SBX IP 320™

Quick-Start Guide v. 2.0

VERTICAL™

SBX IP 320 Quick Start Guide

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TRADEMARKS

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INSTALLATION

1. Remove the system and all equipment from their packing boxes.
2. Inspect the equipment for any damage. It is recommended that you inventory the equipment at this time.
3. Install all cards into their proper slots and insure they are properly seated.
4. Use the supplied mounting template to mount the BKSU/EKSU to a plywood backboard.
5. Connect the ground wire to the frame ground connection on the BKSU/EKSU and secure to a proper earth ground.
6. Plug the power cord(s) into a dedicated power outlet. Do not turn the power switch on.
7. Connect the CO lines to the RJ11 connectors using modular connectors. Refer to the diagram for the proper pin out.

CONNECTOR	PIN NUMBER	NO	SIGNAL NAME
RJ11 		1, 2	N/A
		3, 4	CO-T, CO-R
		5, 6	N/A

8. Connect the digital and/or SLT stations to the RJ11 station connectors. Refer to the diagram for the proper pin out. Insure that a 4 wire (2 pair) modular cord is used when connecting digital telephones to the system.

CONNECTOR	PIN NUMBER	NO	SIGNAL NAME
RJ11 		1	N/A
		2	DKT-T
		3, 4	SLT-T, SLT-R
		5	DKT-R
		6	N/A

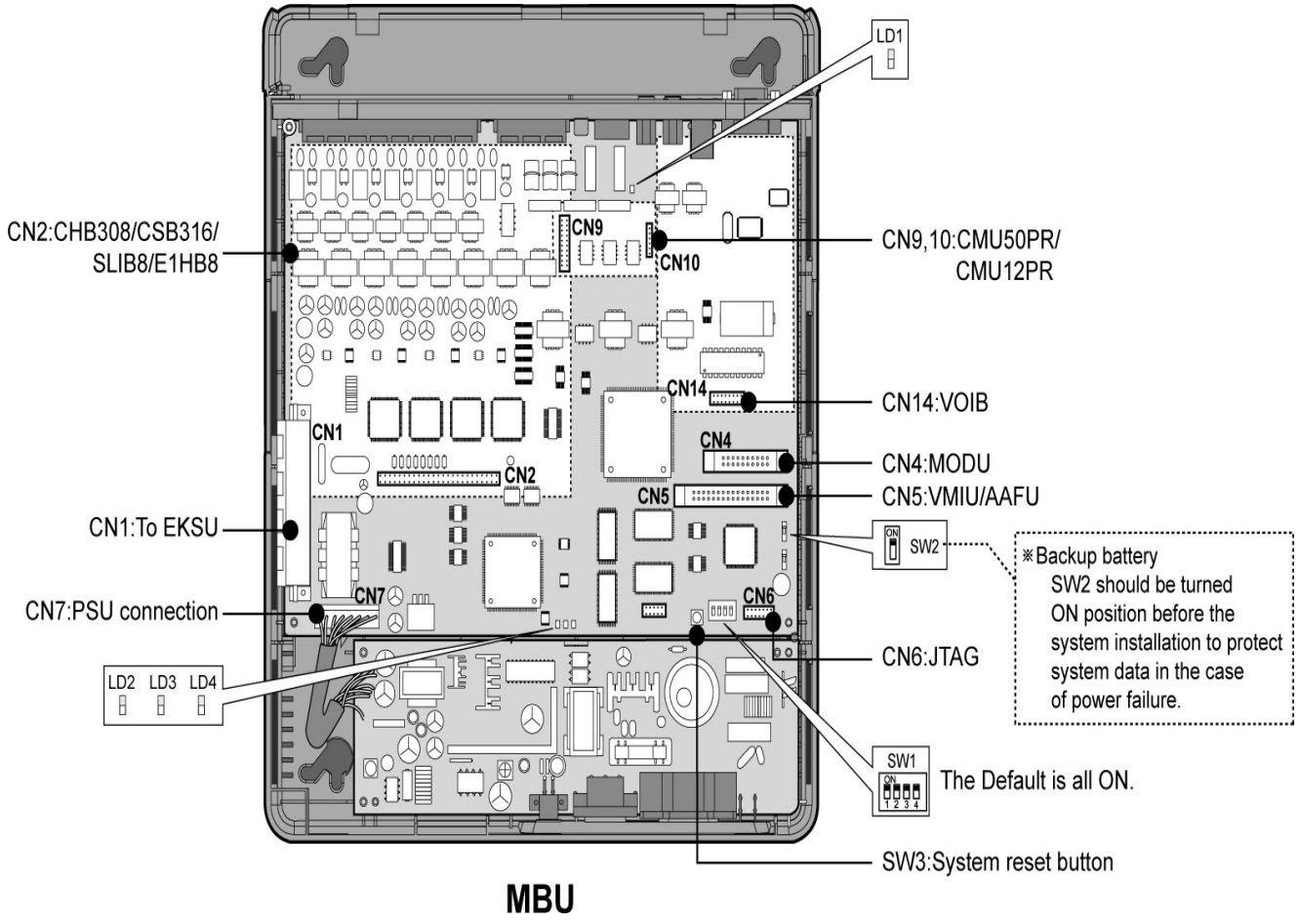
9. Connect the CO lines to the RJ11 connectors using modular connectors. Refer to the diagram for the proper pin out.

