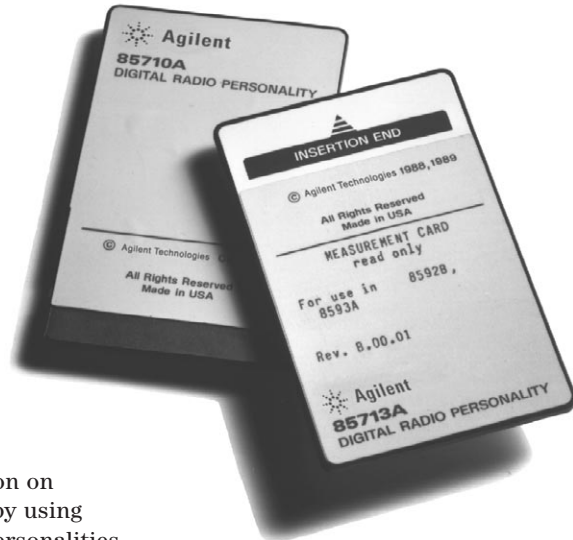




# Agilent 85710A and 85713A Digital Radio Personalities

## Product Overview



### Simplify Digital Radio Measurements

Ensure quality transmission on your digital-radio system by using dedicated measurement personalities for Agilent Technologies portable spectrum analyzers. They make it simple to characterize spectral occupancy on microwave terrestrial links.

The 85710A digital-radio personality adds mask-comparison, frequency-response, and transient-analysis capabilities to the high-performance 8562A and 8563A portable microwave spectrum analyzers. The 85713A adds the same features to the economical 8592B and 8593A portable microwave spectrum analyzers. Both personalities allow these digital-radio measurements to be made with single key-strokes.

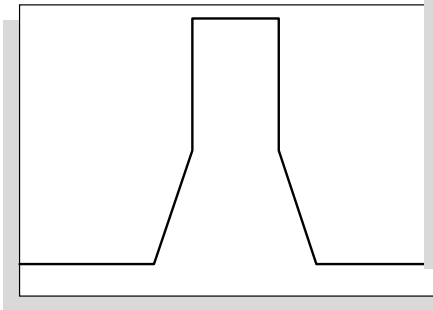
Additional digital-radio tests, including multipath fading margin, power measurements, and flatness, are provided by the 11758T digital-radio test system (DRTS). Please ask for Agilent Technologies publication number 5952-1056.



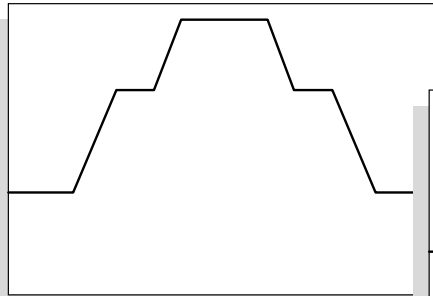
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# Ensure Quality Transmission

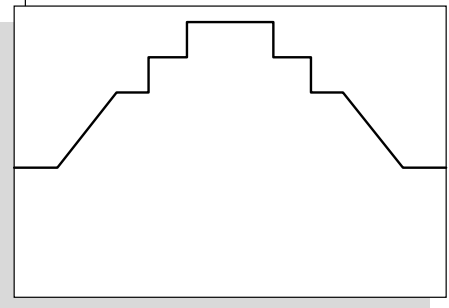
## Convenient and Flexible



4, 6, and 11 GHz FCC masks



13 GHz UK masks



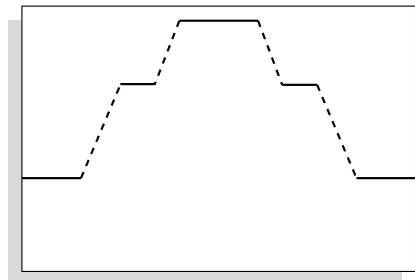
13 GHz FRG masks

## Built-in Agency Masks

Are the spectral occupancy and filter response of your digital-radio transmitter within regulatory-agency specifications? Find out quickly by using a built-in agency mask. Five major agency masks are available for easy testing to FCC, UK, or FRG digital-radio specifications.

