5. ADJUSTMENTS

5.1 Introductory Description and UUC Performance Requirements

This procedure describes calibration of ADVANTEST AMERICA INC. Spectrum Analyzer Models R3261A, R3361A, & R3261B, & R3361B. These Spectrum Analyzers can be used to make frequency and amplitude measurements of 9KHz to 2.6 GHz (for models R3261A & 3361A) or of 9KHz to 3.6GHz (for models R3261B & R3361B).

The unit being calibrated will be reffered herein as the UUC (unit-under-calibration).

UUC Enviromental Range: Temperature : 18°C to 28°C
Relative Humidity : to 80%

UUC Warm-up/Stabilization Period Requirements : 30 Minutes

Table 5-1 UUT Calibration Requirements/Calibration Description

# Unit-Under-Test (UUC) Parameter/Function	Performance Specifications	Note Ref	Test Method
5.4.1. Frequency Span			Input constant signals (2GHz, 10MHz and 2MHz) from the signal generator, and properly adjust the value between each signal and zero spectrum.
5.4.1.1 Main Span (2GHz)	±3% of full scale (60MHz)		
5.4.1.2 10MHz Span	±3% of full scale (300kHz)		
5.4.1.3 2MHz Span	±5% of full scale (100kHz)		
5.4.2. Calibration Signal Level	±0.1dB		Input the signal of 30MHz and -20dBm from the external signal generator, and minimize the difference between the signal and the cal signal.
5.4.3. Resolution Band Width Switching	±0.3dB		Measure band width switching using CAL signal.
5.4.4. Reference Level Accuracy	±0.3dB		Use the external step attenuator and adjust it.
5.4.5. LOG/LINEAR Amplifier lineraity	LOG: ±1.0dB/10dB ±1.5dB/70dB LINEAR: 5%		Use the external step attenuator and adjust it.
5.4.6. TG Output Level Accuracy	±0.5dB (at 30MHz,-10dBm		Measure the TG output level using the RF power meter and adjust it.

5.2 Measurement Standards & Support Test Equipment Performance Requirements

Minimum-Use-Specifications (MUS) are the calculated minimum performance specifications criteria needed for the Measurement Standards (MS) and support M&TE to be used for the comparison measurements required in the Calibration Procedure (CP) process.

The MUS is developed through uncertainty analysis and is calculated through assignment of a defines and documented uncertainty/accuracy ratio or margin between the specified tolerances of the UUT and the capability (uncertainty specification) required of the measurement standards system. MUS is required to assist a measurement specialist in the evaluation of existing or selection of alternate measurement standards equipment.

The uncertainty/accuracy ratio applied in this CP is 10:1 and any exception to that is indicated in Section 5.1 Notes Reference Column.

Caution: The instructions in this CP relate specifically to the equipment and conditions listed in Section 5.2. If other equipment is substitued, the information and instructions must be interpreted and revised accordingly.

MS and SM&TE Environmental Range	: Temperature	: 18°C to 28°C
	: Relative Humidity	: 30-70%

MS and SM&TE Warm-up/Stabilization Period Requirements: 2 Hours

Table 5-2 Measurement Standards (MS) Performance Requirements

Equipment Generic Name (Qty)	Minimum-Use-Specifications		Mfg., Model/ Option Applicable
Synthesized Signal Generator	Frequency Output Level Output Impedance AM Modulation	: to 3.6 GHz : +10dBm to -30dBm : 50Ω : 100Hz with 30% modulation (or can be externally modulated)	Advantest R4262
RF Power Meter	Frequency Attenuation Stability	: to 100MHz : +20dBm to -50dBm : ±0.05dB (at 30MHz)	Generic
Attenuator	Frequency Attenuation Stability	: to 100MHz : 10 dB step : 0 to 80dB 1 dB step : 0 to 6dB : 10dB : ±0.2dB 1 dB : ±0.1dB	Generic

Table 5-3 Support Measuring & Test Equipment (M&TE) Performance Requirements

Equipment Generic Name (Qty)	Minimum-Use-Specifications	Mfg., Model/ Option Applicable
Digital Volt Meter	Stability : ±3mV (at 0 to +5 Volts)	Advantest TR6846
Connecting Cable	BNC-BNC	Advantest MI-02 (DCB-FF0386)
Connecting Cable	SMA-SMA	Advantest AA01002
Connecting Cable (2 required)	UM-BNC	Generic
Probe	10MΩ (10:1)	Generic
Conversion Adapter	N-BNC	Advantest JCF-AF001EX03
Conversion Adapter	N-SMA	Generic

5.3 Preliminary Operations

WARNING

Always makes sure spectrum analyzer's power supply cord is plugged into a 3-hole grounded outlet or 2-hole outlet with grounded adapter. You can be fatally shocked if you fail to follow this rule.

Do not touch live circuits when calibrating instrument.

(1) Review this entire procedure before starting calibration procedure.

(2) Always operate the instrument on AC 100V (120V, 200V, 220V, or 240V) ±10% with a line frequency of 50Hz or 60Hz.

(3) Always confirm that the POWER switch is OFF before connecting the power cable to the AC line.

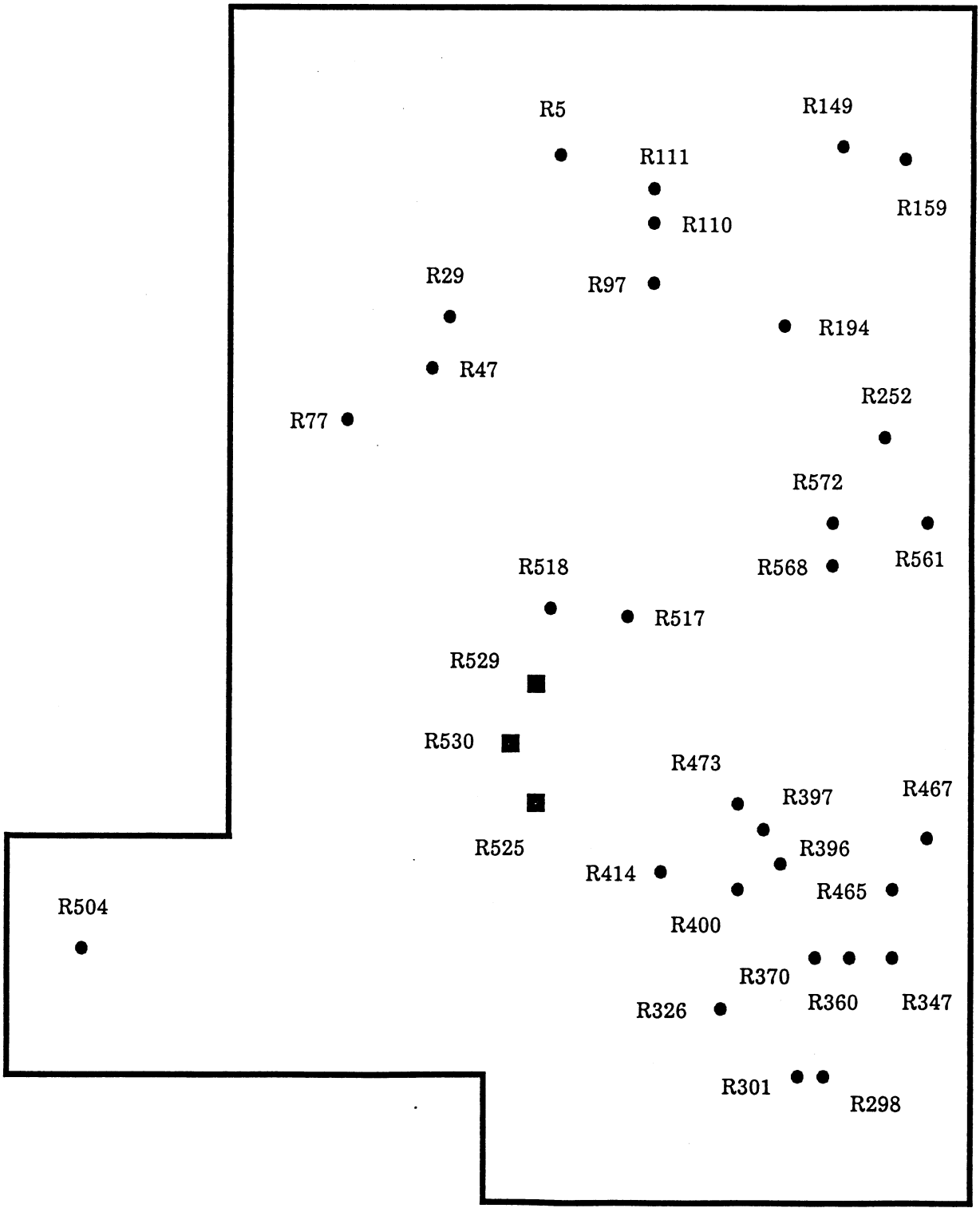
(4) Spectrum analyzer has a self-calibration function. This function compensates for adjusting shift caused by change with age of software. For calibration, turn off this function.

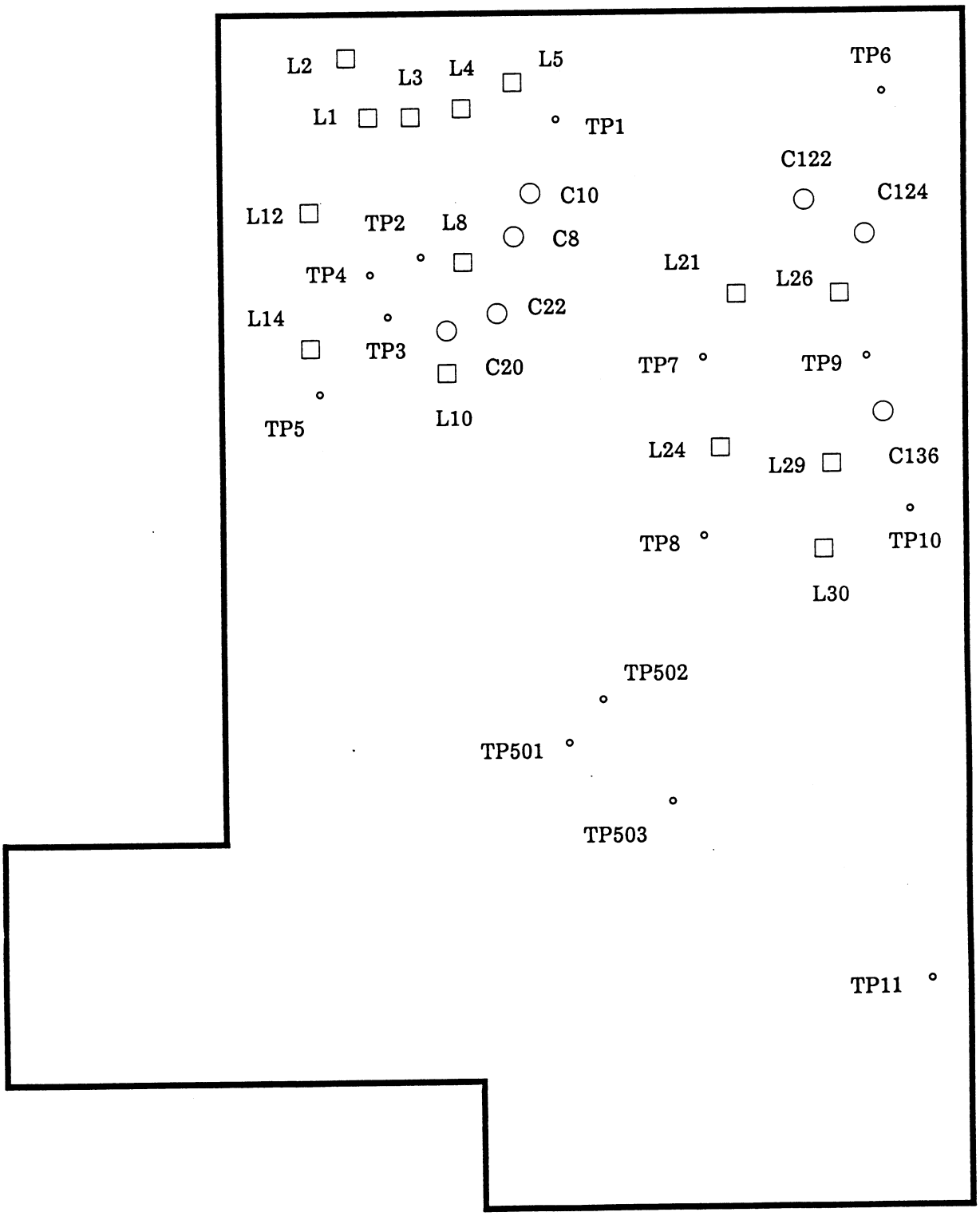
Operation Procedure: [SHIFT] [7] [CAL CORR ON/OFF]
(SOFT KEY 6)

