

V-136RT 36 STATION ROTARY-TONE INTERCOM

GENERAL

The V-136RT is a single-path dial select microprocessor controlled intercom and page control unit used with a 1A2 key system to provide 36 zones of bell or buzzer signalling.

The V-136RT control unit has received an FCC type KX registration; designed to be used with FCC registered key telephone systems. In accordance with FCC rules with applicable tariffs, this paging unit may only be installed with the authorization of the host system. Installations may be made by Valcom, Inc., an authorized agent of the same, equipment manufacturers, telephone companies, registered telephone refurbishers, and those qualified for installation of FCC registered systems under FCC Rules Section 68.215. The FCC Registration Number, BAF9I7-69366-KX-N, will be listed in the affidavits filed with the telephone company; it will be also be recorded in the system log kept by installation and maintenance personnel. The local telephone company is to be notified when this intercom unit is installed.

SPECIFICATIONS

Features

- Dial tone
- Ringback tone
- Last number dialed rering
- Conference call (tone only)
- Combined rotary or tone dialing
- Dial/ringback tone mute
- Mixed bell and buzzer operation
- Single or double burst signaling

Numbering Plan

- The dialing codes are 0, 5 - 39

Dimensions/Weight

- 7.1"H x 5.9"W x 2.1"D
(18.03cm x 14.99cm x 5.33cm)
- 3.25 lbs. (1.47 kg)



Power Requirements

<u>Voltage</u>	<u>Working Limits</u>	<u>Current</u>
Talk Battery	-21.5 to -26 Vdc	90mA
Signal Battery	-21.5 to -26 Vdc	350mA

Electrical Characteristics

<u>Parameter</u>	<u>Working Limits</u>
Input Imp. T and R	600 ohm (incl. inst.)
Signal Contacts	1.5 amps
Signal Time	1 second
Dial Pulses	8-12 PPS
	60-40 Break ratio +/- 10%
Tone Frequencies	Industry Standard

Frequency

Bandwidth	3%
Twist	6db
Detect	40MS
Interdigital Time	40MS

Environmental

Temperature	0° to 50°
Humidity	0 to 85%
	Non-precipitating

INSTALLATION

Precautions

All precautions have been taken at the factory to insure that the equipment functions properly when installed correctly. Please observe the following precautions before applying power to the equipment or the equipment may be damaged and the warranty voided.

- Unplug the power supply before making any connections to the control unit.
- Do not locate the control unit closer than 18 inches or further than 5 feet from the power supply.
- Do not use a lamp tester to check signals, use a voltmeter. A lamp tester when first applied is a short circuit to electronic circuits.
- Do not apply power to the control unit until all connections have been double-checked.

Mounting

Mount the V-136RT on a 7" KTU mounting, relay rack or on the wall.

Connections

- Fasten a 25 pair cable to the unit and terminate all leads on a 66 type block per Figure 1, 2 or 3.
- Strap 1 ground, B ground, lamp ground, 18 Vac and 105 Vac signal grounds common at power supply.
- Refer to Figure 1 for connections; use the chart in Figure 1 to set the option programming.

NOTE: Option switches 3 and 4 must be in the off position for proper operation with bells or buzzers.

- Refer to Figure 2 for connections for 36 stations of buzzer signalling. This figure may also be used for 36 stations of bell signalling by replacing the 18 Vac buzz voltage with 105 Vac ring voltage.
- Refer to Figure 3 for connections for mixed signalling with 20 stations of bells and 16 stations of buzzers.

OPERATION

To make an intercom call, go off-hook and dial the number of the desired station. Dial tone will be broken after the first number is dialed. A one second ringback tone will indicate that the called station is

being signalled.

To rering the same station, press the "*" button. The station will be signalled as long as the * button is held. To rering rotary, dial "1". The station will be signalled for one second each time a "1" is dialed.

For conference calling (tone only), dial the first station number, press the "#" button to receive dial tone, then dial the next station number.

General Method of Operation

When the calling party goes off-hook, the switch hook contacts in the telephone set close the tip and ring to form a loop. Loop closure detection logic then operates the lamps at all stations and returns dial tone to the telephone set. Dial detection circuitry will then receive dialing information and operate relays and/or circuitry to supply signalling voltage to the desired station.

