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Service Information for the U.S. and Canada

Your machine has been registered with the Federal Communications Commission, and under this program in the event of equipment malfunction, all repairs will be performed by Multi-Link, Inc. or a repair center we have authorized. The owner is restricted from performing any maintenance operation other than those specified within this instruction manual.

OBTAINING SERVICE UNDER THIS WARRANTY

To obtain service under this warranty, you must first request a RA number from our technical support department. Call the technical support department from Line 1 of The Stick II. Technicians need to test the unit over the phone before issuing the RA number. Once you have a RA number, present The Stick II™ product, the RA number and copy of a sales receipt (or credit card receipt) or other satisfactory proof of the date of the original retail purchase of the product to Multi-Link, Inc. or an authorized service repair center.

In Canada: Unit A1, 6120 - 2<sup>nd</sup> Street S.E.

Calgary, AB T2H 2L8

1-403-258-1646

In the U.S.: 225 Industry Parkway

Nicholasville, KY 40356

1-800-535-4651

Service Information Outside the U.S. and Canada

For units installed outside the U.S. and Canada, please contact your original point of purchase dealer for information regarding warranty and service.



**Important Safety Instructions**

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water, for example, near a bathtub, sink, kitchen in a wet basement or near a swimming pool.
5. Do not place this product on an unstable cart, stand or table. The product may fall causing serious damage to the product.
6. This product should never be placed near or over a radiator or heat register. It should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
9. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
10. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on this product.
11. To reduce the risk of electric shock, do not disassemble this product, but take it to a qualified serviceman when some service or repair work is required. Opening or removing of covers may expose you to dangerous voltages or other risks and voids the product warranty. Incorrect reassembly can cause electric shock when the appliance is subsequently used.

12. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a) When the power supply cord or plug is damaged or frayed.
  - b) If liquid has been spilled into the product.
  - c) If the product has been exposed to rain or water.
  - d) If the product does not operate normally by following the operating instructions. Adjust only those controls, that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
  - e) If the product has been dropped or the cabinet has been damaged.
  - f) If the product exhibits a distinct change in performance.
13. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
14. Do not use the telephone to report a gas leak in the vicinity of the leak.

**SAVE THESE INSTRUCTIONS**

Warranty commences on the date of purchase by the original retail customer.

The duration of any implied warranty of merchantability, fitness for a particular purpose, or otherwise, on this product shall be limited to the duration of the applicable express warranty set forth above. In no event shall we be liable for any loss, inconvenience or damage whether direct, incidental, consequential or otherwise resulting from breach of any express or implied warranty, of merchantability, fitness for a particular purpose, or otherwise with respect to this product, except as set forth herein. Some states do not allow limitations on how long an implied warranty lasts and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

The AC power supply used with this product is covered under this warranty. This warranty does not cover damage which results from accident, misuse, abuse, improper line voltage, lightning strike, fire, flood, or damage resulting from unauthorized repairs or alterations performed by an unauthorized service center. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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.

### IC Registration

The Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an accepted method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure, for their own protection, that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all devices does not exceed 100.

Notice: This product has been tested and meets the Class B limits for radio noise emissions set out by the Radio Interference Regulations of the Canadian Department of Communications.

### Limited Warranty

To register your purchase, please fill out the warranty card and mail.

We warrant that if The Stick II™ Two-Line Call Processor, manufactured by Multi-Link, Inc. and purchased by you, proves to be defective in material or workmanship, we will provide without charge, for a period of one (1) year (USA only), the labor and parts necessary to remedy any such defect.

# Section 1 . . . . . Introduction

Thank you for purchasing the true two-line call processor, The Stick II! This is an amazing product and we want you to be able to understand and use all of its unique features. We've tried to create a manual that is both detailed and easy to reference.



Many times when you read a manual, you immediately think of "What if . . ." or "How come . . ." questions. We have tried to anticipate this and have denoted these sections with the icon to the left. Enjoy your new Stick II!

### What is The Stick II?

The Stick II is a true two-line call processor. It *automatically* routes all inbound voice, fax and modem calls to the appropriate device every time. The Stick II can even process calls from both lines *simultaneously!* It allows users to share fax machines, phones, credit card authorization machines and other data devices between two phone lines for both inbound and outbound calls.

See Section 4 to understand the amazing programmability of The Stick II. You can program The Stick II to fit *your* particular situation.

### How does The Stick II work?

When installed on two phone lines, The Stick II automatically answers all inbound calls and "screens" for fax tones (CNG-Calling tones) and Security Access Codes (in the form of DTMF/touch tones). In the micro-seconds it takes to "screen" the call, The Stick II transmits phone company-simulated "ring-back" (tones) to the calling party. After the screening function is performed, the call is routed to the proper device.

The Stick II's performance is dependent on how it is installed on a home or business phone line and what programmable features are activated. You might want to review Section 4.1, Standard Features, to learn how to install your Stick II with complete *barge in protection*.

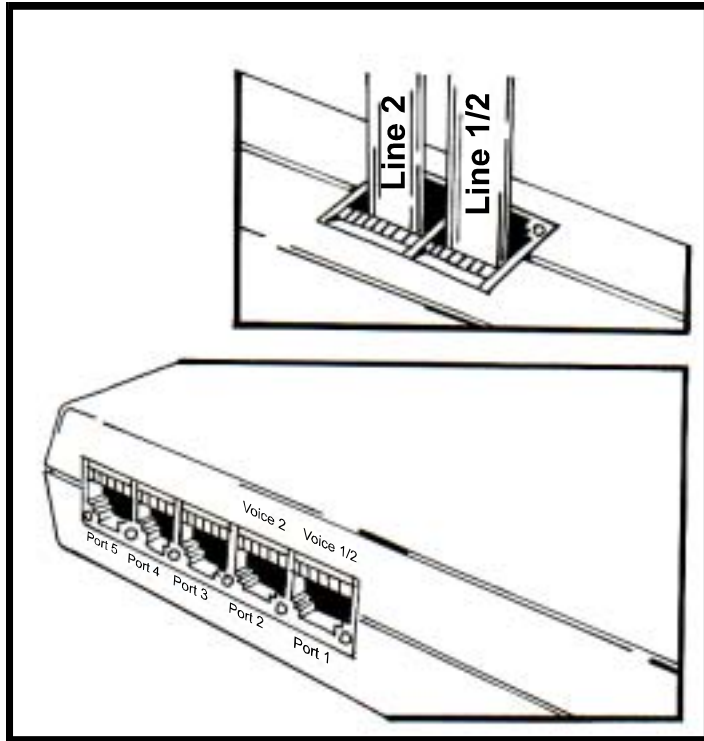


Fig. 1 The Stick II has two ports on top for incoming telephone lines. The five ports on the bottom allow a multitude of devices to share two phone lines.

The Stick II can operate on virtually all multi-line Key and PBX phone systems. We recommend a specific type of installation for The Stick II on either system. Refer to Section 2.4.

The Stick II is also compatible with virtually all **fax machines, modems, Credit Card Authorization Terminals, Point of Sale Terminals, Loop-Start dial-up TELEX machines, dictation machines, answering machines, cordless telephones and caller ID display equipment**-anything that requires a phone line to communicate.

## FCC/IC REGISTRATION AND WARRANTY

### FCC Registration

This equipment complies with Part 68 of the FCC rules. Two RJ14C terminated line cords are provided with the systems which requires RJ14C jacks. The telephone cords and modular plugs provided with this equipment are FCC compliant. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See instructions for details. 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. You must, upon request, provide this information to your telephone company.

The REN for The Stick II is 0.9B. The REN is used to determine the quantity of devices you may connect to the telephone line and still have all those devices ring when your telephone number is called. In most, but not all areas, the sum of the RENs of all devices connected to one line should not exceed five (5.0). The sum of the RENs for The Stick II + all other registered equipment connected to one line must be no greater than 5. 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.

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 you equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact your The Stick II dealer or Multi-Link, Inc., for information on obtaining service and 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.

This equipment may not be used on coin service provided by the telephone company, and is not intended for use with a party line service. This equipment is intended for use only on loop start service, and will not operate on ground start central office line.

