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(54) CORRECTION OF UNEVEN IMAGE APPEARANCE BY USE OF SMALL-SIZE DATA

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(57) **ABSTRACT**

A circuit for display correction includes a memory which stores first data indicative of size and position of a rectangular region on a display screen and second data indicative of gray level changes in a surrounding region around the rectangular region in an isometric manner with respect to a horizontal direction and a vertical direction, and an image processing unit which adjusts gray levels of image data in response to the first data and the second data stored in the memory.

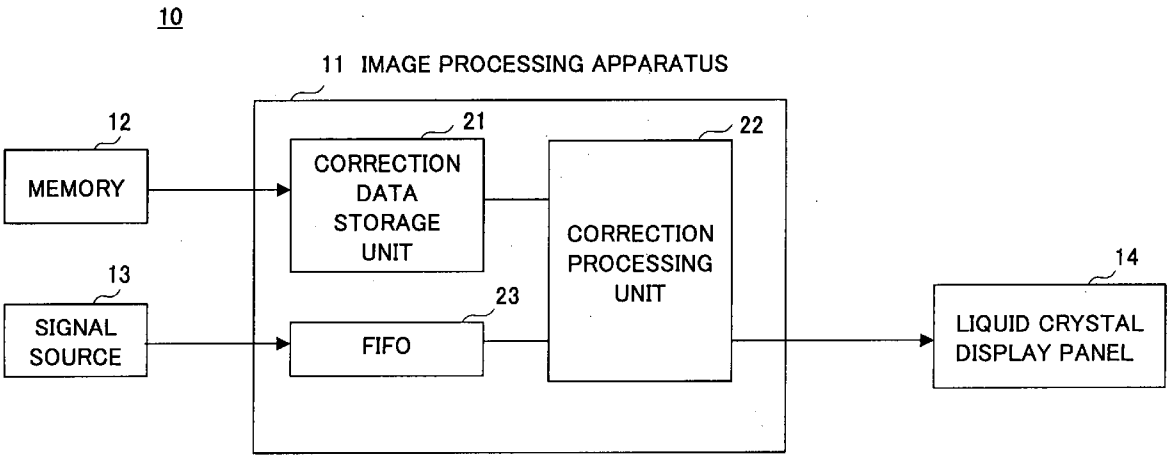

FIG.1

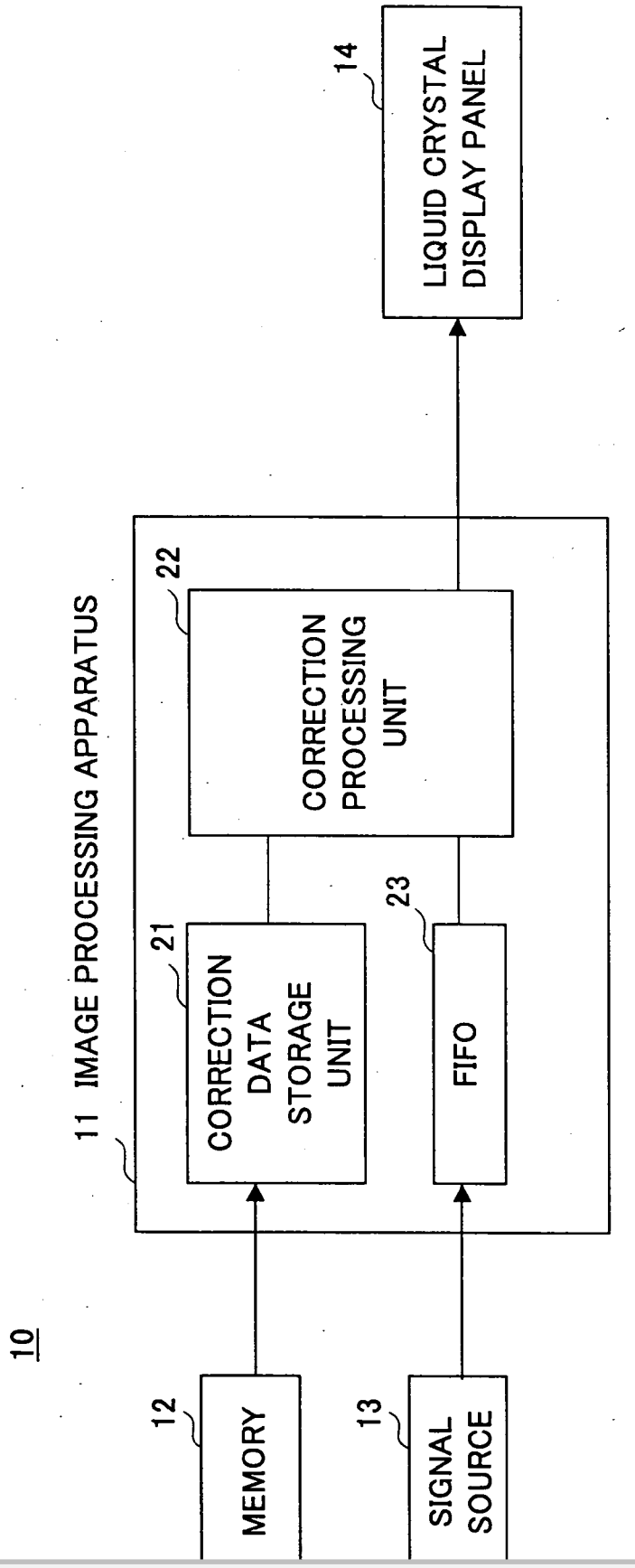

FIG.2

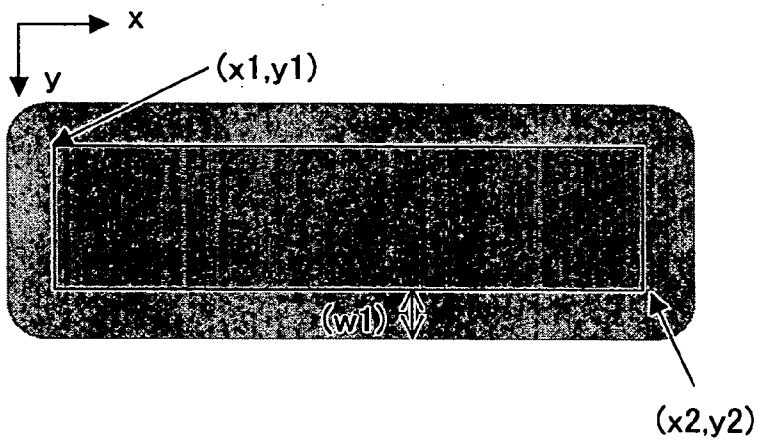

FIG.3

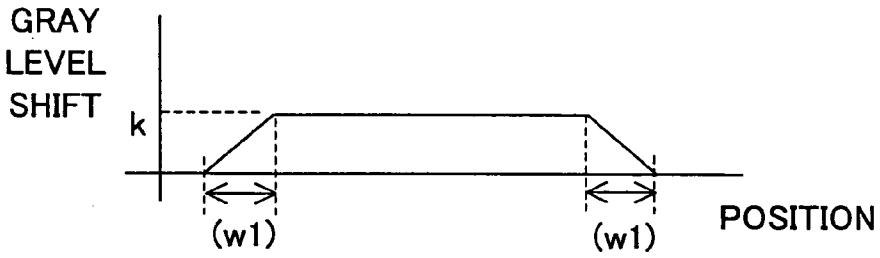

FIG.4

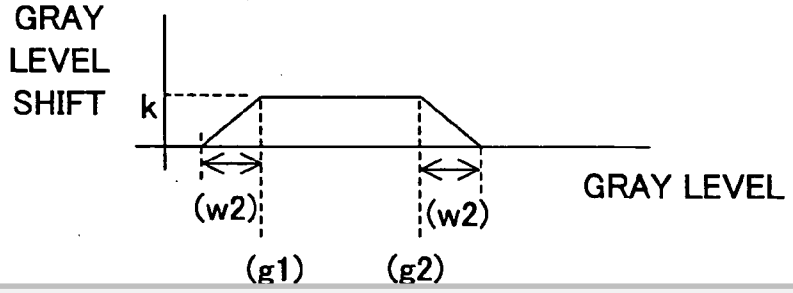

FIG.5A

```
if gs<g1-w2 then
        k=0
elseif gs<g1 then
