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SATELLITE DISH INSTALLER

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ASSESSMENT PACKAGE

National Vocational Certificate Level 4

Version 1 - October, 2019

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SATELLITE DISH INSTALLER

ASSESSMENT PACKAGE

National Vocational Certificate Level 4

Version 1 - October, 2019

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standards	**0619001089 Conduct Site Survey**
Assessment Task	**Perform survey for satellite dish installation and prepare report given in Annexure A**

I can……..

Performance Criteria	**Yes**	**No**
1. Enlist desired channels as per requirement.	☐	☐
2. Prepare estimated budget as per demand	☐	☐
3. Keep record of customer demand as per given format.	☐	☐
4. Ensure availability of desired channels at installation area as per standard.	☐	☐
5. Select appropriate place for dish installation as per customer demand	☐	☐
6. Ensure local regulation in installation area as per requirement.	☐	☐
7. Ensure obstruction-free area for dish installation as per standard.	☐	☐
8. Take weather history (wind pressure, humidity, temperature, rain and snow fall) of dish installation area as per standard.	☐	☐
9. Select best quality of dish and dish components as per wind pressure, snow fall and temperature	☐	☐
10. Ensure strong foundation for dish stand against wind pressure	☐	☐
11. Follow building rules and regulations for require task.	☐	☐
12. Draw layout for cable routing as per given task.	☐	☐
13. Measure length of cable as per job.	☐	☐
14. Identify cable gauge as per requirement.	☐	☐
15. Identify line amplifier if required as per given task.	☐	☐

16. Ensure tools and equipment as per requirement.		
17. Identify East-West directions with compass as per given task.		
18. Check availability of satellite as per customer demand in dish installation area		
19. Identify dish size for the availability of strong signals of the desired satellite as per given task.		
20. Prepare technical report on suggested factors (customer demand, location of satellite, environmental factors, cable routing and quality of material) as given in Annexure A		
21. Obtain signature on agreement between customer and service provider		

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001089 Conduct Site Survey

Candidate Details	Name_____ Registration/Roll Number_____
Guidance for Candidate	**To meet this standard you are required to complete the following within 3Hrs (for practical demonstration & assessment):** **Perform survey for satellite dish installation and prepare report given in Annexure-A**
Time: 3Hrs	During a practical assessment, under observation by an assessor, you are required to

Minimum Evidence Required	**Perform survey for satellite dish installation and prepare report given in annexure- A** demonstrating the following criteria: 1. Enlist desired channels as per requirement. 2. Prepare estimated budget as per demand 3. Keep record of customer demand as per given format. 4. Ensure availability of desired channels at installation area as per standard. 5. Select appropriate place for dish installation as per customer demand 6. Ensure local regulation in installation area as per requirement. 7. Ensure obstruction-free area for dish installation as per standard. 8. Take weather history (wind pressure, humidity, temperature, rain and snow fall) of dish installation area as per standard. 9. Select best quality of dish and dish components as per wind pressure, snow fall and temperature 10. Ensure strong foundation for dish stand against wind pressure 11. Follow building rules and regulations for require task. 12. Draw layout for cable routing as per given task. 13. Measure length of cable as per job. 14. Identify cable gauge as per requirement. 15. Identify line amplifier if required as per given task. 16. Ensure tools and equipment as per requirement. 17. Identify East-West directions with compass as per given task. 18. Check availability of satellite as per customer demand in dish installation area 19. Identify dish size for the availability of strong signals of the desired satellite as per given task. 20. Prepare technical report on suggested factors (customer demand, location of satellite, environmental factors, cable routing and quality of material) as given in Annexure A 21. Obtain signature on agreement between customer and service provider.

Assessors Judgment Guide

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001089 Conduct Site Survey
Candidate Details	Name:_____ Registration/Roll Number: _____Signature: _____
Assessment Outcome	**COMPETENT** ☐ **NOT YETCOMPETENT** ☐ **Name of the Assessor**_____**Assessor's code:**_____ **Signature:**_____

Assessment Summary (to be filled by the assessor)							
Activity	**Method**					**Result**	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

Observation Checklist

Assessment Task	**Perform survey for satellite dish installation and prepare report in annexure A**

	During the practical assessment, candidate demonstrated the following:	**Yes**	**No**	**Remarks**
1.	Enlist desired channels as per requirement.			
2.	Prepare estimated budget as per demand			
3.	Keep record of customer demand as per given format.			
4.	Ensure availability of desired channels at installation area as per standard.			
5.	Select appropriate place for dish installation as per customer demand			
6.	Ensure local regulation in installation area as per requirement.			
7.	Ensure obstruction-free area for dish installation as per standard.			
8.	Take weather history (wind pressure, humidity, temperature, rain and snow fall) of dish installation area as per standard.			
9.	Select best quality of dish and dish components as per wind pressure, snow fall and temperature			
10.	Ensure strong foundation for dish stand against wind pressure			
11.	Follow building rules and regulations for require task.			
12.	Draw layout for cable routing as per given task.			
13.	Measure length of cable as per job.			
14.	Identify cable gauge as per requirement.			
15.	Identify line amplifier if required as per given task.			
16.	Ensure tools and equipment as per requirement.			
17.	Identify East-West directions with compass as per given task.			
18.	Check availability of satellite as per customer demand in			

	dish installation area			
19.	Identify dish size for the availability of strong signals of the desired satellite as per given task.			
20.	Prepare technical report on suggested factors (customer demand, location of satellite, environmental factors, cable routing and quality of material) as given in Annexure A			
21.	Obtain signature on agreement between customer and service provider			
Competent ☐		**Not Yet Competent** ☐		

Feedback to the Candidate
Candidate's Signature_____Assessor's Signature_____

Annexure A

General Information *(must be completed)*

Date when this survey was conducted _____

Approximate intended installation date _____

This site survey was conducted by:

Name: _____

Country: _____

Telephone: _____ **Mobile:** _____

Fax: _____

Email: _____

Customer Contact Details *(must be completed)*

Organization _____

Site Name: _____

Customer _____

_____

City: _____

Zip Code: _____

Country/State: _____

Telephone: _____

Fax: _____

Contact Name: _____

Telephone: _____ **Mobile:** _____

Fax: _____

Email: _____

Section 1: Preliminary Engineering Details

Site latitude: ° ' " **[N/S]** **Site longitude:** ° ' " **[E/W]**

_____ _____

To determine the site coordinates use a GPS. Please enter as degrees, minutes, seconds. Must be accurate to within approximately 20 miles / 30 Km .

Magnetic variation at site: **º [E/W]**

>> **Proposed Satellite & Orbital Slot:** _____ **°El:** _____ **°Az:** _____

Magnetic variation at site: **º [E/W]**

>> **Alternative Satellite & Orbital Slot:** **°El:** _____ **°Az:** _____

>> **Type of Service:** ☐ **C band** ☐ **Ku band**

>> **iDirect platform notes:** _____

Customer Interface: **Ethernet**

>> **Proposed Antenna size:** ☐ **<1.2m** ☐ **1.2m** ☐ **1.8m** ☐ **2.4m** ☐ **3.7m**

Section 2: Building / Site Information

Section 2 is designed to present information about the building/site. Look for the best possible location for placing the antenna system.

