FEATURES

DVW-790/790WSP Digital Betacam Camcorder User Guide

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1 Introduction

This guide aims to provide some of the information not covered in the user manual relating to the set-up menus in the new '700 series Digital Betacam camcorders. Some recommended menu settings are included for the camcorder, which can hopefully be regarded as 'sensible' alternatives to the Sony factory setting.

The Digital Signal Processing (DSP) used in the camera sections allows the use of set-up cards to become a viable way of aligning a camera. Processes such as detail correction, gamma, matrix, knee, and clipping are all performed entirely within the digital domain, and can therefore be set and transferred accurately and repeatably from a memory card.
The new generation of camcorders, i.e. the '709 and the '790 now have 12 bit A/D converters and a new DSP chipset, which, combined with the latest PowerHAD widescreen CCDs, gives improved noise performance and dynamic range. Many new features are also incorporated, such as a built in secondary colour corrector (multi-matrix), true-eye knee saturation processing and auto white balance offset.

The CCDs however, are still analogue devices, and should any drift occur features such as auto black balance and auto shading are provided to correct this. It should also be noted that for cameras to be matched they will still need to be white balanced on the same target from the same point of view after being loaded with the same set-up card.

2 Menu Controls.

2.1 User Menu

The camcorder has two levels of menu control. The user menu is accessed simply by the menu switches on the side of the camera. As delivered from the factory this contains a limited number of pages of functions considered

useful to the operator. More pages can be assigned to this menu if required.

2.2 Engineering Menu

The engineering menu is accessed by powering up the camcorder with the menu wheel on the front of the camera pressed in.
Note: the user menu is relative to the engineering menu for many of the level controls. e.g. if detail level in the engineering menu is set to -10 and in the user menu to +10, the overall effect will be detail set to zero. Looking in the user menu the operator may have the impression that detail is wound up a bit to +10.

In general it is recommended that all items in the eng. menu are left at zero or factory set level, and any 'tweaking' is done via the user menu. More pages can be assigned to the user menu if access is required to a particular control.

A full list of the available menus is attached at the end of this document, including a brief description of the function of each item, and a suggested setting for each item.

2.3 Camera Operator Menu

Instead of selecting whole menu pages to the user menu, it is possible to create up to five individually configured pages, with items taken from anywhere within the menu structure. The user menu pages can then be switched off, and the whole menu cut down to a couple of pages containing only the most useful adjustments.

3 Set-up Cards

Cards can be read or overwritten as many times as you like. They are quite robust, are not corrupted by magnetic fields and can survive accidental immersion in a washing machine!
Data written for DVW-709 and 790 is inter-changeable, but will not transfer to the SX camcorders or the DVW-700. Future software will allow the 709 and 790 to read cards from the '700, but this is not recommended at present. The cards themselves are usable with any of the above camcorders.

3.1 Reading a Set-Up Card

Insert the card to be read into the slot in the side of the camera, label facing outwards.
Turn on the menu, using the Menu on / off / page switch on the small panel below the gain/ white balance memory/ power save switches..
Rotate the dial on the front of the camera until the page called 'Set-up Card' appears in the viewfinder.
Press and turn the dial until the pointer is at 'Read (-camera)'
Press the dial and check the ID of the card is the one you want to read.
Press again to read.

Reading a card to a camera will always copy both levels of menu, so do not worry about someone having left something odd in the engineering menu that will alter your card settings.

3.2 Creating your own set-up card

To copy another card: read the card you want to copy into the camcorder, as per section 3.1. Insert a blank card or one that can be overwritten. Select 'Write (-card)' from the set-up card menu page and press to confirm. That's it.

To create your own set-up, align the camera the way you like it via the menus, either from scratch, or by fine tuning a previous set-up. Write to the card.

To fine tune a card, read it into the camera, change the menu item that will improve your setting, Write to your

card. (It may be worth putting a version number in the card ID menu, to keep track of your settings.)

