

## **CONTRACT DATA**

**A contract between**

**SENTECH, Sender Technology Park, Radiokop, Octave Road, Honeydew,  
and**

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**for the**

**Appointment of a panel of Installers or Installation Companies for the  
installation of domestic Digital Terrestrial Television (DTT) STB's, Direct  
to Home (DTH) STBs and Integrated Digital Television Receive System  
in South Africa (in all nine provinces) for a period of 1year**

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## PART C1: AGREEMENTS AND CONTRACT DATA –

### Form of Offer and Acceptance

#### Offer

The *Purchaser*, identified in the acceptance signature block, has solicited offers to enter into a contract for the installation of DTT/DTH STB Receive system in the Eastern Cape, Western Cape, Limpopo, Mpumalanga, KwaZulu Natal and Gauteng.

The Bidder, identified in the offer signature block, has examined the documents listed in the Tender Data and addenda thereto as listed in the Bid schedules, and by submitting this offer has accepted the conditions of the Bid.

By the representative of the Bidder, deemed to be duly authorized, signing this part of this form of offer and acceptance, the Bidder offers to perform all of the obligations and liabilities of the Bidder under the Contract including compliance with all its' terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the Contract Data.

#### THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF APPLICABLE TAXES; (in the Bids applicable currency).

**N/A** \_\_\_\_\_ (amount in words);  
\_\_\_\_\_ (amount in figures)

***NB: The Prices quoted above is the total Bid offer inclusive of all applicable taxes for the Contract duration. The price must be carried over from the price breakdown / schedule of rates provided in the Bid document.***

This offer may be accepted by Sentech by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the Bidder before the end of the period of validity stated in the Tender Data, whereupon the Bidder becomes the party named as the Bidder in the conditions of contract identified in the Contract Data.

Bidder's Signature(s) \_\_\_\_\_

Signed by the Bidder at \_\_\_\_\_ on this the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

Name(s) \_\_\_\_\_

Capacity \_\_\_\_\_

Address (*Domicillium*) \_\_\_\_\_

## Acceptance

By signing this part of this form of offer and acceptance, Sentech accepts the Bidder's offer. In consideration thereof, Sentech shall pay the Bidder the amount due in accordance with the conditions of contract identified in the Contract Data. Acceptance of the Bidder's offer by the signature by Sentech shall form an agreement between Sentech and the Bidder upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract are contained in:

Part C1 Agreements and contract data, (which includes this agreement)

Part C2 Pricing data

Part C3 Scope of work.

and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C3 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto as listed in the Bid schedules as well as any changes to the terms of the offer agreed by the Bidder and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from the said documents are valid unless contained in this schedule of deviations.

Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the Bidder receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the Bidder within five working days of the date of such receipt notifies Sentech in writing of any reason why it cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

**Sentech's Signature(s)** \_\_\_\_\_

**Signed by Sentech at** \_\_\_\_\_ **on this the** \_\_\_\_\_ **day of** \_\_\_\_\_ **20** \_\_\_\_\_

**Name(s)** \_\_\_\_\_

**Designation** \_\_\_\_\_

**SENTECH SOC LIMITED,**

Sender Technology Park

Octave Road

Radiokop

Honeydew

Johannesburg

**Date** \_\_\_\_\_

**Upon acceptance by Sentech of the Bidder's offer, a contract will come into existence.**

## Contract Data

### Part one - Data provided by Sentech given in all contracts

#### 1. The *Purchaser* is:

**SENTECH SOC LIMITED,**  
Sender Technology Park  
Octave Road  
Radiokop  
Honeydew  
Johannesburg

#### 2. General

The National Treasury General Conditions of Contract for goods and services (NT GCC, 2010) or General Conditions of Contract for Works (2015) as issued by National Treasury and the Construction Industry Development Board of the Republic of South Africa apply, respectively.

The goods are specified in the Scope of Work. The Special Conditions of Contract (SCC) are stipulated in the Tender Data.

#### 3. Goods information:

The *Goods Information* is in the document called "Scope of Work" and in the documents and drawings referred to by it.

#### 4. Terms of Delivery

The *Terms of Delivery* are contained in the General Conditions of Contract (GCC) and Special Conditions of Contract.

#### 5. Language

The *language* of this contract is English.

#### 6. Governing Laws and Jurisdiction

The Contract shall be governed by and interpreted according to the laws of the Republic of South Africa.

In the event of a conflict between or inconsistency in the laws applicable in the various provinces of the Republic of South Africa, the law as applied and interpreted in the Gauteng Province shall prevail.

The parties irrevocably submit to the exclusive jurisdiction of the South Gauteng High Court, Johannesburg in respect of any action or proceeding arising from this Bid.

This Bid and all contracts emanating there from will be subject to the General Conditions of Contract issued in accordance with Treasury Regulation 16A published in terms of the Public Finance Management Act, 1999 (Act 1 of 1999). The Special Conditions of Contract are supplementary to that of the General Conditions of Contract. Where, however, the SCC are in conflict with the GCC, the SCC shall prevail.

#### 7. Sub-contracting post award

A Bidder awarded a Bid may only enter into a subcontracting arrangement with the approval of Sentech. The successful bidder may not subcontract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level of contributor than the Bidder concerned, unless the contract is subcontracted to an EME that has the capability and ability to execute the subcontract. All subcontractors must comply with the same installation accreditation and installation quality assurance as the main contractor.

## **8. Transformation Plan**

A transformation plan is a record of activities an entity intends to undertake to improve its BBB-EE Level through Ownership, Management and Control; Skills Development; Enterprise and Supplier Development and Socio-Economic Development.

Sentech reserves the right to request a BBBEE transformation plan with clearly defined timelines and milestones if the recommended bidder does not meet Sentech's transformation goals. These milestones must be achieved over the term of the contract. This transformation plan shall be submitted within 10 working days from the written request, failing which Sentech reserves the right to withdraw its appointment of the preferred recommended Bidder.

## **9. Warranty**

The warranty period is 12 months after Delivery.

## **10. Payment**

The method and conditions of payment are contained in the Tender Data, GCC and SCC.

The interest on late payment is 0 % per complete week of delay.

## **11. Currency**

South African registered businesses that purchase equipment overseas and quote in foreign currency will be required to provide Sentech a 6-month forward cover contract on appointment. The 6 months forward cover will be re-negotiated and renewed every 6 months should the contract term on this tender be longer than 6 months.

