DeesLink

Technical Product Documentation

1. Overview Description

The *DeesLink* supports the telecommuting applications of remote access to an office telephone system and or access to specific telecommunication equipment such as the CM-30 Call Monitoring system.

The *DeesLink* allows authorized remote workers or clients to gain access to specific system functions within the office environment or gain access to two different ports, A and B within *DeesLink*, which can be connected to auxiliary telephone equipment.

Complete system administration and security capabilities are provided with the *DeesLink*. The unit can be programmed on site or remotely through a DTMF telephone. It provides programmable functions such as: password security, dialing restrictions, release time and port A or B access.

Getting Started
This manual was written for the system administrator (designated as User 1) and an installer.
The system administrator manages all passwords and other programmable functions.
A detailed record should be maintained by the administrator of all passwords issued as well as all dialing restrictions that have been set up for specific users.

Line Requirements: The incoming line should be loop start with forced disconnect. The outgoing line or equipment on the *DeesLink* must be loop start. If you are using a loop start line *without forced disconnect* for the incoming line, the switching platform must deliver dial tone, busy tone or reorder when the caller disconnects. The time-out period for the *DeesLink* must be programmed to ensure timely disconnect.

2. Modes of operations
Accessing
To access the unit, the remote user dials a directory number assigned to the *DeesLink*. *DeesLink* will answer incoming ringing during the second ring cycle, whereupon it will return an acknowledgement tone (one beep). After receiving the acknowledgement tone, the user should proceed to input (DTMF) their specific password code. Upon acknowledging the code as valid the *DeesLink* will return a Ready tone (2 beeps). The user is now connected to either port A or port B, depending upon the password code inputted. User stays accessed to the unit for a prescribed period of time (setup by system administrator at time of programming the unit) if disconnect is not initiated by user.

Disconnect
The remote user can signal the *DeesLink* to release the call (hang up) by entering the command ## from their DTMF phone.
If the user doesn't enter the disconnect command of ## before hanging up, the DeesLink will recognize the "forced-disconnect" signal (which is normally provided on loop-start lines) and release the line.

3. Programming

Read this section carefully before beginning to program the unit.

System Administrator
The system administrator is by default User 1. Only User 1 can program the unit locally or remotely.

User 1's default password is (please *contact Dee Communiationss*).

IT IS EXTREMELY IMPORTANT THAT THIS NUMBER NOT BE GIVEN OUT INDISCRIMANATELY. UNAUTHORIZED USE OF THIS PASSWORD COULD RESULT IN INVALID REPROGRAMMING AND FURTHER SECURITY RISKS.

Basic Programming

Users: DeesLink supports 1 to 8 users including User 1, the System Administrator. The User number is the first digit (1-8) after the initial (*) required at the beginning of each programming string.

CM Port Access Assignments
The system administrator defines Port access assignments. Port access is indexed to the user's password. Each unique password (code) is only allowed access to one port either Port A or B. The User number assigned to an individual determines what CM Port they will be connected to upon accessing DeesLink.

Users 1 through 4 will automatically be connected to CM Port A upon access.
Users 5 through 8 will automatically be connected to CM Port B.

If an application requires all remote users to have access to the same CM Port, parallel Ports A & B. Refer to Section **7. Connections:** for details of how to make these connections. *Caution*: When paralleling CM Ports, you will only be able to have one CM unit connected to the DeesLink.

Passwords
Password (security code) access features of the *DeesLink* are the primary means to prevent unauthorized use of the services for which this unit is being installed.

By default, access to the DeesLink requires entering a password, however this feature can be disabled for special usage. Passwords must be a minimum of 4 digits and up to a maximum of 8 digits long. All-zeroes is not allowed (any length). Each user is assigned a unique password. Each unique Password is what determines the accessibility of the User assigned it.
Multiple Users could be assigned the same password, but only the lower User number will be accessible.

⟹ **Password Disable:** CAUTION…ONLY ENABLE THIS FEATURE WHEN ABSOLUTELY SURE THAT SECURITY IS NOT A REQUIREMENT FOR USER ACCESS.
The password feature can be disabled for single-user applications that don't require this protection, (i.e. restricted DID access).
To disable the password requirement, enter the programming mode and enter (* **0** * *).
To re-enable the password requirement, enter the programming mode and enter (* **0** * *).

CM Line Access Assignment (Restricted Dialing)

Each User can be limited to the line numbers they can dial access after being connected to their assigned CM Port, either A or B. Line numbers 10 through 99 can be assigned.

