

IDENTIFIER PLUS

Manual



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800.648.3207

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INTRODUCTION TO THE MANUAL

THE "IDENTIFIER PLUS" CONSISTS OF TWO PARTS: THE "VIDEO ADAPTOR" WHICH IS DISCUSSED FIRST, AND THE "IDENTIFIER DID MODULE" WHICH IS DISCUSSED SECOND.

- 1) Immediately upon delivery, the "Identifier Plus" needs to be tested.
(Even if your DID lines are not installed yet.)
- 2) Un-wrap the "Identifier Module" (large box with liquid crystal display & small keypad). Check it for damage, then plug it into a wall outlet.
- 3) If the Video Adaptor (small white box the size of a computer modem) is included, plug it in and connect it to the "Identifier." (Page 4)
- 4) Follow the video adaptor programming instructions, then Down-load. (Page 5)
- 5) For non-video systems, follow the "Identifier" programming instructions. (Page 11)
- 6) Perform the Initial Testing Sequence on the "Identifier." (Page 17)
- 7) Call the factory immediately, if any initial test sequence fails.
- 8) Leave both the "Identifier" and Video Adaptor plugged into power (wall-outlet) at all times, to avoid wearing down the internal lithium batteries.
(After completing the above steps, leave both units plugged in.)
- 9) Don't forget to read the Helpful Hints section.

TECHNICAL ASSISTANCE

FOR TECHNICAL ASSISTANCE, YOU SHOULD CONTACT THE FACTORY AUTHORIZED DEALERSHIP YOU PURCHASED THE "IDENTIFIER PLUS" FROM. IF YOUR DEALER IS UNABLE TO ANSWER YOUR QUESTIONS, YOU MAY CALL THE IDENTIFIER SERVICE CENTER AT (800) 648-3207, DURING STANDARD BUSINESS HOURS. PLEASE HAVE YOUR SERIAL # (ACCESS CODE) READY, SO THAT WE MAY ACCESS YOUR RECORDS.

YOUR SERIAL # IS _____.

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VIDEO ADAPTOR USER MANUAL

INTRODUCTION

Congratulations on your purchase of the "IDENTIFIER PLUS" Video Adaptor. The Video Adaptor holds 800 client records standard, displays 200 character answer phrases and allows you to create up to four Secretarial Stations. Additionally, full "Call Counts," are maintained for each of your accounts. A parallel "Printer Port" is also supplied, for direct connection to any inexpensive Printer. At any time you may request a summary of all "Call Counts" to be printed. The printer will automatically make a record of each call as it comes in, including account number, DID number, time of call in, as well as time of call disconnect. Also you may request a "Hard Copy" printout of all your client data as a backup on paper. A full RS-232 serial port is also supported by the adaptor, for direct connection to any "PC" compatible computer. This will allow "Paperless" software to be used with the "Identifier," that is now available (call for details). A Keyboard is supplied with each adaptor for quick entry of answer phrases as well as controlling printer functions. A time-of-day clock is provided at all times on the video screen. An internal back-up battery will retain all clock and answer phrase information for up to 5 years, should external power fail. The adaptor is approximately the size of a computer modem.
(9" x 6" x 2")

VIDEO ADAPTOR REQUIREMENTS

A special video monitor is required to operate with the adaptor box. This monitor is called a computer terminal. Any computer terminal that will emulate the Wyse Corporation Model 55 terminal should work. The actual Wyse Corporation terminal is guaranteed to work, and will normally be supplied with all system sales. The Wyse part number for this terminal is printed on the rear page of this manual. Should you decide to use a different terminal, please make sure it is compatible with the Wyse terminal. Up to 4 of these computer terminals may be connected to the "Video Adaptor" to create up to 4 secretarial stations. A special cable will be needed to connect the computer terminal to the video adaptor, please call (800) 648-3207 to order this cable when not ordering your computer terminals from your authorized "Identifier Plus" dealership.

VIDEO INSTALLATION

1. Please examine your "VIDEO ADAPTOR" for signs of obvious damage do to shipping activities. If damage is present, contact your authorized dealership immediately. Do not attempt to connect or operate the equipment.
2. Position your computer video monitor(s) and plug them into a surge protected wall outlet.
3. Connect each computer monitor to the "Video Adaptor" using the special cable provided. One end of the special cable will have a male DB-25 connector (plug this end of the cable into the monitor connector labeled "MODEM"). The other end of the special cable will have a modular phone plug on it (plug this end of the cable into the video adaptor where it is labeled WYSE 1, WYSE 2, WYSE 3 or WYSE 4). The WYSE 1 connection is the "Master Terminal Position" and should be reserved for the Answering Service's Owner or Office Manager's terminal position. This is the only terminal position that will allow for new accounts to be entered or deleted.
4. Plug the wall mount "Power Supply" (specially marked in its own box) into a wall plug that is surge protected. Then connect the wire leading out of the "Power Supply" to the video adaptor where it is labeled POWER 12V.
5. Connect the computer monitor keyboard to the computer monitor. If you have purchased a 4 port system, only 1 keyboard is needed. This keyboard must be connected to the computer monitor in the WYSE 1 position (Master Terminal Position). If you have purchased either the 8, 12 or 16 port system, then a keyboard will be needed for each computer monitor you plan to use.
6. Now connect the "Identifier" module to the Video Adaptor box using the special cable supplied. One end of the special cable has a male DB-25 connector (connect this end of the cable to the "Identifier" where it is labeled "Computer Serial Port RS-232 DB-25"). The other end of the special cable will have a modular phone plug on it (plug this end of the cable into the video adaptor where it is labeled ID 1, ID 2, ID 3 or ID 4). Use ID 1 if you have a 4 port system, ID 2, ID 3, ID 4, if you have the 8, 12 or 16 port systems.
7. Turn on the power switch on each computer video monitor. After a few seconds adjust the brightness & contrast controls to get a clear picture. Next, press the round silver "Reset Button" on the video adaptor box once. Check to see if the light on top of the video adaptor box is green or red. If the light is red, press the reset button once more. If the light is green, then the video adaptor is ready for programming. Until programming is complete, NO calls will be taken or shown on the computer monitor screen (See Page 5).
8. An optional parallel printer may now be plugged into the parallel printer port of the video adaptor. Additionally, the video adaptor supports two full RS-232 serial ports for direct connection to any "PC" compatible computer. Please call for the special cables required.

VIDEO PROGRAMMING

1. Using the keyboard of computer monitor #1 (plugged into WYSE 1 of the video adaptor), press the numeric (0) key. Your four digit serial number (access code) will be displayed on the top line of your display. This is your programming access code.
2. The programming mode is entered by holding down the (Shift) key, then pressing the 3 key (use the 3 key that also has the # symbol on it). Additionally, your 4 digit access code described in section 1 must be entered now. The access code will be displayed as you enter each digit. If you make a mistake, immediately press the "ESC" key and try again. After you see your correct access code displayed on the screen, strike the "ENTER" or "RETURN" Key. The programming mode is now set & ready.
3. The programming mode will allow you to enter new accounts. Each depression of the "ENTER" or "RETURN" Key will advance the account number until 800 is reached.
4. When the desired account number is reached, the DID number may be directly entered from the keyboard. Example: the DID number is 2400. Press 2, then 4, then 0, then 0. Mistakes are corrected by re-entering the DID number immediately before pressing the "ENTER" Key. If you are using a 3 digit, instead of a 4 digit DID number, then you MUST enter a 0 in the forth position. Example: the DID number is 680. Press 6, then 8, then 0, then a final 0 to fill the forth position. The next entry would be 6,8,1,0 then 6,8,2,0 then 6,8,3,0 then 6,8,4,0 and so on.
5. Additional DID numbers may be entered by pressing the "Enter or Return Key" to advance the next account number. Holding down the "Enter or Return Key" will automatically advance the accounts rapidly without having to press the "Enter or Return Key" over & over again.
6. The answer phrase is programmed by pressing the (F1) Key after the appropriate account number is reached. The (F1) Key is located in the top left hand corner of your keyboard.
7. The display cursor will indicate the current answer phrase letter or number being programmed. The cursor will automatically advance to the next line when the current line is full. The first 40 characters (5 of these are the DID number and a space) of each answer phrase may be down-loaded into the main "Identifier" (to be displayed on the liquid crystal screen). Each answer phrase consists of 3 lines, 40 characters on the top line and 80 characters each on the second and third lines for a total of 200 characters. Mistakes are corrected by backing up the cursor using the "back space" key. The cursor may additionally be moved forward without erasing any characters by using the "right arrow" key. The other "Arrow" Keys also work as expected.
8. Striking the "Enter or Return Key" at any time during answer phrase programming will immediately advance to the next account number for further programming of higher accounts.
9. Pressing the "ESC" Key (Escape Key) at "any time" during programming will return the system back to the call taking mode, with all programming being saved. Therefore, if a call comes in while you are programming, pressing the "ESC" Key will allow you to take the call as normal.