**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, 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 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

## Section 7 . . . Technical Specifications

### INPUT POWER REQUIREMENTS

At AC Transformer: 110-125 Volts AC Only, 50-60 Hz

At Power Jack On The Stick II: 12 AC or 17 Volts DC

**POWER CONSUMPTION** 6.2 Watts

### CO INTERFACE

Ringer Equivalence Number: 0.9B

Input Ring Detection: 40-150 Volts AC, 15-68 Hz

### DEVICE INTERFACE

Battery: 50 Volts Nominal DC to All Devices

Off-Hook Detection: 3-80 mA

**RING GENERATOR FREQUENCY:** 20 Hz (+/- .1) Hz Voltage Regulated and Current Limited

**WAVE FORM:** True Sinusoidal

**RINGING No. LOAD:** Approx. 83 Volts RMS AC

Ringling 8000 Ohm Impedance (REN 1.0): Approx. 80 volts RMS AC

Ringling 4000 Ohm Impedance (REN 2.0): Approx. 69 volts RMS AC

Ringling 2667 Ohm Impedance (REN 3.0): Approx. 62 volts RMS AC

Ringling 2000 Ohm Impedance (REN 4.0): Approx. 56 volts RMS AC

Ringling 1800 Ohm Impedance (REN 5.0): Approx. 52 volts RMS AC

UL Listed 43X3 Telephone Appliance and Equipment (United States and Canada)

## Section 2 . . . Getting Started

### SERVICES OFFERED BY YOUR LOCAL TELEPHONE COMPANY

If you have or want to use these services, please read below before installing.

Most telephone companies are now marketing "Call Packages" that allow subscribers to customize their phone service in a multitude of ways. Most of the different services are compatible with The Stick II, but some may impede performance. Here are a few:

**Caller ID**-The data transmitted by the local telco, which identifies the calling party's phone number, arrives between the first ring and second ring. You should set your Rings To Answer (RTA) to 2 if you plan on using a Caller ID device. You may install your Caller ID box "before" The Stick II or on a voice port. Use Voice Port 1 for Line 1 and Voice Port 2 for Line 2. *Important:* If the Caller ID device is plugged into a voice port, be sure and program The Stick II NOT to suppress incoming rings. If you do suppress, then the Caller ID data will not pass through to the voice ports. *NOTE:* The voice port will ring at least twice before The Stick II processes the call. See Rings to Answer Section 1.2.



**Call Waiting**-The "beep" heard during a phone conversation, alerting you to another call, will not affect the performance of The Stick II. However, the Call Waiting service from the phone company might interfere with modem or fax transmissions. If you have problems, check your modem service manual or contact your local telephone company.

**Call Forwarding**- The Stick II's automatic answering function (answer after a programmed number of rings) will not allow calls to be forwarded to another phone number. You may want to weigh the pro's and con's of using The Stick II versus the Call Forwarding service.

**Q:** *I really need to forward my calls when I am away from my office. Can I still do that?*

**A:** Yes, but you will have to unplug the power to The Stick II or reprogram Rings to Answer (RTA) on The Stick II every time you leave your office and return. Call Forwarding will take over after a certain number of rings (ask your telco what that is). You can change the RTA to a number so that the call will be forwarded before The Stick II can answer. Essentially, you will not enjoy any of the benefits of having The Stick II on that line.

**Voice Mail:** The Stick II answers the line on incoming calls making use of The Stick II incompatible with your phone company's voice mail service. However, voice mail does work properly when your phone line is in use, so you still might want to consider it an option.

## 2.1 Initial Check

You should find the following items included in your Stick II packaging.

- The Stick II Two-Line Call Processor
- Product Manual
- One 12 Volt Class 2 Power Source
- Two Silver Modular Line Cords

If any of these items are missing, please alert the retailer from which you purchased the unit and also Multi-Link, Inc.

## 2.2 Powering Up

Before programming The Stick II you must choose a power outlet close to a telephone wall jack for installation. Insert the barrel plug into the jack (SEE LABELING BELOW) located at the end of the unit. Plug the power supply (included) into the 110 volt outlet. The green light beside The Stick II logo should be lit at this time.

USE ONLY WITH  
12 VAC 0.8-1.0A  
CLASS 2  
POWER SOURCE

## 2.3 Glossary of Terms

We have included this brief section of frequently used telephony terms to aid you in your installation of The Stick II and to keep the explanations brief.

- CAT** - Credit Card Authorization Terminal
- CNG Tone** - The tone produced by virtually all fax machines when they automatically dial another fax machine.
- CO** - Telephone company (central Office)
- DEMARC** - Location between the wiring that comes in from your local telephone company and the wiring you install to hook up your own telephone system.
- EXT** - (Telephone) extension.

- KSU** - A KEY System is a system in which the telephones have multiple buttons permitting the user to select outgoing or incoming central office phone lines directly. With a key system (depending on programming) you don't have to dial "9" to make an outside call.
- PBX** - Private Branch eXchange. A small version of the phone company's larger central switching office. Businesses can buy a PBX and have great programming flexibility.
- POS** - Point of Sale Terminal
- SOHO** - Small Office/Home Office
- TAD** - Telephone Answering Device

expenses.

### *My Voice Mail doesn't work.*

Once The Stick II answers the phone call, the voice mail feature assumes somebody has answered the call. Your Voice Mail will work only when the phone line is in use.

### *My Call Forwarding feature does not work.*

Standard call forwarding does not work with The Stick II. Delayed call forwarding and call messaging will work with The Stick II if the Rings to Answer for The Stick II is set higher than the number of rings set for this feature to forward or retrieve the call.

### *My fax answers all incoming calls.*

Change rings to answer on the fax machine to more than one. If this does not work, your fax may be polarity sensitive. We recommend you call technical support.

the Multi-Link Technical Support Department.

**My phone stays off hook even though I hang it up. I'm able to dial out just once before it goes off hook and I can't receive any phone calls.**

Check and see if the telephone is connected via line cord to one of the five ports on the bottom of The Stick II and your phone line cord is connected to any of the two phone line ports of The Stick II.

**My phone lines and devices are correctly connected to The Stick II and it still doesn't work.**

Check that the power supply is plugged into a power outlet and The Stick II. If your LED light on The Stick II is not lit up, then there is no power being supplied. Verify that the power outlet works by plugging in a lamp or some other device before calling the Technical Support Department.

**People tell me they call, but my phones aren't ringing.**

Check that the VOLUME on your phones is turned ON. Next verify that all the line cords are connected properly. Otherwise, call the Multi-Link Technical Support Department.

**When I answer the phone, there is no sound at all or a BIP sound can be heard.**

You may be receiving a fax! Press the SAC code for the port number where your fax is connected to transfer the call. Change your programming (Registers 01 and 02) so that next time faxes are automatically routed to the port where your fax machine is connected.

**I can not receive modem calls.**

Make sure that the person sending the data has the correct SAC (security access code) to access your modem port. If so, check how many commas they have in place after the phone number and before the SAC. Refer to Section 5 for more details.

**The line stays busy even though nobody is using any of the devices or phones.**

Check all the connections to The Stick II and verify that they are hooked up properly. If everything is fine, make sure your modem is not locked up. Otherwise, call Multi-Link Technical Support Department.

**I am able to send faxes, but I am unable to receive any even though my fax machine rings.**

Change the polarity on your line cord or get a polarity reversing cord. However, we recommend that you call our Technical Support Department before incurring any extra

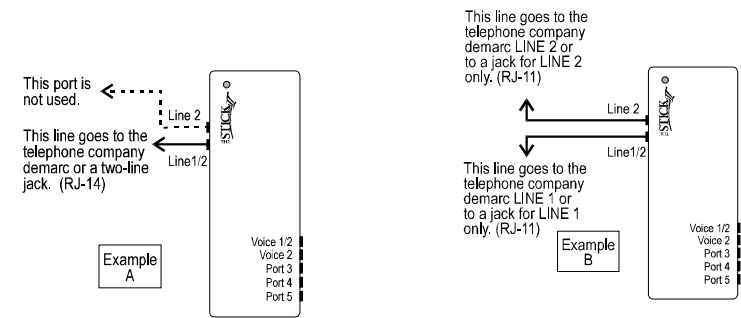
## 2.4 Connecting to the Phone Line

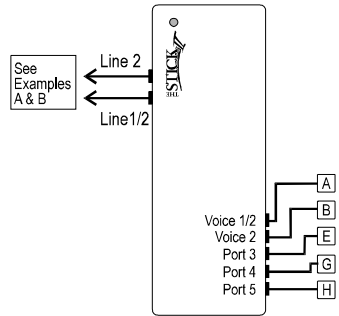
Before programming The Stick II, you will need to install it on your existing telephone lines. There are several ways to install The Stick II. Whether you have a KSU, PBX, or just two-lines running into your home or business, we have tried to make this section as simple and painless as possible. With each installation we have listed the main benefits, an estimate on the difficulty level and recommendations for professional installation.

