



How To Create a Custom Channel Plan for the **XR-3** Cable Air Meter Module (P/N XR-CA-01)

There are 3 ways that you can create a custom channel plan:

- 1) Use the Channel Scan feature and then after the scan is complete, press 'Save', and select "Save Found Channels as new Plan". This method is desirable if you're at a site and want to find which channels are present on the existing cable or off-air system. After selecting the appropriate base Standard Cable or Standard Off-Air channel plan, connect the cable to be tested to RF In port and run a Channel Scan. The meter will automatically find the active channels and determine if they are analog or digital and will save the channel plan with the signal type detected.
- 2) Manually edit all of the desired channel numbers and frequencies using the meter. In the Channel Plans section of the Main Menu, highlight a Standard Cable or Standard Off-Air plan to be used as the base plan and press the Edit/Create soft-key. This allows you to save the standard channel plan lineup under a different file name (Save As) so that the new custom plan can be edited. This method is desirable if you just want to slightly modify the channel lineup from the way it is in the Standard Plan. Or highlight a custom channel plan in the Custom Plans section and press the Edit/Create soft-key to edit the channel lineup and individual channel parameters. You can change the filename, if desired (Save As), to create a new custom channel plan from an existing custom plan. See below for instructions of how to manually add custom channels from within the meter using the keypad.
- 3) Use the MeterMaid application on a PC to load a custom channel plan (.pln) file after editing the plan file using a text editor (i.e. Notepad or Notepad++)

Instructions of how to manually add custom channels from within the meter using the keypad:

- 1) Power on the XR-3 while the Cable-Air module is inserted into it.
 - 2) Press MENU soft-key (located near bottom right corner of screen)
 - 3) Highlight "Channel Plans", using the up/down arrow buttons, and press Enter
 - 4) Highlight the appropriate base plan (i.e. "EIASTD QAM" for QAM channels, "EIASTD ANLG for analog NTSC CATV channels, etc.) channel plan, using the up/down arrow buttons, and press the EDIT/CREATE soft-key (located near top right corner of LCD screen).
 - 5) On the Channel Plan File Summary screen, type in a Filename (i.e. "HILTON") and press Enter. Fill in the Location and Technician fields if desired.
 - 6) Press the Next soft-key (located near center right area of LCD screen)
 - 7) Press the Insert soft-key.
- On the Channel Parameters screen:
- 8) In the **Channel Number** field, type the channel number (i.e. 2) using the alphanumeric keypad and then press Enter. Press the down arrow button to move to the next field.
 - 9) If desired, in the **Channel Label** field, type the channel label (i.e. ESPN or CBS). Press the down arrow button to move to the next field.
 - 10) In the **Frequency** field, type the channel frequency (center frequency for digital carriers or video carrier frequency for analog carriers or pilot carrier frequency for analog testing purposes) using the alphanumeric keypad and then press Enter. Press the down arrow button to move to the next field.
 - 11) In the **Type** field, specify the signal type of the subject channel. Select "QAM" for QAM Annex B channels, select "8VSB" for ATSC 1.0 OTA channels, select "DIGITAL" for generic digital carriers that the XR-3's cable-air meter module is incompatible with (unable to demodulate), or select "ANALOG" for analog carriers.



Application Note

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- 12) In the **Subtype** field, select the appropriate Subtype:
 - a. For QAM signal type, choose from AUTO, QAM 64, or QAM 256 (Annex B only)
 - b. For 8VSB signal type, Subtype is NONE.
 - c. For generic DIGITAL signal type, Subtype is NONE.
 - d. For ANALOG signal type, choose from 1-AUDIO (for carriers with single audio carrier), 0-AUDIO (for analog carriers without any subcarriers, such as a pilot carrier from a test signal generator for testing purposes), or 2-AUDIO (for carriers with two audio carriers).
- 13) If you've chosen QAM, 8VSB, or DIGITAL signal Type then the meter displays the related "**Bandwidth**" and "**Symbol Rates**". These values cannot be modified.
- 14) If you've chosen ANALOG signal Type and have selected "1-AUDIO" or "2-AUDIO" as the Subtype, then in the next two fields you can specify how far away from the video carrier the audio carrier(s) lie. For example, if the analog video carrier that you're tuning to has an audio carrier that lies 4.5 MHz above the video carrier frequency, then specify "4500 kHz" in the **Audio 1 Carrier** field, which is the default when "1-AUDIO" is selected.
- 15) In the **Noise Offset** field, if desired, you can override the default offset value that controls where the noise floor measurement is taken to calculate the Carrier to Noise (C/N) measurement (in relation to the center carrier frequency). For example, on a digital QAM carrier, the noise measurement is taken 3000 kHz below the center frequency of the QAM carrier.
- 16) In the **Favorite/Tilt** field, you can select "Fav" if you'd like the subject channel to be one of your five Favorite channels. Or you can select "Fav/Tilt" if you'd like the subject channel to be one of your two tilt channels amongst your five Favorite channels.
- 17) In the **Hidden** field, you can select "YES" if you'd prefer that the subject channel not appear on the main Run screen when toggling through the channels, but yet the channel will still be a part of the custom channel plan.
- 18) Press **Back** soft-key after you've finished modifying the Channel Parameters for the subject channel.
- 19) Repeat steps 7 through 18 if you'd like to add another new channel to your custom channel plan.
- 20) If desired, highlight each of the stock channels that were part of the chosen base channel plan and press the Delete soft-key to delete each row of non-custom channels, one by one. Unfortunately, this is tedious and will take a couple minutes to complete to delete the 158 channels that were in the EIASTD channel plan. Please note that the custom channels you just created will be at the bottom of the list, so be careful not to delete them.
- 21) Press the **Back** soft-key (located near the bottom right corner of the screen) to return to the Channel Plan File Summary screen.
- 22) Press the **Save** soft-key (located near top right corner of the screen) to save your custom channel plan.
- 23) On the Channel Plans screen, if you toggle to the Custom Plans category at the bottom of the channel plans screen (hidden off bottom of screen) using your down arrow button, then you'll see your new custom channel plan. You can highlight it and press Enter to utilize the new custom channel plan or highlight it and press Edit/Create to modify the custom channel plan.

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