TTENUATOR ladders are frequently found at the input to test gear. Circuits similar to Fig.1, and Fig.2, are both common, and both use some resistors of non-preferred values. The 11.1110hm resistor is often approximated by 10R and 1R in series.

I use the circuit of Fig.3. For the addition of one resistor we can now make the ladder using only preferred values - the parallel pair of 150R and 12R (or its appropriate decade multiples) giving exactly the required value of 11.111R, as accurately as the tolerance of the resistors chosen.

