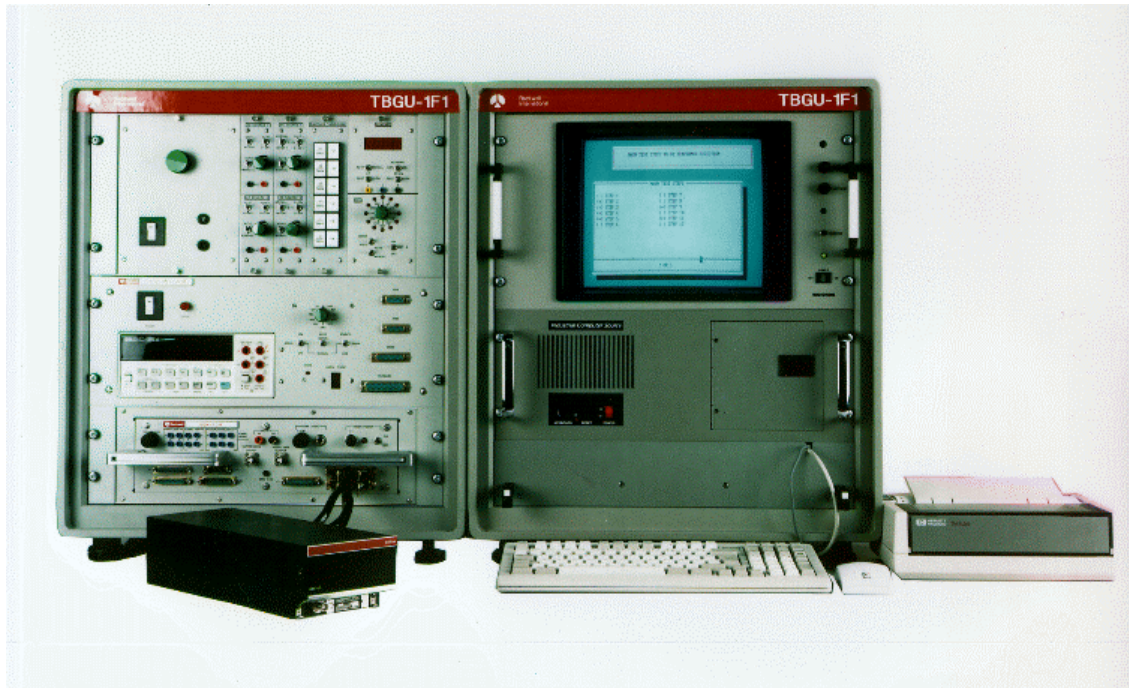


# TBGU-1F1 and TBAP-5F1 Test Benches

## Test Benches for Radio COMM/NAV and Autopilot



*TBGU-1F1*

Rockwell-Collins offers a versatile product line for the testing of many Radio-Communication, Radio-Navigation and Autopilot equipment.

The TBGU/TBAP-( )F test bench line is designed for intermediate level maintenance (fully automated GO/NO GO) as well as depot level (step by step mode, loop around default...).

The TBAP-5F1 is a self-sufficient unit. No additional test equipment is required.

The TBGU-1F1 can be purchased with or without the common support equipment required for the testing. R-CF can determine with the customer which support equipment are required and how those already in the customer's inventory can be used in association with the TBGU-1F1. In most cases, whether the test equipment is manual or remote controllable through an IEEE bus, the TBGU-( )F's software will adjust to the user's configuration.

# TBGU-1F1 and TBAP-5F1 Test Benches

The hardware comprises a common “basic bench” and dedicated elements to cover one or several of the following families of equipment:

Radio-Communication  
ADF  
Pulse (DME, TACAN, XPRDR...)  
VOR/ILS  
Autopilot

- The TBGU-1F1 can be converted into TBAP-5F1 by a simple module swapping (synchro/synchro module in place of synchro/OBS module) vice versa.
- The TBAP-5F1 Tester is an inexpensive drop in replacement for the 980L-1/980L-1A Test Set.
- The TBAP-5F1 utilizes all the same interface adapters that were utilized with the 980L-1/980L-1A test set.
- Much of the software utilized with the TBAP-5F1 will run the test in nearly the same sequence as the 980L-1/980L-1A. The operator can often watch the accomplishment of the tests being performed by the TBAP-5F1 using the 980L-1A test procedure.

