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NoiseCHEK Personal Noise Dosimeter

Cat. No. 701-001
Operating Instructions

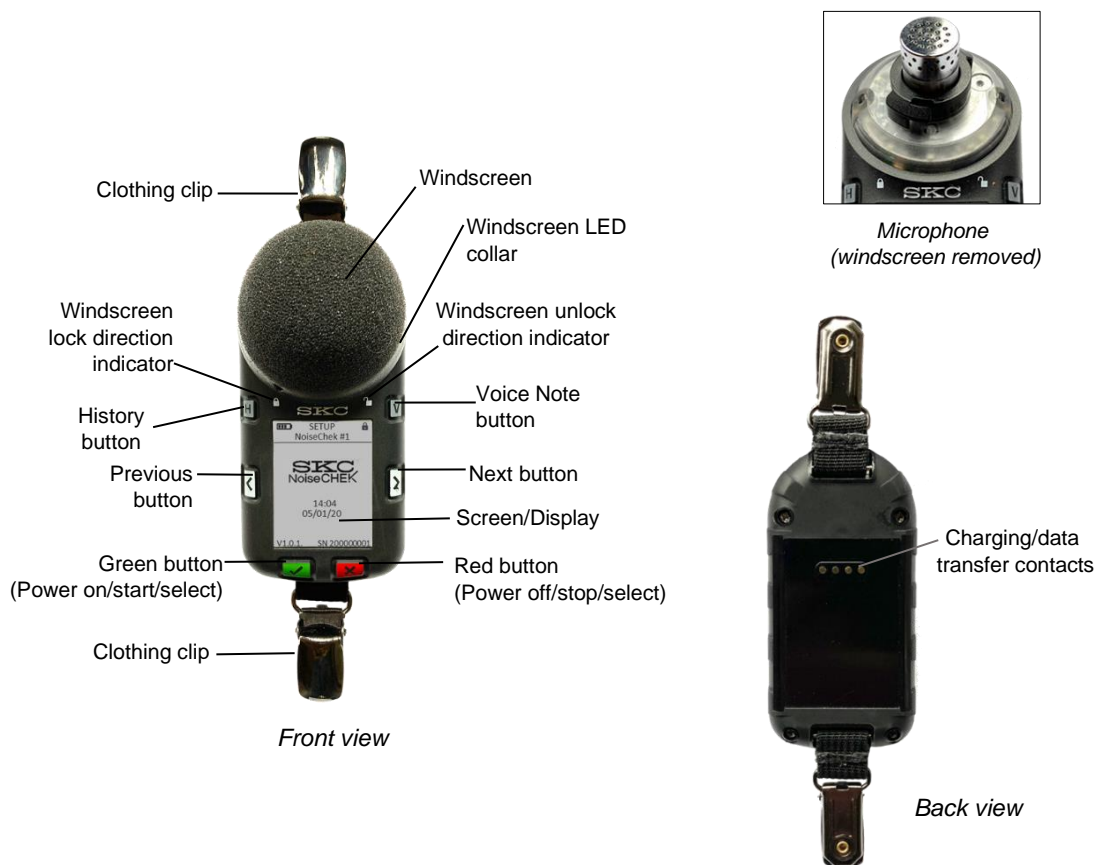


Figure 1. NoiseCHEK Noise Dosimeter — Overview

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INTRODUCTION

SKC NoiseCHEK Personal Noise Dosimeter Cat. No. 701-001 (*Figure 1*) measures a worker's daily noise exposure in the workplace as required to meet regulations and standards for compliance.

NoiseCHEK has a ½-inch Class 2 microphone and is worn on the apex of the shoulder with the microphone close to the ear and away from the neck. Clothing clips on each end of the device attach the dosimeter securely to a worker's shoulder.

Program up to four virtual dosimeters in the noise dosimeter for simultaneous compliance and monitoring per OSHA, ACGIH, MSHA, and a User Custom option to meet internal standards that may exceed the exposure requirements of regulations. Settings are modified/enabled using SKC DataTrac® dB Software for NoiseCHEK. See *Using DataTrac dB Software*.

A note about default settings: NoiseCHEK has been shipped with programmed settings for OSHA compliance and AIHA recommendations listed in the table below.