VIDEO PROGRAMMING CONT.

10. Pressing the (F2) Key will clear the "Call Counter" for the account number currently being displayed on the screen.

11. Pressing the (F3) Key will back up the account number one account position.

12. Pressing the (F4) Key will make a back-up copy of all your (800) client account records. The back-up copy will be stored into your second back-up memory card. Please follow the instructions below exactly! If you have a question, please call the factory first at (800) 648-3207.

A). First, press the round silver reset button on the video adaptor once. Make sure the light on top of the video adaptor turns from green to RED.

B). Insert your back-up memory card (right side up) into slot number 2 (the lower slot) on the video adaptor. Make sure the card is pressed firmly into place.

C). Press the round silver reset button again. Make sure the light on top of the video adaptor turns from red to GREEN.

D). Enter the programming mode again using steps 1 & 2 of page 5.

E). Press the (F4) Key now. The back-up will begin.

F). When "Back-Up Complete" is displayed, press the round silver reset button again. Make sure the light on top of the video adaptor turns from green to RED.

G). Press the memory card "Release Button" located immediately to the right of the memory cards. Your back-up card will be ejected and you should put it in a safe place.

H). Press the round silver reset button again to return to normal operation.

13. Pressing the (F5) Key will delete the current account being displayed. Entering a DID number of (0000) will cause the current account to ring "BUSY" (useful if the account is late in paying their bill). Putting the DID number back in again will return the account back to normal. Also, it does not matter if your DID numbers are entered in order, or if you skip accounts between them.

14. Pressing the (F6) Key will print out a hard copy of all your customer information, onto paper, as an additional back-up. Make sure your parallel printer is plugged in and is set for "ON LINE."

15. Always remember to "Down-Load" your account information into the main "Identifier," from the (F5) instruction, found in the next page of this manual. Until now, all the programming that you have done, is to the "Video Adaptor." A copy of this information will be put (down-loaded) into the main Identifier, with the (F5) Key. The DID lines will ring BUSY until this is done.

IF KEYBOARD QUILTS WORKING:

1) Press Reset Button On Video Adaptor So Light On Top Turns To RED.

2) Turn Wyse Monitor Off For 5 Seconds, Then Back On Again.

3) Press Reset Button On Video Adaptor So Light On Top Turns Back To GREEN.

VIDEO DOWN-LOAD MENU

The "Down-Load Menu" will allow you to download answer phrases, print out all the monthly call counts, clear the call counts, set the clock / calendar and clear (re-format) all memory.

1. To enter the "Down-Load Menu," simply repeat the steps used to enter the normal programming menu (page 5), EXCEPT enter your access code backwards. Example: Pressing the (0) key shows your access code to be 8085. You would hold down the Shift key, press the (3) key (that also has the # symbol on it), then the 5, 8, 0, 8 keys and then the "Enter" key, to enter the down-load menu.

F1 - PRINT BILLING INFORMATION

2. The first menu selection (F1) - Print Billing Information, will cause the printer to print each account number accompanied by the DID number and current call count (only active accounts will be printed to save paper). Make sure the printer is plugged in & is set for "On Line."

F2 - SET CLOCK / CALENDAR

3. This second menu selection will allow you to enter the correct month, day, time and a (AM, PM) setting. Mistakes are corrected by re-entering the proper information for each entry immediately before pressing the "ENTER" Key. The "ENTER" Key must be pressed after each "correct" entry in order to advance to the next question. Remember to always enter a (0) before a month or time that only has one digit in it. Example: April is month number 4, therefore, you would enter (04) when asked for the current month.

F3 - CANCEL & CLEAR ALL MEMORY

4. This selection should only be used to clear or delete all of your accounts. Please Call First!

F4 & F5 - DOWNLOAD ANSWER PHRASES

5. This selection will transmit the video adaptor programming down into the main "Identifier." This download must take place before proper operation can begin and must be done EACH TIME a new account or accounts are entered. This process will take approximately 60 seconds to complete. To be sure the main "Identifier" properly received the information, check the small L.C.D. screen for the message "Transmit Complete." This message means that the download was successful. Press (F5) if you purchased your "Identifier Plus" after February 1996. Press (F4) if you own the old 200 account "Identifier" (not the adaptor).

F6 - CLEAR ALL CALL COUNTS

6. This selection will clear ALL of the call counters at once. Please make a back-up copy first.

VIDEO OPERATION

1. Operation will begin when all the proper cables and power plugs have been connected. Additionally, the adaptor will not be able to take any calls until the proper programming has been entered. To test, call a DID number that has been programmed into both the video adaptor and the "Identifier" (the "Identifier" is automatically programmed through the down-load (F4) or (F5) instruction). It is important to note that if the "Identifier" has NOT been programmed (Down-loaded from the (F4) or (F5) instruction) the video adaptor will not respond to any calls.

2. When a call comes into the "Identifier" and is recognized as a valid DID number, the "Identifier" re-transmits the information to the adaptor for video display. If a call comes in on line 1 (DID #1) of the "Identifier," the answer phrase will appear on line 1 (the top line) of your display. A call on line 2 (DID #2) will come in on line 2 (the second line down) of your display, and so on, for each of the other lines. A maximum of 4 calls may be taken and displayed at any one time on the 4 Port System. Up-grading the 4 Port System to either an 8 or 16 port is simple.

3. On the 8 and 16 Port Systems, the video display is controlled by the operator keyboard. When a call comes in, a short answer phrase (Identified by Line # and DID #) is displayed in the lower part of the video display. In order to view the full answer phrase (of all 200 characters) at the top of the video display, the operator merely presses the corresponding (FX) Key (the (FX) Keys are located across the top-most keys of your keyboard). Example: A call comes in on DID Line 9, the operator will press the (F9) Key to view the call. If another call comes in, simply press the corresponding (FX) Key to view it. You may switch between calls as many times as you like. At the end of each call, the screen will automatically clear for that call.

4. Your video adaptor is supplied with 2 memory cards (the memory cards are the same size and shape of credit cards). The main card is labeled the "Master Card." The second card is labeled the "Back-Up Card." The "Master Card" remains in the upper slot on the video adaptor at all times. The "Back-Up Card" is inserted into the lower slot ONLY when making a Back-Up copy of your clients' information from the instructions on Page 6 (Section 12). REMEMBER: Each time you enter new clients into the system, make a Back-Up copy. If your "Master Card" suffers a malfunction (MEMORY CARD ERROR), your video display will ask you to insert your "Back-Up Card." See instructions below to replace the "Master Card" with the "Back-Up Card."

A). Press the round silver reset button (on the video adaptor) once. Make sure the light on top of the video adaptor turns from Green to RED.

B). Press the memory card "Release Button" located directly to the left of the memory cards. The "Master Card" will be automatically ejected (return bad card to the factory). Insert your "Back-Up Card" into the upper slot now. Make sure it is pressed firmly into place.

C). Press the reset button again for normal operation (light will turn from Red to Green).

THE IDENTIFIER USER MANUAL

INTRODUCTION

Congratulations on your purchase of the "Identifier Plus." The "Identifier Plus" is completely solid state, making for long and trouble free operation. Please follow the installation and operating instructions carefully and do not hesitate to contact a technician if you have any questions or problems. The technical assistance number is (800) 648-3207.