3.3 Gamma Curve Selection

Several different gamma curves can be selected from the camera menus. Each has slightly different gain in the black areas of the picture, and a different roll-off in the knee area. Curve A is the standard Sony setting, curve B has a high initial gain as required by some departments of the BBC. This gives more definition in low luminance areas (black stretch), but also magnifies any noise present. Curve C comes somewhere in between, and curve D gives a black crushed look. Curve F is a composite of the four different film gamma curves already available on separate cards for the DVW-700. The separate film gamma cards cannot be read at present, though it is hoped to enable this feature on future software versions.
These options have been introduced to more closely match the transfer characteristics of film, especially in the highlight regions. Also they can be seen as very useful tools in achieving a more cinematic or “film” look for Digital Betacam recordings when required.

Four cards are supplied in the BSC-1F1 pack, each of which simulates the transfer characteristic of a slightly different film stock.

Film has a transfer curve with different slopes for different parts of the exposure range- it has shallow slope in the shadows area, slopes consistently in the mid tone region and flattens off in high-lights. The new set up cards contain data closely replicating the gamma transfer curves for the most frequently used Kodak stocks.

4 Character Displays

You may find it convenient to have the menu characters and / or timecode displayed on a monitor whilst setting up a camcorder. This can be by enabling page ‘MARKER 3/3’ items 1, 3 and 4, and page ‘OPERATION 2’ item 4. Cursors, safety markers and timecode can be displayed on a monitor, which may be useful for director and PA, without having the timecode appear in the viewfinder.
Under no circumstances will any character or menu displays be recorded over pictures by the camcorder.

5 Audio

5.1 Format

Digital Betacam format VTRs are capable of recording 4 channels of digital audio. All channels are independently editable, unlike for instance the FM tracks on Betacam SP.
It uses a 48kHz 16 bit sampling system. Pre-emphasis may be switched on via the VTR menu, but is factory set to OFF.
The ‘709 and ‘790 can also be configured to record the front camera mic. input onto channel 3, via an automatic level control circuit. Details of the various configurations can be found in volume 1 of the maintenance manual, page 3-28. (Beware of making rude remarks about the director if this feature is enabled!)

5.2 Levels

Headroom is factory set to 20dB This means that 0dB tone from a portable mixer should be set to -20dB on the input level meters on the camcorder, using the manual level controls.
Headroom can be modified to 18dB or 16dB using internal switches.

There is a further audio input level control on the front of the camcorder body. This is normally only in circuit when the camera mic. is selected, and will not affect any signal input to the channel 1 and 2 inputs on the back of the camcorder.
An internal tone generator may be switched on via the VTR menu, which sends 1kHz tone direct to tape at -20dB when colour bars are selected.

5.3 Monitoring

Stereo monitoring is available via the 5 pin XLR on the back of the camcorder. (Pin connections on page 1-11 of the maintenance manual.)
The mini-jack connector can be used to monitor either channel or a mix, but not stereo.
A 'beep' tone can also be enabled via the VTR menu that warns of REC start / stop. See page 3-30 of the maintenance menu.

5.4 Recording to channels 3 and 4

The CA-701 camera adapter gives access to all 4 channels with individual level control monitoring and metering for each channel. This unit also gives SDI output of E-E or replayed pictures complete with 4 channels of embedded digital audio.

6 Batteries

Two types are available: the BP-L60A at 60 Watt hours and the BP-L90A at 90 Watt hours. Some characteristics of Lithium Ion batteries:
They do not suffer from memory effect and can be recharged without being fully discharged.
They are better at holding their charge in cold weather than NiCad cells.
They are safe for transport on aircraft (lithium ion batteries are very different from lithium dry cells).
They cannot be charged from NiCad chargers.
It takes about 2.5 hours to fully charge a BP-L60, which will power the camcorder for about 2 hours.
They have a more gradual discharge curve than NiCads, falling steadily from about 16.8V to 11.5V. Adapters are available to enable the use of PAG or Anton Bauer battery systems.

