

DuraFon 1X Quick Reference Sheet

RMA Requests – go to support section at www.engeniustech.com or email support@engeniustech.com
Engenius technical support: 714-432-8668

BASIC TROUBLESHOOTING

If you encounter any issues with the system, do a power reset on both handset(s), and base station. If the system still isn't working correctly, try resetting the handset and if needed, the base station.

NOTE: Resetting a handset will clear registration and other stored information and settings. Resetting a base station will cause loss of settings including handset registrations so re-registering handsets will be required.

TIPS

Customizing the handset name (display): It is recommended that you customize the name for your handset to match the user's name and/or extension it is wired to. Press MENU, 5, 5, then add your customized display name.

How to transfer a call to a different extension: If using a PBX, while on the call, press the green TALK button (serves as a flash key while on an active call), then dial the extension, then press the "END" button to complete the transfer. For Nortel PBX's press TALK + Star (*) 70 + extension + END.

How to put handset in RSSI (signal check) mode: Must be v2 or newer handset. Press MENU, * # # *, enter base ID under test (10), then press 1 (BER), then press *. -40dBm to -70dBm is very good, -71dBm to -80dBm is still good, -81dBm to -90dBm is fair, and -90dBm to -110dBm is weak. Less negative is better. See "RSSI Instruction Sheet" for more detailed information for conducting a site survey with an EnGenius handset.

How to reduce broadcast button transmit delay time: Must be v2 or newer handset. Press MENU, * * #, enter base ID 10, then choose option 5 (DSP Sleep Tm). Setting sleep time to zero will result in almost no delay for transmitting broadcasts but battery life will be reduced by about 20%. This will also eliminate incoming call ring delay.

How to check handset and base station firmware version: From any registered handset press MENU, * * #, then 1 (SW Ver), then enter 10 for the base ID. Scroll down to see DSP and MCU versions for both the handset in hand and the base station that the handset is registered to.

How to enable or disable headset broadcast control (v2): If plugging in a headset causes the phone to go into broadcast mode you will need to turn this feature off (this feature only usable with call control type headsets). To disable the feature press MENU, * * #, 6 (Earphone Btn), then select on/off, then save.

How to boost earpiece audio on the handset: Press MENU, * * #, then 3 (Vol Adjust), then arrow up/down to select +8dB, then save.

Hold on PBX feature: While on an active call, the icon above the top right soft key shows "HOLD". By default, this hold is just a hold between the handset and base station and not a PBX hold. You have the option to program this key to the PBX system hold dial code (typically a flash). Press MENU, # # *, then press 3 (Hold on PBX), select ON, then enter the dial code (press the TALK key to store "F" for flash), then SAVE. Next save the "UNHOLD" code (typically flash again) and SAVE.

Change default broadcast group – By default, pressing the BROADCAST button will page all handsets. To change this so when a user presses broadcast it only goes to a group, press MENU, # # *, 2 (Pre-PA Group), then select the group (01-09) you want. Note, the handset user will now broadcast to only the defined group unless they pre-dial the all group ID (which is 00).

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Ref #1 – Registering a handset:

First POWER-UP the base station for at least 5 seconds. Press and hold the register (REG) button until all four lights illuminate. Next, press MENU, 6, 1. The handset display will say “registered” with a new handset ID. The first registered handset ID will be 11 and will go up to 19 (up to 9 handsets per base). ID 11 and 12 are the “admin handsets”. **NOTE:** If you use up all 9 handset ID’s, you will get a “Registration Failed” prompt. You must reset the base station and start over if no more handset ID’s are available.

Ref #2a – Resetting the handset serial # below 071100601:

Press MENU, *# # *, then 7, then 1 (Clear all), then press OK, then power cycle.

Ref #2b – Resetting a handset serial # 071100600 to 112000001:

Press MENU, 5, star (*), then 1 (clear all), then power recycle.

Ref #2c – Resetting a handset serial # 113000001 or higher (V2):

Press MENU, *# # *, then press * (factory), then 1 (clear all), then press OK, then power cycle.