PRE-INSTALLATION

Since this is a direct inward dialing (DID) identification system, you should have ordered the appropriate number of DID trunks from the telephone company that will correspond with the number of trunks that were ordered with your "Identifier," either 4, 8, 12 or 16. These trunks should be installed on individual RJ11X jacks and should be in rotary or hunt. This means that if the first trunk is busy, the next incoming call will hunt to the next available trunk in sequence. The telephone company will usually ask you for the make of the device and the FCC registration number and the ringer equivalence number. This information can be found on the back of the equipment, or for your reference, they are:

FCC Registration # - HEW29Y-17557-CD-T

Ringer Equivalence # - 0.0B

HOW TO ORDER YOUR DID TRUNKS

Due to the different types of equipment that are located in the central office of the Telephone company, we have programmed the "Identifier" to be compatible with all of them. When ordering your DID trunks and numbers you will be asked for the following information:

1. Three or four digit out pulse. (Meaning the number of digits that are sent down the DID trunk.)
Recommended - 4
2. Dial Pulse or Touch Tone. (This is the way the digits are sent.)
Recommended - Touch Tone, not Multi-Frequency or Dial Pulse (TT (DTMF), not MF or DP)
3. Wink or Immediate Start - (This is the way the digits are brought up on the equipment. Wink start reverses the battery where Immediate doesn't.)
Recommended - Wink Start

In order for the telephone company to install your DID trunks, the "Identifier" must be present to complete the installation. In technical terms, the "Identifier" provides the telephone company with a -48 volt power supply which completes the loop between their equipment and yours. This must happen for the equipment to work properly. Most important to watch out for, is that if Tip and Ring are reversed on the DID trunks, all lines will ring "BUSY."

IDENTIFIER INSTALLATION

1. Please examine your "Identifier Module" (from now on the "Identifier Module" will just be called the Identifier) for signs of obvious damage due to shipping activities. If damage is present, contact the manufacturer immediately. DO NOT attempt to connect or operate the unit.
2. See Appendix A, for the initial testing exercise. This test can be completed even if your DID lines are not installed yet (this test only takes a few minutes and should **not** be skipped).
3. The "Identifier" has four incoming ports (RJ-11's) labeled (DID TRUNKS ONLY), these ports are to be connected "only" to the special lines from the telephone company designated as DID Lines (Tip & Ring in). The DID ports are labeled 1 through 4. Run a patch cable from each RJ-11X wall jack (where the DID's come in) over the back of the Identifier unit (labeled "DID lines only" (RJ-11's)).

The same holds true for the four ports (RJ-11's) labeled Key-Equipment. The Key-Equipment ports are labeled 1 through 4. Each Key-Equipment port provides standard TIP & RING out (exactly like any normal phone line). Each Key-Equipment port should be connected directly to the C.O. input ports on the KSU (just like any other normal phone line). Run a patch cable from the rear of the Identifier unit (labeled Key-Equipment) over to the KSU (labeled C.O. inputs).

Each DID port has a one-to-one correspondence to each Key Equipment port. For instance, if a call comes in on DID #1, the corresponding Key-Equipment port #1 will feed the call into the KSU on C.O. port #1, then line #1 will begin to ring on all the Key-Phones. For example, the Identifier could easily be connected to:

- A). Four single line telephone sets (four separate home telephones). Not Recommended
- B). A single, four line telephone (KSU-Less Telephone). Not Recommended
- C). A business telephone system (Key-System with KSU). Recommended
- D). A PBX (Public Business Exchange). Not Recommended
- E). Cord Boards in some cases.

4. The "Identifier" has four additional RJ11 jacks labeled "Patching Jacks." These connections are used for both patching calls as well as call forwarding your DID lines to a different location. Each patching jack has a one-to-one correspondence to each DID jack. Therefore, to use call forwarding, a standard phone line must be plugged into each "Patching Jack" for the corresponding DID line to call out on. These patching lines should additionally be punched down (connected) to your Key-Equipment. This will provide a way for you to dial out during a standard patch. A, Y-connector or T-bar (which you can purchase from Radio Shack, part # 279-357) will allow you to connect the out-going patching line to both the "Identifier" and your Key-Equipment.

5. The "Identifier" has an additional connector labeled "DB-25, RS-232 Computer Port." This port is normally connected directly to the "Video Adaptor" (with the special cable provided). However, if you do not have a "Video Adaptor," you may connect this port to a "PC" computer.

IDENTIFIER PROGRAMMING

1. Pressing the (0) key on the small key-pad located on the front of the main "Identifier Module" will read out a four digit serial number. This is your programming access code.

2. The programming mode is entered with the depression of the (#) key, followed by entering your four digit access code. **(Never enter your access code backwards on the small key-pad).**

BUSY OUT ALL DID TRUNKS ?

3. The first menu selection will busy out all DID trunks. This will prevent calls from disturbing you during programming. If this is NOT selected, any incoming call will cancel the programming mode (with all programming being saved) and allow you to take the call as normal.

CHANGE OR ENTER NEW ACCOUNT INFORMATION

4. The second menu selection allows for new accounts to be entered. Each additional depression of the (*) key will advance the account number until 800 is reached.

5. When the desired account number is reached (the number on the top of the display), the DID number may be directly entered from the keypad. Example: the DID number is 680. Press 6, then 8, then 0. The fourth digit must remain a 0 if only a 3 digit DID number is being entered. Mistakes are corrected by re-entering the DID number immediately before pressing the (*) key.

6. Additional DID numbers may be entered by pressing the (*) key to advance the account #.

7. The answer phrase is programmed by pressing the (#) key after the appropriate account number has been reached.

8. The display cursor will indicate the current answer phrase letter or number being programmed.

9. The (7) key will advance the letter forward. Example: A, B, C, D etc. If the (7) key were to be held down indefinitely, you would see the complete alphabet in the upper then lower case. It would then show you the numerals and an array of symbols that could be used for abbreviations ending up where you started with a capital A. It will provide a circular sequence.

10. The (8) key will advance the letter backward. Example: C, B, then A.

11. The (9) key programs in the desired character and then moves the cursor to the right allowing for the next character to be programmed.

12. Pressing the (*) key anytime during the answer phrase programming will immediately advance the account number up one position for further programming of higher account numbers.

13. Pressing the (#) key anytime (even during answer phrase programming) will advance the system to the next menu selection, with all programming being saved.

IDENTIFIER PROGRAMMING (CONT.)

CANCEL ALL BUSY OUT'S ON ALL DID TRUNKS ?

14. The third or next menu selection is used to cancel all busy out's that were previously activated. See sections 3 and 21. **IMPORTANT:** When in doubt, press the (*) key, to insure no busy lines !

THE NEXT 5 MENU SELECTIONS APPLY ONLY TO CALL FORWARDING.
Call Forwarding is an option that may or may not have been ordered for your unit.
IMPORTANT: Always press the "reset button" before programming call forwarding **on!**

ENTER OR CHECK CALL FORWARDING NUMBER ?

15. Press (*) to enter or check the call forwarding number. This should be done each time before activating call forwarding. Up to 11 digits may be entered, including 1 + Area Code + Number. All calls will be forwarded to this number, when activated.

ACTIVATE CALL FORWARDING ?

16. Call forwarding will begin with the next call, when selected. Don't forget to cancel any busy out's, before returning the Identifier to normal operation. The L.C.D. screen will show the DID number and print CALL FORWARDED TO * - *** - *** - ****, with each forwarded call. Note: Your Key-Set or Telephone will not ring during forwarding.

CANCEL CALL FORWARDING ?

17. Next call will not be forwarded, your Key-Set or Telephone will begin to ring and operate as normal during incoming calls.

ENTER AND START BUSY DELAY TIME ?

