

**ABSTRACT**

Mobile radio receiver for a radio transmission system

The invention relates to a mobile radio receiver (2) for a radio transmission system, such receiver comprising a recognition arrangement (6) for searching a received digital signal (e) for pulses (i) of a frequency correction burst contained with a predeterminable frequency in the digital signal (e) and for determining  
5 their pulse positions (t), and including a frequency estimation arrangement (7) for forming frequency estimates ( $\hat{s}$ ) for the predeterminable frequency. The initial synchronization of the mobile radio receiver with a base station is then to be improved.

For this purpose there is proposed that the recognition arrangement (6) comprises an averaging circuit (14) for averaging with weight factors (Us) pulse  
10 positions (t) that have been determined in successive observation intervals, the weight factors (Us) being proportional to the individual pulse heights (U) of the pulses (i).

Digital transmission systems.

Fig. 2

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