7 Widescreen

Some frequently asked questions about widescreen issues:

You don't have to buy a 'widescreen' lens for shooting widescreen. Widescreen switchable lenses have a 0.8x minifier in the range extender section. This is to compensate for the fact that if you are shooting 4:3 on a switchable camcorder the angle of view of your lens will be slightly less than on a 4:3 only camcorder. The 0.8x minifier restores the angle of view to what it would have been.

You can select a 14:9 cursor in the viewfinder for 'shoot and protect'. Alternatively the box cursor can be used to create a safe zone of any required height and width.

The widescreen camcorders are supplied as standard with the 2" widescreen viewfinder.
An optional colour LCD viewfinder is also available.
A menu option on the widescreen selection page allows the viewfinder to be set to 16:9 whilst shooting in 4:3, with the sides of the picture greyed out, in order to give an oversized view right and left of recorded picture.
Widescreen pictures replayed onto a normal monitor or 'telly' will make people look tall and thin.
(They will of course look correct on a widescreen telly or a monitor with a 16:9 button.)
'Letterboxing' via some sort of effects unit prior to transmission will make them the right shape again for non - widescreen capable viewers at home.

8 Film Style Accessories

Many people like to use a range of accessories with the '700 series camcorders that might more usually be associated with operating a film camera. Some of the more popular items are listed below.

8.1 Lenses

The ability of a lens to hold the image size constant whilst pulling focus is often an important issue. To this end, several lens manufacturers have produced digital cinematography style lenses for the ‘700. Some of these also have features such as aperture calibration in ‘T’ stops rather than ‘F’ stops, gearing for focus and zoom drives compatible with Arri equipment, extra large characters for calibrating the lens, and increased number of turns from end to end of the focus range.

8.2 Extension Viewfinder and Colour Viewfinder.

An extension viewfinder is now available. This is the BKW-LVF1 and can be added to any standard viewfinder fitted to the ‘700, ‘709 or ‘790. This features a two piece variable extension tube, that maintains image size throughout the extension range. A mounting point for an Arri self levelling arm is incorporated.

Also available is the BVF-VC10WCE, a 1.5” widescreen colour LCD viewfinder. Although still not able to compete with a tube viewfinder in terms of resolution and lag, colour reproduction and highlight handling are very good, and this will be a useful tool in certain circumstances. Like all our widescreen viewfinders, it automatically switches to 4:3 mode with the camera.

8.3 Matte Box and Follow Focus

A special quick release plate and mounting kit for attaching a wide range of Arri accessories to the ‘700 series is available. ARRI
A similar range of accessories is made by Chroziel

9 Option Boards

Two new options are available for the ‘709 and the ‘790. The BKDW-702 is an SDI output board that gives a serial component digital output with 4 channels of embedded audio from the rear BNC connector. This output is available as a direct output from the camera or a replay from the VTR.

The BKDW-703 is a memory cache board that is a buffer between camera and VTR holding up to 8 seconds of full quality audio and video. This allows the user to hit the record button and start recording what happened 8 seconds ago!
This function can be enabled or disabled from the menu, or by allocating this function to the assignable button. A green LED lights in the viewfinder when in loop record mode.
On ending the recording the VTR will keep running for 8 seconds in order to catch up. Recording can be re-commenced seamlessly at any time during this period.
Note: use of the loop recording function automatically puts timecode into free run mode.
Note: for the full 8 seconds to be available the camcorder should be in ‘Standby’ mode.