We have designed the ports on The Stick II to accommodate households and businesses that are wired for two telephone lines and use a RJ-14 wall jack. This means that both lines can be accessed from one wall jack through one RJ-14 line cord (see Example A). This would allow you to plug into the Line 1 /2 port on The Stick II.

If your household or business has two phone lines wired separately and must be accessed from individual RJ-11 wall jacks, you would simply use the two RJ-14 line cords supplied to you and connect Line 1 to Line 1 /2 and Line 2 to Line 2 on The Stick II (see Example B).

The voice ports located on the bottom of The Stick II are also configured for households and businesses that might have two-line telephones. The two-line phones would simply plug into the Voice 1/2 port. If there are separate single line phones, they can be plugged directly into the appropriate ports.



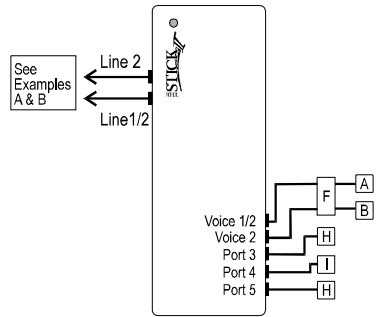


Installation Option 1:  
**Small Office/Home Office  
 College Dormitories**

**Main Benefits of this setup:**  
 Barge-In protection, processes two calls simultaneously, use of both modems at the same time, all equipment has access to two lines.

**Installation:** Simple to not so easy.  
 Depends on size of facility.

Notes:



Installation Option 2:  
**Small Office/Home Office  
 College Dormitories**

**Main Benefits of this setup:**  
 Barge-In protection, processes two calls simultaneously, use of both modems at the same time, all equipment has access to two lines.

**Installation:** Simple to not so easy.  
 Depends on size of facility.

Notes:

A = Phone for Line 1	J = Fax/Phone	S = Last Lines of KSU or PBX
B = Phone for Line 2	K = Secure Fax	T = KSU Outbound Only
C = 2 Line Phone	L = Public Fax	U = Lobby Phone
D = EXT Phone for Line 2 or TAD	M = **The Power Stone	V = Secretary
E = Single Line TAD	N = Money Order	W = Office 1
F = 2 Line TAD	O = Gas Monitor	X = Office 2
G = Fax/Modem	P = POS	Y = Office 3
H = Modem	Q = CAT	* Could be all modems or all CATs.
I = Fax	R = CAT/Phone	

# Section 6. . . . Trouble Shooting and Technical Support

If you are having difficulty with the installation or operation of your Stick II, please review the trouble shooting questions below. If you are unable to resolve the problem on your own, Multi-Link's Technical Support Department has the capability to test and program your unit over the phone.

Should you need to call and speak to a technician, try and call from the phone line connected to Line 1 of The Stick II. Our technicians will be able to conduct diagnostic tests and evaluate your programming to help you get your system up and running. If your unit needs to be sent back for repair, all returns must be issued a Return Authorization Number from the Technical Support Department BEFORE the unit is returned.

MULTI-LINK, INC. TECHNICAL SUPPORT TEAM  
 Monday - Friday 8 a.m.-8 p.m. Eastern Time  
 1-800-535-4651  
 www.multi-link.net

## *I've got this problem . . .*

***I do not hear a dial tone.***

You may have your phone restricted to a line that is already in use. If not, connect your telephone directly to the phone wall jack. If you hear a dial tone, then plug your phone back into The Stick II and disconnect the power supply. If you do not hear a dial tone, you may have a bad line cord from the wall jack to The Stick II line port. If this unit is within warranty, Multi-Link will replace the line cord for free.

***My phone clicks when I pick it up.***

Check and see if the line cord is connected to your phone wall jack at one end and one of the two input ports (LINE 1/2 or LINE 2) on top of The Stick II. If so and you still hear clicks, call

**How to Call Your Modem**

For any person to access your modem through The Stick II, they must know your programmed Security Access Code for the port with your modem. Dialing your telephone number and SAC is done on the remote computer's communications software. It should look something like this (for a HAYES-compatible modem):

**ATDT 1 606 555 1234 , , \* 3**

The commas after the phone number are commands telling the modem to wait two seconds per comma before dialing the SAC \* 3. You should instruct your friends to "time" a call to your residence. Tell them to count the seconds between the last digit dialed and the last ring to the phone before The Stick II answers the call (how many rings before The Stick II answers). Divide that amount of seconds by two and you have the needed number of commas between the phone number and SAC.

It is safe to repeat the SAC twice in the dialing string like so:

**ATDT 1 606 555 1234 , , \* 3 , , \* 3**

Note that additional commas will need to be inserted between the SACs at the end of the dialing string.

Some modems cannot dial the \* and # symbols. You may want to reprogram a specific code for one time access by an outside caller. Again if you have any questions, call our Technical Support line. They can help you out on timing or SACs.

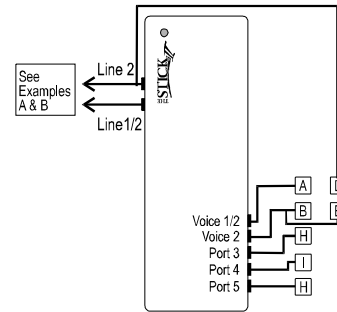
Installation Option 3:

**Small Office/Home Office with Extensions**

Main Benefits of this setup:

Convenience of TAD in different location, barge-In protection, processes two calls simultaneously, all equipment has access to two lines. Extension phone D is NOT barge-in protected.

Installation: Not so easy.



Notes:

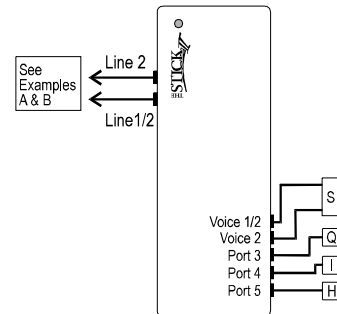
Installation Option 4:

**Common Business Application with Rollover**

Main Benefits of this setup:

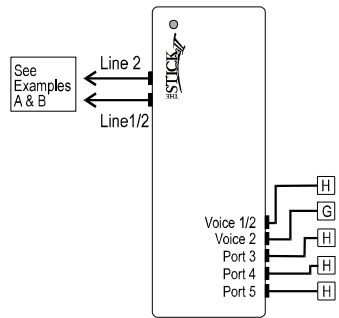
Barge-In protection, process two calls simultaneously, all equipment has access to two lines, fax calls don't ring phones.

Installation: Hire a professional.



Notes:

A = Phone for Line 1	J = Fax/Phone	S = Last Lines of KSU or PBX
B = Phone for Line 2	K = Secure Fax	T = KSU Outbound Only
C = 2 Line Phone	L = Public Fax	U = Lobby Phone
D = EXT Phone for Line 2 or TAD	M = **The Power Stone	V = Secretary
E = Single Line TAD	N = Money Order	W = Office 1
F = 2 Line TAD	O = Gas Monitor	X = Office 2
G = Fax/Modem	P = POS	Y = Office 3
H = Modem	Q = CAT	* Could be all modems or all CATs.
I = Fax	R = CAT/Phone	



Installation Option 5:

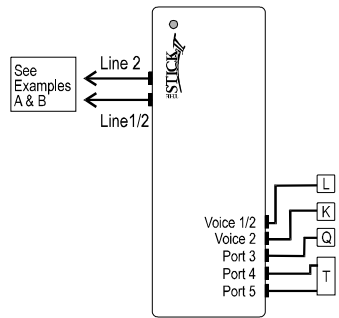
**Business with Non-Voice Needs and Dedicated Data Lines**

Main Benefits of this setup:

Barge-In protection, processes two calls simultaneously, all equipment has access to two lines, data integrity, additional surge protection, security.

Installation: Simple to not so easy.

Notes:



Installation Option 6:

**Standard Retail or Business Operation with Private Fax**

Main Benefits of this setup:

Barge-In protection, processes two calls simultaneously, all equipment has access to two lines, fax calls don't ring phones.

Installation: Hire a professional.

