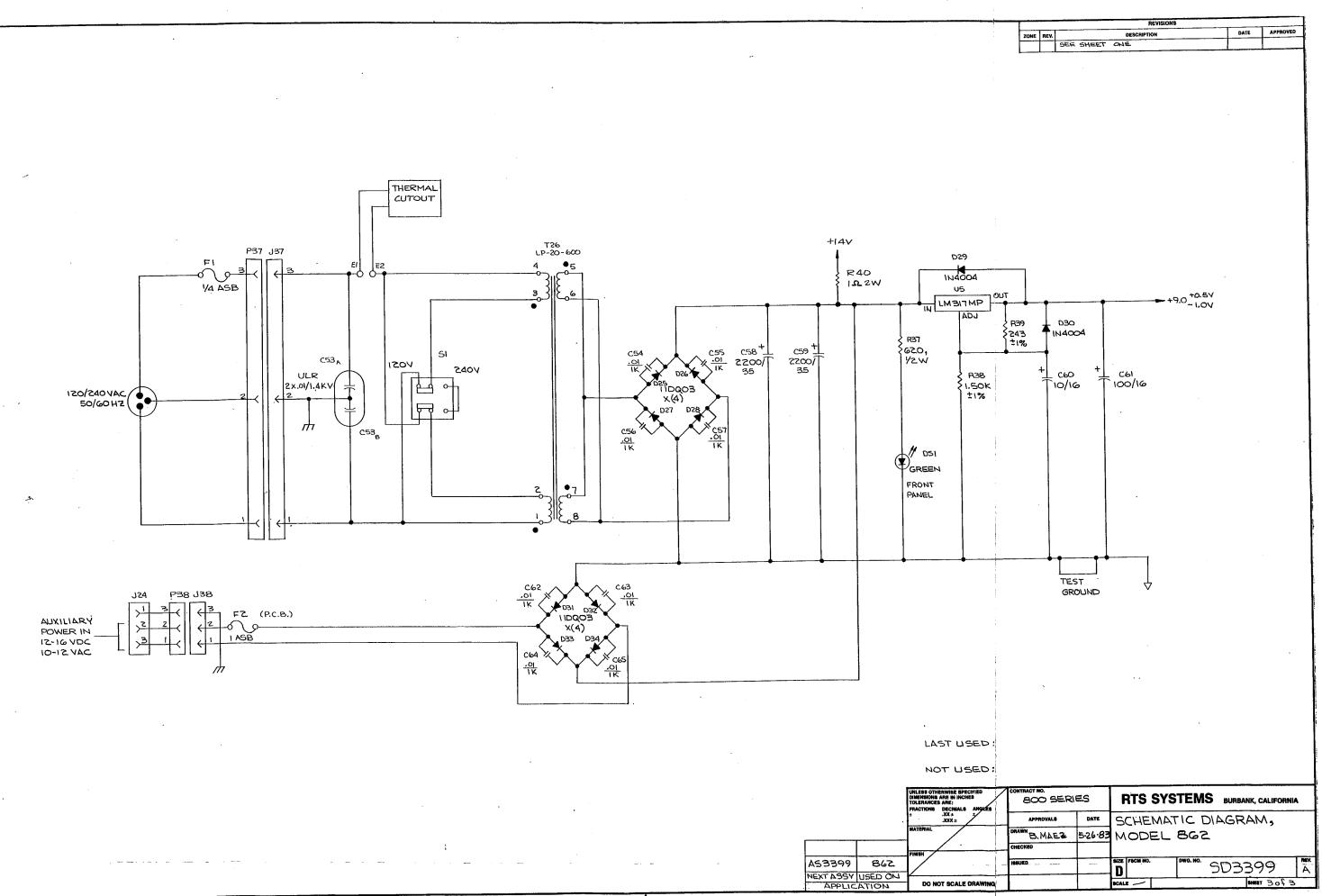


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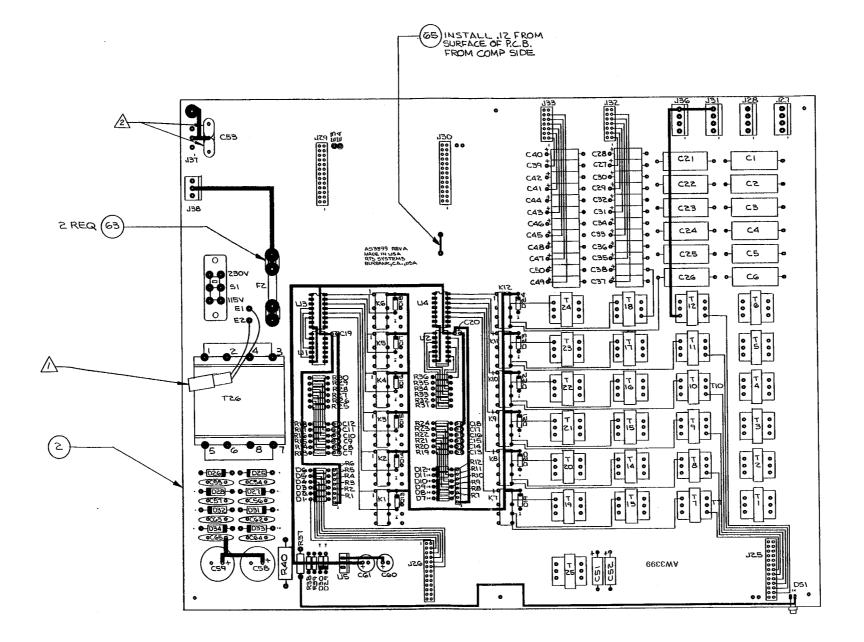


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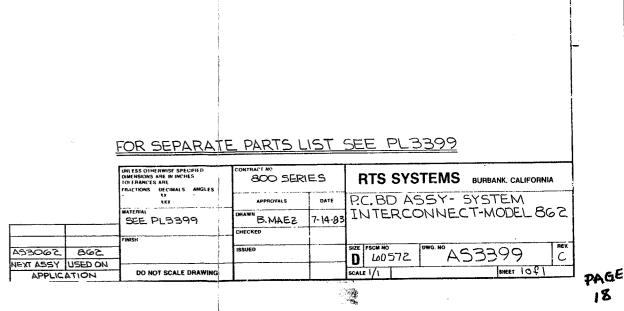


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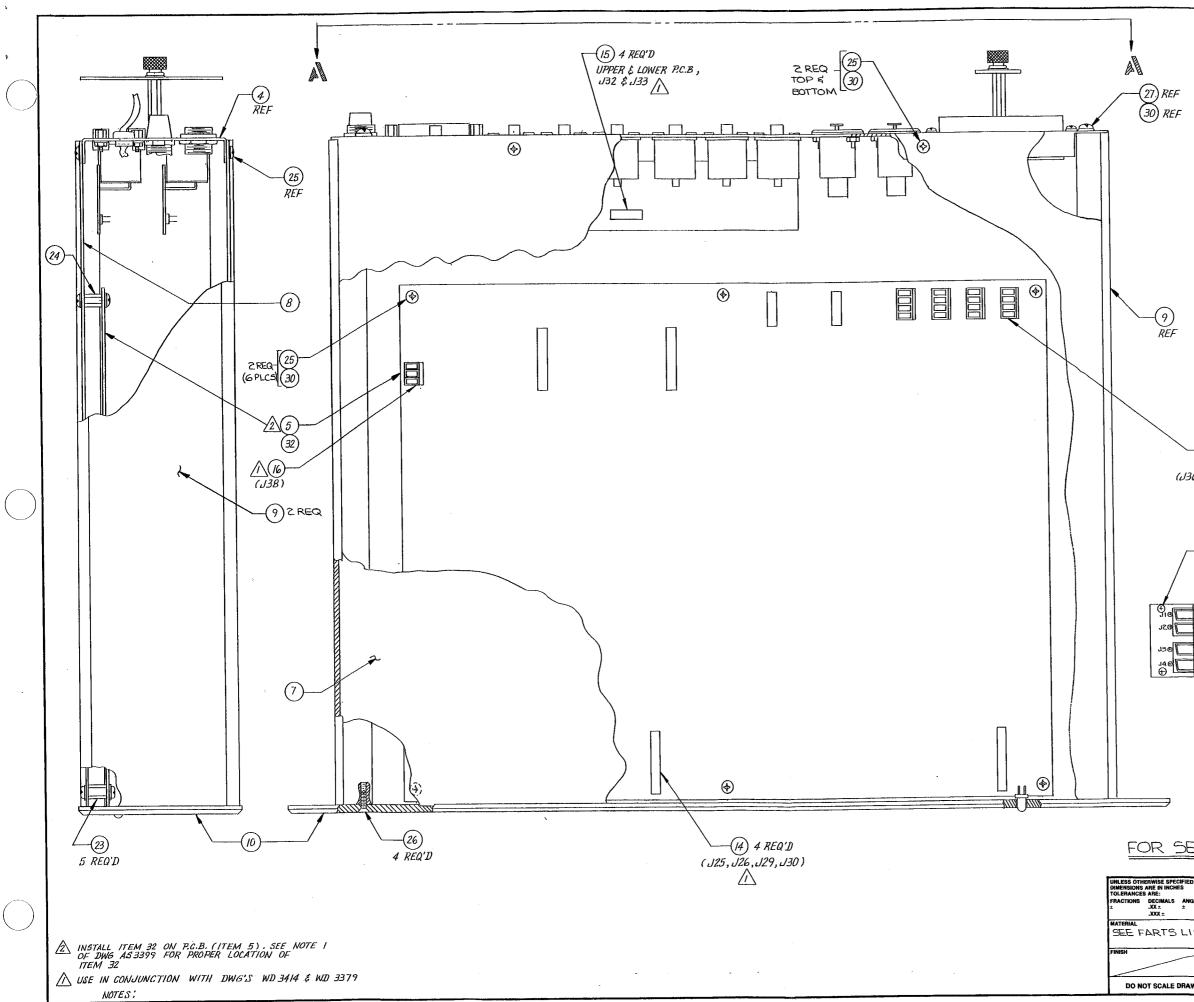
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 SOLDER ITEM 32 OF PARTS LIST # 9010-3062-00 AT LOCATION SHOWN. USE THERMAL BOND, P/N 4002-0251-00 TO GLUE ITEM 32 ONTO TRANSFORMER (T2G) SEE NOTE 2 OF DWG AS 3062. NOT TO BE INSTALLED AT THIS LEVEL. INSTALL TWO (.014F/2KV) CAPS IN PLACE
 INSTALL TWO (.014F/2KV) CAPS IN PLACE

