STALKER DUAL RADAR
OPERATORS MANUAL
NEW ZEALAND POLICE
01 JANUARY 2004

INTRODUCTION

STALKER *DUAL*

The Stalker *Dual* used by New Zealand Police differs from that manufactured by Applied Concepts Inc USA for normal Police markets.

This Stalker *Dual* radar device has been modified to suit the strict operating conditions required by NZ Police, certain functions have been disabled and others have been removed.

The range of this unit has been substantially reduced by more than 1000 metres to prevent spurious readings from distance targets that may not be observed by the operator.

The Stalker *Dual* is basic radar that can only used to target stationary and moving mode vehicles traveling on the opposite side of the road, other Stalker *Dual* radar units supplied to other Police agencies have same lane mode, however this has been removed from *Dual* radars used by NZ Police.

With the Stalker *Dual Same Lane as stated above not used in New Zealand* requires the operator to observe the relative speed of the target vehicle and "tell the radar" whether to add or subtract the difference speed from the patrol speed, the basic same lane radar requires the operator to obtain the "correct speed" by the "correct position" of the "Slower" key on the remote control. This not reliable enough for our operation and errors may be introduced by human error.

The New Zealand Police uses the Stalker *DSR* automatic radar for same lane mode operation.

Utilizing Digital Signal Processor (DSP), *Dual* provides a level of performance, convenience, and accuracy previously unavailable. The DSP performs the critical filtering and timing functions required for speed measurement in its software, as opposed to its hardware. This provides less unit-to-unit variation, more reliable performance, and easier maintenance.

Dual operates in Ka-band at 34.7 GHz frequency band operated by NZ Police and provides a hold mode. Both Ka-band operation and the hold feature reduce the possibility of detection by radar detectors. Track-thru-Lock speed, Fastest Speed Tracking, and the Doppler audio capability assist the operator in positive target identification and provide operating convenience.

THEORY OF OPERATION

STATIONARY MODE - All traffic radar use the Doppler frequency shift technique to measure the speed of moving vehicles. This technique is based on the Doppler Theory, which states that a radar signal reflected from a moving target will experience a frequency shift that is proportional to the speed of the target relative to the radar. Circuitry in the traffic radar then processes the reflected signal to obtain the frequency shift and translate this frequency shift to speed.

In stationary mode, the transmitted signal strikes a moving target and is reflected back to the antenna. The traffic radar then measures the frequency shift to obtain the target speed.

This is conventional traffic radar, targets both closing and moving away generate the same Doppler frequency shift and it is not possible to distinguish between them. Therefore, a stationary radar always reads the speed of all vehicles in it's beam (both closing and moving away) and the operator has to rely on visual observation to determine target direction.

OPPOSITE LANE MOVING MODE - In opposite lane moving mode, two (2) signals must be processed to determine target speed. The first signal, patrol speed, results from the radar signal reflecting from the road about 20 metres in front or behind if a rear antenna is used, of the patrol vehicle. Since the Doppler shift is proportional to the relative velocity between the radar and the passing reflecting objects, the Doppler shift of this signal will be proportional to the speed of the patrol vehicle. The second signal, closing speed, results from the radar signal reflecting from an approaching or retreating opposite lane moving target and then returning to the patrol vehicle. The Doppler shift of this signal will be proportional to the sum of the patrol speed and target speed, or closing speed. To determine the target speed, the **DUAL radar** subtracts the patrol speed from the closing speed. Eg: Patrol traveling at 80 km/h approaching target 130 km/h a combined speed of 210km/h. Subtract the patrol speed from the combined speed levels the target at 130 km/h.

FASTEST MODE - DUAL offers a feature called *Fastest Speed Tracking*. *Fastest* is a field selectable feature and can be disabled, if desired.

The addition of the *fastest* mode allows the ability to track small high- speed targets that normally could not be tracked because a stronger target shields the weaker target from normal speed measurement. The classic example is where a speeding sports car passes a slower moving truck. The *fastest* sports car, although clearly speeding, previously could not be measured because the strongest truck target captures the target display window. *Dual*, in this example, will display the speed of the strongest truck in the target window, while the speed of the *fastest* sports car will appear in the middle *fastest* window. Tracking of both targets may be performed simultaneously.

