Electronic Monitoring of Commercial Fishing Guide

New Zealand Government

Fisheries New Zealand
Tini a Tangaroa

Introduction

This guide provides important information about the operation of the electronic monitoring (on-board camera) system that has been installed on your vessel. It provides an overview of the key operating features and instructions on swapping, sending and receiving data storage devices. It also includes basic troubleshooting information and outlines the process for requesting an exemption if you have an equipment failure.

It is intended for use by those trawlers and set net vessels required to operate an on-board camera system from 1 November 2019, as defined in the Fisheries (Electronic Monitoring on Vessels) Regulations 2017 (the regulations). The regulated area is shown on the map on the next page. Note that for the purposes of this guide, 'trip' means a fishing trip where you trawl or set net in the regulated area, even if only for part of the trip. More explanation about what happens when only part of your fishing takes place within the regulated area is given on page 25.

THIS IS NOT A LEGAL DOCUMENT.

The exact requirements are in the regulations and the Fisheries (Electronic Monitoring on Vessels) Circular 2019. These documents set out the legal and technical requirements for electronic monitoring that fishers must use to provide fishing activity footage and data to MPI from 1 November 2019.

It is important that you read them to fully understand what is expected of you under electronic monitoring. The documents are available on the Digital Monitoring pages of the Fisheries New Zealand website at www.fisheries.govt.nz/camerasWCNI.
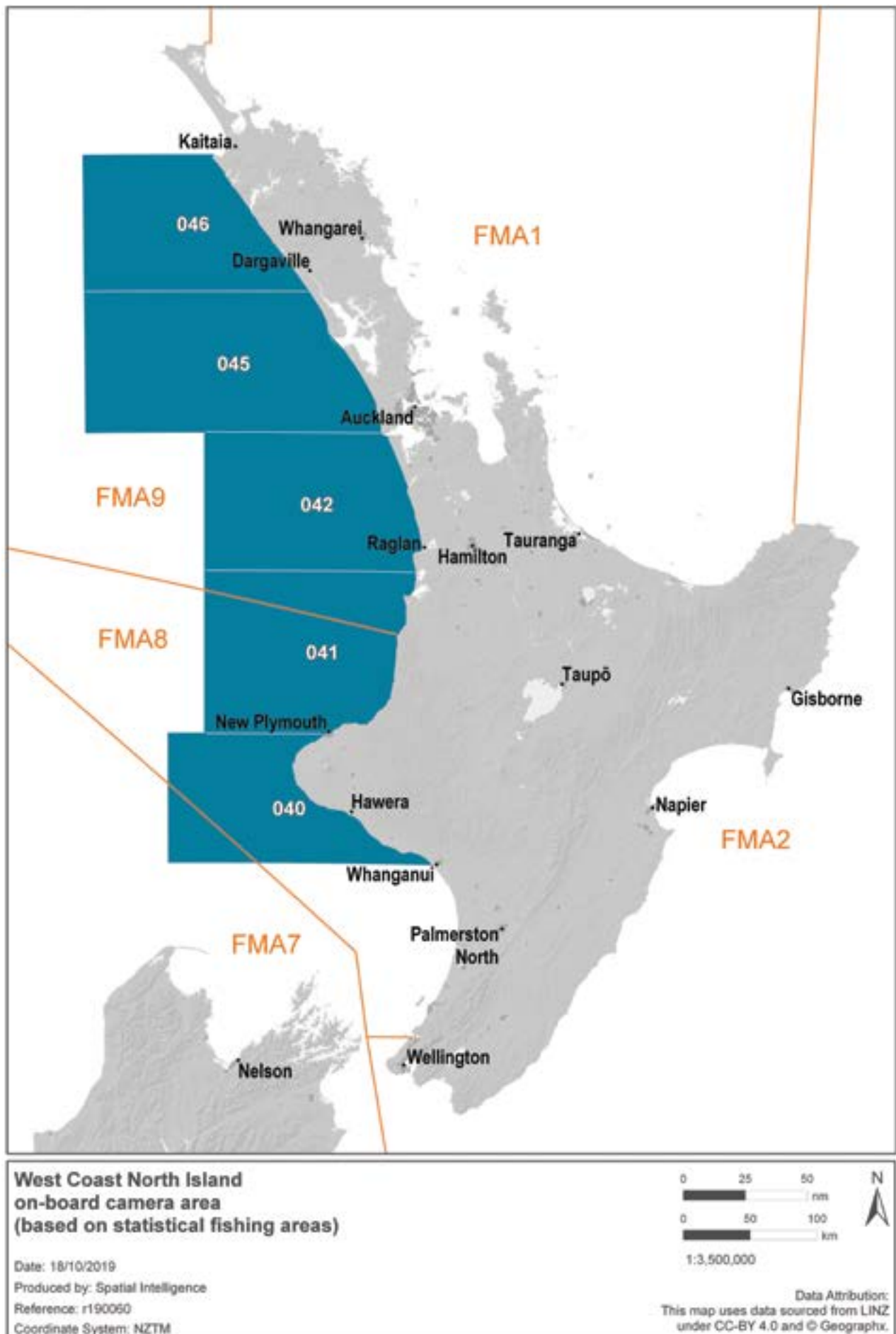
When working out how to incorporate electronic monitoring into your fishing operation, the health and safety of the crew must be considered. All queries about health and safety operational considerations should be directed to Maritime New Zealand (the health and safety regulator for coastal and inland waterways).

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West Coast North Island on-board camera area

The co-ordinates of the regulated area are listed at the end of this guide.

West Coast North Island
on-board camera area
(based on statistical fishing areas)

Date: 18/10/2019
Produced by: Spatial Intelligence
Reference: r190060
Coordinate System: NZTM

1:3,500,000

Data Attribution:
This map uses data sourced from LINZ
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Contents

Section 1: On-board camera system overview

Your camera system consists of:

- up to three digital video cameras (a);
- a power over ethernet (PoE) unit (b);
- a control centre with pre-installed software (EM Record) (c);
- a hydraulic pressure sensor (on some vessels) (d);
- drum rotation sensors (either optical or proximity type; on some vessels) (d);
- a GPS receiver (not shown); and
- a keyboard and monitor (not shown).

Remember that all parts of your MPI-owned on-board camera system must not be repaired, altered or removed, except as directed by MPI or by a contractor instructed by MPI.

You must not plug any other devices (such as USB drives, portable hard drives, mobile phone chargers) into the ports on your control centre. Spare USB ports at the back of the control centre have stickers across them to remind you not to use them.

Section 2: Summary of key operating features

Once switched on and working, your camera system should largely operate without your input. However, it is important to familiarise yourself with the key operating features and to note that some functions take several minutes to complete:

- Once you turn the control centre's power on, the monitor will show a number of messages before the home screen with camera previews appears and the system is ready to record. This can take up to 5 minutes.

- When shutting down and closing a data drive before removing it, the system needs to carry out a number of functions. This can take several minutes to complete. Do not disconnect the system's power or remove the data drive until the system has shut down completely.

- When a blank data drive has been inserted into the control centre and is initialising, the system will need to restart itself twice to complete the necessary formatting steps before the home screen with camera views appears. These two system restarts will happen automatically and take a few minutes to complete. Dealing with data drives is explained in more detail on pages 13-17.

Recording

The standard home screen you will see on the monitor and the meanings of the various lights and icons on the monitor and control centre are shown on pages 7 and 8.