INITIAL STARTUP

This procedure enables the battery back up circuit and initializes the system database so it is ready for site specific programming entry. Refer to the diagram for the switch locations referenced in the procedure.

1. Place SW2 (BATT) in the ON position. Red/White color
2. Ensure switch 4 on SW1 is in the ON position. SW 1 is a bank of 4 switches
3. Power the system up, wait ten seconds
4. Press SW3 to reset the system, wait ten seconds
5. Place switch 4 on SW1 to the OFF position.

Caution! If switch 4 on SW1 is ON and power is lost or the system is reset, the system will initialize and any customer database programming will be lost!



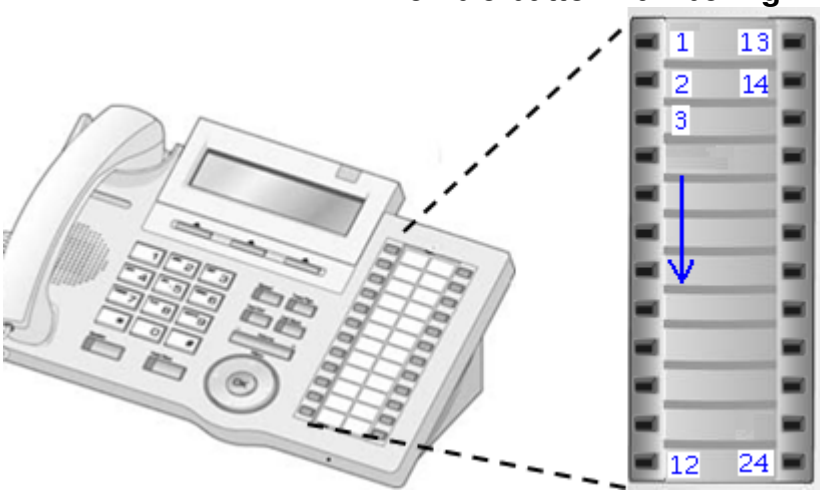
PROGRAMMING

All programming is done at one station (Station 100 by default) using a 24 Button Digital Key Telephone.

Only one telephone can be active in the programming mode at any one time.

When in programming mode, the telephone does not operate as a normal telephone, but instead works as a programming instrument with all of the buttons re-defined for administration purposes.
Specific entries are accomplished by pressing flexible buttons and/or dialpad entries or a combination of both.

Flexible button numbering



To enter programming mode, perform the following Steps:

1. Press the speaker button on the Administration station.
2. Press the [TRANS/PGM] button
3. Dial * # on the dialpad.
4. Enter the Admin password, if a password has been set; a confirmation tone sounds indicating that the Station is in Admin Programming mode. **Default = no password**

The LCD will indicate ADMIN PROGRAM START

Each program area is accessed by pressing [TRANS/PGM] and dialing a 3 digit code that represents a specific programming area.

[TRANS/PGM] + XXX (XXX = specific code)

The following table indicates the high level codes and the administration areas they represent:

Area	Code
Default System Options	100
Station Programming	110 through 131
CO Line Programming	140 through 147
System Programming	101 through 109 and 160 through 184
Voice Mail Routing (CCR)	228

Range Entries:

When programming CO lines or stations, a range of CO lines or stations must be entered to identify the specific line(s) or station(s) that are to be programmed.

The LCD will indicate ENTER COL RANGE or ENTER STA RANGE when you enter an area that requires this entry type.