Notes:

A = Phone for Line 1	J = Fax/Phone	S = Last Lines of KSU or PBX
B = Phone for Line 2	K = Secure Fax	T = KSU Outbound Only
C = 2 Line Phone	L = Public Fax	U = Lobby Phone
D = EXT Phone for Line 2 or TAD	M = **The Power Stone	V = Secretary
E = Single Line TAD	N = Money Order	W = Office 1
F = 2 Line TAD	O = Gas Monitor	X = Office 2
G = Fax/Modem	P = POS	Y = Office 3
H = Modem	Q = CAT	* Could be all modems or all CATs.
I = Fax	R = CAT/Phone	

What can you do if you answer the phone and no one is there or the person at the other end says they're trying to send you a fax? You can manually transfer the call to your fax by pressing \*2 (SAC for Port 4). However, before you do, we suggest you inform the caller that you have a brilliant device that can detect incoming faxes and that they no longer have to call and tell you they are sending one.

ANSWERING MACHINES

An answering machine is an effective tool when used with The Stick II. When connected to either VOICE port, the answering machine will field any unanswered voice calls, and via a message, can provide instructions on how to access other equipment. Here's a sample message:

*Hi! You have reached (Name/Company/Phone Number). We are not in right now, but if you wish to leave a message, wait for the beep. If you want to send us a FAX, press \*2 (or your reprogrammed code) now. Start your fax transmission when you hear our fax signal. If you cannot dial \*2 on your phone then call back in Auto Fax mode. Thanks!*

**Retrieving an Answering Machine Message**

Most answering machines on the market today have factory preset "retrieval codes" for accessing a message from a remote phone. There are no special features or codes on The Stick II for accessing your answering machine any differently than you normally would. Just call your phone number, let your machine answer the line and enter your "retrieval code". **Again, we remind you to program all SAC's used for voice/data equipment different from your answering machine "retrieval code".**

COMPUTER MODEMS

The Stick II is compatible with dial-up modems that use a "single pair" RJ-11 line cord connected to a phone line. Most incoming calls to your modem are from remote (off location) computer modems. The Stick II will route calls to your computer modem when the calling modem dials the proper SAC after The Stick II has answered the call. You should not experience any slow down in your modem transmissions (as you might with a PBX or KSU system) due to The Stick II being on the line. The Stick II is essentially transparent after it answers the call.

# Section 5. . . . Pointers for Hook-Up of Voice/Data Equipment

This section involves the connection of communications equipment to The Stick II. You may configure the "hook up" of different types of equipment in a number of ways.

## FAX MACHINES AND PC FAX CARDS

The Stick II has special features that make it work extremely well with either a PC fax/modem or a fax machine. The feature that enables The Stick II to route an incoming fax call to your "fax" type device is "Fax Tone Detection".

If a PC FAX Card is connected to The Stick II at the Port 4 (factory preset for faxes), you should have no operational problems when a call is routed. There are about half-a-million different types of PC FAX Cards on the market today and each has its own operational idiosyncrasies. If you do experience a problem, check the operations manual included with the PC FAX Card. If you cannot figure the problem out on your own, then call our Technical Support toll free number. They'll be happy to help.

## WHAT IS A "FAX TONE"?

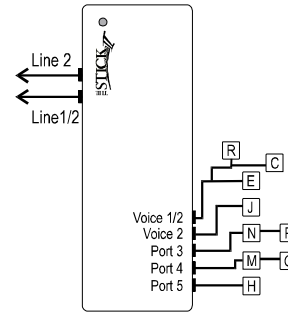
In a nutshell, most fax machines generate a tone when they are operated "automatically". Automatic generally means you just drop the paper(s) to be faxed in the document carriage, the machine loads it, the desired phone number is entered, you hit the START button and you're done. The machine automatically dials the number and begins emitting the tone (commonly known as CNG or AUTO-FAX tone) to identify itself as a fax-type device. This tone is continuously transmitted until the called fax machine answers the call and "handshakes" with the sending fax. With The Stick II at the receiving end, the call is "answered" and the fax tone is detected. At that time the call is routed to the port you have designated or PORT 4 (factory default).

## WHAT ABOUT A MANUAL FAX?

Sometimes people lift the handset on their fax machine and dial out to send a fax. This is what we call a "manual" fax. By doing this they have told their fax machine they want to use it for voice purposes only. No problem for the fax machine, but now CNG tones will not be transmitted. If The Stick II is at the receiving end, it will answer the call, detect the absence of fax tones, assume it is a voice call and route it to the appropriate VOICE port.

## Installation Option 7:

### Convenience/Gas Stores or Retail Businesses



#### Main Benefits of this setup:

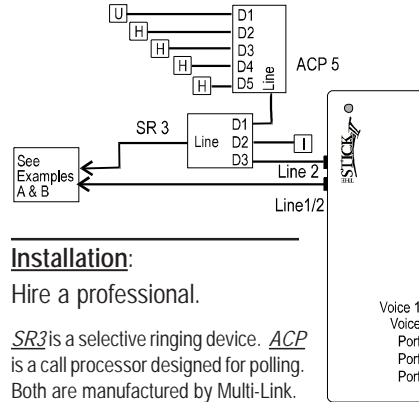
Barge-In protection, processes two calls simultaneously, all equipment has access to two lines, data integrity, saves money by line sharing, retrieval of data can be automatic, minimal equipment maintenance, security.

**Installation:** Hire a professional.

\*\*The Power Stone is a call activated power controller manufactured by Multi-Link, Inc.

## Installation Option 8:

### Simulated PBX for a Small Office Complex



#### Main Benefits of this setup:

Barge-In protection, processes two calls simultaneously, use of any 2-line phone & any device simultaneously, fax calls don't ring phones, data integrity, security, saves money by line sharing, call conferencing between the two-line phones.

#### Installation:

Hire a professional.

SR3 is a selective ringing device. ACP is a call processor designed for polling. Both are manufactured by Multi-Link.

A = Phone for Line 1	J = Fax/Phone	S = Last Lines of KSU or PBX
B = Phone for Line 2	K = Secure Fax	T = KSU Outbound Only
C = 2 Line Phone	L = Public Fax	U = Lobby Phone
D = EXT Phone for Line 2 or TAD	M = **The Power Stone	V = Secretary
E = Single Line TAD	N = Money Order	W = Office 1
F = 2 Line TAD	O = Gas Monitor	X = Office 2
G = Fax/Modem	P = POS	Y = Office 3
H = Modem	Q = CAT	* Could be all modems or all CATs.
I = Fax	R = CAT/Phone	



**Q: *What happens if Bob is on the phone?***

**A:** You will hear a busy signal.

**Q: *What if both Line 1 and Line 2 are in use, can I still make an Port-to-Port call?***

**A:** No. You need an outbound line to initiate the Port-to-Port communication.

### *Port-to-Port Priority*

This feature determines whether a communication or data transfer from Port-to-Port on The Stick II's "internal line" takes precedence over an incoming call. Your choices are either "ON WITHOUT BEEPS", "ON WITH BEEPS", or "OFF". With this feature "ON WITHOUT BEEPS", your Port-to-Port communications/data transfer will go uninterrupted when a call is received. With this feature "ON WITH BEEPS", The StickII will produce beeps similar to Call Waiting beeps from the phone company when an incoming call is detected. When a beep is heard, you have the option of continuing the Port-to-Port communication, or hanging up and accepting the incoming call. With this feature "OFF", your Port-to-Port communication will be immediately dropped and the incoming call will be processed. When Port-to-Port communication is taking place, priority is set to "ON" with or without "BEEPS", and an inbound call is ringing, any device not in use and defaulted to the ringing line will obtain the line simply by going off hook. The factory default is set for "ON WITHOUT BEEPS". Remember, Port-to-Port priority applies only to devices connected to the StickII while using Port-to-Port communication.



**Q: *What does the caller hear if I am using one of the ports that the call should go to?***

**A:** The caller would hear the phone ringing. If you choose not to disconnect from your Port-to-Port, then the caller would have to hang up.

**Q: *Say I have two fax machines connected to The Stick II. I am using one as a scanner and dialing my computer modem over the internal line. A fax call comes in on Line 1. What will happen to the call?***

**A:** During a Port-to-Port call, The Stick II does no call processing other than detecting rings and beeping, if BEEPS are turned ON. The ports in the Port-to-Port call will be connected to their default line.

This feature lets you add an additional device or port to your current call. If you are on a call using Line 1 and you want to add Bob to the conversation, who's phone is connected to The Stick II on Port 5, dial "\* # 5 5". Now you have three parties on the line.

