



# Assessment of Inadequate Reception of Broadcasting Services (Out-of-Area Reception)

# Form ACMA B58

## About this form:

- This form should be used when a commercial or community broadcasting licensee is seeking permission to broadcast or retransmit its television or radio broadcasting service into another nominated licence area pursuant to clause 7(2A)(d), 8(3)(d) or 9(2A)(d) of Schedule 2 to the *Broadcasting Services Act 1992*. This is referred to as 'out-of-area reception'.
- ACMA will not accept applications directly from antenna installers/technicians or viewers/listeners. Individuals seeking out-of-area reception must contact the broadcasting licensee who would provide the out-of-area service.
- Please read the explanatory notes before completing this form.
- The statutory declaration which is part of this form must be completed and submitted with the application.
- Giving false or misleading information is a serious offence.
- A separate form is required for each service.
- Please print clearly. Unclear or incomplete applications may delay processing.

### Disclosure of personal details:

- As part of the approval procedure, ACMA may disclose the business details of the broadcaster making the application to the licensed broadcaster of the nominated area. Any objections to this disclosure should be included in this application.

### Please note:

1. If reception of the digital version of local television services is adequate, ACMA may not grant approval for out-of-area reception.

### Definitions – Out-of-area:

- The term 'applicant broadcaster' in this form means the commercial or community broadcasting licensee who is seeking permission to broadcast its service outside its designated licence area.
- The term 'licensed broadcaster' in this form means a commercial or community broadcasting licensee who is licensed to provide a broadcast service in the licence area nominated within this form.

If you need any more information about the definitions, please contact ACMA.

### When to send this form:

- An applicant broadcaster is requested to submit the application at least 4 – 6 weeks before the proposed commencement of the service.

### Where to send this form:

The applicant broadcaster is to send this form to:

Broadcast Planning Branch  
Australian Communications and Media Authority  
PO Box 34  
BELCONNEN ACT 2616  
Tel: (02) 9334 7700  
1800 810 241  
Fax: (02) 6253 3277  
Email: [broadcasting@acma.gov.au](mailto:broadcasting@acma.gov.au)

### Further Information:

- Please telephone 1800 810 241 or (02) 9334 7700.
- A blank application form and the explanatory notes are also available on ACMA website: [www.acma.gov.au](http://www.acma.gov.au)

## ACMA use only

Application Number	Site Number	Regional/Metropolitan	Approved/ Not Approved
--------------------	-------------	-----------------------	------------------------

**THIS SECTION TO BE COMPLETED BY APPLICANT BROADCASTER**

**Section 1: Applicant broadcaster's details**

Business name	
Postal address	
Contact person	Email
Telephone	Fax
Signature of applicant broadcaster	Date:

**Section 2: Nominated site details**

Contracting technician/company	
Telephone number	
Site location/address	Nearest town/centre

**Section 3: Proposed service details**

Service to be transmitted	Imparja <input type="checkbox"/> Seven Central <input type="checkbox"/> GWN <input type="checkbox"/> WIN <input type="checkbox"/> Other <input type="checkbox"/> Please state name or callsign .....
---------------------------	--

**THIS SECTION TO BE COMPLETED BY BROADCAST ENGINEER/ANTENNA TECHNICIAN/ELECTRONICS TECHNICIAN**

**Section 4: Satellite receiving equipment (optional)**

Model
Serial number
Smart card number

**THIS SECTION TO BE COMPLETED BY VIEWER/LISTENER**

**Section 5: Viewer/listener agreement**

Viewer/Listener's Name.....

Postal address.....

Telephone.....

Email  
(if available).....

I have been provided with information about the estimated costs of equipment required to receive the out-of-area service. YES                  NO

I have been informed about the availability of digital television services in my area. YES                  NO

[If digital transmissions of any of the television services for your area have commenced].

I have been provided with information about the estimated costs of equipment required to access the digital version of television services for my area. YES                  NO

**Please note the following:**

- **Disclosure of personal details:**

As part of the approval procedure, ACMA will disclose your address to the licensed broadcaster or broadcasters of the nominated area to provide the broadcaster or broadcasters with an opportunity to undertake an independent assessment of reception quality.