## **12. General - Prices**

Unless approval has been obtained from Sentech, no adjustment in contract prices will be made. All Price adjustments related to this contract will be at the sole discretion of Sentech.

## **13. Price Negotiations**

Sentech reserves the right to negotiate market related prices or impose prices as dictated by any specific project where prices are fixed. If market-related prices are not agreed to, Sentech reserves the right to cancel the Bid.

## **14. Liabilities indemnities and insurance**

Insurance is required from the Bidder in respect of delivery and transportation where applicable.

## **15. Disputes**

Should any dispute, disagreement or claim arise between the parties ("the dispute") concerning this Agreement, the parties shall try to resolve the dispute by negotiation. This entails one party inviting the other party to meet and attempt to resolve the dispute within fourteen (14) days from the date of the written invitation.

If the dispute has not been resolved by such negotiation as referred to in this clause above, the Parties shall submit the dispute to the Arbitration Foundation of Southern Africa ("AFSA") for administered mediation, upon the terms set out by the AFSA secretariat.

Failing such resolution, the dispute shall be resolved by arbitration in accordance with the rules and procedures of AFSA by an arbitrator appointed by AFSA. Where the arbitration route is followed, the dispute must be adjudicated within Johannesburg in the English language and finally resolved in accordance with the rules of AFSA, by an arbitrator or arbitrators appointed by that Foundation.

The provisions of this clause shall not preclude any party from obtaining relief from a Court of competent jurisdiction. To this extent, the Parties hereby consent to the jurisdiction of the South Gauteng High Court, Johannesburg, South Africa. The provisions of this clause shall continue to be binding on the Parties, notwithstanding any termination or cancellation of this Agreement.

## **16. Termination**

Sentech shall have the right, at its' sole and exclusive discretion, upon written notice to the Bidder, to terminate this Agreement immediately, in whole or in part should the Bidder fail to perform any of its' obligations or deliver any deliverable timeously or should Sentech not be satisfied with the quality of any service/s in terms of this Agreement, to the satisfaction of Sentech.

Sentech shall furthermore have the right, as a result of such termination, to appoint a third party to perform the obligations of the Bidder in terms of the Agreement and the Bidder indemnifies Sentech against all costs incurred by Sentech in appointing such third party to fulfil the obligations of the Bidder.

Sentech shall have the right, at its' sole and exclusive discretion, to terminate this Agreement, at any time, upon 30 (thirty) days' written notice to the Bidder for any reason whatsoever.

## **17. Contract Term**

This Panel is for a period of 1 years

## **18. Supplier Due Diligence**

Sentech reserves the right to conduct supplier due diligence at any time pre, during and post the contract period. This may include announced or unannounced site visits.

### **Sentech's Representative is**

Name: Mr Zunaid Adams

Address: **SENTECH SOC LIMITED,**

Sender Technology Park

Octave Road

Radiokop

Honeydew

Johannesburg

Tel No. (011) 471 4400

Email: adamsz@sentech.co.za

Sentech's Representative is the Executive: Legal and Regulatory.

## **14. Delay damages**

As stipulated in the Special Conditions of Contract.

## **Contract Data**

### **Part two - Data provided by the Bidder**

#### **Statements given in all contracts**

**The Bidder is:**

Name \_\_\_\_\_

Address \_\_\_\_\_

a company / close corporation / partnership duly incorporated in accordance with the laws of the Republic of South Africa.

## 1. PART C2: PRICING DATA

For every successful single DTT/DTH/IDTV installation conducted by the bidder, SENTECH shall make a payment to the bidder in accordance with the rates below. This payment will be made after submission and approval of the installation report and other contractual requirements as stipulated in this document. All payments after the completion of installations in respect of DTT/DTH/IDTV will be processed through the Sentech Installation Application ("the Application"). Sentech will use its' best endeavours to provide training to all appointed users/installers in respect of the Application to warrant swift payment post installation. Installers and any of its own resources or those provided through the municipal allocation process shall be in possession of a smart mobile phone to enable them to download the Application and fully utilise it. All payments pertaining to the completed installations will be made strictly through the successful submission of installation reports via the Application. Unapproved reports will result in non-payment, the bidder will be expected to correct all mistakes at its' own costs.

Payment offered per installation will be based on either predetermined rates on specific projects or market related pricing subject to clause 13 above.

Please note the below section as it refers to the Broadcast Digital Migration project.

Sentech is participating in the Broadcast Digital Migration project and is responsible for the installation of a finite amount of set top boxes in the province. To that end the rates for this specific project has been predetermined. Should a bidder show interest in participating in this project the following rates will apply. See table below.

Payment offered per installation for the BDM Project:

DTH Installations	Price	DTT Installations	Price
Completed Installations	<b>R450,00</b>	Completed Installations	<b>R450,00</b>

SAPO will issue DTT and DTH kits for the purpose of completing an installation at a household as part of the BDM Project. Any additional accessories would be for the installers own cost. For example, the DTT kit does not come with a bracket, pole and wall anchors for the installation of the supplied antenna. This means that the installer should purchase such material and will not be reimbursed.

## PART C3: SCOPE OF WORK:

### 1. BACKGROUND

SENTECH SoC LTD has been appointed by Department of Communications and Digital Technologies (DCDT) to install STB's (DTT and DTH) in all provinces of South Africa namely, Eastern Cape, Western Cape, Limpopo, Mpumalanga, Northern Cape, Free State, KwaZulu Natal, North West and Gauteng as part of the BDM Phase 1 project. SENTECH intends to appoint bidders in all nine provinces for the complete installation of DTT STB's and DTH STB's. The invitation to bid is not limited to any province, however only Local Installers or Local Installer Companies will be permitted to operate in their respective provinces and bids proposals referring to their provinces will be accepted. As part of the panel of installers, bidders have to provide proof of local presence in their province of focus.

The STB's and related equipment, specifically for the BDM project, will be available from the local SAPO branch in any specific municipality. It is therefore important that the bidder's base of operations must be located in a reasonable distance to the South African Post Office (SAPO) Branch in the province.