18. This selection will create busy signals on all your DID trunks for a specified amount of time. When this menu is selected, you will be asked to enter the number of minutes you wish the DID lines to ring "BUSY." You may choose anything between 1 and 99 minutes. The (*) key must be pressed immediately after entering the "busy time" time to activate the busy timers. The screen will then show (BUSY DELAY TIME = XX:XX) and begin to count down. When the count reaches 00:00, all busy's will be removed except for the special one's activated in section 21. This menu selection was created for use mainly with call forwarding. First you would set the call forwarding number, then activate call forwarding. Next, enter a BUSY DELAY TIME, which would give you time to reach the distant call forwarding location. If timed right, calls would start coming in about the same time as your arrival. This feature could additionally be used for other purposes. Returning the Identifier to NORMAL OPERATION (Section 20, page 13) while the Forwarding Mode or Busy Delay is selected, will not De-Activate either selection.

IDENTIFIER PROGRAMMING (CONT.)

CANCEL BUSY DELAY AND ALL BUSY OUT'S ?

19. This selection will stop the busy delay timers and remove all busy signals from all the DID trunks, regardless of all the previous commands that created busy signals.

RETURN TO NORMAL OPERATION ?

20. This selection will exit the programming mode, with all the decisions made during the programming mode, still in full effect. Always return to normal operation after programming.

BUSY LINE # 1 ?

BUSY LINE # 2 ?

BUSY LINE # 3 ?

BUSY LINE # 4 ?

21. Each of the above selections will individually place a busy signal on the appropriate DID line, until removed by the (CANCEL ALL BUSY OUT'S) or (CANCEL BUSY DELAY & ALL BUSY OUT'S) Menu's. These menu's are useful during call forwarding, when you don't have dial-out lines connected to each patching line. For instance, you may only have 1 phone line at home, but have 4 DID lines connected to the "Identifier." In this case you would busy out lines 2, 3 and 4, while line # 1 would be the forwarding line to your home. If you had "Call Waiting" at your home, then lines 3 and 4 would be made busy, while calls were forwarded to you on Patching Lines 1 and 2. If you had rotary (hunt) lines in your home, then no busy out's would be necessary, as long as each PATCHING LINE on the "Identifier" had a standard out-dial phone line plugged into it. Remember, there is a one-to-one correspondence between each DID trunk and each PATCHING LINE (only for call-forwarding, not patching), therefore, FOR EACH DID LINE TO BE FORWARDED, IT MUST HAVE A MATCHING OUT-DIAL LINE PLUGGED INTO THE MATCHING PATCHING JACK. When using the busy-out feature, the customer will receive a busy signal, prompting them to call again. To avoid this, the DID line may be disabled by placing a call to your DID number and leaving the phone off-hook.

BUSY OUT AFTER 5 RINGS ? (*) = YES (#) = NO

22. This selection is mainly used during call-forwarding to your home at night. This selection will give the calling party a "Busy Signal" if you fail to answer the call after 5 rings. This will prompt the caller to try again, instead of making them think no one is in the office. You will find this feature useful if you need to use the rest-room, accidentally fall asleep, or happen to be talking to a friend (your home phone line is tied up with another call) and the "Identifier" can't get through to you (receives a busy signal from your home phone line). Note: The "Identifier" makes the ringing sound your customer hears, therefore to make the customer count fewer rings before you answer, the "Identifier" stretches the "Rings" out (the rings have more pause between them). This means that your home phone will ring 8 times before the customer hears 5 rings (and then the busy signal). The default setting (after reset) is ON (YES - Busy After 5 Rings).

IDENTIFIER OPERATION

The "IDENTIFIER" is turned on by plugging in the power cord. We intentionally did not install an on/off button because the unit must provide a -48 volt power supply to the phone company at all times to keep your DID lines operational. If by chance the power plug is pulled, or building power fails, the only lines that would disconnect would be lines that had calls in progress or any line that gets a call while the power is out. It is very important to note that when a line goes down, the phone company will issue a busy signal for each line that is down. This busy signal can be distinguished from the busy signal the "Identifier" gives out, because the "Identifier" will always print "MADE BUSY" on the small L.C.D. display screen when it is producing the busy signal. Once you have determined the phone company "has dropped" your call forwarding (the DID lines are down), you will have to call your local phone company repair number (it is very important you get a "direct" repair number from your installer) and tell them to bring your lines "up" again. They will need the name of your company and your first DID number to do this. Some phone companies will need additional information to bring up your lines and this you must get from your installer before he leaves. At the same time they are bringing "up" your lines, the phone company is able to run a Diagnostics Test from their computer console. This will detect any trouble in the DID lines. Tip & Ring reversed, shorted line, open line and loop length. If the "loop length" is too long, low volume will occur and must be corrected.

THE USE OF AN UN-INTERRUPTIBLE POWER SUPPLY (UPS) IS HIGHLY RECOMMENDED. THE UPS CONTAINS A BATTERY, THAT WILL KEEP POWER TO THE "IDENTIFIER" AND YOUR PHONE SYSTEM AT ALL TIMES. ADDITIONALLY THE UPS WILL PREVENT POWER SURGES FROM REACHING THESE UNITS AND CAUSING DAMAGE. MOMENTARY DIPS, BROWN-OUTS AND FLICKERS OF LINE POWER ARE ALSO PREVENTED. DIRTY LINE POWER IS THE # 1 PREVENTABLE SOURCE OF UNEXPLAINED PROBLEMS.

Operation begins when the power cord is plugged in. The "Identifier" will immediately print "* RESET *" (which will quickly disappear indicating all internal tests have passed), then "READY=XXX". The READY = XXX is a counter of the total number of accounts programmed into the "Identifier". At any time the (0) Key may be pressed to read the Ready Count, as well as, read out your private serial number (access code). When * RESET * disappears from the screen, the "Identifier" is ready to take a call. Once the appropriate cables have been installed and the tests in Appendix A completed, the "Identifier" is ready for full operation. To test the system, simply call one of your DID numbers. When a call comes into the system, you will see on the display the DID number followed by the answer phrase, if programmed in. If the DID number is followed by "MADE BUSY - UNRECOGNIZED DID NUMBER" then it will be necessary for you to program in your DID numbers according to Page 11 (section 4). If the DID number is followed by "MADE BUSY" only, then it will be necessary to un-busy the line by the instructions on Page 12 (section 14). Or, "MADE BUSY" means you are plugged into an un-authorized port of the "Identifier" and should call the factory for further instructions. IF YOU HEAR A BUSY SIGNAL AND THERE IS NO RESPONSE ON THE "IDENTIFIER", the phone company hasn't brought your DID lines "up" yet. Immediately inform your phone company installer, to have this situation corrected.

SETTINGS AND CONTROLS

RESET BUTTON:

The reset button is located on the lower left rear back panel of the "Identifier." It will cause the "Identifier" to RESET or return to normal operation whenever the "Identifier" becomes affected by static electricity or a power surge from either the power lines or from the telephone lines plugged into it. **IMPORTANT:** Whenever you suspect anything to be wrong with the "Identifier," press the RESET BUTTON Immediately. You will not lose any of your answer phrase programming or D.I.D. account numbers. However, any busy out's, will be de-activated, until re-programmed "on" again. You may optionally reset the "Identifier" by pressing the -5- key on the small key-pad (this performs a "Soft-Ware" reset), but it may still be necessary to press the rear reset button to do a "Hard-Ware" reset. Or unplug the main power cord for 5 seconds.

DISPLAY CONTRAST - AND - RINGER VOLUME CONTROL:

There are two settings on the rear back panel of the "Identifier." One adjusts the front panel Liquid Crystal Display (LCD) screen making it lighter or darker, so it is easier to read. The other setting is for how loud you want the internal tone ringer inside the "Identifier" to ring. You may adjust this Up, Down or Off.

D.I.D. VOLUME CONTROL - AND - TILT FEET:

This 4 position switch is located on the bottom panel of the "Identifier" between the "Tilt Feet" (the tilt feet hold the front of the "Identifier" up, making the L.C.D. display easier to read). Setting the 4 position switch to the "On" position selects Normal Volume, while setting to the "Off" position selects High Volume.