- **Entitlement to receive out-of-area service**

ACMA must approve this application before you will be entitled to receive the out-of-area service.

**Signature of viewer/listener**.....**Dated**.....

**THIS SECTION TO BE COMPLETED BY BROADCAST ENGINEER/ANTENNA TECHNICIAN/ELECTRONICS TECHNICIAN**

**Section 6: Assessment of analog reception quality**

*Television and FM radio reception to be measured using a dedicated antenna 10 metres above ground level*

<b>Local terrestrial licence area</b>			
(Services licensed in the area)	<b>Local service 1</b>	<b>Local service 2</b>	<b>Local service 3</b>
Callsign			
Channel (TV only)			
Frequency			
Main transmission site			
Antenna brand/model used for test			
Antenna gain			
Cable type used for test			
Cable length and loss			
Masthead amplifier brand/model (if used)			
Masthead gain			
Measured terminal voltage in dB $\mu$ V ( <b>Analog/PAL</b> )			
Field Strength meter make/model used			
Calculated Field strength in dB $\mu$ V/m ( <b>Analog/PAL</b> )			
ITU picture quality Grade (Analog TV only)*			
Short description of analog reception in words and of likely reasons for the lack of adequate reception			

\*Reference: ITU Picture Quality Scale for Analog reception assessment

ITU Grade	Picture Quality	Impairment
5	Excellent	Imperceptible
4	Good	Perceptible
3	Fair	Slightly annoying
2	Poor	Annoying
1	Bad	Very annoying

**For Television applications only:**

Are one or more of the licensed broadcasters providing their services in digital mode in this area?

Yes

No

If yes, please provide the following information:

**Section 7: Assessment of digital reception quality**

*Digital television reception to be measured using a digital set-top box*

Local terrestrial licence area			
(Services licensed in the area)	Local service 1	Local service 2	Local service 3
Callsign			
Channel (TV only)			
Frequency			
Main transmission site			
Measured terminal voltage in dB $\mu$ V			
Field strength meter make/model used			
Calculated Field strength in dB $\mu$ V/m			
Short description of digital reception in words and of likely reasons for the lack of adequate reception			

Is digital receiving equipment commonly available in this area?

Yes

No

If no, please explain you consider that such equipment is not commonly available in this area:

# COMMONWEALTH OF AUSTRALIA

## Statutory Declaration

### TO BE COMPLETED BY BROADCAST ENGINEER/ANTENNA TECHNICIAN/ELECTRONICS TECHNICIAN

I,	_____ of _____
Address	(Name of person making the declaration)
	Postcode
Occupation	Telephone

do solemnly and sincerely declare that:

1. I am qualified as	a broadcast engineer <input type="checkbox"/> an antenna technician <input type="checkbox"/> an electronics technician <input type="checkbox"/>
2. I conducted an assessment of reception quality on behalf of	(Name of applicant broadcaster)

at the following location:

Address	_____
	Postcode

3. The details in Sections 6 and 7 of the attached form 'Assessment of Inadequate Reception of Broadcasting Services' are true and correct.

And I make this solemn declaration by virtue of the *Statutory Declarations Act 1959*, and subject to the penalties provided by that Act for the making of false statements in statutory declarations, conscientiously believing the statements contained in this declaration to be true in every particular.

\_\_\_\_\_  
(Signature of person making the declaration)

Declared at \_\_\_\_\_ the \_\_\_\_\_ day of \_\_\_\_\_

Before me,

\_\_\_\_\_  
(Signature of person before whom the declaration is made)

\_\_\_\_\_  
(Title of person before who the declaration is made)

## Persons before whom a Statutory Declaration may be made

### Part 1 – Members of Certain Professions

Chiropractor	Patent attorney
Dentist	Pharmacist
Legal practitioner	Physiotherapist
Medical practitioner	Psychologist
Nurse	Veterinary surgeon

