Review by Gary Heath.

In early February, I was contacted by Irwin Siner of Hobbies and Helis International and asked if I would like to build and review the new Quick World Wide (QWW) 60 size carbon helicopter. Having heard glowing reports about the QWW 30 size ship, I didn't let the sun set on Irwin's offer.

The Quick 60 arrived parcel post, and I immediately opened the box to inspect for any shipping damage. Well… that's what I explained to my wife I was doing. Really, I just wanted to see (and fondle) the parts that go into making a Quick 60.

The packaging was the first indication of the attention to detail that is evident with this kit.

All components are placed in long, numbered, clear plastic bags with separate compartments containing related parts and hardware for each subassembly.

This packaging and the photographs in the manual, along with the text (which, by the way is on a CD-ROM) make for an easy to follow set of instructions and an enjoyable building experience.

The first 'surprise' was the 3mm thick carbon side frames. I knew then that this would be a heli with very little flex, but with these robust frames, would it be light?

The next surprise was the awesome blue anodizing on many of the components, as well as the included blue anodized finish caps.

Closer inspection revealed that many of the subassemblies were of familiar and proven design concepts we have seen tested 'successfully' over the years.

The Quick 60 is a CCPM machine that uses a stacked frame design, a belt driven tail and the ubiquitous transmission that has become the de facto standard, seeing dependable service in many helicopter designs since the early days, as well as in the winners' circle in recent contest machines. That being a pinion mounted on the top of the clutch bell, driving a large main gear, which in turn drives the tail transmission.

It is (as they say) big time bullet proof, and very easy to maintain.

It also allows for a compact center of gravity.

The 88 tooth main gear is driven off of a 9-tooth pinion providing a gear ratio of 9.78:1.

The drive for the tail is via a belt on a pulley that is coupled to a vertical shaft, riding in two bearings, which is driven from a 17-tooth spur gear off of the main gear, providing a tail ratio of 5.18.

The front and rear pulleys for the tail belt drive are the same size, so there is no further gear changes for the tail rotor.

Building starts with the upper side frames and goes rather quickly due to the reduced parts count of a CCPM helicopter.

In addition, some components are pre-built form the factory. On this note, there is a caution included with the kit that states while the head comes assembled, it is advisable to verify thread-locking compound was utilized where needed.

On my kit, many (if not most) of the socket head cap screws (SHCS) were installed without any thread-locking compound so the caution should be heeded.

Also, while on the subject of the head, one of the jam nuts for the bell mixer arm SHCS was missing.

A call to Irwin at HHI reveled that they realize that they aren't perfect and it's not unreasonable to expect a few nuts or bolts to "go Elvis" when they package the helicopter kit, or that sometimes during the building process, the builder may lose some hardware. To cover these circumstances, every kit comes with a bag of 'extra' hardware.

Other manufacturers may want to take note, as this is certainly cheap insurance that there will be no unhappy campers at the building benches.

I can't think of anything more disconcerting than getting into the rhythm of a good building session, only to find the fellows that packaged up the kit forgot to put in a 3X12 SHCS, and I just don't have any in my junk jar.

The head itself will be fairly familiar to many, as it's an almost exact copy of a very expensive upgrade to another popular brand of helicopter. It is a dual blade axle, built up head that teeters on a set of bearings.

Yes, that's right. The entire weight of this helicopter is suspended on a bearing'd pivot and not on the dampeners as in other designs.

The dampener itself is a large rubber tube in a special chamber with a metal axel in it's center, and is located below the teetering point. The dampening system is exercised when the head teeters on the pivot.

The entire head is metal and is just one of the "trick" components that make up this kit.

The under slung flybar is bearing mounted in a seesaw unit, which is also bearing, mounted into the head block.

As a matter of fact, all movement on this helicopter is bearing supported. Every arm and bell crank has both outer and inner sets of bearings. All of these are capable of being attached quite securely, with no bearing binding, and no perceptible slop in the arms at all.

The kit utilizes both a metal washout and metal swash plate (which is held in proper orientation through the use of a metal anti-rotation guide that does not induce any swashplate timing errors when the collective is moved).

All these parts have the blue anodized finish, as do all the control horns, the boom, skids, pulleys and the 'all metal' tail pitch slider.

The mix of carbon graphite frames and these blue anodized components present a striking, well-balanced look to the helicopter.

It appears obvious that each component of the Quick 60 kit has received great attention to detail. Just the auto hub (for example) is an impressive unit.
The Torrington is bordered by two high quality bearings instead of the bushings that are found on other (and more costly helis).
The upper bearing is a 24X12 with the lower a 24X14.
The auto hub shaft does multiple things, all good.

