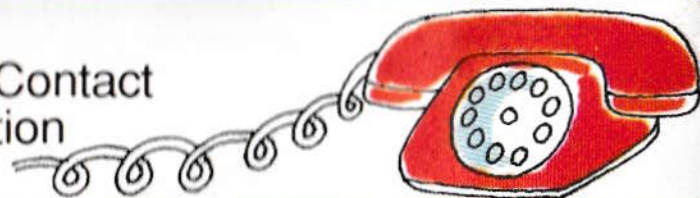


*Now You Own
The Silver Screen*

Decoder User's
Manual



M-NET Contact Information



P.W.V. AREA

Telephones: (011) 889-2333 HELP-line
 (011) 889-2222 Telesales
 (011) 889-2444 Account Queries
 (011) 889-2555 Enable Decoder
 Street Address: 137 Hendrik Verwoerd Drive, Randburg, Tvl.
 Postal Address: P.O. Box 4950, Randburg 2125
 Telex No.: 429295 Telefax No.: 789-4474

PORT ELIZABETH AREA

Telephone: (041) 35-2222
 Street Address: 75-5th Avenue, Newton Park, Port Elizabeth
 Postal Address: P.O. Box 7551, Newton Park, Port Elizabeth 6054

DURBAN AREA

Telephones: (031) 710-2333 HELP-LINE
 (031) 710-2222 Telesales
 (031) 710-2444 Account Queries
 (031) 710-2555 Enable Decoder
 Street Address: 7 Oliver Road, Pinetown, Natal
 Postal Address: P.O. Box 2065, Pinetown 3610

FREE STATE AREA

Telephone: (051) 47-2222
 Street Address: M-Net Building, 113A Zastron Street,
 Bloemfontein 9301

CAPE TOWN AREA

Telephones: (021) 508-2333 HELP-LINE
 (021) 508-2222 Telesales
 (021) 508-2444 Account Queries
 (021) 508-2555 Enable Decoder
 Street Address: M-Net Building, 20A Upper Camp Street, Maitland
 Postal Address: P.O. Box 376, Maitland 7405

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Index



	Page
M-NET CONTACT INFORMATION	Inside cover
1. UNPACK YOUR DECODER	1
2. AERIAL INSTALLATION	3
3. CONNECT YOUR DECODER	7
4. ENABLING THE DECODER	9
5. TUNE TV-SET	10
6. SETTING UP THE DECODER FOR FULL TV VIEWING	12
7. OPERATING THE REMOTE CONTROL UNIT	15
8. USING PARENTAL CONTROL	16
9. FLASHING INDICATOR CODES	19
10. TROUBLE SHOOTING	20
11. TECHNICAL INFORMATION	21

SERIAL NUMBER OF YOUR DECODER(S):

--	--	--

Write the number on the bar-code label on the rear of the decoder in a box above.

1. Unpack your Decoder



THIS MANUAL GIVES DETAILED DECODER INSTALLATION AND OPERATING INFORMATION. THE POSTER PACKED WITH THE DECODER IS FOR QUICK AND EASY REFERENCE.

UNPACK YOUR DECODER

Unpack your new decoder. **Do not plug into power yet!** Read the serial number on the bar-code label on the rear of the decoder. Write the number in the space provided on the index page of this manual.

Ensure that you have:

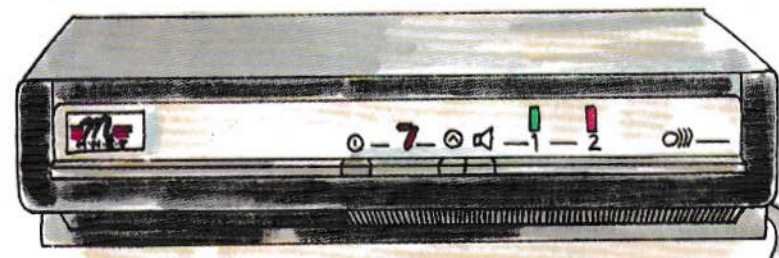
- Decoder Reference Manual
- Contractual Documents
- Remote Control and Batteries
- Fly Lead