Lower Limit Example: You want to assign a User to CM Port A, give them the password of 1234 and allow them to access the lowest CM Line 10. The programming string up through that point would be: * 2 * 1234 * 10. The User with this password (1234) assigned would be User 2 on CM Port A upon accessing *DeesLink* and would be able to access line 10 as the lowest line available to them.

Upper Limit Example: Let's use the same User as above and in addition we will limit their access to an upper limit of CM Line 19. The programming string is now: * 2 * 1234 * 10 * 19.
To this point in the program string, User 2 will be limited to accessing CM Lines 10 through 19 on CM Port A.

Through the use of assigning the upper and lower limits of the CM Line Assignments, specific access to a range of CM lines can be given to each User.

⟹ **Restricted Dialing Disable:** CAUTION…DO NOT DISABLE RESTRICTED DIALING IF YOU ARE INTERFACING WITH A DEES CALL MONITORING (CM) PRODUCT.
Restricted Dialing can be disabled for generic Remote Access applications. The ## disconnect command is the only recognized sequence in this mode.
To disable Restricted Dialing, enter the programming mode and enter **(* 9 * *)**.
To re-enable Restricted Dialing, enter the programming mode and enter **(* 9 * *)**.

Time Out Period

The Time Out Period is the period of time in minutes that each User is allowed before DeesLink automatically disconnects. This period can be programmed for each User from 1-99 minutes. If the Time Out Period is not programmed then each User is automatically given the default period of 60 minutes.

⟹ **Time Out Period Disable**
In applications where the DeesLink is required to remain accessed without timing out, the Time Out Period can be disabled. By inputting 00 as the Time Out value during the programming sequence, the Time Out Period will be disabled for that user. If the Time Out Period is to be disabled for all users, then each user will have to be programmed using 00 as the Time Out value.

CAUTION: IF THE TIME OUT PERIOD IS DISABLED, THE ONLY WAY TO RELEASE THE DEESLINK, ONCE ACCESSED, IS BY DIALING ## BY THE USER, OR BY THE CENTRAL OFFICE SENDING A DISCONNECT SIGNAL. IF FOR SOME REASON THE UNIT DOES NOT RECEIVE ONE OF THESE DISCONNECT SIGNALS, THE ONLY WAY TO RELEASE THE LINE IS BY UNPLUGGING THE DEESLINK'S POWER OR LINE CORD MOMENTARILY.
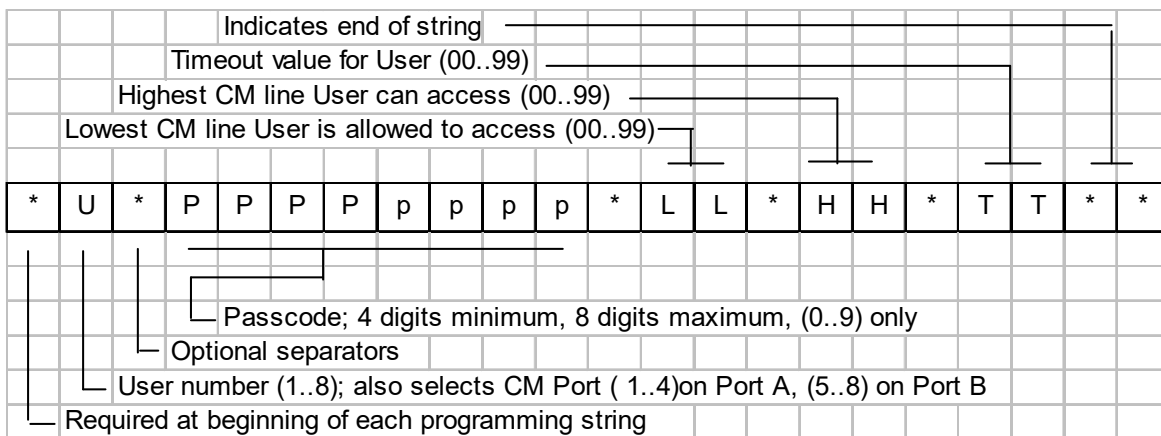
Factory Defaults

LL = 10, lowest CM line accessible
HH = 99, highest CM line accessible
TT = 60 minutes, Time Out Period
PPPP = xxxx for User 1 only (system administrator), no other passwords are assigned by default.