## 2. SCOPE

The scope of work will include both **Digital Terrestrial Television (DTT)** and **DTH (Direct-To-Home) Satellite** as indicated below:

### **Digital Terrestrial Television (DTT)**

#### **Antenna and Set-Top Box (STB) Installation**

- Utilize Sentech CISPUB DTT coverage verification tool (<http://cispub.sentech.co.za>) to confirm DTT coverage, which transmitter station/s covers the area, the bearing of the received signal, the frequency and antenna polarization.
- Assembly and disassembly of outdoor terrestrial antenna.
- Mounting outdoor antenna with a wall mounted bracket and standalone metal pole of not less than 3 meters above the ground (where wall's structural integrity may not allow for mounting of antennae)
- Terrestrial signal direction finding and pointing of antenna with the correct bearing and polarization as indicated by the CISPUB DTT coverage verification tool.
- Connecting of coax cable and fitting of connectors and connect to STB.
- Connect STB to TV with either RCA Cables, Coaxial Cable or HDMI Cables
- All Cabling to be done neatly and the correct cable saddles to be used.
- Workmanship Safety and the safety of the public and household is paramount
- Training of household on the operation of the installed DTT decoder.
- Provide post-installation first line support to household for the first 12 months after installation.

### **Direct to Home (DTH) Satellite Dish and Set-Top Box (STB) Installation**

- Assembly of satellite dish.
- Mounting satellite dish with a wall mounted bracket or standalone metal pole of not less than 3 meters above the ground (where wall's structural integrity may not allow for mounting of satellite dish).
- Satellite signal direction finding and the pointing of the satellite dish for maximum signal strength reception.
- Adjusting the polarization of the LNB for maximum signal quality.
- Fitting of connectors to the coaxial cable and connecting the cable between the LNB and DTH STB.
- All Cabling to be done neatly and the correct cable saddles to be used.
- Workmanship Safety and the safety of the public and household is paramount
- Training of household on the operation of the installed DTT decoder.
- Provide post-installation first line support to household for the first 12 months after installation.
- Training of household on the operation of the installed DTH decoder.

## 3. Performance and quality assurance

Each installation must be of high standards. Installations will be signed off by the household representative and a SENTECH representative. If the installation satisfies these representatives, then a claim for payment can be submitted to and considered by SENTECH.

The quality of installations is critical to the continuous enjoyment of television services. SENTECH will therefore not tolerate substandard workmanship. The bidder is therefore required to guarantee its' workmanship for a period of 12 months at its' own cost. Repeated poor performance could result in the bidder being removed from the panel.

## 4. Logistics and Insurance

Upon approval of the application for the Set Top Box and the issue thereof, SAPO will keep personal details including the South African Identity Number of the qualifying applicant so that those personal details could be attached to the STB kit allocated.

Bidders will be assigned batches of installations and will be informed through SMS and email of any installation(s) that need to be conducted in a particular area using any of the following scenarios:

- In the event that the registered STB kit has been collected by the registered household, the Bidder will be informed via SMS and email (summary of assigned installations) to contact the household to arrange for the installation. The registered household will also in this regard be notified of the assigned bidder's name.
- The assigned bidder will, where necessary, be informed to arrange for the collection of the assigned STB kits in bulk from the nearest post office branch. A maximum of twenty (20) STB kits will be issued via the bulk delivery process to the assigned bidder with a proof of delivery document. In instances where the bidder has subcontracted installers then the bidder must distribute the collected STBs to its' subcontractors to expedite installations. (See Annexure B example of POD). The bidder must verify that the STB kit is complete on collection.

The assigned bidder must deliver the individually assigned STB kit (allocated) where received in bulk to the assigned needy household. The customer detail which includes the unique customer reference number will be written on the assigned STB equipment. The bidder must ensure that the STB kit is installed at the assigned household bearing the name and address of the householder appearing in the Kit box, Proof of Delivery or package. No payment will be made for installations made at the wrong household.

In the case where two STB kits have been issued to two different members of the same qualifying household to the assigned bidder(s), the assigned bidder must only install one STB kit if not installed yet and return the excess STB kit to his/her local Post Office branch as an un-installed STB kit. The assigned bidder must have and provide adequate and secured local storage for the safe-guarding of the STB kit equipment that have been collected in bulk from SAPO for installation such as the set-top boxes, antennae, satellite dishes, and the relevant installation material.

The set-top boxes issued via the assigned bidder are insured against theft and damage by SAPO and a claim form as per **Annexure B** which must be accompanied by the South African Police Case Number must be filled and submitted to SAPO via USAASA within 48 hours after the incident occurred. The following terms and conditions will apply in the event of lost or STB's stolen after issuing it to the bidders.

An excess amount to be paid by the bidder per lost STB equipment. The following excess payment sliding scale table will apply: <b>Number of incidents</b>	<b>Excess amount payable by the bidder per lost STB</b>	<b>Excess amount payable by the bidder per lost DTT antenna</b>	<b>Excess amount payable by the bidder per lost DTH satellite dish set</b>
1st incident	R100	R20	R50
2nd incident	R150	R40	R100
3rd incident	R200	R60	R150

## 5. Exchanges of STB kits

Applicant and or assigned bidder to contact DTT Call Centre for all STB equipment changes/replacements as a result of the following:

- 5.1. Faulty STB equipment
- 5.2. Incomplete STB equipment issued.
- 5.3. Incorrect STB equipment issued.
- 5.4. No exchange of STB equipment shall take place if the serial number is removed or tampered with.
- 5.5. The DTT Call centre to issue authority number for all STB equipment changes. The DTT Call centre to indicate the reason and type of STB equipment to be exchanged.
- 5.6. The applicant and or bidder to ensure that all faulty/incomplete/incorrect STB equipment must be returned in its original packaging for exchange and or replacement.

Please note that exchanges will only be considered for new installations. STB's that have been in operation for more than a week will not be considered for replacement.

## **6. REQUIREMENTS FROM BIDDERS**

### **6.1. Bidders are required to show the following in their submissions:**

#### **6.1.1. Local Installer Companies**

- 6.1.1.1. The number of certified/accredited local installer's in their employ, in each area, as they indicated they have presence.
- 6.1.1.2. The bidder must commit to conducting a minimum of 10 installations in a given day should there be a need for mass deployment.

#### **6.1.2. Quality Control**

- 6.1.2.1. The steps taken by the bidder to ensure high levels of quality for each installation.
- 6.1.2.2. The quality guarantee provided for each installation, may not be less than a period of 12 months from date of installation or re-installation.
- 6.1.2.3. The bidder must equip its' installer/s with an identification card which must be worn at all times when collecting, installing and redeeming STB kits and vouchers. It must include at least the following information:
  - (a) Personal details (including ID number with a photo) of the local installer;
  - (b) Accreditation number of the local installer/s; and
  - (c) Area of operation.
- 6.1.2.4. If an identification card is not presented by the local installer, then no collection, installation or redemptions will be transacted.
- 6.1.2.5. The bidder must leave their contact details with the household on completion of the installation.
- 6.1.2.6. The bidder must be equipped with the minimum tools as highlighted in section 7 of this document.
- 6.1.2.7. Installations will be verified by an appointed SENTECH representative before payment is made. It is therefore the responsibility of the bidder to ensure quality and functional installations as well as to comply with all the required documentation, processes and requirements to ensure timeous payment. These are all captured in the APP as described in the background.

