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**Avaya Solution & Interoperability Test Lab**

# Application Notes for Algo 3226 Trunk Port FXO Doorphone with Avaya Aura® Communication Manager - Issue 1.0

## Abstract

These Application Notes describe the steps required to integrate the Algo 3226 Trunk Port FXO Doorphone with Avaya Aura® Communication Manager. The 3226 Trunk Port FXO Doorphone provides hands-free intercom capability and entrance security with door unlock control. The doorphone connects to a loop start trunk port on Communication Manager.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

# 1. Introduction

These Application Notes describe the steps required to integrate the Algo 3226 Trunk Port FXO Doorphone with Avaya Aura® Communication Manager.  The 3226 Trunk Port FXO Doorphone provides hands-free intercom capability and entrance security with door unlock control.  The doorphone connects to a loop start trunk port on Communication Manager.  The doorphone includes a Control Unit and Door Station.

A visitor can press the call button on the Door Station to ring a specified telephone.  The called party can then answer the call to communicate with the Door Station.  Using DTMF tones, the called party can press a digit on the phone keypad to activate the door control relay to open the door.  Alternatively, a telephone can also originate a call to the Door Station, which would be automatically answered.

# 2. General Test Approach and Test Results

To verify interoperability of the 3226 Doorphone with Communication Manager, calls were made from the doorphone to another specified telephone.  The called telephone would ring and answer the call.  Upon answering the call, a two-way audio path was established between the telephone and the Door Station.  The called party would then be able to press a digit on the telephone keypad to open the door.  In addition, incoming calls to the doorphone were also verified.

## 2.1. Interoperability Compliance Testing

Interoperability compliance testing covered the following features and functionality:

- Press call button at Door Station to ring specified telephone, answer the call, and establish a two-way audio path.  Caller ID on the telephone was also verified.
- Called telephone can press a DTMF digit to open the door.
- Incoming calls to the 3226 Doorphone.
- Proper system recovery after the 3226 Doorphone loses power.

## 2.2. Test Results

All test cases passed.  Calls and delivery of DTMF tones to the doorphone were successful.

## 2.3. Support

For technical support on the 3226 Trunk Port FXO Doorphone, contact Algo Technical Support by phone, through their website, or email.

**Phone:**     (877) 884-2546 (Canada & US only)
                (604) 454-3792
**Web:**       http://www.algosolutions.com/support/support.html
**Email:**     support@algosolutions.com

# 3. Reference Configuration

**Figure 1** illustrates a sample configuration with Communication Manager running on an Avaya S8800 Server with a G450 Media Gateway, and the Algo 3226 Trunk Port FXO Doorphone. The doorphone connected to a loop start trunk (MM711 Analog Board) on the G450 Media Gateway.
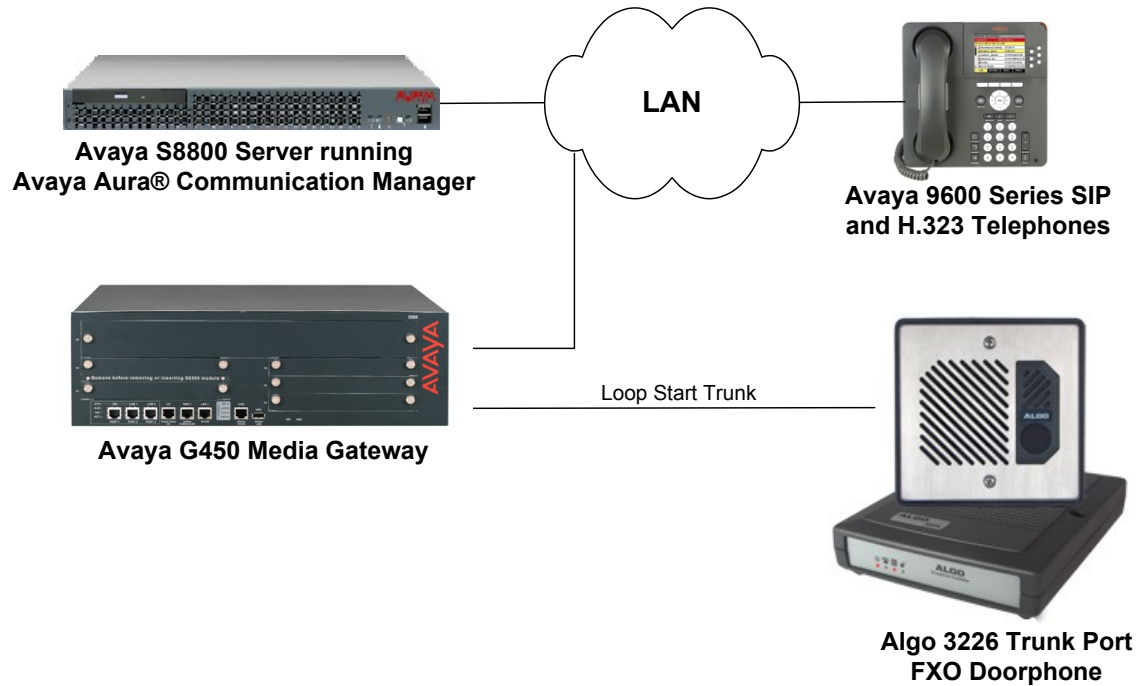


