GAI-TRONICS®
A HUBBELL COMPANY

Model 478-002
Centra-Page Desktop Subset

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General Information

The GAI-Tronics Centra-Page system provides dependable paging and party-line communications for rugged and hazardous industrial facilities. Centra-Page systems feature centrally-located electronics that provide environmental protection and unitized amplification for easy maintenance. Standard Centra-Page cabinets can support up to 30 handset stations, and in most cases, up to 60 speakers. Alarms and telephone interfacing can also be added to Centra-Page systems.

The Model 478-002 Desktop Station is used for paging and party-line communications. Equipped with a push-to-page handset and party-line selector, the station is easy to use.

To generate a page, the station user lifts the handset, checks for an available party line, presses the handset pressbar while announcing their page making sure to indicate which party line they are using, and releases the pressbar. The paged individual then goes to a station, turns the party-line selector switch to the appropriate party line, lifts the handset, and answers the page. Two-way communication can then take place on the party line.

Although there is no absolute limit on the number of stations in use on a given intercom path (party line 1 or 2), for a "conference" call, the effectiveness of the sidetone rejection circuit diminishes, and overall performance begins to diminish when four or more stations are connected together. It is therefore recommended that "conference" call party line conversations be limited to four simultaneous users.

Model 478-002, like the other Centra-Page station models, corresponds to a plug-in PCBA located in the central card rack assembly. The Model 69037-101 Line Cards are sold and shipped separately from this station. The card contains the handset dc power source, dual switching relays, and a 16-watt speaker amplifier with 8-ohm and 70-volt line outputs.

This publication provides instructions on installation and operation of the Model 478-002 Desktop Station. A list of replacement parts is included for repairs.

⚠ CAUTION ⚠

Do not install this desktop subset in any hazardous areas. This desktop subset is for "safe area" operation only. Such installation may cause a safety hazard and consequent injury or property damage.
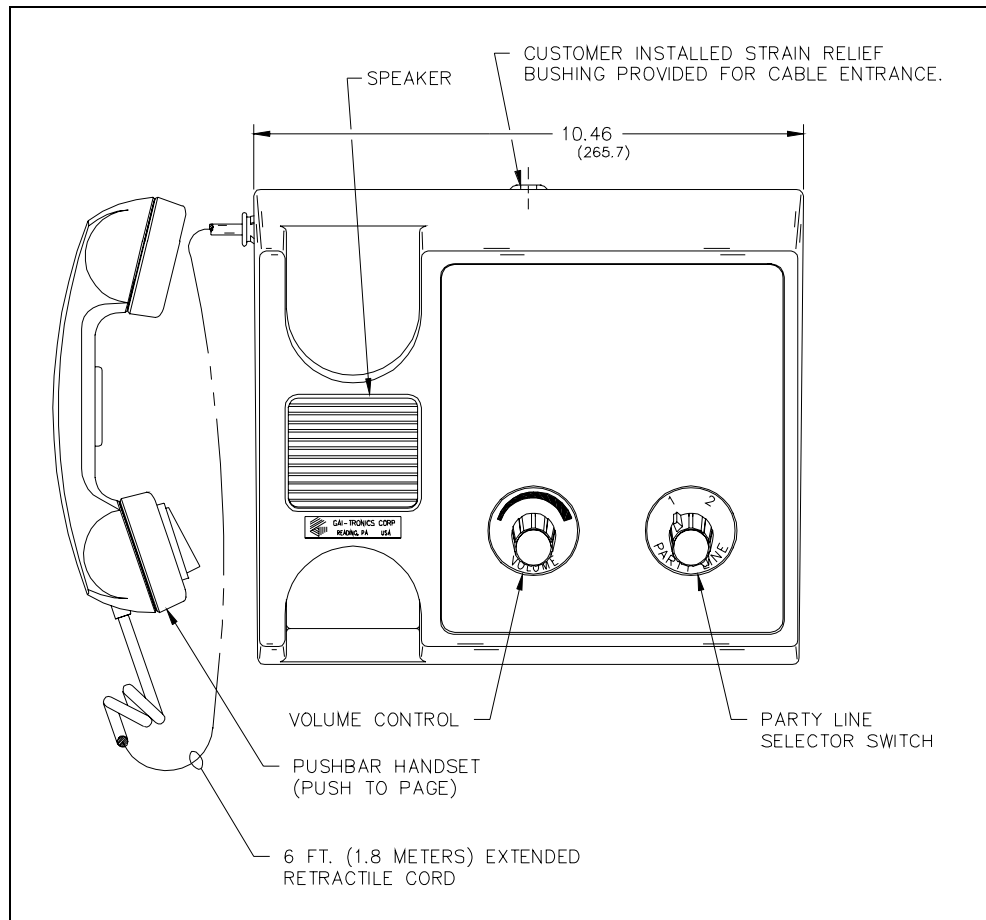

Figure 1. Model 478-002 Centra-Page Desktop Subset Outline Details

Installation in Centra-Page Systems

1. Remove the two screws on the back and the two screws on the bottom of the subset.

2. Hinge the housing forward, being careful of the harness still interconnected. This provides access to the termination blocks on the PCBA (mounted on the subset base assembly as shown in Figure 2).