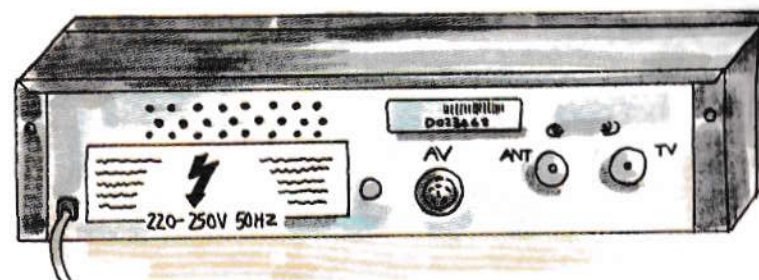
To avoid being cut off later make sure you:

1. Complete the Subscriber/Rental Contract.
2. Complete the Debit Order Form.
3. Complete the Warranty Card Form.

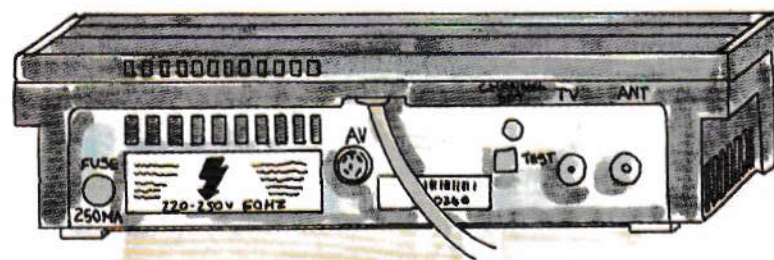
Mail all the above to M-NET in the self-addressed envelope included.



Decoder Front View

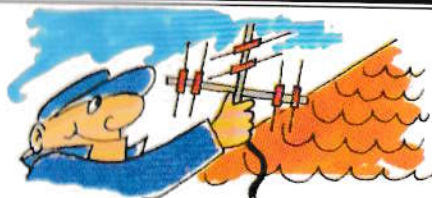


Decoder Rear View (Metal Casing)



Decoder Rear View (Plastic Casing)

2. Aerial Installation



2.1 AERIAL INSTALLATION:

The importance of correct aerial installation cannot be over-emphasised. A list of "Installation Hints" is provided in paragraph 2.3.

In areas where the signal strength is marginal, weather conditions can seriously affect decoder operation – the system may work well when installed in good weather, but provide inadequate reception in bad weather.

Remember:

The M-NET HELP Line (refer to phone numbers under "M-NET Contact Information") will be happy to give advice or arrange expert assistance for you.

2.2 CORRECT AERIAL:

Aerial requirements will vary from area to area. For ease of selection, aerials are colour-coded. For your exact requirements refer to the Aerial Requirements Table on the opposite page.

For Example:

- 2.2.1 In the reception area of Brixton Tower you need a yellow UHF aerial over and above the VHF aerial for TV1, TV2 and TV3.
- 2.2.2 In the reception area of Kameeldrift (Pretoria), you need a red UHF aerial over and above the VHF aerial required for TV1, TV2 and TV3.
- 2.2.3 In the Bezuidenhout Valley, Mondeor and Menlo Park areas, the same outdoor aerial (UHF) as for TV1, TV2 and TV3 could give adequate reception provided it is not deteriorated and correctly installed.
- 2.2.4 In the Natal, Cape and Free-State regions, the same outdoor aerial as TV1, TV2 and TV3 could give adequate reception provided it is not deteriorated and properly installed.

