

Technical Practice

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Model 268 Service Observation System

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1. General Description

1.1 PRACTICE Issue 3 of this practice is released due to several changes and improvements in the Model 268. The audio quality has been improved by implementation of a new compressor circuit. The break in function now implements A/A1 control on the RJ35X jack. LED indicator lights provide assistance during installation and maintenance. The product is housed in a different enclosure. The old enclosure was white in color, the new enclosure is blue in color and physically larger in size. Slide switch SW1 is no longer required, and is not present on the circuit board.

1.2 PRODUCT OVERVIEW The Model 268, used in conjunction with a 1A2 key telephone, is designed to allow the monitoring of telephone conversations in a completely undetected manner. The key telephone does not need to be connected to a KSU. The Model 268 is interfaced via an RJ35X jack, which is installed on the key telephone. A KSU or other equipment is not required, unless the key telephone's lights are to be used as a busy lamp field. The Model 268 includes a switch which allows the observer to either silently monitor or break in to a conversation. The Model 268 also allows the monitored output to be connected to an ITT Orator loudspeaker and/or a standard cassette recorder.

1.3 ISOLATION CIRCUIT The operation of the Model 268 is based upon an input isolation circuit which allows the bridging of a telephone line without inducing clicks or other noise. Line buttons on the associated key telephone select which tip and ring leads are sent to the input of the Model 268, thereby selecting which line is to be monitored.

1.4 AUDIO LEVEL An audio compressor circuit is incorporated into the Model 268. It protects the observer from excessive audio levels and assists in observing low level conversations. This feature is essential when monitoring during

dialing because touch tones are produced at an audio level much greater than average voice conversation levels.

1.5 POWER REQUIREMENTS The Model 268 requires an external source of 12Vac for operation. A UL Listed, Class 2 transformer is shipped with each Model 268.

1.6 PHYSICAL DESCRIPTION The Model 268 Service Observation System consists of a precision fabricated printed circuit board, and an injection molded housing consisting of a base and detachable cover. The thermoplastic material used for the housing conforms to industry recognized flame retardant standards. The main unit measures 8.75 inches (22.23cm) square, 3.25 inches (8.26cm) deep, and weighs approximately two pounds (0.9kg). The main unit wall mounts with four screws. The break in switch measures 2.70 inches (6.86cm) high, 1.40 inches (3.56cm) wide, 1.00 inches (2.54cm) deep, and weighs 0.21 pounds (0.095kg). The break in switch mounts on the side of a key telephone using bracket or double stick tape.

1.7 FCC REGISTERED The Model 268 is FCC registered. The registration number is EPR5ZC-15269-KX-N, ringer equivalence 0.0B

2. Applications

2.1 PRIMARY APPLICATION The Model 268 is normally used in conjunction with a key telephone set. Its primary application is to enable a supervisor in a telemarketing situation to monitor employee telephone conversations for training or performance evaluation purposes. A break in switch allows the supervisor to interrupt the conversation if necessary.

2.2 OUTPUTS In addition to the output that drives the key telephone's handset, two other audio outputs are provided. The Orator output is compatible with the ITT Orator loudspeaker (Model K-107A). The cassette output allows a standard cassette tape recorder to be connected, allowing

the recording of monitored conversations for later evaluation and review.

2.3 BEWARE OF THE FEDS! Federal Law requires all parties in a conversation to consent to monitoring or recording! Check your state and local regulations for further guidelines.

3. Installation

3.1 WORDS OF CAUTION As with any product, installing the Model 268 requires a safety first approach.

Warning: Never install telephone wiring during a lightening storm. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations. Never touch non-insulated telephone wires or terminals unless the telephone line has been disconnected at the network interface. Use caution when installing or modifying telephone lines.

3.2 CHECKING FOR DAMAGE The Model 268 should be inspected for damage immediately upon receipt. A claim should be filed with the shipper if damage is found. A replacement should be ordered if necessary.

3.3 EVERYTHING YOU NEED Included in the Model 268 shipping carton are the following items: Model 268 main unit, break in switch assembly, RJ35X jack kit, 8-position modular to modular cable, 12Vac transformer, 2-conductor cable, technical practice, and installation kit.

3.4 THE COVER The cover is secured via two clamp screws located on the top and bottom of the cover. Remove the cover at this time.

3.5 MOUNTING The Model 268 wall mounts using four #8 screws appropriate for the wall material. Four #8 pan head screws are contained in the installation kit; use these if suitable.

3.6 RJ35X Most, if not all, Model 268 installation problems relate to the RJ35X jack. Be very careful when installing this! An extra few minutes will definitely pay off in the end! Use the RJ35X jack kit to install the RJ35X jack to the selected 1A2 compatible key telephone. The jack kit includes complete instructions; carefully follow these. Prior to attempting the installation, you must have documentation for the key telephone you are using. Gordon Kapes, Inc. technical support can provide limited assistance since each key phone seems to be wired differently! Once you get the hang of it, you'll see that the RJ35X is really quite simple -- take your time!