OPTION SWITCH:

This 6 position switch located on the rear back panel of the "Identifier" is used for diagnostic testing. Setting switch #1 to the ON position, will instruct the "Identifier" to ignore all disconnect signals coming from the central office. Setting switch #2 ON, will instruct the "Identifier" to ignore all disconnect signals coming from your Key-Equipment. Therefore, should you experience any unexplained "dropping" of calls, during the middle of normal conversation, it will be easy to trouble-shoot this problem. Switch #3, when ON, will disable the internal voice chip DID number repeater, useful for phone systems that require the (#) key. Switch #4 will silence the call-forwarding "beep-beep" you hear on your home telephone; this is necessary because some phone companies think the "beep-beep" is miss-dialing a wrong number and they busy-out the call. Switch #5 when On = Immediate Start, when Off = Wink Start. Switch #6 when On = Touch Tone, when Off = Voice Chip.

RS-232 COMPUTER PORT / 4800 PORT

This DB-25 & RJ11 connector support all signals necessary to connect the "Identifier" directly to any computer (RS-232 SERIAL PORT). This port provides the following ASCII data with each phone call. First transmission begins when call comes in: Line #, a 4 Digit DID number and a call-in code. Second transmission occurs when a call goes out: Line #, a 4 Digit DID # and a hang-up code (Appendix C contains the full details on serial protocol). Note: **DO NOT** connect to both the DB-25 & 4800 connectors at the same time; **only one or the other** is allowed.

BAUD RATE: 4800
STOP BITS: 1

DATA BITS: 8 (All Data is Buffered under DTR Control)
PARITY: NONE (See Appendix B for full details)

PATCHING & CALL-FORWARDING

When the "Patching" feature is used, you will be able to directly connect your DID trunks to your standard out-dial company lines. EXAMPLE: A patient calls in for their Doctor on one of the DID lines. You learn the patient must talk to their Doctor immediately. You then pick up one of your standard out-dial lines that has been connected to the Identifier as described in Section 4 (page 10) and dial the Doctor up at his home. Using the Key-Pad on the front of the "Identifier," you connect the Doctor and Patient directly together. At the end of the conversation, the "Patch" will be automatically terminated, without any further assistance from your operator. The "Identifier" will allow you to "Patch" **any** DID line to **any** out-going line, making it possible to have up to 4 patches going at the same time.

PATCHING INSTRUCTIONS

1. Place customer on HOLD.
2. Using one of your company lines that has also been plugged into the Identifier's Patching Port (Page 10 section 4), dial out on your Key-Set (telephone).
3. After reaching the party in question, proceed to step 4.
4. Next, using the (*) Key on the "Identifier's" Key-Pad, press the key (possibly several times) until a STAR symbol (*) appears in front of the answer phrase you wish to patch. (Each press of the (*) key will advance the (*) symbol from one answer phrase to the next.)
5. The final step is to press either the (1), (2), (3) or (4) Key on the "Identifier," signifying which "Patching Line" you used too out-dial on. It will be convenient to label your "Key-Set" or Telephones, 1, 2, 3 or 4, so no mistake will be made during a Patch.
6. The "Patch" is now in full progress, the letters (PTCH) will be written in front of the answer phrase that has been Patched. Additionally, the line on the "KEY-SET" where the call originally came in on, must be left on HOLD. If you wish to listen-in on the conversation, you must use the line you used to out-dial on. We do not recommend listening in during a Patch, as this will drop the volume and make it difficult for your customers to hear.
7. At the end of the "Patch," all circuits will automatically Un-Patch. **Don't forget to hang-up the telephone that was on HOLD.**

CALL FORWARDING . . . (Also read all of page 13, sections 21 and 22).

After having activated "Call Forwarding" from the instructions in Sections 15, 16 & 18 (page 12) you are ready to receive calls at a remote location. When a call comes into your home telephone, it will be identified by a steady beeping sound on the line (this will let you know the difference between a normal call on your phone line and an "Identifier" call). Press the (#) key on your home "touch-tone" phone to hear your customer DID number being spoken. You may repeat pressing the (#) key as many times as necessary until the DID number is fully understood. Next, pressing the (*) Key will connect the caller to you. It's as simple as that. To disconnect, press the (#) sign first, then hang-up. This must be done to prevent crooks from using your answering service to get free long distance calls. If you don't press the (#) sign, the phone company will put dial tone back on the phone line after you hang-up, and the calling party (crook) will be able to dial back out again. All charges for this second call will be billed directly to you.

APPENDIX A - INITIAL TESTING

After inspecting the "Identifier" for any damage during shipping, plug the power cord into your un-interrupted power supply or wall outlet. * RESET * should appear on the viewing screen, as well as READY = XXX. The reset message should disappear within 2 seconds indicating all internal tests have passed. Note: Always keep (2) touch-tone phones nearby for future tests.

THE FOLLOWING TEST WILL SIMULATE A REAL DID CALL IN EVERY RESPECT
BE PREPARED TO USE THIS TEST ANY TIME YOU THINK THERE IS TROUBLE .

1. PRESS THE RESET BUTTON BEFORE PROCEEDING.
2. Locate (2) standard Touch Tone phones. Never use key-equipment!
3. Plug one telephone into the "Identifier" RJ11 jack labeled DID LINE ONLY #1.
4. Plug the other phone into the "Identifier" RJ11 jack labeled KEY EQUIPMENT #1.
5. When you lift the receiver off the telephone plugged into the DID LINE ONLY jack, there will appear four zeros (0000) on the top line of the small L.C.D. viewing screen. (This is the equivalent of the central office beginning a DID call.)
6. Next, wait 1 second, then rapidly dial the last 3 or 4 digits of one of your DID numbers. 3 or 4 digits depends on how many digits you ordered from the phone company to be sent.
7. 1 second after dialing the last digit, the answer phrase will appear next to the four DID digits (the last digit being 0, if only 3 digits are being dialed). If no answer phrase appears, read Programming (Page 11, sections 7 through 11). If you hear a busy signal (this indicates a number has been dialed that has not been properly entered into the programming memory) read Programming (Page 11, section 5).
8. If the "Identifier" has been properly programmed for at least the correct DID number, a ringing sound will be heard in the receiver of the telephone just dialed on. Additionally, the second telephone plugged into the RJ11 KEY-EQUIPMENT PORT will begin to ring, and third, the "Identifier" itself will begin to ring.
9. Lifting the receiver on the phone plugged into the "Key-Set" Port will cause the ringing to quit, and a voice path will be established. You should be able to talk back and forth between the two phones and have no difficulty with volume. If in fact you are encountering a volume problem when plugged into the actual DID lines, it can be assumed the loop length to the central office is too long and a DID "Repeater or Line Amplifier" should be installed.
10. Repeat the above instructions for each of the other port positions.
11. A special feature is available to obtain the "DID" number while not being near the Identifier. When answering a call from one of your key-phones that is not in the same room, as the "Identifier," lift the receiver of your key-phone, then press the (#) symbol, on the phone key-pad. Your customer will continue to hear the standard ringing sound, while you hear a recording of the "DID" number spoken by a voice chip, internal to the "Identifier." Next, pressing the (*) key will allow you to answer the call. Note: This feature is only available if you ordered the Call Forwarding option.
12. The above tests will usually let you know immediately if the problem is in the "Identifier" or if it is a phone company related problem.

Always perform the above tests before calling the factory for technical assistance, as our technicians cannot help without knowing the results.

APPENDIX B - TROUBLE SHOOTING

IN EACH CASE BELOW, IF THE SOLUTION IDEA DOESN'T WORK, IMMEDIATELY PREFORM THE "INITIAL TESTING" STEPS ON THE PAGE BEFORE THIS ONE. IF ALL TESTS PASS ON PREVIOUS PAGE, NOTIFY PHONE COMPANY OF YOUR PROBLEM. IF ANY OF THE TESTS FAIL, CALL FACTORY FOR INSTRUCTIONS.