Default Settings	
Virtual dosimeters/parameters	OSHA Hearing Conservation (HC) OSHA Permissible Exposure Limit (PEL) ACGIH
Measurement readings for sample runs	SPL, TWA, Dose, Lavg, Peak, Lmax, pTWA, pDose, and Upper Limit
Measurement readings shown in History	TWA, Dose, Lavg, Peak, Lmax, pDose, and Upper Limit
History sample rate	60 seconds
Voice Note	Enabled
Secure Lock	Enabled – PIN (default 1 2 3 4) required to connect to SKC SmartWave dB app. See <i>Lock Feature</i> .

Checking Dosimeter/Kit Contents

Use the table below to verify that you received all items associated with the Cat. No. ordered. If you are missing items, contact SKC at 800-725-8472 (U.S. only) or 724-941-9701.

If you ordered Cat. No.	Your package should contain
701-001	Dosimeter only , requires charging dock; see kits below or <i>Accessories/Replacement Parts</i>
701-001K	Single Kit includes dosimeter, 1-unit Charging Dock with power supply, USB cable, and USB drive with instruction manual, in a protective carry case
701-001K-C	Single Kit with Class 2 Calibrator includes dosimeter, 1-unit Charging Dock with power supply, AcoustiCHEK Calibrator, USB cable, and USB drive with instruction manual, in a protective carry case
701-001K3	3-pack Kit includes 3 dosimeters and 1 each: 5-unit Charging Dock with power supply, AcoustiCHEK Calibrator, replacement windscreen, USB cable, and USB drive with instruction manual, in a protective charging carry case
701-001K3-C	3-pack Kit with Class 2 Calibrator includes 3 dosimeters and 1 each: 5-unit Charging Dock with power supply, AcoustiCHEK Calibrator, replacement windscreen, USB cable, and USB drive with instruction manual, in a protective charging carry case
701-001K5	5-pack Kit includes 5 dosimeters and 1 each: 5-unit Charging Dock with power supply, replacement windscreen, USB cable, and USB drive with instruction manual, in a protective charging carry case
701-001K5-C	5-pack Kit with Class 2 Calibrator includes 5 dosimeters and 1 each: 5-unit Charging Dock with power supply, AcoustiCHEK Calibrator, replacement windscreen, USB cable, and USB drive with manual, in a protective charging carry case

GETTING STARTED

- Do not apply stickers to the back of the dosimeter because this can cause connectivity issues while the dosimeter is in the charging dock.

Charging the Battery

Set up the charging train (Figure 2a or 2b as applicable) and completely charge the battery before operating the dosimeter. See *Determining Battery Charge Status*. **Note:** Cat. Nos. 701-001K3, 701-001K3-C, 701-001K5, and 701-001K5-C feature a carry case with charging cable installed to charge dosimeters inside the case. See *Charging Train in Carry Case with Charging Cable Installed* and Figure 2b.

1. Prepare the charging dock (1-unit Charging Dock Cat. No. 701-002 or 5-unit Charging Dock Cat. No. 701-003). See Figure 2a.
 - a. Insert the power supply into the power jack on the back of the charging dock.
 - b. Plug power supply cube into 100-240 V power supply. The power LED on the back of the dock will light up blue when connected to the power supply. **Note:** You can also charge NoiseCHEK by connecting the charging dock to your PC or a USB battery bank with a USB cable. Charging time may increase significantly depending on the power available from the USB port used.
2. Place the NoiseCHEK in the prepared charging dock. Battery charging status bars will be displayed on the dosimeter screen (see right); five amber LEDs will blink during charging. Full charge is indicated by five green blinking LEDs. **Note:** When the battery is fully charged, LCD (display) will shut down. The green LEDs will continue blinking while the dosimeter remains in the charging dock.