### Part 2 – Other Persons

- Agent of the Australian Postal Corporation who is in charge of an office supplying postal services to the public
- Australian Consular Officer, or Australian Diplomatic Officer, (within the meaning of the *Consular Fees Act 1955*)
- Bailiff
- Bank officer with 5 or more years of continuous service
- Building society officer with 5 or more years of continuous service
- Chief executive officer of a Commonwealth Court
- Civil marriage celebrant
- Clerk of a court
- Commissioner for Affidavits
- Commissioner for Declarations
- Credit union officer with 5 or more years of continuous service
- Employee of the Australian Trade Commission who is:
  - (a) in a country or place outside Australia; and
  - (b) authorised under paragraph 3(d) of the *Consular Fees Act 1955*; and
  - (c) exercising his or her function in that place
- Employee of the Commonwealth who is:
  - (a) in a country or place outside Australia; and
  - (b) authorised under paragraph 3(d) of the *Consular Fees Act 1955*; and
  - (c) exercising his or her function in that place
- Fellow of the National Tax Accountants' Association
- Holder of a statutory office not specified in another item in this Part
- Judge of a court
- Justice of the Peace
- Magistrate
- Master of a court
- Member of the Australia Defence Force who is:
  - (a) an officer; or
  - (b) a non-commissioned officer within the meaning of the *Defence Force Discipline Act 1982* with 5 or more years of continuous service; or
  - (c) warrant officer within the meaning of that Act
- Member of the Institute of Chartered Accountants in Australia, the Australian Society of Certified Practising Accountants or the National Institute of Accountants
- Members of the Institute of Corporate Managers, Secretaries and Administrators
- Member of the Institution of Engineers, Australia, other than at the grade of student
- Member of:
  - (a) the Parliament of the Commonwealth; or
  - (b) the Parliament of a State; or
  - (c) a Territory legislature; or
  - (d) a local government authority of a State or Territory
- Minister of religion registered under Division 1 of Part IV of the *Marriage Act 1961*
- Notary public
- Permanent employee of:
  - (a) the Commonwealth or of a Commonwealth authority; or
  - (b) a State or Territory or of a State or Territory authority; or
  - (c) a local government authority;
 with 5 or more years of continuous service who is not specified in another item in this Part.
- Permanent employee of the Australian Postal Corporation with 5 or more years of continuous service who is employed in an office supplying postal services to the public
- Person before whom a statutory declaration may be made under the law of the State or Territory in which the declaration is made
- Police Officer
- Registrar, or Deputy Registrar, of a court
- Senior Executive Service officer of the Commonwealth, or of a State or Territory, or of a Commonwealth, State or Territory authority
- Sheriff
- Sheriff's officer
- Teacher employed on a full-time basis at a school or tertiary education institution.

# **POLICY GUIDELINES AND FREQUENTLY ASKED QUESTIONS FOR OUT-OF-AREA RECEPTION OF TELEVISION AND RADIO SERVICES**

## **Legislative Background**

In accordance with Schedule 2 to the *Broadcasting Services Act 1992* (the Act), a commercial or community broadcasting licensee may transmit its service outside of its licence area under certain conditions. In relation to clauses 7(2A)(d), 8(3)(d) and 9(2A)(d), these conditions are:

- (i) that a person in another licence area is not receiving adequate reception of a service within that other licence area;
- (ii) the out-of-area service is provided to that person only to the extent necessary to ensure adequate reception of that service by that person; and
- (iii) ACMA has given permission in writing.

This is referred to in these guidelines as out-of-area reception.

## ***Licence Areas***

A licence area is the area within which a licensee is entitled to provide a service. All commercial and community broadcasting services have designated licence areas. National services do not have designated licence areas.

## ***Who Can Apply***

Commercial television and radio, and community radio broadcasting licensees may seek ACMA permission to broadcast their services outside their licence areas.

In these guidelines, the term ‘applicant broadcaster’ means the commercial or community broadcasting licensee who is seeking permission to broadcast its service outside its designated licence area. The term ‘licensed broadcaster’ means a commercial or community broadcasting licensee who is licensed to provide a broadcast service in the other licence area.

## **Approval Procedure**

Permission for out-of-area reception is only granted for genuine cases in which people do not receive adequate reception of local planned broadcasting services. The application form requests information that will assist ACMA to examine each application for this purpose.