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Page	Item	Factory	Suggestion	Explanation
Setup card	Read > Camera			Read a setup card
	Write > Card			Create a setup card. Cards can be re-written as often as you like.
	ID edit		Your Name	Labels your setup card
	Write protect	OFF	ON	Protects against accidental erasure.
	White Data Read	OFF	OFF	A and B white balance memories stored on card
Function 1/2	Detail	ON	ON	Turns detail circuit off: very soft pictures.
	Test Out	ENC/R/G/B	ENC	R,G,B may be selected for lineup

				purposes.
	Aperture	ON	ON	High frequency detail. Best left on.
	Skin detail	OFF	OFF	See ‘Level 3’
	Matrix	ON	ON	Off will desatturate pictures. Can be useful, but usually left on.
	Gamma	ON	ON	Off gives v. black crushed pics. Day for night?
	Black gamma	OFF	OFF	Can be used to stretch blacks. See ‘Level 8’
	Test sawtooth	OFF	OFF	Engineering test signal
	Chroma	ON	ON	Only affects monitor o/p, not pics on tape.
Function 2/2	Genlock	ON	ON	For system timing.
	Cam. ret.	OFF	OFF	Signal on genlock conn. can go to VF
	Filter inhibit	OFF	OFF	2 white bal. memories per filter, when OFF
	Field/frame	FLD / FRM	FLD	FRM mode causes motion blur.
	A.Iris Override	OFF	OFF	Use up/down buttons to set auto-iris.
	DCC function	select	DCC / FIX	DCC Can be set to FIX, disabling the dynamic function
	Rear BNC out	VBS / SDI /OFF	VBS/SDI	Set to SDI if BKDW-702 is installed.
	VTR Mode	OFF	OFF	For use if external VTR connected.
	Rec. inhibit (CCU)	ON	ON	For use if external VTR connected.
	Assign switch	OFF	LOOP-REC	Select from: RET/ REC/ TURBO/ AUDIO/ ATW/LOOP-REC
Widescreen	16:9 / 4:3	16:9	16:9	Set to 4:3 and store on card if working 4:3
	VF Aspect	Auto/4:3/16:9A / 16:9B	16:9B	VF switches automatically, but can be set to 16:9 when shooting 4:3, side panels greyed out.
	Box / 4:3 / 14:9	BOX	14:9	Box cursor, 14:9 or 4:3 marker in viewfinder.
	16:9 bars ID	OFF	ON	Puts 16:9 ID on colour bars. (Useful warning for VT / editor)
	16:9 VF ID	OFF	OFF	ID continuously in VF. (Can be distracting.)
VF Setting	Zebra 1 det. Level	70 (20 to 107)	70	Luminance level in % of zebra 1

	Zebra 1 apt. level	10 (1 to 20)	10	Range of luminance over which zebra 1 operates. (eg 65% to 75%)
	Zebra 2 det. Level	100 (52 to 109)	95	Standard BBC setting is 95%
	Zebra select	1 / 2 / Both	Both	Your choice.
	VF detail level	0	0	Adds detail to VF signal, but not to signal going to tape
	Test out zebra	OFF	OFF	Zebra pattern can be added to test out signal.
Level 1 16:9	Detail level	0	-5	Changes total level of detail. Can also artificially soften with negative detail
	H/V	0	0	Sets balance of horizontal to vertical detail correction
	H dtl. freq.	0	80	Peak frequency of H detail. Turn up to boost fine edges.
	Crispening	0	0	Noise coring. Turn up to REDUCE low level detail such as skin texture.
	Aperture level	0	40	High frequency detail.
	Dtl.white clip	0	0	Reduces white edges.
	Detail V black clip	0	-5	Reduces black edges on V detail.
	Detail H black clip	0	-20	Reduces black edges on H detail.
	Level depend.	ON/OFF	ON	Low luminance edges ignored by detail corrector, avoids exaggerating-
	Level dep. level	0	0	noise in blacks.
Level 2 16:9	Knee Aperture	ON	ON	Emphasises detail in compressed highlights.
	Knee Aperture lev.	0	0	
	Detail Comb	0	0	No effect on PAL models
Level 1 4:3	Detail level	0	0	The above two pages are repeated for 4:3 operation.
	H/V	0	0	(In 4:3 a smaller section of the CCD is used, so different detail settings
	H dtl. freq.	0	80	May be required.)
	Crispening	0	0	
	Aperture level	0	30	
	Dtl.white clip	0	0	