5.4 Calibration Process

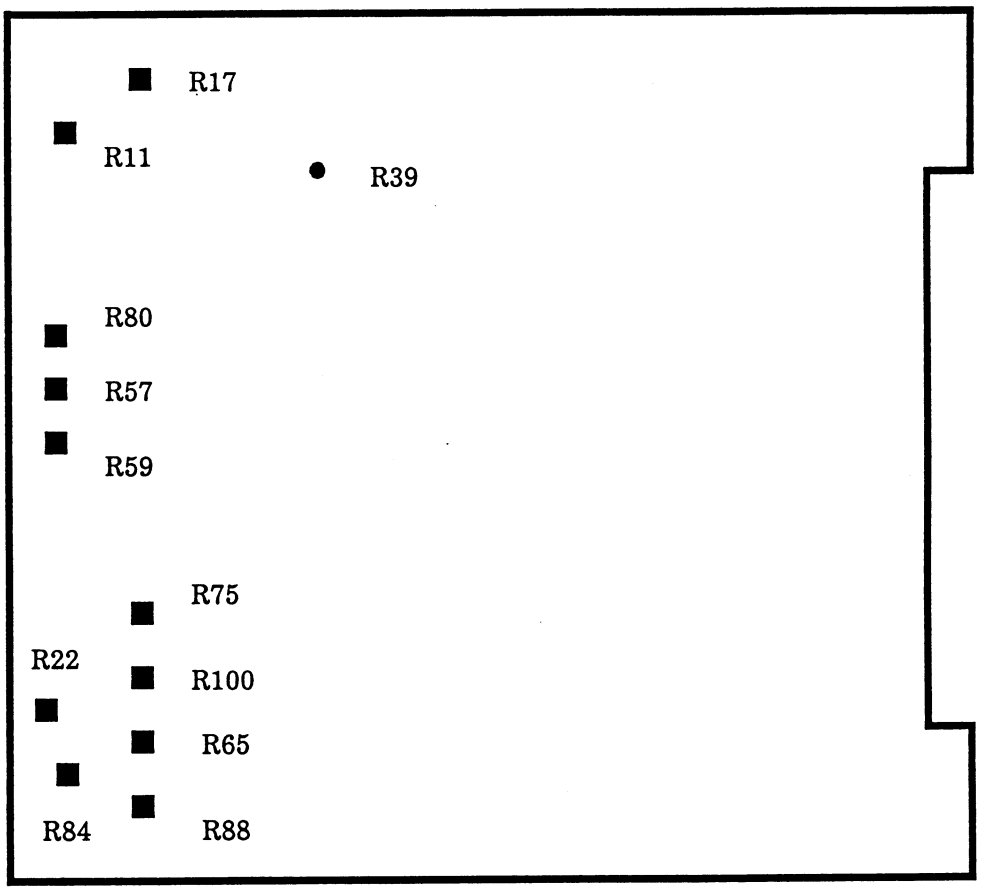
LOCATION

(1) IF (BLQ-015668)

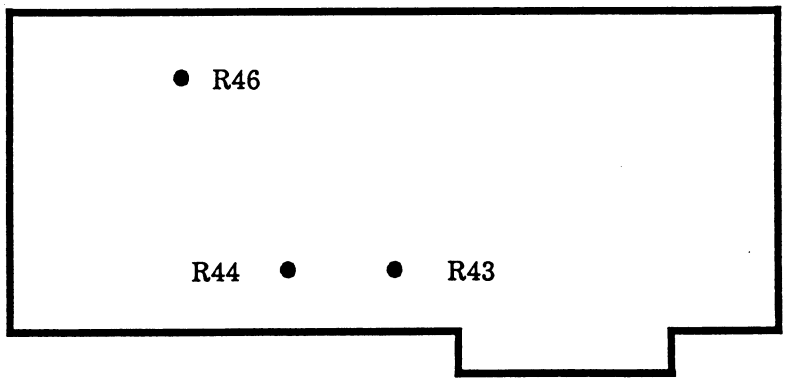



L2
L3
L4
L5
TP6
L1
TP1
C122
C10
C124
L12
TP2
L8
C8
TP4
L21
L26
C22
L14
TP3
TP7
TP9
C20
TP5
L10
L24
L29
C136
TP8
TP10
L30
TP502
TP501
TP503
TP11

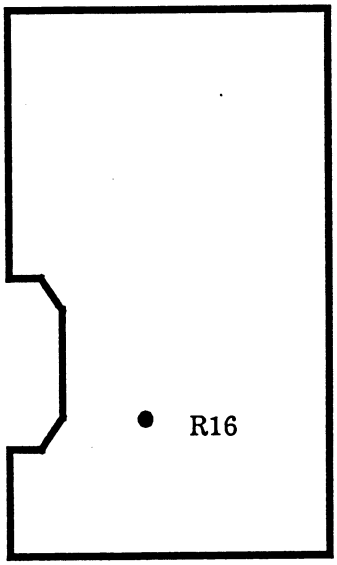
(2) RF CONT (BLL-015672)



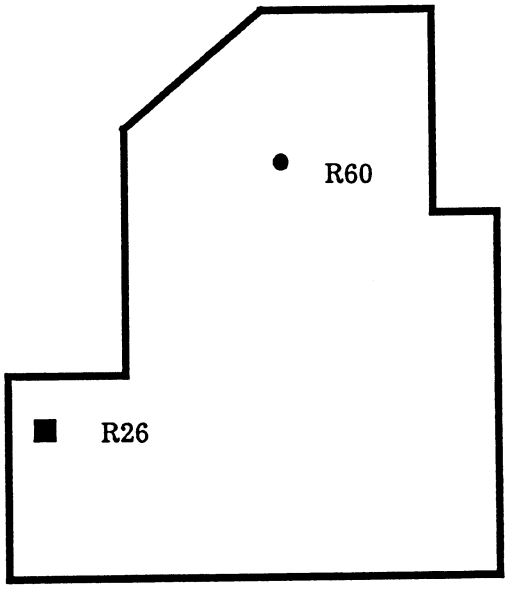
(3) ALC CONT (BLC-015680)



(4) CAL AMP (BLB-015646)



(5) YTO DRIVER (BLB-015647)



5.4.1 Frequency Span

Procedure

(1) Main Span (2GHz)

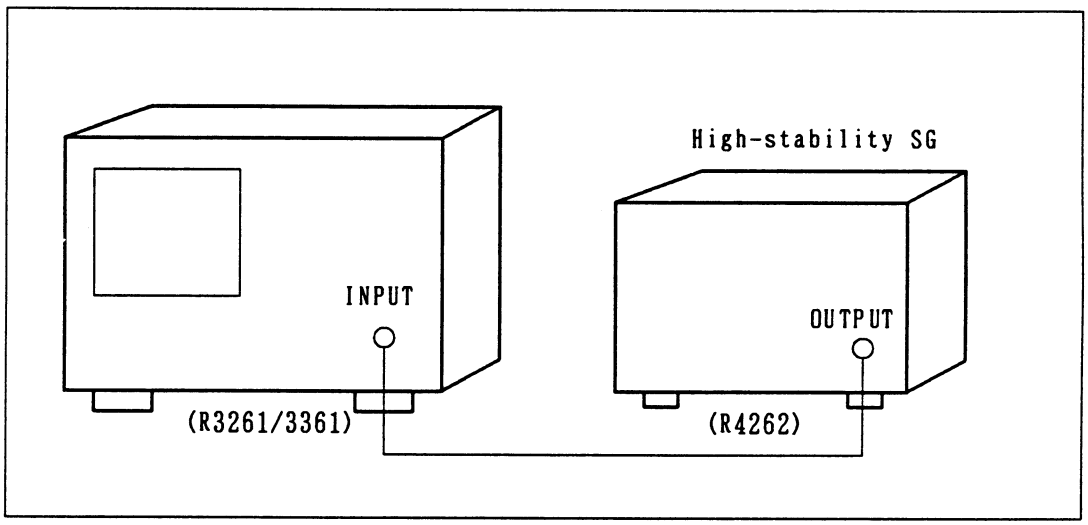
① From the preset condition, set the spectrum analyzer as follows:

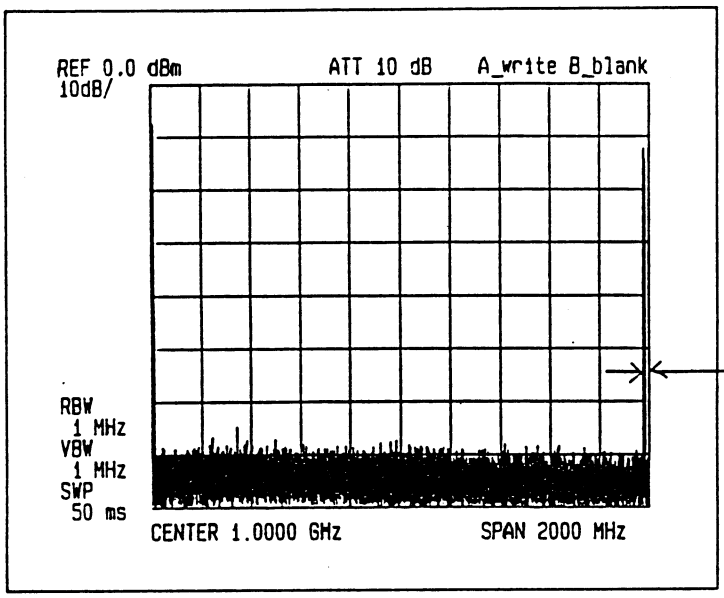
CENTER FREQ : 1GHz
FREQ SPAN : 2GHz

② Input a 2GHz, -10dBm signal from an external signal generator to the spectrum analyzer.

③ Adjust the CENTER FREQ so that the zero spectrum is at the left scale end.

④ Adjust the RF CONTROL (BLL-015672) R22 so that the value between the 2GHz spectrum and right end of tube scale can be within ±0.3div (±60MHz, ±3%).




REF 0.0 dBm
10dB/
ATT 10 dB
A_write B_blank
RBW
1 MHz
VBW
1 MHz
SWP
50 ms
CENTER 1.0000 GHz
SPAN 2000 MHz
±0.3 div 60MHz (±3%)
or less

(2) 10MHz SPAN

① Set the spectrum analyzer as follows:

CENTER FREQ	:	5MHz
FREQ SPAN	:	10MHz

② Adjust the CENTER FREQ so that the peak of the zero spectrum is at the left end of the scale.

③ Input a 10MHz, -10dBm signal from external signal generator to the spectrum analyzer.

Adjust RF CONTROL (BLL-01 5672) R57 so that the value between the 10MHz spectrum and right end of tube scale can be within ±0.3div (±300kHz, ±3%).

(3) 2MHz SPAN

① Set the spectrum analyzer to the following settings:

CENTER FREQ : 1MHz
FREQ SPAN : 2MHz

② Then input a 2MHz, -10dBm signal from an external signal generator to the spectrum analyzer.

Adjust RF CONTR0L (BLL-01 5672) R53 so that the value between the 2MHz spectrum and right end of tube scale can be within ±0.5div (±100kHz, ±5%).

5.4.2 Calibration Signal Level

Procedure

① From the preset condition, set the spectrum analyzer as follows:

CENTER FREQ	:	30MHz
REF LEVEL	:	-15dBm
dB/div	:	1dB
FREQ SPAN	:	500kHz
RBW	:	300kHz

② Input 30MHz, -20dBm signal from the external signal generator. Read value A [dBm] of the peak with a marker. Calibrate the output level of external signal generator using the RF power meter in advance.

③ Disconnect the external signal generator and set the spectrum analyzer as follows:

CAL SIGNAL: ON (-20dBm)

Read value B [dBm] of the CAL SIGNAL spectrum peak with a marker.

④ Adjust CAL AMP (BLB-015646) R16 so that B = A± 0.1dB.

5.4.3 Resolution Band Width Switching Between

(1) Adjusting for 3.5879MHz Band-Pass Filter

Procedure

① Connect TG OUT of the external spectrum analyzer to IF (BLQ-015668) J3. (Use external spectrum analyzer with 1MΩ input.)

② Connect the 10MΩ probe to the 1MΩ input of the external spectrum analyzer, and set as follows:

CENTER FREQ : 3.5789MHz
TG LEVEL : -20dBm

③ From the preset condition, set the R3261A/B R3361A/B spectrum analyzer as follows:

CAL COLLECTION : OFF

④ Connect the 10MΩ probe to IF (BLQ-015668) TP1, and observe the form of 3.5789MHz band-pass filter. Adjust L1, L2, L3 and L4 so that the center frequency is 3.5789MHz and symmetrical. (Refer to circuit 1/33)

(2) Adjusting for IF-1 LC Filter

Procedure

① Connect 10MΩ probe to TP4 after the step (1)- ④. Set the external spectrum analyzer and the R3261A/B R3361A/B spectrum analyzer as follows:
(Refer to circuit 3/33)

(a) External spectrum analyzer

FREQ SPAN : 200kHz

(b) R3261A/B R3361A/B (analyzer under calibration)

RBW	:	10kHz
FREQ SPN	:	10MHz

② Adjust L12 so that the peak of TP4 waveform is 3.5789MHz. (Refer to circuit 3/33)

③ Connect 10MΩ probe to TP5, and adjust L14 so that the peak of TP5 waveform is 3.5789MHz.
(Refer to circuit 3/33)

(3) Adjusting for IF-1 LC Band Filter Changeover Stability

Procedure

① Set the spectrum analyzer RBW to 300kHz from step (2)- ③ and read the peak value of the filter.