In relation to the reception of television services, ACMA notes that digital commercial television broadcasting is becoming available in many areas of Australia. On and from 1 November 2002 ACMA requires that analog and digital television signals be tested in those areas where digital transmission has commenced. Where an adequate digital signal is shown to be available, ACMA is likely to find there is adequate reception of the local services. The availability of an adequate digital signal is likely to prevent permission being granted for out-of-area reception.

Where digital services will be available in a licence area within 3 months of the date of receipt of an application for out-of-area reception, ACMA may defer consideration of the application until the digital services have been introduced and assessed.

### ***Completing the Application Form***

- a) The affected Viewer/Listener will complete Section 5 and sign and date.
- b) The broadcast engineer/antenna technician or electronics technician employed by the applicant broadcaster will undertake a technical assessment of the level of reception at the site, Sections 6 and 7, and attach a **statutory declaration** (see attached form)

A measurement of field strength and reception quality. (For analog TV and FM radio: measurement at 10 metres above ground level, using a dedicated antenna):<sup>1</sup>

- (i) **(analog television only)** an assessment of analog reception quality against the International Telecommunications Union (ITU-R) five-point picture quality (PQ) scale;<sup>2</sup>
- (ii) a description of the reception for the affected channels (for example 'Channel 9: severe ghosting and no sound');
- (iii) the likely reason for the lack of adequate reception;
- (iv) the equipment and techniques used in taking the signal measurements;
- (v) confirmation that an adequate digital service is or is not presently available at the location nominated; and
- (vi) a description of the digital reception.

The broadcast engineer/antenna technician should also complete Section 4 on the satellite receiving equipment.

- c) The broadcaster will complete Section 1, 2 and 3 of the form, *Assessment of Inadequate Reception of Broadcasting Services*.
- d) In the case of television, if digital terrestrial transmissions are operating in an area, the broadcaster is required to inform the viewer of the costs of satellite receiving equipment compared to digital terrestrial television standard definition receiving equipment, including set top boxes.

### ***Assessing the Application***

The following procedure will apply for out-of-area reception applications:

- a) The applicant broadcaster will submit to ACMA the application for permission to broadcast its service outside its licence area to a nominated location.
- b) ACMA will assess the applicant broadcaster's application. ACMA will then notify the licensed broadcaster or broadcasters of the application and allow the licensed broadcaster or broadcasters 28 days to register any objections to ACMA granting permission including any evidence that adequate digital reception is, or will shortly be, provided at the location nominated.
- c) If ACMA has consulted a licensed broadcaster in relation to a location and then receives a second application for the same location which contains the same evidence of reception quality at that location and there are no other relevant changes in circumstances affecting reception at that location,

---

<sup>1</sup> A level below the minimum field strength in dBµV/m, as defined in clause 60 and 78 of ACMA's *Technical Planning Guidelines* and Part 5C of ACMA's *Technical Planning Parameters*, will be considered as 'not receiving adequate reception'.

<sup>2</sup> A rating below '3' will be considered as 'not receiving adequate reception'.

ACMA will not consult again on the issue of reception quality at that location before deciding whether to grant permission. However, ACMA will have regard to any objections previously received concerning reception quality at that location when considering the second application.

- d) ACMA will consider any objections before making a decision to give or not to give permission.
- e) ACMA will inform, in writing:
  - (i) the applicant broadcaster who applied to provide the service; and
  - (ii) the licensed broadcaster(s);of its decision.
- f) Reasons for ACMA's decision will be provided with the decision.

### Appeal Procedures

Decisions of ACMA under clauses 7(2A), 8(3) and 9(2A) of Schedule 2 to the Act are reviewable by the Administrative Appeals Tribunal (AAT). An application to the AAT for the review of a decision may be made by:

- a licensed broadcaster in relation to a decision of ACMA granting permission for out-of-area transmission; or
- the applicant broadcaster in relation to a decision of ACMA refusing permission for out-of-area transmission.