DISPLAY OPERATION

Display Front Panel
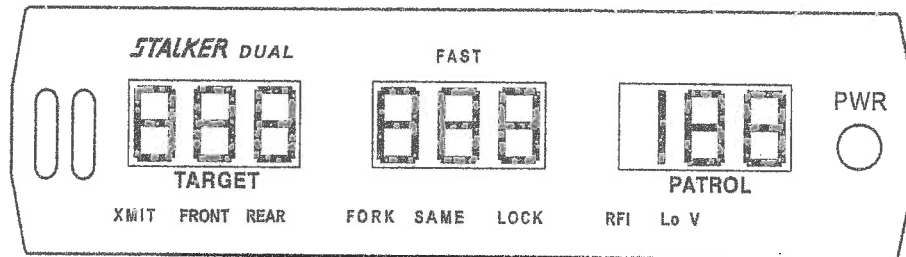
Display Unit Functions

PWR:

The **PWR** switch is the main On/Off power switch.

TARGET WINDOW:

The left, three-digit LED window is the target window. This window displays the speed of the strongest targets entering the radar beam. While in stationary mode, the target window will show the speed of the strongest stationary closing or receding target radar. In opposite lane moving mode, the target window will show the speed of the strongest opposite lane approaching target or the strongest opposite lane receding target.

MIDDLE WINDOW:

The middle, three-digit LED window is a *dual*-purpose window. First, it is used for locking the *strongest* target shown in the left window. While not containing a "locked" speed, the middle window is used to display the *fastest* target in the radar beam. The **LOCK** and **FAST** icons are used to indicate the current use of the window.

The middle window is used to store target speeds that the operator chooses to "lock" using the **LOCK** key. The presence of the **LOCK** icon indicates that the middle window contains a "locked" target speed.

When no **LOCK** target is present, the middle window is used to track the *fastest* target in the radar beam. This is indicated by the presence of the **FAST** icon.

PATROL WINDOW:	The right, three-digit LED window is the patrol window. In moving mode, the operator should always verify that the patrol window is tracking the patrol vehicle's speedometer. After locking a target speed, the patrol window may be "blanked" by pressing the **P.S. BLANK** key. Restore the patrol speed by pressing the **P.S. BLANK** key a second time.
XMIT:	The **XMIT** icon indicates that *DUAL* is transmitting.
FRONT:	The **FRONT** icon indicates the front antenna is selected for use. The icon will light with a steady indication if the antenna is operational, or a blinking indication if the antenna is missing or inoperative.
REAR:	The **REAR** icon indicates the rear antenna is selected for use. The icon will light with a steady indication if the antenna is operational, or a blinking indication if the antenna is missing or inoperative.
LOCK:	An illuminated **LOCK** icon indicates that the operator has locked a target speed in the middle window.
RFI:	The **RFI** icon indicates the presence of an interfering signal. Operation is inhibited during an **RFI** indication.
Lo V:	The **Lo V** icon illuminates when the input voltage falls below 9.0 volts. Operation is inhibited while this icon is displayed, but normal operation will resume automatically when the input voltage is restored to a normal voltage.
FAST:	An illuminated **FAST** icon, above the middle window, indicates that the middle window will display a *fastest* speed target if one is found.

Automatic Self-Test - An automatic self-test (indicated by a 4-beep "happy" tone) is performed every 10 minutes while *DUAL* is transmitting. Switching antennas will reset the 10-minute timer.

NOTE: If for any reason "FAIL" comes up on your *DUAL* Radar, the unit must be turned OFF and then back ON to reset the FAIL mode. As an example, if you did not properly attach the antenna cable and the word "FAIL" appeared, it would be necessary to correct this problem, to properly connect the cable, then turn the power OFF and then back ON. The word FAIL should not reappear.
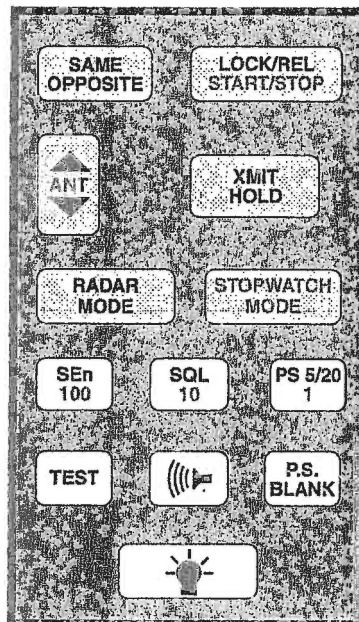
REMOTE CONTROL FUNCTIONS

Fig 2

RELEASE:

RELEASE clears the locked contents of the lock window and the patrol window.

