TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:

a)
received.

b) Arrange the data in signalling point B such that a clear forward signal is not returned in response to an address incomplete message.

c) Arrange the data in signalling point B such that a clear forward signal is not returned in response to a call failure signal.

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

<----------
IAM

ADI
---------->

½

T3
½
4–15 seconds

CFL
---------->

T4

½
4–15 seconds

CFL
---------->

TEST DESCRIPTION

1.

Attempt to make a call from SP B to SP A but do not send the last digit.
Record the message sequence using a signal monitor.

2.

CHECK A: WAS THE CALL FAILURE SIGNAL REPEATED BETWEEN 4–15 SECONDS AFTER SENDING THE INITIAL CALL FAILURE SIGNAL? . . . . . .

3.

CHECK B:

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:

a)
received.

b) Arrange the data in signalling point B such that a clear forward signal is not returned in response to an address incomplete message.

c) Arrange the data in signalling point B such that a clear forward signal is not returned in response to a call failure signal.

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

A

SP

B

<----------

IAM

ADI
T3 –
4–15 seconds
---------->

CFL
T4 –
4–15 seconds
---------->

CFL
T4
4–15 seconds
---------->

CFL
T5
1 minute

---------->

RSC

---------->

TEST DESCRIPTION

1.

Attempt to make a call from SP B to SP A but do not send the last digit.
Record the message sequence using a signal monitor.

2.

CHECK A: WAS THE CALL FAILURE SIGNAL REPEATED BETWEEN 4–15 SECONDS AFTER SENDING THE INITIAL CALL FAILURE SIGNAL? . . . . . .

3.

CHECK B:

MINUTE? . . . . . .

4.

CHECK C:

T5? . . . . . .

5.

CHECK D:

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:
returned in response to a clear forward signal

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM
---------->

<----------
ACM

_____
Ringing tone

CLF
---------->

T6
½

4-15 seconds

CLF
---------->

TEST DESCRIPTION

1.

Make a call from SP A to SP B, record the message sequence using a signal monitor.

2.

CHECK A:

3.

The calling party should clear the call.

4.

CHECK B: WAS THE CLEAR FORWARD SIGNAL REPEATED BEFORE 4–15 SECONDS AFTER SENDING THE INITIAL CLEAR FORWARD SIGNAL? . . . . . .

5.

CHECK C:

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE: To verify that if an answer signal is not received within 2–4 minutes after receiving an address complete signal the connection is released by the outgoing signalling point

PRE–TEST CONDITIONS:

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM
---------->

<----------
ACM

2–4 minutes

CLF
---------->

<----------
RLG

TEST DESCRIPTION

1.

Attempt to make a call from SP A to SP B. Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should NOT answer the call.

4.

CHECK B:

SIGNAL? . . . . . .

5.

CHECK C:

6.

CHECK D:

Note – The timer need only be run at the outgoing international exchange.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE: Verify that the call will be released if the calling party has not cleared the call within 1–2 minutes after the called party clears

PRE–TEST CONDITIONS:

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

<----------
ACM

_____
Ringing tone

<----------
ANC

Speech

_____

Speech

<----------
CBK

1–2 minutes

CLF
---------->

<----------
RLG

TEST DESCRIPTION

1.

Make a call from SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

The called party should clear the call.

6.

CHECK C: WAS THE CLEAR FORWARD SENT WITHIN A PERIOD OF BETWEEN 1 AND 2 MINUTES? . . . . . .

7.

CHECK D:

8.

CHECK E:

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:

a) Called termination is free

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

<----------

ACM

_____

Ringing tone

<----------

ANC

Speech

_____

Speech

<----------

RSC

CLF

---------->

<----------

RLG

TEST DESCRIPTION

1.

Make a call for SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

Arrange for SP B to send a reset–circuit signal.

6.

CHECK C:

7.

CHECK D:

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:

a) Called termination is free

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

<----------

IAM

ACM

---------->

Ringing tone

_____

ANC

---------->

Speech

_____

Speech

<----------

RSC

RLG

---------->

TEST DESCRIPTION

1.

Make a call from SP B to SP A.
Record the message sequence with a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

Arrange for SP B to send a reset circuit signal.

6.

CHECK C:

7.