3. Field wiring cable is user-supplied. Wiring should consist of three twisted and individually shielded pairs of No. 18 AWG (white and black, brown and yellow, and red and blue when using GAI-Tronics Model 60051-001 wire).

4. Spade lug the wires, and connect them to the 6-point terminal block.

5. Included in an envelope is a strain-relief bushing. Using a pair of pliers, fit the bushing around the cable and into the cable entrance on the subset. The bushing will protect the cable entrance.

6. Feed the cable into the conduit that runs to the central cabinet.

7. The terminal blocks for each station (one station per terminal block) are on the chassis that is mounted on the back of the card rack. These blocks are labeled like the blocks in the desktop station. Make sure that the wire colors for each lug match the one in the station.

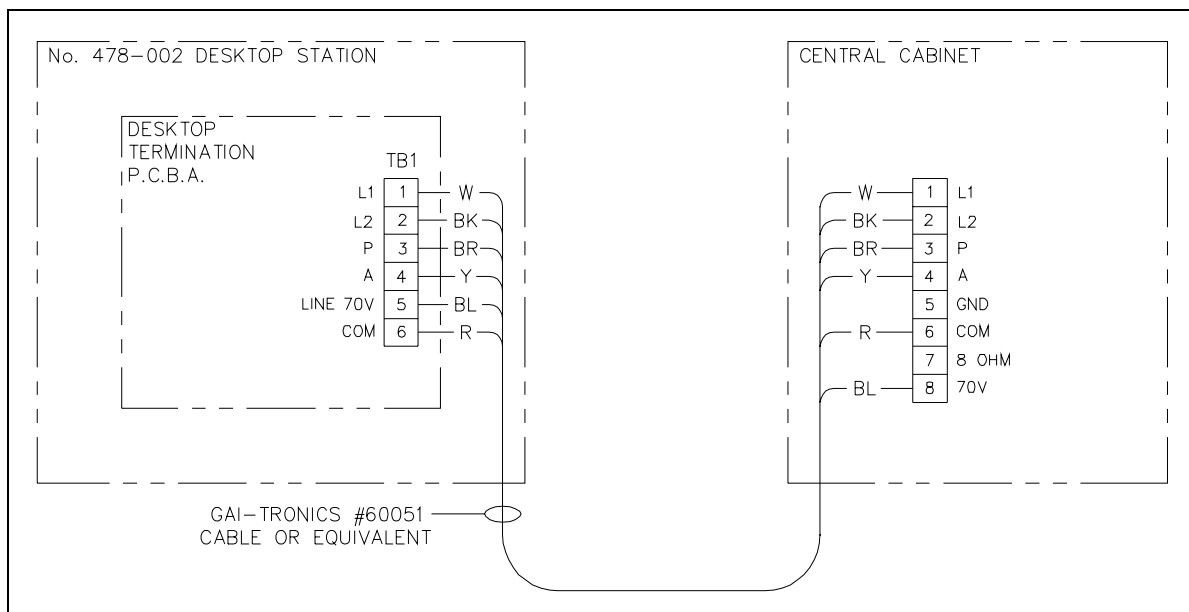8. Spade lug the wires, and secure them at the central cabinet. Close the central cabinet door.

Figure 2. Subset Wiring for Centra-Page

Maintenance

The following table lists some of the most common difficulties encountered in Model 478-002 Desktop Stations. Included are some troubleshooting hints to aid in remedying these problems.

Troubleshooting

Problem	Solution
Integral speaker level requires adjustment.	1. Adjust the volume control on the subset. 2. Adjust the volume control at the central cabinet (Centra-Page systems only). 3. Replace the integral speaker. 4. Replace the 70.7 V line matching transformer.
Station shows always on hook.	The reed switch may be defective. Simulate reed switch operation by disconnecting the reed switch at the terminal board, and shorting (connect) pins 1 and 2 or J3 and J4. This should cause the station to go off hook. If it does, the defective reed is probably defective and requires replacement. (The reed switch is located under the handset cradle. Contact a GAI-Tronics Service Center for further information).
Incoming conversation level requires adjustment.	Replace the receiver element located in the handset.
Miscellaneous	1. Keep all mechanical parts well lubricated. This will help avoid gumming and jamming due to waste buildup. 2. A defective station card in the central cabinet can cause numerous problems. If a station is non-functional, try switching 69037 cards with a known good station.