- **If the antenna system is to be placed on rooftop level using a standard non-penetrating mount, pay special attention to rooftop load capacity and rooftop composition. The total weights of a standard 2.4m antenna system incl. a non-penetrating mount and ballast is about 900 kg. This weight is spread over approximately 25m².**
- **If the antenna system is to be placed on ground level using either a standard non-penetrating mount or a pole mount, pay special attention to trench and/or conduit requirements.**

Proposed Antenna mount: ***(✓ check as applicable)***

Non-penetrating roof mount (NPRM)

If NPRM, can the roof support the weight (up to 2000Kg for 2.4m antenna)?

Non-penetrating ground mount (NPGM)

Ground level pole mount set in concrete

Ground level pole mount bolted to wall

Custom mount

Description / drawings of custom mount to be attached, if applicable.

Where is the building/site located: ☐ **Town (center)** ☐ **Outside Town**

Building external wall composition (*e.g. glass, brick, concrete, etc*):

Is the antenna easily visible to the public: ☐ **Yes** ☐ **No**

Is the antenna safe from unauthorized access: ☐ **Yes** ☐ **No**

Is sufficient roof / floor space available (*if roof mount is specified*): ☐ **Yes** ☐ **No**
(For 2.4m Antenna NPRM / NPGM at least 5m x 5m)

Is the roof / floor flat (maximum inclination 5°): ☐ **Yes** ☐ **No**

Roof / Soil composition:

Building electrical grounding available at the antenna position: ☐ **Yes** ☐ **No**

Lightning protection available : ☐ **Yes** ☐ **No**

Building/ site height: **Stories:** _____ **Height:** _____

Method of transporting dish to the roof: ☐ **By hands** ☐ **Elevator** ☐ **Crane**

Roof access: _____ **m^2**

Section 3: Expected Obstructions / Possible Interference

To complete Section 3 accurately is of vital importance to the performance of the future link. Pay the highest possible attention to obstructing elements including hills and mountains, anticipating future building construction, cranes, air traffic, growing trees, etc. Keep an adequate margin for azimuth and elevation angles to assure a clear view to the satellite.

Sight towards the satellite ***(As seen from the position of the antenna)*:** ☐ **Restricted** ☐ **Free**

If Restricted, ***please explain:*** _____

Interference by RF transmitters ***(GSM, radio, TV, microwave)*** ☐ **Yes** ☐ **No**

If Yes, ***indicate frequency and level [dBm]:*** _____

Interference by high voltage lines, power and telephone cables ☐ **Yes** ☐ **No**

Other possible sources for interference ***(fans, elevators, etc.)*** ☐ **Yes** ☐ **No**

Please use these symbols:

▯ = **Building**

✱ = **Trees**

△ = **Mountains / Hills**

⊙ = **Antennas (e.g. radio, GSM, etc)**

- - = **Overhead cables**

Please record position and height (clearly mark in meters) of obstructions and possible sources of interference relative to the VSAT installation position. Please label and provide photographs where possible.

Section 4: Electrical Wiring

Section 4 is designed for gathering information about the electrical wiring including inter facility (IFL) and customer interface cabling. Pay special attention to any cable ducts or trays, and wall/floor penetrations that may be required.

Standard in country voltage:
- ☐ **110-115 V, 60Hz**
- ☐ **220-240 V, 50 Hz**

Installation voltage: (will be used at the site)
- ☐ **110-115 V, 60Hz**
- ☐ **220-240 V, 50 Hz**

Primary electrical power source:
- ☐ **City power/ national grid**
- ☐ **Gas / diesel generator**
- ☐ **Solar / wind / hydro**

Typical length and frequency of average power outages (primary source):

Is the primary power source earthed? ☐ **Yes** ☐ **No**

Secondary electrical power source:
- ☐ **City power/ national grid**
- ☐ **Gas / diesel generator**
- ☐ **Solar / wind / hydro**

Is battery backup power to be provided? ☐ **Yes** ☐ **No**

Is a pure sine wave inverter already installed? ***(converts DC to AC power – must be adequate for 24/7 operation)*** ☐ **Yes** ☐ **No**

Is the voltage stabilized?
- ☐ **No**
- ☐ **Yes, relay stepped**

☐ **Yes, servo controlled**

Is good quality surge protection installed? ☐ **Yes** ☐ **No**

Who is installing / upgrading the electrical systems?

Will the antenna be equipped with a de-ice system: ☐ **Yes** ☐ **No**

Power connection available at the antenna: ☐ **Yes** ☐ **No**

Total length of cable run from antenna to indoor equipment: _____ **Meter/feet**

Trench and/or conduit required: ☐ **Yes** ☐ **No**

Has the building an existing cable entrance: ☐ **Yes** ☐ **No**

Do wall and floor penetrations have to be made: ☐ **Yes** ☐ **No**

By local law. What type of cable is required: ☐ **Non** ☐ ***Plenum** ☐ **No law**

***Plenum cable is designed to be installed in ventilation ducts and floor/ceiling cavities. It has a strong fire retardant coating.**

Section 5: Indoor Equipment

Section 5 covers the possible location of the indoor unit (IDU). Pay special attention to the environmental condition and security (access) of the location. The netmodem IDU is approximately W 30cm x D 30cm x H 5cm and weighs 3.5 Kg.

Give a brief description of the proposed location of the indoor equipment: ***(Please attach photograph)***

☐ **Computer room** ☐ **Telephone room** ☐ **Storage room**

☐ **Other** ***(please describe)*** _____

Can the indoor equipment be maintained within an acceptable operating temperature range (0ºC - 45ºC, 32ºF - 113ºF) ☐ **Yes** ☐ **No**

Is the IDU location safe from unauthorized access: ☐ **Yes** ☐ **No**

Is standard AC power available for the equipment: ☐ **Yes** ☐ **No**

Is an (existing) UPS (Uninterruptible Power Supply) available: ☐ **Yes** ☐ **No**

If Yes*, what's its capacity:* _____ **Can it be used for** ☐ **Yes** ☐ **No**

Distance between the IDU and the required Ethernet output **Meter/feet**

The interface cable between the IDU and customer's equipment is normally the responsibility of the customer.

Give a brief description of the environmental conditions of the IDU location:

☐ **Normal temperature** ☐ **Properly ventilated** ☐ **Air conditioned**

(See above)

Section 6: Miscellaneous

Shipping Address

Shipping Address is the same as the address in Customer Contact Details: ☐ **Yes** ☐ **No**

Address: _____

_____

City: _____

Zip Code: _____

Country/State: _____

Contact Name: _____

Telephone: _____

Fax: _____

Email:

Is there a secure place *on site* where equipment may be stored prior to installation: ☐ **Yes** ☐ **No**

Transport / Logistics issues

Please confirm method of transport from Port of entry to operating site

(This will ensure that these constraints are considered when equipment is specified.)

