The invention relates to an image reproduction arrangement in accordance with the preamble to the first Claim.

It is known from DE-C-30 38 144 to reproduce, on a viewing screen, a mixture of image signals which is composed of pictures, for example from a television programme, that is to say the normal picture radiated from a television transmitter, such as a moving scene, and legible characters, character elements and graphic signs or symbols from a view-data decoder or a teletext decoding circuit which are superimposed on this. During this superimposing of the mixture of image signals, an annoying disturbance in the vertical direction is noticed in the written horizontal lines of the characters and symbols at the mixing-in positions, as related in detail in column 3, lines 12-32 of the said specification. Accordingly, the object of the invention according to the said Patent was to indicate an image reproduction arrangement wherein the phenomenon of jitter during the reproduction of digitally produced image and/or text information is largely eliminated. The solution provides for causing, by means of a circuit arrangement for producing an image-frequency signal for such additional deflection, in the vertical direction, of one or more electron beams produced in the picture tube, that, in the image portion reproducing the digitally produced image and/or text information, the corresponding symbols of successive fields are written in coincidence on the picture tube.

The known solution is based on the knowledge that circuit arrangements for the reduction of jitter which are associated with the deflection portion of the image reproduction device can be simpler than circuit arrangements in the signal processing portion. As a result of this measure, the cause of the disturbing phenomenon,

(9)

namely the line interlacing, is eliminated, but only in a part of the image in which superimposition of picture and text occurs.

Fundamentally, two methods are known for switching off the line interlacing. A method is known from DE-B-29 49 020 which works on the interline method and which compensates the line interlacing at the front on the colour video signal by offset in that the second field is brought with its raster into registration with the raster of the first field by vertical offsetting. This method can also be used in systems which supply the text information to the monitor via a commonly introduced plug-in connection (Scart) since the necessary signal lines are present in any case and thus include the signal line. The other known solution (Philips), (Gb-A-2 062 401 corresponding to FR-A-2 467 517 or DE-A-3 038 144) provides for the production of an offset voltage which acts on the deflection coils on every 2nd field. It is used with a teletext or viewdata decoder installed in the television set. In this case, a signal has to be transmitted to the image reproduction device for the reproduction of television signals of a usual standard, as a result of which signal, the line interlacing is switched off in the set. An additional signal line is then necessary for this.

Recent systems for mixing-in text, such as viewdata, additionally offer the possibility of so-called mix and box operation. This is understood to mean a transmission of a mixture of image signals wherein the superimposed symbols and/or text of a line are backed with a colour or brightness contrast in the form of a box during box operation whereas such a backing is omitted with mix operation.

Systems hitherto known work by the line interlacing method for both sets of information during mix and box operation.

It has now been found that it is considerably less disturbing for the viewer of mix-ins if the background information, that is to say the secondary television picture is reproduced without line interlacing over the whole viewing screen because:

1. the information is dynamic, that is to say it contains moving pictures not static reproduction;

2. the information is not line-bound, that is to say this continuously changing information is not dependent on lines and it is therefore much less disturbing if the line interlacing is switched off.

This led to the problem on which the invention is based, namely of constructing an image reproduction arrangement in such a manner that the disturbing jitter in the reproduction of text and symbol information is avoided, particularly with mix and box operation.

The solution to this problem ensues from the characterising part of the main Claim.

The feature of the sub-claim reveals further details.

In the new arrangement, the line interlacing is switched on not only during pure text operation but also in mix and box operation.

In the course of this, a known method of switching is used for example, namely the separation of the picture information from the synchronizing signals equipped with line interlacing and subsequent gating of synchronizing signals without line interlacing. This latter processing is effected, for example, in that appropriate synchronizing signals are taken from the digital logic of the viewdata decoder or teletext decoder as illustrated by way of example in the Figure (state of the art). The picture separating stage and the

sync pulse gating stage may be installed or even integrated in the decoder.

In other words, the normal television picture is reproduced with line interlacing so long as it is of primary importance because no graphical symbols and/or text information are being mixed in. Only when the viewer decides he wishes to mix in teletext of viewdata signals and preselects this mode of reproduction by switching on the corresponding decoder does he initiate the switching off of the line interlacing by actuation of one of the keys of the teletext or viewdata keyboard. As soon as his communication is ended, the television picture again becomes of primary importance since it is now again without any mixing in and is therefore reproduced as usual with line interlacing over the whole viewing screen.

* C L M S *

Claims

1. An image reproduction arrangement for the selectively alternate or simultaneous reproduction both of television signals in accordance with one of the usual television standards and of digitally produced picture and/or text information signals, wherein the line interlacing can be switched off using any desired method with regard to the technical mode of carrying out the switching off, characterised in that in the operating mode video information in a usual television standard and/or mixing-in of digitally produced picture and/or text and/or symbols and/or mix and/or box operation, the line interlacing necessarily remains switched off for the whole viewing screen regardless of whether video information according to one of the usual television standards is visible on the viewing screen or not.

2. An image reproduction arrangement according to Claim 1, characterised in that with an active decoder and no mixed-in information, the line interlacing can be switched on again.