3.7 MODEL 268 TO RJ35X Using the 8-position modular line cord, connect J1 on the Model 268 to the RJ35X.

3.8 BREAK IN SWITCH If the break in function is desired, mount the switch assembly to the key telephone utilizing either double-stick tape or mounting bracket, both of which are provided. Plug the break in switch's 6-position modular plug into J2.

3.9 GAIN TRIM Potentiometer R1, located on the upper left side of the Model 268 circuit board, allows adjustment of the monitored level being sent to the key telephone's handset. It is labeled GAIN TRIM. Because the plastic cover must be removed from the unit to adjust this control, the desired volume should be set at the time of installation. When the control is in the middle (50% of rotation) position, the handset's volume will be approximately the same

as that of the telephone line being monitored. If desired, turn the control clockwise (CW) to increase the level. The control does not affect the cassette or Orator output levels.

3.10 CONNECTING POWER Make the power connection using the two-conductor cable provided. Refer to Figure 1, located at the end of this practice, for connection details. Connect one end of the cable to the LOAD terminals on the transformer, and the other end to terminals 1 and 2 of the terminal strip TS1. Plug the transformer into an electrical outlet. The power LED should light. The break in LED will be lit if the break in switch is installed, and is in the break in position.

3.11 ORATOR An ITT Orator K107A (not provided) can be directly connected to the Model 268 for loudspeaker monitoring. Refer to Figure 1, located at the end of this practice, for connection details. Unplug the transformer while you are connecting the Orator. Note that the transformer and Orator power leads are both connected to TS1 terminals 1 and 2. The transformer provides power for both the Model 268 and the Orator. The key telephone's handset does not have to be lifted for the Orator output to follow the key telephone button that is depressed.

3.12 CASSETTE OUTPUT Direct connection to a cassette recorder can be made via jack J3, located on the lower right side of the Model 268's circuit board. J3 is a standard 3.5mm 2-conductor (monaural) jack that is similar to the line input jack on most portable cassette recorders. A connecting cable with a 3.5mm plug, to mate with J3, on one end, and a connector to mate with the selected cassette recorder's line input jack is required (not included with system). The output level is designed to be compatible with most portable cassette recorders. The Model 268 circuitry includes an audio transformer which should eliminate hum or other interfacing problems. The key telephone's handset does not have to be lifted for the cassette output to follow the key telephone button that is depressed.

4. Circuit Description

4.1 BLOCK DIAGRAM Refer to Figure 2, located at the end of this practice, for a block diagram of the Model 268.

5. Specifications

FCC REGISTRATION NUMBER
EPR5ZC-15269-KX-N

RINGER EQUIVALENCE
0.0B

INTERFACE TO KEY TELEPHONE
RJ35X jack (included with Model 268)

POWER REQUIREMENTS
12Vac nominal, 140mA maximum

AUDIO OUTPUT TO KEY TELEPHONE
0.2Vac to 0.8Vac, adjustable

CASSETTE OUTPUT JACK
3.5mm phone jack

CASSETTE OUTPUT LEVEL
150mVac nominal, transformer isolated

ORATOR OUTPUT CONNECTIONS
Screw terminals

ORATOR OUTPUT LEVEL
150mVac nominal

DIMENSIONS, MAIN UNIT
8.75 inches high (22.23cm)
8.75 inches wide (22.23cm)
3.25 inches deep (8.26cm)

WEIGHT, MAIN UNIT
Approximately 2 pounds (0.9kg)

MOUNTING, MAIN UNIT
Wall mounts with four #8 pan head screws

DIMENSIONS, BREAK IN SWITCH
2.70 inches high (6.86cm)
1.40 inches wide (3.56cm)
1.00 inches deep (2.54cm)

WEIGHT, BREAK IN SWITCH
0.21 pounds (0.095kg)

MOUNTING, BREAK IN SWITCH
Mounts on side of key telephone using bracket or double stick tape (included)

6. Incorrect Operation

6.1 REVIEW PRACTICE Should problems arise in the operation of the Model 268, please review Section 3 - Installation of this practice. Ensure that all connections have been made properly. If another Model 268 is available, substitute and retest.

6.2 SAVE TIME You are encouraged to call Gordon Kapes, Inc. for technical support. We much prefer a telephone call BEFORE you tear your hair out! We do not mind "walking" you through an installation, or performing a verbal review prior to your actually getting started. Please have these items with you: a copy of this technical practice, key telephone documentation, and adequate tools. In addition, it is very helpful to have a digital VOM, such as the wonderful Fluke 70 or 80 series, and a lineperson's handset. (For these rare cases, it's not a bad idea to have some aspirin and the telephone number of a Chinese restaurant that delivers!)

7. Repair and Replacement

7.1 NOT SO FAST Statistically, most equipment returned to Gordon Kapes, Inc. for repair actually has nothing wrong with it. A telephone call to Gordon Kapes, Inc. technical support can often help to get the equipment operating correctly. We don't mind spending time with our customers getting a site up and running.