AERIAL REQUIREMENTS

Area	Polarisation	Channel*	Aerial code	Date commences	Additional aerial	Combiner	Same aerial as TV1
JOHANNESBURG							
Brixton	H	39	Yellow	Oct '86	Y	Y	N
Mondeor	V	36	Red	March '87	N	N	Y
Bez. Valley	V	63	Green	March '87	N	N	Y
PRETORIA							
Kameeldrift	H	21	Red	Oct '86	Y	Y	N
Menlo Park	V	61	Green	April '87	N	N	Y
NATAL							
Alverstone	H	10	Blue	Aug '87	N	N	Y
Bluff	V	45	Yellow	Aug '87	N	N	Y
Overport	V	30	Red	Aug '87	N	N	Y
Pietermaritzburg	V	30	Red	Aug '87	N	N	Y
CAPE TOWN							
Constantia	V	11	Blue	Oct '87	N	N	Y
Sea Point	V	44	Yellow	Oct '87	N	N	Y
Table Mountain	V	36	Red	Oct '87	N	N	Y
Welgemoed	V	50	Yellow	Oct '87	N	N	Y
Paarl	V	41	Yellow	Oct '87	N	N	Y
Stellenbosch	V	64	Green	Oct '87	N	N	Y
Franschhoek	V	61	Green	Oct '87	N	N	Y
Simonstown	V	48	Yellow	Oct '87	N	N	Y
Hout Bay	V	64	Green	Oct '87	N	N	Y
PORT ELIZABETH							
Green Bushes	H	10	Blue	Nov '87	N	N	Y
BLOEMFONTEIN							
Naval Hill	H	6	Blue	Nov '87	N	N	Y

*In Channel column circle O = VHF, the remainder uncircled = UHF.

Colour Bands indicate the main transmitter for that area.

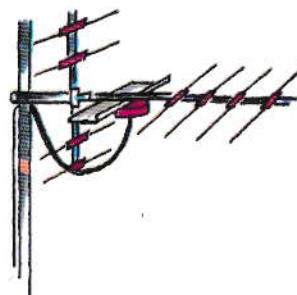
2.3 AERIAL INSTALLATION HINTS:

2.3.1 Use Good Quality Cable

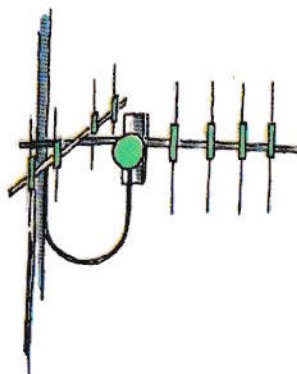
- Use solid di-electric co-axial cable which is double screened.
- Don't use airgap cable. It gathers moisture, resulting in decoder operational problems.
- Replace old cables if your existing cable has been exposed to weather for a few years. It may be deteriorated and will cause signal deterioration resulting in operational problems.

2.3.2 Locate Aerial Properly

- The M-NET signal cannot pass through a tin roof or slate roof. Be careful not to locate the aerial inside or on the "wrong side" of these roofs.
- A wet tile roof (after rain) may cause poor reception resulting in decoder operating problems.
- Obstacles such as large trees, buildings or mountains may cause poor reception.
- Turn the aerial so that it points in the direction of the appropriate transmitter site.



Horizontal Aerial



2.3.3 Install Aerial Properly

- In areas where two aerials are required, make sure you use a COMBINER and not a SPLITTER.
- If the aerial installation is exposed to the weather, make sure the metal surfaces, securing screws/bolts and the plastic are suitably treated to resist the effects of strong sunlight (ultra-violet rays) and other weather conditions.
- The aerial mast and the supporting boom must cross

the aerial elements at 90°.

- Make sure the aerial is installed with the correct polarisation (horizontal or vertical refer to Aerial Requirements Table for your area).
- Ensure drain hole in the aerial connection box faces down.
- Form a drip loop with the co-axial cable before it enters the connection box (as in illustration) to prevent rain water from running into the connection box.
- Keep VHF and UHF aerials at least 500 mm apart.
- Provide proper earthing – to an earth spike or water inlet pipes – as per Bureau of Standards specification 061.

2.3.4 Poor Reception and Interference

- Flimsy construction or inadequate support for the aerial may allow it to move excessively in the wind, causing disturbance in your reception or the decoder to turn off.
- Interference from a nearby transmitter (e.g. CB, Radio Ham, Walkie Talkie, Taxi Service), may cause intermittent patterning on your screen.
- Moving the aerial array up or down the mast (up to one meter) may well improve your picture considerably.
- If you intend using an existing BOP TV aerial and an amplifier is fitted, the signal strength may be too high for the decoder (refer to Aerial Signal Specifications in Section 2.3.5). It is also possible that the aerial will not work at all due to being vertically polarised.