First, it effectively increases the main shaft size to 12-mm, which should equate to a better overall life, and increased performance of the Torrington.

Additionally, it provides a hardened surface for the Torrington to grab, without demanding a brittle and high cost main shaft. It also provides the 12mm dia. surface for the upper auto-hub bearing to run on.
The auto-hub shaft increases in size at the bottom, to fit into the large 24X12 lower bearing that boarders the Torrington (once again, in place of the usual bronze bushing) at the high load end of the hub. These upper and lower bearings will 'significantly' reduce drag during autos, and because of reduced wear (that less expensive bushings see) the Torrington's life can be expected to be extended as the hub is held to running true on the shaft via these 'extra' bearings.

This true running should also extend the life of the main gear and all associated components, as well.
Then, the auto-hub shaft increases to its final maximum diameter at the point that the SHCS goes through it to secure it to the main shaft. This provides enough meat to reduce the possibility of warping the auto-hub shaft by overzealous tightening of the SHCS into the locking nut.

After exiting the top of the auto hub shaft, the main shaft passes through a massive thrust bearing that is held in a large recess in the bottom of lower main shaft-bearing block.

To keep the axial load off of the lower main bearing, this recess is ‘stepped’ just below the lower radial bearing, to a diameter just slightly under that of the OD of the upper thrust bearing race. This places the axial load on the step in the bearing block, and not on the inner race of the lower main shaft radial bearing. The main shaft then passes through the top bearing block and is held in place with a locking collar.

The fan-mounted clutch utilizes a one way bearing in the center that allows the start shaft to turn over the engine and then lets the shaft rest. This negates any need for an expensive starter wand that incorporates a one way bearing in it, and seems to be fast becoming a standard in many helicopter designs these days.

A 6mm hex adapter for starting the heli engine is provided.

As earlier indicated, the clutch has the pinion gear mounted into the top of the bell, and it is also factory installed, not using any set/grub screws (a very good thing as these tend to cause the pinion to see runout and lead to main gear wear and vibrations).

The metal bell itself has a high tech look with its drilled top.

A metal fan is included in the kit, and it has the holes for installing magnets for a governor, already drilled into its base. The fan shroud is more than firmly held in place by a unique set of sub frames, and fits snugly around the head of a YS61STII.

The radio tray appears to be large enough to set up a table and play cards on!

Under the radio tray is an oversized fuel tank, which (much to my satisfaction) includes a stainless steel cap in place of the usual plastic ones that fail in short time (nice touch).

The kit comes with the usual set of skid braces, but these allow the antenna to be run on either side of the heli. The braces hold the blue anodized skids in place with set screws.

Moving on to the tail section, the boom comes with the mount for the tail housing plates already installed.

The builder simply installs the two side plates with the associated hardware, pulley and tail rotor shaft, mounts up the pitch control horn and that’s all there is to it. For

this kind of simplicity and resistance to costly repairs, it's really hard to beat a belt drive.

The kit has the tail rotor already assembled, but I wanted to see what was in the grips with respect to bearings.

Following the now familiar attention to proper design detail, the tail rotor grips contain both two radial bearings and a thrust bearing in each of the one-piece grips.

The blade spacers are a joy to use as they are molded to fit into the groves in the inside of each grip, and follow the shape so as to be virtually invisible once installed.

This sure beats the heck out of messing with those small "washer style" spacers!

Once assembled, the boom slides into the plastic mounts between the upper frames.

Yes, the kit has plastic in this area and after flying other ships that used a metal boom mount, I was happy to see the plastic here.

Nothing is worse than finding out a new "trick" anodized metal boom mount is causing radio glitches.

If you have a heli that uses a metal boom mount, be sure to remove the anodizing off of the inside of the mount and the end of the boom.

The boom is supported by two carbon graphite supports that have (once again) blue anodized ends on them.

Control for the tail pitch is via a small diameter carbon pitch rod that is unique in that it uses the same type of solder on threaded ends that some piano wire links use in fixed wing applications. In this case, the ends are CA'd on before the carbon rod passes through a set of elaborate guides that are designed to reduce drag.

The rod goes directly from the rear 'frame mounted' tail servo and travels dead center under the boom to the control horn for the tail pitch slider.

The Quick 60 uses 3-point/120 degree CCPM for controlling the disk.

All flight control linkages to the head are push-pull with installation of the servos being accomplished during the building process. Once again, the manual is very complete and the building of the linkage goes rather rapidly.

When accomplished, the instructions call for you to refer to your radio manual for the proper setting up of the mixing.

With all this done, and the heli ready for its maiden flight, the San Francisco Bay area winter weather decided to go into its monsoon mode for (what seemed like) a few weeks straight, with only little breaks. This was just enough to ‘tease’ me into trying to make it to the Bayside RC Club flying field in Fremont.