You will be able to see that video is being recorded and saved to the data drive when the banner above the specific camera view is red (as for IP CAM 1 on picture 1 on page 7).

Recording will be triggered automatically when the sensors detect activity, and each time the cameras are triggered they will continue to record for 30 minutes after the sensor stops detecting activity. The red banner will show the word 'Automatic'.

Tables 1 and 2 (on page 9) set out recording information for trawling and set netting. See Section 7 for an explanation of what footage will be reviewed.

Recording can also be triggered manually by clicking the recording button. Click it once to start recording and once more to stop. It is not expected that you will need to use this function.

Data storage

Video footage and associated information (e.g. sensor and location data) is all stored on the removable data drive (no information is stored on the system itself). You can find out how much space is still available by clicking on the third icon from the right on the home screen (blue data disk icon). The rate at which the data drive fills up will depend on the number of cameras and other factors, including how much fishing activity has been carried out.

Detailed instructions on when and how to exchange data drives are given in Section 4.

Standard home screen
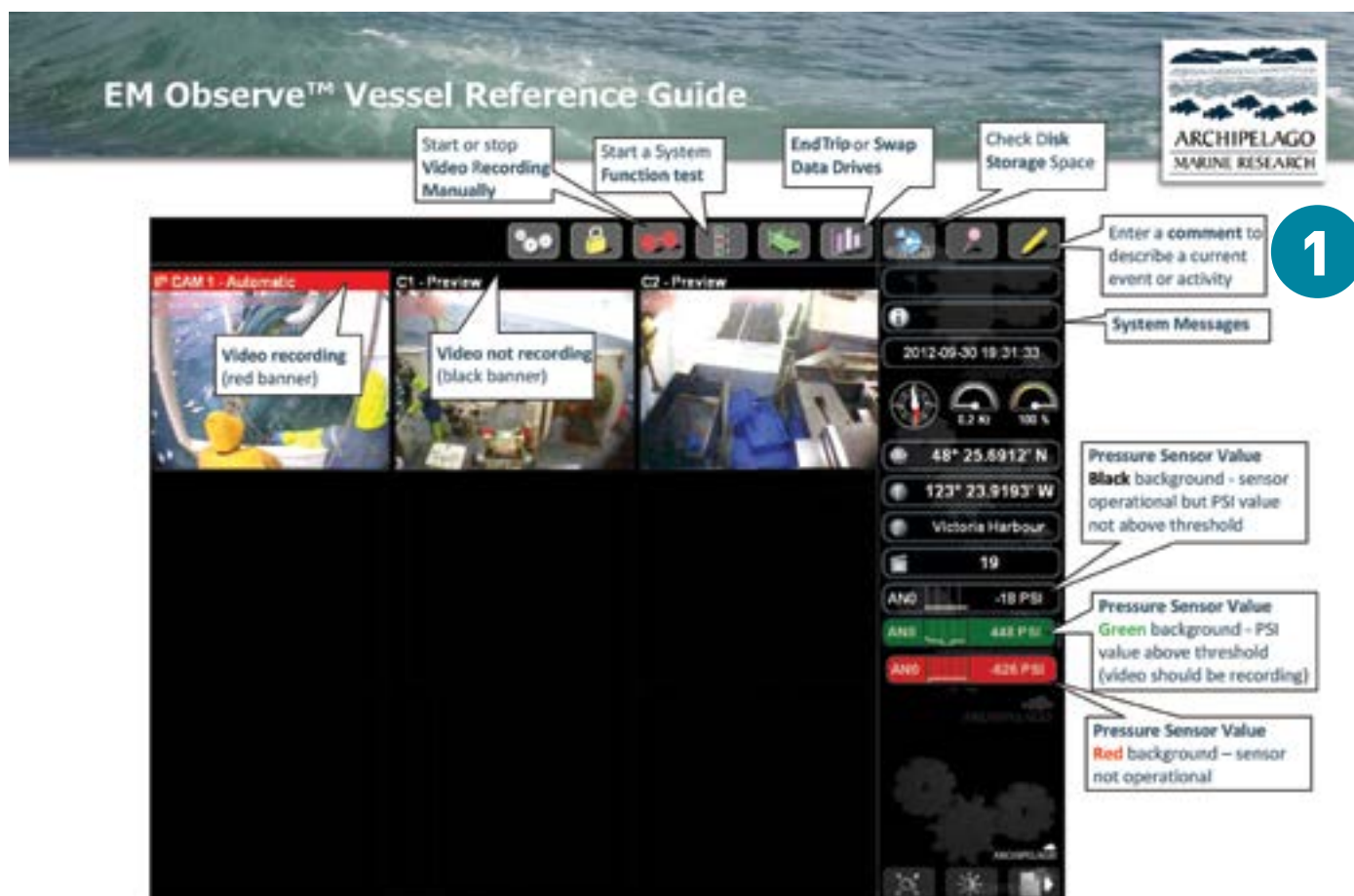
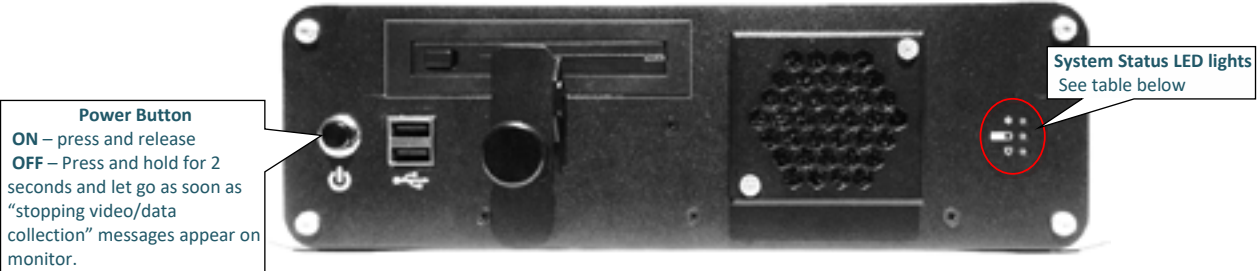NOTE: THE CAMERA VIEWS SHOWN IN THIS IMAGE ARE EXAMPLES ONLY AND ARE NOT INTENDED TO SHOW THE VIEWS THAT WILL ACTUALLY BE RECORDED.

Control centre lights and meanings

Power Button
ON – press and release
OFF – Press and hold for 2 seconds and let go as soon as "stopping video/data collection" messages appear on monitor.

System Status LED lights
See table below

⏻ Power	🔋 Uninterruptable Power Supply	🛡 System Health
The Power light indicates the voltage being delivered to the unit. **BLACK (not lit):** no power (or very low voltage) **GREEN (solid):** sufficient voltage being supplied. Press power button to turn on **RED (flashing):** low voltage (insufficient for operation)	The UPS light indicates the UPS charge levels. The system will not start until UPS is sufficiently charged. **BLACK (not lit):** no charge; backup power at 0%; system is off **GREEN (flashing):** UPS charging; standby for start **GREEN (solid):** full charge; system will soon start **RED:** very low charge; insufficient power to maintain operation	The System health light indicates system state information. **BLACK (not lit):** the system is off, or UPS not charged yet **GREEN (solid or pulsing):** normal operation; a brief pulse occurs when the system receives data through EM Record **RED (solid):** starting up; the system is loading the EM Record software **RED (flashing):** may indicate either of the following: • Incoming power supply is off • A component is being reset

If the Power or System Health lights are flashing red, or the UPS light is red, call MPI on 0800 00 83 33 to arrange assistance from ENL.

