SPOT CANCEL FOR VK-S454 SERIES

[REV. 1.4]

This manual applies to the following models:

<NTSC>	***VK-S454***
<PAL>	***VK-S454E***

CONTENTS

- **S454 SPOT CANCEL**

1. White Spot compensation:

a) Specification

The white-spot will be searched/detected and compensated automatically every time after th e power on then this detected white-spots address data can be written to EEPROM for priori ty compensation. Refer to Fig.1 for the detection spec.

Fig.1 White Spot Detection Function Spec

No. of compensation		10 Max. [*1]
Write to EEPROM		5 Max.
Detection Function	AGC	MAX.(Use with AGC MAX setting)
	DSS	OFF / ON Selectable Selectable Shutter speed during DSS ON
	Threshold	Set by EEPROM

[Note]

*1: 10 spots including 5 spots for EEPROM writing.
For example: If 5 spots data have been written to EEPROM, the Max. compensation capacity during power on will be 5 spots.

b) Command:

i) White Spot Detection & Start Compensation:

Automatically detects White Spots every time power turns on Therefore, the RAM Initialization (Com_454_v18.doc) or Power Reset is required for new detection.

<Reference> RAM Initialize command
address = FCAC
:WFCAC00

ii) Detection condition: (DSS ON/OFF)

address = 10A0
:W10A0X_1X_0 ; X_1X_0 = H'05 (default)
bit 7 of X_1X_0
; 1 : Detect during DSS ON
; 0 : Detect during DSS OFF (default)

[Note]

Detection during DSS ON: Takes longer time for picture appearance.
(The picture appearance time will vary according to the DSS shutter speed setting, threshold level and total number of white spots in the screen.)

iii) DSS Shutter Speed setting (Effective only with DSS ON)

address = 109C
:R109C00
:W109CX_1X_0 ; X_1X_0 = H'20 (default)
; <Data range>
; H'02(min) -- H'20 (max)
; <DSS speed>
; [NTSC]
; DSS speed = 1 / 60 * X_1X_0
; default ; H'20 ; 1/2 (s)
; [PAL]
; DSS speed = 1 / 50 * X_1X_0
; default ; H'20 ; 1/1.5 (s)

[Note]

The noise on the screen might be mistaken detected as white-spots when if DSS Shutter sp eed changed from default setting so the threshold level should be adjusted appropriately.

iv) Threshold Level setting:

address = 109E
:r109E0000
:w109E$X_3X_2X_1X_0$; $X_3X_2X_1X_0$ = H'01E0 (default)
; max. H'03FF

[Note]

The noise on the screen might be mistaken detected as white-spots or will not be detected actual white-spot at all when if the threshold level is not set appropriately.

v) Location data check:

Read 10 byte continuously to check the detected spot location data.

The read out data for "PPPP", "QQQQ", "SSSS", "TTTT", "UUUU","VVVV", "WWWW", "XXX X", "YYYY", "ZZZZ" of the following command will be the white-spot location data.

[Note]

Read out data H'0000: No white-spot is existed = No location data.
Duplicated location data may be displayed.

[V SPOT 1] address = FF14
:rFF14PPPPQQQQSSSSTTTTUUUU

[V SPOT 2] address = FF16
:rFF16VVVVWWWWXXXXYYYYZZZZ

[H SPOT 1] address = FF18
:rFF18PPPPQQQQSSSSTTTTUUUU

[H SPOT 2] address = FF1A
:rFF1AVVVVWWWWXXXXYYYYZZZZ

vi) Location check:

Confirm the detected white-spot location.
Write the location data which were read out from the above v) to the following address:
White cursor will be displayed under the detected white-spot location.
Please Note that all white-spots automatically detected and compensated during power on will be cleared with this function.

[V SPOT] address = FF2A
:w FF2A $X_3X_2X_1X_0$; $X_3X_2X_1X_0$ – Location data
= H'0000 – No setting
[H SPOT] address = FF2C
:w FF2C $X_3X_2X_1X_0$; $X_3X_2X_1X_0$ – Location data
= H'0000 – No setting
[CHECKE] address = FF20
:RFF2000
:W FF20 X_1X_0

DATA(X_1X_0)	Condition
H'04	Cursor ON
H'0C	Blinking Cursor
H'1C	Compensation OFF （White-spot will be appeared）
H'00	Confirmation OFF [default]
[Note] If no cursor is appeared on the screen: ・ An error in data setting ・ White-spot is located inside the Vertical Blanking area	