② Set the spectrum analyzer RBW to 10kHz. Adjust R77 so that the peak level of the filter is the same as that of RBW at 300kHz above. (Refer to circuit 3/33)

(4) Adjusting for IF-1 Crystal Filter

Procedure (Refer to circuit 2/33)

① Set the spectrum analyzer RBW to 3kHz from step (3)- ② and connect the 10MΩ probe to TP2.

② Adjust L8 so that peak of TP2 waveform is 3.5789MHz. Also adjust C8 so that the waveform is symmetrical. Repeat the adjustment several times till both are satisfied.

③ Connect 10MΩ probe to TP3. Adjust L10 so that the peak of waveform is 3.5789MHz, and C20 so that the waveform is symmetrical. Repeat the adjustment several times till both are satisfied.

④ Connect the 10MΩ probe to TP2 and adjust C10 to maximize the peak level of waveform.

⑤ Connect the 10MΩ probe to TP3 and adjust C22 to maximize the peak level.

(5) Adjusting for 1F-1 Crystal Band Filter Changeover Stability

Procedure (Refer to circuit 2/33)

① Set the spectrum analyzer RBW to 3kHz from step (4) - ⑤ and read the peak value of waveform.

② Set the spectrum analyzer RBW to 30Hz. Adjust R29 so that the peak level of filter is the same as that of RBW at 3kHz above.

(6) Adjusting for IF-1 LC-crystal Changeover Stability

Procedure

① Connect 10MΩ probe to TP5 from step (5) - ② and set the spectrum analyzer RBW to 300kHz. Read the peak level of waveform. (Refer to circuit 3/33)

② Set the spectrum analyzer RBW to 3kHz. Adjust R47 so that the peak level is the same as that of RBW at 300kHz above. (Refer to circuit 2/33)

(7) Adjusting for IF-2 LC Filter

Procedure (Refer to circuit 9/33)

① Connect 10MΩ probe to TP7 from step (6) - ② and set the spectrum analyzer RBW to 10kHz. Adjust L21 so that the peak is 3.5789MHz.

② Connect 10MΩ probe to TP8 and adjust L24 so that the peak of waveform is 3.5789MHz.

(8) Adjusting for IF-2 LC Band Filter Changeover Stability

Procedure

① Set the spectrum analyzer RBW to 300kHz from step (7) - ② and read the peak level.

② Set the spectrum analyzer RBW to 10kHz. Adjust R194 so that the peak value of filter is the same as that of RBW at 300kHz above. (Refer to circuit 9/33)

(9) Adjusting for IF-2 Crystal Filter

Procedure (Refer to circuit 10/33)

① Set the spectrum analyzer RBW to 3kHz from step (8) - ②, and connect 10MΩ probe to TP9.

② Adjust L26 so that the peak of waveform is 3.5789MHz. Also adjust C124 so that the waveform is symmetrical.

③ Connect 10MΩ probe to TP10, and adjust L29 so that peak of waveform is 3.5789MHz. Also adjust C136 so that waveform is symmetrical.

④ Connect 10MΩ probe to TP9 and adjust C122 to maximize the peak level of waveform.

⑤ Connect 10MΩ probe to TP10 and adjust C134 to maximize the peak level.

(10) Adjusting IF-2 Crystal Filter Changeover Stability

Procedure

① Set the spectrum analyzer RBW to 3kHz from step (9) - ⑤ and read the peak level of filter.

② Set the spectrum analyzer RBW to 30Hz. Adjust R232 so that the peak value of filter is the same as that of RBW at 3kHz above. (Refer to circuit 10/33)

(11) Adjusting IF-2 LC-Crystal Changeover Stability

Procedure

① Connect IF (BLQ-015668) J4 to the 50Ω input connector of external spectrum analyzer.

② Set the spectrum analyzer RBW to 3kHz and adjust L30 to maximize the peak of waveform filter. (Refer to circuit 11/33)

③ Set the spectrum analyzer RBW to 300kHz, and read the peak of filter.

④ Set the spectrum analyzer RBW to 3kHz. Adjust R252 so that the peak level is the same as that of RBW at 300kHz above. (Refer to circuit 10/33)

(12) Adjusting IF Total Gain

Procedure

① Input 3.5789MHz, -25dBm signal to IF (BLQ-015668) J3 from the external signal generator (J4 and J6 should be connected with the UM cable.)

② From the preset condition, set the spectrum analyzer as follows:

RBW	:	300kHz
REF LEVEL	:	-10dBm
INPUT ATT	:	0dB
CAL COLLECTION	:	OFF

③ Adjust R5 so that the waveform level (horizontal line) displayed on the spectrum analyzer screen is -20dBm±0.3dB. (Refer to circuit 1/33)

④ Return all removed cables.

(13) Testing Switchover Stability of Resolution Bandwidth

Procedure

① From the preset condition, set the spectrum analyzer as follows:

CENTER FREQ : 30MHz
FREQ SPNA : 500kHz
RBW : 300kHz
REF LEVEL : -15dBm
dB/div : 1dB/
CAL SIG : ON

② While changing the resolution bandwidth from 1MHz to 30Hz, confirm that the peak level of each spectrum is within ±0.3dB of the level at the 300kHz resolution bandwidth. Table 5-4 shows the relationship between bandwidth and FREQ SPAN.

Table 5-4 Relationship Between Resolution Bandwidth and FREQ SPAN

RBW [Hz]	1M	300k	300k	30k	10k	3k	1k	300	100	30
FREQ SPAN [Hz]	2M	500k	200k	50k	20k	5k	2k	1k	1k	1k

5.4.4 Reference Level Accuracy

Procedure

① Connect TG OUT of the external spectrum analyzer (50Ω input with TG) to IF (BLQ-015668) J3 through 10dB step attenuator.

② From the preset condition, set the spectrum analyzer as follows:

CAL COLLECTION	:	OFF
FREQ SPAN	:	50kHz
RBW	:	3kHz
INPUT ATT	:	0dB

③ Set TG output level of the external spectrum analyzer to -20dB and 10dB step attenuator to 0dB. Measure the peak value of waveform at that time.

④ Adjust R111 so that the peak value of waveform is the same as that in step③above when the spectrum analyzer REF LEVEL and 10dB step attenuator are set to -10dBm and 10dB respectively. (Refer to circuit 4/33)

⑤ Change the REF LEVEL and 10dB step attenuator as shown in Table 5-5 and adjust in the same way as step④above.

Table 5-5 Adjustment of Step Amp

REF LEVEL	10dB step attenuator	VR for adjustment
-20dBm	10dB	R111
-30dBm	20dB	R97
-50dBm	40dB	R110
-60dBm	50dB	R149
-80dBm	70dB	R159

* Adjustment specification is ±0.03dB.

5.4.5 LOG/LINEAR Amplifier Linearity

(1) Adjusting LOG AMP

Procedure

① Connect the external signal generator to IF (BLQ-015668) J6 through 10dB step attenuator.

② Set the external signal generator and spectrum analyzer as follows:

(a) External signal generator:

Frequency : 3.5789MHz
output level : -1dBm

(b) R3261A/B R3361A/B spectrum analyzer (from the preset condition):

LINEAR mode

CAL COLLECTION: OFF

③ Measure IF (BLQ-015668) TP2 with digital volmeter. (GND is TP503.) (Refer to circuit 2/33)

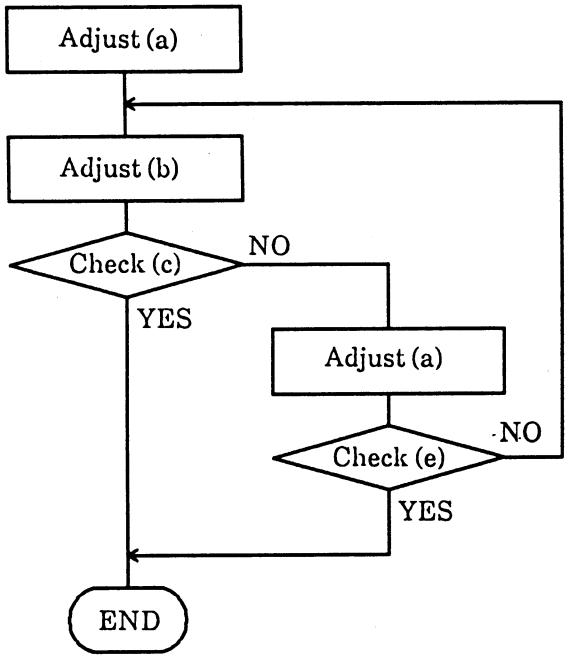
④ Adjust R326 so that the voltage at TP2 is 0V ± 3mV when 10dB step attenuator is set to 80dB. (Refer to circuit 14/33)

⑤ Adjust R298 so that the voltage at TP2 is 4V ± 3mV when 10dB step attenuator is set to 0dB. (Refer to circuit 13/33)

⑥ Repeat steps ④ and ⑤ several times.

⑦ Set the spectrum analyzer to 10dB/div.

⑧ Adjust the following flowchart:



(a) Adjust R347 so that the voltage at TP2 is 500mV±3mV when 10dB step attenuator is set to 70dB. (Refer to circuit 15/33)

(b) Adjust R301 so that the voltage at TP2 is 4V±3mV when 10dB step attenuator is set to 0dB. (Refer to circuit 13/33)

(c) Is the voltage of TP2 500mV±3mV when 10dB step attenuator is set to 70dB?

(d) Is the voltage of TP2 4V±3mV when 10dB step attenuator is set to 0dB?

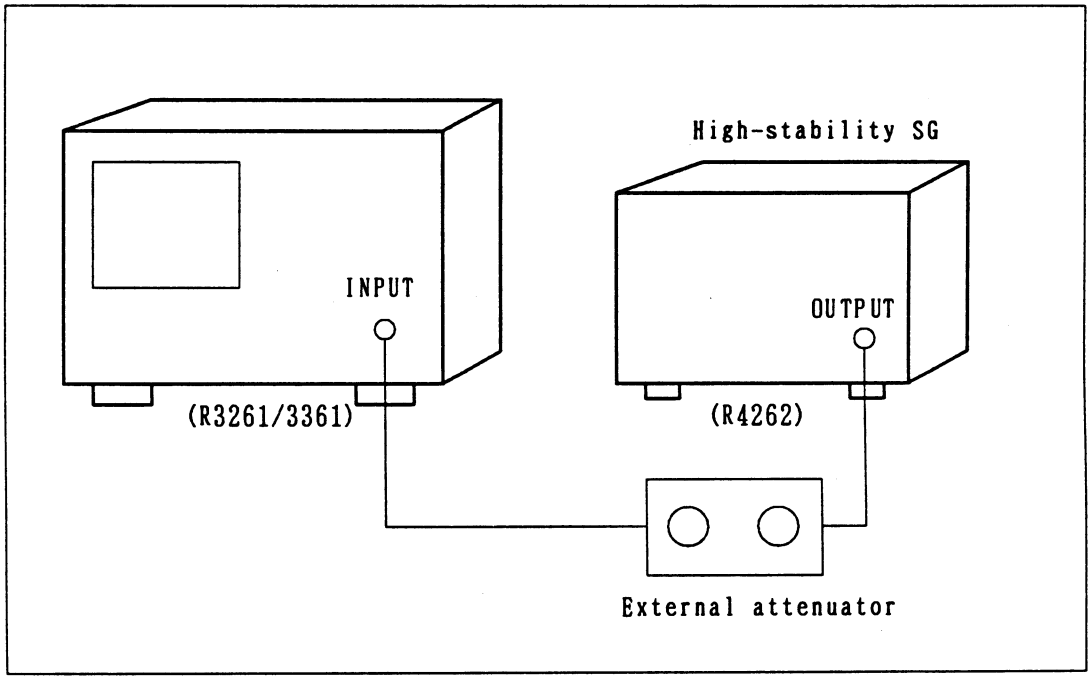
(2) Testing LOG Linearity

Procedure

① From the preset condition, set the spectrum analyzer as follows:

CENTER FREQ	:	30MHz
SPAN	:	50kHz
RBW	:	1kHz
REF LEVEL	:	-10dBm
dB/div	:	10dB/div

② Connect a signal generator to the spectrum analyzer through an external attenuator.



③ Input a 30MHz, -10dBm signal from the signal generator to the spectrum analyzer.

④ Set the output level of the signal generator so that the spectrum peaks at -10dBm when the attenuator is set to 0dB.

⑤ Confirm that the deviation in peak level, as read on the screen, is within ±1.0dB (±0. 1div) while the attenuator setting is incremented by 10dB.

⑥ Confirm that the spectrum peaks at -80dBm± 1. 5dB when the attenuator is set to 70dB. If not, make adjustments in according to 5.4.5 (1) Adjusting LOG AMP".

