DuraFon PRO Quick Reference Sheet

BASIC TROUBLESHOOTING

If you encounter any issues with the system, do a power cycle 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 the base station will cause loss of settings including handset registrations so re-registering handsets will be required.

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TIPS

Customize the display on the handset:
It is recommended that you customize the name of each handset to match the user's name and/or extension it is assigned to. Press menu, 5, 5, 1, then enter the custom display name.

How to transfer a call to a different PBX extension:
For most PBX systems, while on the call, press the green TALK button (FLASH), then dial the extension, then press "END" to complete the transfer. For Nortel PBX's press FLASH + Star (*) 70 + extension + END.

Programming a handset to use one specific port, so it has its own extension on the PBX system:
See Ref #7, or Ref #8. Ref #8 is preferred for single base station applications.

How to turn off line detection *(if getting "NO LINES AVAIL"" or "NO CONNECTION" prompts)***:**
From an admin handset (ID10 or 11), press MENU, 9,1 (choose base 00-07) primary base is 00, press 3 for line det., then select "OFF". No lines avail may also mean your line port dedication is incorrect (see Ref #7).

How to 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 (feature only available with call control type headsets). To disable this feature press Menu, star, star, pound, 00, then press 6 (Earphone Btn) and turn it OFF and SAVE.

How to put a handset in RSSI (signal check) mode: Must be v2 or newer handset, Press menu, star, pound, pound, star, enter base number under test, then press 1 (BER), then press star. -40dBm to -70dBm is very good, -71dBm to -80dBm good, -81dBm to -90dBm is fair, and -90dBm to -110dBm is weak. See "RSSI instruction sheet" for more info (search keyword "RSSI" on our website).

How to reduce broadcast button transmit delay time: Must be v2 or newer handset - Press menu **#, enter base 00, then press 5 (DSP Sleep Tm) and change. Note, setting it to zero will result in almost instantaneous transmit of broadcast but battery life will be reduced by about 20%. This will also reduce incoming call ring delay.

Hold on PBX feature: The top right soft key (while on a call) shows as "HOLD". By default, this HOLD feature is just a hold between the handset and base station (not a PBX hold). It is recommended to program this key to the PBX system hold dial code (typically a FLASH). To do this press Menu ##*, then press 3 (Hold on PBX), turn it ON, then enter the code for HOLD. Assuming the PBX's hold code is FLASH, enter "F" by pressing the TALK button, then SAVE. Next save the "UNHOLD" code as "F" (Flash) again and save.

Reduce line access delay time: Assumes handsets are line dedicated (and therefore using the same base for all calls). Press menu 5, 3 (base select) then turn it "on" and save. Next press Menu ##*, 5 (Preferred BS), then press 1 (Static), then enter the base (00-07) this handset always will use. Requires handset version 3.16 and higher.

How to check handset and base station firmware version: From any registered handset, press Menu, **#, then enter the base ID you want to read, then press "1" (SW VER). Scroll down to read handset and base information. Note, if the handset isn't registered to a base, you can still get handset information but you won't get base information (just enter base ID as 00 to get to the next screen because it's still required to be entered).

How to turn up earpiece volume, turn up/down microphone sensitivity, or change line in/out audio levels (gain) at the base station line ports: See reference #12.

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Ref #1 – Registering a handset:
NOTE: With the PRO system you must register all handsets to the first (primary) base unit (base id 00), and if additional bases are used, add those bases after with an administrative handset (Ref #5).

First power up base station for at least 5 seconds. Find the "Register" button near the antenna connection (blue button labeled REG). Press the REG button and hold it until all line lights illuminate. Once the lights are on, let go of the REG button and with the handset you want to register press Menu 6, 1. The display will say "Register" and a new registration ID will appear. The ID of a handset starts at "10" and will go up from there (from 10 to 99). Up to 90 handsets can be registered. ID 10 and 11 are "Administrative handsets" which allows for dedicating base line ports specific handsets, turning the auto attendant on or off, and to clear or assign IDs to other handsets etc. If you lose both admin handsets, you will need to reset the base and register all handsets over again so keep care to have at least one administrator handset in the system.