Ref #3 – Deregistering a handset:

First power-up the base station for at least 5 seconds. Press and hold the register button (REG) on the base until all four green LED lights illuminate. Take care not to accidentally activate the top buttons on the base station while holding the base station upside-down. Then at the handset press MENU, 6 (register), then 2 (deregister). The handset should display “Deregister”. The ID of the handset will be removed from the handset. If the handset will not deregister, then it probably wasn’t registered to the base station in the first place or lost its configuration. At this point, do Ref #2 (resetting a handset).

Ref #4 – Base station will not go into registration mode:

Make sure only the power light is on the base station while pressing the register button. Often times the unit may be in BROADCAST or 2-Way mode which will not allow it to go into registration mode. Also unplug the RJ11 telephone line going to base to avoid any possible ring signals from coming in while registering handsets. If the problem persists, power cycle the base station and if necessary reset the base station (Ref #5).

Ref #5 – Resetting the Base station:

First POWER-UP the Base Station unit for at least 5 seconds. Press and hold the RESET button (near the phone line plug on the back of the unit) until all four green LED lights illuminate on and off. This will happen quickly. The base station is now reset. Handset registration will start back at “11”.

Ref #6 – Adding additional base stations for a handset to use (for additional line access):

The DuraFon-1X system allows up to 4 base stations. To add additional base stations, first register all handsets to the primary base originally used in the system. Next, get the additional base station you want to add and press and hold the register (REG) button until all four green LED lights illuminate. With the administrator handset (ID 11 or ID 12), press MENU, 6 (register), 3 (add base) and then choose either 20, 30, or 40 (for additional base 2, 3, or 4 respectively). Note: A handset can still only communicate to one base station at a time. If more than one line access at a time is needed, consider using a call-waiting feature from the PBX or Telephone line provider or consider using the DuraFon-PRO (multi-line) model instead.

Ref #7 – How to register more than nine handsets to a single base station:

By default, the base is ID 10 and registered handsets will register as ID 11-19 (for a total of nine handsets). To add more handsets to the same base, first change the existing base ID from 10 to 20. Do this by using an admin handset (ID 11 or ID 12), and press MENU, 6 (register), 3 (add base) then enter “20”. Then continue registering additional handsets to that base. Handset ID’s will continue on as 21-29 respectively.

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Ref #7 – Handset Audio Adjustments:

To check firmware version press MENU, Star (), Star (*), Pound (#), then 1, then "10" for the base ID.
First confirm you already set volume to "6" while on an active call but still need volume to be louder.*

EARPIECE VOLUME ADJUSTMENT (1)

- 1) Press MENU, * * #, then 3 (Vol Adjust), then arrow up/down to select, then save. Setting to +8dB can help in noisy environments.

EARPIECE VOLUME ADJUSTMENT (2)

- 2) Press MENU * * #, then press option "2" for "Boardtest"
- 3) Press 41 and you will be in the "Codec Out" test. You should hear a 1 kHz tone.
- 4) For v1 (firmware version 0.xx through 1.xx) note the digit on the bottom right corner. Default is typically between 3 and 5. Zero is loudest, 9 is lowest, adjust accordingly.
- 5) For v2 (firmware 3.xx) adjust 1 through 6, where 1 is lowest, 6 is loudest.
- 6) After changing the value press "End" to finish and again to exit.

HANDSET MICROPHONE SENSITIVITY ADJUSTMENT

- 1) Press MENU * * #, then then press option "2" for "Boardtest"
- 2) Press 51 and you will be in the "Codec In" test.
- 3) For v1 (firmware version 0.xx through 1.xx) note the digit on the bottom right corner. Default is typically between 3 and 5. Zero is loudest, 9 is lowest. Adjust accordingly.
- 4) For v2 (firmware version 3.xx) PRESS the top left soft key (OPTION), then use the arrow up/down key to adjust. Typical default is 30.75db. Adjust up or down in 3db increments at a time, then test. PRESS the top left soft key to "SAVE".
- 5) After changing the value PRESS "End" to finish and again to exit.
- 6) If the audio out-going is still not loud enough, try adjusting base line out level (below).