PROBLEM	SOLUTION
CUSTOMERS ARE GETTING A BUSY SIGNAL (LINE IS PROBABLY DOWN)	Press Reset Button, then call a DID # that has been programmed fully in. Run "Initial Tests."
CUSTOMERS GET NOTHING WHEN THEY CALL.	Press Reset Button, Try again. Run "Initial Tests."
CUSTOMERS GET CUT OFF DURING A CALL.	Press Reset, disconnect your key set, try regular phone in place.
CROSS-TALK	Probably in the Key-Set or wiring. SEE NEXT PAGE (Page 19)
LOW VOLUME	Loop length to phone company to long. SEE NEXT PAGE (Page 19)
SCREEN SHOWS -MADE BUSY-	May be plugged into unauthorized line, Press Reset if not.
SCREEN SHOWS MADE BUSY-UNRECOGNIZED DID #	Number not programmed in. Read Programming Section 5.
NO ANSWER PHRASE, BUT PROPER DID NUMBER COMES IN.	Read Programming Sections 7-11.
FIRST ONE OR TWO OF DID DIGITS IS GARBLED, WRONG OR MISSING.	DID Line is probably set for Immediate, instead of Wink Start.
DID DIGITS COME INTO MACHINE VERY SLOWLY	DID Line is set for rotary dial, have the company change to TONE.
KEY-SET DOES NOT RING OR LIGHT BUTTON DURING CALL	Reverse Tip & Ring going to Key-Equipment.
KEY-EQUIPMENT WILL NOT GO OR STAY ON HOLD	Some 2,3,4 line phones (KSU-less) Radio Shack & K-Mart have been found to have a holding problem when connected to the Identifier. Best Remedy: Use a true Key-Set, with a separate KSU.
OTHER PROBLEMS	Run the "Initial Tests" (page 17) then call a factory technician.

TROUBLE SHOOTING (CONT.)

TROUBLE SHOOTING CROSS TALK

Cross Talk is when you can hear conversation on one line, bleed over to a second line. This is a common problem that occurs when the phone line (DID or Key-Equipment line) becomes crossed or shorted to another line. The best solution, is to run individual wire pairs, from both the DID jacks and Key-Equipment connections, to and from the "Identifier." In other words, don't run all your phone lines in one common cable, instead, split them up.

FINDING THE SOURCE OF CROSS TALK

To determine where the cross talk problem is coming from, you will need 4 regular telephones. Plug 2 of the phones into the Key Equipment ports of the lines you are experiencing cross talk on. Plug the other 2 phones, into the same corresponding DID ports. Place a call through on both lines using the instructions on page 17. If cross talk can be heard through these phones, the problem may be in the "Identifier," if not, plug the DID trunks back in. Now place 2 calls through the "Identifier" by directly dialing two of your DID numbers. If you can hear cross talk now, between the two telephones, the problem will be in the DID trunks. If no cross talk is heard, the problem is in the Key-Equipment wiring. A factory technician will assist you in these tests, if needed.

FINDING THE SOURCE OF LOW VOLUME

When a call comes into the "Identifier," it of course has been forwarded from your customer's phone. By the time the calling party reaches you, the call has been diverted through several different central offices or circuits. This diverting process (call forwarding) will always produce a certain amount of low volume. However, if you feel the volume is much lower than normal, the following test will quickly determine the source of the problem. You will need 2 regular phones. Plug one into the Key-Equipment port that you are experiencing low volume on, the other into the corresponding DID port. Place a call between the 2 phones using the instructions on page 17. Check your volume now between the 2 phones, if it is low, the problem may be in the "Identifier." If the volume is normal, reconnect the DID trunk, and place a call through to the "Identifier" by dialing one of your DID numbers directly. Check the volume again, if it is low now, the problem is in the DID trunk. If the volume is OK, reconnect your Key-Equipment, and place another call. If the volume is low now, the problem has to be in the Key-Equipment, or Key wiring (call the company who sold the phone system to you for repairs).

TROUBLE-SHOOTING OTHER PROBLEMS

The quickest way to isolate any problem on one of your DID trunks is to move the suspected trunk to another position, and see if the problem moves with the trunk. For instance, you have static on trunk # 1, unplug trunk # 1 from the back of the "Identifier" (port # 1) and plug it into DID port # 2, if you NOW have static on port # 2 the problem must be in the # 1 DID line (because the problem moved with the trunk). Call the phone company for repairs.

HELPFUL HINTS

- A)** As soon as you think anything is wrong with the "Identifier," first hit the **RESET BUTTON**. If this does not clear up the problem immediately, briefly unplug the power cord from the wall outlet for a few seconds (5 seconds). This also holds true for the video adaptor.
- B)** When setting call-forwarding to a second location, always press the reset button on the rear panel of the "Identifier" first, before starting to program the call-forwarding feature.
- C)** When patching or call forwarding, the volume will usually be low (see page 19, "Finding the Source of Low Volume"), unless your out-going line has a (0.0) Zero Dot Zero rating. If your phone company has not given your phone lines the (0.0) rating, it's possible to purchase a line repeater (amplifier) that will bring up the volume as far as needed. The repeater is a telephone amplifier that connects between the "Identifier" Patching Jacks and your out-going phone lines. The top of the line repeater on the market today, is sold by R-Tec Systems (Reliance-Technology (817) 267-3141), the model number is VFR-5050 (Gray-Bar usually carries this). Another is TeLLabs (800) 445-6501 or (630) 378-8800, the model number is 7206 or 81.7206.
- D)** When selecting your Key-Equipment (the phone system that is used to answer your calls) the recommended choice is a true Key-System. This usually consists of a separate Key Service Unit (KSU), a box in which multiple Key-Phones plug into. This type of arrangement is suggested for the following reasons: When using 2 or more key-phones, the calls may be transferred between the phones, which allows for more than one operator to work at a time. The major benefit is to also have your company lines on the same phone, this will eliminate tying up your DID trunks with check-in calls, just have your customers check-in on the extra lines. For patching purposes, the conference button on a Key-System is a great benefit. Music on hold is usually supported by all Key-Systems, if wanted. Should you decide not to use a Key-System, please use care in selecting the proper telephone. Most of the so-called KSU-less phones on the market do not have the integrity of full Key-System phones. These phones will often not stay on hold. If you buy one, make sure there is a PBX (low voltage) setting switch on the phone. The "Identifier" resembles a PBX (Public Business Exchange) and therefore the phone must be compatible with this type of equipment. Save your receipt, in case the phone you purchase is not compatible. All full Key-Systems will be compatible in 99% of the time. (To date only Tel-Trend and the Trillium Panther are not recommended, also most 4 line KSU-less phones do not work).

WHY YOU NEED A GOOD UPS

A good UPS (Un-interruptible Power Supply) will filter the line voltage, providing smooth power to the "Identifier" at all times. This will prevent surges, as well as dips (brown-outs, that surge protectors can't prevent) from affecting the "Identifier" operation. Power line problems are usually of such short duration, it is almost impossible to detect the flickers (up & down) of line voltage, that can cause ANY number of miscellaneous problems. (Compressors, Xerox machines, Computers and other larger appliances are famous producers of power line noise.)

WHY YOU NEED A GOOD U.P.S.

Probably the greatest reason for needing an UPS (Un-interruptible Power Supply), is for the times when your building power completely fails. The "Identifier" normally supplies the phone company with a -48 volt supply that keeps their equipment operating. When your building power fails, so will the equipment at the phone company. This will usually cause a permanent busy signal to be put on your DID lines by the phone company, until you call and let them know your power is back on. An UPS will prevent this problem, especially on weekends when it sometimes hard to reach the right person at the phone company who can bring your lines up again. The top of the line UPS is made by BEST. Their number is (800) 356-5794. All their UPS's feature a switch-over time of less than 20 milli-seconds, which is more than adequate. The 250VA model will keep the "Identifier" operating for approximately 20 minutes. The "Identifier" requires about 100 watts, 160 with video.

NOTE: If your call forwarding is set to another location and the power is lost, your call forwarding will NOT be lost. Call forwarding can only be de-activated by the instructions on Page 12 (Sec.17).

INTERNAL BACK-UP BATTERIES

Both the main "Identifier" and the Video Adaptor contain internal lithium batteries. These batteries save your answer phrase programming as well as call counts, when the power cord is unplugged. These batteries have a 5 year capacity after the power is unplugged. As long as your "Identifier" is running, the batteries are not being drained. The battery in the main "Identifier" will protect your memory (programming) 99% of the time until lightning hits the phone lines. This is rare and should it happen, downloading from the second copy held in the video adaptor will correct the lost memory.