Table 1: Recording information – trawl vessels

Trigger and length of recording	Fishing activities recorded	Field of view (what the cameras can see)	Information collected may include, but is not limited to

All cameras will be configured to start recording when the sensors indicate the use of warp winches or net roller and will continue recording for 30 minutes after the sensors stop detecting use	**Shooting**	• Deck view encompassing all areas from which gear deployment occurs
		• The area outside of the shooting station, including:
		  – Warp wires
		  – Trawl ramp
		  – Trawl winches
		  – Mitigation gear (where required)
			• Use of mitigation gear (e.g. bird bafflers)
			• Fishing effort details:
			  – Fishing method
			  – Number of nets
			  – Tow duration – net reaches fishing depth (warp winch stops paying out)

	Hauling & tipping	• The area outside of the hauling location
		• Deck view encompassing all areas where gear retrieval occurs
		• Deck view encompassing all areas where fish are removed from the net including:
		  – The pound hatch
		  – The area where catch is brought on board
		  – The area where catch is retrieved/ tipped from the net
		• View of below deck pound where fish are emptied emptied from net (for trawlers with below deck pound)
			• Use of mitigation measures
			• Fishing effort details:
			  – Tow duration – net leaves fishing depth (warp winch starts hauling in)
			• Verification of quantity and species of catch, including:
			  – In water adjacent to net as it emerges from the water
			  – That are freed during hauling process
			• Non-fish species or protected fish species interactions:
			  – Verification of species
			  – Identification of capture method
			  – Life status

Table 2: Recording information – set net vessels

Trigger and length of recording	Fishing activity recorded	Field of view (what the cameras can see)	Information collected may include, but is not limited to

All cameras will be configured to start recording when the sensors indicate the use of the haul gear (e.g. net pullers) and will continue recording for 30 minutes after the sensors stop detecting use	**Hauling & retrieval of catch**	• Deck view encompassing all areas where gear retrieval occurs
		• The area outside of the hauling station
		• Deck view encompassing all areas where fishing occurs, including where catch is retrieved/removed from the net
		• The area outboard of the hauling station where the net emerges from the water
			• Use of mitigation measures
			• Fishing effort details:
			  – Fishing method
			  – Number of nets
			• Verification of quantity and species of catch, including:
			  – In water adjacent to net as it emerges from the water
			  – That are removed during hauling process
			  – That are retrieved from net once net is brought on board the vessel
			• Non-fish species or protected fish species interactions:
			  – Verification of species
			  – Identification of capture method
			  – Life status

Section 3: What to do before, during and after fishing

There are a number of tasks and checks you will need to carry out before you start a trip, during the course of a trip, and when you return to port. These are summarised in image 3, which you will be given as a sticker to keep somewhere handy on your vessel.
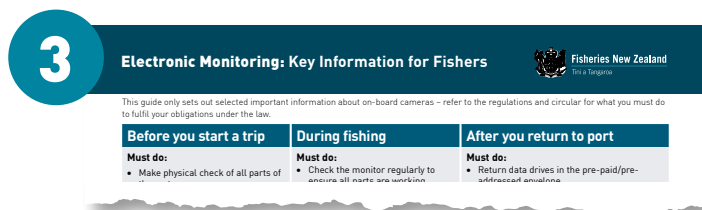
Before you start a trip, turn your system on and do the following:

1. **Make a physical check:** Inspect all components to make sure they are securely mounted.

2. **Check the monitor display:** Check that you can view the monitor clearly. Adjust the brightness manually using the arrow buttons located at the bottom of the monitor, or using the screen brightness icon on the home screen.

3. **Check the amount of data drive storage space remaining:** The camera system software shows the amount of drive space remaining. The approximate number of hours remaining are available in the function test application (see pages 11-12). Make sure there is enough storage space left on your data drive to cover the activity that will be recorded on your trip. If in doubt, close and remove the current drive and install a blank drive (see pages 13-14).

4. **Function test:** see pages 11-12.

> It is a good idea to leave your camera system on and ready to record once you've completed the function test and depart from port. This will ensure you don't forget to turn it on when you trawl or set net in the regulated area, which is when the regulations require recording of fishing.

During a trip, there are a few checks you should make to ensure optimum recording of fishing activity. Note that if, when reviewing your footage, MPI decides that it is not of sufficient quality for any reason, they will get in touch with you to discuss ways to fix the situation.

1. **Check camera views:**
   - Make sure the cameras are displaying correctly, and that the views are unobstructed and clear.
   - During night fishing operations, ensure the camera field of view is sufficiently lit to enable good video quality, while minimising the likelihood of seabird interactions.
   - Clean the lens dome of each camera with a damp, soft cloth as necessary. To clean smudges or stuck dirt use warm water with a few drops of a mild dish soap and a clean microfiber cloth.
   - Regularly rinse the lens dome of each camera with fresh water to remove salt accumulation. Do not use high pressure or salt water for this.

2. **Check sensors:** Check the home screen periodically to ensure that sensor data is being displayed and recorded:
   - Ensure that the GPS position is correctly reporting.
   - If fitted, ensure that the drum reflector is clean and free of obstruction.
   - If your system is equipped with a drum rotation sensor, this will display a number, for example '4 Turn', and be green when the drum is turning.

   - If your system includes hydraulic pressure sensors, these should show a PSI reading. When setting/hauling, check for pressure activity (PSI should be above the threshold pressure, which is specific to your vessel). The PSI sensor display background will turn green when the sensor is above the threshold.

3. If you exchange a data drive while you are out on a trip, you will have to do another function test.

After you return to port, check the amount of data drive space remaining. You may need to send one or more data drives to MPI. This is covered in Section 4.

Function test

A function test is a software-based system check that will confirm if each part of your camera system is operating properly. It should take no more than 2-3 minutes to run this test.

It can also be run during a trip if there are any concerns about the system operations.

Follow the procedure set out on the next page. Answer each section by clicking the 'Yes' ✅ or 'No' ❌ buttons located in the lower right corner of the screen.

The answers you provide will be logged in the data set and saved to the data drive.

You must carry out a function test:

- Before the start of each trip; and
- Whenever data drives are exchanged; and
- If the system has not been operated for more than 14 days.

Run a function test

6

Video recording
(red banner)

Video not recording
(black banner)

IP CAM 1 - Automatic

C1 - Preview

C2 - Preview

2012-09-30 19:31:33

0.2 Kt   100 %

48° 25.6912' N
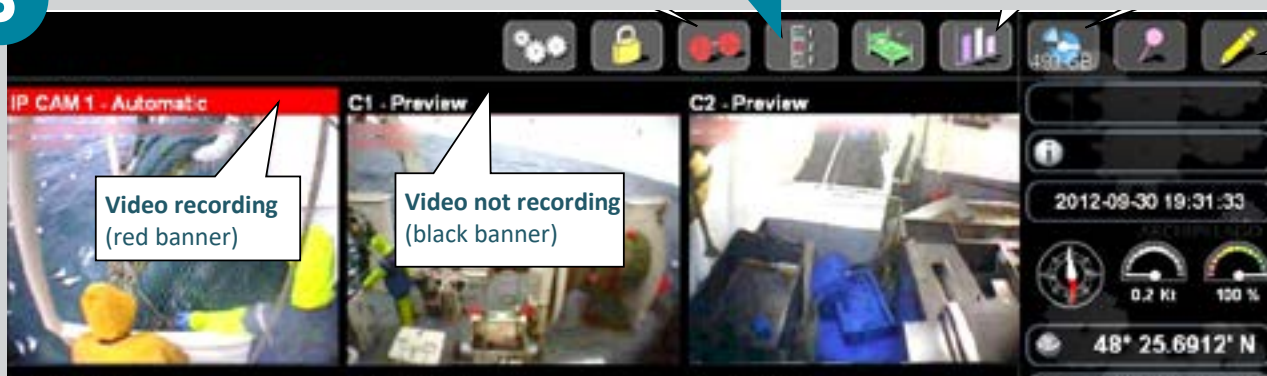
1. **Run:** On the EM Record home screen, click the **Run a Function Test** button.