TECHNICAL ASSISTANCE

When trouble is reported, verify that:

- All telephone sets are in proper working order
- Power is being supplied to the unit
- There are no broken connections at the connecting block
- The conductors of color coded cables are terminated in the proper order

If trouble still exists, additional checks should be made using the following equipment:

- Voltmeter
- Tone-dial single-line instrument (for tone-dial systems)
- Telephone Test Set
- Clip leads

Before proceeding further, check the voltages at the connecting block. An undetected blown fuse or low voltage will cause improper control operation. DC voltage measurements are made with respect to (+) ground.

If a spare unit is available, continue to troubleshoot by substituting the spare unit for the suspected unit.

If the trouble has not been located, refer to the Troubleshooting Chart. Identify the symptoms and perform the corrective actions indicated. After all the suggested tests have been performed, the trouble still exists, call Valcom at (540) 427-3900 and ask for

Technical Support, or call (540) 427-6000 for Valcom 24-hour Automated Support or visit our website at <http://www.valcom.com>.

Valcom equipment is not field repairable. Valcom, Inc. maintains service facilities in Roanoke, VA. Should repairs be necessary, attach a tag to the unit clearly stating company name, address, phone number, contact person, and the nature of the problem. Send the unit to:

Valcom, Inc.
Repair and Return Dept.
5614 Hollins Road
Roanoke, VA 24019-5056

TROUBLESHOOTING CHART

PROBLEM	CORRECTIVE ACTION
No side tone.	Check "A" battery connections, polarity, and voltage.
No dial tone.	Check option switch 1. Check "B" battery connections, polarity, and voltage.
No lamps.	Check lamp supply voltage and input. Verify that grounds are common at power supply.
No audible signal at station dialed.	Check signal voltage at supply and frame locations. Verify bell and buzzer returns are common at power supply.
Double signaling.	Check option switch 2.
Continuous signaling Stations 10 through 29	Check option switch 3.
Stations 30 through 39, 0, and 5 through 9	Check option switch 4.

VALCOM LIMITED WARRANTY

Valcom, Inc. warrants its products to be free from defects in materials and workmanship under conditions of normal use and service for a period of one year from the date of shipment. The obligation under this warranty shall be limited to the replacement, repair or refund of any such defective device within the warranty period, provided that:

1. inspection by Valcom, Inc. indicates the validity of the claim,
2. the defect is not the result of damage, misuse, or negligence after the original shipment.
3. the product has not been altered in any way or repaired by others and that factory sealed units are unopened (A service charge plus parts and labor will be applied to units defaced or physically damaged),
4. freight charges for the return of products to Valcom are prepaid,
5. all units 'out of warranty' are subject to a service charge. The service charge will cover minor repairs (Major repairs will be subject to additional charges for parts and labor).

This warranty is in lieu of and excludes all other warranties, expressed or implied, and in no event shall Valcom, Inc. be liable for any anticipated profits, consequential damages, loss of time or other losses incurred by the buyer in connection with the purchase, operation, or use of the product.

This warranty specifically excludes damage incurred in shipment. In the event a product is received in damaged condition, the carrier should be notified immediately. Claims for such damage should be filed with the carrier involved in accordance with the F.O.B. point.

Headquarters:

In Canada

Valcom, Inc.
1111 Industry Avenue
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Phone: (540) 427-3900
FAX: (540) 427-3517