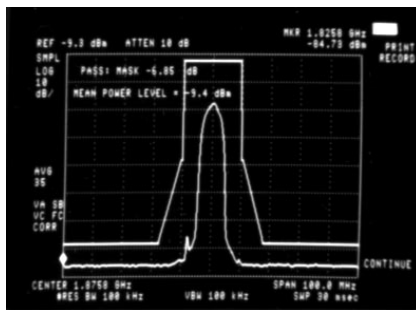
## Create Custom Masks

Do you need a custom mask? Use the front panel to create one to meet YOUR requirements. Tailor specific threshold limits. Limit lines on the 85710A are adaptive—they can change as the reference level, center frequency, and span are altered. Masks may be either relative or absolute. Relative masks reference the top of the mask to the peak of the modulated signal. Store up to 12 user-defined masks in the 85710A or up to 11 masks in the 85713A.



User-definable masks

## Results Oriented



## Compare to Mask Measurement

This powerful function makes an automatic mean-power-level measurement and compares the result to the mask limits. A pass/fail message indicates whether the signal meets specifications. If the comparison fails the masks limits, the marker will be positioned at the greatest difference between the mask and signal, and the screen will display the corresponding amplitude difference.

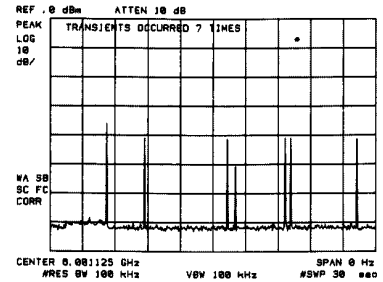
# Simple to Use

## Measure Mean Power Level

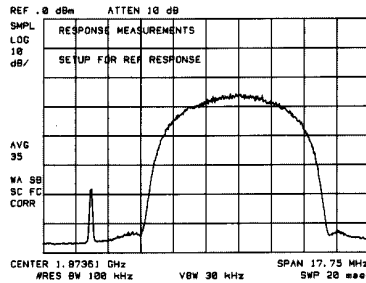
Get quick, accurate, and repeatable readings of the average power of your modulated signal by using the mean-power-level function of the digital-radio personality. The algorithm used to calculate the mean power level treats the wideband signal as a random, noise-like signal. Correction factors are included. To prevent gain compression, additional RF attenuation automatically switches in if the signal level is greater than 0 dBm.

## Frequency Response

Non-intrusive monitoring of your radio system is simple with the frequency-response measurement. This measurement allows you to set up and store a digital signal as a reference on the spectrum analyzer's display. You can even carry the instrument to another site, where you can compare the frequency response to the previously stored reference trace.



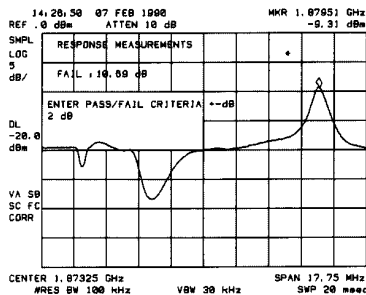
Qualitatively monitor frequency shifts with the transient-analysis function



Step 1. Store a reference trace for non-intrusive frequency response measurements.

## Transient Analysis

Use the digital-radio personality to qualitatively monitor frequency shifts of the digital-radio signal that are caused by EMC or an unlocked LO. The transient-analysis mode looks at the modulated digital-radio signal. In this mode, frequency shifts of the signal are depicted as amplitude variations. An on-screen counter records amplitude variations greater than 5 dB.



Step 2. The analyzer compares the reference and tested response and displays the difference.

# Ordering Information

## 85710A Digital Radio Personality

Supported by the high-performance 8562A<sup>1</sup> and 8563A portable microwave spectrum analyzers. The 85620A mass memory module is required for operation.

## 85713A Digital Radio Personality

Supported by the 8592B and 8593A portable microwave spectrum analyzers. Option 003 card reader is required on the 8592B.

Refer to the 8560 and 8590 Series Spectrum Analyzer Ordering Guide (5954-9145) and product brochure (5952-4843) for more information.

1. ROM firmware on the 8562A must be 881030 or later. ROM upgrade kit is 5062-7707.

## Agilent Technologies' Test and Measurement Support, Services, and Assistance

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### Our Promise

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### Your Advantage

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**Get assistance with all your test and measurement needs at:**  
[www.agilent.com/find/assist](http://www.agilent.com/find/assist)

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