Ref #2a – Resetting a handset (version 1 ser#113000001 or lower):
Press Menu, 5, star, then 1 (clear all), then power recycle.

Ref #2b – Resetting a handset (version 1.5 or v2 serial #114000001 or higher):
Press Menu, * # # *, enter "00" for base, then *, then choose 1 "clear all" or 2 "keep reg" (keep registration), then choose to keep phonebook or not, keep speed dial or not, then choose yes to "are you sure".

Ref #3 – Deregistering a handset:
Same procedure as Ref #1, except press menu 6, 2 instead of menu 6, 1. Keep in mind, deregistering a handset is not required to register a handset so if you have a handset that already has a registration ID but is not communicating with the base, go ahead and register it again (it will override any previous registration information with a new registration ID). If you need to bring back a specific handset ID number (typical issue when getting back a handset after repair) – see Ref #11.

Ref #4 – Base station won't go into registration mode or won't register a handset:
Note, only a primary base (base ID00) allow handsets to register to it. Troubleshooting steps: First do a power cycle on the base station. Next remove telephone lines (so there is no chance of incoming calls to interrupt the process). At this point try and register the handset again. If you are still unsuccessful, you may want to RESET the base station. Only reset the base if other handsets can no longer communicate to the base as well. If other handsets still communicate to that base, the problem may be with that specific handset. If it is specific to that handset, proceed with Ref #2 (resetting the handset).

Ref #5 – Adding additional base stations:
All base stations out of the box start off as a primary base (ID00) so your first step is to RESET the base station you want to add as a secondary base (see ref #6). Next, press the REG button of that base until all four line lights light up. Now from an admin handset (ID10 or 11) press MENU 8, 1 (add base), and then choose 01 through 07. You can have up to 8 base stations. It is recommended to label them. Note that only base ID00 will accept handsets to register to it (the primary base unit). After adding the base station, you will likely need to go to ref #7 to line dedicate the ports to specific handsets.

Ref #6 – Resetting the base station:
First POWER-UP the base station for at least 5 seconds. Locate the RESET button near the base station's antenna connection. It's the very small button labeled "RST". Using a pen or paperclip, lightly press and hold this button down until line 1 and line 2 line lights light up. After they flash, you can let go. Next power cycle the base station. The base station is now reset (registration will now start at ID10 again).

Ref #7 – Assigning a handset to a specific base and line port of that base (Multi-Base application):
NOTE: By default, all lines ring all handsets, and all handsets have access to all lines. To line dedicate a handset to a specific port (give the handset its own extension), do the following:
1) With an admin phone (ID 10 or 11), press MENU, 9, 2 (line settings), base 00 (or 01-07), then 2 (line dedicate).
2) The screen will display: "Select L1: All handsets". You can move the arrow up/down to select lines 1-4 at this menu. To continue with L1, PRESS "OK" to get to the next screen "Line Dedicate". Choose the extension (handset ID), or group you wish to dedicate L1 to. Continue by going back to do lines 2-4.
NOTE: Resetting the base will erase all registration and administrative changes including line dedication. Removing power does not lose settings.
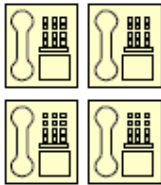**NOTE:** If you wish to dedicate more than one handset to a line, use grouping instead (Ref #8).

See diagram below. This shows how to set up 2 bases and 8 handsets, each handset with their own dedicated port. The same process can be used to configure up to 8 bases and 32 line ports.

Recommended base station antenna separation is at least 5 feet with DuraFon PRO V2 (ser#114xxxxxx or higher). For older v1 (ser#113xxxxxx and lower) you must keep antennas at least 30 feet apart. Note: If external antennas are used, it is the antennas (not the base stations) that would require this separation.

