XC-COMSCAN
Communications Scanner

Automatic Telephone
Line Sharing Device

User Manual

Revision 1.1

Jan 2003

P/N 200013-003

Introduction to XC-COMSCAN

Thank you for purchasing a XC-COMSCAN. The Comscan allows you to take full advantage of existing telephone lines on an XCI system installation. The Comscan is a state-of-the-art telephone line sharing device with eliminates the need for a dedicated telephone line for connection to XCI modems and networks. The Comscan quickly directs incoming calls to one of two appropriate destinations, the customer's normal telephone or the XCI equipment network.

The Comscan is a single line device that can be installed on any type of modular or non-modular system that consists of one or more lines, with one or more telephones. A modular system consists of phone cables that can be connected and disconnected from a telephone device. The most popular modular telephone connector is RJ-11, which is integrated into the Comscan. A non-modular system consists of cables that are hard-wired to the telephone device and cannot be disconnected from the equipment. A telephone installer may be required to install the Comscan on a non-modular system.

Note: Many offices have a KSU or a PBX phone system. The Comscan works with either of these systems. Simply follow the appropriate installation instructions provided in the section "Installing Comscan on a KSU/PBX system".

Ports on the XC-COMSCAN

The rear panel of the Comscan includes four (4) modular ports and a power input as shown in Figure 1.

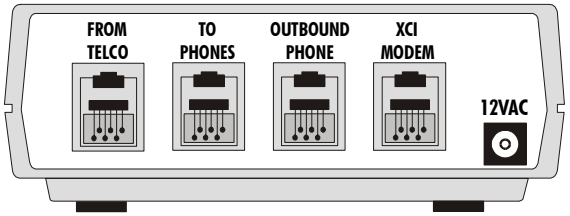

Figure 1. Modular ports and power input port on the rear panel of the Comscan.

Connect the telephone equipment and the XCI equipment to the modular ports on the Comscan as follows:

FROM TELCO: Use this port to connect to a single telephone line from a wall jack to the Comscan. In a KSU/PBX installation, connect to the incoming telephone service, before the KSU/PBX.

TO PHONES: Use this port to connect to a normal user telephone. In a KSU/PBX installation, connect to the last active telephone line input to the KSU/PBX.

OUTBOUND PHONE: If desired, use this port to any telephone for outbound calling only. You may not answer a telephone call on this port.

XCI MODEM: Use this port to connect to the XC-MODEM at the installation location

Installing Comscan

This section explains how to install the Comscan in most phone configurations that appear in a home or office. You can install the Comscan into a single line or KSU/PBX configuration. Installation procedures of each of these are provided in the following sections.

Installing the Comscan on a Single Phone Line and Phone

Items needed for installation:

- Comscan
- Comscan Power Adapter, supplied with Comscan
- Telephone Cable, supplied with Comscan
- Existing Telephone Line
- XCI Modem

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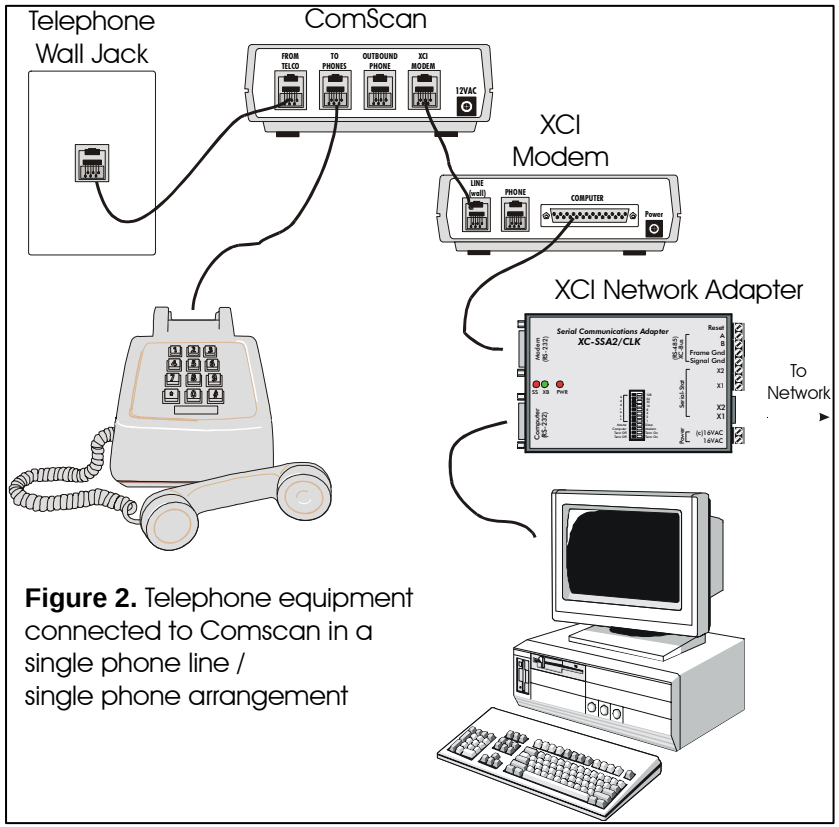