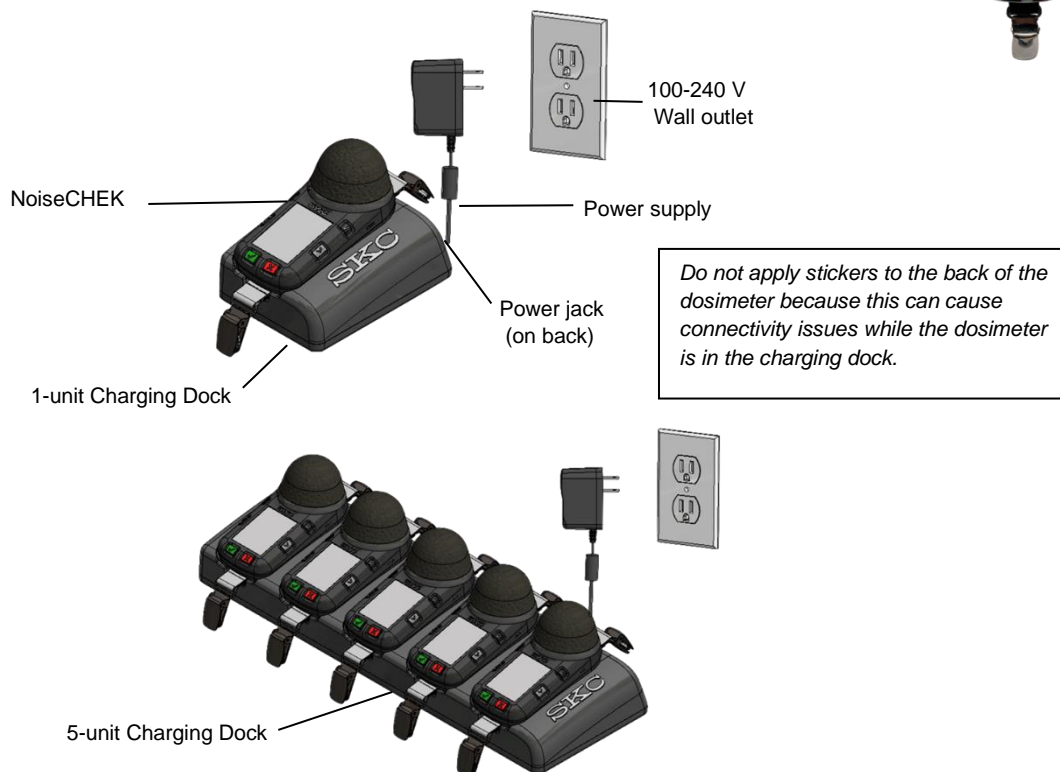


Figure 2a. Charging Train

Charging Train in Carry Case with Charging Cable Installed

- *Do not apply stickers to the back of the dosimeter because this can cause connectivity issues while the dosimeter is in the charging dock.*

The carry case for Cat. Nos. 701-001K3, 701-001K3-C, 701-001K5, and 701-001K5-C has a charging cable installed and a power jack for connection to the charging dock and power supply for charging in the case. See Figure 2b.

1. Prepare 5-unit Charging Dock Cat. No. 701-003.
 - a. Insert the built-in charging cable into the power jack on the back of the charging dock.
 - b. Plug power supply into the power jack on the side of the case; plug the power supply cube into a 100-240 V power supply. The power LED on the back of the dock will light up blue when connected to the power supply.



Figure 2b. Charging Train in Carry Case with Charging Cable Installed

2. Place the dosimeters in the prepared charging dock. Battery charging status bars will be displayed on the dosimeter screens; five amber LEDs will blink during charging. Full charge is indicated by five green blinking LEDs. **Note:** *When batteries are fully charged, the LCDs (displays) will shut down. The green LEDs will continue blinking while the dosimeters remain in the charging dock.*

Note: *Do not keep dosimeters in charging dock during transport.*

Notes and Cautions

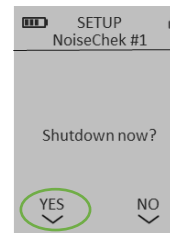
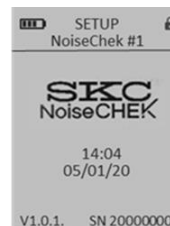
- The battery used in this device may present a risk of fire or explosion when heated above 212 F (100 C) or incinerated. Battery can be replaced only by SKC authorized service center.
- When transporting dosimeters, ensure that they are placed in their designated areas inside the case, not on the charging dock.
- Do not apply stickers to the back of the dosimeter because this can cause connectivity issues while the dosimeter is in the charging dock.

Turning Power On/Off

Turn on: Press and hold the green button (*Figure 1*). The Home (SETUP) screen will be displayed. *See right.*






Turn off: From the Home or any Setup screen, press and hold the red button (*Figure 1*). Select YES (press green button) to confirm shutdown. *See below right.*

Note: After 5 minutes of inactivity, NoiseCHEK will shut down automatically.