2.3.5 Signal Specifications:

Input Signal-strength to Decoder

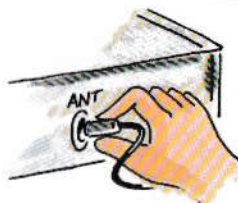
- (a) Without an Amplifier:
- | | |
|---------|-------------------------|
| Minimum | = 60 dB μ V (1 mV) |
| Maximum | = 80 dB μ V (10 mV) |
- (b) With an Amplifier:
- | | |
|---------|--------------------------|
| Minimum | = 60 dB μ V (1 mV) |
| Maximum | = 68 dB μ V (2,5 mV) |

If an amplifier is used IT MUST BE A LOW NOISE BAND AMPLIFIER (UHF or VHF band) housed in a well-screened metal case. The input signal strength directly from the aerial


must be **more than 45 dB μ V** and the maximum output must not exceed 68 dB μ V.

NOTE: IT IS BETTER TO INSTALL A HIGH GAIN (LARGE) AERIAL THAN AN AMPLIFIER, AS AN AMPLIFIER MAY CAUSE PROBLEMS BY AMPLIFYING INTERFERENCE AS WELL AS THE M-NET SIGNAL.

3. Connect your Decoder

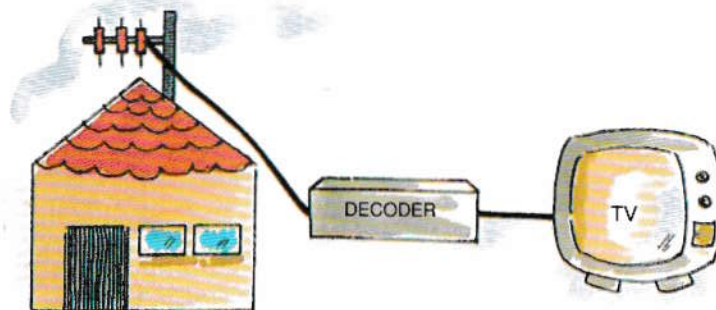


DO NOT PLUG YOUR DECODER INTO THE MAINS POWER YET.

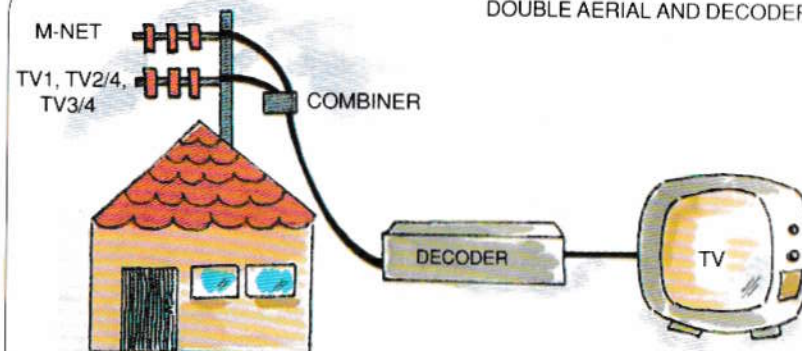
- 3.1 Place the decoder on top of (or close to) the television set.
- 3.2 Disconnect the aerial cable from the television set (or VCR if applicable) and plug it into the antenna 'ANT' socket at the rear of the decoder.
- 3.3 Plug one end of the supplied loose **fly lead** into the "TV" socket at the rear of the decoder.
- 3.4 Plug the other end of the fly lead into the **aerial input** of the television set (or VCR if applicable).
- 3.5 Only after steps 3.1 to 3.4 have been completed, can you plug the decoder power lead into the mains wall socket. Switch the wall socket on and proceed to 3.6.
- 3.6 Check that your TV set receives TV1, TV2 and TV3 normally before switching the decoder on.
- 3.7 Switch the decoder on by operating the  button. A number will appear on the decoder display. This number may change in the first few minutes, which is perfectly normal.

YOUR DECODER IS NOW INSTALLED AND "POWERED-UP" READY TO BE ENABLED.