# TBGU-1F1 and TBAP-5F1 Test Benches

Currently available software and hardware is listed hereafter.

Type Number	Description	Part Number
<b>TBGU-1F1</b>	Automatic Test Bench General Use for Radio-Communication, ADF, Pulse and VOR/ILS equipment w/o test equipment	
<b>OPT-123F</b>	Additional module for testing of equipment with CSDB bus	
<b>OPT-422F</b>	Additional module for testing of equipment with RS-422 bus	
<b>OPT-429F</b>	Additional module for testing of equipment with ARINC-429 bus	
<b>TBGU-1F1</b>	Without OPT -123F and OPT-429F, 115 VAC Power Input	<b>597-1965-105</b>
	Without OPT-123F, with OPT-429F, 115 VAC Power Input	<b>597-1965-102</b>
	With OPT-123F, without OPT-429F, 115 VAC Power Input	<b>597-1965-103</b>
	With OPT-123F and OPT-429F, 115 VAC Power Input	<b>597-1965-104</b>
	With OPT-123F and OPT-429F and OPT-422F, 115 VAC Power Input	<b>597-1965-106</b>
	Without OPT-123F and OPT-429F, 220 VAC Power Input	<b>597-1965-205</b>
	Without OPT-123F, with OPT-429F, 220 VAC Power Input	<b>597-1965-202</b>
	With OPT-123F, without OPT-429F, 220 VAC Power Input	<b>597-1965-203</b>
	With OPT-123F and OPT-429F, 220 VAC Power Input	<b>597-1965-204</b>
	With OPT-123F and OPT-429F and OPT-422F, 220 VAC Power Input	<b>597-1965-206</b>
<b>TBAP-5F1</b>	115 Vac, Automatic Test Set for flight directors, compass systems and auto pilots	<b>597-1965-003</b>
<b>TBAP-5F1</b>	220 Vac, Automatic Test Set for flight directors, compass systems and auto pilots	<b>597-1965-004</b>
<b>MDX-999F</b>	Plug-in module for TBGU/TBAP-( )F1 maintenance	<b>222-0522-126</b>
<b>MDX-999F2</b>	Plug-in module for TBGU/TBAP-1( )F1 autotest	<b>222-0522-209</b>
<b>Synchro/OBS module</b>	Synchro/OBS module for TBGU-1F1	<b>222-3006-734</b>
<b>Synchro/Synchro module</b>	Synchro/Synchro/ module for TBAP-5F1	<b>222-3006-732</b>

# TBGU-1F1 and TBAP-5F1 Test Benches

Equipment To Be Tested	Required MDX-( )F	MDX-( )F CPN
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**Radio-Communication Equipment:**

ARC-159	MDX-204F	222-0522-116
ARC-171	MDX-171F	222-0522-234
ARC-182	MDX-205F	222-0522-117
ARC-186	MDX-203F	222-0522-115
HF-8060	MDX-208F	222-0522-205
HF-9000	MDX-209F	222-0522-213
VHF-20	MDX-202F1	222-0522-245
VHF-22	MDX-202F	222-0522-114
VHF-422	MDX-202F2	222-0522-262
313N-5/5A	MDX-201F	222-0522-113
618M-3/3A	MDX-201F	222-0522-113

**Pulse:**

ARN-118	MDX-403F	222-0522-125
DME-40/42/442	MDX-401F	222-0522-123
TCN-500	MDX-405F	222-0522-216
TDR-90	MDX-402F	222-0522-124
ALT-55B	MDX-407F	222-0522-232

**VOR/ILS:**

51RV-1/2B/4()/5()	MDX-301F	222-0522-120
51Z-4	MDX-302F	222-0522-121
VIR-31	MDX-303F	222-0522-122
VIR-32/432	MDX-303F1	222-0522-240
CTL-32	MDX-303F1	222-0522-240