I’d get about a couple of miles away from the field, and down the rain would come again.

This was most frustrating, as I wanted to see if this heli flew as well as its pedigreed components went together.

With the end of February approaching, a dry Saturday presented itself with a clear blue sky and temperatures in the high 60s, I knew this would be great to both break-in the new YS61STII and wring out the Quick 60.

The first tank was used to get let the engine get some run time and nothing but circuits were flown.

After initial break-in was accomplished. I turned the controls over to one of the top pilots at our field and he did some slow pirouetting circles, a few backward rolls, keeping it mellow to see how things would work.

I had some concerns about the dampening in the head being too soft.

I had sent Irwin at HHI an e-mail concerning this but seeing as the e-mail was sent just a day or so prior to the WRAM show, he did not have the opportunity to answer before the weather cleared.

My initial concerns proved to be valid.

Although the heli felt very crisp (apparently due to the way the mixing is amplified by additional mixing bellcranks on the head) the soft dampening led to a boom strike after exiting an approximate 10 foot stall, tail first and forward elevator was introduced to level the heli.

That put an end to that day’s testing.

I contacted Irwin at HHI and after discussing the dampening, it was decided that new dampening would be tried and the review would continue.

At this point my role as simply a person doing this review changed to that of “Test Pilot” and engineer, as Irwin directed me to feel free to experiment with the heli using new dampeners he sent as well as going in my own direction with it.

As it happens I have many helicopters and as such, have many spare parts.

By doing some static comparisons between the initial dampening in the Quick 60's head and other helis, I determined a starting point for more stiff dampening that I wanted to try.

This was really quite simple to do and as luck would have it, the best results came from the first attempt at providing stiffer dampening.

Before we get to those results, I should comment on the ease of repair to this heli, thanks due in many parts to the simplified control layout of the CCPM and the stacked frame design.

Downtime is significantly reduced and more importantly, the heli didn't end up needing any significant changes to the set-up to be back in trim.

Once the dampening was right, the heli was once again wrung out by myself and then turned over to a pilot that could much better exploit it's abilities.

Now it 'really' clicked.

The CCPM controls provided very crisp responses but the heli was not nervous in a hover as is many times the case when a heli is set up to respond this fast and precise.

Multiple backwards rolls looked like the Quick 60 had a wire strung through it axis.

The heli tracked extremely well having no trim changes for either normal or inverted flight.

It responded to whatever control input was applied with grace and ease, doing exactly what was requested of it without any bad traits.

At first long tail slides with the provided tail blades proved to be less than the potential and other performance of this heli.

The tail would blow out when pushed.

After the installation of a set of SAB 95mm blades, the performance was much improved, but still not spot on in long knife-edge slides.

This was finally resolved with the addition of Model Sport 102mm blades.

The tail was now locked and the Quick 60 was dialed in.

(Comment about tail blade changes to be part of the stock kits).

The Quick 60 is a helicopter that will be familiar to many.

It is the sum of proven components, recent and substantial innovations, and (as ultimately as configured for this review) very well tuned.

It is fully capable to enter into top level competition while remaining an easy heli to fly, and to fly well.

It is a performer that can make you appear to have suddenly acquired new skills.

Through the use of high quality bearings, crisp control system, and well tested designs throughout the helicopter, this will be a favorite heli for many that are fortunate enough to own one.

If you are looking for an all metal, either carbon graphite or metal stacked frame 60 class heli, that is truly capable of doing it all, weighs in at just about 10lbs, has awesome looks and is easy to maintain, you can stop your search at HHI.

They 'got' your heli.

Sidebar:

As can be seen in this review, the Quick 60 as initially received did have some shortcomings.

This is typically the case with new helis, but it is important to note that the distributor (HHI) did not want the kits to get to market with 'any' of these "typical" problems, and has made the needed corrections to assure the delivered product is ready for the task at hand. The final development of the Quick 60 has been a project that I am proud to be associated with and I have enjoyed working with the people at HHI.
Irwin Siner has demonstrated he wanted to do whatever it took to get a fully capable kit into the hands of us pilots, and it is evident that he is committed to this heli.
He certainly has every right to believe in the Quick 60, as it is everything we look for in a radio controlled helicopter.

The Quick 60 as reviewed was configured as follows:

CMT 680 main blades
Model Sport 102mm tail blades
YS 61 ST II engine
Hatori 614 muffler
Morgan 30% fuel
3 Futaba 9304 servos on CCPM
Futaba 9253 on throttle
Futaba GV-1 governor
Futaba GY501 gyro
Futaba 9205 tail servo