Determining Battery Charge Status

The battery status icon is always displayed at the top left on the screen. *See the table below to determine the battery charge.*

Battery Status Icon	Battery Charge
	Full charge, approximately 75 to 100% One to three bars will be displayed when charge is less than full but not low battery.
	Approximately 50 to 75%
	Approximately 25 to 50%
	Approximately 5 to 25%
	Low battery — shutdown is imminent. Note: All data will be stored in History.

Determining Dosimeter Status — LEDs

LEDs (visible through the windscreen LED collar) indicate charging and operation status and activity, exposure level, and Bluetooth® connection. *See the table below.*

LED Description/Activity	Status
Amber, flashing continuously (device seated in charging dock)	Not fully charged
Green, flashing continuously (device seated in charging dock)	Fully charged
Green, single flashing approx. every 3 seconds	Sample run in progress; accumulating data
Green, double flashing approx. every 3 seconds	Sample run paused
Amber flashing, alternating with green	Set % dose reached (level set in DataTrac dB Software)
White (lower right) flashing intermittently	Voice note present.
Blue (top), flashing intermittently	Communicating via Bluetooth (with SKC SmartWave dB app)

Using the Buttons

See the table below for how to use the dosimeter buttons (*Figure 1*) to operate the device, navigate screens, and select screen prompts.

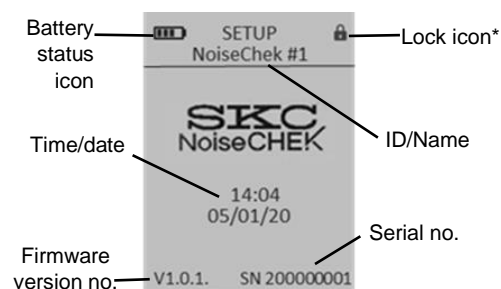
Button	Functions
Green	<ul style="list-style-type: none">• Turn on device. <i>See Turning Power On/Off.</i>• Start run, pause run, and resume run.• Select prompts YES, OK, SELECT, HOME, RESUME, LIST, and digit in PIN for Lock feature.• Undim screen.
Red	<ul style="list-style-type: none">• Turn off device (from Home, Setup, or Standby screens only). <i>See Turning Power On/Off.</i>• Stop sample run.• Select prompts NO, HOME, DELETE, and digit in PIN for Lock feature.• Undim screen.
Previous/Next (left/right arrows)	<ul style="list-style-type: none">• Scroll backwards/forwards through virtual dosimeter screens• Scroll up/down through History list.• Select digits in PIN for Lock feature.
H (History)	<ul style="list-style-type: none">• View selected sample run history.• Access History list.• Return to Home screen after sample run has ended or from a sample run history.
V (Voice Note)	<ul style="list-style-type: none">• Record voice note during sample runs• Access voice note recording held in memory to delete it.

Interpreting and Navigating Screen Displays

The screen displays are intuitive with messages and selection prompts to guide you through each operation. Icons at the top right and left corners indicate battery and operation status, activated features, and alerts (see *Status Icons*). **Note:** After approximately 30 seconds of inactivity, the screen will dim automatically. To undim, press the green button or red button.

Home Screen

When you turn on the noise dosimeter, the Home screen appears (see right). From the Home screen, calibrate, scroll through virtual dosimeters, access History and Voice Note, and turn off the device.



* See Lock Feature.

Virtual Dosimeter Screens

Each programmed virtual dosimeter has a Home screen with the following parameters set to the particular standard, e.g., OSHA HC or PEL, ACGIH, MSHA HC or PEL, or custom:

- Exchange (Exchange rate)
- Threshold
- Criterion (Criterion level)
- Response
- Freq weight (Frequency weight)

Octave bandwidth screens are displayed if enabled in DataTrac dB Software. To view the parameter and bandwidth screens, use the Previous/Next buttons to scroll to them. **Note:** For more details on enabling octave bandwidths, see *Using DataTrac dB Software*.



OSHA HC Measurement view screens

History Screens

Press the History button (Figure 1) to access sample data. See *Reviewing Data*.