1. To enter a CO line range of 1-4, the entry is 01 04

This means that any administration parameters changes will apply to lines 1 through 4.

2. To enter a single CO line enter the SAME line number twice, Examples for CO 1 the entry is 01 01

This means that any administration parameters changes will apply to CO line 1 only. The valid CO line range is 01-12

1. To enter a range of stations from 100-112, the entry is 100 112

This means that any administration parameters changes will apply to stations 100 through 112.

2. To enter station 100 the entry is 100 100

This means that any administration parameters changes will apply to Station 100 only. The valid station range is 100-147

Permanent Update Procedure

To accept changes while programming, perform the following steps:

1. Press the [HOLD/SAVE] button when all changes have been entered to store the data permanently.

Confirmation tone = Solid tone ~1 second long (data valid and entry stored)
Error tone = Series of beep tones (incorrect entry or invalid data, repeat entry after tone stops)

Initial Setup:

Selecting default template:

1. Enter the program mode [TRANS/PGM] * #

2. Press [TRANS/PGM] and dial 100

3. Press Flex Button 3

4. Press Flex Button 1

There are 2 default templates that can be selected at this point:

[1] + [HOLD/SAVE]

All CO lines ring to VMIB greeting 01, All phones forward to VMIB after 4 rings. Callers can select an extension or dial 0 to go to the operator from the VMIB menu. This operation applies to day, night, weekend modes.

[2] + [HOLD/SAVE]

All CO lines ring to STA 100, All phones forward to VMIB, CO lines forward to VMIB greeting 01 after 4 rings. Callers can select an extension or dial 0 to go to the operator from the VMIB menu. This operation applies to day, night, weekend modes.

5. Press Flex Button 2

6. Enter the desired VMIB greeting number on the keypad 01 and press [HOLD/SAVE]

Recording VMIB system prompt 01:

(exit from system programming prior to following these steps)

1. At Station 100 press [TRANS/PGM] and dial 0
2. Use the down NAV key or dial 6
3. Enter 001
4. Press '#'
5. Record a company greeting. For example, "Thank you for calling ABC, if you know your party's extension you can dial it now, to reach the operator dial 0"
6. Press HOLD/SAVE

Recording Mailbox greetings:

1. At each Station press [TRANS/PGM] and dial 6 and then dial 1
2. Have each station record their mailbox (user) greeting
3. Press HOLD/SAVE after recording

Note: A mailbox is not "active" until the greeting is recorded.

COMMON PROGRAMMING PROCEDURES

Administration Station

This allows a station to enter the programming mode and make administration changes. By default, only STA 100 can enter the program mode. To allow/change stations that can access the programming mode:

1. At STA 100 enter the program mode [TRANS/PGM] * #
2. Press [TRANS/PGM] and dial 113
3. Enter the station range or station to be programmed: 100 105 (if an individual station is programmed enter that station number twice 100 100)
4. Press flexible button 1
5. Dial 1 on the keypad
6. Press the [HOLD/SAVE] button

Station CO Line Group Access

This determines what CO line groups stations have access to. By default, stations have access to all 24 CO line groups. To change CO group access for stations:

1. Enter the program mode [TRANS/PGM] * #
2. Press [TRANS/PGM] and dial 117
3. Enter station range or station to be programmed.

   Each of the 24 flexible represents access to a CO group , flexible button 1 = CO group 1, flexible button 2 CO group 2 etc.
4. Press flexible button 2-24 to allow/deny access to a particular CO group. LED on = allow access, LED off = deny access
5. Press Hold/Save

CO Line Grouping

This determines what CO line groups that individual CO lines belong to. By default, all CO lines are in CO line group 1. It is recommended to place all unused CO lines into a different group to prevent stations from inadvertent access to an unused CO line. To change CO group assignment:

1. Enter the program mode [TRANS/PGM] * #

2. Press [TRANS/PGM] and dial 141

   Enter CO line range or CO line to be programmed

3. Press flexible button 1

4. Dial 02

5. Press Hold/Save

Station Flexible Button Programming

1. Enter the program mode [TRANS/PGM] * #

2. Press [TRANS/PGM] and dial 115

   Enter station range to be programmed: 100 105 (if an individual station is programmed enter 100 100)

3. Dial 1

4. Press the desired flexible button (01-24) to be programmed

5. Dial: 01 – 08 (Page 1-17 in programming manual)

   User 01
   CO Lines: 02 XX (XX=01 12)
   CO Group: 03 XX (XX= 01 24)
   Loop: 04
   DSS/BLF: 05 XXX (XXX=100-147)
   GM button: 06 XX (XX=11-99)
   Sta Spd: 07 XX (XX=00 99)
   Sys Spd: 08 XXXX (XXXX=2000 2499)