LINE OUT AUDIO GAIN LEVEL (BASE STATION LINE PORT OUT)

- 1) From any registered handset press MENU * # # *, then "4" (B EEP).
- 2) Display should show "addr". Now enter "0031" (press multiple times to get to the actual numeric value like text messaging). Once entered, press "OK" using the top left soft key.
- 3) Display should show "data". The default value is 00FB. To increase the level, change the data to 0000 for a 5dB increase and change it to 0005 for a 10dB increase.
- 4) Lastly, you must power cycle the base station for any changes to take effect.

DuraFon 1X FAQs

Q1: How to transfer a call from an EnGenius handset to a different extension on the PBX?

A1: If using a PBX, while on the call, press the green TALK button (serves as a flash key while on an active call), then dial the extension, then press the "END" button to complete the transfer. For Nortel PBX's press TALK + Star (*) 70 + extension + END.

Q2: Can I transfer calls from DuraFon-1X handset to a DuraWalkie-1X handset?

A2: Yes. Although the Walkie cannot get direct inbound calls, it can get a transferred call from a full-featured DuraFon-1X handset. To transfer an active call from a DuraFon-1X handset to a DuraWalkie-1X handset, while on the call with the DuraFon-1X handset press the blue 2-way button and then enter the 2-digit handset ID of the handset you want to transfer the call to, then choose "Xfer" to complete the transfer of the call.

Q3: How do adjust flash time on a DuraFon 1X system?

A3: From an admin phone (ID 11 or 12), press MENU, 9, enter base 10, then press 2 for flash time. To change it, press 1 through 9 to choose from 100ms to 900ms respectively. In some cases, adjusting the flash time down to 200ms may be necessary behind certain voice lines for proper 3-Way call handling or transferring calls behind a PBX. The flash time of the EnGenius should match the flash time of the PBX.

Q4: Will my external antenna from my older EnGenius phone system work with my new 1X system?

A4: Yes. The reverse thread TNC connector on the base is the same on all EnGenius telecom products.

Q5: Does the DuraFon-1X system have built in voicemail?

A5: No.

Q6: Does the DuraFon-1X handset have speakerphone?

A6: Yes and No. All phones built after Nov. 2007 with serial number 07A101340 or higher now include this feature. To put a handset in speakerphone mode, press and hold the TALK key for two seconds.

Q7: Is the DuraFon-1X handset compatible with other EnGenius systems such as the 920, 4x, or PRO?

A7: No, the DuraFon-1X is not compatible with any other systems.

Q8: How can I tell the different between a DuraFon-1X, 4X, PRO, and DuraWalkie Handset?

A8: The best way to check is to remove the battery and see the model on the serial number label. The DuraFon-1X handset has a black face plate, DuraFon-4X a silver face plate, DuraFon-PRO a green face plate, and both a DuraWalkie and DuraWalkie-1X have a blue face plate. Be especially careful not to confuse a DuraWalkie with a DuraWalkie-1X. Both have blue face plate so checking via model number on the serial label is essential. A DuraWalkie (non-1X) is made for the PRO model and not compatible with the DuraFon-1X.

Q9: What frequency does the DuraFon-1X operate?

A9: The DuraFon uses frequency hopping spread spectrum (FHSS) at 902 to 928MHz (the unlicensed 900MHz ISM band). This can be changed to 902-915MHz or 915-928MHz if required.

Q10: Can the DuraFon-1X interfere with Wi-Fi networks?

A10: No. The DuraFon-1X will not interfere with Wi-Fi networks because Wi-Fi operates in the 2.4GHz and 5GHz bands while the DuraFon-1X system operates at 900MHz.

Q11: Can multiple DuraFon-1X base stations interfere with each other?