### For more information:

ACMA contact number: (02) 9334 7700 or  
Free call: 1800 810 241

Email: [planning@acma.gov.au](mailto:planning@acma.gov.au)

Internet: [www.acma.gov.au](http://www.acma.gov.au)

**November 2002**

---

## FREQUENTLY ASKED QUESTIONS

### Q1. Why is a technical assessment of the broadcasting service reception quality required?

In accordance with Schedule 2 to the *Broadcasting Services Act 1992* (the Act), a commercial or community broadcasting licensee may transmit its service outside of its licence area under certain conditions.<sup>3</sup> In relation to clauses 7(2A)(d), 8(3)(d) and 9(2A)(d), these conditions are:

- that a person in another licence area is not receiving adequate reception of a service within that licence area;
- the out-of-area service is provided to that person only to the extent necessary to ensure adequate reception of that service by that person; and
- ACMA must have given permission in writing.

Services affected by these provisions include commercial television and radio, and community broadcasting.

---

<sup>3</sup> The complete Broadcasting Services Act is available online at <http://scaleplus.law.gov.au/html/pasteact/0/136/top.htm>.

ACMA therefore requires a technical assessment of whether the reception of broadcasting services provided in the relevant licence area is inadequate in order to consider whether or not to approve the transmission of a broadcasting service outside of its licence area.

## **Q2. How can I assess whether the reception of a broadcasting service is inadequate?**

The level and quality of the broadcasting services at the customer's premises needs to be assessed using a suitable antenna, cable and measuring receiver. The reception assessment, measurement results and factors used in the calculation of the received field strength need to be recorded and forwarded by the broadcaster to ACMA on the "Assessment of inadequate reception of broadcasting services" proforma.

## **Q3. What is an adequate analog quality of service?**

ACMA specifies a minimum acceptable grade of service by defining a minimum median field strength in the absence of interference from other services, ghosting, man-made noise or other sources. The minimum median field strength is the field strength exceeded at 50% of locations, 50% of the time, in an area of approximately 200 metres by 200 metres.

For the purposes of assessing the reception quality of broadcasting services for permission for out-of-area reception, ACMA accepts that measured field strengths below the value listed in the following table are inadequate.

<b>Band</b>	<b>Channel or frequency</b>	<b>Minimum median analog field strength</b>	<b>Minimum median digital field strength</b>
AM radio	Every 9 kHz from 531 kHz to 1602 kHz	0.5 mV/m (54 dB $\mu$ V/m) <sup>4</sup>	N/A
FM radio	Every 200 kHz from 88.1 kHz to 107.9 kHz	54 dB $\mu$ V/m	N/A
TV – Band I	0, 1, 2	50 dB $\mu$ V/m	44 dB $\mu$ V/m
TV – Band II	3, 4, 5	50 dB $\mu$ V/m	44 dB $\mu$ V/m
TV – Band III	5A, 6, 7, 8, 9, 9A, 10, 11,12	50 dB $\mu$ V/m	44 dB $\mu$ V/m
TV – Band IV	28-35	62 dB $\mu$ V/m	50 dB $\mu$ V/m
TV – Band V	36-69	67 dB $\mu$ V/m	54 dB $\mu$ V/m

The minimum median field strength is a statistical target value that will provide an acceptable grade of service when received with a notional receiver environment in the absence of interference, ghosting and man-made noise. Therefore, reception may be considered inadequate at field strengths higher than those listed in the table above where interference from other services, ghosting, man-made noise or other sources is present.

## **Q4. How do I measure the field strength at a customer's premises?**

The field strength of a television or FM radio service is measured using a typical consumer antenna, of known gain, suitable for reception of the service being measured. The antenna is raised to a 10 metre height and rotated for the best reception.

The field strength is either read directly from a field strength meter, into which the antenna gain and system losses have been entered as an antenna calibration factor (often known as the k-factor), or calculated from the measured terminal voltage and system gains and losses. A spectrum analyser can be used to measure the terminal voltage as the peak sync tip voltage of the vision carrier of the television service.

<sup>4</sup> For AM services this is the protected field strength in the presence of man-made radio noise alone.

**Q5. Why should I measure the field strength at an antenna height of 10 metres when few people have antennas of this height?**

An internationally agreed height of 10 metres is used for measuring field strengths. Measurements at this height are statistically repeatable. The majority of viewers get adequate pictures with lower antenna heights, however, some viewers may require an antenna at a height of 10 metres to obtain adequate reception.