	Detail V black clip	0	-5	
	Detail H black clip		-10	
	Level depend.	ON/OFF	ON	
	Level dep. level		0	
Level 2 4:3	Knee Aperture			
	Knee Aperture level			
	Detail Comb			

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Page	Item	Factory	Suggestion	Explanation
Level 3	Skin tone detail	OFF	OFF	
	Suppression level	0	50	Amount of detail taken out of skin tones.
	Skin tone detect	OFF / EXEC		Point at target skin tone, press for auto set up
	Saturation	0	0	Manual set up. Select the saturation, hue and range of skin tones to be targeted
	Hue	0	0	
	Width	0	0	
	Skin tone ind.	OFF	OFF	Gate indicator in VF and test output. Shows which areas will be affected.
Level 4	Master black	0	0	Stretches and crushes black areas.
	Master gamma	0	-5	Stretches and crushes mid luminance areas.
	Master blk. gamma	0	0	Adjusts initial gain of gamma curve
	Knee point	0	85	Knee point and slope set the way highlights in picture are compressed
	Knee slope	0	40	Calibrated in %
	Knee saturation	ON	ON	Restores colour saturation to over exposed highlights.
	Knee saturation level	0	0	

	Knee	ON	ON	
	White clip	ON	ON	
	White clip level	0	+5	Sets max. level of video signal. (+5 = 103%, 0 = 107%)
Level 5	Burst level	0	0	PAL coder alignment. Does not affect recorded pictures.
	Burst phase	0	0	
	R-Y	ON	ON	
	B-Y	ON	ON	
	R-Y level	0	0	
	B-Y level	0	0	
	R-Y level 4:3	0	0	
Level 6	RGB level	0	0	Maintenance use only.
	RGB sync	0	0	
	RGB set up	0	0	
	ENC Y level	0	0	
	ENC Y sync	0	0	
	ENC Y set up	0	0	
	RGB level 4:3	0	0	
	ENC Y level 4:3	0	0	
	Test out	Enc	Enc	
Level 7	R Black	0	0	Manual black balance. Can be used to give low luminance areas a colour
	G	0	0	shift, though probably best done during grading in post.
	B	0	0	
	R Flare	0	0	Flare correction.
	G	0	0	May be used to compensate for flare from filters or a particular lens.
	B	0	0	
	Flare	ON	ON	
	Test Out	0	0	Sawtooth signal for alignment.
Level 8	Gamma Table	A /B / C /D /F	F	A=Sony, B=BBC high initial gain, C=mid initial gain, D=? F=Typical film
	Master gamma	0	0	Lifts or crushes mid-luminance areas of picture

	R gamma	0	0	Individual gamma gives colour offset to mid luminance areas.
	G gamma	0	0	
	B gamma	0	0	
	Blk gamma range	Low / Mid /High	Low	Range over which it works: L/M/H = 0% to 7.2%, 14.4%, 28.8%
	Master blk gamma	0	0	Changes the gain of the black end of the gamma curve
	R blk gamma	0	0	Applies colour offset to low luminance areas.
	G blk gamma	0	0	--
	B blk gamma	0	0	--
Level 9	Matrix	OFF	OFF	The multi-matrix page works like a secondary colour corrector.
	Matrix table	A/B	A	Target a particular colour using the 'Det. Colour' item, and then change
	Det. Colour	OFF / EXEC	OFF	the hue and saturation of all objects of that colour in the picture.
	Axis Number	B/Mg/R/Yl/G/Cy	-	The colour spectrum is divided into 12 sectors, each of which can carry
	Saturation	0	0	a hue and a saturation offset.
	Hue	0	0	
	Matrix area ind.	OFF	OFF	Superimposes the zebra pattern on areas that have been targeted.
	Multi Matrix	ON	OFF	