LOCK:

When in Radar Mode, LOCK is used to transfer the contents of the target window to the lock window.

During lock, the patrol window will lock the present patrol speed and the LOCK icon will light. The target window and Doppler audio remain active after locking.

ANT:

The ANT key is used to switch between the front and rear antenna, unless the radar was factory set for only one antenna. The FRONT or REAR icon will light. The display unit can sense the presence or absence of the front or rear antenna. A steady icon indicates an operational antenna and cable, while a blinking icon indicates a missing antenna and/or cable, or a malfunction of the antenna unit.

XMIT/HOLD:

The XMIT/HOLD key toggles between XMIT (transmit) and HOLD (standby). The XMIT icon will light for transmitting and extinguish for hold.

|	
RADAR MODE:	The **RADAR MODE** key toggles between the two operating radar modes. They are: moving [ ] and stationary both directions.
STOPWATCH MODE:	**This mode is not used in New Zealand**
SEn:	The **SEn** key is used to adjust the range up or down at any time. Maximum range (sensitivity) is **SEn 4**, minimum range (sensitivity) is **SEn 1**
SQL:	The **SQL** key toggles the squelch override on and off. In the normal position, audio will be heard only when a target is being tracked.
	In addition the **SQL** key is used in conjunction with the ((⊷ key to adjust the volume of the voice enunciators -- see below.
PS 5/20:	The **PS 5/20** key is used to select a low end patrol speed of either 5 or 20 mph, this has been preset to 32km/h for NZ Police units.
TEST:	The **TEST** key performs a diagnostic check on the display/counting unit and antenna. The display/counting unit will complete a processor check, memory check, and crystal check, followed by the display of speeds of 10, 35, and 65; and ending with a display of the counting unit's internal operating temperature in degrees Celsius e.g. 35 °C and input battery voltage (e.g., bAt 13.8). A comprehensive test is also performed on the selected antenna by the counting unit to ensure the integrity of the antenna cable and antenna electronics. **PASS** or **FAIL** is indicated on the display unit after all tests have been completed.
P.S. BLANK:	This is a *dual* function key, the **P.S. BLANK** key blanks the patrol speed window after the target speed and patrol speed are locked. Press **P.S. BLANK** again to restore the blanked speeds.

This is a *dual* function key. With a single depression, the ☀ key activates the keyboard back light for six (6) seconds. Two rapid depressions of the ☀ key activate the display unit's brightness control. Additional depressions of the ☀ key toggle the display intensity through six levels of brightness, ranging from **bri 1** (low) to **bri 6** (high).

Target Doppler Audio - The ((⊕ key is used to adjust the volume of the Target Doppler audio up or down. Press the ((⊕ key to make the display step through **Aud 0, Aud 1, Aud 2, Aud 3** and **Aud 4**. **Aud 0** is off and **Aud 4** is the loudest.

OPERATING THE STALKER *DUAL*

STATIONARY MODE SPEED MEASUREMENT

Select   stationary modes by pressing the **MODE** key on the remote control.
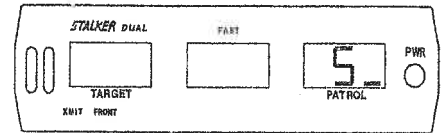
If a target is in range, such as one traveling 54km/h, the speed will appear in the target window of the display unit and a Doppler audio tone, which is proportional to the target speed, will be heard from the speaker. The target speed is continually measured and displayed, and the Doppler audio tone is heard as long as the target is present.
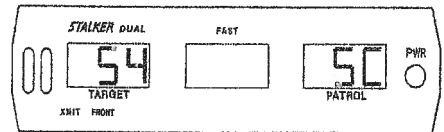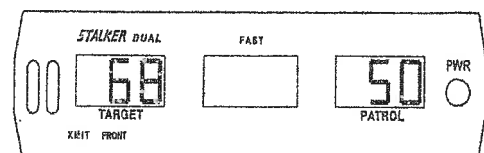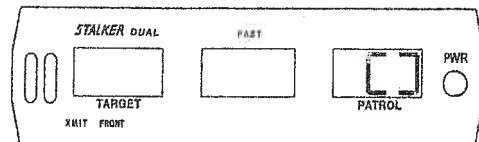
Hold mode can be selected by pressing the **XMIT/HOLD** key on the remote control. In hold mode, The **XMIT** icon will be off and no signal will be transmitted, preventing detection by radar detectors.
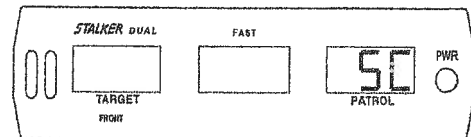
OPPOSITE MOVING MODE SPEED MEASUREMENT