2. **Start:** To begin the test, click the **Proceed** arrow.

3. **GPS test:** Check the GPS location displayed. Is it accurate? Note that the GPS coordinates displayed in the EM Record software are displayed in degrees, so may not exactly match your other GPS displays.

4. **Pressure (hydraulic) test:** Start the engine and turn on the hydraulics. With the hydraulics engaged, does the **ANO** value exceed the **Trigger if** value?

5. **Drum counter test:** Activate the drum or other equipment that engages the rotation sensor. Does the counter increase to indicate each rotation?

6. **Camera recording test:** Allow each camera view to load and the top banner to turn RED (be patient as this will take several seconds). Does the camera view banner turn RED and say, **Function Test** to indicate recording? Is each camera properly aimed and focused?

7. **Data drive space test:** Is there enough drive capacity (recording time) to cover your trip duration, or do you need to install a blank data drive?

8. **Function test finished: If you answer NO to any question, you should call MPI on 0800 00 83 33 and they will arrange for an ENL technician to contact you.**

Finish test
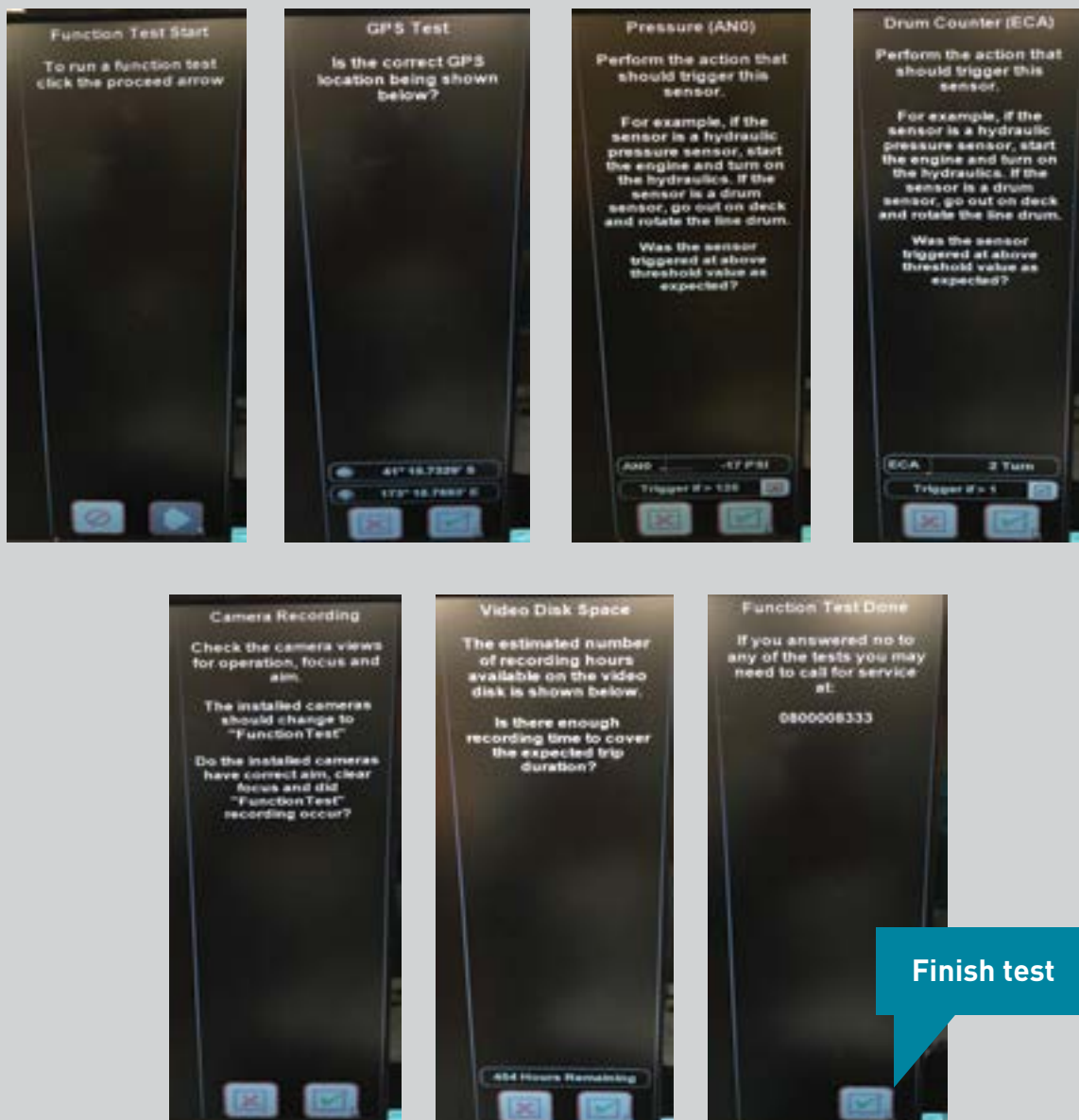
Section 4: Data drives

As part of the installation of your camera system, you were provided with sufficient data drives for your fishing operation. You might also hear these referred to as 'hard drives' or 'data storage devices'. You must not use them for any other purpose than providing footage to MPI.

The data drive will have a plastic frame (spacer) around it that should not be removed. If this spacer comes off at any time, return the data drive and spacer to MPI.

There are a number of important processes involving data drives that you need to be familiar with, relating to:
• data drive removal, install and initialisation; and
• sending and receiving data drives.

> It's important that you incorporate data drive processes into your other operational planning, to ensure you allow enough time to get your footage to MPI. See the diagram on page 16 for more explanation on this.

Data drive exchange (removal and installation)

In most cases, this will be done while you are in port, either at the end of one trip, or before starting another.

Preparation

Before you begin, make sure:
• your system is not in sleep mode;
• you have a blank data drive and protective postage case available.

System shutdown and data drive removal

1. With the camera system on (but not recording), click on the Data Integrity Report icon located on the top row of the screen.

2. The Data Integrity Report window will open.

3. Click the 'Shutdown and end trip or swap drives' button.

4. The software will then close the data collection period and shut the system down (approx. 45 seconds).

5. When the control centre has shut down, press the drive door release button and remove the data drive from the control centre. Make sure you grab it on the corner. Avoid touching any other areas of the drive with your fingers to prevent damage, and don't handle drives with wet hands.
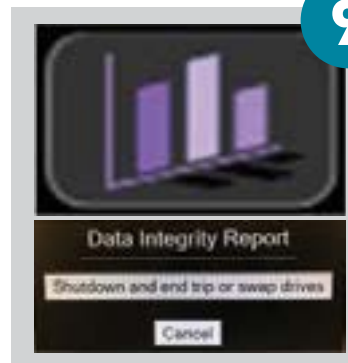
6. Insert the drive into the protective case ready to be couriered back to MPI.