Status Icons

Icons	Indication
	Battery charge level (see <i>Determining Battery Charge Status</i>)
	Sample running
	Sample run paused
	Lock feature activated
	Overload: % Dose set in DataTrac dB Software reached during sample run

Changing Time/Date

Change the time/date when moving between time zones in one of two ways:

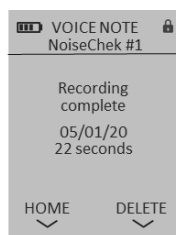
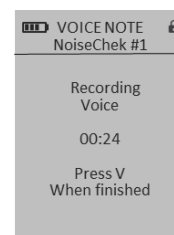
1. Connect to the dosimeter(s) via the SKC SmartWave dB mobile app: the time/date will automatically be adjusted to the time/date on your phone.
2. Use DataTrac dB Software to adjust the time/date and upload the setting from the PC to the dosimeter(s) (see *DataTrac dB Software for NoiseCHEK User Manual*).

Recording/Playing a Voice Note

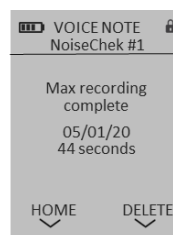
Record a voice note to identify details like the kind of noise being sampled, location of sampling, wearer's job description, and other relevant items. You can upload and play a voice note on a PC using DataTrac dB Software. Only one voice note can be held in NoiseCHEK, and it must be deleted or uploaded to a PC before another note can be recorded.

Note: Voice Note can be disabled in DataTrac dB software. See *DataTrac dB Software for NoiseCHEK User Manual*.

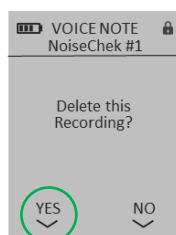
1. From the Home screen, press and hold the Voice button to begin recording a note.
Note: Maximum recording time is approximately 44 seconds.
2. End recording by pressing the Voice button again (otherwise it will be ended automatically when recording time exceeds maximum limit). See below.
 - a. **To save the recording**, select Home (press green button). The white LED will continue to flash intermittently (when dosimeter is powered on but not running) to indicate that a recording is present. If you try to record another note in the meantime, you will see the message that a recording is present. See *Voice Note Status*.
 - b. **To delete the recording**, select Delete (press red button). Select Yes (press green button) to confirm; the message that the recording has been deleted will appear. The white LED will stop flashing. See *Voice Note Status*.



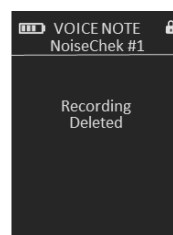
Recording ended manually



Recording stopped automatically



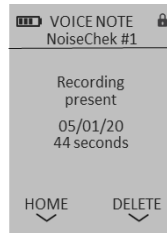
Confirm deletion



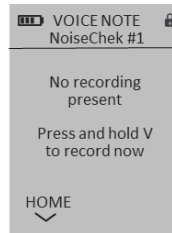
Recording deleted

- To play a voice note, upload data to your PC via DataTrac dB Software. See *DataTrac dB for NoiseCHEK User Manual*.

Voice Note Status



Recording saved

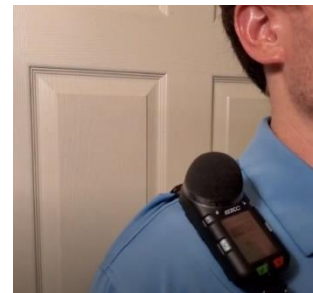


Recording deleted

Attaching NoiseCHEK on a Worker

Attach the NoiseCHEK to the worker's shoulder **after** the unit has been turned on and calibrated and **before** the sample run is started.

- Choose the shoulder facing the highest level or source of noise. Place the unit on the top of that shoulder with the microphone as high as possible so it can collect maximum sound. Turn the wearer's head toward the dosimeter to make sure the chin does not touch the dosimeter.
- Fasten the clothing clips securely to the shirt. See *right*.
- During sampling, keep clothing from touching the windscreen to avoid contaminating results.



Removing/Reinstalling Windscreen

Remove windscreen: Hold the windscreen collar (with arrow on collar facing you), turn it to the unlock indicator on the dosimeter. Lift the windscreen from the microphone.



Reinstall windscreen: Seat the windscreen over the microphone (with arrow on collar facing you), turn it to the lock indicator on the dosimeter to secure it. **Note:** You should feel/hear a click as it is locked in place.



OPERATION

Performing a Sample Run

- Charge the battery completely before operating the noise dosimeter.
- Calibration is necessary **before and after** every sampling operation.
- AcoustiCHEK Class 2 Calibrator Cat. No. 703-002 is required for calibration.
- See Status Icons table for indicators that appear on screen during operation.