WINK OR IMMEDIATE START OPTION SWITCH

Wink or Immediate Start determines the type of signaling used between the "Identifier" and the central office. Wink start reverses the battery where Immediate start doesn't. This option switch (switch #5) is located on the rear back panel of the main "Identifier." Setting the switch to the "On" position selects "Immediate Start," while the "Off" position selects "Wink Start" - Recommended

GROUNDING THE "IDENTIFIER"

The Identifier has a six-foot power cord with a 3 prong plug at the end. This power cord must be plugged into a 3 prong "Grounded" wall outlet. The third prong (the ground prong) must be connected to a good earth ground. This means that if a phone company ground is available, please connect to it first. If not, connect to the power company ground. The ground is for a phone company supervision signal, and if not connected properly, could cause a dropping of calls (or your customers getting a Busy signal). The phone company measures the voltage from Tip to ground and Ring to ground for proper supervision signals. Additionally, there are 4 option switches inside the "Identifier" that adjust the ground signal, call the factory if you experience any problems.

HELPFUL HINTS (CONT.)

Your video computer monitor will last many years if properly cared for. The video tube in the monitor is very much like a jumbo light bulb, and should be turned down when not in use. This means that when the monitor is not being used, the brightness control (located on the face next to the power button) should be turned down until the picture disappears. The video monitor should NOT be turned OFF, rather left ON continuously, to insure the longest amount of life. The reason for this, is that each time the monitor is turned on & off, it will warm up & cool down. This constant warming up & cooling down stresses out the internal parts (like bending a piece of metal back & forth until it breaks). The air vents on the top of the monitor should NEVER be covered, as over-heating would occur within a few minutes.

The video adaptor box also contains air vents cut into both the bottom and top box plates. These vents MUST be open to properly ventilate the microchips inside. Never remove the rubber feet from the bottom of the box, as these hold the box up enough to let air into the lower vent holes.

The main "Identifier" contains a cooling fan that must not be accidentally covered, or anything placed on top of the "Identifier" that would cover it. Since the fan directs air INWARD to the "Identifier," any dust or excess cigarette smoke will collect on the internal parts and cause trouble if left there for extended periods of time. Have your installer clean out this dirt and grime at least once a year, every half year if the "Identifier" is in the same room as smokers. To clean the "Identifier," open the cover with the "Green Key" supplied. Be careful that none of the cables connecting to the display, fan, or keypad come unplugged. If a cable should become unplugged, please call a factory technician to obtain directions, on plugging it back in the PROPER way. Use smokeless ashtrays whenever possible.

The "Identifier" needs to be lightning protected. The major problem with lightning, are the DID lines. Since the DID lines are connected to earth ground through the 3 prong cord, lightning constantly tries to reach earth ground through the Identifier and your DID lines. The phone company is supposed to install lightning protection, but DO NOT count on this completely. We recommend a company called PANAMAX (800) 472-5555 for secondary protection. They offer a full replacement guarantee of your equipment and theirs up to 5 million dollars.

The "Identifier" contains an internal fuse. If lightning should hit, this fuse may blow and should be replaced with a 1.5 to a 2 AMP, 250 VOLT fast blow mini (5mm) fuse. The fuse is located next to the power cord connection, just inside the box. A spare fuse is provided.

FCC STATEMENT - PART 15

As required by FCC (Federal Communications Commission) this equipment complies with the requirements in part 15 of FCC rules for a class -A- computing device. Operation of this equipment in a residential area may cause unacceptable interference to radio and TV reception, requiring the operator to take whatever steps are necessary to correct the interference. (Try re-orienting the TV antenna or moving the "Identifier" away from the antenna. Or plug the "Identifier" into a different electrical out-let circuit than that of the TV. Radio Shack sells electrical interference suppressors that will help to correct this problem.)

FCC STATEMENT (EXHIBIT J)

This equipment complies with Part 68 of the FCC Rules. The label affixed to this equipment contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. The telephone company must be given notification prior to connection of this terminal system. Table J1 indicates the jacks which must be ordered to secure the correct services and facilities plus the REN, SOC, and FIC codes necessary to assure network protection and tariff compliance. For this product the service order code is 9.0F; the facility codes are 02LS2 and 02RV2-T.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

Table J1 indicates the jacks which must be ordered to secure the correct services and facilities plus the REN, SOC, and FIC codes necessary to assure network protection and tariff compliance.

If your telephone equipment 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 you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you have trouble with this equipment, please contact the Identifier Sales & Service Center for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

The maintenance section of this manual describes troubleshooting steps which one can take in the event of equipment problems.

This equipment may not be used on coin service lines provided by the telephone company. Connections to party lines are subject to state tariffs. Contact your local telephone company if you plan to use this equipment on party lines.

FCC TABLE J1

SYSTEM INTERFACE CONFIGURATION

REGISTRATION STATUS	FACILITY INTERFACE CODES	PORT DESIGNATION	REN OR SERVICE CODE	NETWORK JACKS
ORIGINAL	02LS2	PATCH	0.0B	RJ11
ORIGINAL	02RV2-T	DID	0.0B	RJ11

WARRANTY STATEMENT

Your new "Identifier" is a true precision instrument and with ordinary care and handling, will give you many years of maintenance-free performance. Also, it carries a parts and labor guarantee for one year from date of purchase (date unit is shipped). If, during the first year, there is evidence of defects in material or workmanship requiring repairs (all charges for repairs, labor & shipping will be fully covered), you should return the "Identifier" to the manufacturer for repair.

A loaner unit will be made available (for a small fully refundable deposit, about \$250.00) if your system suffers a malfunction during the warranty period. Loaner units are shipped "Monday through Friday Only" (if you are not willing to wait the period of time it takes for the loaner unit to arrive, you may order a re-furbished unit (800) 648-3207 to keep on the shelf as a back-up unit at all times). Also you must call before 2PM E.S.T., for same day shipment of the loaner unit. The loaner unit will be rent free for the first 10 days (the days it takes the factory to repair your unit are not counted). After 10 days, a rental fee of \$25.00 per day, for each day the loaner unit is not returned, will be assessed. After the warranty period has expired, a loaner unit will "only" be made available for a \$2,500.00 deposit, assuming that you have not renewed your warranty for an additional year. You may call (800) 648-3207 anytime during the first year to re-new your warranty. If you fail to call during the first year (and your warranty expires) it will be necessary to send your unit in for a check-up, before an additional warranty will be issued.

If during the first year there is evidence of defects in material or workmanship requiring repairs, all charges for parts, labor, shipping and insurance will be fully covered. If the problem did not result from defects in material or workmanship, all charges for repair and shipping will be deducted from your deposit. Please notify the factory before returning your system. We reserve the right to repair a damaged component, replace it entirely or exchange your machine. 99% of the time, we simply exchange machines to speed up repair time.

This guarantee applies only to the original owner (the warranty is non-transferable). It does not cover damage or malfunctions resulting from shipping damage, fire, theft, accident, lightning, water damage, neglect, abuse or other causes beyond our control.

This guarantee does not cover the repair or replacement of cosmetically related damage or any component damaged by the use of improper line voltage such as a 220-Volt outlet. Nor does it cover the replacement of expendable accessories.

The guarantee will also be automatically voided if your machine is opened, repaired or tampered with by anyone other than factory authorized personnel without permission.

This guarantee covers only the "Identifier" and the "Video Adaptor." All other equipment connected to the "Identifier" or the "Video Adaptor" (phone systems, video WYSE terminals, computers, etc.) are NOT covered under this warranty. If you experience any problems with a WYSE terminal, call (800) GET-WYSE.

This guarantee supersedes, and is in lieu of, all other warranties whether expressed or implied.

TIME AND MATERIALS

If your equipment suffers a malfunction after the warranty period, and you have not requested an extended maintenance contract, the charges for service are by the hour (call for current charges), plus postage. A loaner unit will be made available for a \$2,500.00 deposit (Monday through Friday only).

APPENDIX C - RS232 PROTOCOL

THIS APPENDIX SHOULD ONLY BE READ, IF YOU INTEND TO CONNECT THE "IDENTIFIER" TO A "PC" COMPUTER, CALL FOR DETAILS.