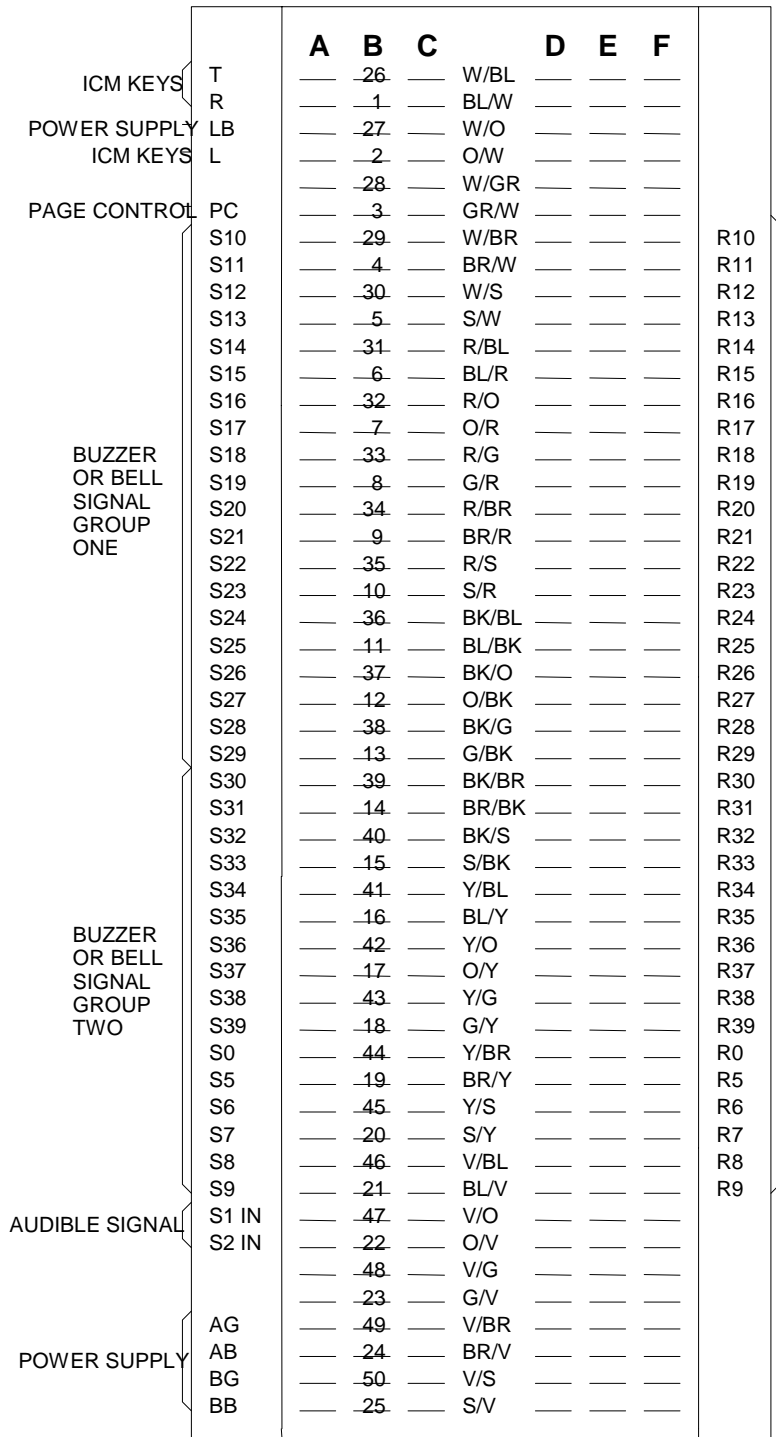
CMX Corporation
35 Van Kirk Drive #11 and 12
Brampton, Ontario L7A1A5
Phone: (905) 456-1072
FAX: (905) 456-2269

NOTES:

- 1) BELL/BUZZER GROUP ONE: STATIONS 10-29
- 2) BELL/BUZZER GROUP TWO: STATIONS 30-39, 0, 5-9
- 3) AUDIBLE SIGNAL: 18VAC BUZZ OR 105VAC RING
- 4) POWER SUPPLY: A BAT. -24VDC FILTERED TALK BATTERY. B BAT. -24 VDC UNFILTERED BATTERY
- 5) AUDIBLE GND., LAMP GND., A GND. AND B GND. MUST BE COMMON AT POWER SUPPLY.
- 6) OPTION PROGRAMMING:

OPTIONS		
SW	ON	OFF
1	NO DIAL TONE	DIAL TONE
2	DOUBLE BURST	SINGLE BURST
3	CONTINUOUS STA 10-STA 29	BUZZER BELL STA 10-STA 29
4	CONTINUOUS STA 30-39, 0, 5 - 9	BUZZER BELL: STA 30-39, 0, 5 - 9