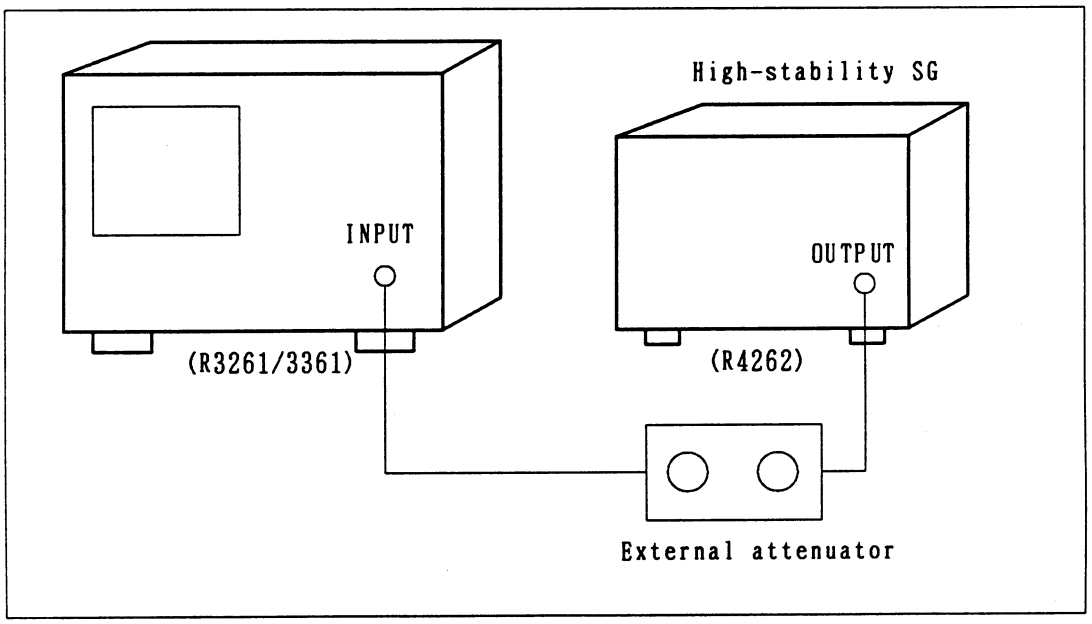
(3) Testing LIN Linearity

Procedure

① From the preset condition, set the spectrum analyzer as follows:

CENTER FREQ : 30MHz
SPAN : 2MHz
RBW : 100kHz
REF LEVEL : -10dBm
LINEAR DISPLAY MODE

② Connect a signal generator to the spectrum analyzer through an external attenuator.



③ Set the signal generator so that is puts out a 30MHz, -10dBm signal.

④ Set the output level of the signal generator so that the spectrum peaks at the uppermost scale on the screen..

⑤ Using the marker, read the peak level of the spectrum.

⑥ Set the attenuator to 6dB, and read the peak level of the spectrum using the marker.

⑦ Obtain the LIN linearity from the values determined in steps ⑤ and ⑥ above. Confirm that the LIN linearity thus obtained is 100±5%.

LIN linearity (%)= 2 x value in step ⑥/value of step ⑤ x 100

If the linearity is out of the specification, make adjustments according to "5.4.5 (1) Adjusting LOG AMP".

5.4.6 TG Output Level Accuracy

(1) Adjusting 1dB Attenuator Output Level Stability

Procedure

① Set the spectrum analyzer as follows:

CENTER FREQ	:	30MHz
FREQ SPAN	:	0MHz
TG	:	ON
CAL COLLECTION	:	OFF

② Connect a power meter to the TG connector of the spectrum analyzer.

③ Adjust ALC CONT (BLC-015680) R43, R46 so that the output level varying width is 4dB±0. 1dB when the TG output level is varied from -10dBm to -14dBm.

④ Adjust R44 so that the output level is -10dBm±0.1dB when the TG output level is set to -10dBm.

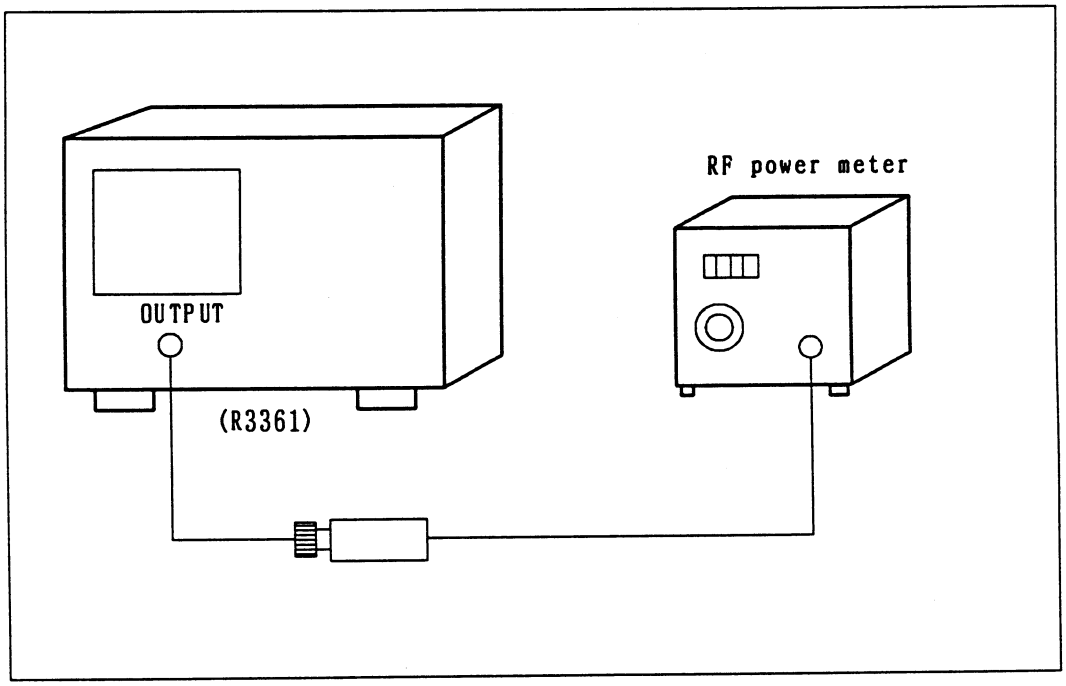
(2) Testing Stability of TG Output Level (For R3361A/B only)

Procedure

① Reset and then set the R3361A/B to the following settings:

CENTER FREQ	:	30MHz
FREQ SPAN	:	0Hz
TG	:	ON
TG LEVEL	:	-10dBm

② Connect an RF power meter to the spectrum analyzer at the TG OUTPUT to measure the TG output level. Confirm that the TG output level is -10dBm±0.5dB. If not, make adjustments according to "(1) Adjusting 1dB Attenuator output Level Stability".



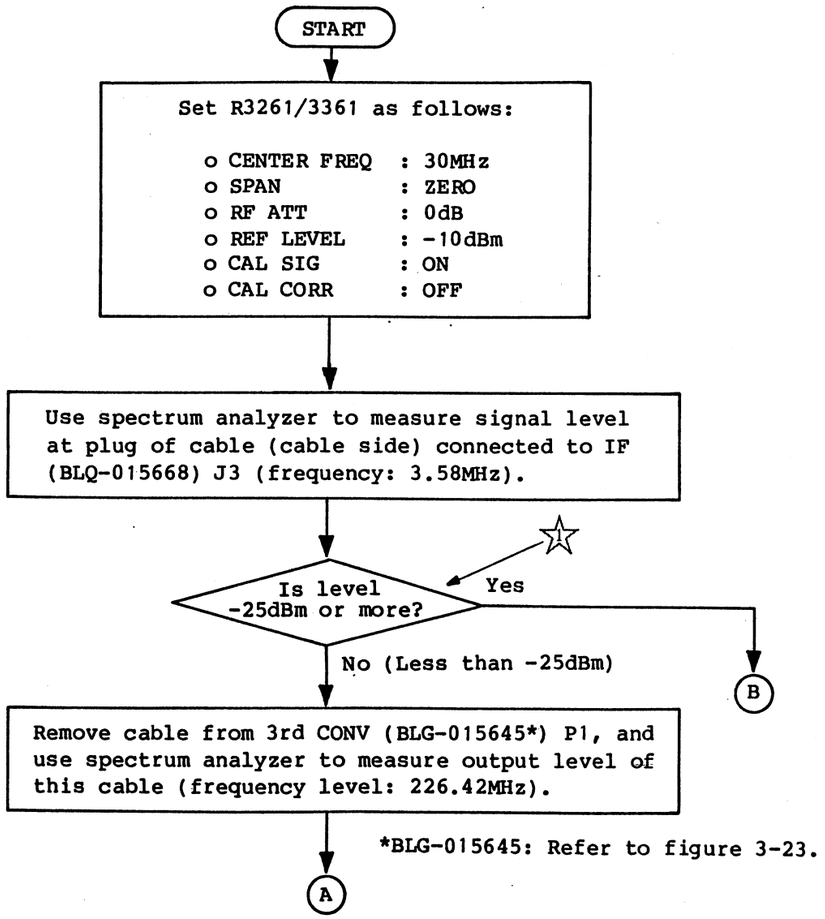
5.5 Check List/Calibration Data Record Form

Step	Unit-Under-Calibration Parameter/Function	Tolerance Limits	Measured Values Tech_____ Date_____
2.4.1.	Frequency Span		
	(1.) Main Span (2GHz)	±3% (60MHz)	% (MHz)
	(2.) 10MHz Span	±3% (300MHz)	% (KHz)
	(3.) 2 MHz Span	±3% (60MHz)	(MHz)
2.4.2.	Calibration Signal Level	±0.1 dB	_____dB
2.4.3.	Resolution Bandwidth Switching Between	±0.3dB	_____dB
2.4.4.	Reference Level Accuracy	±0.3dB	_____dB
2.4.5.	LOG/LINEAR Amplifier Linearity	±1.0dB/10dB (LOG)	_____dB
		±1.5dB/70dB (LOG)	_____dB
		±5% of Full Scale (Linear)	_____%
2.4.6.	TG Output Level Accuracy	±0.5dB (at 30 MHz, -10dBm	_____db