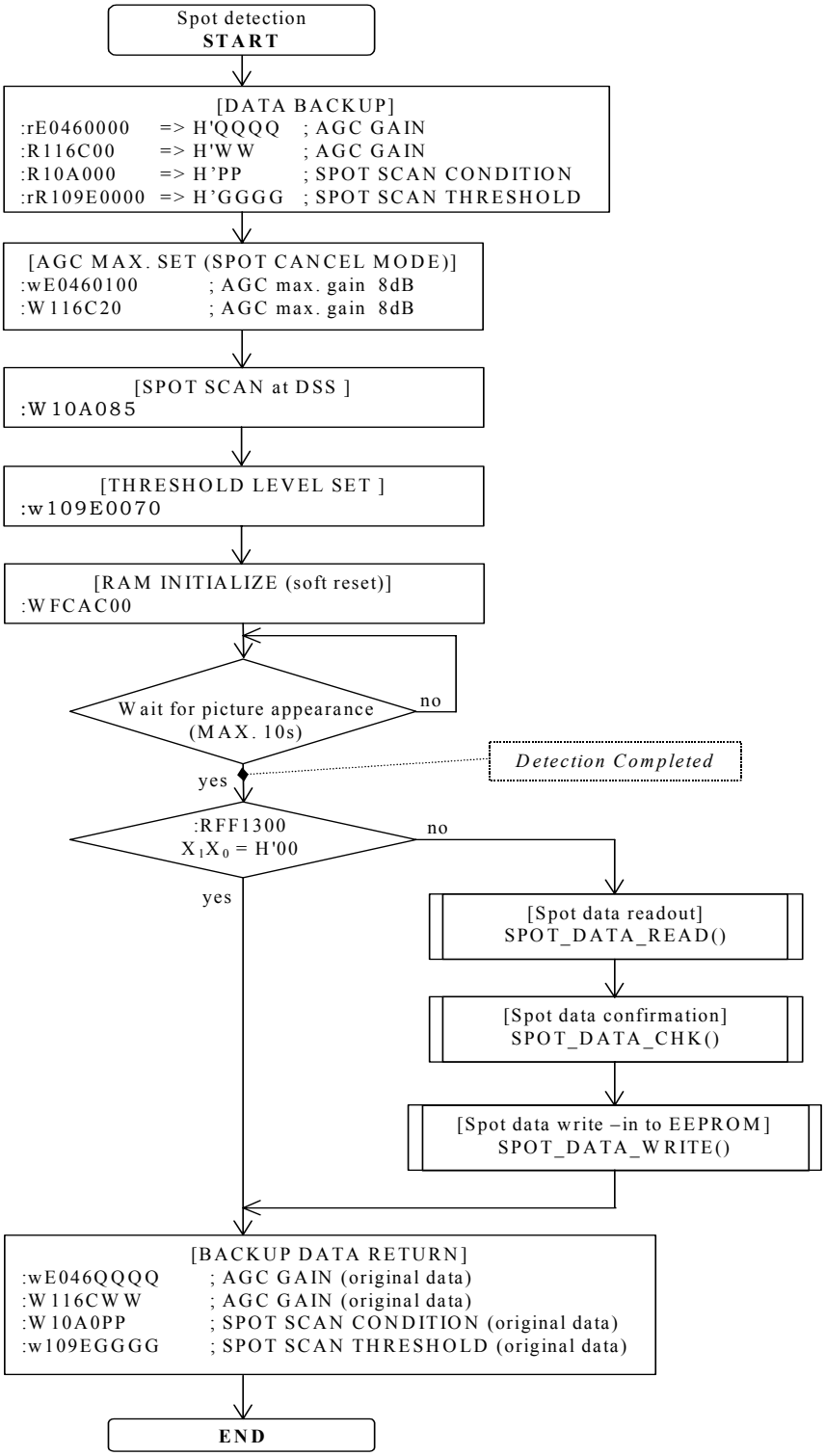
vii) Write the detected white-spot data into the EEPROM:

	H address	V address
SPOT1	:w120E $Y_{3-1}Y_{2-1}Y_{1-1}Y_{0-1}$	:w120C $X_{3-1}X_{2-1}X_{1-1}X_{0-1}$
SPOT2	:w1212 $Y_{3-2}Y_{2-2}Y_{1-2}Y_{0-2}$	:w1210 $X_{3-2}X_{2-2}X_{1-2}X_{0-2}$
SPOT3	:w1216 $Y_{3-3}Y_{2-3}Y_{1-3}Y_{0-3}$	:w1214 $X_{3-3}X_{2-3}X_{1-3}X_{0-3}$
SPOT4	:w121A $Y_{3-4}Y_{2-4}Y_{1-4}Y_{0-4}$	:w1218 $X_{3-4}X_{2-4}X_{1-4}X_{0-4}$
SPOT5	:w121E $Y_{3-5}Y_{2-5}Y_{1-5}Y_{0-5}$	:w121C $X_{3-5}X_{2-5}X_{1-5}X_{0-5}$