**Q6. Do I need to fill in all the information?**

ACMA will return applications to broadcasters that do not contain all the information requested. The information is required so that ACMA can ascertain, as required by the legislation, whether reception is inadequate. The more information that can be provided on the quality of reception and why it is considered inadequate the better.

**Q7. What do the fields in the application form mean?**

The following table gives a description of fields in the application proforma.

<b>Proforma Field/s</b>	<b>Definition</b>
Applicant	This part is to provide details of the applicant broadcaster.
Nominated site details	The name of the transmission site, eg. Mt Alexander.
Services proposed for reception	The relevant services to be received if permission is given. eg Imparja and Central Seven.
Satellite Receiving Equipment	This part is optional to complete as the viewer or listener may chose not to purchase the necessary equipment until permission is given to receive an out-of-area service.
Viewer/listener Agreement	The part is to provide details of the viewer or listener and precise physical location.
Broadcasting licence area(s)	The licence area within which the viewer or listener resides e.g. Sydney licence area.
Services licensed in the area	The services which the viewer or listener is entitled to receive, but not including national services.
Commercial terrestrial broadcast service	The callsign or operator and channel of the service being measured – e.g. WIN32.
Channel and Frequency (TV) or Frequency (radio)	The television channel and vision carrier being measured or the radiofrequency being measured.
Measured terminal voltage in dB $\mu$ V (Analog /PAL & digital)	This is the principal measurement of signal level. It does not readily relate to planned television coverage. In some cases no discernible signal can be measured. Rather than stating a measured voltage of 0 dB $\mu$ V, the sensitivity limit of the field strength meter should be indicated, e.g. < 20 dB $\mu$ V.
Antenna used – Brand, model and gain	Brand, model and gain of antenna used to measure and assess the service reception. This allows ACMA to determine whether an appropriate antenna has been used. For television, the estimated antenna gain with respect to a dipole at the frequency being measured, is 2.1 dB less than the antenna gain with respect to an isotropic radiator, dBi. The gain can be measured, although not easily, or estimated from manufacturers' specifications.
Cable used – Type, length and loss	Type, length and loss in the length of cable used to measure and assess the service reception. This allows ACMA to determine whether an appropriate cable has been used. The loss for the length used should preferably be measured, but can be calculated from the cable specifications.
Masthead amplifier (if used) – Brand, model, gain	The minimum median field strength is defined for a notional receiver installation which does not include a masthead amplifier. If an amplifier is used to make the measurement then details of the amplifier are required. Amplifier gain can be measured by measuring the difference between terminal voltage at the measurement frequency with the amplifier in and out of circuit.
Calculated Field Strength in dB $\mu$ V/m (Analog/PAL & Digital)	The field strength is independent of the reception environment and relates to the planned coverage. See question Q8 for the formula used to calculated the analog field strength. The field strength alone does not indicate whether coverage is inadequate for analog or digital.
ITU Picture Quality Grade (analog PAL television only)	See question Q9.

Short description of analog reception in words (eg 'No picture', 'Severe ghosting', 'inaudible') and likely reason ('behind hill', 'impulse noise', 'dense vegetation')* [For AM Radio: please provide description of day and night time reception]	The more information that can be provided on the quality of reception and why reception is considered inadequate the better.
Short description of digital reception in words if available (eg signal drop outs, artefacts, poor bit error rate)	The more information that can be provided on the quality of reception and why reception is considered inadequate the better.
Field strength meter – Make and model	Make and model of instrument used to measure the field strength or terminal voltage. This includes spectrum analysers. This allows ACMA to determine whether an appropriate measuring device has been used.

### Q8. What is the formula for calculating analog field strength?

The field strength formula for a television or FM radio service is:

$$E = V + K$$

Where E is the field strength in dB $\mu$ V/m;

V is the terminal voltage or peak sync tip voltage of the vision carrier in dB $\mu$ V; and

K is the antenna factor for the channel being measured.

The antenna factor, K, is frequency dependant and incorporates all the gains and losses in the system.

$$K = F - G_a - G_d + L_c - Z - C$$

Where F is the measurement frequency in dB relative to 1 MHz, i.e.  $F = 20\log[f \text{ (MHz)}]$ ;

$G_a$  is amplifier gain in dB, if an amplifier is in circuit;

$G_d$  is antenna gain in dB relative to a dipole, this is 2.1 dB less than the gain relative to an isotropic radiator,  $G_i$ ;

$L_c$  is cable loss in dB; and

Z is the system impedance in dB, typically  $Z = 10.\log(75) = 18.8$ ; and

C is a constant, 14.9 dB, which corrects for the units used and converts the voltage to field strength.