Figure 2. Telephone equipment connected to Comscan in a single phone line / single phone arrangement

Figure 2 shows a single line/single phone arrangement. To install the Comscan on a single telephone line, follow these steps:

1. Unplug the telephone cable from the wall jack.

2. Plug one end of the telephone cable provided with the Comscan into the "FROM TELCO" port on the back of the Comscan. Plug the other end of the cable into the wall jack where the phone was connected.

3. Plug the small end of the AC power adapter provided with the Comscan into the power input port labeled "12VAC" on the back of the Comscan. Plug the AC adapter into a standard 110-volt outlet.

The Comscan will begin a self-check immediately after power is applied. The green ON indicator (LED) flashes during this time. When the Comscan completes it's self-check; the green LED remains illuminated. (If the LED continues to flash, and all peripheral equipment is on-hook, the Comscan is not properly connected.)

4. Connect the phone by plugging it into the "TO PHONES" port on the back of the Comscan.

5. Plug one end of the telephone cable provided with the XC-MODEM into the "XCI MODEM" port on the back of the Comscan. Plug the other end of the cable into the "LINE (wall)" port on the back of the XC-MODEM.

The Comscan is now connected and ready for use.

Installing the Comscan on a KSU/PBX Phone System

A KSU/PBX phone system is common in most office and commercial buildings. A KSU/PBX phone system allows incoming telephone calls on two (2) or more phone lines (phone numbers) and can be routed to any number of extensions. A KSU typically has features such as call holding, music on hold, conference calling and intercom paging.

Figure 3 shows a typical KSU/PBX phone system arrangement. For the Comscan to operate properly, it must be 'in front' of the KSU or PBX. In other words, the Comscan must be connected directly to the incoming telephone line. For best results, connect the Comscan to the last phone line in the rollover.

Caution: Do NOT plug the Comscan into a KSU/PBX phone system jack. You may damage the Comscan and/or the phone system. Damage caused by improper installation is not covered by any warranty.

Caution: You should be a Telephone Installer or be familiar with telephone wiring to complete this installation. If you have any question or are not confident that you can complete this installation procedure, contact a professional telephone system installer for assistance.