### **6.2 Obligations of the Bidder**

- 6.2.1. The bidder shall insure that it is trained and accredited in areas, to be determined by SENTECH, where there is insufficient installation capacity;
- 6.2.2 The bidder shall ensure that:
  - 6.2.2.1. it is tax compliant;
  - 6.2.2.2. it is registered on the Central Supply Database of National Treasury;
  - 6.2.2.3. it produces a tax clearance as proof of VAT registration where applicable;
- 6.2.3. The bidder shall be required to work with its' allocated local municipality to ensure that in areas in which it does not have locally identified resources, the bidder makes use of the resources identified by the local municipality. This excludes areas where the bidder has presence or installers originating from that municipal area. Municipalities will provide resources familiar with the DTT/DTH STBs installations to safeguard the quality of work. The bidder will be accountable for the work carried out by his or locally identified resources as well as its' remuneration.
- 6.3. The bidder shall manage quality assurance of all installations and SENTECH reserves the right to verify the quality of installations independently with prior notification to the bidder.
- 6.4. The bidder hereby agrees that all installations executed by it will at all times be compliant with all applicable legislation which will include but not limited to all environmental and occupational health and safety legislation.
- 6.5. The bidder hereby indemnifies SENTECH in the event of any claim for liability and/or damages that may arise from any installation being executed by it in the event of non-compliance by the Installer of any legislation applicable in South Africa.
- 6.6. The Bidder will inform SENTECH of the satisfactorily completion of the installations by means of the APPLICATION and payment will to be made to the Installer by Sentech.

- 6.7. SENTECH shall notify the bidder via job card, on a rotational basis, closest to the household for the execution of the installation, having due regard to the clustering of installations and the capacity of the installers as stated hereinbefore.
- 6.8. The bidder shall, at its' own costs, collect the allocated STB and related accessories from the dedicated SAPO warehouses and/or local outlet of the Post Office as indicated by SENTECH for the execution of the installation.
- 6.9. The bidder agrees to ensure that it installs the correct allocated set top box and related accessories to the correct Beneficiary concerned at the correct address. Upon the discovery by either SENTECH and/or USAASA and/or SAPO to the contrary, SENTECH will immediately advise the Installer within 3-5 days of such discovery. The bidder will rectify the installation at the bidder's costs and notify SENTECH, USAASA and SAPO accordingly and to be verified by SENTECH.
- 6.10. In the event of the bidder being liable and unable to account for any set top box and related accessories issued to it by SAPO and as provided for in this agreement, SENTECH will be reimbursed by the bidder after it was established by SENTECH who being at fault of the set top box and related accessories losses.
- 6.11. In the event of any installation not being redeemed within 5 (five working) days, the bidder will immediately notify SENTECH in writing and the bidder will have an additional 3 (three) days to account for the set top box and related accessories issued as such to the bidder, failing which the bidder agrees to reimburse SENTECH after it was established who is at fault for the set top box and related accessories losses.
- 6.12. In the event of the bidder being unable to account for any set top box and related accessories issued to it as provided for in this agreement, the Installer will within 30 working days reimburse SENTECH after it was established who is at fault for the set top box and related accessories losses.
- 6.13. The bidder indemnifies SENTECH for any installations that do not comply with the Quality Assurance as provided for in this agreement and the bidder further agrees to rectify the installations provided for in this paragraph within 5(five) working days of being notified by SENTECH at the cost of the bidder/Installer. However, SENTECH will be responsible for the ensuring the STB and related accessories are in working order and will replace same at SENTECH's cost.
- 6.14. The bidder will be responsible for any reverse logistics upon recovery from SENTECH in the event of a wrong allocation of STB and related accessories to the bidder if same was due to the bidder's fault.
- 6.15. Upon the successful completion of the Quality Assurance process by SENTECH as provided for in this agreement, Sentech shall pay the bidder upon the completion of a successful installation within 7 (seven) days for any approved installation completed in the same month.
- 6.16. The bidder will ensure that the serial numbers of the set top box and related accessories allocated to a specific beneficiary by SAPO, be correctly installed at the premises of the Beneficiary, failing which SENTECH, upon the discovery of the incorrect installation, will instruct bidders to rectify the incorrect installation within 5 (five) working days at the bidder's costs. The allocation of the STB and related accessories together with the serial numbers to a specific beneficiary will be conveyed by SAPO to SENTECH before the allocation of the installation to the bidder.
- 6.17. The bidder undertakes that in the event of any mismatch of serial numbers to specific Beneficiary, as aforesaid, to notify SAPO to rectify and amend same on the system accordingly.
- 6.18. The bidder agrees to provide ongoing post installation support where necessary, through the Call Centre, in the following circumstances:
  - 6.18.1 To monitor the correct functioning of all STB's and related accessories within 3 months of installation through trying to assist and resolve all queries from the beneficiary through the Call Centre failing which to notify SENTECH and SAPO immediately upon the discovery of any dysfunctional STB and to initiate immediately

**THIS SECTION PROVIDES A BASIC INSTALLATION GUIDE AS WELL AS THE MINIMUM REQUIREMENTS FOR THE INSTALLATION MATERIAL TO BE USED FOR DTT STB INSTALLATION.**

- the reverse logistics through the Call Centre in informing the relevant beneficiary to return the dysfunctional STB and related accessories to the nearest SAPO outlet.
- 6.18.2 It is conditional that should the queries relating to the installation of the STB and related accessories being within 3 (three) months of installation and being covered by the installation warranty given by the installer, at the costs of the bidder to attend to the query as provided for in this agreement and to be quality assured by SENTECH.
- 6.18.3 Any installation related queries after the 3 (three) month warranty period will be for the cost of the Beneficiary except where the Beneficiary is informed to return the dysfunctional STB and related accessories to the nearest SAPO outlet as aforesaid.
- 6.19 The bidder hereby agrees to rectify any breach in terms of this clause 6 within 10 (ten) working days where possible upon receiving such notification from the bidder at the costs of the bidder if it is proven to be through the bidder's fault and limited to the contract value as provided for in this agreement.

