

49920 INTERRUPT SUPPLY MODULE

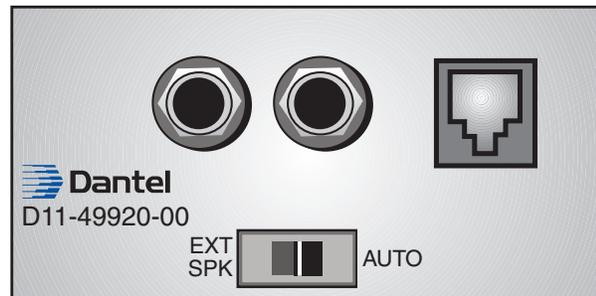


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About this Practice:

This document has been reissued to:

- Add RJ45 connector to front views and Fig. 1.
- Update **Ordering Information** to reflect D11-49920-00.

Reissued Practices: Updated and new content can be identified by a banner in the right margin.

Issue date: November 1999

UPDATED

CAUTION

- Install or remove modules from the shelf only when the power is off. If you install a module in the shelf with the power on, the internal circuitry may suffer damage and the product warranty will be void.
- Remove and install circuit boards only in a static-safe environment (use antistatic wrist straps, smocks, footwear, etc.).
- Keep circuit boards in their antistatic bags when they are not in use.
- Do not ship or store circuit boards near strong electrostatic, electromagnetic, magnetic, or radioactive fields.
- For more complete information on electrostatic discharge safety precautions, refer to Bellcore™ Technical Reference # TR-NWT-000870.

ORDERING INFORMATION

UPDATED

NOTE: This section lists the different options available for this product. To order any of the available options, contact Dantel Inside Sales through our toll-free number, **1-800-432-6835**.

OPTION NUMBER	FEATURES
D11-49920-00	Interrupt Supply

GENERAL DESCRIPTION

The 49920 Interrupt-Supply Module is used in the DTSS3A Selective Signaling Order Wire package. It provides:

- ◆ Headset jacks
- ◆ Buzzer
- ◆ External signaling relay
- ◆ Ringback tone circuitry
- ◆ External speaker control circuitry

Headset jacks and a speaker mute switch are mounted on the front panel.

The 49920 is built on a printed circuit board which measures 2.5" x 6". The front panel measures 1-15/16" x 1.5".

The module operates on -21 VDC to -56 VDC.

CIRCUIT DESCRIPTION

The functional schematic for the 49920 Interrupt-Supply is shown in Fig. 1. The functions are intimately tied to the functions of the 00330 DTSS3A Order Wire. There are 6 sections to this module:

Interrupt Start

Receiving a signal from the group call on pin 17 or the all call on pin 19, starts a timer circuit. This circuit produces a square wave with a dutycycle of 2 seconds on and 4 seconds off when the Interrupt strap is in the NOM position. Strap the Interrupt strap for REV for a cycle of 1 seconds on, 2 seconds off.

This pulse outputs on pin 14 and controls the incoming call light of the DTSS3A.

CIRCUIT DESCRIPTION

Ringback Circuit

The pulse generated by the Interrupt Start circuitry is also used to enable two tone generator circuits, one of 440Hz and one of 480Hz. This is the ringback tone heard by the calling party.

Strap the Ringback Tone strap to ON to enable these tone generators. Strap OFF to disable the generators. When strapped for TEST, the ringback tone is constant.

The two tones are summed together and exit on pin 11.

External Signaling Control Circuit

The interrupt pulse described above is fed to the 44022 Subscriber Line Interface module in the DTSS3A. It returns to the 49920 on pin 13, still cycling, to control the buzzer and external relays. The relays can be used for controlling external audible or visual devices. these relays will cycle with the incoming call.

Pins 1 & 2 and 4 & 6 are normally open contacts. Pins 3 & 6 are normally closed.

Strap the buzzer to ON for normal operation.

External Speaker Control

Taking the DTSS3A off-hook activates the M Lead of the 44022. This mutes the external speaker. S1 on the 49920 set for AUTO allows normal operation of this function. EXT SPK disables the normal M Lead operation of the 44022 and uses pin 9 of the 49920 to control the muting of the external speaker.

XMT/RCV Jacks

These jacks, located on the front panel of the 49920, are available for monitoring the DROP side of the DTSS3A. Fig. 1 shows how either the phone jacks or the RJ11 can be used depending on your need.