☐ **Road / Rail / Boat**

☐ **Small motorized vehicle**

☐ **Beast of burden** ***(camel, oxen, horse, sherpa, etc)***

☐ **Airplane / helicopter**

Specify the smallest aperture through which the packed equipment has to pass. ***(e.g. cargo door size on airplane: roof access door, etc.)***	Height **Meter/feet** Width **Meter/feet**

Communications at installation site

When the system is commissioned, it will be necessary to communicate with the NOC (Network Operations Center) in the USA. Please record all methods of <u>available and reliable</u> communications that will be available at the installation site.

POTS / PSTN (Normal dial-up telephone) service, with IDD (International Direct Dial) capability. Also able to receive international calls.	☐ **Yes** ☐ **No**
Dial-up internet service	☐ **Yes** ☐ **No**
GSM phone service	☐ **Yes** ☐ **No**
If Yes, specify frequency, (if known). Outside the USA, this is most likely to be 900 or 1800 MHz	☐ **850 MHz** ☐ **900 MHz** ☐ **1800 MHz** ☐ **1900 MHz**
If Yes, is the signal reliable at the installation site?	☐ **Yes** ☐ **No**
Satellite phone service and equipment	☐ **Yes** ☐ **No**
BGAN or similar portable satellite internet connection	☐ **Yes** ☐ **No**

Local Permit and License Issues

Is the customer the building owner:	☐ **Yes** ☐ **No**

Any special requirements for access to building/site: ☐ **Yes** ☐ **No**

Approval obtained for placing antenna on the roof/floor: ☐ **Yes** ☐ **No**

Transmit license required? ☐ **Yes** ☐ **No**

Receive license required? ☐ **Yes** ☐ **No**

Customer applied for and obtained all necessary permissions? ☐ **Yes** ☐ **No**

If not, estimated time needed to secure the permits/licenses: _____ **Days/weeks**

Section 7: Budgetary Costs not covered by the normal Agreement

---

Please indicate expected additional budgetary costs:

(This section would normally be used by DRASTIC staff.)

	Description	Budget
1		
2		
3		
4		
5		
6		
7		
	Total :	

Section 8: Remarks, Sketches, and Photographs

Since this form does not support the insert of pictures please create your own file and include as many photographs and/or sketches as necessary.

Please include whatever useful information is available such as:

- **Orientation of The Building;**
- **Antenna Location / Roof Plan;**
- **Satellite Arc View;**
- **Indoor Unit Location;**
- **Cable Run Layout;**
- **Any (Copies) of Constructional Drawings;**
- **Etc.**

If you expect any problems in reference to the mount construction, physical installation, permits, etc., please describe the problems precisely. Include as many details, drawings and/ or pictures:

Remarks

Signature of Site Surveyor: _____

Complete List of Tools, Equipment and Machines

- Marking punch
- Measuring tape
- Phase tester
- Spirit Level
- Vernier caliper
- Wire gauge
- Satellite Finder
- Multi-meter
- Digital Compass
- Wire Tester
- LAN Tester
- Emergency lamp
- Clamp meter.
- Bench voice.

Report format

Micrometers

Knowledge Assessment

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001089 Conduct Site Survey
Candidate Details	Name:_____ Registration/Roll Number: _____ Candidate Signature:_____
Assessment Outcome	**COMPETENT** ☐ **NOT YETCOMPETENT** ☐ Name of the Assessor:_____Assessor's code:_____ Signature of the Assessor:_____

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		**Satisfactory**	**Not Satisfactory**
1.	*Question*		
	Candidate's response		
2.			
3.			
4.			
5.			

6.			
7.			
8.			

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	
Competency Standards	0619001088 Perform Troubleshooting
Assessment Task	**Identify potential errors in Satellite dish and receiver**

I can…….

Performance Criteria	**Yes**	**No**
1. Check LNB with satellite finder as per given task.	☐	☐
2. Check co-axial cable continuity for signals with multi-meter/satellite finder as per standard.	☐	☐
3. Check Diseqc switch/splitter with satellite finder as per requirement	☐	☐
4. Check output down converter of receiver with multi-meter as per given task.	☐	☐
5. Check receiver power supply as per requirement	☐	☐
6. Check LNB power supply from receiver as per requirement	☐	☐
7. Check power supply of actuator stepper motor for revolving dish as per standard.	☐	☐
8. Check voltage of limit switches as per standard.	☐	☐
9. Check low voltage problem as per given task.	☐	☐
10. Check LNB/LNA overheating effects as per requirement.	☐	☐
11. Check rusty cables and connectors as per requirement.	☐	☐
12. Check short circuit of LNB/LNA due to thunder/lighting storm as given task.	☐	☐
13. Check wind effects as per given instructions.	☐	☐
14. Check no noisy signal in surrounding as per requirement.	☐	☐
15. Check no mobile tower in surrounding as per given task.	☐	☐
16. Check no high-tension transmission line as per standard rules.	☐	☐
17. Check no building/trees obstruction as per requirement.	☐	☐
18. Check unwanted signals due to reflection, refraction, diffraction and scattering to follow standard.	☐	☐
19. Check stuck picture fault as per given task.	☐	☐
20. Check if receiver/remote is not working as per standard.	☐	☐
21. Check if the receiver is on standby mode as per standard	☐	☐
22. Check receiver hang fault, (if any) as per standard	☐	☐
23. Check delay in sound &picture as per standard	☐	☐
24. Check stuck on the main menu (if any) as per standard	☐	☐

25. Check continuity of power cables as per requirement.	☐	☐
26. Check continuity of input/output cables (AV, VGA, HDMI, S-video, Scart) as per standard.	☐	☐
27. Check continuity of input/output ports as per standard.	☐	☐
28. Diagnose miss scanning fault as per requirement.	☐	☐
29. Diagnose auto change of channels as per requirement.	☐	☐
30. Diagnose receiver overheating fault as per standard.	☐	☐
31. Diagnose sound noise fault (if any) as per standard.	☐	☐