## 7. Equipment required for bidders

Description	Yes/No
Do you have own tool box with spanners 6mm to 15mm, screwdrivers (various sizes of flat and star), pliers, socket set 6 to 15mm, hammer drill with 13mm chuck, hammer, drill-bits (all types), etc. for installation?	
Do you have own transport or access to reliable transport that is secured?	
Do you have a signal strength meter for both terrestrial and satellite dish installations?	
Do you know how to correctly attach connectors to installed coaxial feeder cables?	
Do you have a ladder up to 2m?	
Do you have a smart cell phone?	

## Annexure A

### TECHNICAL REQUIREMENTS FOR DTT AND DTH STB INSTALLATION

#### Glossary of Terms

Abbreviations & Acronyms	Description
AV	Audio Video
BER	Bit Error Rate
dBμV	Unit for Signal Strength
dBμV/m	Unit for Field Strength
DTT	Digital Terrestrial Television
DVB-T2	Digital Video Broadcasting – Second Generation Terrestrial
GIS	Geographical Information System
HDMI	High-Definition Multimedia Interface
MER	Modulation Error Ratio
MUX	Multiplexer
RF	Radio Frequency
SABC	South African Broadcast Corporation
STB	Set-Top-Box (Decoder)

### 1. INSTALLATION

This document contains the minimum installation specification requirements for domestic Digital Terrestrial Television (DTT) Set top boxes (STB) for the Digital Video Broadcasting – Second Generation Terrestrial (DVB-T2) standard on SENTECH's network.



## 2. TECHNICAL INFORMATION AND REQUIREMENTS

### 2.1 Antenna Position:

- 2.1.1 Determining the direction and polarization from which the best DVB-T2 signal will be received on the customer premises by utilizing the Sentech coverage information system found at <http://cispub.sentech.co.za>;
- 2.1.2. Identify an appropriate mounting position which would allow the antenna aperture to have clearance of obstacle in close proximity relative to the antenna (e.g. tall buildings, trees etc). Crossing of building roof tops in close proximity to the antenna should be avoided where possible since it might create multipath which would result in Set-Top-Box demodulation failures.
- 2.1.3. Ensure that the mounting position would allow a coaxial feeder cable to be installed, without major complications, enabling it to provide access to the location in the building where the viewer require the service;
- 2.1.4. The identified position would be verified by conducting a DVB-T2 reception test measurement utilizing an antenna on an extended pole and a DVB-T2 measurement tool. Signal reception should be verified by conducting a 360 degrees rotational scan of the signals received in the area. Direction of the best signal should then be determined, and special caution taken not to identify a reflection as an option. The signal level should be at least 28dBu (52 dBuV/m) or higher and the Modulation Error Ratio (MER) either equal or above 22 dBs.

### 2.2 Antenna Mounting:

The antenna mast and mounting shall comply towards the following minimum requirements:

- 2.2.1. The antenna mast should preferably consist of a round aluminium tube 38mm x 1.2mm x 3000mm capable to provide sufficient clearance to allow the antenna to be mounted above the
- 2.2.2. lowest part of the roof. If practical problems are experienced and there is a need to divert from this type of installation the project manager need to be informed.
- 2.2.3. A rust-resistant Tripod Wall Bracket (Hot dip, Galvanized) providing minimum distance of 47cm from wall to pole mounting positions shall be used to properly secure the mast with 10mm coach screws and plugs to the outer wall of the building. If there is a requirement to deviate from this type of installation the project manager need to be notified prior to the installer continuing with the installation.
- 2.2.4. The bracket and antenna pole should be mounted utilizing a water-level to ensure that both the bracket and pole it orientated properly in a vertical position;

### 2.3. Antenna Earthing:

When installations are conducted in high lightning probability areas a proper earthing shall be installed which shall comply toward the following minimum requirements):

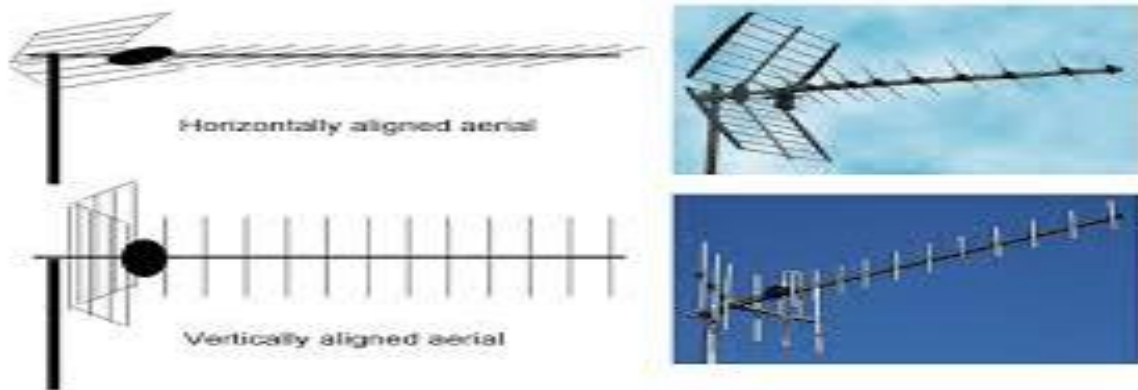
- 2.3.1. The antenna bracket or pole shall be properly connected to the building-erth via a copper cable (if building earth is available);
- 2.3.2. In case where there is no building-earth available an earth spike shall be erected as close as possible to the nearest grounding position and the antenna bracket and pole properly connected to it via a copper cable.

### 2.4. Antenna Installation:

**Antenna installation shall comply with the following minimum requirements:**

- 2.4.1. Once the antenna direction and polarization is determined by accessing the Sentech coverage information system (website: <http://cispub.sentech.co.za>) preliminary measurements shall be conducted utilizing a measurement test antenna and DVB-T2 measurement tool to verify signal reception based on the bearing and polarization provided by the coverage information system;
- 2.4.2. A UHF Wideband CH 21-69 with a minimum gain of 8 Db (Grid/Panel or Yagi) shall then be installed on the antenna mounting at the correct bearing and polarization and adjusted to ensure optimum signal reception performance based on signal level and MER;
- 2.4.3. Antenna measurement results (directly on antenna) with regard to the antenna coordinate, direction, polarization, signal level (dBuV/dBm) and the Modulation Error Ratio (MER) (dB) shall be captured and provided on the installation conformance report (Appendix A);
- 2.4.4. Once the measurement results indicate and proof that the signal reception is adequate (signal level and MER) on the correct bearing and polarization the installer shall then commence with
- 2.4.5. the installation. If the measurement results indicate inadequate signal reception the installer shall then contact the DTT Call Centre and highlight the problems experienced.