Feedback Tones

- 1 beep tone = confirmation of entering Idle mode
- 2 beeps tone = Ready: entering Monitoring or Programming mode
- 1 low beep tone = Release: follows ## disconnect command
- (hi-lo, hi-lo) tone = alarm tone: invalid entry or time-out

Programming Chart

			Indicates end of string																	
			Timeout value for User (00..99)																	
		Highest CM line User can access (00..99)																		
	Lowest CM line User is allowed to access (00..99)																			
*	U	*	P	P	P	P	p	p	p	p	*	L	L	*	H	H	*	T	T	*	*

Passcode; 4 digits minimum, 8 digits maximum, (0..9) only
Optional separators
User number (1..8); also selects CM Port (1..4)on Port A, (5..8) on Port B
Required at beginning of each programming string

(Note: All programming strings begin with * and end with **)

Before beginning the Programming Process

To begin the process of programming and assigning User numbers and passwords, you should carefully organize the number of Users you expect to have, which CM Port they need to access and exactly what lines on that Port they need access to. With this information at hand, you can then fill out a programming chart for each User.
There is no way of retrieving the current programming information from DeesLink.

Programming for all Users can be performed at once. Since programming is stored in non-volatile memory the only way it can be changed is to program over it. It is not necessary to reprogram all Users, only those you wish to change. At any point before the final digit is entered, the programming string can be abandoned by entering #.

If an invalid programming sequence of characters is entered, DeesLink will generate an Alarm Tone (hi-lo, hi-lo), and allow the system administrator to begin over by entering #.

Local Programming
On the *DeesLink* unit there is a RJ-11 jack labeled PGM PORT for the purpose of connecting a standard 2500 type telephone to program the unit locally. Dial tone will not be present on the PGM jack.
Note that there is a 6 second inter-digit timeout period. If exceeded it will clear the entry and generate an Alarm Tone (hi-lo, hi-lo). The procedure for local programming is as follows:

1. Come off-hook on the programming phone and dial xxxx*, you will receive 2 beeps;
2. Enter #, this puts you into the Idle Mode and you will receive 1 beep;
3. Enter *, then User number (1-8)
4. Enter * [just a separator]
5. Enter password you want to assign the User (ex. 1234)
6. Enter *
7. Enter (10-99) as the low CM Line assignment for User
8. Enter *
9. Enter (10-99) as the high CM Line assignment for User
10. Enter *
11. Enter (00-99) as the timeout period assigned for User.
12. Enter **, ends this specific User programming sequence and you will receive 1 beep tone. Wait for beep tone before proceeding.
13. This process can be continued (steps 3 – 12) to set up all of the Users. Do not dial # between programming for different Users.
14. After last User is programmed wait for 1 beep tone confirmation, then dial #. You will receive 1 low beep, then the *DeesLink* will hang up.

EXAMPLE: User 2, CM Port A, Password 1234, Lowest CM Line access 10, Highest CM Line access 19, 15 minutes time out. After entering programming mode (xxxx*#), the programming string would be (*2*1234*10*19*15**).

1. Off-hook on programming phone
2. Enter xxxx*   2 beep confirmation tone
3. Enter #   1 beep confirmation tone
⟹ 4. Enter *2   User number 2 gives them access to CM Port A
5. Enter*1234   Assign password for User 2
6. Enter *10   defines lower Line limit
7. Enter *19   defines upper Line limit
8. Enter *15   will hang up after 15 minutes of inactivity
9. Enter **   1 beep tone confirmation

Shorter String: When assigning each User, you can leave some or all of the default CM Line access and Time Out settings unchanged by ending each User string with ** after the last field to be changed. The same is also true if you are coming back later to make changes. You only need to enter new values up to and through that point in the programming string and end there by entering **.

Note: All programming is stored in non-volatile memory, so the unit can be unplugged without losing its programming.

Remove User: Any User can be removed by programming their password as 0000.

Remote Programming

When programming remotely, a timer will release *DeesLink* if it does not receive any digits within 15 seconds of answering.
To program DeesLink from a remote location (dialing in) the procedure would be:

1. Dial in to *DeesLink* by dialing the 7 or 10 digit number assigned.
2. DeesLink answers and returns a single beep.
3. Enter User's 1 password (System Administrator) default xxxx*. You will receive 2 beep tones as confirmation, and are now actually connected to CM Port A.
4. Enter #, DeesLink releases the CM Port and enters the Idle mode and returns 1 beep tone.
5. Begin with step 3 in the Local Programming section, to begin programming different Users.
6. After programming of different Users is complete, enter #. You will receive 1 low beep indicating *DeesLink* is about to release the line.
7. Hang up.