Select moving mode by pressing the **MODE** key on the remote control. When *DUAL* is in moving mode, the patrol window will contain either the patrol speed or a [ ]. The [ ] indicates that *DUAL* is in moving mode, but has no ground speed.   To transmit, press the **XMIT/HOLD** key. The **XMIT** icon should appear on the display unit indicating that the radar is transmitting. Be sure the patrol speed corresponds to within 3 km/h of the vehicle-calibrated speedometer. The speed of an approaching target will appear in the target window and a Doppler audio tone will be heard from the speaker. Example in which the patrol speed is 50 and the approaching target speed is 68. The target speed is continually measured and displayed and the Doppler audio tone is heard while the *DUAL* is in transmit mode and a target is present.

Hold mode can be selected by pressing the **XMIT/HOLD** key on the remote control. In hold mode, the **XMIT** icon will be off and no signal will be transmitted. This prevents detection by radar detectors. When in hold, *DUAL* remembers the last patrol speed and looks for that speed first when changing from hold back to transmit.
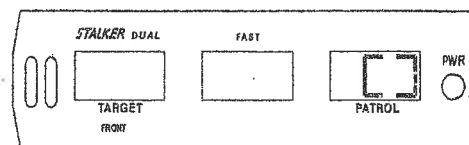
LOW-END PATROL SPEED SELECTION

The **P.S. 5/20** key has been preset at 32 km/h for NZ Police sets. The right two digits of the patrol window refer to the patrol speed of 32km/h
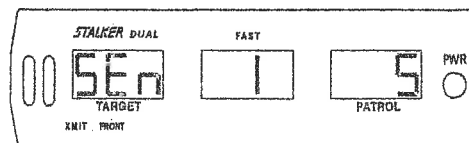
RANGE (SENSITIVITY) ADJUSTMENT

The range (or sensitivity) of *DUAL* is adjusted by pressing the **SEn** key. This key cycles through the four (4) sensitivity levels; **SEn 1**, **SEn 2**, **SEn 3**, and **SEn 4** In each case, the center display refers to the current sensitivity setting. The shortest range is **SEn 1**, and the longest range is **SEn 4**.
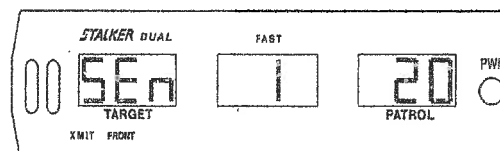
NOTE:
the internal range settings have been reduced as part of the NZ Police specifications to ensure that operators are able to observe the target, extreme range can cause erroneous readings from target hidden to operators.
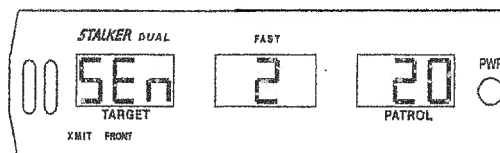
DOPPLER AUDIO

The (((► key is used to adjust the volume of the Target Doppler audio up or down. Press the (((► key to make the display step through **Aud 0, Aud 1, Aud 2, Aud 3** and **Aud 4**. **Aud 0** (Fig 20) is off and **Aud 4** is max.

When a target is being tracked, a Doppler audio tone can be heard from the speaker. The pitch of this tone is a precise indication of target speed. The tone quality is useful for judging possible interfering or multiple targets.

In opposite lane moving mode, *DUAL* compensates for patrol speed variations when generating the Doppler audio. Since the audio tones do not vary with patrol speed, the operator soon learns to correlate the Doppler audio with the target speed. This eliminates the need of constantly watching the display to determine target speed. .

BEEP TONES

Have been removed as part of NZ Police specifications and only used when activating the lock button.