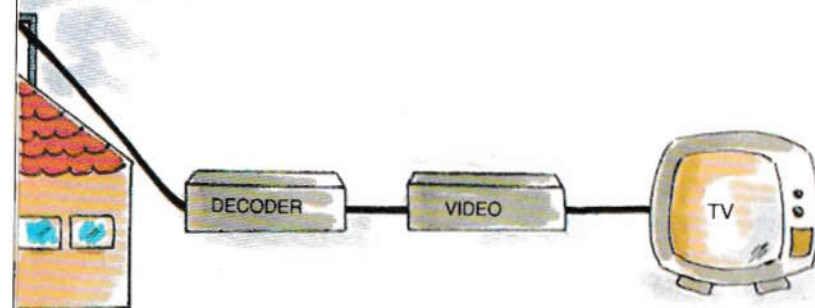
SINGLE AERIAL AND DECODER



DOUBLE AERIAL AND DECODER

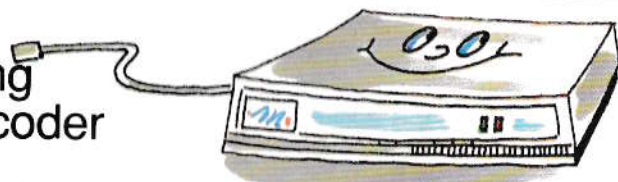


DECODER AND VIDEO



Installation Options

4. Enabling the Decoder



IMPORTANT NOTE:

THE DECODER CANNOT BE ENABLED DURING UNSCRAMBLED (FREE) OPEN TRANSMISSION TIME. IT IS POSSIBLE TO TUNE THE TV SET DURING THIS PERIOD. REFER TO PARAGRAPH 5.1.

THE FRONT PANEL OF THE DECODER HAS THE FOLLOWING CONTROLS AND DISPLAYS:

Controls and Displays		For normal use	For tuning mode
Controls	①	Power on/off	Power on/off
	⤴	Channel select	Channel select & store
	🔊	Audio select	Frequency tuning
Displays	7	Digital indicator	Digital indicator
	•	Standby mode	Indicates tuning mode
	🟢	Audio Channel 1	Frequency search
	🔴	Audio Channel 2	Frequency search

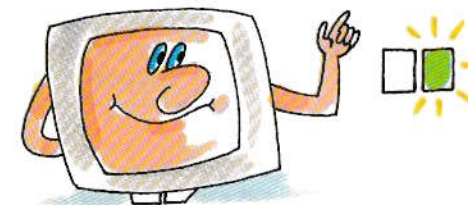
- 4.1 After connecting the decoder, telephone the Telesales Operator at the number shown in the M-Net Contact Information in this manual. Please supply your name and address together with the **Decoder Number**.



- 4.2 If the numbers and other details provided are correct, the operator will then, by computer over the air, enable your decoder to unscramble the M-NET channel. In a few minutes a **7** and a **green light** to the right will come on. The decoder is now enabled and ready for use.

Successful enabling depends on a good antenna installation.

5. Tune TV-set








MAKE SURE THE DECODER IS ENABLED AND SWITCHED ON.

- 5.1 Switch on the TV set and choose an unused programme selector on the television set. Set this programme selector to the UHF mode (either marked **U**, **C** or **21 to 68** or equivalent – see TV Manual).
- 5.2 Establish whether you have the decoder with the metal casing and no "test" switch on the back, or whether you have the decoder with the plastic casing and a "test" switch on the back. Then follow either 5.2.1 or 5.2.2 below.
- 5.2.1 **Decoder Model without Test Switch**
Ensure that the decoder is successfully enabled and a **7** and **🟢** (green light) is showing. Then adjust the tuning knob until the M-NET picture is clearly received.
- 5.2.2 **Decoder Model with Test Switch**
Switch the "test" selector switch on the back of the decoder upward into the "test" position. Adjust the tuning knob until the black and white bar is clearly displayed on the TV-screen. Thereafter switch the "test" selector down into the "normal" position. The M-NET picture will now appear.
- 5.3 IF THE PICTURE RECEIVED IS CLEAR, IGNORE THE FOLLOWING PAGE AND PROCEED TO SECTION 6.