CHECK D:

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE: To verify that the action taken by a signalling point upon receipt of unreasonable signalling information is as stated in Q.724 Section 6.5

PRE–TEST CONDITIONS:

a) Circuit idle and unblocked

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM
---------->

<----------
ACM

_____

Ring tone

<----------
See Item 3 below

<----------
ANC

_____

Speech

<----------

See Item 6 below

CLF

---------->

<----------

RLG

TEST DESCRIPTION

1.

Make a call from SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

Send a message which would be unreasonable at this point in the call (i.e. COT) and confirm that the message is discarded.

4.

The called party should answer the call.

5.

CHECK B:

6.

SP B should send such a message which would be unreasonable at this point in the call (i.e. ACM) and confirm that the message is discarded.

7.

The calling point should clear the call.

8.

CHECK C:

9.

CHECK D:

Note – This test covers only some of the ambiguous messages which could be received.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:
required on this circuit

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

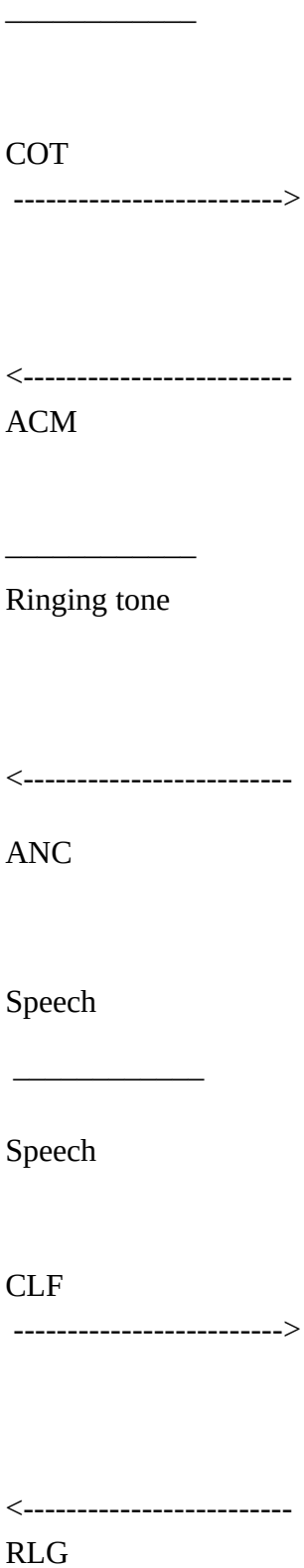
SP

SP

IAM

---------->

Check tone
————————|


COT
ACM
Ringing tone
ANC
Speech
Speech
CLF
RLG

TEST DESCRIPTION

1.

Make a call from SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call

4.

CHECK B:

5.

The calling party should clear the call.

6.

CHECK C:

7.

CHECK D:

8.

For validation testing repeat this test in the reverse direction.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:
previous circuit

PRE–TEST CONDITIONS:
information indicates that a continuity check has been performed on a previous circuit

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

½

delay while check performed on previous circuit

½

COT

---------->

<----------

ACM

_____

Ringing tone

<-------------------------

ANC

Speech

Speech

CLF

------------------------->

<-------------------------

RLG

TEST DESCRIPTION

1.

Make a call from SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

The calling party should clear the call.

6.

CHECK C:

7.

CHECK D:

8.

CHECK E: WAS THE CONTINUITY CHECK INDICATOR SET TO A BINARY VALUE OF TWO (MESSAGE INDICATOR BITS E and F IN IAM)? . . . . . .

9.

For validation testing repeat this test in the reverse direction.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:
over a satellite circuit, with a continuity check applied for