6. MAINTENANCE (TROUBLESHOOTING)

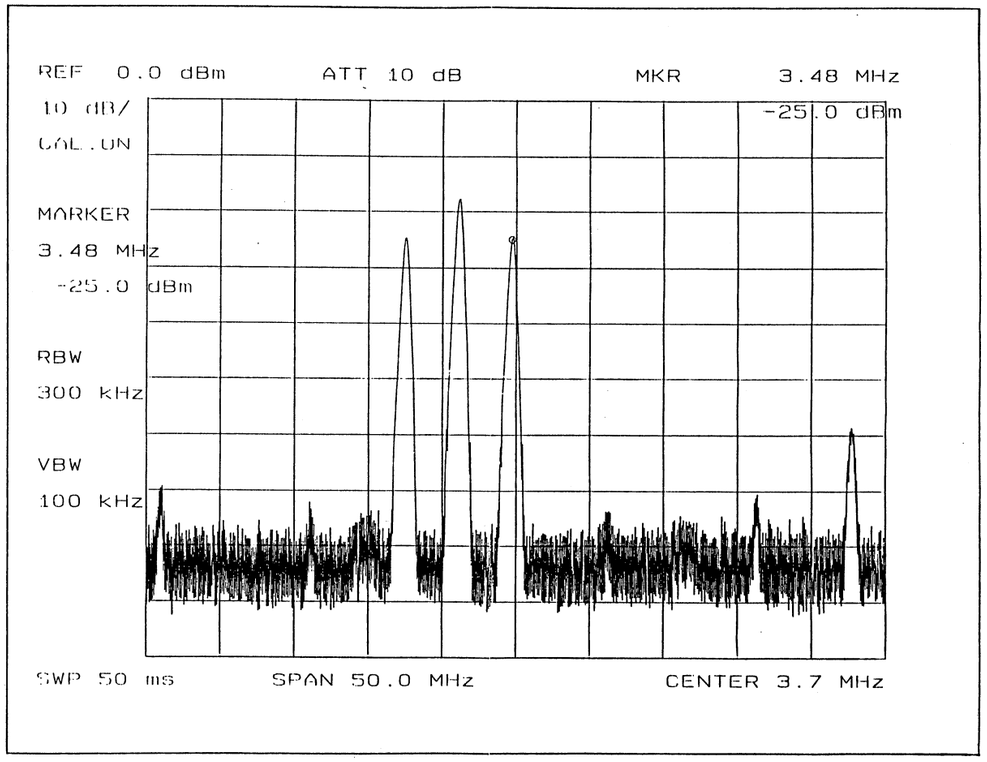
6.1 Level Down

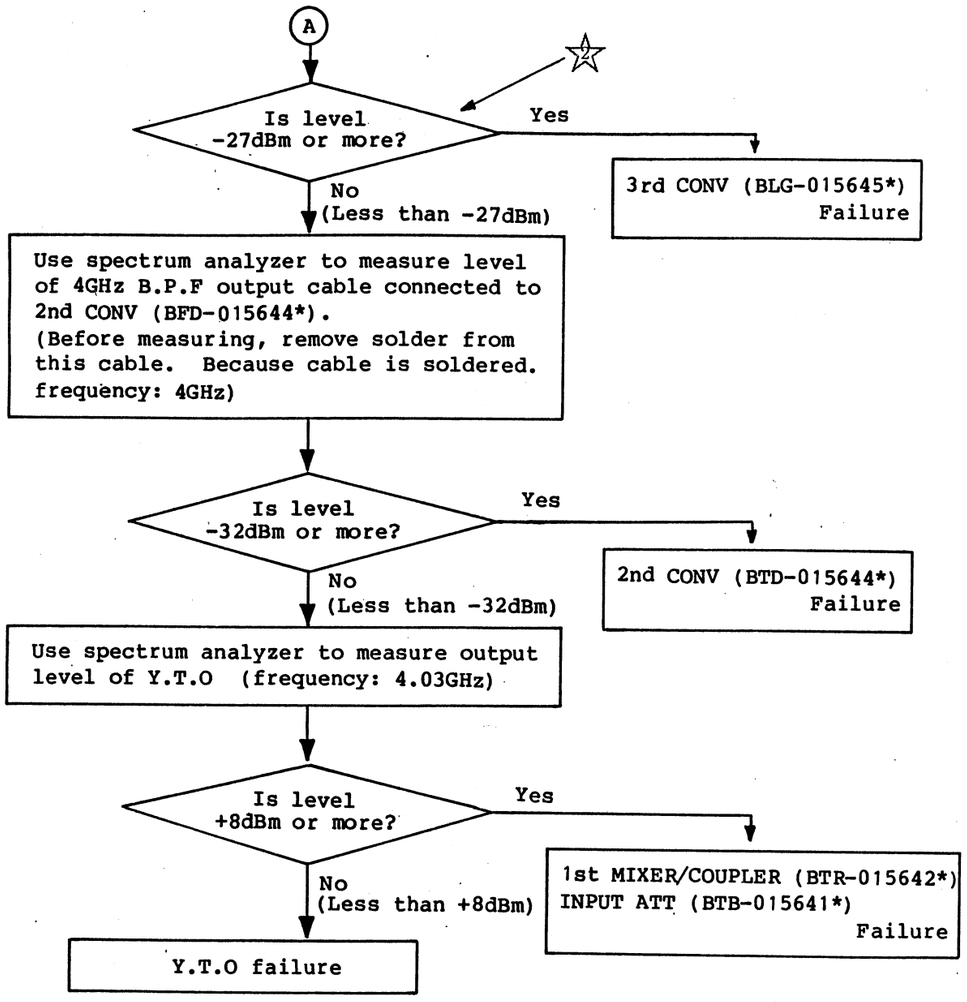
Event : Level is low when CAL signal is displayed.
Level is low when external signal is input.



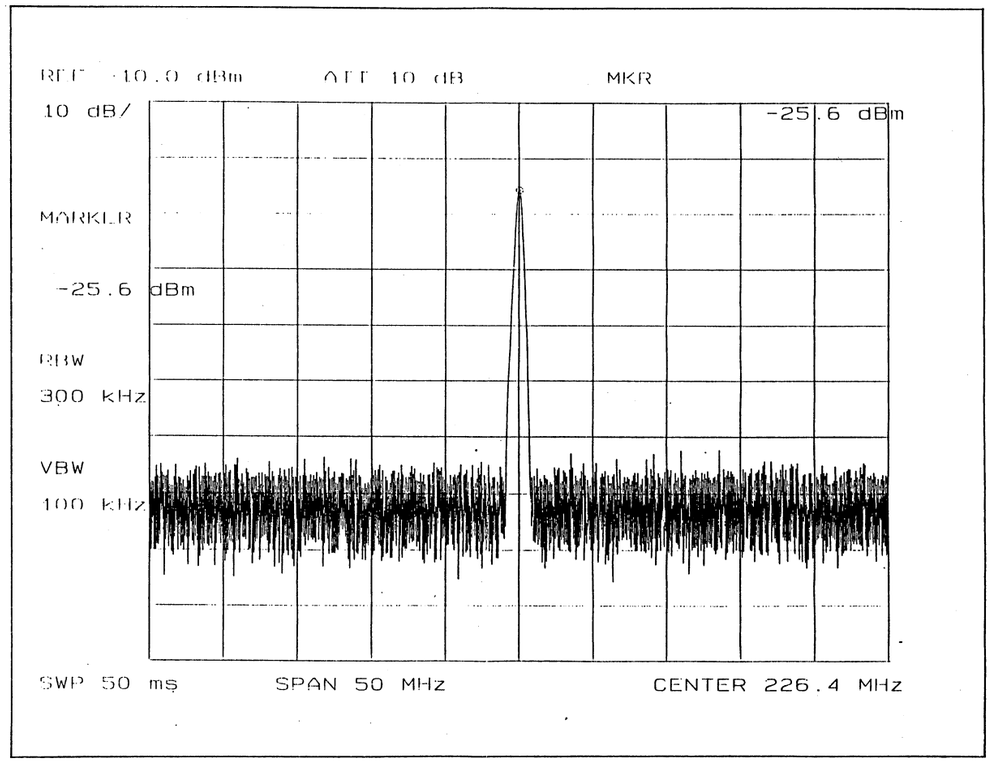
*BLG-015645: Refer to figure 3-23.

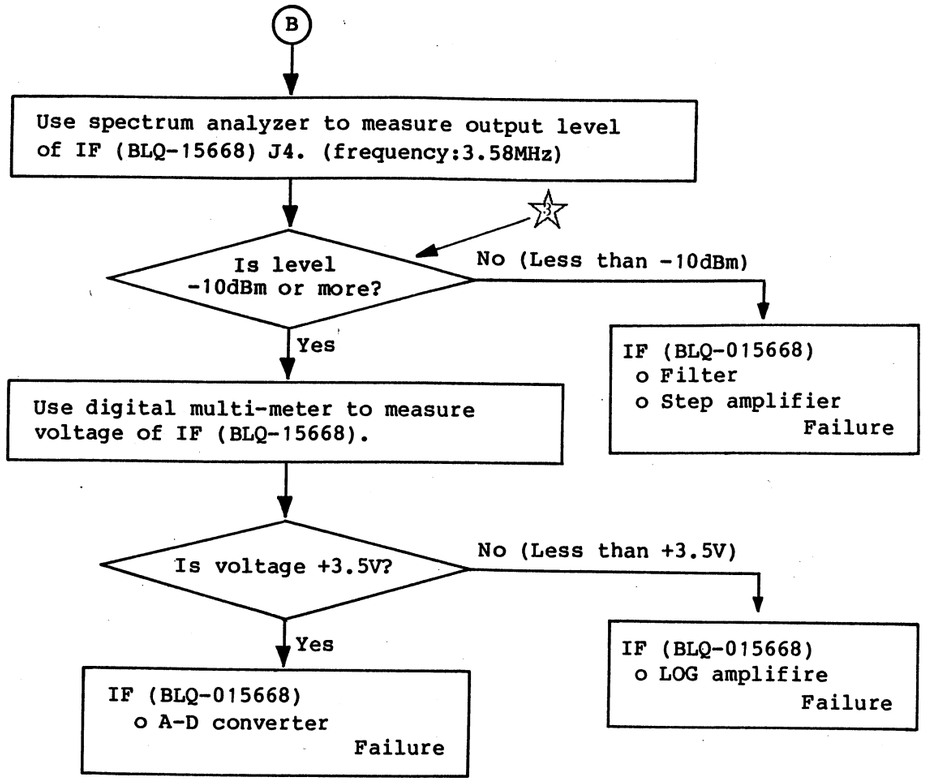
☆



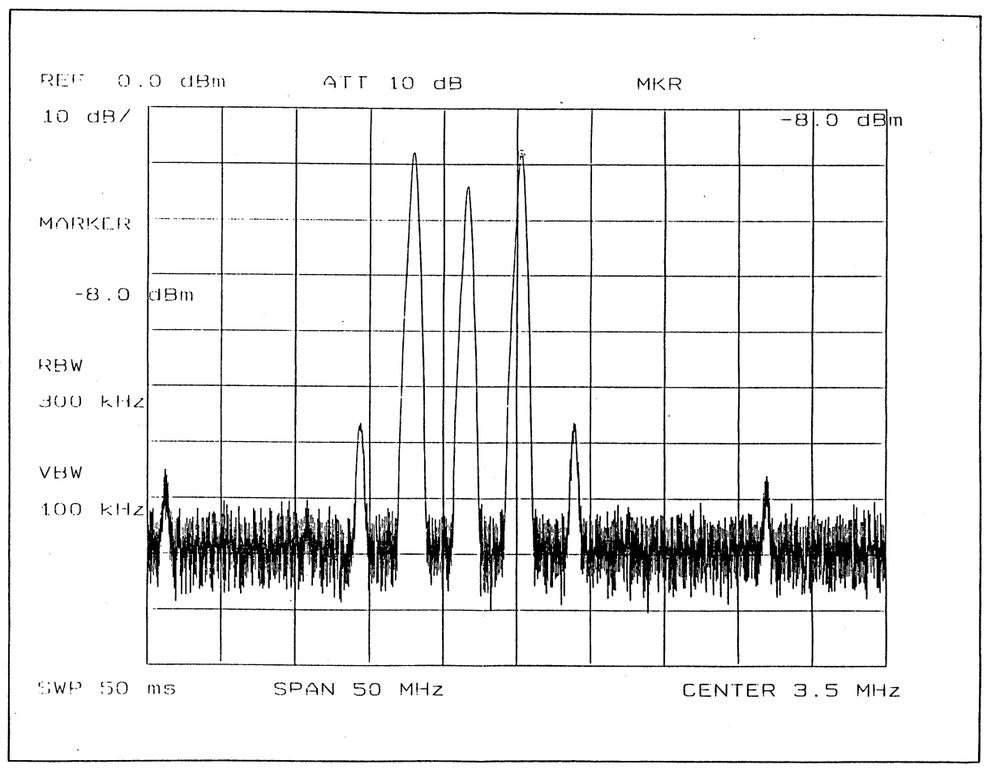


*BFD-015644, BLG-015645, BTR-015642, BTB-015641:
Refer to figure 3-23.

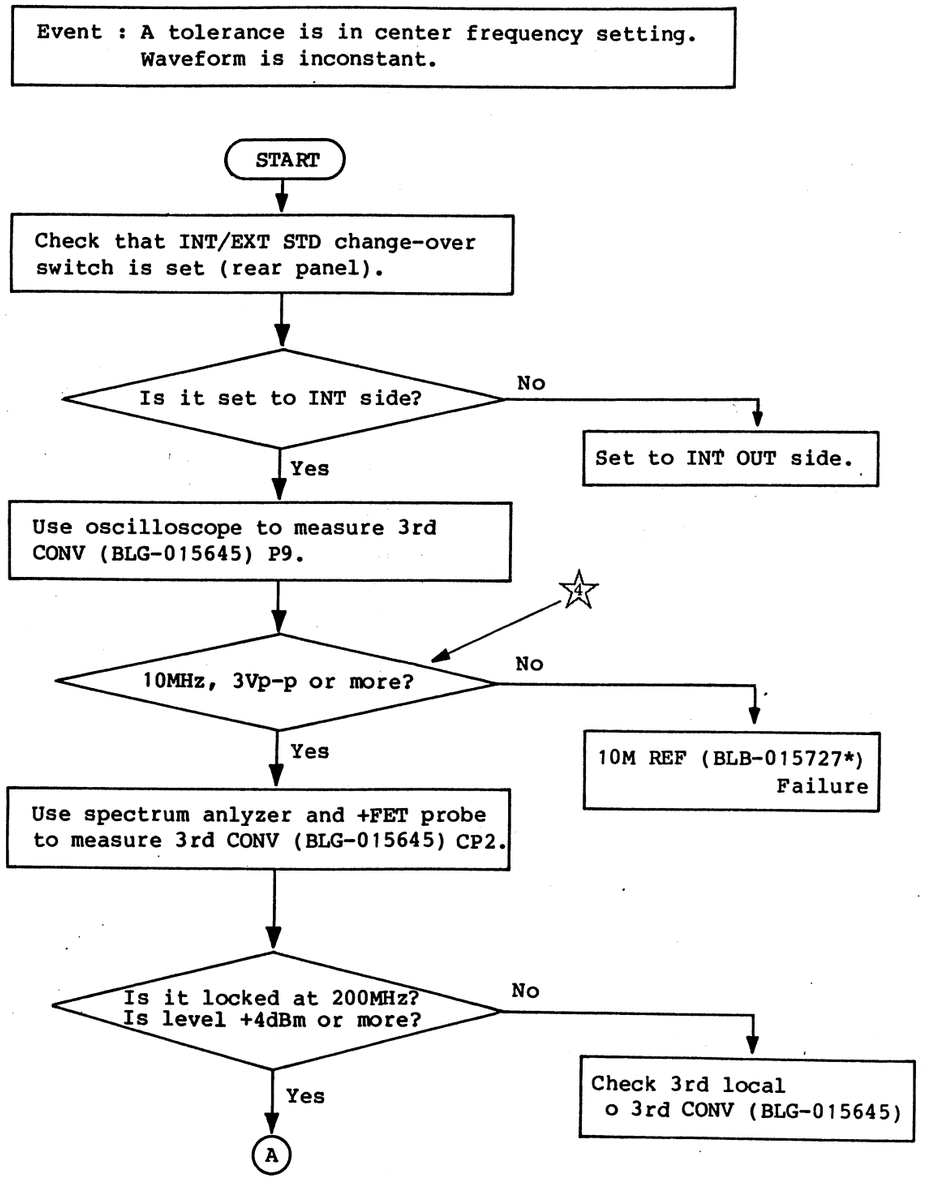



B
Use spectrum analyzer to measure output level of IF (BLQ-15668) J4. (frequency:3.58MHz)
☆2
Is level -10dBm or more?
No (Less than -10dBm)
IF (BLQ-015668)
o Filter
o Step amplifier
Failure
Yes
Use digital multi-meter to measure voltage of IF (BLQ-15668).
Is voltage +3.5V?
No (Less than +3.5V)
IF (BLQ-015668)
o LOG amplifire
Failure
Yes
IF (BLQ-015668)
o A-D converter
Failure