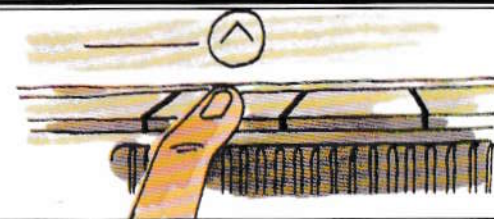
IF THE M-NET PICTURE IS NOT CLEARLY RECEIVED TUNE IN TO M-NET USING THE THREE BUTTONS ON THE DECODER MARKED ① ⤴ 🔊

Follow each step to obtain the following displays on Decoder and TV

Step by Step	Action on Decoder	Obtain on Decoder			Obtain on TV Screen
		Display			
1.	Press ①	•	—	—	—
2.	Set tuning mode: Hold 🔊 & ⤴ down and press ①	•	—	—	—
3.	Release all	7.	—	—	—
4.	Select channel: Press ⤴ repeatedly	7.	—	—	—
5.	Select frequency: Press 🔊 Repeat if necessary	7.	Flash	Flash	—
6.	Repeat step 5 until steady lights and M-NET are obtained	7.	Steady	Steady or off	
7.	Store frequency: Press ⤴ once	7.	Off	Off	
8.	Press ① once	•	—	—	

NOTE: Step 8 must be followed in order for the decoder to revert to normal operation. This stores M-NET in permanent memory in channel 7 of your decoder.

6. Setting up the Decoder for full TV viewing



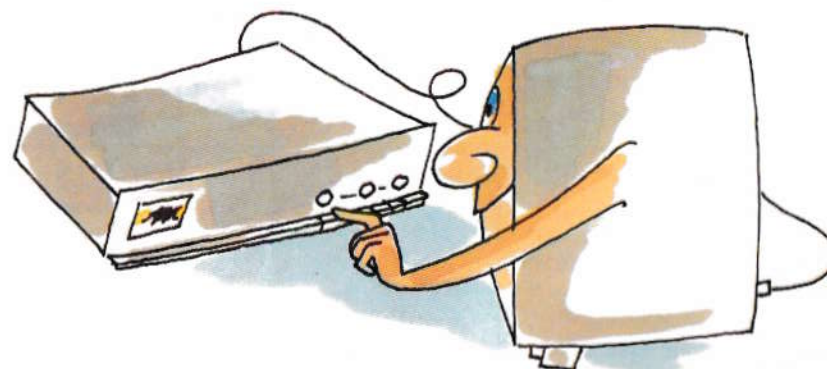
Section 3 described how to connect the decoder. Section 4 described how to enable the decoder. Section 5 describes how to tune the TV-set for M-NET reception. In Section 6 the tuning procedure for full TV viewing using the decoder is described.

Setting the Decoder:

- 6.1 Before proceeding, ensure that the M-NET decoder connecting, enabling and TV set tuning (Sections 3, 4 and 5) have been carried out successfully and that the decoder can decode/unscramble M-NET.
- 6.2 With the television set and decoder on and your pre-tuned M-NET channel on the TV set selected, carry out the procedure in the following table step by step:

NOTE:

IF AT ANY STAGE DURING THE FOLLOWING PROCEDURE YOU WISH TO START AGAIN, SWITCH THE DECODER OFF AND THEN ON USING THE ① CONTROL THEN START AGAIN AT STEP 1 OR STEP 4 (SEE TABLE ON PAGE 13).



TO TUNE YOUR DECODER TO RECEIVE TV1, TV2 AND/OR TV3,
USE THE THREE BUTTONS ON THE DECODER MARKED ① ② ③

Follow each step to obtain the following displays
on Decoder and TV

Step by Step	Action on Decoder	Obtain on Decoder			Obtain on TV Screen
		Display	②	③	
1.	Press ②	1	-	-	TV1
2.	Press ②	2	-	-	TV2/4
3.	Press ② NOTE: IF CLEAR TV1, TV2/4 AND TV3/4 ARE OBTAINED YOU CAN PROCEED TO SECTION 7. IF CLEAR PICTURES ARE NOT OBTAINED, PROCEED WITH STEPS 4 TO 18 BELOW.	3	-	-	TV3/4
4.	Press ①	•	-	-	
5.	Set tuning mode: Hold down ③ & ② press ①	1.	-	-	
6.	Release all	1.	-	-	
7.	Select frequency: Press ③ Repeat if necessary	1.	Flash	Flash	
8.	Repeat step 7 until steady lights and TV1 are obtained	1.	Steady	Steady	TV1
9.	Store frequency: Press ② once	1.	Off	Off	TV1
10.	Press ② once	2.	-	-	
11.	Press ③ Repeat if necessary	2.	Flash	Flash	

