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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.

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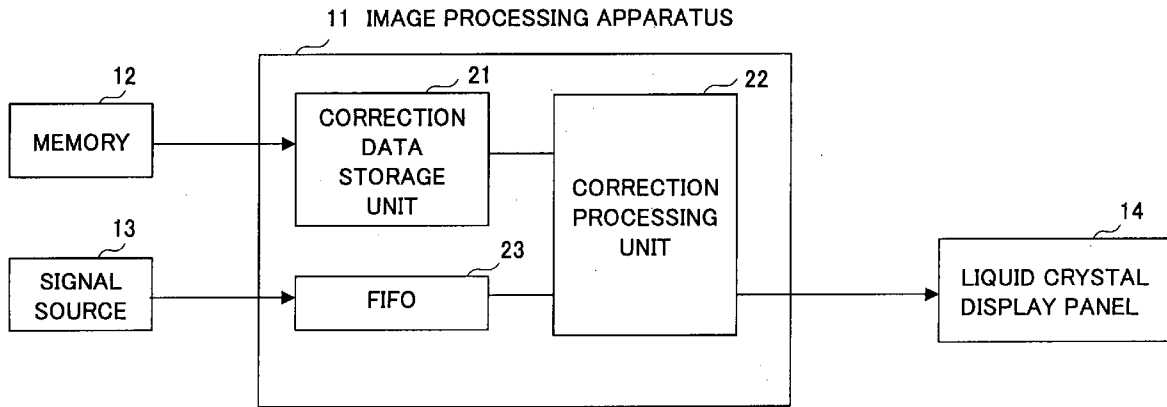


FIG.1

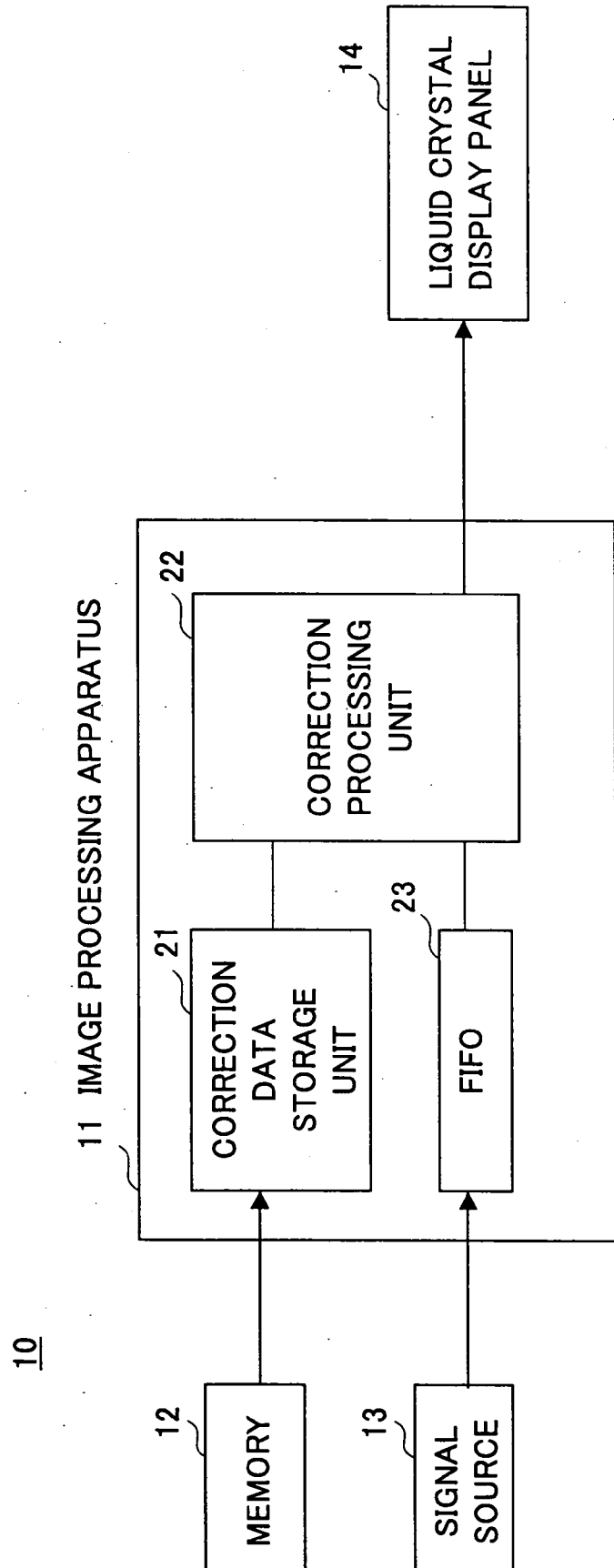


FIG.2

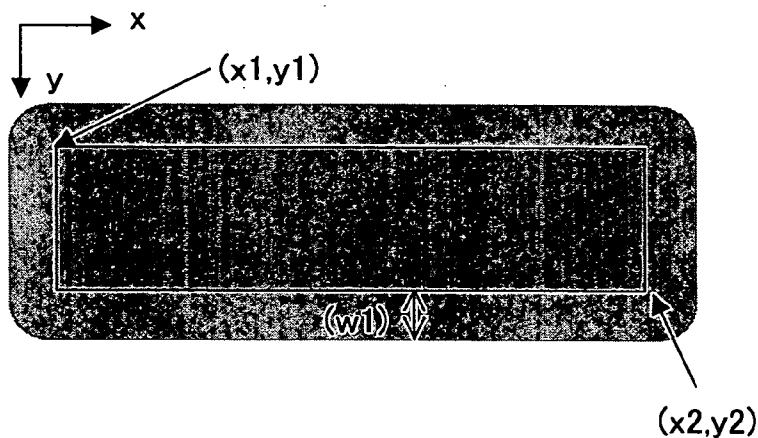


FIG.3

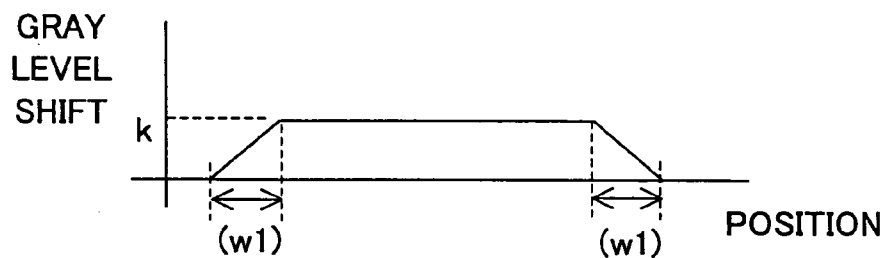


FIG.4

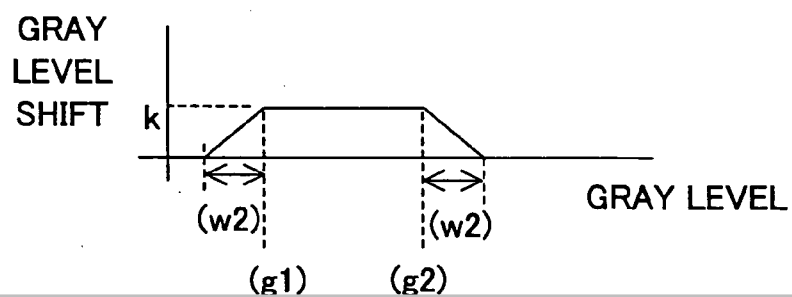


FIG.5A

```

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

$$\text{Output Gray Scale} = \text{Input Gray Scale} + k$$

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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