# TBGU-1F1 and TBAP-5F1 Test Benches

Equipment To Be Tested	Required MDX-( )F	MDX-( )F CPN
<b>DF:</b>		
DF-206MEF	MDX-501F	222-0522-208
Automatic Antenna simulator	AAS-477F	597-2090-001
ADF-60/462	MDX-502F	222-0522-217
Automatic Antenna simulator	AAS-477F60	222-3015-285
MDF-124F	MDX-124F	222-0522-238
Automatic Antenna simulator	AAS-124F	222-3018-545
SDF-123F	MDX-123F	222-0522-239
<b>Centralized Control Box/ETC-4000F:</b>		
EDU-4000F	MDX-604F1	222-0522-242
MPU-4000F	MDX-605F1 ( )	222-0522-243
<b>Autopilot AP-105:</b>		
161E-2A	MDX-20F1	222-0522-108
328A-5	MDX-25F	222-0522-090
329B-7R	MDX-111F	222-0522-206
329B-8Y/8J	MDX-33F	222-0522-112
331A-9G/-8K	MDX-23F	222-0522-111
322C-8	MDX-25F	222-0522-090
322E-5	MDX-25F	222-0522-090
344C-1D	MDX-8F	222-0522-091
345A-7B	MDX-106F	222-0522-104
562A-5F/F5	MDX-5F	222-0522-092
562A-5M/M5	MDX-15F	222-0522-089
562C-5/5B	MDX-101F	222-0522-094

# TBGU-1F1 and TBAP-5F1 Test Benches

<b>Equipment To Be Tested</b>	<b>Required MDX-( )F</b>	<b>MDX-( )F CPN</b>
562C-8A	MDX-102F	222-0522-095
590A-3J/J1	MDX-104F	222-0522-102
614E-10/7F	MDX-13F	222-0522-202
614E-20K	MDX-20F2	222-0522-109
614E-22	MDX-19F	222-0522-203
614E-37	MDX-107F	222-0522-105
614E-5A	MDX-20F	222-0522-093
ADI-85	MDX-109F	222-0522-107
FMC-28	MDX-110F	222-0522-201
HSI-85	MDX-108F	222-0522-106
562C-8F	MDX-103F	222-0522-101

## **Autopilot APS-80:**

APA-80C	MDX-69F	222-0522-100
APC-80	MDX-68F	222-0522-099
APP-80	MDX-68F	222-0522-099
CWC-80	MDX-69F	222-0522-100
FGC-80F	MDX-67F	222-0522-098
FGP-80F	MDX-67F	222-0522-098
FGP-81F	MDX-67F	222-0522-098
NAC-80	MDX-67F	222-0522-098

# Test Benches

## DEDICATED TEST SETS

<b>Type Number</b>	<b>Description</b>	<b>Part Number</b>
TB-206NF	Test set for 51Y-7NFC and BC-206NF with antenna simulator and connecting cables (to be used with BRTN-37A)	222-3011-200
TMS-123F	Test Bench for SDF-123F	222-3017-186
TBMDF-124F	Test Bench for MDF-124F system	597-2111-001
970V-1	Test Bench for DF-301(E) system	622-3029-001
TBDF-2F	Test Bench for SDF-123 F system	222-3004-255
TBDL-11F	Link 11 Test Bench	597-2112-001

# Test Benches

## ATEC-6R

The ATEC-6R is an Automatic Test Equipment used for the testing of radio-communication, radio-navigation ATC Modes and IFF equipment.

The ATEC-6R has been designed, and is manufactured in cooperation with Aerospatiale, Avionics/Systems and Services Division.

The ATEC-6R is based on a UNIX work station associated to measurement and generation of resources through a VME bus.

The ATEC-6R exists under various versions capable of testing HF/VHF/UHF/VOR/ILS/DME/ADF (basic), IFF (option), ATC (option), TACAN (option) and Link 11 (option).

A wide variety of Test Unit Adaptors (TUA) and Test Program Software (TPS) dedicated to specific Radio Com/Nav/IFF equipment is existing.

To obtain more information on ATEC-6R configurations and TUA/TPS availability, please contact R-CF marketing.