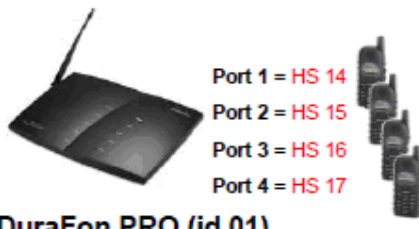## Programming the PRO for PBX applications (Two base stations / 8 handsets)

(Digital extensions)
Ext. 100
P Ext. 101
B Ext. 102
X Ext. 103

(Analog extensions)
Ext. 201 = Base 00/ Port 1
Ext. 202 = Base 00/ Port 2
Ext. 203 = Base 00/ Port 3
Ext. 204 = Base 00/ Port 4

Ext. 205 = Base 01/ Port 1
Ext. 206 = Base 01/ Port 2
Ext. 207 = Base 01/ Port 3
Ext. 208 = Base 01/ Port 4

Port 1 = HS 10
Port 2 = HS 11
Port 3 = HS 12
Port 4 = HS 13
DuraFon PRO (id 00)

Port 1 = HS 14
Port 2 = HS 15
Port 3 = HS 16
Port 4 = HS 17
DuraFon PRO (id 01)

In this configuration, each handset uses exclusively the base station, port of that base, and extension only.

Step 1: Pick one of the two bases to be your primary base 00. Register all phones to that base. ID's should be 10-17.

Step 2: Reset the base to be base "01" by pressing the reset button next to the REG button.

Step 3: From handset 10, press menu, 8, 1, "add base", then press the "REG" button, and "add" the second base as "01"

Step 4: From handset 10, press menu, 9, 2, 00, 2, and program line 1 to ext. "10", line 2 to "11", line 3 to "12", and line 4 to "13".

Step 5: From handset 10, press menu, 9, 2, 01, 2, and program line 1 to ext. "14", line 2 to "15", line 3 to "16", and line 4 to "17".

Step 6: Name the handsets. For handset 10, press Menu, 5, 5, 1 and name it "EXT 201".
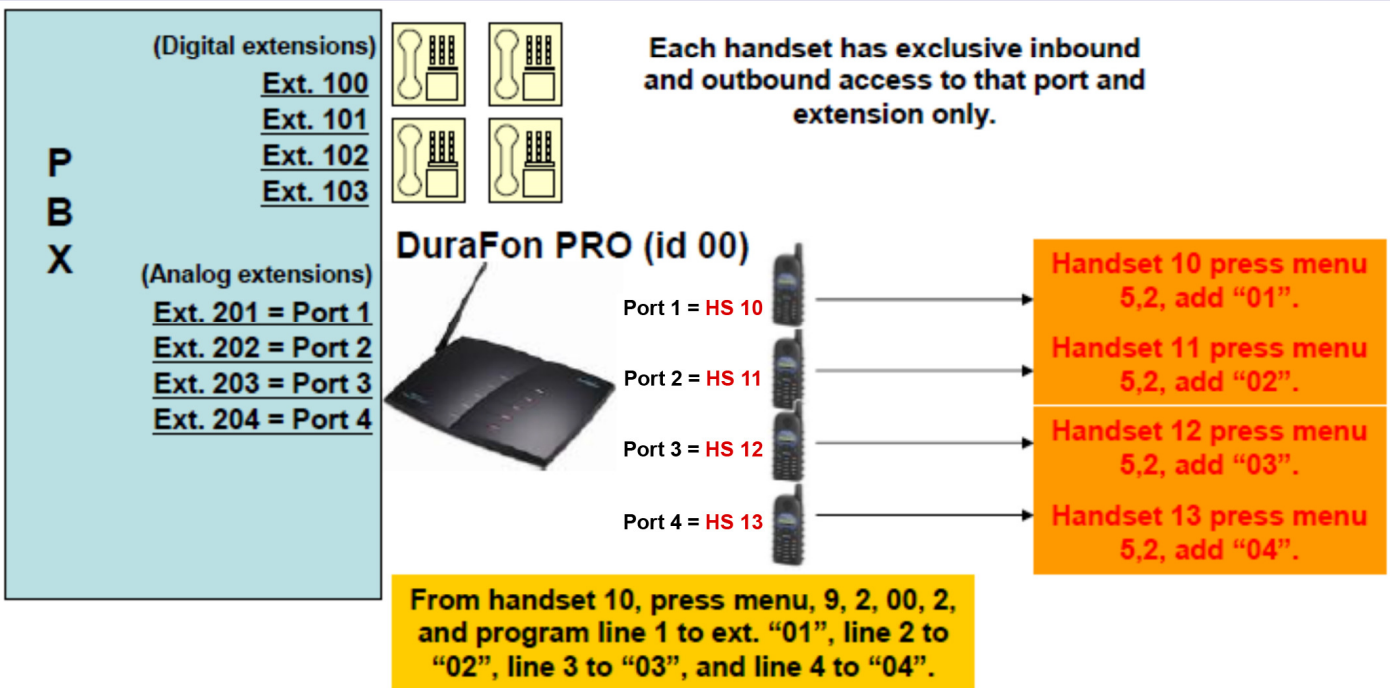
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Ref #8 – Assigning a line port to a group (so more than one handset can share a port):
NOTE: By default, all lines ring all handsets, and all handsets have access to all lines. You will need to program the base station so lines are to groups only. Then only handsets of that group see those lines accordingly.