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

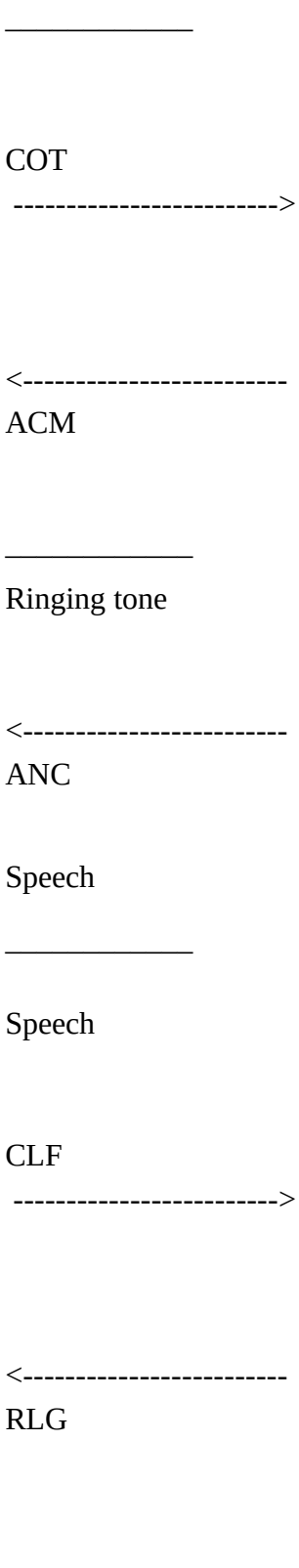
SP

SP

IAM

---------->

Check tone
———————— |


COT
ACM
Ringing tone
ANC
Speech
Speech
CLF
RLG

TEST DESCRIPTION

1.

Make a call from SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

The calling party should clear the call.

6.

CHECK C:

7.

CHECK D:

8.

CHECK E:

9.

For validation testing repeat this test in the reverse direction.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:
phase of the call

PRE–TEST CONDITIONS:
applied on this call

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

Check tone

———————

CLF

---------->

<----------

RLG

TEST DESCRIPTION

1.

Make a call from SP A to SP B.
Record the message sequence with a signal monitor.

2.

The calling party should clear the call during the continuity check phase.

3.

CHECK A:

4.

CHECK B:

5.

For validation testing repeat this test in the reverse direction.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE: To verify that the switching though of the speech path is delayed until the residual check–tone has propagated through the return of the speech path

PRE–TEST CONDITIONS:

a) The called termination is free

b) Arrange the data in signalling point A such that a continuity check is applied on this call

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

Check tone

—————|

_____

COT

---------->

<----------

ACM

_____

Ringing tone

<----------

ANC

Speech

_____

Speech

CLF
---------->

<----------
RLG

TEST DESCRIPTION

1.

Make a call from SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A: WAS THE CONTINUITY CHECK TONE HEARD BY EITHER CALLED OR CALLING PARTY? . . . . . .

3.

CHECK B:

4.

The called party should answer the call.

5.

CHECK B:

6.

The calling party should clear the call.

7.

CHECK C:

8.

CHECK D:

9.

For validation testing repeat this test in the reverse direction.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:
timeout

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

Check tone
———————— |
———————

CCF
---------->

½

T9
½
1–10 seconds

CCR
---------->

Check tone

———————— |
———————

CCF
---------->

½

T10
½
1–3 minutes

Maintenance staff alerted

CCR
---------->

Check tone
————————— |
————————

TEST DESCRIPTION

1.

Initiate the continuity test call procedure at SP A.
Record the message sequence using a signal monitor.

2.

CHECK A: WAS THE SECOND CONTINUITY CHECK INITIATED WITHIN 1 TO 10 SECONDES? . . . . . .

3.

CHECK B: WERE THE MAINTENANCE STAFF ALERTED ON FAILURE OF THE SECOND CONTINUITY CHECK? . . . . . .

4.

CHECK C:

5.

CHECK D:

Note 1 – The repeated check will only finish when continuity is detected.

Note 2 – On failure of the COT an automatic repeat attempt will be made –see test No. 6.2.5.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:
required on this circuit

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

<----------

IAM

|——————

Check tone

———————

<----------

COT

ACM

---------->

Ringing tone
_____

ANC
---------->

Speech

_____

Speech

<----------
CLF

RLG
---------->

TEST DESCRIPTION

1.

Make a call from SP B to SP A.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

The calling party should clear the call.

6.

CHECK C:

7.

CHECK D:

8.

For validation testing repeat this test in the reverse direction.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:
exchange

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP B

IAM

--------->
<---------

IAM (cic=x)

ACM

------------------------>

Ringing tone
_____

ANC
---------->

Speech

_____

Speech

IAM
---------->

<----------
ACM

_____

Ringing tone

<----------

ANC

Speech

_____

Speech

CLF
---------->

<----------
RLG

<----------
CLF

RLG
---------->

TEST DESCRIPTION

1.

Simultaneously transmit an IAM (containing the same value of cic) from each end of the link for a both way circuit.
Record the message sequence using a signal monitor

2.