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency	0619001088 Perform Troubleshooting
Standard(s) Guidance for Candidate	**To meet this standard, you are required to complete the following within the given timeframe (for practical demonstration & assessment):** 1. Identify potential errors in Satellite dish and receiver.
Time: 60 min	During a practical assessment, under observation by an assessor, you are required to Identify **potential errors in Satellite dish and receiver** demonstrating the following criteria:
Minimum Evidence Required	1. Check LNB with satellite finder as per given task. 2. Check co-axial cable continuity for signals with multi-meter/satellite finder as per standard. 3. Check Diseqc switch/splitter with satellite finder as per requirement 4. Check output down converter of receiver with multi-meter as per given task. 5. Check receiver power supply as per requirement 6. Check LNB power supply from receiver as per requirement 7. Check power supply of actuator stepper motor for revolving dish as per standard. 8. Check voltage of limit switches as per standard. 9. Check low voltage problem as per given task. 10. Check LNB/LNA overheating effects as per requirement. 11. Check rusty cables and connectors as per requirement. 12. Check short circuit of LNB/LNA due to thunder/lighting storm as given task. 13. Check wind effects as per given instructions. 14. Check no noisy signal in surrounding as per requirement. 15. Check no mobile tower in surrounding as per given task. 16. Check no high-tension transmission line as per standard rules. 17. Check no building/trees obstruction as per requirement. 18. Check unwanted signals due to reflection, refraction, diffraction and scattering to follow standard. 19. Check stuck picture fault as per given task. 20. Check if receiver/remote is not working as per standard. 21. Check if the receiver is on standby mode as per standard 22. Check receiver hang fault, (if any) as per standard 23. Check delay in sound &picture as per standard 24. Check stuck on the main menu (if any) as per standard 25. Check continuity of power cables as per requirement. 26. Check continuity of input/output cables (AV, VGA, HDMI, S-video, Scart) as per standard. 27. Check continuity of input/output ports as per standard. 28. Diagnose miss scanning fault as per requirement. 29. Diagnose auto change of channels as per requirement. 30. Diagnose receiver overheating fault as per standard. 31. Diagnose sound noise fault (if any) as per standard.

Assessors Judgment Guide

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001088 Perform Troubleshooting
Candidate Details	Name:_____ Registration/Roll Number: _____Signature: _____
Assessment Outcome	**COMPETENT** ☐ **NOT YETCOMPETENT** ☐ **Name of the Assessor**_____**Assessor's code:**_____ **Signature:**_____

Assessment Summary (to be filled by the assessor)							
Activity	**Method**					**Result**	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

Observation Checklist

Assessment Task	**Identify potential errors in Satellite dish and receiver**

During the practical assessment, candidate demonstrated the following:		**Yes**	**No**	**Remarks**
1.	Checked LNB with satellite finder as per given task.			
2.	Checked co-axial cable continuity for signals with multi-meter/satellite finder as per standard.			
3.	Checked Diseqc switch/splitter with satellite finder as per requirement			
4.	Checked output down converter of receiver with multi-meter as per given task.			
5.	Checked receiver power supply as per requirement			
6.	Checked LNB power supply from receiver as per requirement			
7.	Checked power supply of actuator stepper motor for revolving dish as per standard.			
8.	Checked voltage of limit switches as per standard.			
9.	Checked low voltage problem as per given task.			
10.	Checked LNB/LNA overheating effects as per requirement.			
11.	Checked rusty cables and connectors as per requirement.			
12.	Checked short circuit of LNB/LNA due to thunder/lighting storm as given task.			
13.	Checked wind effects as per given instructions.			
14.	Checked no noisy signal in surrounding as per requirement.			
15.	Checked no mobile tower in surrounding as per given task.			
16.	Checked no high-tension transmission line as per standard rules.			
17.	Checked no building/trees obstruction as per requirement.			
18.	Checked unwanted signals due to reflection, refraction, diffraction and scattering to follow standard.			
19.	Checked stuck picture fault as per given task.			
20.	Checked if receiver/remote is not working as per standard.			
21.	Checked if the receiver is on standby mode as per standard			
22.	Checked receiver hang fault, (if any) as per standard			
23.	Checked delay in sound &picture as per standard			
24.	Checked stuck on the main menu (if any) as per standard			
25.	Checked continuity of power cables as per requirement.			
26.	Checked continuity of input/output cables (AV, VGA, HDMI, S-video, Scart) as per standard.			
27.	Checked continuity of input/output ports as per standard.			
28.	Diagnosed miss scanning fault as per requirement.			
29.	Diagnosed auto change of channels as per requirement.			
30.	Diagnosed receiver overheating fault as per standard.			
31.	Diagnosed sound noise fault (if any) as per standard.			

Competent ☐	**Not Yet Competent** ☐

Feedback to the Candidate

Candidate's Signature_____Assessor's Signature_____

Knowledge Assessment

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001088 Perform Troubleshooting
Candidate Details	Name:_____ Registration/Roll Number: _____ Candidate Signature:_____
Assessment Outcome	**COMPETENT** ☐ **NOT YETCOMPETENT** ☐ Name of the Assessor:_____Assessor's code:_____ Signature of the Assessor:_____

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		**Satisfactory**	**Not Satisfactory**
1.	*Question* *Candidate's response*		
2.			
3.			
4.			
5.			

6.			
7.			
8.			

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	
Competency Standards	0619001087 Plan Work
Assessment Task	Compile the information necessary for formulating a work plan for the installation of a satellite dish at the given site, using the proforma given in Annexure-A.

I can……

Performance Criteria	**Yes**	**No**
1. Inspect site visually as per requirement.	☐	☐
2. Communicate with site supervisor as per requirement.	☐	☐
3. Identify actual and potential hazards as per given site.	☐	☐
4. Identify equipment and attachments needed to do the job	☐	☐
5. Determine appropriate starting point as per requirement.	☐	☐
6. Identify access and exit points on site as per requirement.	☐	☐
7. Plan work procedures for efficiency, effectiveness and safety as per given task.	☐	☐
8. Sequence job tasks to co-ordinate activities with others as per given task.	☐	☐
9. Identify Emergency and Warning symbols as per given sheet.	☐	☐
10. Adopt emergency/warning symbols on site as per given task.	☐	☐
11. Interpret building drawings according to given requirement.	☐	☐
12. Interpret abbreviations and symbols common to Electrical/Electronics/Mechanical as per given drawing.	☐	☐
13. Follow drawings of gas and water supply lines as per given task.	☐	☐
14. Follow dish assembly time as per SOPs.	☐	☐
15. Make time schedule for cabling and connections as per given task.	☐	☐
16. Manage time for tuning as per given task.	☐	☐
17. Inspect cable layout for given task	☐	☐
18. Adopt satellite dish installation techniques as per service provider's SOPs.	☐	☐
19. Ensure best signal quality as per standard.	☐	☐
20. Ensure the workability of input/ output ports as per standard.	☐	☐
21. Ensure customer satisfactory feedback as per task.	☐	☐
22. Keep record of customer personal detail as per given instruction.	☐	☐
23. Keep record of dish installation as per relevant components	☐	☐
24. Keep record of customer complaints as per given task.	☐	☐