DISPLAY LIGHTING

The display unit can be adjusted for brightness by using the ☀ key. A single depression of the ☀ key activates the keyboard backlight for 6 seconds. Two rapid depressions of the ☀ key activate the display unit's brightness control, and additional depressions of the ☀ key toggle the display intensity through six levels of brightness, ranging from low (**bri 1**) to high (**bri 6**)

PATROL SPEED BLANKING

After locking a target and patrol speed the patrol speed window may be "blanked" by pressing the **P.S. BLANK** key The patrol speed can be restored by pressing the **P.S. BLANK** key a second time. When the lock window is not occupied by a "locked" target speed, the **P.S. BLANK** key is used to blank the patrol window and re-acquire patrol speed.
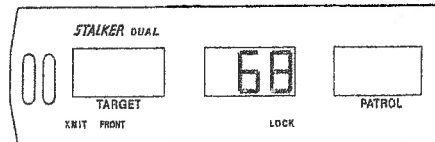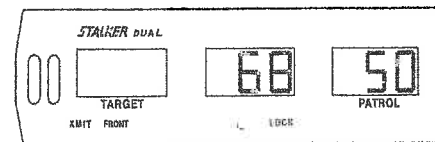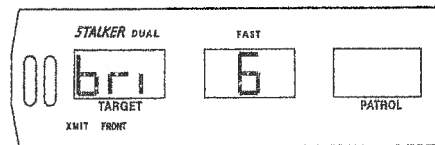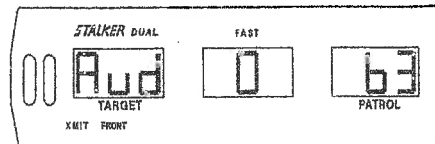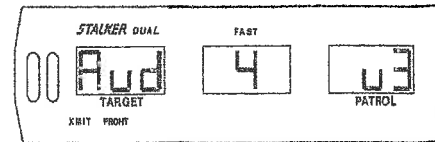
FASTEST SPEED TRACKING THEORY

The following examples are *Fastest* targets under various conditions. In addition to the speeds displayed in each window, carefully note the icons illuminated.

Fastest mode allows **DUAL** to track a smaller high-speed target that was previously undetectable because a stronger target shielded the weaker (smaller) target from normal (strongest target) speed measurement. The classic example is where a speeding sports car passes a slower moving truck. The *Fastest* sports car, although clearly speeding, could not be measured because the strongest truck target captured the target display window. **DUAL** with *Fastest* capability, however, will display the speed of the strongest target (the truck) in the target window, while the speed of the *Fastest* target (the sports car) will appear in the middle *Fastest* window.

DUAL simultaneously tracks both targets: however, the target window is always reserved for the <u>strongest</u> target and the *Fastest* window is reserved for the *Fastest* target. When the *Fastest* target becomes the strongest target, the *Fastest* target's speed will transfer to the strongest target window. The *Fastest* target's speed can be locked only when it becomes the strongest target. The result is better tracking for as required as per the code of operation See the examples.

NZ Police specification requires that the fastest vehicle can only be locked when it becomes the target vehicle.

A Patrol vehicle is cruising at 55 km/h. Two opposite lane targets are approaching from the front - a 60 km/h truck and a 72 km/h sports car behind the truck. The 60 km/h strongest out-front target (the truck) appears in the target window and the 72 km/h *Fastest* target (the sports car) appears in the middle window   The *Fastest* target cannot be locked unless it becomes the strongest target and appears in the left window.
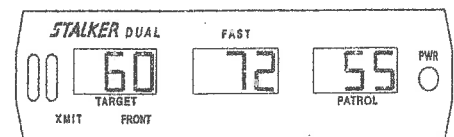
The 60 km/h strongest target can be locked, by pressing the **LOCK** key. Note how the middle window changes from a *Fastest* window to a Lock window The **FAST** icon has been replaced by the **LOCK** icon. The middle window is therefore defined by the icon that is associated with it.
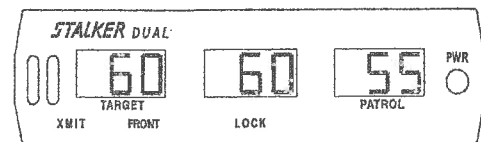
A Patrol vehicle is parked at the top of a hill monitoring approaching traffic with his rear antenna. The first target, a 60 km/h truck, is the strongest out-front target and appears in the target window .The third target, the 72 km/h *Fastest* sports car, is tracked in the middle *Fastest* window. The *Fastest* target can be locked by pressing the **LOCK** key when it becomes the strongest target.
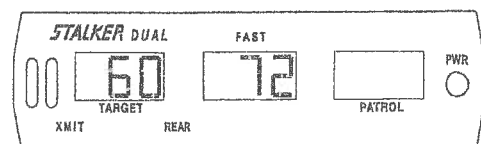
INTERFERENCE FROM OTHER TRANSMITTERS