Installing a blank data drive

1. With the system off, open the drive door all the way.

2. Remove the blank data drive from the protective case and insert it fully, with the MPI sticker facing up, and the end with the gold coloured contacts going into the drive bay first.

3. Close the drive door, applying enough pressure until you hear it 'click', meaning it is locked in place. When it is fully closed, it should not spring open by itself. Do not force the drive door – if it is difficult to close, the data drive is probably the wrong way up.

4. Press the power switch on the control centre and the system will start.

5. After the system restarts, the monitor will display a 'Disk Preparation Warning'. Click 'OK' to confirm that the data drive is blank, and the installation will proceed.

6. The system will then prepare the data drive and the home screen will shortly appear.

7. In most instances, you will install a new data drive while you are in port, before you start fishing. This is when you will do your 'before a fishing trip starts' function test. However, if the data drive becomes full while you are out on a trip, you will have to replace it at a convenient time. Remember that if you do this, you will have to repeat the function test.

Important notes about removing data drives:

The 'shutdown and end trip or swap drives' button mentioned here is not related in any way to the Trip End Report you must do for electronic catch and position reporting.

You should ONLY click 'shutdown and end trip or swap drives' when you are about to remove a data drive from your camera control centre to send it to MPI.

It is likely that you will generally leave a data drive in place for more than one fishing trip, because there is a lot of storage space on the data drives. If you do leave it in place ready for another trip, you would press 'Trip End' on your e-logbook, but not click 'shutdown and end trip' on your camera software.

If you do want to remove a data drive between trips, for example for safekeeping, simply power down the whole system and then remove the data drive from the control centre without going through the process outlined on the previous page. Then, put that data drive back in before powering on the system. If you choose to do this, you should take care not to mix up your data drives.

If you realise you've turned on your system and forgotten to insert a data drive that already contains data, simply power down again, put the drive in the drive bay, and then power on.

Returning data drives to MPI

> **Data drives must be returned to MPI using the New Zealand Couriers Track and Trace service. You CANNOT return data devices by any other means than the courier service.**

It is a good idea to keep a record of the data drive number(s), the Track and Trace number, the person who sent the drive to MPI and the date it was sent. This is your proof of sending a drive(s) to MPI. It is sensible to have somewhere specific to write down this information, such as a dedicated logbook, as this will be an ongoing process for you. You can consider keeping a fuller record of anyone involved in handling the data drives from your vessel, so you feel confident that you are tracking the full chain of custody.

When you are ready to send footage to MPI:
- Place the data drive(s) in the protective case(s) provided and put it in the pre-paid and pre-addressed courier bag supplied by MPI.
- Fill in the 'Sender' section on the reverse of the bag.
- Drop off the courier bag at your nearest New Zealand Couriers location. Some of these are listed below:
    - **Auckland Branch:** 79 St Georges Bay Road
    - **Greymouth Agent:** Challenge Greymouth, 119 Tainui Street
    - **Nelson Branch:** Unit 7, 74 Quarantine Road, Annesbrook
    - **Nelson Agent:** Repco Nelson, 49 Gloucester Street
    - **New Plymouth Branch:** Unit 3 / 674 Devon Road
    - **Raglan Agent:** BP Raglan, 2 Main Road
    - **Wellington Branch:** 195 Aotea Quay
    - **Whangarei Branch:** 11 Dyer Street
    - **Mangonui Agent:** Gloss Ltd, 78 Waterfront Drive

To double-check these addresses, or to find other locations, visit:
www.nzcouriers.co.nz/address_checker.html

If you are experiencing difficulties in dropping off a courier bag, **call MPI** on 0800 00 83 33.

Important note:

At the point the courier scans the bag containing your data drive(s), it is considered to be received by MPI.

If you drop it off at a NZ Couriers **BRANCH**, it will be scanned immediately. However, if you drop it with a NZ Couriers **AGENT** (such as a petrol station), you must make sure you do this at least one business day before the deadline for submitting footage, to allow time for the actual courier to arrive, collect and scan the bag.

Footage must be received by MPI no later than the 15th day of the month after the month in which a fishing trip ends.

For example, the footage will be due by the 15th of December for a trip that ends any time in November. If you go out on more than one trip in November, the footage from all trips will be due by the 15th of December. The diagram on the next page sets out some other examples of when you would send data drives to MPI.

If you are not sure when to exchange or return a data drive, contact onboardcameras@mpi.govt.nz for advice, but note that data drives can be sent in early. Sending it in as soon as you remove it from the control centre is recommended.

Examples of when to send data drives to MPI

11

Timeline: November, December, January

A

Trip 1 4 day trip

Trip 1 footage must be at MPI by the 15th of December. You must change your data drive after trip 1

Trip 2 4 day trip

Trip 2 footage MUST BE at MPI by the 15th of January

B

Trip 1 4 day trip

Trip 1 footage must be at MPI by the 15th of December

Trip 2 3 day trip

Trip 2 footage CAN BE submitted **early** if data drive wasn't changed after trip 1.

OR

Trip 2 footage MUST BE at MPI by the 15th of January if data drive was changed after trip 1

C

Trip 1 2 day trip

Trip 2 2 day trip

Trip 1 and Trip 2 footage must be at MPI by the 15th of December

Trip 3 3 day trip

Trip 3 footage CAN BE submitted **early** if data drive wasn't changed after trip 1.

OR

Trip 3 footage MUST BE at MPI by the 15th of January if data drive was changed after trip 2

Receiving data drives from MPI

In most cases, after you send a data drive to MPI, a replacement blank drive (plus a protective case and return courier bag) will be sent out via courier to the authorised receiver at the address held on file for that person. Note that as each vessel has a specific number of data drives allocated to it, there may be some instances where a replacement drive won't need to be sent out, as the vessel already has the correct number.

Keep spare data drives in the protective cases in the return courier bag in a safe dry place, to prevent them from getting damaged and to avoid losing the return courier bag.

If you need to request another data drive or courier bag from MPI, call 0800 00 83 33 or email **onboardcameras@mpi.govt.nz** and ask to have them sent out. You must allow enough time for this – the very minimum is two working days, but in some regions it may take longer and therefore you should err on the side of caution and allow longer if possible.

As part of your installation process, you let MPI know who is authorised to receive data drives for your vessel, and what their delivery address is. You will need to let MPI know if the authorised receiver details change – MPI will confirm any notification of change via an email to the permit holder.

Section 5: System issues and exemptions

Given good care and maintenance, issues with your camera system should be infrequent. However, when they do occur, it is important to resolve them as quickly as possible, to prevent further damage occurring to the equipment and to ensure that fishing time is not lost.

The diagrams on the next page show the basic details of what you can do if you have an equipment issue (mechanical or technical failure) before or after you start a fishing trip where you expect to be fishing in the regulated area. The relevant troubleshooting steps that can be worked through at sea or in port are explained in Section 6.

Requesting an exemption for an equipment failure

The following information applies if you are **requesting an exemption to address an equipment failure that is preventing you from going fishing:**

- The permit holder, vessel master, or their designated person must call MPI on **0800 00 83 33** as soon as practicable after identifying the failure.
- They will be asked for information including confirmation that scheduled maintenance has been booked with ENL (and the date of that booking) and the expected return date of the planned fishing trip.