25. Provide instructional tags on main devices as per layout.		
26. Provide name tags on different cables as per layout.		

Candidate's Signature_____Assessor's Signature_____

Date: _____

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001087 Plan Work

Candidate Details	Name_____ Registration/Roll Number_____
Guidance for Candidate	**To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):** Compile the information necessary for formulating a work plan for the installation of a satellite dish at the given site, using the proforma given in Annexure-A.
Time: 120 mins	During a practical assessment, under observation by an assessor, you are required to compile the information necessary for formulating a work plan for the installation of a satellite dish at the given site, using the proforma given in Annexure-A, demonstrating the following criteria:
Minimum Evidence Required	1. Inspect site visually as per requirement. 2. Communicate with site supervisor as per requirement. 3. Identify actual and potential hazards as per given site. 4. Identify equipment and attachments needed to do the job 5. Determine appropriate starting point as per requirement. 6. Identify access and exit points on site as per requirement. 7. Plan work procedures for efficiency, effectiveness and safety as per given task. 8. Sequence job tasks to co-ordinate activities with others as per given task. 9. Identify Emergency and Warning symbols as per given sheet. 10. Adopt emergency/warning symbols on site as per given task. 11. Interpret building drawings according to given requirement. 12. Interpret abbreviations and symbols common to Electrical/Electronics/Mechanical as per given drawing. 13. Follow drawings of gas and water supply lines as per given task. 14. Follow dish assembly time as per SOPs. 15. Make time schedule for cabling and connections as per given task. 16. Manage time for tuning as per given task. 17. Inspect cable layout for given task 18. Adopt satellite dish installation techniques as per service provider's SOPs. 19. Ensure best signal quality as per standard. 20. Ensure the workability of input/ output ports as per standard. 21. Ensure customer satisfactory feedback as per task. 22. Keep record of customer personal detail as per given instruction. 23. Keep record of dish installation as per relevant components 24. Keep record of customer complaints as per given task. 25. Provide instructional tags on main devices as per layout. 26. Provide name tags on different cables as per layout.

Assessors Judgment Guide

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001087 Plan Work
Candidate Details	Name:_____ Registration/Roll Number: _____Signature: _____
Assessment Outcome	**COMPETENT** ☐ **NOT YETCOMPETENT** ☐ **Name of the Assessor**_____**Assessor's code:**_____ **Signature:**_____

Assessment Summary (to be filled by the assessor)

Activity	**Method**					**Result**	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

Observation Checklist

Assessment Task	Compile the information necessary for formulating a work plan for the installation of a satellite dish at the given site, using the proforma given in Annexure-A.

During the practical assessment, candidate demonstrated the following:		**Yes**	**No**	**Remarks**
1.	Inspected site visually as per requirement.			
2.	Communicated with site supervisor as per requirement.			
3.	Identified actual and potential hazards as per given site.			
4.	Identified equipment and attachments needed to do the job			
5.	Determined appropriate starting point as per requirement.			
6.	Identified access and exit points on site as per requirement.			
7.	Planned work procedures for efficiency, effectiveness and safety as per given task.			
8.	Sequenced job tasks to co-ordinate activities with others as per given task.			
9.	Identified Emergency and Warning symbols as per given sheet.			
10.	Adopted emergency/warning symbols on site as per given task.			
11.	Interpreted building drawings according to given requirement.			
12.	Interpreted abbreviations and symbols common to Electrical/Electronics/Mechanical as per given drawing.			
13.	Followed drawings of gas and water supply lines as per given task.			
14.	Followed dish assembly time as per SOPs.			
15.	Made time schedule for cabling and connections as per given task.			
16.	Managed time for tuning as per given task.			
17.	Inspected cable layout for given task			
18.	Adopted satellite dish installation techniques as per service provider's SOPs.			
19.	Ensured best signal quality as per standard.			
20.	Ensured the workability of input/ output ports as per standard.			
21.	Ensured customer satisfactory feedback as per task.			
22.	Kept record of customer personal detail as per given instruction.			
23.	Kept record of dish installation as per relevant components			
24.	Kept record of customer complaints as per given task.			
25.	Provided instructional tags on main devices as per layout.			
26.	Provided name tags on different cables as per layout.			

Competent ☐	**Not Yet Competent** ☐

Feedback to the Candidate
Candidate's Signature_____Assessor's Signature_____

Annexure – A

Information for formulating a work plan and post-installation assessment

Existing site hazards:
Potential site hazards:
List of tools, equipment and attachments needed for the job:
Give a basic installation diagram, identifying the Entry and Exit Points on site, choosing appropriate starting point and taking into account the drawings of the building, gas and water supply lines if necessary:
Schedule of tasks and procedures with time and proper sequence of installation:
List of emergency and warning symbols you consider necessary for the given task:
List down the steps you would take to ensure the quality of installation:

List down the necessary details of the installation that should to be recorded:
List of Instructional Tags for main devices:
List of Name tags for cables:

Knowledge Assessment

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001087 Plan Work
Candidate Details	Name:_____ Registration/Roll Number: _____ Candidate Signature:_____
Assessment Outcome	**COMPETENT** ☐ **NOT YET COMPETENT** ☐ Name of the Assessor:_____Assessor's code:_____ Signature of the Assessor:_____

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		**Satisfactory**	**Not Satisfactory**
1.	*Question* *Candidate's response*		
2.			
3.			
4.			
5.			
6.			
7.			
8.			

National Vocational Certificate level 1 to 4, Satellite Dish Installer (implement Network Security)

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	
Competency Standards	0619001086 Implement Network Security
Assessment Task	**Implement satellite dish Network as per instructions and Descramble five channels and apply parental lock on them.**

I can……..

Performance Criteria	**Yes**	**No**
1. Connect one dish with multiple receivers as per given task.	☐	☐
2. Connect multiple dishes with one receiver according to the standard.	☐	☐
3. Connect one receiver with multiple displays as per standard.	☐	☐
4. Connect multiple satellite receivers with multiple dishes as per standard rules.	☐	☐
5. Connect satellite receiver with internet through Wi-Fi or Ethernet cable as per instructor.	☐	☐
6. Connect receiver with multiple displays through video transmitter as per require specification.	☐	☐
7. Connect video transmitter with UHF/VHF antenna as per given task.	☐	☐
8. Connect satellite receiver with server as per given task.	☐	☐
9. Open receiver main menu as per manual.	☐	☐
10. Select desired cam for given task.	☐	☐
11. Insert card in the socket to descramble as per given task.	☐	☐
12. Open receiver main menu as per manual.	☐	☐
13. Select channel edit option as per given instructions.	☐	☐
14. Select parental lock option as per given instructions.	☐	☐
15. Change the default password as required.	☐	☐
16. Add channels in the parental lock as per given instructions.	☐	☐
17. Interpret government policy as per security protocols	☐	☐
18. Follow cyber rules and regulations for given task.	☐	☐

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001086 Implement Network Security

Candidate Details	Name_____ Registration/Roll Number_____
Guidance for Candidate	**To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):** **1. Implement satellite dish Network as per instructions and Descramble five channels and apply parental lock on them.** **2. Knowledge**
Time: 25 min	During a practical assessment, under observation by an assessor, you are required to **Implement satellite dish Network as per instructions** and **Descramble five channels and apply parental lock on them** demonstrating the following criteria:
Minimum Evidence Required	1. Connect one dish with multiple receivers as per given task. 2. Connect multiple dishes with one receiver according to the standard. 3. Connect one receiver with multiple displays as per standard. 4. Connect multiple satellite receivers with multiple dishes as per standard rules. 5. Connect satellite receiver with internet through Wi-Fi or Ethernet cable as per instructor. 6. Connect receiver with multiple displays through video transmitter as per require specification. 7. Connect video transmitter with UHF/VHF antenna as per given task. 8. Connect satellite receiver with server as per given task. 9. Open receiver main menu as per manual. 10. Select desired cam for given task. 11. Insert card in the socket to descramble as per given task. 12. Open receiver main menu as per manual. 13. Select channel edit option as per given instructions. 14. Select parental lock option as per given instructions. 15. Change the default password as required. 16. Add channels in the parental lock as per given instructions. 17. Interpret government policy as per security protocols 18. Follow cyber rules and regulations for given task.