- Dial "\* # 5" to signal a conference.
- Immediately dial in the Port number (1-5) of the device you want to ring.
- The Stick II will begin ringing that device.
- As soon as that device picks up, all three parties are on the line.



**Q:** *Can I conference from an extension phone not connected to The Stick II?*

**A:** Yes. To do this, enter the transfer (SAC) code, not the conference code.

#### Port-to-Port Communication / Data Transfer

This feature allows a communication or data transfer from Port-to-Port on The Stick II's "internal" line. This is great for in-house conferencing, exchanging computer files or scanning documents! Even though The Stick II uses an "internal" line to use this feature, you still need to have one phone line free to start this feature. Once the other port has picked up, The Stick II drops the outside line and you are talking completely on the "internal line".

**For Example:** *Two computers connected to The Stick II at two different ports can communicate via modem without having to dial out! One modem will pick up an available line and dial in the Port-to-Port transfer code "\*\*5" and the Port number of the second modem. As soon as that Port makes the connection, The Stick II drops the outside line. The two modems are talking to each other on the "internal" line.*

**Another Example:** *Connect a PC with a fax/modem and a fax machine to The Stick II and your fax machine can be used to scan documents! Simply set your computer to "receive" a fax. Next "fax" your document to the Port your computer is connected to by dialing "\*\*5" and the port number!*

- Dial "\*\*5" and the PORT NUMBER!

**Last Example:** *This feature lets you have an "internal" conference call so-to-speak. If you want to talk to Bob again, who's phone is connected to The Stick II at Port 5, just dial "\*\*55"!*

## Section 3 . . . Programming

We advise that you read through this section once or twice to become familiar with the programming process.

**Section 3.1** Summary of Factory Presets and Feature Access Codes.

**Section 3.2** Things to know before you begin Programming.

**Section 3.3** How to program a feature!

**Section 3.4** Programming Chart

**Section 3.5** How to check your programming.

### Problems? Questions?

Should you run into a problem or have a question, check out our **Trouble Shooting** section in the manual or call our toll-free technical support number for technical advice. Go on-line and find your answers at [www.multi-link.net](http://www.multi-link.net).

### 3.1 Factory Presets

	Port 1	Port 2	Port 3	Port 4	Port 5	Line 1	Line 2
Alternate Port						Port 2	Port 1
Auto Line Select	ON	ON	ON	ON	ON		
Default Outbound Line	Line 1	Line 2	Line 2	Line 2	Line 2		
Default Fax Port for Line 1				✓			
Default Fax Port for Line 2				✓			
Maximum Ring						8	8
Rings to Answer						0, ON	0, ON
Ring Suppression						ON	ON
Security Access Code	# 1	# 2	* 1	* 2	* 3		
Silent Transfer Destination						Port 4	Port 4
Unanswered Call Silent Transfer						OFF	OFF
Unrestricted Manual Transfer						ON	ON

**IMPORTANT ACCESS CODES TO REMEMBER**

	<b>DIAL</b>	<b>Refer to Manual Page</b>
Call Grab from Extension Phones	9	Page 27
Conference	* # 5 (Port #)	Page 34
Port-to-Port Transfer	* * 5 (Port #)	Page 34
Programming Mode	# # 9 9	Page 18
Transfer a Call to the factory default fax port (SAC for Port 4)	*2	Page 29

**3.2 Before You Begin**

**In order to program The Stick II you will need to make an outbound call on Line 1. You can only program The Stick II from a LINE 1 phone connected to The Stick II.** We suggest calling a friend who will take the call and stay on the line while you enter your programming sequences. The party should stay on the line during the entire programming procedure. Do not let them hang up.

Before you begin programming there are a few "signals" you need to familiarize yourself with. When programming The Stick II you will hear audible tones coming from your handset. These beeps indicate whether you may "PROCEED", that you've made an "ERROR" or that you have entered the programming "OK".

**OK** - You will hear two tones—one high pitched tone immediately followed by a mid-pitched tone. "Bee-Bip". This means that the numbers you have entered are acceptable and within range for the Register Number and Program Range.

**PROCEED** - You will hear three high pitched tones in rapid succession "Bee-Bee-Beep". The Stick II is ready for you to program a Register or receive more commands in the form of touch tones.

**ERROR** - You will hear a single low-pitch tone. This indicates that you have entered a Program Range or program command that is invalid. For example: If you were trying to change the destination port for "Silent Transfer Destination LINE 1" and you entered the Register Number as "5", you would receive an "ERROR" beep. The register number is "05".



**Q: Why would I ever need to restrict a port to only one line for outbound calls?**

**A:** You might want to restrict ports if, for example, you have one or more modems connected to The Stick II. Restricting the modems to use only Line 2 for surfing the Internet or dialing out for credit card approval, leaves Line 1 open to receive calls and faxes. You wouldn't want to miss important calls or faxes because both lines were tied up. Line 2 can still be programmed to receive calls and faxes, but you could mainly use it to dial out.

*Call In/Dial Out Long Distance Saver*

This feature allows you to avoid expensive calling card charges or long distance cellular rates. When away from your home or office, but in the same calling area, simply call in to The Stick II and enter the **Dial Out Line Access Code** to access the available second line! This feature is not recommended for data transfers.

- Dial into Line 1 or Line 2 from another location.
- The Stick II must pick up and begin to process the call. If you have Rings to Answer set for 4, then you need to wait for at least the 5<sup>th</sup> ring before you enter the Dial Out Line Access Code.
- While The Stick II is processing the call you will hear the simulated Ring Back.
- Enter the Call In/Dial Out Line Access Code.
- You will hear The Stick II pick up the secondary line (if available) and hear a dial tone. You are ready to dial! If the secondary line is in use you will hear a busy signal.



**Q: So I don't need a calling card?**

**A:** No, you do not need to use a calling card. You simply make the local call back to The Stick II and enter the codes. You'll then have access to the available line and you dial the long distance number. You get to take advantage of your negotiated business or home long distance rates!

If the call coming in is a fax, however, The Stick II will detect the CNG tones and route it to the programmed fax default port. If your fax machine does not “hand shake” with the calling fax machine, for whatever reason, then The Stick II will drop the call after the programmed Maximum Rings.

### *Unrestricted Manual Transfer (UMT)*

The UMT feature, when “ON”, enables a transfer to be executed at any time. When UMT is “OFF”, The Stick II will **only** allow a transfer during the first 15 seconds of an **inbound** call. Depending on the Security Access Codes you have chosen, there could be a conflict if you dial an automated system. You can either turn this feature off or change your SAC code. Factory preset is “ON”.



**Q:** *Can't I transfer at any time if I know the Security Access Code for the port I want?*

**A:** No. If UMT is OFF, you can only transfer during the first 15 seconds of an INBOUND CALL. That goes for the caller and you, the receiver. If UMT is ON, then yes, you or the caller can transfer at any time.

**Q:** *What about an extension phone, one not plugged into The Stick II, but on the same line?*

**A:** Yes, you can enter transfer codes from phones not attached to The Stick II. The Stick II is always listening. However, if UMT is OFF, and you are using an extension phone, both you and the caller only have 15 seconds to transfer the call.

## 4.3 Unique Features

### *Auto-Line Selection*

This feature allows you to set and control each port's access to outbound lines. See Section 3.4 to find out the default outbound line for each port. By turning this feature OFF, you restrict that port's access to only its default line. By turning the Auto-Line Selection ON, if the default line chosen for that port is busy, the port will access the other phone line to make the call.

### HOW TO SAVE & EXIT

Once you have entered programming mode (explained on the next page), you will need to be familiar with these instructions in order to insure your changes are saved and that you have exited properly.

**Save to Memory / Exit** - After entering the programming for the features you wanted modified, you will need to save the changes to memory and exit the programming mode. The Stick II maintains the programming even if there is a loss of power.

- Dial “80”
- Next you will hear the “OK” tone TWICE (Bee-Bip, Bee-Bip). The LED will go back to normal operation.
- The only reason you would hear an error tone when saving and exiting is if you have Auto-Line Select OFF on ALL ports AND programmed all ports to default to Line 2 (Remember, you can't enter programming mode from Line 2). You will be unable to Save & Exit until the situation is remedied. Assign a port to default to Line 1 or turn Auto-Select ON for at least one port.

**No Save / Exit** - You can cancel any programming you've done and exit the programming mode at any time.

- Dial “90”
- You will hear the “OK” tone ONCE (Bee-Bip). The LED will go back to normal operation.