Follow each step to obtain the following displays
on Decoder and TV

Step by Step	Action on Decoder	Obtain on Decoder			Obtain on TV Screen
		Display	②	③	
12.	Repeat step 11 until steady lights and TV2/4 are obtained	2.	Steady	Steady	TV2/4
13.	Store frequency: Press ② once	2.	Off	Off	TV2/4
14.	Press ② once	3.	-	-	
15.	Press ③ Repeat if necessary	3.	Flash	Flash	
16.	Repeat step 15 until steady lights and TV3/4 are obtained	3.	Steady	Steady	TV3/4
17.	Store frequency: Press ② once	3.	Off	Off	TV3/4
18.	Press ① once	•	-	-	

STEP 18 MUST BE FOLLOWED TO LET THE DECODER REVERT TO
NORMAL OPERATION.

THE DECODER IS NOW READY FOR FULL TV VIEWING
USING THE REMOTE CONTROL.



Remote Control Unit

7. Operating the Remote Control Unit



To operate, simply point the Remote Control at the decoder and depress the required keys to obtain the following functions:

KEY	FUNCTION
	Switches decoder ON and OFF.
	Selects the alternative language on those programmes that are advertised as being available in dual language or cinema / family track.
	Turns the sound ON or OFF. Press to turn sound OFF, press again to restore sound.
	Scans up or down the channels.
	Enters Parental Control "password" (Section 8).
to	(a) Selects required channel. (b) Keys in Parental Control "password". NOTE: KEY 9 IS INOPERATIVE
	Controls the audio volume of any TV channel received via the decoder. For the best results: 1. Turn TV and Decoder ON. 2. Set the TV volume control to a reasonable level. (Approximately 1/3 to 3/4 up.) 3. Fine-tune the volume using the decoder Remote Control volume keys. 4. In the unlikely event of distorted sound, set the TV volume higher and turn the decoder volume lower.

8. Using Parental Control



A film classification with regard to age and other restrictions (if any) is published in the monthly M-NET Programme Guide.

TABLE OF RESTRICTION LEVELS

Parents are able to restrict viewing of any M-NET programme at will. By using the remote control, simply punch in a four digit "password" and then select the restriction level you wish to be blocked out. The following chart tells you how to use the Parental Control Levels:

Parental Control Levels	FILM RATING			
	2-21	2-18	2-12	
	•	•	•	•
		•	•	•
			•	•
				•



Indicates locked out



Indicates able to be viewed

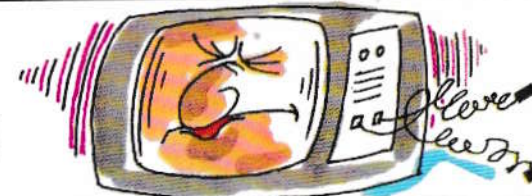
9. Flashing Indicator Codes



For your convenience, the decoder has certain built-in indicator codes. When any particular condition is detected, the decoder will flash a number. Each number has the following meaning:

Flashing Code	Meaning	Action
0	Your decoder has been turned off by M-NET for some reason.	Phone the HELP Number for your area.
1	Your decoder has lost the secret security number which is changed regularly and automatically by the computer.	Phone the HELP Number for your area.
2	Your decoder is blocking out a programme due to your parental control level setting.	Clear the parental control as in paragraph 8.7 example 2.
3	Your decoder has not been enabled to allow a special event programme.	Phone the HELP Number for your area.
5 6 7 8 9	Your decoder has failed and needs to be repaired/adjusted by an authorised repair service.	Phone the HELP Number for your area.
4	Your decoder and M-NET computer are not communicating correctly.	a) Switch decoder OFF and ON again. b) Phone the Help No. for your area so that the problem can be corrected at once.