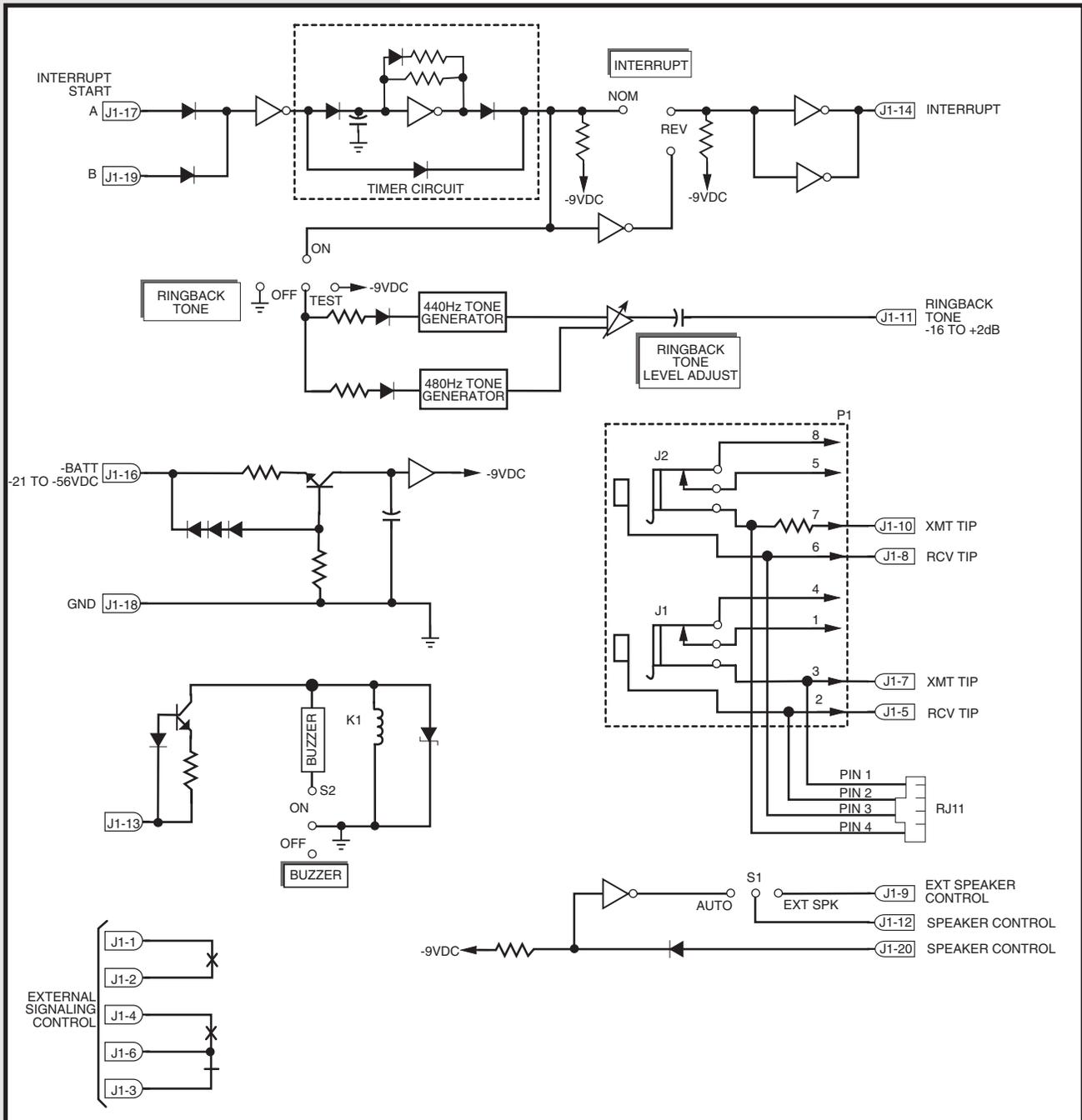
Voltage Regulator

The 49920 can be powered by a voltage range of -21 VDC to -56 VDC. The voltage regulator provides a constant -9 VDC for the 49920 circuitry.