6. Press Hold/Save after each entry to store the button

CO Line Ring Assignments Programming

1. Enter the program mode [TRANS/PGM] * #

2. Press [TRANS/PGM] and dial 144

Enter CO line range or CO line to be programmed

3. Press flexible button 1 – 4 to select the desired mode (1=day, 2=night, 3=weekend, 4=on demand)

4. Dial 1 or 2 or 3 (1 = station, 2= hunt group, 3 = VMIB announcement)

   If you entered 1: Ring to a station or stations

   Dial XXX Y
   (XXX = station number 100-147 and Y = delay value 0-9)

   Example: We want station 101 to ring immediately, the entry is:

   1010 + [Hold/Save]

   Note: The delay value represents the number of rings to delay

   If you entered 2: Ring to a hunt group

   Dial XXX (XXX = 620-629 hunt group pilot number)

   Example: We want group 620 to ring, the entry is:

   620 + [Hold/Save]

   If you entered 3: Ring to a VM greeting

   Dial XX (XX = 01-70 VMIB user greeting number)

   Example: We want VMIB greeting 01 to answer, the entry is:

   01 + [Hold/Save]

Station Group (Hunt) Programming

1. Enter the program mode [TRANS/PGM] * #
2. Press [TRANS/PGM] and dial 190
3. Enter the group pilot number to be programmed: 620-629
4. Press Flex button 1 (group type)
5. Dial: 0 – 7

   0 - Not Assigned
   1 - Circular type
   2 - Terminal type
   3 - UCD
   4 - Ring
   5 - VM
   6 – Pick up
   7 – Network VM

6. Press Hold/Save
7. Press Flex button 3 (member entry)

   Dial: 101101 to enter station 101
   Dial 101105 to enter a range of stations 101-105

8. Press Hold/Save

Custom Call Routing Programming

Custom call routing allows outside callers to enter a DTMF digit and have that represent a certain routing action. For example, 0 can indicate transfer to STA 100 the attendant. Other actions can be assigned to a CCR menu to facilitate routing applications. There are 70 CCR menus that can be programmed in the system.

Note: It is recommended to match CCR numbers to greeting numbers

1. Enter the program mode [TRANS/PGM] * #

2. Press [TRANS/PGM] and dial 228

3. Enter the CCR table to be programmed: 01 70

4. Press the desired flexible button 1-10

   Button 1 represents Digit 1 dialed by the outside caller
   Button 2 represents Digit 2 dialed by the outside caller
   .
   .
   Button 10 represents Digit 0 dialed by the outside caller

5. Dial 1-10 to assign an action to the digit

   1 XXX (XXX is 100-147) Selects a particular station.
   1 [HOLD/SAVE] allows a caller to enter the extension number and have the system route based on the entered extension number.
   2 XXX (XXX is 620-629) Route to a particular Hunt group
   3 XX (XX is 01-70) route to another VMIB announcement
   4 XX (XX is 01-70) play a VMIB announcement then hang up on the caller
   5 XXXX (XXXX is 200-2499) route off net via a System Speed bin
   6 XX (01-10) route to an Internal Page zone
   7 1 route to an External page zone
   8 X (1 or 2) route to an all call page zone - 1 is internal all call 2 is external all call
   9 route to a Net number
   10 X (X 1 -9) route to a system conference room

6. Press Hold/Save after each action assignment

Administration Programming Index

The following tables represent all programming codes and the areas they represent in the system.

Pressing [TRANS/PGM] and then dialing the 3 digit code will direct the administrator to the particular area in system administration.