For example, assume a channel 9 service with no amplifier, 3 dB cable loss and 10 dB antenna gain, the antenna factor K would be:

$$K = 20.\log(196.25) - 0 - 10 + 3 - 18.8 - 14.9$$

$$K = 5.2 \text{ dB}$$

### Q9. What is the ITU Picture quality scale?

The International Telecommunications Union (formerly known as the CCIR) defined a scale for assessing picture quality as defined below.

#### Reference: ITU Picture Quality Scale

ITU Grade	Picture Quality	Impairment
5	Excellent	Imperceptible
4	Good	Perceptible
3	Fair	Slightly annoying
2	Poor	Annoying
1	Bad	Very annoying

### Q10. How do I assess picture quality?

Where possible, picture quality should be assessed on a television receiver connected to the same antenna and cable used to measure field strength. When assessing picture quality it is important to establish reasonable viewing conditions – for example, not having the sun or other light sources shining directly on the screen. For consistency, an attempt should be made to use similar viewing conditions at each test site. A typical viewing distance for picture evaluation is five times the height of the screen.

ACMA produces a booklet *Better television and radio reception* which is useful in identifying and describing typical interference problems. The booklet is available from ACMA regional offices. For contact details, go to the ACMA website at <http://www.acma.gov.au>.

**Q11. How can I assess whether the reception of a digital broadcasting service is adequate?**

The level and quality of the broadcasting services at the customer's premises needs to be assessed using a suitable digital set-top box. The reception assessment needs to be noted and forwarded by the applicant broadcaster to ACMA on the 'Assessment of adequate reception of digital broadcasting services' proforma.

**Q12. Where can I find further information?**

Antenna technician associations and other industry associations may also be useful sources of information.

Antenna Technicians Association Inc.  
PO Box 160,  
MITCHAM VIC 3132  
Freecall 1800 659 726, Fax 03 5997 7401  
Email [ata@netspace.net.au](mailto:ata@netspace.net.au)

## **Contact Information**

### Addresses of Commercial Satellite Broadcasters

#### **For Residents of Central and Eastern States only:**

**(Send ACMA B 58 forms to Imparja and Seven Central - do not send forms to ACMA).**

Imparja Television Pty Ltd  
PO Box 52  
ALICE SPRINGS NT 0871  
Phone: (08) 8950 1411 or 1300 301 683  
Fax: (08) 8953 0322  
Website: [www.imparja.com.au](http://www.imparja.com.au)

**Imparja Television:** provides programming from the Channel Nine and Ten Networks. For more details on the programming available please contact the broadcaster.

Regional Television Pty Ltd (Seven Central)  
PO Box 1016  
TOWNSVILLE QLD 4810  
Phone: (07) 4726 2000 or 1800 501 063  
Fax: (07) 4726 2057  
Website: [www.sevencentral.com.au](http://www.sevencentral.com.au)

**Seven Central Television:** provides programming from the Channel Seven Network. For more details on the programming available please contact the broadcaster.

---

#### **For Residents of Western Australian States only:**

**(Send ACMA B 58 forms to GWN and WIN – do not send forms to ACMA).**

Golden West Network Pty Ltd (GWN Television)  
PO Box 112  
BUNBURY WA 6231  
Phone: (08) 9721 4466  
Fax: (08) 9792 2932  
Website: [www.gwn.com.au](http://www.gwn.com.au)

**GWN Television:** provides programming from the Channel Seven Network. For more details on the programming available please contact the broadcaster.

WIN Television  
PO Box 1010  
MIRRABOOKA WA 6914  
Phone: (08) 9345 5990  
Fax: (08) 9345 9991  
Website: [www.wintv.com.au](http://www.wintv.com.au)

**WIN Television:** provides programming from the Channel Nine and Ten Networks. For more details on the programming available please contact the broadcaster.