

SOP title: Recording Video with Reco Delta

Date: 17Jan2006

**Iowa State University
Animal Behavior Laboratory**



This form has been designed for completion *before* an experiment commences. The form should be filled out by the student and the major professor. This form serves as an instructional piece to help current and future students know the correct procedure for the ISU behavioral laboratory. To allocate a unique SOP number – students need to check the SOP file held within the behavioral lab.

Standard Operating Procedure (SOP)

Unique SOP Number: 48

Version Number: 2

Year: 2006

SOP title: Reco Delta 204 Video Recording Setup and Time Capacities

Authors: Robert Baker, Shelley Hanish

- 1. Background to SOP: Recording information seen by the camera provides the information that is used for studies.**
- 2. Objectives of SOP: To properly record information using the Reco Delta.**
- 3. Materials needed: Mini System or full Video System.**
- 4. Procedure for set up: (maybe useful to include pictures or screen prints)**
 - Ensure all components of the System are ON and Hard Drive is installed. Check date and time stamp on the screen for correctness. See applicable SOP for correcting date and time.**
 - Image should be visible on screen, adjust camera for desired view.**

- **Configure any special settings.**
 - Frame Rate:** To alter the frame rate (how “pictures” every second are recorded) one may simply press MENU, and use the arrows to highlight RECORD SETUP. Here, there will be an option for RECORD SPEED where you can use the horizontal arrows to select many different frame rates, which in NTSC mode will go from 30 fps to 1 fp30sec. NTSC should be the selected mode, Not PAL. PAL the European format and is not compatible with American equipment (such as if the data goes to another lab)
 - Record Time:** To record at particular times of day, such as a period during daylight, or multiple sections per day, one may use the Schedule function. Press MENU, and then highlight SCHEDULER on the main menu and press SELECT. Use the horizontal arrows to highlight a field, and use the vertical arrows to change the times. There will be the options of START, STOP, DATE, and MODE. Mode refers to the frame rate you wish to use, so different rates can be used at different times. Up to 16 recording blocks can be created, and can be set under DATE to record daily, or only on a particular day.
 - Resolution:** Under Video Setup, there is an option for resolution to be set to FULL or HALF. Full resolution will give you a better picture.
 - Video Quality:** Also in Video Setup, this will change the pixel number and so affect the amount of data you can get on a hard drive. Minimum setting of MEDIUM is recommended.
- **Press Record (black circle).** A red dot should appear in the upper part of the Monitor screen. This indicates recording is taking place.
 - Record Lock:** Using this feature commands the Reco to immediately resume recording in the case of a power outage, hitting the wrong button, and other problems. Simply press the Record button twice in a row to activate the feature, and a blue LOCK will appear in the display on the front of the Reco. To turn Record Lock off, press the MENU, SELECT UP, and TIMER buttons in sequence, and this will deactivate the Lock
- **To halt recording, press the Stop button (black square).**
- **The amount of time that can be recorded is dependent on the Video Quality setting and the frame rate. The following table can be used for a general reference for recording times:**

HD Size	Video Quality	30fps	15fps	10fps	5pfs	4pfs	3pfs	2fps	1pfs	1f/2s	1f/5s	1f/15s	1f/30s
20GB	Super	10	16	22	25	31	41	62	123	246	615	1,845	3,690
	High	13	17	24	32	40	53	79	159	318	795	2,385	4,770
	Medium	18	27	38	43	53	71	107	214	428	1,070	3,210	6,420
	Low	29	42	60	79	99	132	198	397	794	1,985	5,955	11,910
40GB	Super	21	31	44	49	62	82	123	247	494	1,235	3,705	7,410
	High	25	34	48	63	79	106	159	317	634	1,585	4,755	9,510
	Medium	36	53	75	85	107	142	265	427	854	2,135	6,405	12,810
	Low	58	84	120	159	198	265	397	794	1,588	3,970	11,910	23,820
80GB	Super	42	63	89	99	123	165	247	494	988	2,470	7,410	14,820
	High	50	67	97	127	159	212	317	635	1,270	3,175	9,525	19,050
	Medium	72	107	150	171	214	285	427	855	1,710	4,275	12,825	25,650
	Low	116	168	242	317	397	529	794	1,587	3,174	7,935	23,805	47,610
120GB	Super	63	95	133	148	185	247	370	741	1,482	3,705	11,115	22,230
	High	75	101	145	190	238	317	476	952	1,904	4,760	14,280	28,560
	Medium	108	160	225	256	321	427	641	1,282	2,564	6,410	19,230	38,460
	Low	174	253	362	476	595	794	1,190	2,381	4,762	11,905	35,715	71,430
200GB	Super	100	160	220	250	310	410	620	1230	2460	6150	18,450	36,900
	High	130	170	240	320	400	530	790	1,590	3,180	7,950	23,850	47,770
	Medium	180	270	380	430	530	710	1,070	2,140	4,280	10,700	32,100	64,200
	Low	290	420	600	790	990	1,320	1,980	3,970	7,940	19,850	59,550	119,100
250GB	Super	125	200	275	312	387	512	775	1,537	3,075	7,687	23,062	46,125
	High	162	212	300	400	500	662	987.5	1,987	3,975	9,937	29,812	59,712
	Medium	225	337	475	537	662	887	1,337	2,675	5,350	13,375	40,125	80,250
	Low	362	525	750	987	1,237	1,650	2,475	4,962	9,925	24,812	74,437	148,875

Table 1: Recording time (in hours) for different frame rates and Video Quality settings for the Reco 204. It is a linear relationship for time and data usage at different settings. (Courtesy: Darim Vision Company)

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5. Trouble Shooting:

If recording does not start, check that Hard Drive is installed correctly.

Sometimes the Reco will lock out functions, simply press CLEAR and see if that allows recording to be started.

If no image is visible, check that the other camera circuit has not been selected on the monitor or on the Reco Delta, and that the coax cables are correctly routed from the output of the Reco to the input channel (A or B) of the monitor.

Make sure the Hard Drive is not full of data, this will cause a message to appear on the monitor and accompanied by a beep.

6. Helpful web links or contact numbers for technical help:

Noldus Corp.

Signature of student

Date:

Signature of major professor

Date:

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