

Selecting the Signal to Noise comparison frequency

The comparison frequency should be a frequency within the band being received on which no signal is transmitted. Check that any indication is greater than 35 dB down on the desired signal levels.

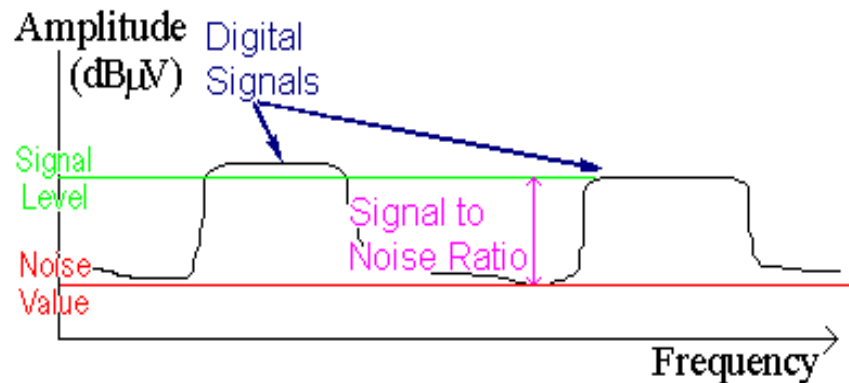
Setting the frequency

Press ON,press Down button until channel number reads S/N.
Press Option button and using UP/DOWN keys select the desired noise comparison frequency. Press the STORE button to save to memory.

The *IM Digi-T* quickly and accurately tests Analogue & digital signals. When measuring *Analogue* signals the RF level is all that is displayed. When measuring *Digital* it gives three pieces of information, which together will allow the installer to be confident that pictures will be received in all situations:

1. Signal Level
2. Signal-to-Noise Ratio (SNR)
3. Pass/Marginal/Fail indication

Once the signal is in the range of the STB/TV, the **Signal to Noise Ratio** (SNR) must be checked. The SNR indicates how high the signal is, in comparison to the noise floor.



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Operators Manual
Terrestrial TV Analogue/Digital
Installers Meter
type - *IM Digi-T 203*

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Using the Meter

After the start up screen when the instrument initialises itself the display will show a channel number, ie 1, on the top line. The meter automatically senses the TV standard and displays either ANALOG or DIGITAL on the second line of the screen. The signal level is then measured according to the requirements of the detected standard.

Should the signal be very low the meter will display SIG LOW.

The preset channels are on a continuous loop. Each press of the "Up" or "Down" will select the next preset channel.

Setting a Channel frequency

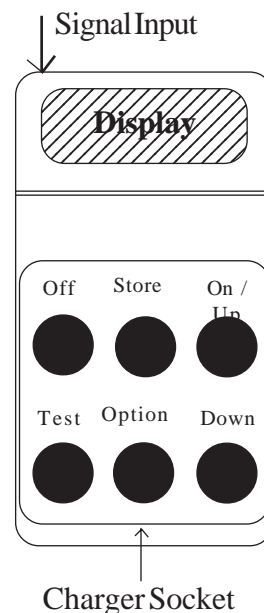
Press ON, press Down button until channel number reads desired channel. Press 'Option' button and using UP/DOWN keys set the desired frequency. Press the STORE button to save to memory.

Meter Layout

The meter has six buttons:

- "**Off**" switches it off.
- "**On/Up**" switches it on, and steps up the preset frequency plan.
- "**Down**" steps down the preset frequency plan.
- "**Test**" performs the SNR quality test.
- "**Store**" Stores frequency information
- "**Option**" Selects Frequency setting.

Also used to download channel plan to another IM Digi -T 203 .



Specifications

- Frequency range: 50 to 860 MHz.
- Number of presets: Up to 99 preset frequencies.
Units are pre-programmed with Bands II,III, IV and V 21-69 channel plan.
- Copying info: Cloning of units from one to another
- Level accuracy: Typically ± 1 dB. Guaranteed $< \pm 2$ dB.
- Input range: -45 to +20 dBmV.

- Signal to Noise: **Please note** that the PASS,MARGINAL and FAIL figures are related to 64 QAM Transmissions. For 16 QAM an SNR figure up to 5 dB lower can be tolerated.