**Figure 1: Avaya Aura® Communication Manager with Algo 3226 Trunk Port FXO Doorphone**

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## 4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

| Hardware Component | Version |
|---|---|
| Avaya S8800 Server and G450 Media Gateway | Avaya Aura® Communication Manager 6.0.1 SP 3 (R016x.00.1.510.1 w/Patch 19009) |
| Avaya 9600 Series IP Telephones | 3.1 (H.323)<br>2.6.4 (SIP) |
| Algo 3226 Trunk Port FXO Doorphone | 1.04 |

## 5. Configure Avaya Aura® Communication Manager

This section describes the steps for configuring a loop start trunk for the 3226 Trunk Port FXO Doorphone.  In addition, routing to the doorphone is also covered. Use the System Access Terminal (SAT) to configure Communication Manager and log in with the appropriate credentials.

### 5.1. Configure Loop Start Trunk

Configure the **Trunk Group** form as shown below.  This trunk group is used for calls to the 3226 Doorphone.  Set the **Group Type** field to *co*, set the **Trunk Type** field to *loop-start*, and specify the extension to dial when the call button on the doorphone is pressed.  This extension is specified in the **Incoming Destination** field (e.g., *77301*).  Configure the other fields in bold and accept the default values for the remaining fields.

```
add trunk-group 100                                          Page   1 of  22
                              TRUNK GROUP

Group Number: 100                   Group Type: co          CDR Reports: y
  Group Name: Algo 3226 Doorphone         COR: 1      TN: 1       TAC: 1100
   Direction: two-way         Outgoing Display? n
 Dial Access? n                  Busy Threshold: 255  Night Service:
Queue Length: 0    Country: 1            Incoming Destination: 77301
   Comm Type: voice                 Auth Code? n   Digit Absorption List:
    Prefix-1? y                    Trunk Flash? n       Toll Restricted? y

        Trunk Type: loop-start
```

On **Page 6** of the trunk group form, specify an available analog port.

```
add trunk-group 100                                          Page   6 of  22
                              TRUNK GROUP
                                   Administered Members (min/max):   1/1
GROUP MEMBER ASSIGNMENTS                  Total Administered Members:   1


     Port     Code Sfx Name         Night          Mode     Type   Ans Delay
  1: 001V208
  2:
```

## 5.2. Configure Station

Use the **add station** command to add a station for the door attendant that will be called when the call button on the 3226 Doorphone is pressed. The following is a basic H.323 station that was used for this purpose. Other types of stations, like SIP, may also be used.

```
add station 77301                                           Page   1 of   5
                                STATION

Extension: 77301                        Lock Messages? n              BCC: 0
     Type: 9620                        Security Code: ****             TN: 1
     Port: IP                        Coverage Path 1:                 COR: 1
     Name: Door Attendant            Coverage Path 2:                 COS: 1
                                     Hunt-to Station:
STATION OPTIONS
                                         Time of Day Lock Table:
               Loss Group: 19       Personalized Ringing Pattern: 1
                                             Message Lamp Ext: 77301
             Speakerphone: 2-way           Mute Button Enabled? y
         Display Language: english
 Survivable GK Node Name:
           Survivable COR: internal          Media Complex Ext:
   Survivable Trunk Dest? y                      IP SoftPhone? n

                                                     IP Video? n
                             Short/Prefixed Registration Allowed: default

                       Customizable Labels? y
```