Assessors Judgment Guide

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)

Competency Standard(s)	0619001086 Implement Network Security
Candidate Details	Name:_____ Registration/Roll Number: _____Signature: _____
Assessment Outcome	**COMPETENT** ☐ **NOT YETCOMPETENT** ☐ **Name of the Assessor**_____**Assessor's code:**_____ **Signature:**_____

Assessment Summary (to be filled by the assessor)							
Activity	**Method**					**Result**	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

Observation Checklist

Assessment Task	**Implement satellite dish Network as per instructions and Descramble five channels and apply parental lock on them.**

During the practical assessment, candidate demonstrated the following:		**Yes**	**No**	**Remarks**
1.	Connect one dish with multiple receivers as per given task.			
2.	Connect multiple dishes with one receiver according to the standard.			
3.	Connect one receiver with multiple displays as per standard.			
4.	Connect multiple satellite receivers with multiple dishes as per standard rules.			
5.	Connect satellite receiver with internet through Wi-Fi or Ethernet cable as per instructor.			
6.	Connect receiver with multiple displays through video transmitter as per require specification.			
7.	Connect video transmitter with UHF/VHF antenna as per given task.			
8.	Connect satellite receiver with server as per given task.			
9.	Open receiver main menu as per manual.			
10.	Select desired cam for given task.			
11.	Insert card in the socket to descramble as per given task.			
12.	Open receiver main menu as per manual.			
13.	Select channel edit option as per given instructions.			
14.	Select parental lock option as per given instructions.			
15.	Change the default password as required.			
16.	Add channels in the parental lock as per given instructions.			
17.	Interpret government policy as per security protocols			
18.	Follow cyber rules and regulations for given task.			

Competent ☐	**Not Yet Competent** ☐

Feedback to the Candidate
Candidate's Signature_____**Assessor's Signature**_____

Knowledge Assessment

Qualification	National Vocational Certificate level 1 to 4, in Electronics Sector (Satellite Dish Installer)
Competency Standard(s)	0619001086 Implement Network Security
Candidate Details	Name:_____ Registration/Roll Number: _____ Candidate Signature:_____
Assessment Outcome	**COMPETENT** ☐ **NOT YETCOMPETENT** ☐ Name of the Assessor:_____Assessor's code:_____ Signature of the Assessor:_____

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		**Satisfactory**	**Not Satisfactory**
1.	*Question*		
	Candidate's response		
2.			
3.			
4.			
5.			

6.			
7.			
8.			

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	National Vocational Certificate level -4, in Electronics Sector (Satellite Dish Installer) 0619 ICT 008
Competency Standards	• Contribute to Work Related Health and Safety (WHS) Initiatives • Analyze and Develop Workplace Policy and Procedures • Perform Advanced Communication • Develop Advance Computer Application Skills • Manage Human Resource Services • Develop Entrepreneurial Skills • Implement Network Security • Plan Work • Perform Troubleshooting • Conduct Site Survey
Assessment Task	**Plan and execute following by adopting proper health and safety rules** **a) Descramble five channels and apply parental lock on them.** **b) Conduct survey for satellite TV installation at costumer location and prepare feasibility report in Annexure A.** **c) Troubleshoot errors of LNB/LNA, and Diseqc switch.**

I can……

Performance Criteria	**Yes**	**No**
1. Use personal safety equipment as per requirement.	☐	☐
2. Keep record of customer demand as per given format.	☐	☐
3. Ensure availability of desired channels at installation area as per standard.	☐	☐
4. Select appropriate place for dish installation as per customer demand	☐	☐
5. Ensure local regulation in installation area as per requirement.	☐	☐
6. Ensure obstruction-free area for dish installation as per standard.	☐	☐
7. Take weather history (wind pressure, humidity, temperature, rain and snow fall) of dish installation area as per standard.	☐	☐
8. Select best quality of dish and dish components as per wind pressure, snow fall and temperature	☐	☐
9. Ensure strong foundation for dish stand against wind pressure	☐	☐
10. Follow building rules and regulations for require task.	☐	☐
11. Draw layout for cable routing as per given task.	☐	☐

12. Measure length of cable as per job.		
13. Identify cable gauge as per requirement.		
14. Identify East-West directions with compass as per given task.		
15. Check availability of satellite as per customer demand in dish installation area		
16. Identify dish size for the availability of strong signals of the desired satellite as per given task.		
17. Prepare technical report on suggested factors (customer demand, location of satellite, environmental factors, cable routing and quality of material) as given in Annexure A		
18. Select desired cam for given task.		
19. Insert card in the socket to descramble as per given task.		
20. Open receiver main menu as per manual.		
21. Select channel edit option as per given instructions.		
22. Select parental lock option as per given instructions.		
23. Change the default password as required.		
24. Add channels in the parental lock as per given instructions.		
25. Check LNB with satellite finder as per given task.		
26. Check LNB power supply as per requirement		
27. Check LNB/LNA overheating effects as per requirement		
28. Check short circuit of LNB/LNA due to thunder/lighting storm.		
29. Check physical condition Diseqc switch/splitter as per requirement		
30. Check voltage limit of Diseqc switch/splitter as per standard.		
31. Diagnose Diseqc switch/splitter overheating fault as per standard		
32. Prepare fault report of LNB/LNA and Diseqc switch/splitter in Annexure B.		