PURPOSE. The objective of this document is to establish a standard protocol to use in interfacing computer resources to the "Identifier." The protocol is herein referred to as "Identifier Protocol" [IDP].

PROTOCOL CONSIDERATION. Normally, very formal communications protocols require that each device (computer) on a communication line(s) take turns in receiving and sending data. The purpose of this turn taking is to prevent 'data collision' and/or preventing lose of data over a poor transmission line. One method of taking turns/flow-control is the utilization of CTR [Clear to Send] and RTS [Request to Send] signals. There are many serial/modem cards or computer BIOS chips on various computers that either do not honor or improperly implement the use of CTS or RTS signals. Since this resource is not reliable on all computer equipment, a general alternate method must be employed.

There are many ways to take turns: such as sending an ENQ software signal to a remote computer, meaning "can I send data." In turn, the remote computer ACK's the requester that Its "ok to go ahead." This causes a lot of jockeying back and forth before you get down to the business of sending/exchanging data. This method can prevent data collision but it's a lot of effort to accomplish, especially for our application needs.

IDEAL TRANSMISSION PROTOCOL. Ideally, a device should have the freedom to transmit when it wants/needs to. Yet, with this freedom how do you prevent data collision. ASSURING DATA INTEGRITY. A simple solution is to implement one of the methods commonly used in communications software: <1> CRC [Character Redundancy Check], or <2> the Arithmetic method known as the Checksum [CS] method. Due to the 'Pier to Pier' type of transmissions over short distances, the CS method of error checking should be adequate.

The CRC method prevents 99.95% of possible errors: the CS method prevents about 90%+ of possible errors. The CRC method is the hardest to implement. The CS method is very simple to calculate in that you just add up the hex value of each byte of data in the 'MESSAGE' being sent. Then append the low byte of the sum to the end of the message. This one byte is the CS value. The CS value will probably exceed the numeric value that can be held in a byte of data. If so, only use the low byte for the CS. For example: (See Next Page)

BASE MESSAGE:

```

+-----+
Hex Bytes: : 31 : 32 : 33 : 34 : 35 : 36 : 37 : 38 : = 1A4
+-----+
ASCII Value: 1   2   3   4   5   6   7   8

```

CS = 1A4H - 100H or A4H.

The byte holding the checksum overflowed when it reached the max value of 255, so the value that remains in the byte would be A4. Thus, the CS byte would be A4.

FULL MESSAGE:

```

+-----+
Hex Bytes: : 31 : 32 : 33 : 34 : 35 : 36 : 37 : 38 : A4 :
+-----+
:-----base message-----: CS :
:-----message-----:

```

IDENTIFIER OPERATIONS / INTERFACE. The "Identifier" is interfaced to a computer using a standard modem DB25 cable. Communications between the computer and the Identifier are via standard RS232 transmission parameters of 4800,N,8,1. This is a 'Pier to Pier' connection, so sending of signals other than DTR is not required. Data flow-control is accomplished by use of the DTR serial/modem line. When DTR is high, the Identifier will immediately send to the computer any message it has. If DTR is low, all messages will be buffered. If data is not promptly taken from Identifier it may be overwritten by the next call. Additionally, the (RI) (Ring In) signal will be asserted by the Identifier when a call has been received or hung-up and data is ready to be sent.

MESSAGES SENT BY THE IDENTIFIER. A message is sent to the computer each time a call is received or a caller hangs up. All bytes in a telephone message are ASCII characters except the CS. Telephone message format is: (See Below)

TELEPHONE MESSAGE

```

+-----+
: 37 : 31 : 32 : 33 : 34 : 20 : CS :      EXAMPLE 5.
+-----+
:   :   :   :   :   :   :   :
:   :   :   :   :   :   :   :      Checksum
:   :   :   :   :   : 20H = Call In Code
:   :   :   :   :   : 23H = Hung Up: Call Out Code
:   :   :   :   : 30H = Zero inserted if 3 digit DID

```

line.

```

: -----
: 4 digit DID trunk line number: i.e., 1234: DECIMAL
37H = Trunk line #1 (30H from the Video Adaptor Serial Port)
38H = Trunk line #2 (31H from the Video Adaptor Serial Port)
39H = Trunk line #3 (32H from the Video Adaptor Serial Port)
30H = Trunk line #4 (33H from the Video Adaptor Serial Port)

```

DE-BUGGING the DTR Signal for the Identifier

For purposes of de-bugging and to make sure of proper cable connections, a RED L.E.D. (Light Emitting Diode) has been installed on the rear back panel of the Identifier next to the two Ringer Control and Display Contrast controls. The L.E.D. will light only when a valid DTR (Data Terminal Ready) signal has been received from the "PC" computer connected to the Identifier. Remember, no transmission will be sent from the Identifier until it has received a valid DTR signal.

VIDEO ADAPTOR RS-232 Serial Port Protocol

The Video Adaptor contains 2, RS-232 Serial Ports. Each port is identical in the way it works. The reason we provided 2 ports is that it is now possible to work with 2 different external pieces of equipment. One being a "PC" compatible computer, the second being a Voice Mail unit.

The data that is transmitted out of the 2 ports, takes the following format: 9600 Baud, N, 8, 1.

The data is also under DTR & RI control, just like the Identifier. Example: A call comes in to, or is disconnected (hung-up) from, the Identifier. The Identifier immediately transmits the appropriate data to the Video Adaptor. The Video Adaptor immediately asserts the (RI) (Ring-In) signal, informing the external devices that data is ready to be sent. When (DTR) (Data Terminal Ready) signal is received back from the external devices, the Video Adaptor will transmit 7 bytes, just like the Identifier. EXCEPT for this difference: The first byte will be 30H for line #1, 31H for line #2, 32H for line #3 and so on, up to 3FH for line #16, BECAUSE the adaptor can have up to 4 Identifiers connected to it, for a total of 16 trunks. The second, third, fourth and fifth bytes sent from the adaptor represent the DID number, just like the Identifier. Example: The DID number is 1234. Sent will be 31, 32, 33, then 34 ASCII Hex. Next will be a single byte indicating a call "In" (20H) or a single byte indicating a call "Disconnect" (23H). The final byte sent will be the check-sum (see page 27, on how the check-sum is calculated).

NOTE: IF YOU ARE ONLY CONNECTED TO A 4 PORT SYSTEM, THEN THE TRUNK LINE # BYTES WILL BE 37H /38H /39H /30H JUST LIKE THE IDENTIFIER ON PAGE 27.

REQUESTING LINE STATUS UP-DATE ANY TIME YOU WANT IT

A special command from either the "PC" computer or the Voice Mail unit, will prompt the Video Adaptor to transmit a "Line Status Up-Date." You may request the "Status Up-Date" at any time and as many times as you like. Simply transmit the following 5 bytes to the Video Adaptor on either of the RS-232 Serial Ports. Send in ASCII Hex: 04 : 00 : 00 : 04 : XX (the XX is filled in by 00H if you want an up-date from Identifier #1, 01H for Identifier #2, 02H for Identifier #3 and 03H for Identifier #4. The Video Adaptor will respond to this command in the following way: Immediately, 17 HEX Bytes will be transmitted (DTR is ignored). The first 4 bytes will be the DID number for line #1. The second 4 bytes will be the DID number for line #2. The third 4 bytes will be the DID number for line #3. The fourth set of 4 bytes will be the DID number for line #4, and finally the 17th byte sent will be the check-sum. If a call is not in progress for a particular line, then 4 HEX Bytes of 23H will be inserted for the DID number.

WARNING: UNPLUG THE D.I.D. TRUNK LINES FROM THE BACK OF THE IDENTIFIER WHENEVER YOU HEAR LIGHTNING.

IF KEYBOARD QUILTS WORKING:

1. Press Reset Button On Video Adp. So Light Turns to RED.
2. Turn Wyse Monitor Off for 5 Seconds, Then Back On Again.
3. Press Reset Button On Video Adp. So Light Turns to GREEN.

***** END OF DOCUMENTATION *****