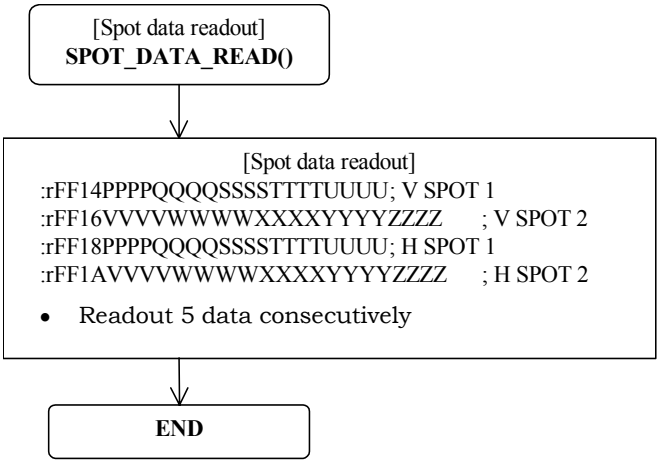
H' $Y_{3-N}Y_{2-N}Y_{1-N}Y_{0-N}$; H direction location data（order No.）
H' $X_{3-N}X_{2-N}X_{1-N}X_{0-N}$; V direction location data（order No.）

c) FLOW CHART

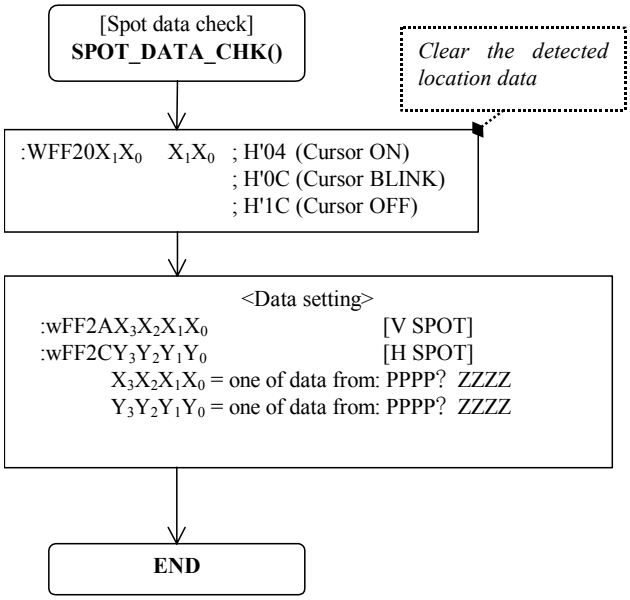
i) Spot Detection:



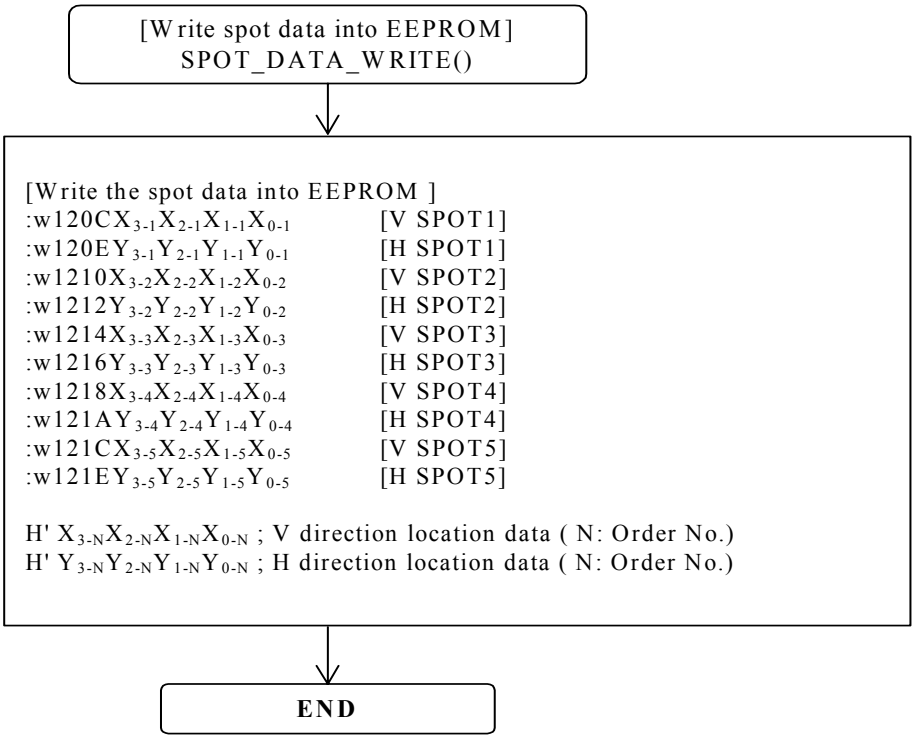
ii) Spot data readout:



iii) Spot data check:



iv) Write-in the spot location data:



• APPENDIX

[REV. 1.0]

2001/08/31* New Version release (VK-S454, VK-S454E)

[REV. 1.1]

2002/01/23* Page.5 <revision> DSS Shutter Speed setting
* [true] ":W109CX_1X_0" [mistake] ":W10A0X_1X_0"
* Page.7 <revision> Spot detection flow chart

[REV. 1.2]

2002/02/01* Page.7 <revision> Spot detection flow chart

[REV. 1.3]

2002/02/05* Page.9 <revision> Write spot location data flow chart

[REV. 1.4]

2002/02/27* Page.7 <revision> Spot detection flow chart
* SPOT SCAN THRESHOLD Data [$109E] Backup
* [true] ":RFF13X_1X_0" [mistake] ":RFF2EX_1X_0"