7.2 SEND IT BACK If you determine that the Model 268 is defective, return for repair or replacement according to the Gordon Kapes, Inc. Warranty/Repair and Return policy.

7.3 ONLY WE FIX IT In the event repairs are ever needed on your Model 268, they should be performed by Gordon Kapes, Inc. or our authorized representative.

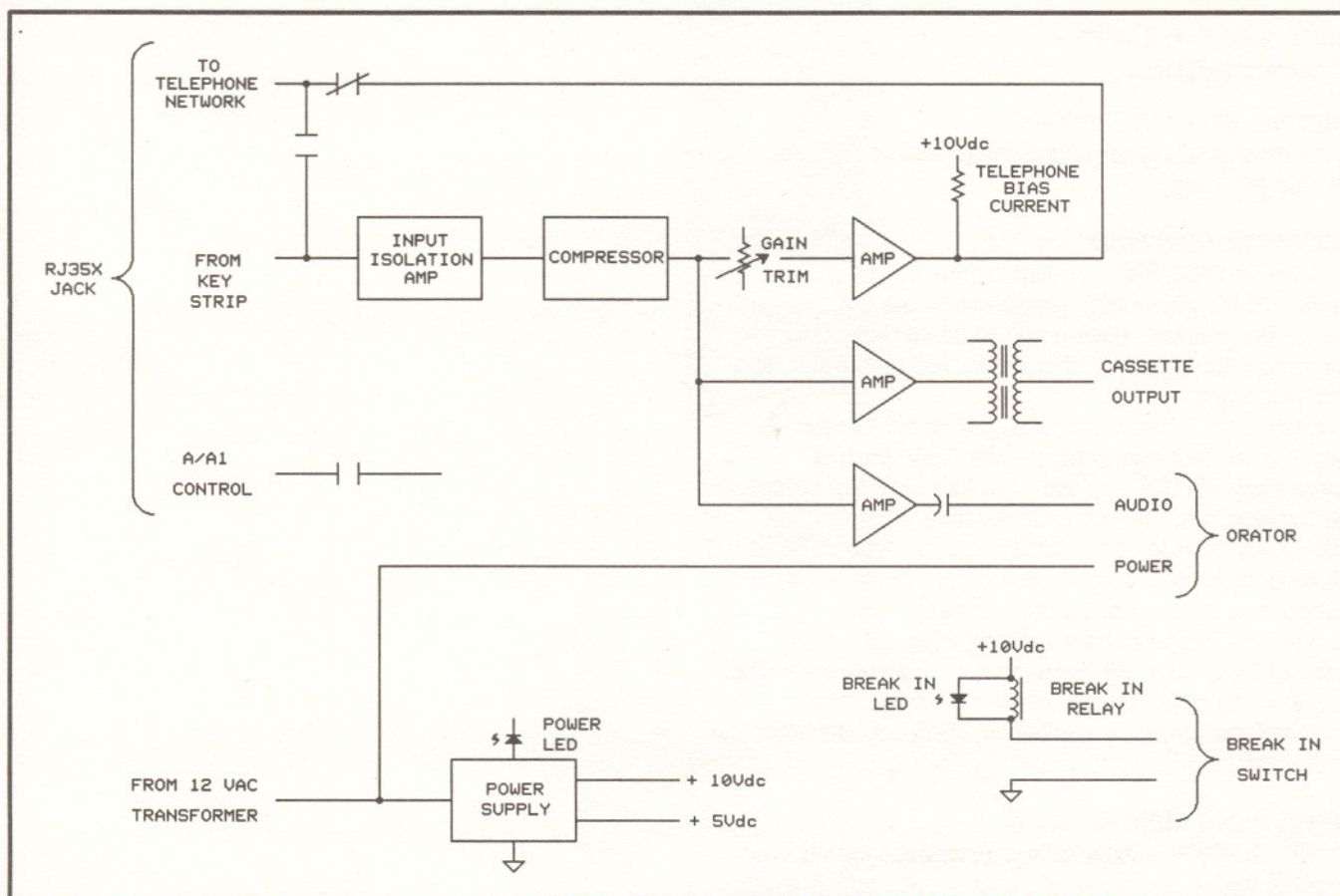
Specifications and information contained in this technical practice subject to change without notice.

Figure 1 Detailed Connection Information

TS1 Terminal Number	Description	Connection
1	Power	Transformer, Orator Black Lead
2	Power	Transformer, Orator Yellow Lead
3	Orator Audio	Orator Green Lead
4	Orator Audio	Orator Red Lead

Jack Number	Description	Connection
J1	Connection to key telephone	To RJ35X via eight-position fully modular cable
J2	Connection to Monitor/Break In Switch	Six-position modular plug attached to switch assembly
J3	Cassette Output	Connect to cassette recorder using cable mounted 3.5mm plug

Figure 2 Model 268 Circuit Block Diagram



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