OFF →
← ON
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">1 <input type="checkbox"/></div> <div style="text-align: center;">2 <input type="checkbox"/></div> <div style="text-align: center;">3 <input type="checkbox"/></div> <div style="text-align: center;">4 <input type="checkbox"/></div> </div>



BUZZER OR BELL RETURN

CABLE FROM CONTROL UNIT 66B350 SPLIT BLOCK

FIGURE 1: CONNECTING BLOCK ARRANGEMENT V-136RT

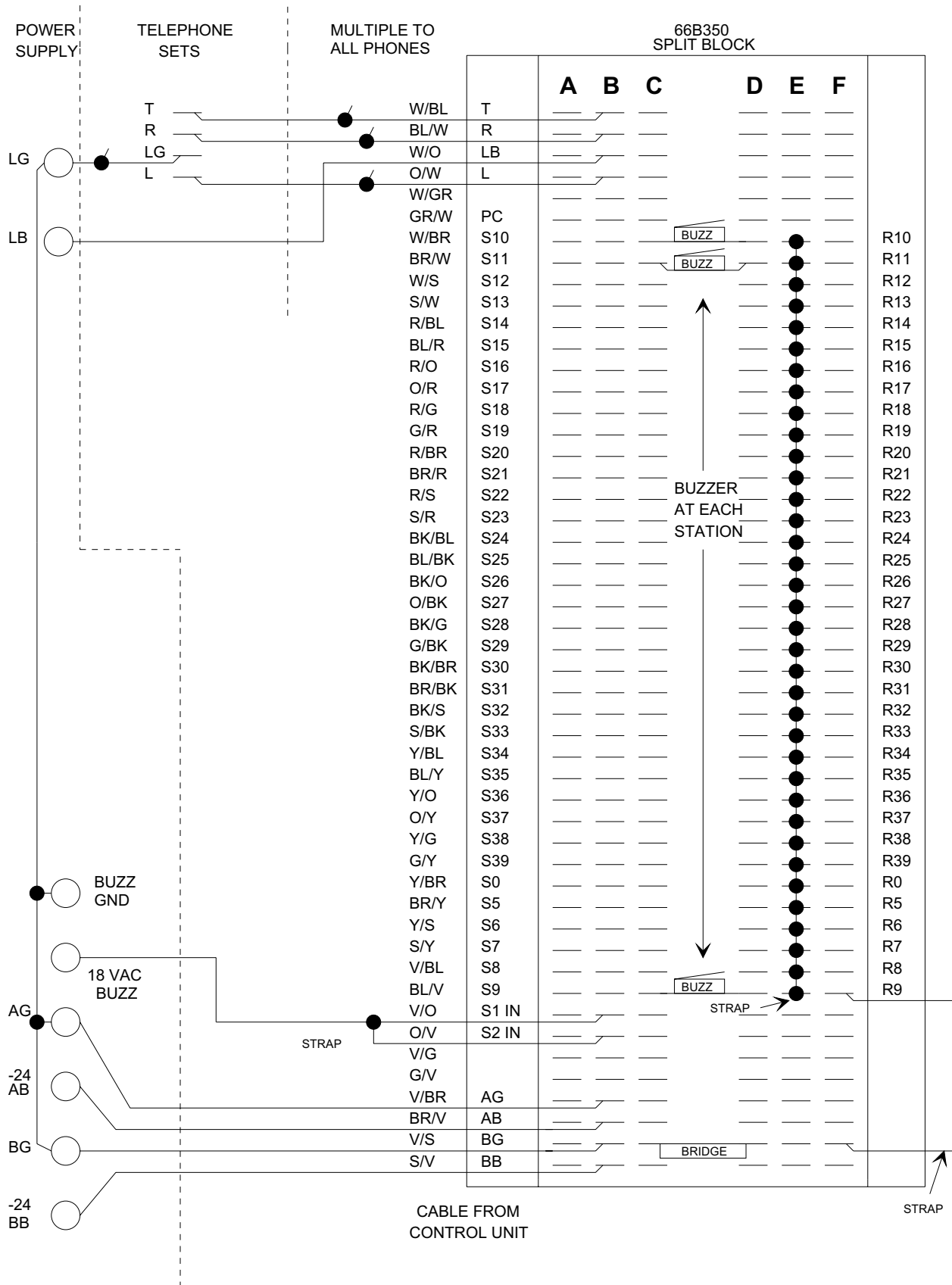