CHECK A:

3.

The called party at SP A should answer the call.

4.

CHECK B:

5.

CHECK C: WAS A REPEAT ATTEMPT MADE BY SP A, WITH A DIFFERENT VALUE OF CIC IN THE IAM? . . . . . .

6.

CHECK D:

7.

The called party at SP B should answer the call.

8.

CHECK E:

9.

Clear both calls down.

10.

CHECK F:

11.

CHECK G:

Note – The message sequence may not be as shown above.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE: To verify that an automatic repeat attempt will be made on receipt of circuit reset after sending of an initial address message and before a backward signal has been received

PRE–TEST CONDITIONS:

a) Arrange the data in signalling point B such that a circuit reset signal is sent in response to the initial address message of the first call request

b) The called termination should be free

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

<----------

RSC

CLF

---------->

<----------

RLG

IAM

---------->

<----------

ACM

_____

Ringing tone

<----------

ANC

Speech
———————
Speech

CLR
------------------------>

<------------------------
RLG

TEST DESCRIPTION

1.

Make a call for SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

The calling party should clear the call.

6.

CHECK C:

7.

CHECK D:

Note – The message sequence may not be as shown above.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE: To verify that a repeat attempt will be made on receipt of unreasonable signalling information after sending the initial address message and before one of the backward signals has been received

PRE–TEST CONDITIONS:

a) Arrange the data in signalling point B such that unreasonable signalling information (see note below) is returned in response to the initial address message of the first call request

b) The called termination should be free

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

<----------

see Note 1 below

RSC

---------->

<----------

RLG

IAM

---------->

<----------

ACM

_____

Ringing tone

<----------

ANC

Speech

_____

Speech

CLF

---------->

<----------

RLG

TEST DESCRIPTION

1.

Make a call for SP A to SP B.

Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

The calling party should clear the call.

6.

CHECK C:

7.

CHECK D:

Note 1 – This may be any message that if received at this point would be either ambiguous or inappropriate.

Note 2 – The message sequence may not be as shown above.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE: To verify that an automatic repeat attempt will be made on receipt of the blocking signal after sending an initial address message and before any backward messages have been received

PRE–TEST CONDITIONS:
returned in response to the initial address message of the first call request

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

<----------

BLO

BLA

---------->

CLF

---------->

<----------

RLG

IAM

---------->

<----------

ACM

_____

Ringing tone

<----------

ANC

Speech

_____

Speech

CLF

---------->

<----------

RLG

TEST DESCRIPTION

1.

Make a call for SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

The calling party should clear the call.

6.

CHECK C:

7.

CHECK D:

Note – The message sequence may not be as shown above.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:

PRE–TEST CONDITIONS:
returned within the specified limits to the first call request

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------->

Check tone
————————┤
————————

CCF

---------->

A repeat of the continuity check of the failed circuit will be made within 1–10 seconds see Q.724 Section 7.3

IAM

---------->

Check tone
————————|

————————

<----------
ACM

————————
Ringing tone

<----------
ANC

Speech

————————

Speech

CLF

---------->

<----------

RLG

TEST DESCRIPTION

1.

Make a call for SP A to SP B.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party should answer the call.

4.

CHECK B:

5.

The calling party should clear the call.

6.

CHECK C:

7.

CHECK D:

Note – The message sequence may not be as shown above.

TUP LEVEL 4 TEST SPECIFICATION

TEST NUMBER:

REFERENCE:

TITLE:

SUBTITLE:

PURPOSE:
signalling point is completed

PRE–TEST CONDITIONS:
signalling point

CONFIGURATION:

TYPE OF TEST:

TYPE OF SP:

EXPECTED MESSAGE SEQUENCE:

SP

SP

IAM

---------> <---------

IAM

ACM

------------------------>

_____

Ringing tone

ANC

------------------------>

Speech

_____

Speech

CLF

---------->

<----------

RLG

TEST DESCRIPTION

1.

Simultaneously transmit an IAM (containing the same value of cic) from each end of the link for a both way circuit.
Record the message sequence using a signal monitor.

2.

CHECK A:

3.

The called party at SP A should answer the call.

4.

CHECK B:

5.

The calling party at SP B should clear the call.

6.

CHECK C:

7.

CHECK D:

8.

CHECK E:

9.

Repeat this test in the reverse direction.