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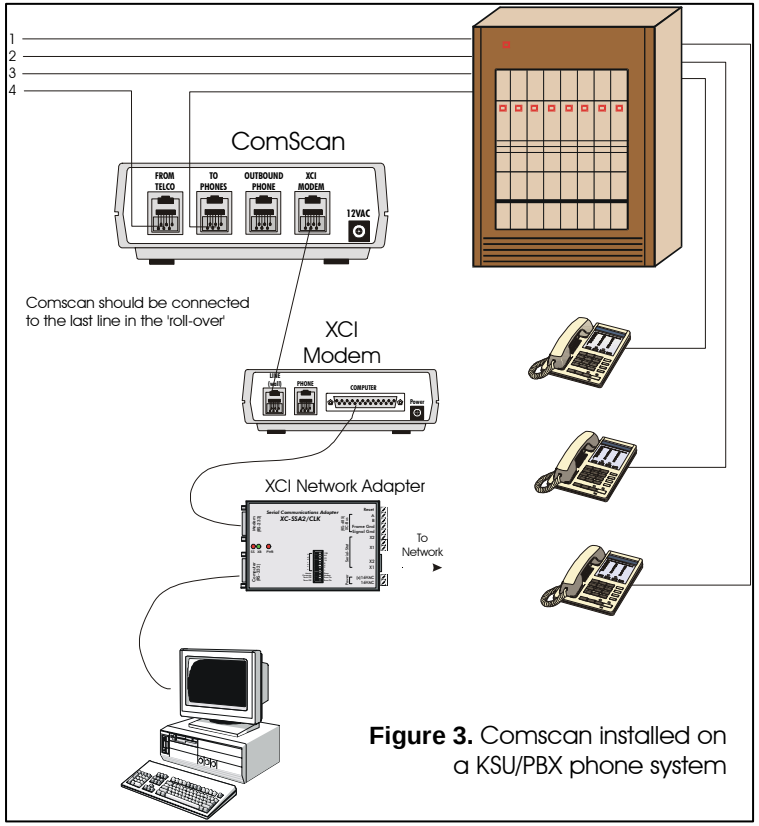

Figure 3. Comscan installed on a KSU/PBX phone system

Items needed for installation:

- Comscan
- Comscan Power Adapter, supplied with Comscan
- Telephone Cables (2), supplied with Comscan
- Existing Telephone Line
- Surface Mount RJ-11 Adapters (2), available at most hardware and electronics stores
- KSU or PBX Phone System
- XCI Modem

To install the Comscan on KSU/PBX system, as shown in Figure 3, follow these steps:

1. Locate the last telephone number in the customer's rollover.

2. Disconnect the last rollover telephone line from the KSU.

3. Using a surface mount RJ-11 jack with screw terminals, connect the telephone line to Pair 1 Tip and Ring (red and green) on the surface mount jack.

4. Plug one end of the telephone cable provided with the Comscan into the "FROM TELCO" port on the back of the Comscan. Plug the other end of the cable into the RJ-11 surface mount jack.

5. Plug the small end of the AC power adapter provided with the Comscan into the power input port labeled "12VAC" on the back of the Comscan. Plug the AC adapter into a standard 110-volt outlet.

The Comscan will begin a self-check immediately after power is applied. The green ON indicator (LED) flashes during this time. When the Comscan completes it's self-check; the green LED remains illuminated. (If the LED continues to flash, and all peripheral equipment is on-hook, the Comscan is not properly connected.)

6. Using another surface mount RJ-11 jack and telephone cable, connect the surface mount jack to the Central Office (CO) line on the KSU / PBX phone system. This is where the last line of the rollover was just removed.

7. Connect the Comscan to the KSU/PBX with the second telephone cable provided with the Comscan. Plug one end of the cable into the "TO PHONES" port on the back of the Comscan and the other end into the second surface mount RJ-11 jack.

8. Plug one end of the telephone cable provided with the XC-MODEM into the "XCI MODEM" port on the back of the Comscan. Plug the other end of the cable into the "LINE (wall)" port on the back of the XC-MODEM.

The Comscan is now connected and ready for use.

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Using Comscan

When a call comes in, the Comscan answers the call on the first ring. It then provides a ring-back tone to the caller, the intent of which is to make the scanning and switching process transparent to the caller.

After Comscan answers the call, it listens for an access code from the XCI Command Center software. If it detects the access code, it automatically routes the call to the XCI Modem for connection. If the Comscan does not detect the access code, it routes the call to the "TO PHONES" port. In this manner, a normal voice call is routed to the single line phone or KSU system and the process is completely transparent to the caller.

