This paper presents an effective technique for watermarking a compressed image, which is encoded by wavelet based techniques. The detail of the image is first decomposed by a wavelet packet transform, and then a number of appropriate subbands are chosen for embedding a watermark signal. Since the direct sequence spread spectrum technique is applied to generate the watermark signal in the embedding process, the original image is not required in the watermark retrieval process. Experimental results showed the impressive quality of the watermarked image, together with a high retrieval performance. The results also indicate that the proposed technique provides robustness against common signal processing attacks, especially with modern compression algorithms.