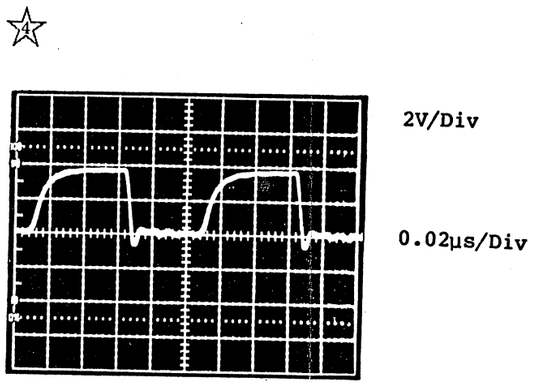
☆2

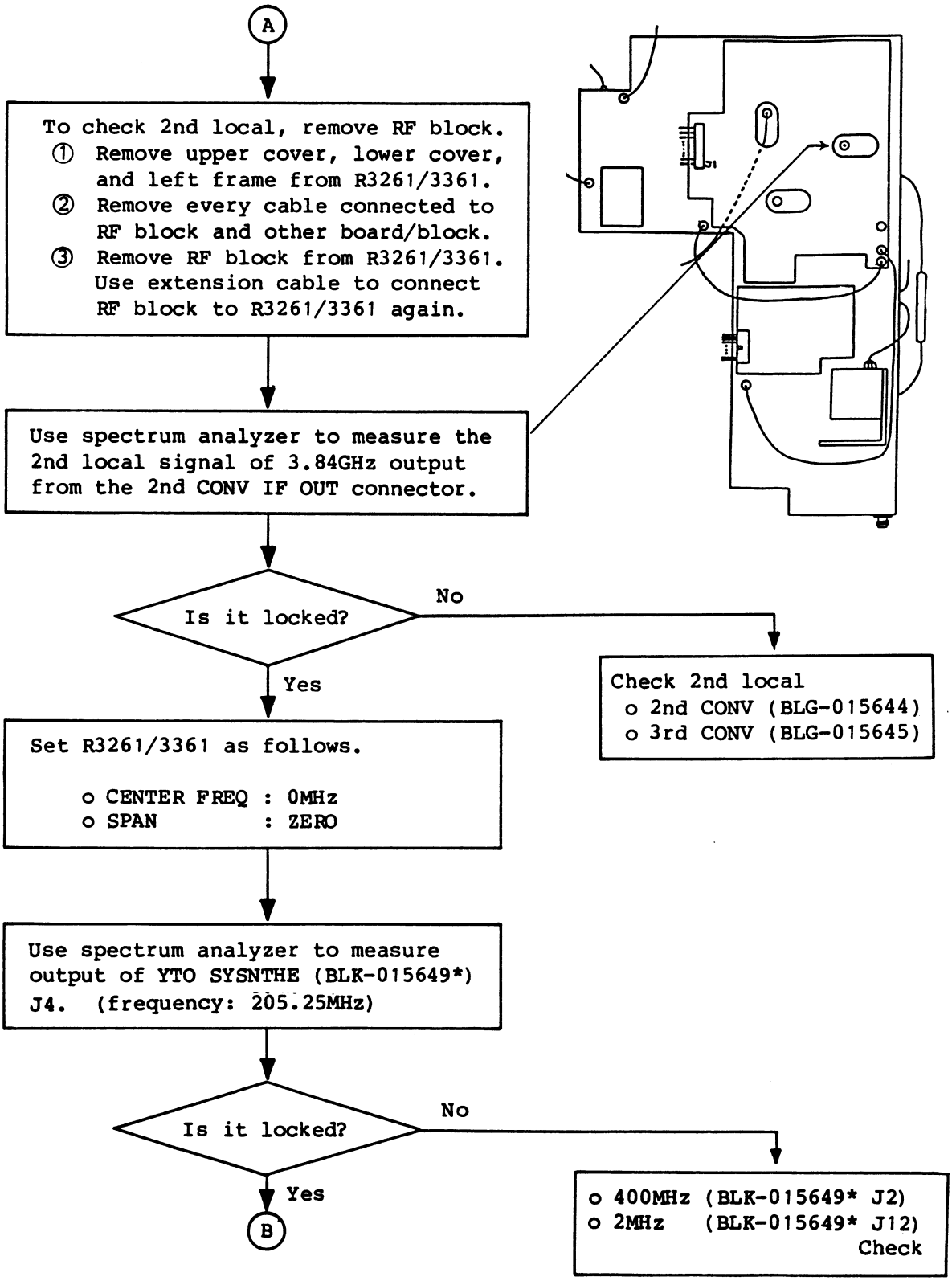

REF 0.0 dBm
ATT 10 dB
MKR
10 dB/
-8.0 dBm
MARKER
-8.0 dBm
RBW
300 kHz
VBW
100 kHz
SWP 50 ms
SPAN 50 MHz
CENTER 3.5 MHz

6.2 Unlock

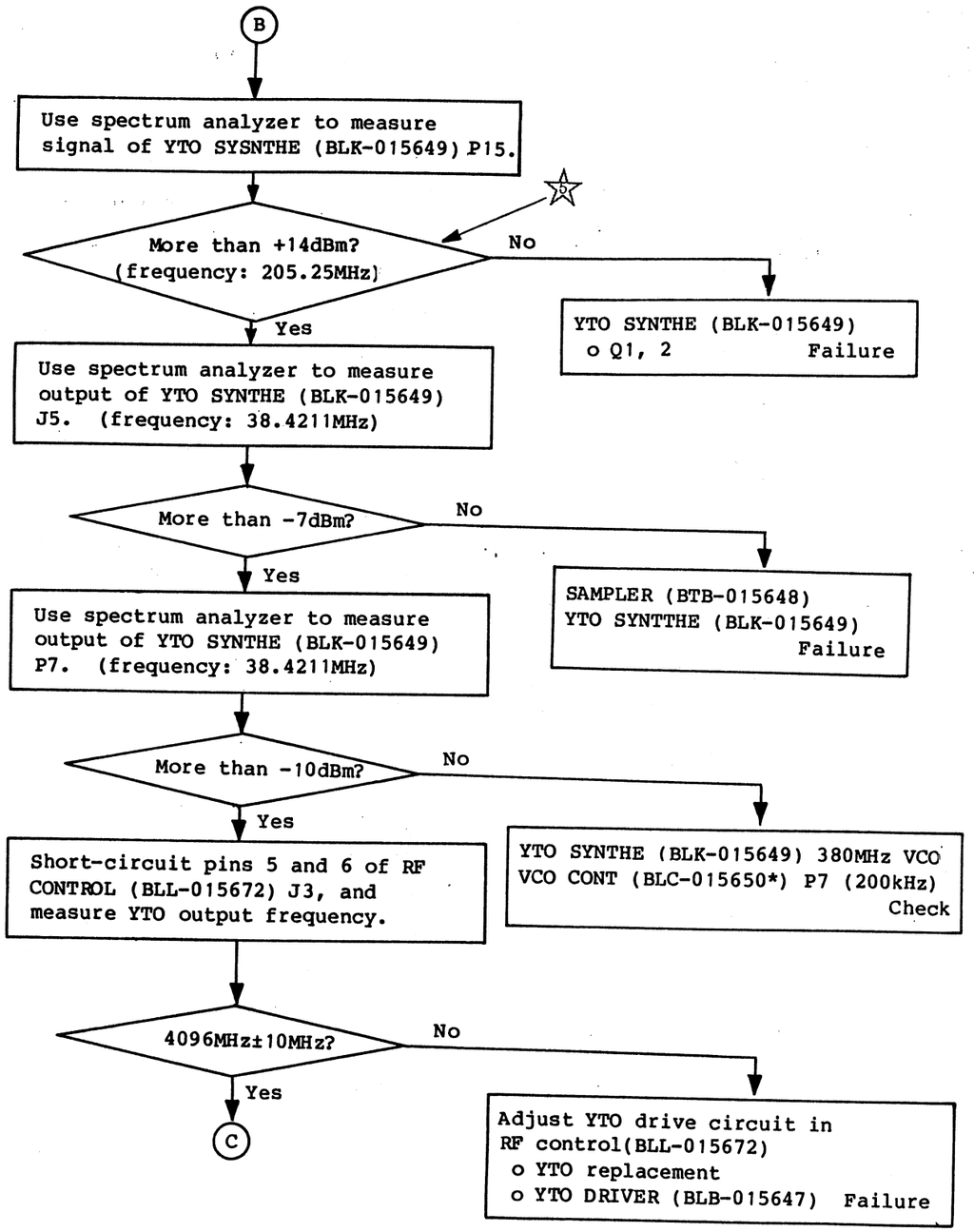


*BLB-015727: Refer to figure 3-23.