NOTE: The DuraFon PRO system supports up to 7 groups. If multiple bases are used, you can mix line port dedication where some ports are individual handset ID's (ref #7) and some are group dedication (like below).

See diagram below.

NOTE: Out of the box no handsets are part of any groups. You must add groups to each and every handset accordingly. No lines will be available until they are in one of these groups. To add a handset to a group, press 2, then press "ADD". Press 01 for group 1, or "02" for group 2 etc. With grouping you can remove or add lines (groups) to handsets individually at any time.

Ref #9 – Turning on the "Broadcast through a port" feature: *(available for lines 3 and 4 only)***:** With an administrator handset (ID 10 or 11), PRESS MENU 9, 2, then choose the base station ID (primary base is 00, and additional bases are from 01-07), then CHOOSE 1. You will then have the choice to turn on line 3, or line 4 broadcasting. Choose the line. Now you have the choice to enable the feature itself and also turn on or off the automated greeting. Choose accordingly. Do a test call to confirm settings. Note a "broadcast ID" can be an individual handset ID or group ID. When a port is changed to a broadcast port, it can no longer be used for normal inbound or outbound use.

Ref #10 – Adding a handset to a group: On each handset, to add it to a group, or groups, press MENU 5, 2, then ADD. You can have up to 7 groups. Group IDs are from 01 through 07.

Ref #11 – Recovering the original handset ID after having a phone repaired:
All handsets returned for repair must be registered to the EnGenius repair dept. test base station. This causes your handset lose registration to your base station. Unless you deregistered the handset from your base station prior to sending it to EnGenius, your base station is thinks that handset ID still exists. For example, if you have four (4) handsets registered as ID 10, 11, 12, and 13 and you send in Handset 12 for repair. When you reregister it, you will get ID 14 because it thinks 12 is in use. To get your handset registration back to ID 12 you must erase the base station information for handset 12.

To erase a registration ID that is stored by the base station, get an administrative handset (ID 10 or 11) and press Menu 9, 1, then choose base number (00), then choose 4 (clear hs). Now enter in the handset ID you want to restore. In our example it would be extension ID 12. Now ID12 is clear and available as the next registration ID. The base unit gives IDs to handsets in numerical order of free IDs. You can now go to Ref #3 (above) and go through the normal handset registration process.

Ref #12 – Internal Audio Adjustments. First check which version you have.
Check firmware by pressing: Menu, Star, Star, Pound, then enter the base ID (Primary base is ID00 and additional bases range from ID 01 through 07. Now press 1 for "SW VER".