- 2.4.6.** Antenna polarization can be changed by changing the horizontal orientation of the antenna as indicated in Figure 1 below.



**Figure 1:** Antenna polarisation (Horizontal and Vertical).

**2.5. Coaxial Cable Installation:**

- 2.5.1.** RG6 rated coaxial cable shall be used (preferably white color)
- 2.5.2** Cable installations shall be neat and secure and should have no cable joints except for the connection on the antenna and on the wall mounted socket;
- 2.5.3** Once the cable is connected to the TV antenna balun it shall be properly water-proofed to prevent water penetration by either using the rubber sleeve (if provided) or by using the self-vulcanising tape;
- 2.5.4** Cable entry points in buildings shall be properly and neatly fitted (where required) with appropriate filler to ensure there is no water penetration;
- 2.5.5** The location of the antenna and cable installation will be jointly determined by the installer and the viewer/customer.

**2.6. Indoor Connection Point:**

- 2.6.1** RG6 rated coaxial cable shall be used (preferably white color) with sufficient length to connect to the Set-Top-Box (STB) position and shall consist of an F-type male connector;
- 2.6.2** Both signal level (dB $\mu$ V / dBm) and Modulation Error Ratio (MER) (dB) shall be measured and recorded at the STB connection point and recorded in the conformance report (Appendix A);

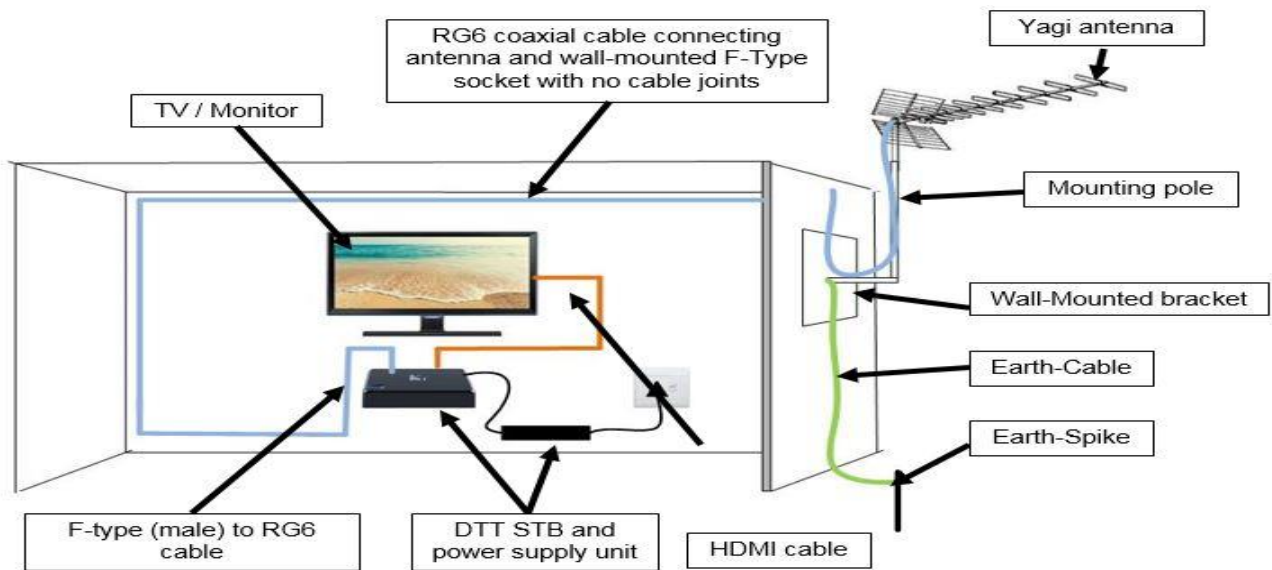
**2.7. Amplifier Installation:**

- 2.7.1** Signal amplifiers shall only be used in exceptional cases where the received signal does not meet the required signal level and/or Modulation-Error-Ratio (MER).
- 2.7.2** If the utilization of signal amplifiers is approved the amplifiers shall be neatly installed and an additional electrical-plug connection shall be provided to compensate for the loss of an electrical connection point to the viewer/customer;

**2.8. Set Top Box Installation:**

- 2.8.1** The Set-Top-Box (STB) shall be installed at the location indicated by the viewer/customer;
- 2.8.2** Electrical power supply connections to the box shall be installed neatly and where required an additional adapter shall be provided;
- 2.8.3** The RG6 rated cable be neatly connected to the STB;
- 2.8.4** An HDMI cable shall be connected between the STB and the TV/monitor. Only in exceptional cases (e.g. no HDMI available on TV/monitor) should the installation of RCA cables be considered;
- 2.8.5** Once the STB is connected and powered-up the frequency spectrum shall be scanned, received signal level and signal quality (%) shall then be noted on the conformance report (**Appendix A**);
- 2.8.6** Basic functionality of the STB shall be tested and the functioning of the MUX1 services verified. In areas where there is a MUX2 presence the e.tv services should also be verified. Basic functional evaluation findings shall be noted on the conformance report (**Appendix A**);

## 2.9. Basic Layout of the Installation:



**Diagram 1:** Basic DTT STB receive system installation layout.

### 3. INSTALLATION

This document contains the minimum installation specification requirements for domestic Direct-To-Home (DTH) installations based on the Digital Video Broadcasting – Second Generation Satellite (DVB-S2) standard on SENTECH's network.

