

## **Precorrections Procedure for Comark EXACT-V2 High End TV Exciter**

The purpose of this Service Bulletin is to illustrate the basic operation of the EXACT-V2's Digital Adaptive Precorrections within the transmitter environment.

**Note**: This procedure applies to an active on-air exciter.

The digital precorrection feature consists of two types of corrections:

- Non-linear precorrection compensation of the power amplifier distortion
- Linear precorrection compensation of distortion due to the channel filter

Note: Run non-linear precorrections first, followed by Linear precorrections.

1. After accessing the Exciter GUI, log in using the following account information: Username: Administrator

Password: admin

	RK Exci	ter 1 - ATSO		_		Administrator	Log out Refresh	Refresh Settings 📃 Refresh Monitoring 🗹
Settings								
< Power Measurements				Manageme	ent - General			
Management	Info				— Test —			A
General		Equipment Name	Exciter 1	4		Test Mode	isabled 💌	
- SNMP		Туре	XTTR-VX20-3002	-		_		
- Files		S/N	00170	-	— Miscellan	ieous		
- Password		Hard, Version	0100	-		Serial Speed 576	00 bps 🔻	
		Soft. Version	141	-		Serial Protocol Sta	ndard 🔹	
⊕ T Process						Auto Logout Time 0	🗘 mir	S
	- Standard -							
Clock & Synchro		Standard	ATSC 1.0	•		Firmware	Upgrade	
Time & Date	- Control 1 -					Rel	poot	
Power Measurements		Addrase	10 105 157 20	2				
Redundancy V		Cubest Mask	10 . 155 . 157 . 20	2		Ah	out	
Refresh		Subhet Mask	200 - 200 - 200 - 0				out	
Monitoring		12-WARPED	- 411 - 4127 - 4					_
Management	😑 Inpu	Its	0	Process	<b>o</b> c	Dutputs	Clock	x & Synchro
Input Cutput Alarm		-	Primary Total Bit	Status ate : 14 507 kbit/s	RF Output Stream :	Data	Clock	Synchro

- 2. Select Outputs -> Precorrections on the side menu.
- 3. Verify that 'Enable Downconvertor' and 'GAP' are checked under the Downconverter Control and GAP sections, respectively.

	Exciter 1 - ATSC	Administrator - Log out Refresh Refresh Refresh Refresh
Settings		
< RF Output Control	Outputs -	- Precorrections
- ASI / SMPTE 310	Downconverter Control	CAR
<ul> <li>Gigabit Inputs</li> </ul>		
- IP Clever Switch	Downconverter	- AUST
	Probes Sources	GAP 🗹 👞
- Sources	MER/Shoulder	
- Mode	Probe	- Non Linear Precorrections - S
	- Linear Precorrections -	Non Linear Precorrections 🗹 🐁
- RF Output Parameters	Linear Procorrections	Mode Single -
- RF Output Control		Timer 5 min a
Precorrections	Mode DAP 💌 🔦	August Thursday (a)
Clock & Synchro	Timer 8 min 🔩	Survey Inresnoids
Time & Date	Start Reset	MER 33.0 . dB . 4
* Power Measuremente		Shoulders 40 👘 dB 🔩 🗹 🔩
Patrosh	Status Stopped	Start Reset
Keiresh	Elapsed Time 00:00 hh:mm	

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- 4. Make the following verifications and/or adjustments to the Non Linear Precorrections section found further down on the Precorrections screen:
  - a. Verify the FBA Level and FBA Sync. Icons are green

	Node	Single	• *
	Timer	5	🗘 min 🔌
Surv	ey Thresholds		
			🚔 dB 📃 🔩
	Shoulders	40	🕂 dB 🔍 🗹 🔍
	Start		Reset
	Status	Stopped	
	Elapsed Time	00:00	hh:mm

**Note**: If either FBA Level and/or FBA Sync. lights are not green, inspect feedback cabling condition and check for loose connections. It may also be necessary to add or reduce the amount of feedback attenuation to adjust the power levels into the correct range (-15 to -5 dBm).

Caution: Damage to the exciter may occur if the maximum feedback input level of +5dBm is exceeded.



- b. Verify that the Non Linear Precorrections check-box is checked
- c. Verify that the Mode is set to 'Single'
- d. Set the Timer value between 5 to 8 minutes
- e. Select 'Start'

n Linear Pr	ecorrecti	ons ——		
Non Linear Pre	ecorrections	2 🔍		
	Node	Single	• •	
1	limer	5	📫 min 🔌	
Survey Th	resholds			
			dB 🗌	
5	Shoulders	40	🕂 dB 🔨 🗹	
	Start		Reset	
s	tatus	Stopped	_	
E	lapsed Time	00:00	hh:mm	
F	BA Level	-	FBA Sync.	

After completing these steps, the Status changes to 'Active' as the exciter performs the necessary precorrections and the 'Elapsed Time' begins measuring the time that has passed since the start of the precorrection process.

Status	Active	

When the precorrection period is complete, the 'Status' changes to 'Time Out'.

Status	Time out	
Elapsed Time	00:05	hh:mm



5. Make the following verifications and/or adjustments to the Linear Precorrections section found to the left of the Non Linear Precorrections section on the Precorrections screen:

Linear Precorrections	2	
Mode	DAP	
Timer	8	🔒 min 🔌
Start		Reset
Status	Stopped	6
Elapsed Time	00:00	hh:mm
FBF Level		FBF Sync.
Sharp Filter Profile	lone	✓ Inactive

a. Verify the FBF Level and FBF Sync. Icons are green

**Note**: If either FBF Level and/or FBF Sync. lights are not green, inspect feedback cabling condition and check for loose connections. It may also be necessary to add or reduce the amount of feedback attenuation to adjust the power levels into the correct range (-15 to -5 dBm).

Caution: Damage to the exciter may occur if the maximum feedback input level of +5dBm is exceeded.



- b. Verify that the Linear Precorrections check-box is checked
- c. Verify that the Mode is set to 'DAP'
- d. Set the Timer value between 5 to 8 minutes
- e. Select 'Start'

Linear Precorrections	2	
Mode	DAP	• 4
Timer	8	🗘 min 🔧
Start		Reset
Status	Stopped	1000
Elapsed Time	00:00	hh:mm
FBF Level		FBF Sync.

After completing these steps, the Status changes to 'Active' as the exciter performs the necessary precorrections and the 'Elapsed Time' begins measuring the time that has passed since the start of the precorrection process.

Status Active

When the precorrection period is complete, the 'Status' changes to 'Time Out'.

Status	Time out	
Elapsed Time	00:08	hh:mm

**Note**: Repeating both Non-linear and Linear precorrection processes may provide slight additional performance improvements.



## Technical Service Bulletin 200527

**Note**: Precorrection files can be saved for later use under Management Menu, Files. Non-Linear and Linear correctors must be in "Static" mode in order to be saved.



Hitachi Kokusai Electric Comark LLC 104 Feeding Hills Road Southwick, MA 01077 U.S.A. (800) 345-9295 support@comarktv.com www.comarktv.com

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