ADMIN PROGRAMMING		
Main Menu	PGM Code	Item
Pre-programmed Database	100	Location Program
	101	Board Assignment
	103	Logical Slot Assignment
	104	Numbering Plan Type
	105	Flexible Number Plan – Station Number
	106	Flexible Number Plan A
	107	Flexible Number Plan B
	108	IP Setting
	109	Flexible Number Plan C
	250	Hot Desk Attribute
Station Base Program	110	Station ID
	111	Station Attribute I
	112	Station Attribute II
	113	Station Attribute III
	114	ISDN Station Attribute
	115	Flex Button Assignment
	116	Station COS
	117	CO Line Group Access
	118	Internal Page Zone
	119	Conference Page Zone
	120	ICM Tenancy Group
	121	Preset Call Forward
	122	Hot/Warm Line Selection
	124	SMDR Account Group
	125	Copy DSS Button
	126	Station IP List

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ADMIN PROGRAMMING		
Main Menu	PGM Code	Item
Station Base Program	130	Display Stations by COS
	131	Display Stations by CO Line Group Access
CO Line Base Program	140	CO Service Type
	141	CO Line Attribute I
	142	CO Line Attribute II
	143	ISDN CO Line Attribute I
	144	CO Ring Assignment
	145	CO Ring Assignment Display
	146	CO Line Attribute III
	147	CO CID Attribute
Slot Base Program	155	Board Attribute
System Base Program	160	System Attribute – I
	161	System Attribute – II
	162	ADMIN Password
	163	Alarm Attributes
	164	Attendant Assignment
	165	Auto Attendant VMIB Annc. Assignment
	166	CO-to-CO COS
	167	DID/DISA Destination
	168	External Control Contact
	169	LCD Date/Time/Language Display Mode
	170	Modem
	171	Music
	172	PBX Access Code
	173	PLA Priority Setting
	174	RS-232C Port Setting
	175	Print Port Selection
	176	Pulse Dial Ratio

Administration Programming Index

ADMIN PROGRAMMING		
Main Menu	PGM Code	Item
System Base Program	177	SMDR Attributes
	178	System Date/Time Setting
	179	Linked Station Pairs Table
	180	System Timers – I
	181	System Timers – II
	182	System Timers – III
	183	In Room Indication
	184	Chime Bell Attribute
E1 R2 DCOB	186	DCOB System attribute
	187	DCOB CO Line Attribute
Station Group	190	Station Group Assign
	191	Station Group Attribute
ISDN System Base Program	201	COLP Table
Tables	220	LCR Attributes
	221	LCR – Leading Digit Table
	222	LCR – Digit Modification Table
	223	LCR Table Initialization
	224	Toll Exception Table - Allow A (Entry no:01-30)
		Toll Exception Table - Deny A (Entry no:01-30)
		Toll Exception Table - Allow B (Entry no:01-30)
		Toll Exception Table - Deny B (Entry no:01-30)
	225	Canned Toll Table - Allow (Entry no:01-10)
		Canned Toll Table - Deny (Entry no:01-10)
	226	Emergency Code Table
	227	Authorization Code Table
	228	Customer Call Routing
	229	Executive/Secretary Table
	231	Flexible DID Table

Administration Programming Index

ADMIN PROGRAMMING		
Main Menu	PGM Code	Item
Tables	232	System Speed Zone
	233	Weekly Time Table
	234	Voice Mail Dialing Table
	236	Mobile Extension
	204	Local Code Table
SMS Attribute	291	SMS Setting
	292	SMS CO Attribute
Networking	320	Networking Basic Attribute
	321	Networking Supplementary Attribute
	322	Networking CO Line Attribute
	324	Networking Routing Table
VOIB	340	VOIB IP Setting
	341	GK Setting (Not Supported yet)
SIP Attrinute	500	SIP Attributes 1
	501	SIP Attributes 2
RSG	380	VOIB Slot For RSG/IP
	381	RSG/IP No Assign
	382	RSG/IP Attribute
	386	IP Phone Attribute
	396	IP Phone RX GAIN
	397	IP Phone TX GAIN
Nation Specific	400	DTIB Rx Gain Control
	401	SLIB Rx Gain Control
	404	ACOB Rx Gain Control
	406	DCOB Rx Gain Control
	407	VMIB Rx Gain Control
	408	DTMF Receiver Rx Gain Control
	409	EXT Page Rx Gain Control

Default Passwords

KSU-	
keyset administration	BLANK (none)
PCAdmin administration	BLANK (none)
RS-232 board trace	jennie
RS-232 maintenance	brandy
PCAdmin (default username=administrator)	0000
VOIB trace and upgrade	BLANK (none)
IP Telephone admin (IP7008D-IP7024D-IP7024LD)	147✶ (include the asterisk[✶])
IP Telephone Web UI (IP7008D-IP7024D-IP7024LD)	ipkts

Default IP Addresses

KSU	192.168.1.1
VOIB	0.0.0.0

RS-232 port default settings

Baud Rate	19200
Parity	None
Stop Bits	1
Flow Control	None