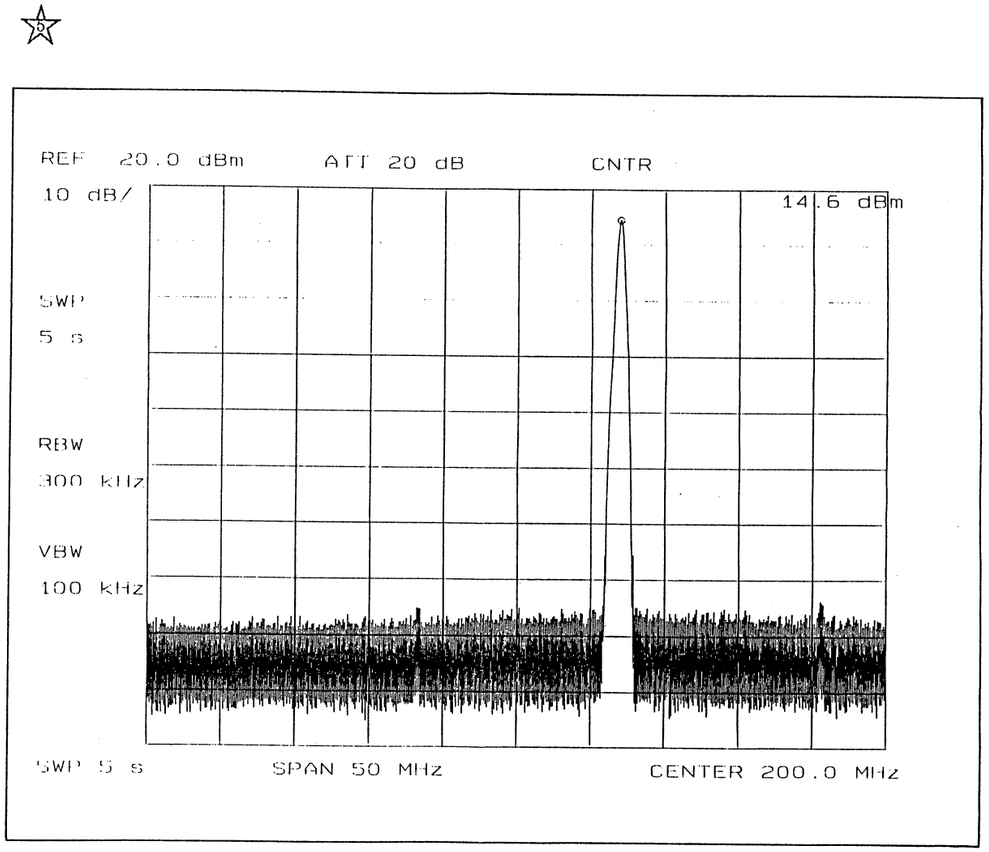


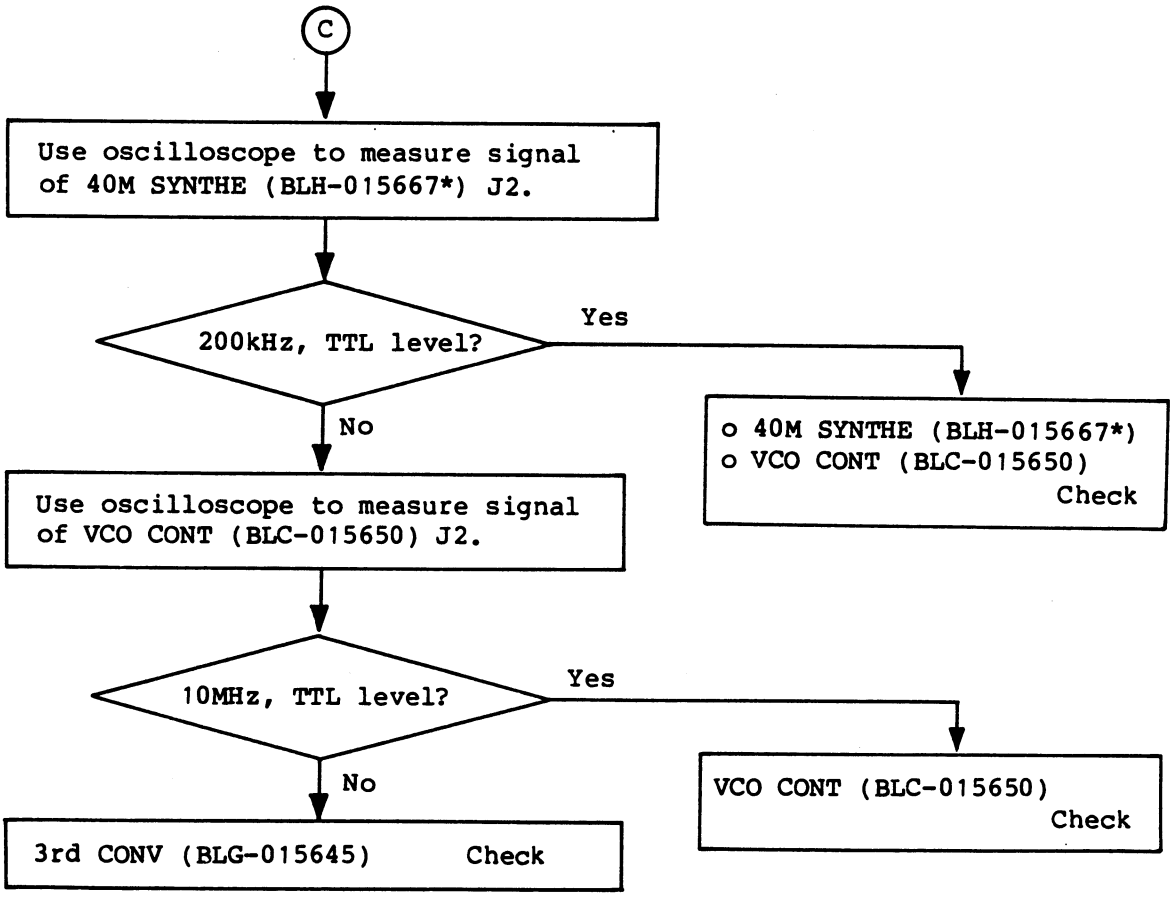


*BLK-015649: Refer to figure 3-23.



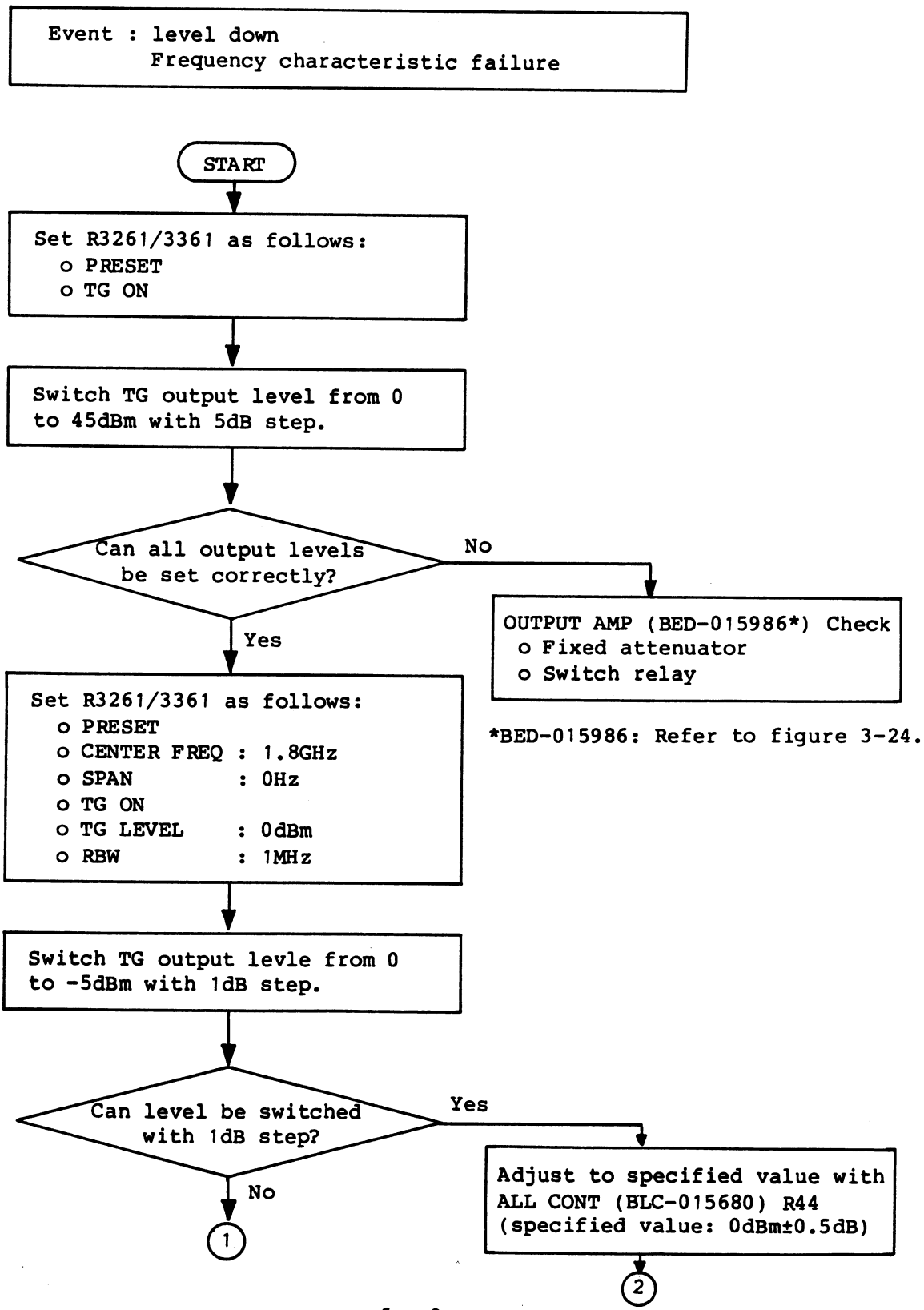
*BLC-015650: Refer to figure 3-23.



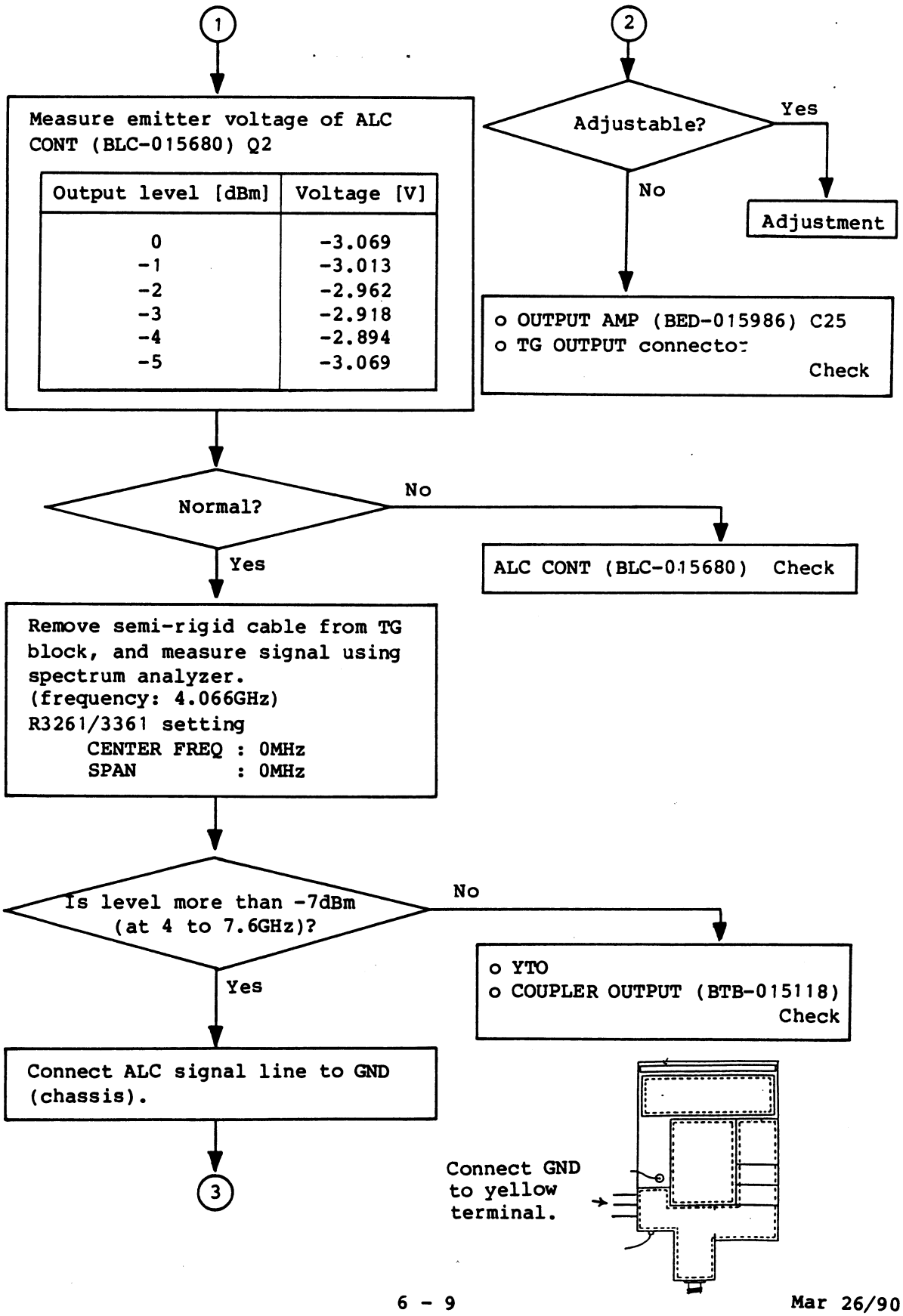


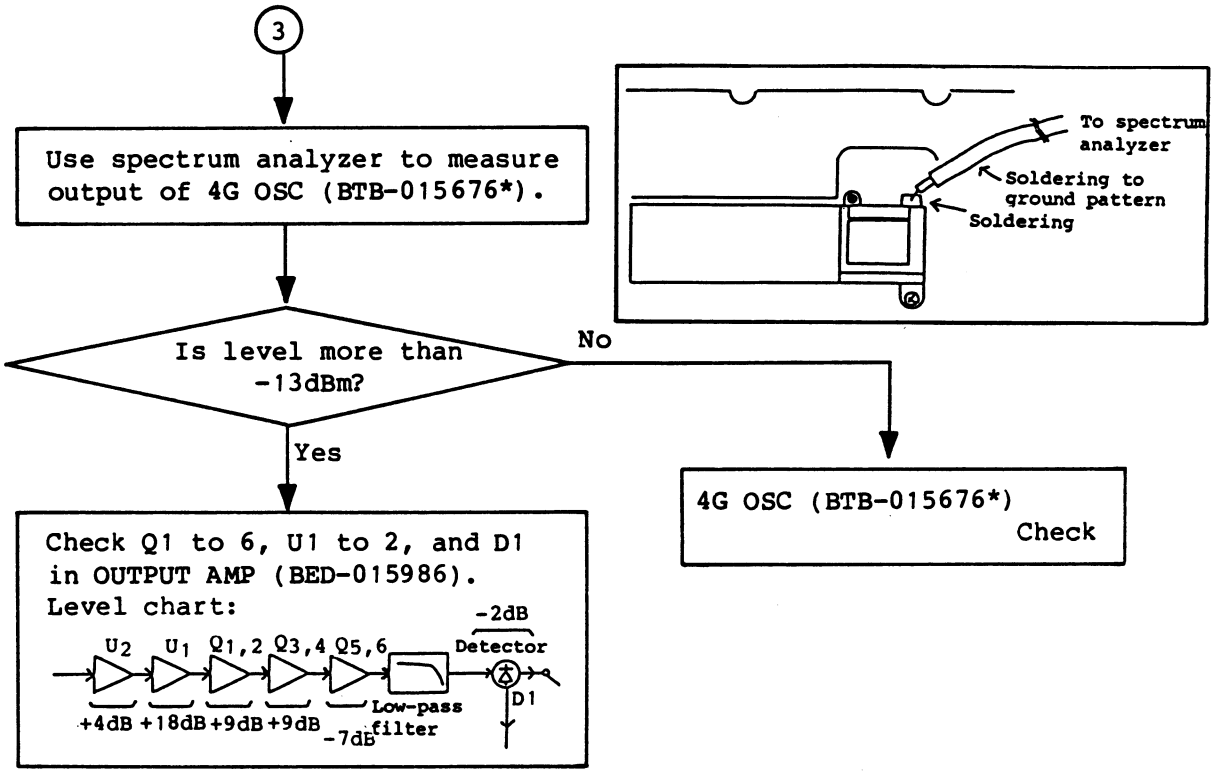
*BLH-015667: Refer to figure 3-23.