        k=k * (g1-gs)/w2
elseif gs>g2+w2 then
        k=0
elseif gs>g2 then
        k=k * (gs-g2)/w2
else
        k=k
end
```

FIG.5B

```
if x<x1-w1 then
        k=0
elseif x<x1 then
        k=k * (x1-x)/w1
elseif x>x2+w1 then
        k=0
elseif x>x2 then
        k=k * (x-x2)/w1
else
        k=k
end
```

FIG.5C

```
if y<y1-w1 then
        k=0
elseif y<y1 then
        k=k * (y1-y)/w1
elseif y>y2+w1 then
        k=0
elseif y>y2 then
        k=k * (y-y2)/w1
else
        k=k
end
```

FIG.5D

```
Output Gray Scale = Input Gray Scale + k
```

FIG.6

	x1	y1	x2	y2	w1	k	g1	g2	w2
CIRCULAR UNEVEN APPEARANCE (BLACK)	170	796	172	799	16	18	72	255	64
CIRCULAR UNEVEN APPEARANCE (WHITE)	896	242	897	244	32	−12	64	255	64
HORIZONTAL BAND UNEVEN APPEARANCE	0	120	1280	360	32	10	54	240	64
VERTICAL BAND UNEVEN APPEARANCE	624	0	750	1024	32	16	54	240	64
SHOT UNEVEN APPEARANCE	256	0	511	384	1	4	48	172	64
STREAK UNEVEN APPEARANCE	0	384	1280	384	0	4	48	128	64

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