UPDATED

CIRCUIT DESCRIPTION

FIG. 1 - 49920 INTERRUPT-SUPPLY MODULE FUNCTIONAL SCHEMATIC

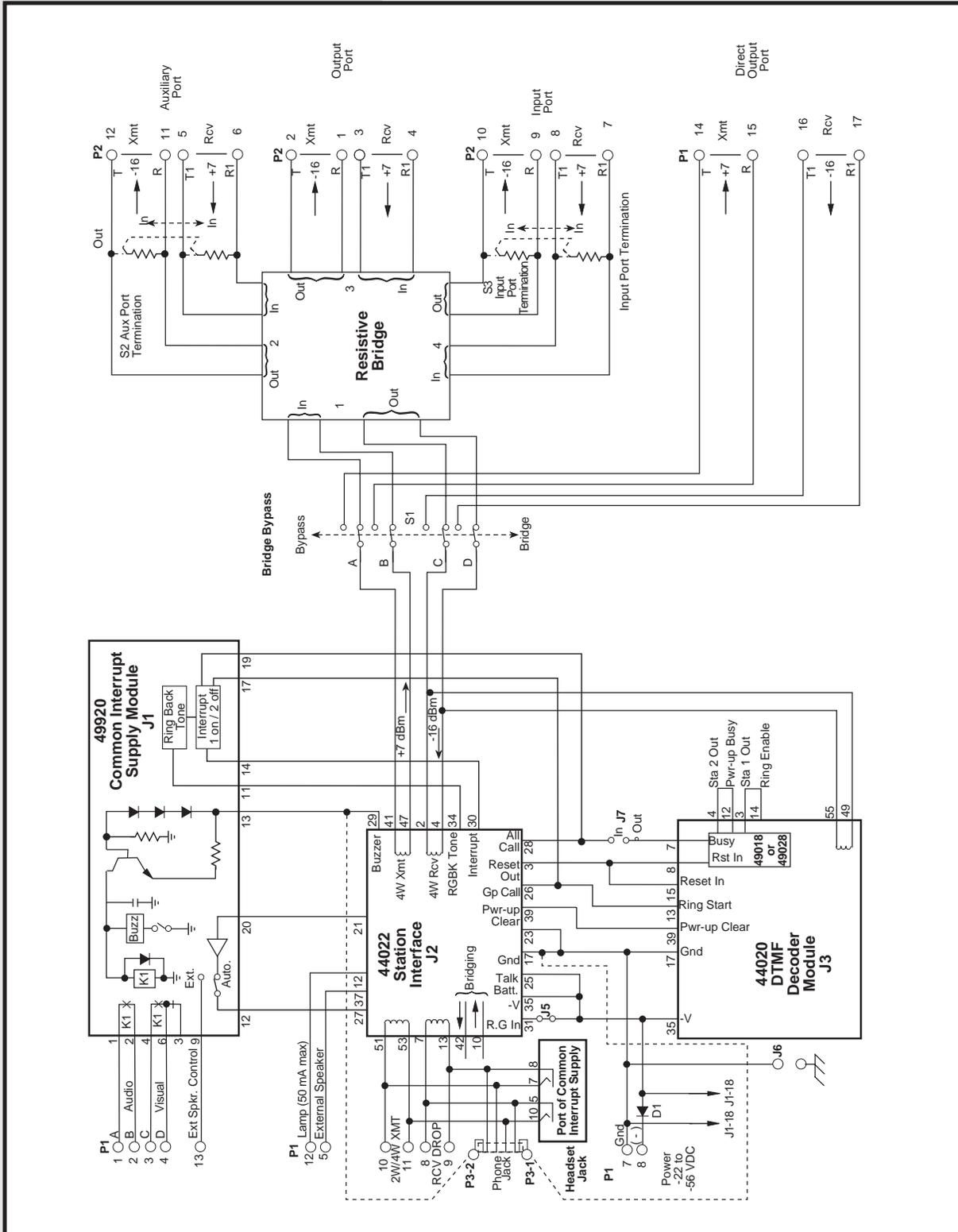


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APPLICATION INFORMATION

The 49920 is an integral part of the DTSS3A Order Wire system. Fig. 2 shows a Block Diagram of the DTSS3A and the 49920's place in that system.

FIG. 2 - TYPICAL DTSS3A SYSTEM



INSTALLATION

Strap options on the unit allow the ring and ringback tone interrupter to be set for:

TABLE A - STRAP OPTIONS

OPTION	POSITION
INTERRUPT	
Normal (1 on, 2 off)	NOM
Reverse (2 on, 1 off)	REV
RINGBACK TONE	
Continually on	TEST
Cycling (normal)	ON
Defeated	OFF
SPEAKER CONTROL (S1)	
Automatic	AUTO (right)
Externally Operated	EXT SPK (left)
BUZZER (S2)	
Operational	ON (left)
Defeated	OFF (right)
Steady	remove NOM & REV

- ◆ Normal (NOM); Operation of one second on and two seconds off.
- or
- ◆ Reverse (REV); Operation of two seconds on and one second off.

