

DUPLEX SWITCHBOARD CALL

IN A NUTSHELL

Via a centralized master control station, a temporary duplex connection is configured between 2 subscribers who cannot establish a direct voice connection between each other themselves. This way, any subscriber can be connected to another subscriber.

A duplex connection is often called full duplex connection.

ILLUSTRATION



Subscriber at Station A requests the master control station to configure a duplex connection to subscriber at Station B.

②

Operator at master control station configures a duplex connection as follows:

1  He presses the "Switchboard Duplex" key.

2   He presses the "Station A" and "Station B" keys.

3  Then, he presses the "Switchboard Duplex" key again.





A temporary duplex connection is configured. Operator at Station A lifts his handset and presses his switchboard speak key once briefly. A ringing tone is played back at Station B.



A temporary duplex connection is established as soon as the operator at Station B lifts his handset. Both operators can now speak with each other in duplex mode via handset.

DESCRIPTION

The subscriber at Station A speaks to the subscriber at the master control station and requests a duplex connection to Station B. The operator at the master control station presses the duplex switchboard key first to configure a temporary connection. Then, the operator selects the two stations which are supposed to participate in the connection by pressing the corresponding keys. Here, the station which requested the connection is selected first. Finally, he presses the duplex switchboard key again. The temporary duplex connection is now configured, but not established yet.

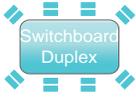
A short acoustic signal is played back at Station A and B. At the same time, the temporary direct key especially defined for temporary connections is activated at Station A (switchboard speak key). The operator at station A now lifts his handset and presses the switchboard speak key once briefly.

A ringing tone is played back at Station B. As soon as the handset is lifted at Station B, the duplex connection is established and both subscribers can speak with each other.

The temporary duplex connection is terminated as soon as one subscriber replaces the handset. Station A, however, can call Station B again within a specified time (e.g. 10 s) without the need for the master control station to configure the connection. If the specified time has elapsed, the switchboard speak key is without function.

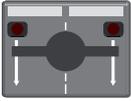
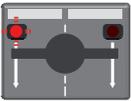
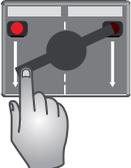
SIGNALING AT MASTER INTERCOM STATION

LEDs at the keys indicating the different connection states are helpful for the operator personnel. The following illustrations show the default signaling types at a master control station using the example of an IP desktop intercom station from INDUSTRONIC with display buttons.

	Signaling	Description
	Switchboard key is off.	Mode to configure the temporary duplex connection is not active. Subscribers cannot be selected.
	Switchboard key blinks at a frequency of 250:250 (250 ms on / 250 ms off).	Mode to configure the temporary duplex connection is active. Subscribers can now be selected.
	Selection key is off.	Subscriber for temporary duplex connection is not selected.
	Selection key is illuminated.	Subscriber for temporary duplex connection is selected. Pressing the key again removes the subscriber from the selection.

SIGNALING AT PARTICIPATING INTERCOM STATIONS (SWITCHBOARD SPEAK KEY)

The following illustrations show the signaling at intercom stations participating in a switchboard connection using the example of momentary rocker switches which are installed in outdoor intercom stations from INDUSTRONIC.

	Signaling	Description
	LED is off.	No temporary connection configured. Key has no function.
	LED blinks at a frequency of 100:900 (100 ms on / 900 ms off). Corresponding side of the rocker switch is not pressed.	Temporary connection configured. Key can now be used.
	LED is illuminated. The corresponding side of the rocker switch was pressed once previously.	A ringing tone is played back at the target. As soon as the handset is lifted at the target, the connection is established.

APPLICATION EXAMPLES

The duplex switchboard call is often used to configure temporary duplex connections between subscribers who cannot establish direct voice connections between each other themselves. An intercom station in a control room is often deployed as centralized master control station which coordinates and configures the connections requested.

CUSTOMER BENEFITS

- Any subscriber can be connected to another subscriber at any time
- A centralized master control station, which has a coordinating role, configures voice connections and thus authorizes subscribers to speak to each other in duplex mode
- Easy coordination of call requests
- Compact and easy-to-use intercom stations can be deployed as they only require one direct call key to the master control station and one speak key to communicate (switchboard speak key)

OPTIONS

Priorities

You can also assign an individual priority for a temporary duplex connection configured by the master control station. This means that an active connection remains busy for other subscribers with the same or lower priority. The connection can only be interrupted by a voice connection or function with higher priority.

Dial Keypad

Duplex connections can also be configured by using a dial keypad. For each individual subscriber the operator enters the call number first and then presses the * key. Only after pressing the * key, the subscriber is selected. A dial keypad is often used when a master control station has only a few keys available or when these keys are already assigned to other functions.

TECHNICAL DETAILS

For a duplex switchboard call at least one intercom station is required which takes on the role of the centralized master control station (e.g. an intercom station in a control room). This intercom station requires the following keys:

- 1 key to configure the duplex connection and to activate the mode for selecting the subscribers (duplex switchboard key)
- 1 key for each subscriber who is supposed to participate in the connection. If there are already direct call keys configured to reach the subscribers, you can use them.
- Optionally, you can also use a dial keypad to select the subscribers.

A master control station can configure several connections at the same time.

Each intercom station which is used for temporary duplex connections requires a handset. A handset is used to avoid acoustic feedback and echoes. Furthermore, 1 special key is required which is exclusively reserved for these temporary connections and which has no other function (switchboard speak key). The operator must press this key only once. During the conversation, the key does not need to be actuated again.

The temporary duplex connection is terminated as soon as one subscriber replaces the handset. Station A, however, can call Station B again within a specified time (e.g. 10 s) without the need for the master control station to configure the connection. If the specified time has elapsed, the temporary connection is deleted and the corresponding switchboard speak key is then without function.

An intercom station can only control one temporary connection at a time. The master control station, however, can always override an active connection by a new one. In this case, the operator is informed about it by an acoustic tone.

RELATED FUNCTIONS

- PA switchboard call
- Two-way switchboard call
- Switchboard call to external telephones
- Conference switchboard call

© INDUSTRONIC