- Input connector: 'F' type, 75ohm female
- Weight: 0.5 kg.
- Dimensions: 275 mm \times 115 mm \times 63 mm.
- Power source: Rechargeable NiCad batteries.
- Power sources: Charging from either the mains or 12 V dc car battery.
Full charge gives 5 hours continuous use.

- Included with: Mains charger, instruction sheet.

- **'Optional'** extras: Ever-ready case, car charging lead.

Testing an Installation

Before commencing tests it is essential to have the correct preset frequencies and 'Signal to Noise' comparison frequency. (see back page)

With the meter switched on, select the first preset frequency you wish to check. Look at the signal level, **measured in dBuV**. It needs to be in the range acceptable to the set-top box, or television. If it is outside this range or if the display shows "High" or "Low" then there is a fault with the installation, which must be remedied first.

For Digital Only, press the "Test" button, to check the signal to noise ratio (SNR). The display will show the SNR value in dB's.

NB . If >32 appears this indicates a SNR of 'greater than' 32dB (which is a good pass figure).

After a slight pause the display shows "Pass", "Fail" or "Marginal".

- If it indicates "Pass", the signal is acceptable (SNR 'greater than' > 26 dB).

- If it indicates "Marginal" (SNR 23 - 25 dB) or "Fail" (SNR less than < 23 dB) then further work needs to be done on the installation.

Charging the IM Digi -T 203

An overnight charge will fully charge the meter, giving approximately 5 hours of continuous use. The meter can also be charged from a car cigarette lighter socket using the **optional** lead. To conserve the batteries, the meter switches off automatically after 5 minutes.

Cloning from one meter (Master) to another meter (Slave)

There are four stages to programming the units:

1. Nominate the number of preset Frequencies to be used (Master only).
2. Change the frequencies of your 'Selected' presets (Master only).
3. Switch the Slave unit into receive mode
4. Switch the Master unit into transmit mode

1. Nominate the number of 'presets' to be programmed

With the instrument off, press and hold the "Store" key, press the "On" key. The display will change to show the amount of Preset frequencies in the Top line. Select the amount you require with the "Up" and "Down" keys. (1 to 99 valid) Switch OFF instrument.(No need to press Store!).

2. Changing the Frequency of your 'Selected' presets .

1. Switch ON the instrument. Using the UP/Down keys select the preset to be altered. Press '**Option**' key Once.
2. Use the UP/Down keys to move to a new frequency.
3. Press the '**Store**' key once.

To continue with the next 'preset' use the UP/Down keys to select the next preset to be altered in frequency. Press the '**Option**' Key once again. Follow from step 2 above. Continue the above until all your selected amount of preset frequencies are changed to the new desired frequencies.

Switch off the Master unit and connect the power sockets of the Master and Slave units with the special programming lead.

3. Switch the Slave unit into receive mode

Press and hold the "**Down**" key then press the "**On**" key. Continue to hold both keys until "Rx" appears on the screen after 2-3 seconds. Release both keys.

4. Switch the Master unit into transmit mode

Press and hold the "**Option**" key and press the "**On**" key. Continue to hold both keys until "TX" appears in the screen (approx 2-3 sec's). Release both keys and the unit will start transmitting. The progress of the transmission can be seen on both screens by the end two digits counting up to 2025. This will take approximately 1 minute.

When the transmission is complete both displays will show "finished". Unplug the units and to ensure the transfer has been successful scan through the frequencies stored in the Slave unit.*nb.This feature is only required if you have several engineers and want the same channel plan in each instrument.*

Setting the Noise floor frequency

This is the point in the frequency band that the instrument looks at to find the noise floor of the network.

Its frequency can be changed if the factory set position ,usually 404 MHz (which should be a guard band frequency) is not clear.

To change it follow the procedure below:-

1. switch on instrument
 2. press the down key once - Top line of display should read S/N 437.75MHz
 3. press the **OPTION** key once.
 4. Use the **UP/Down** keys to change to new desired frequency.
 5. Press the **STORE** key once.
- your new comparison point frequency is now stored in the instrument.