Dialing from the XCI Command Center Software

The access code to enable the Comscan to route the call to the XCI Modem is the touch-tone codes: #22

To connect to the XCI Modem via the Comscan and the XCI Command Center Software, perform the following step:

1. Launch the XCI Command Center software and open the desired project.

2. Click on the 'Dial Modem' icon.

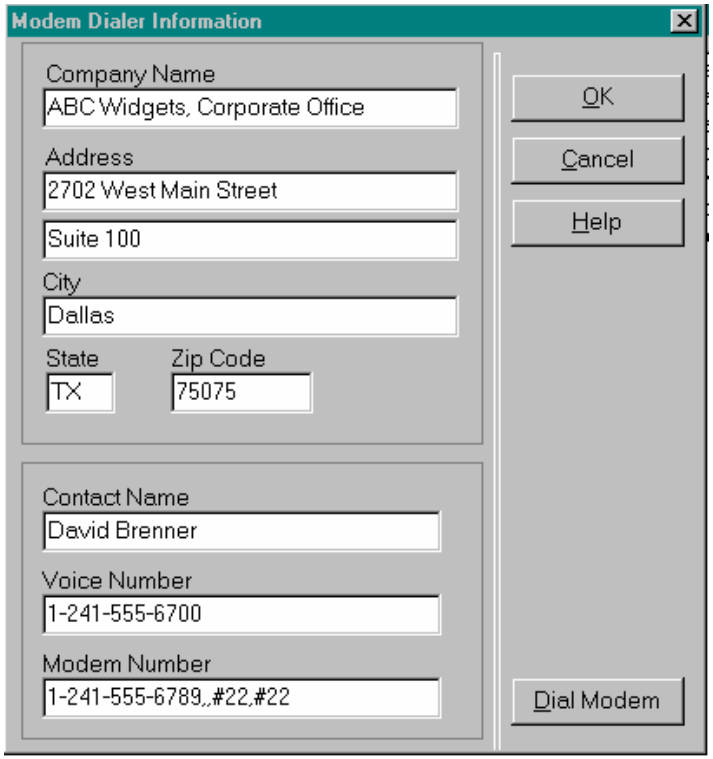
3. Fill in the Modem Dialer Information screen. At the bottom of the screen there is an entry location for the Modem Number. This is where the access code is entered for connection with the Comscan. As an example, if the phone number for access is 1-241-555-6789 the Modem Number field would be entered as:

   1-241-555-6789,,#22,#22

   A comma in the dial string allows a two (2) second pause before continuation of the touch tone codes. In the example above (factory recommended), the phone number is dialed, followed by four (4) seconds of waiting, then the modem will send the #22 access code, wait two (2) more seconds, and then send the #22 access code again.

   The pauses are needed because it is not possible to know exactly how long it will take for the telephone company routing equipment to get the call from the origination point (your location with the XCI Command Center software) to the destination point (the location with the Comscan). It may be necessary to adjust the number of pauses in the dial string in order to connect reliably with the Comscan.

4. After entering the Modem Dialer Information, click 'Dial Modem' if you are ready to dial the location, or click 'OK' in order to save the information. Clicking 'Dial Modem' automatically saves the information you have entered.



See the XCI Command Center Software installation guide and help files for information on using the software.

Registration Information

Comscan has been registered with the Federal Communications Commission (FCC). It meets the FCC requirements and may be connected directly to your telephone line. On the bottom of this equipment is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. If requested, this information must be provided to the telephone company. Use the REN to help determine the maximum number of devices you can connect to your telephone without eliminating their ability to ring when your number is called. In many areas, the sum of the RENs of all devices connected to one line should not exceed 5.0. To determine how many devices you can connect to your line, contact your local telephone company to find out the maximum REN for your area.

Comscan may not be connected to a party line or a coin line telephone network. If Comscan does not function properly, disconnect the unit. Do not leave a potentially damaged device on a telephone line.

If Comscan causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, the telephone company will notify you 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.

The telephone company may make changes in the telephone network. Should these changes affect Comscan, the telephone company must notify you, in writing, to enable you to maintain uninterrupted service.

FCC Rules Part 15 - Computing Devices

Note: 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, and uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the Comscan.

This unit complies with DOC RFI Standards.

XCI Corporation
1304 W. Walnut Hill Lane, Suite 200
Irving, TX 75038
(972)580-8001 (972)580-7774 fax
http://www.xcicorp.com

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