10. Trouble Shooting



Indication	Possible Cause	Action
7 and no green light on decoder	1. Inadequate aerial signal 2. Decoder not tuned properly to M-NET	1. Check aerial installation including cable (see Section 2) 2. Tune decoder as per page 11
7 and green light, no TV picture	TV not tuned properly to decoder	Tune TV as per para 5.1 and 5.2
Picture, but no sound	1. Inadequate aerial signal 2. Decoder faulty 3. "Mute" is on	1. Check aerial 2. Phone M-NET Help Number 3. Press "mute" again
Crackling sound, snowy picture on all TV and M-NET programmes	1. Faulty TV set 2. External interference	1. Check TV set 2. Investigate possible sources of interference
Crackling sound, snowy picture on M-NET only	Faulty aerial system	Check aerial installation including cable (see Section 2)
Ghosting: a) To the left of image b) To the right of image	a) Picking up a stray signal on the aerial or flylead cables b) Picking up a reflection from buildings, etc.	a) Check cables and renew if necessary b) Check and if necessary re-locate your aerial
Decoder changes channel when the TV or VCR Remote Control Unit (RCU) is operated	The decoder is picking up signals from the TV / VCR Remote Control Unit	Shield the front panel of the decoder from the TV / VCR Remote Control Unit
Decoder Inoperative: a) No small red dot b) Red dot but no display	a) No power input or Faulty Decoder b) Decoder Faulty	a) Check wall plug Phone Help Number b) Phone Help Number
Losing picture when it rains or during misty conditions	Water penetrating the aerial system	Check drain hole drip loop and cable system (see Section 2)
Sound distortion	1. Incorrect volume setting 2. Aerial signal too weak	1. See end of table in Section 7 2. Correct aerial signal see Section 2

11. Technical Information

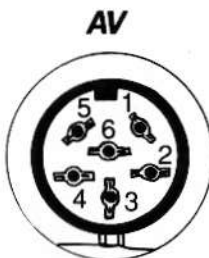


The following is an abbreviated list of pertinent technical information:

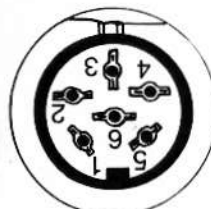
Power Source:	220 to 250 Volts 50 Hz
Power Consumption:	15 W
Fuse:	250 mA Slow Blow, 5 x 20 mm Glass Cartridge type
Remote Control Unit:	2 x AAA 1,5 V d.c. dry cell batteries
Tuning:	8 channels pre-select Defaults to M-NET Channel 7 on power up. This is a standard setting.
Pre-tuning Range:	VHF Channels 4-13 UHF Channels 21-68
Input Level:	AERIAL socket, 250 μ V to 20 mV into 75 ohms. Minimum recommended input is 1 mV on installation.
Output Frequency:	Factory adjusted to UHF channel 32. Screwdriver – adjustable over the range of Channels 32 to 42.

6 Pin DIN Connector
on rear of Decoder:

Pin No.	Service
1	+12 V d.c.
2	VIDEO OUT (1 V p-p into 75 Ω)
3	Earth (Ground)
4	AUDIO OUT (into 10 k Ω)



AV



AV

Die volgende is 'n verkorte weergawe van belangrike tegniese inligting:	Kragbron:	220 tot 250 Volt 50 Hz
	Kragverbruik:	15 W
	Sekering:	250 mA Stadigsmelt, 5 x 20 mm Glasbuistipe
	Afstandbeheerder:	2 x AAA 1,5 V d.c. droësel-batterie
	Instelling:	8 Kanale, vooraf-instelling Skakel outomaties in op M-NET Kanaal 7 wanneer aangeskakel word.
	Vooraf-instelling:	BHF Kanale 4-13 UHF Kanale 21-68
	Insetvlak:	ANTENNESOK, 250 μ V tot 20 mV in 75 ohms. Minimum aanbevole inset is 1 mV tydens instal- lasie.
	Uitsetfretkewensie:	Fakbriekgestel vir UHF-kanale 32. Kan met skroewedraaier verstel word tussen Kanale 32 tot 42.
6-punt DIN-koppeling agter op dekodeerder:	Punt no.	Diens
	1	+12 V g.s.
	2	VIDEO UIT
	3	Aard
	4	KLANK UIT (na 10 k Ω)



11. Tegniese Inligting