Calibrate

1. Turn on NoiseCHEK.
2. Remove the windscreen from the microphone. See *Removing/Reinstalling the Windscreen*.
3. Attach the AcoustiCHEK Class 2, 114-dB calibrator on the microphone, and turn on the calibrator by pressing the Power key.
4. Press the Level key to set calibrator to 114 dB (see *calibrator operating instructions and Figure 3*). After a 5-second countdown shown on the screen, calibration will take place.
5. When calibration is complete/passed, turn off or remove the calibrator from the microphone.
6. Select OK (press green button) on NoiseCHEK (returns you to Home screen).
7. Reinstall the windscreen. See *Removing/Reinstalling the Windscreen*.
8. You are ready to sample. See *Sample*.



Figure 3. Calibration Train and Display

Sample

- To schedule a timed sample run, see *DataTrac dB Software for NoiseCHEK User Manual*.
 - For details about Secure Lock and Auto Lock, see *Lock Feature*.
1. After successful calibration, from the Home screen press the green button. See below.
Note: Attach the dosimeter to the worker in Step 2 **before** selecting YES to begin sampling.
 2. Attach NoiseCHEK on worker's shoulder. See *Attaching Noise Dosimeter on a Worker*.
 3. Select YES (press green button) to begin sampling. The run indicator will appear at the top right of the screen (see below right).



Start sampling.



Confirm start sampling.



Sample running

- a. **To pause sampling**, press and hold green button. Select Yes (press green button) to confirm. The pause indicator appears at top right on the screen. See below. **Note:** If Auto Lock is enabled, you will be prompted to enter the four-digit PIN using the buttons on the dosimeter to select the PIN digits. See *Lock Feature*. NoiseCHEK will remain powered on but sampling will stop (timer will not increment further) and data will stop accumulating.



While sample is running, press and hold green button.



Confirm pause.



Enter PIN if required.



Sample paused.

- b. **To resume sampling**, press and hold green button and confirm by selecting YES (press green button). See below. The timer will continue where it left off, and data will continue to accumulate.



Resume sampling.



Confirm resume sampling.

4. Stop sampling by pressing and holding the red button. Select YES (press green button) to confirm. **Note:** If Auto Lock is enabled, you will be prompted to enter the four-digit PIN. See Lock Feature.



Stop sample run.



Enter PIN if required.



Confirm stop.

5. Remove the device from the worker's shoulder. Review sample history or return to Home screen by pressing the red button or History button.
6. Proceed to Post-calibrate.

Post-calibrate

- Each time NoiseCHEK is calibrated, it displays the calibration values obtained "Before" and "After" calibration and stores them. For post-calibration, use the "Before" value.
1. See Calibrate, Steps 2 through 6.
 2. Review data. See Reviewing Data (History).

Lock Feature

Secure Lock: When activated, a four-digit PIN (using numbers 1, 2, 3, 4) designated in DataTrac dB Software is required to connect to the mobile app. Secure Lock must be activated to enable Auto Lock (*see below*). Lock icon appears on screen.

Auto Lock: When this feature is activated, the PIN designated for Secure Lock is required to **stop** or **pause** sampling but **not** to start the device.

Reviewing Data (History)

The History (data) view (*below left*) appears after a sample run ends (after post-calibration) and when you press the History button from the Home screen.

1. View the run data.
 - a. Use Previous/Next buttons to scroll through and view the run data for each programmed virtual dosimeter. After viewing the last virtual dosimeter data, you will be prompted to go to the History list or to return to the Home screen (*see below*). Select LIST (press green button) to go to the History list.
 - OR**
 - b. From the History view of any virtual dosimeter, press the green button.
2. Scroll to the desired sample run and choose SELECT (press green button).



View sample run data



Select list of sample runs



Select run from list

Review data from the History views on the NoiseCHEK device, on your PC using DataTrac dB software (*see Using DataTrac dB Software*), or on your mobile device using the SKC SmartWave dB mobile app.

Upload and print summary reports from PC or mobile app. Upload a more detailed report (compliance + time history) from your PC. **Note:** All the data needed to comply with OSHA is in the summary report.