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Page	Item	Factory	Suggestion	Explanation
Level 10	Matrix	ON	ON	
	Matrix Table	A / B	A B	Changes colorimetery.
	R-G	0	0 10	All at 0 is EBU standard matrix.
	R-B	0	0 0	Store non-standard values in table B
	G-R	0	0 10	Use carefully: non standard values may cause unexpected colorimetery.
	G-B	0	0 0	
	B-R	0	0 10	Increasing values increases saturation.
	B-G	0	0 0	No effect on black, white or the grey scale, so not like using a colour filter.

Level 11	H phase	0	0	Timing controls for system integration.
	SC phase	0	0	
	SC 0/180 select	0/180	0	
	SC-H	0	0	
Level 12	Iris set	0	0	Set the auto iris reference level. Turn down to underexpose pictures.
	Iris mode	0	0	Positive = peak weighting, negative = average weighting
	Iris weight	0 to 4	0	Increase to tell auto iris to ignore more of the top part of the picture.
	Iris speed	0 /1 /2 /3 /4	2	Sets reaction speed of auto iris
	Clip highlight	OFF	OFF	Auto iris ignores extreme highlights.
W shading G				Shading correction for individual lenses.
W shading R				Service use.
W shading B				
DCC adjust	D. range	4	4	Auto knee alignment.
	Point	0	0	
	Gain	0	0	
Offset white	Offset white A	OFF	OFF	Automatically adds a colour temp. offset to the result of auto white bal.
	Warm-Cool A	0	0	Equivalent to balancing through a ¼ blue gel, and then removing it to warm
	Fine A	0	0	up the look of pictures, but more flexible and predictable.
	Offset white B	OFF	ON	
	Warm-Cool B	0	40	
	Fine B	0	0	
Preset white	Colour temp. P	3200	3200	Changes the value of the preset colour temperature. Dial in your required
	Fine P	0	0	setting.
	R Gain P	0	0	Changing red or blue gain is an alternative way of changing colour temp.
	B Gain P	0	0	

Operation 1	R-G / B-G select	OFF	OFF	For registration measurement only.
	Gamma Table	A/B/C/D/F	F	Parallel to gamma table selection in level 8
	Low light	OFF	OFF	Activates low light warning.
	Low light level	0	0	Sets level at which warning comes on.
	Select Bars	EBU/SNG/SM..	SMPTE	EBU, SMPTE, SNG. SMPTE bars carry PLUGE test signal for bright adj.
	White B channel	AWB / ATW	AWB	White bal memory B can become the Auto Tracing White select switch
	Battery warning	10% / 20%	10%	
	Wide AWB	OFF	OFF	Increases the range over which the AWB will work.
	Zebra	OFF	OFF	Only for use with VF without an external zebra switch.
	Turbo sw. indep.	OFF	OFF	
Operation 2	AWB level gate			
	Rec Tally			
	Time code display			
SG adjust	H blanking width			
Enc. adjust	Burst start			PAL coder alignment.
	Burst stop			
	R-Y carrier bal			
	R-Y carrier bal			
	Sync start			
	Sync stop			
	Int SC freq.			
Data Reset	User			Factory reset user menu
	Engineer			Factory reset eng. menu

