

**Subject: The VoiceSaver® In Band  
Signaling Template Support**

## Technical Memorandum

The VoiceSaver® software package has been enhanced to support the in-band signaling template for the PBX DTMF strings.

### The Inband Program

In order to set up the template you must run the template program by entering:

**C>INBAND**

brings up the following screen:

```

+-----+
|                                     Inband Signal Template                                     |
+-----+
| PBX Code   XXX |
+-----+
|Code|String |Off|Len|MOff|MLen|
+-----+
| XX |XXXXXXXX| XX| XX| XX | XX |
+-----+
| XX |XXXXXXXX| XX| XX| XX | XX |
+-----+
| XX |XXXXXXXX| XX| XX| XX | XX |
+-----+
| XX |XXXXXXXX| XX| XX| XX | XX |
+-----+
| XX |XXXXXXXX| XX| XX| XX | XX |
+-----+
| XX |XXXXXXXX| XX| XX| XX | XX |
+-----+
| XX |XXXXXXXX| XX| XX| XX | XX |
+-----+
|                                     <Esc>=Exit                                     |
|                                     <F10>=Save                                       |
+-----+

```

where:

The **PBX Code** is not currently used. You should set it to 0.

The **Code** corresponds to the meaning of the DTMF message from the PBX. The following values are supported:

<b>Code</b>	<b>Description</b>
1	The extension has not answered, play the greeting number 1 of the mail box and then take a message.
2	The extension has not answered, take a message for the mail box, but before taking a message, play the greeting number 2 of the mail box.
3	The extension has not answered, take a message for the mail box, but before taking a message, play the greeting number 3 of the mail box.
4	The extension is busy, play greeting number 1 and take a message for the mail box.
5	The extension has been placed in Do Not Disturb (DND), play the greeting number 1, and take a message for the mail box.
6	Call is directly from the subscriber who wishes to pick up his messages, but he must enter his pass code before picking up his messages.
7	Call is directly from the subscriber who wishes to pick up his messages, but he does not have to enter his pass code.
8	Call is directly from the subscriber. If the pass code is set to <b>ROOM</b> , then the caller does not have to enter any pass codes before picking his message. If the pass code is set to any other setting VoiceSaver will prompt the caller to enter his valid pass code to pick up his messages.

The **String** specifies the matching characters to look for determining the **Code**.

The **Off** defines the offset within the DTMF string from the PBX for matching.

The **Len** defines the length to use for string comparison.

The **Moff** defines the location of the mail box number within the DTMF string from the PBX.

The **Mlen** defines the length of the mail box number. If 0, then the system uses the mboxsize parameter in the PARM.

**Note: Please the ppp68 parameter in PARM to 1.**

### Example

The following table defines the inband signals for the BPL PBX switch.

Inband Signal Template						
Code	String	Off	Len	MOff	MLen	
1	***5	0	4	7	0	No Answer
5	***6	0	4	7	0	Do Not Disturb
4	***4	0	4	7	0	Busy
8	***1	0	4	4	0	Direct Call
XX	XXXXXXXX	XX	XX	XX	XX	
XX	XXXXXXXX	XX	XX	XX	XX	
XX	XXXXXXXX	XX	XX	XX	XX	
XX	XXXXXXXX	XX	XX	XX	XX	
<Esc>=Exit			<F10>=Save			

### Code 1 - No Answer

If the operator transfers a call to an extension and if the extension does not answer, the PBX should forward the call to one of the Voice Mail ports and after the voice mail port goes off-hook, the PBX should send the DTMF string:

\*\*\*5\*\*\*xxx

where xxx is the extension number.

VoiceSaver plays the no answer greeting and takes a message for the mail box corresponding to the extension xxx. If the caller wishes to dial another extension number he may do so while the greeting message is being played.

For example if a live operator transfers the call to the extension 441, and the extension does not answer, the PBX forwards the call to VoiceSaver and after VoiceSaver goes off-hook, it sends the DTMF string:

```
***5***441
```

### **Code 5 - Do Not Disturb**

If the operator transfers a call to an extension and if the extension is in Do Not Disturb mode, the PBX should forward the call to one of the Voice Mail ports and once the voice mail port goes off hook, the PBX should send the DTMF string:

```
***6***xxx
```

where xxx is the extension number.

VoiceSaver plays the no answer greeting and takes a message for the mail box corresponding to the extension xxx. If the caller wishes to talk to someone else, he may dial another extension number while the greeting message is played. VoiceSaver will transfer the call to another extension number instead of taking a message.

For example if a live operator transfers the call to the extension 376, and the extension is in Do Not Disturb mode, the PBX forwards the call to VoiceSaver and after VoiceSaver goes off-hook, it sends the DTMF string:

```
***6***376
```

After VoiceSaver the string, it plays the no answer greeting message and take a message for the mail box 376.

### **Code 4 - Busy**

If the operator transfers a call to an extension and if the extension is Busy, the PBX should forward the call to one of the Voice Mail ports and once the voice mail port goes off hook, the PBX should send the DTMF string:

```
***4***xxx
```

where xxx is the extension number.

VoiceSaver plays the Busy greeting and takes a message for the mail box corresponding to the extension xxx. If the caller wishes to talk to the operator, he should press 0 on his phone or he may dial another extension number while the busy greeting message is being played.

For example if a live operator transfers the call to the extension 576, and the extension is Busy, the PBX forwards the call to VoiceSaver and after VoiceSaver goes off-hook, it sends the DTMF string:

```
***4***576
```

### **Direct Call from an Extension**

When someone calls VoiceSaver directly from an extension, the PBX should send the following string:

```
***1xxx
```

where xxx is the extension number from where VoiceSaver received the call. VoiceSaver asks the caller to enter his valid pass code. If the pass code is valid, the caller will be allowed to read the messages stored for the mail box corresponding to the extension xxx.

However if the pass code is the default **ROOM**, the caller will not be asked for the pass code, instead VoiceSaver will allow him to read his messages.

For example:

If a caller calls VoiceSaver from extension 534, the PBX should send the string:

```
***1534
```

to VoiceSaver after VoiceSaver goes off hook.

If the pass code for the mail box 534 is ROOM, the caller will be able to pick up his messages without entering his pass code.

### **Turning the Message Waiting Light On or Off**

The data for turning on or off the message waiting light for the extensions must be entered on the master data form.

## Turning on the Message Waiting Light

Once a caller leaves a message for a mail box, VoiceSaver selects one of the Voice Mail lines and after going off hook, it dials the DTMF string:

,18xxxQ

where , is a one second pause, Q means go on hook after dialing, and xxx is extension number of the message waiting light that should be turn on.

VoiceSaver does not check the status of the extension for busy. It is the responsibility of the PBX switch to periodically check the extension and make sure the light turns on.

Example:

If a caller has left a message for mail box 634, VoiceSaver will pick up one of the Voice Mail port and go off-hook. After the port goes off hook, it will dial the DTMF string:

,18634Q

At this point the PBX switch must turn on the Message Waiting Light.

## Turning off the Message Waiting Light

Once the subscriber calls VoiceSaver and reads all his message, VoiceSaver picks up a free port and after going off hook dials the string:

,19xxxQ

where xxx is the extension number of the message waiting light that must be turned off.

VoiceSaver does not check the extension status for Busy. It is the responsibility of the PBX software to make sure the Message Waiting Light is turned off. Also please note the string ,19xxxQ will be dialed out only and only if the caller has read all his messages.

Example:

To turn off the message waiting light of extension 773, VoiceSaver picks up a free line and after going off-hook, it dials the DTMF string ,19773Q.