**Set Register to Factory Preset** - This command sets all of the Registers back to the factory presets. See your Programming and Quick Reference Guide for the factory presets.

- Dial “60”
- You will hear the “OK” tone ONCE (Bee-Bip) immediately followed by the “PROCEED” tone (Bee-Bee-Beep).
- Dial “80” to save and exit.
- Next you will hear the “OK” tone TWICE (Bee-Bip, Bee-Bip). The LED will go back to normal operation.

### 3.3 How to Program a Feature

You are ready to begin programming. Keep in mind that all the programmable features are set to the factory default. You do not have to go through this procedure unless you want to turn a feature "OFF" or "ON", change the number of rings, security access code(s) or destination port(s).

When entering the programming mode The Stick II will signal you with audible beeps from the handset. These beeps tell you that you have entered the programming mode "OK" and to "PROCEED". You will have 30 seconds to enter your next command. Your "next" command could be to modify a feature or to save and exit. If nothing is entered within those 30 seconds, The Stick II will signal with the "OK" beep. Your programming changes will not be saved and you will have exited the programming mode. It is as if you DIALED "90" for the No Save/Exit command.

#### Entering Programming Mode

- Place a call to your friend from LINE 1. (Do not call into LINE 2.)
- Wait at least 5 seconds before continuing.
- DIAL "# # 9 9" on your telephone key pad. The LED will begin blinking rapidly.
- Immediately listen for the "PROCEED" (Bee-Bee-Beep) tones. You have 30 seconds to begin programming.

#### You are now ready to modify any programmable feature.

- DIAL the Register Number of the feature you want to modify. (see chart on p. 20-24)
- *Next DIAL in the Program Range.* (see chart on p. 20-24)
- Immediately listen for the "OK" tones (Bee-Bip), then the "PROCEED" tones (Bee Bee-Beep) or "ERROR" tones (low pitch beeps) then "PROCEED". You have 30 seconds to begin the next command.

With Unanswered Call Silent Transfer "ON", the inbound call (routed to the phone) will be switched over to a designated port (see Silent Transfer Destination) after the unanswered phone has been rung the Maximum number of rings. Factory preset for this feature is "off".



**Q:** *I don't ever expect to receive a manual fax or a modem call that can't dial the SAC. Is there another reason I should ever need to turn this feature on?*

**A:** No, not normally.

#### Maximum Rings

This feature allows you to program the number of rings generated to your phones/ answering machine, fax and modem by The Stick II before dropping or transferring the call (depending on your programming for Unanswered Call Silent Transfer). Maximum Rings can be programmed anywhere from 1 (minimum) to 30 rings. Factory preset is 8 rings to all equipment.



**Q:** *Is this feature so my phone, fax or modem won't ring off the wall if my answering machine, modem or fax machine won't pick up the call?*

**A:** Exactly.

#### Silent Transfer Destination

After activating the Unanswered Call Silent Transfer feature, you will want to tell The Stick II where to route the call. The "Destination" programmable feature gives you the option of routing unanswered calls to any port. Factory preset is Port 4 for both Line 1 and Line 2.



**Q:** *Won't my answering machine turn on after so many rings?*

**A:** Yes and no. Your answering machine will turn on after so many rings if the call coming in is ringing one of the ports to which you have your phone and answering machine connected. However, if you have your Maximum Rings set to 3 and your answering machine set to turn on after 5 rings, then the call will be dropped before your answering machine turns on.

**Factory preset Security Access Codes are as follows:**

Voice 1/2(Port 1/2) =	"# 1"	Port 3 =	" * 1"
Voice 2 (Port 2) =	"# 2"	Port 4 =	" * 2"
		Port 5 =	" * 3"

Note: If limited access to your equipment is an issue, we recommend you change the factory preset Security Access Codes upon installation.

*Rings to Answer (RTA)*

This feature directs The Stick II to answer an inbound call after a programmed number of rings (0 to 9 rings) from the phone company. If RTA is programmed to "0", The Stick II will answer the call during the first ring. Extension phones (not attached to The Stick II) in your location may only "chirp" on the first ring before going quiet.

When the RTA is greater than "0", The Stick II will allow the incoming call to ring extensions and the device connected to the voice port for that line. This feature also allows you to suppress rings to the devices connected to the voice ports of The Stick II during the RTA if you so choose. If a phone has not been picked up during the RTA, then The Stick II will answer the call and process it according to its programming. Factory preset is 0 rings for immediate answer and suppression OFF.



**Q:** Why would I ever want to have the RTA greater than 0 and suppressed?

**A:** The Caller ID information comes from the telco between the first ring and second ring. If you have Caller ID service and the ID equipment is on the line side (before) The Stick II, you would want to set the RTA to be at least 2. Remember that if you connect your caller ID to the device port, you need to set the "ring suppression" feature OFF.

*Unanswered Call Silent Transfer*

This feature was engineered for those of you who might receive manual faxes or modem calls after normal business hours, but do not use an answering machine. Manual fax calls are not accompanied by CNG fax tones and modem calls usually wind up routed to the phone when the caller cannot execute the proper access code.

**PROGRAMMING EXAMPLES**

**Turning "ON" your Unanswered Call Silent Transfer LINE 2**

- DIAL "041" — "04" is the Register Number and "1" is the Program Range which means "ON"
- Immediately listen for the "OK" tones (Bee-Bip), then the "PROCEED" tones (Bee-Bee-Beep) or "ERROR" tones (low pitch beeps) then proceed. You have 30 seconds to begin the next command.

**Changing your Rings to Answer (RTA) LINE 1 and suppressing the devices connected to Voice 1 from ringing during the RTA**

- DIAL "1541" — "15" is the Register Number, next enter the Program Range of "41". "4" is the number of rings that will occur on every Line 1 phone before The Stick II takes the call and processes it and "1" tells The Stick II to suppress any of the devices hooked to Voice 1 from ringing until after the 4<sup>th</sup> ring.
- Immediately listen for the "OK" tones (Bee-Bip), then the "PROCEED" tones (Bee-Bee-Beep) or "ERROR" tones (low pitch beeps) then proceed. You have 30 seconds to begin the next command.

**Changing the Security Access Code for Port 3**

- DIAL "1137\*6" — "11" is the Register Number and the Program Range is "37\*6" — the new access code for Port 3. See the Don'ts of SAC Programming before selecting your Access Code.
- Immediately listen for the "OK" tones (Bee-Bip), then the "PROCEED" tones (Bee-Bee-Beep) or "ERROR" tones (low pitch beeps) then proceed. You have 30 seconds to begin the next command.

**DON'T FORGET TO SAVE AND EXIT PROPERLY**

- DIAL "80"
- You will hear the "OK" tone TWICE (Bee-Bip, Bee-Bip). The LED will go back to normal operation.

*Remember:* The only reason you would hear an error tone when saving and exiting is if you have programmed all ports to default to Line 2 (can't enter programming mode from Line 2) and Auto-Line Select OFF on ALL ports. You will be unable to Save & Exit until the situation is remedied. Assign a port to default to Line 1 or turn Auto-Line Select ON for at least one port.

- Programming complete and changes are saved.

Programmable Features & Programming Recommendations	Register Number	Program Range	Factory Preset	Your Program
<b>LINE 1 FAX PORT</b> This feature is designed so you can have two fax machines hooked to The Stick II. The first digit is your default port where all faxes for Line 1 will go. The second digit routes faxes to an alternate fax port if your fax default port is busy. Enter "0" for both digits to turn this feature OFF. The default is set up as if you only have one fax machine connected to Port 4.	01	1 <sup>st</sup> digit Ports 0-5 2 <sup>nd</sup> digit Ports 0-5	44	
<b>LINE 2 FAX PORT</b> This feature is designed so you can have two fax machines hooked to The Stick II. The first digit is your default port where all faxes for Line 2 will go. The second digit routes faxes to an alternate fax port if your fax default port is busy. Enter "0" for both digits to turn this feature OFF. The default is set up as if you only have one fax machine connected to Port 4.	02	1 <sup>st</sup> digit Ports 0-5 2 <sup>nd</sup> digit Ports 0-5	44	
<b>Unanswered Call Silent Transfer</b> <b>LINE 1</b> UCST (when programmed ON) routes all unanswered calls (on any installation) in conjunction with the Max Rings feature. Use Silent Transfer Destination programming to designate which Port you want to receive the transferred call.	03	0 = OFF 1 = ON	0	
<b>Unanswered Call Silent Transfer</b> <b>LINE 2</b> UCST (when programmed ON) routes all unanswered calls (on any installation) in conjunction with the Max Rings feature. Use Silent Transfer Destination programming to designate which Port you want to receive the transferred call.	04	0 = OFF 1 = ON	0	
<b>Silent Transfer Destination</b> <b>LINE 1</b> This feature determines which Port/device will receive a call after it has been "silently transferred".	05	1 = Port 1 2 = Port 2 3 = Port 3 4 = Port 4 5 = Port 5	4	



**Q: If Line 1 is being used will the call roll over to my second line?**

**A:** No. You have to pay for that service from your local telephone company. If you have the rollover service activated, remember that the programming and destination ports you have set up for calls on Line 1 will not work. Rollover calls from Line 1 will follow the programming and destination ports you have set up for Line 2 calls and vice versa.