HANDSET EARPIECE OUTPUT ADJUSTMENT

1) PRESS MENU, Star(*), Star(*), Pound(#)
2) Scroll down (arrow up/down keys) to "Vol Adjust" and select it (press 3 or 4 depending on model).
3) Use the up/down arrows to adjust between -8,-4, 0, +4, and +8.
4) +8 is loudest, -8 is lowest, and default is zero.
5) Adjust accordingly and then press the top left soft key to save.
6) Now press "End" three times to exit.

HANDSET MICROPHONE SENSITIVITY ADJUSTMENT

1) PRESS MENU, Star(*), Star(*), Pound(#) 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 levels (below).

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

1) From any registered handset press Menu, *****, **#, #, *** (star, pound, pound, star), then "4" (B EEP).
2) Display should show **"addr"**. Now enter "0050" (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 first two digits are the value for **line 2**, and the last two are for **line 1**. 0000 is the loudest and 0909 is the lowest (9db down from maximum for line 2 and line 1). Enter the desired value (typically you should change the default 0606 value to 0000 to get audio louder.
4) For **lines 3 and 4**, follow step #2 and step #3, but enter Addr "0052" instead (Addr 0052 = L4/L3).
5) Lastly, **you must power cycle the base station** in order for any changes to take effect.

Still having trouble? Call EnGenius support at 888-735-7888 or email _support@engeniustech.com_

DuraFon PRO FAQ'S

Q1: How do I transfer a call from an EnGenius handset to a different extension on my PBX phone system?
A1: Most PBX transfers will require you to PRESS the FLASH (green button) key + extension number, then the "END" (red button) to complete the transfer. An exception is Nortel, which requires you to press FLASH, Star (*), 70 + extension number, then "END".

Q2: Can an EnGenius DuraWalkie receive calls from DuraFon PRO handset?
A2: A DuraWalkie handset cannot receive inbound calls from an incoming line or make a new call however, the DuraWalkie can get a transferred call from a Durafon PRO handset. The DuraWalkie can also transfer that call to other PRO handsets or DuraWalkies as well. See Q14 on how to do this.

Q3: Can I transfer a call from a DuraFon-PRO handset to a DuraWalkie handset?
A3: Yes. To transfer an active call from a DuraFon-PRO handset to a DuraWalkie handset, while on the call with the DuraFon-PRO handset, press the blue 2-way button and then the two-digit handset ID of the Walkie you want to transfer the call to, then choose to "Xfer" the call.

Q4: How far can a DuraWalkie transmit from one handset to another?
A4: 2-way intercom and broadcast mode (regardless if done from a DuraFon-PRO handset or DuraWalkie handset) range is typically 25% to 50% less than for telephone calls. The reason is these modes are a handset to handset feature and do not use the base station. Only telephone calls use the base station. There is an exception to this and that is if a separate repeater base is used. A repeater base allows the 2-way intercom and broadcast modes to go through it, thus making range the same as for telephone calls. Overall range will vary depending on environment. Another option for is to use the DuraFon-UHF handset (requires UHF FCC licensing). The DuraFon-UHF radio has similar range to the telephone calls, without the need of a repeater base, due it is much lower frequency (450MHz) versus the 900MHz telephone frequency.

Q5: Which one is the DuraFon PRO Handset and which one is the DuraWalkie?
A5: DuraFon PRO Handsets have a green faceplate. DuraWalkie handsets have a blue faceplate. You can also remove the battery to verify model and serial number. Note, the DuraWalkie-1x also has a blue face plate but is not compatible with the DuraFon PRO system.