Requesting an exemption for any other reason

The permit holder, vessel master, or their designated person will need to provide the following information by email to onboardcameras@mpi.govt.nz or by post to Digital Monitoring, Fisheries New Zealand, P.O. Box 2526, Wellington, 6140:

General information about you:
- Full name
- Client number
- Phone number (mobile preferred)
- Email address
- Vessel name
- Vessel registration number
- Methods used (trawling/set netting)

Information about your intended fishing activities during the requested exemption period. List as many as apply:
- Species being targeted
- Fishing methods to be used
- Where you will be fishing (give the statistical areas)
- If the trip is multi-day
- Start and end dates for the requested exemption period

They will also have to explain why it is unreasonable or impracticable to comply with the requirements of the regulations, which could be for reasons other than device failure. Include any supporting evidence.

However, if it is for device failure, they will need to include details of the failure. They will also have to confirm that a visit from an ENL technician has been booked when the exemption request is made.

> A note about *directions* versus *exemptions*: For e-logbooks and GPR devices, MPI can issue a direction to allow you to continue fishing in the event of a device failure. The electronic monitoring regulations don't allow for MPI to issue directions, but they have developed a process that works in a very similar way, and an exemption to continue fishing in the event of camera equipment failure can be granted quickly if certain criteria are met.

Dealing with equipment issues before or after starting a trip

12

```
The equipment malfunction happens before your fishing trip has started
        │
        ▼
Have you managed to successfully troubleshoot?
  │ Yes                      │ No
  ▼                          ▼
You don't need to take    Call MPI
any further action        0800 00 83 33
  │                          │
  ▼                          ▼
Continue to go fishing    Can ENL resolve your issue over the phone?
as planned                  │ Yes ──────────────▶ You don't need to take any further action
                            │ No
                            ▼
                   You can request an exemption if you wish to trawl or set net in the WCNI regulated area
                     │ Granted*              │ Declined
                     ▼                       ▼
            You can depart on your    You must remain in port
            trip, but must meet       or fish outside the WCNI
            the conditions of your    regulated area until the
            exemption                 malfunction is repaired
```

* 1. If you were granted your exemption over the phone, paperwork will be sent through afterwards.
*2. Among other things, the exemption will be dependent on you having booked a service visit with ENL.

13

```
The equipment malfunction happens after your fishing trip has started
        │
        ▼
Have you managed to successfully troubleshoot?
  │ Yes                      │ No
  ▼                          ▼
You don't need to take    Call MPI
any further action        0800 00 83 33
  │                          │
  ▼                          ▼
Continue fishing          Can ENL resolve your issue over the phone?
                            │ Yes ──────────────▶ You don't need to take any further action
                            │ No
                            ▼
                   You can complete THIS fishing trip
                            │
                            ▼
                   Can ENL fix the issue before your next trip?
                     │ Yes                   │ No
                     ▼                       ▼
            You can depart on your    Request an exemption if you
            next trip                 wish to trawl or set net in
                                      the WCNI regulated area
```

Section 6: Troubleshooting

This section sets out the basic troubleshooting steps that can be carried out by the vessel crew, if appropriate, subject to any health and safety considerations.

If you or your crew are not comfortable performing the troubleshooting steps, call MPI on **0800 00 83 33** and they will arrange for an ENL technician to contact you.

> Please note that FishServe are unable to help with on-board camera issues or queries.

System power issues

If there is no display on the screen within approximately 2 minutes of pressing the Power button on the control centre, the system may not have adequate power.

Check the power connections have proper contact but if the input power light is still not solid green, call MPI.

General system error message

If you see the error message about restarting your computer (shown in picture 14) when you start up your camera system, you can safely ignore it. **You do not need to restart your computer - click 'No'.** The message relates to an issue with the keyboard that will not have any effect on the operation of your on-board camera system.

Monitor display issues

If your monitor is blank, but all three lights on the control centre are green, make sure you have turned on the monitor (picture 16):

- If the monitor still doesn't power on, check that the power supply is correctly plugged into the back of the monitor and that the monitor power supply adapter is correctly plugged into a power point.
- Next, make sure there is a valid VGA signal from the control centre: check the VGA cable connection at the back of the monitor (picture 17) and at the control centre end. The cable should be plugged into the 'VGA 1' output of the control centre (picture 18).

- You can try plugging the power supply into a different monitor, if you have one on your vessel.
- If you still have issues, and your monitor was not supplied by ENL, contact the other supplier.
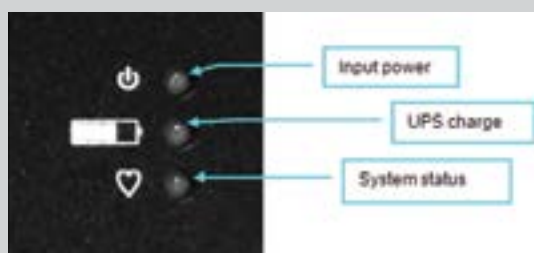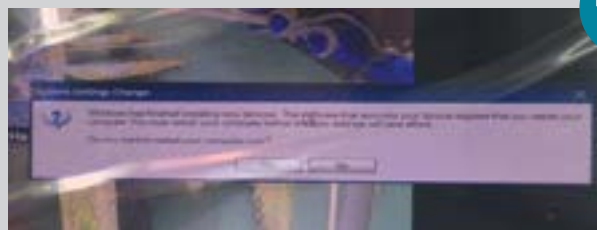
GPS position is incorrect

- If the GPS position is displayed incorrectly and is highlighted red (picture 19) there may be an issue with the GPS antenna. If it is not upright, call MPI to get direction from ENL on repositioning it.
- If you continue to have occasional GPS issues, it may mean that a replacement antenna or cable is needed. In this case, you will also need to call MPI to arrange for this replacement.
- Note that it may take a couple of minutes to obtain a GPS position fix if the system has been shut down for some time.
- Also note that this information only relates to the GPS component of your on-board camera system, and is not relevant to the GPR device you use for electronic position reporting.

Incorrect pressure reading

Under typical operating conditions, with the hydraulic system off, the pressure reading displayed on the monitor should be in the range of about -30 to +30.

- If the system shows a reading of -626 PSI or a similar negative value and is red (picture 20), the sensor cable or pressure transducer may be damaged. If it is showing -1450 and is red, it means no sensor is connected. In both cases, you will need to **call MPI** to arrange a service visit from ENL.

No sensor counts

Under typical operating conditions, a count will be registered by the control centre when the reflector passes by the sensor (for rotation sensors), or when the metal offset trigger passes by the sensor (for proximity sensors).

If no count is registering on the home screen, check the following:

- Does the rotation sensor have power? It will be lit green when the camera system is powered on (picture 21 – but note that tape may prevent you from seeing this). If it is not a green light, there may be a damaged cable or an issue with the control centre. **Call MPI** to arrange a service visit by ENL if you can't see a green light, even if this is due to tape.

- Is the sensor picking up counts? An orange light indicates that a count or event has been detected by the sensor (picture 21). Check the alignment between the sensor and the reflector (picture 22) and if it seems that the sensor is not passing over the reflector, **call MPI** to arrange for ENL to call you and direct you through the process of re-alignment.

- What is the condition of the reflector on the drum? If it is dirty, clean it with a damp cloth and a mild dishwashing detergent. Glazed, cracked or damaged reflectors showing mould will need to be replaced. You should have been supplied with spare reflectors during your installation, but if you need more, **call MPI. If you are unable to replace the reflector yourself, call MPI** to arrange a service visit by ENL.