### 4. TECHNICAL INFORMATION AND REQUIREMENTS

#### 1.1. Dish Position:

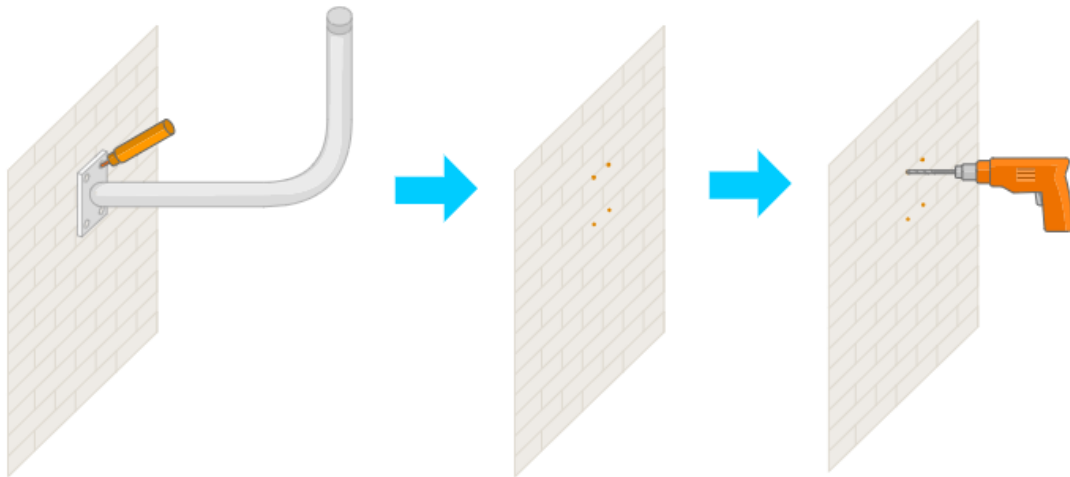
- 1.1.1. Determining the direction and polarization from which the best DVB-T2/DTH signal will be received on the customer premises by utilizing the Sentech coverage information system found at <http://cispub.sentech.co.za>;
- 1.1.2. Identify an appropriate mounting position which would allow the dish to have clearance of obstacle in close proximity relative to the dish (e.g. tall buildings, trees etc).
- 1.1.3. Ensure that the mounting position would allow a coaxial feeder cable to be installed, without major complications, enabling it to provide access to the location in the building where the viewer require the service;

#### 1.2. Dish Mounting:

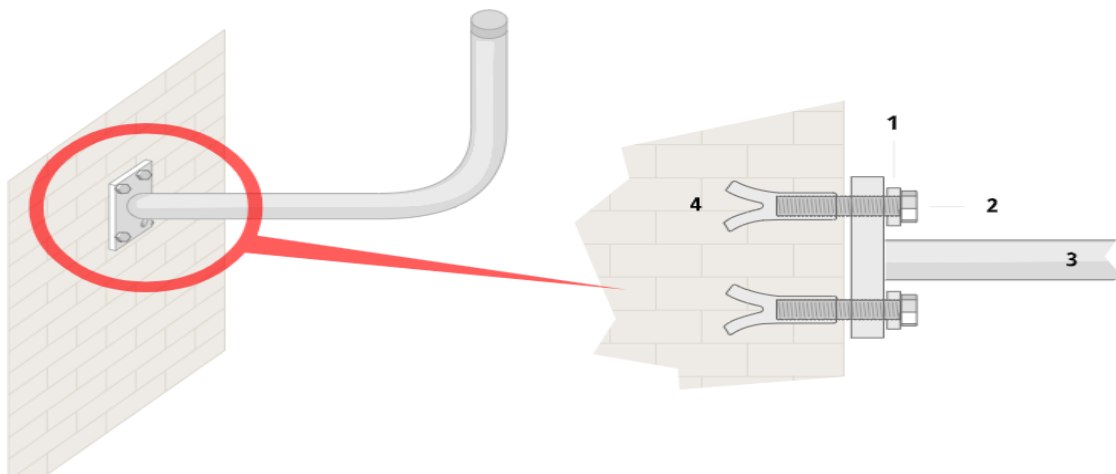
First find an appropriate location, and follow the following steps:

- 1.2.1. The location must allow the correct orientation of the dish to the satellite. Use the compass.
- 1.2.2. There cannot be any obstacles between the dish and the satellite. You will learn where the satellite is in the following steps.
- 1.2.3. Take the "L" wall mount and attach it to the wall manually. Mark the positions of the future holes on the wall.
- 1.2.4. Now, drill the four holes. Be careful choosing appropriate diameter (see the number engraved on the fixing). The ideal depth for the holes is about 0, 5 cm + wall plug length.