Strong signals from nearby radio transmitters may interfere with operation of *DUAL*. The **RFI** indicator signals that an interference source has been detected. Speed-readings are inhibited when this occurs to prevent the possibility of false readings. The interference source may be the vehicle's two-way radio, another nearby transmitter, or an illegal radar-jamming device.
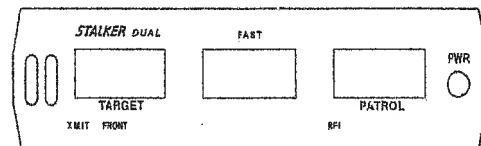
POWER SUPPLY

A low voltage condition from the vehicle's electrical system will cause a **Lo V** indication and will inhibit speed-readings. An extremely noisy vehicle electrical system may result in false readings or erratic operation. If this condition occurs, a two-conductor, shielded cable should be connected directly from the vehicle battery to the cigarette-plug on the dash. This should eliminate any problems from vehicle electrical noise.
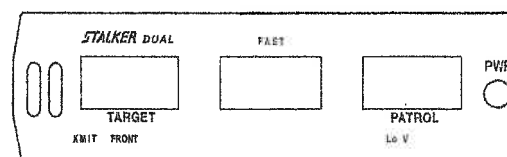
NO POWER

If the radar does not have power, check the fuse in the power cable. Unscrew the silver tip on the end of the cigarette plug and remove the fuse. If the fuse is blown, replace with a new fuse and test the radar.

If the power cable fuse is okay, check the fuse in the vehicle's fuse block this is beside the battery in NZ patrol vehicles, and provides the power to the cigarette lighter.

If the vehicle's fuse is also okay, place the radar in a different vehicle or try a different radar in your vehicle.

POWER-ON SELF-TEST

Each time the unit is powered on, an automatic self-test is performed to verify that the unit functions. The display indicates 888 888 188 during the test. A 4-beep "happy" tone indicates the successful completion of this test. If a problem is detected, FAIL will be displayed along with a 15-beep tone. Immediately after power-on, and while all display segments are illuminated.
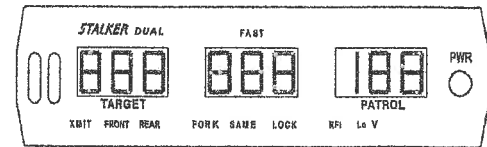
INTERNAL CIRCUIT TEST

An internal circuit test can be performed at any time by pressing the TEST key. This performs a diagnostic check on the display/counting unit, the selected antenna, and antenna cable. Since only the selected antenna is tested, it is necessary to perform this test twice -- once with the front antenna selected, and once with the rear antenna selected.

The display/counting unit will first perform a processor check, memory check, and crystal accuracy check. This will be followed by the display of speeds 10, 35, and 65 and end with a display of the display/counting unit internal operating temperature in degrees Celsius 35 °c) and input battery voltage (e.g., bAt 13.8)

A comprehensive test is also performed on the selected antenna by the display/counting unit to ensure the integrity of the selected antenna cable and antenna electronics. After all the tests are completed, PASS along with a 4-beep "happy" tone indicates successful test completion. FAIL along with a 15-beep tone indicates a failed self-test.

Check your antenna plug and socket the most common cause of this fault.

Extreme caution should be taken when plugging in your antenna cable to the antenna, line up the keyways to ensure the antenna is properly coupled.