A INSTALL TWO (.OI UF/2KV) CAPS IN PLACE OF DUAL CAP (C53). CAPS SHARE THE MIDDLE PAD.



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-	A	ADDED NOTE ON FID	бМ	8-21-84	
	B	REVISED PER ECO 1560	GM	12-5-85	
	C	REVISED PER ELO 2592	RTL	B-17-B9	



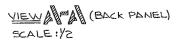
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4 REQ'D (J36,J28,J27)

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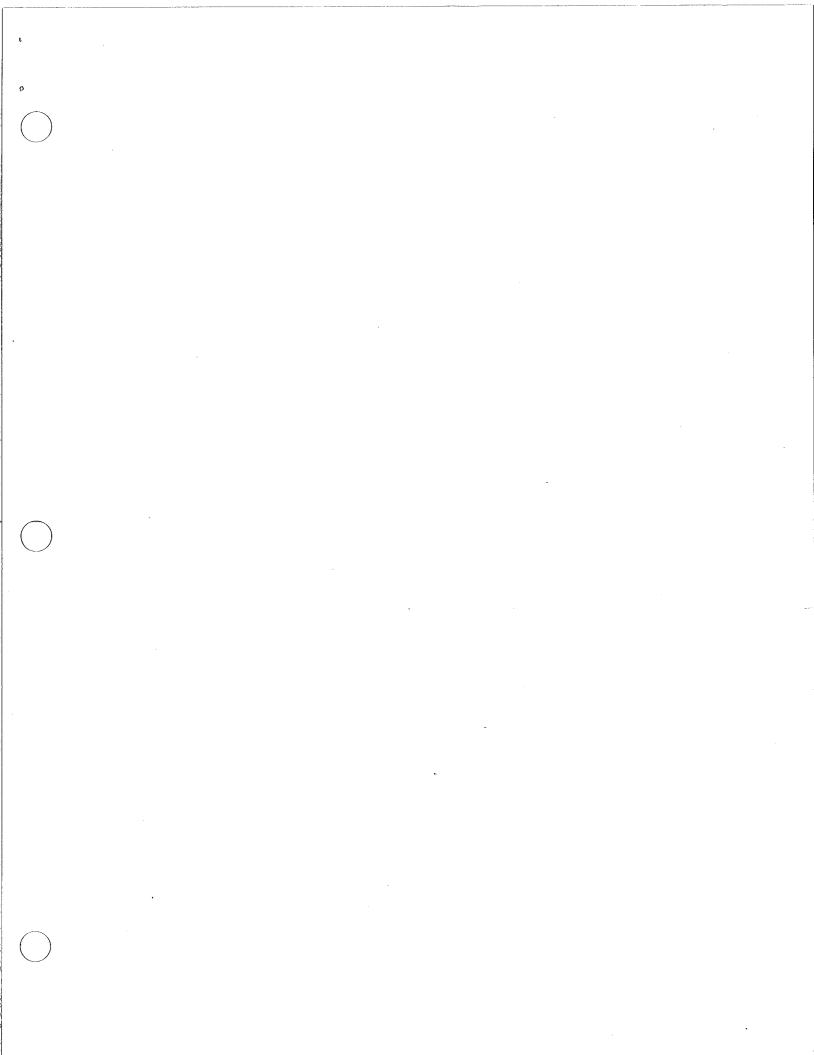
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