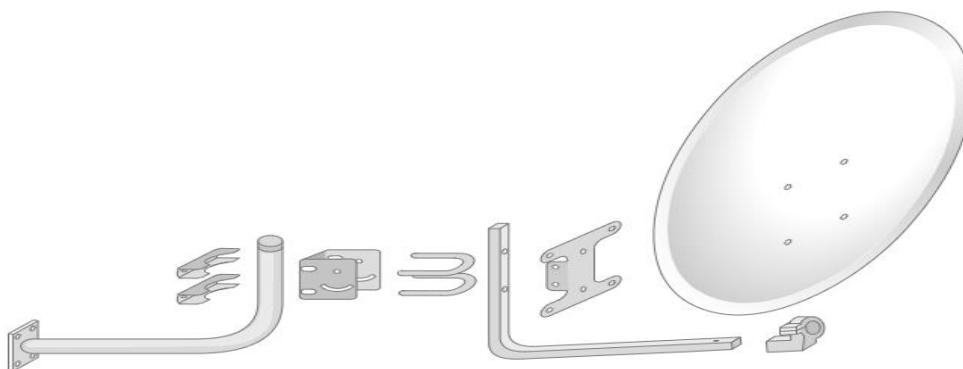




**Figure 2:** Mounting bracket



**Figure 3:** Mounting the bracket on the wall

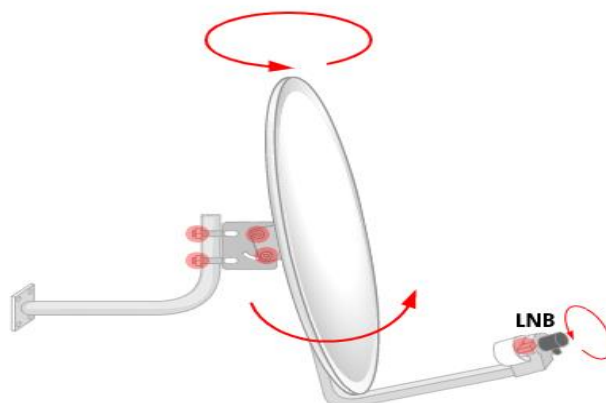


**Figure 4:** Components of the dish

#### **4.2 Pointing the dish to a satellite**

4.2.1 You will need to find out the azimuth, elevation and LNB polarization/skew values.

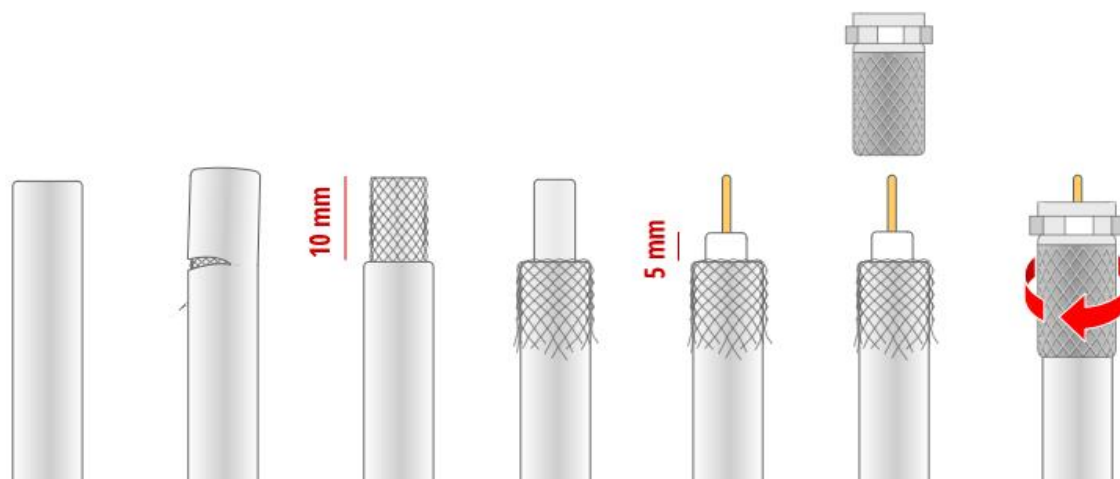
Now it is time for the fine-tuning. Turn on the digital satellite receiver, choose the name of the satellite and look for the option that tells you the signal strength and quality. Then, move the dish slightly until you get the best signal quality and strength.



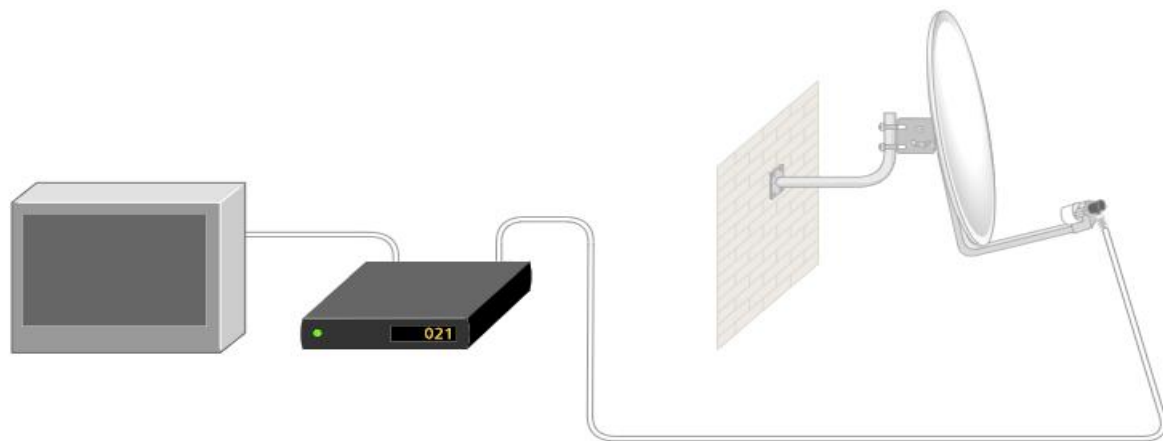
**Figure 5:** Dish pointing polarisation

**1.3. Indoor Connection Point:**

- 4.3.1. RG6 rated coaxial cable shall be used (preferably white color) with sufficient length to connect to the Set-Top-Box (STB) position and shall consist of an F-type male connector;
- 4.3.2. Connect two "F" connectors, on both ends of the cable. Connect one end to the LNB of the dish and the other one to the receiver.



**Figure 6:** RG6 rated coaxial cable



**Diagram 2:** Basic DTT STB receive system installation layout.

## 5. DTH Decoder/STB settings

The setting for the DTH decoder.

- i. Menu
- ii. Settings (Press ok on remote)
- iii. Decoder
- iv. Enter Pin (1379 ok)
- v. Advance parameters
- vi. Manual setting

If signal indicates POOR please follow the below instructions.

### 1. Modify parameters

- i. . Press ok on NETWORK ID ENTER 73.
- ii. . Press ok on BASE FREQUENCY ENTER 12682
- iii. . Press ok on SYMBOL RATE ENTER 30000
- iv. . Press ok on FEC SELECT 2/3
- v. . Press ok on LNB LOW FREQUENCY ENTER 9750
- vi. . Press ok on LNB HIGH FREQUENCY ENTER 10700

### 2. Press ok on reward, Record or Confirm

### 3. If still have poor signal change LNB high frequency from 10700 to 10600

### 4. Press ok on next step channel scanning.

If you have good signal you should receive the channels.

## Annexure B



### DTT Insurance Claims Form

Name of Reporting Person	
Contact nr	
Date of incident/discovery	
Time of incident	

Business Name of Installer Contractor		
Vendor nr of Installer		
Contact Person of Installer		
Contact details of Installer: Mobile nr and e mail address		
Address where incident took place		
SAPS: Police Station where case reported		
SAPS: Investigation Officer name		
SAPS: Contact details: Mobile nr and e mail address of Investigation Officer		
SAPS: Case number		
Post Office name and Province from where stock was collected		
List of items stolen/damage	Type of STB	Serial Nr
Detail description that cause loss/damage		

I ..... hereby acknowledge that, after consideration of the facts, the statement of events made above is to my knowledge and believe true.

Name of Claimant: .....

Signature of Claimant: .....

## Annexure C

### STB Issues - Proof of delivery of bulk STB equipment to allocated installer company



#### STB Issues - Proof of delivery of bulk STB equipment to allocated installer company

Proof of delivery of bulk STB equipment to allocated installer company: ABC ELECTRONICS PTY LTD., Branch: POFADDER, Period:  
 2018/10/07 02:16:00 PM 2018/10/22 10:14:00 AM

Distribution Number	Issue Date	Customer ID number	Customer Name	Cell Number	Installation Company	Box Type	STB Serial Number	Antenna/Dish Serial Number	LNB Serial Number	Address	Signature : Installer
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#### Summary

Acknowledge receipt of above	
NAME OF INSTALLER	
ID NUMBER OF INSTALLER	
ACCREDITATION NUMBER OF INSTALLER	
NAME OF INSTALLATION COMPANY	
DATE	