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Page	Item	Factory	Suggestion	Explanation
Menu Select 1	Marker 1/3	Y	Y	The next 3 pages determine which pages
	Marker 2/3	N	Y #	are selected to appear in the user menu.
	Marker 3/3	N	Y	
	Vf Display 1/2	Y	Y	
	Vf Display 2/2	Y	Y	
	Master gain	Y	Y	
	Shot ID	Y	Y	
	Shot display	Y	Y	
	Shutter	N	N	
	! LED	N	N	
Menu select 2	Setup card	Y	Y	
	Function 1/2	N	Y	
	Function 2/2	N	N	
	VF setting	N	Y	
	Widescreen	N	Y	
	Level 1 (Detail)	N	Y	
	Level 2 (Detail)	N	Y	
	Level 1 (4:3)	N	Y	
	Level 2 (4:3)	N	Y	
Menu select 3	Level 3 skin dtl	N	Y	
	Level 4 knee	N	Y	
	Level 5 Enc.	N	N	
	Level 6 Enc.	N	N	
	Level 7 Blk/Flr	N	Y	
	Level 8 Gamma	N	Y	
	Level 9 Matrix	N	Y	
	Level 10 Matrix	N	Y	
	Level 11 SC/H	N	N	
	Level 12 A. Iris	N	Y	
Menu select 4	White shading	N	N	
	DCC Adjust	N	N	

	Offset White	N	Y	
	Preset White	N	Y	
	Operation 1	N	Y	
	Operation 2	Y	Y	
Menu select 5	SG adjust	N	N	
	Enc Adj	N	N	
	Data reset	N	Y	
	Cameraman 1-5	Y	Y	
Measurement	Factory use			
Marker 1/3	Safety zone	ON	ON	
	Safety area	90%	90%	80% or 90%
	Centre	ON	ON	
	Centre H			Repositions centre cross
	CentreV			
Marker 2/3	Box cursor	OFF	OFF	Draw your own box.
	Box width			e.g. 15:9 safety area
	Box height			
	Box H			
	Box V			
Marker 3/3	Test out Mix	OFF	ON	Outputs VF markers to test out, eg director can see 14:9 safe area.
	Return mix	OFF	OFF	Puts VF markers on return video signal.
	Test out VF disp.	OFF	ON	Puts VF characters on test out.
	Test out menu	OFF	ON	Puts menu displays on test out.
	RM VF menu inhib.	ON	ON	Allows menus to be adjusted on RM-B150 without appearing in VF.
VF Display 1/2	Disp. mode	3	3	Temporary warning display mode.
	Extender	ON	OFF	Permanent displays:
	Zoom	ON	OFF	

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Page	Item	Factory	Suggestion	Explanation
VF Display 2/2	Filter	ON	OFF	Choose which warnings you wish to have permanently displayed in the
	White	ON	OFF	Viewfinder.
	Gain	ON	ON	
	Shutter	ON	OFF	
	Tape	ON	OFF	
	Iris	ON	ON	
	Audio	ON	OFF	
Master gain	Low	0dB	0dB	Choose from:
	Mid	9dB	6dB	-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB
	High	18dB	12dB	
	Turbo	42dB	-3dB	
Shot ID	ID-1	12 Characters		Choose a caption, eg programme name, to be superimposed on bars.
	ID-2	‘’		
	ID-3	‘’		
	ID-4	‘’		
Shot Display	Date	OFF	ON	Selects the data superimposed on the colour bars test signal.
	Time	OFF	ON	
	Model Name	OFF	ON	
	Serial No.	OFF	ON	
	Cassette No.	OFF	OFF	
	Shot No.	OFF	OFF	
	ID select	OFF	ID1	
Shutter speed	CLS	Y	Y	This page doesn’t select the shutter speed in
	EVS	Y	Y	use, only the options that are available via
	1/60	Y	Y	switch on front of camera.
	1/125	Y	Y	
	1/250	Y	N	
	1/500	Y	N	

	1/1000	Y	N	
	1/2000	Y	N	
! LED	Gain	Y	Y	Choose when the ! warning appears in VF
	Shutter	Y	Y	
	White Preset	N	N	
	ATW Run			
	Extender	Y	Y	
	Filter 2,3,4	N	N	
	Filter A,C,D			
	A. iris override	N	N	

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Please could you fill in our Optional Form about this feature.

We are always grateful for your input!