Using DataTrac dB Software

NoiseCHEK communicates with a PC via SKC Charging Dock 701-002 or 701-003 and DataTrac dB Software. With DataTrac dB software, you can:

- Program and modify presets in your dosimeter setup including virtual dosimeters, octave band display, secure lock and auto lock, and more (*Figure 4*).
- Schedule sample runs.
- Upload data for viewing and/or generating and sharing summary and compliance reports.

Figure 4. DataTrac dB Setup Screen

- 👉 When all four virtual dosimeters and octave band data logging are enabled and log data is set to 1 second, it will take approximately 3 hours (1/3 octave) or 1 hour (1 octave) to download data accumulated during an 8-hour run. Select log octave band data and 1 second log interval only if you need and intend to use this kind of data.

Install DataTrac dB Software

The NoiseCHEK noise dosimeter communicates with a PC via USB cable and charging dock (1-unit or 5-unit) and DataTrac dB Software (*Figure 5*). Connect up to five NoiseCHEK dosimeters in the 5-unit charging dock to upload settings. **Note:** *Do not apply stickers to the back of the dosimeter because this can cause connectivity issues while the dosimeter is in the charging dock.*

1. Connect charging dock to PC using included USB cable.
2. Download from <https://www.skinc.com/catalog/datatrac/DataTracdB/setup.exe> or copy from USB drive “setup.exe” and install DataTrac dB as instructed. DataTrac dB will launch automatically.



The DataTrac dB Installer requires administrator privileges to install properly.

3. Place noise dosimeter(s) in the charging dock to complete the communication train (*Figure 5*). **Note:** *DataTrac dB will only detect dosimeters that are properly seated in the connected charging dock.*



Figure 5. Communication Train

To program and upload settings to your noise dosimeters and download run data to your PC, see the DataTrac dB Software for NoiseCHEK User Manual.

ACCESSORIES/REPLACEMENT PARTS

Accessories

Cat. No.

1-unit Charging Dock for charging and connection to PC, includes power supply **100-240 V**

701-002

5-unit Charging Dock for charging and connection to PC, includes power supply **100-240 V**

701-003

AcoustiCHEK Calibrator, Class 2, 114 dB

703-002

Replacement Parts

Cat. No.

Replacement Power Supply for Charging Docks, 12 V DC, with interchangeable plugs **100-240 V**

220-600

Replacement Windscreen

701-004

Replacement Microphone, ½-inch

701-005

SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to skcinc.com/warranty.

APPENDIX: PERFORMANCE PROFILE

Standards	ANSI S1.25 Personal Noise Dosimeters, 2017 IEC61252 Personal Sound Exposure Meter
Microphone	½ in, Type 2, ACO7052
Noise Measurement Range	80 to 140 dB, peak up to 143 dB
Weighting	A, C, and Z; peak C or Z
Response Time	Fast and slow
Exchange Rate	3, 4, or 5 dB
Virtual Dosimeters	Up to 4, programmable, OSHA HC, OSHA PEL, MSHA HC, MSHA PEL, ACGIH, or custom
Octave Filters	1/1 or 1/3 octave bands
Run Time	40+ hours
Data Logging	Selectable parameters every 1 sec or 60 sec
Data Storage	36 to 200+ hrs depending on configuration
Voice Note	Up to 44 sec, can be disabled
Audio Recording	Audio recording of event when sound pressure exceeds set value, can be disabled
Status LEDs	Green, amber, blue, and white LEDs provide visual indication of dosimeter status from a distance
Security	User-selectable 4-digit PIN can be activated to secure access from mobile device and STOP/PAUSE function on the dosimeter
Connectivity	USB to PC with DataTrac dB Software; BLE to mobile device with SKC SmartWave dB app
Battery	Li-Ion* polymer rechargeable battery, 3.7 V, 1200 mAh
Charge Time	6 to 8 hrs
Charging Method	Charging dock, 100-240 Vac, 12 Vdc, 5 V USB
Display	Continuously on, TFT monochrome, front lit 1.8 in (45.72 mm), 9 lines of user-selectable data for each virtual dosimeter including: SPL, Lavg, Leq, Dose, Peak, TWA, projected dose and TWA, and exposure
Operating Temperature Range	32 to 122 F (0 to 50 C)
Humidity	Up to 95%, non-condensing
Dimensions	3.9 x 1.9 x 2 in (99 x 48 x 51 mm)
Weight	4.1 oz (117 gm)

**NoiseCHEK dosimeters are shipped with Li-Ion batteries and are subject to special shipping regulations.*