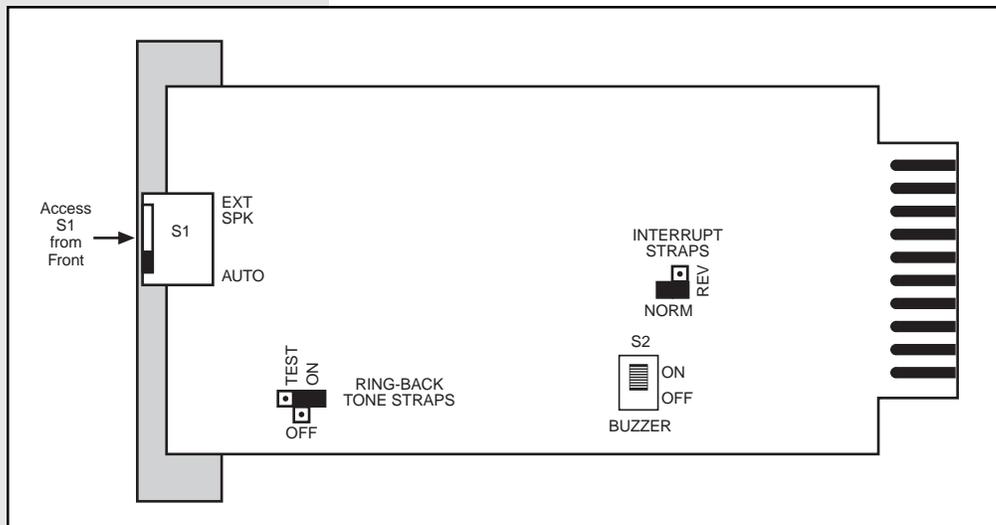
A steady buzzer occurs if neither the NOM or the REV positions are strapped.

Another set of straps provides three options for the ringback tone oscillator:

- ◆ On continually for testing (TEST)
- ◆ Cycling for standard operation (ON)
- or
- ◆ Totally defeated (OFF).

A level adjustment (R7) is provided for the ringback tone. Refer to Table A for strapping options and Fig. 3 for switch and strap locations.

FIG. 3 - 49920 INTERRUPT SUPPLY MODULE SWITCH AND STRAP LOCATIONS



OPERATION

The 49920 Interrupt Supply is operated as an integral part of the DTSS3A single-station Order Wire. This module provides ringback tone, interrupt circuitry, and a buzzer.

On receipt of a properly decoded DTMF signal, the calling party hears a ringback tone generated by the 49920 at the station being called. The buzzer at the called station starts buzzing in a cycle determined by strapping - normally one second on, two seconds off.

TECHNICAL SPECIFICATIONS

DESCRIPTION	DESCRIPTION
Input Voltage Range	-21 to -56 VDC
Ringback Tone Frequency Tone Level	440 Hz and 480 Hz -16 to +2 dB, adjustable
Interrupt Rate	1 second on, 2 seconds off, or 2 seconds on, 1 second off
Relay Current Capability @ 30 VDC @ 125 VAC	2 Amps 0.5 Amps

WARRANTY

LIMITED WARRANTY

The Seller warrants that the standard hardware products sold will be free from defects in material and workmanship and perform to the Seller's applicable published specifications for a period of 18 months for hardware, and 3 months for software, from the date of the original invoice. The liability of the Seller hereunder shall be limited to replacing or repairing, at its option, any defective products which are returned F.O.B. to the Seller's plant, (or, at the Seller's option, refunding the purchase price of such products). In no case are products to be returned without first obtaining permission and a customer return authorization number from the Seller. In no event shall the Seller be liable for any consequential or incidental damages.

Equipment or parts which have been subject to abuse, misuse, accident, alteration, neglect, unauthorized repair or installation are not covered by warranty. The Seller shall make the final determination as to the existence and cause of any alleged defect. No warranty is made with respect to custom equipment or products produced to the Buyer's specifications except as specifically stated in writing by the Seller in the contract for such custom equipment.

This warranty is the only warranty made by the Seller with respect to the goods delivered hereunder, and may be modified or amended only by a written instrument signed by a duly authorized officer of the Seller and accepted by the Buyer.

Warranty and remedies on products not manufactured by the Seller are in accordance with warranty of the respective manufacturer. THE SELLER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED; AND ALL IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS THE AFORESAID OBLIGATIONS IS HEREBY DISCLAIMED BY THE SELLER.

IN CASE OF DIFFICULTY

If you experience difficulty with this equipment, check the following, as appropriate:

1. **Switch settings**
2. **Signal levels**
3. **Software configuration**
4. **Connections between Dantel's equipment and your equipment.**

If there is still a problem, substitute equipment that is known to be good. For additional assistance, call Dantel's Technical Field Service Department weekdays, 6 A.M. to 5 P.M. pacific time:

1-800-4DANTEL (1-800-432-6835).

If a thorough checkout shows a piece of equipment has malfunctioned, you may return it to the factory. For repairs and emergency replacements, obtain a Return Material Authorization (RMA) number from the Customer Service Representative at **1-800-4DANTEL (1-800-432-6835)**.

To ensure expedient processing of your order, provide a purchase order number and shipping and billing information when requesting an RMA number. Also, when the units are returned to Dantel, include a description of the failure symptoms for each unit returned. Send defective equipment to:

Dantel, Inc. • 2991 North Argyle Avenue • Fresno, California 93727-1388