- Does the rotation sensor need to be cleaned? To check, remove the plastic barrel cover by turning it anti-clockwise. The face of the sensor (picture 23) can then be cleaned, if necessary, using a damp cloth and a mild dishwashing detergent, and then drying it. Replace the plastic barrel cover.
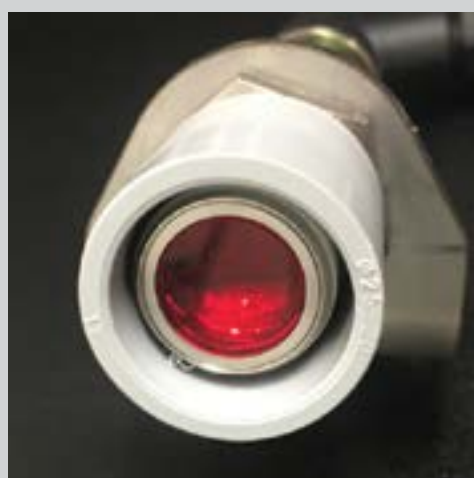
Camera preview issues

The camera preview banner (picture 24) may show either 'Searching' or 'Initializing':

Searching means the system is not able to locate the camera. This could indicate a power or connectivity problem:

- Check if there is a red light on the camera itself, and if there are lights on the power over ethernet unit (picture 25). If there aren't, and all cables are plugged in securely, **call MPI** to arrange a service visit.

Initializing means the cameras have power, but are not communicating with the system correctly. When cameras are turned on for the first time, or after being turned off for some time, camera initialization may take up to a couple of minutes. If after 5 minutes the banner still shows 'Initializing', the system should be rebooted:

- Press and hold the power button for five seconds and allow the system to shut down.
- Turn off all camera system power supplies at the power outlet. Wait for 60 seconds and then turn back on power to all devices. Restart the camera system by holding the power button down for one second.
- Complete a function test after restarting the system.
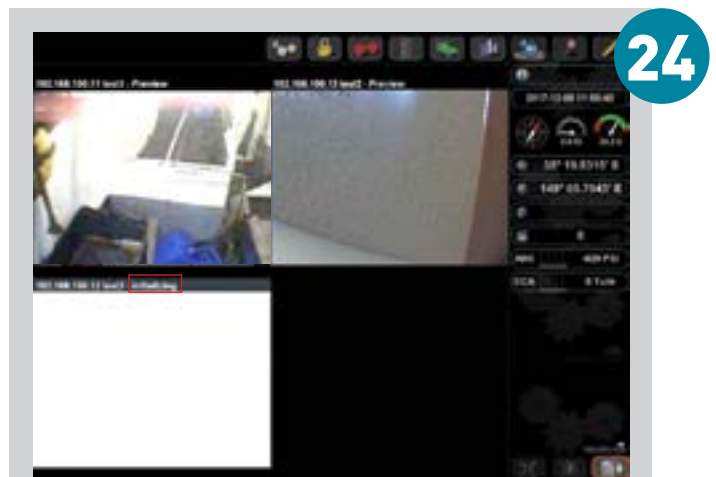
Data drive issues

In the unlikely event that you see either of the two error messages (shown in pictures 26 & 27), you will need to try replacing the installed data drive with a new blank one.

'This disk has data!' means it is likely the data drive already contains data or has failed.

'No hard disk error' means the hard drive has not been identified by the control centre and the data drive may be damaged.

To replace the data drive:

- Press the control centre power button until the on-screen message indicates that the system is stopping data recording. As soon as you see the first on-screen message, let go of the power button and wait for the system to shut down. It is important that you release the power button as soon as you see the message 'Stopping video recording' or 'Stopping data logging' so that the system shuts down correctly.
- After the system has shutdown, remove the problem data drive and insert a spare, blank data drive according to the instructions on page 14.
- Press the control centre power button for one second to restart the system.
- If this doesn't fix the problem, **call MP**I.
- If this does fix the issue, you will still need to notify MPI that there was an issue with the first drive and request a replacement drive. However, this does not need to be done urgently unless you are running low on data drives.
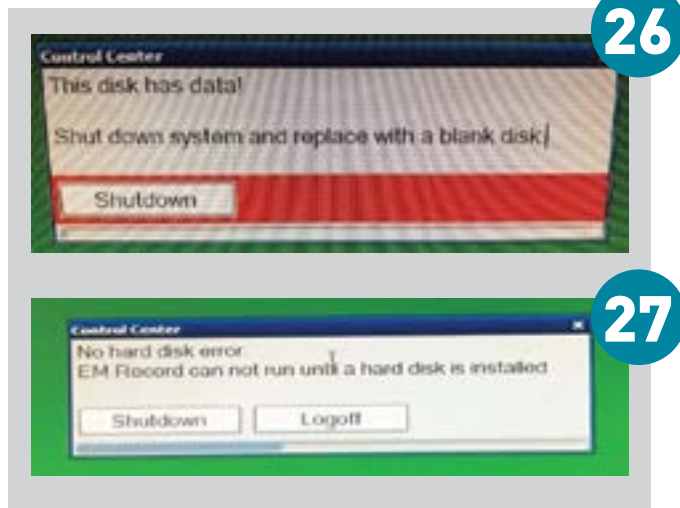
Section 7: What happens after MPI receives footage?

Footage review

- All footage captured within the scope of the regulations will be reviewed for protected species interactions.
- Approximately 10% of this footage will also be reviewed for catch composition, and reconciled with electronic catch data for verification of catch reporting.
- If, when reviewing your footage, MPI decides that it is not of sufficient quality for any reason, they will get in touch with you to discuss ways to fix the situation.
- Video footage and associated data will be kept for up to two years. Footage of interest will be kept for a minimum of seven years.
- The diagram below shows what footage is reviewed when fishing takes place only partially in the regulated area.