6.3 TG Failure



*BED-015986: Refer to figure 3-24.


1
2
Measure emitter voltage of ALC CONT (BLC-015680) Q2
Output level [dBm] | Voltage [V]
0 | -3.069
-1 | -3.013
-2 | -2.962
-3 | -2.918
-4 | -2.894
-5 | -3.069
Adjustable?
Yes
Adjustment
No
o OUTPUT AMP (BED-015986) C25
o TG OUTPUT connector
Check
Normal?
No
ALC CONT (BLC-015680) Check
Yes
Remove semi-rigid cable from TG block, and measure signal using spectrum analyzer.
(frequency: 4.066GHz)
R3261/3361 setting
CENTER FREQ : 0MHz
SPAN : 0MHz
Is level more than -7dBm (at 4 to 7.6GHz)?
No
o YTO
o COUPLER OUTPUT (BTB-015118)
Check
Yes
Connect ALC signal line to GND (chassis).
3
Connect GND to yellow terminal.



*BTB-015676: Refer to figure 3-24.

6.4 Power Supply

Replace the power supply unit if does not work correctly.

Procedure

① Replace the power supply unit. (See Figure 6-3.)

② Check that the voltage check points (+15V, -15V, +5.2V and +12V) shown in Figure 6-1 are within the following tolerances:

+15V --- ±5%
-15V --- ±5%
+5.2V --- ±3%
+12V --- ±5%

③ Make the adjustments described in 5.4.1 "Frequency Span".

④ Make the adjustments described in 5.4.5 "LOG/LINEAR Amplifier Linearity".

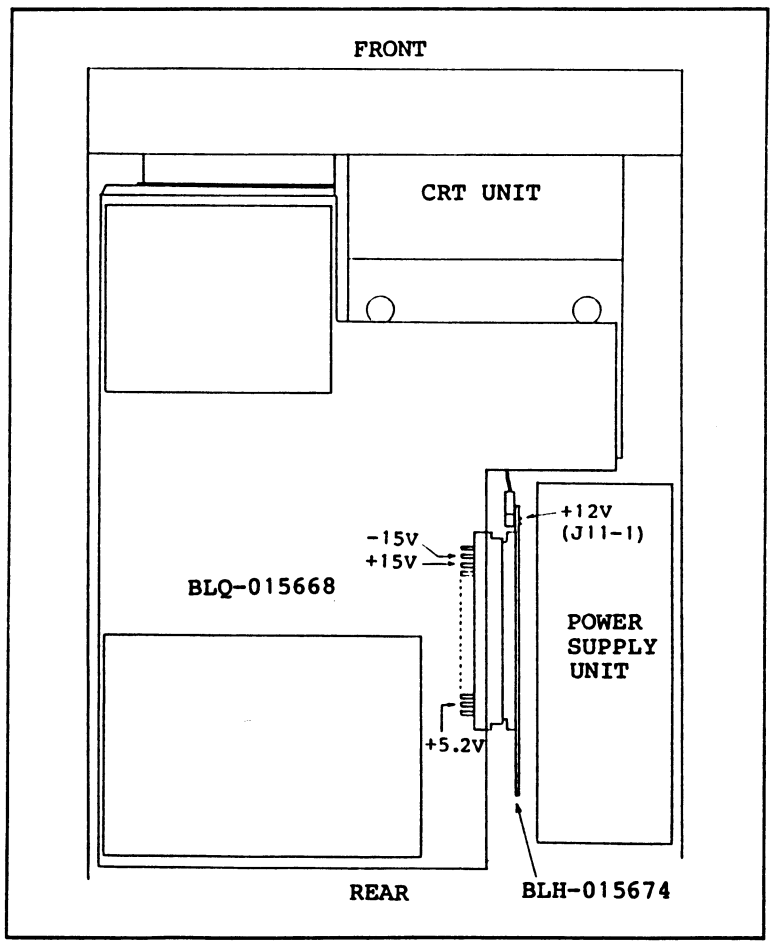


Figure 6-1 Voltage Check Points

6.5 CRT Unit

Replace the CRT unit if it does not work correctly.

Procedure

① Replace the CRT unit. (See Figure 6-3.)

② Set the intensity to the maximum value with INTENSITY.

③ Adjust the intensity with "SUB BRIGHT" (See Figure 6-2.) so that the back raster appears faintly.

④ Adjust "CONTRAST" to strengthen the contrast (See Figure 6-2.) as far as the pattern is not distorted remarkably and can be focused.

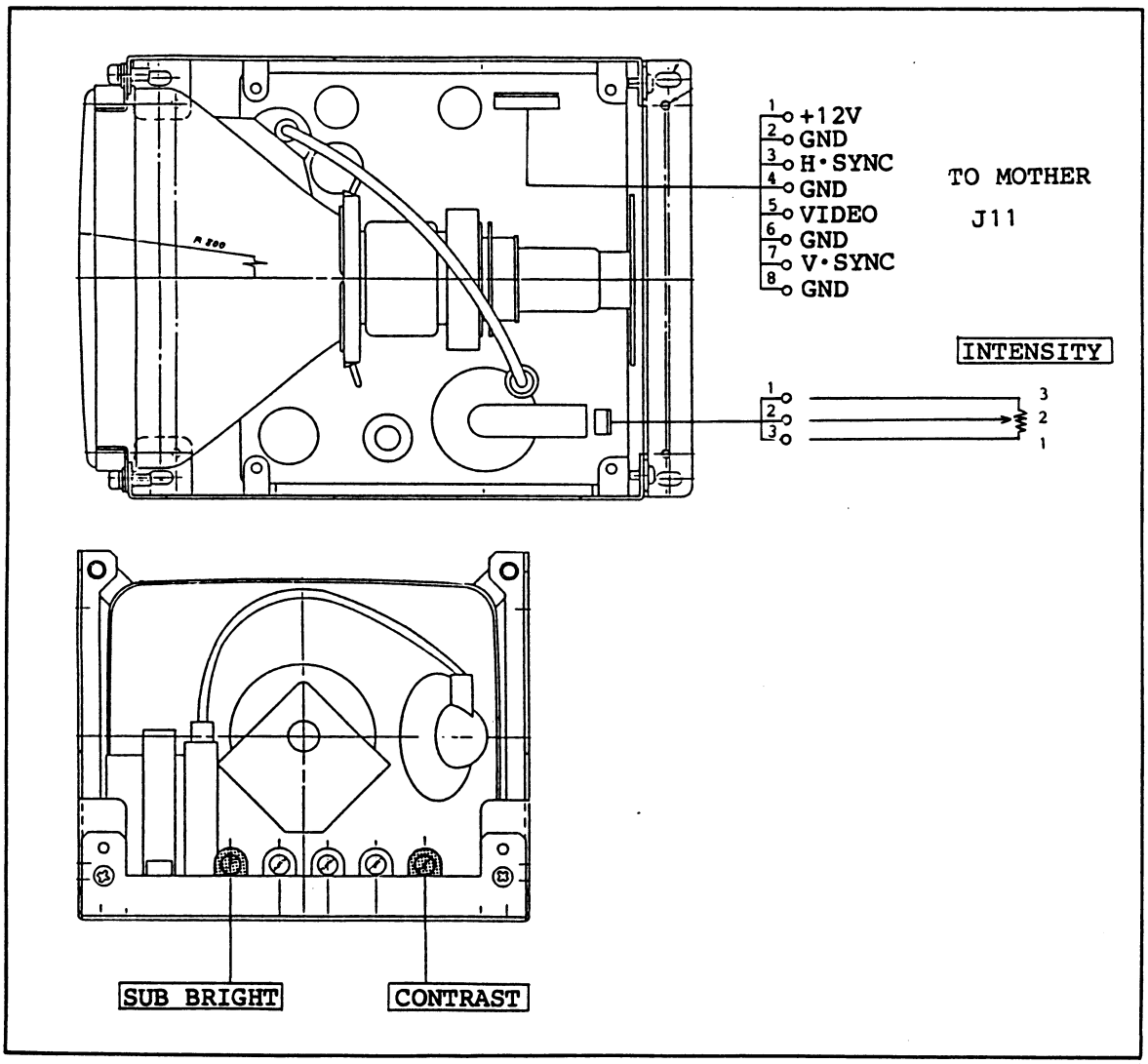


Figure 6-2 Fine Adjustment of The CRT Unit

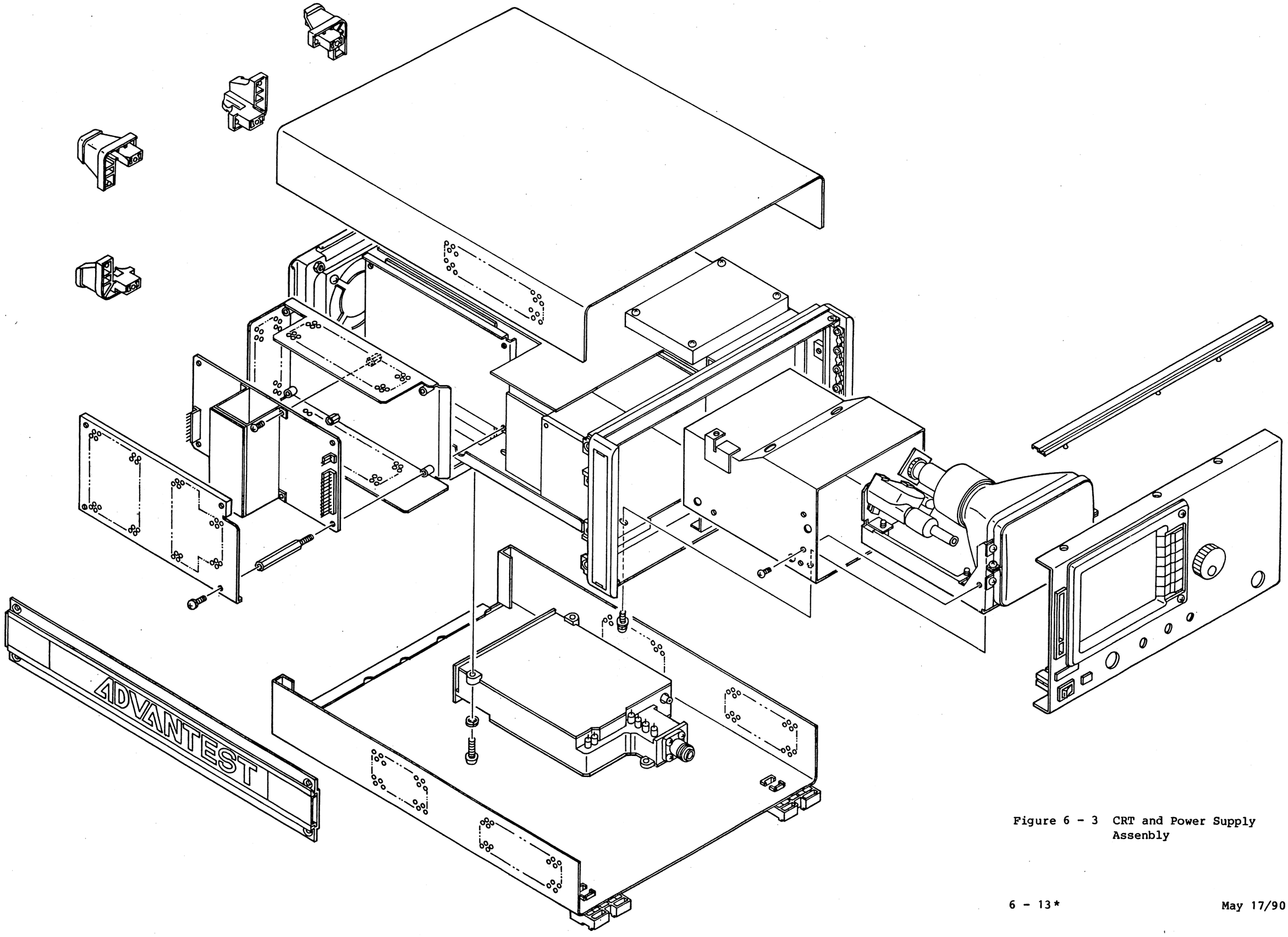


Figure 6 - 3 CRT and Power Supply Assenbly