Specifications

Electrical

Handset:

Microphone.. 10 ohms; pressure differential, noise-canceling dynamic

Receiver .... 150 ohms; high-efficiency dynamic, hearing-aid compatible

Cable .... Retractile, 6-foot (1.82 m) extended, PVC

Material ....Light gray ABS

Control..Pressbar (push-to-page) switch

Frequency response...200–2000 Hz, $\pm$3 dB

Distortion ....Microphone input to receiver output 2 % (nominal line level @ 1 kHz)

Sidetone rejection... 14 dB (nominal line level @ 1 kHz)

DC line current ....Handset: 8 mA typical

Mechanical

Construction/finish:

Housing...Light gray ABS

Front panel and base...16 gauge CRS with black polyurethane enamel finish

External controls.. Rotary party line selector, integral speaker volume control

Connections...Internal, screw-type barrier terminal block

Integral speaker .... 3 sq. in., 45-ohm, 4-watt, moisture-proof, shielded magnetic pole piece

Temperature range, operating... -22° F to +140° F (-30° C to +60° C)

Dimensions..9.35 L $\times$ 10.46 W $\times$ 4.81 H inches (237.5 $\times$ 265.7 $\times$ 122.2 mm)

Shipping weight ....5 lbs.

Approvals..None

Replacement Parts

Part Number	Description
10450-004	Pressbar Handset Assembly
12511-001	Dynamic Noise-canceling Transmitter with Cap
12514-007	6-foot PVC Coil Cord
12550-002	Receiver Replacement Kit
25728-003	Housing/Hookswitch Assembly
61504-025	Speaker/Volume Control Harness Assembly
61504-049	Rotary Switch Harness Assembly
61504-029	Transformer Harness Assembly
69142-001	Termination PCBA

Warranty

Equipment. GAI-Tronics warrants for a period of one (1) year from the date of shipment, that any GAI-Tronics equipment supplied hereunder shall be free of defects in material and workmanship, shall comply with the then-current product specifications and product literature, and if applicable, shall be fit for the purpose specified in the agreed-upon quotation or proposal document. If (a) Seller's goods prove to be defective in workmanship and/or material under normal and proper usage, or unfit for the purpose specified and agreed upon, and (b) Buyer's claim is made within the warranty period set forth above, Buyer may return such goods to GAI-Tronics' nearest depot repair facility, freight prepaid, at which time they will be repaired or replaced, at Seller's option, without charge to Buyer. Repair or replacement shall be Buyer's sole and exclusive remedy. The warranty period on any repaired or replacement equipment shall be the greater of the ninety (90) day repair warranty or one (1) year from the date the original equipment was shipped. In no event shall GAI-Tronics warranty obligations with respect to equipment exceed 100% of the total cost of the equipment supplied hereunder. Buyer may also be entitled to the manufacturer's warranty on any third-party goods supplied by GAI-Tronics hereunder. The applicability of any such third-party warranty will be determined by GAI-Tronics.

Services. Any services GAI-Tronics provides hereunder, whether directly or through subcontractors, shall be performed in accordance with the standard of care with which such services are normally provided in the industry. If the services fail to meet the applicable industry standard, GAI-Tronics will re-perform such services at no cost to buyer to correct said deficiency to Company's satisfaction provided any and all issues are identified prior to the demobilization of the Contractor's personnel from the work site. Re-performance of services shall be Buyer's sole and exclusive remedy, and in no event shall GAI-Tronics warranty obligations with respect to services exceed 100% of the total cost of the services provided hereunder.

Warranty Periods. Every claim by Buyer alleging a defect in the goods and/or services provided hereunder shall be deemed waived unless such claim is made in writing within the applicable warranty periods as set forth above. Provided, however, that if the defect complained of is latent and not discoverable within the above warranty periods, every claim arising on account of such latent defect shall be deemed waived unless it is made in writing within a reasonable time after such latent defect is or should have been discovered by Buyer.

Limitations / Exclusions. The warranties herein shall not apply to, and GAI-Tronics shall not be responsible for, any damage to the goods or failure of the services supplied hereunder, to the extent caused by Buyer's neglect, failure to follow operational and maintenance procedures provided with the equipment, or the use of technicians not specifically authorized by GAI-Tronics to maintain or service the equipment. THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES AND REMEDIES, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Return Policy

If the equipment requires service, contact your Regional Service Center for a return authorization number (RA#). Equipment should be shipped prepaid to GAI-Tronics with a return authorization number and a purchase order number. If the equipment is under warranty, repairs or a replacement will be made in accordance with the warranty policy set forth above. Please include a written explanation of all defects to assist our technicians in their troubleshooting efforts.

Call 800-492-1212 (inside the USA) or 610-777-1374 (outside the USA) for help identifying the Regional Service Center closest to you.