Compliance considerations

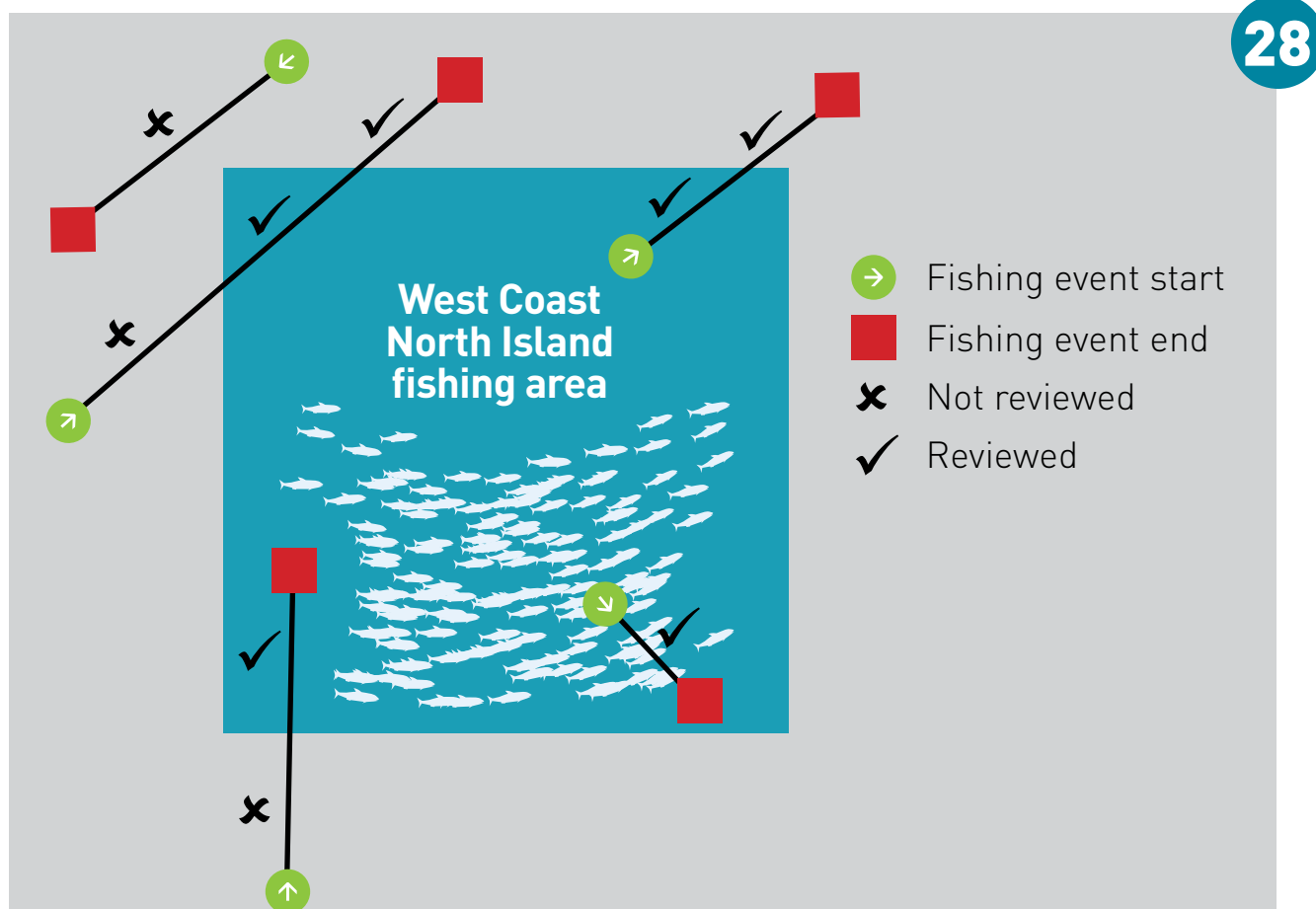As with electronic catch and position reporting, the goal of Fishery Officers is to help you make the transition to operating under the new rules around electronic monitoring as smooth as possible. They will continue to use the graduated intervention model that they've always used, as appropriate. All decisions will be made on a case-by-case basis.

Privacy considerations

MPI understands the need to protect fishers' personal and commercial information. A brochure explaining how this information will be kept safe will be made available to you, and can also be downloaded from the Fisheries New Zealand website at www.fisheries.govt.nz/camerasWCNI. The brochure explains:

- what activity is recorded;
- what footage is reviewed;
- how the government keeps information secure
- what information the government might share; and
- how to find out more.

Vessel masters are responsible for ensuring any person on the vessel is made aware of the location of camera equipment, what the camera equipment is for, and demonstrating the camera field of view.

West Coast North Island fishing area

→ Fishing event start
■ Fishing event end
✘ Not reviewed
✔ Reviewed

Section 8: Regulated area co-ordinates

West Coast North Island means the area of New Zealand fisheries waters enclosed by a line:

(1) starting at Tauroa Point (at 35°10.000'S and 173°04.000'E); and

(2) then proceeding due west to a point at 35°10.000'S and 172°00.000'E; and

(3) then proceeding due south to a point at 37°02.000'S and 172°00.000'E; and

(4) then proceeding due east to a point at 37°02.00'S and 173°00.000'E; and

(5) then proceeding due south to a point at 39°04.000'S and 173°00.000'E; and

(6) then proceeding due west to a point at 39°04.000'S and 172°41.000'E; and

(7) then proceeding due south to a point at 39°56.000'S and 172°41.000'E; and

(8) then proceeding due east to a point on the mean high-water mark (at 39°56.000'S and 174°58.250'E); and

(9) then following a line in a generally northerly direction by the mean high-water mark to a point on the southern entrance of Kawhia Harbour (at 38°05.370'S and 174°46.220'E); and

(10) then proceeding in a straight line to a point on the northern entrance of Kawhia Harbour (at 38°04.985'S and 174°47.043'E); and

(11) then following a line in a generally northerly direction by the mean high-water mark to a point on the southern entrance of Aotea Harbour (at 38°02.229'S and 174°47.070'E); and

(12) then proceeding in a straight line to a point on the northern entrance of Aotea Harbour (at 38°00.431'S and 174°47.762'E); and

(13) then following a line in a generally northerly direction by the mean high-water mark to a point on the southern entrance of Raglan Harbour (at 37°48.268'S and 174°50.568'E); and

(14) then proceeding in a straight line to a point on the northern entrance of Raglan Harbour (at 37°47.843'S and 174°50.528'E); and

(15) then following a line in a generally northerly direction by the mean high-water mark to a point on the southern mouth of the Waikato River (at 37°22.667'S and 174°42.171'E); and

(16) then proceeding in a straight line to a point on the northern mouth of the Waikato River (at 37°20.996'S and 174°41.207'E); and

(17) then following a line in a generally northerly direction by the mean high-water mark to a point on the southern entrance of Manukau Harbour (at 37°03.544'S and 174°32.155'E); and

(18) then proceeding in a straight line to a point on the northern entrance of Manukau Harbour (at 37°02.975'S and 174°29.580'E); and

(19) then following a line in a generally northerly direction by the mean high-water mark to a point on the southern entrance of Kaipara Harbour (at 36°28.917'S and 174°09.716'E); and

(20) then proceeding in a straight line to a point on the northern entrance of Kaipara Harbour (at 36°23.468'S and 174°03.165'E); and

(21) then following a line in a generally northerly direction by the mean high-water mark to a point on the southern entrance of Hokianga Harbour (at 35°32.008'S and 173°22.045'E); and

(22) then proceeding in a straight line to a point on the northern entrance of Hokianga Harbour (at 35°31.392'S and 173°21.395'E); and

(23) then following a line in a generally northerly direction by the mean high-water mark to a point on the southern entrance of Whangape Harbour (at 35°22.917'S and 173°13.131'E); and

(24) then proceeding in a straight line to a point on the northern entrance of Whangape Harbour (at 35°22.706'S and 173°12.899'E); and

(25) then following a line in a generally northerly direction by the mean high-water mark to a point on the southern entrance of Herekino Harbour (at 35°17.680'S and 173°09.518'E); and

(26) then proceeding in a straight line to a point on the northern entrance of Herekino Harbour (at 35°17.524'S and 173°09.685'E); and

(27) then following a line in a generally northerly direction by the mean high-water mark to the starting point at Tauroa Point (at 35°10.00'S and 173°04.000'E).

Further support for fishers

The Fisheries New Zealand website is a great source of information and guidance material on all aspects of digital monitoring, including electronic monitoring:

www.fisheries.govt.nz/camerasWCNI

Resources include downloadable versions of this guide and the sticker on page 10, and the legal documents relating to electronic monitoring that you need to be familiar with to understand your obligations.

For general enquiries regarding electronic monitoring, email onboardcameras@mpi.govt.nz

THIS IS NOT A LEGAL DOCUMENT.

New Zealand Government

Fisheries New Zealand
Tini a Tangaroa