*The Stick II*

### *Fax Port Destinations*

This feature is designed so you can have two fax machines connected to The Stick II. Fax port destinations are programmed for each line. When programming Line 1, the first digit in the register is the default port where all faxes for Line 1 will go. The second digit routes faxes to another port where you have an additional fax machine. The fax call will be sent here if your default fax port is busy. You are able to program fax port destinations and alternate ports for both incoming lines. You can also turn this feature "OFF". The default is set up as if you only have one fax machine connected to Port 4.

### *Programmable Security Access Codes (SACs)*

**The transfer of a call is executed by dialing the programmed SAC for each port of The Stick II.** SAC's are programmable (using a touch tone phone only) up to 4 characters long—digits 0 through 9 and symbols \* (star) and # (pound). You can transfer calls from an extension phone to any device connected to The Stick II by using the SAC for that port. The Stick II will not detect SAC's dialed from pulse phones.

### The Don'ts of SAC

- **1 digit Security Access Codes ARE NOT recommended.** This will be a problem when you dial automated systems with menu options. Remember, The Stick II is always listening. If any of your SAC's start without a \* or #, then turn OFF the Unrestricted Manual Transfer option. (see pg. 32 for more details)
- DO NOT use any code that starts with 9, ##, \*#, \*\*, \*\* 5, \*#5 & ##9. These codes will not program and will give you an error tone.
- DO NOT use codes for each port that repeat the same sequence of numbers, i.e., Port 1=01, Port 2=012, Port 3=0123.
- DO NOT select an access code that may be the first part of a dialed number, the control code of your answering machine or the extension of a frequently dialed number.

equipment connected to the device port(s) you have designated for your fax(es). You can program this feature "OFF" if you choose. The factory default setting for faxes is Port 4. You may choose to have a different designated fax port for each line. See *Programming Chart for programming Line 1 Fax Port and Line 2 Fax Port*.

*Line-in-Use iBusy Tone*

The Stick II will give a cadenced tone similar to the standard "busy" signal to any user attempting to make an outbound call on devices connected to The Stick II when both lines. If only one line is in use and you are trying to call from a device restricted to that line, you will hear neither a dial tone nor a busy signal, telling you the non-restricted line is available if needed.

*Phone Line Surge Protection*

The Stick II is designed to protect *the unit* from damage caused by most phone line power surges. We recommend you plug your communication devices, including The Stick II, into a power surge protection strip. For extra protection, for your telephone devices, also use a phone line surge suppressor.

*Power/Call Status Light*

The LED on the front of The Stick II demonstrates two functions- when lit, it tells you the unit is powered up and it blinks rapidly when in programming mode.

*Two-Line Call Processor*

The Stick II is a *true* two-line call processor. Two incoming calls can be processed by The Stick II simultaneously. The process is fast and accurate and when added with your particular programming needs, becomes an amazing communication tool you will wonder how you ever did without!

**4.2 Programmable Features**

*Alternate Ports*

Incoming voice calls for Line 1 always default to Port 1 and voice calls for Line 2 always default to Port 2. But, if the default port is in use, the *Alternate Port* feature lets you redirect the call. If the alternate port is also busy, the caller gets a busy signal.

<p><b>Silent Transfer Destination</b> This feature determines which Port/device will receive a call after it has been "silently transferred".</p>	<p><b>LINE 2</b></p>	<p>1 = Port 1 2 = Port 2 3 = Port 3 4 = Port 4 5 = Port 5</p>	<p>4</p>
<p><b>Unrestricted Manual Transfer</b> This feature allows transfer ability at any time by either party and from any phone. Recommended programming "ON".</p>	<p><b>LINE 1</b></p>	<p>0 = OFF 1 = ON</p>	<p>1</p>
<p><b>Unrestricted Manual Transfer</b> This feature allows transfer ability at any time by either party and from any phone. Recommended programming "ON".</p>	<p><b>LINE 2</b></p>	<p>0 = OFF 1 = ON</p>	<p>1</p>
<p><b>Security Access Code</b> This register contains the code for "manually transferring" a call to devices connected to Port 1. See the Do's and Don'ts of SAC Programming before changing your code.</p>	<p><b>PORT 1</b></p>	<p>Digits 0-9, *, # 4 digits maximum</p>	<p># 1</p>
<p><b>Security Access Code</b> This register contains the code for "manually transferring" a call to devices connected to Port 2. See the Do's and Don'ts of SAC Programming before changing your code.</p>	<p><b>PORT 2</b></p>	<p>Digits 0-9, *, # 4 digits maximum</p>	<p># 2</p>
<p><b>Security Access Code</b> This register contains the code for "manually transferring" a call to devices connected to Port 3. See the Do's and Don'ts of SAC Programming before changing your code.</p>	<p><b>PORT 3</b></p>	<p>Digits 0-9, *, # 4 digits maximum</p>	<p>* 1</p>

# Section 4 . . . . . Features

## 4.1 Standard Features

### Barge-In Protection

When installed on incoming telephone lines before ALL telephone equipment (extension wall jacks or multi-line phone systems), The Stick II will protect any voice or data call from being accessed by other telephone equipment attached to other device ports. Any telephony device trying to access that line during a conversation or data transmission will receive a *line-in-use "busy" tone* or, if programmed to do so, that device will try and access the second line.

*Note:* The Barge-In Protection feature will control only those phone/data devices connected directly to The Stick II. For optimum performance and protection it is recommended that all premise extension phones be wired to The Stick II at either the Voice 1 /2 or Voice 2 ports. See Installation Procedures Section 2.

### Call Grab (designed for extension phones)

Call Grab can be initiated from *any touch tone extension phone* on the premise, that has access to that line, by dialing "9" on the telephone key pad. When "9" is dialed, The Stick II will immediately cease its call routing function and give you the line. This feature is standard.



**Q:** Why would I ever need to "grab" a call? Wouldn't I want The Stick II to continue processing?

**A:** No, you would want to "grab" the call if a call came in on Line 1 and you are near an extension phone that is not connected to The Stick II. Instead of running back to your office to try and answer the call before your answering machine picks up, simply pick up the extension phone that has access to Line 1 and enter "9" on dial pad. The Stick II will immediately release the call to that extension.

### Fax Tone Detection

This automatic feature tells The Stick II to detect the presence of CNG tones which may be transmitted by a calling fax machine or PC fax/modem. All calls accompanied by CNG tones, whether they be from a fax machine or PC fax/modem, are routed to