AUTOMATIC SELF-TEST

An automatic self-test (indicated by a 4-beep "happy" tone) is performed every 10 minutes while DUAL is transmitting. Switching antenna will reset the 10-minute timer.
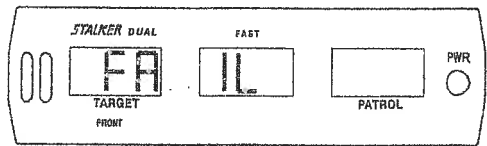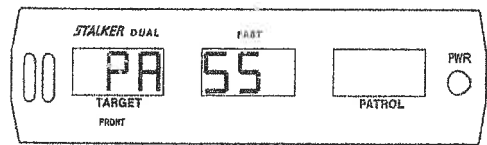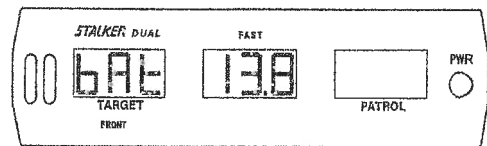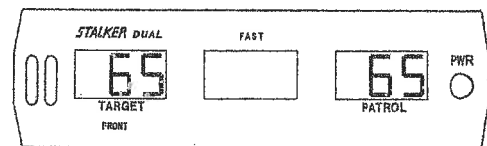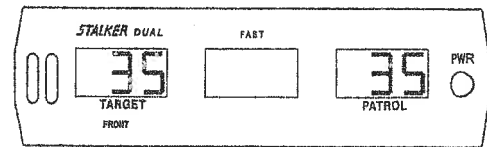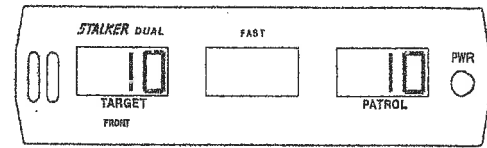
TUNING FORK TESTS

STATIONARY MODE TUNING FORK TEST

Two (2) tuning forks are supplied with *DUAL*. The tuning forks are calibrated for 40 Km/h and 64 Km/h.

To perform the tuning fork test:

Press the **PWR** key

Press the **MODE** key and select any of the stationary modes

Press the **ANT** key to select the front antenna

Press the **XMIT** key to enter transmit mode

Lightly strike the 40 Km/h tuning fork against the 64 Km/h fork. Quickly hold the tuning fork approximately 50mm in front of the antenna, with the narrow edge of the fork facing the antenna. The target window should indicate 40 Km/h.

Repeat the above test with the 64 Km/h tuning fork. Select the rear antenna if purchased, and repeat both tuning fork tests.

TUNING FORK TESTS

OPPOSITE LANE MOVING MODE TUNING FORK TEST

Two (2) tuning forks are supplied with *DUAL*. The tuning forks are calibrated for 40 Km/h and 64 Km/h.

To perform the tuning fork test:

Press the PWR key
Press the MODE key to select moving mode
Press the OPPOSITE key to select opposite lane mode
Press the ANT key to select the front antenna
Press the XMIT key to enter transmit mode.

Lightly strike both tuning forks against each other. Quickly hold the lower speed 40 Km/h fork approximately 50mm in front of the antenna, with the narrow edge of the fork facing the antenna. The patrol window should indicate 40 Km/h. Now move the higher speed fork in front of the antenna with the narrow edge facing the antenna. The target window should register 24 Km/h, which is the difference in speed of the two forks.

MOVING-VEHICLE TEST

A moving-patrol vehicle ground speed test should be performed as an additional check of performance and accuracy.

To perform the moving vehicle test:

Press the **PWR** key

Press the **MODE** key and select moving mode

Press the **ANT** key to select the front antenna

Press the **XMIT** key to enter transmit mode.

While driving a patrol vehicle, with an accurately calibrated speedometer, aim the front antenna down the road directly in front of the vehicle.

The speed indicated by **DUAL** should match the speedometer indication within 3 km/h (depending on speedometer certificate accuracy).

TROUBLESHOOTING

PWR KEY DOES NOT FUNCTION

Make sure all cables are mated correctly with their connectors. Check the vehicle cigarette-plug connector for dirty contacts. Check for a blown fuse in the *Dual* cigarette-plug.

Check the supply fuse to the cigarette plug, this located near the vehicles battery in a separate fuse holder.

Try radar in another vehicle to confirm it works in one but not the other.

LOW OR NO SPEAKER VOLUME

Press the ((◉► key on the remote control to adjust the volume. Aud 1 (lowest level) to Aud 4 (highest level).

RADAR HAS SHORT RANGE

Set range (sensitivity) control to SEn 4 (longest range).

