

# Talk-A-Phone Co.

*Creating Communication Solutions*

## Installation & Operation Manual

### For

## EC-2 Consolidator

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**Talk-A-Phone Co.**

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## Getting Started

### I. Getting Started

#### A. Introduction

The EC-2 allows two Talk-A-Phone Emergency Phones to be connected on one common phone line without reduction in volume so that they can independently call, or receive calls from any standard touch-tone phone.

This manual will guide you through the installation of this unit and provide comprehensive operating instructions. Please read this manual COMPLETELY before installing the unit. Once you have installed it and are familiar with its operation, store this manual in an accessible location for future reference.

#### B. What Is In The Box

- One 2 Phone Consolidator
- One Power Supply
- One Instruction Manual

You should inspect your Consolidator when you open the box for possible damage in shipment. If it is damaged, or any of the components are missing, contact your Talk-A-Phone Co. distributor immediately. Do not discard any hardware or packing material before you are certain you have all the items listed above, and the unit is installed and functioning correctly.

#### C. Technical Requirements

When connecting Emergency Phone to an EC-2, we strongly recommend twisted, shielded pairs with the shield connected only at the EC-2 end. The resistance on the line is not to exceed 25 Ohms. The following chart shows distances and recommended wire gauges:

<b>Distance from EC-2 to Emergency/Information Telephone</b>	<b>Recommended Wire Gauge</b>
0 - 500 feet	24 G
501 - 750 feet	22 G
751 - 1,000 feet	20 G
1,001 - 1,800 feet	18 G
1,801 - 3,000 feet	16 G

## II. Hardware Installation

### A. Connecting the Power Supply

The EC-2 has a power connector receptacle. The connector on the power supply plugs into this receptacle. The power supply itself plugs into a 110-120 volt, 50-60 Hz source of clean power.

The EC-2 has a built-in UPS (uninterruptable power supply) which will allow the unit to continue to function for at least four hours during a power outage. The back-up battery is continuously recharged by the unit and has a replacement date marked on it.

Note: The fuse for the EC-2 is shipped in a bag attached to the top of the unit to keep the battery from discharging prior to installation. When you are ready to connect the unit to a power source, place the fuse into the receptacle marked "Battery Fuse".

### B. Connecting Emergency Phones & Phone Line

Connect the two Emergency Phones to the ports marked "To Emergency Phones". Then connect the phone company line or PBX extension to the port marked "TELCO IN".

## III. Software Programming

The EC-2 unit does not require programming. To program the Emergency Phones, see the Emergency Phone Manual included with each of your Emergency Phones.

## IV. Operation

### A. Calling Out from Emergency Phones

Depressing the button on an Emergency Phone automatically causes it to dial. If the second Emergency Phone has its buttons pushed while the first is using the line, the request will automatically be held. When the line becomes available, the second call will automatically be put through. The Emergency Phone will not dial out until it is given the line by the EC-2.

### B. Calling to the Emergency Phones

Dial the phone number to which the consolidator is connected. When the ringing stops, you have 15 seconds to select which Emergency Phone you wish to call by entering the code \*41\* to call port #1 or \*42\* to call port #2. After a few seconds you will hear the Emergency Phone answer with its characteristic series of DTMF tones. Then follow the normal commands described in the Emergency Phone Manual. On completion of the call you can press # to immediately disconnect or simply hang up the phone and the EC-2 will shortly hang up as well.

**V. Federal Communications Commission Information**

This device has been granted a registration number by the Federal Communications Commission (FCC), under part 8 rules and regulations for direct connection to telephone lines. In order to comply with these FCC rules, the following instructions must be carefully read and applicable portions followed completely. These instructions must be provided to the consumer.

- A. This equipment complies with part 68 of the FCC rules. A label located on an outside surface of this equipment contains, among other information, the FCC registration number and ringer equivalence number (REN). If requested, this information must be provided to the Telephone Company.
- B. As indicated below, the suitable jack (USOC connecting arrangement) for this equipment is shown. If applicable, the facility interface codes (FIC) and service order codes (SOC) are shown.
- C. The ringer equivalence number (REN) is used to determine the quantity of devices which, when connected to the telephone line, may result in the device not ringing in response to an incoming call. In most, but not all, areas, the sum of the REN's should not exceed five (5.0). To be certain of the maximum number of devices that may be connected to the line, as determined by the total REN's, contact the Telephone Company to determine the maximum REN for the calling area.
- D. If this equipment (indicated with trade name and model) causes harm to the Telephone Network, the Telephone Company will notify you in advance. If advance notice is not practical, the Telephone Company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.
- E. The Telephone Company may make changes to its facilities, equipment, operations or procedures that could affect the operation of this equipment. If this happens, the Telephone Company will provide advance notice in order for you to make the necessary modifications needed in order to maintain uninterrupted service.
- F. If trouble is experienced with this equipment, (indicated below with trade name and model, together with a service center in the U. S. A. address and telephone number), contact the manufacturer for repair and/or warranty information. If the trouble is causing harm to the Telephone Network, the Telephone Company may request that you remove the equipment from the Network until the problem is resolved. User repairs must not be made. Doing so voids the warranty.
- G. This equipment must not be used on Telephone Company provided public coin service. Connection to party lines is subject to State Tariffs, (contact your State Public Utility Commission for information). If so required, this equipment is hearing aid compatible (HAC).
- H. The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- I. The Talk-A-Phone Co. U. S. A. Service Center is located at 5013 North Kedzie Avenue, Chicago, Illinois 60625-4988, telephone number (773) 539-1100, fax number (773) 539-1241.

