



ALGO 3026 Doorphone Installation Guide

About the 3026 Doorphone

The 3026 Doorphone is a system comprised of a 3004 Door Station and 3025 Control Unit. This guide applies to the installation of the 3025 Control Unit with a 3004 Door Station.

The 3026 Doorphone provides intercom capability for a telephone system through a spare trunk port. The Doorphone emulates a telephone line by providing talk battery and ringing. Calls are made by pressing the call button at the door station which causes the control unit to initiate ringing to the trunk port. Anytime that the trunk port is off-hook, communication is provided hands-free at the door station.

Installation

The 3026 Doorphone is shipped with the option switches and controls preset for optimum performance and most common configuration. We suggest that the Doorphone be installed and tested with these settings prior to any adjustments.

Wiring Requirements

Prewire at least one pair of 24 AWG twisted wire between the control unit location and telephone system. The control unit must be installed in a dry protected environment (usually beside the telephone system). The maximum distance between the control unit and telephone system is 1000 meters or 3200 feet.

Prewire at least two pair of 24 AWG twisted wire between the control unit and door station. The door station may be mounted outdoors in un-protected areas. Maximum distance is 300 meters or 1000 feet.

Mounting

Install the door station into a recessed or surface mounted double-gang electrical box of the type that would be used for two light switches or two duplex receptacles. A sealant should be used behind the door station to prevent water from penetrating behind the door station. The door station can be used outdoors in ambient temperatures -30 degC to +40degC (-22degF to +104degF).

The control unit is wall mounted within 1.5m (5ft) of a 120 volt 60 Hz AC receptacle for the supplied 3242 external plug-in adapter.

Wire Connections

The door station connects to the control unit terminals 1-4. The numbers are identified on both the door station and control unit.

The terminals marked T and R (tip and ring) connect to the telephone system trunk port. A modular jack (TEL) is also provided on the rear of the control unit.

The remaining terminals (C, NC, NO) are for door or gate control and are explained in the section **Door Control**.

Testing

With the option switches and level controls adjusted at factory default:

Spkr Volume:	1/2 turn counter clockwise from fully clockwise position
Mic Sensitivity:	1/8-1/4 turn clockwise from fully counter clockwise position
Switch 1:	XXXXOOOO (1,2,3 on - 4,5,6,7,8 off)
Switch 2:	OOOOOXOO (6 on, 1,2,3,4,5,7,8 off)

Pressing the call button should turn on the door station light momentarily and cause the telephone system to ring wherever assigned. The switch 1 settings will provide a ring cadence of 1.5 sec on followed by 3 sec off. (Each switch position contributes 1/2 sec to the ring cadence and the cycle repeats every 4.5 seconds). The switch 2 setting allows for 5 ring cycles before the ringing will stop.

Upon answer, the ring will stop and communication is established with the visitor. Communication may be established at any time by accessing the telephone system port even if ringing was not initiated by the call button.

Level Controls

On the rear of the control unit two controls are provided. Spkr Volume adjusts the speaker volume and is maximum when fully clockwise. This control may be adjusted to suit but should not be turned down to minimum when door control functions are used. The factory setting is ideal for most installations.

The Mic Sensitivity control should not normally be adjusted. This control is factory set for optimum performance and any adjustment may prevent proper switching of the speakerphone circuits.

Option Switches

There are two option switches of 8 positions each exposed through the bottom of the control unit. Switch 1 controls ring cadence pattern and switch 2 controls the number of ring cycles provided in response to the call button.

Switch 1:

Each position contributes 0.5 seconds to the ring cycle which repeats every 4.5 seconds. The switch is scanned each cycle and for every switch position that is on, ring is output. For switch positions that are off, no ring is output. There are 256 ring cadence possibilities to distinguish the Doorphone from other incoming lines when ring cadence is repeated by the telephone system to station locations.

Switch 2:

The number of ring cycles can be selected as follows. If more than one switch is in the on position, the lowest position will control the ring cycles.

Position		Position	
1	(No ring cycles)	5	Four ring cycles
2	One ring cycle	6	Five ring cycles
3	Two ring cycles	7	Six ring cycles
4	Three ring cycles	8	Nine ring cycles
		NONE	- NO LIMIT, RING UNTIL ANSWERED

Door Control

The 3026 Doorphone includes a door control relay for telephone systems that provide tone dialing. Upon detection of the digit 6 from the telephone system the door control relay will operate for 3 seconds. (This time can be adjusted by opening the control unit and adjusting an orange control. Time can be adjusted from momentary to about 10 seconds.)

When idle the C (common) terminal is connected to the NC (normally closed) terminal. When the relay is activated, the C (common) terminal is connected to the NO (normally open) terminal. The relay can switch up to 30VDC or 30VAC at 5 Amps. **Do not use these contacts to directly switch mains power such as 120 or 240VAC.**

These relay contacts are normally used to switch a customer supplied power supply to a customer provided door solenoid or similar mechanism.

Compatible Telephone Systems

The Doorphone is designed to emulate a central office line from the public switched telephone network. **Do not connect the Doorphone to a telephone line.** The Doorphone works with any device with tone dialing that is normally connected to a loop start trunk from a central office. The current revision C design is compatible with all known brands of PBX and key telephone systems including Northern Telecom Meridian Universal Trunk Cards.

The Doorphone can also be used on standard telephones, answering machines, and cordless phones provided that these devices connect **only** to the Doorphone. No line sharing is possible without additional equipment to allow use of these devices for both Doorphone and telephone network, unless a two line device is used.

Algo manufactures Doorphones for station port applications that provide telephone emulation, as well as a variety of products in rack mountable configuration for prison, university, airport and other applications that require many units.

Electrical Specifications:

Power Supply	120V 60Hz 9W plug in adapter. CSA and UL approved. Output to Control Unit 24Vdc 200mA 2.1mm female plug center negative. Maximum input to Control Unit 26Vdc.
Talk Battery	24V nominal, 20mA current limited.
Impedance	600 ohm nominal
Maximum Distance Tip and Ring	Tip and Ring DC loop limited to 600 ohms including telephone. Maximum recommended distance is 1 km (3200 ft) twisted pair 24 AWG.
Maximum Distance Door Station	Maximum recommended distance is 300 m (1000 ft) twisted pair 24 AWG.
Door Control Relay	Maximum voltage 30Vdc or 30Vac Maximum current 5 A.