RADAR HAS TROUBLE MAINTAINING PATROL SPEED

Ensure the antenna is mounted on the approved antenna mounting bracket installed in the patrol vehicle on the right hand side and pointing slightly down toward the ground. Make sure the wipers are not in the radar beam path. Make sure the windshield does not have painted sun mesh around the perimeter this will absorb the radar energy reducing range.

RADAR DISPLAYS LO V ICON

Make sure the cigarette-plug is securely installed and the contacts are clean.

Check by re-starting patrol that the vehicle battery is not flat.

FAILS ON START UP

Check that the antenna cable is correctly aligned to the antenna socket, remove antenna cable and check line up of keyways on plug to socket.

RADAR DOUBLES PATROL SPEED

The patrol speed window indiactes double the speedometer readings, check the postion of the antenna it may be facing up and not towards the ground, this may also occur after moving quickly away from a stationary postion, switch the Xmit off wait 5 seconds and power back on again.

REMOTE HAND CONTROL

Can not change operations over with hand control, check that the 2 AA batteries are not flat.

It only works sometimes, as the remote control is an infared light device it may be that to much sun is in the path between the radar and hand control, re postion the hand control try again.

SERVICING OF *DUAL* RADAR

There is no requirement by the manufacturer or NZ Police for routine maintainace of a radar device, service is only required if the unit becomes faulty.

Normal operational repairs and mainatenance costs for units supplied after December 2003 will be paid for by Police Calibration Services.

However where radars units have been subjected to damage through missuse, this includes broken cables and loss of accosiated parts these costs will be met by the District.

GENERAL

AUTHORISED SERVICE AGENT

Stalker *Dual* radar devices must only be serviced by the factory authorised service agent

> Microwave Services Ltd
>
> 7 Kaiwharawhara Road
>
> Wellington
>
> Phone: 04 472 3651

the turn around time should be no more than 5 days.

USAGE

All radar units supplied after December 2003 are leased, a sticker is attached to the set indicating this fact, as these radar have been supplied by Road Policing Support, Office of the Commissioner under the 2010 Road Safety Initiatives Scheme, failure to use the radar for periods of time may result in the unit being impounded and relocated to another District.

OFFICIAL INFORMATION REQUESTS

This is the only document related to Stalker *Dual* radar units used by NZ Police, the training Module DUT 244 is to be read in conjunction with this manual and both of these documents are not restricted and may be supplied to any person on request.

If the person making the request requires maintenance records for the radar the member completing the OIA request should contact with Microwave Services Ltd who hold these records, and will supply them.

TRAINING

Once a member has passed both practical and the theory sections of NZ Police training module DUT244 no further training is required.

CERTIFICATES OF ACCURACY

These are forwarded from PCS to the District Inspector of Road Policing copies should be obtained at District level.

CALIBRATION

As with all NZ Police radar units these will be recalled every 12 months for annual calibration or after service by the agent.

MOUNTING OF RADAR UNITS

All radar units must be mounted to the approved NZ Police brackets to prevent personal injury in the event of a road crash, brackets that come with a normal vehicle fit out are approved.

Front antenna brackets should be on the right hand side by the A pillar to prevent fan noise and produce a clear view to the driver of the left side of the vehicle.

CAUTION FLAT BATTERY

Reports have been received that when jump starting a patrol car from a secondary cars battery the radar has burnt out even though the radar was turned off, to prevent this damage remove the cigarette power supply plug prior to jump start your vehicle.

RADIO INTERFERENCE

In some Police Districts have experienced activation of the mute on their cars radio telephone when the radar unit is on, the normal cause for this fault is that the antenna plug ring is loose or the cable has been broken by staff pulling the cable out of the readout, without pushing the black button down.

Refer this fault to Police Calibration Services for assistance.

HELP

If you require any other information refer to

              Police Calibration Services

              Phone Ext   42308

                              42201

                              42356

            or External   04 2389508

August 20th, 2001

To Whom It May Concern:

This letter is to confirm that the Stalker models supplied to the New Zealand Police Department are special models with unique settings, and therefore our standard operator manuals are not applicable to the New Zealand Police Department.

These Stalker models include, but are not limited to the following:

Stalker Dual
Stalker DSR
Stalker Lidar

Sincerely,

Stan Partee, President