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate level 4, in Electronics Sector (Satellite Dish Installer) 0619 ICT 008
Competency Standard(s)	• Contribute to Work Related Health and Safety (WHS) Initiatives • Analyze and Develop Workplace Policy and Procedures • Perform Advanced Communication • Develop Advance Computer Application Skills • Manage Human Resource Services • Develop Entrepreneurial Skills • Implement Network Security • Plan Work • Perform Troubleshooting • Conduct Site Survey

<table>
<tr><td>Candidate Details</td><td>Name_____

Registration/Roll Number_____</td></tr>
<tr><td>Guidance for Candidate</td><td>To meet this standard you are required to complete the following within 4Hrs (for practical demonstration & assessment):

Plan and execute following by adopting proper health and safety rules

a) Conduct survey for satellite TV installation at customer location and prepare feasibility report in Annexure A.
b) Descramble five channels and apply parental lock on them.
c) Troubleshoot errors of LNB/LNA, Diseqc switch and prepare fault report in Annexure B.</td></tr>
<tr><td>Time: 4Hrs</td><td rowspan="2">During a practical assessment, under observation by an assessor, you are required to demonstrate the following criteria:

Conduct survey for satellite TV installation at costumer location and prepare

• Use personal safety equipment as per requirement.
• Keep record of customer demand as per given format.
• Ensure availability of desired channels at installation area as per standard.
• Select appropriate place for dish installation as per customer demand
• Ensure local regulation in installation area as per requirement.
• Ensure obstruction-free area for dish installation as per standard.
• Take weather history (wind pressure, humidity, temperature, rain and snow fall) of dish installation area as per standard.
• Select best quality of dish and dish components as per wind pressure, snow fall and temperature
• Ensure strong foundation for dish stand against wind pressure
• Follow building rules and regulations for require task.
• Draw layout for cable routing as per given task.
• Measure length of cable as per job.
• Identify cable gauge as per requirement.
• Identify East-West directions with compass as per given task.
• Check availability of satellite as per customer demand in dish installation area
• Identify dish size for the availability of strong signals of the desired satellite as per given task.
• Prepare technical report on suggested factors (customer demand, location of satellite, environmental factors, cable routing and quality of material) as given in Annexure A
Descramble five channels and apply parental lock on them.

• Select desired cam for given task.
• Insert card in the socket to descramble as per given task.
• Open receiver main menu as per manual.
• Select channel edit option as per given instructions.
• Select parental lock option as per given instructions.
• Change the default password as required.
• Add channels in the parental lock as per given instructions.
Troubleshoot errors of LNB/LNA, and Diseqc switch.</td></tr>
<tr><td>Minimum Evidence Required</td></tr>
</table>

	• Check LNB with satellite finder as per given task. • Check LNB power supply as per requirement • Check LNB/LNA overheating effects as per requirement • Check short circuit of LNB/LNA due to thunder/lighting storm . • Check physical condition Diseqc switch/splitter as per requirement • Check voltage of limit of Diseqc switch/splitter as per standard. • Diagnose Diseqc switch/splitter overheating fault as per standard • Prepare fault report of LNB/LNA and Diseqc switch/splitter in Annexure B.

Assessors Judgment Guide

Qualification	National Vocational Certificate level-4, in Electronics Sector(Satellite Dish Installer)
Competency Standard(s)	• Contribute to Work Related Health and Safety (WHS) Initiatives • Analyze and Develop Workplace Policy and Procedures • Perform Advanced Communication • Develop Advance Computer Application Skills • Manage Human Resource Services • Develop Entrepreneurial Skills • Implement Network Security • Plan Work • Perform Troubleshooting • Conduct Site Survey

Candidate Details	Name: _____ Registration/Roll Number: _____Signature: _____
Assessment Outcome	**COMPETENT** ☐ **NOT YETCOMPETENT** ☐ **Name of the Assessor**_____**Assessor's code:** _____ **Signature:** _____

Assessment Summary (to be filled by the assessor)							
Activity	**Method**					**Result**	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

Observation Checklist

Assessment Task	**Plan and execute following by adopting proper health and safety rules** **d) Descramble five channels and apply parental lock on them.** **e) Conduct survey for satellite TV installation at costumer location and prepare feasibility report in Annexure A.** **f) Troubleshoot errors of LNB/LNA, and Diseqc switch.**

During the practical assessment, candidate demonstrated the following:		**Yes**	**No**	**Remarks**
1.	Use personal safety equipment as per requirement.			
2.	Keep record of customer demand as per given format.			
3.	Ensure availability of desired channels at installation area as per standard.			
4.	Select appropriate place for dish installation as per customer demand			
5.	Ensure local regulation in installation area as per requirement.			
6.	Ensure obstruction-free area for dish installation as per standard.			
7.	Take weather history (wind pressure, humidity, temperature, rain and snow fall) of dish installation area as per standard.			
8.	Select best quality of dish and dish components as per wind pressure, snow fall and temperature			
9.	Ensure strong foundation for dish stand against wind pressure			
10.	Follow building rules and regulations for require task.			
11.	Draw layout for cable routing as per given task.			
12.	Measure length of cable as per job.			
13.	Identify cable gauge as per requirement.			
14.	Identify East-West directions with compass as per given task.			
15.	Check availability of satellite as per customer demand in dish installation area			
16.	Identify dish size for the availability of strong signals of the desired satellite as per given task.			

17.	Prepare technical report on suggested factors (customer demand, location of satellite, environmental factors, cable routing and quality of material) as given in Annexure A			
18.	Select desired cam for given task.			
19.	Insert card in the socket to descramble as per given task.			
20.	Open receiver main menu as per manual.			
21.	Select channel edit option as per given instructions.			
22.	Select parental lock option as per given instructions.			
23.	Add channels in the parental lock as per given instructions.			
24.	Check LNB with satellite finder as per given task.			
25.	Check LNB power supply as per requirement			
26.	Check LNB/LNA overheating effects as per requirement			
27.	Check short circuit of LNB/LNA due to thunder/lighting storm.			
28.	Check physical condition Diseqc switch/splitter as per requirement			
29.	Check voltage limit of Diseqc switch/splitter as per standard.			
30.	Diagnose Diseqc switch/splitter overheating fault as per standard			
31.	Prepare fault report of LNB/LNA and Diseqc switch/splitter in Annexure B.			
32.	Check short circuit of LNB/LNA due to thunder/lighting storm.			
Competent ☐		**Not Yet Competent** ☐		

Feedback to the Candidate
Candidate's Signature_____Assessor's Signature_____

Annexure A

General Information *(must be completed)*			
Date when this survey was conducted			
Approximate intended installation date			
This site survey was conducted by:			
Name:			
Country:			
Telephone:		**Mobile:**	
Fax:			
Email:			

Section 1: Preliminary Engineering Details									
Site latitude:	**°**	**'**	**"**	**[N/S]**	**Site longitude:**	**°**	**'**	**"**	**[E/W]**
To determine the site coordinates use a GPS. Please enter as degrees, minutes, seconds. Must be accurate to within approximately 20 miles / 30 Km .									
Magnetic variation at site:	**º [E/W]**								
>> Proposed Satellite & Orbital Slot:					**°El:**		**°Az :**		
Magnetic variation at site:	**º [E/W]**								
>> Alternative Satellite & Orbital Slot:					**°El:**		**°Az :**		
>> Type of Service:	☐ **C band**			☐ **Ku band**					

>> **iDirect platform notes:**					
Customer Interface:	**Ethernet**				
>> **Proposed Antenna size:**	☐ **<1.2m**	☐ **1.2m**	☐ **1.8m**	☐ **2.4m**	☐ **3.7m**

Section 2: Building / Site Information

Proposed Antenna mount: ***(✓ check as applicable)***	
Non-penetrating roof mount (NPRM)	
If NPRM, can the roof support the weight (up to 2000Kg for 2.4m antenna)?	
Non-penetrating ground mount (NPGM)	
Ground level pole mount set in concrete	
Ground level pole mount bolted to wall	
Custom mount	
Description / drawings of custom mount to be attached, if applicable.	