Programmable Features & Programming Recommendations	Register Number	Program Range	Factory Preset	Your Program
<p><b>Security Access Code</b>                      This register contains the code for "manually transferring" a call to devices connected to Port 4. See the Do's and Don'ts of SAC Programming before changing your code. This is also your factory default fax port. You'll need to know this code if you want to manually transfer a call to the fax machine.</p>	12	Digits 0-9, *, # 4 digits maximum	* 2	
<p><b>Security Access Code</b>                      This register contains the code for "manually transferring" a call to devices connected to Port 5. See the Do's and Don'ts of SAC Programming before changing your code.</p>	13	Digits 0-9, *, # 4 digits maximum	* 3	
<p><b>Call In/Dial Out Long Distance Saver</b>                      This register contains the Dial Out Line access code for this feature. See Section 4.3 for more information about this feature. Also see the Do's and Don'ts of SAC Programming before changing your programming. To turn this feature on, change the code.</p>	14	Digits 0-9, *, # 4 digits maximum	0 =OFF	
<p><b>Rings to Answer (Suppress or Pass Through) LINE 1</b>                      On installs with ext. phone access, program in the number of rings needed (1<sup>st</sup> digit). The 2<sup>nd</sup> digit will be a "1" (ON) if you want to suppress the device connected to Voice 1 port from ringing during the RTA or a "0" (OFF) to let it pass through. If The Stick II is used on a KSU or PBX set RTA to "0". See section 1.2 for more information.</p>	15	1 <sup>st</sup> digit 0 to 9 rings 2 <sup>nd</sup> digit 0 = OFF 1 = ON	0 1	
<p><b>Rings to Answer (Suppress or Pass Through) LINE 2</b>                      On installs with ext. phone access, program in the number of rings needed (1<sup>st</sup> digit). The 2<sup>nd</sup> digit will be a "1" (ON) if you want to suppress the device connected to Voice 2 port from ringing during the RTA or a "0" (OFF) to let it pass through. If The Stick II is used on a KSU or PBX set RTA to "0". See section 1.2 for more information.</p>	16	1 <sup>st</sup> digit 0 to 9 rings 2 <sup>nd</sup> digit 0 = OFF 1 = ON	0 1	

**PLEASE READ THE EXAMPLES BELOW.**

- Make an outbound call from Line 1.
- Press " # # 9 9 " to enter programming.
- You will hear the "PROCEED" tone (Bee-Bee-Bip).
- Press " \* 0 4 " (This tells The Stick II you want to hear the programming for Register 04).
- You will hear "BEEP BEEP". These tones represent the value "0". Register 04 is for Unanswered Call Silent Transfer Line 2. The "0" value means this feature is turned off.
- ...short pause...next you'll hear the "OK" tone (Bee-Bip) and the "PROCEED" tone (Bee-Bee-Bip).
- Now you can read back another register or exit the programming mode by dialing "80" to save and exit. You will hear the "OK" tone TWICE (Bee-Bip, Bee-Bip). The LED will go back to normal operation.

**.Registers Containing More Than a Single Value**

Some registers contain more than a single value, i.e., Security Access Codes which can be from one up to four characters of a telephone dialing pad. Below is a short example of what a "Read Back" would sound like when more than 2 digits or symbols are programmed in the Register. Let's say you have changed your Security Access Code for Port 4 (Register Number 12) to 1823.

- Make an outbound call from Line 1.
- Press " # # 9 9 " to enter programming.
- Press " \* 1 2 " to listen to Register 12's programming.
- You will hear "BIP" (pause) "BEEP BIP BIP BIP" (pause) 'BIP BIP" (pause) 'BIP BIP BIP". (Equivalent to "1823").
- You will hear "OK" and "PROCEED" tones. (Bee-Bip) (Bee-Bee-Beep). The LED will go back to normal operation after you dial "90" or "80".

*Note: If you enter an incorrect Register number you will hear an "ERROR" tone.*

		<p><b>Maximum Rings</b> This feature controls the no. of times a device (voice, fax modem) is rung by The Stick II before dropping or transferring the call.</p>	<p><b>LINE 1</b></p>	<p>17</p>	<p>1 to 30 rings</p>	<p>8</p>
		<p><b>Maximum Rings</b> This feature controls the no. of times a device (voice, fax modem) is rung by The Stick II before dropping or transferring the call.</p>	<p><b>LINE 2</b></p>	<p>18</p>	<p>1 to 30 rings</p>	<p>8</p>
		<p><b>Port-to-Port Priority with Call Waiting Beeps</b> This feature controls whether a local "internal" call between ports takes precedence over an incoming call. You can set the programming to beep over your internal call just like call waiting. Simply disconnect from your internal call and The Stick II will process the call. The default is set for ON with NO BEEPS, because internal modem or faxing could be disrupted.</p>		<p>19</p>	<p>0 = OFF 1 = ON with NO beeps 2 = ON and beeps</p>	<p>1</p>
		<p><b>Auto-Line Select</b> This feature, when ON, gives the port permission to access the other phone line when making an outbound call if the port's default outbound line is in use. The 1<sup>st</sup> digit sets the default outbound line for that port. The 2<sup>nd</sup> digit turns the Auto-Select feature ON or OFF. Remember, you can not program all ports to Line 2 and Auto-Select OFF.</p>	<p><b>PORT 1</b></p>	<p>20</p>	<p>1<sup>st</sup> digit 1 = Line 1 2 = Line 2 2<sup>nd</sup> digit 0 = OFF 1 = ON</p>	<p>11</p>
		<p><b>Auto-Line Select</b> This feature, when ON, gives the port permission to access the non-default phone line when making an outbound call if the port's default outbound line is in use. The 1<sup>st</sup> digit sets the default outbound line for that port. The 2<sup>nd</sup> digit turns the Auto-Select feature ON or OFF. Remember, you can not program all ports to Line 2 and Auto-Select OFF.</p>	<p><b>PORT 2</b></p>	<p>21</p>	<p>1<sup>st</sup> digit 1 = Line 1 2 = Line 2 2<sup>nd</sup> digit 0 = OFF 1 = ON</p>	<p>21</p>

### 3.5 Checking your Programming

The Stick II allows you to review your programming changes or check and see if a feature is (de) activated before leaving your home or office. This is done by signaling back to you over the handset with audible tones.

There are two types of tones that The Stick II will transmit through your receiver on the audible "Read Back."

- A clipped, high pitched "bip" which has a numerical value of ONE.
- A long, low pitched "beep" which has the numerical value of FIVE.

The chart below describes the audible tones which coincide with each number or symbol in a register.

NUMBER/SYMBOL	AUDIBLE TONES
1	"BIP"
2	"BIP BIP"
3	"BIP BIP BIP"
4	"BIP BIP BIP BIP"
5	"BEEP"
6	"BEEP BIP"
7	"BEEP BIP BIP"
8	"BEEP BIP BIP BIP"
9	"BEEP BIP BIP BIP BIP"
0	"BEEP BEEP"
*	"BEEP BEEP BIP"
#	"BEEP BEEP BIP BIP"

#### Executing Audible "Read Back"

- Enter programming mode " ## 9 9 ".
- Press " \* " and the Register Number you wish to read back.

Programmable Features & Programming Recommendations	Register Number	Program Range	Factory Preset	Your Program
<p><b>Auto-Line Select</b>                      This feature, when ON, gives the port permission to access the non-default phone line when making an outbound call if the port's default outbound line is in use. The 1<sup>st</sup> digit sets the default outbound line for that port. The 2<sup>nd</sup> digit turns the Auto-Select feature ON or OFF. Remember, you can not program all ports to Line 2 and Auto-Select OFF.</p>	22	1 <sup>st</sup> digit 1 = Line 1 2 = Line 2 2 <sup>nd</sup> digit 0 = OFF 1 = ON	21	
<p><b>Auto-Line Select</b>                      This feature, when ON, gives the port permission to access the non-default phone line when making an outbound call if the port's default outbound line is in use. The 1<sup>st</sup> digit sets the default outbound line for that port. The 2<sup>nd</sup> digit turns the Auto-Select feature ON or OFF. Remember, you can not program all ports to Line 2 and Auto-Select OFF.</p>	23	1 <sup>st</sup> digit 1 = Line 1 2 = Line 2 2 <sup>nd</sup> digit 0 = OFF 1 = ON	21	
<p><b>Auto-Line Select</b>                      This feature, when ON, gives the port permission to access the non-default phone line when making an outbound call if the port's default outbound line is in use. The 1<sup>st</sup> digit sets the default outbound line for that port. The 2<sup>nd</sup> digit turns the Auto-Select feature ON or OFF. Remember, you can not program all ports to Line 2 and Auto-Select OFF.</p>	24	1 <sup>st</sup> digit 1 = Line 1 2 = Line 2 2 <sup>nd</sup> digit 0 = OFF 1 = ON	21	
<p><b>Alternate Port</b>                      Voice calls for Line 1 always default to Port 1, but if it is in use for some reason (internal conference or some one is using phone hooked to Port 1) this feature lets you redirect the call. If the alternate port is busy, the caller gets a "busy" signal.</p>	25	Ports 1-5	2	
<p><b>Alternate Port . . . . .</b>                      Voice calls for Line 2 always default to Port 2, but if it is in use for some reason (internal conference or some one is using phone hooked to Port 2) this feature lets you redirect the call. If the alternate port is busy, the caller gets a "busy" signal.</p>	26	Ports 1-5	1	