FIGURE 2: CONNECTIONS FOR 36 STATIONS OF BUZZER SIGNALLING

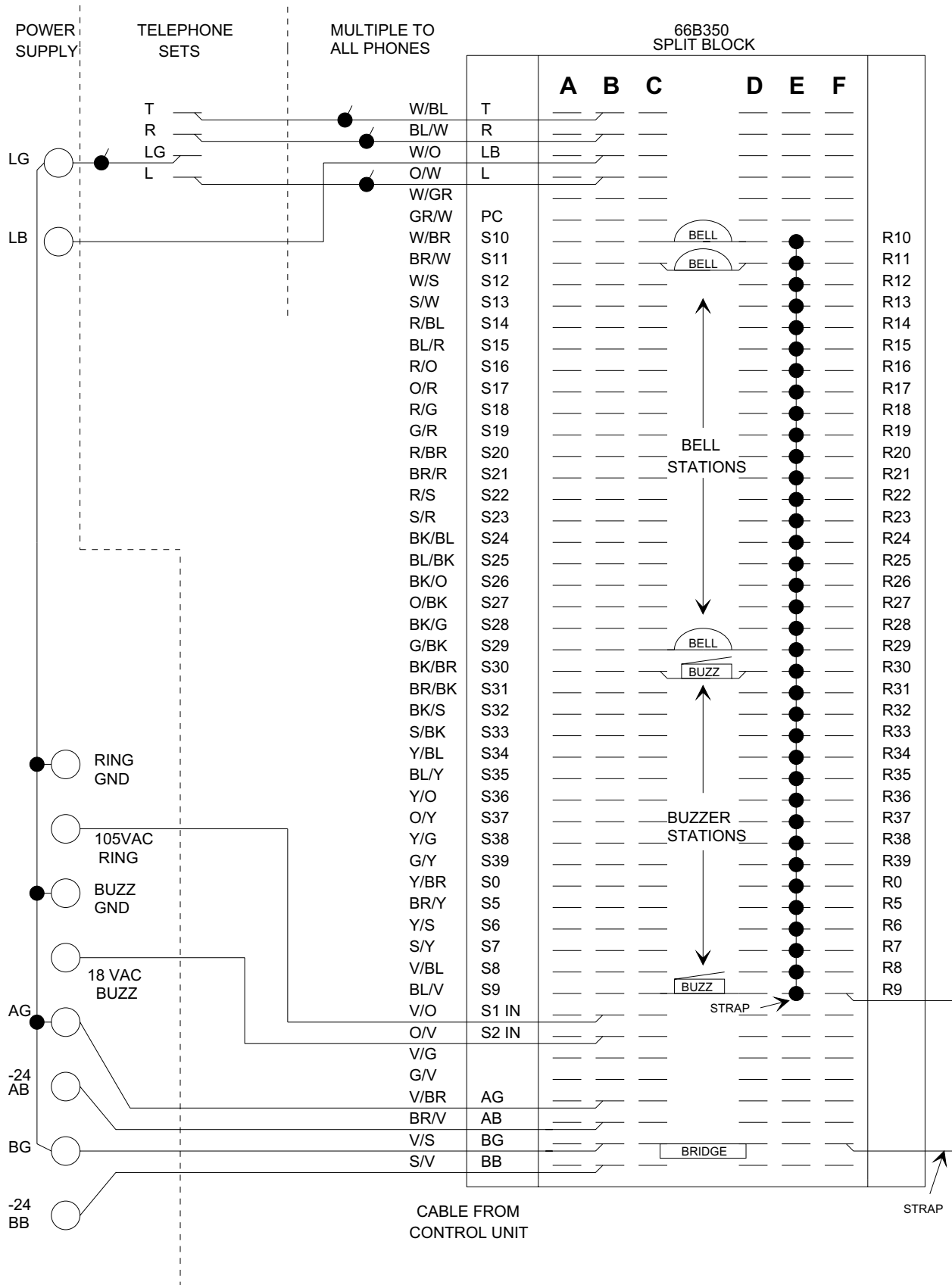
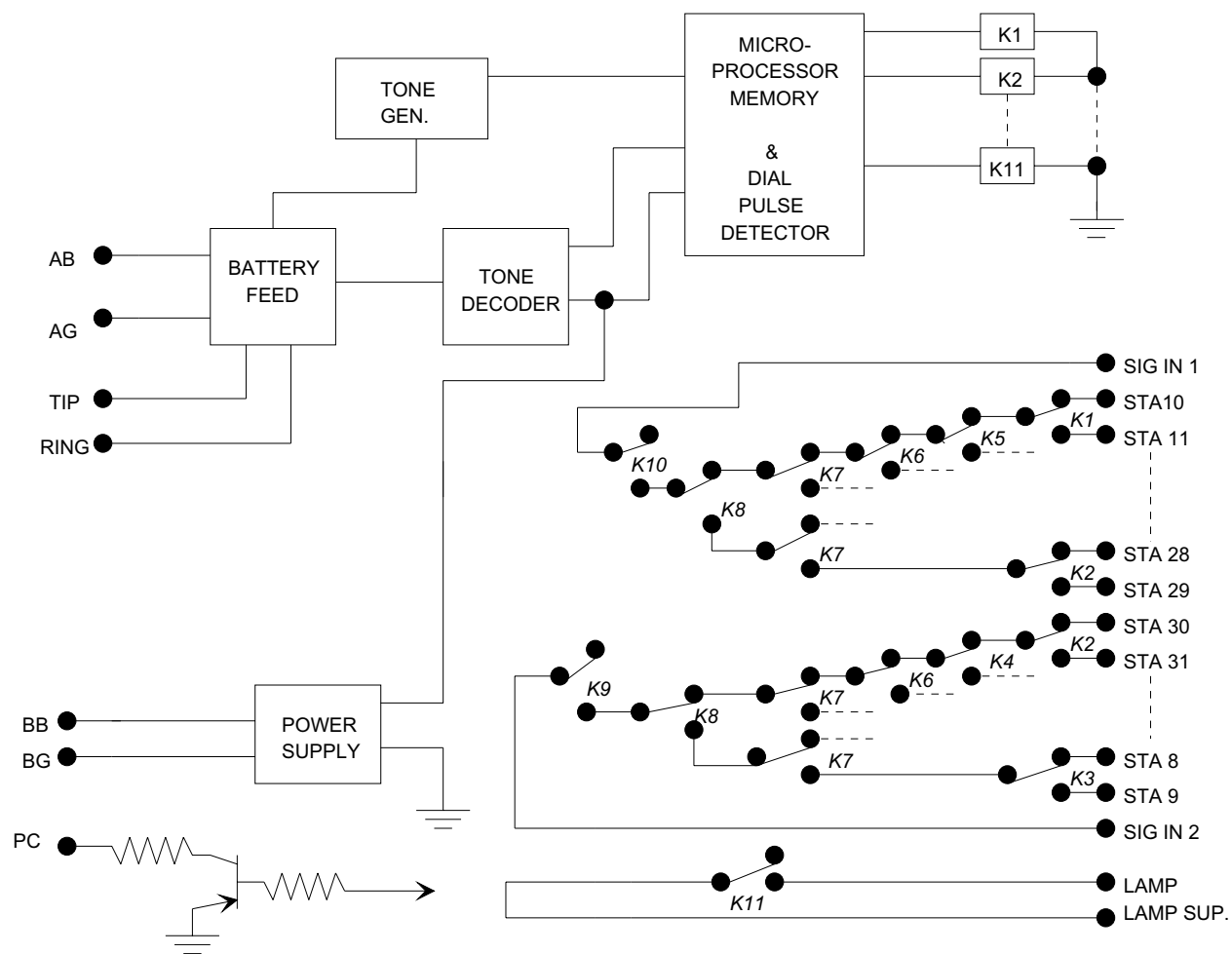


FIGURE 3: CONNECTIONS FOR SPLIT SIGNALLING WITH 20 BELL STATIONS AND 16 BUZZ STATIONS



V-136RT SIMPLIFIED SCHEMATIC