Where is the building/site located:	☐ **Town (center)**	☐ **Outside Town**
Building external wall composition (*e.g. glass, brick, concrete, etc*):		

Is the antenna easily visible to the public:	☐ **Yes**	☐ **No**
Is the antenna safe from unauthorized access:	☐ **Yes**	☐ **No**
Is sufficient roof / floor space available (*if roof mount is specified*):	☐ **Yes**	☐ **No**
(For 2.4m Antenna NPRM / NPGM at least 5m x 5m)		
Is the roof / floor flat (maximum inclination 5°):	☐ **Yes**	☐ **No**
Roof / Soil composition:		
Building electrical grounding available at the antenna position:	☐ **Yes**	☐ **No**
Lightning protection available :	☐ **Yes**	☐ **No**
Building/ site height: **Stories:**	**Height:**	
Method of transporting dish to the roof: ☐ **By hands**	☐ **Elevator**	☐ **Crane**
Roof access:		**m^2**

Section 3: Expected Obstructions / Possible Interference

Sight towards the satellite ***(As seen from the position of the antenna)*****:**	☐ **Restricted**	☐ **Free**
If Restricted, ***please explain:***		
Interference by RF transmitters ***(GSM, radio, TV, microwave)***	☐ **Yes**	☐ **No**
If Yes, ***indicate frequency and level [dBm]:***		
Interference by high voltage lines, power and telephone cables	☐ **Yes**	☐ **No**
Other possible sources for interference ***(fans, elevators, etc.)***	☐ **Yes**	☐ **No**

Section 4: Electrical Wiring

Section 4 is designed for gathering information about the electrical wiring including inter facility (IFL) and customer interface cabling. Pay special attention to any cable ducts or trays, and wall/floor penetrations that may be required.

Standard in country voltage:	☐ **110-115 V, 60Hz**
	☐ **220-240 V, 50 Hz**

Installation voltage: (will be used at the site)	☐ **110-115 V, 60Hz**		
	☐ **220-240 V, 50 Hz**		
Primary electrical power source:	☐ **City power/ national grid**		
	☐ **Gas / diesel generator**		
	☐ **Solar / wind / hydro**		
Typical length and frequency of average power outages (primary source):			
Is the primary power source earthed?	☐ **Yes**	☐ **No**	
Secondary electrical power source:	☐ **City power/ national grid**		
	☐ **Gas / diesel generator**		
	☐ **Solar / wind / hydro**		
Is battery backup power to be provided?	☐ **Yes**	☐ **No**	
Is a pure sine wave inverter already installed? ***(converts DC to AC power – must be adequate for 24/7 operation)***	☐ **Yes**	☐ **No**	
Is the voltage stabilized?	☐ **No**		
	☐ **Yes, relay stepped**		
	☐ **Yes, servo controlled**		
Is good quality surge protection installed?	☐ **Yes**	☐ **No**	
Who is installing / upgrading the electrical systems?			
Will the antenna be equipped with a de-ice system:	☐ **Yes**	☐ **No**	
Power connection available at the antenna:	☐ **Yes**	☐ **No**	
Total length of cable run from antenna to indoor equipment:		**Meter/feet**	
Trench and/or conduit required:	☐ **Yes**	☐ **No**	
Has the building an existing cable entrance:	☐ **Yes**	☐ **No**	
Do wall and floor penetrations have to be made:	☐ **Yes**	☐ **No**	
By local law. What type of cable is required: ☐ **Non**	☐ ***Plenum**	☐ **No law**	

Section 5: Indoor Equipment

Give a brief description of the proposed location of the indoor equipment: ***(Please attach photograph)***

☐ **Computer room**	☐ **Telephone room**	☐ **Storage room**	
☐ **Other** ***(please describe)***			

Can the indoor equipment be maintained within an acceptable operating temperature range (0ºC - 45ºC, 32ºF - 113ºF)	☐ **Yes**	☐ **No**
Is the IDU location safe from unauthorized access:	☐ **Yes**	☐ **No**
Is standard AC power available for the equipment:	☐ **Yes**	☐ **No**
Is an (existing) UPS (Uninterruptible Power Supply) available:	☐ **Yes**	☐ **No**
If Yes*, what's its capacity:*	**Can it be used for**	☐ **Yes** ☐ **No**

Distance between the IDU and the required Ethernet output _____ **Meter/feet**

The interface cable between the IDU and customer's equipment is normally the responsibility of the customer.

Give a brief description of the environmental conditions of the IDU location:		
☐ **Normal temperature** ***(See above)***	☐ **Properly ventilated**	☐ **Air conditioned**

Section 8: Remarks, Sketches, and Photographs

Since this form does not support the insert of pictures please create your own file and include as many photographs and/or sketches as necessary.

Please include whatever useful information is available such as:

- **Orientation of The Building;**
- **Antenna Location / Roof Plan;**
- **Satellite Arc View;**
- **Indoor Unit Location;**
- **Cable Run Layout;**
- **Any (Copies) of Constructional Drawings;**
- **Etc.**

Remarks

Signature of Site Surveyor: _____

Annexure B:

FAULT REPORT FOR SATELLITE TV

Please complete all fields marked*

1. Customer Information

Customer reference/Fault report no.

Report date*

Customer* **Area*** **Network***

Fault date*

Reported by* **Phone*** **Mobile***

2. Installation, product and fault description

Product name* **Station no (e.g switch id)*** **Serial no.*** **Fault report no.**

Full description of the fault and any further useful information*	
Installation description: (Equipment primary and secondary voltage etc.)	
Measures taken by the customer/Other remarks	

3. Actions taken

Received by **Date** **Sent to SE** **Date** **Received by (SE)**

Guarantee commitment

-

Replacement sent to no of replacement _ **Serial customer**

If no, customer informed

Any other measur es taken Probabl e cause of failure

Signature **Date**

Issue classification -

Measures taken or necessary to rectify the fault

Customer **Customer agrees to** **Date** **Scrapped**

- - -

4. Invoice information

Exch ange

d **com** **pone** **nts** **Man** **hour** **s (h)**

Complete List of Tools, Equipment and Machines

- Marking punch
- Measuring tape
- Phase tester
- Spirit Level
- Vernier caliper
- Wire gauge
- Satellite Finder
- Multi-meter
- Digital Compass
- Wire Tester
- LAN Tester
- Emergency lamp
- Clamp meter.
- Bench voice.

Report format

Micrometers

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