

# Quick Start Guide **860 DSP & DSPi**

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Although your 860 is delivered from the factory ready-to-use, there are a few items you will want to setup to get you started using your 860 effectively.

## POWER


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Make sure your 860 has been fully charged (approximately 4 hours).

From Main Navigation screen select , select  and press .

Select the power scheme that best meets your needs.

## POWER SCHEMES

- **Low** – Most efficient. No backlight, 1X processor speed. Extends battery life.
- **Normal** – Normal usage. Backlight level 10, 1X processor speed.
- **High** – Fastest. Backlight level 16, 2X processor speed. Faster refresh speeds.
- **Custom** – User defined backlight level (0 to 28) and processor speed. (1X or 2X).
- **UNIT OFF TIMER** – Sets time unit will sit idle before automatically shutting down.
- **BACKLIGHT TIMER** – Sets time unit will sit idle before automatically turning backlight off.
- Press  to return to the Set up menu.

## BASIC SET UP

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From Main Navigation screen select , select  and press .

There are various features you can setup from this menu, but not all of them are required to use your instrument effectively. Only the basic setup is included in this guide.

- **GLOBAL** – set time, date, language, or turn keyboard beeps on and off.
- **MEASUREMENT** – set temp or measurement units, or adjust noise bandwidth.

## LEARN CHANNEL PLAN

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Although you can build channel plans in the 860 DSP, it is more convenient to create complex channel plans or setup multiple instruments using the WorkBench software.


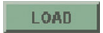
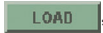

In order for the 860 to know which channels are active in your system, it will need to learn your specific Channel Plan.

- **BASE CHANNEL PLAN** – Choose plan for your system, NCTA, HRC, PAL, etc.
- **LOW LEVEL LIMIT** – Carriers below this level will not be included in Plan
- **HIGH LEVEL LIMIT** – Carriers above this limit will not be included in Plan.
- **START FREQUENCY** – Sets lowest frequency of Channel Plan.
- **STOP FREQUENCY** – Sets Highest frequency of Channel Plan (max 870 MHz)
- **LEARNED PLAN NAME** – allows naming of plan so that more than one plan can be saved on 860 DSP. This allows custom plans to be used at numerous systems.
- **LEARN** – This button starts the process of learning the channel plan by the 860. Information bar will tell you when plan has been successfully learned.

## EDIT CHANNEL PLAN

Once the 860 has learned which channels are active, you will need to tell it which are scrambled and Digital..



Use  or  to move the cursor to the item to change. Use  or  to make selection in each Line




The Plan to be edited is listed in top of window. If you wish to edit a different plan, press  until  is displayed. Press , highlight desired plan and press .

- **CHANNEL NUMBER** – Standard channel format for Base plan chosen.
- **CHANNEL NAME** – User defined
- **CHANNEL TYPE** – Change for digitals, CW or channels different from Base.
- **CHANNEL DETAILS** – Allows setting of options such as scrambling details or digital options.





**DOCSIS QAM** options will automatically set symbol rate and Digital Band width. **USER QAM** requires that these be set manually.

- **VIDEO / CENTER** – Frequency of video carrier for analog channels, or center frequency for digitals. Can be changed for nonstandard channels.
- **AUDIO / DIG BW** – Frequency of audio carrier on analog channels, or bandwidth of digital. Can be adjusted for non standard channels
- **SAP / SYMBOL RATE** – Frequency of Secondary Audio Programming for analog channels, or Symbol rate of digital modulation.
- **TILT, C/N, HUM, MOD, USE** – Used to select channels to be used for these functions. The  or  buttons toggle Yes to No. No in the USE section will disable channel from plan.

- After making any changes to a channel plan, press . “Channel Plan Saved” will be displayed in the Message Bar. Soft keys will also allow you to “Save As” an edited plan as another name, or delete an unneeded plan.
- Press  to return to the Set up menu and  again to return to the main NAVIGATION menu.

## TRY IT OUT!

- Select  from the main NAVIGATION menu.
- Select  and choose your Channel Plan from the list.

## 860 DSPi CABLE MODEM SET UP & CONNECTION

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You will need to get your 860 DSPi to connect to a cable system’s DOCSIS network via the 860 DSPi’s internal cable modem.

### 1. Preliminary Information Gathering

The first thing required is to provision the 860 on the cable system’s DOCSIS network.




This can be done two ways. Performing one of these steps is essential to get the cable modem to work properly.

- Provision the 860 DSPi’s cable modem’s MAC address on the cable modem network. The modem MAC address can be found by following step 1 under Modem Setup below. The field labeled **Modem MAC** shows the 860 DSPi’s modem MAC address.
- By using the MAC of a modem which has already been provisioned (spoofing).



Second, find out the center frequency of the downstream DOCSIS carrier. (Example 575.00 MHz).

### 2. Modem Set up















From Main Navigation screen select , select  and press .

- Select **MODEM** and press .
- **NETWORK PORT** – Press  until the field says *Internal Cable Modem*.
- **SPOOF MAC** – Enter the MAC address from step 1 (if *Spoofing an existing Modem*).
- **SEARCH FREQUENCY** – Enter the center frequency in MHz of the DOCSIS carrier you found in step 1. If the frequency is not known press **0** then , which will cause the field to say **SEARCH ALL**.



This could take up to 5 (five) minutes.

- **SHOW MODEM INFO** – Press  until **YES** is shown.
- Press  to return to the Set up menu.


### 3. Com/Net Set up

- Select **COM/NET** field and press .
- **MY IP ADDRESS** Press , , , , , , , then  to put the 860 DSPi in DHCP mode.
- Repeat for the **SUBNET MASK**, **GATEWAY ADDRESS**, **PRI DNS ADDRESS**, and **SEC DNS ADDRESS**.
- **NETWORK AUTO OFF** Press  and  so that the field says *Never Off / Always On*. Press  so that the field says *10 seconds*.
- Press  to return to the Setup menu.
- Press  again to return to the Navigation Screen.
- Press the **INSTALL** soft key.

### Connecting to the DOCSIS network

- Verify at the top of your NAVIGATION screen, that the field to the left of the time says **RDY**. If not turn off the 860 DSPi, then turn it back on. **RDY** means the unit is ready to connect to the cable modem network.
- Make sure the RF input is connected to the FORWARD port of the 860 DSPi before proceeding to the next step.
- Select  and press . This will start the log in process.
- The **Logging on to Network** pop up window that appears will give the current status of the log on process. This process will take between 30 seconds if the RF carrier is found quickly, up to 5 minutes if the 860 DSPi is forced to search the entire frequency spectrum for the RF carrier.
- The **STATUS** field will display the following information.
  - Finding Downstream** – unit is searching for the downstream carrier.
  - Downstream Found**– The downstream frequency has been found.
  - Ranging Begin** – indicates that the ranging process has been started.
  - Ranging Success** – indicates that the ranging process has completed.
  - Traffic Enable** – indicates the modem has successfully been configured to operate on the cable modem network.
- Before the unit can operate on the cable modem network the 860 DSPi must receive an IP address from a DHCP server on the cable network. If this happens successfully the *Internal IP* field on the pop up window will be updated with the received IP address, then the unit will enter the **PING** menu.

### TRY IT OUT! PING the Network

- Enter an I.P address and select  to PING HOST.
- PING Statistics will update on the screen.