Q6: How many ports/lines does the "broadcast through the port" feature take up on the DuraFon PRO Base Station?
A6: There are four (4) available RF time slots on each PRO Base Station unit normally used for up to four concurrent phone calls. A broadcast coming from the base uses 2 of the 4 time slots during a broadcast. One is being used as the occupied line (L4 for example), and the other time slot is used to do the outgoing broadcast to all the handsets. This means that if you are on 3 calls (L1, L2, AND L3), L4 broadcast will NOT work. During a broadcast, if L1 and L2 are in use, and L3 receives an incoming call, the incoming call takes priority. The broadcast stops, and handsets ring instead.

Q7: How do I register handsets to multiple DuraFon PRO Base Station?
A7: You cannot. The PRO system only allows you to register handsets to the primary (ID00) base station). How you would get a handset to use a secondary base station's line port (and not other base stations) is via line port dedication (Ref #7).

Q8: Can the DuraWalkie be used out of the box without a Base Station?
A8: No. DuraWalkies require registration IDs from the same base station to receive 2-Way intercom calls or to make or receive broadcasts.

DuraFon PRO FAQ'S 2

Q9: What is the difference between the 4x system and the PRO system?
A9: Additions to the PRO include:
- Speakerphone capability in the PRO handsets.
- Multiple base station registration (allowing 2-Way / broadcast with all, up to 8 total Base Station units), where 4x is limited to one registered base station unit (no multi-base).
- Broadcast through a line port feature.
- DuraWalkies only work with the DuraFon PRO system.
- Phonebook wireless transferring from one handset to another or all.
- RSSI signal measuring tool available on V2 PRO handsets and Walkies.
- RS-232 TAP (Nurse call text messaging) integration option available only on PRO (act as pager).
- 99 Speed dial entries (PRO V2)
- DuraFon-UHF handset only works on the DuraFon-PRO system

Q10: Will a DuraWalkie handset receive a remote broadcast from the line port (broadcast via port feature)?
A10: Yes in the same way that the DuraFon PRO handsets do.

Q11: Is the range different for a DuraWalkie versus a PRO handset?
A11: Yes and No. It depends on the mode of operation. When using 2-way intercom or broadcast on a handset, it does not use the base station (either of these two modes do not use the base station), regardless of whether it is a DuraFon PRO handset or a DuraWalkie. If you find that coverage is adequate when making phone calls (i.e. using the base station) but not with 2-way, you may want to consider purchasing the optional 2-way repeater base station (a special DuraFon PRO base unit modified for this purpose).

Q12: How does the broadcast from the base station feature work?
A12: By default line 3 and 4 are just regular line ports, but if switch to a broadcast mode, they can broadcast the incoming call to all DuraFon PRO Handsets and DuraWalkies. For example, if you wire x435 to our line 4 port with broadcast on, it will auto answer with a greeting asking for the group number, or wait to broadcast all. After the beep, you are then broadcasted to the selected group or all handsets.

Q13: How do I adjust flash time on a PRO system?
A13: From an admin phone (ID 10 or 11), press menu 9, 1, enter base 00, then press 2 for flash time. Default is 600ms. PRESS 1-9 to choose from 100ms to 900ms. In some cases adjusting flash time down to around 300ms may be necessary behind certain PBX's for proper 3-Way call handling or transferring calls.

Q14: How can someone call into the base station to transmit a broadcast?
A14: First the Base Station line port 3 or 4 broadcast must be turned on (MENU 9, 2, base number (00-07)), 1, change for L3 or L4. Then dial into it and follow the auto attendant instructions. **NOTE:** For broadcast ID, you must enter a group number (01-07). By default the handsets themselves are not part of any groups. To add a handset to a group, press MENU 5, 2, ADD, then 01-07 accordingly.

Q15: Does the DuraFon-PRO system support visual voicemail indication?
A15: Yes it supports FSK signaling for voicemail indication. To enable this feature, from any registered handset press MENU * * #, choose base ID (00), then go to option 8 (VMWI enable), then select "ON". When a voicemail signal is received by the base station, the handset will double-beep and a mailbox icon will also be shown on the display.

Still having trouble? Call EnGenius support at 888-735-7888 or email *support@engeniustech.com*

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