

Commissioning the Fiber Optic System

Commission the optical transmission system as described in the following instruction. The instruction covers the optical system only and is therefore applicable to all units with optical transmission, for instance BMU, RMU, OCM, FOR, and RH.

Figure 6-1 shows a fiber optic system in a BMU and a FOR. These units are also used as examples in the instruction.

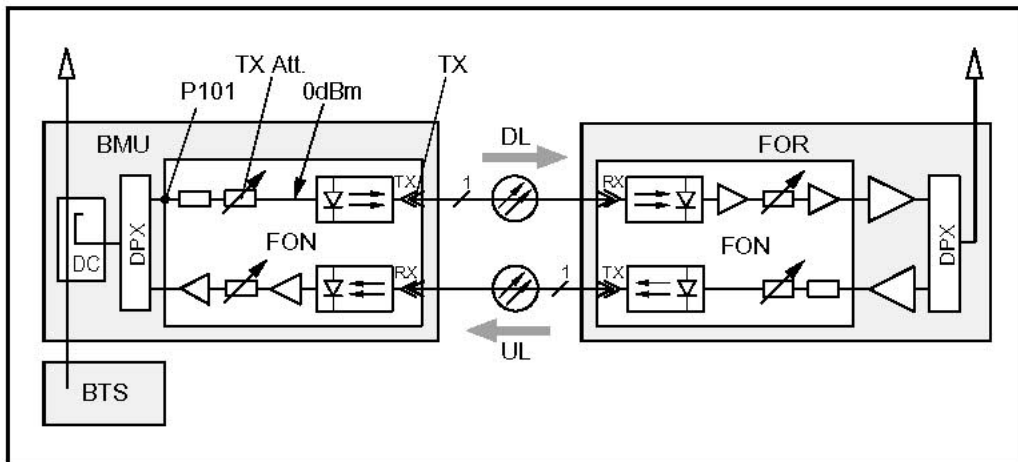


Figure 6-1. Master unit downlink path

Master Unit Downlink Path

1. Make sure the BMU is switched off.
2. Measure the downlink input RF signal power (from the BTS) at the FON board connector 'P101' in Figure 6-1 (or at the OCM/BMU 19" rack) using a spectrum analyzer.
The signal power should be between +10dBm and +36dBm.
Write down the measured power value.
3. Switch the BMU on and wait until it is in operational mode.
4. Connect the O&M software to the FON board.
5. Measure the optical output power from the FON board (TX) using an optical power meter.
If there is only one slave unit on a short distance, choose the low power range.
Otherwise, keep the default high power range.

If you are in doubt, choose high power and, if needed, change to low power if the received optical power is more than 4dBm at the slave unit.
6. Set the transmitter attenuation (TX Att.) to a value that gives the following optical transmitter an input power of approximately 0dBm. The attenuation is set via the O&M software (FON configuration).

$$P_{P101} - 20\text{dB} - X\text{dB} = 0\text{dB}$$

Measured RF input signal level at P101 minus 20dB minus XdB attenuation equals 0dB. X is the attenuation set via O&M software. Write down the attenuation set.