## VI. Phone Line Specifications

### A. MODE I Operation

The following criteria must be met by a phone line to insure proper functionality of the FCC approved equipment. All voltages use Tip as ground when measuring.

1. On-Hook voltage must be less than or equal to  $-36\text{ V}$  ( $-50\text{ V}$  standard).
2. Off-Hook should be recognized in a maximum time of 300 ms.
3. At an Off-Hook voltage of  $-15\text{ V}$ , the current that is supplied must be no less than 20 mA and no more than 120 mA.
4. Dial tone must consist of 350 Hz and 450 Hz tones at  $-17\text{ dB} \pm 0.5\%$ .
5. The telephone line must generate Ring-Back consisting of 440 Hz and 480 Hz tones at  $-17\text{ dB} \pm 0.5\%$ , with a duty cycle of 1.6 seconds on—4.8 seconds off  $\pm 10\%$  interrupted at 20 Hz.
6. The telephone line must generate a busy signal consisting of 480 Hz and 620 Hz tones at  $-17\text{ dB} \pm 0.5\%$ , with a duty cycle of 500 ms on—500 ms off.
7. The telephone line must be able to recognize or send the following frequencies in order to decode or transmit DTMF:
  - a) 685 Hz — 709 Hz                      Row 1
  - b) 757 Hz — 784 Hz                      Row 2
  - c) 837 Hz — 867 Hz                      Row 3
  - d) 925 Hz — 957 Hz                      Row 4
  - e) 1189 Hz — 1229 Hz    Column 1 (1, 4, 7, \*)
  - f) 1314 Hz — 1358 Hz    Column 2 (2, 5, 8, 0)
  - g) 1453 Hz — 1501 Hz    Column 3 (3, 6, 9, #)
  - h) 1607 Hz — 1659 Hz    Column 4 (A, B, C, D)
8. When dialing, the telephone line should require a minimum tone pulse ON time of 40 ms, as well as a minimum between tone gap of 40 ms.
9. The telephone line should support and match with a  $600\Omega$  AC impedance, as well as a DC resistance of  $100\Omega$  —  $200\Omega$ .

### B. MODE II and MODE III Operation

Talk-A-Phone phones can be used with most PBX systems with non-standard dial tones, ring-backs, busy signals and hang-ups.

## **VII. Information To The User**

### **A. Section 15.105**

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and may cause harmful interference to radio communications if not installed and used in accordance to the instructions. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna;
2. Increase the distance between the equipment and the receiver;
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected;
4. Consult the dealer or an experienced Radio/TV technician for assistance.

### **B. Section 15.21**

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### **C. Section 15.27**

The user is cautioned that any peripheral device installed with this equipment, such as a modem or printer, must be connected with a high-quality shielded cable to insure compliance with FCC limits.

### **D. Talk-A-Phone Factory Service**

Talk-A-Phone factory service is available to Talk-A-Phone users at a reasonable charge, plus transportation to and from our factory. When you send units to our factory, freight prepaid, our technicians will examine, service and promptly return the units to you, transportation collect.

**You must receive a Return Materials Authorization (RMA) number to send units in for repair.** Contact the Talk-A-Phone Service department for more information.

Talk-A-Phone also sells replacement components for our products directly both to dealers and to our users. When ordering, please give either the component part number or a brief description of the component's function, and the model for which it is needed.

When returning equipment for service or ordering replacement components, please be sure to include your full name, address and telephone number.

**VIII. Talk-A-Phone Co. Limited Warranty**

Talk-A-Phone Co. warrants Talk-A-Phone equipment against any defects in material and workmanship, under normal use, for a period of twelve (12) months from date of installation, provided that Talk-A-Phone receives a completed "Installation Certification" certifying the date on which the system has been installed. An "Installation Certification" card is enclosed with every unit. In the event that no "Installation Certification" is received by Talk-A-Phone, the twelve (12) months will commence on the date of shipment by Talk-A-Phone. The warranty period for Models ETP-PM, ETP-MT and ETP-MT/R is five (5) years, under the same terms and conditions.

In the event this product is found by Talk-A-Phone to be defective within the warranty period, Talk-A-Phone's only obligation and your exclusive remedy shall be the repair and/or replacement of any defective parts, provided the equipment is returned to Talk-A-Phone Co., 5013 N. Kedzie Ave., Chicago, IL 60625. It is expressly understood that Talk-A-Phone shall have no obligation to furnish labor, nor pay for the labor of any third parties, nor bear the expense of shipping defective products for repair. This warranty shall not apply if Talk-A-Phone determines that the defect was caused by improper use or installation, or damage caused to the equipment by others.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.