4. Operation

⟹
LED indication and function
The LED on the front panel of the *DeesLink* is on and RED in the non-active state.
During incoming ringing the RED LED will blink. Upon detection of a valid input code and coming off-hook on its CM Port, the LED will turn GREEN, and return to RED upon release of the CM Port.
During programming the RED LED will blink.

System operation and specific User accessibility is set by the system administrator and cannot be changed by other Users: i.e. CM Port access, CM Line access, Password and Time Out Periods are all preset during programming.

Typical Application, remotely accessing a CM-10 or CM-30 Call Monitoring system
A remote user dials the ten-digit number provided by the system administrator for accessing the *DeesLink*. *DeesLink* answers incoming ringing during the second ringing cycle and gives a one second acknowledgement tone to the user. After receiving the acknowledgement tone, the user will enter their unique password (code) that has been provided to them by the system administrator, followed by a (*). Upon acknowledging that the password is valid *DeesLink* will return a Ready tone (2 short beeps). The user is now connected to either port A or port B, depending on the password used.
DeesLink does not provide dial tone to the user.

The user can now proceed with dialing the two-digit code representative of the line they wish to monitor on the CM-10/CM-30. The user can move from line to line on the CM-10/CM-30 by dialing a single # then the new two-digit number.

If a two-digit code outside the assigned range is attempted, a brief alarm tone is heard and the CM port is hung up for two seconds to reset the CM-10/CM-30 unit. The *DeesLink* CM port then returns off-hook and the Ready tone is heard.

When the monitoring session is over the user can disconnect by hanging up or dialing ##. Upon disconnect the user will receive a single acknowledgment tone prior to *DeesLink* disconnecting.

Only one User can access *DeesLink* at a time.

5. Installation

DeesLink requires a dedicated central office line assignment. This number should be guarded carefully and given to authorized Users only.

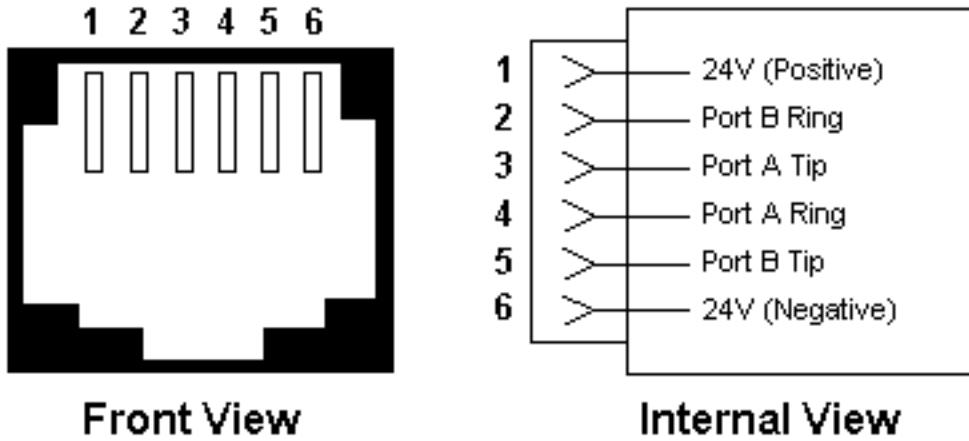*DeesLink* provides an RJ-11 jack for easy connection to the outside line.

DeesLink comes self-contained, with its own power supply. All other connections in and out of the unit are on RJ-11 jacks.

DeesLink's housing accommodates being mounted on a backboard. With the use our Mounting Bracket Model 106 it can be mounted vertically to the wall or in a relay rack.

6. Specifications

Ring Detection	Standard (2 seconds on, 4 seconds off) or Double-Ring pattern
Operating Supply Voltage	20 to 30 VDC
Operating Supply Current	150 ma. DC max
Operating Temperature	-32 to +122 °F (0 to 50 °C)
Humidity (non-condensing)	95% RH max
Dimensions (LxWxH)	4" x 5" x 1.5" (10 x 12.5 x 3.8 cm)
Shipping Weight	1.8 lbs (812 grams)
Certifications	Pending
Support	1-800-654-5604
	support@dees.com
	www.dees.com

7. Connections:

Front View   **Internal View**

1	24V (Positive)
2	Port B Ring
3	Port A Tip
4	Port A Ring
5	Port B Tip
6	24V (Negative)

(View of CM connector) CM Port A and B connections. Shown with CM-10 connected.