A11: Yes, so a minimum of 30 feet of physical separation between base stations is recommended for best performance. If external antennas are used, then the bases can be close to each other while the external antennas are separated by at least 30 feet. Also keep the antennas at least 3 feet away from other electronic equipment to avoid receiving or causing EMI.

Q12: Will the DuraFon-1X hand off a call from one base station to another (support roaming)?

A12: No, there is no handoff or roaming capability.

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Q13: Can the DuraFon-1X system interfere with other communication devices?

A13: The EnGenius system uses 900MHz FHSS. Frequency hop spread spectrum technology is very good at avoiding interference but only up to a point. At very close proximity, another 900MHz system (as in a few feet) can create a “near far” problem and both systems will suffer from degraded range and performance. For devices not using 900MHz, simply keeping the antennas at least 3 feet away from other electronic devices is usually enough to avoid any EMI or RFI issues.

Q14: Why does the DuraFon-1X use 900MHz?

A14: Lower frequency 900MHz goes further than higher frequencies available to use for cordless phones such as 1.9GHz (DECT), 2.4GHz, or 5GHz. Lower frequencies are less absorbed by objects and less affected by walls, buildings, trees, and even has less free space path loss (FSPL) than higher frequencies. Another reason is to avoid receiving or causing interference to 2.4GHz or 5GHz networks. Low frequency, high power, and high receiver sensitivity is what gives EnGenius phones their unmatched long range.

Q15: I am getting a “enter base ID” prompt every time I try to make a call. How do I disable this?

A15: Press MENU, 8, 2 (for outgoing calls for base 1 settings), and then off. This should only be on when multiple base stations are used.

Q16: I’m sharing a phone line with another phone and when I join in on the call, they can’t hear me.

A16: To avoid howling or feedback in speakerphone mode when starting a new call, the handset is initially muted. To cancel the mute, press any digit to turn on the voice path. This is now standard on all DuraFon-1X handsets with speakerphone capability (ser. # 07A101340 or higher).

Q17: How do I change the handset from PULSE to TONE dialing?

A17: From the administrator handset (ID 11 or 12) press MENU 9, then “10” for base ID, then 1 for dial mode.

Q18: Can I answer a second call from another base station while on a call from the first base station?

A18: No. The DuraFon-1X handset can only use one base station at a time. If you need to take a second call using a DuraFon-1X system, you may consider doing so by using the PBX or telephone service provider’s “Call Waiting” feature or consider using the EnGenius DuraFon-PRO multi-line system instead.

Q19: Does a DuraFon-1X support Call Waiting, and/or 3-Way Calling?

A19: Yes, provided this is handled by the phone company or phone system it is connected to. You will need to press the TALK button (serves as the flash key while on calls) to flip between callers.

Q20: What is the maximum number of handsets that can be used on a DuraFon-1X system?

A20: The maximum number of handsets is 9 per base station (with base ID of 10 and handset ID’s 11-19). However, if you were to use more base stations (up to 4) with base ID’s 20, 30, or 40, then you could have 18, 27, or 36 handsets with handset ID’s 21-29, 31-39, and 41-49 respectively. If you change the original base ID from 10 to 20, you can actually have additional handsets (more than 9) on just one base station (handsets will continue to register as 21-29). See Ref #7 for more details (page 2).

Q21: When was my phone manufactured?

A21: The first three values in the serial number determine build date. The first two are the year and the third digit is the month, and A = Oct., B = Nov., and C = Dec. For example: 07Cxxxxxx = 2007, December.

Q22: How different is the range using 2-Way mode or broadcast handset-to-handset mode as compared to base-to-handset (telephone calls) communication?

A22: 2-Way and broadcast handset-to-handset modes are independent of the base station. Range will be less than a typical incoming call or broadcast from the base station (typically 25% to 50% less). If an external antenna is used on the base station, the range difference will be even more noticeable. To maximize 2-Way or handset broadcasts, use the long antenna on the handsets.

Still having trouble? Call EnGenius technical support at 714-432-8668 or email support@engeniustech.com