## 5.3. Call Routing to Algo 3226 Trunk Port FXO Doorphone

To route calls to the doorphone, a uniform dialplan and AAR routing was used. In the **Uniform-Dialplan** form add an entry for extension *77777*. When this extension is dialed, the call will be routed using AAR to the doorphone.

```
change uniform-dialplan 7                                   Page   1 of   2
                     UNIFORM DIAL PLAN TABLE

                                               Percent Full: 0


  Matching                    Insert              Node
  Pattern        Len Del      Digits        Net Conv Num
  77777           5   0                      aar  n
```

In the **AAR Analysis** form, add entry for *77777* to route calls to the **Route Pattern** *100*, which specifies the loop start trunk connected to the doorphone.

```
change aar analysis 7                                       Page   1 of   2
                        AAR DIGIT ANALYSIS TABLE
                            Location: all       Percent Full: 1


          Dialed          Total      Route      Call  Node  ANI
          String          Min  Max   Pattern    Type  Num   Reqd
    77777                  5    5     100        aar         n
```

Lastly, specify the loop start trunk group in route pattern 100/

```
change route-pattern 100                                    Page   1 of   3
                  Pattern Number: 100 Pattern Name: 3226 Doorphone
                             SCCAN? n     Secure SIP? n
   Grp FRL NPA Pfx Hop Toll No.  Inserted                       DCS/ IXC
   No          Mrk Lmt List Del  Digits                         QSIG
                             Dgts                                Intw
 1: 100  0                                                        n   user
 2:                                                               n   user
 3:                                                               n   user
 4:                                                               n   user
 5:                                                               n   user
 6:                                                               n   user

    BCC VALUE   TSC CA-TSC    ITC BCIE Service/Feature PARM  No. Numbering LAR
    0 1 2 M 4 W     Request                                  Dgts Format
                                                        Subaddress
 1: y y y y y n  n             rest                                        none
 2: y y y y y n  n             rest                                        none
 3: y y y y y n  n             rest                                        none
 4: y y y y y n  n             rest                                        none
 5: y y y y y n  n             rest                                        none
 6: y y y y y n  n             rest                                        none
```

# 6. Configure Algo 3226 Trunk Port FXO Doorphone

The 3226 Trunk Port FXO Doorphone is pre-configured for a typical installation.  Programming is only required to change default setting or for more advanced applications.  For this compliance test, no additional configuration was required.  The doorphone was connected to a port of an MM711 Analog Board on the G450 Media Gateway.  For installation and configuration instructions, refer **[2]**.

# 7. Verification Steps

The following steps can be used to verify and/or troubleshoot installations in the field.

1.  Verify that the staus of the loop start trunk connected to the 3226 Trunk Port FXO Doorphone is *in-service* using the **status trunk** command on Communication Manager. Below is the output of the command.

```
status trunk 100

                        TRUNK GROUP STATUS

Member   Port      Service State       Mtce Connected Ports
                                       Busy

0100/001 001V208   in-service/idle     no
```

2.  Verify that when the call button on the Door Station is pressed, the specified telephone on Communication Manager rings, and upon answering the call, two-way audio path is established.

3.  Verify that the 3226 Trunk Port FXO Doorphone returns to the idle state when the call is terminated.

4.  Verify that incoming calls to the 3226 Trunk Port FXO Doorphone are also successful.

# 8. Conclusion

These Application Notes describe the administration steps required to integrate the Algo 3226 Trunk Port FXO Doorphone with Avaya Aura® Communication Manager. Calls to the 3226 Trunk Port FXO Doorphone were successful in both directions. In addition, unlocking a door using DTMF tones was successful. All test cases passed.

# 9. Additional References

This section references documentation relevant to these Application Notes. The following Avaya product documentation is available at http://support.avaya.com.

[1] *Administering Avaya Aura$^{TM}$ Communication Manager*, June 2010, Release 6.0, Issue 6.0, Document Number 03-300509.

The following Algo product documentation is available at http://www.algosolutions.com.

[2] *Algo 3226 Trunk Port FXO Doorphone Installation and User Guide*, Document Number 90-00040A.

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